# City of Knoxville Pension System

## Active and Inactive Liability

*presented by*

*Alan Pennington, FSA*
*Bryan, Pendleton, Swats & McAllister, LLC*

*January 21, 2010*

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



BPS&M

# City of Knoxville Pension System

## Presentation Overview:

1. Review of Active and Inactive Liability
2. Should liability impact assets?
3. What is the goal?
4. Adjust Investment Policy
5. Purchasing annuities
6. Create self-insured annuities



BPS&M

# 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 Active and Inactive liability 7/1/2009

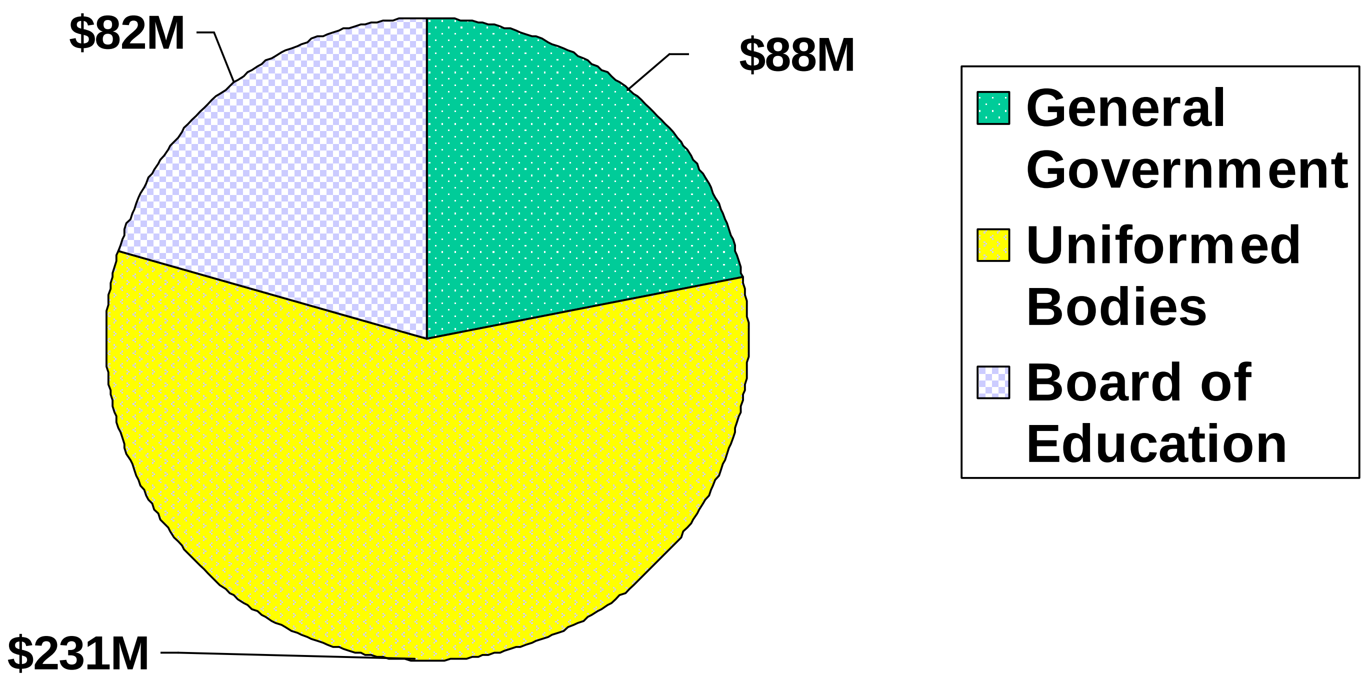
| | Bd of Ed | Div C | GG |
|---|---|---|---|
| Active Liability | $0M | $90M | $70M |
| Inactive Liability | $82M | $231M | $88M |
| Total Plan Liability | $82M | $321M | $158M |
| Inactive / Total | 100% | 72.0% | 56.7% |



BPS&M

# City of Knoxville Pension System

## Review Inactive liability

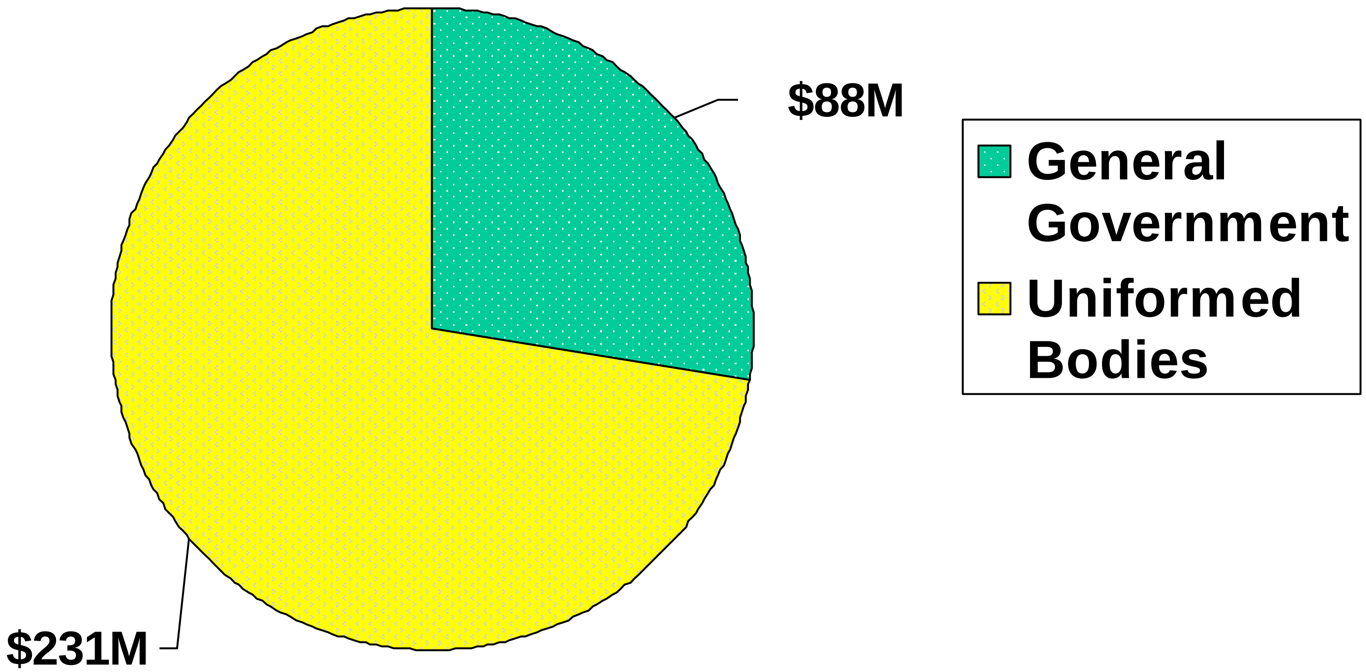





BPS&M

# City of Knoxville Pension System

## Review Inactive liability






BPS&M

# City of Knoxville Pension System

## Average Annual Retirement Benefit

| | Div C | GG |
|---|---|---|
| Benefit Payments | $21M | $ 8M |
| Retirees | 674 | 474 |
| Average Benefit | $31k | $17k |
| Final Average Salary | $51k | $42k |



BPS&M

# City of Knoxville Pension System

## Average Annual Retirement Benefit

| | Div C | GG |
|---|---|---|
| Average Ret Age | 55.6 | 59.3 |
| Form of Benefit | 50%JS | Life |
| Average Service | 31 | 25 |
| Multiplier | 2.5% | 2% |



BPS&M

# City of Knoxville Pension System

## Should liabilities impact investment policy?

What would last year's asset loss of $130M have been if the plan had no inactive liability?

| | | |
|---|---|---|
| Active Liability 7/1/2009 | $160M | $160M |
| Inactive Liability 7/1/2009 | $401M | $ 0M |
| Total Plan Liability | $561M | $160M |
| Total Payroll | $ 60M | $ 60M |
| Total Loss for Year Ending 6/30/2009 | $130M | $ 37M |



BPS&M

# City of Knoxville Pension System

## Should liabilities impact investment policy?

1. The smaller the payroll is relative to the inactive liability, the less ability the sponsor will have to absorb losses.

2. In the extreme example of all inactive liability and no payroll, presumably there is no margin to absorb losses.

3. Should the plan make some changes to reflect the large amount of inactive liability?



BPS&M

# City of Knoxville Pension System

## What is the goal?

Less Conservative <------------> More Conservative

| | | |
|---|---|---|
| More | Active Liability | Less |
| Equity | Assets | Fixed Income |
| Higher* | Returns | Lower |
| Lower | Contribution | Higher |
| Less Predictable | Contribution | More Predictable |

* More equity does not guarantee higher returns or lower contributions.



BPS&M

# City of Knoxville Pension System

## Possible actions

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



BPS&M

# 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 |



BPS&M

# 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% |



BPS&M

# City of Knoxville Pension System

## How to create self-insured annuities

1. Determine what liability will be insured (100% of Board of Education, x% of other retiree liability? )
2. Determine over what period to transition to full coverage (20 to 30 years?)
3. Determine how to make incremental steps towards coverage
4. Determine if/when transitional steps will be accelerated (funding is over 100% and/or bond rates hit target level?)
5. Determine funding policy for self-insured group



BPS&M

# City of Knoxville Pension System

## How to create self-insured annuities

1. Work with investment manager to determine logistics and time-frame to begin implementation.
2. Revise charter to make it more difficult for future administrations to undo changes?



BPS&M

# City of Knoxville Pension System

## Possible Targets

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. After transition period, continue to self-insure to the extent necessary to meet condition 2.
4. 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 |



BPS&M

# City of Knoxville Pension System

## Sample Action

The board desires to transition to self-insured annuities over the next 30 years.

Such annuities will cover 100% of Board of Education liability and other retiree liability as described previously.

The post retirement discount rate shall be transitioned to 6%.

The board gives authority to the executive director to take such actions as are necessary to begin implementation of these changes as of July 1, 2010.

Further, the board asks the attorney to draft language which would codify changes regarding self-insured annuities.

# City of Knoxville Pension System

## Possible Next Steps:

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



BPS&M