

City of Knoxville Pension System

Risk Profiles and Self-Insurance

presented by

Alan Pennington, FSA

Bryan, Pendleton, Swats & McAllister, LLC

March 10, 2010

Today's presentation will discuss the composition of liability and possible ways to handle the liability.

City of Knoxville Pension System

Presentation Overview:

1. Risk Profile versus Discount Rate
2. Review of Active and Inactive Liability
3. Review of other plans risk profiles
4. What if...?
5. Advantages/ Disadvantages of changing risk profile
6. Self-insured annuities

City of Knoxville Pension System

Discount rate versus Risk Profile

1. Determine discount rate
 - > discount rate determines investment policy or,
2. Determine risk profile
 - > Risk profile determines Investment Policy
 - > Investment Policy determines Discount Rate
 - > Discount Rate determines contribution

More risk – higher potential returns/ more expected volatility/ lower potential contributions

Less risk – lower potential returns/ lower expected volatility/ higher expected contribution

City of Knoxville Pension System

Review of Active and Inactive liability 7/1/2009

Active Liability	\$160M
Inactive Liability	\$401M
Total Plan Liability	\$561M
Inactive as a % of Total	71.4%

City of Knoxville Pension System

Review of other Plans vs Knoxville

Entity (Assets)	Valuation Rate	Inactive Liability	Fixed Income
Knoxville (420M)	8.00%	71%	35%
Nashville (1.6B)	8.00%	35%	37%
CALPERS (200B)	7.75%	49%	28%
TCRS (40B)	7.50%	38%	44%
Average*	7.75%	42%	36%

* Excluding Knoxville

City of Knoxville Pension System

One Measure of Risk Profile

Entity (Assets)	Inactive Liability	Non-Fixed Income	Inactive x Non-Fixed
Knoxville (420M)	71%	65%	46%
Nashville (1.6B)	35%	63%	22%
CALPERS (200B)	49%	72%	35%
TCRS (40B)	38%	56%	21%
Average*	42%	64%	27%

* Excluding Knoxville

City of Knoxville Pension System

Risk Profile – Modified Investment Policy

Entity (Assets)	Inactive Liability	Non-Fixed Income	Inactive x Non-Fixed
Knoxville (420M)	71%	38%	27%
Nashville (1.6B)	35%	63%	22%
CALPERS (200B)	49%	72%	35%
TCRS (40B)	38%	56%	21%
Average*	42%	64%	27%

* Excluding Knoxville

City of Knoxville Pension System

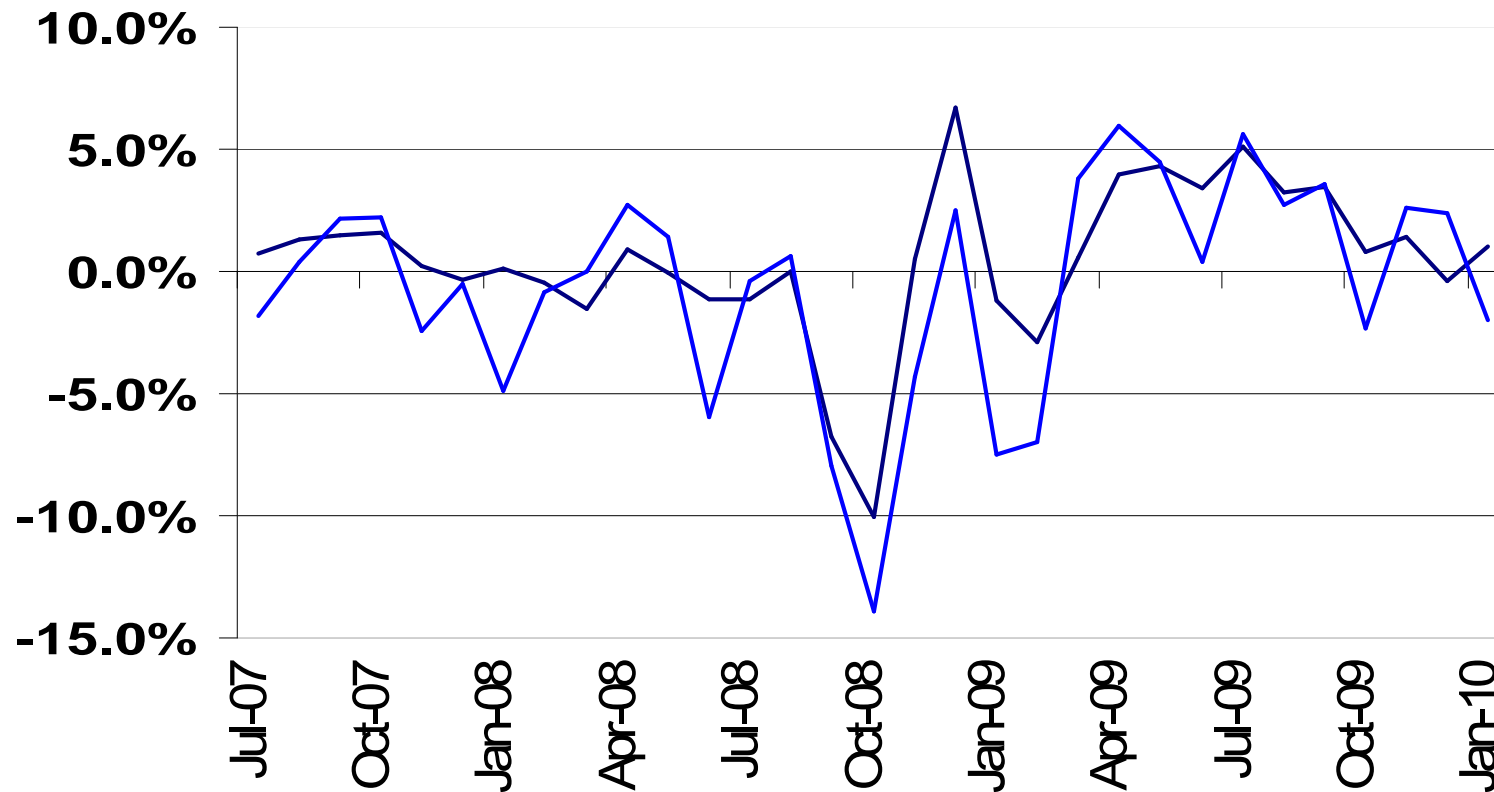
Knoxville – Current vs Modified Assumptions

	Valuation Rate	Inactive Liability	Fixed Income
Current	8.00%	71%	35%
Modified	6% / 8%*	71%	65%

* 6% post-retirement / 8% pre-retirement

City of Knoxville Pension System

Monthly Asset Return: Fixed Income v Other



City of Knoxville Pension System

What if...

	Actual	What if *
Market Value 7/1/07	\$546M	\$546M
Market Value 1/31/10	\$410M	\$522M
Minimum Market Value	\$336M	\$408M
Employer Contributions	\$15M	\$40M

* The above projections show likely outcomes if the plan had been invested 70% fixed income as of July 1, 2007.

City of Knoxville Pension System

Liability 7/1/2009: 8% vs 6% post-retirement return

	Bd of Ed	Div C	GG	Total
8%	\$82M	\$321M	\$156M	\$559M
6%	\$94M	\$391M	\$189M	\$674M
Increase	\$12M	\$70M	\$33M	\$115M

City of Knoxville Pension System

Normal Cost 7/1/2009: 8% vs 6% post-ret return

	Div C	GG	Total
8%	12.7%	5.1%	8.8%
6%	17.4%	7.3%	12.3%
Increase	4.7%	2.2%	3.5%

City of Knoxville Pension System

Advantages of Current Policy

1. Expected asset returns are higher (than modified policy).
2. Projected contributions are lower.
3. Requires no change.

City of Knoxville Pension System

Advantages of Modified Policy

1. Less asset volatility - > less contribution volatility
2. Once inactive liability is fully funded, it's much less likely that additional contributions will be required for those members.
3. Largest asset gains and losses apply to active members who have longer period to absorb gains and losses.
4. Policy is consistent with other large governmental plans.
5. Minimize likelihood of repeating performance of prior two years.

City of Knoxville Pension System

Disadvantages of Modified Policy

1. If future asset returns meet expectations, asset returns will be lower and contributions will be higher.
2. Requires change from current policy.

City of Knoxville Pension System

How to change balance Inactive Liability v Fixed Assets

1. Change asset mix (weight more toward fixed income)
2. Purchase annuities (reduces inactive exposure)
3. Create self-insured annuities (more assets in fixed income)

City of Knoxville Pension System

Self-Insured Annuities

1. A portion of assets are aside for a portion of inactive liability
2. Assets set aside are invested more conservatively (with input from Summit)
3. Could adopt a 20 or 30 year transition period.

City of Knoxville Pension System

Self-Insured Annuities

1. Self-insure 100% of Board of Education liability.
2. Self-insure inactive non-BDED liability such that inactive liability that is not self-insured does not exceed 50% of active liability.
3. Change post-retirement discount rate from 8% to 6% (200 bps):
 - a) 10 basis points per year for 20 years or
 - b) 6.67 basis points per year for 30 years

City of Knoxville Pension System

Limit Inactive Uninsured to 50% of Active

Liability	Total	Div C	GG
Active	\$160M	\$90M	\$70M
Inactive	\$320M	\$231M	\$89M
Inactive Uninsured	\$80M	\$45M	\$35M
Inactive Self-Insured	\$240M	\$186M	\$54M
Total Uninsured	\$240M	\$135M	\$105M

City of Knoxville Pension System

Current Cost vs 6% Post Retirement (\$M)

	Current	30 Years	20 Years	Full Phase In
Board of Education	0.26	0.30	0.32	1.46
Uniformed Bodies	5.49	5.66	5.74	11.51
General Govt	2.99	3.11	3.17	7.42
Total	8.74	9.07	9.23	20.39
Increase		0.33	0.49	11.65

City of Knoxville Pension System

Current Cost vs 6% Post Retirement (% Pay)

	Current	30 Years	20 Years	Full Phase In
Uniformed Bodies	18.57%	19.14%	19.43%	38.94%
General Govt	9.73%	10.14%	10.35%	24.19%
Total	14.26%	14.75%	15.00%	31.85%
Increase		0.50%	0.74%	17.59%

City of Knoxville Pension System

Next Steps

1. Any desire to pursue self-insured or other option to change risk profile?
2. Ready to make any decision on actions/timing or need more information?
3. Asset Liability study could be used to give specific illustrations of various risk profiles.

City of Knoxville Pension System

Other Actions:

1. Determine what, if any, next step on Self-Insurance Option
2. See further projections regarding asset smoothing and amortization periods (June/July 2010)
3. Valuation Results/ Experience Study 2010 (Nov/Dec 2010)
4. Review plan objectives/benefits