



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

Actuarial Valuations as of June 30, 2012
November 18, 2013



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Agenda

- ◆ Background
- ◆ Individual Actuarial Valuation Reports
- ◆ Consolidated Actuarial Valuation Results
 - ▶ July 1, 2012 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, 2012
- ◆ 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, 2014
 - ▶ The Fund's eligibility to receive an allocation of the premium tax allocation for fiscal year end June 30, 2014
 - ▶ The Fund's eligibility to provide Supplemental Benefits for the fiscal year beginning July 1, 2014
 - ▶ The advantages and disadvantages of switching to one of the recently available funding policy options (i.e., the Optional and Conservation Funding Policies)



Consolidated Actuarial Valuation Results

As of July 1, 2012

Dollars in Thousands

	Standard Policy	Alternative Policy	Optional Policy From Standard	Optional Policy From Alternative	Conservation Policy	All Plans
Number of Plans	8	31	7	5	2	53
Total Plan Members	97	2,296	79	568	765	3,805
Payroll	\$2,257	\$47,188	\$1,823	\$10,830	\$18,017	\$80,115
Benefit Payments	\$962	\$31,799	\$652	\$9,841	\$12,812	\$56,066



Consolidated Actuarial Valuation Results

As of July 1, 2012

Dollars in Thousands

	Standard Policy	Alternative Policy	Optional Policy From Standard	Optional Policy From Alternative	Conservation Policy	All Plans
Actuarial Liability	\$22,091	\$710,175	\$16,452	\$199,763	\$295,405	\$1,243,886
Assets	\$10,286	\$164,541	\$10,408	\$39,235	\$21,095	\$245,565
Unfunded Liability	\$11,805	\$545,634	\$6,044	\$160,528	\$274,310	\$998,321
Funded Ratio	47%	23%	63%	20%	7%	20%



Consolidated Actuarial Valuation Results

As of July 1, 2012

Dollars in Thousands

	Standard Policy	Alternative Policy	Optional Policy From Standard	Optional Policy From Alternative	Conservation Policy	All Plans
Net Employer Normal Cost	\$543	\$14,190	\$440	\$3,111	\$5,796	\$24,080
Employer Contributions^a	\$949	\$15,749	\$650	\$10,268	\$9,007	\$36,623
State Premium Tax Allocation	\$501	\$10,364	\$318	\$2,476	\$3,387	\$17,046
Employee Contributions	\$163	\$3,562	\$137	\$761	\$1,441	\$6,064

^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, 2012

- ◆ Unfunded actuarial liability increased by \$45 million from \$953 million at July 1, 2011, to \$998 million at July 1, 2012, primarily due to:
 - ▶ Alternative and Conservation funding policies that did not adequately finance the normal cost plus interest on unfunded actuarial liability resulting in a contribution deficiency of approximately \$19.5 million
 - ▶ Plan assets experiencing an annualized return of 1.7% compared to the expected annualized return of 5.5% for fiscal 2012, causing a loss of approximately \$9.0 million
 - ▶ Liabilities increasing by 1.4% more than expected causing a loss of approximately \$16.5 million
- ◆ Contributions under the Alternative policy, on average, are not projected to finance the normal cost and the interest on the unfunded actuarial liability until after approximately 17 years



Consolidated Actuarial Valuation Results

As of July 1, 2012

- ◆ Assumed Interest Rate was increased for six plans and decreased for four plans which increased liabilities by approximately \$619,000
 - ▶ Due to investment and demographic experience, and increased equity exposures
 - ▶ Improved funded ratios and liquidity ratios

Number

of Plans	July 1, 2011	July 1, 2012	Change
2	5.5%	6.0%	0.5%
1	6.0%	6.5%	0.5%
1	6.0%	7.0%	1.0%
2	6.5%	7.0%	0.5%
1	5.5%	5.0%	(0.5)%
2	6.0%	5.5%	(0.5)%
1	7.0%	6.5%	(0.5)%



Consolidated Actuarial Valuation Results

As of July 1, 2012

Experience (gain) loss for plan year ending June 30, 2012 (\$ in Thousands)	All Plans
Number of Plans:	53
(a) Unfunded Accrued Liability (UAL) as of 7/1/2011	\$952,717
(b) Decrease to Market Value of Assets at Beginning of Year ^b	(244)
(c) Normal Cost due 7/1/2011	29,693
(d) Interest on (a), (b) and (c) to 6/30/2012 ^a	50,986
(e) Contributions with interest to 6/30/2012 ^a	(60,983)
(f) Effect of Assumption Changes on UAL at 6/30/2012	619
(g) Expected UAL at 7/1/2012 [(a) + (b) + (c) + (d) + (e) + (f)]	972,788
(h) Actual UAL at 7/1/2012	\$998,321
(i) Total (Gain)/Loss [(h) -(g)]	\$25,533
Liability (Gain)/Loss	\$16,534
Asset (Gain)/Loss	\$8,999

^a Interest based on assumptions used for each specific plan as of June 30, 2011.

^b Seven plans restated their Market Value of Assets as of June 30, 2011.



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
2012	8	47%	31	23%	7	63%	5	20%	2	7%
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
2012	7	42%	31	33%	7	36%	5	95%	2	50%
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 six retired members, no active members, and no payroll.

² As a percent of payroll.



Consolidated Actuarial Valuation

Historical Results

Consolidated Actuarial Valuation Historical Investment Returns

Plan Year Ending June 30	Estimated return on Market Value of Assets	Assumed return on Market Value of Assets
2012	1.7%	5.5%
2011	13.8%	5.3%
2010	8.9%	6.3%
2009	(9.5)%	6.3%
2008	(3.3)%	6.3%



Consolidated Actuarial Valuation

Historical Results

◆ Key observations of historical results

▶ Standard plans

- One standard plan elected the optional funding policy during the year ended June 30, 2012
- The funded ratio for this plan decreased from 73.5% in 2011 to 68.0% in 2012 and the funded ratio for the eight plans remaining as standard decreased from 50% in 2011 to 47% in 2012. These decreases are primarily due to unfavorable investment experience
- The average contribution rate for the eight plans remaining as standard decreased from 51% of payroll for the 2011 valuation year to 42% for the 2012 valuation year, primarily because the 2012 contributions are based on higher discount rates implemented in 2011, the average retiree liability decreased, and the average payroll increased



Consolidated Actuarial Valuation

Historical Results

◆ Key observations of historical results

▶ Alternative plans

- No alternative plans elected the optional funding policy during the year ended June 30, 2012
- Aggregate funded ratio for alternative plans decreased from 24% in 2011 to 23% in 2012
- Average contribution rate for alternative plans increased from 32% of payroll for the 2011 valuation year to 33% for the 2012 valuation year

▶ Optional plans that switched from the Alternative Policy

- Aggregate funded ratio increased from 18% in 2011 to 20% in 2012
- Average contribution rate decreased from 97% of payroll for the 2011 valuation year to 95% for the 2012 valuation year



Consolidated Actuarial Valuation

Historical Results

◆ Key observations of historical results

▶ Optional plans that switched from the Standard Policy

- Aggregate funded ratio increased from 62% in 2011 to 63% in 2012
- Average contribution rate decreased from 47% of payroll for the 2011 valuation year to 36% for the 2012 valuation year. As with the Standard plans, this is because the 2012 contributions are based on the higher discount rates implemented in 2011

▶ Conservation plans

- Aggregate funded ratio remained stable at 7% in for 2012
- Average contribution rate increased slightly from 49% of payroll for the 2011 valuation year to 50% for the 2012 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 2032, 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	2012 Valuation				
		Number of Plans				
		Standard Plans	Alternative Plans	Optional From Standard	Optional From Alternative	Conservation Plans
2012	Greater Than: 20%	8	19	7	3	0
2022	40%	8	8	7	3	0
2032	60%	8	8	7	2	0
2042	80%	8	15	7	2	0
2052	100%	8	21	7	5	2
Of Total Number of Plans:		8	31	7	5	2



Consolidated Actuarial Valuation

Projection Results

Projected Distribution of Plans

Projection Period	Target Contribution Rate	2012 Valuation Number of Plans				
		Standard Plans	Alternative Plans	Optional From Standard	Optional From Alternative	Conservation Plans
2012	Less Than: 40%	6	21	4	1	0
2022	40%	4	14	5	2	0
2032	40%	8	7	7	3	0
2042	40%	8	12	7	5	0
2052	40%	8	21	7	5	2
Of Total Number of Plans:		8	31	7	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 ^a	Conservation
2012	100%	10%	100%	0%	0%
2011	100%	10%	100%	20%	0%
2010	100%	9%	100%	0%	0%

^a All 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 2014 to satisfy the 15-year Solvency Test on an Open Group Basis in order to receive 100% of the State Premium Tax Allocation
 - Six Funds using the Alternative method would need to make additional contributions in 2014 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 2014 at a level that approximates a sound funding basis.
- By 2034, this increases to 16 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 2014	FY 2034
100% of Net Normal Cost plus 0% to 2% of Unfunded Actuarial Liability	15	3
100% of Net Normal Cost plus 2% to 4% of Unfunded Actuarial Liability	8	6
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	16



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 prior Standard plans and by 2050 for prior 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 (19 years remaining as of July 1, 2012 for prior Standard plans and 37.5 years for prior 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

Year Municipality Contributions are lower	Number of Alternative Plans	
	If Optional Policy is selected	If Conservation Policy is selected
2014	2	7
2015 to 2019	1	1
2020 to 2029	6	10
2030 to 2039	7	8
After 2040	15	5



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 a certain threshold, such as 125% funded
- ◆ Requesting investment policy information, including asset allocation targets, to ensure that the assumed investment return is consistent with the investment policy
- ◆ Evaluating how the additional one-time State revenue, expected to be recognized in plan year ended June 30, 2013, will impact the next valuation and projections
- ◆ Implications of new accounting standards GASB Nos. 67 and 68, first applicable with plan year end June 30, 2014, and the sponsors fiscal year end June 30, 2015



Questions





Disclaimers

- ◆ This presentation is intended to be used in conjunction with the Consolidated Actuarial Valuation Report issued on October 17, 2013. This presentation should not be relied on for any purpose other than the purpose described in the valuation report.
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