# ARKANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM ACTUARIAL VALUATION AND EXPERIENCE GAIN/(LOSS) ANALYSIS 

JUNE 30, 2007

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The Board of Trustees
Arkansas Public Employees Retirement System
Little Rock, Arkansas
Ladies and Gentlemen:

The results of the June 30, 2007 actuarial valuation of the Arkansas Public Employees Retirement System together with the annual gain and loss analysis for the year ended June 30, 2007 are presented in this report. The purpose of the valuation and gain/loss analysis is to measure funding progress and to determine employer contribution rates for the coming year.

The actuarial methods and assumptions used in the actuarial valuation are summarized in Sections D and F of this report. The assumptions are established by the Board after consulting with the actuary.

The valuation was completed using generally accepted actuarial principles in accordance with standards of practice prescribed by the Actuarial Standards Board and in conformance with Title 24 of the Arkansas Code. To the best of our knowledge, this report is complete and accurate and the actuarial methods and assumptions produce results which are reasonable.

The cooperation of the Executive Director and the APERS staff in furnishing the materials required for these valuations is acknowledged with appreciation.

Respectfully submitted,


Norman L. Jones


Mita D. Drazilov


David L. Hoffman

DLH:sew

## SECTION A

VALUATION RESULTS

## Comments

General Financial Objective. Section 24-2-701 of the Arkansas Code provides as follows:
The general financial objective of each Arkansas public employee retirement plan shall be to establish and receive contributions that, expressed as percentages of active member payroll, will remain approximately level from generation to generation of Arkansas citizens. More specifically, contributions received each year shall be sufficient both:
(1) To fully cover the costs of benefit commitments being made to members for their service being rendered in that year; and
(2)(A) To make a level payment that, if paid annually over a reasonable period of future years, will fully cover the unfunded costs of benefit commitments for service previously rendered.
(B) Alternatively, if the costs of benefit commitments for service previously rendered are overfunded, the plan may deduct a level payment that, if deducted annually over a reasonable period of future years, will fully liquidate the overfunded portion of such costs.

Benefit Changes. New Contributory benefits increased from $2.00 \%$ to $2.03 \%$ for service after June 30, 2007. Non-Contributory benefits increased from $1.72 \%$ to $1.75 \%$ for service between July 1, 2005 and June 30, 2007.

APERS Status. Based upon the results of the June 30, 2007 actuarial valuation, APERS continues to satisfy the general financial objective of level contribution financing.

APERS Reserve Strength. As a by-product of achieving level contribution financing, actuarial accrued liabilities usually become more and more funded over a period of years. Funded ratios in the $80 \%$ to $95 \%$ range are common in public sector retirement plans. The reserve strength of APERS remains strong, both by absolute and relative measures, as shown by the Short Condition Test information shown on page A-12.

Employer Contribution Rates. Based upon experience through June 30, 2007 and changes in actuarial methods adopted by the Board in October 2005, the State and Local Government contribution rate will be $11.01 \%$ of covered payroll for the ensuing year.

District Judges. Results for the recently incorporated District Judges are presented in Section E. These results are not included in any of the numbers presented in Sections A, B, C and H.

## Employer Contribution Rates Computed June 30, 2007 Expressed as Percents of Active Member Payroll

| Contribution for | Contributions Expressed as \%'s of Active Payroll and General Assembly Annual \$ |  |
| :---: | :---: | :---: |
|  | State and Local \# | General Assembly |
| Normal Cost: |  |  |
| Age and service annuities (including DROP and reduced retirement) | 9.26\% | \$ 32,097 |
| Separation benefits | 1.83\% | 2,386 |
| Disability benefits | 0.76\% | 1,665 |
| Death-in-service annuities | 0.32\% | 1,304 |
| Total | 12.17\% | \$ 37,452 |
| Member contributions (ultimate) | 5.00\% | 0 |
| Employer Normal Cost | 7.17\% | \$ 37,452 |
| Unfunded Actuarial Accrued Liabilities | 3.84\% * | 1,101,585 * |
| Total Employer Contribution | 11.01\% | \$1,139,037 |

* Unfunded actuarial accrued liabilities were amortized over a 18.0 year period.
\# Included in this total is the Wildlife rate fixed at $22 \%$ of payroll and School rate fixed at $4 \%$ of payroll.


## Summary Statement of System Resources and Obligations YEAR ENDED JUNE 30, 2007

## Present Resources and Expected Future Resources

A. Present Valuation Assets:

1. Net assets from system financial statements

$$
\begin{array}{r}
\$ 5,981,614,449 \\
(484,088,429) \\
\hline 5,497,526,020
\end{array}
$$

2. Market value adjustment
3. Valuation assets
B. Actuarial present value of expected future employer contributions:
4. For normal costs

725,256,205
2. For unfunded actuarial accrued liability
3. Total
C. Actuarial present value of expected future member contributions

505,649,608
D. Total Present and Expected Future Resources
\$7,404,719,415
A. To retirees and beneficiaries:

1. Annual pensions
2. DROP participants: future payments
\$2,285,412,192
3. DROP Reserve: accrued balances
4. Total

605,080,431
96,677,028
2,987,169,651
B. To vested terminated members:

291,909,865
C. To present active members:

1. Allocated to service rendered prior to valuation date - actuarial accrued liability

2,894,734,086
2. Allocated to service likely to be rendered after valuation date
3. Total
D. Total Actuarial Present Value of Expected Future Benefit Payments \$7,404,719,415

# Computed Actuarial LiAbilities and Allocation Using Entry Age Actuarial Cost Method As OF June 30, 2007 

| Actuarial Present Value of | Total <br> Present <br> Value | Portion <br> Covered By <br> Future Normal <br> Cost Contributions | Actuarial Accrued Liabilities $(1)-(2)$ |
| :---: | :---: | :---: | :---: |
| Benefits to be paid to current retirees, beneficiaries, and future beneficiaries of current retirees | \$2,285,412,192 | \$ 0 | \$2,285,412,192 |
| Age and service allowances based on total service likely to be rendered by present active members | 2,578,256,264 | 680,736,925 | 1,897,519,339 |
| DROP paricipant benefits likely to be paid to present active members and current DROP participants. | 1,832,485,933 | 255,858,703 | 1,576,627,230 |
| Separation benefits (refunds of contributions and deferred allowances) likely to be paid to present active and inactive members | 464,814,948 | 185,077,610 | 279,737,338 |
| Disability benefits likely to be paid to present active members | 164,553,494 | 76,865,615 | 87,687,879 |
| Death in service benefits likely to be paid on behalf of present active members | 79,196,584 | 32,366,960 | 46,829,624 |
| Total | \$7,404,719,415 | \$1,230,905,813 | \$6,173,813,602 |
| Applicable Assets (Funding Value) | 5,497,526,020 | 0 | 5,497,526,020 |
| Liabilities to be covered by future Contributions | \$1,907,193,395 | \$1,230,905,813 | \$ 676,287,582 |

# EXPECTED DEVELOPMENT OF PRESENT POPULATION <br> JUNE 30, 2007 

## Closed Group Population Projection



Closed Group Population Projection

$\square$ Retirements $\square$ Non-Vested Separations $\square$ Deaths and Disabilities $\square$ Vested Separations

The charts show the expected future development of the present population in simplified terms. The retirement system presently covers 43,613 active members. Eventually, $16 \%$ of the population is expected to terminate covered employment prior to retirement and forfeit eligibility for an employer provided benefit. About $77 \%$ of the present population is expected to receive monthly retirement benefits either by retiring directly from active service, retiring from DROP, or retiring from vested deferred status. About $7 \%$ of the present population is expected to become eligible for death-inservice or disability benefits. Within 7 years, over half of the covered membership is expected to consist of new hires.

## Recommended Transfers <br> to Fully Fund the Deferred Annuity Accounts and Retirement Reserve Accounts

Each year the actuary recommends transfers to the Deferred Annuity Accounts and the Retirement Reserve Accounts from the Employer Accumulation Accounts. These transfers place in the Deferred Annuity Account and the Retirement Reserve Account sufficient assets to cover the computed liabilities for future deferred annuity payments to present reported inactive members and for future retirement annuities to present retired members.
This year's transfer amounts are given below:

| Division | Employer Accumulation Accounts Before Transfers | Transfers as of July 1, 2007 To: |  | Employer Accumulation Accounts After Transfers |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Deferred Annuity Accounts | Retirement Reserve <br> Accounts |  |
| State | \$2,770,233,984 | \$25,580,563 | \$254,419,203 | \$2,490,234,218 |
| Wildlife | $(21,510,000)$ | 279,580 | 3,665,622 | $(25,455,202)$ |
| Penitentiary | $(310,714)$ | 0 | (23) | $(310,691)$ |
| State Const. Off. | $(765,994)$ | 71,129 | $(258,948)$ | $(578,175)$ |
| Governors | $(4,030,996)$ | 0 | 30,665 | $(4,061,661)$ |
| Quasi-Judicial | $(562,414)$ | 0 | 9,710 | $(572,124)$ |
| State Capitol Pol. | 1,692,604 | 0 |  | 1,692,604 |
| Admin. Off. Courts | 411,700 | 0 |  | 411,700 |
| Total State | 2,745,158,170 | 25,931,272 | 257,866,229 | 2,461,360,669 |
| Gen. Assembly | $(6,659,756)$ | $(126,117)$ | $(3,145,946)$ | $(3,387,693)$ |
| County | 500,562,889 | 8,818,799 | 55,723,871 | 436,020,219 |
| County Const. Off. | $(87,826)$ | 0 | $(95,129)$ | 7,303 |
| Total County | 500,475,063 | 8,818,799 | 55,628,742 | 436,027,522 |
| Municipal | 244,885,131 | 4,153,726 | 19,910,461 | 220,820,944 |
| School | 167,756,430 | 458,261 | 10,943,910 | 156,354,259 |
| Non-State | 5,357,411 | 115,978 | 168,835 | 5,072,598 |
| Total | \$3,656,972,449 | \$39,351,919 | \$341,372,231 | \$3,276,248,299 |

## Valuation Results <br> COMPARATIVE STATEMENT (\$ MILLIONS)

| Valuation <br> Date June 30, | Actuarial <br> Accrued <br> Liabilities <br> \& Reserves | Valuation Assets |  | Unfunded Actuarial Accrued Liabilities \& Reserves |  |  | Contribution Rate Computed Percents |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Dollars | Amortiz. Period * | $\%$ of Payroll | General <br> Assembly | State \& Local** |
| 1998 @\# | \$2,921 | \$ 3,297 | 112.9 \% | \$(376) | 30 | (41) \% |  | 10.00 \% |
| 1999 @ | 3,479 | 3,712 | 106.7 | (233) | 30 | (23) | 98.05 \% | 10.00 |
| 2000 | 3,803 | 4,121 | 108.4 | (318) | 30 | (32) |  | 10.00 |
| 2001 @ | 4,111 | 4,342 | 105.6 | (231) | 50 | (22) | 148.78 | 10.00 |
| 2002 \# | 4,398 | 4,404 | 100.1 | (6) | 6 | (1) | 150.95 | 10.00 |
| 2003 \# | 4,674 | 4,416 | 94.5 | 258 | 30 | 22 | 222.80 | 11.09 |
| 2004 | 5,005 | 4,438 | 88.7 | 567 | 30 | 48 | 201.39 | 12.54 |
| 2005 @\# | 5,619 | 4,584 | 81.6 | 1,035 | 22 | 85 | 459.47 | 12.54 |
| 2006 | 5,936 | 4,949 | 83.4 | 987 | 19 | 78 | 464.67 | 12.54 |
| 2007 | 6,173 | 5,498 | 89.1 | 675 | 18 | 52 | 410.58 | 10.88 |
| 2007 @ | 6,174 | 5,498 | 89.1 | 676 | 18 | 52 | 410.58 | 11.01 |

* Amortization period is for State division prior to 2001, State and Local division for 2001 and later. General Assembly unfunded actuarial accrued liabilities are amortized over a 30-year period.
** Local Government rate was 6.00\% for the 1998 valuation, $7.00 \%$ for the 1999 valuation, and $8.00 \%$ for the 2000 valuation.
@ After legislated changes in benefit provisions
\# After changes in actuarial assumptions.


## Active Members and Retired Lives Historical Comparative Schedule

| ValuationDate | No. | Active Members |  |  | Retired Lives |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | No. | Active per Retired | Annual Benefits |  |
|  |  | Valuation Payroll |  |  |  |  |  | As a \% |
|  |  | \$ Millions | Average | \% Incr. |  |  | \$ Millions | of Pay |
| 6/30/84 | * | * | * | * | 7,036 | * | \$ 19.1 | 4.4\% |
| 6/30/85 | * | * | * | * | 7,331 | * | 22.0 | 4.8\% |
| 6/30/86 | * | * | * | * | 7,649 | * | 24.1 | 4.9\% |
| 6/30/87 | * | * | * | * | 8,074 | * | 30.2 | 6.0\% |
| 6/30/88 | * | * | * | * | 9,155 | * | 39.6 | 7.5\% |
| 6/30/89 | * | * | * | * | 9,418 | * | 42.9 | 7.6\% |
| 6/30/90 | * | * | * | * | 9,747 | * | 44.9 | 7.4\% |
| 6/30/91 | * | * | * | * | 10,110 | * | 49.2 | 7.6\% |
| 6/30/92 | 39,752 | \$ 698.2 | \$ 17,564 | NA | 10,456 | 3.8 | 51.9 | 7.4\% |
| 6/30/93 | 39,849 | 733.4 | 18,404 | 4.8\% | 10,840 | 3.7 | 56.8 | 7.7\% |
| 6/30/94 | 40,940 | 778.7 | 19,021 | 3.3\% | 11,213 | 3.7 | 60.7 | 7.8\% |
| 6/30/95 | 42,041 | 834.5 | 19,850 | 4.4\% | 11,683 | 3.6 | 70.1 | 8.4\% |
| 6/30/96 | 42,712 | 889.3 | 20,821 | 4.9\% | 12,073 | 3.5 | 76.2 | 8.6\% |
| 6/30/97 | 43,068 | 938.5 | 21,791 | 4.7\% | 12,644 | 3.4 | 84.8 | 9.0\% |
| 6/30/98 | 43,047 | 974.7 | 22,644 | 3.9\% | 13,480 | 3.2 | 94.6 | 9.7\% |
| 6/30/99 | 43,064 | 1,008.9 | 23,427 | 3.5\% | 14,688 | 2.9 | 119.3 | 11.8\% |
| 6/30/00 | 43,121 | 1,050.0 | 24,351 | 3.9\% | 15,544 | 2.8 | 133.6 | 12.7\% |
| 6/30/01 | 42,556 | 1,070.1 | 25,146 | 3.3\% | 16,643 | 2.6 | 150.0 | 14.0\% |
| 6/30/02 | 42,230 | 1,111.5 | 26,320 | 4.7\% | 17,748 | 2.4 | 167.6 | 15.1\% |
| 6/30/03 | 42,879 | 1,147.9 | 26,772 | 1.7\% | 18,838 | 2.3 | 186.0 | 16.2\% |
| 6/30/04 | 42,826 | 1,175.8 | 27,455 | 2.6\% | 19,872 | 2.2 | 203.4 | 17.3\% |
| 6/30/05 | 42,938 | 1,214.9 | 28,295 | 3.1\% | 21,080 | 2.0 | 232.9 | 19.2\% |
| 6/30/06 | 43,453 | 1,267.1 | 29,159 | 3.1\% | 22,234 | 2.0 | 254.7 | 20.1\% |
| 6/30/07 | 43,630 | 1,302.6 | 29,855 | 2.4\% | 22,409 | 1.9 | 274.8 | 21.1\% |

## Actuarial Accrued Liabilities \& Assets





## Short Condition Test

The APERS funding objective is to meet long-term benefit promises through contributions that remain approximately level from year to year as a percent of member payroll. If the contributions to the System are level in concept and soundly executed, the System will pay all promised benefits when due -- the ultimate test of financial soundness. Testing for level contribution rates is the long-term condition test.

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

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

In a system that has been following the discipline of level percent of payroll financing, the liabilities for active member contributions on deposit (liability 1) and the liabilities for future benefits to present retired lives (liability 2) will be fully covered by present assets (except in unusual circumstances). In addition, the liabilities for service already rendered by active members (liability 3) will be partially covered by the remainder of present assets. The larger the funded portion of liability 3, the stronger the condition of the System. Liability 3 being fully funded is uncommon.

# Short Condition Tests 10-YEAR COMPARATIVE STATEMENT (\$ IN MilliONS) 

| Val'n. <br> Date: <br> June 30 | Entry Age Accrued Liability |  |  | Valuation Assets | Portion of Present Values Covered by Present Assets |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (1) <br> Active <br> Member <br> Contr. | (2) <br> Retirees and Benef. | (3) <br> Active Members (Employer Financed Portion) |  |  |  |  |  |
|  |  |  |  |  | (1) | (2) | (3) | Total |
| STATE DIVISION (including sub-divisions) |  |  |  |  |  |  |  |  |
| 1998@ | \$17.2 | \$ 640.3 | \$1,395.9 | \$2,328.5 | 100\% | 100\% | 119\% | 113\% |
| 1999@\# | 16.9 | 784.0 | 1,634.2 | 2,637.1 | 100\% | 100\% | 112\% | 108\% |
| 2000 | 15.8 | 747.5 | 1,865.7 | 2,943.3 | 100\% | 100\% | 117\% | 112\% |
| LOCAL GOVERNMENT DIVISION |  |  |  |  |  |  |  |  |
| 1998@ | \$ 8.8 | \$ 337.9 | \$ 501.1 | \$ 968.1 | 100\% | 100\% | 124\% | 114\% |
| 1999\# | 8.8 | 446.9 | 587.9 | 1,074.7 | 100\% | 100\% | 105\% | 103\% |
| 2000 | 7.6 | 440.0 | 706.0 | 1,178.1 | 100\% | 100\% | 103\% | 102\% |

## STATE AND LOCAL GOVERNMENT DIVISION

| 2001\# | $\$ 23.4$ | $\$ 1,305.0$ | $\$ 2,759.2$ | $\$ 4,335.5$ | $100 \%$ | $100 \%$ | $109 \%$ | $106 \%$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 2002@ | 20.5 | $1,502.7$ | $2,850.8$ | $4,397.2$ | $100 \%$ | $100 \%$ | $101 \%$ | $101 \%$ |
| 2003@ | 20.5 | $1,624.7$ | $3,004.7$ | $4,408.3$ | $100 \%$ | $100 \%$ | $92 \%$ | $95 \%$ |
| 2004 | 20.5 | $1,762.2$ | $3,197.6$ | $4,429.9$ | $100 \%$ | $100 \%$ | $83 \%$ | $89 \%$ |
| $2005 @$ | 15.5 | $1,878.2$ | $3,701.7$ | $4,576.1$ | $100 \%$ | $100 \%$ | $72 \%$ | $82 \%$ |
| 2006 | 15.5 | $1,990.6$ | $3,907.3$ | $4,941.1$ | $100 \%$ | $100 \%$ | $75 \%$ | $84 \%$ |
| 2007 | 29.7 | $2,268.5$ | $3,855.4$ | $5,489.3$ | $100 \%$ | $100 \%$ | $83 \%$ | $89 \%$ |
| 2007\# | 29.7 | $2,268.5$ | $3,856.7$ | $5,489.3$ | $100 \%$ | $100 \%$ | $83 \%$ | $89 \%$ |

\# After legislated changes in benefit provisions.
@ After changes in financial assumptions.

## SECTION B

## VALUATION DATA

# Summary of Provisions Evaluated (Excludes Special Provisions for General Assembly) (LAST CHANGED AS OF 7/1/2007) 

The Old Contributory Plan is available to persons who became members of APERS before January l, 1978. The Non-Contributory Plan applies to all persons first hired after January l, 1978 and before July 1, 2005 in APERS-covered employment. The New Contributory Plan applies to all persons hired after July 1, 2005 in APERS-covered employment or Non-Contributory members who elect to participate in the New Contributory Plan before January 1, 2005.

New Contributory Plan
Non-Contributory Plan

## Voluntary Retirement

With a full benefit, after either (a) age 65 with 5 years of service, or (b) 28 years of actual service, regardless of age. For sheriff and public safety members, the age 65 requirement is reduced 1 month for each 2 months of actual service, but not below age 55 (age 52 for sheriff members with a minimum of 10 years of actual service).

With a reduced benefit, after age 55 with 5 years of service or any age with 28 years of service. The reduction is equal to $1 / 2$ of $1 \%$ for each month retirement precedes normal retirement age.

With a full benefit, after either (a) age 65 with 5 years of service, or (b) 28 years of actual service, regardless of age. For sheriff and public safety members, the age 65 requirement is reduced 1 month for each 2 months of actual service, but not below age 55 (age 52 for sheriff members with a minimum of 10 years of actual service).

With a reduced benefit, after age 55 with 5 years of service or any age with 28 years of service. The reduction is equal to $1 / 2$ of $1 \%$ for each month retirement precedes normal retirement age.

## Final Average Compensation (FAC)

Average of highest 36 calendar months of covered compensation.

Average of highest 36 calendar months of covered compensation.

Full Age \& Service Retirement Benefit
$2.03 \%$ of FAC times years of service $(2.00 \%$ for service prior to July 1, 2007).
$1.72 \%$ of FAC times years and months of credited service ( $1.75 \%$ for service prior to July 1, 2007). If retirement is prior to age 62, an additional $.33 \%$ of FAC times years of service will be paid until age 62. The portion of the APERS benefit based on service before 1978 cannot be less than the amount provided by contributory provisions in effect at the time of retirement. The minimum monthly benefit is $\$ 150$ minus any age and beneficiary option reductions.

## Benefit Increases After Retirement

Annually, there will be a cost-of-living adjustment equal to $3 \%$ of the current benefit.

Annually, there will be a cost-of-living adjustment equal to $3 \%$ of the current benefit.

## Member Contribution Rates

5\% of covered compensation. Member contributions are refundable if APERS-covered employment terminates before a monthly benefit is payable (if contributions were for 5 or more years, interest credits are included in the refund). Members will earn interest on the contributions at a rate of $4 \%$ annually.

No employee contributions for service after January 1, 1978. If there is service before January 1, 1978, contributions for that period are refundable later in the same manner as under the Contributory Plan.

## Vested Retirement Benefits

5 years service, and leaving APERS-covered employment before full retirement age. Deferred full retirement benefit, based on service and pay at termination, begins at age 65. A death benefit is payable to surviving spouse of member who dies before benefit commencement.

In place of deferred full benefit, at age 55 or older a qualifying member can elect an immediate reduced benefit equal to full amount reduced by $1 / 2$ of $1 \%$ for each month of difference in benefit beginning ages.

5 years service, and leaving APERS-covered employment before full retirement age. Deferred full retirement benefit, based on service and pay at termination, begins at age 65. A death benefit is payable to surviving spouse of member who dies before benefit commencement.

In place of deferred full benefit, at age 55 or older a qualifying member can elect an immediate reduced benefit equal to full amount reduced by $1 / 2$ of $1 \%$ for each month of difference in benefit beginning ages.

## Total and Permanent Disability

Disabled after 5 years service, including credit for 18 of the 24 months preceding disability.

Amount is computed as an age \& service benefit, based on service and pay at disability.

Disabled after 5 years service, including credit for 18 of the 24 months preceding disability.

Amount is computed as an age \& service benefit, based on service and compensation at disability.

## Death After Retirement

If death occurs before total monthly benefit payments equal member's accumulated contributions, the difference is refunded.

A retiring member can also elect an optional form of benefit, which provides beneficiary protection paid for by reducing the retired member's benefit amount. Should the member elect a straight life benefit and decease within 12 months of the date of retirement, a benefit may be payable to the surviving spouse under certain conditions.

Member contributions before 1978 are protected in the same manner as under the Contributory Plan.

A retiring member can also elect an optional form of benefit, which provides beneficiary protection paid for by reducing the retired member's benefit amount. Should the member elect a straight life benefit and decease within 12 months of the date of retirement, a benefit may be payable to the surviving spouse under certain conditions.

## Death While In APERS-Covered Employment

Member's accumulated contributions are refundable.

If the member had 5 years service, monthly benefits are payable instead. Surviving spouse receives a benefit computed as if member had retired and elected the Joint \& 75\% Survivor Option. Payment begins immediately.

Each dependent child receives benefit of $10 \%$ of compensation (maximum of $25 \%$ for all children).

Dependent parents benefits are payable if neither spouse nor children's benefits are payable.

Member's accumulated contributions before 1978 are refundable.

If the member had 5 years service, monthly benefits are payable instead. Surviving spouse receives a benefit computed as if member had retired and elected the Joint \& 75\% Survivor Option. Payment begins immediately.

Each dependent child receives benefit of $10 \%$ of compensation (maximum of $25 \%$ for all children).

Dependent parents benefits are payable if neither spouse nor children's benefits are payable.

## Summary of Provisions Evaluated CREDITED SERVICE

## Membership Group

 Service CreditsPublic Safety Members (including State 1-1/2 times regular rate with 5 years actual service Capitol Police and Wildlife Sub-Division required to meet benefit eligibility rules. members) hired before July 1, 1997.

| Governor | 3 times regular rate with 5 years actual service <br> required to meet death-in-service eligibility and 4 <br> years actual service required for other benefit <br> eligibility. |
| :--- | :--- |
| Elected State Constitutional Officers | $2-1 / 2$ times regular rate with 5 years actual service <br> required to meet benefit eligibility. |
| General Assembly | Regular crediting rate with 5 years of actual service <br> required to meet death-in-service eligibility and 10 <br> years of actual service required for other benefit |
| Other Elected Public Officials | eligibility. |
| 2 times regular rate with 5 years actual service <br> required to meet benefit eligibility. |  |

All Other Members

Regular rate.

## Arkansas Public Employees Deferred Retirement Option Plan

Members with 28 years of actual service in APERS or in combination with a reciprocal system are eligible to participate.

Members, for a maximum of 7 years, may continue employment and have $75 \%$ of their accrued benefit (at date of participation with 30 or more years of service) paid into the Deferred Retirement Option Plan in lieu of any further benefit accruals.

The payments into the Deferred Retirement Option Plan accumulate with interest at 6\% on the mean balance and are paid to the member at termination of active membership in either a lump sum or as an annuity.

# Summary of Provisions Evaluated <br> GENERAL ASSEMBLY SUb-DIVISION Additional Benefit Provisions 

## Voluntary Retirement Eligibility

Age 65 with 10 or more years of credited service, 28 years of actual service regardless of age, or age 55 with 12 or more years of actual service, 10 of which must be as a member of the General Assembly. In addition, a member of the general Assembly who was a member of the General Assembly on July 1, 1979, or holding any other Arkansas elective office on July 1, 1979, is eligible to retire with 17.5 years of actual service regardless of age.

## Vesting

Termination of employment prior to normal retirement age after completing 10 or more years of credited service.

## RETIREMENT BENEFIT

$\$ 35.00$ per month times years of General Assembly service. The amount is $\$ 40.00$ per month per year of service for any member who served as Speaker of the House of Representatives or President Pro Tempore of the Senate.

## DISABILITY

Eligibility: 10 years of credited service.
Amount: Accrued retirement benefit.

## DEATH-IN-SERVICE

Eligibility: 5 years of service.
Amount - Less than 10 years in General Assembly: Same as for regular members.
Amount - 10 or more years in General Assembly: 100\% of the benefit the member would have been entitled to had he or she been at retirement age payable to an eligible surviving spouse.

## DEATH-AFTER-RETIREMENT

$100 \%$ of the benefit the member was receiving payable to an eligible surviving spouse.

## PARTICIPATION

A member of the General Assembly may, at any time, elect either (i) to be covered by regular benefit provisions, or (ii) to discontinue an APERS membership.

| Year Ended June 30 | Increase <br> Beginning of Year | Benefit <br> Dollars <br> In Year | $\begin{aligned} & \hline \hline \text { Inflation } \\ & \text { (Loss) } \\ & \text { In Year\# } \\ & \hline \end{aligned}$ | Purchasing Power <br> At Year End |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1985 \$ | \% of 1985 |
| 1985 | -- | \$ 8,000 | (3.7)\% | \$8,000 | 100\% |
| 1986 | \$ 240 | 8,240 | (1.7)\% | 8,102 | 101\% |
| 1987 | 240 | 8,480 | (3.7)\% | 8,041 | 101\% |
| 1988 | 240 | 8,720 | (3.9)\% | 7,958 | 99\% |
| 1989 | 240 | 8,960 | (5.1)\% | 7,780 | 97\% |
| 1990 | 240 | 9,200 | (4.7)\% | 7,630 | 95\% |
| 1991 | 240 | 9,440 | (4.7)\% | 7,478 | 93\% |
| 1992 | 661 | 10,101 | (3.1)\% | 7,761 | 97\% |
| 1993 | 303 | 10,404 | (3.0)\% | 7,761 | 97\% |
| 1994 | 584 | 10,988 | (2.5)\% | 7,996 | 100\% |
| 1995 | 275 | 11,263 | (3.0)\% | 7,958 | 99\% |
| 1996 | 1,064 | 12,327 | (2.8)\% | 8,472 | 106\% |
| 1997 | 345 | 12,672 | (3.0)\% | 8,506 | 106\% |
| 1998 | 760 | 13,432 | (2.3)\% | 8,761 | 110\% |
| 1999 | 309 | 13,741 | (1.7)\% | 8,896 | 111\% |
| 2000 | 990 | 14,731 | (3.7)\% | 9,194 | 115\% |
| 2001 | 442 | 15,173 | (3.2)\% | 9,172 | 115\% |
| 2002 | 713 | 15,886 | (1.1)\% | 9,502 | 119\% |
| 2003 | 477 | 16,363 | (2.1)\% | 9,586 | 120\% |
| 2004 | 491 | 16,854 | (3.0)\% | 9,586 | 120\% |
| 2005 | 506 | 17,360 | (3.2)\% | 9,570 | 120\% |
| 2006 | 521 | 17,881 | (4.1)\% | 9,465 | 118\% |
| 2007 | 715 | 18,596 | (2.4)\% | 9,617 | 120\% |
| 2008 | 558 | 19,154 |  |  |  |

[^0]
## REVENUES AND EXPENDITURES <br> JULY 1, 2006 THROUGH JUNE 30, 2007 MARKET VALUE (\$ IN MILLIONS)

|  | Division |  | Totals |
| :---: | :---: | :---: | :---: |
|  | State and Local Gov't. | General <br> Assembly |  |
| Balance 7/1/2006 | \$5,127.3 | \$8.2 | \$5,135.5 |
| Revenues <br> Member contr. <br> Employer contr. <br> Transfers <br> Other <br> Investment ret.* <br> Total |  |  |  |
|  | 12.1 | 0.0 | 12.1 |
|  | 161.8 | 1.4 | 163.2 |
|  | 6.4 | 0.0 | 6.4 |
|  | 2.5 | (0.0) | 2.5 |
|  | 910.0 | 1.4 | 911.4 |
|  | 1,092.8 | 2.8 | 1,095.6 |
| Expenditures <br> Benefits paid <br> Expenses <br> Total |  |  |  |
|  | 242.7 | 2.1 | 244.8 |
|  | 4.7 | 0.0 | 4.7 |
|  | 247.4 | 2.1 | 249.5 |
| Balance 6/30/2007 | \$5,972.7 | \$8.9 | \$5,981.6 |

* Net of investment expenses.

Note: Results may not total due to rounding.

# State \& Local Government Division (ExCLUDING GENERAL AsSEMBLY) Reported Accrued Assets Available for Benefits June 30, 2007 

| Retirement System Account | Reported Assets <br> June 30, 2007 |  |
| :--- | ---: | ---: |
| Employer Accumulation Account | $\$ 3,279,635,992 \quad *$ |  |
| Members Deposit Account | $29,720,597$ |  |
| Members Deposit Interest Reserve | $1,448,358$ |  |
| Retirement Reserve Account | $2,268,524,880 \quad *$ |  |
| Deferred Annuity Reserve Account | $290,921,065$ | $*$ |
| DROP Reserve | $96,677,028$ |  |
| Miscellaneous Reserves | 179,655 |  |
| Total Market Value | $5,967,107,575$ |  |
| Funding Value of Assets | $5,489,340,379$ |  |
|  |  |  |
| Valuation Asset Adjustment | $(477,767,196)$ |  |
| Adjusted Employer Accum. Account | $\$ 2,801,868,796$ |  |

* After recommended reserve transfers (see page A-6).

The Employers Accumulation Account represents employer contributions accumulated for benefits on behalf of present members.

The Members Deposit Account represents member contributions accumulated for (1) monthly benefits at retirement, and (2) refunds upon termination if monthly benefits are not payable.

The Members Deposit Interest Reserve represents interest credited on member contributions.

The Retirement Reserve Account represents reserves, from employer and member contributions, held for the monthly benefits being paid to present retired lives.

The Deferred Annuity Account represents employer reserves held for future monthly benefits to present inactive members.

## GENERAL Assembly Sub-Division <br> Reported Assets Applicable to Active Member Liabilities Members Deposit Account \& Employers Accumulation Account

The balances at June 30, 2007 were reported to be as follows:

| Retirement System Account | Reported Assets <br> June 30, 2007 |
| :---: | :---: |
| Employer Accumulation Account | \$ (3,387,693) * |
| Members Deposit Account | 23,312 |
| Members Deposit Interest Reserve | $(4,858)$ |
| Retirement Reserve Account | 16,887,313 * |
| Deferred Annuity Reserve Account | 988,800 * |
| DROP Reserve | 0 |
| Total Market Value | 14,506,874 |
| Funding Value of Assets | 8,185,641 |
| Valuation Asset Adjustment | $(6,321,233)$ |
| Adjusted Employer Accum. Account | \$ (9,708,926) |

* After recommended reserve transfers (see page A-6).

In financing the liabilities, the above Fund balances were applied to the actuarial accrued liabilities.

## Development of Funding Value of Assets

| Valuation Date June 30: |  | 2005 |  | 2006 |  | 2007 |  | 2008 |  | 2009 |  | 2010 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A. Funding Value Beginning of Year | \$ | 4,437,986,672 | \$ | 4,583,932,326 | \$ | 4,949,014,050 |  |  |  |  |  |  |
| B. Market Value End of Year |  | 4,640,777,983 |  | 5,135,503,145 |  | 5,981,614,449 |  |  |  |  |  |  |
| C. Market Value Beginning of Year |  | 4,306,846,042 |  | 4,640,777,983 |  | 5,135,503,145 |  |  |  |  |  |  |
| D. Non-Investment Net Cash Flow |  | $(63,185,663)$ |  | $(46,328,850)$ |  | $(60,565,732)$ |  |  |  |  |  |  |
| E. Investment Income |  |  |  |  |  |  |  |  |  |  |  |  |
| E1. Market Total: B - - D |  | 397,117,604 |  | 541,054,012 |  | 906,677,036 |  |  |  |  |  |  |
| E2. Assumed Rate |  | 8.00\% |  | 8.00\% |  | 8.00\% |  |  |  |  |  |  |
| E3. Amount for Immediate Recognition |  | 352,543,923 |  | 364,885,200 |  | 393,529,566 |  |  |  |  |  |  |
| E4. Amount for Phased-In Recognition |  | 44,573,681 |  | 176,168,812 |  | 513,147,470 |  |  |  |  |  |  |
| F. Phased-In Recognition of Investment Income |  |  |  |  |  |  |  |  |  |  |  |  |
| F1. Current Year: $0.25 \times$ E4 |  | 11,143,420 |  | 44,042,203 |  | 128,286,868 |  |  |  |  |  |  |
| F2. First Prior Year |  | 32,075,647 |  | 11,143,420 |  | 44,042,203 | \$ | 128,286,868 |  |  |  |  |
| F3. Second Prior Year |  | $(40,735,898)$ |  | 32,075,647 |  | 11,143,420 |  | 44,042,203 | \$ | 128,286,868 |  |  |
| F4. Third Prior Year |  | $(145,895,775)$ |  | $(40,735,896)$ |  | 32,075,645 |  | 11,143,421 |  | 44,042,203 | \$ | 128,286,866 |
| F5. Total Recognized Investment Gain |  | $(143,412,606)$ |  | 46,525,374 |  | 215,548,136 |  | 183,472,492 |  | 172,329,071 |  | 128,286,866 |
| G. Funding Value End of Year: |  |  |  |  |  |  |  |  |  |  |  |  |
| A + D + E3 + F5 | \$ | 4,583,932,326 | \$ | 4,949,014,050 | \$ | 5,497,526,020 |  |  |  |  |  |  |
| H. Difference Between Market \& Funding Value |  | 56,845,657 |  | 186,489,095 |  | 484,088,429 |  |  |  |  |  |  |
| I. Recognized Rate of Return |  | 4.7\% |  | 9.0\% |  | 12.4\% |  |  |  |  |  |  |
| J. Market Rate of Return |  | 9.3\% |  | 11.7\% |  | 17.8\% |  |  |  |  |  |  |
| K. Ratio of Funding Value to Market Value |  | 99\% |  | 96\% |  | 92\% |  |  |  |  |  |  |

The Funding Value of Assets recognizes assumed investment return (line E3) fully each year. Differences between actual and assumed investment return (Line E4) are phased-in over a closed 4-year period. During periods when investment performance exceeds the assumed rate, Funding Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Funding Value of Assets will tend to be greater than market value. If assumed rates are exactly realized for 3 consecutive years, funding value will become equal to market value.

## SUMMARY OF ANNUITANTS ON ROLLS

Retirees and beneficiaries (including DROP participants) on rolls included in the valuation totaled 22,409, involving monthly annuities of $\$ 274,846,872$, distributed as follows:

|  |  |  |  |
| :--- | ---: | ---: | ---: |
| Division | Number | Monthly | Annualized |
| State \& Local | 20,511 | $\$ 18,555,922$ | $\$ 222,671,064$ |
| General Assembly | 121 | 145,407 | $1,744,884$ |
| Governor | 4 | 7,850 | 94,200 |
| Wildlife | 72 | 192,696 | $2,312,352$ |
| State Constitutional Officers | 1 | 3,286 | 39,432 |
| Penitentiary | 0 | 0 | 0 |
| Sub-total | $\mathbf{2 0 , 7 0 9}$ | $\mathbf{1 8 , 9 0 5 , 1 6 1}$ | $\mathbf{2 2 6 , 8 6 1 , 9 3 2}$ |
|  |  |  |  |
|  | $\mathbf{3 , 7 0 0}$ | $3,998,745$ | $47,984,940$ |
| Dotals | $\mathbf{2 2 , 4 0 9}$ | $\mathbf{\$ 2 2 , 9 0 3 , 9 0 6}$ | $\$ \mathbf{2 7 4 , 8 4 6 , 8 7 2}$ |

Inactive members, entitled to deferred annuities, included in the valuation totaled 11,674, involving estimated deferred monthly annuities of $\$ 4,193,655$, distributed as follows:

|  | Number of | Estimated Deferred Annuities |  |
| :--- | :---: | ---: | ---: |
| Division | Inactive Members | Monthly | Annualized |
| State and Local | 11,581 | $\$ 4,171,299$ | $\$$ |
| General Assembly | 74 |  | 11,465 |
| Wildlife | 15 | 137,584 |  |
| State Constitutional Officers | 4 | 8,444 | 101,328 |
| Totals | $\mathbf{1 1 , 6 7 4}$ | $\$ 4,493,655$ | $\$ \mathbf{5 0 , 3 2 3 , 8 5 8}$ |

## Retirement System Totals <br> Annuities Being Paid Retirees and Beneficiaries and DROP PARTICIPANTS <br> June 30, 2007 <br> by Attained Age and Type of Retirement

| Attained Ages | DROP |  | Age \& Service* |  | Disability |  | Death-in-Service |  | Totals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | No. | Annual Amount | No. | Annual Annuities | No. | Annual Annuities | No. | Annual Annuities | No. | Annual Annuities |
| Under 40 |  |  | 9 | \$ 60,432 | 142 | \$ 508,572 | 8 | \$ 38,184 | 159 | \$ 607,188 |
| 40-44 |  |  | 3 | 80,640 | 80 | 422,724 |  |  | 83 | 503,364 |
| 45-49 | 56 | \$ 1,422,756 | 100 | 1,826,844 | 178 | 1,125,444 | 3 | 14,544 | 337 | 4,389,588 |
| 50-54 | 431 | 11,952,792 | 441 | 10,911,612 | 339 | 2,450,412 | 4 | 29,640 | 1,215 | 25,344,456 |
| 55-59 | 688 | 21,017,520 | 1,491 | 27,878,172 | 527 | 3,899,940 | 3 | 15,996 | 2,709 | 52,811,628 |
| 60-64 | 437 | 11,719,968 | 2,898 | 37,788,720 | 566 | 3,802,368 | 3 | 17,760 | 3,904 | 53,328,816 |
| 65-69 | 75 | 1,543,800 | 3,928 | 39,186,576 | 343 | 2,336,244 | 5 | 31,524 | 4,351 | 43,098,144 |
| 70-74 | 10 | 265,560 | 3,451 | 33,802,344 | 163 | 1,215,372 | 10 | 88,884 | 3,634 | 35,372,160 |
| 75-79 | 3 | 62,544 | 2,564 | 25,318,548 | 76 | 618,684 | 14 | 76,260 | 2,657 | 26,076,036 |
| 80-84 |  |  | 1,765 | 18,086,712 | 31 | 240,192 | 15 | 85,500 | 1,811 | 18,412,404 |
| 85-89 |  |  | 1,012 | 10,121,832 | 9 | 85,680 | 15 | 93,300 | 1,036 | 10,300,812 |
| 90-94 |  |  | 398 | 3,634,860 | 1 | 4,848 | 10 | 73,620 | 409 | 3,713,328 |
| 95-99 |  |  | 85 | 754,980 |  |  | 3 | 9,048 | 88 | 764,028 |
| Over 100 |  |  | 15 | 121,956 |  |  | 1 | 2,964 | 16 | 124,920 |
| Totals | 1,700 | \$47,984,940 | 18,160 | \$209,574,228 | 2,455 | \$16,710,480 | 94 | \$577,224 | 22,409 | \$274,846,872 |

[^1]
## AnNuities Being Paid June 30, 2007 <br> By Type of Annuity

| Type of Annuity | Number | Annual <br> Annuities |  |
| :---: | :---: | :---: | :---: |
| Age \& Service Retirees |  |  |  |
| Life | 14,401 | \$ | 164,406,996 |
| Option A-60 ( 5 years certain) | 611 |  | 6,603,672 |
| Option A-120 (10 years certain) | 1,188 |  | 12,155,484 |
| Option B- 50 (joint and 50\% survivor) | 662 |  | 10,556,172 |
| Option B- 75 (joint and 75\% survivor) | 919 |  | 11,874,900 |
| Option B-100 (joint and 100\% survivor) | 80 |  | 1,378,560 |
| Totals | 17,861 |  | 206,975,784 |
| Beneficiaries of Age \& Service Retirees |  |  |  |
| Life | 100 |  | 729,528 |
| Option A-60 | 1 |  | 38,832 |
| Option A-120 | 8 |  | 48,360 |
| Option B- 50 | 105 |  | 768,144 |
| Option B- 75 | 67 |  | 700,728 |
| Option B-100 | 18 |  | 312,852 |
| Totals | 299 |  | 2,598,444 |
| Total Age \& Service Retirees \& Beneficiaries | 18,160 |  | 209,574,228 |
| Disability Retirees |  |  |  |
| Life | 1,484 |  | 10,680,168 |
| Option A-60 | 87 |  | 565,596 |
| Option A-120 | 193 |  | 1,337,376 |
| Option B- 50 | 98 |  | 714,300 |
| Option B- 75 | 132 |  | 917,700 |
| Option B-100 | 0 |  | 0 |
| Totals | 1,994 |  | 14,215,140 |
| Beneficiaries of Disability Retirees |  |  |  |
| Life | 70 |  | 354,432 |
| Option A-60 | 0 |  | 0 |
| Option A-120 | 3 |  | 34,248 |
| Option B- 50 | 8 |  | 36,204 |
| Option B-75 | 380 |  | 2,070,456 |
| Option B-100 | 0 |  | 0 |
| Totals | 461 |  | 2,495,340 |
| Total Disability Retirees \& Beneficiaries | 2,455 |  | 16,710,480 |
| Death-in-Service Beneficiaries | 94 |  | 577,224 |
| Total Retirees \& Beneficiaries | 20,709 |  | 226,861,932 |
| DROP Participants | 1,700 |  | 47,984,940 |
| Total Including DROP Participants | 22,409 | \$ | 274,846,872 |

## Schedule of Average Benefit Payments (Voluntary Retirements Still Receiving BENEFITS AS OF JUNE 30, 2007)



## Annuities Being Paid by Type JUNE 30, 2007



## RETIREMENT SYSTEM TOTALS <br> Annuities Likely to be Paid Present Inactive Members June 30, 2007 <br> By Attained Age

| Attained <br> Ages | No. | Estimated <br> Annual <br> Annuities |
| :---: | :---: | :---: |
| Under 40 | 2,587 | $\$ 8,159,000$ |
| $40-44$ | 1,876 | $7,769,403$ |
| $45-49$ | 2,196 | $10,214,723$ |
| $50-54$ | 2,289 | $11,467,523$ |
| $55-59$ | 1,644 | $7,998,204$ |
| $60-64$ | 808 | $3,680,027$ |
| $65-69$ | 274 | $1,034,978$ |
| Totals | $\mathbf{1 1 , 6 7 4}$ | $\$ 50,323,858$ |

LIAbILITIES FOR DEFERRED ANNUITIES JUNE 30, 2007

| Number of <br> Inactive <br> Members | Estimated <br> Annual <br> Annuities | Annuity <br> Liabilities |
| :---: | :---: | :---: |
| 11,674 | $\$ 50,323,858$ | $\$ 291,909,865$ |

# STATE AND LOCAL DIVISION <br> (Excluding General Assembly) <br> Active Members in Valuation June 30, 2007 <br> By Attained Age and Years of Service 

| $\begin{array}{\|c} \text { Attained } \\ \text { Age } \\ \hline \end{array}$ | Years of Service to Valuation Date |  |  |  |  |  |  | Totals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30 plus | No. | Valuation Payroll |
| Under 20 | 308 |  |  |  |  |  |  | 308 | \$ 4,109,358 |
| 20-24 | 2,204 | 33 |  |  |  |  |  | 2,237 | 46,811,357 |
| 25-29 | 3,181 | 690 | 10 |  |  |  |  | 3,881 | 97,523,148 |
| 30-34 | 2,269 | 1,401 | 308 | 12 | 1 |  |  | 3,991 | 111,153,636 |
| 35-39 | 2,080 | 1,402 | 884 | 343 | 36 | 3 |  | 4,748 | 139,502,368 |
| 40-44 | 1,826 | 1,293 | 896 | 852 | 385 | 44 | 8 | 5,304 | 161,090,374 |
| 45-49 | 1,871 | 1,325 | 881 | 850 | 822 | 498 | 55 | 6,302 | 200,580,003 |
| 50-54 | 1,539 | 1,346 | 918 | 906 | 845 | 790 | 186 | 6,530 | 217,078,260 |
| 55-59 | 1,250 | 1,042 | 889 | 832 | 702 | 543 | 208 | 5,466 | 177,978,364 |
| 60 | 224 | 190 | 141 | 147 | 134 | 89 | 37 | 962 | 29,961,175 |
| 61 | 178 | 169 | 130 | 124 | 115 | 81 | 33 | 830 | 26,215,964 |
| 62 | 118 | 129 | 94 | 100 | 68 | 66 | 20 | 595 | 18,610,241 |
| 63 | 81 | 104 | 72 | 81 | 62 | 38 | 12 | 450 | 13,781,956 |
| 64 | 94 | 88 | 60 | 73 | 58 | 38 | 14 | 425 | 12,428,217 |
| 65 | 77 | 81 | 53 | 64 | 45 | 46 | 16 | 382 | 11,745,280 |
| 66 | 58 | 50 | 35 | 36 | 40 | 28 | 10 | 257 | 7,535,893 |
| 67 | 43 | 43 | 33 | 22 | 21 | 15 | 9 | 186 | 5,536,702 |
| 68 | 37 | 44 | 27 | 23 | 16 | 11 | 2 | 160 | 4,631,973 |
| 69 | 32 | 31 | 26 | 21 | 6 | 10 | 5 | 131 | 3,676,852 |
| 70 \& over | 126 | 115 | 60 | 53 | 52 | 42 | 20 | 468 | 12,351,669 |
| Totals | 17,596 | 9,576 | 5,517 | 4,539 | 3,408 | 2,342 | 635 | 43,613 | \$1,302,302,790 |

## Group Averages

| \|ge: | 44.6 years |
| :--- | :---: |
| Service: | 9.4 years |
| Annual Pay: | $\$ 29,860$ |

Of the 43,613 active members included in the above schedule, 28 were hired prior to July 1, 1978 and are not covered by the Non-Contributory Plan or the New-Contributory Plan.

GENERAL AsSEMBLY SUB-DIVISION MEMBERS AS OF JUNE 30, 2007 by Attained Age and Years of Service

| $\begin{array}{\|c} \text { Attained } \\ \text { Age } \\ \hline \end{array}$ | Years of Service to Valuation Date |  |  |  |  |  |  | No. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-27 | 28 Plus |  | Valuation Payroll |
| 25-29 |  |  |  |  |  |  |  |  |  |
| 30-34 |  |  |  |  |  |  |  |  | \$ |
| 35-39 |  | 1 |  |  |  |  |  | 1 | 14,764 |
| 40-44 |  |  |  |  |  |  |  |  |  |
| 45-49 |  |  | 1 | 1 | 1 |  |  | 3 | 69,839 |
| 50-54 |  | 1 |  |  |  |  |  | 1 | 14,764 |
| 55-59 |  | 2 | 1 | 2 |  |  |  | 5 | 74,705 |
| 60 |  |  | 1 |  |  |  |  | 1 | 14,764 |
| 61 |  |  | 1 |  |  |  |  | 1 | 14,764 |
| 62 |  |  |  |  |  |  |  |  |  |
| 63 |  |  |  |  |  |  |  |  |  |
| 64 |  |  |  |  |  |  |  |  |  |
| 65 |  |  | 1 |  |  |  |  | 1 | 14,764 |
| 66 |  |  |  |  |  |  |  |  |  |
| 67 |  |  |  |  |  |  |  |  |  |
| 68 |  |  | 1 |  |  |  |  | 1 | 14,764 |
| 69 |  |  | 2 |  |  |  |  | 2 | 29,528 |
| 70 |  |  |  |  |  |  |  |  |  |
| 71 |  |  | 1 |  |  |  |  | 1 | 14,764 |
| 72 |  |  |  |  |  |  |  |  |  |
| 73 |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Totals |  | 4 | 9 | 3 | 1 |  |  | 17 | \$ 277,420 |

While not used in the computations, the following group averages are computed and shown for their general interest.

## Group Averages

| Age: | 57.6 years |
| :--- | :---: |
| Service: | 12.8 years |
| Annual Pay: | $\$ 16,319$ |

# SECTION C <br> GAIN/(LOSS) ANALYSIS 

## GAIN/(Loss) ANALYSIS Comments

Purpose of Gain/(Loss) Analysis. Regular actuarial valuations give valuable information about the composite change in unfunded actuarial accrued liabilities - whether or not the liabilities are increasing or decreasing and by how much.

But valuations do not show the portion of the change attributable to each risk area within the Retirement System: the rate of investment return which plan assets earn; the rates of withdrawal of active members who leave covered employment; the rates of mortality; the rates of disability; the rates of pay increases; and the ages at actual retirement. In an actuarial valuation, assumptions must be made as to what these rates will be, for the next year and for decades in the future.

The objective of a gain and loss analysis is to determine the portion of the change in actuarial condition (unfunded actuarial accrued liabilities) attributable to each risk area.

The fact that actual experience differs from assumed experience is to be expected - the future cannot be predicted with precision. The economic risk areas (particularly investment return and pay increases) are volatile. Inflation directly affects economic risk areas, and inflation seems to defy reliable prediction.

Changes in the valuation assumed experience for a risk area should be made when the differences between assumed and actual experience have been observed to be sizable and persistent. A gain and loss analysis covering a relatively short period may or may not be indicative of long-term trends, which are the basis of actuarial assumptions.

## Change in Unfunded Actuarial Accrued Liabilities During the Period July 1, 2006 to June 30, 2007

|  | \$ in Millions |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | State and Local Division | General <br> Assembly |  | Total |
| (1) UAAL* at beginning of year | \$972.3 | \$15.0 | \$ | 987.3 |
| (2) Normal cost from last valuation | 89.3 | 0.1 |  | 89.4 |
| (3) Actual employer contributions | 161.8 | 1.4 |  | 163.2 |
| (4) Interest accrual: $[(1)+1 ⁄ 2[(2)-(3)]] x .080$ | 74.9 | 1.1 |  | 76.0 |
| (5) Expected UAAL before changes: $(1)+(2)-(3)+(4)$ | 974.7 | 14.8 |  | 989.5 |
| (6) Increase from benefit changes | 31.0 | 0.0 |  | 31.0 |
| (7) Changes from revised actuarial assumptions and methods | 0.0 | 0.0 |  | 0.0 |
| (8) New entrant liabilities | 37.7 | 0.0 |  | 37.7 |
| (9) Expected UAAL after changes: $(5)+(6)+(7)+(8)$ | 1,043.4 | 14.8 |  | 1,058.2 |
| (10) Actual UAAL at end of year | 665.6 | 10.7 |  | 676.3 |
| (11) Gain/(Loss): (9) - (10) | \$ 377.8 | \$ 4.1 | \$ | 381.9 |

[^2]
# Gains/(Losses) by Risk Area And By Division <br> During the Period July 1, 2006 TO June 30, 2007 

| Type of Risk Area | Gain/(Loss) in Period - (\$ in Millions) |  |  | \% of <br> Accrued <br> Liabilities |
| :---: | :---: | :---: | :---: | :---: |
|  | State and Local Divisions | General <br> Assembly | Total |  |
| ECONOMIC RISK AREAS ..... |  |  |  |  |
| Pay Increases. If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss. | \$ 53.2 | \$ 0.0 | \$ 53.2 | 0.9 \% |
| Investment Return. If there is greater investment return than assumed, there is a gain. If less return, a loss. | 215.2 | 0.3 | 215.5 | 3.5 \% |
| NON-ECONOMIC RISK AREAS ..... |  |  |  |  |
| Non-Casualty Retirements. If members retire at older ages or with lower final average pays than assumed, there is a gain. If younger ages or higher average |  |  |  |  |
| Disability Retirements. If there are fewer disabilities than assumed, there is a gain. If more, a loss. | 0.8 | 0.0 | 0.8 | 0.0 \% |
| Death-in-Service Benefits. If there are fewer claims than assumed, there is a gain. If more, a loss. | 0.1 | 0.0 | 0.1 | 0.0 \% |
| Withdrawal. If more liabilities are released by other separations than assumed, there is a gain. If smaller releases, a loss. | 17.2 | 0.0 | 17.2 | 0.3 \% |
| Total Active Member Actuarial Gains/(Losses) | \$ 298.9 | \$ 0.3 | \$ 299.2 | 4.8 \% |
| Retired Life Mortality. | 16.0 | 0.0 | 16.0 | 0.3 \% |
| Other. Includes data adjustments at retirement, timing of financial transactions, and miscellaneous unidentified sources. | \$ 62.9 | \$ 3.8 | \$ 66.7 | 1.1 \% |
| Total Actuarial Gains/(Losses) | \$ 377.8 | \$ 4.1 | \$ 381.9 | 6.2 \% |

## Actuarial Gains/(Losses) <br> Active Members <br> 2006-2007 PLAN YEAR

## Amount in \$ Millions


\% of Accrued Liabilities


# Actuarial Gains/(Losses) By Risk Area <br> Active Members <br> COMPARATIVE STATEMENT <br> (\$ IN MiLLIONS) 

| Year Ending <br> June 30 | Gain/(Loss) By Risk Area |  |  |  |  |  | Total Experience Gain/(Loss) |  | Accrued <br> Liability End of Year |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Pay <br> Increases | Investments | Age \&ServiceRetirement | Disability | Death In Service | Withdrawal |  |  |  |
|  |  |  |  |  |  |  | Dollars | \% of AAL |  |
| 1991 | \$ (3.7) | \$ (8.2) | \$ 0.2 | \$ 0.8 | \$ 2.3 | \$(13.3) | \$ (21.9) | (4.0)\% | \$ 955.2 * |
| 1992 | 2.7 | 27.9 | 2.7 | 1.2 | 2.1 | (6.1) | 30.5 | 3.2 \% | 1,607.6 |
| 1993 | (2.6) | 36.3 | 1.6 | 1.3 | 3.1 | 4.2 | 43.9 | 2.7 \% | 1,711.3 |
| 1994 | 26.0 | 21.5 | 3.8 | 1.4 | 2.4 | (2.2) | 52.9 | 3.1 \% | 1,853.8 |
| 1995 | 32.0 | 68.1 | (2.1) | (1.5) | (3.0) | (1.7) | 91.8 | 4.5 \% | 2,057.4 |
| 1996 | (0.7) | 103.5 | 5.7 | 2.9 | 1.4 | 5.3 | 118.1 | 5.8 \% | 2,290.6 |
| 1997 | (2.2) | 155.3 | 7.7 | 3.6 | 1.9 | 4.9 | 171.2 | 7.5 \% | 2,605.6 |
| 1998 | 18.2 | 197.4 | (4.4) | 4.2 | 2.1 | 20.6 | 238.1 | 9.1 \% | 2,882.5 |
| 1999 | (0.6) | 153.1 | (0.3) | 3.2 | (0.1) | 25.8 | 181.1 | 5.5 \% | 3,478.7 |
| 2000 | (13.1) | 134.1 | 2.2 | 2.8 | (0.1) | 20.7 | 146.6 | 4.2 \% | 3,803.4 |
| 2001 | 31.3 | (37.0) | 3.3 | 3.0 | 0.1 | 18.9 | 19.6 | 0.5 \% | 4,111.0 |
| 2002 | 5.4 | (247.1) | 3.7 | (2.5) | 0.5 | (4.2) | (244.2) | (5.6)\% | 4,398.0 |
| 2003 | 36.0 | (292.6) | 11.2 | 3.3 | (0.1) | 15.2 | (227.0) | (4.9)\% | 4,398.0 |
| 2004 | 16.2 | (274.0) | 18.4 | 0.5 | 0.2 | 8.6 | (230.0) | (4.6)\% | 5,004.5 |
| 2005 | 46.7 | (143.4) | 20.1 | 0.5 | 0.5 | 28.5 | (47.1) | (0.8)\% | 5,619.4 |
| 2006 | (15.4) | 46.5 | 17.0 | 0.8 | 0.0 | 11.4 | 60.3 | 1.0 \% | 5,936.3 |
| 2007 | 53.2 | 215.5 | 12.4 | 0.8 | 0.1 | 17.2 | 299.2 | 4.8 \% | 6,173.8 |

* Excludes liability for retired lives.


## DEVELOPMENT OF GAIN/(LOSS) <br> FROM InVESTMENT RETURN* During the Period July 1, 2006 TO June 30, 2007

|  |  | \$ Millions |
| :--- | :--- | :---: |
| 1. Total Assets Beginning of Year | $\$ 4,949.0$ |  |
| 2. | Total Assets End of Year (Funding Value) |  |
| a. Actual | $5,497.5$ |  |
| b. If net investment return had been $8.00 \%$ | $5,282.0$ |  |

3. Gain/(Loss): 2a. minus 2b. \$ 215.5

* "Investment return" as used in this Gain/(Loss) Analysis means essentially: assumed investment income; plus/minus a four year phase-in of differences between actual and assumed investment return (see page B-10).


# Active Members who Became Age \& Service Retirees 

 DURING THE PERIOD JULY 1, 2006 TO JUNE 30, 2007(RETIREMENT WITH UNREDUCED BENEFIT
BEGINNING IMMEDIATELY)
Attained age of 65 OR Older with Less
Than 28 Years of Service

| Ages | State \& Local <br> Retirements |  |
| :---: | :---: | :---: |
|  | Actual | Expected |
|  |  |  |
| 65 | 42 | 104 |
| 66 | 73 | 60 |
| 67 | 32 | 32 |
| 68 | 27 | 19 |
| 69 | 20 | 15 |
| 70 | 18 | 12 |
| 71 | 13 | 8 |
| 72 | 8 | 8 |
| 73 | 9 | 10 |
| 74 | 8 | 9 |
| $75 \& U p$ | 26 | 34 |
|  |  |  |
|  | $\mathbf{2 7 6}$ | $\mathbf{3 1 1}$ |

Averages, in Years:
Age at retirement
68.9

Service at retirement
14.5

# Active Members who Became Reduced Early Retirees 

 DURING THE PERIOD JULY 1, 2006 TO JUNE 30, 2007 (EARLY RETIREMENTS WITH REDUCED BENEFITS BEGINNING IMMEDIATELY)| Ages | State \& Local <br> Early Retirement |  |
| :---: | :---: | :---: |
|  | Actual | Expected |
|  |  |  |
| 55 | 16 | 13 |
| 56 | 14 | 12 |
| 57 | 13 | 17 |
| 58 | 13 | 17 |
| 59 | 24 | 21 |
| 60 | 34 | 28 |
| 61 | 25 | 26 |
| 62 | 66 | 79 |
| 63 | 61 | 57 |
| 64 | 54 | 47 |
|  |  |  |
| Totals | $\mathbf{3 2 0}$ | $\mathbf{3 1 6}$ |

Averages, in Years:

| Age at retirement | 60.4 |
| :--- | :--- |
| Service at retirement | 16.5 |

## Active Members who Retired or Entered the DROP

 During the Period July 1, 2006 TO June 30, 2007 (28 OR MORE YEARS OF SERVICE)| Service | State \& Local |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Retirement |  | DROP |  |
|  | Actual | Expected | Actual | Expected |
| 28 | 128 | 89 | 221 | 284 |
| 29 | 15 | 33 | 38 | 31 |
| 30 | 12 | 21 | 26 | 20 |
| 31 | 16 | 17 | 13 | 15 |
| 32 | 8 | 12 | 10 | 11 |
| 33 | 8 | 9 | 8 | 8 |
| 34 | 2 | 7 | 5 | 6 |
| 35 | 3 | 4 | 9 |  |
| 36 | 3 | 6 |  |  |
| 37 | 1 | 4 |  | $\mathbf{3 7 5}$ |
| 38 \& Up | 25 | $\mathbf{1 0 0}$ |  |  |
| Totals | $\mathbf{2 2 1}$ | $\mathbf{3 0 3}$ | $\mathbf{3 3 0}$ |  |

Averages, in Years:
Age at retirement
61.2
56.6
Service at retirement
33.1
28.7

# Active Members who Became Disability Retirees DURING THE PERIOD JULY 1, 2006 TO JUNE 30, 2007 <br> (and Who Were Active Members as of June 30, 2006) 

| Ages | State \& Local <br> Disabilities |  |
| :---: | :---: | :---: |
|  | Actual | Expected |
|  |  |  |
| $20-24$ | 1 | 0 |
| $25-29$ | 3 | 1 |
| $30-34$ | 3 | 1 |
| $35-39$ | 11 | 4 |
| $40-44$ | 14 | 13 |
| $45-49$ | 22 | 26 |
| $50-54$ | 31 | 38 |
| $55-59$ | 30 | 31 |
| $60 \& U p$ | $\mathbf{1 1 5}$ | $\mathbf{1 2 0}$ |

Averages, in Years:
Age at retirement 55.6
Service at retirement 16.3

# Active Members who Left Active Status with a Deferred Benefit Payable During the Period July 1, 2006 to June 30, 2007 (VESTED SEPARATIONS) 

| Ages | State \& Local <br> Vested Separations |  |
| :---: | :---: | :---: |
|  | Actual | Expected |
| Below 30 | 135 | 79 |
|  | 238 | 127 |
| $35-39$ | 277 | 125 |
| $40-44$ | 235 | 146 |
| $45-49$ | 238 | 143 |
| $50-54$ | 253 | 63 |
| $55-59$ | 177 | 46 |
| $60 \&$ Up | 163 | 30 |
|  | $\mathbf{1 , 7 1 6}$ | $\mathbf{7 5 8}$ |

Averages, in Years:
Age at retirement
44.4
Service at retirement
9.3

# Active Members who Left Active Status with No Benefit Payable <br> DURING THE PERIOD JULY 1, 2006 TO JUNE 30, 2007 (NON-VESTED SEPARATIONS) 

| Service at Termination | State \& Local <br> Non-Vested Separations |  |
| :---: | :---: | :---: |
|  | Actual | Expected |
| 0 | 1,909 | 2,039 |
| 1 | 927 | 1,021 |
| 2 | 536 | 619 |
| 3 | 404 | 393 |
| 4 | 2 | 109 |
| Totals | $\mathbf{3 , 7 7 8}$ | $\mathbf{4 , 1 8 1}$ |

Averages, in Years:
Age at retirement
34.7

Service at retirement
0.9

# Members Active Both Beginning and End of Year Salary Increases by Age Group During the Period July 1, 2006 to June 30, 2007 

| Age Groups | Number | $\begin{gathered} \text { Beginning } \\ \text { Pay } \\ \hline \hline \end{gathered}$ | Ending Pay |  | Percentage Increase |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Expected | Actual | Expected | Actual |
| Below 25 | 1,349 | \$ 27,660,224 | \$ 30,284,162 | \$ 30,776,797 | 9.5\% | 11.3\% |
| 25-29 | 2,752 | 67,927,191 | 73,282,925 | 73,546,972 | 7.9\% | 8.3\% |
| 30-34 | 3,201 | 88,080,415 | 94,110,054 | 94,100,989 | 6.8\% | 6.8\% |
| 35-39 | 4,054 | 117,114,511 | 124,559,867 | 124,273,672 | 6.4\% | 6.1\% |
| 40-44 | 4,662 | 140,386,960 | 148,859,618 | 147,790,584 | 6.0\% | 5.3\% |
| 45-49 | 5,761 | 180,365,632 | 190,457,397 | 189,658,041 | 5.6\% | 5.2\% |
| 50-54 | 5,903 | 192,774,239 | 202,759,269 | 201,215,174 | 5.2\% | 4.4\% |
| 55-59 | 4,892 | 155,101,538 | 162,741,334 | 161,723,662 | 4.9\% | 4.3\% |
| 60-64 | 2,813 | 84,638,789 | 88,502,286 | 87,904,766 | 4.6\% | 3.9\% |
| 65 \& Over | 1,264 | 35,257,754 | 36,668,064 | 36,481,081 | 4.0\% | 3.5\% |
| Totals | 36,651 |  |  |  | 5.8\% | 5.3\% |

## SECTION D

ACTUARIAL METHODS AND ASSUMPTIONS AND OTHER TECHNICAL ASSUMPTIONS

# Summary of Assumptions Used For APERS Actuarial VALUATIONS <br> Assumptions Adopted by Board of Trustees After Consulting With Actuary 

## ECONOMIC ASSUMPTIONS

The investment return rate used in making the valuation was $8.00 \%$ per year, compounded annually (net after investment and administrative expenses). This rate of return is not the assumed real rate of return. The real rate of return is the portion of investment return which is more than the wage inflation rate. Considering the assumed wage inflation rate of $4.0 \%$, the $8.00 \%$ investment return rate translates to an assumed net real rate of return of $4.0 \%$. This assumption was first used for the June 30, 2002 valuation.

Pay increase assumptions for individual active members are shown on page D-7. Part of the assumption for each age is for a merit and/or seniority increase, and the other $4.0 \%$ recognizes inflation. This assumption was first used for the June 30, 2002 valuation.

Total active member payroll is assumed to increase 4.0\% a year, which is the portion of the individual pay increase assumptions attributable to inflation. This assumption was first used for the June 30, 2002 valuation.

The number of active members is assumed to continue at the present number.

## NON-ECONOMIC ASSUMPTIONS

The mortality table used to measure retired life mortality was the 1983 Group Annuity Mortality Table. Related values are shown on page D-3. This assumption was first used for the June 30, 1998 valuation.

The probabilities of retirement for members eligible to retire are shown on pages D-4, D-5, and D-6.

The probabilities of withdrawal from service, death-in-service and disability are shown for sample ages on pages D-7 and D-8.

The ultimate entry-age normal actuarial cost method of the valuation was used in determining liabilities and normal cost. The normal cost is based on the benefits and contribution rate applicable to new hires. While $5.0 \%$ of member contributions are assumed in developing the employer normal cost, until such time as all members become contributory, the System will not receive $5.0 \%$ of payroll for member contributions. To account for this difference, $5.0 \%$ of the present value of future salary for all non-contributory members has been added to the actuarial accrued liability.

Differences in the past between assumed experience and actual experience (actuarial gains and losses) become part of actuarial accrued liabilities.

Unfunded actuarial accrued liabilities are amortized to produce contribution amounts (principal and interest) which are level percent of payroll contributions.

Recognizing the special circumstances of the General Assembly Sub-Division, modifications of the above assumptions were made where appropriate.

Present assets (cash \& investments) were valued on a market related basis in which differences between actual and assumed returns are phased-in over a four year period.

The data about persons now covered and about present assets were furnished by the System's administrative staff. Although examined for general reasonableness, the data was not audited by the Actuary.

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

## Single Life Retirement Values Based on 1983 Group Annuity Mortality <br> 8.00\% INTEREST <br> JUNE 30, 2007

| Sample <br> Attained <br> Ages | Present Value of <br> \$1.00 Monthly for Life |  | Present Value of <br> \$1.00 Monthly for Life <br> Increasing 3\% Annually |  | Future Life <br> Expectancy (Years) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Men | Women | Men | Women | Men | Women |
| 40 | $\$ 142.98$ | $\$ 147.82$ | $\$ 201.77$ | $\$ 213.96$ | 38.46 | 44.52 |
| 45 | 138.18 | 144.67 | 190.68 | 205.34 | 33.74 | 39.69 |
| 50 | 132.10 | 140.42 | 177.82 | 194.90 | 29.18 | 34.92 |
| 55 | 124.57 | 134.74 | 163.18 | 182.35 | 24.82 | 30.24 |
| 60 | 115.04 | 127.24 | 146.32 | 167.43 | 20.64 | 25.67 |
| 65 | 103.26 | 117.61 | 127.37 | 150.12 | 16.69 | 21.29 |
| 70 | 90.18 | 105.53 | 107.87 | 130.45 | 13.18 | 17.13 |
| 75 | 76.40 | 91.57 | 88.67 | 109.59 | 10.15 | 13.37 |
| 80 | 62.65 | 77.16 | 70.71 | 89.47 | 7.64 | 10.20 |
| 85 | 50.59 | 62.99 | 55.72 | 70.85 | 5.73 | 7.58 |


| Sample <br> Attained <br> Ages | Benefit <br> Increasing | Portion of Age 60 <br> Lives Still Alive |  |
| :---: | :---: | :---: | :---: |
|  | 3.0\% Yearly | Men | Women |
| 60 | $\$ 100$ | $100 \%$ | $100 \%$ |
| 65 | 116 | 94 | 97 |
| 70 | 134 | 84 | 92 |
| 75 | 155 | 69 | 84 |
| 80 | 180 | 51 | 70 |

The mortality table was set forward 10 years for disabilities.

# State and Local Government Division <br> Age-Based Retirement <br> June 30, 2007 

| Retirement Ages (with less than 28 years of service) | Percent of Eligible Active Retiring Within Next Year |  |
| :---: | :---: | :---: |
|  | Unreduced | Reduced |
| 55 |  | 2 \% |
| 56 |  | 2 |
| 57 |  | 3 |
| 58 |  | 3 |
| 59 |  | 4 |
| 60 |  | 5 |
| 61 |  | 7 |
| 62 |  | 23 |
| 63 |  | 19 |
| 64 |  | 16 |
| 65 | 35 \% |  |
| 66 | 25 |  |
| 67 | 20 |  |
| 68 | 15 |  |
| 69 | 15 |  |
| 70 | 15 |  |
| 71 | 15 |  |
| 72 | 15 |  |
| 73 | 20 |  |
| 74-77 | 25 |  |
| 78 | 30 |  |
| 79 | 40 |  |
| 80-82 | 50 |  |
| 83 | 60 |  |
| 84 | 90 |  |
| 85 | 100 |  |

A member was assumed eligible for unreduced retirement after attaining age 65 with 5 years of service or 28 years regardless of age (both unreduced retirement and DROP). A member was assumed eligible for reduced retirement after attaining age 55 with 10 or more years of service. These rates were first used in the June 30, 2003 valuation.

# State and Local Government Division SERVICE BASED RETIREMENT <br> June 30, 2007 

| Service | Percent of Eligible Active <br> Retiring Within Next Year |  |
| :---: | :---: | :---: |
|  | Retirement | DROP |
|  |  |  |
| 28 | $20 \%$ | $35 \%$ |
| 29 | 15 | 20 |
| 30 | 15 | 15 |
| 31 | 15 | 15 |
| 32 | 15 | 15 |
| 33 | 15 | 15 |
| 34 | 15 | 15 |
| 35 | 15 | 15 |
| 36 | 20 |  |
| 37 | 30 |  |
| 38 | 100 |  |

These rates were first used in the June 30, 2003 valuation.

## General Assembly Sub-Division Probabilities of Retirement for Members Eligible to Retire JUNE 30, 2007

| Retirement <br> Ages | Percent of Eligible Active Members <br> Retiring Within Next Year |
| :---: | :---: |
|  |  |
| 50 | $30 \%$ |
| 51 | 30 |
| 52 | 30 |
| 53 | 30 |
| 54 | 30 |
| 55 | 30 |
| 56 | 30 |
| 57 | 30 |
| 58 | 30 |
| 59 | 30 |
| 60 | 30 |
| 61 | 30 |
| 62 | 50 |
| 63 | 30 |
| 64 | 30 |
| 65 | 50 |
| 66 | 30 |
| $67-79$ | 20 |
| 80 | 100 |

Member may retire with 28 or more years of service or at age 55 with 10 or more years of General Assembly service.

## State and Local Government Division Separations From Active Employment Before Service Retirement June 30, 2007

| SampleAges | Years of Service | Percent of Active Members Separating within the Next Year |  |  |  |  |  | Pay Increase Assumptions For An Individual Employee |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Withdrawal |  | Death |  | Disability |  | Merit \& Seniority | Base(Economy) | Increase Next Year |
|  |  | Men | Women | Men | Women | Men | Women |  |  |  |
|  | 0 | 40.0 \% | 40.0 \% |  |  |  |  |  |  |  |
|  | 1 | 25.0 | 25.0 |  |  |  |  |  |  |  |
|  | 2 | 20.0 | 20.0 |  |  |  |  |  |  |  |
|  | 3 | 15.0 | 15.0 |  |  |  |  |  |  |  |
|  | 4 | 12.0 | 12.0 |  |  |  |  |  |  |  |
| 20 | 5+ | 13.8 | 13.8 | 0.03 \% | 0.02 \% | 0.07 \% | 0.07 \% | 5.80 \% | 4.00 \% | 9.80 \% |
| 25 |  | 12.7 | 12.7 | 0.04 | 0.02 | 0.07 | 0.07 | 4.60 | 4.00 | 8.60 |
| 30 |  | 8.1 | 8.1 | 0.05 | 0.02 | 0.07 | 0.07 | 3.20 | 4.00 | 7.20 |
| 35 |  | 4.6 | 4.6 | 0.07 | 0.04 | 0.07 | 0.07 | 2.50 | 4.00 | 6.50 |
| 40 |  | 4.0 | 4.0 | 0.10 | 0.06 | 0.18 | 0.18 | 2.10 | 4.00 | 6.10 |
| 45 |  | 3.7 | 3.7 | 0.18 | 0.08 | 0.23 | 0.23 | 1.80 | 4.00 | 5.80 |
| 50 |  | 1.7 | 1.7 | 0.31 | 0.13 | 0.44 | 0.44 | 1.30 | 4.00 | 5.30 |
| 55 |  | 1.2 | 1.2 | 0.49 | 0.20 | 0.80 | 0.80 | 1.00 | 4.00 | 5.00 |
| 60 |  | 1.2 | 1.2 | 0.74 | 0.34 | 1.27 | 1.27 | 0.70 | 4.00 | 4.70 |

These rates were first used in the June 30, 2003 valuation. Pay increase rates are age based only, and not service based.

# General Assembly Sub-Division Separations From Active Employment Before SERVICE RETIREMENT <br> June 30, 2007 

Percent of Active Members
Separating within the Next Year

| Sample <br> Ages | Years of Service | Withdrawal |  | Death |  | Disability |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Men | Women | Men | Women | Men | Women |
|  | 0 | 30.0 \% | 30.0 \% |  |  |  |  |
|  | 1 | 25.0 | 25.0 |  |  |  |  |
|  | 2 | 20.0 | 20.0 |  |  |  |  |
|  | 3 | 15.0 | 15.0 |  |  |  |  |
|  | 4 | 12.0 | 12.0 |  |  |  |  |
| 20 | $5+$ | 9.0 | 9.0 | 0.03 \% | 0.02 \% | 0.06 \% | 0.06 \% |
| 25 |  | 8.3 | 8.3 | 0.04 | 0.02 | 0.06 | 0.06 |
| 30 |  | 5.3 | 5.3 | 0.05 | 0.02 | 0.06 | 0.06 |
| 35 |  | 3.0 | 3.0 | 0.07 | 0.04 | 0.06 | 0.06 |
| 40 |  | 2.6 | 2.6 | 0.10 | 0.06 | 0.16 | 0.16 |
| 45 |  | 2.4 | 2.4 | 0.18 | 0.08 | 0.21 | 0.21 |
| 50 |  | 1.1 | 1.1 | 0.31 | 0.13 | 0.39 | 0.39 |
| 55 |  | 0.8 | 0.8 | 0.49 | 0.20 | 0.71 | 0.71 |
| 60 |  | 0.8 | 0.8 | 0.74 | 0.34 | 1.13 | 1.13 |

# Summary of Assumptions Used <br> June 30, 2007 <br> Miscellaneous and Technical Assumptions 

Marriage Assumption. $80 \%$ of males and $80 \%$ of females are assumed to be married for purposes of death-in-service benefits.

Pay Increase Timing. Beginning of (Fiscal) year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.

Decrement Timing. Decrements of all types are assumed to occur mid-year.

Eligibility Testing. Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.

Benefit Service. Exact fractional service is used to determine the amount of benefit payable.

Decrement Relativity. Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.

Normal Form of Benefit. The assumed normal form of benefit is the straight life form.

Incidence of Contributions. Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made. New entrant normal cost contributions are applied to the funding of new entrant benefits.

## SECTION E

DISTRICT JUDGES - VALUATION RESULTS, VALUATION DATA, AND FINANCIAL PRINCIPLES

## DISTRICT Judges <br> Employer Contribution Rates Computed June 30, 2007

| Contribution for | Contributions Expressed as \%'s of Active Payroll and Old Plan Annual \$ |  |
| :---: | :---: | :---: |
|  | New Plan and Paid-Off Old Plan | Still Paying Old Plan |
| Normal Cost: |  |  |
| Age and service annuities (including reduced retirement) | 16.26\% |  |
| Separation benefits | 1.47\% |  |
| Disability benefits | 1.61\% |  |
| Death-in-service annuities | 0.00\% |  |
| Total | 19.34\% |  |
| Member contributions (ultimate) | 5.00\% |  |
| Employer Normal Cost | 14.34\% |  |
| Unfunded Actuarial Accrued Liabilities | 1.14\% * | 983,290 ** |
| Total Employer Contribution | 15.48\% | \$983,290 |

* Unfunded actuarial accrued liabilities were amortized over an 18 year period.
** Unfunded actuarial accrued liabilities were amortized over a 28 year period.


## DISTRICT JUDGES <br> Summary Statement of System Resources and Obligations <br> Year Ended June 30, 2007

## Present Resources and Expected Future Resources

A. Present Valuation Assets:

1. Net assets from system financial statements

B. Actuarial present value of expected future employer contributions:
2. For normal costs

3,242,077
2. For unfunded actuarial accrued liability
3. Total

C. Actuarial present value of expected future member contributions

1,129,096
D. Total Present and Expected Future Resources
\$28,758,606
A. To retirees and beneficiaries
\$ 9,404,251
B. To vested terminated members

11,991,319
C. To present active members:

1. Allocated to service rendered prior to valuation date - actuarial accrued liability 2,227,730
2. Allocated to service likely to be rendered after valuation date

4,371,173
3. Total
D. Reserve for Paid-Off Old Plan

764,133
E. Total Actuarial Present Value of Expected Future Benefit Payments

# DISTRICT JUDGES <br> Computed Actuarial Liabilities and Allocation Using Entry Age Actuarial Cost Method As OF June 30, 2007 

| Actuarial Present Value of | Total <br> Present <br> Value | Portion <br> Covered By <br> Future Normal <br> Cost Contributions | Actuarial Accrued Liabilities $(1)-(2)$ |
| :---: | :---: | :---: | :---: |
| Benefits to be paid to current retirees, beneficiaries, and future beneficiaries of current retirees and reserve for Paid-Off Old Plan | \$10,168,384 | 0 | \$10,168,384 |
| Age and service allowances based on total service likely to be rendered by present active members | 5,934,423 | 3,654,704 | 2,279,719 |
| Separation benefits (refunds of contributions and deferred allowances) likely to be paid to present active and inactive members | 12,314,336 | 348,733 | 11,965,603 |
| Disability benefits likely to be paid to present active members | 341,463 | 367,736 | $(26,273)$ |
| Death in service benefits likely to be paid on behalf of present active members | 0 | 0 | 0 |
| Total | \$28,758,606 | \$4,371,173 | \$24,387,433 |
| Applicable Assets (Funding Value) | 12,582,548 | 0 | 12,582,548 |
| Liabilities to be covered by future Contributions | \$16,176,058 | \$4,371,173 | \$ 11,804,885 |

## DISTRICT JUDGES <br> Summary of Provisions Evaluated

Voluntary Retirement<br>Final Average Compensation (FAC)<br>Benefit Service<br>Eligibility Service<br>Full Age \& Service Retirement Benefit<br>Benefit Increases After Retirement<br>Member Contribution Rates<br>Vested Retirement Benefits<br>Total and Permanent Disability<br>\section*{Death After Retirement}<br>With a full benefit, after either (a) age 50 with 20 years of eligibility service, (b) age 60 with 16 years of eligibility service, or (c) age 65 with 8 years of eligibility service.<br>Average of the final three calendar years of employment.<br>Service performed on or after January 1, 2005.<br>Benefit service plus service in Old Local District Judges Plan.<br>$2.50 \%$ of FAC times actual service.<br>Annually, there will be a cost-of-living adjustment equal to $3 \%$ of the current benefit.<br>Active members contribute 5\% of their salaries. If a member leaves service before becoming eligible to retire, accumulated contributions may be refunded.<br>8 years of eligibility service. Deferred full retirement benefit, based on benefit service and pay at termination, begins when member would have been eligible for voluntary retirement.<br>An active member with 3 or more consecutive years of eligibility service who becomes totally and permanently disabled may be retired and receive a disability annuity computed in the same manner as an age and service annuity.<br>If the member was eligible for normal retirement at the time of death, an eligible beneficiary will begin receiving a $50 \%$ joint and survivor pension computed in the same manner as a service retirement pension as if the member had retired the last day of his life.

# DISTRICT JUDGES <br> REVENUES AND ExpEnditures JULY 1, 2006 THROUGH JUNE 30, 2007 <br> MARKET VALUE 

|  | Plan |  |  | Totals |
| :---: | :---: | :---: | :---: | :---: |
|  | New Plan | Paid-Off <br> Old Plan | Still Paying Old Plan |  |
| Balance 7/1/2006 | \$790,319 | \$4,086,719 | \$5,264,002 | \$10,141,040 |
| Revenues |  |  |  |  |
| Member contr. | 171,439 | 0 | 0 | 171,439 |
| Employer contr. | 617,356 | 0 | 1,224,278 | 1,841,634 |
| Other | 0 | 0 | 0 | 0 |
| Investment ret. | 152,808 | 605,728 | 820,547 | 1,579,083 |
| Total | \$941,603 | \$605,728 | \$2,044,825 | \$3,592,156 |
| Expenditures |  |  |  |  |
| Benefits paid | 0 | 140,200 | 870,092 | 1,010,292 |
| Refunds | 0 | 0 | 0 | 0 |
| Expenses | 13,582 | 53,840 | 72,934 | 140,356 |
| Total | \$13,582 | \$194,040 | \$943,026 | \$1,150,648 |
| Preliminary Balance | \$1,718,340 | \$4,498,407 | \$6,365,801 | \$12,582,548 |
| Employer Paid Off Old Liability | 0 | 1,402,850 | $(1,402,850)$ | 0 |
| Balance 6/30/2007 | \$1,718,340 | \$5,901,257 | \$4,962,951 | \$12,582,548 |

Note: Results may not total due to rounding.

## DISTRICT JUDGES <br> Summary of Annuitants on Rolls

Retirees and beneficiaries on rolls included in the valuation totaled 117, involving monthly annuities of $\$ 85,541$, distributed as follows:

| Plan | Number of | Annuities Being Paid July 1, 2007 |  |
| :--- | :---: | :---: | ---: |
|  | Retired Members | Monthly | Annualized |
| New Plan | 0 | $\$$ | 0 |
| Old Plan Paid Off | 20 | 18,448 | 0 |
| Still Paying Old Plan | 97 | 67,093 | 221,379 |
| Totals | $\mathbf{1 1 7}$ | $\mathbf{\$ 8 5 , 5 4 1}$ | $\mathbf{\$ 1 , 0 2 6 , 4 1 4}$ |

Inactive members, entitled to deferred annuities, included in the valuation totaled 161, involving estimated deferred monthly annuities of $\$ 119,389$ distributed as follows:

| Division | Number of Inactive Members | Estimated Deferred Annuities |  |
| :---: | :---: | :---: | :---: |
|  |  | Monthly | Annualized |
| New Plan | 0 | \$ 0 | \$ 0 |
| Old Plan Paid Off | 40 | 32,439 | 389,273 |
| Still Paying Old Plan | 121 | 86,950 | 1,043,400 |
| Totals | 161 | \$119,389 | \$1,432,672 |

## DISTRICT JUDGES <br> Schedule of Average Benefit Payments (Voluntary Retirements Still Receiving <br> BENEFITS AS OF JUNE 30, 2007)

\begin{tabular}{|c|c|c|c|c|c|c|}
\hline \multirow[t]{2}{*}{} \& \multicolumn{6}{|c|}{Years Credited Service} \\
\hline \& 0-10 \& 10-14 \& 15-19 \& 20-24 \& 25-29 \& 30+ \\
\hline \begin{tabular}{l}
Retirement Effective Dates July 1, 2006 to June 30, 2007 \\
Average Monthly Benefit Number of Active Retirees
\end{tabular} \& \$ 9,532.25

7 \& $\$ 0.00$

0 \& $$
\begin{gathered}
\$ 0.00 \\
0
\end{gathered}
$$ \& \[

$$
\begin{gathered}
\$ 0.00 \\
0
\end{gathered}
$$

\] \& \[

$$
\begin{gathered}
\$ 0.00 \\
0
\end{gathered}
$$

\] \& \[

$$
\begin{aligned}
& \$ 0.00 \\
& 0
\end{aligned}
$$
\] <br>

\hline Retirement Effective Dates July 1, 2005 to June 30, 2006 Average Monthly Benefit Number of Active Retirees \& $2,195.15$
6 \& $\$ 0.00$
0 \& $\$ 0.00$
0 \& $\$ 0.00$
0 \& $\$ 0.00$

0 \& $$
\begin{aligned}
& \$ 0.00 \\
& 0
\end{aligned}
$$ <br>

\hline
\end{tabular}

DISTRICT JUDGES
DETAIL BY EMPLOYER

| Employer | ER ID | $\begin{gathered} \text { Participan } \\ \hline \text { Deferred } \\ \text { Vested } \end{gathered}$ | Covered <br> Retired | Retiree Mon. Ben. 7/1/2007 | Deferred Mon. Ben. 7/1/2007 | $\begin{gathered} \text { Retiree } \\ \text { Liability } \\ \text { 6/30/2007 } \\ \hline \end{gathered}$ | Deferred Liability 6/30/2007 | $\begin{gathered} \text { Total } \\ \text { Liability } \\ \text { 6/30/2007 } \\ \hline \end{gathered}$ | Assets Allocated 6/30/2007 | Unfunded <br> Liability | $\begin{gathered} \text { 28-year } \\ \text { Payoff of } \\ \text { Unfunded Liabilty } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ashdown | 90141 | 2 | 2 | 466.28 | 550.08 | 46,712 | 70,806 | 117,518 | 19,758 | 97,760 | 8,510 |
| Ashdown (County) | 90941 | 2 | 2 | 771.63 | 910.30 | 78,605 | 117,173 | 195,778 | 32,695 | 163,083 | 14,197 |
| Batesville | 90132 | 2 | 1 | 859.69 | 514.54 | 111,513 | 39,010 | 150,523 | 30,943 | 119,580 | 10,410 |
| Batesville (Independence Co.) | 90932 | 2 | 1 | 859.69 | 514.54 | 111,513 | 39,010 | 150,523 | 30,943 | 119,580 | 10,410 |
| Beebe | 90511 | 0 | 1 | 1,016.67 | 0.00 | 120,118 | 0 | 120,118 | 9,990 | 110,128 | 9,587 |
| Benton | 90962 | 1 | 2 | 2,398.38 | 666.67 | 281,243 | 73,447 | 354,690 | 207,986 | 146,704 | 12,771 |
| Benton County - West | 90204 | 3 | 0 | 0.00 | 1,892.53 | 0 | 193,401 | 193,401 | 113,085 | 80,316 | 6,992 |
| Berryville | 90108 | 1 | 2 | 275.05 | 475.94 | 28,621 | 66,896 | 95,517 | 12,474 | 83,043 | 7,229 |
| Berryville (County) | 90908 | 1 | 2 | 275.05 | 475.94 | 28,621 | 66,896 | 95,517 | 12,474 | 83,043 | 7,229 |
| Biscoe | 90159 | 0 | 1 | 150.00 | 0.00 | 20,075 | 0 | 20,075 | 546 | 19,529 | 1,700 |
| Booneville | 90142 | 2 | 1 | 216.09 | 189.65 | 29,419 | 12,708 | 42,127 | 10,473 | 31,654 | 2,755 |
| Booneville (County) | 90942 | 2 | 1 | 216.09 | 189.65 | 29,419 | 12,708 | 42,127 | 10,473 | 31,654 | 2,755 |
| Bryant | 90133 | 0 | 1 | 1,035.00 | 0.00 | 116,258 | 0 | 116,258 | -6,439 | 122,697 | 10,681 |
| Cabot | 90143 | 3 | 0 | 0.00 | 1,651.12 | 0 | 140,334 | 140,334 | 106,655 | 33,679 | 2,932 |
| Clarendon | 90148 | 1 | 0 | 0.00 | 444.72 | 0 | 35,643 | 35,643 | 21,445 | 14,198 | 1,236 |
| Conway | 90123 | 2 | 1 | 1,600.55 | 4,591.66 | 183,705 | 482,195 | 665,900 | 200,817 | 465,083 | 40,486 |
| Dequeen | 90166 | 1 | 2 | 1,797.45 | 2,608.67 | 176,285 | 321,554 | 497,839 | 67,345 | 430,494 | 37,475 |
| Dermott | 90109 | 2 | 2 | 455.00 | 205.08 | 56,454 | 10,839 | 67,293 | 109 | 67,184 | 5,848 |
| Dermott (County) | 90909 | 2 | 2 | 455.00 | 205.08 | 56,454 | 10,839 | 67,293 | 109 | 67,184 | 5,848 |
| Devalls Bluff | 90359 | 0 | 1 | 225.00 | 0.00 | 30,335 | 0 | 30,335 | 819 | 29,516 | 2,569 |
| Dewitt | 90101 | 2 | 0 | 0.00 | 1,252.92 | 0 | 124,694 | 124,694 | 44,236 | 80,458 | 7,004 |
| Dumas | 90121 | 2 | 2 | 1,208.92 | 1,564.42 | 155,396 | 155,869 | 311,265 | 18,231 | 293,034 | 25,509 |
| East Camden | 90252 | 3 | 0 | 0.00 | 667.60 | 0 | 76,386 | 76,386 | 32,094 | 44,292 | 3,856 |
| Elkins | 90172 | 2 | 0 | 0.00 | 1,074.68 | 0 | 119,999 | 119,999 | 23,621 | 96,378 | 8,390 |
| Eureka Springs | 90208 | 1 | 1 | 1,099.20 | 225.00 | 154,349 | 12,197 | 166,546 | 93,668 | 72,878 | 6,344 |
| Greenwood | 90265 | 0 | 1 | 771.00 | 0.00 | 101,659 | 0 | 101,659 | -5,918 | 107,577 | 9,365 |
| Hamburg | 90202 | 2 | 1 | 450.00 | 1,205.63 | 43,500 | 127,789 | 171,289 | 37,995 | 133,294 | 11,603 |
| Hampton | 90107 | 1 | 1 | 696.00 | 850.46 | 77,077 | 106,467 | 183,544 | 106,310 | 77,234 | 6,723 |
| Hazen | 90459 | 0 | 1 | 683.33 | 0.00 | 96,285 | 0 | 96,285 | 2,488 | 93,797 | 8,165 |
| Helena | 90154 | 2 | 2 | 523.51 | 27.72 | 41,317 | 679 | 41,996 | -9,190 | 51,186 | 4,456 |
| Helena (County) | 90954 | 2 | 2 | 523.51 | 27.72 | 41,317 | 679 | 41,996 | -9,190 | 51,186 | 4,456 |
| Hope | 90110 | 0 | 3 | 1,031.05 | 0.00 | 110,679 | 0 | 110,679 | -12,823 | 123,502 | 10,751 |
| Hope (County) | 90929 | 0 | 3 | 1,031.05 | 0.00 | 110,679 | 0 | 110,679 | -12,823 | 123,502 | 10,751 |
| Hot Springs | 90126 | 4 | 3 | 5,501.75 | 3,585.85 | 629,742 | 179,758 | 809,500 | 197,477 | 612,023 | 53,278 |
| Hoxie | 90138 | 2 | 0 | 0.00 | 664.66 | 0 | 82,854 | 82,854 | 14,680 | 68,174 | 5,935 |
| Jacksonville | 90160 | 1 | 2 | 1,610.27 | 2,824.71 | 97,161 | 343,189 | 440,350 | 424,525 | 15,825 | 1,378 |

## DISTRICT JUDGES

DETAIL BY EMPLOYER

| Employer | ER ID | $\begin{gathered} \frac{\text { Participan }}{\text { Deferred }} \\ \text { Vested } \\ \hline \end{gathered}$ | Covered <br> Retired | Retiree Mon. Ben. 7/1/2007 | Deferred Mon. Ben. 7/1/2007 | $\begin{gathered} \text { Retiree } \\ \text { Liability } \\ 6 / 30 / 2007 \\ \hline \end{gathered}$ | Deferred Liability 6/30/2007 | Total Liability 6/30/2007 | Assets Allocated 6/30/2007 | Unfunded Liability | $\begin{gathered} \text { 28-year } \\ \text { Payoff of } \\ \text { Unfunded Liabilty } \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lawrence County | 90938 | 2 | 0 | 0.00 | 1,016.99 | 0 | 126,645 | 126,645 | 25,014 | 101,631 | 8,847 |
| Little Rock | 90260 | 19 | 9 | 9,457.38 | 21,912.67 | 1,169,489 | 2,151,422 | 3,320,911 | 965,557 | 2,355,354 | 205,037 |
| Magnolia | 90114 | 0 | 1 | 641.98 | 0.00 | 69,656 | 0 | 69,656 | 8,023 | 61,633 | 5,365 |
| Magnolia (Columbia County) | 90914 | 0 | 1 | 641.98 | 0.00 | 69,656 | 0 | 69,656 | 8,023 | 61,633 | 5,365 |
| Malvern | 90130 | 0 | 2 | 1,426.79 | 0.00 | 177,805 | 0 | 177,805 | 173,247 | 4,558 | 397 |
| Marked Tree | 90256 | 0 | 1 | 948.14 | 0.00 | 99,575 | 0 | 99,575 | $(7,373)$ | 106,948 | 9,310 |
| Marshall | 90964 | 1 | 0 | 0.00 | 701.31 | 0 | 81,729 | 81,729 | 63,419 | 18,310 | 1,594 |
| McCrory | 90274 | 0 | 1 | 90.00 | 0.00 | 10,539 | 0 | 10,539 | 8,678 | 1,861 | 162 |
| Mt. Home | 90103 | 2 | 3 | 1,448.91 | 2,080.86 | 136,530 | 227,738 | 364,268 | 19,108 | 345,160 | 30,047 |
| Newport | 90134 | 1 | 3 | 1,555.70 | 234.22 | 174,255 | 13,485 | 187,740 | 103,830 | 83,910 | 7,304 |
| North Little Rock | 90460 | 13 | 8 | 8,413.05 | 11,835.50 | 824,771 | 1,276,299 | 2,101,070 | 173,965 | 1,927,105 | 167,757 |
| Osceola | 90247 | 1 | 2 | 781.25 | 648.60 | 58,677 | 59,887 | 118,564 | 40,033 | 78,531 | 6,836 |
| Ozark | 90124 | 1 | 1 | 531.72 | 593.47 | 69,741 | 75,312 | 145,053 | 30,787 | 114,266 | 9,947 |
| Ozark (County) | 90924 | 1 | 1 | 531.72 | 593.47 | 69,741 | 75,312 | 145,053 | 30,787 | 114,266 | 9,947 |
| Pocahontas | 90161 | 2 | 1 | 113.58 | 530.57 | 9,813 | 41,267 | 51,080 | 6,814 | 44,266 | 3,853 |
| Pocahontas (County) | 90961 | 2 | 1 | 113.58 | 530.57 | 9,813 | 41,267 | 51,080 | 6,814 | 44,266 | 3,853 |
| Prairie Grove | 90372 | 1 | 2 | 1,861.93 | 233.23 | 225,425 | 14,351 | 239,776 | 33,508 | 206,268 | 17,956 |
| Rison | 90113 | 1 | 0 | 0.00 | 780.00 | 0 | 97,646 | 97,646 | 30,491 | 67,155 | 5,846 |
| Russellville | 90158 | 1 | 1 | 597.51 | 1,218.49 | 78,348 | 45,000 | 123,348 | 65,115 | 58,233 | 5,069 |
| Searcy | 90273 | 2 | 1 | 1,833.34 | 1,646.02 | 180,583 | 172,031 | 352,614 | 68,267 | 284,347 | 24,753 |
| Stuttgart | 90201 | 2 | 1 | 283.90 | 951.56 | 27,926 | 110,908 | 138,834 | 36,643 | 102,191 | 8,896 |
| Stuttgart | 90901 | 2 | 1 | 346.98 | 1,163.02 | 34,131 | 135,555 | 169,686 | 45,024 | 124,662 | 10,852 |
| Texarkana | 90146 | 1 | 2 | 2,393.77 | 2,937.49 | 300,453 | 308,841 | 609,294 | 599,742 | 9,552 | 832 |
| Trumann | 90356 | 1 | 2 | 1,758.59 | 224.77 | 167,971 | 12,919 | 180,890 | $(22,224)$ | 203,114 | 17,681 |
| Tyronza | 90456 | 2 | 0 | 0.00 | 890.76 | 0 | 86,462 | 86,462 | 29,864 | 56,598 | 4,927 |
| Walnut Ridge | 90238 | 2 | 1 | 500.00 | 941.73 | 38,302 | 117,232 | 155,534 | 35,502 | 120,032 | 10,449 |
| Ward | 90443 | 1 | 0 | 0.00 | 173.01 | 0 | 7,969 | 7,969 | 1,535 | 6,434 | 560 |
| West Helena | 90254 | 2 | 0 | 0.00 | 1,048.27 | 0 | 124,550 | 124,550 | 35,990 | 88,560 | 7,709 |
| West Memphis | 90218 | 2 | 3 | 2,468.84 | 2,500.99 | 196,924 | 286,243 | 483,167 | 478,230 | 4,937 | 430 |
| Wrightsville | 90760 | 2 | 0 | 0.00 | 739.80 | 0 | 79,138 | 79,138 | 12,685 | 66,453 | 5,785 |
| Wynne | 90519 | 1 | 1 | 150.00 | 765.05 | 8,205 | 92,379 | 100,584 | 27,765 | 72,819 | 6,339 |
| UAL>0 as of | /30/2007 | 121 | 97 | 67,092.85 | 86,949.96 | 7,372,840 | 8,885,606 | 16,258,446 | 4,962,951 | 11,295,495 | 983,289 |

## DISTRICT JUDGES

Active Member in Valuation June 30, 2007 By Attained Age and Years of Eligibility Service

| $\begin{gathered} \text { Attained } \\ \text { Age } \\ \hline \end{gathered}$ | Years of Service to Valuation Date |  |  |  |  |  |  | Totals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30 plus | No. | Valuation Payroll |
| Under 20 |  |  |  |  |  |  |  |  | \$ - |
| 20-24 |  |  |  |  |  |  |  |  |  |
| 25-29 |  |  |  |  |  |  |  |  |  |
| 30-34 |  |  |  |  |  |  |  |  |  |
| 35-39 | 3 | 1 |  |  |  |  |  | 4 | 167,226 |
| 40-44 | 2 | 2 |  |  |  |  |  | 4 | 208,521 |
| 45-49 | 7 | 1 | 1 |  |  |  |  | 9 | 315,914 |
| 50-54 | 9 | 2 | 1 | 1 | 1 |  |  | 14 | 563,132 |
| 55-59 | 6 | 2 | 3 | 3 | 3 |  |  | 17 | 745,459 |
| 60 | 1 |  |  | 1 | 2 |  |  | 4 | 244,041 |
| 61 |  |  |  |  |  |  | 1 | 1 | 25,754 |
| 62 |  |  |  |  | 1 | 1 |  | 2 | 121,250 |
| 63 | 1 |  |  |  |  |  |  | 1 | 16,456 |
| 64 |  | 1 |  | 1 | 1 |  | 2 | 5 | 321,801 |
| 65 |  |  |  | 1 | 1 | 1 |  | 3 | 137,368 |
| 66 |  |  | 2 |  |  |  |  | 2 | 210,560 |
| 67 | 2 |  |  |  | 1 |  |  | 3 | 81,275 |
| 68 |  |  |  |  |  |  | 1 | 1 | 20,000 |
| 69 |  |  |  |  |  |  |  |  |  |
| 70 \& over |  | 1 | 2 |  |  |  |  | 3 | 188,104 |
| Totals | 31 | 10 | 9 | 7 | 10 | 2 | 4 | 73 | \$3,366,861 |

Group Averages

| \|ge: | 55.6 years |
| :--- | :---: |
| Benefit Service: | 2.2 years |
| Eligibility Service: | 10.2 years |
| Annual Pay: | $\$ 46,121$ |

# DISTRICT JUDGES <br> Change in Unfunded Actuarial Accrued LiAbilities DURING THE PERIOD JULY 1, 2006 TO JUNE 30, 2007 

|  | New Plan | Paid Off Old Plan | Still Paying Old Plan | Total |
| :---: | :---: | :---: | :---: | :---: |
| (1) UAAL* at beginning of year | \$532,498 | \$47,671 | \$14,222,172 | \$14,802,341 |
| (2) Normal cost from last valuation | 567,750 | - | - | 567,750 |
| (3) Actual employer contributions | 617,356 | - | 1,224,278 | 1,841,634 |
| (4) Interest accrual: $[(1)+1 / 2[(2)-(3)]] x .070$ | 35,539 | 3,337 | 952,702 | 991,578 |
| (5) Expected UAAL before changes: $(1)+(2)-(3)+(4)$ | 518,431 | 51,008 | 13,950,596 | 14,520,035 |
| (6) Increase from benefit changes | - | - | - | - |
| (7) Changes from revised actuarial assumptions and methods | 195,617 | 247,129 | $(1,548,694)$ | $(1,105,948)$ |
| (8) Transfer of Still Paying Old Plan to Paid Off Old Plan | - | $(93,317)$ | 93,317 | - |
| (9) Expected UAAL after changes: $(5)+(6)+(7)+(8)$ | 714,048 | 204,820 | 12,495,219 | 13,414,087 |
| (10) Actual UAAL at end of year | 509,390 | - | 11,295,495 | 11,804,885 |
| (11) Gain/(Loss): (9) - (10) | \$204,658 | \$204,820 | \$1,199,724 | \$1,609,202 |

[^3]
## DISTRICT JUDGES

GASB STATEMENTS No. 25 AND No. 27

## REQUIRED ACTUARIAL INFORMATION Schedule of Funding Progress

| Actuarial <br> Valuation <br> Date | Actuarial <br> Value of <br> Assets <br> (a) | Entry Age <br> AAL <br> (b) | UAAL <br> (b)-(a) | Funded <br> Ratio <br> (a)/(b) | Annual <br> Covered <br> Payroll <br> (c) | UAAL as a <br> Percentage of <br> Covered Payroll <br> [(b-a)/(c)] |  |
| :---: | :---: | ---: | ---: | ---: | ---: | ---: | ---: |
| $12 / 31 / 04$ | $\$$ | 0 | $\$$ | 0 | $\$$ | 0 | $100.0 \%$ |
| $6 / 30 / 05$ | $7,569,919$ | $24,134,114$ | $16,564,195$ | $31,841,022$ | $0.0 \%$ |  |  |
| $6 / 30 / 06$ | $10,141,040$ | $24,943,381$ | $14,802,341$ | $40.7 \%$ | $3,222,495$ | $514.0 \%$ |  |
| $6 / 30 / 07$ | $12,582,548$ | $24,387,433$ | $11,804,885$ | $51.6 \%$ | $3,313,454$ | $446.7 \%$ |  |
|  |  |  |  |  |  |  |  |

# District Judges <br> GASB Statements No. 25 and No. 27 <br> REQUIRED SUPPLEMENTARY INFORMATION 

The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest valuation date follows:

| Valuation Date | June 30, 2007 |
| :---: | :---: |
| Actuarial Cost Method | Entry Age |
| Amortization Method L | Level Percent-of-Payroll (New Plan and Paid Off Old Plan) Level Dollar (Still Paying Old Plan) |
| Remaining Amortzation Period | 18 years (New Plan and Paid Off Old Plan) <br> 28 years (Still Paying Old Plan) |
| Asset Valuation Method | 4-Year Smoothed Market |
| Actuarial Assumptions: |  |
| Investment Rate of Return | 8.0\% |
| Projected Salary Increases | 4.7\%-9.8\% |
| Including inflation at | 4.0\% |
| Cost-of-living adjustments | 3.0\% Annual Compounded Increase |
|  | Number |
| Retirees and beneficiaries receiving benefits | ts 117 |
| Terminated plan members entitled to but not yet receiving benefits | 161 |
| Current active plan members | $\underline{73}$ |
| Total | 351 |

SECTION F
DISTRICT JUDGES - ACTUARIAL METHODS AND ASSUMPTIONS AND OTHER TECHNICAL ASSUMPTIONS

## DISTRICT JUDGES <br> Summary of Assumptions Used For Actuarial Valuations

## ECONOMIC ASSUMPTIONS

The investment return rate used in making the valuation was $8.00 \%$ per year, compounded annually (net after investment and administrative expenses). This rate of return is not the assumed real rate of return. The real rate of return is the portion of investment return which is more than the wage inflation rate. Considering the assumed wage inflation rate of $4.0 \%$, the $8.00 \%$ investment return rate translates to an assumed net real rate of return of $4.0 \%$. This assumption was first used for the June 30, 2007 valuation.

Pay increase assumptions for individual active members are shown on page F-5. Part of the assumption for each age is for a merit and/or seniority increase, and the other $4.0 \%$ recognizes inflation.

Total active member payroll is assumed to increase 4.0\% a year, which is the portion of the individual pay increase assumptions attributable to inflation.

The number of active members is assumed to continue at the present number.

## NON-ECONOMIC ASSUMPTIONS

The mortality table used to measure retired life mortality was the 1983 Group Annuity Mortality Table. Related values are shown on page F-3.

The probabilities of retirement for members eligible to retire are shown on pages F-4.

The probabilities of withdrawal from service, disability, and salary increases are shown for sample ages on pages F-5.

The individual entry-age actuarial cost method was used in determining liabilities and normal cost. This cost method has the following characteristics:
(i) the annual normal costs for each individual active member, payable from the member's actual date of employment to the projected date of retirement, are sufficient to accumulate the actuarial present value of the member's benefit at the time of retirement;
(ii) each annual normal cost is a constant percentage of the member's year-byyear projected covered pay.

Amortization of Unfunded Actuarial Accrued Liabilities. Unfunded actuarial accrued liabilities associated with accumulated actuarial gains and losses, were amortized by level percent-ofpayroll contributions (principal and interest combined) over an 18-year period.

Differences in the past between assumed experience and actual experience (actuarial gains and losses) become part of actuarial accrued liabilities.

## Present assets (cash \& investments) were valued on a market related basis.

The data about persons now covered and about present assets were furnished by the System's administrative staff. Although examined for general reasonableness, the data was not audited by the Actuary.

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

# Single Life Retirement Values Based on 1983 Group Annuity Mortality 8.00\% INTEREST JUNE 30, 2007 

| Sample <br> Attained <br> Ages | Present Value of <br> \$1.00 Monthly for Life |  | Present Value of <br> \$1.00 Monthly for Life <br> Increasing 3\% Annually |  | Future Life <br> Expectancy (Years) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Men | Women | Men | Women | Men | Women |
| 40 | $\$ 142.98$ | $\$ 147.82$ | $\$ 230.76$ | $\$ 247.72$ | 38.46 | 44.52 |
| 45 | 138.18 | 144.67 | 215.78 | 235.41 | 33.74 | 39.69 |
| 50 | 132.10 | 140.42 | 198.99 | 221.05 | 29.18 | 34.92 |
| 55 | 124.57 | 134.74 | 180.46 | 204.45 | 24.82 | 30.24 |
| 60 | 115.04 | 127.24 | 159.86 | 185.46 | 20.64 | 25.67 |
| 65 | 103.26 | 117.61 | 137.46 | 164.20 | 16.69 | 21.29 |
| 70 | 90.18 | 105.53 | 115.02 | 140.86 | 13.18 | 17.13 |
| 75 | 76.40 | 91.57 | 93.48 | 116.86 | 10.15 | 13.37 |
| 80 | 62.65 | 77.16 | 73.79 | 94.27 | 7.64 | 10.20 |
| 85 | 50.59 | 62.99 | 57.63 | 73.81 | 5.73 | 7.58 |

The mortality table was set forward 10 years for disabilities.

# District Judges <br> Probabilities of Retirement for Members Eligible to Retire June 30, 2007 

| Retirement <br> Ages | Percent of Eligible Active Members <br> Retiring Within Next Year |
| :---: | :---: |
|  | $10 \%$ |
| 50 | 10 |
| 51 | 10 |
| 52 | 10 |
| 53 | 10 |
| 54 | 12 |
| 55 | 12 |
| 56 | 14 |
| 57 | 14 |
| 58 | 14 |
| 59 | 18 |
| 60 | 18 |
| 61 | 30 |
| $62-73$ | 100 |
| 74 |  |

Member may retire age 50 with 20 or more years of service, age 60 with 16 or more years of service, or age 65 with 8 or more years of service.

# DISTRICT JUDGES <br> Separations From Active Employment Before SERVICE RETIREMENT <br> JUNE 30, 2007 

| Sample <br> Ages | Percent of Active Members Separating within the Next Year |  |  |  | Pay Increase Assumptions For An Individual Employee |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Withdrawal |  | Disability |  |  <br> Seniority | Base (Economy) | Increase <br> Next |
|  | Men | Women | Men | Women |  |  |  |
| 20 | 2.0 \% | 2.0 \% | 0.08 \% | 0.08 \% | 2.70 \% | 4.00 \% | 6.70 \% |
| 25 | 2.0 | 2.0 | 0.08 | 0.08 | 2.60 | 4.00 | 6.60 |
| 30 | 2.0 | 2.0 | 0.08 | 0.08 | 2.20 | 4.00 | 6.20 |
| 35 | 2.0 | 2.0 | 0.08 | 0.08 | 1.90 | 4.00 | 5.90 |
| 40 | 2.0 | 2.0 | 0.20 | 0.20 | 1.40 | 4.00 | 5.40 |
| 45 | 2.0 | 2.0 | 0.26 | 0.26 | 1.20 | 4.00 | 5.20 |
| 50 | 2.0 | 2.0 | 0.49 | 0.49 | 0.70 | 4.00 | 4.70 |
| 55 | 2.0 | 2.0 | 0.89 | 0.89 | 0.70 | 4.00 | 4.70 |
| 60 | 2.0 | 2.0 | 1.41 | 1.41 | 0.00 | 4.00 | 4.00 |

DISTRICT JUDGES<br>Summary of Assumptions Used<br>JUNE 30, 2007<br>Miscellaneous and Technical Assumptions

Marriage Assumption. 100\% of males and $100 \%$ of females are assumed to be married for purposes of death-in-service benefits. $80 \%$ of males and $80 \%$ of females are assumed to be married for purposes of death-after-retirement benefits for active member valuation purposes.

Pay Increase Timing. Beginning of (Fiscal) year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.

Decrement Timing. Decrements of all types are assumed to occur mid-year.

Eligibility Testing. Eligibility for benefits is determined based upon the age and service on the valuation date.

Benefit Service. Exact fractional service is used to determine the amount of benefit payable.

Decrement Relativity. Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.

Normal Form of Benefit. The assumed normal form of benefit is the straight life form.

Incidence of Contributions. Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made. New entrant normal cost contributions are applied to the funding of new entrant benefits.

## SECTION G

FINANCIAL PRINCIPLES

## Financial Principles and Operational Techniques of APERS

Promises Made, and To Be Paid For. As each year is completed, APERS in effect hands an "IOU" to each member then acquiring a year of service credit --- the "IOU" says: "The Arkansas Public Employees Retirement System owes you one year's worth of retirement benefits, payments in cash commencing when you qualify for retirement."

The related key financial questions are:

## Which generation of taxpayers contributes the money to cover the IOU?

The present taxpayers, who receive the benefit of the member's present year of service? Or the future taxpayers, who happen to be in Arkansas at the time the IOU becomes a cash demand, years and often decades later?

The law governing APERS financing intends that this year's taxpayers contribute the money to cover the IOUs being handed out this year. With this financial objective, the employer contribution rate is expected to remain approximately level from generation to generation of taxpayers.

There are systems which have a design for deferring contributions to future taxpayers. Lured by a lower contribution rate now, they put aside the consequence that the contribution rate must then relentlessly grow to a level much higher than would be required if a level contribution pattern were followed.

An inevitable by-product of the level-cost design is the accumulation of reserve assets, for decades, and the income produced when the assets are invested. Investment income becomes the third and largest contributor for benefits to employees, and is interlocked with the contribution amounts required from employees and employers.

Translated to actuarial terminology, this level-cost objective means that the contribution rates must total at least the following:

Normal Cost (the cost of members' service being rendered this year)
... plus ...
Interest on Unfunded Actuarial Accrued Liabilities (unfunded actuarial accrued liabilities are the difference between: liabilities for service already rendered the accrued assets).

Computing Contributions to Support Fund Benefits. From a given schedule of benefits and from employee and asset data, the actuary calculates the contribution rates to support the benefits by means of an actuarial valuation and a funding method.

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

In an actuarial valuation, assumptions must be made as to what the above rates will be for the next year and for decades in the future. The assumptions are established by the Retirement Board after receiving the advice of the actuary.

Reconciling Differences Between Assumed Experience and Actual Experience. Once actual experience has occurred and has been observed, it will not coincide exactly with assumed experience, regardless of the skill of the actuary and the many calculations made. The future can not be predicted with $100 \%$ precision.

APERS copes with these continually changing differences by having annual actuarial valuations. Each actuarial valuation is a complete recalculation of assumed future experience, taking into account all past differences between assumed and actual experience. The result is continuing adjustments in financial position.


## YEARS OF TIME

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

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

Economic Risk Areas
Rates of investment return
Rates of pay increase
Changes in active member group size
Non-Economic Risk Areas
Ages at actual retirement
Rates of mortality
Rates of withdrawal of active members (turnover)
Rates of disability

## The Actuarial Valuation Process

The financing diagram on the preceding page shows the relationship between the two fundamentally different philosophies of paying for retirement benefits: the method where contributions match cash benefit payments (or barely exceed cash benefit payments, as in the Federal Social Security program) which is thus an increasing contribution method; and, the level contribution method which attempts to equalize contributions between the generations.

The actuarial valuation is the mathematical process by which the level contribution rate is determined. The activity constituting the valuation may be summarized as follows:
A. Census Data, including:

Retired lives now receiving benefits
Former employees with vested benefits not yet payable
Active employees
B. + Asset data (cash \& investments)
C. + Benefit provisions that establish eligibility and amounts of payments to members
D. + Assumptions concerning future experience in various risk areas
E. + The funding method for employer contributions (the long-term, planned pattern for employer contributions)
F. + Mathematically combining the assumptions, the funding method, and the data
G. = Determination of:

Plan Financial position; and/or
New Employer Contribution Rate

## GLOSSARY

Actuarial Accrued Liability. The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability."

Accrued Service. The service credited under the plan which was rendered before the date of the actuarial valuation.

Accumulated Benefit Obligation. The actuarial present value of vested and non-vested benefits based on service to date and past and current salary levels.

Actuarial Assumptions. Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

Actuarial Cost Method. A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future plan benefits" between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method."

Actuarial Equivalent. A single amount or series of amounts of equal value to another single amount or series of amounts, computed on the basis of the rate(s) of interest and mortality tables used by the plan.

Actuarial Present Value. The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Amortization. Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

## GLOSSARY

Experience Gain (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.

Normal Cost. The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost." Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

Plan Termination Liability. The actuarial present value of future plan benefits based on the assumption that there will be no further accruals for future service and salary. The termination liability will generally be less than the liabilities computed on a "going concern" basis and is not normally determined in a routine actuarial valuation.

Reserve Account. An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.

Unfunded Actuarial Accrued Liability. The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability."

Valuation Assets. The value of current plan assets recognized for valuation purposes. Generally based on a phase-in of differences between actual and assumed market rates of return.

# Meaning of "Unfunded Actuarial Accrued Liabilities" 

"Actuarial accrued liabilities" are the present value of the portions of promised benefits that are not covered by future normal cost contributions --- a liability has been established ("accrued") because the service has been rendered but the resulting monthly cash benefit may not be payable until years in the future.

If "actuarial accrued liabilities" at any time exceed the plan's accrued assets (cash \& investments), the difference is "unfunded actuarial accrued liabilities." This is the common condition. When a plan's assets equal or exceed the plan's "actuarial accrued liabilities," the plan is said to be "fully funded." This is an unusual condition.

Each time a plan adds a new benefit which applies to service already rendered, an "actuarial accrued liability" is created, which is also an "unfunded actuarial accrued liability" because the plan can't print instant cash to cover the value of the new benefit promises. Payment for such unfunded actuarial accrued liabilities is spread over a period of years, commonly in the 20-30 year range.

Unfunded actuarial accrued liabilities can occur in another way: if actual plan experience is less favorable than assumed, the difference is added to unfunded actuarial accrued liabilities. For example, in plans where benefits are directly related to an employee's pay near time of retirement, unfunded actuarial accrued liabilities increased rapidly during the 1970's because unexpected rates of pay increase created additional actuarial accrued liabilities which could not be matched by reasonable investment results. Most of the unexpected pay increases were the direct result of inflation, which is a very destructive force on financial stability.

The existence of unfunded actuarial accrued liabilities is not bad but the changes from year to year in amount of unfunded actuarial accrued liabilities are important --- "bad" or "good" or somewhere in between.

Nor are unfunded actuarial accrued liabilities a bill payable immediately, but it is important that policy-makers prevent the amount from becoming unreasonably high and it is vital for plans to have a sound method for making payments toward them so that they are controlled.

## SECTION H

ACTUARIAL SUPPLEMENTAL INFORMATION REQUIRED BY STATEMENTS NO. 25 AND NO. 27 OF THE GOVERNMENTAL ACCOUNTING STANDARDS BOARD

GASB Statements No. 25 AND No. 27
REQUIRED ACTUARIAL INFORMATION
Schedule of Funding Progress
(\$ MILLIONS)

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Entry Age AAL (b) | $\begin{aligned} & \text { UAAL } \\ & \text { (b)-(a) } \end{aligned}$ | Funded <br> Ratio <br> (a)/(b) | Annual <br> Covered <br> Payroll <br> (c) | UAAL as a Percentage of Covered Payroll $\qquad$ [(b-a)/(c)] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6/30/95 | \$2,248 | \$2,060 | \$ (188) | 109.1 \% | \$ 835 | (22.5)\% |
| 6/30/96 | 2,522 | 2,291 | (231) | 110.1 \% | 889 | (26.0)\% |
| 6/30/97 | 2,876 | 2,607 | (269) | 110.3 \% | 939 | (28.6)\% |
| 6/30/98 @ \# | 3,297 | 2,921 | (376) | 112.9 \% | 975 | (38.6)\% |
| 6/30/99 @ | 3,712 | 3,479 | (233) | 106.7 \% | 1,009 | (23.1)\% |
| 6/30/00 | 4,121 | 3,803 | (318) | 108.4 \% | 1,050 | (30.3)\% |
| 6/30/01 @ | 4,342 | 4,111 | (231) | 105.6 \% | 1,070 | (21.6)\% |
| 6/30/02 \# | 4,404 | 4,398 | (6) | 100.1 \% | 1,112 | (0.5)\% |
| 6/30/03 \# | 4,416 | 4,674 | 258 | 94.5 \% | 1,148 | 22.5\% |
| 6/30/04 | 4,438 | 5,005 | 567 | 88.7 \% | 1,176 | 48.2\% |
| 6/30/05 | 4,584 | 5,323 | 739 | 86.1 \% | 1,215 | 60.8\% |
| 6/30/05 @ \# | 4,584 | 5,619 | 1,035 | 81.6 \% | 1,215 | 85.2\% |
| 6/30/06 | 4,949 | 5,936 | 987 | 83.4 \% | 1,267 | 77.9\% |
| 6/30/07 | 5,498 | 6,173 | 675 | 89.1 \% | 1,303 | 51.8\% |
| 6/30/07 @ | 5,498 | 6,174 | 676 | 89.1 \% | 1,303 | 51.9\% |

@ After legislated changes in benefit provisions.
\# After changes in actuarial assumptions.
Please note that columns (a) and (b) may not add to UAAL due to rounding.

GASB Statements No. 25 AND No. 27 REQUIRED ACTUARIAL INFORMATION SCHEDULE OF EMPLOYER CONTRIBUTIONS

| Year Ended <br> June 30 | Annual Required <br> Contribution | Percent <br> Contributed |
| :---: | :---: | :---: |
| 1994 | $\$ 75,710,660$ | $100 \%$ |
| 1995 | $75,028,320$ | $100 \%$ |
| 1996 | $76,772,911$ | $100 \%$ |
| 1997 | $82,050,663$ | $100 \%$ |
| 1998 | $87,528,945$ | $100 \%$ |
| 1999 | $93,322,444$ | $100 \%$ |
| 2000 | $96,348,947$ | $100 \%$ |
| 2001 | $100,925,338$ | $100 \%$ |
| 2002 | $109,037,491$ | $100 \%$ |
| 2003 | $115,690,798$ | $100 \%$ |
| 2004 | $118,419,346$ | $100 \%$ |
| 2005 | $135,027,447$ | $100 \%$ |
| 2006 | $158,152,183$ | $100 \%$ |
| 2007 | $163,223,695$ | $100 \%$ |

## GASB Statements No. 25 AND No. 27 <br> REQUIRED SUPPLEMENTARY INFORMATION

The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest valuation date follows:

| Valuation Date | June 30, 2007 |
| :--- | :---: |
| Actuarial Cost Method | Entry Age |
| Amortization Method | Level Percent-of-Payroll (State and Local) <br> Level Dollar (General Assembly) |
|  |  |
| Remaining Amortzation Period | 18 years |
|  |  |
| Asset Valuation Method | $4-$ Year Smoothed Market |
| Actuarial Assumptions: |  |
| Investment Rate of Return |  |
| Projected Salary Increases | $8.0 \%-9.8 \%$ |
| Including inflation at | $4.0 \%$ |
| Cost-of-living adjustments | $3.0 \%$ Annual Compounded Increase |

## Number

Retirees and beneficiaries receiving benefits \# 22,409
Terminated plan members entitled to but
11,674
not yet receiving benefits
Active plan members $\underline{43,630}$
Total 77,713
\# Includes DROP participants.

November 19, 2007

Ms. Gail H. Stone, Executive Director
Arkansas Public Employees Retirement System
One Union National Plaza
124 West Capitol, 4th Floor
Little Rock, Arkansas 72201
Re: Report of the June 30, 2007 Actuarial Valuation and Gain/Loss Analysis of Financial Experience

Dear Gail:
Enclosed are 40 copies of this report.
Sincerely,

Norman L. Jones
NLJ:sew
Enclosures
cc: David Hoffman


[^0]:    \# Based on Consumer Price Index, All Urban Consumers, United States City Average (July values).

[^1]:    * Including survivor beneficiaries of deceased retirees.

[^2]:    * Unfunded actuarial accrued liability.

[^3]:    * Unfunded actuarial accrued liability.

