PUBLIC EMPLOYEES'
RETIREMENT FUND OF INDIANA
ACTUARIAL VALUATION
JULY 1, 2001

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## PUBLIC EMPLOYEES' RETIREMENT FUND <br> OF INDIANA

## Summary of Actuarial Valuation as of July 1, 2001

## Introduction

As of the valuation date there were 145,019 active participants, 50,769 pensioners and 10,323 terminated participants entitled to future benefits. See the exhibit labeled Summary of Employee Data for a breakdown of the participants between state employees and employees of municipalities.

We have established the following contributions as of July 1, 2001:

|  | Revised Assumptions |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | State |  | Municipalities |  | Total |  |
| Total Annual Cost | \$ | 72,332,921 |  | \$ 103,486,622 |  | 175,819,543 |
| Cost as Percentage of Anticipated Payroll (Interest adjusted to mid-year) |  | 5.2\% |  | 5.0\% |  | 5.1\% |

This report reflects the plan provisions in effect as of July 1, 2001. Refer to the exhibit titled Summary of Major Plan Provisions for a brief description of benefits provided by this plan.

The Total Annual Cost is composed of employer normal cost of $\$ 197,374,637$ and a net amortization payment of a negative $\$ 21,555,094$. As of July 1, 2001, the Unfunded Actuarial Accrued Liability is a negative $\$ 417,632,106$. A breakdown and a comparison with the results of the prior valuation is provided in the exhibit titled Contribution Breakdown and Comparison.

The Total Annual Cost for 2001, as a percent of anticipated payroll increased to $5.1 \%$ as compared to $5.0 \%$ for 2000. The Fund had experience losses from investments yielding less than the assumed $7.25 \%$ (estimated return for the 2000 plan year was $5.77 \%$ on an actuarial value basis) which were partially offset by experience gains from salaries being increased less than the assumed $5 \%$ and other miscellaneous items. In terms of actual dollars, the Total Annual Cost increased by \$6,445,678 from \$169,373,865 for the 2000 plan year to $\$ 175,819,543$ for the 2001 plan year.

The Entry Age Normal Cost Method was continued for determining the cost of retirement benefits, death benefits, disability benefits, and termination benefits. Valuation assets continue to be developed on an actuarial basis.

The actuarial assumptions used in this Valuation have been reviewed and revised based on an actuarial experience study prepared in 2001.

A brief explanation of the methods and a complete summary of the assumptions used, as revised, may be found in the exhibits titled Actuarial Methods and Actuarial Assumptions.

## Valuation Data and Disclaimer

The valuation census data was provided by the Public Employees' Retirement Fund and transposed into a computer file for processing. Similar information has been furnished to us in the past, and the accuracy of this report depends on the accuracy of all data that has been furnished to us from time to time. Trust information was also furnished by the Public Employees' Retirement Fund. It is noted that we make no representation concerning the accuracy of any employee data or valuation information that has been furnished to us.

The Valuation has been prepared for the sole purpose of determining the contribution requirements for the respective plan year and for providing accounting data to meet the requirements of GASB \#25 and \#27. The figures in this Valuation should not be used as the basis for any other purpose for which it was not designed.

## Summary of Trust Experience

Using market value, the assets consist of $80.5 \%$ in investments, $13.5 \%$ in securities lending collateral, $3.7 \%$ in cash and cash equivalents, $2.2 \%$ in net accruals and $0.1 \%$ in real estate investments and equipment less depreciation. Based on the actuarial value, the entire asset portfolio had net investment income for the 2000 plan year that resulted in an estimated yield of $5.77 \%$. See the exhibit labeled Ten Year Historical Investment Experience for more detail.

We will be pleased to furnish any additional information or answer any questions which may arise after your review of this report.

## ACTUARIAL CERTIFICATION

The information and valuation results shown in this report are, to the best of my knowledge, complete and accurate and are based upon:

1. Employee census data as of July 1, 2001 submitted by the Director of the Public Employees' Retirement Fund. Although we did not audit this data, it appears to be sufficient and reliable for purposes of the report.
2. Financial data as of July 1, 2001 submitted by the Director of the Public Employees' Retirement Fund. Although we did not audit this data, it appears to be sufficient and reliable for purposes of the report.
3. Actuarial assumptions which, in the aggregate, are reasonably related to the experience of the plan and to reasonable expectations, and which represent our best estimate of anticipated experience under the plan.
4. Actuarial methods as stated in the report and our interpretation of plan provisions as summarized in the report.

Sincerely,

Douglas Todd
A.S.A., M.A.A.A., E.A.

Senior Actuary

## SUMMARY OF CONTRIBUTIONS

TOTAL ANNUAL COST

COST AS PERCENTAGE OF ANTICIPATED PAYROLL*

TOTAL ANNUAL COST

COST AS PERCENTAGE OF ANTICIPATED PAYROLL*

| July 1, 2001 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| State |  | Municipalities Revised Assumptions |  |  | Total |
|  |  |  |
| \$ | 72,332,921 |  |  |  | \$ | 103,486,622 | \$ | 175,819,543 |
|  | 5.2\% |  | 5.0\% |  | 5.1\% |


| July 1, 2001 |  |  |
| :---: | :---: | :---: |
| State Municipalities <br> Prior Assumptions  |  |  |

5.2\%
5.3\%
*Interest adjusted for mid-year contribution

|  | July 1, 2001 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | State |  | Municipalities |  | Total |  |
| TOTAL ANNUAL COST (Revised Assumptions) |  |  |  |  |  |  |
| Employer Normal Cost | \$ | 79,567,647 | \$ | 117,806,990 |  | \$ 197,374,637 |
| Amortization of Unfunded Actuarial Liability |  | (7,234,726) |  | (14,320,368) |  | $(21,555,094)$ |
| Total | \$ | 72,332,921 | \$ | 103,486,622 |  | 175,819,543 |
| ANTICIPATED PAYROLL | \$ | 1,429,768,169 |  | 2,157,311,469 |  | \$3,587,079,638 |
| TOTAL ANNUAL COST AS \% OF ANTICIPATED PAYROLL (Interest Adjusted for Mid-Year Contribution) |  | 5.2\% |  | 5.0\% |  | 5.1\% |

## DEVELOPMENT OF UNFUNDED ACTUARIAL LIABILITY




## ACTUARIAL PRESENT VALUE OF ACCUMULATED PLAN BENEFITS

FOR NON-RETIRED PARTICIPANTS

## Revised Assumptions

## Vested Benefits

- Active Participants
- Terminated Participants

Total

## Nonvested Benefits

Total Non-Retired Actuarial Present Value of Accumulated Plan Benefits
Non-Retired Participant Assets

- Market Value
- Actuarial Value

Ratio of Assets to the Present Value of Vested Accumulated Plan Benefits

- Market Value
- Actuarial Value

Ratio of Assets to the Present Value of Total Accumulated Plan Benefits

- Market Value
- Actuarial Value

| July 1, 2001 |  |  |
| :---: | :---: | :---: |
| State | Municipalities | Total |
| $\begin{array}{r} \$ \quad 818,744,256 \\ 94,857,110 \end{array}$ | $\begin{array}{r} \$ 986,937,112 \\ 49,886,261 \end{array}$ | $\begin{array}{r} \text { \$ 1,805,681,368 } \\ 144,743,371 \end{array}$ |
| $\begin{array}{rr} \hline \$ & 913,601,366 \\ & 119,973,176 \\ \hline \end{array}$ | $\begin{array}{r} \hline \$ 1,036,823,373 \\ \quad 178,894,652 \\ \hline \end{array}$ | $\begin{array}{r} \hline \$ 1,950,424,739 \\ \quad 298,867,828 \\ \hline \end{array}$ |
| \$ 1,033,574,542 | \$ 1,215,718,025 | \$ 2,249,292,567 |
| $\begin{array}{r} \text { \$ 1,897,501,223 } \\ 2,063,626,964 \end{array}$ | $\begin{array}{r} \$ 2,303,014,844 \\ 2,504,643,196 \end{array}$ | $\begin{array}{r} \$ 4,200,516,067 \\ 4,568,270,160 \end{array}$ |
| 2.077 | 2.221 | 2.154 |
| 2.259 | 2.416 | 2.342 |
| 1.836 | 1.894 | 1.867 |
| 1.997 | 2.060 | 2.031 |

## ACTUARIAL PRESENT VALUE OF ACCUMULATED PLAN BENEFITS

FOR NON-RETIRED PARTICIPANTS

## Prior Assumptions

## Vested Benefits

- Active Participants
- Terminated Participants

Total

## Nonvested Benefits

Total Non-Retired Actuarial Present Value of Accumulated Plan Benefits
Non-Retired Participant Assets

- Market Value
- Actuarial Value

Ratio of Assets to the Present Value of Vested Accumulated Plan Benefits

- Market Value
- Actuarial Value

Ratio of Assets to the Present Value of Total Accumulated Plan Benefits

- Market Value
- Actuarial Value

| July 1, 2001 |  |  |
| :---: | :---: | :---: |
| State | Municipalities | Total |
| $\begin{array}{r} \$ 807,571,325 \\ \\ \hline 89,955,486 \\ \hline \end{array}$ | $\begin{array}{r} \$ \quad 963,643,281 \\ \\ \hline \end{array}$ | $\begin{array}{r} \$ 1,771,214,606 \\ 136,204,822 \\ \hline \end{array}$ |
| $\begin{array}{ll} \hline \$ & 897,526,811 \\ & 166,673,336 \\ \hline \end{array}$ | $\begin{array}{r} \hline \text { 1,009,892,617 } \\ 240,638,429 \\ \hline \end{array}$ | $\begin{array}{r} \hline \text { 1,907,419,428 } \\ 407,311,765 \\ \hline \end{array}$ |
| \$ 1,064,200,147 | \$ 1,250,531,046 | \$ 2,314,731,193 |
| $\begin{array}{r} \$ 1,891,247,505 \\ 2,057,373,246 \end{array}$ | $\begin{array}{r} \$ 2,295,424,649 \\ 2,497,053,001 \end{array}$ | $\begin{array}{r} \$ 4,186,672,154 \\ 4,554,426,247 \end{array}$ |
| 2.107 | 2.273 | 2.195 |
| 2.292 | 2.473 | 2.388 |
| 1.777 | 1.836 | 1.809 |
| 1.933 | 1.997 | 1.968 |

## ACTUARIAL PRESENT VALUE OF ACCUMULATED PLAN BENEFITS

FOR NON-RETIRED PARTICIPANTS

- Continued -


## REVISED

## Vested Benefits

- Active Participants
- Terminated Participants

Total
Nonvested Benefits
Total Non-Retired Actuarial Present Value of Accumulated Plan Benefits
Non-Retired Participant Assets

- Market Value
- Actuarial Value

Ratio of Assets to the Present Value of Vested Accumulated Plan Benefits

- Market Value
2.516
2.357
$2.116 \quad 2.131$
2.124
- Market Value
1.983
2.131
1.990


## STATEMENT OF CHANGES IN THE PRESENT VALUE OF ACCUMULATED PLAN BENEFITS FOR NON-RETIRED PARTICIPANTS

Actuarial Present Value of Accumulated Plan Benefits, July 1, 2000\$2,168,888,664
Plus: Increase Due to Additional Benefits Accumulated ..... 225,154,219
Less: Transfers to Retired and Disabled Status ..... 270,602,180
Plus: Increase Due to Decrease in the Discount Period (@7.25\%) ..... $173,568,109$
Plus: Increase Due to Change in Plan Provisions ..... 0
Plus: Increase (Decrease) Due to Change in Actuarial Assumptions ..... $(65,438,626)$
Plus: Actuarial Experience (Gain)/Loss and other Miscellaneous Items17,722,381
Equals: Actuarial Present Value of Accumulated Plan Benefits, July 1, 2001 ..... \$2,249,292,567

## STATEMENT OF INCOME

July 1, 2000 - June 30, 2001

| (1) | Net Value of Assets Available for Benefits, July 1, 2000 |  |  | \$ 8,559,089,415 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (2) | Receipts |  |  |  |  |
| Employer Contributions: |  |  |  |  |  |
|  | State | \$ | 76,218,663 |  |  |
|  | Municipalities |  | 111,540,006 |  | 187,758,669 |
| Employee Contributions: |  |  |  |  |  |
|  | State | \$ | 46,018,469 |  |  |
|  | Municipalities |  | 78,935,926 |  | 124,954,395 |
|  | Contributions Receivable from TRF |  |  |  | 4,771,013 |
|  | Investment Income and Dividends Net of Fees |  |  |  | 279,811,666 |
|  | Security Lending Income Net of Fees |  |  |  | 2,514,718 |
|  | Unrealized Capital Gain (Loss) |  |  |  | $(469,473,246)$ |
|  | Total Receipts |  |  | \$ | 130,337,215 |
| (3) Disbursements |  |  |  |  |  |
|  | Pension and Annuity Benefits |  |  | \$ | 269,819,270 |
|  | Disability Benefits |  |  |  | 13,640,991 |
|  | Refund of Contributions and Interest |  |  |  | 28,884,303 |
|  | Payable to TRF |  |  |  | 4,780,478 |
|  | Administrative Expenses |  |  |  | 16,751,789 |
|  | Total Disbursements |  |  | \$ | 333,876,831 |
| (4) | Net Value of Assets Available for Benefits, June 30, 2001 (1) + (2) - (3) |  |  |  | 8,355,549,799 |

## DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS

## Actuarial Value, Prior June 30

## Receipts

Employer Contributions Made During the Year
Employee Contributions Made During the Year
Expected Investment Income (@ 7.25\%) - Beginning Value
Expected Investment Income (@ 7.25\%) - Contributions
Miscellaneous Income
Total
Disbursements
Benefits Paid During the Year
Net Operational Expenses
Expected Investment Expenses (@ 7.25\%) - Disbursements
Miscellaneous Expenses
Total
Expected Actuarial Value, Current June 30
Actual Market Value, Current June 30
Actuarial Value, Current June 30
[75\% of Expected Actuarial Value] + [25\% of Actual Market Value]

July 1, 2000
\$ 7,595,266,028

July 1, 2001
\$ 8,267,656,599

| $216,708,616$ |  | $187,758,669$ |
| ---: | ---: | ---: |
| $112,116,139$ |  | $124,954,395$ |
| $550,656,787$ |  | $599,405,103$ |
| $11,919,897$ |  | $11,335,849$ |
| $4,950,985$ |  |  |
|  | $4,771,013$ |  |
| $\$$ | $896,352,424$ | $928,225,029$ |


| \$ | 302,123,767 | \$ | 312,344,564 |
| :---: | :---: | :---: | :---: |
|  | 3,447,067 |  | 20,791,803 |
|  | 11,076,943 |  | 12,076,193 |
|  | 4,458,415 |  | 4,780,478 |
| \$ | 321,106,192 | \$ | 349,993,038 |
| \$ | 8,170,512,260 | \$ | 8,845,888,590 |
| \$ | 8,559,089,615 | \$ | 8,355,549,799 |
| \$ | 8,267,656,599 | \$ | 8,723,303,892 |

RECONCILIATION OF

## EMPLOYEE ACCOUNT BALANCES

July 1, 2000 - June 30, 2001

Balance, July 1, 2000
\$ 1,647,901,260

## Market Value

## Receipts

| Net Employee Account Contributions | $\$ 124,954,395$ |
| :--- | ---: |
| Interest Credited | $91,786,829$ |
| Other Receipts | $1,370,228$ |

Total Receipts

Disbursements

Net Payments on Account Balances
Transferred to Benefits in Force
Other Disbursements
Total Disbursements

Balance, June 30, 2001

Net Employee Account Contributions

Other Receipts
\$ 28,884,303
107,035,024
1,121,616
\$ 218,111,452
$\$ \quad 137,040,943$

## ALLOCATION OF ASSETS

Total Assets Available for Benefits

- Market Value
- Actuarial Value

Less: Employee Account Balances
Less: Retired and Disabled
Equals: Total Non-Retired Assets

- Market Value
July 1, 2000
$\qquad$
\$ 8,559,089,615
\$ 8,355,549,799
8,267,656,599
8,723,303,892
1,647,901,260
1,728,971,769
- Actuarial Value

Total Ledger Assets

- State Share of Total
- State Percent of Total
- Municipalities Share of Total
- Municipalities Percent of Total

State Portion (Based on Ledger Share)

- Market Value

2,303,679,365
2,426,061,963
$\begin{array}{ll}4,601,508,990 & 4,200,516,067 \\ 4,316,075,974 & 4,568,270,160\end{array}$
4,757,230,757 5,217,458,565
2,160,355,405 2,356,885,151
45.412037\% 45.173050\%

2,596,875,352 2,860,573,414
$\begin{array}{rr}2,54,587963 \% & 54.826950 \%\end{array}$

2,092,363,687 1,897,501,223

- Actuarial Value

1,960,018,018 2,063,626,964
Municipalities Portion (Based on Ledger Share)

- Market Value

2,515,145,303
2,303,014,844

- Actuarial Value

2,356,057,956
2,504,643,196

Each year the assets of the plan are allocated first to employee account balances and second to retired and disabled lives. Residual assets are then allocated to non-retired participants to determine necessary contribution levels for non-retired participants.

## REQUIRED PENSION DISCLOSURE UNDER GASB \#25 AND \#27

(State Employees Only)

## Schedule of Funding Progress


*Revised economic and/or noneconomic assumptions due to experience review.

## REQUIRED PENSION DISCLOSURE UNDER GASB \#25 AND \#27

(State Employees Only)

Development of Net Pension Obligation (NPO)
(Dollar Amounts in Thousands)

| Year <br> Beginning | (1) <br> Annual <br> Required <br> Contrib | (2) <br> Interest on NPO <br> @ 7.25\% | (3) <br> ARC <br> Adjust <br> (8) / (4) | (4) <br> Amort. <br> Factor | (5) <br> Net Pens Cost $(1)+(2)-(3)$ | (6) <br> Actual <br> Employer <br> Contrib | (7) <br> Change <br> in NPO <br> (5) - (6) | $\begin{gathered} \text { (8) } \\ \\ \text { NPO } \\ \text { @ BOY } \\ \hline \end{gathered}$ | $\begin{gathered} (9) \\ \text { NPO } \\ \text { @ EOY } \\ \text { (7) + (8) } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7/1/00 | \$66,559 | \$ 2,460 ) | \$(2,660) | 12.7581 | \$66,759 | \$76,219 | \$(9,460) | \$(33,937) | \$(43,397) |
| 7/1/99 | 61,762 | (827) | (889) | 12.8280 | 61,824 | 84,354 | $(22,530)$ | $(11,407)$ | $(33,937)$ |
| 7/1/98 | 67,481 | (78) | (83) | 12.8933 | 67,486 | 77,821 | $(10,335)$ | $(1,072)$ | $(11,407)$ |
| 7/1/97 | 81,546 | (180) | (192) | 12.9541 | 81,558 | 80,146 | 1,412 | $(2,484)$ | $(1,072)$ |
| 7/1/96 | 79,101 | - | - | 12.5944 | 79,101 | 81,585 | $(2,484)$ | - | $(2,484)$ |

## SUMMARY OF EMPLOYEE DATA

July 1, $2000 \quad$ July 1, 2001

Active Participants

## State <br> Municipalities <br> Total

Retired Participants and Beneficiaries Receiving Benefits
Annual Benefits Payable from Trust
Average Annual Benefit
Disabled Participants Receiving Benefits
Annual Benefits Payable from Trust
Average Annual Benefit
Terminated Participants Entitled to Future Benefits

| STATE |
| :--- |
| Deferred Annual Benefits* <br> Average Annual Benefits* |
| MUNICIPALITIES | | Deferred Annual Benefits* |
| :--- |
| Average Annual Benefits* |


|  | 53,281 |  | 52,579 |
| :--- | ---: | ---: | ---: |
|  | 93,332 |  | 92,440 |
|  | 146,613 |  | 145,019 |
|  | 45,768 |  | 47,203 |
| $\$$ | $216,615,494$ | $\$$ | $230,791,087$ |
| $\$$ | 4,733 | $\$$ | 4,889 |
|  |  |  |  |
|  | 3,537 |  | 3,566 |
| $\$$ | $13,230,143$ | $\$$ | $13,529,137$ |
| $\$$ | 3,740 | $\$$ | 3,794 |


|  | 5,255 |  | 6,408 |
| :--- | ---: | ---: | ---: |
| $\$$ | $21,480,886$ | $\$$ | $26,565,153$ |
| $\$$ | 4,088 | $\$$ | 4,146 |
|  | 3,113 |  | 3,915 |
| $\$$ | $10,213,851$ | $\$$ | $14,543,807$ |
| $\$$ | 3,281 | $\$$ | 3,715 |

*Weighted with early retirement rates

STATE PORTION

| Date Base Established | Reason | Years Remaining at 7-1-2001 | Amortization Amount | Balance at 7/1/2001 |
| :---: | :---: | :---: | :---: | :---: |
| 6/30/1975 | Initial UAL | 14 | \$ 9,018,801 | 83,338,183 |
| 6/30/1976 | Experience Loss | 15 | 1,685,928 | 16,211,617 |
| 6/30/1977 | Experience Loss | 16 | 1,178,949 | 11,749,191 |
| 6/30/1978 | Experience Loss | 17 | 1,316,896 | 13,553,689 |
| 6/30/1979 | Experience Loss | 18 | 1,452,602 | 15,392,357 |
| 6/30/1980 | Experience Loss | 19 | 1,911,309 | 20,795,224 |
| 6/30/1981 | Assump./Experience Gain | 20 | $(1,581,922)$ | $(17,629,915)$ |
| 6/30/1982 | Assumption Change | 21 | 3,985,291 | 45,397,435 |
| 6/30/1982 | Experience Loss | 21 | 1,957,011 | 22,292,804 |
| 6/30/1983 | Experience Gain | 22 | $(698,574)$ | $(8,118,267)$ |
| 6/30/1984 | Experience Loss | 23 | 2,112,891 | 25,007,396 |
| 6/30/1985 | Experience Gain | 24 | $(994,812)$ | $(11,973,103)$ |
| 6/30/1986 | Experience Gain | 25 | $(2,439,258)$ | $(29,812,500)$ |
| 6/30/1987 | Experience Loss-COLA | 1 | 437,508 | 437,508 |
| 6/30/1987 | Asset Method Change | 26 | 2,438,462 | 30,226,596 |
| 6/30/1987 | Assumption Change | 26 | 3,116,220 | 38,627,929 |
| 6/30/1987 | Experience Gain | 26 | (6,285,785) | $(77,917,107)$ |
| 6/30/1988 | Assump./Experience Loss | 27 | 1,059,632 | 13,306,673 |
| 6/30/1989 | Experience Loss | 28 | 3,335,525 | 42,390,934 |
|  |  |  |  | Continued.. |
| March 7, 2002 (I418) |  |  |  | -22 |

-Continued-

| Date Base Established | Reason | STATE PORTION, Continued |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Years Remaining at 7-1-2001 | Amortization Amount | Balance at 7/1/2001 |
| 6/30/1990 | Experience Gain | 29 | \$ (2,734,888) | \$ (35,142, 810 ) |
| 6/30/1991 | Experience Gain | 30 | $(6,507,574)$ | $(84,475,969)$ |
| 6/30/1992 | Experience Gain | 31 | $(3,390,981)$ | $(44,434,267)$ |
| 7/1/1993 | Experience Gain | 32 | $(5,680,630)$ | $(75,085,806)$ |
| 7/1/1994 | Experience Gain | 33 | $(7,526,461)$ | $(100,285,218)$ |
| 7/1/1995 | Experience Gain | 34 | $(5,441,381)$ | $(73,043,136)$ |
| 7/1/1995 | Subsidized Early |  | 2,450,554 |  |
|  | Retirement | 34 |  | 32,895,345 |
| 7/1/1995 | Assumption Change | 34 | 8,041,218 | 107,942,397 |
| 7/1/1996 | Experience Gain | 35 | $(2,721,579)$ | $(36,785,439)$ |
| 7/1/1996 | Assumption Change | 35 | 5,124,290 | 69,260,985 |
| 7/1/1997 | Experience Gain | 36 | $(5,687)$ | $(77,357)$ |
| 7/1/1998 | Experience Gain | 36 | $(10,574,011)$ | $(143,833,295)$ |
| 7/1/1999 | Experience Gain | 36 | (7,660,765) | $(104,205,773)$ |
| 7/1/2000 | Experience Gain | 36 | $(665,781)$ | $(9,056,304)$ |
| 7/1/2001 | Experience Loss | 36 | 3,706,926 | 50,423,563 |
| 7/1/2001 | Assumption Change | 36 | 3,345,350 | 45,505,220 |
| Total |  |  | \$ (7,234,727) | \$ (167,121,220) |

## SCHEDULED AMORTIZATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY

-Continued-

| Date Base Established | Reason | MUNICIPALITY PORTION |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Years Remaining at 7-1-2001 | Amortization Amount | Balance at 7/1/2001 |
| 6/30/1981 | Initial UAL-Combined | 15 | \$ 13,222,723 | \$ 127,147,668 |
| 6/30/1982 | Assumption Change | 21 | 2,808,877 | 31,996,619 |
| 6/30/1982 | Experience Loss | 21 | 1,248,079 | 14,217,173 |
| 6/30/1983 | Experience Gain | 22 | $(195,876)$ | $(2,276,320)$ |
| 6/30/1984 | Experience Loss | 23 | 395,006 | 4,675,147 |
| 6/30/1985 | Experience Gain | 24 | $(3,038,665)$ | $(36,572,002)$ |
| 6/30/1986 | Experience Gain | 25 | $(4,196,179)$ | $(51,285,528)$ |
| 6/30/1987 | Experience Loss-COLA | 1 | 398,515 | 398,517 |
| 6/30/1987 | Asset Method Change | 26 | 2,941,853 | 36,466,515 |
| 6/30/1987 | Assumption Change | 26 | 3,921,520 | 48,610,238 |
| 6/30/1987 | Experience Gain | 26 | $(1,999,627)$ | $(24,786,898)$ |
| 6/30/1988 | Assump./Experience Gain | 27 | $(1,795,917)$ | $(22,552,814)$ |
| 6/30/1989 | Experience Loss | 28 | 4,547,601 | 57,795,114 |

Continued....

## SCHEDULED AMORTIZATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY

-Continued-

| Date Base Established | Reason | MUNICIPALITY PORTION, Continued |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Years Remaining at 7-1-2001 | Amortization Amount | Balance at 7/1/2001 |
| 6/30/1990 | Experience Gain | 29 | \$ (1,402,505) | \$ (18,021,934) |
| 6/30/1991 | Experience Gain | 30 | $(5,988,013)$ | $(77,731,470)$ |
| 6/30/1992 | Experience Gain | 31 | $(2,618,090)$ | $(34,306,570)$ |
| 7/1/1993 | Experience Gain | 32 | $(5,630,704)$ | $(74,425,893)$ |
| 7/1/1994 | Experience Gain | 33 | $(4,860,205)$ | $(64,759,086)$ |
| 7/1/1995 | Experience Gain | 34 | $(8,587,968)$ | $(115,281,784)$ |
| 7/1/1995 | Subsidized Early |  | 2,101,061 |  |
|  | Retirement | 34 |  | 28,203,883 |
| 7/1/1995 | Assumption Change | 34 | 9,657,141 | 129,633,957 |
| 7/1/1996 | Experience Gain | 35 | $(3,437,988)$ | (46,468,570) |
| 7/1/1996 | Assumption Change | 35 | 6,108,712 | 82,566,654 |
| 7/1/1997 | Experience Gain | 36 | $(3,790,418)$ | $(51,559,269)$ |
| 7/1/1998 | Experience Gain | 36 | $(7,688,907)$ | $(104,588,582)$ |
| 7/1/1999 | Experience Gain | 36 | $(8,682,630)$ | $(118,105,729)$ |
| 7/1/2000 | Experience Gain | 36 | $(2,259,871)$ | $(30,739,960)$ |
| 7/1/2001 | Experience Loss | 36 | 1,079,021 | 14,677,416 |
| 7/1/2001 | Assumption Change | 36 | 3,423,086 | 46,562,622 |
| Total |  |  | \$ (14,320,368) | \$ (250,510,886) |


| Valuation Date | $\underline{\text { State }}$ | Municipalities | Total |
| :--- | :--- | :---: | :---: |
| July 1, 2001* | $5.2 \%$ | $5.0 \%$ | $5.1 \%$ |
| July 1, 2000 | $5.0 \%$ | $5.0 \%$ | $5.0 \%$ |
| July 1, 1999 | $5.0 \%$ | $5.1 \%$ | $5.1 \%$ |
| July 1, 1998 | $5.7 \%$ | $5.5 \%$ | $5.6 \%$ |
| July 1, 1997 | $6.6 \%$ | $5.9 \%$ | $6.2 \%$ |
| July 1, 1996* | $6.6 \%$ | $6.2 \%$ | $6.4 \%$ |
| July 1, 1995* | $6.3 \%$ | $6.0 \%$ | $6.1 \%$ |
| July 1, 1994 | $5.6 \%$ | $5.7 \%$ | $5.6 \%$ |
| July 1, 1993 | $6.2 \%$ | $6.0 \%$ | $6.1 \%$ |
| June 30, 1992 | $6.6 \%$ | $6.4 \%$ | $6.5 \%$ |

* Plan changes and/or changes in actuarial assumptions


## TEN YEAR HISTORICAL INVESTMENT EXPERIENCE

| Year Ending June 30 | Estimated Annual Rate of Investment Return |  |  |
| :---: | :---: | :---: | :---: |
|  | Actuarial Basis | Market Basis | Actuarial Assumed Interest Rate |
| 2001 | 5.77\% | (2.14\%) | 7.25\% |
| 2000 | 8.53\% | 5.80\% | 7.25\% |
| 1999 | 9.52\% | 10.04\% | 7.25\% |
| 1998 | 9.34\% | 13.27\% | 7.25\% |
| 1997 | 8.57\% | 8.25\% | 7.25\% |
| 1996 | 7.96\% | 5.04\% | 7.25\% |
| 1995 | 8.61\% | 10.52\% | 7.00\% |
| 1994 | 9.32\% | 0.91\% | 7.50\% |
| 1993 | 9.69\% | 1.27\% | 7.50\% |
| 1992 | 9.54\% | 30.26\% | 7.50\% |

## TEN YEAR HISTORICAL PARTICIPANT I INFORMATION

|  | Active Participant Statistics |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Year Ending June 30 |  | Total <br> Annual Payroll |  | Average <br> Annual Salary |

Non-Retired Inactive Vested Participant Statistics

| Year Ending June 30 |
| :---: |
| 2001 |
| 2000 |
| 1999 |
| 1998 |
| 1997 |
| 1996 |
| 1995 |
| 1994 |
| 1993 |
| 1992 |


| Number | Average Annual Benefit* |
| ---: | :---: |
|  | $\$ 3,982$ |
| 8,368 | 3,788 |
| 7,979 | 3,611 |
| 6,862 | 3,661 |
| 5,741 | 3,349 |
| 6,083 | 3,113 |
| 5,871 | 3,011 |
| 5,300 | 3,056 |
| 5,014 | 2,893 |
| 4,829 | 2,743 |

*Weighted with early retirement rates

Retired Participant and Beneficiary Statistics

| Year Ending June 30 |
| :---: |
| 2001 |
| 2000 |
| 1999 |
| 1998 |
| 1997 |
| 1996 |
| 1995 |
| 1994 |
| 1993 |
| 1992 |


| Number |
| :--- |
| 47,203 |
| 45,768 |
| 44,594 |
| 43,517 |
| 42,050 |
| 40,819 |
| 39,610 |
| 38,024 |
| 36,818 |
| 35,482 |


| Annual Benefit* | Average Annual Benefit* |
| :--- | :---: |
| $\$ 230,791,087$ | $\$ 4,889$ |
| $216,615,494$ | 4,733 |
| $203,097,160$ | 4,554 |
| $193,350,012$ | 4,443 |
| $176,509,450$ | 4,198 |
| $163,455,987$ | 4,004 |
| $152,231,035$ | 3,843 |
| $140,249,468$ | 3,688 |
| $130,180,230$ | 3,536 |
| $121,880,315$ | 3,435 |

Disabled Participant Statistics

| 2001 | $\$ 3,566$ |
| :--- | ---: |
| 2000 | 3,537 |
| 1999 | 3,360 |
| 1998 | 3,257 |
| 1997 | 3,101 |
| 1996 | 2,966 |
| 1995 | 2,803 |
| 1994 | 2,666 |
| 1993 | 2,518 |
| 1992 | 2,320 |


| $\$ 13,529,137$ | $\$ 3,794$ |
| ---: | ---: | ---: |
| $13,230,143$ | 3,740 |
| $11,986,411$ | 3,567 |
| $11,433,222$ | 3,510 |
| $10,363,939$ | 3,342 |
| $9,516,383$ | 3,208 |
| $8,666,154$ | 3,092 |
| $7,843,643$ | 2,942 |
| $7,189,100$ | 2,855 |
| $6,377,803$ | 2,749 |

*Includes employee annuities

## TEN YEAR HISTORICAL FUNDING INFORMATION

| Year Ending June 30 | Portion Of Actuarial Liability Provided for by Assets |  |  | Net Assets <br> Available for Benefits, $\qquad$ Actuarial Value |
| :---: | :---: | :---: | :---: | :---: |
|  | Accumulated <br> Employee Contributions | (In Thousands of Dollars) |  |  |
|  |  | Retired and Disabled | Non-Retired Participant Actuarial Liability |  |
| 2001 | \$ 1,728,972 | \$ 2,426,062 | \$ 4,150,638 | \$ 8,559,090 |
|  | 100\% | 100\% | 100\% |  |
| 2000 | \$ 1,647,902 | \$ 2,303,679 | \$ 3,748,305 | \$ 8,267,657 |
|  | 100\% | 100\% | 100\% |  |
| 1999 | 1,428,913 | 2,158,640 | 3,488,428 | 7,595,266 |
|  | 100\% | 100\% | 100\% |  |
| 1998 | 1,288,353 | 2,074,561 | 3,267,237 | 6,914,957 |
|  | 100\% | 100\% | 100\% |  |
| 1997 | 1,264,456 | 1,893,179 | 3,126,230 | 6,304,948 |
|  | 100\% | 100\% | 100\% |  |
| 1996 | 1,140,426 | 1,751,629 | 2,926,879 | 5,776,621 |
|  | 100\% | 100\% | 98.6\% |  |
| 1995 | 1,046,516 | 1,561,103 | 2,685,974 | 5,312,016 |
|  | 100\% | 100\% | 100\% |  |
| 1994 | 966,872 | 1,342,286 | 2,402,380 | 4,835,817 |
|  | 100\% | 100\% | 100\% |  |
| 1993 | 878,179 | 1,249,912 | 2,280,584 | 4,352,349 |
|  | 100\% | 100\% | 97.5\% |  |
| 1992 | 793,526 | 1,165,702 | 2,145,608 | 3,882,840 |
|  | 100\% | 100\% | 89.7\% |  |

## TEN YEAR HISTORICAL FUNDING INFORMATION

-Continued-

Portion of Present Value of Accumulated Vested and Total Accumulated Benefits Provided for by Assets
(In Thousands of Dollars)

| Year Ending June 30 | Accumulated <br> Employee <br> Contributions | Retired and Disabled | Non-Retired Accumulated Vested Benefits | Non-Retired Total Accumulated Benefits | Net Assets <br> Available for Benefits, Actuarial Value |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2001 | \$1,728,972 | \$ 2,426,062 | \$1,950,425 | \$2,249,293 | \$8,559,090 |
|  | 100\% | 100\% | 100\% | 100\% |  |
| 2000 | \$1,647,901 | \$ 2,303,679 | \$1,785,795 | \$2,168,889 | \$8,267,657 |
|  | 100\% | 100\% | 100\% | 100\% |  |
| 1999 | 1,428,913 | 2,158,640 | 1,639,166 | 2,005,646 | 7,595,266 |
|  | 100\% | 100\% | 100\% | 100\% |  |
| 1998 | 1,288,353 | 2,074,561 | 1,511,289 | 1,859,857 | 6,914,957 |
|  | 100\% | 100\% | 100\% | 100\% |  |
| 1997 | 1,264,456 | 1,893,179 | 1,405,101 | 1,747,693 | 6,304,948 |
|  | 100\% | 100\% | 100\% | 100\% |  |
| 1996 | 1,140,426 | 1,751,629 | 1,307,888 | 1,639,205 | 5,776,621 |
|  | 100\% | 100\% | 100\% | 100\% |  |
| 1995 | 1,046,516 | 1,658,027 | 1,289,703 | 1,604,165 | 5,312,016 |
|  | 100\% | 100\% | 100\% | 100\% |  |
| 1994 | 966,872 | 1,342,286 | 841,089 | 1,094,104 | 4,835,817 |
|  | 100\% | 100\% | 100\% | 100\% |  |
| 1993 | 878,179 | 1,249,912 | 782,738 | 1,018,084 | 4,352,349 |
|  | 100\% | 100\% | 100\% | 100\% |  |
| 1992 | 793,526 | 1,165,702 | 732,949 | 944,120 | 3,882,840 |
|  | 100\% | 100\% | 100\% | 100\% |  |

## TEN YEAR HISTORICAL ASSET INFORMATION

Revenues by Source
(In Thousands of Dollars)

| Year Ending <br> June 30 |  | Employee <br> Contributions |
| :---: | :---: | :---: |
| 2001 |  | $\$ 124,954$ |
| 2000 |  | 112,116 |
| 1999 |  | 104,578 |
| 1998 |  | 96,786 |
| 1997 |  | 96,751 |
| 1996 |  | 90,516 |
| 1995 |  | 89,051 |
| 1994 | 83,713 |  |
| 1993 |  | 88,977 |
| 199 |  |  |


| Employer <br> Contributions |  | Investment <br> Income |
| :---: | :---: | :---: |
| $\$ 187,759$ |  | $\$(187,147)$ |
| 216,709 |  | 468,829 |
| 203,054 |  | 734,791 |
| 196,457 |  | 855,380 |
| 190,205 |  | 489,413 |
| 185,911 |  | 415,407 |
| 187,353 |  | 338,479 |
| 184,077 |  | 392,999 |
| 189,237 |  | 424,093 |
| 187,318 |  | 403,760 |


| Other <br> Misc. Income |  |  |
| :---: | ---: | ---: |
| $\$ 4,771$ |  | Total |
| 4,951 |  | 130,337 |
| 0 |  | 802,605 |
| 0 |  | $1,042,423$ |
| 0 |  | $1,148,623$ |
| 0 |  | 776,369 |
| 0 |  | 691,834 |
| 672 |  | 614,882 |
| 815 |  | 661,461 |
| 779 |  | 696,122 |
|  |  |  |
|  |  |  |

Expenses by Type
(In Thousands of Dollars)

| Year Ending June 30 | Benefits Paid | Administration <br> Expenses and Misc. |
| :---: | :---: | :---: |
| 2001 | $\$ 283,460$ <br> 2000 | $\$ 21,532$ <br> 1999 |
| 1998 | 268,181 | 7,905 |
| 1997 | 249,136 | 1,603 |
| 1996 | 237,730 | 2,218 |
| 1995 | 200,531 | 6,681 |
| 1994 | 186,057 | 6,119 |
| 1993 | 163,884 | 5,220 |
| 1992 | 157,794 | 5,524 |
|  | 144,269 | 5,299 |
|  |  | 4,217 |


| Refunds of <br> Contributions |  |  |
| :---: | :---: | :---: |
| $\$ 28,884$ |  | Total |
| 33,943 |  | 333,877 |
| 35,766 |  | 310,029 |
| 33,010 |  | 286,506 |
| 33,635 |  | 272,958 |
| 29,197 |  | 254,848 |
| 27,700 |  | 236,064 |
| 24,797 |  | 218,978 |
| 19,849 |  | 194,205 |
| 21,099 |  | 182,943 |
|  |  | 169,585 |

## ACTUARIAL METHODS

## ACTUARIAL COST METHOD

## ASSET VALUATION METHOD

Entry Age Normal Cost

75\% of Expected
Actuarial Value Plus
$25 \%$ of Market Value

## Entry Age Normal Cost

The normal cost is calculated separately for each active participant and is equal to the level percentage of payroll needed as an annual contribution from entry age to retirement age to fund projected benefits. The unfunded actuarial accrued liability on any valuation date is the accumulated value of such normal costs from entry age to the valuation date less the actuarial value of assets.

The effect of this valuation method is to amortize all actuarial gains and losses, resulting from experience different from that anticipated in our assumptions, over a 40 -year period ( 30 -year period is being phased in commencing July 1, 1998). The purpose of the method is to give a smooth progression of the costs from year to year and, at the same time, provide for an orderly funding of the unfunded liabilities.

## ACTUARIAL ASSUMPTIONS

| Interest | $7.25 \%$ |
| :--- | :--- |
| Future Salary Increases | Based on PERF experience 1995-2000 (revised from 5\%). |
| Cost of Living Increases | An increase of $2.0 \%$ (compounded) is assumed to be applied to the pension benefit each <br> year following retirement. No increase is assumed to be applied to the PERF annuity <br> benefit. |
| Mortality | UP-1994 (revised from 1983 GAM). Pre-retirement mortality based on PERF experience <br> $1995-2000$. |
| Disability | Based on PERF experience 1995-2000 (revised from PERF experience for July 1, 1991 <br> through June 30, 1994). |
| Termination | Select and ultimate tables based on PERF experience 1995-2000 (revised from PERF <br> experience for July 1, 1991 through June 30, 1994). Separate tables are used for state <br> employees and municipality employees. |
| Retirement | Based on PERF experience 1995-2000 (revised from PERF experience for July 1, 1991 <br> through June 30, 1994). |
| Spouse's Benefit | 90\% of participants are assumed either to be married or to have a dependent beneficiary. <br> Males are assumed to be 3 years older than their spouses. |
| Administrative Expense | None |

## PARTICIPATION

All full time employees of the State of Indiana and all full time employees of political subdivisions which have adopted the plan must become members of PERF upon date of hire.

## ELIGIBILITY FOR ANNUITY BENEFITS:

Normal Retirement

Early Retirement
Late Retirement
Disability Retirement

Termination

Pre-Retirement Death

Earliest of:
(1) Age 65 with 10 years of creditable service;
(2) Age 60 with 15 years of creditable service;
(3) Sum of age and creditable service equal to 85 (but not earlier than age 55).

Age 50 with 15 years of creditable service
Subject to continued employment after normal retirement
5 years of creditable service and qualified for Social Security disability benefits or federal Civil Service disability benefits.

10 years of creditable service and election not to take lump sum payment of employee account balance with interest.

If death occurs in service, 15 years of creditable service. If death occurs after separating from service, age 50 with 15 years of creditable service.

## AMOUNT OF BENEFITS:

## Normal Retirement

Early Retirement

Late Retirement

Disability Retirement

Termination

The normal retirement benefit is an annuity payable for life with 60 months guaranteed and is equal to $1.1 \%$ of average monthly earnings* times years and months of creditable service earned.

The early retirement benefit is the accrued retirement benefit determined as of the early retirement date and payable commencing at the normal retirement date. A participant may elect to have the benefit commence prior to normal retirement provided the benefit is reduced by $1 / 10 \%$ for each of the first 60 months and by $5 / 12 \%$ for each of the next 120 months that the benefit commencement date precedes the normal retirement date.

The late retirement benefit is calculated in the same manner as the normal retirement benefit. Creditable service and earnings earned after normal retirement is included in the computation.

The disability retirement benefit is the accrued retirement benefit determined as of the disability date and payable commencing the month following disability date without reduction for early commencement.

The termination benefit is the accrued retirement benefit determined as of the termination date and payable commencing at 65 . If the participant has 15 or more years of creditable service, then the participant may elect to receive a reduced early retirement benefit.
*Average monthly earnings is the monthly average of earnings during the 5 years within the 10 years preceding retirement that produce the highest such average. Earnings include basic salary, the participant's $3 \%$ mandatory contribution paid by the employer, and up to $\$ 2,000$ of additional compensation received from the employer in anticipation of the participant's termination or retirement.

## AMOUNT OF BENEFITS:

Pre-Retirement Death

Employee Contributions

The spouse or dependent beneficiary is entitled to receive the monthly life annuity under the assumption that the participant retired on the later of age 50 or the day before the date of death and elected the joint and full survivor option.

Each participant is required to contribute to an employee annuity at the rate of $3 \%$ of pay (unless the employer has opted to make all or a portion of the contribution for the employee). These contributions are kept on deposit and credited with interest until such time as they are refunded or used to provide the annuity benefit at retirement.

The benefits provided by employee contributions are in addition to the benefits provided by employer contributions. The monthly annuity provided at a normal retirement age of 65 is equal to $\$ 1.00$ for each $\$ 108.79$ of accumulated employee contributions plus interest.

