

**ARIZONA CORRECTIONS OFFICER RETIREMENT PLAN  
CONSOLIDATED REPORT**

**JUNE 30, 2014**

October 16, 2014

The Board of Trustees  
Arizona Corrections Officer Retirement Plan  
Phoenix, Arizona

**Re: Arizona Corrections Officer Retirement Plan Actuarial Valuation as of June 30, 2014**

Ladies and Gentlemen:

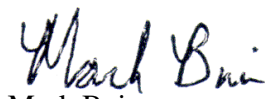
The results of the June 30, 2014 annual actuarial valuation of members covered by the Arizona Corrections Officer Retirement Plan (CORP) are presented in this report. The purpose of the valuation was to measure the System's funding progress, provide actuarial information in connection with applicable Governmental Accounting Standards Board Statements and to determine the employer contribution for the 2015-2016 fiscal year. The funding objective is stated in Article 4, Chapter 5, Title 38, Sections 843B and 848N of the Arizona Revised Statutes. In addition, this consolidated report provides summary information for CORP participating employers. This report should not be relied upon for any other purpose. This report may be distributed to parties other than the System only in its entirety and only with the permission of the Board.

The valuation was based upon information, furnished by the State Retirement System, concerning Retirement System benefits, financial transactions, and individual members, terminated members, retirees and beneficiaries. Data was checked for internal and year to year consistency, but was not otherwise audited by us. As a result, we are unable to assume responsibility for the accuracy or completeness of the data provided.


Future actuarial measurements may differ significantly from those presented in this report due to such factors as experience differing from that anticipated by actuarial assumptions, changes in plan provisions, actuarial assumptions/methods or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements.

To the best of our knowledge, this report is complete and accurate and the valuation was conducted in accordance with standards of practice prescribed by the Actuarial Standards Board and in compliance with the applicable state statutes. Mark Buis, James D. Anderson and Francois Pieterse are independent of the plan sponsor and are Members of the American Academy of Actuaries (MAAA) who meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. It is our opinion that the actuarial assumptions used for the valuation produce results which are reasonable.

Respectfully submitted,



Mark Buis  
FSA, EA, MAAA



James D. Anderson  
FSA, EA, MAAA



Francois Pieterse  
ASA, MAAA

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**EXECUTIVE SUMMARY/BOARD SUMMARY**

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**1. Required Employer Contributions to Support Retirement Benefits**

The computed employer contribution and funded status for the fiscal year beginning July 1, 2015 is shown below.

<b>Averages</b>	<b>Pension</b>	<b>Health</b>	<b>Total</b>
Employer Contribution Rate	17.99%	0.22%	18.21%
Funded Status	57.3%	105.2%	59.0%

**2. Contribution Rate Comparison**

The chart below compares the results for this valuation of the Retirement System with the results of the prior year's valuation:

<b>Valuation Date</b>	<b>Pension</b>	<b>Health</b>	<b>Total</b>
6/30/2013	13.23%	1.23%	14.46%
6/30/2014 (prior to phase-in)	17.99%	0.22%	18.21%
6/30/2014 (after phase-in)	14.82%	0.22%	15.04%

Please note that the pension contribution rate increased significantly for most employers. This arose primarily due to the repeal of certain aspects of SB1609 which resulted in much larger recognition of liabilities related to Permanent Benefit Increases (PBI). The contribution rate also increased due to the continued recognition of 2008-2009 asset losses, or in some cases population movements. While it is recommended that employers contribute the full amount, the Board adopted a policy to allow employers to phase-in the pension contribution rate increase over 3 years, if necessary. Employers that have funded ratios below 50% are strongly encouraged to contribute the full amount prior to phase-in.

**EXECUTIVE SUMMARY/BOARD SUMMARY**

**3. Reasons for Change**

In aggregate, changes in the contribution rate and funded status are illustrated on the following charts. The impact of each change will be different for each employer.

<b>Contribution Rate</b>	<b>Pension</b>	<b>Health</b>	<b>Total</b>
Contribution Rate Last Valuation	13.23%	1.23%	14.46%
PBI Effect	3.47%	N/A	3.47%
Asset Losses	0.62%	N/A	0.62%
Transfer of Assets to Health	1.07%	(1.07)%	0.00%
Other	(0.40)%	0.06%	(0.34)%
Contribution Rate This Valuation	17.99%	0.22%	18.21%

<b>Funded Status</b>	<b>Pension</b>	<b>Health</b>	<b>Total</b>
Funded Status Last Valuation	69.7%	0.0%	66.9%
PBI Effect	(6.8)%	N/A	(6.8)%
Asset Losses	(2.3)%	N/A	(2.3)%
Transfer of Assets to Health	(1.6)%	105.2%	0.0%
Other	(1.7)%	0.0%	1.2%
Funded Status This Valuation	57.3%	105.2%	59.0%

The PBI effect is the result of increases in liability due to the reversal of SB1609. Asset losses are based on 7-year smoothing of assets and therefore primarily attributable to the market downturn in 2008-2009. A transfer of Assets to the Health Plan was also made this year. In accordance with IRS rules, assets dedicated to pay retiree health care benefits must be segregated from assets dedicated to pay pension benefits. The Board of Trustees provided this asset split for the year ending June 30, 2014. This resulted in an increase in the pension contribution with an equivalent decrease in the health contribution.

## **EXECUTIVE SUMMARY/BOARD SUMMARY**

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### **4. Plan Experience**

Experience during the year ended June 30, 2014 was overall unfavorable. On a market value basis, the System's return for the year ended June 30, 2014 was 13.2%. However, the market value smoothing techniques used in this valuation of the System recognize both past and present investment gains and losses. The resulting actuarial asset yield for the year was 3.8%. The effects of the asset losses phased-in from prior years were partially offset by gains attributable to demographic experience. Detailed information related to System experience is shown on page B-2.

### **5. Looking Ahead**

The continuing effect of prior asset losses was dampened by the 7-year smoothing period, and further offset by the effect of lower than expected pay increases. There remains \$14 million of unrecognized investment losses that will, in the absence of other gains, put upward pressure on the contribution rate next year. Next year is the last year of the recognition of the 2008/2009 asset loss.

In 2014 the Society of Actuaries published new mortality tables which include mortality improvement scales. While these tables were not developed specifically for the Public Sector, we recommend that the mortality assumption be reviewed in conjunction with the next regularly scheduled experience study.

### **6. Conclusion**

The reversal of some of the provisions in SB1609 due to the Fields decision resulted in a significant increase in the contribution rate. If pending litigation in the Hall case is ruled in favor of the plaintiffs, contribution rates will increase again yet further. The Board adopted a provision allowing for up to a 3-year phase-in of contribution rate increases in this valuation only.

**EXECUTIVE SUMMARY/BOARD SUMMARY**

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After accounting for active member contributions, the retired lives are less than fully funded on a funding value of assets basis, and much less than fully funded based upon the market value of assets (please see page B-4). It is most important that this plan receive contributions at least equal to the rates shown in this report.



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**SECTION A**  
INTRODUCTION

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## FUNDING OBJECTIVE

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The purpose of the annual actuarial valuation of the Arizona Corrections Officer Retirement Plan as of June 30, 2014 is to:

- Compute the liabilities associated with benefits likely to be paid on behalf of current retired and active members. This information is contained in Section B.
- Compare accrued assets with accrued liabilities to assess the funded condition. This information is contained in Section B.
- Compute the employers' recommended contribution rates for the fiscal year beginning July 1, 2015. This information is contained in Section A.

This objective is stated in Article 4, Chapter 5, Title 38, Sections 843B and 848N of the Arizona Revised Statutes.

## CONTRIBUTION RATES

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The Retirement System is supported by member contributions, employer contributions and investment income from Retirement System assets.

Contributions which satisfy the funding objective are determined by the annual actuarial valuation and are sufficient to:

- (1) Cover the actuarial present value of benefits allocated to the current year by the actuarial cost method described in Section E (the normal cost); and
- (2) Finance over a period of future years the actuarial present value of benefits not covered by valuation assets and anticipated future normal costs (the unfunded actuarial accrued liability).

*Computed contribution rates* for the fiscal year beginning July 1, 2015 are shown on page A-2.

**CONTRIBUTION REQUIREMENTS**

**Development of Employer Contributions for the Indicated Valuation Date**

	June 30,	
	2013	2014
Contribution for Fiscal Year Ending	2015	2016
<b>Pension</b>		
Normal cost requirement		
Service pensions	10.77%	10.45%
Disability pensions	0.26	0.27
Survivors of active members	1.02	1.05
Refunds of members' accumulated contributions	<u>3.13</u>	<u>3.18</u>
Total normal cost requirement	15.18%	14.95%
Less member contributions	<u>8.40</u>	<u>8.40</u>
Employer normal cost requirement	6.78%	6.55%
Amortization of unfunded liabilities	<u>6.45%</u>	<u>11.44%</u>
<b>Total recommended pension contribution rate (before phase-in)</b>	<b>13.23%</b>	<b>17.99%</b>
<b>Total pension contribution rate (after phase-in)</b>	<b>N/A</b>	<b>14.82%</b>
<b>Health</b>		
Normal cost requirement	0.34%	0.33%
Amortization of unfunded liabilities	<u>0.89%</u>	<u>(0.11)%</u>
<b>Total health contribution requirement</b>	<b>1.23%</b>	<b>0.22%</b>
<b>Total contribution rate (before phase-in)</b>	<b>14.46%</b>	<b>18.21%</b>
<b>Total contribution rate (after phase-in)</b>	<b>N/A</b>	<b>15.04%</b>

Actuarial accrued liability, \$2,734,560,372, exceeded the funding value of assets, which was \$1,613,311,913. The unfunded actuarial accrued liabilities were amortized as a level percent of payroll over a closed period of 22 years ending on June 30, 2037 and added to the employer normal cost. The 22-year period is a one year decrease from last year. The results shown above are prior to the application of the statutory minimum of 6% of payroll.

## HISTORICAL SUMMARY OF EMPLOYER PENSION RATES

Valuation Date June 30	Fiscal Year Ending June 30	Normal Cost	Unfunded Actuarial Accrued Liability	Total
2005	2007	4.64%	(0.18)%	4.46%
2006	2008	6.07	0.65	6.72
2007	2009	7.10	1.55	8.65
2008	2010	6.10	1.39	7.49
2009	2011	6.43	2.14	8.57
2010	2012	6.67	2.83	9.50
2011	2013	6.47	4.84	11.31
2012	2014	7.50	6.18	13.68
2013	2015	7.12	7.34	14.46
<b>2014* (before phase-in)</b>	<b>2016</b>	<b>6.55</b>	<b>11.44</b>	<b>17.99</b>
<b>2014* (after phase-in)</b>	<b>2016</b>	<b>6.55</b>	<b>8.27</b>	<b>14.82</b>

\* Beginning with the June 30, 2014 valuation the rates are for pension only.

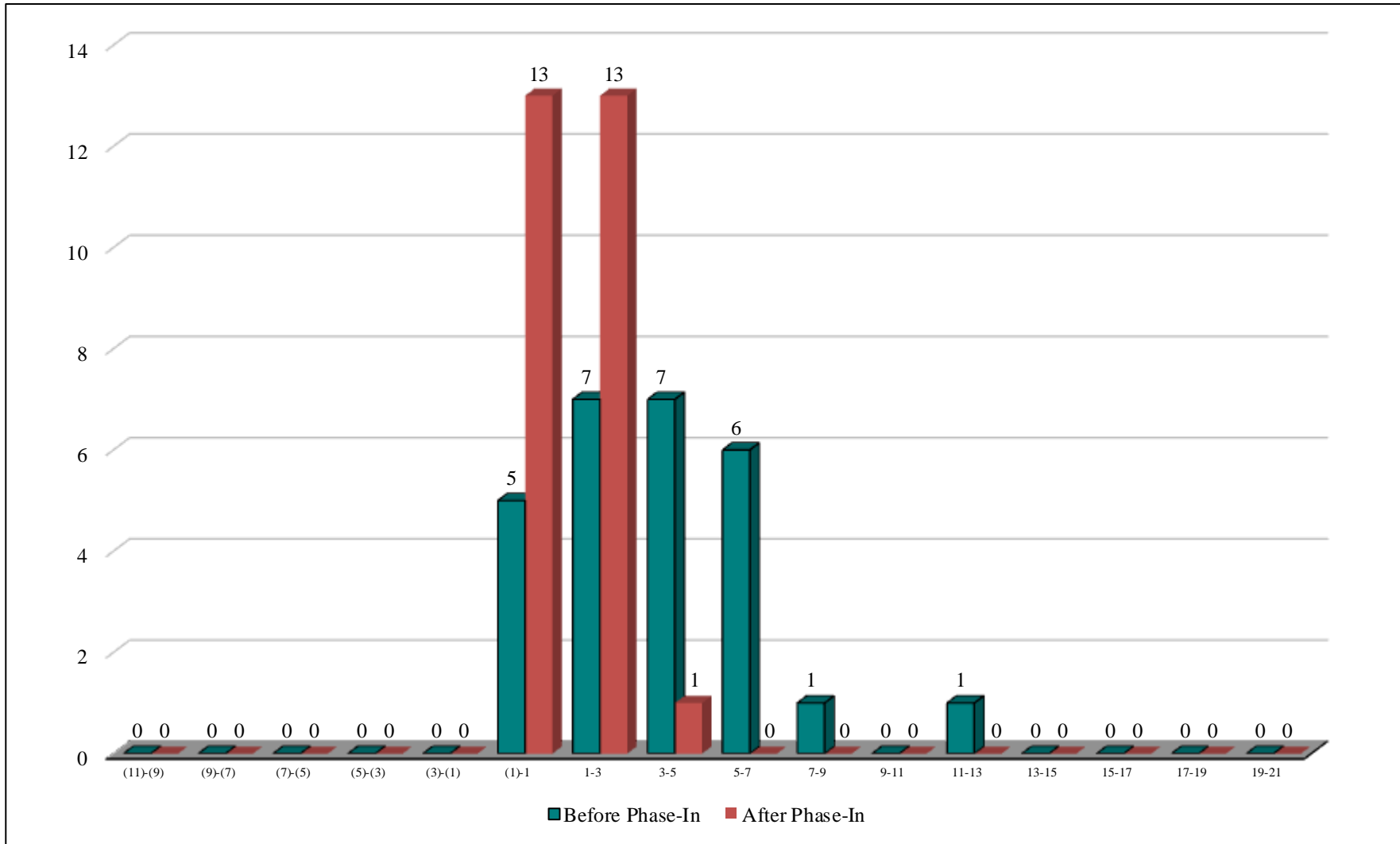
2005 results were revised pursuant to changes enacted by the 2006 Legislature and the CORP Board of Trustees.

Results prior to 2009 were calculated by the prior actuary.

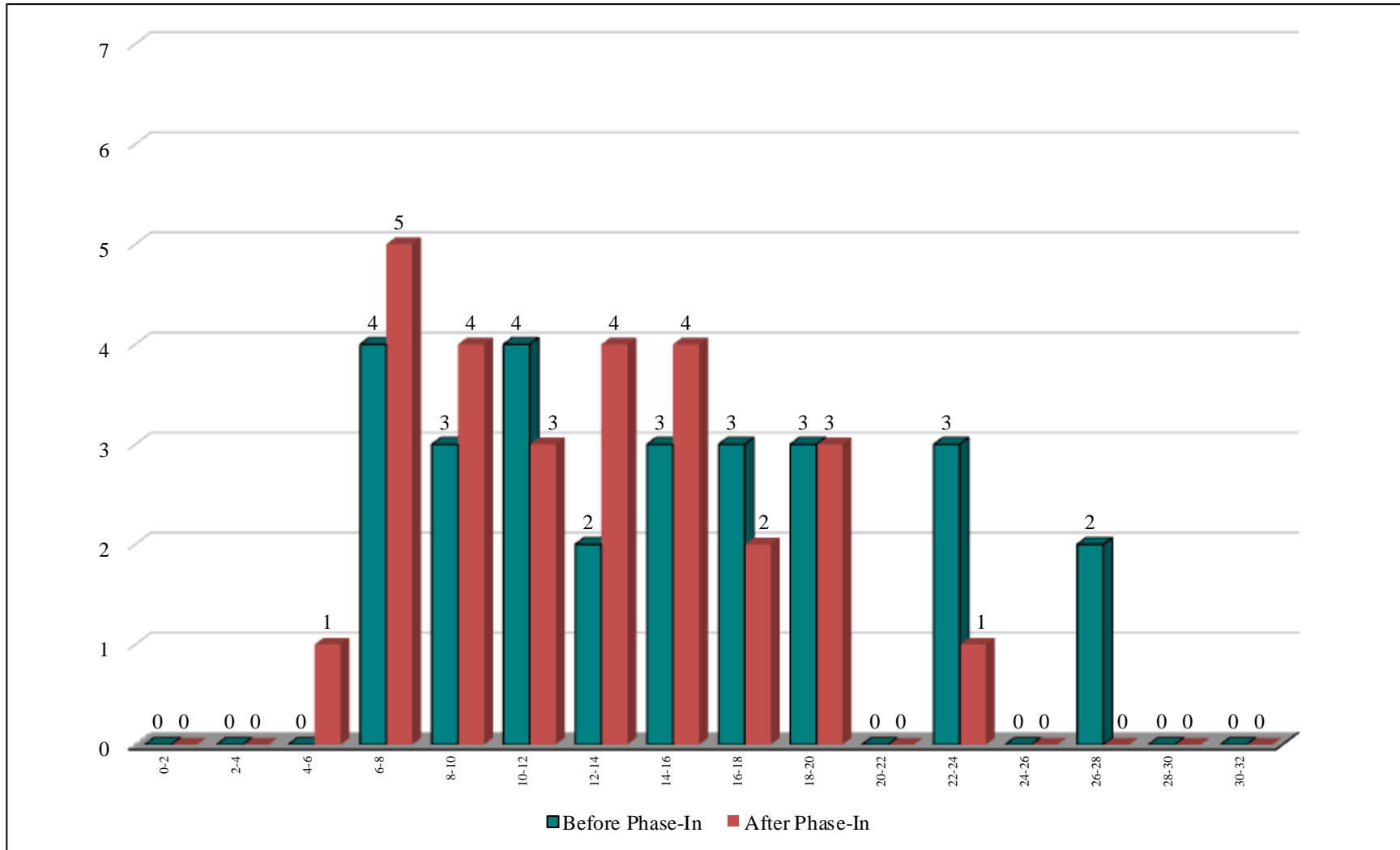
## HISTORICAL SUMMARY OF EMPLOYER HEALTH RATES

Valuation Date June 30	Fiscal Year Ending June 30	Normal Cost	Unfunded Actuarial Accrued Liability	Total
2014	2016	0.33%	(0.11)%	0.22%

**EMPLOYER CONTRIBUTION RATE CHANGES AT JUNE 30, 2014  
ALL EMPLOYERS**



**EMPLOYER CONTRIBUTION RATES - ALL EMPLOYERS AT JUNE 30, 2014**



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**SECTION B**  
FUNDING RESULTS

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**PRESENT VALUE OF FUTURE BENEFITS AND ACCRUED LIABILITY**

	June 30,	
	2013	2014
<b>Pension</b>		
A. Accrued Liability		
1. For retirees and beneficiaries	\$ 980,669,280	\$ 1,269,514,650
2. For vested terminated members	24,576,651	25,011,171
3. For present active members		
a. Value of expected future benefit payments	1,846,265,737	1,950,420,130
b. Value of future normal costs	614,818,231	607,400,787
c. Active member accrued liability: (a) - (b)	<u>1,231,447,506</u>	<u>1,343,019,343</u>
4. Total accrued liability	2,236,693,437	2,637,545,164
B. Present Assets (Funding Value)	<u>1,559,583,226</u>	<u>1,511,211,514</u>
C. Unfunded Accrued Liability: (A.4) - (B)	677,110,211	1,126,333,650
D. Stabilization Reserve	<u>1,175,181</u>	<u>674,367</u>
E. Net Unfunded Accrued Liability: (C) + (D)	<u>\$ 678,285,392</u>	<u>\$ 1,127,008,017</u>
F. Funding Ratio: (B) / (A.4)	<u>69.7%</u>	<u>57.3%</u>
<b>Health</b>		
A. Accrued Liability		
1. For retirees and beneficiaries	\$ 30,808,685	\$ 32,793,109
2. For present active members		
a. Value of expected future benefit payments	75,852,333	76,869,369
b. Value of future normal costs	13,116,694	12,647,270
c. Active member accrued liability: (a) - (b)	<u>62,735,639</u>	<u>64,222,099</u>
3. Total accrued liability	93,544,324	97,015,208
B. Present Assets (Funding Value)	<u>-</u>	<u>102,100,399</u>
C. Net Unfunded Accrued Liability: (A.3) - (B)	<u>\$ 93,544,324</u>	<u>\$ (5,085,191)</u>
D. Funding Ratio: (B) / (A.3)	<u>0.0%</u>	<u>105.2%</u>



**DERIVATION OF EXPERIENCE GAIN/(LOSS)**

Actual experience will never (except by coincidence) exactly match assumed experience. Gains and losses often cancel each other over a period of years, but sizable year-to-year fluctuations are common. Detail on the derivation of the experience gain (loss) is shown below, along with a year-by-year comparative schedule.

	<b>June 30,</b>	
	<b>2013</b>	<b>2014**</b>
(1) UAAL* at start of year	\$718,554,839	\$771,793,536
(2) Normal cost from last valuation	97,313,446	96,352,744
(3) Actual contributions	119,904,199	130,000,717
(4) Interest accrual	56,580,756	59,265,109
(5) Expected UAAL before changes: (1) + (2) - (3) + (4)	752,544,842	797,410,672
(6) Changes from benefit increases, methods and assumptions	19,055,874	258,620,730
(7) Change in reserve for future pension increases	-	-
(8) Expected UAAL after changes: (5) + (6) + (7)	771,600,716	1,056,031,402
(9) Actual UAAL at end of year	770,654,535	1,126,333,650
(10) Experience Gain/(Loss): (8) - (9)	\$ 946,181	\$ (70,302,248)

\* *Unfunded Actuarial Accrued Liability.*

\*\* *Pension only beginning with the June 30, 2014 valuation.*

**FY 2014 Gains and Losses by Source**

	<b>Gain/(Loss)</b>	<b>% of Liability</b>
Investment Return	\$(59,150,664)	-2.6%
Salary Increases	4,285,304	0.2%
Retirement	2,521,561	0.1%
Turnover	(4,094,771)	-0.2%
Disability	239,764	0.0%
Death-in-Service	(1,034,161)	0.0%
Retiree Mortality	(7,067,107)	-0.3%
Other	(6,002,174)	-0.3%
<b>Total</b>	<b>\$(70,302,248)</b>	<b>-3.1%</b>

**UNFUNDED ACTUARIAL ACCRUED LIABILITIES  
COMPARATIVE STATEMENT**

(Dollar amounts in \$'000s)

**Pension**

Valuation Date	(1) Actuarial Accrued Liabilities (AAL)	(2) Valuation Assets	(3) Unfunded AAL	(4) Funded Ratio (2)/(1)	(5) Financing Period	(6) Payroll	Liability Ratio	
							(7) Unfunded (3)/(6)	(8) Total (1)/(6)
2005	\$ 863,791	\$ 872,981	\$ (9,190)	101.1%	20 yrs.	\$ 404,156	0.0%	213.7%
2006	981,208	919,868	61,340	93.7	30	437,744	14.0	224.2
2007	1,110,801	940,126	170,675	84.6	29	515,428	33.1	215.5
2008	1,390,363	1,207,026	183,337	86.8	28	642,621	28.5	216.4
2009	1,584,293	1,309,124	275,169	82.6	27	630,825	43.6	251.1
2010	1,722,006	1,382,144	339,862	80.3	26	616,481	55.1	279.3
2011	2,008,569	1,466,750	541,819	73.0	25	609,243	88.9	329.7
2012	2,231,544	1,512,989	718,555	67.8	24	626,223	114.7	356.3
2013	2,330,238	1,559,583	770,655	66.9	23	604,068	127.6	385.8
<b>2014*</b>	<b>2,637,545</b>	<b>1,511,212</b>	<b>1,126,333</b>	<b>57.3</b>	<b>22</b>	<b>625,264</b>	<b>180.1</b>	<b>421.8</b>

\* Pension only beginning with the June 30, 2014 valuation.

**Health**

Valuation Date	(1) Actuarial Accrued Liabilities (AAL)	(2) Valuation Assets	(3) Unfunded AAL	(4) Funded Ratio (2)/(1)	(5) Financing Period	(6) Payroll	Liability Ratio	
							(7) Unfunded (3)/(6)	(8) Total (1)/(6)
<b>2014</b>	<b>\$ 97,015</b>	<b>\$ 102,100</b>	<b>\$ (5,085)</b>	<b>105.2%</b>	<b>22</b>	<b>\$ 625,264</b>	<b>(0.8)%</b>	<b>15.5%</b>

The Unfunded Liability ratio gives a general measure of the ability to collect contributions to pay off the unfunded liabilities. The Total Liability ratio gives a longer term indication of the volatility of the contribution rate.

2005 results revised pursuant to changes in assumptions and methods enacted by the 2006 Legislature and the CORP Board of Trustees. Results prior to 2009 were calculated by the prior actuary.

**SHORT CONDITION TEST**

If the contributions to CORP are soundly executed, the System will *pay all promised benefits when due -- the ultimate test of financial soundness.*

A *short condition test* is one means of checking a system’s progress under its funding program. In a short condition test, the plan’s present assets (cash and investments) are compared with:

- 1) Member contributions on deposit;
- 2) The liabilities for future benefits to present retired lives; and
- 3) The liabilities for service already rendered by active and inactive members.

In a system that has been following the discipline of pre-funding, the liabilities for member contributions on deposit (liability 1) and the liabilities for future benefits to present retired lives (liability 2) will be fully covered by present assets (except in rare circumstances). In addition, the liabilities for service already rendered by active and inactive members (liability 3) will be partially covered by the remainder of present assets. The larger the funded portion of liability 3, the stronger the condition of the system.

**Short Condition Test**

(in \$'000s)

**Pension**

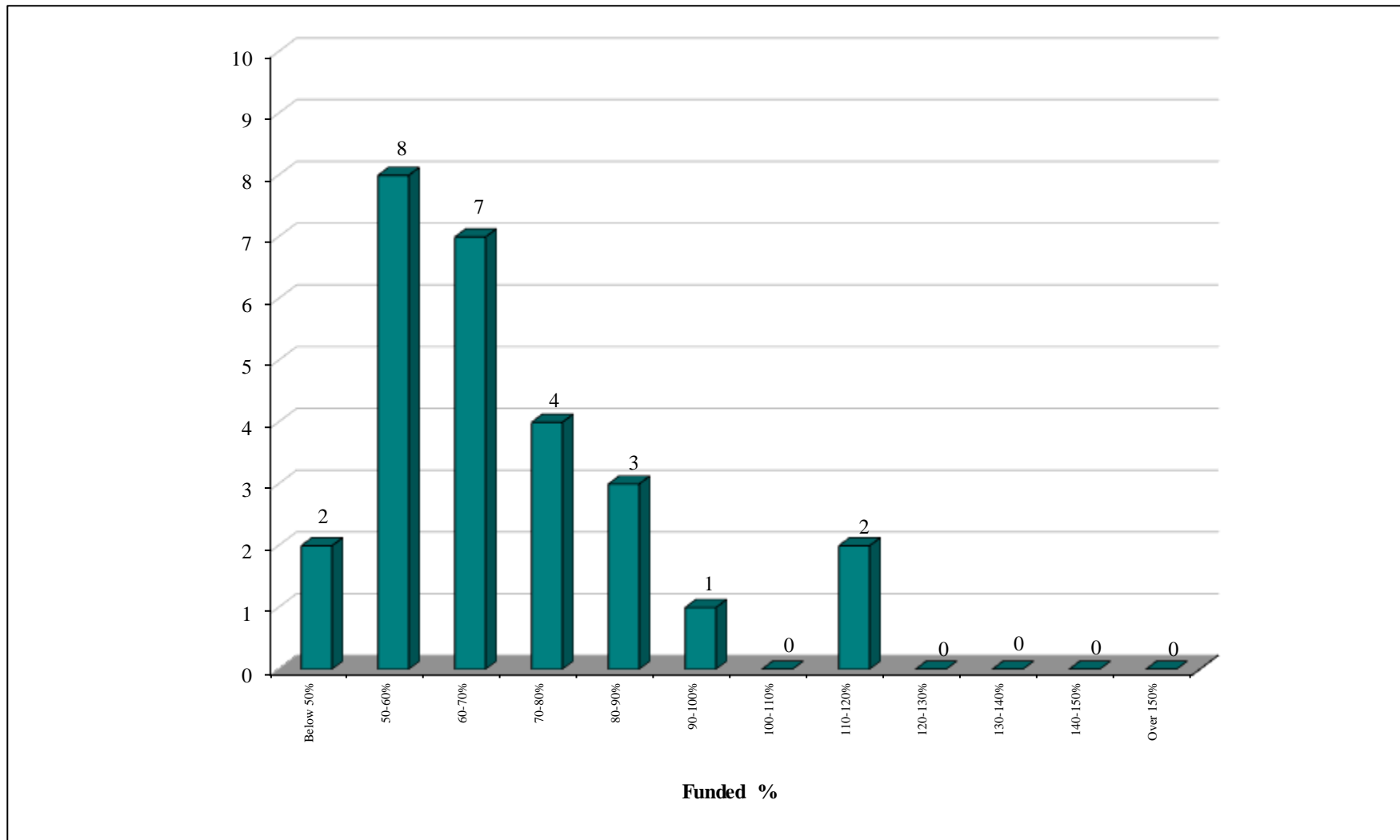
Calendar Year	Aggregate Actuarial Liabilities For			Actuarial Assets	Portion of Actuarial Liabilities Covered by Assets		
	(1) Non-Retired Contributions	(2) Annuitants	(3) Non-Retired Members (Employer Financed Portion)		(1)	(2)	(3)
2010	345,122	689,910	686,973	1,382,144	100%	100%	50.5%
2011	353,892	823,664	831,013	1,466,750	100%	100%	34.8%
2012	373,726	918,771	939,047	1,512,989	100%	100%	23.5%
2013	382,417	1,011,478	936,343	1,559,583	100%	100%	17.7%
<b>2014*</b>	<b>396,381</b>	<b>1,269,515</b>	<b>971,649</b>	<b>1,511,212</b>	<b>100%</b>	<b>88%</b>	<b>0.0%</b>

\* Pension only beginning with the June 30, 2014 valuation.

**Health**

Calendar Year	Aggregate Actuarial Liabilities For			Actuarial Assets	Portion of Actuarial Liabilities covered by Assets		
	(1) Non-Retired Contributions	(2) Annuitants	(3) Non-Retired Members (Employer Financed Portion)		(1)	(2)	(3)

**FUNDED PERCENTS - ALL EMPLOYERS AT JUNE 30, 2014**



**PENSION CONTRIBUTION PROJECTION**

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**Without contribution phase-in during FYE16 & FYE17**

<b>Fiscal Year</b>	<b>Contribution</b>	<b>Contribution</b>
<b>Ending</b>	<b>Rate</b>	<b>Amount (Estimate)</b>
<b>June 30</b>	<b>Rate</b>	<b>Amount (Estimate)</b>
2016	17.99%	\$121,663,741
2017	18.16	127,682,119
2018	17.92	130,981,355
2019	17.73	134,732,420
2020	17.65	139,467,827
2021	17.41	142,977,429
2022	17.20	146,814,823
2023	17.08	151,570,051
2024	16.97	156,611,978
2025	16.87	161,927,387
2026	16.77	167,405,162

**With contribution phase-in during FYE16 & FYE17**

<b>Fiscal Year</b>	<b>Contribution</b>	<b>Contribution</b>
<b>Ending</b>	<b>Rate</b>	<b>Amount (Estimate)</b>
<b>June 30</b>	<b>Rate</b>	<b>Amount (Estimate)</b>
2016	14.82%	\$100,225,494
2017	16.52	116,151,355
2018	18.15	132,662,477
2019	18.08	137,392,112
2020	18.01	142,312,497
2021	17.76	145,851,760
2022	17.56	149,887,692
2023	17.44	154,764,736
2024	17.33	159,934,330
2025	17.23	165,382,861
2026	17.14	171,098,657

Contribution Rate and Amount estimated based on June 30, 2014 valuation data, methods, and assumptions, including 7.85% investment return and 4% payroll growth.

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**SECTION C**  
FUND ASSETS

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**DEVELOPMENT OF PENSION FUNDING VALUE OF ASSETS (7-YEAR SMOOTHING)**

<b>Year Ended June 30:</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
A. Funding Value Beginning of Year	\$ 1,464,899,901						
B. Market Value End of Year	1,497,245,001						
C. Market Value Beginning of Year	1,330,784,684						
D. Non Investment Net Cash Flow	(9,172,350)						
E. Investment Income							
E1. Total: B-C-D	175,632,667						
E2. Amount for Immediate Recognition: (7.85%)	114,634,627						
E3. Amount for Phased-in Recognition: E1-E2	60,998,040						
F. Phased-in Recognition of Investment Income							
F1. Current Year: E3 / 7	8,714,006						
F2. First Prior Year	2,691,222	\$ 8,714,006					
F3. Second Prior Year	(17,588,811)	2,691,222	\$ 8,714,006				
F4. Third Prior Year	9,960,661	(17,588,811)	2,691,222	\$ 8,714,006			
F5. Fourth Prior Year	2,113,337	9,960,661	(17,588,811)	2,691,222	\$ 8,714,006		
F6. Fifth Prior Year	(43,460,069)	2,113,337	9,960,661	(17,588,811)	2,691,222	\$ 8,714,006	
F7. Sixth Prior Year	(21,581,010)	(43,460,070)	2,113,335	9,960,661	(17,588,811)	2,691,224	\$ 8,714,004
F8. Funding Value Corridor Adjustment							
F9. Total Recognized Investment Gain	(59,150,664)	(37,569,655)	5,890,413	3,777,078	(6,183,583)	11,405,230	8,714,004
G. Funding Value End of Year							
G1. Preliminary Funding Value End of Year: (A+D+E2+F1:F7)	1,511,211,514						
G2. Upper Corridor: (120% x B)	1,796,694,001						
G3. Lower Corridor: (80% x B)	1,197,796,001						
G4. End of Year: (G1 subject to max of G2 and min of G3)	1,511,211,514						
H. Difference Between Market Value & Funding Value: (B-G4)	(13,966,513)	23,603,142	17,712,729	13,935,651	20,119,234	8,714,004	0
I. Market Rate of Return	13.2%						
J. Recognized Rate of Return	3.8%						
K. Ratio of Funding Value to Market Value	100.9%						

The funding value of assets recognizes assumed investment return (line E2) fully each year. Differences between actual and assumed investment return (line E3) are phased-in over a closed 7-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. The funding value of assets is **unbiased** with respect to market value. At any time it may be either greater or less than market value. If actual and assumed rates of investment return are exactly equal for 7 consecutive years, the funding value will become equal to market value.

**DEVELOPMENT OF HEALTH FUNDING VALUE OF ASSETS (7-YEAR SMOOTHING)**

<b>Year Ended June 30:</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
A. Funding Value Beginning of Year	\$ 94,683,325						
B. Market Value End of Year	101,323,221						
C. Market Value Beginning of Year	86,014,832						
D. Non Investment Net Cash Flow	3,643,679						
E. Investment Income							
E1. Total: B-C-D	11,664,710						
E2. Amount for Immediate Recognition: (7.85%)	7,575,656						
E3. Amount for Phased-in Recognition: E1-E2	4,089,054						
F. Phased-in Recognition of Investment Income							
F1. Current Year: E3 / 7	\$ 584,150						
F2. First Prior Year	173,946	\$ 584,150					
F3. Second Prior Year	(1,136,847)	173,946	\$ 584,150				
F4. Third Prior Year	643,804	(1,136,847)	173,946	\$ 584,150			
F5. Fourth Prior Year	136,595	643,804	(1,136,847)	173,946	\$ 584,150		
F6. Fifth Prior Year	(2,809,027)	136,595	643,804	(1,136,847)	173,946	\$ 584,150	
F7. Sixth Prior Year	(1,394,882)	(2,809,027)	136,595	643,804	(1,136,847)	173,947	\$ 584,154
F8. Funding Value Corridor Adjustment							
F9. Total Recognized Investment Gain	(3,802,261)	(2,407,379)	401,648	265,053	(378,751)	758,097	584,154
G. Funding Value End of Year							
G1. Preliminary Funding Value End of Year: (A+D+E2+F1:F7)	102,100,399						
G2. Upper Corridor: (120% x B)	121,587,865						
G3. Lower Corridor: (80% x B)	81,058,577						
G4. End of Year: (G1 subject to max of G2 and min of G3)	102,100,399						
H. Difference Between Market Value & Funding Value: (B-G4)	(777,178)	1,630,201	1,228,553	963,500	1,342,251	584,154	0
I. Market Rate of Return	13.3%						
J. Recognized Rate of Return	3.9%						
K. Ratio of Funding Value to Market Value	100.8%						

The funding value of assets recognizes assumed investment return (line E2) fully each year. Differences between actual and assumed investment return (line E3) are phased-in over a closed 7-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. The funding value of assets is **unbiased** with respect to market value. At any time it may be either greater or less than market value. If actual and assumed rates of investment return are exactly equal for 7 consecutive years, the funding value will become equal to market value.



**REVENUES AND DISBURSEMENTS**

	<b>Pension</b>	
	<u>2013</u>	<u>2014</u>
<b>Market Value at the Beginning of Year:</b>	\$1,213,523,970	\$1,330,784,684
<b>Revenues:</b>		
a. Member contributions	\$ 51,463,276	\$ 52,202,793
b. Employer contributions	61,106,700	77,797,924
c. Investment income (net of expenses)	131,339,633	174,194,976
d. Net transfers	(656,053)	(201,856)
e. Total	<u>\$ 243,253,556</u>	<u>\$ 303,993,837</u>
<b>Disbursements:</b>		
a. Refunds of member contributions	\$ 31,179,499	\$ 30,446,708
b. Pension benefits (including DROP)	94,813,343	107,086,812
c. Totals	<u>\$ 125,992,842</u>	<u>\$ 137,533,520</u>
<b>Reserve Increase:</b>		
Total revenues minus total disbursements	\$ 117,260,714	\$ 166,460,317
<b>Market Value at the End of Year:</b>	\$1,330,784,684	\$1,497,245,001

	<b>Health</b>	
	<u>2013</u>	<u>2014</u>
<b>Market Value at the Beginning of Year:</b>	\$ 73,454,977	\$ 86,014,832
<b>Revenues:</b>		
a. Health contributions	7,334,225	6,681,242
b. Interest income (net of expenses)	8,055,254	11,664,710
c. Total	<u>\$ 15,389,479</u>	<u>\$ 18,345,952</u>
<b>Disbursements:</b>	\$ 2,829,624	\$ 3,037,563
<b>Reserve Increase:</b>		
Total revenues minus total disbursements	12,559,855	15,308,389
<b>Market Value at the End of Year:</b>	\$ 86,014,832	\$ 101,323,221

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**SECTION D**  
CENSUS DATA

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**JUNE 30, 2014 VALUATION DATA SUMMARY**

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For purposes of the June 30, 2014 valuation, information on 20,372 covered persons was furnished. These people may be briefly described as follows.

	No.	Averages			
		Age	Years of Service	Annual Pay or Retirement Allowance	
				2014	2013
Actives	14,595	39.6	8.1	\$42,841	\$41,431
Retirees & Beneficiaries	4,090	63.6		26,299	25,319
Inactive Vested	1,687	38.6			
	20,372				

**ACTIVE MEMBERS**

**Members in Active Service as of June 30, 2014  
by Years of Service**

Age	Years of Service							Total Count	Total Pay	Average Pay
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 & Up			
Under 25	1,121	11						1,132	\$ 39,732,864	\$35,100
25 - 29	1,966	406	3					2,375	87,140,835	36,691
30 - 34	1,007	918	255	1				2,181	87,980,555	40,340
35 - 39	601	669	530	165				1,965	85,828,978	43,679
40 - 44	530	555	502	507	44			2,138	97,449,625	45,580
45 - 49	328	396	383	368	164	17		1,656	77,924,618	47,056
50 - 54	232	290	280	268	151	86	6	1,313	62,580,756	47,662
55 - 59	170	203	254	207	89	62	13	998	46,854,023	46,948
60 - 64	82	155	148	119	60	33	17	614	29,049,626	47,312
65 and over	23	60	63	38	18	14	7	223	10,721,975	48,081
<b>Total</b>	<b>6,060</b>	<b>3,663</b>	<b>2,418</b>	<b>1,673</b>	<b>526</b>	<b>212</b>	<b>43</b>	<b>14,595</b>	<b>\$ 625,263,855</b>	<b>\$42,841</b>

**TERMINATED VESTED MEMBERS**

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Age	Years of Service					Total Count
	0 - 4	5 - 9	10 - 14	15 - 19	20 & Up	
Under 30	485	16				501
30 - 39	418	86	15			519
40 - 44	131	28	18	6	1	184
45 - 49	103	15	18	2		138
50 - 54	75	15	19	5	2	116
55 - 59	61	20	33	11	2	127
60 - 69	47	7	34	8	1	97
70 and over	2	1		1	1	5
Total	1,322	188	137	33	7	1,687

**RETIREES AND BENEFICIARIES**

Attained Ages	Males		Females		Total	
	No.	Annual Pension Benefits	No.	Annual Pension Benefits	No.	Annual Pension Benefits
Under 25	5	\$ 79,065	5	\$ 158,358	10	\$ 237,423
25-29	0	0	4	63,079	4	63,079
30-34	2	34,997	12	168,701	14	203,698
35-39	6	97,633	13	224,984	19	322,617
40-44	70	1,751,241	40	877,076	110	2,628,317
45-49	194	5,213,797	66	1,620,450	260	6,834,247
50-54	345	10,208,994	154	4,456,350	499	14,665,344
55-59	353	11,415,343	192	5,953,200	545	17,368,543
60-64	447	14,467,644	218	5,882,309	665	20,349,953
65-69	540	14,957,808	273	6,734,765	813	21,692,573
70-74	373	8,781,487	189	3,711,433	562	12,492,920
75-79	233	4,609,176	121	2,216,200	354	6,825,376
80-84	102	1,788,735	57	839,866	159	2,628,601
85-89	38	614,993	25	413,286	63	1,028,279
90-94	5	70,136	7	141,123	12	211,259
95-99	0	0	1	9,914	1	9,914
100 and Over	0	0	0	0	0	0
<b>Totals</b>	<b>2,713</b>	<b>\$74,091,049</b>	<b>1,377</b>	<b>\$33,471,094</b>	<b>4,090</b>	<b>\$107,562,143</b>

Pension Being Paid		Number	Annual Pensions	Average Pensions
Retired Members	Service Pensions	3,402	\$ 94,941,342	\$27,908
	Disability Pensions	122	2,580,038	21,148
Totals		3,524	97,521,380	27,673
Survivors of Members	Spouses	529	9,414,624	17,797
	Children with Guardians	37	626,139	16,923
Total		566	10,040,763	17,740
<b>Total Pension being Paid</b>		<b>4,090</b>	<b>\$107,562,143</b>	<b>\$26,299</b>
		<b>Average Age</b>	<b>Average Service</b>	<b>Average Age at Retirement</b>
Normal Retired Members		63.8	19.8	56.7
Disability Retired Members		56.4	9.6	46.2
Spouse Beneficiaries		66.1	12.5	52.2

**PENSIONS BEING PAID  
HISTORICAL SCHEDULE**

Valuation Date June 30	No.	Annual Pensions	% Incr. in Annual Pensions	Average Pension	Present Value of Pensions	
					Total	Average
1990	115	\$ 765,738	34.0%	\$ 6,659	\$ 7,150,080	\$ 62,175
1995	435	3,456,705	27.5	7,946	34,140,660	78,484
2000	925	11,042,151	14.5	11,937	107,650,253	116,379
2001	1,040	13,446,069	21.8	12,929	124,247,094	119,468
2002	1,218	17,660,065	31.3	14,499	166,073,532	136,349
2003	1,363	21,653,042	22.6	15,886	201,489,450	147,828
2004	1,536	26,261,143	21.3	17,097	255,272,652	166,193
2005	1,733	31,329,225	19.3	18,078	332,199,210	191,690
2006	1,955	37,272,183	19.0	19,065	384,512,841	196,682
2007	2,123	42,666,000	14.5	20,097	430,172,373	202,625
2008	2,428	51,062,647	19.7	21,031	504,461,674	207,768
2009	2,591	59,089,591	15.7	22,806	566,228,807	218,537
2010	2,908	69,769,056	18.1	23,992	666,416,976	229,167
2011	3,256	81,637,650	17.0	25,073	796,704,561	244,688
2012	3,476	87,918,348	7.7	25,293	889,093,751	255,781
2013	3,810	96,465,575	9.7	25,319	980,669,280	257,394
<b>2014</b>	<b>4,090</b>	<b>107,562,143</b>	<b>11.5</b>	<b>26,299</b>	<b>1,269,514,650</b>	<b>310,395</b>

Results prior to 2009 were calculated by the prior actuary.

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**SECTION E**  
METHODS AND ASSUMPTIONS

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## VALUATION METHODS

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**Actuarial Cost Method** – Normal cost and the allocation of benefit values between service rendered before and after the valuation date were determined using an individual entry-age actuarial cost method having the following characteristics:

- (i) the annual normal costs for each individual active member, payable from the date of hire to the date of retirement, are sufficient to accumulate to the value of the member's benefits.
- (ii) each annual normal cost is a constant percentage of the member's year-by-year projected covered pay.

The entry-age actuarial cost method allocates the actuarial present value of each member's projected benefits on a level basis over the member's compensation between the entry age of the member and the assumed exit ages.

**Actuarial Accrued Liability** – The actuarial accrued liability is the portion of actuarial present value allocated to service rendered prior to the valuation date, including experience gains and losses. The actuarial accrued liability was computed using the assumptions summarized in this report.

**Actuarial Value of System Assets** – The actuarial value of assets recognizes assumed investment income fully each year. Differences between actual and assumed investment income are phased-in over a closed 7-year period subject to a 20% corridor. During periods when investment performance exceeds the assumed rate, actuarial value of assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, the actuarial value of assets will tend to be greater than market value.

**Financing of Unfunded Actuarial Accrued Liabilities** – The actuarial value of assets were subtracted from the computed actuarial accrued liability. Any unfunded amount would be amortized as level percent-of-payroll over a closed period of 22 years. If the actuarial value of assets exceeded the actuarial accrued liability, the excess was amortized over an open period of 20 years and applied as a credit to reduce the normal cost which otherwise would be payable.

Active member payroll was assumed to increase 4.00% annually for the purpose of computing the amortization payment (credit) as a level percent-of-payroll.

**VALUATION ASSUMPTIONS**

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Beginning with the June 30, 2007 valuation and with each subsequent valuation, if the actuarial value of assets exceeds the actuarial accrued liabilities, one half of this excess in each year is allocated to a Stabilization Reserve. The Stabilization Reserve is excluded from the calculation of the employer contribution rates. The Stabilization Reserve continues to accumulate as long as the plan is over-funded. Once the plan becomes under-funded, the Stabilization Reserve will be used to dampen increases in the employer contribution rates.

*The rate of investment return* was 7.85% a year, compounded annually net of investment and administrative expenses.

The assumed real return is the rate of return in excess of wage growth. Considering other assumptions used in the valuation, the 7.85% nominal rate translates to a net real return over wage growth of 3.85% a year.

*The rates of pay increase* used for individual members are shown below. This assumption is used to project a member’s current pay to the pay upon which System benefits will be based.

Sample Ages	Salary Increase Assumptions For an Individual Member		
	Merit & Seniority	Base (Economy)	Increase Next Year
20	3.3%	4.0%	7.3%
25	3.0%	4.0%	7.0%
30	2.2%	4.0%	6.2%
35	1.3%	4.0%	5.3%
40	0.7%	4.0%	4.7%
45	0.5%	4.0%	4.5%
50	0.4%	4.0%	4.4%
55	0.2%	4.0%	4.2%
60	0.0%	4.0%	4.0%
Ref:	382		

Active member payroll is assumed to grow at 4.00% per year. Although no specific price inflation assumption is required to perform this valuation, since no benefits are linked to prices, a price inflation assumption on the order of 3.0% to 4.0% would be consistent with the other economic assumptions.

**VALUATION ASSUMPTIONS**

*The healthy mortality table* used to evaluate death after retirement in this valuation of the System was the RP 2000 Mortality table (adjusted by 105% for both males and females). This assumption was first used for the June 30, 2012 valuation of the System. Sample rates of mortality and years of life expectancy are shown below:

Sample Attained Ages	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	0.22%	0.18%	30.37	33.14
55	0.38	0.29	25.76	28.47
60	0.71	0.53	21.35	23.95
65	1.34	1.02	17.24	19.72
70	2.33	1.76	13.54	15.86
75	3.97	2.95	10.27	12.40
80	6.76	4.82	7.50	9.38
Ref:	506 x 1.05 0 year set forward	507 x 1.05 0 year set forward		

This assumption is used to measure the probabilities of each benefit payment being made after retirement. For disabled members, non-disability rates with a 5-year set forward were used.

*The disabled mortality table* used to evaluate death after retirement in this valuation of the System was the RP 2000 Mortality table (set forward 10 years for both males and females). This assumption was first used for the June 30, 2012 valuation of the System. Sample rates of mortality and years of life expectancy are shown below:

Sample Attained Ages	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	0.67%	0.51%	21.74	24.38
55	1.27	0.97	17.61	20.12
60	2.22	1.67	13.88	16.23
65	3.78	2.81	10.57	12.74
70	6.44	4.59	7.75	9.68
75	11.08	7.74	5.49	7.09
80	18.34	13.17	3.86	5.15
Ref:	506 x 1.00 10 year set forward	507 x 1.00 10 year set forward		

**VALUATION ASSUMPTIONS**

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For actives, the sample rates of mortality for death-in-service are shown below, and were first used for the June 30, 2012 valuation of the System.

Sample Attained Ages	Probability of Dying Next Year	
	Men	Women
50	0.17%	0.13%
55	0.29	0.22
60	0.54	0.40
65	1.02	0.78
Ref:	506 x 0.80 0 year set forward	507 x 0.80 0 year set forward

*The rates of regular retirement* used to measure the probability of eligible members retiring during the next year are shown below. These assumptions was first used for the June 30, 2012 valuation of the System.

**Retirement Rates:** Age-related rates for members hired before January 1, 2012 are shown below:

Age at Retirement	Rates
60	60%
61	60%
62	60%
63	60%
64	60%
65	60%
66	60%
67	60%
68	60%
69	60%
70	60%
71	60%
72	60%
73	60%
74	60%
75	100%
Ref.	2153

These retirement rates are applicable to employees attaining age 62 before attaining 20 (25 for dispatchers) years of service.

**VALUATION ASSUMPTIONS**

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Service-related rates for members hired before January 1, 2012 are shown below:

<b>Service at Retirement</b>	<b>Rates</b>
20	28%
21	28%
22	22%
23	20%
24	17%
25	33%
26	33%
27	25%
28	17%
29	17%
30	30%
31	30%
32	50%
33	50%
34	75%
35	75%
36	75%
37	100%
Ref.	2154

These retirement rates are applicable to employees attaining 20 (25 for dispatchers) years of service before attaining age 62.

Age-related rates for members hired after January 1, 2012 are shown below:

<b>Age at Retirement</b>	<b>Rates</b>
53	40%
54	40%
55	30%
56	15%
57	15%
58	30%
59	30%
60	65%
61	65%
62	100%
Ref.	1744

**VALUATION ASSUMPTIONS**

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*Rates of separation from active membership* used in the valuation are shown below (rates do not apply to members eligible to retire and do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment. This assumption was first used for the June 30, 2012 valuation of the System.

<b>Sample Ages</b>	<b>Years of Service</b>	<b>% of Active Members Separating Within Next Year</b>
All	0	25.00%
	1	20.00%
	2	16.00%
	3	14.00%
	4	12.00%
	5	9.00%
	6	9.00%
	7	9.00%
	8	8.00%
	9	8.00%
	10	8.00%
	11	5.00%
	12	4.00%
	13	4.00%
	14	3.00%
	15	3.00%
	16	3.00%
	17	2.00%
	18	2.00%
19	2.00%	
Ref.		729

**VALUATION ASSUMPTIONS**

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*Rates of disability* among active members used in the valuation are shown below, and were first used for the June 30, 2012 valuation of the System.

<b>Sample Ages</b>	<b>% of Active Members Becoming Disabled within Next Year</b>
20	0.03%
25	0.03%
30	0.03%
35	0.04%
40	0.05%
45	0.06%
50	0.08%
55	0.08%
Ref	592 75%

**SUMMARY OF ASSUMPTIONS USED  
JUNE 30, 2014**

**MISCELLANEOUS AND TECHNICAL ASSUMPTIONS**

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<b>Marriage Assumption:</b>	80% of males and females are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses for active member valuation purposes.
<b>Pay Increase Timing:</b>	Six months after the valuation date. This means that the pays received are assumed to be annual rates of pay on the valuation date as opposed to W-2 type earnings for the prior 12 months.
<b>Decrement Timing:</b>	Decrements of all types are assumed to occur mid-year.
<b>Eligibility Testing:</b>	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.
<b>Decrement Relativity:</b>	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
<b>Decrement Operation:</b>	Disability and turnover decrements do not operate during retirement eligibility.
<b>Service Credit Accruals:</b>	It is assumed that members accrue one year of service credit per year.
<b>Incidence of Contributions:</b>	Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.
<b>Normal Form of Benefit:</b>	A straight life payment is the assumed normal form of benefit for members who are not married, and the 80% Joint and Survivor form of payment with no reduction, for married members. 80% of members are assumed to be married at the time of retirement.
<b>Benefit Service:</b>	Exact fractional service is used to determine the amount of benefit payable.
<b>Health Care Utilization:</b>	70% of future retirees are expected to utilize retiree health care. 80% of those are assumed to be married.
<b>Assumed Future Permanent Benefit Increases (PBI):</b>	Members retired on or before July 1, 2011: 2.25% of benefit. Members retired on or after August 1, 2011: 0.5% of benefit.



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**SECTION F**  
PLAN PROVISIONS

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**SUMMARY OF PLAN PROVISIONS  
VALUED AND/OR CONSIDERED**

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**Membership:** Designated positions for the following employers that elect to join the Plan are eligible to participate in the CORP if the employee's customary employment is for at least forty (40) hours per week, or as defined by statute. A.R.S. § 38-881(13):

- For a County: A county detention officer and non-uniformed employees of a sheriff's department whose primary duties require direct inmate contact.
- For the State Department of Corrections and the Department of Juvenile Correction: Specific positions are eligible to participate. Refer to the statute for specific positions.
- For a City or Town, a City or Town Detention Officer.
- For an employer of an eligible group as defined in A.R.S. § 38-842, full-time dispatchers.
- For the judiciary, probation, surveillance, and juvenile detention officers and those positions designated by the Local Board.
- For the Department of Public Safety, state detention officers.

Dispatchers hired after November 24, 2009 must participate in the Arizona State Retirement System. A.R.S. § 38-902(C).

***Average Monthly Compensation:***

**For members hired before January 1, 2012:**

One-thirty-sixth of total compensation paid to member during the three years, out of the last 10 years of credited service, in which the amount paid was highest. Compensation is the amount including base salary, overtime pay, shift differential pay and holiday pay, paid to an employee on a regular payroll basis and longevity pay paid at least every six months for which contributions are made to the System.

**For members hired after January 1, 2012:**

One-sixtieth of total compensation paid to member during the five years, out of the last 10 years of credited service, in which the amount paid was highest. Compensation is the amount including base salary, overtime pay, shift differential pay and holiday pay, paid to an employee on a regular payroll basis and longevity pay paid at least every six months for which contributions are made to the System.

***Normal Retirement (no reduction for age)***

**For members hired before January 1, 2012:**

A corrections officer may retire upon meeting one of the following age and service requirements:

- a) Any age with 20 (25 for dispatchers) or more years of credited service (effective August 9, 2001);
- b) Age 62 years with 10 or more years of credited service; or
- c) A combination of age and credited service equal to 80 (effective July 1, 1995).

The amount of normal pension at 20 years of credited service is 50% of average monthly salary with 2% increments for every year over 20 years of credited service up to 25 years of credited service. With 25 or more years of credited service the accrual rate is 2.5% for each year.

**SUMMARY OF PLAN PROVISIONS  
VALUED AND/OR CONSIDERED**

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The maximum amount payable as a normal retirement pension is 80% of the average monthly compensation.

**For members hired after January 1, 2012:**

First day of month following the attainment of age 52.5 and completion of 25 years of service or the attainment of age 62 and completion of 10 years of service.

The amount of monthly normal pension is based on credited service and average monthly compensation as follows:

- *Age 62 and 10 years of service*, 2.5% of average monthly compensation per year of credited service.
- *Age 52.5 with 25 or more years of credited service*, 62.5% of average monthly compensation, plus 2.5% of average monthly compensation for each year of credited service over 25.
- *Age 52.5 with 25 years of service, but less than 25 years of credited service*, 2.5% of average monthly compensation multiplied total credited service.

The maximum amount payable as a normal retirement pension is 80% of the average monthly compensation.

*Early Retirement (reduction for age).* No provision.

*Vested Termination (deferred retirement):* Termination of covered position employment with 10 or more years of credited service. Pension is calculated based on twice the member's accumulated contributions with payments commencing at age 62. Benefit is forfeited if accumulated contributions are refunded. The following schedule shows additional money which would be payable to members who receive a refund of their accumulated member contributions.

<u>Years of Credited Service</u>	<u>Additional Monies (% of Contributions)</u>
0-4	0%
5-6	25-40
7-8	55-70
9-10	85-100

For members hired on or after January 1, 2012 that cease to hold office for any reason other than death or retirement, member can withdraw their accumulated contributions less any benefit payments already received or any amount the member owes the Plan (no employer match of refund contributions) with interest at rate set by Board.

*Disability Retirement.* A member who is injured in the performance of his duties which totally and permanently prevent him from performing a reasonable range of duties in his department and was the

## **SUMMARY OF PLAN PROVISIONS VALUED AND/OR CONSIDERED**

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result of either physical contact with an inmate, responding to a confrontational situation with an inmate or a job-related motor vehicle accident may be retired under accidental disability. A corrections officer who becomes incapacitated for any gainful employment, as the direct and proximate result of performance of duty as a corrections officer, may be retired by the Board of Trustees under total and permanent disability. The amount of pension for both types of disability is 50 percent of average monthly salary.

A member who has a total and permanent disability that prevents the performance of a reasonable range of duties in his department may be retired by the Board of Trustees under an ordinary disability (non-duty related). The amount of the pension is a percentage of normal retirement benefit. The percentage based on credited service divided by 20 (25 for dispatchers).

***DROP:*** Beginning July 1, 2006 and through June 30, 2016, the CORP shall offer the Reverse Deferred Retirement Option Plan (Reverse DROP) to members that are eligible for a normal pension (based on service and age) applicable to a membership date that is either prior to, or after January 1, 2012 (who is not awarded an accidental, ordinary or total and permanent disability pension). Under the Reverse DROP, the member must voluntarily and irrevocably elect to terminate employment and receive a normal retirement upon participation in the Reverse DROP. The Reverse DROP date is the first day of the month immediately following completion of required credited service, or a date not more than sixty (60) consecutive months before the date the member elects to participate in the Reverse DROP, whichever is later.

The member's pension will be calculated using the factors of credited service and average monthly benefit compensation in effect on the Reverse DROP Date. The lump sum distribution is credited as though it accrued monthly from the Reverse DROP date to the date the member elected to participate in the Reverse DROP (plus interest equal to the yield on a five (5) year Treasury note as of the first day of the month as published by the Federal Reserve Board).

***Survivor Pensions.*** Payable to the eligible beneficiary of a retired corrections officer or an active corrections officer. An eligible beneficiary is a surviving spouse who was married to the retired or active corrections officer for at least two years. A surviving spouse's pension terminates upon death. The amount of a surviving spouse's pension is 80% of the pension being paid the deceased retired corrections officer and 40% (100% if duty-related) of the average monthly salary of the deceased active corrections officer. Eligible surviving children are paid equal shares of the pension which would have been payable to a surviving spouse if a surviving spouse pension is not being paid. If no pension is payable because of the death of an active member, a refund of twice the member's accumulated contributions is paid to the beneficiary.

***Other Terminations.*** The member is paid a refund of accumulated member contributions, plus an additional amount if the member has at least five years of service credited. The additional amount is a percent, based on service credit, of the member contribution amount, ranging from 25% (with five years of service credited) to 100% (with 10 or more years of service credited).

## SUMMARY OF PLAN PROVISIONS VALUED AND/OR CONSIDERED

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### *Post-Retirement Adjustments:*

#### **For members retired on or before July 1, 2011:**

Contingent upon the excess investment earnings, effective July 1 of each year, eligible retired members or survivors may be entitled to a permanent benefit increase in their base benefit. To be eligible for the increase, the retired member or survivor must be either age 55 or older on July 1 of the current year and receiving benefits on or before July 31 of the previous year, or the retired member or survivor has been receiving benefits on or before July 31 of the previous two years. The maximum amount of the increase is 4% of the average normal benefit being received on the preceding June 30.

Prior to July 1, 2013 a PBI reserve is maintained and used to pay for the post-retirement adjustment. The investment return on the PBI reserve is the same as the return on the market value of assets (whether the return is positive or negative). Additional amounts are added to the PBI reserve in years when the investment return on the market value of assets exceeds 9.0%. Each year the present value of that year's post-retirement adjustment is subtracted from the PBI reserve. A post-retirement adjustment is paid as long as there is a positive balance in the PBI reserve.

#### **For members retired on or after August 1, 2011:**

A PBI is only paid in a year when the annual return on the market value of assets of the prior fiscal year exceeds 10.5% and the plan is at least 60% funded. 100% of the excess earnings is used to determine whether a PBI can be paid and the size of the PBI for that year. No PBI reserve will accumulate and the present value of that year's PBI for eligible retirees cannot exceed 100% of the earnings in excess of 10.5%. If the excess earnings is high enough to exceed the present value of that year's PBI, the excess stays in the fund.

To be eligible for an increase the retiree or the survivor must be:

- In the case of a retired member who became a member of the plan before January 1, 2012, the retired member or survivor was receiving benefits on or before July 31 of the two previous years; or
- In the case of a retired member who became a member of the plan before January 1, 2012, the retired member or survivor was 55 or older on July 1 of the current year and was receiving benefits on or before July 31 of the previous year.
- In the case of a retired member who became a member of the plan on or after January 1, 2012, the retired member or survivor was at least 55 or older on July 1 and receiving benefits.
- In the case of a retired member who became a member of the plan on or after January 1, 2012, if under 55 on July 1, was receiving accidental disability benefits for the preceding 2 years.
- In the case of a member who became a member of the plan on or after January 1, 2012, if the survivor is under 55 on July 1, is the survivor of the member who was killed in the line of duty, and has been receiving a survivor benefits for the preceding 2 years.

The amount of the PBI to be paid is determined as follows:

- Funded ratio is 60-64%, PBI is 2%
- Funded ratio is 65-69%, PBI is 2.5%

**SUMMARY OF PLAN PROVISIONS  
VALUED AND/OR CONSIDERED**

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- Funded ratio is 70-74%, PBI is 3%
- Funded ratio is 75-79%, PBI is 3.5%
- Funded ratio is 80% or more, PBI is 4%

**Post-Retirement Health Insurance Subsidy:** Payable on behalf of retired members and survivors who elect coverage provided by the state or participating employer. The monthly amounts cannot exceed:

Member Only		With Dependents		
Not Medicare Eligible	Medicare Eligible	All Not Medicare Eligible	All Medicare Eligible	One With Medicare
\$150	\$100	\$260	\$170	\$215

**Member Contributions.** 8.50% of base salary. For fiscal years 2007/2008 and 2008/2009, the member contribution rate is 7.96% pursuant to legislation adopted in 2005. Effective after 9/26/2008, non-dispatcher members contribute 8.41%, or a 50/50 split between employer and employee, whichever is lower, until the Plan is 100% funded. Minimum employee contribution rate of 7.65%, minimum employer contribution rate of 6%. Dispatcher contribution rate is .45% less than the non-dispatcher rate until the plan is 100% funded then rates are equal thereafter.

**Employer Contributions.** Percent of payroll normal cost plus 30-year (22 years remaining as of June 30, 2014) amortization of unfunded actuarial accrued liability (20-year amortization for credit). The minimum employer contribution rate is 6% for fiscal years beginning with FY 2007/2008 (5% for units under 5% as of June 30, 2005 valuation).

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**SECTION G**  
FUNDING POLICY

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## **ACTUARIAL FUNDING POLICY**

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### **Introduction**

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The purpose of this Actuarial Funding Policy is to record the funding objectives and policy set by the Board for the Arizona Public Safety Personnel Retirement System (PSPRS). The Board establishes this Funding Policy to help ensure the systematic funding of future benefit payments for members of the Retirement System.

In 2012, the Governmental Accounting Standards Board (GASB) approved two new financial reporting standards. GASB Statement No. 67, "Financial Reporting for Pension Plans" replaces the requirements of Statement No. 25. GASB Statement No. 68, "Accounting and Financial Reporting for Pensions" replaces the requirements of Statements No. 27 and No. 50. Prior to the changes, the Annual Required Contribution (ARC) rate was used as a basis for funding decisions. The new GASB statements separate accounting cost (expense) from funding cost (contributions), necessitating the creation of this funding policy.

This funding policy shall be reviewed by the Board annually for several years following initial adoption until the next experience study. Subsequently, it shall be reviewed every five years in conjunction with the experience study.

### **Funding Objectives**

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1. Maintain adequate assets so that current plan assets plus future contributions and investment earnings are sufficient to fund all benefits expected to be paid to members and their beneficiaries.
2. Maintain stability of employer contribution rates, consistent with other funding objectives.
3. Maintain public policy goals of accountability and transparency. Each policy element is clear in intent and effect, and each should allow an assessment of whether, how and when the funding requirements of the plan will be met.
4. Promote intergenerational equity. Each generation of members and employers should incur the cost of benefits for the employees who provide services to them, rather than deferring those costs to future members and employers.
5. Provide a reasonable margin for adverse experience to help offset risks.
6. Continue progress of systematic reduction of the Unfunded Actuarial Accrued Liabilities (UAAL).



## **ACTUARIAL FUNDING POLICY**

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### **Elements of Actuarial Funding Policy**

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#### **1. Actuarial Cost Method**

- a. The Individual Entry Age Normal level percent-of-pay actuarial cost method of valuation shall be used in determining Actuarial Accrued Liability (AAL) and Normal Cost. Differences in the past between assumed experience and actual experience (“actuarial gains and losses”) shall become part of the AAL. The Normal Cost shall be determined on an individual basis for each active member.

#### **2. Asset Smoothing Method**

- a. The investment gains or losses of each valuation period, resulting from the difference between actual investment return and assumed investment return, shall be recognized annually in level amounts over 7 years in calculating the Funding Value of Assets
- b. The Funding Value of Assets so determined shall be subject to a 20% corridor relative to Market Value of Assets.

#### **3. Amortization Method**

- a. The Funding Value of Assets are subtracted from the computed AAL. Any unfunded amount is amortized as a level percent-of-payroll over a closed period. If the Funding Value of Assets exceeds the AAL, the excess is amortized over an open period of 20 years and applied as a credit to reduce the Normal Cost otherwise payable.

#### **4. Funding Target**

- a. The targeted funded ratio shall be 100%.
- b. The maximum amortization period shall be 30 years.
- c. If the funded ratio is between 100% and 120%, a minimum contribution equal to the Normal Cost will be made.

## ACTUARIAL FUNDING POLICY

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### Elements of Actuarial Funding Policy

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#### 5. Risk Management

##### a. Assumption Changes

- The actuarial assumptions used shall be those last adopted by the PSPRS Board based on the most recent experience study and upon the advice and recommendation of the actuary. In accordance with best practices, the actuary shall conduct an experience study every five years. The results of the study shall be the basis for the actuarial assumption changes recommended to the PSPRS Board.
- The actuarial assumptions can be updated during the 5-year period if significant plan design changes or other significant events occur, as advised by the actuary.

##### b. Amortization Method

- The amortization method, Level Percent Closed, will ensure full payment of the UAAL over a finite, systematically decreasing period not to exceed 30 years. The amortization period will be reviewed once the period reaches 15 years.

##### c. Risk Measures

- The following risk measures will be annually determined to provide quantifiable measurements of risk and their movement over time.

###### (i) Classic measures currently determined

- Funded ratio (assets/liability)

###### (ii) UAAL/Total Payroll

- Measures the risk associated with contribution decreases relative impact on the ability to fund the UAAL. An increase in this measure indicates a increase in contribution risk.

###### (iii) Total Liability/Total Payroll

- Measures the risk associated with the ability to respond to liability experience through adjustments in contributions. An increase in this measure indicates an increase in experience risk.

## ACTUARIAL FUNDING POLICY

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### Glossary

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1. **Actuarial Accrued Liability (AAL):** 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.”
2. **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.
3. **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.”
4. **Actuarial 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. For example, if during a given year the assets earn more than the investment return assumption, the amount of earnings above the assumption will cause an unexpected reduction in UAAL, or “actuarial gain” as of the next valuation. These include contribution gains and losses that result from actual contributions made being greater or less than the level determined under the policy.
5. **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 (SOA) is an international research, education and membership organization for actuaries in the life and health insurance, employee benefits, and pension fields. The SOA administers a series of examinations leading initially to Associateship and the designation ASA and ultimately to Fellowship with the designation FSA.
6. **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.
7. **Entry Age Normal Actuarial Cost Method:** A funding method that calculates the Normal Cost as a level percentage-of-pay over the working lifetime of the plan’s members.
8. **Experience Study:** An actuarial investigation of demographic and economic experiences of the system during the period studied. The investigation is made for the purpose of updating the actuarial assumptions used in valuing the actuarial liabilities.

## ACTUARIAL FUNDING POLICY

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9. **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.
10. **Market Value of Assets:** The fair value of plan assets as reported in the plan's audited financial statements.
11. **Normal Cost (NC):** 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.
12. **Unfunded Actuarial Accrued Liability (UAAL):** The positive difference, if any, between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability."

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**SECTION H**  
GLOSSARY

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<b><i>Actuarial Accrued Liability</i></b>	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.”
<b><i>Accrued Service</i></b>	The service credited under the plan which was rendered before the date of the actuarial valuation.
<b><i>Actuarial Assumptions</i></b>	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.
<b><i>Actuarial Cost Method</i></b>	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.”
<b><i>Actuarial Equivalent</i></b>	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.
<b><i>Actuarial Present Value</i></b>	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.
<b><i>Amortization</i></b>	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.
<b><i>Experience Gain/(Loss)</i></b>	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.
<b><i>Normal Cost</i></b>	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.

<b><i>Reserve Account</i></b>	An account used to indicate that funds have been set aside for a specific purpose and is not generally available for other uses.
<b><i>Unfunded Actuarial Accrued Liability</i></b>	The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as “unfunded accrued liability.”
<b><i>Valuation Assets</i></b>	The value of current plan assets recognized for valuation purposes. Generally based on market value plus a portion of unrealized appreciation or depreciation.

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## **APPENDIX I**

### ACCOUNTING DISCLOSURES

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**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. Please note Plan reporting under GASB Statement No. 25 has been replaced by GASB Statement No. 67.**



## **INFORMATION REQUIRED BY GASB STATEMENT NO. 67**

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The Governmental Accounting Standards Board Statement No. 67 (GASB 67) contains certain requirements regarding the accounting and disclosure of financial information. In addition to disclosing the system's fiduciary net position, retirement systems are also required to disclose information regarding the plan's total pension liability, net pension liability, and change in net pension liability from the prior year. In actuarial terms, these are the plan's actuarial accrued liability and unfunded actuarial accrued liability on a market value of asset basis. This section of the report contains information that is part of the Retirement System's disclosure requirements under this accounting standard.

### **Determination of the Total Pension Liability**

The total pension liability shown in this subsection is also shown as of the last date of the pension plan's fiscal year, June 30, 2014.

A single discount rate of 7.85% was used to measure the total pension liability. This single discount rate was based on the expected rate of return on pension plan investments of 7.85%. The projection of cash flows used to determine this single discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on these assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

An exhibit providing the projections and calculations used to determine the single equivalent discount rate under GASB Statement No. 67 can be provided upon request.

### **Measurement of Net Pension Liability**

The net pension liability is to be measured as the total pension liability, less the amount of the pension plan's fiduciary net position. As of the plan year ending June 30, 2014, the net pension liability is \$1,140,300,163. If a single discount rate that was 100 basis points lower was used, the net pension liability would have been \$1,488,068,005. Similarly, if a single discount rate that was 100 basis points higher was used, the net pension liability would have been \$852,333,128.

The following exhibit provides information regarding the total pension liability, net pension liability, and change in the net pension liability since the prior plan year (and related ratios).

**Schedules of Required Supplementary Information**  
**Schedule of Changes in the Employers' Net Pension Liability and Related Ratios**

**Last 10 Fiscal Years (which may be built prospectively)**

Fiscal year ending June 30,	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
<b>Total Pension Liability</b>										
Service Cost	\$ 96,352,744									
Interest on the Total Pension Liability	173,964,089									
Benefit and Assumption Changes	259,052,776									
Difference between expected and actual experience of the Total Pension Liability	9,015,638									
Benefit Payments and Refunds	(137,533,520)									
<b>Net Change in Total Pension Liability</b>	400,851,727									
<b>Total Pension Liability - Beginning</b>	2,236,693,437									
<b>Total Pension Liability - Ending (a)</b>	\$ 2,637,545,164									
<b>Plan Fiduciary Net Position</b>										
Employer Contributions	\$ 77,797,924									
Employee Contributions	52,202,793									
Pension Plan Net Investment Income	160,350,224									
Benefit Payments and Refunds	(137,533,520)									
Pension Plan Administrative Expense	(1,437,691)									
Other	15,080,587									
<b>Net Change in Plan Fiduciary Net Position</b>	166,460,317									
<b>Plan Fiduciary Net Position - Beginning</b>	1,330,784,684									
<b>Plan Fiduciary Net Position - Ending (b)</b>	\$ 1,497,245,001									
<b>Net Pension Liability - Ending (a) - (b)</b>	1,140,300,163									
<b>Plan Fiduciary Net Position as a Percentage of Total Pension Liability</b>	56.77 %									
<b>Covered Employee Payroll</b>	\$ 625,263,855									
<b>Net Pension Liability as a Percentage of Covered Employee Payroll</b>	182.37 %									
<b>Notes to Schedule:</b>										
N/A										

**Schedules of Required Supplementary Information  
Schedule of the Employers' Net Pension Liability**

**Last 10 Fiscal Years (which may be built prospectively starting from 2014)**

<b>FY Ending June 30,</b>	<b>Total Pension Liability</b>	<b>Plan Net Position</b>	<b>Net Pension Liability</b>	<b>Plan Net Position as a % of Total Pension Liability</b>	<b>Covered Payroll</b>	<b>Net Pension Liability as a % of Covered Payroll</b>
2005			-			
2006			-			
2007			-			
2008			-			
2009			-			
2010			-			
2011			-			
2012			-			
2013			-			
2014	\$2,637,545,164	\$1,497,245,001	\$1,140,300,163	56.77%	\$625,263,855	182.37%

## Schedule of Contributions

**Last 10 Fiscal Years (which may be built prospectively starting from 2014)**

FY Ending June 30,	Actuarially Determined Contribution	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll	Actual Contribution as a % of Covered Payroll
2007					
2008					
2009					
2010					
2011					
2012					
2013					
2014	\$ 86,853,695	\$ 77,797,924	\$ 9,055,771	\$ 625,263,855	12.44%
2015	87,272,617				
2016	121,663,741				

**Sensitivity of the Net Pension Liability to the Single Discount Rate Assumption**

	<b>1% Decrease 6.85%</b>	<b>Current Single Rate Assumption 7.85%</b>	<b>1% Increase 8.85%</b>
Total Pension Liability	\$ 2,985,313,006	\$ 2,637,545,164	\$ 2,349,578,129
Plan Fiduciary Net Position	1,497,245,001	1,497,245,001	1,497,245,001
Net Pension Liability/(Asset)	\$ 1,488,068,005	\$ 1,140,300,163	\$ 852,333,128

## Single Discount Rate Development Projection of Contributions

Year	Normal Cost and					Total Contributions
	Payroll for Current Employees	Contributions from Current Employees	Expense Contributions	UAL Contributions		
0	\$ 625,263,799					
1	598,206,324	\$ 50,287,168	\$ 40,157,464	\$ 42,558,000	\$	133,002,632
2	549,227,531	46,169,097	35,557,202	78,871,895		160,598,194
3	511,192,447	42,971,339	32,993,011	85,052,048		161,016,398
4	479,757,387	40,328,434	30,868,626	87,913,785		159,110,845
5	451,690,982	37,969,033	28,927,864	91,039,194		157,936,091
6	424,948,685	35,720,753	27,130,581	95,364,680		158,216,014
7	399,007,771	33,539,603	25,355,228	97,721,544		156,616,376
8	374,316,008	31,463,687	23,637,109	100,371,087		155,471,883
9	350,968,147	29,501,017	22,057,926	104,385,931		155,944,873
10	327,924,979	27,563,968	20,511,747	108,561,368		156,637,083
11	305,213,552	25,654,875	18,969,599	112,903,822		157,528,296
12	282,804,630	23,771,221	17,464,219	117,419,975		158,655,416
13	259,567,354	21,817,587	15,900,024	122,116,774		159,834,385
14	235,859,021	19,824,300	14,330,342	127,001,445		161,156,088
15	213,699,052	17,961,285	12,856,293	132,081,503		162,899,081
16	192,787,371	16,203,458	11,483,070	137,364,763		165,051,292
17	171,178,761	14,387,277	10,042,607	142,859,354		167,289,238
18	149,935,686	12,602,052	8,632,129	148,573,728		169,807,910
19	132,461,262	11,134,060	7,428,270	154,516,677		173,079,007
20	120,054,875	10,092,156	6,529,338	160,697,344		177,318,838
21	111,357,910	9,361,804	5,890,039	167,125,238		182,377,081
22	104,548,973	8,789,944	5,373,761	173,810,247		187,973,953
23	97,963,723	8,236,734	4,898,737	180,762,657		193,898,128
24	90,681,465	7,624,850	4,408,188	-		12,033,037
25	82,851,570	6,966,839	3,936,826	-		10,903,665
26	75,308,049	6,332,822	3,510,904	-		9,843,726
27	68,133,624	5,729,735	3,122,161	-		8,851,896
28	60,649,224	5,100,465	2,730,890	-		7,831,354
29	52,371,062	4,404,359	2,316,431	-		6,720,791
30	43,066,375	3,621,867	1,866,286	-		5,488,153
31	33,638,552	2,828,999	1,430,938	-		4,259,937
32	25,273,859	2,125,531	1,057,502	-		3,183,033
33	18,632,006	1,566,952	768,465	-		2,335,417
34	13,691,047	1,151,417	561,953	-		1,713,370
35	10,025,128	843,113	410,486	-		1,253,599
36	7,113,659	598,259	289,857	-		888,116
37	4,694,194	394,782	189,403	-		584,185
38	2,784,779	234,200	110,698	-		344,898
39	1,443,187	121,372	56,075	-		177,447
40	633,408	53,270	23,980	-		77,250
41	226,619	19,059	8,331	-		27,390
42	63,251	5,319	2,250	-		7,569
43	12,233	1,029	422	-		1,450
44	1,511	127	50	-		177
45	-	-	-	-		-
46	-	-	-	-		-
47	-	-	-	-		-
48	-	-	-	-		-
49	-	-	-	-		-
50	-	-	-	-		-

## Single Discount Rate Development Projection of Contributions (concluded)

Year	Payroll for Current Employees	Contributions from Current Employees	Normal Cost and Expense Contributions	UAL Contributions	Total Contributions
51	-	-	-	-	-
52	-	-	-	-	-
53	-	-	-	-	-
54	-	-	-	-	-
55	-	-	-	-	-
56	-	-	-	-	-
57	-	-	-	-	-
58	-	-	-	-	-
59	-	-	-	-	-
60	-	-	-	-	-
61	-	-	-	-	-
62	-	-	-	-	-
63	-	-	-	-	-
64	-	-	-	-	-
65	-	-	-	-	-
66	-	-	-	-	-
67	-	-	-	-	-
68	-	-	-	-	-
69	-	-	-	-	-
70	-	-	-	-	-
71	-	-	-	-	-
72	-	-	-	-	-
73	-	-	-	-	-
74	-	-	-	-	-
75	-	-	-	-	-
76	-	-	-	-	-
77	-	-	-	-	-
78	-	-	-	-	-
79	-	-	-	-	-
80	-	-	-	-	-
81	-	-	-	-	-
82	-	-	-	-	-
83	-	-	-	-	-
84	-	-	-	-	-
85	-	-	-	-	-
86	-	-	-	-	-
87	-	-	-	-	-
88	-	-	-	-	-
89	-	-	-	-	-
90	-	-	-	-	-
91	-	-	-	-	-
92	-	-	-	-	-
93	-	-	-	-	-
94	-	-	-	-	-
95	-	-	-	-	-
96	-	-	-	-	-
97	-	-	-	-	-
98	-	-	-	-	-
99	-	-	-	-	-
100	-	-	-	-	-

## Single Discount Rate Development Projection of Plan Fiduciary Net Position

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Investment Earnings at 7.85%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)=(a)+(b)-(c)+(d)
1	\$ 1,497,245,001	\$ 133,002,632	\$ 132,798,041	\$ 117,541,611	\$ 1,614,991,203
2	1,614,991,203	160,598,194	144,911,338	127,380,887	1,758,058,946
3	1,758,058,946	161,016,398	155,532,411	138,218,808	1,901,761,741
4	1,901,761,741	159,110,845	166,192,028	149,015,611	2,043,696,168
5	2,043,696,168	157,936,091	177,897,220	159,661,475	2,183,396,515
6	2,183,396,515	158,216,014	189,889,802	170,176,915	2,321,899,641
7	2,321,899,641	156,616,376	201,271,395	180,549,522	2,457,794,144
8	2,457,794,144	155,471,883	213,880,960	190,687,592	2,590,072,659
9	2,590,072,659	155,944,873	227,718,267	200,556,815	2,718,856,080
10	2,718,856,080	156,637,083	241,347,165	210,168,140	2,844,314,138
11	2,844,314,138	157,528,296	255,144,660	219,519,596	2,966,217,369
12	2,966,217,369	158,655,416	269,530,296	228,578,433	3,083,920,922
13	3,083,920,922	159,834,385	284,521,549	237,286,271	3,196,520,030
14	3,196,520,030	161,156,088	299,589,395	245,595,957	3,303,682,679
15	3,303,682,679	162,899,081	313,705,040	253,531,772	3,406,408,492
16	3,406,408,492	165,051,292	326,748,570	261,176,340	3,505,887,554
17	3,505,887,554	167,289,238	339,732,190	268,571,646	3,602,016,247
18	3,602,016,247	169,807,910	352,094,876	275,738,669	3,695,467,950
19	3,695,467,950	173,079,007	361,748,908	282,828,831	3,789,626,879
20	3,789,626,879	177,318,838	368,351,519	290,129,319	3,888,723,518
21	3,888,723,518	182,377,081	372,951,172	297,926,065	3,996,075,492
22	3,996,075,492	187,973,953	376,398,328	306,435,977	4,114,087,095
23	4,114,087,095	193,898,128	379,190,691	315,820,490	4,244,615,022
24	4,244,615,022	12,033,037	381,779,779	318,963,870	4,193,832,151
25	4,193,832,151	10,903,665	383,948,109	314,850,425	4,135,638,131
26	4,135,638,131	9,843,726	385,336,405	310,187,916	4,070,333,368
27	4,070,333,368	8,851,896	386,000,369	304,997,730	3,998,182,625
28	3,998,182,625	7,831,354	386,369,985	299,280,364	3,918,924,359
29	3,918,924,359	6,720,791	386,771,682	293,000,355	3,831,873,823
30	3,831,873,823	5,488,153	387,336,187	286,097,683	3,736,123,471
31	3,736,123,471	4,259,937	387,513,862	278,527,141	3,631,396,687
32	3,631,396,687	3,183,033	386,320,657	270,310,567	3,518,569,631
33	3,518,569,631	2,335,417	383,281,670	261,538,030	3,399,161,407
34	3,399,161,407	1,713,370	378,440,724	252,326,948	3,274,761,001
35	3,274,761,001	1,253,599	372,133,019	242,786,711	3,146,668,292
36	3,146,668,292	888,116	364,819,513	232,998,992	3,015,735,887
37	3,015,735,887	584,185	356,680,344	223,022,522	2,882,662,249
38	2,882,662,249	344,898	347,737,863	212,911,389	2,748,180,672
39	2,748,180,672	177,447	337,878,090	202,727,822	2,613,207,851
40	2,613,207,851	77,250	327,271,926	192,537,025	2,478,550,200
41	2,478,550,200	27,390	316,025,355	182,397,569	2,344,949,804
42	2,344,949,804	7,569	304,375,815	172,357,781	2,212,939,339
43	2,212,939,339	1,450	292,474,956	162,453,009	2,082,918,842
44	2,082,918,842	177	280,417,216	152,710,677	1,955,212,480
45	1,955,212,480	-	268,262,815	143,153,769	1,830,103,433
46	1,830,103,433	-	256,050,636	133,802,982	1,707,855,779
47	1,707,855,779	-	243,809,727	124,677,921	1,588,723,972
48	1,588,723,972	-	231,568,199	115,797,477	1,472,953,251
49	1,472,953,251	-	219,354,818	107,179,795	1,360,778,228
50	1,360,778,228	-	207,198,558	98,842,176	1,252,421,845



## Single Discount Rate Development

### Projection of Plan Fiduciary Net Position (concluded)

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Investment Earnings at 7.85%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)=(a)+(b)-(c)+(d)
51	\$ 1,252,421,845	\$ -	\$ 195,128,819	\$ 90,800,988	\$ 1,148,094,014
52	1,148,094,014	-	183,174,861	83,071,583	1,047,990,735
53	1,047,990,735	-	171,365,908	75,668,221	952,293,048
54	952,293,048	-	159,731,259	68,603,986	861,165,776
55	861,165,776	-	148,300,193	61,890,689	774,756,271
56	774,756,271	-	137,101,663	55,538,782	693,193,389
57	693,193,389	-	126,165,061	49,557,248	616,585,576
58	616,585,576	-	115,520,492	43,953,442	545,018,526
59	545,018,526	-	105,199,322	38,732,881	478,552,086
60	478,552,086	-	95,234,645	33,898,991	417,216,431
61	417,216,431	-	85,661,246	29,452,800	361,007,985
62	361,007,985	-	76,514,985	25,392,646	309,885,646
63	309,885,646	-	67,831,600	21,713,927	263,767,972
64	263,767,972	-	59,646,180	18,408,898	222,530,690
65	222,530,690	-	51,991,624	15,466,537	186,005,604
66	186,005,604	-	44,897,181	12,872,515	153,980,938
67	153,980,938	-	38,387,011	10,609,276	126,203,203
68	126,203,203	-	32,478,144	8,656,265	102,381,324
69	102,381,324	-	27,178,753	6,990,320	82,192,890
70	82,192,890	-	22,486,857	5,586,206	65,292,239
71	65,292,239	-	18,389,206	4,417,299	51,320,332
72	51,320,332	-	14,861,315	3,456,358	39,915,376
73	39,915,376	-	11,868,487	2,676,319	30,723,207
74	30,723,207	-	9,367,440	2,051,045	23,406,812
75	23,406,812	-	7,308,562	1,555,993	17,654,243
76	17,654,243	-	5,638,605	1,168,724	13,184,362
77	13,184,362	-	4,303,468	869,252	9,750,147
78	9,750,147	-	3,250,573	640,212	7,139,786
79	7,139,786	-	2,430,829	466,865	5,175,822
80	5,175,822	-	1,800,070	336,984	3,712,737
81	3,712,737	-	1,319,910	240,622	2,633,448
82	2,633,448	-	957,972	169,836	1,845,312
83	1,845,312	-	687,638	118,377	1,276,052
84	1,276,052	-	487,593	81,394	869,853
85	869,853	-	341,072	55,149	583,929
86	583,929	-	235,018	36,788	385,700
87	385,700	-	159,316	24,142	250,526
88	250,526	-	106,151	15,579	159,954
89	159,954	-	69,466	9,881	100,369
90	100,369	-	44,631	6,160	61,898
91	61,898	-	28,146	3,775	37,528
92	37,528	-	17,438	2,274	22,364
93	22,364	-	10,614	1,347	13,097
94	13,097	-	6,350	784	7,531
95	7,531	-	3,740	447	4,238
96	4,238	-	2,167	249	2,320
97	2,320	-	1,230	135	1,224
98	1,224	-	681	70	613
99	613	-	363	34	284
100	284	-	295	11	0

## Single Discount Rate Development

### Present Values of Projected Benefit Payments

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of Benefit Payments using Single Discount Rate (sdr)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v <sup>(a)-.5</sup>	(g)=(e)*vf <sup>(a)-.5</sup>	(h)=(c)/(1+sdr) <sup>(a)-.5</sup>
1	\$ 1,497,245,001	\$ 132,798,041	\$ 132,798,041	\$ -	\$ 127,873,807	\$ -	\$ 127,873,807
2	1,614,991,203	144,911,338	144,911,338	-	129,381,488	-	129,381,488
3	1,758,058,946	155,532,411	155,532,411	-	128,756,906	-	128,756,906
4	1,901,761,741	166,192,028	166,192,028	-	127,567,388	-	127,567,388
5	2,043,696,168	177,897,220	177,897,220	-	126,613,055	-	126,613,055
6	2,183,396,515	189,889,802	189,889,802	-	125,311,468	-	125,311,468
7	2,321,899,641	201,271,395	201,271,395	-	123,154,727	-	123,154,727
8	2,457,794,144	213,880,960	213,880,960	-	121,344,753	-	121,344,753
9	2,590,072,659	227,718,267	227,718,267	-	119,791,664	-	119,791,664
10	2,718,856,080	241,347,165	241,347,165	-	117,720,143	-	117,720,143
11	2,844,314,138	255,144,660	255,144,660	-	115,391,791	-	115,391,791
12	2,966,217,369	269,530,296	269,530,296	-	113,025,352	-	113,025,352
13	3,083,920,922	284,521,549	284,521,549	-	110,627,550	-	110,627,550
14	3,196,520,030	299,589,395	299,589,395	-	108,007,626	-	108,007,626
15	3,303,682,679	313,705,040	313,705,040	-	104,864,702	-	104,864,702
16	3,406,408,492	326,748,570	326,748,570	-	101,274,796	-	101,274,796
17	3,505,887,554	339,732,190	339,732,190	-	97,634,708	-	97,634,708
18	3,602,016,247	352,094,876	352,094,876	-	93,822,519	-	93,822,519
19	3,695,467,950	361,748,908	361,748,908	-	89,378,789	-	89,378,789
20	3,789,626,879	368,351,519	368,351,519	-	84,385,835	-	84,385,835
21	3,888,723,518	372,951,172	372,951,172	-	79,220,743	-	79,220,743
22	3,996,075,492	376,398,328	376,398,328	-	74,133,494	-	74,133,494
23	4,114,087,095	379,190,691	379,190,691	-	69,247,533	-	69,247,533
24	4,244,615,022	381,779,779	381,779,779	-	64,645,665	-	64,645,665
25	4,193,832,151	383,948,109	383,948,109	-	60,280,781	-	60,280,781
26	4,135,638,131	385,336,405	385,336,405	-	56,095,268	-	56,095,268
27	4,070,333,368	386,000,369	386,000,369	-	52,101,924	-	52,101,924
28	3,998,182,625	386,369,985	386,369,985	-	48,355,878	-	48,355,878
29	3,918,924,359	386,771,682	386,771,682	-	44,882,848	-	44,882,848
30	3,831,873,823	387,336,187	387,336,187	-	41,676,733	-	41,676,733
31	3,736,123,471	387,513,862	387,513,862	-	38,660,965	-	38,660,965
32	3,631,396,687	386,320,657	386,320,657	-	35,736,599	-	35,736,599
33	3,518,569,631	383,281,670	383,281,670	-	32,874,806	-	32,874,806
34	3,399,161,407	378,440,724	378,440,724	-	30,096,976	-	30,096,976
35	3,274,761,001	372,133,019	372,133,019	-	27,441,197	-	27,441,197
36	3,146,668,292	364,819,513	364,819,513	-	24,943,808	-	24,943,808
37	3,015,735,887	356,680,344	356,680,344	-	22,612,247	-	22,612,247
38	2,882,662,249	347,737,863	347,737,863	-	20,440,729	-	20,440,729
39	2,748,180,672	337,878,090	337,878,090	-	18,415,532	-	18,415,532
40	2,613,207,851	327,271,926	327,271,926	-	16,539,137	-	16,539,137
41	2,478,550,200	316,025,355	316,025,355	-	14,808,323	-	14,808,323
42	2,344,949,804	304,375,815	304,375,815	-	13,224,338	-	13,224,338
43	2,212,939,339	292,474,956	292,474,956	-	11,782,361	-	11,782,361
44	2,082,918,842	280,417,216	280,417,216	-	10,474,376	-	10,474,376
45	1,955,212,480	268,262,815	268,262,815	-	9,291,029	-	9,291,029
46	1,830,103,433	256,050,636	256,050,636	-	8,222,598	-	8,222,598
47	1,707,855,779	243,809,727	243,809,727	-	7,259,623	-	7,259,623
48	1,588,723,972	231,568,199	231,568,199	-	6,393,252	-	6,393,252
49	1,472,953,251	219,354,818	219,354,818	-	5,615,261	-	5,615,261
50	1,360,778,228	207,198,558	207,198,558	-	4,918,009	-	4,918,009

## Single Discount Rate Development

### Present Values of Projected Benefit Payments (concluded)

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of Benefit Payments using Single Discount Rate (sdr)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v <sup>^(a)-.5)</sup>	(g)=(e)*vf <sup>^(a)-.5)</sup>	(h)={(c)/(1+sdr) <sup>^(a)-.5)</sup>
51	\$ 1,252,421,845	\$ 195,128,819	\$ 195,128,819	\$ -	\$ 4,294,414	\$ -	\$ 4,294,414
52	1,148,094,014	183,174,861	183,174,861	-	3,737,904	-	3,737,904
53	1,047,990,735	171,365,908	171,365,908	-	3,242,400	-	3,242,400
54	952,293,048	159,731,259	159,731,259	-	2,802,283	-	2,802,283
55	861,165,776	148,300,193	148,300,193	-	2,412,368	-	2,412,368
56	774,756,271	137,101,663	137,101,663	-	2,067,876	-	2,067,876
57	693,193,389	126,165,061	126,165,061	-	1,764,415	-	1,764,415
58	616,585,576	115,520,492	115,520,492	-	1,497,961	-	1,497,961
59	545,018,526	105,199,322	105,199,322	-	1,264,836	-	1,264,836
60	478,552,086	95,234,645	95,234,645	-	1,061,686	-	1,061,686
61	417,216,431	85,661,246	85,661,246	-	885,453	-	885,453
62	361,007,985	76,514,985	76,514,985	-	733,343	-	733,343
63	309,885,646	67,831,600	67,831,600	-	602,799	-	602,799
64	263,767,972	59,646,180	59,646,180	-	491,477	-	491,477
65	222,530,690	51,991,624	51,991,624	-	397,222	-	397,222
66	186,005,604	44,897,181	44,897,181	-	318,053	-	318,053
67	153,980,938	38,387,011	38,387,011	-	252,142	-	252,142
68	126,203,203	32,478,144	32,478,144	-	197,802	-	197,802
69	102,381,324	27,178,753	27,178,753	-	153,479	-	153,479
70	82,192,890	22,486,857	22,486,857	-	117,741	-	117,741
71	65,292,239	18,389,206	18,389,206	-	89,278	-	89,278
72	51,320,332	14,861,315	14,861,315	-	66,899	-	66,899
73	39,915,376	11,868,487	11,868,487	-	49,538	-	49,538
74	30,723,207	9,367,440	9,367,440	-	36,253	-	36,253
75	23,406,812	7,308,562	7,308,562	-	26,226	-	26,226
76	17,654,243	5,638,605	5,638,605	-	18,761	-	18,761
77	13,184,362	4,303,468	4,303,468	-	13,276	-	13,276
78	9,750,147	3,250,573	3,250,573	-	9,298	-	9,298
79	7,139,786	2,430,829	2,430,829	-	6,447	-	6,447
80	5,175,822	1,800,070	1,800,070	-	4,427	-	4,427
81	3,712,737	1,319,910	1,319,910	-	3,010	-	3,010
82	2,633,448	957,972	957,972	-	2,025	-	2,025
83	1,845,312	687,638	687,638	-	1,348	-	1,348
84	1,276,052	487,593	487,593	-	886	-	886
85	869,853	341,072	341,072	-	575	-	575
86	583,929	235,018	235,018	-	367	-	367
87	385,700	159,316	159,316	-	231	-	231
88	250,526	106,151	106,151	-	143	-	143
89	159,954	69,466	69,466	-	87	-	87
90	100,369	44,631	44,631	-	52	-	52
91	61,898	28,146	28,146	-	30	-	30
92	37,528	17,438	17,438	-	17	-	17
93	22,364	10,614	10,614	-	10	-	10
94	13,097	6,350	6,350	-	5	-	5
95	7,531	3,740	3,740	-	3	-	3
96	4,238	2,167	2,167	-	2	-	2
97	2,320	1,230	1,230	-	1	-	1
98	1,224	681	681	-	0	-	0
99	613	363	363	-	0	-	0
100	284	295	284	11	0	0	0
<b>Totals</b>					\$ 3,244,945,951	\$ -	\$ 3,244,945,951

**GASB STATEMENT NO. 67 SUPPLEMENTARY INFORMATION**

**SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS USED TO  
DETERMINE CONTRIBUTION RATES**

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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 actuarial valuation follows:

Valuation date	June 30, 2014
Actuarial cost method	Entry-Age Normal
Amortization method	Level percent-of-pay, Closed
Remaining amortization period	22 years
Asset valuation method	7-year smoothed market 80%/120% market corridor
Inflation	4.00%; no explicit price inflation assumption is used in this valuation.
Actuarial assumptions:	
Investment rate of return	7.85%
Projected salary increases	4.00% - 7.25%
Payroll growth	4.00%
Retirement Age	Experience-based table of rates that is specific to the type of eligibility condition.
Mortality	RP-2000 mortality table (adjusted by 105% for both males and females).
Assumed Future Permanent Benefit Increases	Members retired on or before July 1, 2011: 2.25% of benefit. Members retired on or after August 1, 2011: 0.5% of benefit.

**GASB STATEMENT NO. 45 SUPPLEMENTARY INFORMATION**

The following information is presented concerning the post-retirement health insurance subsidy. The liabilities and computed contribution for the post-retirement health insurance subsidy were based on the same assumptions and actuarial cost methods as indicated for GASB Statement No. 25.

**SCHEDULE OF FUNDING PROGRESS**

<b>Valuation Date June 30</b>	<b>Actuarial Value of Assets (a)</b>	<b>Actuarial Liability (AAL) (b)</b>	<b>Unfunded AAL (UAAL) (b-a)</b>	<b>Funded Ratio (a/b)</b>	<b>Annual Covered Payroll (c)</b>	<b>UAAL as a % of Covered Payroll ((b-a)/c)</b>
2006	\$0	\$45,454,331	\$45,454,331	0.00%	\$437,743,658	10.4%
2007	0	48,990,212	48,990,212	0.00	515,427,641	9.5%
2008	0	53,700,864	53,700,864	0.00	642,621,478	8.4%
2009	0	68,730,755	68,730,755	0.00	630,824,994	10.9%
2010	0	73,272,493	73,272,493	0.00	616,481,375	11.9%
2011	0	94,105,048	94,105,048	0.00	609,243,354	15.4%
2012	0	90,881,845	90,881,845	0.00	626,223,066	14.5%
2013	0	93,544,324	93,544,324	0.00	604,067,645	15.5%
<b>2014</b>	<b>102,100,399</b>	<b>97,015,208</b>	<b>(\$5,085,191)</b>	<b>105.24</b>	<b>625,263,855</b>	<b>(0.8)%</b>

**ANNUAL REQUIRED CONTRIBUTION**

<b>Valuation Date June 30</b>	<b>Fiscal Year Ended June 30</b>	<b>Normal Cost (a)</b>	<b>Actuarial Accrued Liability (b)</b>	<b>Total (a+b)</b>	<b>Dollar Amount</b>
2005	2007	0.59%	0.59%	1.18%	\$5,742,051
2006	2008	0.43%	0.41%	0.84%	5,398,020
2007	2009	0.51%	0.44%	0.95%	6,245,994
2008	2010	0.43%	0.41%	0.84%	5,178,444
2009	2011	0.61%	0.54%	1.15%	8,074,426
2010	2012	0.62%	0.60%	1.22%	8,371,142
2011	2013	0.39%	0.83%	1.22%	8,194,628
2012	2014	0.33%	0.77%	1.10%	7,594,520
2013	2015	0.34%	0.89%	1.23%	8,113,781
<b>2014</b>	<b>2016</b>	<b>0.33%</b>	<b>(0.11)%</b>	<b>0.22%</b>	<b>1,487,828</b>

Fiscal Years prior to 2011 provided by the prior actuary.

**Health Insurance Subsidy Payment Reported for FY 2014: \$3,037,563**

Note: GASB Statement No. 45 Supplementary information is shown individually in the separate reports for each participating unit.

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## **APPENDIX II**

### **SUMMARY OF POPULATION DATA BY INDIVIDUAL EMPLOYERS**

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# Arizona Corrections Officer Retirement Plan Annual Actuarial Valuation

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Division Number	Employer Name	Number of Actives	Active Payroll	Number of Retirees	Annual Retiree Benefits	Number of Vested Inactive	Annual Vested Benefits
575	ADMINISTRATIVE OFFICE OF THE COURTS	2,188	\$ 110,728,017	421	\$ 15,757,190	205	\$ 3,417,652
520	APACHE COUNTY - Detention	19	582,323	5	94,909	7	28,061
506	CITY OF AVONDALE - Detention	8	474,629	1	11,584	3	5,484
562	CITY OF SOMERTON - Dispatchers	5	170,002	1	32,389	1	7,507
525	COCHISE COUNTY - Detention	60	2,072,309	25	372,878	21	148,189
530	COCONINO COUNTY - Detention	90	3,488,706	8	210,409	44	186,306
500	DEPARTMENT OF CORRECTIONS - Detention	8,139	328,065,168	2,642	64,201,333	709	13,850,506
501	DEPT OF JUVENILE CORRECTIONS - Detention	509	19,793,956	239	6,298,594	151	2,091,860
563	DEPARTMENT OF PUBLIC SAFETY - Dispatchers	49	2,454,314	8	299,814	5	177,681
564	DEPARTMENT OF PUBLIC SAFETY - Detention	2	86,974	-	-	2	9,820
503	GILA COUNTY - Detention	59	2,132,979	7	116,208	25	139,960
558	GILA COUNTY - Dispatchers	6	223,276	3	80,128	4	55,340
504	GRAHAM COUNTY - Detention	38	1,332,329	4	106,573	9	213,367
560	GRAHAM COUNTY - Dispatchers	6	208,836	-	-	3	26,954
505	MARICOPA COUNTY - Detention	2,109	99,513,508	430	12,341,712	194	2,446,071
535	MOHAVE COUNTY - Detention	115	3,830,354	11	184,269	53	195,763
545	NAVAJO COUNTY - Detention	50	1,618,686	8	147,431	20	112,999
515	PIMA COUNTY - Detention	461	19,765,154	176	4,856,184	85	779,697
502	PINAL COUNTY - Detention	260	12,605,782	22	667,441	31	212,679
555	PINAL COUNTY - Dispatchers	16	647,717	2	54,942	8	106,719
540	SANTA CRUZ COUNTY - Detention	38	1,212,091	3	83,502	15	78,428
557	TOWN OF MARANA - Dispatchers	9	456,104	-	-	3	9,488
556	TOWN OF ORO VALLEY - Dispatchers	8	410,789	3	67,950	2	1,875
559	TOWN OF WICKENBURG - Dispatchers	3	125,260	3	48,252	1	2,322
550	YAVAPAI COUNTY - Detention	180	7,098,514	40	771,842	50	325,813
561	YAVAPAI COUNTY - Dispatchers	7	275,904	1	39,323	1	6,208
510	YUMA COUNTY - Detention	161	5,890,174	27	717,286	35	374,422
TOTAL		14,595	\$ 625,263,855	4,090	\$ 107,562,143	1,687	\$ 25,011,171



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## **APPENDIX III**

### **SUMMARY OF PENSION LIABILITY AND ASSET INFORMATION BY INDIVIDUAL EMPLOYERS**

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# Arizona Corrections Officer Retirement Plan Annual Actuarial Valuation

Division Number	Employer Name	Pension AAL	Pension Assets	Reserve for Future Pension Increases	Net Assets	Funded Percent	Unfunded Liability
575	ADMINISTRATIVE OFFICE OF THE COURTS	\$ 541,912,095	\$ 320,480,940	-	\$ 320,480,940	59.10%	\$ 221,431,155
520	APACHE COUNTY - Detention	1,941,693	1,282,337	-	1,282,337	66.00%	659,356
506	CITY OF AVONDALE - Detention	1,395,188	1,048,650	-	1,048,650	75.20%	346,538
562	CITY OF SOMERTON - Dispatchers	992,948	434,412	-	434,412	43.70%	558,536
525	COCHISE COUNTY - Detention	8,573,379	5,013,421	-	5,013,421	58.50%	3,559,958
530	COCONINO COUNTY - Detention	8,748,409	6,618,601	-	6,618,601	75.70%	2,129,808
500	DEPARTMENT OF CORRECTIONS - Detention	1,396,096,443	783,243,520	-	783,243,520	56.10%	612,852,923
501	DEPT OF JUVENILE CORRECTIONS - Detention	111,101,342	59,996,122	-	59,996,122	54.00%	51,105,220
563	DEPARTMENT OF PUBLIC SAFETY - Dispatchers	12,828,342	8,801,733	-	8,801,733	68.60%	4,026,609
564	DEPARTMENT OF PUBLIC SAFETY - Detention	50,285	30,457	-	30,457	60.60%	19,828
503	GILA COUNTY - Detention	4,531,072	3,936,983	-	3,936,983	86.90%	594,089
558	GILA COUNTY - Dispatchers	1,692,935	1,264,264	-	1,264,264	74.70%	428,671
504	GRAHAM COUNTY - Detention	2,315,251	1,882,080	-	1,882,080	81.30%	433,171
560	GRAHAM COUNTY - Dispatchers	407,719	483,935	-	483,935	118.70%	(76,216)
505	MARICOPA COUNTY - Detention	355,684,352	203,684,774	-	203,684,774	57.30%	151,999,578
535	MOHAVE COUNTY - Detention	5,975,988	6,593,818	-	6,593,818	110.30%	(617,830)
545	NAVAJO COUNTY - Detention	3,953,613	3,393,316	-	3,393,316	85.80%	560,297
515	PIMA COUNTY - Detention	100,333,490	48,811,222	-	48,811,222	48.60%	51,522,268
502	PINAL COUNTY - Detention	31,588,215	24,662,909	-	24,662,909	78.10%	6,925,306
555	PINAL COUNTY - Dispatchers	2,329,890	1,484,713	-	1,484,713	63.70%	845,177
540	SANTA CRUZ COUNTY - Detention	2,431,307	2,229,164	-	2,229,164	91.70%	202,143
557	TOWN OF MARANA - Dispatchers	1,330,327	914,642	-	914,642	68.80%	415,685
556	TOWN OF ORO VALLEY - Dispatchers	2,269,744	1,228,308	-	1,228,308	54.10%	1,041,436
559	TOWN OF WICKENBURG - Dispatchers	789,716	399,342	-	399,342	50.60%	390,374
550	YAVAPAI COUNTY - Detention	19,383,145	10,618,695	-	10,618,695	54.80%	8,764,450
561	YAVAPAI COUNTY - Dispatchers	1,021,159	677,212	-	677,212	66.30%	343,947
510	YUMA COUNTY - Detention	17,867,117	11,995,944	-	11,995,944	67.10%	5,871,173
TOTAL		\$ 2,637,545,164	\$ 1,511,211,514	-	\$ 1,511,211,514		\$ 1,126,333,650

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**APPENDIX IV**

SUMMARY OF PENSION CONTRIBUTION  
INFORMATION BY INDIVIDUAL EMPLOYERS

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# Arizona Corrections Officer Retirement Plan Annual Actuarial Valuation

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Division Number	Employer Name	Pension ER NC%	Pension UAL Pmt %	Calculated ER Cont	Recommended ER Cont	Phase-In ER Cont	Statutory Minimum
575	ADMINISTRATIVE OFFICE OF THE COURTS	6.48%	12.62%	19.10%	19.10%	16.29%	N/A
520	APACHE COUNTY - Detention	6.43%	7.29%	13.72%	13.72%	10.79%	N/A
506	CITY OF AVONDALE - Detention	6.64%	4.63%	11.27%	11.27%	9.96%	N/A
562	CITY OF SOMERTON - Dispatchers	6.96%	20.67%	27.63%	27.63%	23.74%	N/A
525	COCHISE COUNTY - Detention	6.58%	10.93%	17.51%	17.51%	14.30%	N/A
530	COCONINO COUNTY - Detention	6.27%	3.93%	10.20%	10.20%	8.71%	N/A
500	DEPARTMENT OF CORRECTIONS - Detention	6.57%	11.88%	18.45%	18.45%	14.92%	N/A
501	DEPT OF JUVENILE CORRECTIONS - Detention	6.52%	16.43%	22.95%	22.95%	17.89%	N/A
563	DEPARTMENT OF PUBLIC SAFETY - Dispatchers	6.17%	10.38%	16.55%	16.55%	14.04%	N/A
564	DEPARTMENT OF PUBLIC SAFETY - Detention	5.43%	1.42%	6.85%	6.85%	6.76%	N/A
503	GILA COUNTY - Detention	7.55%	1.80%	9.35%	9.35%	8.54%	N/A
558	GILA COUNTY - Dispatchers	6.25%	12.27%	18.52%	18.52%	14.17%	N/A
504	GRAHAM COUNTY - Detention	6.09%	2.06%	8.15%	8.15%	7.85%	N/A
560	GRAHAM COUNTY - Dispatchers	6.69%	-0.58%	6.11%	6.11%	5.92%	N/A
505	MARICOPA COUNTY - Detention	6.56%	9.68%	16.24%	16.24%	13.73%	N/A
535	MOHAVE COUNTY - Detention	7.03%	0.00%	7.03%	7.03%	6.85%	N/A
545	NAVAJO COUNTY - Detention	6.60%	2.24%	8.84%	8.84%	7.97%	N/A
515	PIMA COUNTY - Detention	6.28%	16.51%	22.79%	22.79%	18.62%	N/A
502	PINAL COUNTY - Detention	6.78%	3.48%	10.26%	10.26%	9.49%	N/A
555	PINAL COUNTY - Dispatchers	6.12%	8.26%	14.38%	14.38%	12.37%	N/A
540	SANTA CRUZ COUNTY - Detention	6.74%	1.12%	7.86%	7.86%	7.23%	N/A
557	TOWN OF MARANA - Dispatchers	6.17%	5.70%	11.87%	11.87%	11.19%	N/A
556	TOWN OF ORO VALLEY - Dispatchers	6.06%	15.99%	22.05%	22.05%	18.57%	N/A
559	TOWN OF WICKENBURG - Dispatchers	7.45%	20.01%	27.46%	27.46%	19.47%	N/A
550	YAVAPAI COUNTY - Detention	6.36%	7.80%	14.16%	14.16%	12.51%	N/A
561	YAVAPAI COUNTY - Dispatchers	7.41%	8.01%	15.42%	15.42%	12.07%	N/A
510	YUMA COUNTY - Detention	6.50%	6.41%	12.91%	12.91%	10.44%	N/A
TOTAL		6.55%	11.44%	17.99%	17.99%	14.82%	

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**APPENDIX V**

**SUMMARY OF HEALTH LIABILITY AND ASSET  
INFORMATION BY INDIVIDUAL EMPLOYERS**

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# Arizona Corrections Officer Retirement Plan Annual Actuarial Valuation

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Division Number	Employer Name	Health AAL	Health Assets	Funded Percent	Unfunded Liability
575	ADMINISTRATIVE OFFICE OF THE COURTS	\$ 16,847,354	\$ 6,359,967	37.80%	\$ 10,487,387
520	APACHE COUNTY - Detention	71,810	152,985	213.00%	(81,175)
506	CITY OF AVONDALE - Detention	51,425	23,236	45.20%	28,189
562	CITY OF SOMERTON - Dispatchers	26,289	14,268	54.30%	12,021
525	COCHISE COUNTY - Detention	302,219	575,122	190.30%	(272,903)
530	COCONINO COUNTY - Detention	366,967	400,984	109.30%	(34,017)
500	DEPARTMENT OF CORRECTIONS - Detention	57,958,819	66,896,356	115.40%	(8,937,537)
501	DEPT OF JUVENILE CORRECTIONS - Detention	4,177,710	5,678,992	135.90%	(1,501,282)
563	DEPARTMENT OF PUBLIC SAFETY - Dispatchers	485,996	137,452	28.30%	348,544
564	DEPARTMENT OF PUBLIC SAFETY - Detention	812	1,430	176.10%	(618)
503	GILA COUNTY - Detention	232,448	272,817	117.40%	(40,369)
558	GILA COUNTY - Dispatchers	35,231	75,039	213.00%	(39,808)
504	GRAHAM COUNTY - Detention	62,218	61,384	98.70%	834
560	GRAHAM COUNTY - Dispatchers	15,385	15,144	98.40%	241
505	MARICOPA COUNTY - Detention	10,429,987	13,834,531	132.60%	(3,404,544)
535	MOHAVE COUNTY - Detention	253,412	539,633	212.90%	(286,221)
545	NAVAJO COUNTY - Detention	138,877	302,076	217.50%	(163,199)
515	PIMA COUNTY - Detention	3,122,595	3,248,193	104.00%	(125,598)
502	PINAL COUNTY - Detention	1,123,698	1,152,486	102.60%	(28,788)
555	PINAL COUNTY - Dispatchers	71,554	129,563	181.10%	(58,009)
540	SANTA CRUZ COUNTY - Detention	66,444	197,254	296.90%	(130,810)
557	TOWN OF MARANA - Dispatchers	44,111	30,453	69.00%	13,658
556	TOWN OF ORO VALLEY - Dispatchers	67,692	78,501	116.00%	(10,809)
559	TOWN OF WICKENBURG - Dispatchers	11,653	33,151	284.50%	(21,498)
550	YA VAPAI COUNTY - Detention	563,689	971,902	172.40%	(408,213)
561	YA VAPAI COUNTY - Dispatchers	20,219	19,637	97.10%	582
510	YUMA COUNTY - Detention	466,594	897,843	192.40%	(431,249)
TOTAL		\$ 97,015,208	\$ 102,100,399		\$ (5,085,191)

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**APPENDIX VI**

SUMMARY OF HEALTH CONTRIBUTION  
INFORMATION BY INDIVIDUAL EMPLOYERS

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# Arizona Corrections Officer Retirement Plan Annual Actuarial Valuation

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Division Number	Employer Name	Health ER NC%	Health UAL Pmt %	Calculated ER Cont	Required ER Cont
575	ADMINISTRATIVE OFFICE OF THE COURTS	0.29%	0.56%	0.85%	0.85%
520	APACHE COUNTY - Detention	0.45%	-0.45%	0.00%	0.00%
506	CITY OF AVONDALE - Detention	0.24%	0.36%	0.60%	0.60%
562	CITY OF SOMERTON - Dispatchers	0.30%	0.42%	0.72%	0.72%
525	COCHISE COUNTY - Detention	0.40%	-0.40%	0.00%	0.00%
530	COCONINO COUNTY - Detention	0.32%	-0.10%	0.22%	0.22%
500	DEPARTMENT OF CORRECTIONS - Detention	0.35%	-0.26%	0.09%	0.09%
501	DEPT OF JUVENILE CORRECTIONS - Detention	0.38%	-0.38%	0.00%	0.00%
563	DEPARTMENT OF PUBLIC SAFETY - Dispatchers	0.20%	0.87%	1.07%	1.07%
564	DEPARTMENT OF PUBLIC SAFETY - Detention	0.20%	-0.05%	0.15%	0.15%
503	GILA COUNTY - Detention	0.55%	-0.17%	0.38%	0.38%
558	GILA COUNTY - Dispatchers	0.27%	-0.27%	0.00%	0.00%
504	GRAHAM COUNTY - Detention	0.32%	-0.02%	0.30%	0.30%
560	GRAHAM COUNTY - Dispatchers	0.28%	-0.02%	0.26%	0.26%
505	MARICOPA COUNTY - Detention	0.29%	-0.28%	0.01%	0.01%
535	MOHAVE COUNTY - Detention	0.39%	-0.39%	0.00%	0.00%
545	NAVAJO COUNTY - Detention	0.44%	-0.44%	0.00%	0.00%
515	PIMA COUNTY - Detention	0.29%	-0.11%	0.18%	0.18%
502	PINAL COUNTY - Detention	0.31%	-0.05%	0.26%	0.26%
555	PINAL COUNTY - Dispatchers	0.25%	-0.25%	0.00%	0.00%
540	SANTA CRUZ COUNTY - Detention	0.38%	-0.38%	0.00%	0.00%
557	TOWN OF MARANA - Dispatchers	0.20%	0.16%	0.36%	0.36%
556	TOWN OF ORO VALLEY - Dispatchers	0.20%	-0.20%	0.00%	0.00%
559	TOWN OF WICKENBURG - Dispatchers	0.41%	-0.41%	0.00%	0.00%
550	YAVAPAI COUNTY - Detention	0.35%	-0.35%	0.00%	0.00%
561	YAVAPAI COUNTY - Dispatchers	0.43%	-0.01%	0.42%	0.42%
510	YUMA COUNTY - Detention	0.35%	-0.35%	0.00%	0.00%
	TOTAL	0.33%	-0.11%	0.22%	0.22%



October 16, 2014

Mr. Jared Smout  
Deputy Administrator  
Arizona Corrections Officer Retirement Plan  
3010 E. Camelback Road, Suite 200  
Phoenix, Arizona 85016

**Re: Report of the June 30, 2014 Actuarial Valuation of CORP**

Dear Mr. Smout:

Enclosed please find 5 copies of this report.

Any questions or comments you may develop will be welcomed.

Sincerely,

A handwritten signature in black ink that reads "Mark Buis". The signature is written in a cursive style with a large initial "M".

Mark Buis, FSA, EA, MAAA

MB:bd  
Enclosures