

**OKLAHOMA POLICE PENSION  
AND RETIREMENT SYSTEM  
ACTUARIAL VALUATION REPORT  
AS OF JULY 1, 2011**

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This report has been prepared by Buck Consultants for the Oklahoma Police Pension and Retirement System to:

- Present the results of a valuation of the Oklahoma Police Pension and Retirement System as of July 1, 2011;
- Review experience under the System for the year ended June 30, 2011; and
- Provide reporting and disclosure information for auditors' reports, governmental agencies and other interested parties.

**The main financial highlights are:**

- As a result of the action taken by the Oklahoma Legislature to concurrently fund any cost-of-living adjustment (COLA), the 2% cost-of-living increase assumption has been removed from the valuation. Accordingly, the results of the July 1, 2011 valuation are significantly improved from recent valuations.
- The funded status of the System increased since the prior valuation as indicated by the table below.

<b>GASB No. 25 Funded Status (\$000,000)</b>	<b>July 1, 2011</b>	<b>July 1, 2010</b>
Accrued Liability	\$ 1,960.0	\$ 2,341.6
Actuarial Value of Assets	\$ 1,822.7	\$ 1,754.4
Unfunded Accrued Liability	\$ 137.3	\$ 587.2
Funded Ratio	93.0%	74.9%

- The funded ratio on a ASC 960 basis, measuring the market value of System assets versus the present value of benefits accrued as of the valuation date, increased from 87.0% to 99.2%.
- The required state contribution for the System decreased from \$113.9 million to \$31.3 million.

<b>Contribution Summary (\$000,000)</b>	<b>July 1, 2011</b>	<b>July 1, 2010</b>
Total Required Contribution	\$ 85.1	\$ 166.8
Expected Employee Contributions	20.3	20.0
Expected Municipality Contributions	33.5	32.9
Required State Contribution	\$ 31.3	\$ 113.9
--As a Percentage of Total Payroll	12.1%	45.0%

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or system provisions between the two valuations are described herein.

	Actuarial Valuation as of	
	July 1, 2011	July 1, 2010
<b>Summary of Costs</b>		
Required State Contribution for Current Year	\$ 31,270,062	\$ 113,892,443
Actual State Contribution Received in Prior Year <sup>(1)</sup>	\$ 24,645,000	\$ 22,292,000

<b>GASB No. 25 Funded Status</b>		
Actuarial Accrued Liability	\$ 1,959,976,006	\$ 2,341,619,152
Actuarial Value of Assets	\$ 1,822,702,000	\$ 1,754,372,000
Unfunded Actuarial Accrued Liability	\$ 137,274,006	\$ 587,247,152

<b>Market Value of Assets and Additional Liabilities</b>		
Market Value of Assets	\$ 1,811,460,000	\$ 1,558,741,000
Actuarial Present Value of Accumulated System Benefits (ASC 960)	\$ 1,825,786,845	\$ 1,792,010,348
Present Value of Projected System Benefits	\$ 2,443,485,081	\$ 2,944,906,319

<b>Summary of Data</b>		
Number of Members in Valuation		
Active Paid Members	4,368	4,305
Deferred Option Plan Members	50	50
Terminated Members with Refunds Due	583	621
Terminated Members with Deferred Benefits	124	111
Retired Members	2,292	2,241
Beneficiaries	631	616
Disabled Members	137	136
<b>Total</b>	<b>8,185</b>	<b>8,080</b>

<b>Active Member Statistics <sup>(2)</sup></b>		
Total Annual Compensation <sup>(3)</sup>	\$ 257,504,567	\$ 249,582,676
Average Compensation <sup>(3)</sup>	\$ 58,285	\$ 57,975
Average Age	39.7	39.3
Average Service	12.1	11.8

<sup>(1)</sup> For the fiscal years beginning July 1, 2009, the system receives 14% of the State’s revenue from insurance premium taxes. For fiscal years beginning July 1, 2010, the amount of insurance premium tax apportioned to the System will be applied prior to the calculation of the Home Office Credit.

<sup>(2)</sup> Statistics as of July 1, 2011 include participants in the prospective DOP program.

<sup>(3)</sup> Compensation is projected one year based on the salary increase assumptions.

**Legislative Changes**

The Oklahoma Pension Legislation Actuarial Analysis Act was modified to change the definition of a non-fiscal retirement bill and by removing a certain provision that allows a cost-of-living adjustment (COLA) to be considered non-fiscal, thereby requiring that COLAs be concurrently funded by the Legislature at the time they are enacted.

**Changes in Assumptions in Methods**

Due to the requirement that the Oklahoma Legislature must concurrently fund any cost-of-living adjustment, the valuation incorporates no assumption for future cost-of-living adjustments.

There were no other changes to assumptions or methods since the prior valuation. See Section 4.2 for more detail.

**Changes in Plan Provisions**

There were no changes in plan provisions or system benefits with an actuarial impact as of July 1, 2011.

**Actuarial Experience During the Plan Year**

The System experienced the following gains/(losses) during the year ending June 30, 2011. These amounts are developed in Section 1.4 of this report:

	<b>Millions</b>
Liability Gain/(Loss)	\$ 96.1
Asset Gain/(Loss)	\$ (32.6)
Total Gain/(Loss)	\$ 63.5

The Oklahoma Police Deferred Option Plan (DOP) allows employees eligible for a Normal Retirement Benefit to defer the receipt of retirement benefits while continuing employment. Participation in the DOP is limited to five years. During this time, the members' contributions stop, but the employer contributes half of the regular contribution on base salary to the Police Pension and Retirement System and the other half to the members' account in the DOP. In addition, the monthly retirement benefits are paid into the members' account in the DOP. The DOP also allows members to retroactively elect to enter the DOP as of an earlier date upon termination. The monthly retirement benefits and employer contributions that would have been payable had the member elected to enter the DOP are credited to the member's account in the DOP.

The DOP accounts are credited with interest at a rate of 2% less than the total fund net earnings, with a guaranteed minimum interest rate equal to the valuation interest rate of 7.5%. The interest rate credited for the fiscal year ended June 30, 2011, was 16.18%.

Effective July 1, 2006, a retired member who has completed participation in the DOP is allowed to transfer their account balance into a Deferred Option Payout Account and no further contributions will be accepted. The accounts are credited with interest at a rate of 2% less than the total fund net earnings if the fund returns more than 2%. If the fund realizes negative returns, the accounts are reduced at a rate equal to the fund net earnings. Alternatively, if the fund realizes a positive return of less than 2%, the accounts are credited with a rate of zero. The interest rate for the payout accounts for the fiscal year ended June 30, 2011 was 16.18%.

The assets and liabilities reflected in these results as of July 1, 2011, include the account balances for the Deferred Option Plan, as in prior valuations. Statistics regarding the number of Deferred Option Plan members and total account balances are shown in the table below:

<b>DOP Statistics</b>	<b>July 1, 2011</b>	<b>July 1, 2010</b>
Number of Active DOP Members	50	50
Account Balances of Active Members	\$ 8.4M	\$ 7.9M
Annual Retirement Benefits of Active Members	\$ 1.9M	\$ 1.9M
Deferred Option Payout Account Balances	\$ 2.3M	\$ 2.0M
Total	\$ 10.7M	\$ 9.9M

We have prepared an actuarial valuation of the Oklahoma Police Pension and Retirement System as of July 1, 2011, for the plan year ending June 30, 2011. The results of the valuation are set forth in this report, which reflects the provisions of the System as amended and effective on July 1, 2011.

The valuation is based on employee and financial data which were provided by the Oklahoma Police Pension and Retirement System and the independent auditor, respectively, and which are summarized in this report.

Any changes in actuarial methods, assumptions and benefit provisions since the last valuation of the System as of July 1, 2010 are summarized on page 3 and the financial impact, if any, are incorporated in this report.

**Actuarial Certification**

The Board selected the assumptions used for the results in this report. I believe that these assumptions are reasonable and comply with the requirements of GASB 25. I prepared this report's exhibits in accordance with the requirements of these standards.

I am an Enrolled Actuary, a Fellow of the Society of Actuaries and a Member of the American Academy of Actuaries. I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. This report has been prepared in accordance with all applicable Actuarial Standards of Practice, and I am available to answer questions about it.



September 20, 2011

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R. Ryan Falls, F.S.A., E.A., M.A.A.A.

**Section 1.1** Summary of Contribution Requirement

**Section 1.2** Liability Detail

**Section 1.3** Unfunded Actuarial Accrued Liability

**Section 1.4** Actuarial Gain/(Loss)

**Section 1.5** Contributions

**Section 1.6** Ten-Year Projected Cash Flow



## SUMMARY OF CONTRIBUTION REQUIREMENT

	Actuarial Valuation as of			
	July 1, 2011		July 1, 2010	
	Amount	% of Active Covered Comp.	Amount	% of Active Covered Comp.
1. Annual Covered Compensation for Members Included in Valuation				
a. Active Members	\$253,989,944	N/A	\$249,582,676	N/A
b. Deferred Option Plan Members	3,514,623	N/A	3,677,049	N/A
c. Total	\$257,504,567	N/A	\$253,259,725	N/A
2. Total Normal Cost Mid-year	\$ 56,906,021	22.4%	\$ 66,973,924	26.8%
3. Unfunded Actuarial Accrued Liability	\$137,274,006	N/A	\$587,247,152	N/A
4. Amortization of Unfunded Actuarial Accrued Liability over 30 years From July 1, 1988 at mid-year	\$ 25,013,281	9.8%	\$ 96,761,553	38.8%
5. Budgeted Expenses	\$ 3,145,550	1.2%	\$ 3,047,344	1.2%
6. Total Required Contribution (2 + 4 + 5)	\$ 85,064,852	33.5%	\$166,782,821	66.8%
7. Estimated Employee Contribution (8% x 1a)	\$ 20,319,196	8.0%	\$ 19,966,614	8.0%
8. Estimated Municipality Contributions				
a. Active Members	\$ 33,018,693	13.0%	\$ 32,445,748	13.0%
b. Deferred Option Plan Members	456,901	13.0% <sup>(1)</sup>	478,016	13.0% <sup>(1)</sup>
c. Total	\$ 33,475,594	13.0% <sup>(2)</sup>	\$ 32,923,764	13.0% <sup>(2)</sup>
9. Required State Contribution to amortize Unfunded Actuarial Accrued Liability over 30 years from July 1, 1988 at mid-year. (6 - 7 - 8c)	\$ 31,270,062	12.1% <sup>(2)</sup>	\$113,892,443	45.0% <sup>(2)</sup>
10. Expected State Contribution <sup>(3)</sup>	\$ 25,384,350	9.9% <sup>(2)</sup>	\$ 22,960,760	9.1% <sup>(2)</sup>
11. Approximate period over which previous year's State Contribution will amortize current Unfunded Actuarial Accrued Liability (UAAL)	\$ 9 <sup>(4)</sup>	N/A	Not sufficient to amortize UAAL	N/A

<sup>(1)</sup> Percentage of Deferred Option Plan Members' covered compensation.

<sup>(2)</sup> Percent of total covered compensation.

<sup>(3)</sup> For the fiscal years beginning July 1, 2009, the system receives 14% of the State's revenue from insurance premium taxes. For fiscal years beginning July 1, 2010, the amount of insurance premium tax apportioned to the System will be applied prior to the calculation of the Home Office Credit. The actual State contributions for the fiscal years ending June 30, 2009 and June 30, 2010 were \$22,292,000 and \$24,645,000, respectively.

<sup>(4)</sup> Amortization period assumes that the State contribution will increase at 3% per year and covered compensation for Deferred Option Plan members remains a constant percentage of total covered compensation.

## LIABILITY DETAIL

	July 1, 2011
<b>Present Value of Benefits</b>	\$ 2,443,485,081
<b>Present Value of Future Normal Costs</b>	\$ 483,509,075
<b>Accrued Liability</b>	\$ 1,959,976,006
<b>Normal Cost Mid-Year</b>	<b>\$ 56,906,021</b>

<b>Active</b>	
a. Retirement	\$ 957,522,097
b. Disability	(434,971)
c. Withdrawal	10,675,991
d. Death	4,529,544
e. Refunds	(10,089,596)
f. Total	\$ 962,203,065
<b>Inactive</b>	
1. Members Eligible for Automatic COLA	
a. Retired Members	\$ 82,722,580
b. Disabled Members	13,660,799
c. Terminated Members	0
d. Deferred Option Plan Members	0
e. Beneficiaries	71,040,672
f. Total	\$ 167,424,051
2. Members Not Eligible for Automatic COLA	
a. Retired Members	\$ 696,257,332
b. Disabled Members	12,774,855
c. Terminated Members	18,155,036
d. Deferred Option Plan Members	35,535,983
e. Beneficiaries	67,625,684
f. Total	\$ 830,348,890
3. Total Inactive ( <i>1f</i> + <i>2f</i> )	\$ 997,772,941
<b>Accrued Liability (Active + Inactive)</b>	<b>\$ 1,959,976,006</b>

**UNFUNDED ACTUARIAL ACCRUED LIABILITY**

The actuarial accrued liability is the present value of projected system benefits allocated to past service by the actuarial funding method being used.

	<b>Total System</b>	
	<b>July 1, 2011</b>	<b>July 1, 2010</b>
1. Actuarial Present Value of Benefits		
a. Active Members	\$ 1,445,712,140	\$ 1,774,262,162
b. Terminated Members	18,155,036	19,408,284
c. Members Receiving Benefits who are not eligible for Automatic COLA	776,657,871	933,142,188
d. Members Receiving Benefits who are eligible for Automatic COLA	167,424,051	177,932,599
e. Deferred Option Plan Members	35,535,983	40,161,086
f. Total	\$ 2,443,485,081	\$ 2,944,906,319
2. Actuarial Present Value of Future Normal Costs	483,509,075	603,287,167
3. Total Actuarial Accrued Liability ( <i>If - 2</i> )	1,959,976,006	2,341,619,152
4. Actuarial Value of Assets	1,822,702,000	1,754,372,000
<b>5. Unfunded Actuarial Accrued Liability</b> <i>(3 - 4, not less than \$0)</i>	<b>\$ 137,274,006</b>	<b>\$ 587,247,152</b>

**ACTUARIAL GAIN/(LOSS)**

The actuarial gain/(loss) is comprised of both the liability gain/(loss) and the actuarial asset gain/(loss). Each of these represents the difference between the expected and actual values as of July 1, 2011.

1. Expected Actuarial Accrued Liability	
a. Actuarial Accrued Liability at July 1, 2010	\$ 2,341,619,152
b. Normal Cost for Plan Year Ending June 30, 2011	66,973,924
c. Benefit Payments for Plan Year Ending June 30, 2011	103,854,000
d. Interest on a + b - c to End of Year	174,238,434
e. Expected Actuarial Accrued Liability Before Changes ( $a + b - c + d$ )	2,478,977,510
f. Change in Actuarial Accrued Liability at July 1, 2011 due to changes in Actuarial Assumptions	(422,900,906)
g. Change in Actuarial Accrued Liability at July 1, 2011 due to changes in System Provisions	0
h. Expected Actuarial Accrued Liability at July 1, 2011 ( $e + f + g$ )	\$ 2,056,076,604
2. Actuarial Accrued Liability at July 1, 2011	\$ 1,959,976,006
3. Actuarial Liability Gain/(Loss) ( $1h - 2$ )	\$ <b>96,100,598</b>
4. Expected Actuarial Value of Assets	
a. Actuarial Value of Assets at July 1, 2010	\$ 1,754,372,000
b. Contributions Made for Plan Year Ending June 30, 2011	75,980,000
c. Benefit Payments and Expenses for Plan Year Ending June 30, 2011	105,566,000
d. Interest on a + b - c to End of Year	130,468,425
e. Expected Actuarial Value of Assets at July 1, 2011 ( $a + b - c + d$ )	\$ 1,855,254,425
5. Actuarial Value of Assets as of July 1, 2011	\$ 1,822,702,000
6. Actuarial Asset Gain/(Loss) ( $5 - 4e$ )	\$ <b>(32,552,425)</b>
7. Actuarial Gain/(Loss) ( $3 + 6$ )	\$ <b>63,548,173</b>

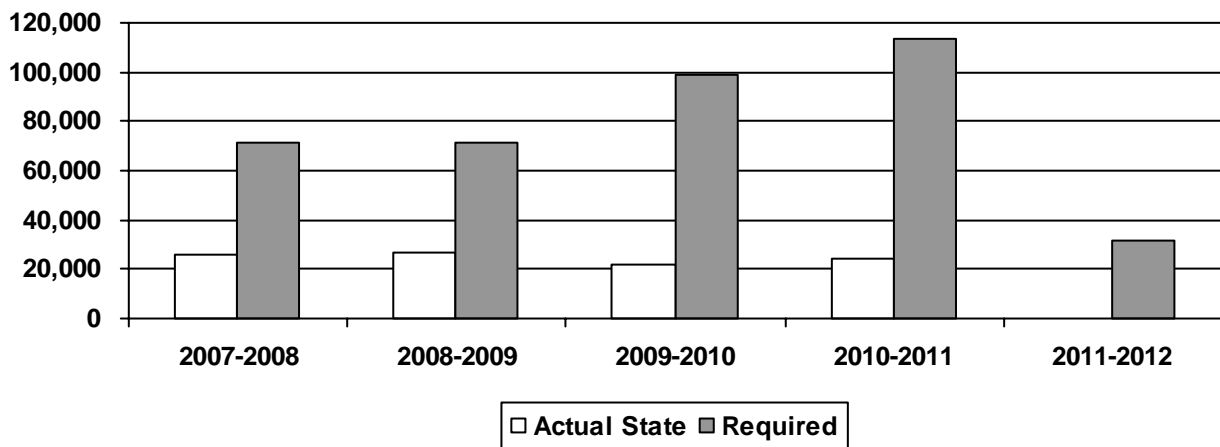
**CONTRIBUTIONS**

Contributions to the Retirement System are made by the Members, municipalities, and the State of Oklahoma. Member contributions equal 8% of base salary. Municipalities contribute 13% of base salary per year for plan years after June 30, 1996.

The active Deferred Option Plan Members do not make employee contributions to the System. However, municipalities continue contributing for them, with 50% of the contribution going into the System fund and 50% going into the Deferred Option Account. Contributions for members who retroactively elect to enter the Deferred Option Plan as of an earlier date are also deposited into the Deferred Option Account.

Beginning in fiscal year July 1, 2004 and ending June 30, 2009, the fund received 17% of the insurance premium tax. For years after that, the fund will receive 14% of the taxes. Beginning in fiscal year July 1, 2006, the system began receiving 26% of a special allocation established to refund the System for reduced allocations of insurance premium taxes resulting from increases in insurance premium tax credits. Beginning in fiscal year July 1, 2010, the amount of tax apportioned will be applied prior to the calculation of the Home Office Credit.

**State Contributions Received versus  
Contributions Required by Funding Policy  
(000's)**



As of July 1, 2003, the amortization period was changed to 30 years from 1988.

**TEN-YEAR PROJECTED CASH FLOW  
(RETIREMENT BENEFIT PAYMENTS)**

<b>Plan Year Ending</b>	<b>Actives</b>	<b>Retirees <sup>(1)</sup></b>	<b>Total</b>
6/30/2012	\$ 66,747,335	\$ 95,712,534	\$ 162,459,869
6/30/2013	\$ 46,137,767	\$ 90,650,686	\$ 136,788,453
6/30/2014	\$ 48,394,301	\$ 90,018,537	\$ 138,412,838
6/30/2015	\$ 57,241,693	\$ 90,776,286	\$ 148,017,979
6/30/2016	\$ 62,676,226	\$ 89,095,854	\$ 151,772,080
6/30/2017	\$ 61,159,334	\$ 89,564,070	\$ 150,723,404
6/30/2018	\$ 68,696,649	\$ 86,171,367	\$ 154,868,016
6/30/2019	\$ 74,388,044	\$ 85,129,825	\$ 159,517,869
6/30/2020	\$ 85,116,724	\$ 83,912,003	\$ 169,028,727
6/30/2021	\$ 92,112,808	\$ 82,646,807	\$ 174,759,615

<sup>(1)</sup> Includes DOP Members, Disabled Members, Beneficiaries and Terminated Members.

**Section 2.1** ASC 960 Information

**Section 2.2** GASB No. 25 Information

**ASC 960 INFORMATION****A. Actuarial Present Value of Accumulated System Benefits**

The actuarial present value of vested and non-vested accumulated system benefits was computed on an ongoing system basis in order to provide required information under FASB Accounting Standards Codification (ASC) 960. In this calculation, a determination is made of all benefits earned by current Members as of the valuation date; the actuarial present value is then computed using demographic assumptions and an assumed interest rate. Assumptions regarding future salary and accrual of future benefit service are not necessary for this purpose.

<b>Accumulated System Benefits</b>	<b>July 1, 2011</b>	<b>July 1, 2010</b>
Vested Benefits		
a. Active Members	\$ 741,669,479	\$ 699,073,717
b. Deferred Option Plan Members	35,535,983	35,167,874
c. Terminated Members	18,155,036	15,973,257
d. Members Receiving Benefits	944,081,922	945,525,791
e. Total Vested Benefits	\$ 1,739,442,420	\$ 1,695,740,639
Non-vested Benefits	86,344,425	96,269,709
<b>Total Accumulated System Benefits</b>	<b>\$ 1,825,786,845</b>	<b>\$ 1,792,010,348</b>
Assumed Rate of Interest	7.5%	7.5%
Market Value of Assets Available for Benefits	\$ 1,811,460,000	\$ 1,558,741,000
Funded Ratio	99.2%	87.0%

<b>Number of Members</b>	<b>July 1, 2011</b>	<b>July 1, 2010</b>
Vested Members		
a. Active Members	2,411	2,350
b. Deferred Option Plan Members	50	50
c. Members with Deferred Benefits	124	111
d. Members Receiving Benefits	3,060	2,993
e. Total Vested Members	5,645	5,504
Non-vested Members	2,540	2,576
<b>Total Members</b>	<b>8,185</b>	<b>8,080</b>



## ASC 960 INFORMATION (CONTINUED)

**B. Statement of Changes in Accumulated System Benefits**

A statement of changes in the actuarial present value of accumulated system benefits follows. This statement shows the effect of certain events on the actuarial present value shown on the previous page.

<b>Actuarial Present Value of Accumulated System Benefits as of July 1, 2010</b>	<b>\$ 1,792,010,348</b>
Increase/(Decrease) During Year Attributable to:	
a. Normal Cost	47,578,243
b. Increase for Interest Due to Decrease in Discount Period	134,074,619
c. Benefits Paid, Including Refund of Contributions	(103,854,000)
d. System Amendment	0
e. Assumption Changes	0
f. (Gains)/Losses	(44,022,365)
Net Increase/(Decrease)	33,776,497
<b>Actuarial Present Value of Accumulated System Benefits as of July 1, 2011</b>	<b>\$ 1,825,786,845</b>

The benefits valued include all benefits – retirement, preretirement death and vested termination – payable from the System for employee service prior to the valuation date. Benefits are assumed to accrue/(accumulate) in accordance with the system provisions.

**GASB NO. 25 INFORMATION****Supplementary Schedules**

The GASB has issued the statement titled Financial Reporting for Defined Benefit and Note Disclosures for Defined Contribution Plans (GASB Statement No. 25). This standard became effective for periods beginning after June 15, 1996, and requires funding status to be measured based upon the actuarial funding method adopted by the Board, i.e., for the Oklahoma Police Retirement System, the Entry Age Normal Cost Method. The target value of assets is equal to the Actuarial Accrued Liability (AAL). The actual value of assets is the Actuarial Value developed later in this report. This GASB standard supersedes GASB Statement No. 5 in its entirety.

**A. Schedules of Funding Progress**

The GASB Statement No. 25 liabilities and assets resulting from the last ten actuarial valuations are as follows:

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
07/01/2002	\$ 1,370,024,000	\$ 1,554,288,324	\$ 184,264,324	88.1%	\$ 160,419,776	114.9%
07/01/2003	\$ 1,392,043,000	\$ 1,646,979,675	\$ 254,936,675	84.5%	\$ 170,507,025	149.5%
07/01/2004	\$ 1,399,975,000	\$ 1,727,162,602	\$ 327,187,602	81.0%	\$ 175,559,285	186.4%
07/01/2005	\$ 1,423,834,000	\$ 1,811,572,114	\$ 387,738,114	78.6%	\$ 188,848,451	205.3%
07/01/2006	\$ 1,490,208,000	\$ 1,910,059,072	\$ 419,851,072	78.0%	\$ 204,189,807	205.6%
07/01/2007	\$ 1,627,476,000	\$ 2,035,653,471	\$ 408,177,471	79.9%	\$ 220,884,875	184.8%
07/01/2008	\$ 1,752,169,000	\$ 2,132,175,698	\$ 380,006,698	82.2%	\$ 239,804,959	158.5%
07/01/2009	\$ 1,717,566,000	\$ 2,253,133,775	\$ 535,567,775	76.2%	\$ 253,955,863	210.9%
07/01/2010	\$ 1,754,372,000	\$ 2,341,619,152	\$ 587,247,152	74.9%	\$ 249,582,676	235.3%
07/01/2011	\$ 1,822,702,000	\$ 1,959,976,006	\$ 137,274,006	93.0%	\$ 257,504,567	53.3%

**GASB NO. 25 INFORMATION (CONTINUED)****B. Schedule of Employer Contributions**

The GASB Statement No. 25 required and actual contributions for the last ten fiscal years are as follows:

<b>Year Ended June 30</b>	<b>Annual Required Contribution</b>	<b>Percentage Contributed</b>
2002	\$ 54,918,091	76.9%
2003	\$ 71,704,935	61.6%
2004	\$ 63,511,155	37.7%
2005	\$ 73,756,197	66.1%
2006	\$ 85,391,444	58.6%
2007	\$ 95,082,357	59.3%
2008	\$ 100,561,406	55.8%
2009	\$ 102,609,620	57.1%
2010	\$ 132,456,043	41.2%
2011	\$ 146,816,207	38.5%

This section presents information regarding System assets as reported by the auditor. The System assets represent the portion of total System liabilities, which has been funded as of the valuation date.

**Section 3.1** Summary of Assets

**Section 3.2** Reconciliation of Assets

**Section 3.3** Actuarial Value of Assets

**Section 3.4** Average Annual Rates of Investment Return

## SUMMARY OF ASSETS

Asset Category	Market Value as of June 30, 2011	Market Value as of June 30, 2010
<b>1. Cash and Short-term Investments</b>	\$ 33,516,000	\$ 22,931,000
<b>2. Receivables</b>		
a. Interest and Dividends	\$ 2,973,000	\$ 2,905,000
b. Member Contributions	893,000	870,000
c. Employer Contributions	1,472,000	1,440,000
d. Insurance Premium Tax	5,526,000	4,917,000
e. Investments Sold	0	0
f. Other Receivables	3,000	0
g. Total	\$ 10,867,000	\$ 10,132,000
<b>3. Investments at Fair Value</b>		
a. Domestic Government Bonds	\$ 14,121,000	\$ 28,338,000
b. International Government Bonds	0	0
c. Corporate Bonds <sup>(1)</sup>	330,503,000	433,922,000
d. Domestic Stock	533,850,000	490,135,000
e. International Stock	185,952,000	145,685,000
f. Other	707,163,000	427,952,000
g. Securities Lending Short-Term Pool	44,578,000	48,845,000
h. Total	\$ 1,816,167,000	\$ 1,574,877,000
<b>4. Assets used in System Operations</b>		
a. Furniture, Fixtures and Equipment	\$ 913,000	\$ 1,014,000
<b>5. Total Assets</b>	\$ 1,861,463,000	\$ 1,608,954,000
<b>6. Liabilities</b>		
a. Payable for Investments Purchased	\$ 3,753,000	\$ 201,000
b. Accounts Payable and Accrued Expenses	1,672,000	1,167,000
c. Securities Lending Collateral Payable	44,578,000	48,845,000
d. Total Liabilities	50,003,000	50,213,000
<b>7. Net Assets for Pension Benefits</b>	\$ 1,811,460,000	\$ 1,558,741,000

<sup>(1)</sup> Includes Domestic and International Bonds

## RECONCILIATION OF ASSETS

Transactions	June 30, 2011	June 30, 2010
<b>Additions</b>		
<b>1. Contributions</b>		
a. Contributions from Employers	\$ 31,846,000	\$ 32,240,000
b. Contributions from System Members	19,489,000	19,626,000
c. Insurance Premium Tax	24,645,000	22,292,000
d. Total	\$ 75,980,000	\$ 74,158,000
<b>2. Net Investment Income</b>		
a. Interest	\$ 7,365,000	\$ 7,451,000
b. Dividends	9,662,000	8,256,000
c. Realized Gain and Unrealized Appreciation	276,186,000	157,918,000
d. Income from Securities Lending	60,000	107,000
e. Other	732,000	1,222,000
f. Total	\$ 294,005,000	\$ 174,954,000
g. Investment Expense	(11,700,000)	(10,236,000)
h. Net Investment Income	\$ 282,305,000	\$ 164,718,000
<b>3. Total Additions</b>	\$ 358,285,000	\$ 238,876,000
<b>Deductions</b>		
<b>4. Retirement Benefits</b>	\$ (101,737,000)	\$ (107,641,000)
<b>5. Refund of Contributions</b>	\$ (2,117,000)	\$ (1,420,000)
<b>6. Administrative Expenses</b>	\$ (1,712,000)	\$ (2,379,000)
<b>7. Total Deductions</b>	\$ (105,566,000)	\$ (111,440,000)
<b>8. Net Increase</b>	\$ 252,719,000	\$ 127,436,000
<b>9. Net Assets Held in Trust for Pension Benefits</b>		
a. Beginning of Year	\$ 1,558,741,000	\$ 1,431,305,000
b. End of Year	\$ 1,811,460,000	\$ 1,558,741,000
<b>Reconciliation of Actuarial Asset Value and Market Value</b>		
Actuarial Asset Value	\$ 1,822,702,000	\$ 1,754,372,000
Deferred Gain/(Loss)	\$ (11,242,000)	\$ (195,631,000)
Impact of Market Value Corridor	\$ 0	\$ 0
Market Value	\$ 1,811,460,000	\$ 1,558,741,000

## ACTUARIAL VALUE OF ASSETS

Schedule of Assets Gains/(Losses)				
Year	Original Amount	Recognized in Prior Years	Recognized This Year	Recognized in Future Years
2006/2007	\$ 154,453,918	\$ 123,563,135	\$ 30,890,783	\$ 0
2007/2008	(164,696,917)	(98,818,149)	(32,939,384)	(32,939,384)
2008/2009	(414,206,995)	(165,682,798)	(82,841,399)	(165,682,798)
2009/2010	109,851,050	21,970,210	21,970,210	65,910,630
2010/2011	151,836,917	0	30,367,383	121,469,534
<b>Total</b>	<b>\$ (162,762,027)</b>	<b>\$ (118,967,602)</b>	<b>\$ (32,552,407)</b>	<b>\$ (11,242,018)</b>

Development of Actuarial Value of Assets	
1. Actuarial Value as of July 1, 2010	\$ 1,754,372,000
2. Contributions	
a. Member	\$ 19,489,000
b. Employer	31,846,000
c. Insurance tax	24,645,000
d. Total (a + b + c)	\$ 75,980,000
3. Decreases During the Year	
a. Benefit Payments	\$ 101,737,000
b. Return of Member Contributions	2,117,000
c. Non-investment Expenses	1,712,000
d. Total (a + b + c)	\$ 105,566,000
4. Expected Return at 7.5% on:	
a. Item 1	\$ 131,577,900
b. Item 2 (one-half year)	2,849,250
c. Item 3 (one-half year)	3,958,725
d. Total (a + b - c)	\$ 130,468,425
5. Expected Actuarial Value of Assets June 30, 2011 (1 + 2 - 3 + 4)	\$ 1,855,254,425
6. Unrecognized Asset Gain/(Loss) as of June 30, 2010	\$ (195,631,342)
7. Expected Actuarial Value June 30, 2011 plus previous year's Unrecognized Asset Gain (5 + 6)	\$ 1,659,623,083
8. Market Value as of June 30, 2011	\$ 1,811,460,000
9. 2010/2011 Asset Gain/(Loss) (8 - 7)	\$ 151,836,917
10. Asset Gain/(Loss) to be Recognized as of June 30, 2011	\$ (32,552,407)
11. Initial Actuarial Value July 1, 2011 (5 + 10) (Rounded to \$1,000's)	\$ 1,822,702,000
12. Constraining Values:	
a. 80% of Market Value (8 x 0.8)	\$ 1,449,168,000
b. 120% of Market Value (8 x 1.2)	\$ 2,173,752,000
13. Actuarial Value July 1, 2011 (11), but no less than (12a), nor greater than (12b)	\$ 1,822,702,000

## AVERAGE ANNUAL RATES OF INVESTMENT RETURN

Year Ending June 30	Actuarial Value		Market Value	
	Annual	Cumulative	Annual	Cumulative
1990	8.6%	8.6%	9.2%	9.2%
1991	7.9%	8.2%	8.1%	8.6%
1992	8.7%	8.4%	13.8%	10.3%
1993	10.3%	8.9%	15.1%	11.5%
1994	9.3%	9.0%	0.0%	9.1%
1995	11.0%	9.3%	17.7%	10.5%
1996	11.9%	9.7%	13.5%	10.9%
1997	12.8%	10.1%	17.3%	11.7%
1998	13.5%	10.4%	16.9%	12.3%
1999	14.3%	10.8%	9.7%	12.0%
2000	12.8%	11.0%	8.7%	11.7%
2001	8.8%	10.8%	(5.3%)	10.2%
2002	4.9%	10.3%	(5.6%)	8.9%
2003	2.7%	9.8%	3.5%	8.5%
2004	3.3%	9.3%	15.0%	8.9%
2005	3.0%	8.9%	8.7%	8.9%
2006	6.1%	8.8%	11.0%	9.0%
2007	10.6%	8.9%	17.3%	9.5%
2008	8.9%	8.9%	(2.4%)	8.8%
2009	(0.9%)	8.3%	(16.4%)	7.4%
2010	4.4%	8.2%	11.7%	7.6%
2011	5.6%	8.0%	18.3%	8.0%

Annual Returns before 1998 exclude DOP assets.



This section presents and describes the basis of the valuation. The census of Members, actuarial basis and benefit provisions of the System are the foundation of the valuation, since these are the present facts on which the projection of benefit payments will depend. The valuation is based on the premise that the System will continue in existence.

**Section 4.1** System Members**Section 4.2** Actuarial Basis**Section 4.3** Summary of System Provisions

## SYSTEM MEMBERS

## A. Member Data Reconciliation

	Active Members		Inactive Members				Total	
	Regular	Deferred Option Plan	Refund Due to Member	Deferred Vested Members	Retired Members	Disabled Members		Bene-ficiaries
As of July 1, 2010	4,305	50	621	111	2,241	136	616	8,080
Deferred Option Plan Retirees	(15)	15	0	0	0	0	0	0
Age Retirements	(66)	(14)	0	(5)	85	0	0	0
Disability Retirements	(3)	0	0	0	0	3	0	0
Deaths Without Beneficiaries	(2)	(1)	(2)	0	(14)	0	(17)	(36)
Deaths With Beneficiaries	(3)	0	0	0	(20)	(4)	28	1
Vested Terminations	(25)	0	0	25	0	0	0	0
Rehires	97	0	(74)	(6)	0	0	0	17
Expiration of Benefits	0	0	0	0	0	0	(5)	(5)
Termination Without Refund	(71)	0	71	0	0	0	0	0
Terminations Electing a Refund	(112)	0	(67)	0	0	0	0	(179)
Alternate Payee of a Qualified Domestic Relations Order	0	0	0	0	0	0	7	7
Data Corrections	2	0	0	(1)	0	2	2	5
Transfers Out	0	0	0	0	0	0	0	0
Transfers In	0	0	0	0	0	0	0	0
Net Change	(198)	0	(72)	13	51	1	15	(190)
New Entrants During the Year	261	0	34	0	0	0	0	295
<b>As of July 1, 2011</b>	<b>4,368</b>	<b>50</b>	<b>583</b>	<b>124</b>	<b>2,292</b>	<b>137</b>	<b>631</b>	<b>8,185</b>

## SYSTEM MEMBERS (CONTINUED)

## B. Count of Active Members

Age	Years of Service									Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
Under 20										0
20-24	129									129
25-29	425	153								578
30-34	253	354	109							716
35-39	146	224	407	92						869
40-44	81	104	197	311	142					835
45-49	31	43	83	136	300	105				698
50-54	2	10	34	57	96	120	57			376
55-59	1		5	21	29	21	49	5		131
60-64	1		2	5	6	9	5	3	1	32
65-69				1	1		1		1	4
70-74										0
75+										0
<b>Total</b>	<b>1,069</b>	<b>888</b>	<b>837</b>	<b>623</b>	<b>574</b>	<b>255</b>	<b>112</b>	<b>8</b>	<b>2</b>	<b>4,368</b>

## C. Average Compensation

Age	Years of Service									Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
Under 20										0
20-24	37,511									37,511
25-29	41,532	50,087								43,797
30-34	40,740	52,718	62,418							49,962
35-39	38,343	50,342	62,865	66,716						55,925
40-44	37,605	47,568	61,020	69,155	77,013					62,823
45-49	35,962	48,692	56,691	68,677	74,046	78,650				68,375
50-54	30,899	49,317	59,212	61,839	70,473	81,958	82,425			72,850
55-59	38,288		46,555	56,486	66,067	67,105	85,271	87,210		71,731
60-64	29,229		48,588	53,895	70,931	64,742	83,675	91,681	82,485	68,126
65-69				58,120	87,841		89,506		78,046	78,378
70-74										0
75+										0
<b>Total</b>	<b>39,930</b>	<b>50,829</b>	<b>61,480</b>	<b>67,454</b>	<b>73,771</b>	<b>78,765</b>	<b>83,789</b>	<b>88,887</b>	<b>80,266</b>	<b>58,148</b>

## SYSTEM MEMBERS (CONTINUED)

## D. Members in Pay Status - Annual Benefits

Attained Age	Retired Members		Beneficiaries		Disabled Members		Current Payment Total	
	No.	Benefit	No.	Benefit	No.	Benefit	No.	Benefit
Under 51	136	\$ 4,144,862	52	\$ 732,408	28	317,256	216	\$ 5,194,526
51	60	1,681,455	8	182,091	4	43,027	72	1,906,573
52	47	1,358,202	10	184,236	2	26,187	59	1,568,625
53	58	1,494,918	8	82,288	3	28,546	69	1,605,752
54	71	2,010,442	12	233,592	6	65,811	89	2,309,845
55	91	2,638,533	19	366,575	2	30,327	112	3,035,435
56	72	2,153,266	12	208,428	3	40,086	87	2,401,780
57	85	2,467,292	17	373,603	5	98,203	107	2,939,098
58	113	3,275,747	10	276,540	7	60,954	130	3,613,241
59	102	3,039,849	19	335,895	5	48,600	126	3,424,344
60	97	2,892,743	15	320,545	2	35,951	114	3,249,239
61	95	3,080,987	16	327,845	7	93,361	118	3,502,193
62	110	3,280,875	16	382,630	4	81,485	130	3,744,990
63	138	4,414,628	18	349,436	6	64,939	162	4,829,003
64	104	3,171,791	14	343,842	4	113,409	122	3,629,042
65	107	3,395,707	14	343,681	1	9,120	122	3,748,508
66	84	2,595,539	17	456,435	3	55,281	104	3,107,255
67	82	2,391,690	19	545,138	3	77,192	104	3,014,020
68	69	1,992,523	15	432,724	2	24,071	86	2,449,318
69	66	2,017,705	18	472,086	3	37,652	87	2,527,443
70	57	1,665,640	6	231,972	4	96,696	67	1,994,308
71	55	1,698,040	18	538,585	4	106,437	77	2,343,062
72	55	1,718,924	15	340,899	3	76,536	73	2,136,359
73	43	1,290,173	17	567,768	2	30,193	62	1,888,134
74	34	1,047,931	16	472,518	3	83,609	53	1,604,058
75	38	1,140,442	20	635,660	3	88,461	61	1,864,563
76	37	1,141,759	7	273,581	3	67,049	47	1,482,389
77	32	1,027,405	13	402,957	2	76,508	47	1,506,870
78	16	484,448	11	336,471	1	23,859	28	844,778
79	26	857,338	14	401,099	2	56,083	42	1,314,520
80	19	656,879	19	669,329	1	31,311	39	1,357,519
81	13	429,780	23	682,627	2	46,595	38	1,159,002
82	13	422,430	22	688,639	2	80,937	37	1,192,006
83	16	577,456	10	300,156	1	36,469	27	914,081
84	12	356,009	11	349,287	1	17,189	24	722,485
85	7	237,346	16	521,534	2	63,377	25	822,257
86	6	207,684	12	344,051	0	0	18	551,735
87	8	255,737	10	277,988	0	0	18	533,725
88	6	183,454	9	249,121	0	0	15	432,575
89	5	153,021	5	127,433	1	23,403	11	303,857
90	3	95,378	8	240,545	0	0	11	335,923
Over 90	4	110,628	20	468,817	0	0	24	579,445
<b>Total</b>	<b>2,292</b>	<b>\$ 69,256,656</b>	<b>631</b>	<b>\$16,071,055</b>	<b>137</b>	<b>\$2,356,170</b>	<b>3,060</b>	<b>\$87,683,881</b>

## SYSTEM MEMBERS (CONTINUED)

## E. Terminated Vested and Deferred Option Plan Members - Annual Benefits

Attained Age	Terminated Vested Members		Deferred Option Plan Members	
	No.	Benefit	No.	Benefit
Under 40	19	\$ 275,316	0	0
40	9	117,099	0	0
41	9	122,397	0	0
42	5	52,514	0	0
43	3	54,698	0	0
44	4	62,203	0	0
45	8	125,352	1	\$ 51,332
46	5	68,620	1	18,023
47	9	153,426	4	110,139
48	8	149,951	3	101,706
49	12	153,537	1	48,626
50	10	162,170	6	200,036
51	3	34,095	1	54,267
52	2	23,780	3	123,168
53	0	0	1	25,010
54	2	39,217	4	134,439
55	4	57,439	5	190,347
56	2	37,990	4	156,357
57	3	37,626	3	91,951
58	2	44,179	2	139,458
59	1	39,488	2	97,764
60	1	14,607	4	154,026
61	3	75,442	0	0
62	0	0	2	63,727
63	0	0	1	26,553
64	0	0	1	51,332
65 and Over	0	0	1	33,633
<b>Total</b>	<b>124</b>	<b>\$ 1,901,146</b>	<b>50</b>	<b>\$ 1,871,894</b>

## SYSTEM MEMBERS (CONTINUED)

## F. Member Statistics

Inactive Members as of July 1, 2011	Number	Amount of Annual Benefit
<b>Members Receiving Benefits</b>		
a. Retired	2,292	\$ 69,256,656
b. Beneficiaries	631	16,071,055
c. Disabled	137	2,356,170
<b>Total</b>	<b>3,060</b>	<b>\$ 87,683,881</b>
<b>Members with Deferred Benefits</b>		
a. Terminated Vested	124	\$ 1,901,146
b. Beneficiaries	N/A	N/A
c. Disabled	N/A	N/A
<b>Total</b>	<b>124</b>	<b>\$ 1,901,146</b>
<b>Deferred Option Plan Members</b>	<b>50</b>	<b>\$ 1,871,894</b>
<b>Terminated Members with Refunds Due</b>	<b>583</b>	N/A

Statistics for Active Members	Number	Average		
		Age	Service	Earnings
<b>As of July 1, 2010</b>				
a. Continuing	4,111	39.8	12.3	\$ 58,984
b. New	194	30.6	1.0	36,599
<b>Total</b>	<b>4,305</b>	<b>39.3</b>	<b>11.8</b>	<b>\$ 57,975</b>
<b>As of July 1, 2011</b>				
a. Continuing	4,008	40.4	12.9	\$ 59,915
b. New	360	30.7	2.3	38,470
<b>Total</b>	<b>4,368</b>	<b>39.6</b>	<b>12.0</b>	<b>\$ 58,148</b>

## SYSTEM MEMBERS (CONTINUED)

## G. Data Tape Reconciliation

	July 1, 2011	July 1, 2010
<b>Tape Records Submitted</b>		
Records submitted	7,676	8,235
Not Eligible to Participate	0	0
Terminations/ No Benefits Payable	(182)	(127)
Denied Benefit	0	0
Data Corrections	0	0
Number Added	691 <sup>(1)</sup>	0
<b>Total Valued</b>	<b>8,185</b>	<b>8,080</b>

- <sup>(1)</sup> Records for 691 terminated members with contribution balances still held by the System were provided on a supplemental file.

## ACTUARIAL BASIS

### A. Entry Age Actuarial Cost Method

The actuarial cost method is selected by the Board with the recommendation of the actuary. Liabilities and contributions shown in this report are computed using the Individual Entry Age method of funding. The System has used this cost method since at least 1990.

Sometimes called “funding method”, this is a particular technique used by actuaries for establishing the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily the annual contribution to the system is comprised of (1) the normal cost and (2) an amortization payment on the unfunded actuarial accrued liability.

Under the Entry Age Actuarial Cost Method, the **Normal Cost** is computed as the level percentage of pay which, if paid from the earliest time each Member would have been eligible to join the system if it then existed (thus, entry age) until his retirement or termination, would accumulate with interest at the rate assumed in the valuation to a fund sufficient to pay all benefits under the system.

The **Actuarial Accrued Liability** under this method at any point in time is the theoretical amount of the fund that would have accumulated had annual contributions equal to the normal cost been made in prior years (it does not represent the liability for benefits accrued to the valuation date.) The **Unfunded Actuarial Accrued Liability** is the excess of the actuarial accrued liability over the actuarial value of system assets on the valuation date.

Under this method experience gains or losses, i.e. decreases or increases in accrued liabilities attributable to deviations in experience from the actuarial assumptions, adjust the unfunded actuarial accrued liability.

### B. Asset Valuation Method

The asset valuation method is selected by the Board with the recommendation of the actuary. The actuarial value of assets is based on a five-year moving average of expected and market values determined as follows:

- at the beginning of each plan year, a preliminary expected actuarial asset value is calculated as the sum of the previous year’s actuarial value increased with a year’s interest at the System valuation rate plus net cash flow adjusted for interest (at the same rate) to the end of the previous plan year;



**ACTUARIAL BASIS (CONTINUED)****B. Asset Valuation Method (continued)**

- the expected actuarial asset value is set equal to the preliminary expected actuarial value plus the unrecognized investment gains and losses as of the beginning of the previous plan year;
- the difference between the expected actuarial asset value and the market value is the investment gain or loss for the previous plan year;
- the (final) actuarial asset value is the preliminary value plus 20% of the investment gains and losses for each of the five previous plan years, but in no case more than 120% of the market value or less than 80% of the market value.
- Deferred Option Plan assets are included in the actuarial value. For all periods following July 1, 2007, the Deferred Option Plan assets are subject to the same smoothing method stated above. Prior to July 1, 2007, they were included at market value but were not subject to the smoothing described above.

Besides the changes to the smoothing of Deferred Option Plan assets, the System has used this method since at least 1998.

**C. Valuation Procedures**

No actuarial accrued liability is held for non-vested, inactive Members who have a break in service, or for non-vested Members who have quit or been terminated, even if a break in service had not occurred as of the valuation date. The actuarial accrued liability does include a liability for non-vested terminations that have not taken a refund of their accumulated contribution balance.

The wages used in the projection of benefits and liabilities are based upon the prior year's actual earnings increased by the salary scale.

In computing accrued benefits, average earnings were determined using actual pay history.

No benefits are projected to be greater than the compensation limitation and dollar limitation required by the Internal Revenue Code Section 401 and 415 for governmental plans.

**ACTUARIAL BASIS (CONTINUED)****C. Valuation Procedures (continued)**

The calculations for the required state contribution are determined as of mid-year. This is a reasonable assumption since the employer contributions, employee contributions and State insurance premium tax allocations are made on a monthly basis throughout the year, and mid-year represents an average weighting of the contributions.

The contribution requirements are based on total annual compensation rather than total covered compensation of employees under assumed retirement age. This is a better reflection of the overall expectations for the System.

The Entry Age Normal Funding Method has been adjusted for those members granted prior service. The prior service is treated as occurring immediately before the membership date. Level pay is assumed during this period before actual membership. Entry Age costs are determined as if the member entered the System on the date the prior service is assumed to have begun. This treatment reflects the extra cost of prior service immediately in the accrued liability and preserves the relationship of normal cost to a year of service accrual.

**ACTUARIAL BASIS (CONTINUED)****D. Actuarial Assumptions**

The actuarial assumptions are selected by the Board with the recommendation of the actuary. The most recent experience study considered actual System experience for the period July 1, 2002 through June 30, 2007.

**Economic Assumptions**

1. Investment Return 7.5%, net of investment expenses, per annum, compound annually. The System has used this assumption since at least 1984.
2. Earnings Progression Sample rates below:

<b>Years of Service</b>	<b>Inflation %</b>	<b>Merit %</b>	<b>Increase %</b>
1	3.0	16.00	19.00
2	3.0	12.00	15.00
3	3.0	6.75	9.75
4	3.0	6.25	9.25
5	3.0	5.75	8.75
6	3.0	5.50	8.50
7	3.0	5.00	8.00
8	3.0	4.25	7.25
9	3.0	4.10	7.10
10	3.0	3.90	6.90
15	3.0	2.90	5.90
20	3.0	2.00	5.00

## ACTUARIAL BASIS (CONTINUED)

## D. Actuarial Assumptions (continued)

Demographic Assumptions

## 1. Retirement Rates

See table below:

Years of Service	Annual Rates of Retirement Per 100 Eligible Members
20	25
21	10
22	10
23	15
24	20
25	30
26	15
27	15
28	15
29	25
30	100

## 2. Mortality Rates

- |  |  |
|--|--|
| (a) Active employees<br>(pre-retirement)                                 | RP-2000 No Collar Healthy<br>Employees (Fully generational using Scale AA)                                 |
| (b) Active employees<br>(post-retirement and<br>non-disabled pensioners) | RP-2000 Blue Collar Healthy<br>Annuitant (Fully generational using Scale AA)<br>with age set back one year |
| (c) Disabled pensioners  | RP-2000 Blue Collar Healthy Annuitant<br>with age set forward 7 years                                      |

## ACTUARIAL BASIS (CONTINUED)

## D. Actuarial Assumptions (continued)

Demographic Assumptions (continued)

## 3. Disability Rates

Graduated rates. See table below:

Age Range	Annual Rate
20-24	.0002
25-29	.0004
30-34	.0008
35-39	.0008
40-44	.0012
45-49	.0012
50-54	.0012
55-59	.0012

## 4. Withdrawal Rates

Graduated rates by years of service. See table below:

Service Range	Annual Rate
0	.150
1	.120
2	.085
3	.070
4	.060
5-10	.040
11-15	.015
16-20	.010
Over 20	.000

## 5. Marital Status

(a) Percentage married:

85% of participants are assumed to be married.

(b) Age difference:

Males are assumed to be three (3) years older than females.

**ACTUARIAL BASIS (CONTINUED)****D. Actuarial Assumptions (continued)****Other Assumptions**

1. Assumed Age of Commencement for Deferred Benefits: Age 50, or the date at which the participant would have achieved twenty years of service, if later.
2. Provision for Expenses: Administrative Expenses, as budgeted by the Oklahoma Police Pension and Retirement System.
3. Percentage of Disability: Members becoming disabled have a 25%-49% impairment.
4. Duty-Related Death: All active pre-retirement deaths are duty-related.
5. Cost-of-Living Allowance: Police officers eligible to receive increased benefits according to repealed Section 50-120 of Title 11 of the Oklahoma Statutes pursuant to a court order receive an adjustment of 1/3 to 1/2 of the increase or decrease of any adjustment to the base salary of a regular police officer, based on an increase in base salary of 3%.

A 2% annual ad hoc increase has been removed effective July 1, 2011 from assumptions upon passing of legislation that requires the Oklahoma Legislature to fund all future ad hoc cost-of-living increases.

6. Deferred Option Plan: Members currently participating in the Deferred Option Plan (DOP) are assumed to remain in the DOP for the maximum of five years. Active members leaving active service are assumed to retroactively elect to join the DOP for the maximum allowable period. DOP account balances are assumed to accumulate at 7.75% (to reflect the interest rate guarantee prior to retirement) and members are assumed to elect a lump sum at retirement. All balances held in Deferred Option Payout Accounts are assumed to be paid immediately.

**SUMMARY OF SYSTEM PROVISIONS**

**Effective Date and Plan Year:** The System became effective January 1, 1981 and has been amended each year since then. The plan year is July 1 to June 30.

**Administration:** The System is administered by the Oklahoma Police Pension and Retirement Board consisting of thirteen Members. The Board shall be responsible for the policies and rules for the general administration of the System.

**Type of Plan:** A defined benefit plan.

**Employers Included:** An eligible employer may join the System on the first day of any month. An application of affiliation must be filed in the form of a resolution before the eligible municipality can become a participating municipality.

**Eligibility:** All persons employed full-time as officers working more than 25 hours per week or any person undergoing police training to become a permanent police officer with a police department of a participating municipality, with ages not less than twenty-one (21) nor more than forty-five (45) when accepted for membership.

**Service Considered:** Credited service consists of the period during which the Member participated in the System or predecessor municipal plan as an active employee, plus any service prior to the establishment of the municipal plan which was credited under the predecessor municipal systems or credited service granted by the State Board, plus any applicable military service.

**Salary Considered:** Base salary used in the determination of benefits does not include payment for accumulated sick and annual leave upon termination of employment or any uniform allowances.

Final average salary means the average paid base salary for normally scheduled hours of an officer over the highest 30 consecutive months of the last 60 months of credited service.

**SUMMARY OF SYSTEM PROVISIONS (CONTINUED)**

<b>State Contributions:</b>	Insurance premium tax allocation. Historically, the System has received 14% of these collected taxes. For the fiscal years beginning July 1, 2004 and ending June 30, 2009, the System received 17% of these collected taxes. For the fiscal year beginning July 1, 2009 and each fiscal year thereafter, the System received 14% of these collected taxes. Beginning in fiscal year July 1, 2006, the System began receiving 26% of a special allocation established to refund the System for reduced allocations of insurance premium taxes resulting from increases in insurance premium tax credits. Beginning in fiscal year July 1, 2010, the amount of insurance premium tax apportioned to the System will be applied prior to the calculation of the Home Office Credit.
<b>Municipality Contributions:</b>	Contribution is thirteen (13%) percent as of July 1, 1996.
<b>Member Contributions:</b>	Eight (8%) percent of base salary. These contributions shall be “picked up” after December 31, 1988 pursuant to Section 414(h)(2) of the Internal Revenue Code.
<b>Normal Retirement Benefit:</b>	
Eligibility:	20 years of credited service.
Benefit:	2 1/2% of the final average salary multiplied by the years of credited service, with a maximum of 30 years of credited service considered.
Form of Benefit:	The normal form of benefit is a Joint and 100% Survivor Annuity if the Member has been married 30 months prior to death.
Cost-of-Living Adjustments:	Police officers eligible to receive increased benefits according to repealed Section 50-120 of Title 11 of the Oklahoma Statutes pursuant to a court order shall receive an adjustment of 1/3 to 1/2 of the increase or decrease of any adjustment to the base salary of a regular police officer.
<b>Termination:</b>	
Less Than 10 Years of Service:	A refund of contributions without interest.



**SUMMARY OF SYSTEM PROVISIONS (CONTINUED)**

**More than 10 Years of Service:** If greater than 10 years of service, but not eligible for the Normal Retirement Benefit, the benefit is payable at the later of the date the Member would have had 20 years of service or attained age 50 in an amount equal to 2 1/2% of the final average salary multiplied by the years of credited service. The Member may elect a refund of contributions instead of the retirement benefit.

**Disability Benefit (Duty):**Total Disability

Upon determination of total disability incurred as a result of the performance of duty, the normal disability benefit is 50% of final average salary.

Partial Disability

Upon determination of partial disability incurred as a result of the performance of duty, the normal disability is reduced according to the percentage of impairment, as outlined in the "American Medical Association's Guide to the Evaluation of Permanent Impairment." The following shows the percent of normal disability benefit payable as related to the percent of impairment.

<u>% Impairment</u>	<u>% of Benefit</u>
1% to 49%	50%
50% to 74%	75%
75% to 100%	100%

**Disability Benefit (Non-Duty):**

Upon determination of disability after 10 years of service due to causes other than duty, the benefit equals the accrued benefit of 2 1/2% of final average salary times years of credited service (maximum of 30 years) times:

**SUMMARY OF SYSTEM PROVISIONS (CONTINUED)**

- 100%, if permanent and total, or
- the following percentages, if partial disability.

1% to 24%	25%
25% to 49%	50%
50% to 74%	75%
75% to 99%	90%

**Death Benefits Payable to Beneficiaries:**

Prior to Retirement (Duty):

The greater of:

- 1) 2 1/2% of final average salary times years of credited service (maximum of 30 years), or
- 2) 50% of final average salary.

Prior to Retirement (Non-Duty):

After 10 years of service, a benefit equal to 2 1/2% of final average salary times years of credited service (maximum of 30 years).

Prior to 10 years of service, a refund of the accumulated contributions made by the Member will be paid to the estate.

After Retirement:

100% of the Member's retirement or deferred vested benefit, payable when the Member would have been eligible to receive it, payable to the beneficiary.

Death Benefit:

The beneficiary shall receive a death benefit amount of \$5,000.

Beneficiary:

Surviving spouses must be married to the member for 30 continuous months prior to the date of death (waived in the case of duty related death).

**SUMMARY OF SYSTEM PROVISIONS (CONTINUED)**

If the beneficiary is a child, the benefits are payable to age 18, or 22 if a full-time student.

**Deferred Option Plan:**

A Member who has 20 or more years of service and continues employment may elect to participate in the Deferred Option Plan (DOP). Participation in the DOP shall not exceed five years. The employees' contributions cease upon entering the Plan, but the employer contributions are divided equally between the System and the DOP. The monthly retirement benefits that the employee is eligible to receive are paid into the DOP account.

A member is also allowed to retroactively elect to join the DOP as of a back-drop-date which is no earlier than the member's normal retirement date or five years before his termination date. The monthly retirement benefits and employee contributions that would have been payable had the member elected to join the DOP are credited to the member's DOP account with interest.

The retirement benefits are not recalculated for service and salary past the election date to join the DOP. However, the benefits may be increased by any applicable cost-of-living increases.

When the Member actually retires from active service, the DOP account balance may be paid in a lump sum, to an annuity provider, or transferred to a Deferred Option Payout Account. Monthly retirement benefits are then paid directly to the retired Member.

The original Plan became effective during the July 1, 1990 to June 30, 1991 Plan Year with the back-drop and Payout Account provisions added subsequently. The DOP account of an active member is guaranteed a minimum of the valuation interest rate for investment return, or 2% less than the fund rate of return, if greater. If the balance is transferred to a Payout Account upon retirement, the account is credited with interest at a rate of 2% below the total fund net earnings if the fund returns more than 2%. If the fund realizes negative returns, the account is reduced at a rate equal to the fund net earnings. Alternatively, if the fund realizes a positive return of less than 2%, the account is credited with a rate of zero.