

**MINNESOTA STATE RETIREMENT SYSTEM
LEGISLATORS RETIREMENT FUND
ACTUARIAL VALUATION REPORT AS OF JULY 1, 2013**



December 4, 2013

Minnesota State Retirement System
Legislators Retirement Fund
St. Paul, Minnesota

Dear Board of Directors:

The results of the July 1, 2013 annual actuarial valuation of the Legislators Retirement Fund are presented in this report. This report was prepared at the request of the Board and is intended for use by the Board and staff and those designated or approved by the Board. This report may be provided to parties other than the Fund only in its entirety. GRS is not responsible for the consequences of any unauthorized use of this report.

The purpose of the valuation is to measure the Fund's funding progress, to determine the required contribution rate for the fiscal year beginning July 1, 2013, and to determine the actuarial information for Governmental Accounting Standards Board (GASB) Statement No. 25. Note that we have not attempted to quantify the impact of GASB Statements No. 67 and 68 in this report.

The valuation was based upon information furnished by the Minnesota State Retirement System (MSRS), concerning benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not otherwise audit the data. We are not responsible for the accuracy or completeness of the information provided by MSRS.

Actuarial assumptions, including discount rates, mortality tables and others identified in this report, are prescribed by Minnesota Statutes Section 356.215, the Legislative Commission on Pensions and Retirement (LCPR), and the Board of Directors. These parties are responsible for selecting the plan's funding policy, actuarial valuation methods, asset valuation methods, and assumptions. The policies, methods and assumptions used in this valuation are those that have been so prescribed and are described in the Actuarial Basis of this report. MSRS is solely responsible for communicating to GRS any changes required thereto.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of such future measurements.

This report should not be relied on for any purpose other than the purpose described herein. Determinations of the financial results associated with the benefits described in this report in a manner other than the intended purpose may produce significantly different results.

Board of Directors

December 4, 2013

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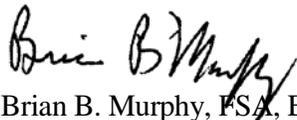
The signing actuaries are independent of the plan sponsor. We are not aware of any relationship that would impair the objectivity of our work.

Brian B. Murphy and Bonita J. Wurst 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 herein. In addition, Mr. Murphy meets the requirements of "approved actuary" under Minnesota Statutes Section 356.215, Subdivision 1, Paragraph (c).

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge and belief the information contained in this report is accurate and fairly presents the actuarial position of the Legislators Retirement Fund as of the valuation date and was performed in accordance with the requirements of Minnesota Statutes Section 356.215, and the requirements of the Standards for Actuarial Work established by the LCPR. All calculations have been made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board and with applicable statutes.

We are available to answer any questions or provide further details.

Respectfully submitted,



Brian B. Murphy, FSA, EA, MAAA



Bonita J. Wurst, ASA, EA, MAAA

BBM/BJW:sc

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Summary of Valuation Results

Contributions

The following table summarizes important contribution information as described in the Development of Costs section.

| <u>Contributions</u> (dollars in thousands) | <u>Actuarial Valuation as of</u> | |
|---|----------------------------------|---------------------|
| | <u>July 1, 2013</u> | <u>July 1, 2012</u> |
| Statutory Contributions* - Chapter 3A | \$ 89 | \$ 123 |
| Required Contributions - Chapter 356 | \$ 18,577 | \$ 18,331 |
| Sufficiency / (Deficiency) | \$ (18,488) | \$ (18,208) |

* Member contributions equal to 9% of payroll.

The Chapter 356 Required Contribution shown above represents the estimated annual contribution amount that would be needed for this plan to attain 100% funding by July 1, 2026, based upon the prescribed assumptions. The Required Contribution includes not only the expected benefit payments for the year, but also amounts intended to pre-fund future benefit payments. Actual contributions have been less than the Required Contribution amount since 1999. Without a change in contribution policy, the funding target identified by Chapter 356 will not be met.

This plan is currently funded on a pay-as-you-go basis by annual appropriations from the state's General Fund. The current contribution levels (member contributions and annual appropriations) are not sufficient to cover annual benefit payments. For the fiscal year ending June 30, 2013, total contributions were \$3.5 million and total benefit payments were \$7.9 million. As of July 1, 2013, assets will cover approximately 16 months of future benefit payments. Therefore, the ability of the fund to pay benefits in the future is highly dependent upon timely receipt of the contributions from the state's General Fund. The expected benefit payments for the next 10 years, based on current data, methods, and assumptions, are:

| <u>Fiscal Year Ending</u> | <u>Expected Annual Benefit Payments</u> |
|---------------------------|---|
| 2014 | \$ 8,333,000 |
| 2015 | 8,661,000 |
| 2016 | 8,964,000 |
| 2017 | 9,026,000 |
| 2018 | 8,999,000 |
| 2019 | 8,997,000 |
| 2020 | 9,005,000 |
| 2021 | 9,006,000 |
| 2022 | 8,923,000 |
| 2023 | 8,830,000 |

Participant reconciliation and statistics are detailed in the *Membership Data* section. The *Actuarial Basis* section includes a summary of plan provisions and actuarial methods and assumptions used for the calculations in this report.

Summary of Valuation Results

The *Plan Accounting* section details the required accounting information for the Plan under GASB No. 25 (as amended by GASB No. 50). Statements No. 67 and No. 68, issued in June 2012, replace the requirements of Statements No. 25 and No. 27, respectively. Statement No. 68, effective for the fiscal year beginning July 1, 2014, sets the accounting rules for the employers that sponsor or contribute to public retirement systems, while Statement No. 67, effective for the fiscal year beginning July 1, 2013, sets the rules for the systems themselves. Accounting information prepared according to Statements No. 67 and No. 68 will be provided in a separate report beginning with the July 1, 2014 valuation.

Summary of Valuation Results

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

| | Actuarial Valuation as of | |
|---|----------------------------------|---------------------|
| | July 1, 2013 | July 1, 2012 |
| Assumptions | | |
| - Pre-retirement discount rate | 0.0% | 0.0% |
| - Post-retirement discount rate | 0.0% | 0.0% |
| - Post-retirement annual benefit increase | 2.0% | 2.0% |
| Contributions (dollars in thousands) | | |
| Statutory - Chapter 3A | \$ 89 | \$ 123 |
| Required - Chapter 356 | 18,577 * | 18,331 |
| Sufficiency / (Deficiency) | (18,488) * | (18,208) |
| Funding Ratios (dollars in thousands) | | |
| Accrued Liability Funding Ratio | | |
| - Current assets (AVA) | \$ 11,493 | \$ 15,523 |
| - Actuarial accrued liability | 235,877 | 247,657 |
| - Funding ratio | 4.87% | 6.27% |
| Projected Benefit Funding Ratio | | |
| - Current and expected future assets | \$ 12,289 | \$ 25,324 |
| - Current and expected future benefit obligations | 241,751 | 257,458 |
| - Projected benefit funding ratio | 5.08% | 9.84% |
| Participant Data | | |
| Active Members | | |
| - Number | 24 | 34 |
| - Projected annual earnings (000s) | 984 | 1,368 |
| - Average projected annual earnings | 41,000 | 40,235 |
| - Average age | 65.6 | 64.3 |
| - Average service | 25.8 | 23.5 |
| Service Retirements | 287 | 287 |
| Survivors | 75 | 80 |
| Disability Retirements | 0 | 0 |
| Deferred Retirements | 70 | 74 |
| Terminated other Non-Vested | 1 | 1 |
| Total | 457 | 476 |

* Expected benefit payments for the fiscal year are \$8,333,000. The Required Contribution also includes amounts intended to pre-fund future benefit payments.

Summary of Valuation Results

Legislative Changes

Effective July 1, 2013, the Elective State Officers Retirement Fund (ESORF) is administratively consolidated with the Legislators Retirement Fund (LRF). This change first affects financial reporting for the fiscal year ending June 30, 2014. Beginning in 2014, the LRF actuarial valuation will include a separate calculation of the ESORF actuarial accrued liabilities. Benefit provisions for both retirement plans are unaffected by the merger.

Valuation of Future Annual Post-Retirement Benefit Increases

A very important assumption affecting the valuation results is the expectation of future annual post-retirement benefit increases, which, by statute, depends on the accrued liability funding ratio of the State Employees Retirement Fund (SERF) instead of this plan which has a 0% funding ratio. If the SERF reaches a funding ratio of 90% (on a market value of assets basis) in the future, post-retirement increases in the Legislators Retirement Fund will revert to the 2.5% level. The SERF's accrued liability funding ratio (on a market value of assets basis and assuming 2.0% post-retirement benefit increases in all future years) is currently 87.8%.

We performed a projection of the SERF's liabilities and assets, using 2013 valuation results as a baseline and assuming future experience follows the valuation assumptions, liabilities and normal cost assume future annual benefit increases at 2.5%, cashflow assumes future annual benefit increases at 2.0%, level normal cost as a percent of pay, and current statutory contribution levels. Our projection indicates the funded status of the SERF is not expected to reach 90% within the next 15 years of the projection. See the SERF 2013 valuation report, dated November 26, 2013, for additional information.

The liabilities in this report are based on the assumption that the post-retirement benefit increase will remain at the reduced level of 2.0% indefinitely. If we assumed future post-retirement benefit increases of 2.5% instead of 2.0%, the actuarial accrued liability would increase by \$16.2 million.

Supplemental Information

The remainder of the report includes information supporting the results presented in the previous sections.

- **Plan assets** presents information about the plan's assets as reported by the Minnesota State Retirement System. The assets represent the portion of total fund liabilities that has been funded.
- **Membership data** presents and describes the membership data used in the valuation.
- **Development of costs** shows the liabilities for plan benefits and the derivation of the contribution amount.
- **Actuarial basis** describes the plan provisions, as well as the methods and assumptions used to value the plan. The valuation is based on the premise that the plan is ongoing.
- **Plan accounting under GASB No. 25 (as amended by GASB No. 50)** shows the disclosures required by GASB Statement No. 25 as amended by GASB Statement No. 50.
- **Glossary** defines the terms used in this report.

Plan Assets

Statement of Fiduciary Net Position *(Dollars in Thousands)*

| Assets | Market Value | |
|--|------------------|------------------|
| | June 30, 2013 | June 30, 2012 |
| Cash, equivalents, short term securities | \$ 1,874 | \$ 1,424 |
| Fixed income | 2,659 | 3,207 |
| Equity | 8,615 | 10,903 |
| Other* | 1,129 | 1,307 |
| Total cash, investments, and other assets | \$ 14,277 | \$ 16,841 |
| Amounts Receivable | 1 | 57 |
| Total Assets | \$ 14,278 | \$ 16,898 |
| Amounts Payable* | (2,785) | (1,375) |
| Net Position Restricted for Pensions | \$ 11,493 | \$ 15,523 |

* Includes \$1,129 in Securities Lending Collateral as of June 30, 2103 and \$1,307 in Securities Lending Collateral as of June 30, 2012.

Plan Assets

Reconciliation of Plan Assets (*Dollars in Thousands*)

The following exhibit shows the revenue, expenses and resulting assets of the Fund as reported by the Minnesota State Retirement System for the prior two fiscal years.

| Change in Assets Year Ending | Market Value | |
|---|------------------|------------------|
| | June 30, 2013 | June 30, 2012 |
| 1. Fund balance at market value at beginning of year | \$ 15,523 | \$ 19,140 |
| 2. Contributions | | |
| a. Member | 111 | 124 |
| b. Employer | 0 | 0 |
| c. Other sources (annual appropriations from state's General Fund) | 3,399 | 3,935 |
| d. Total contributions | <u>\$ 3,510</u> | <u>\$ 4,059</u> |
| 3. Investment income | | |
| a. Investment income/(loss) | 1,783 | 273 |
| b. Investment expenses | <u>(20)</u> | <u>(20)</u> |
| c. Net investment income/(loss) | 1,763 | 253 |
| 4. Other | 0 | 0 |
| 5. Total income: (2.d.) + (3.c.) + (4.) | \$ 5,273 | \$ 4,312 |
| 6. Benefits paid | | |
| a. Annuity benefits | (7,826) | (7,721) |
| b. Refunds | <u>(101)</u> | <u>(172)</u> |
| c. Total benefits paid | <u>(7,927)</u> | <u>(7,893)</u> |
| 7. Expenses | | |
| a. Other | (1,338) | 0 |
| b. Administrative | <u>(38)</u> | <u>(36)</u> |
| c. Total expenses | <u>(1,376)</u> | <u>(36)</u> |
| 8. Total disbursements: (6.c.) + (7.c.) | (9,303) | (7,929) |
| 9. Fund balance at market value at end of year: (1.) + (5.) + (8.) | \$ 11,493 | \$ 15,523 |

Plan Assets

Actuarial Asset Value

The Actuarial Value of Assets (AVA) is equal to the Market Value of Assets (consistent with valuations since July 1, 2000).

Membership Data

Distribution of Active Members

| Age | Years of Service as of June 30, 2013 | | | | | | | | Total | |
|----------------------|--------------------------------------|-------|-------|---------|---------------|---------------|---------------|---------------|---------------|---------------|
| | <3* | 3 - 4 | 5 - 9 | 10 - 14 | 15 - 19 | 20 - 24 | 25 - 29 | 30 - 34 | | 35+ |
| < 25 | | | | | | | | | | |
| Avg. Earnings | | | | | | | | | | |
| 25 - 29 | | | | | | | | | | |
| Avg. Earnings | | | | | | | | | | |
| 30 - 34 | | | | | | | | | | |
| Avg. Earnings | | | | | | | | | | |
| 35 - 39 | | | | | | | | | | |
| Avg. Earnings | | | | | | | | | | |
| 40 - 44 | | | | | | | | | | |
| Avg. Earnings | | | | | | | | | | |
| 45 - 49 | | | | | 1 | | | | | 1 |
| Avg. Earnings | | | | | 43,204 | | | | | 43,204 |
| 50 - 54 | | | | | | | | | | |
| Avg. Earnings | | | | | | | | | | |
| 55 - 59 | | | | | 1 | 3 | 1 | | | 5 |
| Avg. Earnings | | | | | 42,258 | 38,321 | 40,471 | | | 39,538 |
| 60 - 64 | | | | | 2 | | 2 | 1 | | 5 |
| Avg. Earnings | | | | | 42,921 | | 39,637 | 42,149 | | 41,453 |
| 65 - 69 | | | | | 1 | | | 2 | | 3 |
| Avg. Earnings | | | | | 36,070 | | | 39,551 | | 38,390 |
| 70+ | | | | | 2 | 2 | 2 | | 4 | 10 |
| Avg. Earnings | | | | | 36,070 | 36,070 | 39,282 | | 37,657 | 37,347 |
| Total | | | | | 7 | 5 | 5 | 3 | 4 | 24 |
| Avg. Earnings | | | | | 39,931 | 37,420 | 39,661 | 40,417 | 37,657 | 39,033 |

* This exhibit does not reflect service earned in other MSRS or Combined Service Annuity benefits. It should not be relied upon as an indicator of non-vested status.

In each cell, the top number is the count of active participants for the age/service combination and the bottom number is average valuation earnings for the fiscal year ending on the valuation date.

Membership Data

Distribution of Service Retirements

| Age | Years Retired as of June 30, 2013 | | | | | | | Total |
|---------------------|-----------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | <1 | 1 - 4 | 5 - 9 | 10 - 14 | 15 - 19 | 20 - 24 | 25+ | |
| <50 | | | | | | | | |
| Avg. Benefit | | | | | | | | |
| 50 - 54 | | | | | | | | |
| Avg. Benefit | | | | | | | | |
| 55 - 59 | | | | | | | | |
| Avg. Benefit | | | | | | | | |
| 60 - 64 | 7 | 13 | 4 | | | | | 24 |
| Avg. Benefit | 29,696 | 25,730 | 17,010 | | | | | 25,433 |
| 65 - 69 | 3 | 20 | 17 | 11 | | | | 51 |
| Avg. Benefit | 20,691 | 18,498 | 19,295 | 15,101 | | | | 18,160 |
| 70 - 74 | | 10 | 24 | 26 | | | | 60 |
| Avg. Benefit | | 25,616 | 15,589 | 16,800 | | | | 17,785 |
| 75 - 79 | 3 | 2 | 7 | 17 | 29 | | | 58 |
| Avg. Benefit | 32,047 | 22,555 | 18,887 | 24,868 | 26,099 | | | 25,053 |
| 80 - 84 | | 1 | 3 | 11 | 17 | 21 | | 53 |
| Avg. Benefit | | 23,339 | 21,796 | 26,784 | 23,001 | 24,229 | | 24,211 |
| 85 - 89 | | 1 | 1 | 1 | 8 | 9 | 10 | 30 |
| Avg. Benefit | | 11,511 | 31,077 | 32,261 | 37,642 | 27,811 | 20,640 | 27,756 |
| 90+ | | 1 | | | | 1 | 9 | 11 |
| Avg. Benefit | | 27,676 | | | | 14,974 | 32,797 | 30,711 |
| Total | 13 | 48 | 56 | 66 | 54 | 31 | 19 | 287 |
| Avg. Benefit | 28,161 | 22,255 | 17,837 | 20,493 | 26,834 | 24,970 | 26,399 | 22,684 |

In each cell, the top number is the count of retired participants for the age/years retired combination and the bottom number is the average annual benefit amount.

Membership Data

Distribution of Survivors

| Age | Years Since Death as of June 30, 2013 | | | | | | | Total |
|---------------------|---------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | <1 | 1 - 4 | 5 - 9 | 10 - 14 | 15 - 19 | 20 - 24 | 25+ | |
| <45 | | | | | | | | |
| Avg. Benefit | | | | | | | | |
| 45 - 49 | | | | | | | | |
| Avg. Benefit | | | | | | | | |
| 50 - 54 | | 1 | | | | | | 1 |
| Avg. Benefit | | 6,301 | | | | | | 6,301 |
| 55 - 59 | | 1 | 1 | | | | | 2 |
| Avg. Benefit | | 13,097 | 12,705 | | | | | 12,901 |
| 60 - 64 | | | | | 1 | | | 1 |
| Avg. Benefit | | | | | 6,932 | | | 6,932 |
| 65 - 69 | | 2 | 2 | 2 | | | | 6 |
| Avg. Benefit | | 22,109 | 24,294 | 23,818 | | | | 23,407 |
| 70 - 74 | | 4 | 1 | 1 | 2 | 2 | 2 | 12 |
| Avg. Benefit | | 12,472 | 5,833 | 19,953 | 14,703 | 19,559 | 37,235 | 18,222 |
| 75 - 79 | 1 | 3 | 4 | 1 | | 1 | | 10 |
| Avg. Benefit | 15,142 | 25,574 | 16,345 | 7,594 | | 13,484 | | 17,832 |
| 80 - 84 | 1 | 5 | | 2 | 3 | 3 | 1 | 15 |
| Avg. Benefit | 17,296 | 19,360 | | 37,524 | 24,037 | 11,131 | 7,146 | 20,120 |
| 85 - 89 | 3 | 4 | 3 | 1 | 5 | | 2 | 18 |
| Avg. Benefit | 17,659 | 10,155 | 13,874 | 3,957 | 20,833 | | 10,387 | 14,673 |
| 90+ | 1 | 2 | 2 | | 1 | 1 | 3 | 10 |
| Avg. Benefit | 11,034 | 19,862 | 14,536 | | 9,216 | 10,743 | 7,983 | 12,374 |
| Total | 6 | 22 | 13 | 7 | 12 | 7 | 8 | 75 |
| Avg. Benefit | 16,075 | 16,699 | 15,631 | 22,027 | 18,486 | 13,820 | 15,792 | 16,882 |

In each cell, the top number is the count of survivors for the age/years since death combination and the bottom number is the average annual benefit amount.

Membership Data

Reconciliation of Members

| | Terminated | | | Recipients | | | Total |
|-----------------------------|------------|------------|------------|------------|------------|-----------|------------|
| | Actives | Deferred | Other Non- | Service | Disability | Survivor | |
| | | Retirement | Vested | | Retirement | | |
| Members on 7/1/2012 | 34 | 74 | 1 | 287 | 0 | 80 | 476 |
| Additions | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Return to active | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Terminated non-vested | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Service retirements | (6) | (7) | 0 | 13 | 0 | 0 | 0 |
| Terminated deferred | (4) | 4 | 0 | 0 | 0 | 0 | 0 |
| Terminated refund/transfer | 0 | (1) | 0 | 0 | 0 | 0 | (1) |
| Deaths | 0 | 0 | 0 | (13) | 0 | (10) | (23) |
| New beneficiary | 0 | 0 | 0 | 0 | 0 | 5 | 5 |
| Disabled | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Data correction | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Net change | (10) | (4) | 0 | 0 | 0 | (5) | (19) |
| Members on 6/30/2013 | 24 | 70 | 1 | 287 | 0 | 75 | 457 |

| Terminated Member Statistics on June 30, 2013 | Deferred | Other Non- | Total |
|--|------------|------------|----------|
| | Retirement | Vested | |
| Number | 70 | 1 | 71 |
| Average age | 58.2 | 64.3 | 58.3 |
| Average service | 11.9 | 4.0 | 11.8 |
| Average annual benefit, with augmentation to Normal Retirement Date and 30% CSA load | \$28,587 | N/A | \$28,587 |
| Average refund value, with 30% CSA load | \$82,155 | \$38,728 | \$81,543 |

Development of Costs

Actuarial Valuation Balance Sheet (*Dollars in Thousands*)

The actuarial balance sheet is based on the principle that the long-term projected benefit obligations of the plan should be ideally equal to the long-term resources available to fund those obligations. The resources available to meet projected obligations for current members consist of current fund assets plus the present value of anticipated future contributions intended to fund benefits for current members. In the exhibit below, B.2 is the estimated present value of contributions to fund the normal cost rate for current members until their respective termination dates. Since statutory contributions are less than normal cost, B.2. is equal to the statutory contribution rate, minus expenses, times the present value of future payroll and Item B.1 is zero.

The contributions made in excess of amounts required for current benefit payments are accumulated as a reserve to help meet benefit payments in later years. It is this reserve system which permits the establishment of a level rate of contribution each year.

| | | | | <u>June 30, 2013</u> |
|--|-------|------------|--|----------------------|
| A. Actuarial Value of Assets | | | | \$ 11,493 |
| B. Expected Future Assets | | | | |
| 1. Present value of expected future statutory supplemental contributions | | | | 0 |
| 2. Present value of future normal cost contributions | | | | 796 |
| 3. Total expected future assets: (1.) + (2.) | | | | \$ 796 |
| C. Total Current and Expected Future Assets | | | | \$ 12,289 |
| D. Current Benefit Obligations* | | | | |
| 1. Benefit recipients | | | | |
| a. Service retirements | \$ 0 | \$ 131,509 | | \$ 131,509 |
| b. Disability retirements | 0 | 0 | | 0 |
| c. Survivors | 0 | 17,822 | | 17,822 |
| 2. Deferred retirements with augmentation | 0 | 69,932 | | 69,932 |
| 3. Former members without vested rights** | 39 | 0 | | 39 |
| 4. Active members | 0 | 18,763 | | 18,763 |
| 5. Total Current Benefit Obligations | \$ 39 | \$ 238,026 | | \$ 238,065 |
| E. Expected Future Benefit Obligations | | | | \$ 3,686 |
| F. Total Current and Expected Future Benefit Obligations*** | | | | \$ 241,751 |
| G. Unfunded Current Benefit Obligations: (D.5.) - (A.) | | | | \$ 226,572 |
| H. Unfunded Current and Future Benefit Obligations: (F.) - (C.) | | | | \$ 229,462 |
| I. Accrued Benefit Funding Ratio: (A.)/(D.5.) | | | | 4.83% |
| J. Projected Benefit Funding Ratio: (C.)/(F.) | | | | 5.08% |

* Present value of credited projected benefits (projected compensation, current service).

** Former members who have not satisfied vesting requirements and have not collected a refund of member contributions as of the valuation date.

*** Present value of projected benefits (projected compensation, projected service).

Development of Costs

Determination of Unfunded Actuarial Accrued Liability and Supplemental Contribution Rate *(Dollars in Thousands)*

| | Actuarial Present Value of Projected Benefits | Actuarial Present Value of Future Normal Costs | Actuarial Accrued Liability |
|--|---|--|--------------------------------|
| A. Determination of Actuarial Accrued Liability (AAL) | | | |
| 1. Active members | | | |
| a. Retirement annuities | \$ 21,958 | \$ 5,557 | \$ 16,401 |
| b. Disability benefits | 0 | 0 | 0 |
| c. Survivor's benefits | 491 | 184 | 307 |
| d. Deferred retirements | 0 | 117 | (117) |
| e. Refunds* | <u>0</u> | <u>16</u> | <u>(16)</u> |
| f. Total | \$ 22,449 | \$ 5,874 | \$ 16,575 |
| 2. Deferred retirements with future augmentation | 69,932 | 0 | 69,932 |
| 3. Former members without vested rights* | 39 | 0 | 39 |
| 4. Benefit recipients | <u>149,331</u> | <u>0</u> | <u>149,331</u> |
| 5. Total | \$ 241,751 | \$ 5,874 | \$ 235,877 |
| B. Determination of Unfunded Actuarial Accrued Liability (UAAL) | | | |
| 1. Actuarial accrued liability | | | \$ 235,877 |
| 2. Current assets (AVA) | | | <u>11,493</u> |
| 3. Unfunded actuarial accrued liability | | | \$ 224,384 |
| C. Determination of Supplemental Contribution Rate | | | |
| 1. Current unfunded actuarial accrued liability to be amortized by June 30, 2026 | | | \$ 224,384 |
| 2. Supplemental contribution amount | | | \$ 17,260 ** |

* Former members with either six full years of service or service during all or part of four regular legislative sessions that have not collected a refund of member contributions as of the valuation date.

** The amortization factor as of July 1, 2013 is 13.0000.

Development of Costs

Changes in Unfunded Actuarial Accrued Liability (UAAL) (*Dollars in Thousands*)

| | Year Ending June 30, 2013 |
|---|--------------------------------------|
| A. Unfunded actuarial accrued liability at beginning of year | \$ 232,134 |
| B. Changes due to interest requirements and current rate of funding | |
| 1. Normal cost and expenses | 1,758 |
| 2. Contributions | (3,510) |
| 3. Interest on A., B.1. and B.2. | 0 |
| 4. Total (<i>B.1. + B.2. + B.3.</i>) | <u>(1,752)</u> |
| C. Expected unfunded actuarial accrued liability at end of year (<i>A. + B.4.</i>) | 230,382 |
| D. Increase (decrease) due to actuarial losses (gains) because of experience deviations from expected | |
| 1. Age and service retirements | (1,551) |
| 2. Disability retirements | 0 |
| 3. Death-in-service benefits | 23 |
| 4. Withdrawals | (286) |
| 5. Salary increases | 193 |
| 6. Investment income | (387) |
| 7. Mortality of annuitants | (1,030) |
| 8. Other items* | <u>(2,960)</u> |
| 9. Total | (5,998) |
| E. Unfunded actuarial accrued liability at end of year before plan amendments and changes in actuarial assumptions (<i>C. + D.9.</i>) | 224,384 |
| F. Change in unfunded actuarial accrued liability due to changes in plan provisions | 0 |
| G. Change in unfunded actuarial accrued liability due to changes in actuarial assumptions | 0 |
| H. Change in unfunded actuarial accrued liability due to changes in actuarial methods | 0 |
| I. Unfunded actuarial accrued liability at end of year (<i>E. + F. + G. + H.</i>) | \$ 224,384 |

* *Other items include actuarial gains due to a number of changes in benefit amounts for members who were a deferred vested status last year and retired this year. In the prior valuation, many of these benefits were not available and were estimated. Actual benefits provided by MSRS for this valuation were smaller for many members than the estimated benefits used in the 2012 valuation.*

Development of Costs

Determination of Contribution Sufficiency/(Deficiency)*

The required contribution is defined in statutes as the sum of normal cost, a supplemental contribution to amortize the UAAL, and an allowance for expenses.

| | <u>Percent of Payroll</u> | <u>Dollar Amount (000s)</u> |
|--|-------------------------------|---------------------------------|
| A. Statutory Contributions - Chapter 352 | | |
| 1. Employee Contributions | 9.00% | \$ 89 |
| 2. Employer contributions | 0.00% | 0 |
| 3. Total | <u>9.00%</u> | <u>\$ 89</u> |
| B. Required Contributions - Chapter 356 | | |
| 1. Normal cost | | |
| a. Retirement benefits | 122.43% | \$ 1,205 |
| b. Disability benefits | 0.00% | 0 |
| c. Survivors | 4.47% | 44 |
| d. Deferred retirement benefits | 3.59% | 35 |
| e. Refunds | 0.62% | 6 |
| f. Total | <u>131.11%</u> | <u>\$ 1,290</u> |
| 2. Supplemental contribution amortization of Unfunded Actuarial Accrued Liability by June 30, 2026 | | |
| | 1,754.09% | \$ 17,260 |
| 3. Allowance for expenses | | |
| | <u>2.78%</u> | <u>\$ 27</u> |
| 4. Total | 1,887.98% * | \$ 18,577 |
| C. Contribution Sufficiency/(Deficiency) (A.3. - B.4.) | (1,878.98%) | \$ (18,488) |

* Plan is funded by annual appropriations from the state's General Fund. Estimated benefit payments of \$8,333,000 are expected to be paid during the upcoming fiscal year.

Note: Projected annual payroll for fiscal year beginning on the valuation date: \$984.

Actuarial Basis

Actuarial Methods

All actuarial methods are prescribed by Minnesota Statutes, the Legislative Commission on Pensions and Retirement, or the MSRS Board of Directors. Different methodologies may also be reasonable and results based on other methodologies would be different.

Actuarial Cost Method

An actuarial cost method is a set of techniques used by the actuary to develop contribution levels under a retirement plan. The actuarial cost method used in this valuation for all purposes is the Entry Age Actuarial Cost Method. Under this method, a normal cost is developed by amortizing the actuarial value of benefits expected to be received by each active participant (as a level percentage of pay) over the total working lifetime of that participant, from hire to termination. Age as of the valuation date was calculated based on the dates of birth provided by the Fund. Entry age for valuation purposes was calculated as the age on the valuation date minus the provided years of service on the valuation date.

To the extent that current assets and future normal costs do not support participants' expected future benefits, an unfunded actuarial accrued liability ("UAAL") develops. The UAAL is amortized over the statutory amortization period using level dollar. The total contribution developed under this method is the sum of normal cost, expenses, and the payment toward the UAAL.

Decrement Timing

All decrements are assumed to occur mid-fiscal year.

Asset Valuation Method

Market Value (consistent with valuations since July 1, 2000).

Payment on the Unfunded Actuarial Accrued Liability

The unfunded liability is amortized as a level dollar each year to the statutory amortization date of June 30, 2026. If the Unfunded Actuarial Accrued Liability is negative, the surplus amount shall be amortized over 30 years as a level dollar amount. If the unfunded liability increases due to changes in benefits, assumptions, or methods, the statutory amortization date will be re-determined.

Funding Objective

This plan is primarily funded on a pay-as-you-go basis, offset by member contributions and annual appropriations from the state's General Fund.

Changes in Methods since Prior Valuation

None.

Actuarial Basis

Summary of Actuarial Assumptions

The following assumptions were used in valuing the liabilities and benefits under the plan. All actuarial assumptions are prescribed by Minnesota Statutes, the Legislative Commission on Pensions and Retirement (LCPR), or the MSRS Board of Directors. These parties are responsible for selecting the assumptions used for this valuation. The assumptions prescribed are based on the last assumption review, dated January 2012, prepared by a former actuary, and are consistent with the *Alternate Assumptions* used in the 2011 valuation.

The Allowance for Combined Service Annuity was also based on a recommendation by a former actuary. We are unable to judge the reasonableness of this assumption without performing a substantial amount of additional work beyond the scope of the assignment.

| | |
|------------------------------------|--|
| Investment return | 0.00% per annum post-retirement 0.00% per annum pre-retirement |
| Benefit increases after retirement | Payment of 2.00% annual benefit increases after retirement are accounted for explicitly in the projected benefits. This valuation does not reflect potential additional benefit increases payable if the State Employees Retirement Fund's funding ratio exceeds 90%. |
| Salary increases | 5.00% annually. |
| Inflation | 3.00% annually. |
| Mortality rates | |
| Healthy Pre-retirement | RP-2000 employee generational mortality table projected with mortality improvement scale AA, white collar adjustment, set forward three years for males and set back one year for females. |
| Healthy Post-retirement | RP-2000 annuitant generational mortality table projected with mortality improvement scale AA, white collar adjustment. The RP-2000 employee mortality table as published by the Society of Actuaries (SOA) contains mortality rates for ages 15 to 70 and the annuitant mortality table contains mortality rates for ages 50 to 120. We have applied the annuitant mortality table for active members beyond age 70 until the assumed retirement age and the employee mortality table for annuitants younger than age 50. |
| Disabled | N/A |
| Retirement | Members retiring from active status are assumed to retire according to the age related rates shown in the rate table. Members who have attained the highest assumed retirement age are assumed to retire in one year. |
| Withdrawal | Ultimate rates based on actual experience. Rates are shown in rate table. |

Actuarial Basis

Summary of Actuarial Assumptions (Continued)

| | |
|--|---|
| Disability | None. |
| Allowance for combined service annuity | Liabilities for former members are increased by 30.00% to account for the effect of some participants having eligibility for a Combined Service Annuity. |
| Administrative expenses | Prior year administrative expenses expressed as percentage of prior year projected payroll. |
| Refund of contributions | Account balances accumulate interest until normal retirement date and are discounted back to the valuation date. All employees withdrawing after becoming eligible for a deferred benefit take the larger of their contributions accumulated with interest or the value of their deferred benefit. |
| Commencement of deferred benefits | Members receiving deferred annuities (including current terminated deferred members) are assumed to begin receiving benefits at age 62. |
| Percentage married | 85% of active members are assumed to be married. |
| Age of spouse | Females are assumed to be three years younger than their male spouses. |
| Eligible children | Each member may have two dependent children depending on member's age. Assumed first born child born at member's age 28 and second born child at member's age 31. |
| Form of payment | Active married members are assumed to elect 50% joint and survivor annuity. Active single members and deferred members are assumed to elect a life annuity. Unless reported with a joint & survivor option, retired members are assumed to have a spouse that is eligible for the automatic survivor benefit. |
| Eligibility testing | Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur. |
| Decrement operation | Withdrawal decrements do not operate during retirement eligibility. |
| Service credit accruals | It is assumed that members accrue one year of service credit per year. |

Actuarial Basis

Summary of Actuarial Assumptions (Continued)

| | |
|----------------------------------|---|
| Unknown data for certain members | <p>To prepare this report, GRS has used and relied on participant data supplied by the Fund. Although GRS has reviewed the data in accordance with Actuarial Standards of Practice No. 23, GRS has not verified or audited any of the data or information provided.</p> <p>There are no members reported with missing gender or birth dates. In cases where submitted data was missing or incomplete, the following assumptions were applied:</p> <p><u>Data for active members:</u></p> <p>There were no members reported with missing salary or service.</p> <p><u>Data for terminated members:</u></p> <p>There were 13 members reported without a benefit. If available, we calculated benefits for these members using the reported Average Salary, Credited Service and Termination Date. If Average Salary was also not reported (10 members), we assumed a value of \$30,000. If Termination Date was not reported (three members), we assumed the member terminated at age 40 (or current age if younger than 40). There were no members reported without Credited Service.</p> <p><u>Data for members receiving benefits:</u></p> <p>There were no members reported without a benefit.</p> <p>Unless reported with a joint & survivor option, retired members were assumed to have a spouse that is eligible for the automatic survivor benefit. Of the 287 retired members, 109 were reported with a joint & survivor option. Of the remaining 178 members, 81 were reported as a life annuity option but with a spouse benefit. The remaining 97 retired members were reported as a life annuity but were valued as a 50% joint & survivor annuity per MSRS' direction.</p> |
| Changes in actuarial assumptions | None. |

Actuarial Basis

Summary of Actuarial Assumptions (Concluded)

| Age | Rate (%)* | | | |
|-----|----------------------------|--------|-----------------------------|--------|
| | Healthy | | Healthy | |
| | Pre-Retirement Mortality** | Female | Post-Retirement Mortality** | Female |
| 20 | 0.04% | 0.02% | 0.03% | 0.02% |
| 25 | 0.04 | 0.02 | 0.04 | 0.02 |
| 30 | 0.05 | 0.02 | 0.04 | 0.03 |
| 35 | 0.08 | 0.04 | 0.06 | 0.05 |
| 40 | 0.11 | 0.06 | 0.09 | 0.06 |
| 45 | 0.17 | 0.09 | 0.13 | 0.10 |
| 50 | 0.24 | 0.15 | 0.60 | 0.24 |
| 55 | 0.35 | 0.22 | 0.54 | 0.35 |
| 60 | 0.56 | 0.34 | 0.66 | 0.56 |
| 65 | 0.85 | 0.54 | 1.16 | 0.91 |
| 70 | 2.67 | 0.82 | 1.93 | 1.52 |

* Generally, mortality rates are expected to increase as age increases. Due to the combination of pre-retirement rates, post-retirement rates, the white collar adjustment and Projection Scale AA, the prescribed mortality tables have a few ages where assumed mortality decreases slightly instead of increases. We have used the rates prescribed, but note that the prescribed assumption may not be reasonable at every age. If the rates were reasonably adjusted so that they decrease at all ages, we would not expect the valuation results to be materially different.

** These rates were adjusted for mortality improvements using projection scale AA.

| Age | Percent Retiring | Service | Withdrawal | |
|-----|------------------|---------|------------|--------|
| | | | House | Senate |
| 60 | 0.00% | 1 | 0.0% | 0.0% |
| 61 | 0.00 | 2 | 30.0 | 0.0 |
| 62 | 40.00 | 3 | 0.0 | 0.0 |
| 63 | 30.00 | 4 | 20.0 | 25.0 |
| 64 | 30.00 | 5 | 0.0 | 0.0 |
| 65 | 40.00 | 6 | 10.0 | 0.0 |
| 66 | 30.00 | 7 | 0.0 | 0.0 |
| 67 | 25.00 | 8 | 5.0 | 10.0 |
| 68 | 25.00 | 9+ | 0.0 | 0.0 |
| 69 | 25.00 | | | |
| 70 | 30.00 | | | |
| 71+ | 100.00 | | | |

Actuarial Basis

Summary of Plan Provisions

Following is a summary of the major plan provisions used in the valuation of this report. MSRS is solely responsible for the validity, accuracy and comprehensiveness of this information. If any of the plan provisions shown below are not accurate and complete, the valuation results may differ significantly from those shown in this report and may require a revision of this report.

| | |
|----------------------------------|--|
| Plan year | July 1 through June 30. |
| Eligibility | Members of the State Legislature first elected to office before July 1, 1997 and who elect to retain coverage under this plan (i.e., do not elect Social Security coverage). |
| Contributions | |
| Member | 9.00% of salary which must be paid to the state's General Fund. |
| Employer | Plan is funded by annual appropriations from the state's General Fund. Employee contributions are "picked up" according to the provisions of Internal Revenue Code 414(h). |
| Allowable service | Service while in an eligible position. |
| Salary | Compensation received for service as a member of the legislature. Salary includes the monthly compensation paid to a legislator and the per diem payments paid during a regular or special session. Salary does not include additional compensation attributable to a leadership position. |
| Average salary | Average of the five highest successive years of salary. |
| Retirement | |
| <u>Normal retirement benefit</u> | |
| Age/Service requirements | Age 62 and either six full years of service or service during all or part of four regular legislative sessions. For eligibility purposes, service does not include credit for time not served when a member does not serve a full term of office. |
| Amount | A percentage of Average Salary for each year of service as follows: First elected prior to January 1, 1979: (a) 5.00% for the first eight years of service prior to January 1, 1979; and (b) 2.50% for subsequent years. Elected after December 31, 1978: (a) 2.50%. |

Actuarial Basis

Summary of Plan Provisions (Continued)

Retirement (Continued)

Early retirement benefit

Age/service requirements Age 55 and either six full years of Service or Service during all or part of four regular legislative sessions.

Form of Payment Normal retirement benefit based on service and Average Salary at retirement date and actuarially reduced for each month the member is under age 62 assuming augmentation to age 62 at 3.00% per year.

Form of payment

Paid as a 50% joint and survivor annuity to member, spouse and dependent children. Annuitants may elect 100% joint and survivor bounce back annuity, life annuity, or a term certain and life annuity on an actuarially equivalent basis.

Benefit increases

Benefit recipients receive future annual 2.0% benefit increases. When the funding ratio of the State Employees Retirement Fund reaches 90% (on a Market Value of Assets basis), the benefit increase will revert to 2.5%. A benefit recipient who has been receiving a benefit for at least 12 full months as of June 30 will receive a full increase. Members receiving benefits for at least one month but less than 12 full months as of June 30 will receive a pro rata increase.

Disability

No additional benefits provided beyond standard plan. Treated as retirement or termination, depending on age and service at termination.

Death

Surviving spouse benefit

Age/Service requirement Death while active, or after termination if service requirements for a normal retirement benefit is met but payments have not begun.

Amount Survivor payments of 50% of the retirement benefit of the member assuming the member had attained normal retirement age and had a minimum of eight years of service. Benefit is paid for life. A former member's benefit is augmented as a Deferred Annuity to date of death before determining the portion payable to the spouse. If the legislator was at least age 60 at death, the surviving spouse may elect an optional joint and survivor annuity. If a deferred benefit was not eligible to be in pay status before July 1, 1997, an actuarial increase shall be made for the change in the post-retirement interest rates from 5.00% to 6.00%.

Benefit increases Same as for retirement.

Actuarial Basis

Summary of Plan Provisions (Continued)

Death (Continued)

Surviving dependent children's benefit

| | |
|-------------------------|---|
| Age/Service requirement | Same as spouse's benefit. |
| Amount | Benefit for first child is 25.00% of the retirement benefit (computed as for surviving spouse) with 12.50% for each additional child. Maximum payable (including spouse) is 100.00% of the retirement benefit. Benefits cease when a child marries or attains age 18 (22 if a full-time student). |
| Benefit increases | Same as retirement. |

Refund of contributions

| | |
|-------------------------|---|
| Age/Service requirement | Member dies before receiving any retirement benefits and survivor benefits are not payable. |
| Amount | Member's contributions with 6.00% annual interest compounded daily until June 30, 2011, 4.00% thereafter. |

Termination

Refund of contributions

| | |
|-------------------------|---|
| Age/Service requirement | Termination of service. |
| Amount | Member's contributions with 6.00% annual interest compounded daily until June 30, 2011, 4.00% thereafter. If a member is vested, a deferred annuity may be elected in lieu of a refund. |

Deferred benefit

| | |
|-------------------------|---|
| Age/service requirement | Same service requirements as for normal retirement. |
| Amount | Benefit computed under law in effect at termination and increased by the following annual augmentation percentage: <ul style="list-style-type: none"> (a.) 0.00% before July 1, 1973; (b.) 5.00% from July 1, 1973 to January 1, 1981; (c.) 3.00% until the earlier of January 1 of the year following attainment of age 55 and January 1, 2012; (d.) 5.00% until the earlier of January 1, 2012 and when the annuity begins; and (e.) 2.00% from January 1, 2012 forward. <p>Amount is payable at normal or early retirement.</p> <p>For members who terminated prior to July 1, 1997 but were not eligible to commence their pensions before July 1, 1997, the benefit shall be increased to reflect the actuarial equivalent change in post-retirement interest rate from 5.00% to 6.00%.</p> |

Adjustments for benefits not in pay status

Benefits are adjusted on an actuarial equivalent basis to reflect the 1997 change in post-retirement interest rate assumption from 5.0% to 6.0%.

Actuarial Basis

Summary of Plan Provisions (Concluded)

| | |
|---|---|
| Optional form conversion factors | Actuarially equivalent factors based on RP-2000 mortality for healthy annuitants, white collar adjustment, projected to 2025 using Scale AA, blended 55% males, and 6.5% interest. |
| Combined service annuity | <p>Members are eligible for combined service benefits if they:</p> <ul style="list-style-type: none"> (a.) Have sufficient allowable service in total that equals or exceeds the applicable service credit vesting requirement of the retirement plan with the longest applicable service credit vesting requirement; and (b.) Have at least six months of allowable service credit in each plan worked under; and (c.) Are not in receipt of a benefit from another plan, or have applied for benefits with an effective date within one year. <p>Members who meet the above requirements must have their benefit based on the following:</p> <ul style="list-style-type: none"> (a.) Allowable service in all covered plans are combined in order to determine eligibility for early retirement. (b.) Average salary is based on the high five consecutive years during their entire service in all covered plans. |
| Legislative changes | Effective July 1, 2013, the Elective State Officers Retirement Fund (ESORF) is administratively consolidated with the Legislators Retirement Fund (LRF). This change first affects financial reporting for the fiscal year ending June 30, 2014. Beginning in 2014, the LRF actuarial valuation will include a separate calculation of the ESORF actuarial accrued liabilities. Benefit provisions for both retirement plans are unaffected by the merger. |

Plan Accounting Under GASB No. 25 (as amended by GASB No. 50)

Provided below is information required under GASB Statement No. 25 as amended by GASB Statement No. 50 - Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans as amended by GASB Statement No. 50.

Schedule of Funding Progress¹ (Dollars in Thousands)

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Liability (AAL) (b) | Unfunded (Overfunded) AAL (UAAL) (b)-(a) | Funded Ratio (a)/(b) | Actual Covered Payroll (Previous FY) (c) | UAAL as a Percentage of Covered Payroll <u>(b)-(a)</u> (c) |
|--------------------------------|-------------------------------------|-------------------------------------|--|----------------------------|---|---|
| 07/01/1991 | \$ 14,694 | \$ 30,403 | \$ 15,709 | 48.33% | \$ 7,078 | 221.94% |
| 07/01/1992 | 15,160 | 33,224 | 18,064 | 45.63 | 6,556 | 275.53 |
| 07/01/1993 | 17,169 | 36,801 | 19,632 | 46.65 | 7,322 | 268.12 |
| 07/01/1994 | 18,738 | 45,448 | 26,710 | 41.23 | 6,589 | 405.37 |
| 07/01/1995 | 21,213 | 50,255 | 29,042 | 42.21 | 7,056 | 411.59 |
| 07/01/1996 | 22,532 | 54,225 | 31,693 | 41.55 | 6,267 | 505.71 |
| 07/01/1997 | 25,678 | 60,055 | 34,377 | 42.76 | 7,767 | 442.60 |
| 07/01/1998 | 31,212 | 62,928 | 31,716 | 49.60 | 6,802 | 466.27 |
| 07/01/1999 | 33,474 | 66,418 | 32,944 | 50.40 | 7,490 | 439.84 |
| 07/01/2000 | 37,265 | 69,364 | 32,099 | 53.72 | 5,808 | 552.67 |
| 07/01/2001 | 42,608 | 75,072 | 32,464 | 56.76 | 5,858 | 554.18 |
| 07/01/2002 | 45,501 | 78,070 | 32,569 | 58.28 | 5,089 | 639.99 |
| 07/01/2003 ² | - | - | - | - | - | - |
| 07/01/2004 | 46,155 | 83,197 | 37,042 | 55.48 | 3,815 | 970.89 |
| 07/01/2005 | 45,523 | 81,836 | 36,314 | 55.63 | 3,014 | 1,204.84 |
| 07/01/2006 | 48,504 | 81,361 | 32,858 | 59.62 | 2,894 | 1,135.45 |
| 07/01/2007 | 44,869 | 86,449 | 41,580 | 51.90 | 2,380 | 1,747.42 |
| 07/01/2008 | 39,209 | 86,131 | 46,922 | 45.52 | 1,993 | 2,354.34 |
| 07/01/2009 | 28,663 | 90,431 | 61,768 | 31.70 | 1,963 | 3,146.61 |
| 07/01/2010 | 26,821 | 86,236 | 59,415 | 31.10 | 1,877 | 3,165.42 |
| 07/01/2011 ³ | 19,140 | 216,559 | 197,419 | 8.84 | 1,774 | 11,128.47 |
| 07/01/2012 | 15,523 | 247,657 | 232,134 | 6.27 | 1,378 ⁴ | 16,845.72 |
| 07/01/2013 | 11,493 | 235,877 | 224,384 | 4.87 | 1,233 ⁴ | 18,198.22 |

¹ Information prior to 2012 provided by prior actuaries. See prior reports for additional detail.

² An actuarial valuation was not completed as of July 1, 2003.

³ Based on the alternate assumptions, including, an investment return assumption of 0%.

⁴ Assumed equal to actual member contributions divided by 9%.

Plan Accounting Under GASB No. 25 (as amended by GASB No. 50)

Schedule of Contributions from the Employer and Other Contributing Entities¹ (Dollars in Thousands)

The GASB Statement No. 25 required and actual contributions are as follows:

| Plan Year Ended June 30 | Actuarially Required Contribution Rate (a) | Actual Covered Payroll (b) | Actual Member Contributions (c) | Annual Required Contributions [(a)x(b)]-(c)=(d) | Actual Employer Contributions ² (e) | Percentage Contributed (e)/(d) |
|-------------------------------|---|----------------------------------|---------------------------------------|---|--|--------------------------------------|
| 1991 | 32.62 % | \$ 7,078 | \$ 637 | \$ 1,672 | \$ 1,889 | 112.98 % |
| 1992 | 27.67 | 6,556 | 590 | 1,224 | 601 | 49.10 |
| 1993 | 30.49 | 7,322 | 659 | 1,573 | 2,284 | 145.20 |
| 1994 | 32.12 | 6,589 | 593 | 1,457 | 1,618 | 111.05 |
| 1995 | 38.34 | 7,056 | 635 | 2,070 | 2,938 | 141.93 |
| 1996 | 41.54 | 6,267 | 564 | 2,039 | 1,511 | 74.10 |
| 1997 | 43.96 | 7,767 | 699 | 2,715 | 3,176 | 116.98 |
| 1998 | 48.03 | 6,802 | 612 | 2,655 | 5,199 | 195.82 |
| 1999 | 47.19 | 7,490 | 674 | 2,861 | 2,091 | 73.09 |
| 2000 | 52.72 | 5,808 | 523 | 2,539 | 3,192 | 125.72 |
| 2001 | 47.26 | 5,858 | 527 | 2,241 | 5,039 | 224.85 |
| 2002 | 60.14 | 5,089 | 458 | 2,603 | 4,135 | 158.86 |
| 2003 ³ | 63.12 | - | - | - | - | - |
| 2004 | 63.12 | 3,815 | 343 | 2,065 | 425 | 20.58 |
| 2005 | 104.72 | 3,014 | 384 | 2,773 | 1,822 | 65.71 |
| 2006 | 112.64 | 2,894 | 264 | 2,995 | 5,684 | 189.78 |
| 2007 | 111.24 | 2,380 | 239 | 2,408 | 1,772 | 73.59 |
| 2008 | 171.10 | 1,993 | 180 | 3,230 | 2,217 | 68.64 |
| 2009 | 243.21 | 1,963 | 248 | 4,526 | 1,269 | 28.04 |
| 2010 | 413.00 | 1,877 | 170 | 7,582 | 1,975 | 26.05 |
| 2011 | 432.92 | 1,774 | 160 | 7,520 | 2,805 | 37.30 |
| 2012 ⁴ | 1,320.95 | 1,378 ⁵ | 124 | 18,079 | 3,935 | 21.77 |
| 2013 | 1,340.00 | 1,233 ⁵ | 111 | 16,411 | 3,399 | 20.71 |
| 2014 | 1,887.98 | N/A | N/A | N/A | N/A | N/A |

¹ Information prior to 2012 provided by prior actuary. See prior reports for additional detail.

² Includes contributions from other sources (if applicable). Information for 2004 to 2012 provided by MSRS.

³ An actuarial valuation for this fiscal year was not completed.

⁴ Based on the alternate assumptions, including, an investment return assumption of 0%.

⁵ Assumed equal to actual member contributions divided by 9%.

Glossary of Terms

| | |
|---|--|
| <i>Accrued Benefit Funding Ratio</i> | The ratio of assets to Current Benefit Obligations. |
| <i>Accrued Liability Funding Ratio</i> | The ratio of assets to Actuarial Accrued Liability. |
| <i>Actuarial Accrued Liability (AAL)</i> | The difference between the Actuarial Present Value of Future Benefits, and the Actuarial Present Value of Future Normal Costs. |
| <i>Actuarial Assumptions</i> | Assumptions about future plan experience that affect costs or liabilities, such as: mortality, withdrawal, disablement, and retirement; future increases in salary; future rates of investment earnings; future investment and administrative expenses; characteristics of members not specified in the data, such as marital status; characteristics of future members; future elections made by members; and other items. |
| <i>Actuarial Cost Method</i> | A procedure for allocating the Actuarial Present Value of Future Benefits between the Actuarial Present Value of future Normal Costs and the Actuarial Accrued Liability. |
| <i>Actuarial Equivalent</i> | Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions. |
| <i>Actuarial Present Value (APV)</i> | The amount of funds required to provide a payment or series of payments in the future. It is determined by discounting the future payments with an assumed interest rate and with the assumed probability each payment will be made. |
| <i>Actuarial Present Value of Projected Benefits</i> | The Actuarial Present Value of amounts which are expected to be paid at various future times to active members, retired members, beneficiaries receiving benefits, and inactive, non-retired members entitled to either a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due. |
| <i>Actuarial Valuation</i> | The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial Valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB No. 25, such as the Funded Ratio and the Annual Required Contribution (ARC). |
| <i>Actuarial Value of Assets</i> | The value of the assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets or a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the actuarially required contribution (ARC). |

Glossary of Terms (Continued)

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| <i>Amortization Method</i> | A method for determining the Amortization Payment. Under the Level Percentage of Pay method, the Amortization payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. The stream of payments increases at the rate at which total covered payroll of all active members is assumed to increase. |
| <i>Amortization Payment</i> | That portion of the plan contribution or ARC which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability. |
| <i>Amortization Period</i> | The period used in calculating the Amortization Payment. |
| <i>Annual Required Contribution (ARC)</i> | The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation, determined under GASB No. 25. The ARC consists of the Employer Normal Cost and Amortization Payment. |
| <i>Augmentation</i> | Annual increases to deferred benefits. |
| <i>Closed Amortization Period</i> | A specific number of years that is reduced by one each year, and declines to zero with the passage of time. For example if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc. |
| <i>Current Benefit Obligations</i> | The present value of benefits earned to the valuation date, based on current service and including future salary increases to retirement. |
| <i>Employer Normal Cost</i> | The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions. |
| <i>Expected Assets</i> | The present value of anticipated future contributions intended to fund benefits for current members. |
| <i>Experience Gain/Loss</i> | A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two actuarial valuations. To the extent that actual experience differs from that assumed, Unfunded Actuarial Accrued Liabilities emerge which may be larger or smaller than projected. Gains are due to favorable experience, e.g., the assets earn more than projected, salaries do not increase as fast as assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, losses are the result of unfavorable experience, i.e., actual results that produce Unfunded Actuarial Accrued Liabilities which are larger than projected. |

Glossary of Terms (Concluded)

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| <i>GASB</i> | Governmental Accounting Standards Board. |
| <i>GASB No. 25 and GASB No. 27</i> | These are the governmental accounting standards that set the accounting rules for public retirement systems and the employers that sponsor or contribute to them. Statement No. 27 sets the accounting rules for the employers that sponsor or contribute to public retirement systems, while Statement No. 25 sets the rules for the systems themselves. |
| <i>GASB No. 50</i> | The accounting standard governing a state or local governmental employer's accounting for pensions. |
| <i>GASB No. 67 and GASB No. 68</i> | Statements No. 67 and No. 68, issued in June 2012, replace the requirements of Statements No. 25 and No. 27, respectively. Statement No. 68, effective for the fiscal year beginning July 1, 2014, sets the accounting rules for the employers that sponsor or contribute to public retirement systems, while Statement No. 67, effective for the fiscal year beginning July 1, 2013, sets the rules for the systems themselves. Accounting information prepared according to Statements No. 67 and No. 68 will be provided in a separate report beginning July 1, 2014. |
| <i>Normal Cost</i> | The annual cost assigned, under the Actuarial Cost Method, to the current plan year. |
| <i>Projected Benefit Funding Ratio</i> | The ratio of the sum of Actuarial Value of Assets and Expected Assets to the Actuarial Present Value of Projected Benefits. |
| <i>Unfunded Actuarial Accrued Liability</i> | The difference between the Actuarial Accrued Liability and Actuarial Value of Assets. |
| <i>Valuation Date</i> | The date as of which the Actuarial Present Value of Future Benefits is determined. The benefits expected to be paid in the future are discounted to this date. |