nyhart

State of Indiana

Retirement Medical Accounts
Actuarial Valuation
For Fiscal Year Ending June 30, 2011

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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

Randy Gomez

Randy Gomez, FSA, MAAA

January 18, 2011

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, 2010; and
- Estimate the State's contribution to fund the Regular and Bonus Contributions earned during FY 2011.

Census Data and Asset Information

Census information collected as of February 2010 was used for the analysis. Asset values are as of June 2010.

Assumptions and Methods

The actuarial assumptions used are the same as those used to determine the State's GASB 45 OPEB liabilities except for the termination assumption; which was updated to reflect recent experience. 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. This benefit is funded on an annual basis for the full value of benefits earned during the year.

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 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 2011

	All Employees
Member Information	
Currently retired	2,204[1]
Currently active	34,107
Active average age	46.7
Active average service	11.9

Total Individual Account Balances as of June 2010	
Currently retired	$ 63,600,000
Currently active	$ 104,700,000
Total	$ 168,300,000

Total Actuarially Adjusted Account Balances as of June 2010	
Currently retired	$ 63,600,000
Currently active	$ 67,600,000
Total	$ 131,200,000

Market Value of Assets as of June 2010	
Currently retired	$ 63,600,000
Currently active	$ 106,600,000
Total	$ 170,200,000

Funded Percentage on an Actuarial Basis as of June 2010	
Currently retired	100%
Currently active	158%
Total	130%

FY 2011 Projected State Contribution	
Regular Contribution	$ 31,600,000
Bonus Contribution	$ 21,200,000

[1] Approximate number of retired members with retiree health account balances as of July 1, 2010.

Summary of Results for FYE 2011 – 2013

	FYE 2010	FYE 2011	FYE 2012	FYE 2013
Member Information				
Currently retired	2,204[2]			
Currently active	34,107	31,500	31,500	31,500

Total Actuarially Adjusted Account Balances as of End of Year				
Currently retired	$ 63,600,000	$ 62,600,000	$ 60,900,000	$ 60,100,000
Currently active	$ 67,600,000	$ 83,200,000	$ 99,500,000	$ 114,900,000
Total	$ 131,200,000	$ 145,800,000	$ 160,400,000	$ 175,000,000

Market Value of Assets as of End of Year				
Currently retired	$ 63,600,000	$ 62,600,000	$ 60,900,000	$ 60,100,000
Currently active	$ 106,600,000	$ 132,100,000	$ 126,700,000	$ 120,400,000
Total	$ 170,200,000	$ 194,700,000	$ 187,600,000	$ 180,500,000

Funded Percentage on an Actuarial Basis (Assets ÷ Actuarial Balance)				
Currently retired	100%	100%	100%	100%
Currently active	158%	159%	127%	105%
Total	130%	134%	117%	103%

Projected State Contribution				
Regular Contribution	$ 35,900,000	$ 31,600,000	$ -	$ -

[2] Approximate number of retired members with retiree health account balances as of July 1, 2010.

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	$ 37,000,000
Reduction for known forfeitures during the year	3,000,000
Net State funding	$ 34,000,000

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	50%
Actuarially reduced contribution	$ 400 = $800 x 50%

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
> 65	94.6%	5.4%	1,154
60 - 65	86.7%	13.3%	3,482
55 - 60	75.4%	24.6%	5,145
50 - 55	63.8%	36.2%	5,228
45 - 50	59.9%	40.1%	4,603
40 - 45	52.9%	47.1%	3,873
35 - 40	47.4%	52.6%	3,602
30 - 35	41.2%	58.8%	3,070
25 - 30	37.9%	62.1%	3,068
< 25	33.2%	66.8%	792
Overall	**60.4%**	**39.6%**	**34,017**

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 2011

Regular Contribution

Based on the above actuarial analysis and the State's expected employment level of 31,500 eligible employees for FYE 2011, the projected contribution for FYE 2011 is:

- $35.1 million (less known forfeitures occurring during the year) using a defined contribution approach. The contribution on a per-person basis is $1,114. The state's actual contribution for FYE 2010 was $35.9 million for 32,500 eligible employee or $1,105 per person.

  OR

- $ 21.2 million ($35.1 million x 60.4%) using an actuarial approach and 31,500 eligible employees.

Bonus Contribution

The projected State contribution for FYE 2011 is $21.2 million assuming a consistent number of new retirements as in the prior year (approximately 750 retirements). The actual FY 2011 contribution will not be known until all retiring employees have been identified by June 30, 2011.

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 retirement experience of the program should be reviewed and future budgets adjusted for this expectation.

Three-Year Projections of Contributions

Below is a projection of the State's total contribution for the next three fiscal years as well as actual contributions for FYE 2010. The projected contributions were provided by the State Budget Agency.

Fiscal Year Ending	Number of Employees	Regular Contribution	Bonus Contribution	Total State Contribution
2010 (Actual)	32,500	$ 35,900,000	$ 21,200,000	$ 57,100,000
2011	31,500	$ 31,600,000	$ 21,200,000	$ 52,800,000
2012	31,500	$ 0	$ 21,200,000	$ 21,200,000
2013	31,500	$ 0	$ 21,200,000	$ 21,200,000

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)

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 February 2010 was used for the study

Mortality

RP-2000 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.

Annual retirement rates at sample ages for the different groups are as shown below.

Group: State Personnel

- For State Personnel employees who are eligible for full unreduced benefits at age 55 with 85 points, take the maximum of the regular rates and the rates by duration.

Age	Regular Rates
60	13.0%
62	28.6%
64	28.6%
65	42.9%
68	19.5%
70	39.0%
75	100.0%

Duration	Eligible for 55/85
0	24.0%
1	12.5%
2	13.5%
3	14.5%
4	15.5%
5	17.0%
6	18.5%
7 – 10	20.0%

Group: Indiana State Police (ISP)

- Based on the rates below but 100% retirement at the earlier of age 65 or 34 years of service.

YOS	Pre-1987
20	25.0%
21 – 31	10.0%
32	20.0%
33	30.0%
34	40.0%
35+	35.0%

YOS	Post-1987
25 – 26	20.0%
27 – 31	15.0%
32	20.0%
33+	40.0%

Group: Conservation and Excise Police

Age	Rates
45	3.0%
46 – 49	2.0%
50	3.0%
51 – 52	2.0%
53	3.0%
54	4.0%

Age	Rates
55	2.0%
56	6.0%
57 – 58	15.0%
59	5.0%
60+	100.0%

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 higher termination rates than those used in the GASB 45 report for general service employees. The same termination rates as the GASB 45 report were used for transportation, ISP and CEP employees.

Below is a comparison of the GASB 45 and Retirement Medical Account Study termination rates for the different groups.

Group: Transportation employees (same as GASB 45 assumptions for State Personnel)

Male	**Years of Service**					
Age	**0**	**1**	**2**	**3**	**4**	**5+**
25	29.5%	12.5%	5.0%	3.0%	3.0%	2.0%
30	27.0%	10.0%	5.0%	3.0%	3.0%	2.0%
35	24.5%	7.5%	5.0%	3.0%	3.0%	2.0%
40	22.0%	7.0%	5.0%	3.0%	3.0%	2.0%
45	22.0%	7.0%	5.0%	3.0%	3.0%	2.0%
50	22.0%	7.0%	5.0%	3.0%	3.0%	2.0%
55	22.0%	7.0%	5.0%	3.0%	3.0%	2.0%
60	23.0%	7.0%	5.0%	3.0%	3.0%	2.0%

Female	**Years of Service**					
Age	**0**	**1**	**2**	**3**	**4**	**5+**
25	28.0%	12.8%	5.0%	4.0%	3.0%	2.0%
30	23.0%	11.5%	5.0%	4.0%	3.0%	2.0%
35	21.0%	10.3%	5.0%	4.0%	3.0%	2.0%
40	21.0%	9.0%	5.0%	4.0%	3.0%	2.0%
45	21.0%	9.0%	5.0%	4.0%	3.0%	2.0%
50	21.0%	9.0%	5.0%	4.0%	3.0%	2.0%
55	21.0%	9.0%	5.0%	4.0%	3.0%	2.0%
60	23.0%	9.0%	5.0%	4.0%	3.0%	2.0%

Actuarial Assumptions – Continued

Termination

Group: State Hospital employees (200% x GASB 45 rates)

Male	Years of Service					
Age	0	1	2	3	4	5+
25	29.5%	25.0%	10.0%	6.0%	6.0%	4.0%
30	27.0%	20.0%	10.0%	6.0%	6.0%	4.0%
35	24.5%	15.0%	10.0%	6.0%	6.0%	4.0%
40	22.0%	14.0%	10.0%	6.0%	6.0%	4.0%
45	22.0%	14.0%	10.0%	6.0%	6.0%	4.0%
50	22.0%	14.0%	10.0%	6.0%	6.0%	4.0%
55	22.0%	14.0%	10.0%	6.0%	6.0%	4.0%
60	23.0%	14.0%	10.0%	6.0%	6.0%	4.0%

Female	Years of Service					
Age	0	1	2	3	4	5+
25	28.0%	25.5%	10.0%	8.0%	6.0%	4.0%
30	23.0%	23.0%	10.0%	8.0%	6.0%	4.0%
35	21.0%	20.5%	10.0%	8.0%	6.0%	4.0%
40	21.0%	18.0%	10.0%	8.0%	6.0%	4.0%
45	21.0%	18.0%	10.0%	8.0%	6.0%	4.0%
50	21.0%	18.0%	10.0%	8.0%	6.0%	4.0%
55	21.0%	18.0%	10.0%	8.0%	6.0%	4.0%
60	23.0%	18.0%	10.0%	8.0%	6.0%	4.0%

Actuarial Assumptions – Continued

Termination

Group: Correction and all other state employees (175% x GASB 45 termination rates)

Male	Years of Service					
Age	**0**	**1**	**2**	**3**	**4**	**5+**
25	29.5%	21.9%	8.8%	5.3%	5.3%	3.5%
30	27.0%	17.5%	8.8%	5.3%	5.3%	3.5%
35	24.5%	13.1%	8.8%	5.3%	5.3%	3.5%
40	22.0%	12.3%	8.8%	5.3%	5.3%	3.5%
45	22.0%	12.3%	8.8%	5.3%	5.3%	3.5%
50	22.0%	12.3%	8.8%	5.3%	5.3%	3.5%
55	22.0%	12.3%	8.8%	5.3%	5.3%	3.5%
60	23.0%	12.3%	8.8%	5.3%	5.3%	3.5%

Female	Years of Service					
Age	**0**	**1**	**2**	**3**	**4**	**5+**
25	28.0%	22.3%	8.8%	7.0%	5.3%	3.5%
30	23.0%	20.1%	8.8%	7.0%	5.3%	3.5%
35	21.0%	17.9%	8.8%	7.0%	5.3%	3.5%
40	21.0%	15.8%	8.8%	7.0%	5.3%	3.5%
45	21.0%	15.8%	8.8%	7.0%	5.3%	3.5%
50	21.0%	15.8%	8.8%	7.0%	5.3%	3.5%
55	21.0%	15.8%	8.8%	7.0%	5.3%	3.5%
60	23.0%	15.8%	8.8%	7.0%	5.3%	3.5%

Group: Indiana State Police post-1987 plan and Conservation and Excise Police (same as GASB 45 assumptions)

Age	ISP	CEP
25	2.0%	4.9%
30	2.0%	3.7%
35	2.0%	2.3%
40	1.1%	1.1%
45	0.3%	0.3%
50	0.0%	0.0%