

OHIO PUBLIC EMPLOYEES RETIREMENT SYSTEM

ACTUARIAL VALUATION OF DEFINED BENEFIT ALLOWANCES –
TRADITIONAL, COMBINED AND MEMBER DIRECTED PLANS

DECEMBER 31, 2014

TABLE OF CONTENTS

<i>Section</i>	<i>Pages</i>	<i>Item</i>
	1-2	Cover Letter
I		Executive Summary
	1	Introduction
	2-5	Summary of Pension Defined Benefit Valuation Results
	6	Comments and Conclusion
	7	Other Observations
	8	Financing Defined Benefit Pension Promises
	9-14	Summary of Active and Retired Member Information
	15-17	Summary of Pension Experience
	18	Summary of Risk Measures
II		Financial Information
	1	Consolidated Asset Reconciliation
	2-5	Development of Funding Value of Pension DB Assets
	6-9	Allocation of Funding Value of Assets Among Divisions
	10	Comparison of Rates of Return & Asset Values
III		Benefits and Conditions Evaluated
	1-22	Summary of Benefits
	23-28	Sample Benefit Computations
IV	1-5	Recommendations for Reserve Transfers
V	1-8	State Division
VI	1-8	Local Government Division
VII	1-8	Public Safety Division
VIII	1-8	Law Enforcement Division
	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
IX		Allowances Being Paid to Retirees and Beneficiaries
	1	Totals by Year of Retirement
	2	Totals by Years of Service
	3-8	Annuity and Pension Reserve Fund
	9-17	Survivors' Benefit Fund
	18	Historical Averages
X	1-14	Actuarial Methods and Assumptions
XI		Financial Principles
	1-5	Principles and Operational Techniques
	6-7	Glossary
	8	Meaning of "Unfunded Actuarial Accrued Liabilities"
XII	1-10	GASB Reporting

August 28, 2015

The Retirement Board
Ohio Public Employees Retirement System
Columbus, Ohio

Ladies and Gentlemen:

The results of the *December 31, 2014 Annual Actuarial Valuation of Defined Benefit Allowances* 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 by division, the annual actuarial valuation of retiree health and Medicare benefits, projections of defined benefit allowances and projections of retiree health and Medicare benefits are covered in separate reports. The purposes of the 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.

This report should not be relied on for any purpose other than those described above. It was prepared at the request of the Board and is intended for use by the Retirement System and those designated or approved by the Board. This report may be provided to parties other than the System only in its entirety and only with the permission of the Board.

The signing actuaries are independent of the plan sponsor.

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. We checked for internal and year-to-year consistency, but did not otherwise audit the data. We are not responsible for the accuracy or completeness of the data.

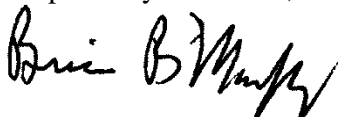
Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

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

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the Ohio Public Employees Retirement System as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

Brian B. Murphy and Mita D. Drazilov are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,



Brian B. Murphy, FSA, MAAA



Mita D. Drazilov, ASA, MAAA

BBM/MDD: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, 2014 annual actuarial valuation of the Ohio Public Employees Retirement System (OPERS) Defined Benefit Allowances of the Traditional, Combined and Member Directed 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 Public Safety
Section VIII	-	Active and Inactive Vested Valuation Results for Law Enforcement
Section IX	-	Allowances Being Paid to Retirees and Beneficiaries
Section X	-	Actuarial Methods and Assumptions
Section XI	-	Financial Principles
Section XII	-	Governmental Accounting Standards Board (GASB) Reporting

There have been no significant benefit changes since the last valuation. Please see Section III for a detailed description of the benefit provisions.

A summary of the primary valuation results as of December 31, 2014 are presented on the following pages.

SUMMARY OF PENSION DEFINED BENEFIT VALUATION RESULTS
TRADITIONAL, COMBINED, AND MEMBER DIRECTED PLANS
DECEMBER 31
(\$ IN MILLIONS)

	2014						2013	
	General			Law			Grand Total	Grand Total
	State	Local	Total General	Public Safety	Law Enforcement	Total Law		
A. Demographic Information								
1. Active Number Counts								
a. Traditional Plan	115,384	199,230	314,614	86	7,618	7,704	322,318	325,181
b. Combined Plan	2,730	4,725	7,455	0	0	0	7,455	7,239
c. Total	118,114	203,955	322,069	86	7,618	7,704	329,773	332,420
2. Active Payroll								
a. Traditional Plan	\$ 4,677	\$ 7,155	\$ 11,832	\$ 4	\$ 464	\$ 468	\$ 12,300	\$ 12,000
b. Combined Plan	149	205	354	0	0	0	354	331
c. Total	\$ 4,826	\$ 7,360	\$ 12,186	\$ 4	\$ 464	\$ 468	\$ 12,654	\$ 12,331
3. Retired Number Counts	71,785	131,980	203,765	171	4,873	5,044	208,809	202,136
4. Deferred/Inactive Number Counts	210,298	275,405	485,703	40	924	964	486,667	472,821
5. Member Directed Active Number Counts	3,900	6,951	10,851	0	0	0	10,851	10,053
6. Total Number Counts	404,097	618,291	1,022,388	297	13,415	13,712	1,036,100	1,017,430
B. Defined Benefit Assets								
1. Market Value (MV)	\$ 28,780	\$ 45,071	\$ 73,851	\$ 30	\$ 3,383	\$ 3,413	\$ 77,263	\$ 74,867
2. Rate of Return on MV							6.83 %	14.11 %
3. Funding Value (FV)	\$ 27,886	\$ 43,671	\$ 71,558	\$ 29	\$ 3,278	\$ 3,307	\$ 74,865	\$ 71,411
4. Rate of Return on FV							8.68 %	8.93 %
5. Ratio of FV to MV							96.9%	95.4%
C. Defined Benefit Actuarial Results								
1. Normal Cost as a % of Payroll	13.03%	12.73%	12.85%	16.16%	18.34%	18.32%	13.05%	13.17%
2. Actuarial Accrued Liability (AAL)								
a. Active	\$ 11,916	\$ 18,229	\$ 30,145	\$ 7	\$ 1,520	\$ 1,527	\$ 31,672	\$ 31,760
b. Retired	22,254	30,606	52,860	44	2,216	2,260	55,120	52,417
c. Deferred/Inactive	1,036	1,426	2,462	1	31	31	2,493	2,467
d. Total	\$ 35,206	\$ 50,261	\$ 85,467	\$ 52	\$ 3,766	\$ 3,818	\$ 89,285	\$ 86,645
3. Unfunded AAL (UAAL)	\$ 7,320	\$ 6,590	\$ 13,909	\$ 23	\$ 488	\$ 511	\$ 14,420	\$ 15,233
4. Funded Ratio	79.2 %	86.9 %	83.7 %	55.8 %	87.0 %	86.6 %	83.8 %	82.4 %
D. Amortization Years to Fully Amortize UAAL *	41	14	21	N/A	14	14	21	24
E. Contribution Rates								
	CY 2017						CY 2016	
1. Pension Contributions								
a. Employer Normal Cost	3.40%	3.06%	3.20%	4.16%	5.34%	5.33%	3.27%	3.38%
b. Member Contribution Rate #	9.63%	9.67%	9.65%	12.00%	13.00%	12.99%	9.78%	9.79%
c. UAAL Contribution Rate	6.60%	6.94%	6.80%	9.94%	8.76%	8.77%	6.89%	6.77%
d. Total	19.63%	19.67%	19.65%	26.10%	27.10%	27.09%	19.94%	19.94%
2. Retiree Health Contribution Rate	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
3. Total Employer Contribution Rate	14.00%	14.00%	14.00%	18.10%	18.10%	18.10%	14.16%	14.15%

* Based on i) schedule of employer and member contribution rates shown on page III-3. For the 2014 results, the amortization years shown are from December 31, 2015. For GASB purposes, amortization years are determined based upon scheduled contribution rate changes through 2017. See page XII-10 for additional explanation, and ii) Entry age actuarial cost method reflecting additional future normal cost savings anticipated to occur as Group A and Group B members are replaced by new hires subject to Group C benefit provisions.

2013 and 2014 results reflect 0% for Combined Plan members.

SUMMARY OF PENSION DEFINED BENEFIT VALUATION RESULTS
TRADITIONAL PLAN
DECEMBER 31
(\$ IN MILLIONS)

	2014						2013	
	General			Law			Grand Total	Grand Total
	State	Local	Total General	Public Safety	Law Enforcement	Total Law		
A. Demographic Information								
1. Active Number Counts	115,384	199,230	314,614	86	7,618	7,704	322,318	325,181
2. Active Payroll	\$ 4,677	\$ 7,155	\$ 11,832	\$ 4	\$ 464	\$ 468	\$ 12,300	\$ 12,000
3. Retired Number Counts	71,670	131,681	203,351	171	4,873	5,044	208,395	201,841
4. Deferred/Inactive Number Counts	209,585	274,308	483,893	40	924	964	484,857	471,194
5. Total Number Counts	396,639	605,219	1,001,858	297	13,415	13,712	1,015,570	998,216
B. Defined Benefit Assets								
1. Market Value (MV)	\$ 28,656	\$ 44,887	\$ 73,543	\$ 30	\$ 3,383	\$ 3,413	\$ 76,956	\$ 74,619
2. Rate of Return on MV							6.83 %	14.11 %
3. Funding Value (FV)	\$ 27,767	\$ 43,493	\$ 71,260	\$ 29	\$ 3,278	\$ 3,307	74,567	\$ 71,175
4. Rate of Return on FV							8.67 %	8.93 %
5. Ratio of FV to MV							96.9%	95.4%
C. Defined Benefit Actuarial Results								
1. Normal Cost as a % of Payroll	13.21%	12.89%	13.02%	16.17%	18.35%	18.33%	13.22%	13.33%
2. Actuarial Accrued Liability (AAL)								
a. Active	\$ 11,815	\$ 18,091	\$ 29,906	\$ 7	\$ 1,520	\$ 1,527	\$ 31,433	\$ 31,544
b. Retired	22,248	30,594	52,842	44	2,216	2,260	55,102	52,404
c. Deferred/Inactive	1,031	1,420	2,451	1	30	31	2,482	2,458
d. Total	\$ 35,095	\$ 50,104	\$ 85,199	\$ 52	\$ 3,766	\$ 3,818	\$ 89,017	\$ 86,407
3. Unfunded AAL (UAAL)	\$ 7,328	\$ 6,611	\$ 13,939	\$ 23	\$ 488	\$ 511	\$ 14,450	\$ 15,232
4. Funded Ratio	79.1 %	86.8 %	83.6 %	55.8 %	87.0 %	86.6 %	83.8 %	82.4 %
D. Amortization Years to Fully Amortize UAAL *								
	42	14	22	N/A	14	14	21	25
E. Contribution Rates								
	CY 2017						CY 2016	
1. Pension Contributions								
a. Employer Normal Cost	3.21%	2.89%	3.02%	4.17%	5.35%	5.34%	3.11%	3.22%
b. Member Contribution Rate	10.00%	10.00%	10.00%	12.00%	13.00%	12.99%	10.11%	10.11%
c. UAAL Contribution Rate	6.79%	7.11%	6.98%	9.93%	8.75%	8.76%	7.05%	6.94%
d. Total	20.00%	20.00%	20.00%	26.10%	27.10%	27.09%	20.27%	20.27%
2. Retiree Health Contribution Rate	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
3. Total Employer Contribution Rate	14.00%	14.00%	14.00%	18.10%	18.10%	18.10%	14.16%	14.16%

* Based on i) schedule of employer and member contribution rates shown on page III-3. For the 2014 results, the amortization years shown are from December 31, 2015. For GASB purposes, amortization years are determined based upon scheduled contribution rate changes through 2017. See page XII-10 for additional explanation, and ii) Entry age actuarial cost method reflecting additional future normal cost savings anticipated to occur as Group A and Group B members are replaced by new hires subject to Group C benefit provisions.

**SUMMARY OF PENSION DEFINED BENEFIT VALUATION RESULTS
COMBINED PLAN
DECEMBER 31
(\$ IN MILLIONS)**

	2014		2013	
	General		Grand Total	Grand Total
	State	Local		
A. Demographic Information				
1. Active Number Counts	2,730	4,725	7,455	7,239
2. Active Payroll	\$ 149	\$ 205	\$ 354	\$ 331
3. Retired Number Counts	74	185	259	164
4. Deferred/Inactive Number Counts	713	1,097	1,810	1,627
5. Total Number Counts	3,517	6,007	9,524	9,030
B. Defined Benefit Assets				
1. Market Value (MV)	\$ 121	\$ 177	\$ 298	\$ 241
2. Rate of Return on MV			7.97 %	14.43 %
3. Funding Value (FV)	\$ 117	\$ 172	\$ 289	\$ 229
4. Rate of Return on FV			9.23 %	9.45 %
5. Ratio of FV to MV			97%	95%
C. Defined Benefit Actuarial Results				
1. Normal Cost as a % of Payroll	7.52%	7.40%	7.45%	17.47%
2. Actuarial Accrued Liability (AAL)				
a. Active	\$ 101	\$ 137	\$ 238	\$ 216
b. Retired	3	7	10	6
c. Deferred/Inactive	5	6	11	9
d. Total	\$ 109	\$ 151	\$ 260	\$ 230
3. Unfunded AAL (UAAL)	\$ (8)	\$ (21)	\$ (29)	\$ 1
4. Funded Ratio	107.5 %	113.9 %	111.2 %	99.5 %
D. Amortization Years to Fully Amortize UAAL *	0	0	0	0
E. Contribution Rates				
	CY 2017		CY 2016	
1. Total Normal Cost	7.52%	7.40%	7.45%	7.47%
2. Member Contribution Rate	0.00%	0.00%	0.00%	0.00%
3. Employer Normal Cost	7.52%	7.40%	7.45%	7.47%
4. Other Contributions #	6.48%	6.60%	6.55%	6.53%
5. Total Employer Contribution Rate	14.00%	14.00%	14.00%	14.00%

* Based on i) schedule of employer and member contribution rates shown on page III-3. For the 2014 results, the amortization years shown are from December 31, 2015. For GASB purposes, amortization years are determined based upon scheduled contribution rate changes through 2017. See page XII-10 for additional explanation, and ii) Entry age actuarial cost method reflecting additional future normal cost savings anticipated to occur as Group A and Group B members are replaced by new hires subject to Group C benefit provisions.

Other contributions include: amortization payments for the pension UAAL, mitigating contributions, and contributions to the retiree health care fund.

SUMMARY OF PENSION DEFINED BENEFIT VALUATION RESULTS
MEMBER DIRECTED PLAN
DECEMBER 31

	2014		2013	
	General		Grand Total	Grand Total
	State	Local		
A. Demographic Information				
1. Active Number Counts	3,900	6,951	10,851	10,053
2. Retired Number Counts	41	114	155	131
3. Deferred / Inactive Number Counts	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
4. Total Number Counts	3,941	7,065	11,006	10,184
B. Defined Benefit Assets				
1. Market Value (MV)	\$ 2,784,583	\$ 6,095,248	\$ 8,879,831	\$ 7,099,170
2. Rate of Return on MV			6.45 %	14.59 %
3. Funding Value (FV)	\$ 2,750,678	\$ 6,021,034	\$ 8,771,712	\$ 6,826,536
4. Rate of Return on FV			8.89 %	10.05 %
5. Ratio of FV to MV			98.8%	96.2%
C. Defined Benefit Actuarial Results				
1. Normal Cost as a % of Payroll				
2. Actuarial Accrued Liability (AAL)				
a. Active	\$ 0	\$ 0	\$ 0	\$ 0
b. Retired	2,634,698	5,656,379	8,291,077	6,884,231 *
c. Deferred/Inactive	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
d. Total	2,634,698	5,656,379	8,291,077	6,884,231
3. Unfunded AAL (UAAL)	\$ (115,980)	\$ (364,655)	\$ (480,635)	\$ 57,695
4. Funded Ratio			105.8 %	99.2 %

* 2013 results include a reserve of \$8,133 for future adverse experience. 2014 results do not include such reserve.

COMMENTS AND CONCLUSION

The December 31, 2014 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 21 years for the System in total.

Experience. The computed amortization period, taking into account all scheduled increases in contribution rates, is 21 years compared with the 24-year period that had been reported in the December 31, 2013 valuation. The primary factors contributing to the change in the amortization years were:

- Measured on a market value basis, investment return was 6.83%. This figure is based upon an actuarial calculation and may not agree with figures reported elsewhere. The return on the funding value of assets was 8.68% due to continued partial recognition of the overall net market gains in 2011 through 2013. Since the return on funding value of assets was more than the 8% assumed return, there was a decrease in the amortization period.
- Individual salary increases during 2014 were again less than expected on average which also further improved the amortization period.
- Payroll for active members again increased from last year by less than the 3.75% payroll increase assumption. This resulted in a slight increase in amortization years.

Information concerning 2014 experience including other sources of gains and losses is presented on pages I-15 through I-17.

Conclusion. Based on the results of the December 31, 2014 regular annual actuarial valuation, it is our opinion that the Ohio Public Employees Retirement System continues to operate in accordance with actuarial principles of level percent of payroll financing.

OTHER OBSERVATIONS

General Implications of Contribution Allocation Procedure or Funding Policy on Future Expected Plan Contributions and Funded Status

Given the plan's contribution allocation procedure, if all actuarial assumptions are met (including the assumption of the plan earning 8.0% on the actuarial value of assets), it is expected that:

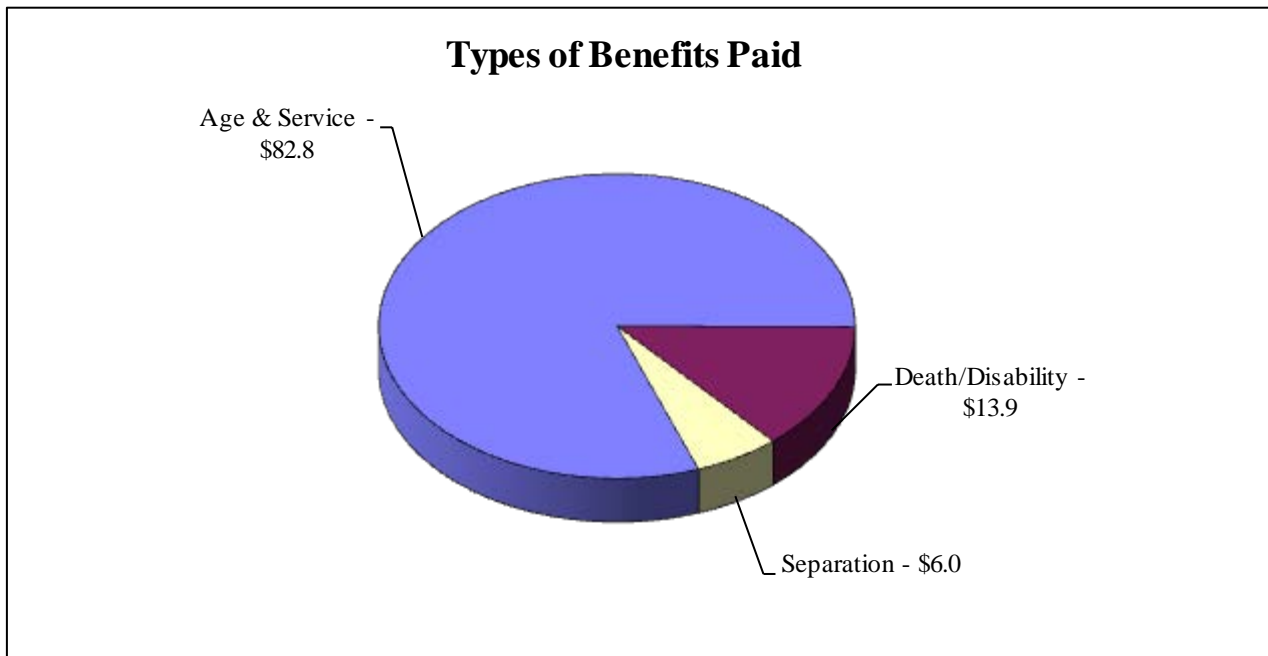
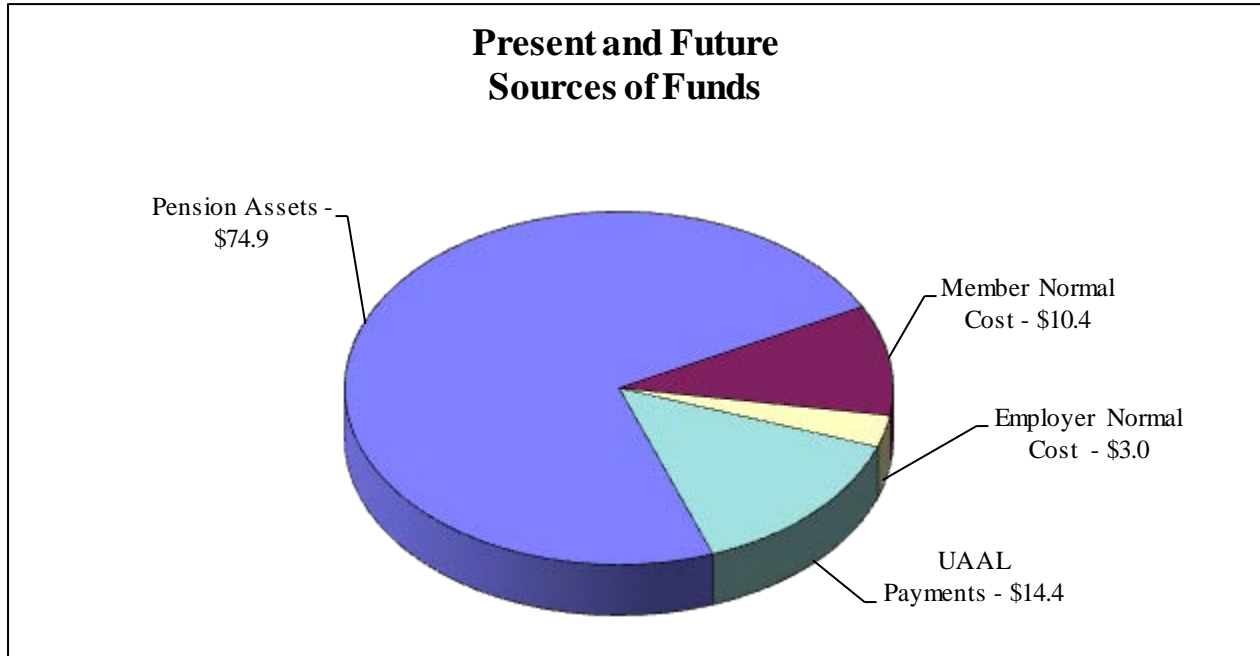
- (1) The employer normal cost as a percentage of pay will decrease to the level of the Group C normal cost as time passes as the majority of the active population is comprised of Group C members,
- (2) The unfunded actuarial accrued liabilities will be fully amortized after 21 years, and
- (3) The funded status of the plan will increase gradually towards a 100% funded ratio.

Limitations of Funded Status Measurements

Unless otherwise indicated, a funded status measurement presented in this report is based upon the actuarial accrued liability and the actuarial value of assets. Unless otherwise indicated, with regard to any funded status measurements presented in this report:

- (1) The measurement is inappropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations.
- (2) The measurement is dependent upon the actuarial cost method which, in combination with the plan's amortization policy, affects the timing and amounts of future contributions. The amounts of future contributions will most certainly differ from those assumed in this report due to future actual experience differing from assumed experience based upon the actuarial assumptions. A funded status measurement in this report of 100% is not synonymous with no required future contributions. If the funded status were 100%, the plan would still require future normal cost contributions (i.e., contributions to cover the cost of the active membership accruing an additional year of service credit).
- (3) The measurement would produce a different result if the market value of assets were used instead of the actuarial value of assets, unless the market value of assets is used in the measurement.

**FINANCING \$102.7 BILLION* OF DEFINED BENEFIT PROMISES
FOR PRESENT ACTIVE AND RETIRED MEMBERS
DECEMBER 31, 2014
(DOLLAR AMOUNTS IN BILLIONS)**



* Present value of future benefits – all divisions combined.

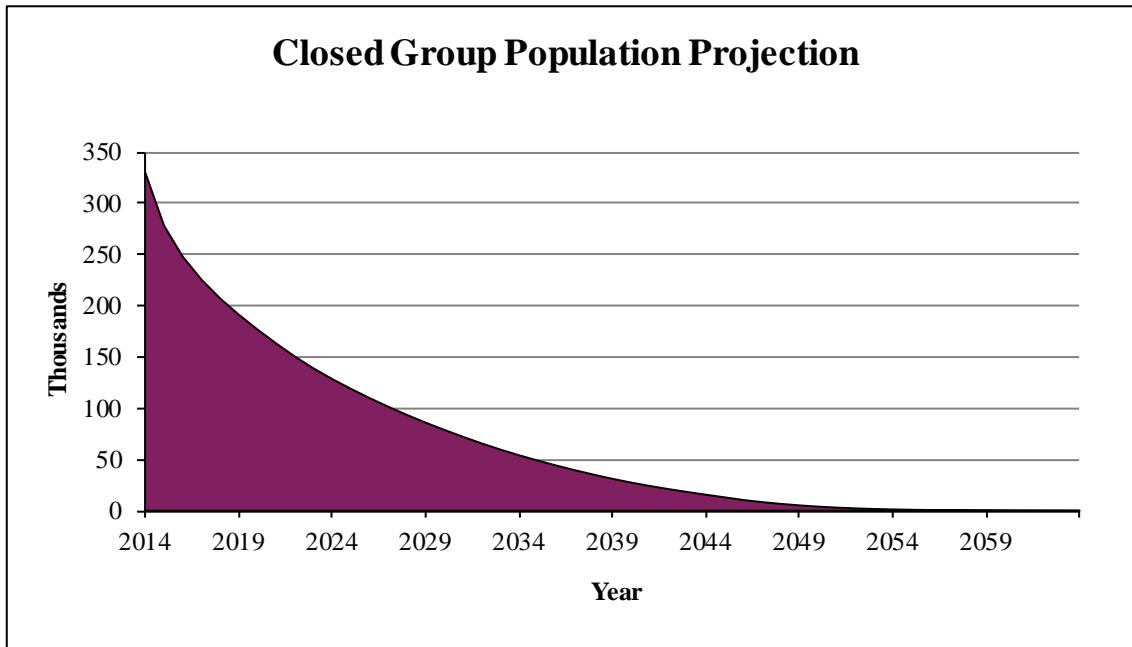
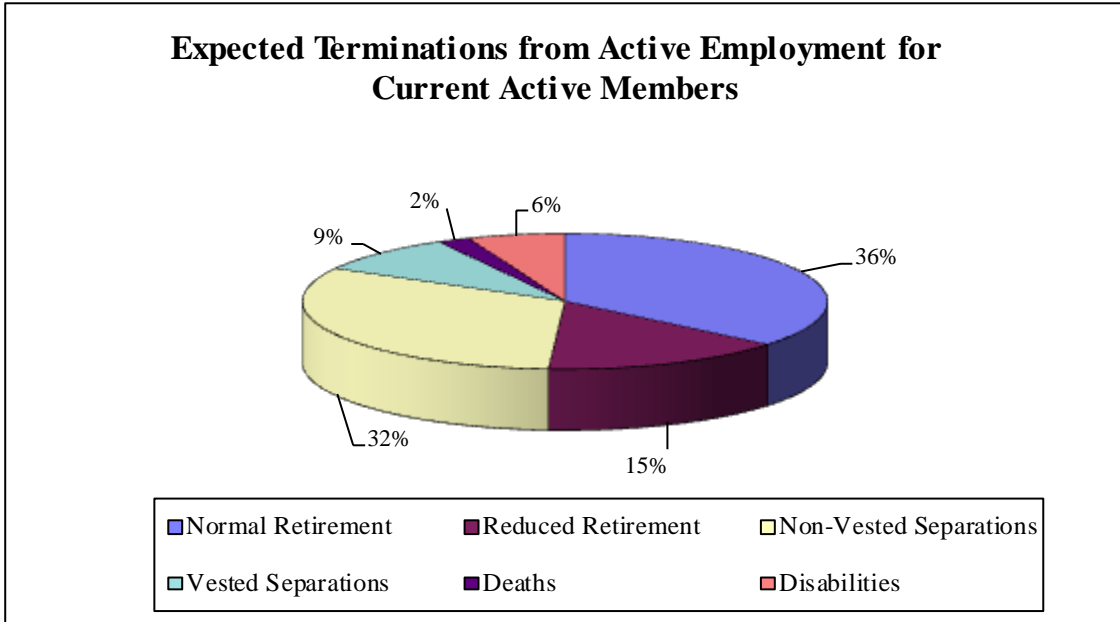
DEFINED BENEFIT ACTIVE MEMBERS IN VALUATION GROUP AVERAGES - COMPARATIVE STATEMENT

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 %	@	
	2005	114,620	42.0	10.1	37,858	2.1 %	@	
	2010	118,240	41.0	9.6	40,691	1.5 %	@	
	2011	118,273	40.5	9.2	40,952	0.6 %		
	2012	117,430	40.4	9.1	39,938	(2.5)%		
	2013	117,370	40.2	9.1	40,433	1.2 %		
	2014	118,114	39.8	8.8	40,862	1.1 %		
	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 %	@	
2005		236,073	43.3	9.2	29,933	4.2 %	@	
2010		215,144	44.6	10.1	33,447	2.2 %	@	
2011		209,452	44.9	10.2	33,968	1.6 %		
2012		208,188	44.7	10.1	33,918	(0.1)%		
2013		207,416	44.6	10.0	34,396	1.4 %		
2014		203,955	44.3	10.0	36,087	4.9 %		
LAW * (Includes Public Safety and Law Enforcement)		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 %	@	
	2005	8,111	39.9	12.6	49,472	4.1 %	@	
	2010	7,790	41.2	14.0	56,801	2.8 %	@	
	2011	7,629	41.3	14.1	57,836	1.8 %		
	2012	7,557	41.3	14.2	58,522	1.2 %		
	2013	7,634	41.3	14.2	59,117	1.0 %		
	2014	7,704	41.2	14.0	60,680	2.6 %		
	TOTAL	2005	358,804	42.8 yrs.	9.5 yrs.	32,906	2.1 %	
		2010	341,174	43.3	10.0	36,491	1.2 %	
2011		335,354	43.2	9.9	36,974	1.3 %		
2012		333,175	43.1	9.8	36,598	(1.0)%		
2013		332,420	43.0	9.8	37,095	1.4 %		
2014		329,773	42.6	9.7	38,372	3.4 %		

@ 5-year annual compound rate.

* Beginning with the December 31, 2005 valuation report, valuation results for the Law division are shown separately for Public Safety and Law Enforcement.

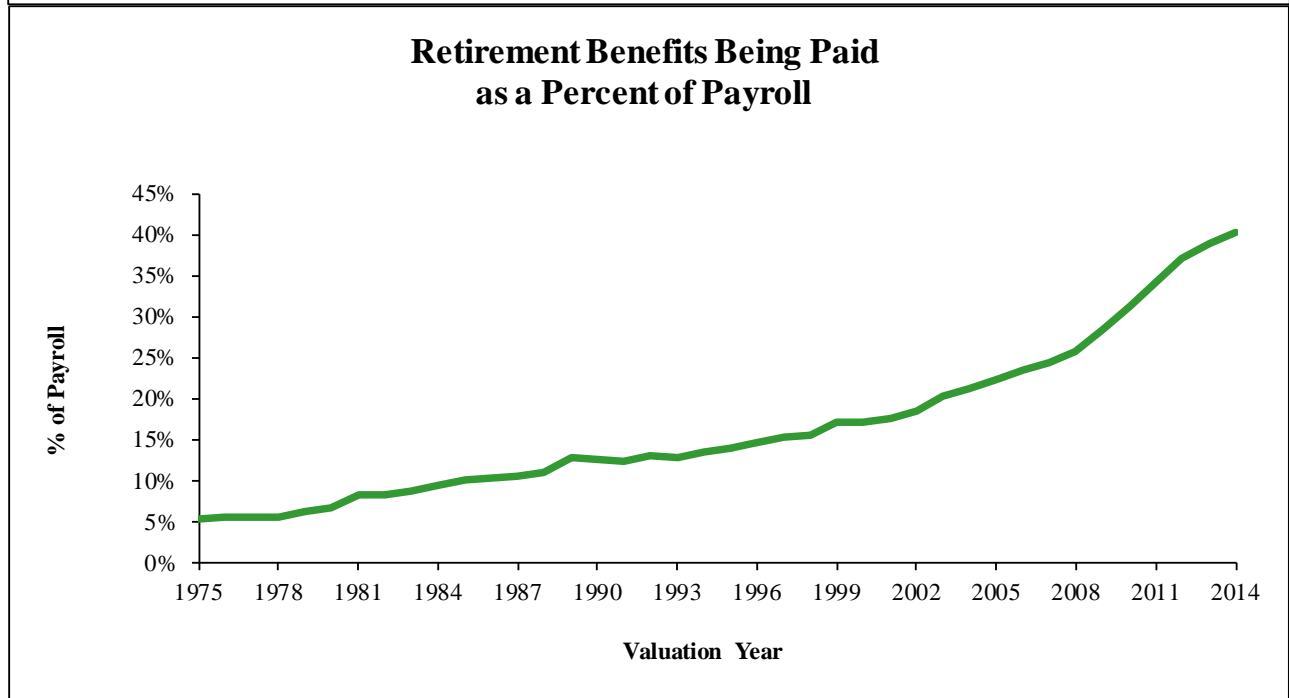
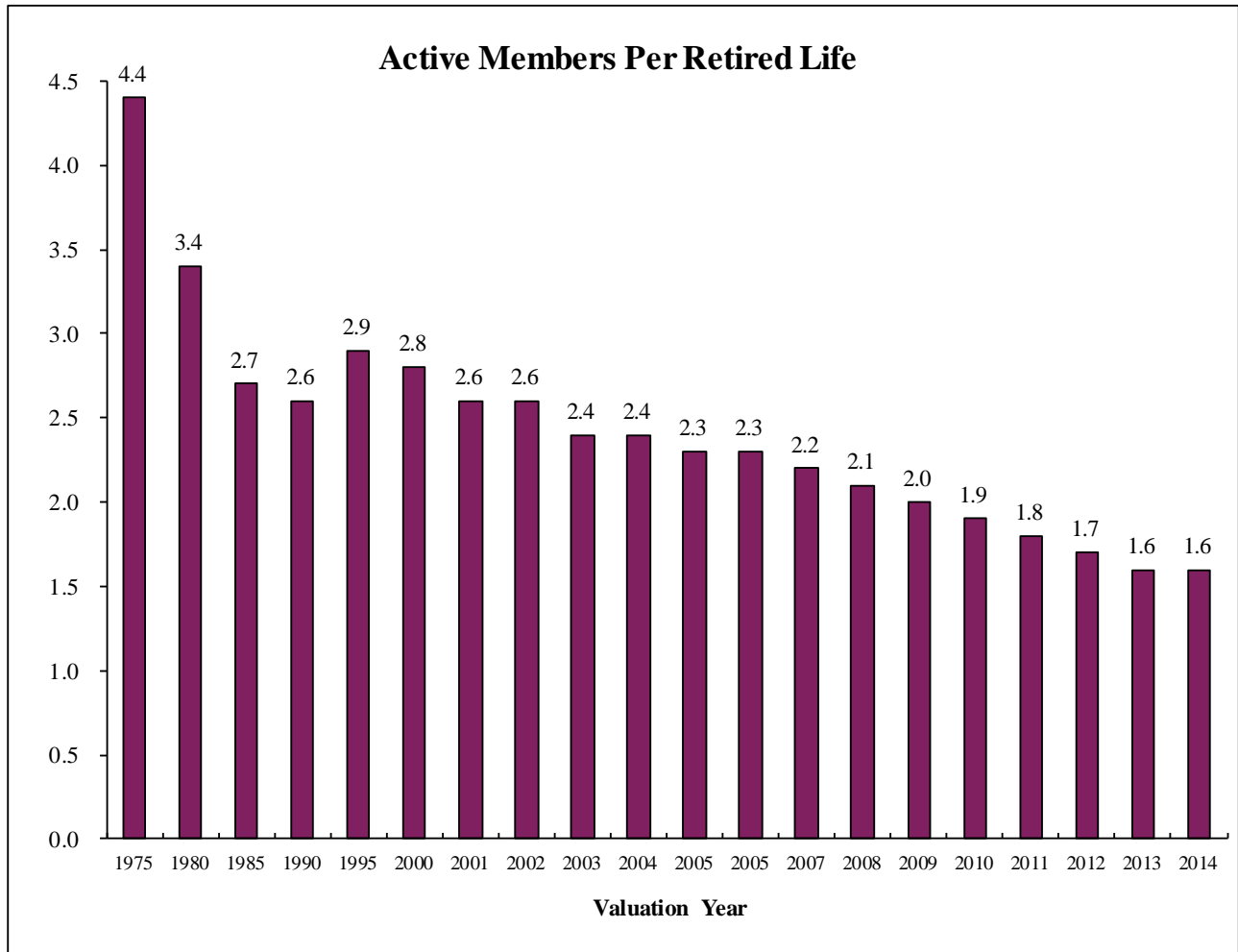
DEVELOPMENT OF PRESENT DEFINED BENEFIT POPULATION DECEMBER 31, 2014



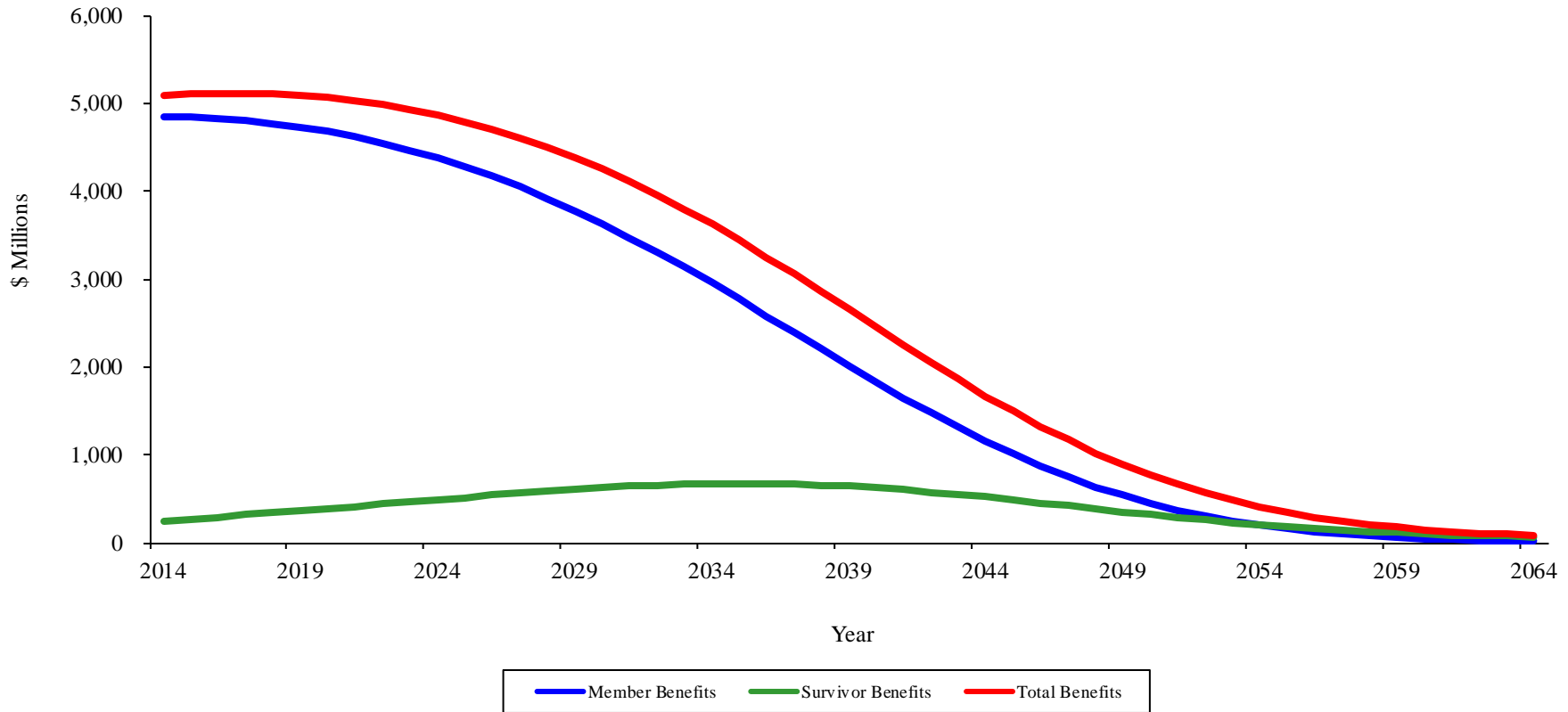
The charts above show the expected future development of the present population in simplified terms. The defined benefit portion of the Retirement System presently covers 329,773 active members. Eventually, 32% of the population is expected to terminate covered employment prior to retirement and forfeit eligibility for a monthly benefit. 60% 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. 8% of the present population is expected to become eligible for death-in-service or disability benefits. Within 7 years, over half of the covered membership is expected to consist of new hires.

ACTIVE/RETIRED MEMBER STATISTICS

DECEMBER 31, 2014



PROJECTED FUTURE BENEFIT PAYMENTS ON BEHALF OF PRESENT RETIRED LIVES



Total future payments:	\$135.0 billion
From present assets:	\$55.1 billion
From future earnings:	\$79.9 billion

**ALL DIVISIONS
DEFINED BENEFIT ACTIVE MEMBERS IN VALUATION
DECEMBER 31, 2014
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	11,480							11,480
Tot. Pay	\$102,088,648							\$102,088,648
Avg. Pay	\$8,893							\$8,893
20-24	36,181	272						36,453
Tot. Pay	\$473,101,084	\$5,724,541						\$478,825,625
Avg. Pay	\$13,076	\$21,046						\$13,135
25-29	24,059	4,054	168					28,281
Tot. Pay	\$662,142,692	\$157,498,239	\$6,224,869					\$825,865,800
Avg. Pay	\$27,522	\$38,850	\$37,053					\$29,202
30-34	17,652	9,167	3,536	216				30,571
Tot. Pay	\$520,249,403	\$409,947,548	\$168,786,760	\$9,568,979				\$1,108,552,690
Avg. Pay	\$29,473	\$44,720	\$47,734	\$44,301				\$36,262
35-39	11,106	7,446	7,574	3,212	124			29,462
Tot. Pay	\$356,842,450	\$344,613,994	\$394,886,218	\$170,438,615	\$6,375,352			\$1,273,156,629
Avg. Pay	\$32,131	\$46,282	\$52,137	\$53,063	\$51,414			\$43,214
40-44	10,066	6,493	6,799	7,718	2,924	111		34,111
Tot. Pay	\$324,295,272	\$295,948,500	\$351,847,386	\$430,277,727	\$167,972,114	\$5,856,087		\$1,576,197,086
Avg. Pay	\$32,217	\$45,580	\$51,750	\$55,750	\$57,446	\$52,758		\$46,208
45-49	9,096	6,148	6,300	6,822	7,096	3,212	84	38,758
Tot. Pay	\$282,643,236	\$267,929,249	\$316,488,050	\$379,453,960	\$433,999,756	\$191,506,679	\$5,215,635	\$1,877,236,565
Avg. Pay	\$31,073	\$43,580	\$50,236	\$55,622	\$61,161	\$59,622	\$62,091	\$48,435
50-54	8,369	5,967	6,363	6,545	6,473	7,312	1,524	42,553
Tot. Pay	\$247,149,937	\$246,708,619	\$300,052,192	\$337,777,645	\$372,489,068	\$455,287,216	\$97,081,156	\$2,056,545,833
Avg. Pay	\$29,532	\$41,346	\$47,156	\$51,609	\$57,545	\$62,266	\$63,702	\$48,329
55-59	6,963	5,312	5,946	6,405	5,846	5,210	2,524	38,206
Tot. Pay	\$190,382,969	\$208,429,378	\$264,215,123	\$313,728,886	\$317,937,096	\$312,688,083	\$166,652,475	\$1,774,034,010
Avg. Pay	\$27,342	\$39,237	\$44,436	\$48,982	\$54,385	\$60,017	\$66,027	\$46,433
60-64	4,597	3,551	3,771	3,894	4,000	3,331	1,754	24,898
Tot. Pay	\$110,990,290	\$134,103,637	\$163,002,425	\$187,539,126	\$208,097,454	\$194,171,890	\$116,896,075	\$1,114,800,897
Avg. Pay	\$24,144	\$37,765	\$43,225	\$48,161	\$52,024	\$58,292	\$66,645	\$44,775
65-69	2,667	1,568	1,323	1,182	1,264	1,032	711	9,747
Tot. Pay	\$41,784,913	\$46,595,255	\$48,600,590	\$50,909,413	\$63,522,403	\$56,989,624	\$47,515,369	\$355,917,567
Avg. Pay	\$15,667	\$29,716	\$36,735	\$43,071	\$50,255	\$55,223	\$66,829	\$36,516
70 & Over	2,045	1,017	735	470	370	303	313	5,253
Tot. Pay	\$23,411,602	\$15,563,503	\$14,928,684	\$12,680,280	\$13,727,351	\$13,945,180	\$16,509,103	\$110,765,703
Avg. Pay	\$11,448	\$15,303	\$20,311	\$26,979	\$37,101	\$46,024	\$52,745	\$21,086
Totals	144,281	50,995	42,515	36,464	28,097	20,511	6,910	329,773
Tot. Pay	\$3,335,082,496	\$2,133,062,463	\$2,029,032,297	\$1,892,374,631	\$1,584,120,594	\$1,230,444,759	\$449,869,813	\$12,653,987,053
Avg. Pay	\$23,115	\$41,829	\$47,725	\$51,897	\$56,380	\$59,990	\$65,104	\$38,372

ALL DIVISIONS
DEFINED BENEFIT ACTIVE MEMBERS IN VALUATION
DECEMBER 31, 2014
BY GENDER AND YEARS OF SERVICE

Service Years	Active Member Count			Active Member Pays	
	Males	Females	Total	Total	Average
0	32,074	37,547	69,621	\$ 1,074,920,627	\$15,440
1	13,272	15,358	28,630	727,725,387	25,418
2	9,087	11,125	20,212	622,184,797	30,783
3	6,657	7,446	14,103	484,078,580	34,325
4	5,463	6,252	11,715	426,173,105	36,378
5	4,512	4,630	9,142	346,293,894	37,879
6	4,511	5,747	10,258	408,297,518	39,803
7	5,025	6,011	11,036	464,077,648	42,051
8	4,992	5,855	10,847	479,653,711	44,220
9	4,372	5,340	9,712	434,739,692	44,763
10	4,009	4,826	8,835	407,285,256	46,099
11	3,839	4,194	8,033	377,498,008	46,993
12	3,571	4,297	7,868	379,830,128	48,275
13	3,847	4,587	8,434	404,116,086	47,915
14	4,126	5,219	9,345	460,302,819	49,257
15 & Up	44,492	47,490	91,982	5,156,809,797	56,063
Totals	153,849	175,924	329,773	\$ 12,653,987,053	\$38,372

SUMMARY OF PENSION EXPERIENCE
TRADITIONAL, COMBINED, AND MEMBER DIRECTED PLANS
(\$ IN MILLIONS)

	2014		2013	
	Total \$	% of Accrued Liabilities	Total \$	% of Accrued Liabilities
Beginning of Year				
1. Total Accrued Liabilities	\$ 86,644.58	100.0 %	\$ 83,878.13	100.0 %
2. Valuation Assets	71,411.24	82.4 %	67,854.78	80.9 %
3. Unfunded Actuarial Accrued Liabilities	\$ 15,233.34	17.6 %	\$ 16,023.35	19.1 %
Experience Gains(Losses)				
4. Gains (losses) in economic risk areas				
a. Pay increases	\$ 466.74	0.5 %	\$ 557.20	0.7 %
b. Investment return	474.42	0.5 %	620.03	0.7 %
c. Total	\$ 941.16	1.0 %	\$ 1,177.23	1.4 %
5. Gains (losses) from decrement experience				
a. Service retirement	(92.07)	(0.1)%	(77.28)	(0.1)%
b. Disability retirement	99.62	0.1 %	68.31	0.1 %
c. Death-in-service	41.41	0.0 %	30.19	0.0 %
d. Other separations	4.02	0.0 %	(13.09)	0.0 %
e. Total	\$ 52.98	0.0 %	\$ 8.13	0.0 %
6. Gains (losses) from retiree mortality	\$ 95.86	0.1 %	\$ 140.51	0.2 %
7. Total experience gains (losses): (4c) + (5e) + (6)	\$ 1,090.00	1.1 %	\$ 1,325.87	1.6 %
End of Year				
8. Total Actuarial Accrued Liabilities	\$ 89,285.24	100.0 %	\$ 86,644.58	100.0 %
9. Valuation Assets	74,864.75	83.8 %	71,411.24	82.4 %
10. Unfunded Actuarial Accrued Liabilities	\$ 14,420.49	16.2 %	\$ 15,233.34	17.6 %

SUMMARY OF PENSION EXPERIENCE
TRADITIONAL PLAN
(\$ IN MILLIONS)

	2014		2013	
	Total \$	% of Accrued Liabilities	Total \$	% of Accrued Liabilities
Beginning of Year				
1. Total Accrued Liabilities	\$ 86,407.23	100.0 %	\$ 83,663.71	100.0 %
2. Valuation Assets	71,175.05	82.4 %	67,669.64	80.9 %
3. Unfunded Actuarial Accrued Liabilities	\$ 15,232.18	17.6 %	\$ 15,994.07	19.1 %
Experience Gains (Losses)				
4. Gains (losses) in economic risk areas				
a. Pay increases	\$ 461.82	0.5 %	\$ 551.67	0.7 %
b. Investment return	471.29	0.5 %	617.10	0.7 %
c. Total	933.11	1.0 %	1,168.77	1.4 %
5. Gains (losses) from decrement experience				
a. Service retirement	(91.91)	(0.1)%	(77.19)	(0.1)%
b. Disability retirement	94.96	0.1 %	63.97	0.1 %
c. Death-in-service	40.38	0.0 %	29.53	0.0 %
d. Other separations	4.76	0.0 %	(12.99)	0.0 %
e. Total	\$ 48.19	0.1 %	\$ 3.32	0.0 %
6. Gains (losses) from retiree mortality	\$ 95.80	0.1 %	\$ 140.40	0.2 %
7. Total experience gains (losses): (4c) + (5e) + (6)	\$ 1,077.10	1.2 %	\$ 1,312.49	1.6 %
End of Year				
8. Total Actuarial Accrued Liabilities	\$ 89,017.35	100.0 %	\$ 86,407.23	100.0 %
9. Valuation Assets	74,567.26	83.8 %	71,175.05	82.4 %
10. Unfunded Actuarial Accrued Liabilities	\$ 14,450.09	16.2 %	\$ 15,232.18	17.6 %

**SUMMARY OF PENSION EXPERIENCE
COMBINED PLAN
(\$ IN MILLIONS)**

	2014		2013	
	Total \$	% of Accrued Liabilities	Total \$	% of Accrued Liabilities
Beginning of Year				
1. Total Accrued Liabilities	\$ 230.47	100.0 %	\$ 211.76	100.0 %
2. Valuation Assets	229.37	99.5 %	182.62	86.2 %
3. Unfunded Actuarial Accrued Liabilities	\$ 1.10	0.5 %	\$ 29.14	13.8 %
Experience Gains (Losses)				
4. Gains (losses) in economic risk areas				
a. Pay increases	\$ 4.92	2.1 %	\$ 5.53	2.6 %
b. Investment return	3.05	1.3 %	2.84	1.3 %
c. Total	7.97	3.4 %	8.37	3.9 %
5. Gains (losses) from decrement experience				
a. Service retirement	(0.16)	(0.1)%	(0.09)	0.0 %
b. Disability retirement	4.66	2.0 %	4.34	2.0 %
c. Death-in-service	1.04	0.5 %	0.66	0.3 %
d. Other separations	(0.74)	(0.3)%	(0.09)	0.0 %
e. Total	\$ 4.80	2.1 %	\$ 4.82	2.3 %
6. Gains (losses) from retiree mortality	\$ 0.04	0.0 %	\$ 0.10	0.0 %
7. Total experience gains (losses): (4c) + (5e) + (6)	\$ 12.81	5.5 %	\$ 13.29	6.2 %
End of Year				
8. Total Actuarial Accrued Liabilities	\$ 259.60	100.0 %	\$ 230.47	100.0 %
9. Valuation Assets	288.72	111.2 %	229.37	99.5 %
10. Unfunded Actuarial Accrued Liabilities	\$ (29.12)	(11.2)%	\$ 1.10	0.5 %

SUMMARY OF RISK MEASURES

TRADITIONAL PLAN

Valuation Year	Funded Ratio	UAAL		Funding Value	
		Amortization Period	UAAL / Total Payroll	of Assets / Total Payroll	Total AAL / Total Payroll
2005 *	89 %	20	0.6	4.7	5.3
2006	93	25	0.4	5.1	5.5
2007	96	14	0.2	5.4	5.6
2008	75	30	1.4	4.4	5.8
2009	75	30	1.5	4.7	6.2
2010	79	25	1.4	5.2	6.6
2011	77	30	1.6	5.4	7.0
2012	81	26	1.3	5.7	7.0
2013	82	25	1.3	5.9	7.2
2014	84	21	1.2	6.1	7.2

COMBINED PLAN

Valuation Year	Funded Ratio	UAAL		Funding Value	
		Amortization Period	UAAL / Total Payroll	of Assets / Total Payroll	Total AAL / Total Payroll
2005 *	85 %	1	0.0	0.2	0.3
2006	85	N/A	0.1	0.3	0.4
2007	88	N/A	0.0	0.4	0.4
2008	71	4	0.1	0.3	0.5
2009	74	3	0.1	0.4	0.6
2010	76	3	0.2	0.5	0.6
2011	79	2	0.1	0.5	0.7
2012	86	1	0.1	0.6	0.7
2013	100	0	0.0	0.7	0.7
2014	111	0	-0.1	0.8	0.7

MEMBER DIRECTED PLAN

Valuation Year	Funded Ratio	UAAL		Funding Value	
		Amortization Period	UAAL / Total Payroll	of Assets / Total Payroll	Total AAL / Total Payroll
2005	N/A	N/A	N/A	N/A	N/A
2006	N/A	N/A	N/A	N/A	N/A
2007	N/A	N/A	N/A	N/A	N/A
2008	89 %	N/A	0.0	0.0	0.0
2009	81	N/A	0.0	0.0	0.0
2010	92	N/A	0.0	0.0	0.0
2011	99	N/A	0.0	0.0	0.0
2012	95	N/A	0.0	0.0	0.0
2013	99	N/A	0.0	0.0	0.0
2014	106	N/A	0.0	0.0	0.0

* Results shown are before assumption changes were made per the 2005 Experience Study.

SECTION II
FINANCIAL INFORMATION

FINANCIAL DATA FOR CALENDAR YEAR 2014

CONSOLIDATED ASSET RECONCILIATION

ALL PLANS, ALL DIVISIONS

	Traditional Pension Plan	DB Portion of Combined Pension Plan	DB Portion of Member-Directed Plan	Total Pension Defined Benefit	401(h) Health Care	115 Health Care Trust	Member Directed VEBA	Total Health Care	DC Portion of Combined Pension Plan	Member Directed	Total Defined Contribution	Total
Beginning Market Value @ 12/31/13												
Assets Held in Trust for Benefits	\$ 74,501,693,269	\$ 240,964,406	\$ 7,099,170	\$ 74,749,756,845	\$ 13,111,684,807	\$ -	\$ 153,084,296	\$ 13,264,769,103	\$ 318,648,484	\$ 539,922,867	\$ 858,571,351	\$ 88,873,097,299
Assets Held for Upcoming Year Budget	116,839,000	-	-	116,839,000	-	-	-	-	-	-	-	116,839,000
Total Beginning Market Value @ 12/31/13	\$ 74,618,532,269	\$ 240,964,406	\$ 7,099,170	\$ 74,866,595,845	\$ 13,111,684,807	\$ -	\$ 153,084,296	\$ 13,264,769,103	\$ 318,648,484	\$ 539,922,867	\$ 858,571,351	\$ 88,989,936,299
External Cash Flows:												
Revenues:												
Member Contributions/Deposits	\$ 1,259,470,753	\$ 218,504	\$ -	\$ 1,259,689,257	\$ -	\$ -	\$ -	\$ -	\$ 34,757,412	\$ 45,278,156	\$ 80,035,568	\$ 1,339,724,825
Employer Contributions	1,559,577,968	44,232,890	5,406,768	1,609,217,626	138,885,020	114,393,084	14,722,682	268,000,786	4,444	42,547,734	42,552,178	1,919,770,590
Retiree Paid Health Care Premiums	-	-	-	-	236,597,968	-	-	236,597,968	-	-	-	236,597,968
Refund from HC Vendors (Formulary & Guarantees)	-	-	-	-	9,396,129	140,981,425	-	150,377,554	-	-	-	150,377,554.00
Federal Subsidies (Med D, ERRP & Direct Subsidy)	-	-	-	-	44,715,641	131,904,250	-	176,619,891	-	-	-	176,619,891.00
Other Income/Cancelled Warrants	625,549	-	-	625,549	7,601,841	76,970	-	7,678,811	-	-	-	8,304,360
Total Revenues	\$ 2,819,674,270	\$ 44,451,394	\$ 5,406,768	\$ 2,869,532,432	\$ 437,196,599	\$ 387,355,729	\$ 14,722,682	\$ 839,275,010	\$ 34,761,856	\$ 87,825,890	\$ 122,587,746	\$ 3,831,395,188
Disbursements:												
Refunds of Member Accounts	\$ (389,707,612)	\$ (1,977,983)	\$ -	\$ (391,685,595)	\$ -	\$ -	\$ -	\$ -	\$ (8,996,459)	\$ (25,019,775)	\$ (34,016,234)	\$ (425,701,829)
Retirement Benefits	(5,109,100,939)	(773,394)	(620,941)	(5,110,495,274)	-	-	-	-	(1,457,593)	(170,920)	(1,628,513)	(5,112,123,787)
Retiree Paid Post Retirement Health Care	-	-	-	-	(236,597,968)	-	-	(236,597,968)	-	-	-	(236,597,968)
ER Paid Post Retirement Health Care	-	-	-	-	(1,383,378,975)	-	(2,217,933)	(1,385,596,908)	-	-	-	(1,385,596,908)
ER Paid Post Retirement Medicare	-	-	-	-	(113,949,600)	-	-	(113,949,600)	-	-	-	(113,949,600)
RMA Funding	-	-	-	-	(4,669,630)	-	-	(4,669,630)	-	-	-	(4,669,630)
Administrative Expenses	(80,615,732)	-	-	(80,615,732)	(23,581,605)	(108,782)	(1,165,490)	(24,855,877)	(2,647,054)	(2,672,113)	(5,319,167)	(110,790,776)
Total Disbursements	\$ (5,579,424,283)	\$ (2,751,377)	\$ (620,941)	\$ (5,582,796,601)	\$ (1,762,177,778)	\$ (108,782)	\$ (3,383,423)	\$ (1,765,669,983)	\$ (13,101,106)	\$ (27,862,808)	\$ (40,963,914)	\$ (7,389,430,498)
Net External Cash Flow	\$ (2,759,750,013)	\$ 41,700,017	\$ 4,785,827	\$ (2,713,264,169)	\$ (1,324,981,179)	\$ 387,246,947	\$ 11,339,259	\$ (926,394,973)	\$ 21,660,750	\$ 59,963,082	\$ 81,623,832	\$ (3,558,035,310)
Inter-Plan Activity												
Member Balance Transfers & Plan Switches	\$ 2,582,400	\$ (2,324,780)	\$ -	\$ 257,620	\$ -	\$ -	\$ -	\$ -	\$ (1,317)	\$ (256,303)	\$ (257,620)	\$ -
DCP Fixed Assets Advanced by TP	370,430	-	-	370,430	-	-	-	-	(76,708)	(293,721)	(370,429)	1
Mitigation Rate	6,615,369	(2,887,263)	-	3,728,106	-	-	-	-	-	(3,728,106)	(3,728,106)	-
Interest on 12/31/13 Advance Balance	789,465	-	-	789,465	-	-	-	-	(85,500)	(703,965)	(789,465)	-
Income Applied to Advance (Loan) Balance	-	2,740,744	(3,504,684)	(763,940)	-	-	-	-	(2,740,744)	3,504,684	763,940	-
Total Inter-Plan Activity	\$ 10,357,664	\$ (2,471,299)	\$ (3,504,684)	\$ 4,381,681	\$ -	\$ -	\$ -	\$ -	\$ (2,904,269)	\$ (1,477,411)	\$ (4,381,680)	\$ 1
Investment Income:												
Interest and Dividends	\$ 1,909,434,744	\$ 6,723,596	\$ 187,538	\$ 1,916,345,878	\$ 470,582,579	\$ 1,554,918	\$ 4,173,227	\$ 476,310,724	\$ 614,302	\$ 301,227	\$ 915,529	\$ 2,393,572,131
Other Ordinary Investment Income	3,053,071,332	10,750,626	299,863	3,064,121,821	4,321,338	223	6,672,740	10,994,301	58	29	87	3,075,116,209
Realized Capital Value Changes	439,907,576	1,544,757	43,087	441,495,420	209,726,745	(2,660,677)	958,805	208,024,873	28,507,910	13,979,012	42,486,922	692,007,215
External Asset Management Fees	(316,878,977)	(1,115,810)	(31,123)	(318,025,910)	(30,811,500)	(61,239)	(692,565)	(31,565,304)	(238,750)	(436,553)	(675,303)	(350,266,517)
Rounding	(1)	(1)	-	(2)	-	-	1	1	1	(1)	-	(1)
Investment Return	\$ 5,085,534,674	\$ 17,903,168	\$ 499,365	\$ 5,103,937,207	\$ 653,819,162	\$ (1,166,775)	\$ 11,112,208	\$ 663,764,595	\$ 28,883,521	\$ 13,843,714	\$ 42,727,235	\$ 5,810,429,037
Ending Market Value @ 12/31/14	\$ 76,954,674,594	\$ 298,096,292	\$ 8,879,678	\$ 77,261,650,564	\$ 12,440,522,790	\$ 386,080,172	\$ 175,535,763	\$ 13,002,138,725	\$ 366,288,486	\$ 612,252,252	\$ 978,540,738	\$ 91,242,330,027
Assets Held in Trust for Benefits	77,075,983,642	298,101,771	8,879,831	77,382,965,244	12,440,522,790	386,080,172	175,539,164	13,002,142,126	366,288,486	612,252,252	978,540,738	91,363,648,108
Assets Held for Upcoming Year Budget	(119,753,000)	-	-	(119,753,000)	-	-	-	-	-	-	-	(119,753,000)
Total Ending Market Value @ 12/31/14	\$ 76,956,230,642	\$ 298,101,771	\$ 8,879,831	\$ 77,263,212,244	\$ 12,440,522,790	\$ 386,080,172	\$ 175,539,164	\$ 13,002,142,126	\$ 366,288,486	\$ 612,252,252	\$ 978,540,738	\$ 91,243,895,108

DEVELOPMENT OF FUNDING VALUE OF PENSION DEFINED BENEFIT ASSETS TRADITIONAL, COMBINED, AND MEMBER DIRECTED PLANS

Year Ended December 31	2013	2014	2015	2016	2017
A. Funding Value Beginning of Year	\$ 67,854,786,533	\$ 71,411,242,059			
B. Market Value End of Year	74,866,595,845	77,263,212,244			
C. Market Value Beginning of Year	67,854,865,577	74,866,595,845			
D. Non-Investment/Administrative Net Cash Flow					
D1. Member Contributions	1,268,633,475	1,259,689,257			
D2. Employer and other Non-Member Contributions	1,681,134,593	1,613,571,281			
D3. Refund of Member Accounts	(412,582,744)	(391,685,595)			
D4. Retirement Benefits	(4,929,942,568)	(5,110,495,274)			
D5. Member Balance Transfers	(3,356,364)	257,620			
D6. Total Net Cash Flow: D1+D2+D3+D4+D5	(2,396,113,608)	(2,628,662,711)			
E. Investment Return					
E1. Market Total: B-C-D6	9,407,843,876	5,025,279,110			
E2. Assumed Rate of Return	8.00%	8.00%			
E3. Assumed Amount of Return	5,332,538,378	5,607,752,856			
E4. Amount Subject to Phase-In: E1-E3	4,075,305,498	(582,473,746)			
F. Phased-In Recognition of Investment Return					
F1. Current Year: 0.25 x E4	1,018,826,375	(145,618,437)			
F2. First Prior Year	797,670,280	1,018,826,375	\$ (145,618,437)		
F3. Second Prior Year	(1,196,465,899)	797,670,280	1,018,826,375	\$ (145,618,437)	
F4. Third Prior Year**	-	(1,196,465,897)	797,670,280	1,018,826,373	\$ (145,618,435)
F5. Total Phase-Ins	620,030,756	474,412,321	1,670,878,218	873,207,936	(145,618,435)
G. Funding Value End of Year					
G1. Preliminary Funding Value End of Year: A+D6+E3+F5	\$ 71,411,242,059	\$ 74,864,744,525			
G2. Upper Corridor Limit: 112% x B	83,850,587,346	86,534,797,714			
G3. Lower Corridor Limit: 88% x B	65,882,604,344	67,991,626,774			
G4. Funding Value End of Year	\$ 71,411,242,059	\$ 74,864,744,525			
H. Difference Between Market and Funding Value	3,455,353,786	2,398,467,719	727,589,501	(145,618,435)	-
I. Recognized Rate of Return	8.93 %	8.68 %			
J. Market Rate of Return	14.11 %	6.83 %			
K. Ratio of Funding Value to Market Value	95 %	97 %			

***Funding Value was set to Market Value as of December 31, 2010.*

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.

DEVELOPMENT OF FUNDING VALUE OF PENSION DEFINED BENEFIT ASSETS TRADITIONAL PLAN

Year Ended December 31	2013	2014	2015	2016	2017
A. Funding Value Beginning of Year	\$ 67,669,639,684	\$ 71,175,050,279			
B. Market Value End of Year	74,618,532,269	76,956,230,642			
C. Market Value Beginning of Year	67,668,091,799	74,618,532,269			
D. Non-Investment/Administrative Net Cash Flow					
D1. Member Contributions	1,268,289,288	1,259,470,753			
D2. Employer and other Non-Member Contributions	1,638,165,318	1,570,323,570			
D3. Refund of Member Accounts	(411,321,700)	(389,707,612)			
D4. Retirement Benefits	(4,928,972,847)	(5,109,100,939)			
D5. Member Balance Transfers	5,709,239	2,582,400			
D6. Total Net Cash Flow: D1+D2+D3+D4+D5	(2,428,130,702)	(2,666,431,828)			
E. Investment Return					
E1. Market Total: B-C-D6	9,378,571,172	5,004,130,201			
E2. Assumed Rate of Return	8.00%	8.00%			
E3. Assumed Amount of Return	5,316,445,947	5,587,346,749			
E4. Amount Subject to Phase-In: E1-E3	4,062,125,225	(\$583,216,548)			
F. Phased-In Recognition of Investment Return					
F1. Current Year: 0.25 x E4	1,015,531,306	(\$145,804,137)			
F2. First Prior Year	795,324,026	1,015,531,306	\$ (145,804,137)		
F3. Second Prior Year	(1,193,759,982)	795,324,026	1,015,531,306	\$ (145,804,137)	
F4. Third Prior Year**	-	(1,193,759,982)	795,324,027	1,015,531,307	\$ (145,804,137)
F5. Total Phase-Ins	617,095,350	471,291,213	1,665,051,196	869,727,170	(145,804,137)
G. Funding Value End of Year					
G1. Preliminary Funding Value End of Year: A+D6+E3+F5	\$ 71,175,050,279	\$ 74,567,256,413			
G2. Upper Corridor Limit: 112% x B	83,572,756,141	86,190,978,319			
G3. Lower Corridor Limit: 88% x B	65,664,308,397	67,721,482,965			
G4. Funding Value End of Year	\$ 71,175,050,279	\$ 74,567,256,413			
H. Difference Between Market and Funding Value	3,443,481,990	2,388,974,229	723,923,033	(145,804,137)	-
I. Recognized Rate of Return	8.93 %	8.67 %			
J. Market Rate of Return	14.11 %	6.83 %			
K. Ratio of Funding Value to Market Value	95 %	97 %			

***Funding Value was set to Market Value as of December 31, 2010.*

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.

DEVELOPMENT OF FUNDING VALUE OF PENSION DEFINED BENEFIT ASSETS COMBINED PLAN

Year Ended December 31	2013	2014	2015	2016	2017
A. Funding Value Beginning of Year	\$ 182,622,970	\$ 229,365,244			
B. Market Value End of Year	240,964,406	298,101,771			
C. Market Value Beginning of Year	184,188,348	240,964,406			
D. Non-Investment/Administrative Net Cash Flow					
D1. Member Contributions	344,187	218,504			
D2. Employer and Other Non-Member Contributions	42,969,275	41,345,627			
D3. Refund of Member Accounts	(1,261,044)	(1,977,983)			
D4. Retirement Benefits	(533,920)	(773,394)			
D5. Member Balance Transfers	(13,356,808)	(2,324,780)			
D6. Total Net Cash Flow: D1+D2+D3+D4+D5	28,161,690	36,487,974			
E. Investment Return					
E1. Market Total: B-C-D6	28,614,368	20,649,391			
E2. Assumed Rate of Return	8.00%	8.00%			
E3. Assumed Amount of Return	15,736,305	19,808,738			
E4. Amount Subject to Phase-In: E1-E3	12,878,063	840,653			
F. Phased-In Recognition of Investment Return					
F1. Current Year: 0.25 x E4	3,219,516	210,163			
F2. First Prior Year	2,315,851	3,219,516	\$ 210,163		
F3. Second Prior Year	(2,691,088)	2,315,851	3,219,516	\$ 210,163	
F4. Third Prior Year**	-	(2,691,086)	2,315,850	3,219,515	\$ 210,164
F5. Total Phase-Ins	2,844,279	3,054,444	5,745,529	3,429,678	210,164
G. Funding Value End of Year					
G1. Preliminary Funding Value End of Year: A+D6+E3+F5	\$ 229,365,244	\$ 288,716,400			
G2. Upper Corridor Limit: 112% x B	269,880,135	333,873,984			
G3. Lower Corridor Limit: 88% x B	212,048,677	262,329,558			
G4. Funding Value End of Year	\$ 229,365,244	\$ 288,716,400			
H. Difference Between Market and Funding Value	11,599,162	9,385,371	3,639,842	210,164	-
I. Recognized Rate of Return	9.45 %	9.23 %			
J. Market Rate of Return	14.43 %	7.97 %			
K. Ratio of Funding Value to Market Value	95 %	97 %			

***Funding Value was set to Market Value as of December 31, 2010.*

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.

DEVELOPMENT OF FUNDING VALUE OF PENSION DEFINED BENEFIT ASSETS MEMBER DIRECTED PLAN

Year Ended December 31	2013	2014	2015	2016	2017
A. Funding Value Beginning of Year	\$ 2,523,879	\$ 6,826,536			
B. Market Value End of Year	7,099,170	8,879,831			
C. Market Value Beginning of Year	2,585,430	7,099,170			
D. Non-Investment/Administrative Net Cash Flow					
D1. Member Contributions	-	-			
D2. Employer and Other Non-Member Contributions	-	1,902,084			
D3. Refund of Member Accounts	-	-			
D4. Retirement Benefits	(435,801)	(620,941)			
D5. Member Balance Transfers	4,291,205	-			
D6. Total Net Cash Flow: D1+D2+D3+D4+D5	3,855,404	1,281,143			
E. Investment Return					
E1. Market Total: B-C-D6	658,336	499,518			
E2. Assumed Rate of Return	8.00%	8.00%			
E3. Assumed Amount of Return	356,126	597,369			
E4. Amount Subject to Phase-In: E1-E3	302,210	(97,851)			
F. Phased-In Recognition of Investment Return					
F1. Current Year: 0.25 x E4	75,553	(24,463)			
F2. First Prior Year	30,403	75,553	\$ (24,463)		
F3. Second Prior Year	(14,829)	30,403	75,553	\$ (24,463)	
F4. Third Prior Year**	-	(14,829)	30,403	75,551	\$ (24,462)
F5. Total Phase-Ins	91,127	66,664	81,493	51,088	(24,462)
G. Funding Value End of Year					
G1. Preliminary Funding Value End of Year: A+D6+E3+F5	\$ 6,826,536	\$ 8,771,712			
G2. Upper Corridor Limit: 112% x B	7,951,070	9,945,411			
G3. Lower Corridor Limit: 88% x B	6,247,270	7,814,251			
G4. Funding Value End of Year	\$ 6,826,536	\$ 8,771,712			
H. Difference Between Market and Funding Value	272,634	108,119	26,626	(24,462)	-
I. Recognized Rate of Return	10.05 %	8.89 %			
J. Market Rate of Return	14.59 %	6.45 %			
K. Ratio of Funding Value to Market Value	96 %	99 %			

** *Funding Value was set to Market Value as of December 31, 2010.*

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 AMONG DIVISIONS
DECEMBER 31, 2014
TRADITIONAL, COMBINED AND MEMBER DIRECTED PLANS**

	Total DB System				
	State	Local	Public Safety	Law Enforcement	Total
(1) Employer Accumulation Fund					
(a) Allocated Amounts	\$ 2,059,973,747	\$ 7,660,219,053	\$ (17,830,110)	\$ 678,158,896	\$ 10,380,521,586
(b) Unallocated Amounts Allocated by (1)(a)	(84,343,458)	(325,430,273)	775,112	(29,480,977)	(438,479,596)
(c) Total EAF (1)(a) + (1)(b)	\$ 1,975,630,289	\$ 7,334,788,780	\$ (17,054,998)	\$ 648,677,919	\$ 9,942,041,990
(2) Employee Savings Fund (ESF)					
(a) Total Member Deposits	\$ 5,322,523,504	\$ 8,224,810,462	\$ 3,581,551	\$ 603,593,013	\$ 14,154,508,530
(b) ESF Allocated by (2)(a)	\$ 4,961,530,672	\$ 7,666,869,695	\$ 3,338,121	\$ 562,568,183	\$ 13,194,306,671
(3) Retired Assets					
(a) Allocated Amounts	\$ 21,797,594,743	\$ 29,939,684,907	\$ 43,662,083	\$ 2,166,621,828	\$ 53,947,563,561
(b) Additional and DC Annuities	234,315	59,312,707	0	0	59,547,022
(c) Total Retiree Assets	\$ 21,797,829,058	\$ 29,998,997,614	\$ 43,662,083	\$ 2,166,621,828	\$ 54,007,110,583
(4) Subtotal: (1)(c) + (2)(b) + (3)(c)	\$ 28,734,990,019	\$ 45,000,656,089	\$ 29,945,206	\$ 3,377,867,930	\$ 77,143,459,244
(5) Assets Held For Upcoming Year Budget Allocated According to (4)	44,592,566	69,849,209	46,671	5,264,554	119,753,000
(6) Total Employer + Employee Defined Benefit Assets: (4)+(5)	\$ 28,779,582,585	\$ 45,070,505,298	\$ 29,991,877	\$ 3,383,132,484	\$ 77,263,212,244
(7) Market Value Adjustment Allocated According to (6)	(893,413,344)	(1,399,099,782)	(931,046)	(105,023,547)	(2,398,467,719)
(8) Funding Value of Defined Benefit Assets (6)+(7)	\$ 27,886,169,241	\$ 43,671,405,516	\$ 29,060,831	\$ 3,278,108,937	\$ 74,864,744,525

**ALLOCATION OF FUNDING VALUE OF ASSETS AMONG DIVISIONS
DECEMBER 31, 2014
TRADITIONAL PLAN**

	Traditional Plan				
	State	Local	Public Safety	Law Enforcement	Total
(1) Employer Accumulation Fund (EAF)					
(a) Allocated Amounts	\$ 1,943,186,869	\$ 7,490,328,713	\$ (17,830,110)	\$ 678,158,896	\$ 10,093,844,368
(b) Unallocated Amounts Allocated by (1)(a)	(84,474,373)	(325,620,161)	775,112	(29,480,977)	(438,800,399)
(c) Total EAF (1)(a) + (1)(b)	\$ 1,858,712,496	\$ 7,164,708,552	\$ (17,054,998)	\$ 648,677,919	\$ 9,655,043,969
(2) Employee Savings Fund (ESF)					
(a) Total Member Deposits	\$ 5,321,892,776	\$ 8,223,947,931	\$ 3,581,551	\$ 603,593,013	\$ 14,153,015,271
(b) ESF Allocated by (2)(a)	\$ 4,960,175,956	\$ 7,664,985,092	\$ 3,338,121	\$ 562,568,183	\$ 13,191,067,352
(3) Retired Assets					
(a) Allocated Amounts	\$ 21,792,567,098	\$ 29,927,968,290	\$ 43,662,083	\$ 2,166,621,828	\$ 53,930,819,299
(b) Additional Annuities	234,315	59,312,707	0	0	59,547,022
(c) Total Retiree Assets	\$ 21,792,801,413	\$ 29,987,280,997	\$ 43,662,083	\$ 2,166,621,828	\$ 53,990,366,321
(4) Subtotal: (1)(c) + (2)(b) + (3)(c)	\$ 28,611,689,865	\$ 44,816,974,641	\$ 29,945,206	\$ 3,377,867,930	\$ 76,836,477,642
(5) Assets Held For Upcoming Year Budget Allocated According to (4)	44,592,566	69,849,209	46,671	5,264,554	119,753,000
(6) Total Employer + Employee Defined Benefit Assets: (4)+(5)	\$ 28,656,282,431	\$ 44,886,823,850	\$ 29,991,877	\$ 3,383,132,484	\$ 76,956,230,642
(7) Market Value Adjustment Allocated According to (6)	(889,585,153)	(1,393,434,483)	(931,046)	(105,023,547)	(2,388,974,229)
(8) Funding Value of Defined Benefit Assets (6)+(7)	\$ 27,766,697,278	\$ 43,493,389,367	\$ 29,060,831	\$ 3,278,108,937	\$ 74,567,256,413

**ALLOCATION OF FUNDING VALUE OF ASSETS AMONG DIVISIONS
DECEMBER 31, 2014
COMBINED PLAN**

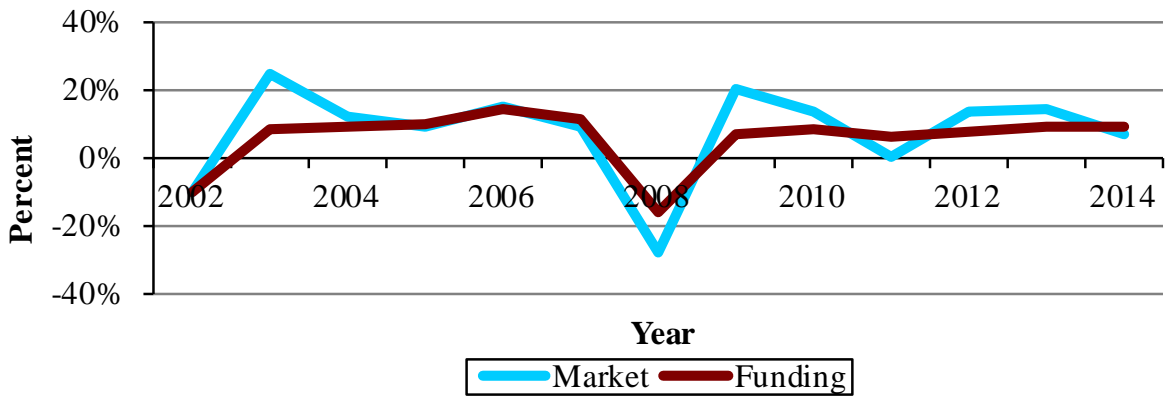
	Combined Plan				
	State	Local	Public Safety	Law Enforcement	Total
(1) Employer Accumulation Fund					
(a) Allocated Amounts	\$ 116,693,051	\$ 169,728,342	\$0	\$0	\$ 286,421,393
(b) Unallocated Amounts Allocated by (1)(a)	132,852	193,233	0	0	326,085
(c) Total EAF	\$ 116,825,903	\$ 169,921,575	\$0	\$0	\$ 286,747,478
(2) Employee Savings Fund					
(a) Total Member Deposits	\$ 536,634	\$ 765,194	\$0	\$0	\$ 1,301,828
(b) ESF Allocated by (2)(a)	\$ 1,234,380	\$ 1,760,121	\$0	\$0	\$ 2,994,501
(3) Retired Assets					
(a) Allocated Amounts	\$ 2,455,288	\$ 5,904,504	\$0	\$0	\$ 8,359,792
(b) DC Annuities	0	0	0	0	0
(c) Total Retiree Assets	\$ 2,455,288	\$ 5,904,504	\$0	\$0	\$ 8,359,792
(4) Subtotal: (1)(c)+ (2)(b)+ (3)(c)	\$ 120,515,571	\$ 177,586,200	\$0	\$0	\$ 298,101,771
(5) Assets Held For Upcoming Year Budget Allocated According to (4)	0	0	0	0	0
(6) Total Employer + Employee Defined Benefit Assets: (4)+(5)	\$ 120,515,571	\$ 177,586,200	\$0	\$0	\$ 298,101,771
(7) Market Value Adjustment Allocated According to (6)	(3,794,286)	(5,591,085)	0	0	(9,385,371)
(8) Funding Value of Defined Benefit Assets (6)+(7)	\$ 116,721,285	\$ 171,995,115	\$0	\$0	\$ 288,716,400

**ALLOCATION OF FUNDING VALUE OF ASSETS AMONG DIVISIONS
DECEMBER 31, 2014
MEMBER DIRECTED PLAN**

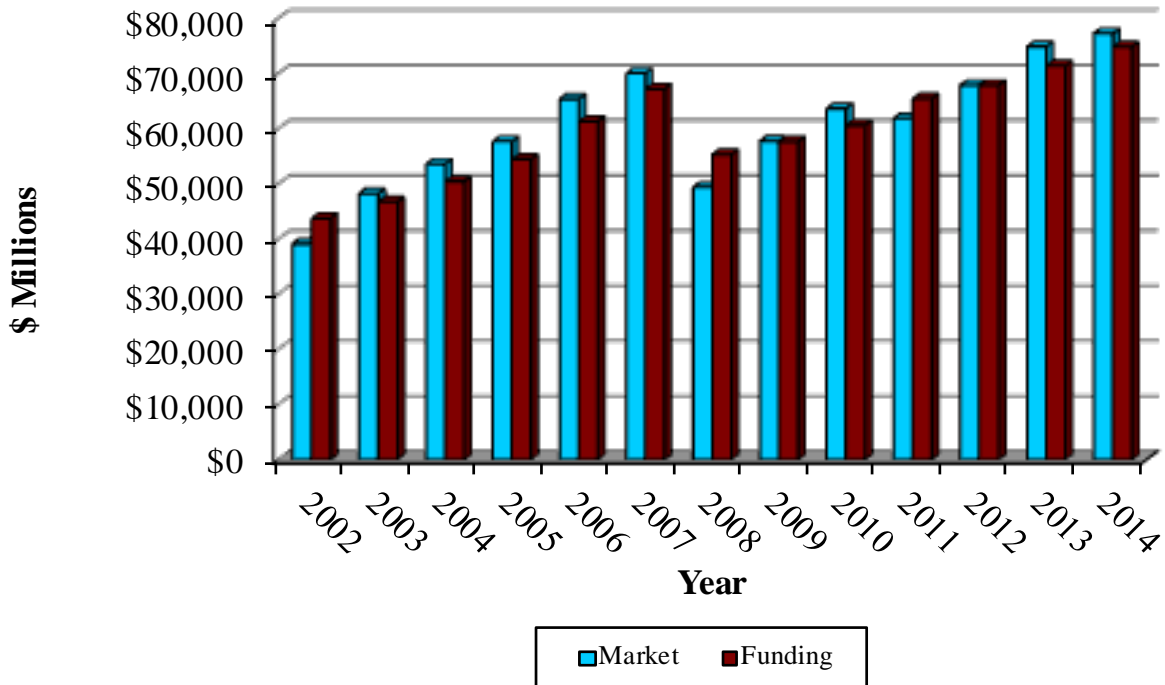
	Member Directed Plan				
	State	Local	Public Safety	Law Enforcement	Total
(1) Employer Accumulation Fund					
(a) Allocated Amounts	\$ 93,827	\$ 161,998	\$0	\$0	\$ 255,825
(b) Unallocated Amounts Allocated by 1(a)	(1,937)	(3,345)	0	0	(5,282)
(c) Total EAF	\$ 91,890	\$ 158,653	\$0	\$0	\$ 250,543
(2) Employee Savings Fund					
(a) Total Member Deposits	\$ 94,095	\$ 97,337	\$0	\$0	\$ 191,431
(b) ESF Allocated by (2)(a)	\$ 120,336	\$ 124,482	\$0	\$0	\$ 244,818
(3) Retired Assets					
(a) Allocated Amounts	\$ 2,572,357	\$ 5,812,113	\$0	\$0	\$ 8,384,470
(b) No Division	0	0	0	0	0
(c) Total Retiree Assets	\$ 2,572,357	\$ 5,812,113	\$0	\$0	\$ 8,384,470
(4) Subtotal: (1)(c)+ (2)(b)+ (3)(c)	\$ 2,784,583	\$ 6,095,248	\$0	\$0	\$ 8,879,831
(5) Assets Held For Upcoming Year Budget Allocated According to (4)	0	0	0	0	0
(6) Total Employer + Employee Defined Benefit Assets: (4)+(5)	\$ 2,784,583	\$ 6,095,248	\$0	\$0	\$ 8,879,831
(7) Market Value Adjustment Allocated According to (6)	(33,905)	(74,214)	0	0	(108,119)
(8) Funding Value of Defined Benefit Assets (6)+(7)	\$ 2,750,678	\$ 6,021,034	\$0	\$0	\$ 8,771,712

COMPARISON OF DEFINED BENEFIT PENSION ASSETS

Comparison of Rates of Return



Comparison of Defined Benefit Pension Asset Values



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 (or five if a member of Group C as defined on page III-4) highest years of earnable salary (or final average salary). 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). OPERS 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 several 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 for Transition Group A and B members. The highest 5 calendar years is used for Transition Group C members.

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. Member contribution rates as a % of earnable salary are presented on page III-3.

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 14.0%. The maximum statutory rate for law enforcement employers is 18.1% (H.B. 416, effective 1/1/2001).

BENEFITS AND CONDITIONS EVALUATED

CONTRIBUTIONS (CONCLUDED)

Health Care Preservation Plan (HCPP). The following table shows total scheduled employer contribution rates (includes contributions for both the pension and retiree health programs):

Year	State	Local Government	Law Enforcement	Public Safety
2015 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:

Year	All Divisions
2015	2.0%
2016	3.0%
2017 and Later	4.0%

Health care funding portion of contribution rates are according to the Board adopted schedule.

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

Year	State	Local Government	Law Enforcement	Public Safety
2015 and Later	10.00%	10.00%	13.00%	12.00%

SENATE BILL 343

Senate Bill 343. Senate Bill (SB) 343 became effective January 7, 2013. The benefit changes enacted by SB 343 do not apply to members who retired with an effective date of January 1, 2013 or earlier. The benefit provisions enumerated on pages III-9 through the end of Section III are the provisions that were applicable prior to the enactment of SB 343. Changes to the benefit provisions resulting from Senate Bill 343 are enumerated on pages III-4 through III-8.

Transition Groups. A transition plan was developed as part of the SB 343 benefit changes. The transition group to which a member belongs is dependent upon the date at which that member is first eligible to retire with a reduced or unreduced benefit.

A member is in Group A if the member is eligible to retire under the retirement eligibility conditions in place prior to the passage of SB 343 on or before January 7, 2018.

A member is in Group B if the member is not in Group A and satisfies either of the following conditions:

- (1) The member has 20 years of service credit as of January 7, 2013, or
- (2) The member is eligible to retire under the retirement eligibility conditions in place prior to the passage of SB 343 on or before January 7, 2023.

A member is in Group C if the member satisfies either of the following conditions:

- (1) The member was hired prior to January 7, 2013 but was not in Group A or Group B, or
- (2) The member was hired on or after January 7, 2013.

Key Benefit Changes. There are five key components that were affected by SB 343:

- (1) Age and service retirement eligibility conditions,
- (2) Benefit formula,
- (3) Cost-of-living Allowance (COLA),
- (4) Final Average Salary (FAS) period, and
- (5) Early retirement reduction factors

SENATE BILL 343

KEY BENEFIT CHANGES FOR TRANSITION GROUP A

COLAs. COLAs provided up to December 31, 2018 will be based upon a simple, 3 percent COLA. COLAs provided after December 31, 2018 continue to be simple, but will be based upon the annual percentage change in the Consumer Price Index (CPI), and not greater than 3%.

KEY BENEFIT CHANGES FOR TRANSITION GROUP B

Retirement Eligibility. The table below shows retirement eligibility conditions for Group B members:

<u>Valuation Group</u>	<u>Unreduced</u>		<u>Reduced</u>	
	<u>Age</u>	<u>Service</u>	<u>Age</u>	<u>Service</u>
State / Local Government	52	31	55	25
	Any	32		
	66	5	60	5
Law Enforcement	50	25	48	25
	64	15	52	15
Public Safety	54	25	48	25
	64	15	52	15

Early Retirement Reduction Factors. Presented below are the reduction factors, expressed as a percentage of the base amount, applicable to a Group B member who retires with a reduced benefit:

State and Local Government:

<u>Service</u>	<u>Ages</u>										
	<u>55</u>	<u>56</u>	<u>57</u>	<u>58</u>	<u>59</u>	<u>60</u>	<u>61</u>	<u>62</u>	<u>63</u>	<u>64</u>	<u>65</u>
30	75%	76%	78%	79%	80%	82%	83%	85%	86%	88%	89%
29	69	70	72	73	74	75	76	78	79	80	89
28	64	65	66	67	68	69	70	71	72	80	89
27	59	60	61	62	62	63	64	65	72	80	89
26	55	55	56	57	57	58	59	65	72	80	89
25	50	51	51	52	52	53	59	65	72	80	89
24 & Under						53	59	65	72	80	89

SENATE BILL 343

Law Enforcement and Public Safety:

Law Enforcement		Public Safety	
Age	Factor	Age	Factor
48	84%	48	58%
49	92	49	64
50	100	50	70
		51	76
		52	83
		53	91
		54	100

COLAs. Simple COLAs will be based upon the annual percentage change in the Consumer Price Index (CPI), but not greater than 3%.

KEY BENEFIT CHANGES FOR TRANSITION GROUP C

Retirement Eligibility. The table below shows retirement eligibility conditions for Group C members:

Valuation Group	Unreduced		Reduced	
	Age	Service	Age	Service
State / Local Government	55	32	57	25
	67	5	62	5
Law Enforcement	52	25	48	25
	64	15	56	15
Public Safety	56	25	52	25
	64	15	56	15

SENATE BILL 343

Early Retirement Reduction Factors. Presented below are the reduction factors, expressed as a percentage of the base amount, applicable to a Group C member that retires with a reduced benefit:

State and Local Government:

Service	Ages									
	57	58	59	60	61	62	63	64	65	66
31	80%	80%	81%	82%	83%	85%	86%	87%	88%	89%
30	73	74	75	75	76	77	78	79	80	89
29	67	68	68	69	70	70	71	72	80	89
28	61	62	62	63	63	64	64	72	80	89
27	56	57	57	57	58	58	64	72	80	89
26	51	52	52	52	52	58	64	72	80	89
25	47	47	47	47	52	58	64	72	80	89
24 & Under						58	64	72	80	89

Law Enforcement and Public Safety:

Law Enforcement		Public Safety	
Age	Factor	Age	Factor
48	70%	52	69%
49	76	53	76
50	84	54	83
51	91	55	91
52	100	56	100

COLAs. Simple COLAs will be based upon the annual percentage change in the Consumer Price Index (CPI), but not greater than 3%.

SENATE BILL 343

FAS Period. Final average salary is based on the average of the annual earnings for the 5 highest calendar years of compensation.

Benefit Formula. Service breakpoint for the 2.50% benefit multiplier in the Traditional Plan or 1.25% benefit multiplier in the Combined Plan for State and Local Government members increased from 30 years to 35 years.

OTHER BENEFIT CHANGES FOR ALL TRANSITION GROUPS

Minimum Benefit. The \$86 minimum benefit provision has been eliminated.

Long Interest Calculation. The minimum allowance calculation based upon twice the member's savings funding balance at retirement together with interest credits, annuitized with unisex factors that reflect plan interest and mortality assumptions, but not the plan's COLA, has been eliminated.

Disability Program. The definition of disability was changed to a more restrictive definition which is expected to result in a reduction in future disability cases.

TRADITIONAL PENSION PLAN – PRE SENATE BILL 343

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, annuitized with unisex factors that reflect plan interest and mortality assumptions, but not the plan’s COLA.

TRADITIONAL PENSION PLAN – PRE SENATE BILL 343

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 early at age 48 with 25 or more years of service and receive the following percentage of the base benefit: 75%, 80%, 86%, or 93% at retirement ages 48, 49, 50 and 51 respectively.

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 – PRE SENATE BILL 343

DISABILITY RETIREMENT

The disability program was revised in 1992, 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 – PRE SENATE BILL 343

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 1/4 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 – PRE SENATE BILL 343

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, COLA, 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 – PRE SENATE BILL 343

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 – PRE SENATE BILL 343

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 meeting retiree health care eligibility requirements. Members retiring with a normal or early service retirement allowance after January 1, 2015 must have 20 or more years of qualified service credit to be eligible for this benefit.

TRADITIONAL PENSION PLAN – PRE SENATE BILL 343

ADDITIONAL ANNUITY PROGRAM

The additional annuity program provides Traditional Plan and re-employed retiree members the opportunity of supplementing their retirement income. Members make additional contributions (independent of the contributions described on page III-2) to an account that earns investment income based upon the return of the OPERS Stable Value Fund. At termination, the member may take the additional annuity account balance either as a lump sum or annuitized in monthly payments.

RE-EMPLOYED RETIREES

Re-employed age and service retirees contribute to the “Money Purchase Plan”. In most instances, re-employed retirees will continue to receive their retirement allowance during re-employment. Upon termination of re-employment, members are eligible to apply for either a refund of contributions prior to age 65 or a Money Purchase Plan benefit as a lump sum or annuity after age 65. The Money Purchase Plan benefit is equal to member contributions and allowable interest plus an additional 67% matching amount. If monthly benefits are elected, joint and survivor options are also available.

COMBINED PLAN – PRE SENATE BILL 343

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 – PRE SENATE BILL 343

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, COLA, 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 – PRE SENATE BILL 343

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.

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.

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

COMBINED PLAN – PRE SENATE BILL 343

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 meeting retiree health care eligibility requirements. Members retiring with a normal or early service retirement allowance after January 1, 2015 must have 20 or more years of qualified service credit to be eligible for this benefit.

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.

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.

MEMBER-DIRECTED PLAN

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).

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. Beginning January 1, 2009, members vest in their RMA based on their attained years of participation in the Plan as follows:

Less than 1 year	0%
1 year	20%
2 years	40%
3 years	60%
4 years	80%
5 years	100%

SAMPLE BENEFIT COMPUTATION – TRADITIONAL PLAN
STATE OR LOCAL MEMBER (TRANSITION GROUP A) - NORMAL RETIREMENT
RETIRING DECEMBER 31, 2014
UNDER BENEFIT PROVISIONS EVALUATED

Data:

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

Computations:

F.	Formula Benefit: $(0.022 \times 30 \text{ years} + 0.025 \times 3 \text{ years}) \times \$32,000 =$	\$ 23,520
G.	Reduction for Line E Election: $\# (1 - 0.85714) \times (F) =$	<u>3,360</u>
H.	Benefit Payable to Retiree while Spouse is Alive: $(F) - (G) =$	20,160
I.	Benefit Payable to Spouse after Retiree's Death	20,160
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)
2015	\$ 20,160	\$ 20,160	\$ 23,520
2016	20,765	20,765	24,226
2017	21,370	21,370	24,931
2018	21,974	21,974	25,637
2019	22,579	22,579	26,342
2020	23,184	23,184	27,048
2021	23,789	23,789	27,754
2022	24,394	24,394	28,459
2023	24,998	24,998	29,165
2024	25,603	25,603	29,870

* Assumes the annual percentage change in the Consumer Price Index (CPI) is 3% or greater in all future years.
Based on conversion factors for optional forms of payment in effect December 31, 2014.

SAMPLE BENEFIT COMPUTATION – TRADITIONAL PLAN
STATE OR LOCAL MEMBER (TRANSITION GROUP A) - EARLY RETIREMENT
RETIRING DECEMBER 31, 2014
UNDER BENEFIT PROVISIONS EVALUATED

Data:

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

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: $(F) \times (G) =$	14,643
I.	Reduction for Line E Election: $\# (1 - 0.85714) \times (H) =$	<u>2,092</u>
J.	Benefit Payable to Retiree while Spouse is Alive: $(H) - (I)$	12,551
K.	Benefit Payable to Spouse after Retiree's Death	12,551
L.	Benefit Payable to Retiree after Spouse's Death	14,643

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)
2015	\$ 12,551	\$ 12,551	\$ 14,643
2016	12,928	12,928	15,082
2017	13,304	13,304	15,522
2018	13,681	13,681	15,961
2019	14,057	14,057	16,400
2020	14,434	14,434	16,840
2021	14,810	14,810	17,279
2022	15,187	15,187	17,718
2023	15,563	15,563	18,158
2024	15,940	15,940	18,597

* Assumes the annual percentage change in the Consumer Price Index (CPI) is 3% or greater in all future years.
Based on conversion factors for optional forms of payment in effect December 31, 2014.

**SAMPLE BENEFIT COMPUTATION – TRADITIONAL PLAN
SECTION 145.33 (B)(2)(b) PUBLIC SAFETY
MEMBER (TRANSITION GROUP A) - NORMAL RETIREMENT
RETIRING DECEMBER 31, 2014
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: $(0.025 \times 25 \text{ years} + 0.021 \times 3 \text{ years}) \times \$38,000 \times 80\% =$	\$ 20,915
G.	Reduction for Line E Election: $\# (1 - 0.91705) \times (F) =$	<u> 1,735 </u>
H.	Benefit Payable to Retiree while Spouse is Alive: $(F) - (G) =$	19,180
I.	Benefit Payable to Spouse after Retiree's Death	19,180
J.	Benefit Payable to Retiree after Spouse's Death	20,915

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)
2015	\$ 19,180	\$ 19,180	\$ 20,915
2016	19,755	19,755	21,542
2017	20,331	20,331	22,170
2018	20,906	20,906	22,797
2019	21,482	21,482	23,425
2020	22,057	22,057	24,052
2021	22,632	22,632	24,680
2022	23,208	23,208	25,307
2023	23,783	23,783	25,935
2024	24,359	24,359	26,562

* Assumes the annual percentage change in the Consumer Price Index (CPI) is 3% or greater in all future years.
Based on conversion factors for optional forms of payment in effect December 31, 2014.

**SAMPLE BENEFIT COMPUTATION – TRADITIONAL PLAN
SECTION 145.33 (B)(2)(a) LAW ENFORCEMENT
MEMBER (TRANSITION GROUP A) - NORMAL RETIREMENT
RETIRING DECEMBER 31, 2014
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: $\# (1 - 0.91705) \times (F) =$	<u>2,169</u>
H.	Benefit Payable to Retiree while Spouse is Alive: $(F) - (G) =$	23,975
I.	Benefit Payable to Spouse after Retiree's Death	23,975
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)
2015	\$ 23,975	\$ 23,975	\$ 26,144
2016	24,694	24,694	26,928
2017	25,414	25,414	27,713
2018	26,133	26,133	28,497
2019	26,852	26,852	29,281
2020	27,571	27,571	30,066
2021	28,291	28,291	30,850
2022	29,010	29,010	31,634
2023	29,729	29,729	32,419
2024	30,448	30,448	33,203

* Assumes the annual percentage change in the Consumer Price Index (CPI) is 3% or greater in all future years.
Based on conversion factors for optional forms of payment in effect December 31, 2014.

**SAMPLE BENEFIT COMPUTATION – TRADITIONAL PLAN
STATE OR LOCAL MEMBER (TRANSITION GROUP A) – TERMINATION BENEFIT
RETIRING DECEMBER 31, 2014
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 E Election: $\# (1 - 0.84967) \times (J) =$	<u>1,349</u>
L.	Benefit Payable to Retiree while Spouse is Alive: $(J) - (K) =$	7,627
M.	Benefit Payable to Spouse after Retiree's Death	7,627
N.	Benefit Payable to Retiree after Spouse's Death	8,976
O.	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.	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)
2015	\$ 7,627	\$ 7,627	\$ 8,976
2016	7,856	7,856	9,245
2017	8,085	8,085	9,515
2018	8,313	8,313	9,784
2019	8,542	8,542	10,053
2020	8,771	8,771	10,322
2021	9,000	9,000	10,592
2022	9,229	9,229	10,861
2023	9,457	9,457	11,130
2024	9,686	9,686	11,400

* Assumes the annual percentage change in the Consumer Price Index (CPI) is 3% or greater in all future years.
Based on conversion factors for optional forms of payment in effect December 31, 2014.

SAMPLE BENEFIT COMPUTATION – TRADITIONAL PLAN
SECTION 145.33 (B)(2)(a) PUBLIC SAFETY/LAW ENFORCEMENT MEMBER
(TRANSITION GROUP A) – TERMINATION BENEFIT
RETIRING DECEMBER 31, 2014
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 x 15 years) x \$38,000 =	\$ 8,550
I.	Reduction for Line E Election: # (1 - 0.90207) x (H) =	<u>837</u>
J.	Benefit Payable to Retiree while Spouse is Alive: (H) - (I) =	7,713
K.	Benefit Payable to Spouse after Retiree's Death	7,713
L.	Benefit Payable to Retiree after Spouse's Death	8,550
M.	In lieu of a lifetime benefit, terminnee may elect to receive a refund of accumulated contributions with interest plus an additional 67% of eligible accumulated contributions because terminnee 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)
2015	\$ 7,713	\$ 7,713	\$ 8,550
2016	7,944	7,944	8,807
2017	8,176	8,176	9,063
2018	8,407	8,407	9,320
2019	8,639	8,639	9,576
2020	8,870	8,870	9,833
2021	9,101	9,101	10,089
2022	9,333	9,333	10,346
2023	9,564	9,564	10,602
2024	9,796	9,796	10,859

* Assumes the annual percentage change in the Consumer Price Index (CPI) is 3% or greater in all future years.
Based on conversion factors for optional forms of payment in effect December 31, 2014.

SECTION IV

RECOMMENDATIONS FOR RESERVE TRANSFERS

DECEMBER 31, 2014 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 cover the cost of ad-hoc postretirement 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, OPERS 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 OPERS 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 pages IV-2 through IV-5 should be netted off the "Other" column on pages IV-2 through IV-5.

TRADITIONAL PLAN
RESERVE TRANSFERS AFFECTING THE EMPLOYER ACCUMULATION FUND
DECEMBER 31, 2014

	Assets Before Transfers	Transfers		Assets After Transfers	Liabilities	Ratio
		Accrued	Other			
State						
A&PR FUND						
SR	\$ 18,302,464,620	\$ 427,284,261	\$ 4,265,899	\$ 18,734,014,780	\$ 18,734,014,780	
MP	56,077,825	248,787	(1,269,134)	55,057,478	55,057,478	
AA	234,315	0	9,868	244,183	244,183	
JR	(10,190)	0	10,190	0	0	
CR	94,508,576	264,312	10,307,366	105,080,254	105,080,254	
DR	2,213,466,499	7,361,946	(11,222,947)	2,209,605,498	2,209,605,498	
BD	516,196,070	6,482,842	3,740,438	526,419,350	526,419,350	
TOTAL A&PR	21,182,937,715	441,642,148	5,841,680	21,630,421,543	21,630,421,543	100.0%
SBF						
AA	0	0	0	0	0	
S-1	119,488,411	2,762,625	1,061,065	123,312,101	123,312,101	
S-2	490,375,288	4,598,311	(522,369)	494,451,230	494,451,230	
TOTAL SBF	609,863,699	7,360,936	538,696	617,763,331	617,763,331	100.0%
TOTAL STATE	\$ 21,792,801,414	\$ 449,003,084	\$ 6,380,376	\$ 22,248,184,874	\$ 22,248,184,874	100.0%
Local						
A&PR FUND						
SR	\$ 25,273,071,690	\$ 566,506,808	\$ 14,563,931	\$ 25,854,142,429	\$ 25,854,142,429	
MP	142,031,655	693,887	(2,748,320)	139,977,222	139,977,222	
AA	59,312,706	251,926	(71,819)	59,492,813	59,492,813	
JR	(808)	0	808	0	0	
CR	126,114,491	0	15,328,904	141,443,395	141,443,395	
DR	2,745,178,779	5,265,144	(12,523,521)	2,737,920,402	2,737,920,402	
BD	640,429,919	10,177,552	4,670,809	655,278,280	655,278,280	
TOTAL A&PR	28,986,138,432	582,895,317	19,220,792	29,588,254,541	29,588,254,541	100.0%
SBF						
AA	0	0	0	0	0	
S-1	177,378,905	4,054,357	(708,183)	180,725,079	180,725,079	
S-2	823,763,659	8,235,116	(7,884,863)	824,113,912	824,113,912	
TOTAL SBF	1,001,142,564	12,289,473	(8,593,046)	1,004,838,991	1,004,838,991	100.0%
TOTAL LOCAL	\$ 29,987,280,996	\$ 595,184,790	\$ 10,627,746	\$ 30,593,093,532	\$ 30,593,093,532	100.0%

TRADITIONAL PLAN
RESERVE TRANSFERS AFFECTING THE EMPLOYER ACCUMULATION FUND
DECEMBER 31, 2014

	Assets Before Transfers	Transfers		Assets After Transfers	Liabilities	Ratio
		Accrued	Other			
Public Safety						
A&PR FUND						
SR	\$ 9,149,006	\$ 0	\$ (172,671)	\$ 8,976,335	\$ 8,976,335	
MP	0	0	0	0	0	
AA	0	0	0	0	0	
JR	0	0	0	0	0	
CR	71,979	0	(71,979)	0	0	
DR	14,552,903	0	287,225	14,840,128	14,840,128	
BD	1,941,125	0	227,372	2,168,497	2,168,497	
TOTAL A&PR	25,715,013	0	269,947	25,984,960	25,984,960	100.0%
SBF						
AA	0	0	0	0	0	
S-1	213,944	0	4,165	218,109	218,109	
S-2	17,733,126	176,176	171,398	18,080,700	18,080,700	
TOTAL SBF	17,947,070	176,176	175,563	18,298,809	18,298,809	100.0%
TOTAL PUBLIC SAFETY	\$ 43,662,083	\$ 176,176	\$ 445,510	\$ 44,283,769	\$ 44,283,769	100.0%
Law Enforcement						
A&PR FUND						
SR	\$ 1,448,579,158	\$ 44,521,837	\$ (5,771,833)	\$ 1,487,329,162	\$ 1,487,329,162	
MP	(11)	0	11	0	0	
AA	0	0	0	0	0	
JR	4,328	0	(4,328)	0	0	
CR	620,499	0	636,689	1,257,188	1,257,188	
DR	562,495,522	1,909,911	3,671,142	568,076,575	568,076,575	
BD	107,949,050	2,328,087	1,352,236	111,629,373	111,629,373	
TOTAL A&PR	2,119,648,546	48,759,835	(116,083)	2,168,292,298	2,168,292,298	100.0%
SBF						
AA	0	0	0	0	0	
S-1	12,956,164	99,950	(282,990)	12,773,124	12,773,124	
S-2	34,017,118	816,009	237,161	35,070,288	35,070,288	
TOTAL SBF	46,973,282	915,959	(45,829)	47,843,412	47,843,412	100.0%
TOTAL LAW ENFORCEMENT	\$ 2,166,621,828	\$ 49,675,794	\$ (161,912)	\$ 2,216,135,710	\$ 2,216,135,710	100.0%
GRAND TOTAL	\$ 53,990,366,321	\$ 1,094,039,844	\$ 17,291,720	\$ 55,101,697,885	\$ 55,101,697,885	100.0%

COMBINED PLAN
RESERVE TRANSFERS AFFECTING THE EMPLOYER ACCUMULATION FUND
DECEMBER 31, 2014

	Assets Before Transfers	Transfers		Assets After Transfers	Liabilities	Ratio
		Accrued	Other			
State						
A&PR FUND						
CA	\$ 920,152	\$ 440,129	\$ (237,901)	\$ 1,122,380	\$ 1,122,380	
CB	1,535,136	670,059	96,935	2,302,130	2,302,130	
TOTAL A&PR	2,455,288	1,110,188	(140,966)	3,424,510	3,424,510	
TOTAL STATE	\$ 2,455,288	\$ 1,110,188	\$ (140,966)	\$ 3,424,510	\$ 3,424,510	
Local						
A&PR FUND						
CA	\$ 2,530,396	\$ 492,383	\$ (271,949)	\$ 2,750,830	\$ 2,750,830	
CB	3,374,108	700,158	93,652	4,167,918	4,167,918	
TOTAL A&PR	5,904,504	1,192,541	(178,297)	6,918,748	6,918,748	100.0%
TOTAL LOCAL	\$ 5,904,504	\$ 1,192,541	\$ (178,297)	\$ 6,918,748	\$ 6,918,748	100.0%
GRAND TOTAL	\$ 8,359,792	\$ 2,302,729	\$ (319,263)	\$ 10,343,258	\$ 10,343,258	100.0%

MEMBER DIRECTED PLAN
RESERVE TRANSFERS AFFECTING THE EMPLOYER ACCUMULATION FUND
DECEMBER 31, 2014

	Assets Before Transfers	Transfers		Assets After Transfers	Liabilities	Ratio
		Accrued	Other			
State						
A&PR FUND						
MD	\$ 2,572,356	\$ 195,849	\$ (133,507)	\$ 2,634,698	\$ 2,634,698	
TOTAL A&PR	2,572,356	195,849	(133,507)	2,634,698	2,634,698	
TOTAL STATE	\$ 2,572,356	\$ 195,849	\$ (133,507)	\$ 2,634,698	\$ 2,634,698	
Local						
A&PR FUND						
MD	\$ 5,812,114	\$ 52,506	\$ (208,241)	\$ 5,656,379	\$ 5,656,379	
TOTAL A&PR	5,812,114	52,506	(208,241)	5,656,379	5,656,379	100.0%
TOTAL LOCAL	\$ 5,812,114	\$ 52,506	\$ (208,241)	\$ 5,656,379	\$ 5,656,379	100.0%
GRAND TOTAL	\$ 8,384,470	\$ 248,355	\$ (341,748)	\$ 8,291,077	\$ 8,291,077	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, 2014

Groups	Number	Annual Payroll	Average		
			Pay	Age	Service
Traditional Plan					
Men	52,038	\$ 2,183,543,445	\$ 41,961	40.0 yrs.	9.2 yrs.
Women	63,346	2,493,810,110	39,368	39.6	8.6
Traditional Plan Total	115,384	\$ 4,677,353,555	\$ 40,537	39.8 yrs.	8.9 yrs.
Combined Plan					
Men	1,077	\$ 59,107,889	\$ 54,882	42.0 yrs.	6.9 yrs.
Women	1,653	89,927,220	54,402	41.9	6.4
Combined Plan Total	2,730	\$ 149,035,109	\$ 54,592	41.9 yrs.	6.6 yrs.
Grand Total	118,114	\$ 4,826,388,664	\$ 40,862	39.8 yrs.	8.8 yrs.

Also included in the valuation were 210,298 inactive members and 4,364 members active in the money purchase plan.

Retired Members in Valuation December 31, 2014

Fund/Type of Allowance	Number	Current Monthly Benefits	Actuarial Liabilities
Traditional Plan			
A & PR Fund			
Superannuation Retirement	57,577	\$ 144,186,616	\$ 18,839,339,217
Disability Retirement	8,676	20,932,371	2,736,024,848
Money Purchase	859	455,077	55,057,478
Total A & PR Fund	67,112	165,574,064	21,630,421,543
Total SBF	4,558	5,406,161	617,763,331
Traditional Plan Total	71,670	\$ 170,980,225	\$ 22,248,184,874
Combined Plan			
A & PR Fund			
CMDB	49	\$ 15,913	\$ 2,302,130
CMDC	25	7,910	1,122,380
Total A & PR Fund	74	23,823	3,424,510
Combined Plan Total	74	\$ 23,823	\$ 3,424,510
Member Directed Plan			
A & PR Fund	41	17,672	2,634,698
Member Directed Plan Total	41	\$ 17,672	\$ 2,634,698
Grand Total	71,785	\$ 171,021,720	\$ 22,254,244,082

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

Valuation Date December 31	2014			2013
Contributions for	2017			2016
Normal Cost	<u>Traditional Plan</u>	<u>Combined Plan</u>	<u>Traditional and Combined Plans</u>	<u>Traditional and Combined Plans</u>
Age and Service Allowances	7.08 %	4.31 %	6.99 %	7.07 %
Disability Allowances	2.03 %	1.87 %	2.03 %	2.04 %
Survivor's Benefits	0.40 %	0.34 %	0.40 %	0.40 %
Separation Benefits	3.70 %	1.00 %	3.61 %	3.62 %
Total Normal Cost	13.21 %	7.52 %	13.03 %	13.13 %
(Member Contributions)	10.00 %	0.00 %	9.63 %	9.64 %
Employer Normal Cost	3.21 %	7.52 %	3.40 %	3.49 %
Unfunded Actuarial Accrued Liabilities				
Total Available Contribution	6.79 %	2.48 %	6.60 %	6.51 %
Amortization Years	42	0	41	33
Total Pension Employer Contribution Rate	10.00 %	10.00 %	10.00 %	10.00 %

The term “Amortization Years” refers to the period sufficient to produce the Total Employer Contribution Rate for retirement allowances and survivor benefits and incorporates all scheduled employer and member contribution rate increases and scheduled employer rate reallocations between the pension and retiree health programs.

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					
			(\$Millions)							
2000	2003	113,099	\$ 3,868	\$ 34,201	7.4 %	7.69 %	0.62 %	8.31 %	5.00 %	13.31 %
2001@	2004	109,219	3,996	36,589	7.0 %	6.17 %	3.14 %	9.31 %	4.00 %	13.31 %
2002	2005	110,017	4,129	37,531	2.6 %	5.95 %	3.36 %	9.31 %	4.00 %	13.31 %
2003##	2006	108,249	4,079	37,679	0.4 %	5.70 %	3.34 %	9.04 %	4.50 %	13.54 %
2004	2007	110,207	4,165	37,794	0.3 %	5.67 %	2.60 %	8.27 %	5.50 %	13.77 %
2005@	2008	114,620	4,339	37,858	0.2 %	5.43 %	1.57 %	7.00 %	7.00 %	14.00 %
2006	2009	115,930	4,522	39,005	3.0 %	4.97 %	2.03 %	7.00 %	7.00 %	14.00 %
2007	2010	118,466	4,703	39,695	1.8 %	5.44 %	1.56 %	7.00 %	7.00 %	14.00 %
2008	2011	114,925	4,780	41,590	4.8 %	5.44 %	4.56 %	10.00 %	4.00 %	14.00 %
2009	2012	117,008	4,763	40,704	(2.1)%	5.45 %	4.55 %	10.00 %	4.00 %	14.00 %
2010@	2013	118,240	4,811	40,691	0.0 %	5.36 %	7.64 %	13.00 %	1.00 %	14.00 %
2011	2014	118,273	4,844	40,952	0.6 %	5.37 %	8.63 %	14.00 %	0.00 %	14.00 %
2012#	2015	117,430	4,690	39,938	(2.5)%	3.49 %	7.51 %	11.00 %	3.00 %	14.00 %
2013	2016	117,370	4,746	40,433	1.2 %	3.49 %	6.51 %	10.00 %	4.00 %	14.00 %
2014	2017	118,114	4,826	40,862	1.1 %	3.40 %	6.60 %	10.00 %	4.00 %	14.00 %

After benefit changes.

@ 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, 2014

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	\$ 21,636,480,751	\$ -	\$ 21,636,480,751
Allowances currently being paid from the Survivors Benefit Fund	617,763,331	-	617,763,331
Age and service allowances based on service rendered before and likely to be rendered after valuation date	13,541,185,271	2,687,857,612	10,853,327,659
Disability allowances likely to be paid present active members who become permanently disabled	1,712,588,529	778,875,678	933,712,851
Survivor benefits likely to be paid to spouses and children of present active members who die before retiring	446,669,502	152,346,817	294,322,685
Separation benefits (refunds of contributions and deferred allowances) likely to be paid to present active and inactive members	2,323,672,276	1,453,574,231	870,098,045
Total	\$ 40,278,359,660	\$ 5,072,654,338	\$ 35,205,705,322
Actuarial Value of Assets			27,886,169,241
Unfunded Actuarial Accrued Liability			\$ 7,319,536,081

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	Amortization Years	
	Total	Average					
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
2005@	4,339	37,858	13,326	10,296	3,030	39	0.70
2006	4,522	39,005	14,006	12,131	1,875	35	0.41
2007	4,703	39,695	14,526	13,442	1,084	20	0.23
2008	4,780	41,590	14,872	7,488	7,384	N/A	1.54
2009	4,763	40,704	14,843	6,648	8,195	N/A	1.71
2010@	4,811	40,691	14,903	7,113	7,790	48	1.62
2011	4,844	40,952	14,754	6,616	8,138	37	1.68
2012#	4,690	39,938	13,135	5,270	7,865	37	1.68
2013	4,746	40,433	13,125	6,572	6,553	32	1.38
2014	4,826	40,862	12,951	5,631	7,320	40	1.52

After benefit changes.

@ 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, 2014
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	\$7,731,131							\$7,731,131
Avg. Pay	\$8,969							\$8,969
20-24	9,563	33						9,596
Tot. Pay	\$112,475,709	\$837,572						\$113,313,281
Avg. Pay	\$11,762	\$25,381						\$11,808
25-29	5,190	704	15					5,909
Tot. Pay	\$135,427,869	\$29,644,525	\$645,756					\$165,718,150
Avg. Pay	\$26,094	\$42,109	\$43,050					\$28,045
30-34	3,056	1,570	545	16				5,187
Tot. Pay	\$100,778,052	\$75,827,122	\$28,143,110	\$861,165				\$205,609,449
Avg. Pay	\$32,977	\$48,298	\$51,639	\$53,823				\$39,639
35-39	1,794	1,234	1,127	448	7			4,610
Tot. Pay	\$66,805,961	\$64,056,048	\$64,462,526	\$25,828,717	\$393,098			\$221,546,350
Avg. Pay	\$37,239	\$51,909	\$57,198	\$57,653	\$56,157			\$48,058
40-44	1,481	950	1,009	1,203	457	6		5,106
Tot. Pay	\$56,161,144	\$51,391,095	\$59,514,007	\$72,427,605	\$28,789,269	\$453,181		\$268,736,301
Avg. Pay	\$37,921	\$54,096	\$58,983	\$60,206	\$62,996	\$75,530		\$52,631
45-49	1,247	809	837	1,017	1,402	557	7	5,876
Tot. Pay	\$47,383,208	\$42,500,393	\$49,856,578	\$61,540,283	\$95,069,967	\$37,699,001	\$522,235	\$334,571,665
Avg. Pay	\$37,998	\$52,534	\$59,566	\$60,512	\$67,810	\$67,682	\$74,605	\$56,939
50-54	1,070	694	789	926	1,091	1,470	260	6,300
Tot. Pay	\$40,613,331	\$37,288,786	\$46,385,895	\$54,964,495	\$70,705,409	\$102,792,289	\$18,202,967	\$370,953,172
Avg. Pay	\$37,956	\$53,730	\$58,791	\$59,357	\$64,808	\$69,927	\$70,011	\$58,881
55-59	781	585	695	738	848	878	490	5,015
Tot. Pay	\$28,847,952	\$29,877,663	\$40,934,168	\$43,619,353	\$55,326,694	\$60,346,019	\$35,593,590	\$294,545,439
Avg. Pay	\$36,937	\$51,073	\$58,898	\$59,105	\$65,244	\$68,731	\$72,640	\$58,733
60-64	511	397	444	442	514	544	346	3,198
Tot. Pay	\$17,226,475	\$20,793,957	\$25,623,411	\$26,812,567	\$32,460,546	\$36,360,019	\$27,323,897	\$186,600,872
Avg. Pay	\$33,711	\$52,378	\$57,710	\$60,662	\$63,153	\$66,838	\$78,971	\$58,349
65-69	236	131	124	107	151	125	150	1,024
Tot. Pay	\$5,306,032	\$6,048,187	\$6,714,794	\$6,829,438	\$10,305,988	\$8,472,142	\$12,768,761	\$56,445,342
Avg. Pay	\$22,483	\$46,169	\$54,152	\$63,827	\$68,252	\$67,777	\$85,125	\$55,122
70 & Over	204	57	48	32	28	26	37	432
Tot. Pay	\$3,974,202	\$2,117,115	\$2,026,814	\$1,755,760	\$1,775,950	\$2,087,109	\$3,143,232	\$16,880,182
Avg. Pay	\$19,481	\$37,142	\$42,225	\$54,868	\$63,427	\$80,273	\$84,952	\$39,074
Totals	25,995	7,164	5,633	4,929	4,498	3,606	1,290	53,115
Tot. Pay	\$622,731,066	\$360,382,463	\$324,307,059	\$294,639,383	\$294,826,921	\$248,209,760	\$97,554,682	\$2,242,651,334
Avg. Pay	\$23,956	\$50,305	\$57,573	\$59,777	\$65,546	\$68,832	\$75,624	\$42,223

STATE DIVISION
FEMALE ACTIVE MEMBERS IN DEFINED BENEFIT VALUATION
DECEMBER 31, 2014
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	1,251							1,251
Tot. Pay	\$10,069,932							\$10,069,932
Avg. Pay	\$8,050							\$8,050
20-24	11,927	29						11,956
Tot. Pay	\$133,949,095	\$789,623						\$134,738,718
Avg. Pay	\$11,231	\$27,228						\$11,270
25-29	5,864	839	13					6,716
Tot. Pay	\$170,669,823	\$36,313,810	\$512,584					\$207,496,217
Avg. Pay	\$29,105	\$43,282	\$39,430					\$30,896
30-34	4,775	1,890	670	15				7,350
Tot. Pay	\$137,308,121	\$91,259,543	\$34,989,240	\$670,129				\$264,227,033
Avg. Pay	\$28,756	\$48,285	\$52,223	\$44,675				\$35,949
35-39	2,262	1,458	1,333	461	13			5,527
Tot. Pay	\$82,838,297	\$74,867,572	\$74,857,328	\$25,769,674	\$706,482			\$259,039,353
Avg. Pay	\$36,622	\$51,350	\$56,157	\$55,900	\$54,345			\$46,868
40-44	1,952	1,260	1,108	1,183	429	12		5,944
Tot. Pay	\$76,223,613	\$66,518,187	\$63,267,708	\$69,921,184	\$26,601,505	\$661,917		\$303,194,114
Avg. Pay	\$39,049	\$52,792	\$57,101	\$59,105	\$62,008	\$55,160		\$51,008
45-49	1,591	1,153	1,086	1,069	1,266	613	17	6,795
Tot. Pay	\$62,903,177	\$59,937,631	\$60,784,266	\$61,132,032	\$81,229,516	\$37,829,370	\$1,052,256	\$364,868,248
Avg. Pay	\$39,537	\$51,984	\$55,971	\$57,186	\$64,162	\$61,712	\$61,897	\$53,697
50-54	1,373	1,133	1,110	1,063	1,159	1,501	272	7,611
Tot. Pay	\$53,928,533	\$57,104,966	\$59,477,277	\$57,338,099	\$70,597,928	\$96,908,929	\$18,839,389	\$414,195,121
Avg. Pay	\$39,278	\$50,402	\$53,583	\$53,940	\$60,913	\$64,563	\$69,262	\$54,421
55-59	983	1,007	1,050	1,021	1,016	978	461	6,516
Tot. Pay	\$36,917,063	\$50,449,427	\$53,390,720	\$56,140,920	\$59,107,346	\$60,274,508	\$31,886,723	\$348,166,707
Avg. Pay	\$37,556	\$50,099	\$50,848	\$54,986	\$58,177	\$61,630	\$69,169	\$53,433
60-64	457	555	611	647	685	622	283	3,860
Tot. Pay	\$15,651,141	\$28,116,374	\$31,980,523	\$34,789,813	\$39,632,310	\$37,911,309	\$19,333,509	\$207,414,979
Avg. Pay	\$34,248	\$50,660	\$52,341	\$53,771	\$57,857	\$60,951	\$68,316	\$53,734
65-69	146	145	152	175	189	200	126	1,133
Tot. Pay	\$3,846,798	\$6,837,063	\$6,992,120	\$8,835,480	\$11,193,424	\$11,518,769	\$7,954,197	\$57,177,851
Avg. Pay	\$26,348	\$47,152	\$46,001	\$50,488	\$59,224	\$57,594	\$63,129	\$50,466
70 & Over	87	43	35	27	37	56	55	340
Tot. Pay	\$1,365,338	\$1,004,423	\$1,266,045	\$1,315,986	\$1,994,792	\$2,989,353	\$3,213,120	\$13,149,057
Avg. Pay	\$15,694	\$23,359	\$36,173	\$48,740	\$53,913	\$53,381	\$58,420	\$38,674
Totals	32,668	9,512	7,168	5,661	4,794	3,982	1,214	64,999
Tot. Pay	\$785,670,931	\$473,198,619	\$387,517,811	\$315,913,317	\$291,063,303	\$248,094,155	\$82,279,194	\$2,583,737,330
Avg. Pay	\$24,050	\$49,748	\$54,062	\$55,805	\$60,714	\$62,304	\$67,775	\$39,750

STATE DIVISION
INACTIVE MEMBERS IN DEFINED BENEFIT VALUATION
DECEMBER 31, 2014
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	19,021							19,021
25-29	38,548	174						38,722
30-34	57,203	673	37					57,913
35-39	28,543	871	217	9				29,640
40-44	20,614	754	303	98	8			21,777
45-49	11,716	874	451	168	70	5		13,284
50-54	8,347	1,043	647	309	137	54	4	10,541
55-59	7,163	972	754	393	198	28	4	9,512
60-64	5,019	605	327	181	78	18	7	6,235
65-69	2,456	204	74	19	8	3	1	2,765
70 & Over	815	44	18	7	2	1	1	888
Totals	199,445	6,214	2,828	1,184	501	109	17	210,298

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, 2014

Groups	Number	Annual Payroll	Average		
			Pay	Age	Service
Traditional Plan					
Men	91,926	\$ 3,509,531,410	\$ 38,178	44.6 yrs.	10.0 yrs.
Women	107,304	3,645,503,023	33,974	44.1	10.0
Traditional Plan Total	199,230	\$ 7,155,034,433	\$ 35,913	44.3 yrs.	10.0 yrs.
Combined Plan					
Men	2,022	\$ 95,832,638	\$ 47,395	44.9 yrs.	7.4 yrs.
Women	2,703	109,254,967	40,420	43.8	7.0
Combined Plan Total	4,725	\$ 205,087,605	\$ 43,405	44.2 yrs.	7.2 yrs.
Grand Total	203,955	\$ 7,360,122,038	\$ 36,087	44.3 yrs.	10.0 yrs.

Also included in the valuation were 275,405 inactive members and 17,053 members active in the money purchase plan.

Retired Members in Valuation December 31, 2014

Fund/Type of Allowance	Number	Current Monthly Benefits	Actuarial Liabilities
Traditional Plan			
A & PR Fund			
Superannuation Retirement	106,994	\$ 200,487,085	\$ 26,055,078,637
Disability Retirement	12,221	26,527,113	3,393,198,682
Money Purchase	2,744	1,166,618	139,977,222
Total A & PR Fund	121,959	228,180,816	29,588,254,541
Total SBF	9,722	8,960,818	1,004,838,991
Traditional Plan Total	131,681	\$ 237,141,634	\$ 30,593,093,532
Combined Plan			
A & PR Fund			
CMDB	109	\$ 29,125	\$ 4,167,918
CMDC	76	19,501	2,750,830
Total A & PR Fund	185	48,626	6,918,748
Combined Plan Total	185	\$ 48,626	\$ 6,918,748
Member Directed Plan			
A & PR Fund	114	37,940	5,656,379
Member Directed Plan Total	114	\$ 37,940	\$ 5,656,379
Grand Total	131,980	\$ 237,228,200	\$ 30,605,668,659

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

Valuation Date December 31	2014			2013
Contributions for	2017			2016
Normal Cost	<u>Traditional Plan</u>	<u>Combined Plan</u>	<u>Traditional and Combined Plans</u>	<u>Traditional and Combined Plans</u>
Age and Service Allowances	7.17 %	4.45 %	7.08 %	7.18 %
Disability Allowances	1.61 %	1.44 %	1.61 %	1.62 %
Survivor's Benefits	0.48 %	0.42 %	0.48 %	0.47 %
Separation Benefits	3.63 %	1.09 %	3.56 %	3.57 %
Total Normal Cost	12.89 %	7.40 %	12.73 %	12.84 %
(Member Contributions)	10.00 %	0.00 %	9.67 %	9.68 %
Employer Normal Cost	2.89 %	7.40 %	3.06 %	3.16 %
Unfunded Actuarial Accrued Liabilities				
Total Available Contribution	7.11 %	2.60 %	6.94 %	6.84 %
Amortization Years	14	0	14	21
Total Pension Employer Contribution Rate	10.00 %	10.00 %	10.00 %	10.00 %

The term "Amortization Years" refers to the period sufficient to produce the Total Employer Contribution Rate for retirement allowances and survivor benefits and incorporates all scheduled employer and member contribution rate increases and scheduled employer rate reallocations between the pension and retiree health programs.

**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					
			(\$Millions)							
2000	2003	245,831	\$ 5,999	\$ 24,401	4.8 %	7.68 %	0.87 %	8.55 %	5.00 %	13.55 %
2001@	2004	243,202	6,451	26,526	8.7 %	6.14 %	3.41 %	9.55 %	4.00 %	13.55 %
2002	2005	247,377	6,721	27,171	2.4 %	5.92 %	3.63 %	9.55 %	4.00 %	13.55 %
2003##	2006	237,082	6,702	28,269	4.0 %	5.66 %	3.54 %	9.20 %	4.50 %	13.70 %
2004	2007	236,907	6,896	29,110	3.0 %	5.57 %	2.78 %	8.35 %	5.50 %	13.85 %
2005@	2008	236,073	7,066	29,933	2.8 %	5.00 %	2.00 %	7.00 %	7.00 %	14.00 %
2006	2009	237,981	7,234	30,399	1.6 %	4.53 %	2.47 %	7.00 %	7.00 %	14.00 %
2007	2010	237,225	7,438	31,354	3.1 %	5.12 %	1.88 %	7.00 %	7.00 %	14.00 %
2008	2011	233,163	7,566	32,451	3.5 %	5.14 %	4.86 %	10.00 %	4.00 %	14.00 %
2009	2012	223,004	7,334	32,889	1.3 %	5.14 %	4.86 %	10.00 %	4.00 %	14.00 %
2010@	2013	215,144	7,196	33,447	1.7 %	5.12 %	7.88 %	13.00 %	1.00 %	14.00 %
2011	2014	209,452	7,115	33,968	1.6 %	5.14 %	8.86 %	14.00 %	0.00 %	14.00 %
2012#	2015	208,188	7,061	33,918	(0.1)%	3.13 %	7.87 %	11.00 %	3.00 %	14.00 %
2013	2016	207,416	7,134	34,396	1.4 %	3.16 %	6.84 %	10.00 %	4.00 %	14.00 %
2014	2017	203,955	7,360	36,087	4.9 %	3.06 %	6.94 %	10.00 %	4.00 %	14.00 %

After benefit changes.

@ 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, 2014

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	\$ 29,600,829,668	\$ -	\$ 29,600,829,668
Allowances currently being paid from the Survivors Benefit Fund	1,004,838,991	-	1,004,838,991
Age and service allowances based on service rendered before and likely to be rendered after valuation date	20,902,133,899	4,171,371,576	16,730,762,323
Disability allowances likely to be paid present active members who become permanently disabled	2,032,924,719	952,258,815	1,080,665,904
Survivor benefits likely to be paid to spouses and children of present active members who die before retiring	814,221,849	271,361,762	542,860,087
Separation benefits (refunds of contributions and deferred allowances) likely to be paid to present active and inactive members	3,513,952,453	2,212,827,516	1,301,124,937
Total	\$ 57,868,901,579	\$ 7,607,819,669	\$ 50,261,081,910
Actuarial Value of Assets			43,671,405,516
Unfunded Actuarial Accrued Liability			\$ 6,589,676,394

LOCAL GOVERNMENT 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	Amortization Years	
	Total	Average					
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
2005@	7,066	29,933	19,484	14,921	4,563	25	0.65
2006	7,234	30,399	20,147	17,523	2,624	19	0.36
2007	7,438	31,354	20,838	19,656	1,182	9	0.16
2008	7,566	32,451	21,590	11,561	10,029	N/A	1.33
2009	7,334	32,889	21,620	11,599	10,021	N/A	1.37
2010@	7,196	33,447	21,668	13,212	8,456	22	1.18
2011	7,115	33,968	21,631	11,418	10,213	25	1.44
2012#	7,061	33,918	19,583	11,981	7,602	15	1.08
2013	7,134	34,396	19,586	11,440	8,146	20	1.14
2014	7,360	36,087	19,656	13,066	6,590	13	0.90

After benefit changes.

@ 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, 2014
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	4,560							4,560
Tot. Pay	\$43,014,345							\$43,014,345
Avg. Pay	\$9,433							\$9,433
20-24	7,291	87						7,378
Tot. Pay	\$115,690,719	\$1,930,347						\$117,621,066
Avg. Pay	\$15,868	\$22,188						\$15,942
25-29	5,713	1,124	61					6,898
Tot. Pay	\$152,632,282	\$42,688,082	\$2,571,433					\$197,891,797
Avg. Pay	\$26,717	\$37,979	\$42,155					\$28,688
30-34	3,981	2,320	994	81				7,376
Tot. Pay	\$120,042,213	\$101,402,134	\$46,977,592	\$3,594,563				\$272,016,502
Avg. Pay	\$30,154	\$43,708	\$47,261	\$44,377				\$36,879
35-39	3,001	1,965	1,966	901	39			7,872
Tot. Pay	\$91,681,495	\$88,783,435	\$101,837,261	\$48,419,710	\$2,064,366			\$332,786,267
Avg. Pay	\$30,550	\$45,182	\$51,799	\$53,740	\$52,932			\$42,275
40-44	2,840	1,840	1,911	1,967	766	37		9,361
Tot. Pay	\$88,761,264	\$80,872,953	\$99,804,908	\$109,979,089	\$44,083,927	\$2,029,059		\$425,531,200
Avg. Pay	\$31,254	\$43,953	\$52,227	\$55,912	\$57,551	\$54,839		\$45,458
45-49	2,573	1,834	1,846	2,009	1,858	829	21	10,970
Tot. Pay	\$76,307,932	\$77,068,164	\$93,477,278	\$116,460,437	\$112,507,384	\$50,970,232	\$1,285,797	\$528,077,224
Avg. Pay	\$29,657	\$42,022	\$50,638	\$57,969	\$60,553	\$61,484	\$61,228	\$48,138
50-54	2,458	1,763	1,850	1,967	1,948	2,046	494	12,526
Tot. Pay	\$69,828,951	\$68,850,946	\$87,390,577	\$107,326,202	\$114,168,861	\$127,273,468	\$32,516,475	\$607,355,480
Avg. Pay	\$28,409	\$39,053	\$47,238	\$54,563	\$58,608	\$62,206	\$65,823	\$48,488
55-59	2,383	1,585	1,684	1,866	1,696	1,676	812	11,702
Tot. Pay	\$61,601,473	\$59,120,793	\$75,491,214	\$95,780,230	\$94,232,206	\$102,484,833	\$53,961,376	\$542,672,125
Avg. Pay	\$25,850	\$37,300	\$44,829	\$51,329	\$55,561	\$61,148	\$66,455	\$46,374
60-64	1,973	1,242	1,179	1,182	1,161	1,012	626	8,375
Tot. Pay	\$44,078,313	\$42,653,190	\$49,324,156	\$58,527,006	\$62,115,917	\$61,204,377	\$41,840,084	\$359,743,043
Avg. Pay	\$22,341	\$34,342	\$41,836	\$49,515	\$53,502	\$60,479	\$66,837	\$42,954
65-69	1,449	750	544	395	378	319	245	4,080
Tot. Pay	\$20,905,332	\$19,698,883	\$18,949,543	\$16,821,659	\$18,955,075	\$18,636,107	\$16,418,764	\$130,385,363
Avg. Pay	\$14,427	\$26,265	\$34,834	\$42,586	\$50,146	\$58,420	\$67,015	\$31,957
70 & Over	1,189	655	435	230	147	90	104	2,850
Tot. Pay	\$12,555,177	\$8,918,939	\$7,734,406	\$5,237,055	\$5,015,525	\$3,955,162	\$4,853,372	\$48,269,636
Avg. Pay	\$10,559	\$13,617	\$17,780	\$22,770	\$34,119	\$43,946	\$46,667	\$16,937
Totals	39,411	15,165	12,470	10,598	7,993	6,009	2,302	93,948
Tot. Pay	\$897,099,496	\$591,987,866	\$583,558,368	\$562,145,951	\$453,143,261	\$366,553,238	\$150,875,868	\$3,605,364,048
Avg. Pay	\$22,763	\$39,036	\$46,797	\$53,043	\$56,693	\$61,001	\$65,541	\$38,376

LOCAL GOVERNMENT DIVISION
FEMALE ACTIVE MEMBERS IN DEFINED BENEFIT VALUATION
DECEMBER 31, 2014
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	4,807							4,807
Tot. Pay	\$41,273,240							\$41,273,240
Avg. Pay	\$8,586							\$8,586
20-24	7,226	118						7,344
Tot. Pay	\$104,475,956	\$1,976,614						\$106,452,570
Avg. Pay	\$14,458	\$16,751						\$14,495
25-29	6,738	1,198	75					8,011
Tot. Pay	\$179,207,430	\$38,283,122	\$2,261,684					\$219,752,236
Avg. Pay	\$26,597	\$31,956	\$30,156					\$27,431
30-34	5,566	2,915	1,097	93				9,671
Tot. Pay	\$149,566,226	\$113,915,217	\$44,283,213	\$3,821,265				\$311,585,921
Avg. Pay	\$26,871	\$39,079	\$40,368	\$41,089				\$32,219
35-39	3,928	2,536	2,563	1,075	58			10,160
Tot. Pay	\$109,593,664	\$102,164,387	\$116,332,889	\$48,769,565	\$2,748,228			\$379,608,733
Avg. Pay	\$27,901	\$40,286	\$45,389	\$45,367	\$47,383			\$37,363
40-44	3,701	2,284	2,403	2,569	940	54		11,951
Tot. Pay	\$98,874,277	\$87,886,870	\$106,574,929	\$125,365,755	\$45,828,819	\$2,568,238		\$467,098,888
Avg. Pay	\$26,716	\$38,479	\$44,351	\$48,799	\$48,754	\$47,560		\$39,085
45-49	3,638	2,264	2,378	2,329	2,021	1,043	35	13,708
Tot. Pay	\$93,995,024	\$83,298,202	\$103,172,778	\$114,189,654	\$106,638,797	\$52,919,329	\$1,939,788	\$556,153,572
Avg. Pay	\$25,837	\$36,792	\$43,386	\$49,029	\$52,765	\$50,738	\$55,423	\$40,571
50-54	3,443	2,339	2,534	2,445	2,043	2,110	467	15,381
Tot. Pay	\$81,872,869	\$81,438,667	\$102,056,477	\$108,777,383	\$101,779,970	\$115,813,726	\$25,254,134	\$616,993,226
Avg. Pay	\$23,780	\$34,818	\$40,275	\$44,490	\$49,819	\$54,888	\$54,077	\$40,114
55-59	2,801	2,121	2,492	2,704	2,185	1,586	701	14,590
Tot. Pay	\$62,395,445	\$68,295,192	\$92,927,536	\$113,511,244	\$102,929,755	\$83,233,797	\$40,357,438	\$563,650,407
Avg. Pay	\$22,276	\$32,200	\$37,290	\$41,979	\$47,107	\$52,480	\$57,571	\$38,633
60-64	1,645	1,348	1,523	1,587	1,593	1,119	469	9,284
Tot. Pay	\$33,582,079	\$41,984,609	\$55,256,436	\$65,306,611	\$71,081,724	\$56,433,964	\$26,334,780	\$349,980,203
Avg. Pay	\$20,415	\$31,146	\$36,281	\$41,151	\$44,621	\$50,432	\$56,151	\$37,697
65-69	832	538	499	502	535	382	186	3,474
Tot. Pay	\$11,637,625	\$13,763,163	\$15,753,402	\$18,240,781	\$22,484,983	\$17,956,805	\$10,095,752	\$109,932,511
Avg. Pay	\$13,988	\$25,582	\$31,570	\$36,336	\$42,028	\$47,007	\$54,278	\$31,644
70 & Over	564	262	214	180	158	131	117	1,626
Tot. Pay	\$5,500,132	\$3,523,026	\$3,797,199	\$4,302,107	\$4,941,084	\$4,913,556	\$5,299,379	\$32,276,483
Avg. Pay	\$9,752	\$13,447	\$17,744	\$23,901	\$31,273	\$37,508	\$45,294	\$19,850
Totals	44,889	17,923	15,778	13,484	9,533	6,425	1,975	110,007
Tot. Pay	\$971,973,967	\$636,529,069	\$642,416,543	\$602,284,365	\$458,433,360	\$333,839,415	\$109,281,271	\$3,754,757,990
Avg. Pay	\$21,653	\$35,515	\$40,716	\$44,667	\$48,089	\$51,959	\$55,332	\$34,132

**LOCAL GOVERNMENT DIVISION
INACTIVE MEMBERS IN DEFINED BENEFIT VALUATION
DECEMBER 31, 2014
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	27,508							27,508
25-29	37,164	350						37,514
30-34	44,077	1,083	93					45,253
35-39	34,646	1,307	417	29				36,399
40-44	28,118	1,560	654	210	20			30,562
45-49	20,944	1,724	911	357	117	12		24,065
50-54	18,850	1,982	1,267	523	221	70	3	22,916
55-59	18,886	2,184	1,633	789	345	46	4	23,887
60-64	13,601	1,537	775	270	128	12	6	16,329
65-69	7,314	526	185	79	26	4	4	8,138
70 & Over	2,518	212	78	18	5	2	1	2,834
Totals	253,626	12,465	6,013	2,275	862	146	18	275,405

SECTION VII
PUBLIC SAFETY DIVISION

PUBLIC SAFETY DIVISION

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

Active Members in Valuation December 31, 2014

Groups	Number	Annual Payroll	Average		
			Pay	Age	Service
Men	74	\$ 3,354,866	\$ 45,336	38.7 yrs.	9.2 yrs.
Women	12	468,024	39,002	37.4	7.4
Totals	86	\$ 3,822,890	\$ 44,452	38.6 yrs.	9.0 yrs.

Also included in the valuation were 40 inactive members and 3 members active in the money purchase plan.

Retired Members in Valuation December 31, 2014

Fund/Type of Allowance	Number	Current Monthly Benefits	Actuarial Liabilities
A & PR Fund			
Superannuation Retirement	32	\$ 57,310	\$ 8,976,335
Disability Retirement	39	119,592	17,008,625
Money Purchase	0	0	0
Total A & PR Fund	71	\$ 176,902	\$ 25,984,960
Total SBF	100	130,803	18,298,809
Grand Total	171	\$ 307,705	\$ 44,283,769

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

Valuation Date December 31	2014	2013
Contributions for	2017	2016
Normal Cost		
Age and Service Allowances	7.37 %	7.32 %
Disability Allowances	3.63 %	3.57 %
Survivor's Benefits	0.55 %	0.53 %
Separation Benefits	4.61 %	4.69 %
Total Normal Cost	16.16 %	16.11 %
(Member Contributions)	12.00 %	12.00 %
Employer Normal Cost	4.16 %	4.11 %
Unfunded Actuarial Accrued Liabilities		
Total Available Contribution	9.94 %	9.99 %
Amortization Years	N/A	20
Total Pension Employer Contribution Rate	14.10 %	14.10 %

N/A The unfunded actuarial accrued liabilities are unable to be amortized based upon the total pension contribution rate.

The term "Amortization Years" refers to the period sufficient to produce the Total Employer Contribution Rate for retirement allowances and survivor benefits and incorporates all scheduled employer and member contribution rate increases and scheduled employer rate reallocations between the pension and retiree health programs.

**PUBLIC SAFETY 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					
			(\$Thousands)							
2005@	2008	135	\$ 6,078	\$ 45,023	6.7 %	9.01 %	1.39 %	10.40 %	7.00 %	17.40 %
2006	2009	127	5,851	46,067	2.3 %	8.73 %	1.90 %	10.63 %	7.00 %	17.63 %
2007	2010	120	5,638	46,985	2.0 %	8.95 %	1.92 %	10.87 %	7.00 %	17.87 %
2008	2011	127	6,219	48,969	4.2 %	8.32 %	5.78 %	14.10 %	4.00 %	18.10 %
2009	2012	94	4,061	43,205	(11.8)%	7.77 %	6.33 %	14.10 %	4.00 %	18.10 %
2010@	2013	88	3,650	41,480	(4.0)%	6.22 %	10.88 %	17.10 %	1.00 %	18.10 %
2011	2014	84	3,629	43,202	4.2 %	6.12 %	11.98 %	18.10 %	0.00 %	18.10 %
2012#	2015	87	3,751	43,119	(0.2)%	3.96 %	11.14 %	15.10 %	3.00 %	18.10 %
2013	2016	85	3,684	43,338	0.5 %	4.11 %	9.99 %	14.10 %	4.00 %	18.10 %
2014	2017	86	3,823	44,452	2.6 %	4.16 %	9.94 %	14.10 %	4.00 %	18.10 %

After benefit changes.

* Prior to 2005, Public Safety and Law Enforcement results were reported together. Historical information prior to 2005 may be found on page VIII-3.

@ Revised actuarial assumptions.

PUBLIC SAFETY DIVISION
DEVELOPMENT OF UNFUNDED ACTUARIAL ACCRUED LIABILITIES
DECEMBER 31, 2014

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	\$ 25,984,960	\$ -	\$ 25,984,960
Allowances currently being paid from the Survivors Benefit Fund	18,298,809	-	18,298,809
Age and service allowances based on service rendered before and likely to be rendered after valuation date	8,163,924	2,484,551	5,679,373
Disability allowances likely to be paid present active members who become permanently disabled	2,352,240	1,215,341	1,136,899
Survivor benefits likely to be paid to spouses and children of present active members who die before retiring	399,175	177,746	221,429
Separation benefits (refunds of contributions and deferred allowances) likely to be paid to present active and inactive members	2,412,356	1,618,508	793,848
Total	\$ 57,611,464	\$ 5,496,146	\$ 52,115,318
Actuarial Value of Assets			29,060,831
Unfunded Actuarial Accrued Liability			\$ 23,054,487

PUBLIC SAFETY 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	Amortization Years	
	Total	Average					
2005@	\$6	\$45,023	\$16	\$(44)	\$ 60	N/A	10.00
2006	6	46,067	16	(64)	80	N/A	13.33
2007	6	46,985	18	(82)	100	N/A	16.67
2008	6	48,969	18	9	9	79	1.50
2009	4	43,205	12	0	12	N/A	3.00
2010@	4	41,480	7	(7)	14	N/A	3.50
2011	4	43,202	8	(1)	9	45	2.25
2012#	4	43,119	7	(14)	21	N/A	5.25
2013	4	43,338	7	1	6	19	1.50
2014	4	44,452	8	(15)	23	N/A	5.75

After benefit changes.

N/A The unfunded actuarial accrued liabilities are unable to be amortized based upon the total pension contribution rate.

* Prior to 2005, Public Safety and Law Enforcement results were reported together. Historical information prior to 2005 may be found on page VIII-5.

@ 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.

PUBLIC SAFETY DIVISION
MALE ACTIVE MEMBERS IN VALUATION DECEMBER 31, 2014
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	3							3
Tot. Pay	\$69,355							\$69,355
Avg. Pay	\$23,118							\$23,118
25-29	11	3						14
Tot. Pay	\$580,528	\$147,354						\$727,882
Avg. Pay	\$52,775	\$49,118						\$51,992
30-34	7	5						12
Tot. Pay	\$222,089	\$203,530						\$425,619
Avg. Pay	\$31,727	\$40,706						\$35,468
35-39	2	4	6					12
Tot. Pay	\$88,626	\$190,769	\$336,125					\$615,520
Avg. Pay	\$44,313	\$47,692	\$56,021					\$51,293
40-44	2	5	2	6				15
Tot. Pay	\$83,424	\$195,319	\$88,307	\$302,607				\$669,657
Avg. Pay	\$41,712	\$39,064	\$44,154	\$50,435				\$44,644
45-49		1	2		1	1		5
Tot. Pay		\$36,926	\$81,410		\$39,754	\$51,633		\$209,723
Avg. Pay		\$36,926	\$40,705		\$39,754	\$51,633		\$41,945
50-54	1	1	2	1	2			7
Tot. Pay	\$29,485	\$62,976	\$112,767	\$56,669	\$73,358			\$335,255
Avg. Pay	\$29,485	\$62,976	\$56,384	\$56,669	\$36,679			\$47,894
55-59				1	2	1		4
Tot. Pay				\$40,078	\$102,393	\$51,703		\$194,174
Avg. Pay				\$40,078	\$51,197	\$51,703		\$48,544
60-64		1						1
Tot. Pay		\$73,302						\$73,302
Avg. Pay		\$73,302						\$73,302
65-69		1						1
Tot. Pay		\$34,379						\$34,379
Avg. Pay		\$34,379						\$34,379
70 & Over								
Tot. Pay								
Avg. Pay								
Totals	26	21	12	8	5	2		74
Tot. Pay	\$1,073,507	\$944,555	\$618,609	\$399,354	\$215,505	\$103,336		\$3,354,866
Avg. Pay	\$41,289	\$44,979	\$51,551	\$49,919	\$43,101	\$51,668		\$45,336

PUBLIC SAFETY DIVISION
FEMALE ACTIVE MEMBERS IN VALUATION DECEMBER 31, 2014
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	3							3
Tot. Pay	\$95,589							\$95,589
Avg. Pay	\$31,863							\$31,863
25-29	3							3
Tot. Pay	\$121,282							\$121,282
Avg. Pay	\$40,427							\$40,427
30-34		1						1
Tot. Pay		\$33,860						\$33,860
Avg. Pay		\$33,860						\$33,860
35-39								
Tot. Pay								
Avg. Pay								
40-44								
Tot. Pay								
Avg. Pay								
45-49					1			1
Tot. Pay					\$81,231			\$81,231
Avg. Pay					\$81,231			\$81,231
50-54	1	1				1		3
Tot. Pay	\$34,521	\$33,099				\$34,521		\$102,141
Avg. Pay	\$34,521	\$33,099				\$34,521		\$34,047
55-59		1						1
Tot. Pay		\$33,921						\$33,921
Avg. Pay		\$33,921						\$33,921
60-64								
Tot. Pay								
Avg. Pay								
65-69								
Tot. Pay								
Avg. Pay								
70 & Over								
Tot. Pay								
Avg. Pay								
Totals	7	3			1	1		12
Tot. Pay	\$251,392	\$100,880			\$81,231	\$34,521		\$468,024
Avg. Pay	\$35,913	\$33,627			\$81,231	\$34,521		\$39,002

PUBLIC SAFETY DIVISION
INACTIVE MEMBERS IN VALUATION DECEMBER 31, 2014
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								
25-29	11							11
30-34	12							12
35-39	8	2						10
40-44	3	1						4
45-49	2							2
50-54								
55-59				1				1
60-64								
65-69								
70 & Over								
Totals	36	3		1				40

SECTION VIII

LAW ENFORCEMENT DIVISION

LAW ENFORCEMENT DIVISION

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

Active Members in Valuation December 31, 2014

Groups	Number	Annual Payroll	Average		
			Pay	Age	Service
Men	6,712	\$ 412,239,969	\$ 61,418	41.2 yrs.	14.2 yrs.
Women	906	51,413,492	56,748	41.4	13.6
Totals	7,618	\$ 463,653,461	\$ 60,863	41.2 yrs.	14.1 yrs.

Also included in the valuation were 924 inactive members and 52 members active in the money purchase plan.

Retired Members in Valuation December 31, 2014

Fund/Type of Allowance	Number	Current Monthly Benefits	Actuarial Liabilities
A & PR Fund			
Superannuation Retirement	2,937	\$ 9,928,326	\$ 1,488,586,350
Disability Retirement	1,603	5,000,603	679,705,948
Money Purchase	0	0	0
Total A & PR Fund	4,540	\$ 14,928,929	\$ 2,168,292,298
Total SBF	333	383,366	47,843,412
Grand Total	4,873	\$ 15,312,295	\$ 2,216,135,710

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

Valuation Date December 31	2014	2013
Contributions for	2017	2016
Normal Cost		
Age and Service Allowances	11.34 %	11.42 %
Disability Allowances	4.02 %	4.03 %
Survivor's Benefits	0.54 %	0.54 %
Separation Benefits	2.44 %	2.45 %
Total Normal Cost	18.34 %	18.44 %
(Member Contributions)	13.00 %	13.00 %
Employer Normal Cost	5.34 %	5.44 %
Unfunded Actuarial Accrued Liabilities		
Total Available Contribution	8.76 %	8.66 %
Amortization Years	14	16
Total Pension Employer Contribution Rate	14.10 %	14.10 %

The term “Amortization Years” refers to the period sufficient to produce the Total Employer Contribution Rate for retirement allowances and survivor benefits and incorporates all scheduled employer and member contribution rate increases and scheduled employer rate reallocations between the pension and retiree health programs.

**LAW ENFORCEMENT 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					
			(\$Thousands)							
2000	2003	8,045	\$ 324,918	\$ 40,387	4.9 %	11.59 %	0.11 %	11.70 %	5.00 %	16.70 %
2001@	2004	7,892	335,432	42,503	5.2 %	8.88 %	3.82 %	12.70 %	4.00 %	16.70 %
2002	2005	8,030	356,694	44,420	4.5 %	8.77 %	3.93 %	12.70 %	4.00 %	16.70 %
2003	2006	8,253	384,388	46,576	4.9 %	8.65 %	3.78 %	12.43 %	4.50 %	16.93 %
2004	2007	8,173	392,672	48,045	3.2 %	8.63 %	3.04 %	11.67 %	5.50 %	17.17 %
2005@	2008	7,976	395,189	49,547	3.0 %	9.65 %	0.75 %	10.40 %	7.00 %	17.40 %
2006	2009	8,092	413,182	51,061	3.1 %	9.65 %	0.98 %	10.63 %	7.00 %	17.63 %
2007	2010	8,265	437,223	52,901	3.6 %	9.95 %	0.92 %	10.87 %	7.00 %	17.87 %
2008	2011	8,173	448,694	54,900	3.8 %	8.43 %	5.67 %	14.10 %	4.00 %	18.10 %
2009	2012	8,006	447,232	55,862	1.8 %	8.16 %	5.94 %	14.10 %	4.00 %	18.10 %
2010@	2013	7,702	438,830	56,976	2.0 %	7.56 %	9.54 %	17.10 %	1.00 %	18.10 %
2011	2014	7,545	437,605	57,999	1.8 %	7.18 %	10.92 %	18.10 %	0.00 %	18.10 %
2012#	2015	7,470	438,500	58,702	1.2 %	5.43 %	9.67 %	15.10 %	3.00 %	18.10 %
2013	2016	7,549	447,612	59,294	1.0 %	5.44 %	8.66 %	14.10 %	4.00 %	18.10 %
2014	2017	7,618	463,653	60,863	2.6 %	5.34 %	8.76 %	14.10 %	4.00 %	18.10 %

After benefit changes.

@ Revised actuarial assumptions.

* Prior to 2005, Law Enforcement and Public Safety are combined for purposes of this schedule.

LAW ENFORCEMENT DIVISION
DEVELOPMENT OF UNFUNDED ACTUARIAL ACCRUED LIABILITIES
DECEMBER 31, 2014

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	\$ 2,168,292,298	\$ -	\$ 2,168,292,298
Allowances currently being paid from the Survivors Benefit Fund	47,843,412	-	47,843,412
Age and service allowances based on service rendered before and likely to be rendered after valuation date	1,794,926,519	476,078,409	1,318,848,110
Disability allowances likely to be paid present active members who become permanently disabled	340,469,783	167,340,072	173,129,711
Survivor benefits likely to be paid to spouses and children of present active members who die before retiring	55,493,595	22,688,905	32,804,690
Separation benefits (refunds of contributions and deferred allowances) likely to be paid to present active and inactive members	128,313,982	102,895,987	25,417,995
Total	\$ 4,535,339,589	\$ 769,003,373	\$ 3,766,336,216
Actuarial Value of Assets			3,278,108,937
Unfunded Actuarial Accrued Liability			\$ 488,227,279

LAW ENFORCEMENT 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	Amortization Years	
	Total	Average					
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
2005@	395	49,547	1,298	926	372	N/A	0.94
2006	413	51,061	1,356	1,069	287	N/A	0.69
2007	437	52,901	1,430	1,214	216	N/A	0.49
2008	449	54,900	1,500	771	729	N/A	1.62
2009	447	55,862	1,534	807	727	N/A	1.63
2010@	439	56,976	1,542	966	576	19	1.31
2011	438	57,999	1,546	813	733	23	1.67
2012#	439	58,702	1,480	945	535	14	1.22
2013	448	59,294	1,510	981	529	15	1.18
2014	464	60,863	1,550	1,062	488	13	1.05

After benefit changes.

@ Revised actuarial assumptions.

* Prior to 2005, Law Enforcement and Public Safety are combined for purposes of this schedule.

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 ENFORCEMENT DIVISION
MALE ACTIVE MEMBERS IN VALUATION DECEMBER 31, 2014
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	140	4						144
Tot. Pay	\$5,297,292	\$149,872						\$5,447,164
Avg. Pay	\$37,838	\$37,468						\$37,828
25-29	480	170	4					654
Tot. Pay	\$21,017,402	\$9,605,273	\$233,412					\$30,856,087
Avg. Pay	\$43,786	\$56,502	\$58,353					\$47,181
30-34	231	413	198	8				850
Tot. Pay	\$10,683,081	\$24,131,303	\$12,581,423	\$464,369				\$47,860,176
Avg. Pay	\$46,247	\$58,429	\$63,543	\$58,046				\$56,306
35-39	103	220	510	283	7			1,123
Tot. Pay	\$5,170,179	\$12,936,844	\$32,895,603	\$18,891,843	\$463,178			\$70,357,647
Avg. Pay	\$50,196	\$58,804	\$64,501	\$66,756	\$66,168			\$62,652
40-44	74	130	336	704	298	2		1,544
Tot. Pay	\$3,476,116	\$7,640,318	\$20,784,277	\$46,823,615	\$20,450,210	\$143,692		\$99,318,228
Avg. Pay	\$46,975	\$58,772	\$61,858	\$66,511	\$68,625	\$71,846		\$64,325
45-49	44	76	129	348	499	153	4	1,253
Tot. Pay	\$1,887,524	\$4,460,253	\$7,929,897	\$23,126,031	\$35,273,779	\$10,972,208	\$415,559	\$84,065,251
Avg. Pay	\$42,898	\$58,688	\$61,472	\$66,454	\$70,689	\$71,714	\$103,890	\$67,091
50-54	19	30	62	125	205	165	29	635
Tot. Pay	\$740,166	\$1,610,976	\$3,810,243	\$8,138,950	\$13,838,135	\$11,316,227	\$2,125,785	\$41,580,482
Avg. Pay	\$38,956	\$53,699	\$61,456	\$65,112	\$67,503	\$68,583	\$73,303	\$65,481
55-59	15	10	20	58	76	78	54	311
Tot. Pay	\$621,036	\$546,876	\$1,220,004	\$3,674,023	\$4,862,878	\$5,584,507	\$4,343,593	\$20,852,917
Avg. Pay	\$41,402	\$54,688	\$61,000	\$63,345	\$63,985	\$71,596	\$80,437	\$67,051
60-64	10	7	11	32	44	32	26	162
Tot. Pay	\$427,089	\$420,895	\$620,315	\$1,896,261	\$2,633,647	\$2,174,744	\$1,820,653	\$9,993,604
Avg. Pay	\$42,709	\$60,128	\$56,392	\$59,258	\$59,856	\$67,961	\$70,025	\$61,689
65-69	4	2	4	3	10	5	3	31
Tot. Pay	\$89,126	\$154,184	\$190,731	\$182,055	\$538,238	\$340,593	\$223,141	\$1,718,068
Avg. Pay	\$22,282	\$77,092	\$47,683	\$60,685	\$53,824	\$68,119	\$74,380	\$55,422
70 & Over	1		3	1				5
Tot. Pay	\$16,753		\$104,220	\$69,372				\$190,345
Avg. Pay	\$16,753		\$34,740	\$69,372				\$38,069
Totals	1,121	1,062	1,277	1,562	1,139	435	116	6,712
Tot. Pay	\$49,425,764	\$61,656,794	\$80,370,125	\$103,266,519	\$78,060,065	\$30,531,971	\$8,928,731	\$412,239,969
Avg. Pay	\$44,091	\$58,057	\$62,937	\$66,112	\$68,534	\$70,188	\$76,972	\$61,418

LAW ENFORCEMENT DIVISION
FEMALE ACTIVE MEMBERS IN VALUATION DECEMBER 31, 2014
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	1						29
Tot. Pay	\$1,047,369	\$40,513						\$1,087,882
Avg. Pay	\$37,406	\$40,513						\$37,513
25-29	60	16						76
Tot. Pay	\$2,486,076	\$816,073						\$3,302,149
Avg. Pay	\$41,435	\$51,005						\$43,449
30-34	36	53	32	3				124
Tot. Pay	\$1,649,621	\$3,174,839	\$1,812,182	\$157,488				\$6,794,130
Avg. Pay	\$45,823	\$59,903	\$56,631	\$52,496				\$54,791
35-39	16	29	69	44				158
Tot. Pay	\$664,228	\$1,614,939	\$4,164,486	\$2,759,106				\$9,202,759
Avg. Pay	\$41,514	\$55,688	\$60,355	\$62,707				\$58,245
40-44	16	24	30	86	34			190
Tot. Pay	\$715,434	\$1,443,758	\$1,813,250	\$5,457,872	\$2,218,384			\$11,648,698
Avg. Pay	\$44,715	\$60,157	\$60,442	\$63,464	\$65,247			\$61,309
45-49	3	11	22	50	48	16		150
Tot. Pay	\$166,371	\$627,680	\$1,185,843	\$3,005,523	\$3,159,328	\$1,064,906		\$9,209,651
Avg. Pay	\$55,457	\$57,062	\$53,902	\$60,110	\$65,819	\$66,557		\$61,398
50-54	4	6	16	18	25	19	2	90
Tot. Pay	\$102,081	\$318,203	\$818,956	\$1,175,847	\$1,325,407	\$1,148,056	\$142,406	\$5,030,956
Avg. Pay	\$25,520	\$53,034	\$51,185	\$65,325	\$53,016	\$60,424	\$71,203	\$55,900
55-59		3	5	17	23	13	6	67
Tot. Pay		\$105,506	\$251,481	\$963,038	\$1,375,824	\$712,716	\$509,755	\$3,918,320
Avg. Pay		\$35,169	\$50,296	\$56,649	\$59,818	\$54,824	\$84,959	\$58,482
60-64	1	1	3	4	3	2	4	18
Tot. Pay	\$25,193	\$61,310	\$197,584	\$206,868	\$173,310	\$87,477	\$243,152	\$994,894
Avg. Pay	\$25,193	\$61,310	\$65,861	\$51,717	\$57,770	\$43,739	\$60,788	\$55,272
65-69		1			1	1	1	4
Tot. Pay		\$59,396			\$44,695	\$65,208	\$54,754	\$224,053
Avg. Pay		\$59,396			\$44,695	\$65,208	\$54,754	\$56,013
70 & Over								
Tot. Pay								
Avg. Pay								
Totals	164	145	177	222	134	51	13	906
Tot. Pay	\$6,856,373	\$8,262,217	\$10,243,782	\$13,725,742	\$8,296,948	\$3,078,363	\$950,067	\$51,413,492
Avg. Pay	\$41,807	\$56,981	\$57,874	\$61,828	\$61,918	\$60,360	\$73,082	\$56,748

LAW ENFORCEMENT DIVISION
INACTIVE MEMBERS IN VALUATION DECEMBER 31, 2014
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								8
20-24	8							8
25-29	65	6						71
30-34	94	30	2					126
35-39	96	23	11	1				131
40-44	113	25	16	18	2			174
45-49	113	22	22	10	12	3		182
50-54	59	7	9	12	3	3		93
55-59	32	11	10	9	4			66
60-64	30	5	3	3	2	1		44
65-69	20	1						21
70 & Over	7	1						8
Totals	637	131	73	53	23	7		924

SECTION IX

ALLOWANCES BEING PAID TO
RETIREES AND BENEFICIARIES

**MONTHLY ALLOWANCES OF RETIRED LIVES
BY YEAR OF RETIREMENT
AS OF DECEMBER 31, 2014**

Year of Retirement	No.	Initial	Post-Ret. Increase	Total	Average
2014	11,911	\$21,715,893	\$ 63,493	\$ 21,779,386	\$ 1,829
2013	12,066	23,596,355	1,026,095	24,622,450	2,041
2012	11,069	22,742,713	1,455,159	24,197,872	2,186
2011	12,199	27,113,401	2,546,377	29,659,778	2,431
2010	10,994	22,299,819	2,762,686	25,062,505	2,280
2009	10,741	22,426,721	3,409,908	25,836,629	2,405
2008	9,397	17,857,056	3,251,137	21,108,193	2,246
2007	8,948	16,439,898	3,494,318	19,934,216	2,228
2006	9,462	16,572,945	4,003,776	20,576,721	2,175
2005	8,788	15,820,524	4,287,959	20,108,483	2,288
2004	8,283	14,031,829	4,220,633	18,252,462	2,204
2003	7,740	13,289,068	4,377,664	17,666,732	2,283
2002	8,554	14,281,527	5,146,033	19,427,560	2,271
2001	6,991	11,013,578	4,286,244	15,299,822	2,189
2000	6,690	9,842,474	4,076,432	13,918,906	2,081
1999	5,861	8,198,375	3,536,300	11,734,675	2,002
1998	5,709	7,383,847	3,313,490	10,697,337	1,874
1993-1997	22,264	26,236,393	13,596,079	39,832,472	1,789
1988-1992	15,334	15,001,063	10,349,777	25,350,840	1,653
1983-1987	9,489	6,735,990	5,643,598	12,379,588	1,305
1978-1982	4,221	2,074,268	2,389,498	4,463,766	1,058
1973-1977	1,600	557,948	965,123	1,523,071	952
1968-1972	317	73,399	187,619	261,018	823
1963-1967	136	29,886	98,280	128,166	942
Before 1963	45	9,790	37,482	47,272	
TOTAL	208,809	\$335,344,760	\$88,525,160	\$423,869,920	\$2,030

**MONTHLY ALLOWANCES OF RETIRED LIVES
BY YEARS OF SERVICE
AS OF DECEMBER 31, 2014**

Years of Service	No.	Initial	Post-Ret. Increase	Total	Average
<5 or n/a	8,164	\$ 2,979,658	\$ 439,151	\$ 3,418,809	\$ 419
5	4,278	1,641,392	475,110	2,116,502	495
6	3,419	1,466,542	410,691	1,877,233	549
7	3,279	1,532,672	414,613	1,947,285	594
8	3,116	1,583,004	411,116	1,994,120	640
9	2,388	1,368,823	339,275	1,708,098	715
10	9,700	4,789,920	1,370,780	6,160,700	635
11	5,910	3,475,535	927,099	4,402,634	745
12	5,909	3,731,966	983,627	4,715,593	798
13	5,499	3,956,318	1,002,334	4,958,652	902
14	5,203	3,913,108	1,017,017	4,930,125	948
15	5,655	4,580,535	1,220,252	5,800,787	1,026
16	5,391	4,543,321	1,245,396	5,788,717	1,074
17	4,974	4,685,171	1,297,581	5,982,752	1,203
18	4,951	4,890,332	1,376,426	6,266,758	1,266
19	4,805	5,040,371	1,400,158	6,440,529	1,340
20	5,972	6,763,718	1,884,374	8,648,092	1,448
21	5,118	6,207,498	1,789,745	7,997,243	1,563
22	4,833	6,356,162	1,799,134	8,155,296	1,687
23	4,812	6,680,735	1,866,876	8,547,611	1,776
24	4,549	6,837,155	1,903,765	8,740,920	1,922
25	9,711	16,117,549	4,369,937	20,487,486	2,110
26	5,880	10,472,257	3,016,485	13,488,742	2,294
27	5,873	11,260,123	3,285,887	14,546,010	2,477
28	6,447	13,958,835	4,016,106	17,974,941	2,788
29	6,270	14,689,516	3,900,968	18,590,484	2,965
30	28,896	73,324,475	17,420,005	90,744,480	3,140
31	8,575	22,607,556	5,746,931	28,354,487	3,307
32	6,626	18,049,353	4,737,442	22,786,795	3,439
33	5,095	14,547,315	3,711,166	18,258,481	3,584
34	4,025	11,780,047	3,132,719	14,912,766	3,705
35	3,655	10,874,204	2,941,426	13,815,630	3,780
36	2,582	7,757,394	2,110,674	9,868,068	3,822
37	2,070	6,293,022	1,718,724	8,011,746	3,870
38	1,505	4,591,511	1,271,555	5,863,066	3,896
39	1,152	3,411,526	1,054,293	4,465,819	3,877
40 & Over	2,522	8,586,141	2,516,322	11,102,463	4,402
TOTAL	208,809	\$335,344,760	\$88,525,160	\$423,869,920	\$2,030

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				
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
12/31/2005@	138,996	2,508	21.2 % **	27,084	27,084	100.0 %	2.6
12/31/2006	144,037	2,710	22.3 % **	29,304	29,304	100.0 %	2.5
12/31/2007	148,493	2,916	23.2 % **	31,547	31,547	100.0 %	2.5
12/31/2008	153,931	3,148	24.6 % **	34,060	34,060	100.0 %	2.3
12/31/2009	159,518	3,419	27.2 % **	37,098	37,098	100.0 %	2.2
12/31/2010@	166,247	3,705	29.8 % **	40,184	40,818	100.0 %	2.1
12/31/2011	174,679	4,065	32.8 % **	45,001	45,001	100.0 %	1.9
12/31/2012	180,759	4,352	35.7 % **	48,044	48,044	100.0 %	1.8
12/31/2013	187,198	4,629	37.5 % **	50,754	50,754	100.0 %	1.8
12/31/2014	194,096	4,908	38.8 % **	53,432	53,432	100.0 %	1.7

* Including certain recommended transfers and accrued transfers.

@ 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, 2014
TYPE OF BENEFIT, MONTHLY AMOUNT AND ACTUARIAL LIABILITIES

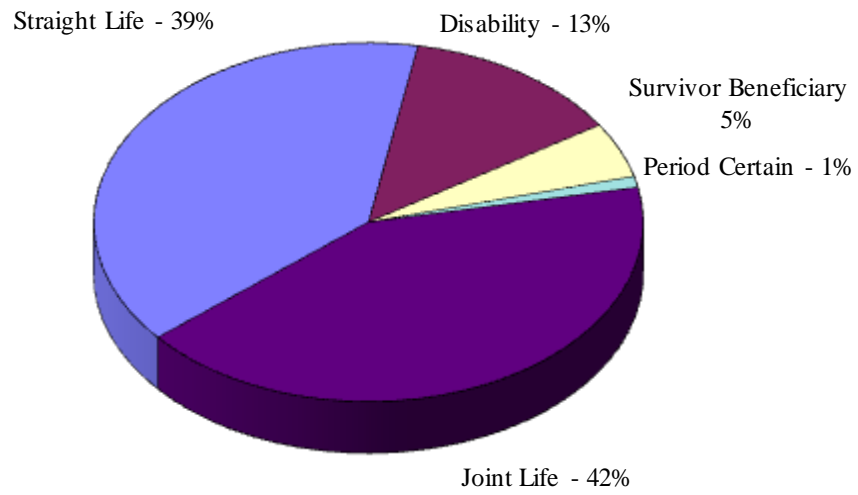
Type of Allowance	Number	Current Total	Actuarial Liabilities
Superannuation Retirement			
Plan A - Joint & 50%	21,862	\$ 54,387,577	\$ 7,414,698,295
Plan B - Straight Life	79,884	158,957,379	19,003,877,121
Plan C - Special Joint & Survivor	22,824	58,080,940	8,243,487,649
Plan D - Joint & 100%	24,105	58,502,486	9,155,940,837
Plan E - Life & 0 to 5 Years Guaranteed	358	657,216	79,925,661
- Life & 6 to 10 Years Guaranteed	517	962,695	115,597,688
- Life & 11 to 15 Years Guaranteed	721	1,158,382	143,984,973
- Life & 16 to 20 Years Guaranteed	71	161,003	24,421,352
Plan F - Multiple Continuing Beneficiaries	939	2,364,192	438,504,133
Money Purchase	3,603	1,621,695	195,034,701
Survivor Beneficiary - Life Benefit	16,594	19,463,397	1,784,879,170
Survivor Beneficiary - Temporary Benefit	79	92,131	5,297,994
Total Superannuation	171,557	\$ 356,409,093	\$ 46,605,649,574
Disability Retirement	22,539	\$ 52,579,679	\$ 6,825,938,107
Total from A & PR	194,096	\$ 408,988,772	\$ 53,431,587,681

ANNUITY AND PENSION RESERVE FUND
RETIREES AND BENEFICIARIES DECEMBER 31, 2014
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%	14,430	\$ 38,235,051	7,432	\$ 16,152,526	21,862	\$ 54,387,577
Plan B - Straight Life	24,546	55,661,830	55,338	103,295,549	79,884	158,957,379
Plan C - Special Joint & Survivor	10,787	31,409,516	12,037	26,671,424	22,824	58,080,940
Plan D - Joint & 100%	19,255	48,793,921	4,850	9,708,565	24,105	58,502,486
Plan E - Life & 0 to 5 Years Guaranteed	144	292,182	214	365,034	358	657,216
- Life & 6 to 10 Years Guaranteed	257	477,049	260	485,646	517	962,695
- Life & 11 to 15 Years Guaranteed	400	631,280	321	527,102	721	1,158,382
- Life & 16 to 20 Years Guaranteed	46	97,108	25	63,895	71	161,003
Plan F - Multiple Continuing Beneficiaries	351	1,069,085	588	1,295,107	939	2,364,192
Money Purchase	2,327	1,261,895	1,276	359,800	3,603	1,621,695
Survivor Beneficiary - Life Benefit	1,876	1,392,197	14,718	18,071,200	16,594	19,463,397
Survivor Beneficiary - Temporary Benefit	20	18,986	59	73,145	79	92,131
Total Superannuation	74,439	\$ 179,340,100	97,118	\$ 177,068,993	171,557	\$ 356,409,093
Disability Retirement	11,459	\$ 29,421,594	11,080	\$ 23,158,085	22,539	\$ 52,579,679
Total from A & PR	85,898	\$ 208,761,694	108,198	\$ 200,227,078	194,096	\$ 408,988,772

ANNUITIES BEING PAID BY TYPE
DECEMBER 31, 2014

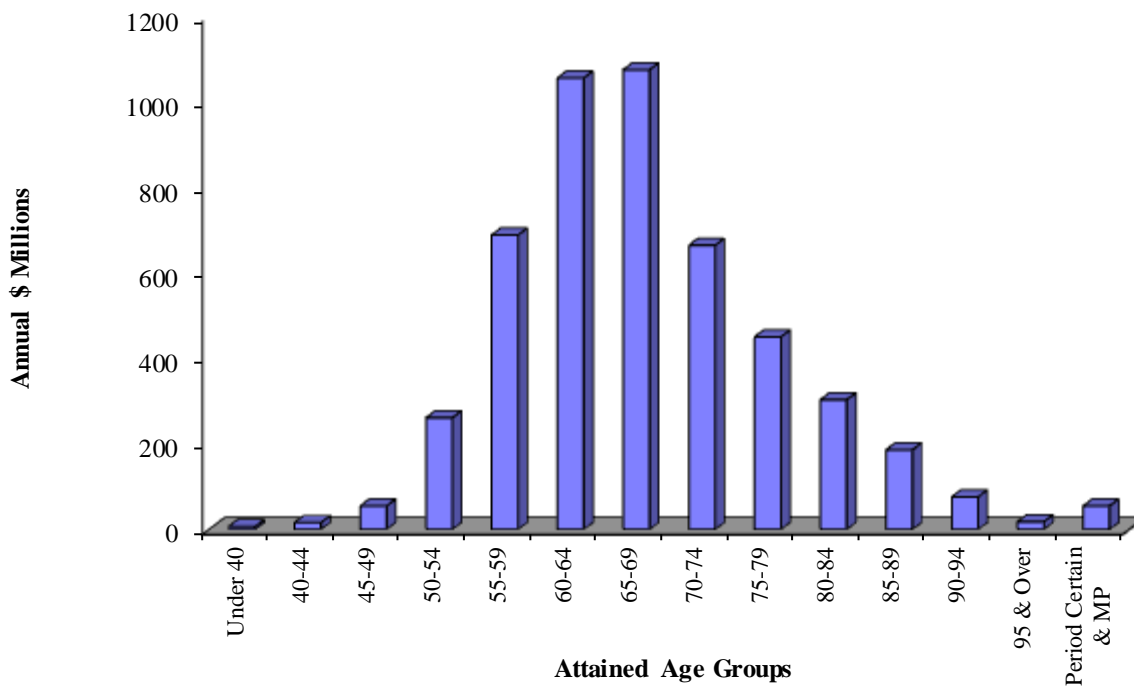
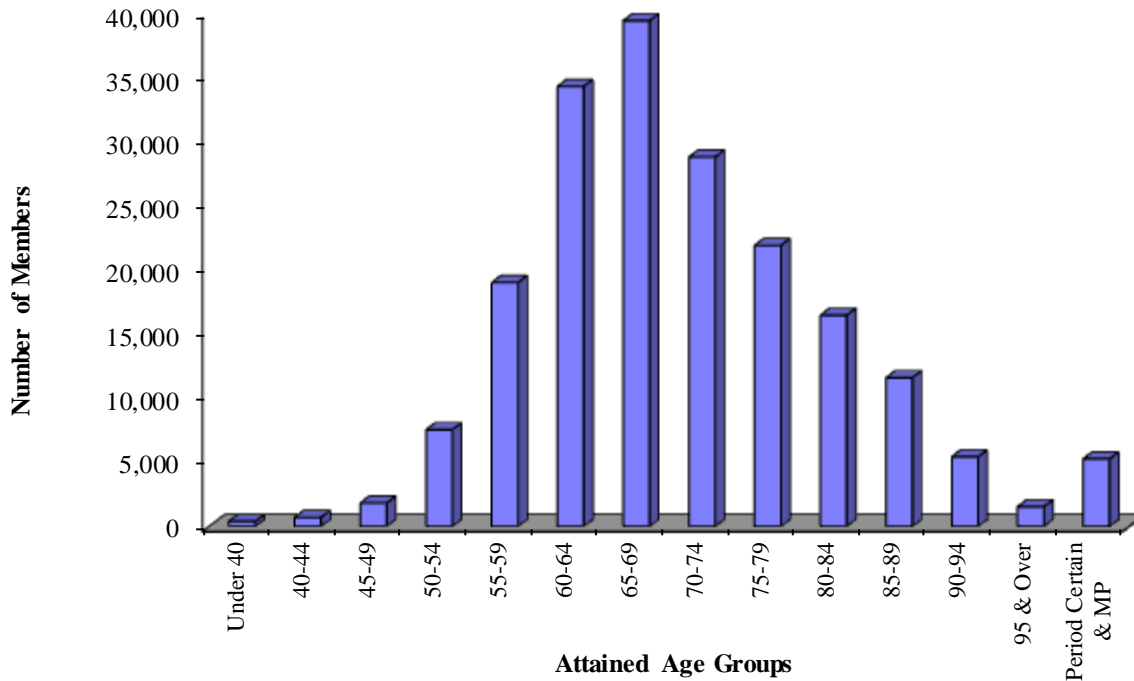
Annuity and Pension Reserve Fund



**ANNUITY AND PENSION RESERVE FUND
RETIREES AND BENEFICIARIES DECEMBER 31, 2014
CURRENT MONTHLY TOTAL \$ BY ATTAINED AGES**

Attained Ages	Superannuation		Disability		Totals	
	No.	Monthly Total	No.	Monthly Total	No.	Monthly Total
Under 20	15	\$ 9,864			15	\$ 9,864
20-24	21	10,977			21	10,977
25-29	31	26,908	3	\$ 4,934	34	31,842
30-34	27	28,455	47	74,490	74	102,945
35-39	35	18,628	222	379,747	257	398,375
40-44	62	42,447	644	1,301,889	706	1,344,336
45-49	318	778,176	1,509	3,787,789	1,827	4,565,965
50-54	4,318	13,209,538	3,221	8,541,547	7,539	21,751,085
55-59	14,026	44,718,685	4,977	12,639,156	19,003	57,357,841
60-64	28,999	75,431,337	5,278	12,491,227	34,277	87,922,564
65-69	36,139	82,014,512	3,253	7,519,008	39,392	89,533,520
70-74	27,059	52,019,058	1,715	3,316,252	28,774	55,335,310
75-79	21,010	35,972,393	886	1,515,119	21,896	37,487,512
80-84	16,031	24,652,380	424	587,058	16,455	25,239,438
85-89	11,310	15,149,409	275	329,701	11,585	15,479,110
90-94	5,368	6,255,087	63	71,341	5,431	6,326,428
95 & Over	1,518	1,510,248	22	20,421	1,540	1,530,669
Period Certain & Money Purchase	5,270	4,560,991			5,270	4,560,991
Totals	171,557	\$356,409,093	22,539	\$52,579,679	194,096	\$408,988,772

**ANNUITY AND PENSION RESERVE FUND
BENEFITS BEING PAID BY ATTAINED AGES
DECEMBER 31, 2014**



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

Attained Age Group	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999
Under 30	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
30-39	0.2%	0.2%	0.2%	0.2%	0.3%	0.3%	0.4%	0.4%	0.5%	0.5%	0.5%	0.5%	0.6%	0.6%	0.6%	0.6%
40-49	1.3%	1.5%	1.8%	2.0%	2.2%	2.5%	2.7%	2.9%	3.1%	3.3%	3.4%	3.5%	3.5%	3.3%	3.2%	3.1%
50-59	13.7%	14.6%	15.4%	15.9%	15.9%	16.0%	15.9%	15.9%	16.1%	15.8%	14.7%	13.7%	12.9%	11.7%	10.7%	9.8%
60-69	37.9%	36.5%	35.5%	34.8%	33.5%	32.6%	31.4%	30.7%	29.6%	28.9%	28.8%	28.6%	28.3%	28.1%	28.2%	28.9%
70-79	26.2%	26.1%	25.8%	25.4%	25.7%	26.2%	26.7%	27.2%	27.7%	28.5%	29.4%	30.4%	31.5%	32.7%	34.0%	35.5%
80-89	14.4%	14.8%	15.3%	15.8%	16.6%	16.9%	17.4%	17.7%	17.9%	18.0%	18.2%	18.3%	18.4%	18.7%	18.5%	18.7%
90 & Over	3.6%	3.6%	3.6%	3.6%	3.6%	3.4%	3.4%	3.3%	3.2%	3.2%	3.2%	3.2%	3.1%	3.1%	3.0%	3.1%
Period Certain & MP	2.7%	2.7%	2.4%	2.3%	2.2%	2.1%	2.1%	1.9%	1.9%	1.8%	1.8%	1.8%	1.7%	1.8%	1.8%	0.3%
TOTALS	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Average Age	70.2	70.0	69.9	69.9	70.0	70.0	70.1	70.1	70.2	70.2	70.4	70.6	70.7	71.0	71.2	71.4

STATE DIVISION
SURVIVOR BENEFIT FUND TABULATED BY
TYPE OF BENEFIT BEING PAID AND MONTHLY AMOUNT
DECEMBER 31, 2014

Group	Number	Current Total	Actuarial Liabilities
S-1 - Survivor Benefit to Beneficiary of Deceased Member Joint and Survivor Computation			
Men	175	\$ 189,044	\$ 19,517,862
Women	648	1,009,125	103,794,239
Totals	823	\$ 1,198,169	\$ 123,312,101
S-2 - Survivor Benefit to Beneficiary of Deceased Member Fixed Rate Amount			
Widower - no child	677	\$ 809,181	\$ 100,130,743
Widower - child	46	48,308	7,941,020
Child's record	109	68,373	4,562,321
Parent	0	0	0
Other	0	0	0
Child only	162	141,144	8,308,252
Subtotals - male	994	\$ 1,067,006	\$ 120,942,336
Widower - no child	2,107	\$ 2,610,374	\$ 320,775,531
Widower - child	113	133,959	23,680,194
Child's record	118	72,212	5,428,108
Parent	0	0	0
Other	2	1,698	260,798
Child only	172	157,099	8,231,240
Subtotals - female	2,512	\$ 2,975,342	\$ 358,375,871
Totals	3,506	\$ 4,042,348	\$ 479,318,207
Total Benefits Being Paid from Survivor Benefit Fund			
Men	1,169	\$ 1,256,050	\$ 140,460,198
Women	3,160	3,984,467	462,170,110
Totals	4,329	\$ 5,240,517	\$ 602,630,308

LOCAL GOVERNMENT DIVISION
SURVIVOR BENEFIT FUND TABULATED BY
TYPE OF BENEFIT BEING PAID AND MONTHLY AMOUNT
DECEMBER 31, 2014

Group	Number	Current Total	Actuarial Liabilities
S-1 - Survivor Benefit to Beneficiary of Deceased Member Joint and Survivor Computation			
Men	233	\$ 206,641	\$ 20,377,249
Women	1,342	1,579,230	160,347,831
Totals	1,575	\$ 1,785,871	\$ 180,725,080
S-2 - Survivor Benefit to Beneficiary of Deceased Member Fixed Rate Amount			
Widower - no child	1,112	\$ 946,346	\$ 113,400,785
Widower - child	79	62,447	10,618,071
Child's record	207	101,848	7,276,145
Parent	0	0	0
Other	2	1,264	139,014
Child only	311	247,302	16,419,921
Subtotals - male	1,711	\$ 1,359,207	\$ 147,853,936
Widower - no child	5,086	\$ 4,870,921	\$ 582,238,915
Widower - child	246	241,615	41,625,630
Child's record	269	146,644	11,721,314
Parent	2	2,221	162,799
Other	6	4,228	485,374
Child only	327	249,350	12,624,465
Subtotals - female	5,936	\$ 5,514,979	\$ 648,858,497
Totals	7,647	\$ 6,874,186	\$ 796,712,433
Total Benefits Being Paid from Survivor Benefit Fund			
Men	1,944	\$ 1,565,848	\$ 168,231,185
Women	7,278	7,094,209	809,206,328
Totals	9,222	\$ 8,660,057	\$ 977,437,513

PUBLIC SAFETY DIVISION
SURVIVOR BENEFIT FUND TABULATED BY
TYPE OF BENEFIT BEING PAID AND MONTHLY AMOUNT
DECEMBER 31, 2014

Group	Number	Current Total	Actuarial Liabilities
S-1 - Survivor Benefit to Beneficiary of Deceased Member Joint and Survivor Computation			
Men	0	\$ 0	\$ 0
Women	1	1,257	218,109
Totals	1	\$ 1,257	\$ 218,109
S-2 - Survivor Benefit to Beneficiary of Deceased Member Fixed Rate Amount			
Widower - no child	3	\$ 3,808	\$ 291,646
Widower - child	0	0	0
Child's record	1	576	15,942
Other	0	0	0
Child only	5	3,403	291,256
Subtotals - male	9	\$ 7,787	\$ 598,844
Widower - no child	82	\$ 114,547	\$ 16,650,213
Widower - child	2	2,503	428,727
Child's record	1	803	56,884
Other	4	3,620	317,479
Child only	0	0	0
Subtotals - female	89	\$ 121,473	\$ 17,453,303
Totals	98	\$ 129,260	\$ 18,052,147
Total Benefits Being Paid from Survivor Benefit Fund			
Men	9	\$ 7,787	\$ 598,844
Women	90	122,730	17,671,412
Totals	99	\$ 130,517	\$ 18,270,256

LAW ENFORCEMENT DIVISION
SURVIVOR BENEFIT FUND TABULATED BY
TYPE OF BENEFIT BEING PAID AND MONTHLY AMOUNT
DECEMBER 31, 2014

Group	Number	Current Total	Actuarial Liabilities
S-1 - Survivor Benefit to Beneficiary of Deceased Member Joint and Survivor Computation			
Men	0	\$ 0	\$ 0
Women	60	107,648	12,773,125
Totals	60	\$ 107,648	\$ 12,773,125
S-2 - Survivor Benefit to Beneficiary of Deceased Member Fixed Rate Amount			
Widower - no child	7	\$ 6,673	\$ 1,001,551
Widower - child	1	849	157,351
Child's record	14	8,876	737,188
Other	0	0	0
Child only	24	24,605	1,318,354
Subtotals - male	46	\$ 41,003	\$ 3,214,444
Widower - no child	150	\$ 172,706	\$ 24,596,233
Widower - child	23	27,116	4,955,002
Child's record	27	14,068	967,525
Other	18	12,679	472,894
Child only	0	0	0
Subtotals - female	218	\$ 226,569	\$ 30,991,654
Totals	264	\$ 267,572	\$ 34,206,098
Total Benefits Being Paid from Survivor Benefit Fund			
Men	46	\$ 41,003	\$ 3,214,444
Women	278	334,217	43,764,779
Totals	324	\$ 375,220	\$ 46,979,223

**STATE DIVISION
DEFERRED SURVIVOR BENEFICIARIES
TABULATED BY GENDER AND DEFERRED AGE
DECEMBER 31, 2014**

Group	Number	Current Total	Actuarial Liabilities
Widowers			
Deferred to age 50	0	\$ 0	\$ 0
Deferred to age 62	55	39,935	3,589,463
Deferred to age 65	0	0	0
Total	55	\$ 39,935	\$ 3,589,463
Widows			
Deferred to age 50	1	\$ 887	\$ 120,527
Deferred to age 62	172	123,886	11,368,717
Deferred to age 65	1	936	54,316
Total	174	\$ 125,709	\$ 11,543,560
Totals	229	\$ 165,644	\$ 15,133,023

**LOCAL GOVERNMENT DIVISION
DEFERRED SURVIVOR BENEFICIARIES
TABULATED BY GENDER AND DEFERRED AGE
DECEMBER 31, 2014**

Group	Number	Current Total	Actuarial Liabilities
Widowers			
Deferred to age 50	0	\$ 0	\$ 0
Deferred to age 62	115	60,125	4,855,872
Deferred to age 65	0	0	0
Total	115	\$ 60,125	\$ 4,855,872
Widows			
Deferred to age 50	1	\$ 1,042	\$ 167,508
Deferred to age 62	384	239,594	22,378,098
Deferred to age 65	0	0	0
Total	385	\$ 240,636	\$ 22,545,606
Totals	500	\$ 300,761	\$ 27,401,478

**PUBLIC SAFETY DIVISION
 DEFERRED SURVIVOR BENEFICIARIES
 TABULATED BY GENDER AND DEFERRED AGE
 DECEMBER 31, 2014**

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	1	286	28,553
Total	1	\$ 286	\$ 28,553
Totals	1	\$ 286	\$ 28,553

**LAW ENFORCEMENT DIVISION
 DEFERRED SURVIVOR BENEFICIARIES
 TABULATED BY GENDER AND DEFERRED AGE
 DECEMBER 31, 2014**

Group	Number	Current Total	Actuarial Liabilities
Widowers			
Deferred to age 50	0	\$ 0	\$ 0
Deferred to age 62	0	0	0
Total	0	\$ 0	\$ 0
Widows			
Deferred to age 50	0	\$ 0	\$ 0
Deferred to age 62	9	8,146	864,189
Total	9	\$ 8,146	\$ 864,189
Totals	9	\$ 8,146	\$ 864,189

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			
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 %
12/31/2005@	14,108	10,948,727	831	528,162	1,289.3	1,289.3	100 %
12/31/2006	14,172	11,333,735	832	508,430	1,332.6	1,332.6	100 %
12/31/2007	14,186	11,714,551	832	510,846	1,375.9	1,375.9	100 %
12/31/2008	14,238	12,122,501	847	526,623	1,425.6	1,425.6	100 %
12/31/2009	14,301	12,576,956	840	527,032	1,479.4	1,479.4	100 %
12/31/2010@	14,407	13,047,857	829	524,242	1,545.7	1,545.7	100 %
12/31/2011	14,370	13,424,237	800	505,111	1,589.7	1,589.7	100 %
12/31/2012#	14,224	13,769,795	796	519,459	1,629.3	1,629.3	100 %
12/31/2013	14,187	14,152,417	751	480,335	1,663.5	1,663.5	100 %
12/31/2014	13,974	14,406,311	739	474,837	1,688.7	1,688.7	100 %

@ Revised actuarial assumptions.

* Benefits increased.

After benefit changes.

+ Includes certain recommended transfers and accrued transfers.

RETIREES AND BENEFICIARIES DECEMBER 31, 2014

HISTORICAL AVERAGES

All Retirees								
December 31	Number Count	Average Age at Retirement	Average Service at Retirement	Average Pension at Retirement	Average Age on Valuation Date	Average Pension on Valuation Date	Median Pension on Valuation Date	Average FAS at Retirement
2014	208,809	57.6	22.8	\$19,673	69.7	\$24,833	\$21,348	\$39,753
2013	202,136	57.4	22.8	19,290	69.5	24,209	20,784	38,763
2012	195,779	57.4	22.7	18,827	69.3	23,461	20,088	37,743
2011	189,849	57.3	22.6	18,218	69.3	22,611	19,212	36,552
2010	181,483	57.2	22.4	17,379	69.3	21,598	18,144	35,025
2009	174,659	57.2	22.2	16,724	69.3	20,730	17,256	33,808
2008	169,016	57.2	22.0	15,942	69.4	19,750	16,284	32,401
2007	163,511	57.2	21.9	15,318	69.4	18,917	15,480	31,214
2006	159,041	57.3	21.7	14,711	69.4	18,096	14,700	29,975
Traditional Plan								
December 31	Number Count	Average Age at Retirement	Average Service at Retirement	Average Pension at Retirement	Average Age on Valuation Date	Average Pension on Valuation Date	Median Pension on Valuation Date	Average FAS at Retirement
2014	208,395	57.6	22.8	\$19,686	69.7	\$24,849	\$21,372	\$39,749
2013	201,841	57.4	22.8	19,299	69.5	24,220	20,796	38,760
2012	195,622	57.4	22.7	18,832	69.3	23,468	20,088	37,741
2011	189,753	57.3	22.6	18,221	69.3	22,614	19,224	36,549
2010	181,433	57.2	22.4	17,380	69.3	21,600	18,144	35,025
2009	174,637	57.2	22.2	16,725	69.3	20,731	17,256	33,808
2008	169,000	57.2	22.0	15,942	69.4	19,751	16,284	32,401
2007	163,505	57.2	21.9	15,318	69.4	18,917	15,480	31,214
2006	159,039	57.3	21.7	14,711	69.4	18,096	14,700	29,974
Combined Plan								
December 31	Number Count	Average Age at Retirement	Average Service at Retirement	Average Pension at Retirement	Average Age on Valuation Date	Average Pension on Valuation Date	Median Pension on Valuation Date	Average FAS at Retirement
2014	259	64.7	9.7	\$3,284	66.8	\$3,421	\$3,030	\$44,349
2013	164	64.9	8.7	2,839	67.0	2,962	2,682	43,403
2012	95	64.2	8.5	2,785	66.2	2,891	2,556	45,218
2011	58	64.2	7.9	2,757	66.0	2,828	2,202	49,751
2010	32	64.3	7.9	2,158	65.9	2,219	1,962	40,548
2009	12	65.0	7.6	1,590	66.6	1,635	1,740	35,139
2008	12	64.0	7.4	1,239	64.8	1,260	1,092	29,454
2007	4	61.1	4.8	1,620	62.0	1,644	1,644	43,743
2006	2	62.1	3.8	1,656	62.3	1,656	1,656	50,116
Member Directed Plan								
December 31	Number Count	Average Age at Retirement	Average Service at Retirement	Average Pension at Retirement	Average Age on Valuation Date	Average Pension on Valuation Date	Median Pension on Valuation Date	Average FAS at Retirement
2014	155	NA	NA	NA	NA	NA	NA	NA
2013	131	NA	NA	NA	NA	NA	NA	NA
2012	62	NA	NA	NA	NA	NA	NA	NA
2011	38	NA	NA	NA	NA	NA	NA	NA
2010	18	NA	NA	NA	NA	NA	NA	NA
2009	10	NA	NA	NA	NA	NA	NA	NA
2008	4	NA	NA	NA	NA	NA	NA	NA
2007	2	NA	NA	NA	NA	NA	NA	NA
2006	NA							

SECTION X

ACTUARIAL METHODS AND ASSUMPTIONS

**SUMMARY OF
ACTUARIAL METHODS AND ASSUMPTIONS USED FOR OPERS
ACTUARIAL VALUATIONS
ASSUMPTIONS ADOPTED BY THE RETIREMENT BOARD
AFTER CONSULTING WITH THE ACTUARY**

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

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

The actuarial assumptions used in the valuation are shown in this Section. Assumptions were established following the December 31, 2010 actuarial valuation based upon an Experience Study covering the period January 1, 2006 through December 31, 2010 and updated in conjunction with the passage of Senate Bill 343. The actuarial assumptions represent estimates of future experience.

ECONOMIC ASSUMPTIONS

The investment return rate assumed in the valuations was 8.00% per year, compounded annually (net after administrative expenses).

The wage inflation rate assumed in this valuation was 3.75% per year. The wage inflation rate is defined to be the portion of total pay increases for an individual that are due to macroeconomic forces including productivity, price inflation, and labor market conditions. The wage inflation rate does not include pay changes related to individual merit and seniority effects.

The price inflation component of the investment return rate and the wage inflation rate is assumed to be 3.00%.

The assumed real rate of return over wage inflation is defined to be the portion of total investment return that is more than the assumed total wage growth rate. Considering other economic assumptions, the 8.00% investment return rate translates to an assumed real rate of return over wage inflation of 4.25%. The assumed real rate of return over price inflation is 5.00%.

The active member population (the sum of the Traditional and Combined Plan active members) is assumed to remain constant. For purposes of financing the unfunded actuarial accrued liabilities, total payroll (the sum of the Traditional and Combined Plan active payroll) is assumed to grow at the wage inflation rate – 3.75% per year.

Pay increase assumptions for individual active members are shown for sample ages on pages X-8 through X-11. Part of the assumption for each age is for merit and/or seniority increase, and the other 3.75% recognizes wage inflation, including price inflation, productivity increases, and other macroeconomic forces.

NON-ECONOMIC ASSUMPTIONS

The post-retirement mortality rates used in evaluating age and service and survivor benefit allowances to be paid are based upon the RP-2000 mortality table projected 20 years using Projection Scale AA. For males, 105% of the Combined Healthy male mortality rates are used. For females, 100% of the Combined Healthy female mortality rates are used. Related values are shown on page X-12. The mortality rates used in evaluating disability allowances are based upon the RP-2000 mortality table with no projection. For males, 120% of the Disabled female mortality rates are used set forward 2 years. For females, 100% of the Disabled female mortality rates are used. The mortality rates were established based upon the experience of the OPERS membership in total. Based upon the experience observed during the most recent 5-year period study, it appears that the current rates provide for an approximate 13% margin for future mortality improvement.

The probabilities of unreduced and reduced age and service retirement are shown on pages X-3 through X-7. For State and Local Government members that satisfy the 30-year unreduced retirement condition prior to age 65, the service-based unreduced retirement probabilities are used. For State and Local Government members that satisfy the 30-year unreduced retirement condition on or after age 65, the age-based unreduced retirement probabilities are used.

The probabilities of withdrawal from service, disability and death-in-service are shown for sample ages on pages X-8 through X-11. 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-in-service 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.

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 values 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 through II-9.

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

Transition Group A

Ages	Percent of Eligible Active Members Retiring Within Next Year			
	State		Local Government	
	Men	Women	Men	Women
65	22%	22%	20%	20%
66	22%	22%	20%	20%
67	20%	20%	15%	20%
68	20%	20%	15%	17%
69	20%	20%	15%	17%
70	20%	20%	15%	17%
71	20%	20%	15%	17%
72	15%	20%	15%	17%
73	15%	20%	15%	17%
74	15%	20%	15%	17%
75	15%	20%	15%	17%
76	15%	20%	15%	17%
77	15%	25%	15%	17%
78	15%	25%	15%	17%
79	15%	25%	15%	22%
80	25%	25%	20%	22%
81	25%	25%	20%	22%
82	25%	25%	20%	22%
83	25%	25%	20%	22%
84	25%	25%	20%	22%
85 & Over	100%	100%	100%	100%
Ref	2094	2095	2096	2097

Ages	Percent of Eligible Active Members Retiring Within Next Year	
	Public Safety	Law Enforcement
	48	
49		20%
50		20%
51		20%
52	30%	20%
53	30%	20%
54	25%	20%
55	25%	20%
56	25%	23%
57	25%	23%
58	20%	25%
59	20%	25%
60	35%	30%
61	35%	25%
62	35%	25%
63	35%	25%
64	35%	25%
65	35%	25%
66	35%	25%
67	35%	25%
68	35%	25%
69	35%	25%
70 & Over	100%	100%
Ref	1334	2084

Service	Percent of Eligible Active Members Retiring Within Next Year			
	State		Local Government	
	Men	Women	Men	Women
30	37%	40%	35%	35%
31	28%	33%	26%	30%
32-39	24%	26%	23%	24%
40	35%	33%	32%	24%
41	35%	33%	32%	24%
42	35%	33%	32%	24%
43	35%	33%	32%	20%
44	35%	33%	32%	20%
45	25%	25%	32%	20%
46	25%	25%	25%	20%
47	25%	25%	25%	20%
48	25%	25%	25%	20%
49	25%	25%	25%	20%
50 & Over	100%	100%	100%	100%
Ref	2091	2093	2098	2099

PROBABILITIES OF UNREDUCED AGE AND SERVICE RETIREMENT

Transition Group B

Ages	Percent of Eligible Active Members Retiring Within Next Year			
	State		Local Government	
	Men	Women	Men	Women
66	22%	22%	20%	20%
67	22%	22%	20%	20%
68	20%	20%	15%	20%
69	20%	20%	15%	17%
70	20%	20%	15%	17%
71	20%	20%	15%	17%
72	20%	20%	15%	17%
73	15%	20%	15%	17%
74	15%	20%	15%	17%
75	15%	20%	15%	17%
76	15%	20%	15%	17%
77	15%	20%	15%	17%
78	15%	25%	15%	17%
79	15%	25%	15%	17%
80	15%	25%	15%	22%
81	25%	25%	20%	22%
82	25%	25%	20%	22%
83	25%	25%	20%	22%
84	25%	25%	20%	22%
85 & Over	100%	100%	100%	100%
Ref	2094	2095	2096	2097

Ages	Percent of Eligible Active Members Retiring Within Next Year	
	Public Safety	Law Enforcement
	50	
51		20%
52		20%
53		20%
54	25%	20%
55	25%	20%
56	25%	20%
57	25%	20%
58	20%	23%
59	20%	23%
60	35%	25%
61	35%	25%
62	35%	30%
63	35%	25%
64	35%	25%
65	35%	25%
66	35%	25%
67	35%	25%
68	35%	25%
69	35%	25%
70	100%	25%
71		25%
72 & Over		100%
Ref	1334	2084

Service	Percent of Eligible Active Members Retiring Within Next Year			
	State		Local Government	
	Men	Women	Men	Women
32	37%	40%	35%	35%
33	28%	33%	26%	30%
34-41	24%	26%	23%	24%
42	35%	33%	32%	24%
43	35%	33%	32%	24%
44	35%	33%	32%	24%
45	35%	33%	32%	20%
46	35%	33%	32%	20%
47	25%	25%	32%	20%
48	25%	25%	25%	20%
49	25%	25%	25%	20%
50	25%	25%	25%	20%
51	25%	25%	25%	20%
52 & Over	100%	100%	100%	100%
Ref	2091	2093	2098	2099

PROBABILITIES OF UNREDUCED AGE AND SERVICE RETIREMENT

Transition Group C

67&5 Condition	Percent of Eligible Active Members Retiring Within Next Year			
	State		Local Government	
	Men	Women	Men	Women
Age				
67	22%	22%	20%	20%
68	22%	22%	20%	20%
69	20%	20%	15%	20%
70	20%	20%	15%	17%
71	20%	20%	15%	17%
72	20%	20%	15%	17%
73	20%	20%	15%	17%
74	15%	20%	15%	17%
75	15%	20%	15%	17%
76	15%	20%	15%	17%
77	15%	20%	15%	17%
78	15%	20%	15%	17%
79	15%	25%	15%	17%
80	15%	25%	15%	17%
81	15%	25%	15%	22%
82	25%	25%	20%	22%
83	25%	25%	20%	22%
84	25%	25%	20%	22%
85 & Over	100%	100%	100%	100%
Ref	2094	2095	2096	2097

Ages	Percent of Eligible Active Members Retiring Within Next Year	
	Public Safety	Law Enforcement
	52	
53		20%
54		20%
55		20%
56	25%	20%
57	25%	20%
58	20%	20%
59	20%	20%
60	35%	23%
61	35%	23%
62	35%	25%
63	35%	25%
64	35%	30%
65	35%	25%
66	35%	25%
67	35%	25%
68	35%	25%
69	35%	25%
70	100%	25%
71		25%
72		25%
73		25%
74 & Over		100%
Ref	1334	2084

55&32 Condition	Percent of Eligible Active Members Retiring Within Next Year				
	Year of Eligibility	State		Local Government	
		Men	Women	Men	Women
1	37%	40%	35%	35%	
2	28%	33%	26%	30%	
3-10	24%	26%	23%	24%	
11	35%	33%	32%	24%	
12	35%	33%	32%	24%	
13	35%	33%	32%	24%	
14	35%	33%	32%	20%	
15	35%	33%	32%	20%	
16	25%	25%	32%	20%	
17	25%	25%	25%	20%	
18	25%	25%	25%	20%	
19	25%	25%	25%	20%	
20	25%	25%	25%	20%	
21 & over	100%	100%	100%	100%	
Ref	2091	2093	2098	2099	

PROBABILITIES OF REDUCED RETIREMENT

Transition Group A

Ages	Percent of Eligible Active Members Retiring Within Next Year				
	State		Local Government		Public Safety
	Men	Women	Men	Women	
48					8%
49					8%
50					8%
51					8%
52					
53					
54					
55	10%	10%	9%	11%	
56	10%	10%	9%	11%	
57	10%	10%	9%	11%	
58	10%	10%	9%	11%	
59	10%	11%	9%	11%	
60	10%	12%	9%	11%	
61	10%	13%	9%	12%	
62	15%	15%	13%	13%	
63	15%	15%	14%	14%	
64	15%	15%	12%	15%	
Ref	2085	2086	2087	2088	1496

Transition Group B

Ages	Percent of Eligible Active Members Retiring Within Next Year					
	State		Local Government		Public Safety	Law Enforcement
	Men	Women	Men	Women		
48					8%	8%
49					8%	8%
50					8%	
51					8%	
52					8%	
53					8%	
54						
55	10%	10%	9%	11%		
56	10%	10%	9%	11%		
57	10%	10%	9%	11%		
58	10%	10%	9%	11%		
59	10%	11%	9%	11%		
60	10%	12%	9%	11%		
61	10%	13%	9%	12%		
62	15%	15%	13%	13%		
63	15%	15%	14%	14%		
64	15%	15%	12%	15%		
65	15%	15%	12%	15%		
Ref	2085	2086	2087	2088	469	1496

PROBABILITIES OF REDUCED RETIREMENT

Transition Group C

Ages	Percent of Eligible Active Members Retiring Within Next Year					
	State		Local Government		Public Safety	Law Enforcement
	Men	Women	Men	Women		
48						8%
49						8%
50						8%
51						8%
52					8%	
53					8%	
54					8%	
55					8%	
56						
57	10%	10%	9%	11%		
58	10%	10%	9%	11%		
59	10%	10%	9%	11%		
60	10%	10%	9%	11%		
61	10%	11%	9%	11%		
62	10%	12%	9%	11%		
63	10%	13%	9%	12%		
64	15%	15%	13%	13%		
65	15%	15%	14%	14%		
66	15%	15%	12%	15%		
Ref	2085	2086	2087	2088	1496	1496

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			45.00%	45.00%					
	1			30.00%	30.00%					
	2			17.00%	18.00%					
	3			12.00%	13.00%					
	4			10.00%	10.00%					
25	5 & Over	0.03%	0.01%	7.20%	8.28%	0.12%	0.12%	4.30%	3.75%	8.05%
30		0.04%	0.02%	5.16%	6.66%	0.15%	0.15%	3.00%	3.75%	6.75%
35		0.07%	0.03%	3.82%	4.82%	0.26%	0.26%	2.20%	3.75%	5.95%
40		0.10%	0.04%	2.82%	3.32%	0.42%	0.42%	1.80%	3.75%	5.55%
45		0.14%	0.06%	2.14%	2.50%	0.58%	0.58%	1.40%	3.75%	5.15%
50		0.19%	0.09%	1.90%	2.30%	0.74%	0.74%	1.20%	3.75%	4.95%
55		0.33%	0.17%	1.90%	2.30%	1.10%	1.10%	0.90%	3.75%	4.65%
60	0.61%	0.34%	1.90%	2.30%	1.78%	1.78%	0.70%	3.75%	4.45%	
Ref		#506x0.9sb0	#455x0.75sb0	751 #1202x1	755 #1203x1	#385x0.808	#385x0.808	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			40.00%	40.00%					
	1			26.00%	26.00%					
	2			16.00%	17.00%					
	3			11.00%	13.00%					
	4			10.00%	10.00%					
25	5 & Over	0.03%	0.01%	6.74%	8.30%	0.11%	0.10%	4.30%	3.75%	8.05%
30		0.04%	0.02%	5.24%	6.54%	0.14%	0.11%	3.00%	3.75%	6.75%
35		0.07%	0.03%	3.96%	4.94%	0.23%	0.17%	2.20%	3.75%	5.95%
40		0.10%	0.04%	2.86%	3.52%	0.36%	0.27%	1.80%	3.75%	5.55%
45		0.14%	0.06%	2.38%	2.76%	0.50%	0.36%	1.40%	3.75%	5.15%
50		0.19%	0.09%	2.30%	2.60%	0.73%	0.53%	1.20%	3.75%	4.95%
55		0.33%	0.17%	2.30%	2.60%	1.08%	0.79%	0.90%	3.75%	4.65%
60	0.61%	0.34%	2.30%	2.60%	1.24%	1.09%	0.70%	3.75%	4.45%	
Ref		#506x0.9sb0	#455x0.75sb0	752 #1205x1	754 #1206x1	#333x0.808	#334x0.808	301		

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

PUBLIC SAFETY
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			19.00%	19.00%					
	1			17.00%	17.00%					
	2			10.00%	10.00%					
	3			10.00%	10.00%					
	4			10.00%	10.00%					
25	5 & Over	0.03%	0.01%	10.00%	10.00%	0.21%	0.34%	6.30%	3.75%	10.05%
30		0.04%	0.02%	8.80%	8.80%	0.38%	0.45%	4.00%	3.75%	7.75%
35		0.07%	0.03%	6.20%	6.20%	0.65%	0.88%	1.60%	3.75%	5.35%
40		0.10%	0.04%	3.50%	3.50%	0.83%	1.22%	0.85%	3.75%	4.60%
45		0.14%	0.06%	2.20%	2.20%	1.01%	1.60%	0.60%	3.75%	4.35%
50		0.19%	0.09%	2.00%	2.00%	1.70%	2.01%	0.50%	3.75%	4.25%
55		0.33%	0.17%	2.00%	2.00%	2.37%	2.92%	0.50%	3.75%	4.25%
60	0.61%	0.34%	2.00%	2.00%	3.01%	3.44%	0.50%	3.75%	4.25%	
Ref		#506x0.9sb0	#455x0.75sb0	756 #1211x1	756 #1211x1	#699x0.86	#743x0.86	303		

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

LAW ENFORCEMENT
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			16.00%	16.00%					
	1			10.00%	12.00%					
	2			8.00%	8.00%					
	3			6.00%	7.00%					
	4			5.00%	7.00%					
25	5 & Over	0.03%	0.01%	3.54%	3.80%	0.21%	0.34%	6.30%	3.75%	10.05%
30		0.04%	0.02%	2.66%	2.90%	0.38%	0.45%	4.00%	3.75%	7.75%
35		0.07%	0.03%	2.14%	2.30%	0.65%	0.88%	1.60%	3.75%	5.35%
40		0.10%	0.04%	1.48%	1.50%	0.83%	1.22%	0.85%	3.75%	4.60%
45		0.14%	0.06%	1.20%	1.30%	1.01%	1.60%	0.60%	3.75%	4.35%
50		0.19%	0.09%	1.20%	1.20%	1.70%	2.01%	0.50%	3.75%	4.25%
55		0.33%	0.17%	1.20%	1.20%	2.37%	2.92%	0.50%	3.75%	4.25%
60		0.61%	0.34%	1.20%	1.20%	3.01%	3.44%	0.50%	3.75%	4.25%
Ref		#506x0.9sb0	#455x0.75sb0	753 #876x1	445 #575x1	#699x0.86	#743x0.86	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	\$177.31	\$181.07	32.36	34.63
55	165.65	170.43	27.64	29.88
60	151.34	157.52	23.09	25.31
65	134.71	142.57	18.81	21.02
70	116.28	125.95	14.89	17.06
75	95.74	107.82	11.29	13.47
80	74.64	88.38	8.17	10.23
Ref:	:#454x1.05sb0	:#455x1sb0		

MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

DECEMBER 31, 2014

Marriage Assumption:	70% of males and 60% 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 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, 2014 (CONCLUDED)

Miscellaneous Loads:	<ul style="list-style-type: none">• A load of approximately 0.36% of payroll is included in the computed normal cost 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.• A load of approximately 1% of Combined Plan payroll is included in the Combined Plan computed normal cost to recognize expected administrative expenses.• Approximately \$3 million was added to the Combined Plan actuarial accrued liability to reflect assumed future transfers out of Combined Plan assets to repay start-up loans.
Transition Groups Under Senate Bill #343:	A member's transition group (i.e., Group A, Group B, or Group C) was determined as of the valuation date based upon the assumption (for transition group determination only) that active members would continue in active service.
Cost-of-Living Adjustments:	For individuals retiring after January 7, 2013, cost-of-living adjustments were assumed to be 3% for calendar years 2013 through 2018 and 2.8% thereafter.
Incidence of Contributions:	Contributions are assumed to be received continuously throughout the year based upon contribution rates presented in the Summary of Benefits, 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.
Missing Member Data:	Active and inactive records with missing dates of birth, if any, were given dates of birth that resulted in an entry age of 30 based upon the reported service. Active and inactive records with missing gender codes, if any, were assumed to be female.

SECTION XI
FINANCIAL PRINCIPLES

FINANCIAL PRINCIPLES AND OPERATIONAL TECHNIQUES OF OPERS

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 3rd 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 OPERS).

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.*

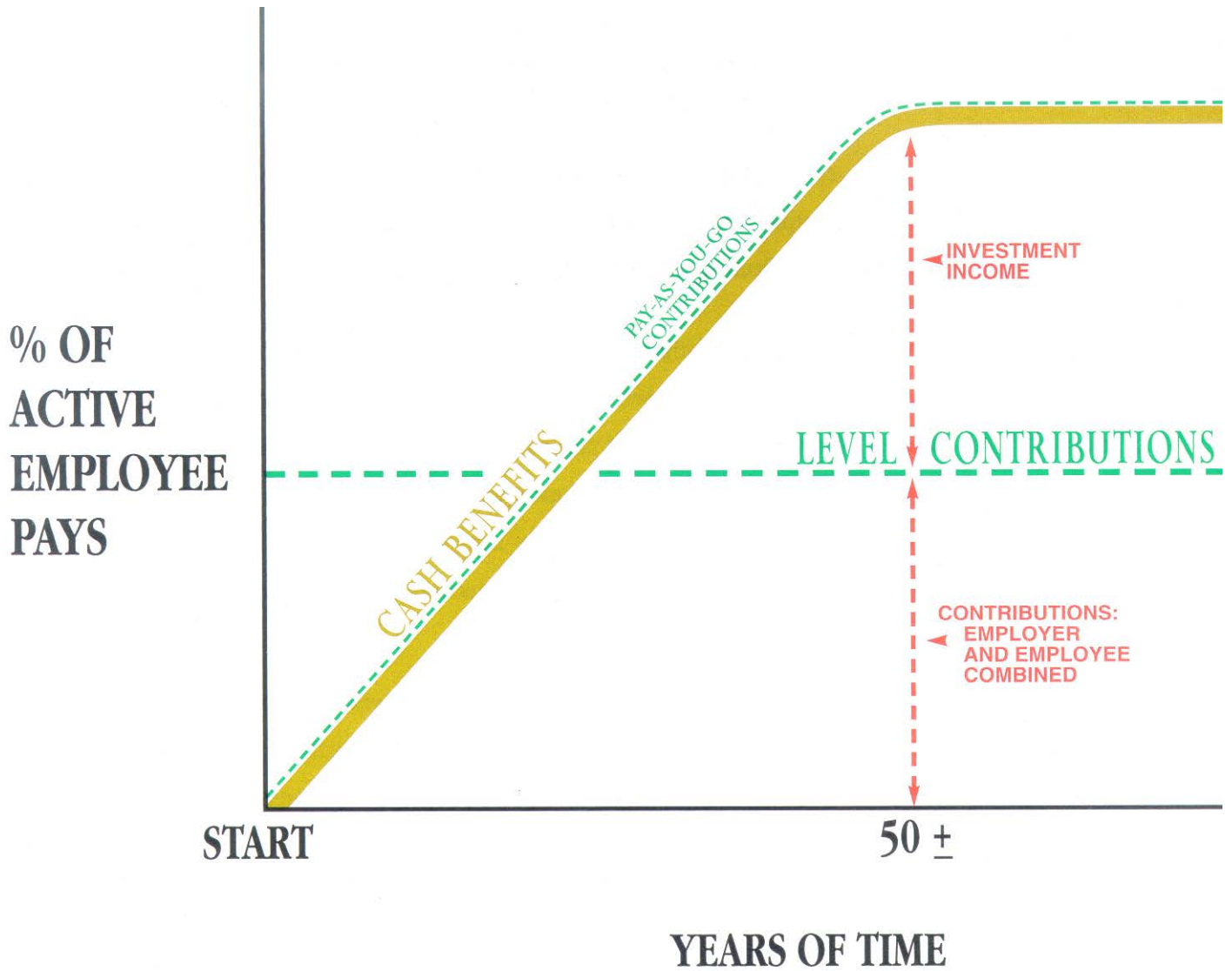
An actuarial valuation has a number of ingredients such as: the rate of investment return which plan assets will earn; the rates of withdrawal of active members who leave covered employment; the rates of mortality; the rates of disability; the rates of pay increases; and the assumed age or ages at actual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

OPERS 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.*

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

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

Economic Risk Areas

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

Non-Economic Risk Areas

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

THE ACTUARIAL VALUATION PROCESS

The 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

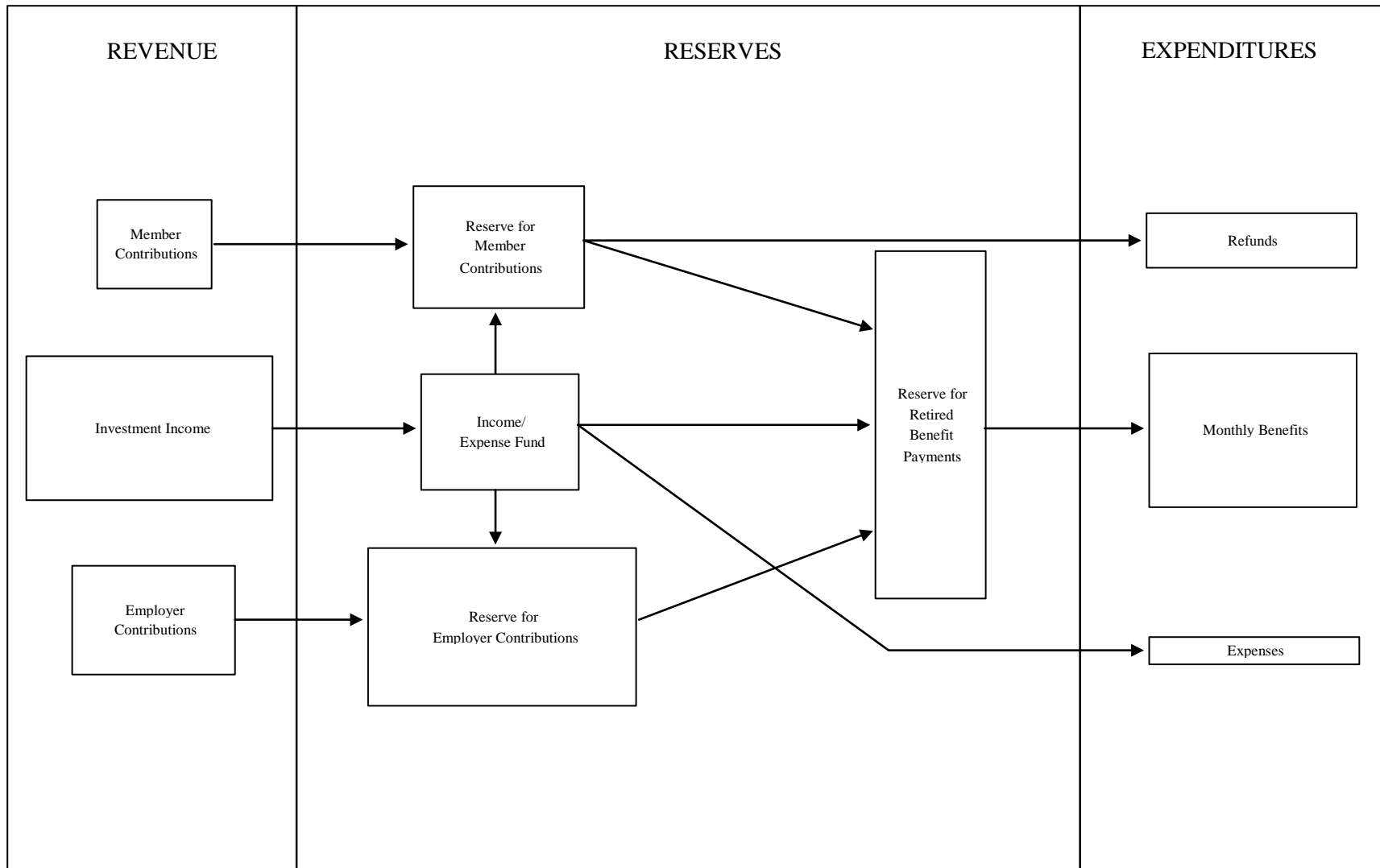
- D. + **Assumptions concerning future experience** in various risk areas

- 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 (MAAA). 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 ASA and ultimately to Fellowship with the designation FSA.

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 15-30 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 the 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 XII

GASB REPORTING

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

**SCHEDULE OF DEFINED BENEFIT FUNDING PROGRESS
FOR COMPLIANCE WITH APPLICABLE GASB STATEMENTS
(\$ AMOUNTS IN MILLIONS)
TRADITIONAL, COMBINED, AND MEMBER DIRECTED PLANS**

The schedule below measures the funding progress with respect to the *retirement allowance* portion of OPERS benefits for compliance with applicable GASB Statements. Assets and liabilities related to post-employment health care benefits are specifically excluded from the schedule. Assets do, however, include market value adjustments.

Valuation Year	Actuarial Accrued Liabilities (AAL)	Valuation Assets	Unfunded Actuarial Accrued Liabilities (UAAL)	Ratio of Assets to AAL	Active Member Payroll	UAAL as a % of Active Member Payroll
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 %
2005	61,146	54,473	6,673	89 %	11,807	57 %
2005*	62,498	54,473	8,025	87 %	11,807	68 %
2006	66,161	61,296	4,865	93 %	12,175	40 %
2007	69,734	67,151	2,583	96 %	12,583	21 %
2008	73,466	55,315	18,150	75 %	12,801	142 %
2009	76,555	57,629	18,926	75 %	12,548	151 %
2010	79,630	60,600	19,031	76 %	12,450	153 %
2010*	80,485	63,649	16,836	79 %	12,450	135 %
2011	84,530	65,436	19,094	77 %	12,399	154 %
2012	87,105	67,855	19,250	78 %	12,193	158 %
2012#	83,878	67,855	16,023	81 %	12,193	131 %
2013	86,645	71,411	15,234	82 %	12,331	124 %
2014	89,285	74,865	14,420	84 %	12,654	114 %

* Revised actuarial assumptions.

After benefit changes.

**SCHEDULE OF DEFINED BENEFIT FUNDING PROGRESS
FOR COMPLIANCE WITH APPLICABLE GASB STATEMENTS
(\$ AMOUNTS IN MILLIONS)
TRADITIONAL PLAN**

The schedule below measures the funding progress with respect to the *retirement allowance* portion of OPERS benefits for compliance with applicable GASB Statements. Assets and liabilities related to post-employment health care benefits are specifically excluded from the schedule. Assets do, however, include market value adjustments.

Valuation Year	Actuarial Accrued Liabilities (AAL)	Valuation Assets	Unfunded Actuarial Accrued Liabilities (UAAL)	Ratio of Assets to AAL	Active Member Payroll	UAAL as a % of Active Member Payroll
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	54,756	46,737	8,019	85 %	11,056	73 %
2004	57,573	50,430	7,143	88 %	11,313	63 %
2005	61,099	54,433	6,666	89 %	11,633	57 %
2005*	62,447	54,433	8,014	87 %	11,633	69 %
2006	66,089	61,235	4,854	93 %	11,971	41 %
2007	69,639	67,067	2,572	96 %	12,347	21 %
2008	73,346	55,230	18,116	75 %	12,546	144 %
2009	76,407	57,519	18,888	75 %	12,290	154 %
2010	79,459	60,461	18,997	76 %	12,165	156 %
2010*	80,307	63,515	16,792	79 %	12,165	138 %
2011	84,325	65,274	19,052	77 %	12,103	157 %
2012	86,876	67,670	19,206	78 %	11,884	162 %
2012#	83,664	67,670	15,994	81 %	11,884	135 %
2013	86,407	71,175	15,232	82 %	12,000	127 %
2014	89,017	74,567	14,450	84 %	12,300	117 %

* Revised actuarial assumptions.

After benefit changes.

**SCHEDULE OF DEFINED BENEFIT FUNDING PROGRESS
FOR COMPLIANCE WITH APPLICABLE GASB STATEMENTS
(\$ AMOUNTS IN MILLIONS)
COMBINED PLAN**

The schedule below measures the funding progress with respect to the *retirement allowance* portion of OPERS benefits for compliance with applicable GASB Statements. Assets and liabilities related to post-employment health care benefits are specifically excluded from the schedule. Assets do, however, include market value adjustments.

Valuation Year	Actuarial Accrued Liabilities (AAL)	Valuation Assets	Unfunded Actuarial Accrued Liabilities (UAAL)	Ratio of Assets to AAL	Active Member Payroll	UAAL as a % of Active Member Payroll
1995						
1996						
1997						
1998						
1999						
2000						
2001						
2001						
2002						
2003	\$ 18	\$ 9	\$ 9	50 %	\$109	8 %
2004	31	22	9	71 %	141	6 %
2005	47	40	7	85 %	174	4 %
2005*	51	40	11	78 %	174	6 %
2006	72	61	11	85 %	205	5 %
2007	95	84	11	88 %	236	5 %
2008	120	85	35	71 %	255	14 %
2009	148	110	38	74 %	258	15 %
2010	171	138	33	81 %	284	12 %
2010*	177	134	43	76 %	284	15 %
2011	203	161	42	79 %	296	14 %
2012	226	183	43	81 %	310	14 %
2012#	212	183	29	86 %	310	9 %
2013	230	229	1	100 %	331	0 %
2014	260	289	(29)	111 %	354	0 %

* Revised actuarial assumptions.

After benefit changes.

**SCHEDULE OF DEFINED BENEFIT FUNDING PROGRESS
FOR COMPLIANCE WITH APPLICABLE GASB STATEMENTS
(\$ AMOUNTS)
MEMBER DIRECTED PLAN**

The schedule below measures the funding progress with respect to the *retirement allowance* portion of OPERS benefits for compliance with applicable GASB Statements. Assets and liabilities related to post-employment health care benefits are specifically excluded from the schedule. Assets do, however, include market value adjustments.

Valuation Year	Actuarial Accrued Liabilities (AAL)	Valuation Assets	Unfunded Actuarial Accrued Liabilities (UAAL)	Ratio of Assets to AAL	Active Member Payroll	UAAL as a % of Active Member Payroll
1991						
1992						
1993						
1994						
1995						
1995						
1996						
1997						
1998						
1999						
2000						
2001						
2001						
2002						
2003						
2004						
2005						
2005*						
2006						
2007						
2008	\$ 166,354	\$ 147,976	\$ 18,378	89 %	NA	NA
2009	252,670	205,639	47,031	81 %	NA	NA
2010	489,792	438,982	50,810	90 %	NA	NA
2010*	496,004	454,025	41,979	92 %	NA	NA
2011	1,172,900	1,156,151	16,749	99 %	NA	NA
2012	2,665,552	2,523,879	141,673	95 %	NA	NA
2013	6,884,231	6,826,536	57,695	99 %	NA	NA
2014	8,291,077	8,771,712	(480,635)	106 %	NA	NA

* Revised actuarial assumptions.

SCHEDULE OF EMPLOYER CONTRIBUTIONS*
FOR COMPLIANCE WITH APPLICABLE GASB STATEMENTS

Traditional Plan		
Valuation Date December 31	Year Ended December 31	Annual Required Contributions
2004	2006	8.44%
2005	2008	7.12%
2006	2009	7.13%
2007	2010	7.14%
2008	2011	13.33%
2009	2012	13.64%
2010	2013	13.52%
2011	2014	14.15%
2012	2015	11.16%
2013	2016	10.16%
2014	2017	10.16%

Combined Plan		
Valuation Date December 31	Year Ended December 31	Annual Required Contributions
2004	2006	8.33%
2005	2008	7.29%
2006	2009	7.33%
2007	2010	7.22%
2008	2011	10.00%
2009	2012	10.00%
2010	2013	13.00%
2011	2014	14.00%
2012	2015	11.00%
2013	2016	10.00%
2014	2017	10.00%

Member Directed Plan		
Valuation Date December 31	Year Ended December 31	Annual Required Contributions
2008	2011	\$ 1,570
2009	2012	4,019
2010	2013	4,342
2011	2014	1,669
2012	2015	14,121
2013	2016	5,751
2014	2017	0

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

**SCHEDULE OF UNFUNDED ACTUARIAL ACCRUED LIABILITY@
FOR COMPLIANCE WITH APPLICABLE GASB STATEMENTS
TRADITIONAL, COMBINED AND MEMBER DIRECTED PLANS**

	December 31, 2014					
	General			Public Safety	Law Enforcement	Grand Total
	State	Local	Total			
Accrued Liabilities						
Active and Inactive Members	\$ 12,951,461,240	\$ 19,655,413,251	\$ 32,606,874,491	\$ 7,831,549	\$ 1,550,200,506	\$ 34,164,906,546
Retirees and Beneficiaries	22,254,244,082	30,605,668,659	52,859,912,741	44,283,769	2,216,135,710	55,120,332,220
Total Accrued Liabilities	\$ 35,205,705,322	\$ 50,261,081,910	\$ 85,466,787,232	\$ 52,115,318	\$ 3,766,336,216	\$ 89,285,238,766
Assets						
Active and Inactive Members						
EAF*	\$ 1,519,215,265	\$ 6,728,117,735	\$ 8,247,333,000	\$ (17,676,684)	\$ 599,164,037	\$ 8,828,820,353
ESF	4,961,530,672	7,666,869,695	12,628,400,367	3,338,121	562,568,183	13,194,306,671
Unallocated	44,592,566	69,849,209	114,441,775	46,671	5,264,554	119,753,000
Market Value Adjustment	(893,413,344)	(1,399,099,782)	(2,292,513,126)	(931,046)	(105,023,547)	(2,398,467,719)
Total Active and Inactive Assets	\$ 5,631,925,159	\$ 13,065,736,857	\$ 18,697,662,016	\$ (15,222,938)	\$ 1,061,973,227	\$ 19,744,412,305
Retirees and Beneficiaries						
A & PR Fund*	\$ 21,636,480,751	\$ 29,600,829,668	\$ 51,237,310,419	\$ 25,984,960	\$ 2,168,292,298	\$ 53,431,587,677
SBF Fund*	617,763,331	1,004,838,991	1,622,602,322	18,298,809	47,843,412	1,688,744,543
Total R&B Assets	\$ 22,254,244,082	\$ 30,605,668,659	\$ 52,859,912,741	\$ 44,283,769	\$ 2,216,135,710	\$ 55,120,332,220
Total Assets	\$ 27,886,169,241	\$ 43,671,405,516	\$ 71,557,574,757	\$ 29,060,831	\$ 3,278,108,937	\$ 74,864,744,525
Unfunded Actuarial Accrued Liability	\$ 7,319,536,081	\$ 6,589,676,394	\$ 13,909,212,475	\$ 23,054,487	\$ 488,227,279	\$ 14,420,494,241

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

* After reserve transfers.

**SCHEDULE OF UNFUNDED ACTUARIAL ACCRUED LIABILITY@
FOR COMPLIANCE WITH APPLICABLE GASB STATEMENTS
TRADITIONAL PLAN**

	December 31, 2014					
	General			Public Safety	Law Enforcement	Grand Total
	State	Local	Total			
Accrued Liabilities						
Active and Inactive Members	\$12,846,338,403	\$19,511,279,923	\$32,357,618,326	\$ 7,831,549	\$1,550,200,506	\$33,915,650,381
Retirees and Beneficiaries	22,248,184,874	30,593,093,532	52,841,278,406	44,283,769	2,216,135,710	55,101,697,885
Total Accrued Liabilities	\$35,094,523,277	\$50,104,373,455	\$85,198,896,732	\$ 52,115,318	\$3,766,336,216	\$89,017,348,266
Assets						
Active and Inactive Members						
EAF*	\$ 1,403,329,035	\$ 6,558,896,017	\$ 7,962,225,052	\$ (17,676,684)	\$ 599,164,037	\$ 8,543,712,405
ESF	4,960,175,956	7,664,985,092	12,625,161,048	3,338,121	562,568,183	13,191,067,352
Unallocated	44,592,566	69,849,209	114,441,775	46,671	5,264,554	119,753,000
Market Value Adjustment	(889,585,153)	(1,393,434,483)	(2,283,019,636)	(931,046)	(105,023,547)	(2,388,974,229)
Total Active and Inactive Assets	\$ 5,518,512,404	\$12,900,295,835	\$18,418,808,239	\$ (15,222,938)	\$ 1,061,973,227	\$19,465,558,528
Retirees and Beneficiaries						
A & PR Fund*	\$21,630,421,543	\$29,588,254,541	\$51,218,676,084	\$ 25,984,960	\$2,168,292,298	\$53,412,953,342
SBF Fund*	617,763,331	1,004,838,991	1,622,602,322	18,298,809	47,843,412	1,688,744,543
Total R&B Assets	\$22,248,184,874	\$30,593,093,532	\$52,841,278,406	\$ 44,283,769	\$2,216,135,710	\$55,101,697,885
Total Assets	\$27,766,697,278	\$43,493,389,367	\$71,260,086,645	\$ 29,060,831	\$3,278,108,937	\$74,567,256,413
Unfunded Actuarial Accrued Liability	\$ 7,327,825,999	\$ 6,610,984,088	\$13,938,810,087	\$ 23,054,487	\$ 488,227,279	\$14,450,091,853

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

* After reserve transfers.

**SCHEDULE OF UNFUNDED ACTUARIAL ACCRUED LIABILITY@
FOR COMPLIANCE WITH APPLICABLE GASB STATEMENTS
COMBINED PLAN**

	December 31, 2014					
	General			Public Safety	Law Enforcement	Grand Total
	State	Local	Total			
Accrued Liabilities						
Active and Inactive Members	\$105,122,837	\$144,133,328	\$249,256,165			\$249,256,165
Retirees and Beneficiaries	3,424,510	6,918,748	10,343,258			10,343,258
Total Accrued Liabilities	\$108,547,347	\$151,052,076	\$259,599,423			\$259,599,423
Assets						
Active and Inactive Members						
EAF*	\$115,856,681	\$168,907,331	\$284,764,012			\$284,764,012
ESF	1,234,380	1,760,121	2,994,501			2,994,501
Unallocated	0	0	0			0
Market Value Adjustment	(3,794,286)	(5,591,085)	(9,385,371)			(9,385,371)
Total Active and Inactive Assets	\$113,296,775	\$165,076,367	\$278,373,142			\$278,373,142
Retirees and Beneficiaries						
A & PR Fund*	\$ 3,424,510	\$ 6,918,748	\$ 10,343,258			\$ 10,343,258
SBF Fund*	0	0	0			0
Total R&B Assets	\$ 3,424,510	\$ 6,918,748	\$ 10,343,258			\$ 10,343,258
Total Assets	\$116,721,285	\$171,995,115	\$288,716,400			\$288,716,400
Unfunded Actuarial Accrued Liability	\$ (8,173,938)	\$ (20,943,039)	\$ (29,116,977)			\$ (29,116,977)

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

* After reserve transfers.

**SCHEDULE OF UNFUNDED ACTUARIAL ACCRUED LIABILITY@
FOR COMPLIANCE WITH APPLICABLE GASB STATEMENTS
MEMBER DIRECTED PLAN**

	December 31, 2014					
	General			Public Safety	Law Enforcement	Grand Total
	State	Local	Total			
Accrued Liabilities						
Active and Inactive Members	\$ -	\$ -	\$ -			\$ -
Retirees and Beneficiaries	2,634,698	5,656,379	8,291,077			8,291,077
Total Accrued Liabilities	\$ 2,634,698	\$ 5,656,379	\$ 8,291,077			\$ 8,291,077
Assets						
Active and Inactive Members						
EAF*	\$ 29,549	\$ 314,387	\$ 343,936			\$ 343,936
ESF	120,336	124,482	244,818			244,818
Unallocated	0	0	0			0
Market Value Adjustment	(33,905)	(74,214)	(108,119)			(108,119)
Total Active and Inactive Assets	\$ 115,980	\$ 364,655	\$ 480,635			\$ 480,635
Retirees and Beneficiaries						
A & PR Fund*	\$ 2,634,698	\$ 5,656,379	\$ 8,291,077			\$ 8,291,077
SBF Fund*	0	0	0			0
Total R&B Assets	\$ 2,634,698	\$ 5,656,379	\$ 8,291,077			\$ 8,291,077
Total Assets	\$ 2,750,678	\$ 6,021,034	\$ 8,771,712			\$ 8,771,712
Unfunded Actuarial Accrued Liability	\$ (115,980)	\$ (364,655)	\$ (480,635)			\$ (480,635)

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

* After reserve transfers.

REQUIRED SUPPLEMENTARY INFORMATION FOR COMPLIANCE WITH APPLICABLE GASB STATEMENTS

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, 2014
Actuarial cost method	Individual entry age
Amortization method for unfunded actuarial accrued liabilities	Level percent closed - Traditional and Combined Level dollar closed - Member Directed
Equivalent Single Amortization Period (Years from December 31, 2016)	
Traditional Plan	20
Combined Plan	0
Member Directed Plan	30
Asset valuation method	4-year smoothed market
Actuarial assumptions:	
Investment rate of return	8.00%
Projected salary increases including wage inflation at 3.75%	4.25% - 10.05%
Cost-of-living adjustments	Pre 1/7/2013 Retirees: 3.0% simple Post 1/7/2013 Retirees: 3.0% simple through 2018, then 2.8% simple

	Traditional	Combined	Member Directed	Total
Retirees and beneficiaries receiving benefits	208,395	259	155	208,809
Terminated plan members entitled to but not yet receiving benefits				
Less than 5 years of service	452,628	1,160	0	453,788
5 or more years of service	32,229	650	0	32,879
Total	484,857	1,810	0	486,667
Active plan members				
Less than 5 years of service	141,312	2,969	0	144,281
5 or more years of service	181,006	4,486	0	185,492
Total	322,318	7,455	0	329,773
Total				
Less than 5 years of service	593,940	4,129	0	598,069
5 or more years of service	421,630	5,395	155	427,180
Total	1,015,570	9,524	155	1,025,249

August 28, 2015

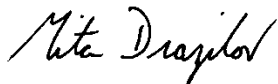
Ms. Karen E. Carraher
Executive Director
Ohio Public Employees Retirement System
277 East Town Street
Columbus, Ohio 43215

Re: Report of December 31, 2014 Actuarial Valuation

Dear Karen:

Enclosed are the 20 bound copies of the final report.

Sincerely,

A handwritten signature in cursive script that reads "Mita Drazilov".

Mita Drazilov, MAAA, ASA

MD:bd
Enclosures

cc: Mr. Tom Heseltine
Clifton Larson Allen