

nyhart

State of Indiana

***Retirement Medical Accounts
Actuarial Valuation
For Fiscal Year Ending June 30, 2012***



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Certification

The information presented herein is based on the information furnished to us by the Plan Sponsor that has been reconciled and reviewed for reasonableness. We have not audited the information at the source, and therefore do not accept responsibility for the accuracy or the completeness of the data on which the information is based.

The actuarial assumptions were selected by the Plan Sponsor with the concurrence of Nyhart. In our opinion, the actuarial assumptions are individually reasonable and in combination represent our estimate of anticipated experience of the Plan. All computations have been made in accordance with generally accepted actuarial principles and practice.

To our knowledge, there have been no significant events prior to the completion of this project or as of the date of this report that could materially affect the results contained herein.

Neither Nyhart nor any of its employees has any relationship with the plan or its sponsor that could impair or appear to impair the objectivity of this report.

Nyhart

A handwritten signature in black ink that reads "Randy Gomez". The signature is written in a cursive style.

Randy Gomez, FSA, MAAA

December 12, 2012



Comments

Nyhart was asked to prepare an actuarial valuation of the State's Retiree Medical Account program. The goals of the valuation were to:

- Determine the funded percentage of the program on an actuarial basis as of June 30, 2012; and
- Estimate the State's contribution to fund the Regular and Bonus Contributions earned during FY 2013 through FY 2020.

Census Data and Asset Information

Census information collected as of June 30, 2012 was used for the analysis. Asset values are as of June 30, 2012.

Assumptions and Methods

The actuarial assumptions used are the same as those used to determine the State's GASB 45 OPEB liabilities. A summary of the assumptions is included in the report.

Benefits Provided and Funding Approach

The program's Regular Contribution is age-based and is higher at the older ages.

The program's Bonus Contribution is service-based and is only payable in the employee's final year of employment. The Bonus Contribution is scheduled to be phased out by June 30, 2017.

Employees who terminate employment prior to reaching full retirement eligibility will have their account balance forfeited. The forfeitures are used to reduce future State contributions in the following year.

Funded Percentage

The account balance for retiring employees is fully funded on the last day of the employee's year of termination. By definition, the funded percentage for all retired employees is 100%.

The funded percentage for active employees was determined after converting each person's account balance to an actuarial basis. The actuarial adjustment is explained later in the report.



Summary of Results for FYE 2012

All Employees	
Member Information	
Currently retired	4,344
Currently active	27,816
Average retiree account balance	\$ 21,256
Average active account balance	\$ 4,795
Active average age	47.1
Active average service	12.1
Total Individual Account Balances as of June 30, 2012¹	
Currently retired	\$ 92,300,000
Currently active	\$ 133,000,000
Total	\$ 225,300,000
Total Actuarially Adjusted Account Balances as of June 30, 2012	
Currently retired	\$ 92,300,000
Currently active	\$ 91,700,000
Total	\$ 184,000,000
Market Value of Assets as of June 30, 2012	
Currently retired	\$ 92,300,000
Currently active	\$ 123,000,000
Total	\$ 215,300,000
Funded Percentage on an Actuarial Basis as of June 30, 2012	
Currently retired	100%
Currently active	134%
Total	117%
FYE 2012 State Contribution	
Total Contribution	\$ 22,400,000

¹ The account balance total as of June 30, 2012 includes FYE 2012 increases for active employees and net of reimbursements made during FYE 2012 for retired employees.



Summary of Projections for FYE 2013 – 2020

	FYE 2012	FYE 2013	FYE 2014	FYE 2015	FYE 2016	FYE 2017	FYE 2018	FYE 2019	FYE 2020
Member Information									
Retired employees	4,344	5,076	5,753	6,508	7,516	9,068	9,628	10,274	10,966
Active employees	27,816	28,500	28,500	28,500	28,500	28,500	28,500	28,500	28,500

Total Actuarially Adjusted Account Balances as of End of Year									
Retired employees ²	\$ 92,300,000	\$ 101,600,000	\$ 105,800,000	\$ 110,900,000	\$ 119,200,000	\$ 133,600,000	\$ 108,400,000	\$ 83,100,000	\$ 55,600,000
Active employees	\$ 91,700,000	\$ 104,600,000	\$ 118,100,000	\$ 129,800,000	\$ 135,900,000	\$ 131,200,000	\$ 140,100,000	\$ 147,000,000	\$ 152,300,000
Total	\$ 184,000,000	\$ 206,200,000	\$ 223,900,000	\$ 240,700,000	\$ 255,100,000	\$ 264,800,000	\$ 248,500,000	\$ 230,100,000	\$ 207,900,000

Market Value of Assets as of End of Year									
Retired employees	\$ 92,300,000	\$ 101,600,000	\$ 105,800,000	\$ 110,900,000	\$ 119,200,000	\$ 133,600,000	\$ 108,400,000	\$ 83,100,000	\$ 55,600,000
Active employees	\$ 123,000,000	\$ 122,000,000	\$ 147,200,000	\$ 168,900,000	\$ 185,500,000	\$ 195,300,000	\$ 220,100,000	\$ 241,800,000	\$ 261,100,000
Total	\$ 215,300,000	\$ 223,600,000	\$ 253,600,000	\$ 279,800,000	\$ 304,700,000	\$ 328,900,000	\$ 328,500,000	\$ 324,900,000	\$ 316,700,000

Funded Percentage on an Actuarial Basis (Assets / Actuarially Adjusted Account Balance)									
Retired employees	100%	100%	100%	100%	100%	100%	100%	100%	100%
Active employees	134%	117%	125%	130%	136%	149%	146%	164%	171%
Total	117%	108%	113%	116%	119%	124%	132%	141%	152%

Contributions and Reimbursements									
State Contributions	\$ 22,400,000	\$ 24,800,000	\$ 48,800,000	\$ 49,000,000	\$ 52,200,000	\$ 60,600,000	\$ 32,400,000	\$ 31,300,000	\$ 30,300,000
Reimbursements	\$(12,400,000)	\$(16,500,000)	\$(19,400,000)	\$(22,200,000)	\$(27,300,000)	\$(36,400,000)	\$(32,800,000)	\$(34,900,000)	\$(38,500,000)

² Retired employees actuarially adjusted account balances for FYE 2013 onwards include bonus contribution and have been reduced for expected reimbursements during the year.



Impact on Funding Using an Actuarial Approach

The account balances of employees that terminate prior to reaching unreduced retirement eligibility are forfeited and used to reduce State contributions for future periods. The State funding strategy may be accomplished using a defined contribution or an actuarial approach.

Defined Contribution Approach

Concept: The State funds 100% of the contribution earned during the year by each employee. The actual deposit is made as of the end of the year. The final deposit is reduced by forfeited account balances from known terminations which occurred during the year.

Example of Defined Contribution Approach

State funding for the regular contribution	\$ 30,900,000
Reduction for known forfeitures during the year	<u>10,000,000</u>
Net State funding	\$ 20,900,000

Forfeitures are recognized when they actually occur.

Actuarial Approach

Concept: The employer funds the actuarially reduced value of the contribution earned during the year. The actuarial adjustment recognizes future expected terminations for the current and future periods.

Example of Actuarial Approach

Age-35 employee regular contribution earned during the year	\$ 800
Reduction for likelihood of terminating during his future career	68.2%
Actuarially reduced contribution	\$ 254 = \$800 x (100% - 68.2%)

Forfeitures are recognized prior to the actual termination occurring in the future.

An actuarial approach will produce a lower annual State contribution than the defined contribution approach because of the time horizon for recognizing when terminations occur. The defined contribution approach recognizes actual terminations occurring during the current period. An actuarial approach recognizes a possible termination during the employee's entire career. This difference is illustrated in the example below.

Assume that the State has a 5% aggregate termination every year.

- Using the defined contribution approach, the State would fund \$100 and receives a \$ 5 forfeiture for a net contribution of \$95. There will be a second \$5 forfeiture in the following year so the initial State contribution is \$90 over two years on a post-forfeiture basis.
- Under the actuarial approach, the projected forfeitures over a two-year period are \$10 resulting in a net \$90 initial contribution.

Each approach produces a \$90 net contribution over the two-year period for the same \$100 earned benefit. The actuarial perspective is that the employee could terminate in the current year or following year.

Important – The above example is a simplified version of the actuarial process.

**Impact on Funding Using an Actuarial Approach – Continued**

Below is a distribution by current age of the actuarial likelihood that employees will continue to work to their unreduced retirement age and the likelihood of terminating employment prior to then. The table was developed using actual State census information and the actuarial assumptions disclosed in the report.

Current Age	Work to Unreduced Retirement Age	Forfeit Account Balance	Number of Employees
< 25	15.3%	84.7%	676
25 - 30	19.6%	80.4%	2,346
30 - 35	25.4%	74.6%	2,584
35 - 40	31.8%	68.2%	2,512
40 - 45	41.7%	58.3%	3,147
45 - 50	56.9%	43.1%	3,620
50 - 55	72.4%	27.6%	4,338
55 - 60	85.7%	14.3%	4,382
60 - 65	92.7%	7.3%	2,966
> 65	94.3%	5.7%	1,036
Overall	58.0%	42.0%	27,607

Comments**Sources of Forfeitures**

The vast majority of forfeitures will occur due to termination of employment. Forfeitures will also occur in the following instances:

- Early retirement prior to unreduced retirement age
- Death of the employee and no surviving spouse or IRS-dependent children
- Death of the retiree and no surviving spouse or IRS-dependent children

Sensitivity of Results

All actuarial approaches are sensitive to the underlying modeling assumptions. The assumptions used in this analysis should be reviewed periodically for reasonableness and changes made as needed. Below are two common examples of assumption sensitivity.

1. Should the State's turnover experience decrease overtime then the termination assumption should be reduced. Reducing this assumption will cause the actuarially-reduced State contributions to increase because of fewer termination-related forfeitures are expected to occur.
2. Another example of assumption sensitivity is changing retirement patterns. If there is a trend of employees delaying their retirement (i.e. fewer take early retirement), then fewer early retirement-related forfeitures will occur and the actuarially-reduced State contributions will increase.



Projected State Contributions for FYE 2013 – 2020

Regular Contribution

Based on the above actuarial analysis and the State’s expected employment level of 28,500 eligible employees for FYE 2013, the recommended projected contribution for FYE 2013 is:

- \$31.9 million (less known forfeitures occurring during the year) using a defined contribution approach. The contribution on a per-person basis is \$1,120.

OR

- \$ 18.5 million (\$31.9 million x 58.0%) using an actuarial approach and 28,500 eligible employees.

The actual budgeted contribution for FYE 2013 is as shown in the three-year projections of contributions table below. These budgeted contributions below are based on revenue sources dedicated to fund the retirement medical benefits account and also excess accumulated account balance in prior years.

Bonus Contribution

The projected State contribution for FYE 2013 is \$19.8 million assuming 732 new eligible retirees and an average Bonus Contribution of \$27,000.

The State should expect an increase in this contribution as the 2017 phase-out date approaches. It is our opinion the contribution will be significantly larger in the final two years of the phase-out. The projections of contributions until FYE 2020 shown below reflects anticipated higher retirements in FYE 2016 and 2017.

Projections of Contributions until FYE 2020

Below is a projection of the State’s total contribution for the next three fiscal years as well as actual contributions for FYE 2012. The Total Contribution for FYE 2013 – 2020 were provided by the State Budget Agency. The Bonus Contributions for FYE 2013 – 2020 were estimated by Nyhart. The Regular Contribution represents the excess of the total contribution over the bonus contribution.

Fiscal Year Ending	Number of Employees	Number of Retirees	Regular Contribution	Bonus Contribution	Total State Contribution
2012 (Actual)	27,816	4,344	\$ 6,700,000	\$15,700,000	\$ 22,400,000
2013	28,500	5,076	\$ 5,000,000	\$ 19,800,000	\$ 24,800,000
2014	28,500	5,753	\$ 30,500,000	\$ 18,300,000	\$ 48,800,000
2015	28,500	6,508	\$ 28,600,000	\$ 20,400,000	\$ 49,000,000
2016	28,500	7,516	\$ 25,000,000	\$ 27,200,000	\$ 52,200,000
2017	28,500	9,068	\$ 18,700,000	\$ 41,900,000	\$ 60,600,000
2018	28,500	9,628	\$ 32,400,000	\$ 0	\$ 32,400,000
2019	28,500	10,274	\$ 31,300,000	\$ 0	\$ 31,300,000
2020	28,500	10,966	\$ 30,300,000	\$ 0	\$ 30,300,000



Plan Provisions

Benefits

The State of Indiana provides retirement medical accounts to its employees that are funded by State's contributions while the employees are actively working.

An employee is entitled to the retirement medical accounts balance if he retires from active employment and meets certain eligibility requirements.

The account balance will be forfeited under the following scenarios:

- Active employee terminates employment prior to meeting the eligibility requirements.
- Active employee dies prior to meeting the eligibility requirements.

The retirement medical accounts balance can only be used to pay for health care premium rates (medical, prescription drug, dental, and vision) at retirement.

Plan Year

12-month period beginning on July 1

Eligibility

Employees are eligible to start utilizing the account balance in the retirement medical account once they retire with full unreduced pension under Public Employees Retirement Fund (PERF) or have completed at least ten years of service as an elected or appointed officer.

PERF eligibility for full unreduced pension is the earlier of:

- Age 60 with 15 years of service
- Age 65 with 10 years of service
- Age 55 and 85 points (sum of age and years of service)

Excluded Groups

Effective July 1, 2011 employees of Indiana State Police, other than those who waived coverage under a common and unified plan of self-insurance provided for under IC 5-10-8-6 before July 1, 2011, are not eligible for the Senate Enrolled Act 501 retirement medical benefits account.

Effective July 1, 2011 conservation officers of the Department of National Resources and employees of the State Excise Police are not eligible for the Senate Enrolled Act 501 retirement medical benefits account.

Spouse Benefits

Surviving spouse of retirees or active employees who die after meeting the eligibility requirements can continue to utilize the remaining balance in the retirement medical benefits account.



Plan Provisions – Continued

State Contributions

Active employees receive two types of contributions from the State while actively working:

- Regular contributions
- Bonus contributions

Regular Contributions

Regular contributions are based on the table below:

Attained Age	Annual Contribution
Less than 30	\$ 500
At least 30 but less than 40	\$ 800
At least 40 but less than 50	\$ 1,100
At least 50	\$ 1,400

Attained age is determined as of the last day of the calendar year falling within the Plan Year for which the contribution is made.

To receive the regular contributions an employee must be an eligible employee on the preceding December 31 and must be continuously employed through the date on which the contribution is made.

Bonus Contributions

Employees receive the bonus contributions if they meet all of the following requirements:

- Retire from active service after June 30, 2007 and before July 1, 2017
- Eligible for unreduced pension benefit from PERF
- They have completed at least 15 years of service (or 10 years of service as elected or appointed officer)

Bonus contribution is equal to the employee's total years of service (rounded down to the nearest whole year) multiplied by \$1,000.

GASB 43/45 Liability

The accounting treatment for the retiree medical account benefit is based on recognizing the program as a defined contribution OPEB benefit. In order to avoid creating unfunded post-employment OPEB liabilities, it is necessary that each employee's account be funded while active employed and their individual account balances be 100% fully funded at the time of retirement.

Using a defined benefit funding approach will require the State to create a sub-account for each retired employee within the plan's trust and transfer from the unallocated portion of the trust to the sub-account the full value of the employee's account balance including the Bonus Contribution.



Actuarial Assumptions

Census Data

Census data as of June 30, 2012 provided by the State was used for the study. We have reviewed this data for reasonableness and no material modifications were made to this data.

Retiree Reimbursement

Monthly retiree reimbursements are assumed to be the following. These are based on retiree reimbursement experience for the last three years.

# of Months After Retirement	Monthly Reimbursement / Retiree
< 12	\$ 700
12 – 23	\$ 300
24+	\$ 200

The above reimbursements are assumed to increase 3% annually.

Mortality

IRS 2008 Static Mortality Table projected to 2013 using scale AA (prior valuation used RP-2000 Combined Mortality Table projected to 2010 using scale AA).

Retirement Rates

Annual retirement rates used in the Retirement Medical Account study are the same as those used in the GASB 45 report, which have been updated to follow the rates used in PERF actuarial valuation as of June 30, 2011.

Annual retirement rates at sample ages are as shown below.

Age	10 YOS	15 YOS	20 YOS	30 YOS	31+ YOS
50	0%	4%	4%	4%	4%
55	0%	7%	7%	12%	7%
60	0%	10%	10%	10%	10%
65	30%	30%	30%	30%	30%
67+	100%	100%	100%	100%	100%

The above retirement rates have been increased by 150% for FY 2015/16 and by 300% for FY 2016/17 in anticipation of higher retirements as the bonus contributions feature is expiring on June 30, 2017.

Refer to the Appendix section for a comparison of the number of employees assumed to retire annually based on a sample of 100 active employees age 55 with 30 years of service at retirement under current and prior assumptions.



Actuarial Assumptions – Continued

Termination

Assumption used to project terminations (voluntary and involuntary) prior to meeting minimum retirement eligibility for retiree health care coverage.

This report uses the same termination rates as those used in the GASB 45 report for all groups, which have been updated to follow the rates used in PERF actuarial valuation as of June 30, 2011.

Prior valuations used termination rates that are higher than the GASB rates for all employees except for Transportation employees.

Below are sample termination rates. Refer to Appendix A for comparison of current and prior termination rates.

State Personnel – Male

Age	0 YOS	1 YOS	2 YOS	3 YOS	4 YOS	5+ YOS
20	43%	26%	13%	10%	9%	7%
30	39%	20%	12%	9%	8%	6%
40	36%	16%	11%	8%	7%	5%
50	36%	14%	9%	7%	7%	4%
60	37%	13%	8%	6%	6%	3%

State Personnel – Female

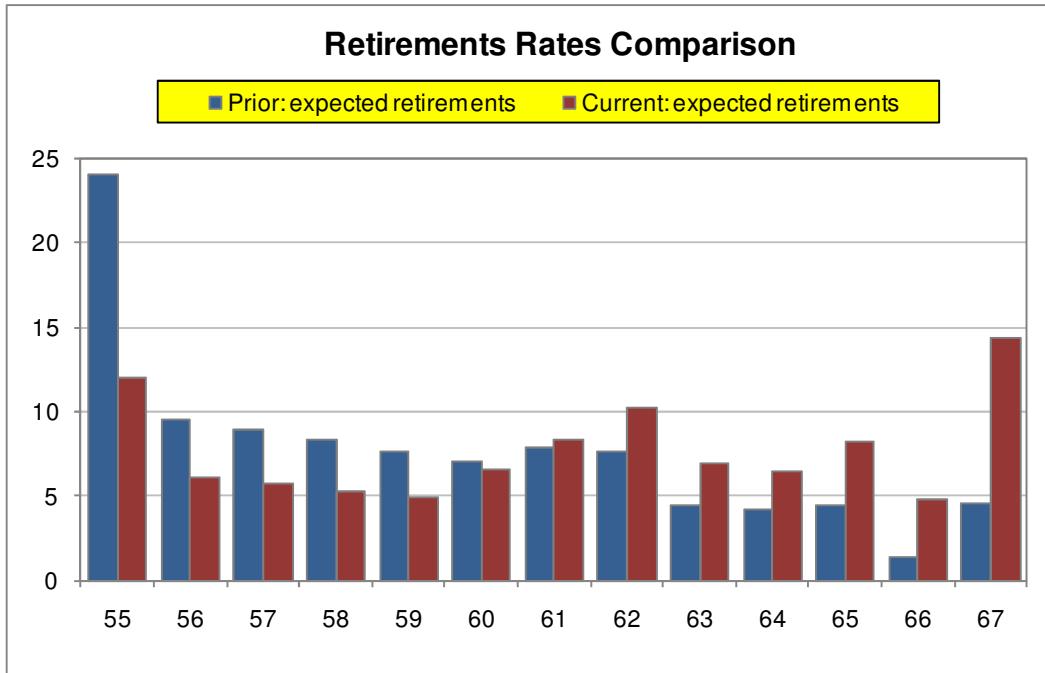
Age	0 YOS	1 YOS	2 YOS	3 YOS	4 YOS	5+ YOS
20	43%	25%	14%	14%	11%	8%
30	36%	22%	13%	12%	10%	7%
40	35%	19%	12%	10%	9%	6%
50	35%	17%	10%	9%	7%	5%
60	36%	16%	9%	7%	6%	4%



Appendix

Retirement Rates Comparison

The graph below shows a comparison of the number of employees assumed to retire annually based on a sample of 100 active employees age 55 with 30 years of service at retirement under current and prior assumptions.



The table below shows the annual number of retirements by age under the prior and current retirement assumptions:

Age	55	56	57	58	59	60	61	62	63	64	65	66	67
Prior	24	10	9	8	8	7	8	8	4	4	4	1	5
Current	12	6	6	5	5	7	8	10	7	6	8	5	14



Appendix – Continued

Termination Rates Comparison

Below is a graphical comparison of the current and prior annual termination rates.

