OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

## ACTUARIAL VALUATION REPORT

AS OF JULY 1, 2012

## SECTION

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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, 2012;
- Review experience under the System for the year ended June 30, 2012; and
- Provide reporting and disclosure information for auditors' reports, governmental agencies and other interested parties.


## The main financial highlights are:

- The funded status of the System decreased since the prior valuation as indicated by the table below.

| GASB No. 25 Funded Status (\$000,000) | July 1, 2012 |  | July 1, 2011 |
| :--- | :--- | ---: | ---: |
| Accrued Liability | $\$$ | $2,034.5$ | $\$$ |

- 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, decreased from $99.2 \%$ to $94.8 \%$.
- The required state contribution for the System increased from $\$ 31.3$ million to $\$ 44.9$ million.

| Contribution Summary (\$000,000) | July 1, 2012 | July 1, 2011 |  |
| :--- | :--- | :--- | :--- |
| Total Required Contribution | $\$ 100.4$ | $\$$ | 85.1 |
| Expected Employee Contributions |  | 21.1 | 20.3 |
| Expected Municipality Contributions | 34.4 | 33.5 |  |
| Required State Contribution | $\$$ | 44.9 | $\$$ |
| --As a Percentage of Total Payroll | $16.9 \%$ | $12.1 \%$ |  |

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, 2012 |  | July 1, 2011 |  |
| Summary of Costs |  |  |  |  |
| Required State Contribution for Current Year | \$ | 44,891,731 | \$ | 31,270,062 |
| Actual State Contribution Received in Prior Year ${ }^{(1)}$ | \$ | 28,092,000 | \$ | 24,645,000 |

GASB No. 25 Funded Status

| Actuarial Accrued Liability | $\$ 2,034,485,171$ | $\$$ | $1,959,976,006$ |  |
| :--- | ---: | ---: | ---: | ---: |
| Actuarial Value of Assets | $\$$ | $1,834,170,000$ | $\$$ | $1,822,702,000$ |
| Unfunded Actuarial Accrued Liability | $\$$ | $200,315,171$ | $\$$ | $137,274,006$ |


| Market Value of Assets and Additional Liabilities | $\$ 1,784,760,000$ | $\$$ | $1,811,460,000$ |
| :--- | ---: | ---: | ---: | ---: |
| Market Value of Assets | $\$ \quad 1,882,317,166$ | $\$$ | $1,825,786,845$ |
| Actuarial Present Value of Accumulated System <br> Benefits (ASC 960) | $\$ \quad 2,551,090,081$ | $\$$ | $2,443,485,081$ |
| Present Value of Projected System Benefits |  |  |  |


| Summary of Data |  |  |
| :--- | ---: | ---: |
| Number of Members in Valuation | 4,441 | 4,368 |
| Active Paid Members | 37 | 50 |
| Deferred Option Plan Members | 660 | 583 |
| Terminated Members with Refunds Due | 126 | 124 |
| Terminated Members with Deferred Benefits | 2,368 | 2,292 |
| Retired Members | 642 | 631 |
| Beneficiaries | 138 | 137 |
| Disabled Members | $\mathbf{8 , 4 1 2}$ | $\mathbf{8 , 1 8 5}$ |
| Total |  |  |


| Active Member Statistics | $\$$ | $263,529,629$ | $\$$ | $253,989,944$ |
| :--- | ---: | ---: | ---: | ---: |
| Total Annual Compensation ${ }^{(2)}$ | $\$$ | 59,340 | $\$$ | 58,148 |
| Average Compensation ${ }^{(2)}$ | 39.6 |  | 39.6 |  |
| Average Age |  | 11.9 |  | 12.0 |
| Average Service |  |  |  |  |

[^0]
## Legislative Changes

There were no legislative changes with an actuarial impact as of July 1, 2012.

## Changes in Assumptions in Methods

There were no changes to assumptions or methods since the prior valuation. See Section 4.2 for a description of the assumptions and methods used for the July 1, 2012 valuation.

## Changes in Plan Provisions

There were no changes in plan provisions or system benefits with an actuarial impact as of July 1, 2012. See Section 4.3 for a description of the plan provisions used for the July 1, 2012 valuation.

## Actuarial Experience During the Plan Year

The System experienced the following gains/(losses) during the year ending June 30, 2012. These amounts are developed in Section 1.4 of this report:

|  | Millions |  |
| :--- | :---: | :---: |
| Liability Gain/(Loss) | $\$$ | 10.1 |
| Asset Gain/(Loss) | $\$$ | $(88.9)$ |
| Total Gain/(Loss) | $\$$ | $(78.8)$ |

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, 2012, was $7.5 \%$.

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, 2012 was $0.0 \%$.

The assets and liabilities reflected in these results as of July 1, 2012, 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:

| DOP Statistics | July 1, 2012 | July 1, 2011 |
| :---: | :---: | :---: |
| Number of Active DOP Members | 37 | 50 |
| Account Balances of Active Members | \$ 4.2 M | \$ 8.4M |
| Annual Retirement Benefits of Active Members | \$ 1.3M | \$ 1.9M |
|  |  |  |
| Deferred Option Payout Account Balances | \$ 2.6 M | \$ 2.3 M |
| Total | \$ 6.8M | \$ 10.7M |

We have prepared an actuarial valuation of the Oklahoma Police Pension and Retirement System as of July 1, 2012, for the plan year ending June 30, 2013. 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, 2012.

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, 2011 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.

We are Members of the American Academy of Actuaries and 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 we are available to answer questions about it.


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, 2012 |  | July 1, 2011 |  |
|  | Amount | $\%$ of Active Covered Comp. | Amount | \% of Active Covered Comp. |
| 1.Annual Covered Compensation for <br> Members Included in Valuation     |  |  |  |  |
| a. Active Members | \$263,529,629 | N/A | \$253,989,944 | N/A |
| b. Deferred Option Plan Members | 2,508,730 | N/A | 3,514,623 | N/A |
| c. Total | \$266,038,359 | N/A | \$257,504,567 | N/A |
| 2. Total Normal Cost Mid-year | \$ 56,159,687 | 21.3\% | \$ 56,906,021 | 22.4\% |
| 3. Unfunded Actuarial Accrued Liability | \$200,315,171 | N/A | \$137,274,006 | N/A |
| 4. Amortization of Unfunded Actuarial Accrued Liability over 30 years From July 1, 1988 at mid-year | \$ 41,187,422 | 15.6\% | \$ 25,013,281 | 9.8\% |
| 5. Budgeted Expenses | \$ 3,048,911 | 1.2\% | \$ 3,145,550 | 1.2\% |
| 6. Total Required Contribution $(2+4+5)$ | \$100,396,020 | 38.1\% | \$ 85,064,852 | 33.5\% |
| 7. Estimated Employee Contribution ( $8 \%$ x 1a) | \$ 21,082,370 | 8.0\% | \$ 20,319,196 | 8.0\% |
| 8. Estimated Municipality Contributions |  |  |  |  |
| a. Active Members | \$ 34,258,852 | 13.0\% | \$ 33,018,693 | 13.0\% |
| b. Deferred Option Plan Members | 163,067 | 6.5\% ${ }^{(1)}$ | 456,901 | 13.0\% ${ }^{(1)}$ |
| c. Total | \$ 34,421,919 | 12.9\% ${ }^{(2)}$ | \$ 33,475,594 | 13.0\% ${ }^{(2)}$ |
| 9. Required State Contribution to amortize Unfunded Actuarial Accrued Liability over 30 years from July 1, 1988 at mid-year. (6-7-8c) | \$ 44,891,731 | 16.9\% ${ }^{(2)}$ | \$ 31,270,062 | 12.1\% ${ }^{(2)}$ |
| 10. Previous year's actual State Contribution ${ }^{(3)}$ | \$ 28,092,000 | $10.9 \%^{(4)}$ | \$ 24,645,000 | 9.7\% ${ }^{(4)}$ |
| 11. Approximate period over which previous year's State Contribution will amortize current Unfunded Actuarial Accrued Liability (UAAL) | \$ $\quad 10^{(5)}$ | N/A | \$ $\quad 9{ }^{(5)}$ | N/A |

${ }^{(1)}$ Percentage of Deferred Option Plan Members' covered compensation. For July 1, 2012, we have reflected that only $50 \%$ of the employer contribution is made to the System.
${ }^{(2)}$ Percent of total covered compensation.
${ }^{(3)}$ 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.
${ }^{(4)}$ Shown as a percent of previous year's total covered compensation (\$297,504,567 for 2011 and $\$ 253,259,725$ for 2010).
${ }^{(5)}$ 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, 2012 |  |
| :--- | :--- | ---: |
| Present Value of Benefits | $\$$ | $2,551,090,081$ |
| Present Value of Future Normal Costs | $\$$ | $516,604,910$ |
| Accrued Liability | $\$$ | $2,034,485,171$ |
| Normal Cost Mid-Year | $\$$ | $56,159,687$ |


| Active |  |  |
| :---: | :---: | :---: |
| a. Retirement | \$ | 999,775,790 |
| b. Disability |  | $(424,227)$ |
| c. Withdrawal |  | 2,370,487 |
| d. Death |  | 5,027,727 |
| e. Total | \$ | 1,006,749,777 |
| Inactive |  |  |
| 1. Members Eligible for Automatic COLA |  |  |
| a. Retired Members | \$ | 78,538,994 |
| b. Disabled Members |  | 11,774,192 |
| c. Beneficiaries |  | 65,556,275 |
| d. Total | \$ | 155,869,461 |
| 2. Members Not Eligible for Automatic COLA |  |  |
| a. Retired Members | \$ | 739,551,561 |
| b. Disabled Members |  | 13,669,471 |
| c. Terminated Members |  | 21,409,764 |
| d. Deferred Option Plan Members |  | 22,818,369 |
| e. Beneficiaries |  | 74,416,768 |
| f. Total | \$ | 871,865,933 |
| 3. Total Inactive $(1 d+2 f)$ | \$ | 1,027,735,394 |
| Accrued Liability (Active + Inactive) | \$ | 2,034,485,171 |

## 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.

|  | Total System |  |
| :---: | :---: | :---: |
|  | July 1, 2012 | July 1, 2011 |
| 1. Actuarial Present Value of Benefits |  |  |
| a. Active Members | \$ 1,523,354,687 | \$ 1,445,712,140 |
| b. Terminated Members | 21,409,764 | 18,155,036 |
| c. Members Receiving Benefits who are not eligible for Automatic COLA | 827,637,800 | 776,657,871 |
| d. Members Receiving Benefits who are eligible for Automatic COLA | 155,869,461 | 167,424,051 |
| e. Deferred Option Plan Members | 22,818,369 | 35,535,983 |
| f. Total | \$ 2,551,090,081 | \$ 2,443,485,081 |
| 2. Actuarial Present Value of Future Normal Costs | 516,604,910 | 483,509,075 |
| 3. Total Actuarial Accrued Liability (1f-2) | 2,034,485,171 | 1,959,976,006 |
| 4. Actuarial Value of Assets | 1,834,170,000 | 1,822,702,000 |
| 5. Unfunded Actuarial Accrued Liability (3-4, not less than \$0) | \$ 200,315,171 | \$ 137,274,006 |

## 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, 2012.

| 1. Expected Actuarial Accrued Liability |  |
| :--- | ---: |
| a. Actuarial Accrued Liability at July 1, 2011 | $\$ 1,959,976,006$ |
| b. Normal Cost for Plan Year Ending June 30, 2012 | $54,058,923$ |
| c. Benefit Payments for Plan Year Ending June 30, 2012 | $114,223,000$ |
| d. Interest on a + b - c to End of Year | $144,742,048$ |
| e. Expected Actuarial Accrued Liability Before Changes $(a+b-c+d)$ | $2,044,553,977$ |
| f. Change in Actuarial Accrued Liability at July 1, 2012 due to changes in <br> Actuarial Assumptions |  |
| g. Change in Actuarial Accrued Liability at July 1, 2012 due to changes in <br> System Provisions | 0 |
| h. Expected Actuarial Accrued Liability at July 1, 2012 (e + f+g) | $\$ 2,044,553,977$ |
| 2. Actuarial Accrued Liability at July 1, 2012 | $\$ 2,034,485,171$ |
| 3. Actuarial Liability Gain/(Loss) (1h - 2) | $\$ 10,068,806$ |
| 4. Expected Actuarial Value of Assets | $\$ 1,822,702,000$ |
| a. Actuarial Value of Assets at July 1, 2011 | $81,101,000$ |
| b. Contributions Made for Plan Year Ending June 30, 2012 | $116,175,000$ |
| c. Benefit Payments and Expenses for Plan Year Ending June 30, 2012 | $135,387,375$ |
| d. Interest on a + b - c to End of Year | $\$ 1,923,015,375$ |
| e. Expected Actuarial Value of Assets at <br> July 1, 2012 $(a+b-c+d)$ | $\$ 1,834,170,000$ |
| 5. Actuarial Value of Assets as of July 1, 2012 | $\$$ |
| 6. Actuarial Asset Gain/(Loss) (5 - 4e) | $\$$ |
| 7. Actuarial Gain/(Loss) (3 + 6) | $(78,776,569)$ |

## 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)

| Plan Year Ending | Actives |  | Retirees ${ }^{(1)}$ |  | Total |  |
| :---: | :---: | :--- | :---: | :---: | :---: | :---: |
| $6 / 30 / 2013$ | $\$$ | $82,154,929$ | $\$$ | $101,759,780$ | $\$$ | $183,914,709$ |
| $6 / 30 / 2014$ | $\$$ | $47,707,921$ | $\$$ | $92,154,051$ | $\$$ | $139,861,972$ |
| $6 / 30 / 2015$ | $\$$ | $57,329,365$ | $\$$ | $91,651,116$ | $\$$ | $148,980,481$ |
| $6 / 30 / 2016$ | $\$$ | $62,719,531$ | $\$$ | $91,007,113$ | $\$$ | $153,726,644$ |
| $6 / 30 / 2017$ | $\$$ | $60,778,478$ | $\$$ | $90,294,754$ | $\$$ | $151,073,232$ |
| $6 / 30 / 2018$ | $\$$ | $67,899,352$ | $\$$ | $89,382,911$ | $\$$ | $157,282,263$ |
| $6 / 30 / 2019$ | $\$$ | $73,375,184$ | $\$$ | $88,322,125$ | $\$$ | $161,697,309$ |
| $6 / 30 / 2020$ | $\$$ | $83,840,661$ | $\$$ | $87,113,907$ | $\$$ | $170,954,568$ |
| $6 / 30 / 2021$ | $\$$ | $90,353,378$ | $\$$ | $85,858,006$ | $\$$ | $176,211,384$ |
| $6 / 30 / 2022$ | $\$$ | $93,542,673$ | $\$$ | $84,523,045$ | $\$$ | $178,065,717$ |

${ }^{(1)}$ 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.

| Accumulated System Benefits | July 1, 2012 | July 1, 2011 |
| :--- | ---: | ---: |
| Vested Benefits |  |  |
| a. Active Members | $\$$ | $759,517,646$ |
| b. Deferred Option Plan Members | $\$ 2,818,369$ | $741,669,479$ |
| c. Terminated Members | $21,409,764$ | $35,535,983$ |
| d. Members Receiving Benefits | $983,507,261$ | $18,155,036$ |
| e. Total Vested Benefits | $\$ 1,787,253,040$ | $\$$ |
| Non-vested Benefits | $95,064,126$ | $8,739,442,420$ |
| Total Accumulated System Benefits | $\$ 1,882,317,166$ | $\$$ |
| Assumed Rate of Interest | $7,825,786,845$ |  |
| Market Value of Assets Available for Benefits | $\$$ | $1,784,760,000$ |
| Funded Ratio | $\$$ | $1,811,460,000$ |


| Number of Members | July 1, 2012 | July 1, 2011 |
| :--- | ---: | ---: |
| Vested Members |  |  |
| a. Active Members | 2,364 | 2,411 |
| b. Deferred Option Plan Members | 37 | 50 |
| c. Members with Deferred Benefits | 126 | 124 |
| d. Members Receiving Benefits | 3,148 | 3,060 |
| e. Total Vested Members | 5,675 | 5,645 |
| Non-vested Members | 2,737 | 2,540 |
| Total Members | $\mathbf{8 , 4 1 2}$ | $\mathbf{8 , 1 8 5}$ |

## 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.

| Actuarial Present Value of Accumulated System Benefits as of <br> July 1, 2011 | $\$ \quad 1,825,786,845$ |
| :--- | ---: |
| Increase/(Decrease) During Year Attributable to: |  |
| a. Normal Cost | $45,606,641$ |
| b. Increase for Interest Due to Decrease in Discount Period | $136,071,149$ |
| c. Benefits Paid, Including Refund of Contributions | $(114,223,000)$ |
| d. System Amendment | 0 |
| e. Assumption Changes | 0 |
| f. (Gains)/Losses | $(10,924,469)$ |
| Net Increase/(Decrease) | $56,530,321$ |
| Actuarial Present Value of Accumulated System Benefits as of <br> July 1, 2012 | $\$ \quad \mathbf{1 , 8 8 2 , 3 1 7 , 1 6 6}$ |

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 <br> Valuation <br> Date | Actuarial Value <br> of Assets <br> (a) | Accrued Liability <br> (AAL) Entry Age <br> (b) | Unfunded AAL <br> (UAAL) <br> (b-a) | Funded <br> Ratio (a/b) | Covered <br> Payroll (c) | UAAL as a <br> of Covered <br> Payroll <br> $(\mathbf{( b - a ) / c ) ~}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $07 / 01 / 2003$ | $\$ 1,392,043,000$ | $\$ 1,646,979,675$ | $\$ 254,936,675$ | $84.5 \%$ | $\$ 170,507,025$ | $149.5 \%$ |
| $07 / 01 / 2004$ | $\$ 1,399,975,000$ | $\$ 1,727,162,602$ | $\$ 327,187,602$ | $81.0 \%$ | $\$ 175,559,285$ | $186.4 \%$ |
| $07 / 01 / 2005$ | $\$ 1,423,834,000$ | $\$ 1,811,572,114$ | $\$ 387,738,114$ | $78.6 \%$ | $\$ 188,848,451$ | $205.3 \%$ |
| $07 / 01 / 2006$ | $\$ 1,490,208,000$ | $\$ 1,910,059,072$ | $\$ 419,851,072$ | $78.0 \%$ | $\$ 204,189,807$ | $205.6 \%$ |
| $07 / 01 / 2007$ | $\$ 1,627,476,000$ | $\$ 2,035,653,471$ | $\$ 408,177,471$ | $79.9 \%$ | $\$ 220,884,875$ | $184.8 \%$ |
| $07 / 01 / 2008$ | $\$ 1,752,169,000$ | $\$ 2,132,175,698$ | $\$ 380,006,698$ | $82.2 \%$ | $\$ 239,804,959$ | $158.5 \%$ |
| $07 / 01 / 2009$ | $\$ 1,717,566,000$ | $\$ 2,253,133,775$ | $\$ 535,567,775$ | $76.2 \%$ | $\$ 253,955,863$ | $210.9 \%$ |
| $07 / 01 / 2010$ | $\$ 1,754,372,000$ | $\$ 2,341,619,152$ | $\$ 587,247,152$ | $74.9 \%$ | $\$ 249,582,676$ | $235.3 \%$ |
| $07 / 01 / 2011$ | $\$ 1,822,702,000$ | $\$ 1,959,976,006$ | $\$ 137,274,006$ | $93.0 \%$ | $\$ 257,504,567$ | $53.3 \%$ |
| $07 / 01 / 2012$ | $\$ 1,834,170,000$ | $\$ 2,034,485,171$ | $\$ 200,315,171$ | $90.2 \%$ | $\$ 266,038,359$ | $75.3 \%$ |

## 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:

| Year Ended June 30 | Annual Required <br> Contribution | Percentage Contributed |
| :---: | :---: | :---: |
| 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 | $\$ 146,816,207$ | $38.5 \%$ |
| 2012 | $\$ 64,745,656$ | $94.2 \%$ |

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, 2012 |  | Market Value as of June 30, 2011 |  |
| :---: | :---: | :---: | :---: | :---: |
| 1. Cash and Short-term Investments | \$ | 47,146,000 | \$ | 33,516,000 |
| 2. Receivables |  |  |  |  |
| a. Interest and Dividends | \$ | 3,157,000 | \$ | 2,973,000 |
| b. Member Contributions |  | 954,000 |  | 893,000 |
| c. Employer Contributions |  | 1,529,000 |  | 1,472,000 |
| d. Insurance Premium Tax |  | 5,520,000 |  | 5,526,000 |
| e. Investments Sold |  | 4,349,000 |  | 0 |
| f. Other Receivables |  | 0 |  | 3,000 |
| g. Total | \$ | 15,509,000 | \$ | 10,867,000 |
| 3. Investments at Fair Value |  |  |  |  |
| a. Domestic Government Bonds | \$ | 18,418,000 | \$ | 14,121,000 |
| b. International Government Bonds |  | 0 |  | 0 |
| c. Corporate Bonds ${ }^{(1)}$ |  | 344,515,000 |  | 330,503,000 |
| d. Domestic Stock |  | 441,609,000 |  | 533,850,000 |
| e. International Stock |  | 205,997,000 |  | 185,952,000 |
| f. Other |  | 715,669,000 |  | 707,163,000 |
| g. Securities Lending Short-Term Pool |  | 26,729,000 |  | 44,578,000 |
| h. Total | \$ | 1,752,937,000 | \$ | 1,816,167,000 |
| 4. Assets used in System Operations |  |  |  |  |
| a. Furniture, Fixtures and Equipment | \$ | 710,000 | \$ | 913,000 |
| 5. Total Assets | \$ | 1,816,302,000 | \$ | 1,861,463,000 |
| 6. Liabilities |  |  |  |  |
| a. Payable for Investments Purchased | \$ | 3,599,000 | \$ | 3,753,000 |
| b. Accounts Payable and Accrued Expenses |  | 1,214,000 |  | 1,672,000 |
| c. Securities Lending Collateral Payable |  | 26,729,000 |  | 44,578,000 |
| d. Total Liabilities |  | 31,542,000 |  | 50,003,000 |
| 7. Net Assets for Pension Benefits | \$ | 1,784,760,000 | \$ | 1,811,460,000 |

(1) Includes Domestic and International Bonds

## Reconciliation of Assets

| Transactions |  | June 30, 2012 |  | June 30, 2011 |
| :---: | :---: | :---: | :---: | :---: |
| Additions |  |  |  |  |
| 1. Contributions |  |  |  |  |
| a. Contributions from Employers | \$ | 32,896,000 | \$ | 31,846,000 |
| b. Contributions from System Members |  | 20,113,000 |  | 19,489,000 |
| c. Insurance Premium Tax |  | 28,092,000 |  | 24,645,000 |
| d. Total | \$ | 81,101,000 | \$ | 75,980,000 |
| 2. Net Investment Income |  |  |  |  |
| a. Interest | \$ | 7,547,000 | \$ | 7,365,000 |
| b. Dividends |  | 10,318,000 |  | 9,662,000 |
| c. Realized Gain and Unrealized Appreciation |  | 1,676,000 |  | 276,186,000 |
| d. Income from Securities Lending |  | 54,000 |  | 60,000 |
| e. Other |  | 590,000 |  | 732,000 |
| f. Total | \$ | 20,185,000 | \$ | 294,005,000 |
| g. Investment Expense |  | $(11,811,000)$ |  | $(11,700,000)$ |
| h. Net Investment Income | \$ | 8,374,000 |  | 282,305,000 |
| 3. Total Additions | \$ | 89,475,000 |  | 358,285,000 |

## Deductions

| 4. Retirement Benefits | $\$(112,653,000)$ | $\$(101,737,000)$ |  |
| :--- | :--- | :--- | ---: |
| 5. Refund of Contributions | $\$(1,570,000)$ | $\$ r$ | $(2,117,000)$ |
| 6. Administrative Expenses | $\$(1,952,000)$ | $\$$ | $(1,712,000)$ |
| 7. Total Deductions | $\$(116,175,000)$ | $\$(105,566,000)$ |  |
| 8. Net Increase | $\$(26,700,000)$ | $\$ 252,719,000$ |  |
| 9. Net Assets Held in Trust for Pension Benefits |  |  |  |
| a. Beginning of Year | $\$ 1,811,460,000$ | $\$ 1,558,741,000$ |  |
| b. End of Year | $\$ 1,784,760,000$ | $\$ 1,811,460,000$ |  |

Reconciliation of Actuarial Asset Value and Market Value

| Actuarial Asset Value | $\$ 1,834,170,000$ | $\$ 1,822,702,000$ |  |
| :--- | :--- | :--- | ---: |
| Deferred Gain/(Loss) | $\$ ~(49,410,000)$ | $\$(11,242,000)$ |  |
| Impact of Market Value Corridor | $\$$ | 0 | $\$$ |
| Market Value | $\$ 1,784,760,000$ | $\$ 1,811,460,000$ |  |

## Actuarial Value of Assets

Schedule of Assets Gains/(Losses)

| Year | Original Amount |  | Recognized in Prior Years |  | Recognized This Year |  | Recognized in Future Years |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2007/2008 | \$ | $(164,696,917)$ | \$ | $(131,757,533)$ | \$ | $(32,939,384)$ | \$ | 0 |
| 2008/2009 |  | $(414,206,995)$ |  | $(248,524,197)$ |  | $(82,841,399)$ |  | $(82,841,399)$ |
| 2009/2010 |  | 109,851,050 |  | 43,940,420 |  | 21,970,210 |  | 43,940,420 |
| 2010/2011 |  | 151,836,917 |  | 30,367,383 |  | 30,367,383 |  | 91,102,151 |
| 2011/2012 |  | $(127,013,357)$ |  | 0 |  | $(25,402,671)$ |  | (101,610,686) |
| Total | \$ | $(444,229,302)$ |  | $(305,973,927)$ | \$ | $(88,845,861)$ | \$ | $(49,409,514)$ |


| Development of Actuarial Value of Assets |  |  |
| :---: | :---: | :---: |
| 1. Actuarial Value as of July 1, 2011 |  | 1,822,702,000 |
| 2. Contributions |  |  |
| a. Member | \$ | 20,113,000 |
| b. Employer |  | 32,896,000 |
| c. Insurance tax |  | 28,092,000 |
| d. Total $(\mathrm{a}+\mathrm{b}+\mathrm{c})$ | \$ | 81,101,000 |
| 3. Decreases During the Year |  |  |
| a. Benefit Payments | \$ | 112,653,000 |
| b. Return of Member Contributions |  | 1,570,000 |
| c. Non-investment Expenses |  | 1,952,000 |
| d. Total ( $\mathrm{a}+\mathrm{b}+\mathrm{c}$ ) | \$ | 116,175,000 |
| 4. Expected Return at $7.5 \%$ on: |  |  |
| a. Item 1 | \$ | 136,702,650 |
| b. Item 2 (one-half year) |  | 3,041,288 |
| c. Item 3 (one-half year) |  | 4,356,563 |
| d. $\operatorname{Total}(\mathrm{a}+\mathrm{b}-\mathrm{c})$ | \$ | 135,387,375 |
| 5. Expected Actuarial Value of Assets June 30, $2012(1+2-3+4)$ | \$ | 1,923,015,375 |
| 6. Unrecognized Asset Gain/(Loss) as of June 30, 2011 | \$ | $(11,242,018)$ |
| 7. Expected Actuarial Value June 30, 2012 plus previous year's Unrecognized Asset Gain $(5+6)$ |  | 1,911,773,357 |
| 8. Market Value as of June 30, 2012 | \$ | 1,784,760,000 |
| 9. 2011/2012 Asset Gain/(Loss) (8-7) | \$ | $(127,013,357)$ |
| 10. Asset Gain/(Loss) to be Recognized as of June 30, 2012 | \$ | $(88,845,861)$ |
| 11. Initial Actuarial Value July 1, $2012(5+10)$ (Rounded to \$ 1,000 's) | \$ | 1,834,170,000 |
| 12. Constraining Values: |  |  |
| a. $80 \%$ of Market Value ( $8 \times 0.8$ ) | \$ | 1,427,808,000 |
| b. $120 \%$ of Market Value ( $8 \times 1.2$ ) | \$ | 2,141,712,000 |
| 13. Actuarial Value July 1,2012 <br> (11), but no less than (12a), nor greater than (12b) | \$ | 1,834,170,000 |

## Average Annual Rates of Investment Return

| Year Ending <br> 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 | $8.8 \%$ | $10.8 \%$ | $15.3 \%)$ | $10.2 \%$ |
| 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 | $5.6 \%$ | $8.0 \%$ | $18.3 \%$ | $8.0 \%$ |
| 2012 | $2.6 \%$ | $7.8 \%$ | $0.5 \%$ | $7.7 \%$ |

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 <br> Due to <br> Member | Deferred <br> Vested <br> Members | Retired <br> Members | Disabled Members | Beneficiaries |  |
| As of July 1, 2011 | 4,368 | 50 | 583 | 124 | 2,292 | 137 | 631 | 8,185 |
| Deferred Option Plan Retirees | (10) | 10 | 0 | 0 | 0 | 0 | 0 | 0 |
| Age Retirements | (87) | (22) | 0 | (10) | 119 | 0 | 0 | 0 |
| Disability Retirements | (1) | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Deaths Without Beneficiaries | (1) | (1) | 0 | 0 | (19) | (3) | (25) | (49) |
| Deaths With Beneficiaries | (2) | 0 | 0 | 0 | (24) | (1) | 27 | 0 |
| Vested Terminations | (28) | 0 | 0 | 28 | 0 | 0 | 0 | 0 |
| Rehires | 20 | 0 | (9) | 0 | 0 | 0 | 0 | 11 |
| Expiration of Benefits | 0 | 0 | 0 | 0 | 0 | 0 | (1) | (1) |
| Termination Without Refund | (72) | 0 | 72 | 0 | 0 | 0 | 0 | 0 |
| Terminations Electing a Refund | (105) | 0 | (42) | 0 | 0 | 0 | 0 | (147) |
| Alternate Payee of a Qualified Domestic Relations Order | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 13 |
| Data Corrections | 0 | 0 | 22 | (16) | 0 | 4 | (3) | 7 |
| Transfers Out | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transfers In | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Net Change | (286) | (13) | 43 | 2 | 76 | 1 | 11 | (166) |
| New Entrants During the Year | 359 | 0 | 34 | 0 | 0 | 0 | 0 | 393 |
| As of July 1, 2012 | 4,441 | 37 | 660 | 126 | 2,368 | 138 | 642 | 8,412 |

## System Members (Continued)

B. Count of Active Members

|  | Years of Service |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| Under 20 |  |  |  |  |  |  |  |  |  | 0 |
| 20-24 | 111 |  |  |  |  |  |  |  |  | 111 |
| 25-29 | 475 | 87 |  |  |  |  |  |  |  | 562 |
| 30-34 | 302 | 352 | 68 |  |  |  |  |  |  | 722 |
| 35-39 | 175 | 211 | 362 | 59 |  |  |  |  |  | 807 |
| 40-44 | 118 | 142 | 239 | 305 | 74 |  |  |  |  | 878 |
| 45-49 | 37 | 41 | 94 | 162 | 323 | 50 |  |  |  | 707 |
| 50-54 | 3 | 21 | 35 | 78 | 126 | 144 | 49 |  |  | 456 |
| 55-59 | 1 |  | 10 | 22 | 31 | 27 | 54 | 6 |  | 151 |
| 60-64 | 1 |  | 2 | 9 | 9 | 8 | 11 | 3 | 1 | 44 |
| 65-69 |  |  |  |  | 1 |  | 2 |  |  | 3 |
| 70-74 |  |  |  |  |  |  |  |  |  | 0 |
| 75+ |  |  |  |  |  |  |  |  |  | 0 |
| Total | 1,223 | 854 | 810 | 635 | 564 | 229 | 116 | 9 | 1 | 4,441 |

## C. Average Compensation

|  | Years of Service |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age | $0-4$ | $\mathbf{5 - 9}$ | $10-14$ | $\mathbf{1 5 - 1 9}$ | $\mathbf{2 0 - 2 4}$ | $\mathbf{2 5 - 2 9}$ | $30-34$ | $35-39$ | $40+$ | Total |
| Under 20 |  |  |  |  |  |  |  |  |  | 0 |
| $20-24$ | 37,735 |  |  |  |  |  |  |  |  | 37,735 |
| $25-29$ | 42,057 | 53,458 |  |  |  |  |  |  |  | 43,822 |
| $30-34$ | 41,746 | 53,970 | 62,516 |  |  |  |  |  |  | 49,662 |
| $35-39$ | 41,255 | 54,350 | 64,482 | 68,592 |  |  |  |  |  | 57,097 |
| $40-44$ | 39,294 | 50,006 | 64,331 | 71,738 | 78,324 |  |  |  |  | 62,402 |
| $45-49$ | 37,068 | 51,679 | 60,310 | 67,555 | 78,167 | 80,938 |  |  |  | 69,870 |
| $50-54$ | 43,663 | 49,189 | 60,157 | 67,026 | 73,589 | 82,470 | 84,217 |  |  | 74,061 |
| $55-59$ | 39,199 |  | 53,482 | 60,890 | 67,627 | 77,956 | 87,135 | 95,352 |  | 75,445 |
| $60-64$ | 29,689 |  | 54,608 | 56,318 | 75,714 | 74,310 | 77,186 | 95,665 | 85,148 | 71,429 |
| $\mathbf{6 5 - 6 9}$ |  |  |  |  | 91,226 |  | 97,345 |  |  | 95,305 |
| $70-74$ |  |  |  |  |  |  |  |  |  | 0 |
| $75+$ |  |  |  |  |  |  |  |  |  | 0 |
| Total | 41,047 | 53,125 | 63,441 | 69,205 | 76,570 | 81,318 | 85,135 | 95,456 | 85,148 | 59,340 |

## System Members (Continued)

D. Members in Pay Status - Annual Benefits

| Attained <br> Age | Retired Members |  | Beneficiaries |  | Disabled <br> Members |  | Current Payment Total |  |
| :---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
|  | No. | Benefit | No. | Benefit | No. | Benefit | No. | Benefit |
| Under 50 | 102 | $\$$ | $3,274,344$ | 50 | $\$$ | 851,626 | 28 | 321,438 |
| $50-54$ | 267 | $7,521,367$ | 38 | 623,864 | 12 | 150,497 | $\$ 17$ | $4,447,408$ |
| $55-59$ | 458 | $13,649,963$ | 76 | $1,628,394$ | 24 | 304,748 | 558 | $15,583,728$ |
| $60-64$ | 554 | $17,148,266$ | 84 | $1,721,549$ | 23 | 305,676 | 661 | $19,175,491$ |
| $65-69$ | 444 | $13,521,275$ | 83 | $2,281,954$ | 12 | 233,554 | 539 | $16,036,783$ |
| $70-74$ | 272 | $8,326,609$ | 78 | $2,278,935$ | 16 | 351,723 | 366 | $10,957,267$ |
| $75-79$ | 149 | $4,674,263$ | 69 | $2,245,993$ | 12 | 344,733 | 230 | $7,264,989$ |
| $80-84$ | 79 | $2,694,219$ | 88 | $2,827,799$ | 7 | 218,935 | 174 | $4,740,953$ |
| $85-89$ | 34 | $1,074,944$ | 50 | $1,524,123$ | 3 | 81,282 | 87 | $2,681,349$ |
| $90+$ | 9 | 271,872 | 26 | 714,434 | 1 | 23,403 | 36 | $1,009,709$ |
| Total | 2,368 | $\$ 72,158,122$ | 642 | $\$ 16,698,671$ | 138 | $\$ 2,340,989$ | 3,148 | $\$ 91,197,782$ |

## 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 | 21 | $\$$ | 283,530 | 0 |
| 0 |  |  |  |  |
| $40-44$ | 31 | 465,151 | 1 | 25,886 |
| $45-49$ | 39 | 736,441 | 6 | 224,063 |
| $50-54$ | 16 | 236,802 | 10 | 363,090 |
| $55-59$ | 14 | 268,266 | 13 | 489,066 |
| $60-64$ | 5 | 136,678 | 6 | 159,840 |
| $65+$ | 0 | 0 | 1 | 27,885 |
| Total | $\mathbf{1 2 6}$ | $\$ 2,126,868$ | 37 | $\$ 1,289,830$ |

## System Members (Continued)

F. Member Statistics

| Inactive Members as of July 1, 2012 | Number | Amount of <br> Annual Benefit |  |
| :--- | ---: | ---: | :---: |
| Members Receiving Benefits |  |  |  |
| a. Retired | 2,368 | $\$$ |  |
| b. Beneficiaries | 642 | $72,158,122$ |  |
| c. Disabled | 138 | $16,698,671$ |  |
| Total | 3,148 | $\$$ |  |
|  |  |  |  |
| Terminated Vested | 126 | $\$, 197,782$ |  |
| Deferred Option Plan Members | 37 | $\$$ |  |
| Terminated Members with Refunds Due | 660 | $1,289,830$ |  |


| Statistics for Active Members | Number | Average |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Age | Service |  | ings |
| As of July 1, 2011 |  |  |  |  |  |
| a. Continuing | 4,008 | 40.4 | 12.9 | \$ | 59,915 |
| b. New | 360 | 30.7 | 2.3 |  | 38,470 |
| Total | 4,368 | 39.6 | 12.0 | \$ | 58,148 |
| As of July 1, 2012 |  |  |  |  |  |
| a. Continuing | 4,062 | 40.6 | 13.0 | \$ | 61,305 |
| b. New | 379 | 29.9 | 1.1 |  | 38,282 |
| Total | 4,441 | 39.6 | 11.9 | \$ | 59,340 |

## 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
2. Earnings Progression

| Years of <br> Service | Inflation <br> $\mathbf{\%}$ | Merit <br> $\mathbf{\%}$ | Increase <br> $\mathbf{\%}$ |
| :---: | :---: | :---: | :---: |
| 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 <br> 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 (pre-retirement)
(b) Active employees (post-retirement and nondisabled pensioners)
(c) Disabled pensioners

RP-2000 Healthy
Employees (Fully generational using Scale AA)

RP-2000 Blue Collar Healthy
Annuitant (Fully generational using Scale AA) with age set back one year

RP-2000 Blue Collar Healthy Annuitant 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 <br> 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 <br> 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: $\quad 85 \%$ 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 $3 \%$.
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:

Type of Plan:
Employers Included:

Eligibility:

## Service Considered:

Salary Considered:

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.

A defined benefit plan.
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.

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 fortyfive (45) when accepted for membership.

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.

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)

State Contributions:

## Municipality Contributions:

Member Contributions:

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.

Contribution is thirteen (13\%) percent as of July 1, 1996.
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.

20 years of credited service.
$21 / 2 \%$ of the final average salary multiplied by the years of credited service, with a maximum of 30 years of credited service considered.

The normal form of benefit is a Joint and $100 \%$ Survivor Annuity if the Member has been married 30 months prior to death.

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.

## Termination:

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 $21 / 2 \%$ 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.

| \% Impairment | \% of Benefit |
| :--- | :---: |
| 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 $21 / 2 \%$ 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 $24 \% \quad 25 \%$
$25 \%$ to $49 \% \quad 50 \%$
$50 \%$ to $74 \% \quad 75 \%$
$75 \%$ to $99 \% \quad 90 \%$


## Death Benefits Payable <br> to Beneficiaries:

Prior to Retirement (Duty)
The greater of:

1) $21 / 2 \%$ 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 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.

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.


[^0]:    ${ }^{(1)}$ 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.
    ${ }^{(2)}$ Compensation is projected one year based on the salary increase assumptions.

