



Municipal Policemen's and Firemen's Pension and Relief Funds of West Virginia

Actuarial Valuations as of June 30, 2011
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Agenda

- ◆ Background
- ◆ Individual Actuarial Valuation Reports
- ◆ Consolidated Actuarial Valuation Results
 - ▶ July 1, 2011 Valuation Results
 - ▶ Historical Results
 - ▶ Projection Results
- ◆ Funding Policy Choices
- ◆ Upcoming Issues for Consideration



Background

Purpose of the Valuations

- ◆ Individual actuarial valuations were performed for all 53 Policemen's and Firemen's Pension and Relief Funds of West Virginia as of July 1, 2011
- ◆ Primary purpose of the actuarial valuations is to assess the adequacy of the funding policy currently in use by each participating Fund.



Background

Purpose of the Valuations

- ◆ Additional purpose of the actuarial valuations is to provide each Municipality with information on:
 - ▶ The funding requirements for fiscal year end June 30, 2013,
 - ▶ The Fund's eligibility to receive an allocation of the premium tax allocation for fiscal year end June 30, 2013,
 - ▶ The Fund's eligibility to provide Supplemental Benefits for the fiscal year beginning July 1, 2013, and
 - ▶ The advantages and disadvantages of switching to one of the recently available funding policy options (i.e., the Optional and Conservation Funding Policies)



Background

Changes to the July 1, 2011 Valuations

- ◆ Changes to the July 1, 2011 actuarial valuations
 - ▶ We assumed that each Fund will receive the State premium tax allocation until the Fund reaches 100% funded, even if the premium tax allocation exceeds the amortization of the unfunded liability. In all cases, however, the employer contribution will not be less than the normal cost.
 - ▶ The premium tax allocation was updated to include the Base Allocation and Excess Allocation as defined in the State Statutes. The updated methodology did not significantly change the premium tax allocation when compared to the last valuation.



Consolidated Actuarial Valuation Results

As of July 1, 2011

Dollars in Thousands

	Standard Policy	Alternative Policy	Optional Policy From Standard	Optional Policy From Alternative	Conservation Policy	All Plans
Number of Plans	9	31	6	5	2	53
Total Plan Members	107	2,282	69	575	780	3,813
Payroll	\$2,373	\$45,188	\$1,455	\$11,014	\$18,088	\$78,118
Benefit Payments	\$1,009	\$30,441	\$535	\$9,511	\$12,360	\$53,856



Consolidated Actuarial Valuation Results

As of July 1, 2011

Dollars in Thousands

	Standard Policy	Alternative Policy	Optional Policy From Standard	Optional Policy From Alternative	Conservation Policy	All Plans
Actuarial Liability	\$23,186	\$677,438	\$13,521	\$192,379	\$282,275	\$1,188,799
Assets	\$11,572	\$161,462	\$8,438	\$34,697	\$19,913	\$236,082
Unfunded Liability	\$11,614	\$515,976	\$5,083	\$157,682	\$262,362	\$952,717
Funded Ratio	50%	24%	62%	18%	7%	20%



Consolidated Actuarial Valuation Results

As of July 1, 2011

Dollars in Thousands

	Standard Policy	Alternative Policy	Optional Policy From Standard	Optional Policy From Alternative	Conservation Policy	All Plans
Net Employer Normal Cost	\$582	\$13,941	\$349	\$3,352	\$5,931	\$24,155
Employer Contributions ^a	\$1,211	\$14,653	\$688	\$10,698	\$8,827	\$36,077
State Premium Tax Allocation	\$466	\$9,590	\$303	\$2,485	\$3,325	\$16,169
Employee Contributions	\$169	\$3,340	\$106	\$772	\$1,446	\$5,833

^a For plans under the Alternative Funding Policy, includes any additional required contributions in order to satisfy the 15-year solvency tests



Consolidated Actuarial Valuation Results

As of July 1, 2011

- ◆ Actuarial Experience from 7/1/2010 to 7/1/2011
 - ▶ Plan assets experienced a positive return of 13.8% compared to the expected annualized return of 5.3% for fiscal 2011
 - ▶ Liabilities increased by 1.4% less than expected
 - In the aggregate, demographic assumptions were consistent with experience
 - ▶ The assumed interest rate was increased for certain plans
 - ▶ The net result is that the Unfunded Actuarial Liabilities decreased from \$976 million at July 1, 2010 to \$953 million at July 1, 2011.



Consolidated Actuarial Valuation Results

As of July 1, 2011

- ◆ Assumed Interest Rate was Increased for 14 Plans
 - ▶ Due to favorable investment returns, liability gains, and increased equity exposures
 - ▶ Improved funded ratios and liquidity ratios

Number of Plans	July 1, 2010	July 1, 2011	Change
5	5.0%	5.5%	0.5%
4	5.5%	6.0%	0.5%
1	5.5%	6.5%	1.0%
2	6.0%	6.5%	0.5%
1	6.0%	7.0%	1.0%
1	6.5%	7.0%	0.5%



Consolidated Actuarial Valuation Results

As of July 1, 2011

Experience (gain) loss for plan year ending June 30, 2011 (\$ in Thousands)	All Plans
Number of Plans:	53
(a) Unfunded Accrued Liability (UAL) as of 7/1/2010	\$976,187
(b) Decrease to Market Value of Assets at Beginning of Year ^b	74
(c) Gross Normal Cost due 7/1/2010	29,856
(d) Interest on (a), (b) and (c) to 6/30/2011 ^a	51,246
(e) Contributions with interest to 6/30/2011 ^a	(56,356)
(f) Effect of Assumption Changes on UAL at 6/30/2011	(14,897)
(g) Expected UAL at 7/1/2011 [(a) + (b) + (c) + (d) + (e) + (f)]	986,111
(h) Actual UAL at 7/1/2011	\$952,717
(i) Total (Gain)/Loss [(h) -(g)]	(\$33,394)

^a Interest based on assumptions used for each specific plan as of June 30, 2010.

^b Seven plans restated their Market Value of Assets as of June 30, 2010.



Consolidated Actuarial Valuation

Historical Results

Funded Ratio As of July 1	Standard Policy Plans		Alternative Policy Plans		Optional Policy Plans From Standard		Optional Policy Plans From Alternative		Conservation Policy Plans	
	Number	Average	Number	Average	Number	Average	Number	Average	Number	Average
2011	9	50%	31	24%	6	62%	5	18%	2	7%
2010	14	44%	32	22%	1	57%	4	12%	2	7%
2009	14	52%	37	19%	NA	NA	NA	NA	NA	NA



Consolidated Actuarial Valuation

Historical Results

Contribution Rate ² As of July 1	Standard Policy Plans		Alternative Policy Plans		Optional Policy Plans From Standard		Optional Policy Plans From Alternative		Conservation Policy Plans	
	Number	Average ¹	Number	Average	Number	Average	Number	Average	Number	Average
2011	8	51%	31	32%	6	47%	5	97%	2	49%
2010	13	33%	32	30%	1	45%	4	103%	2	31%
2009	13	34%	37	39%	NA	NA	NA	NA	NA	NA

¹ One outlying Standard Policy Fund, excluded from this table, is closed to new employees, has seven retired members, no active members, and no payroll.

² As a percent of payroll.



Consolidated Actuarial Valuation

Historical Results

◆ Key observations of historical results

▶ Standard plans

- Five standard plans elected the optional funding policy during the year ended June 30, 2011.
- The aggregate funded ratio for these five plans increased from 50.2% in 2010 to 62.7% in 2011 and the aggregate funded ratio for the nine plans remaining as standard increased from 41.5% in 2010 to 50% in 2011. These increases are primarily due to favorable investment experience.
- The average contribution rate for the nine plans remaining as standard increased from 35% of payroll for the 2010 valuation year to 51% for the 2011 valuation year, primarily because the 2011 contributions are based on lower discount rates implemented in 2010, and the aggregate payroll also decreased while the unfunded portion of the contribution increased.



Consolidated Actuarial Valuation

Historical Results

◆ Key observations of historical results

▶ Alternative plans

- One alternative plan elected the optional funding policy during the year ended June 30, 2011.
- Aggregate funded ratio for alternative plans increased from 22% in 2010 to 24% in 2011
- Average contribution rate for alternative plans increased from 30% of payroll for the 2010 valuation year to 32% for the 2011 valuation year

▶ Optional plans that switched from Alternative

- Aggregate funded ratio increased from 12% in 2010 to 18% in 2011
- Average contribution rate decreased from 103% of payroll for the 2010 valuation year to 97% for the 2011 valuation year



Consolidated Actuarial Valuation

Historical Results

◆ Key observations of historical results

▶ Optional plans that switched from Standard

- Aggregate funded ratio increased from 57% in 2010 to 62% in 2011
- Average contribution rate increased slightly from 45% of payroll for the 2010 valuation year to 47% for the 2011 valuation year

▶ Conservation plans

- Aggregate funded ratio remained stable at 7% in for 2011
- Average contribution rate increased from 31% of payroll for the 2010 valuation year to 49% for the 2011 valuation year



Consolidated Actuarial Valuation

Historical Results

◆ Key observations of historical results

▶ Investment policy

- West Virginia Code §8-22-22, as of July 1, 2009, increased the equity allocation limits
- Investing in equities is generally appropriate given the long-term nature of the Plan's benefit obligation, but
 - Some Plans have not invested a significant portion of assets in equities
 - Liquidity strain may not allow Municipalities to invest in equities
- May be difficult to support an investment return assumption of even 6.0% due to asset mix and/or liquidity strain



Consolidated Actuarial Valuation

Projection Results

◆ Projection methodology

- ▶ 40-year projections, on an open group basis
- ▶ Municipalities contributing under the alternative funding policy are assumed to elect the standard funding policy when their funded ratio exceeds 80% (which is equivalent to the unfunded liability being less than 25% of the assets) and contributions are lower
 - By 2031, only eight out of 31 plans are projected to switch from the alternative funding policy to the standard funding policy



Consolidated Actuarial Valuation

Projection Results

Projected Distribution of Plans

Projection Period	Target Funded Ratio	2011 Valuation				
		Number of Plans				
		Standard Plans	Alternative Plans	Optional From Standard	Optional From Alternative	Conservation Plans
2011	Greater Than: 20%	9	19	6	4	0
2021	40%	8	8	6	3	0
2031	60%	9	8	6	2	0
2041	80%	9	14	6	2	0
2051	100%	9	20	6	5	2
Of Total Number of Plans:		9	31	6	5	2



Consolidated Actuarial Valuation

Projection Results

Projected Distribution of Plans

Projection Period	Target Contribution Rate	2011 Valuation Number of Plans				
		Standard Plans	Alternative Plans	Optional From Standard	Optional From Alternative	Conservation Plans
2011	Less Than: 40%	4	23	2	1	0
2021	40%	7	16	5	2	0
2031	40%	8	8	6	3	0
2041	40%	9	11	6	5	0
2051	40%	9	20	6	5	2
Of Total Number of Plans:		9	31	6	5	2



Consolidated Actuarial Valuation

Projection Results

Projected Distribution of Plans

Valuation As of July 1	Percentage of Plans that are Projected to be Fully Funded by 2031				
	Standard	Alternative	Optional from Standard	Optional from Alternative ^b	Conservation
2011	100%	10%	100%	20%	0%
2010	100%	9% ^a	100%	0%	0%
2009	100%	32%	NA	NA	NA

^a The significant decrease from 32% in 2009 to 9% in 2010 for Alternative Plans is primarily the result of the changes in assumptions.

^b Former Alternative plans that selected the Optional policy are projected to be fully funded by 2050.



Consolidated Actuarial Valuation

Projection Results

- ◆ Key observations of projection results
 - ▶ Standard funding policy:
 - Produces stable employer costs
 - Is consistent with actuarial standards
 - Fully amortizes unfunded actuarial liability by 2031
 - ▶ Alternative funding policy:
 - Does not adjust for actuarial experience
 - Employer contribution requirements grow exponentially, to over 100% of payroll for some plans
 - The projected funded ratio grows at a very slow rate leaving the funds in jeopardy for many years if there is another significant market downturn



Consolidated Actuarial Valuation

Projection Results

- ◆ Key observations of projection results
 - ▶ Alternative funding policy (Continued):
 - One Fund using the Alternative method would need to make additional contributions in 2013 to satisfy the 15-year Solvency Test on an Open Group Basis in order to receive 100% of the State Premium Tax Allocation
 - Seven Funds using the Alternative method would need to make additional contributions in 2013 to satisfy the 15-year Solvency Test on a Closed Group Basis in order to provide supplemental benefits



Consolidated Actuarial Valuation

Projection Results

- ◆ Key observations of projection results

- ▶ Alternative funding policy:

- One key concern of the Alternative policy is the level of required contributions relative to the sum of normal cost and an amortization payment on the unfunded liability.
- A sound funding policy generally finances, on an annual basis, normal cost plus 6% to 8% of the unfunded liability.
- Only two of 31 Alternative plans are contributing in fiscal 2013 at a level that approximates a sound funding basis.
- By 2033, this increases to 15 out of 31 plans but takes into account 20 more years of 7% increases in annual contributions.



Consolidated Actuarial Valuation

Projection Results

Level of Alternative Plan Contributions

Employer Contributions Plus State Premium Tax Allocation	Number of Alternative Plans Satisfying Conditions in	
	FY 2013	FY 2033
100% of Net Normal Cost plus 0% to 2% of Unfunded Actuarial Liability	16	3
100% of Net Normal Cost plus 2% to 4% of Unfunded Actuarial Liability	7	7
100% of Net Normal Cost plus 4% to 6% of Unfunded Actuarial Liability	6	6
100% of Net Normal Cost plus 6% or more of Unfunded Actuarial Liability (Sound Policy)	2	15



Consolidated Actuarial Valuation

Projection Results

- ◆ Key observations of projection results
 - ▶ Optional funding policy:
 - Produces stable employer costs
 - Is consistent with actuarial standards
 - Fully amortizes unfunded actuarial liability by 2031 for Standard plans and by 2050 for Alternative Plans
 - ▶ Conservation funding policy:
 - Does not adjust for actuarial experience
 - The projected funded ratio grows at a very slow rate leaving the funds in jeopardy for many years if there is another significant market downturn
 - Contributions are based on actual retirements and disabilities which could vary significantly from expected results



Funding Policy Choices

◆ Basis of Choice

- ▶ Municipalities currently using either the Standard funding policy or the Alternative funding policy may switch to the **Optional** funding policy
 - Local plan is closed and new employees covered under recently established multiple employer statewide plan.
 - Contributions to the closed local plan equal to normal cost plus closed period amortization of unfunded actuarial liability (20 years remaining as of July 1, 2011 for Standard plans and 38.5 years for Alternative plans)



Funding Policy Choices

◆ Basis of Choice

- ▶ Municipalities currently using the Alternative funding policy may switch to the **Conservation** funding policy
 - Local plan is closed and new employees covered under recently established multiple employer statewide plan.
 - Contributions to the closed local plan equal to benefits and expenses on a pay-as-you-go basis, net of a portion of employee contributions and a portion of premium tax allocation



Funding Policy Choices

◆ Basis of Choice

- ▶ Municipalities are assumed to participate in the recently established statewide cost sharing pension plan if and when they are expected to receive contribution relief
- ▶ Contribution relief implies the Municipality's total contributions to the closed plan and the recently established statewide plan are projected to be less than contributions to the current plan



Funding Policy Choices

Year Municipality Contributions Are Lower

	Number of Alternative Plans	
Year Municipality Contributions are lower	If Optional Policy is selected	If Conservation Policy is selected
2013 to 2014	2	9
2015 to 2019	4	4
2020 to 2029	4	7
2030 to 2039	6	8
After 2040	15	3



Funding Policy Choices

- ◆ General observations – Alternative policy plans electing either Optional or Conservation Funding Policy
 - ▶ Effectively defers when the Fund receives contributions
 - ▶ Causes the funded ratio of the closed plan to grow at a significantly slower rate when compared to the current policy
 - ▶ Plans with dangerously low funded ratios, such as less than 30%, could be in more financial risk if the contributions are decreased due to the election of either the optional or conservation policies
 - ▶ Although not apparent from the aggregate projections, some large severely under funded plans are projected to have very little growth in the funded ratio over the next 20 years



Funding Policy Choices

- ◆ Key Observations – Optional Funding Policy
 - ▶ Municipalities using the Standard policy are expected to receive immediate contribution relief by switching to the Optional policy with no significant impact to the projected funded ratio.
 - ▶ Municipalities using the Alternative policy are generally not expected to receive immediate contribution relief from switching to the Optional policy.
 - ▶ Municipalities using the Alternative policy may find it more affordable in the long run to switch to the Optional funding policy even if it means an increase in employer contributions in the short term.



Funding Policy Choices

- ◆ Key Observations – Conservation Funding Policy
 - ▶ Municipalities using the Alternative policy are generally not expected to receive immediate contribution relief from switching to the Conservation policy.



Upcoming Issues for Consideration

- ◆ Allowing the Municipalities to NOT contribute normal cost if the plan reaches 125% funded
- ◆ Allowing the Municipalities of closed plans after the last member/spouse/beneficiary dies to recover any remaining plan assets
- ◆ Other similar future considerations



Questions





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