



SOUTH CAROLINA GENERAL ASSEMBLY

Legislative Audit Council

Independence, Reliability, Integrity

Summary of the LAC's 2015

REPORT ON PUBLIC PENSIONS

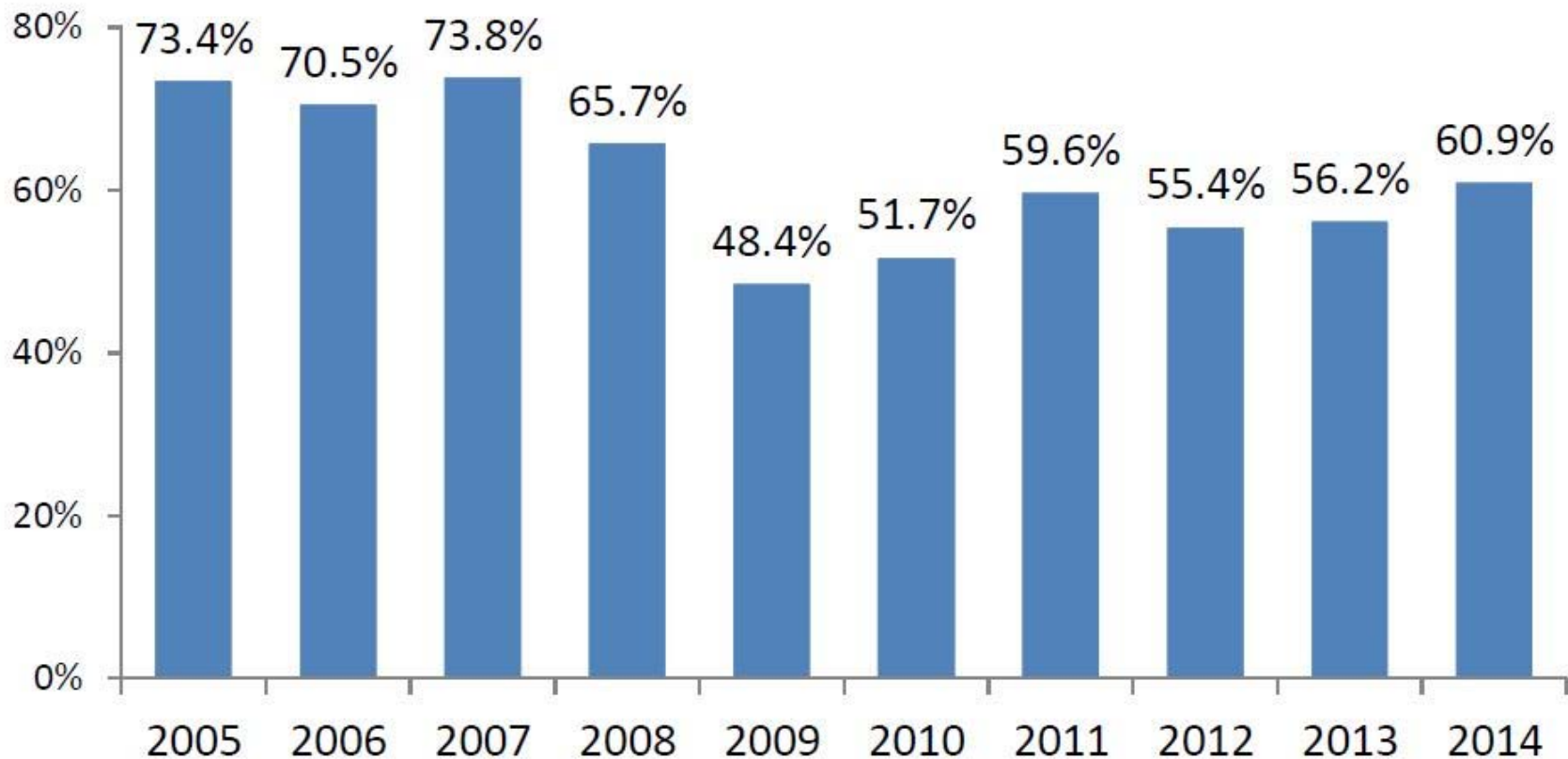
ADMINISTERED BY THE STATE OF SOUTH CAROLINA

October 26, 2016

# Unfunded Liabilities for SCRS and PORS Combined

Year	SCRS + PORS Liabilities	SCRS + PORS Market Value Of Assets	SCRS + PORS Unfunded Liabilities	SCRS + PORS Funded Ratio
2005	\$33,391,401	\$24,500,000	\$ 8,891,401	73.4%
2006	35,484,800	25,000,000	10,484,800	70.5%
2007	37,497,222	27,657,677	9,839,545	73.8%
2008	39,982,374	26,262,945	13,719,429	65.7%
2009	41,714,426	20,207,995	21,506,431	48.4%
2010	43,624,486	22,532,611	21,091,875	51.7%
2011	43,134,111	25,712,562	17,421,549	59.6%
2012	44,815,200	24,806,898	20,008,302	55.4%
2013	46,859,818	26,317,770	20,542,048	56.2%
2014	48,795,442	29,723,623	19,071,819	60.9%
Increase from 2005-2014	\$15,404,041	\$ 5,223,623	\$10,180,418	

# Funded Ratios for SCRS and PORS Combined (based on market value of assets)



# Comparison of South Carolina's 2014 Funded Ratio with the National Median (based on market value of assets)

Funded Ratios	
South Carolina	60.9%
National Median (Wilshire Consulting)	77%

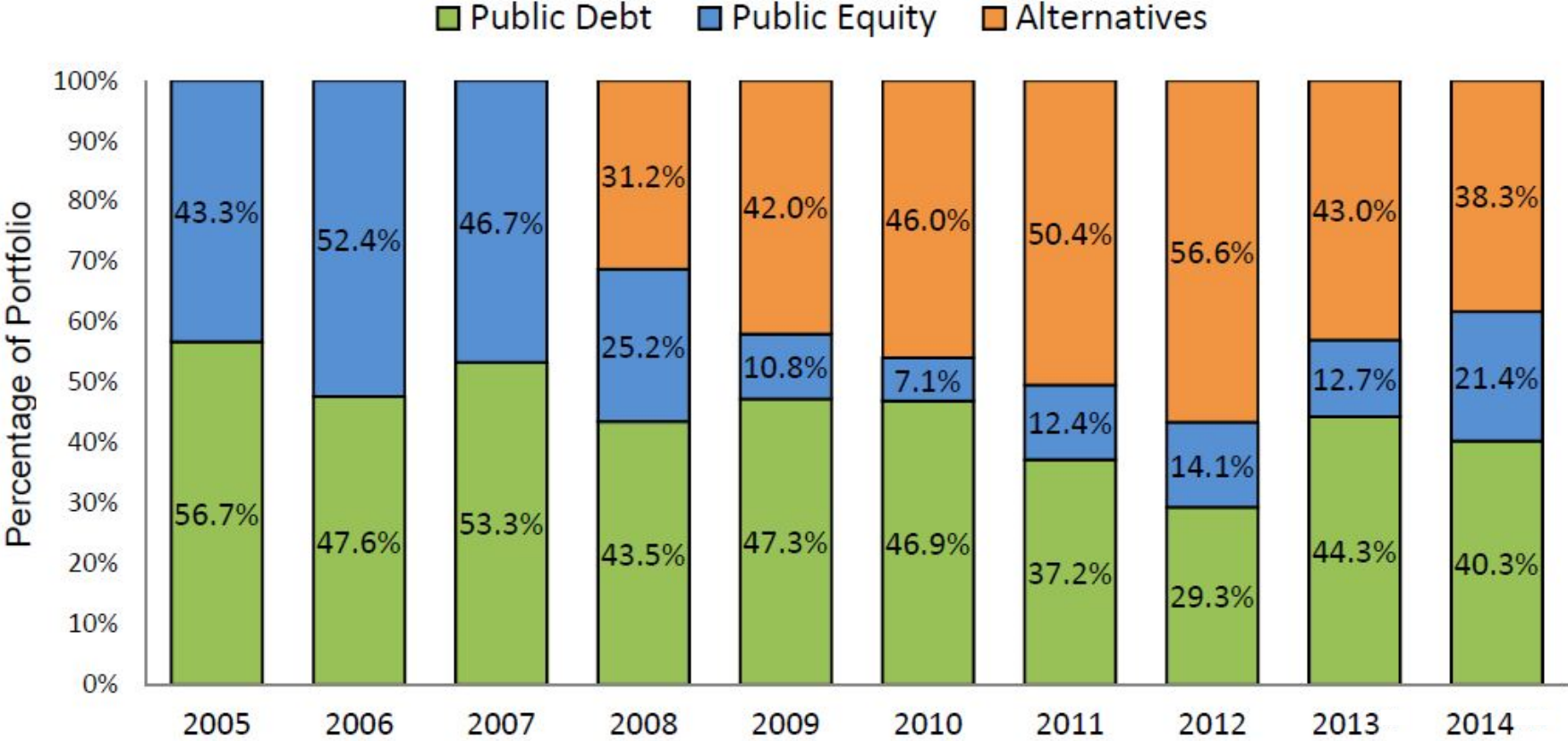
# Projected Unfunded Liabilities for 2043

In July 2015, Aon Hewitt, an investment consultant to the RSIC, projected a 50% probability that the two largest pensions combined will have:

- 30-year annualized rate of return of 6.8%
- 87% funded status
- \$11 billion shortfall

These projections are based on a 2.1% assumed rate of inflation.

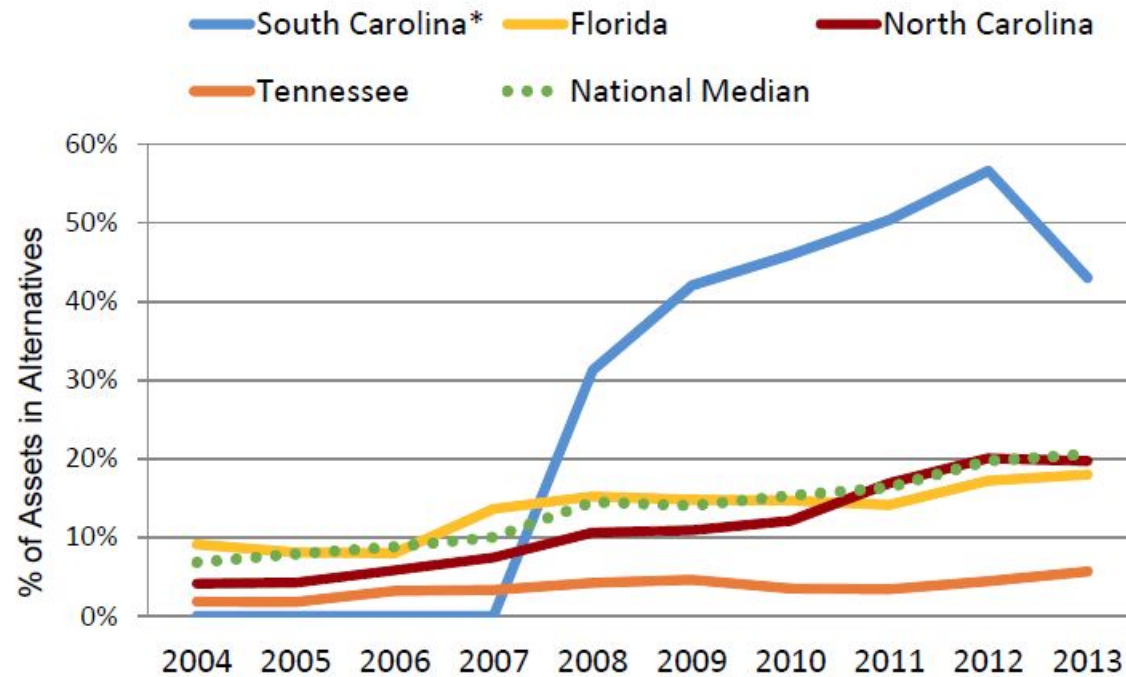
# Asset Allocation



# Alternative Asset Allocation of Public Pension Plans

ASSET CLASS	NATIONAL AVERAGE	SOUTH CAROLINA
Private Equity	9%	9.2%
Real Estate	6%	3.5%
Hedge Funds/GTAA	4%	19.8%
Real Assets	3%	0.1%
Other Alternatives	1%	5.7%
<b>TOTAL</b>	<b>24%</b>	<b>38.3%</b>

# Alternative Investments FY 03-04 Through FY 12-13



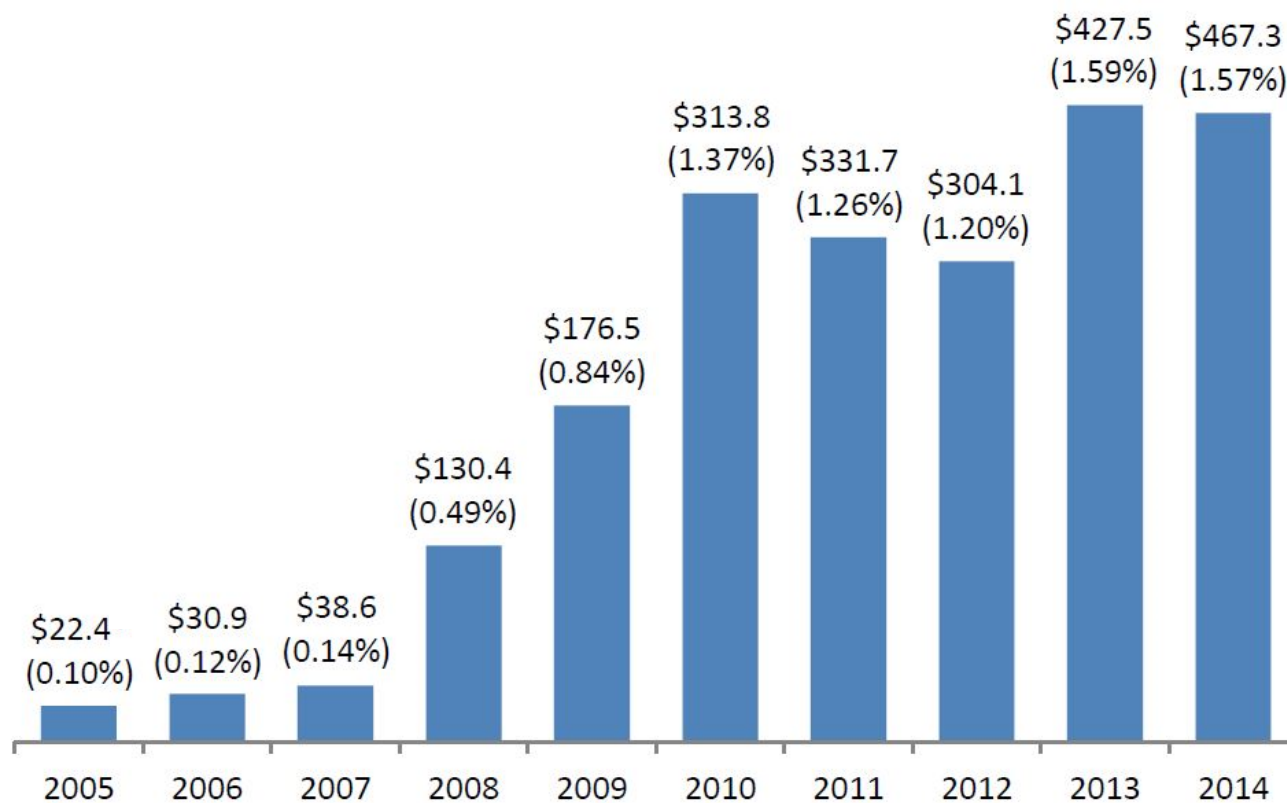
\* Prior to FY 12-13, cash, short duration and high yield held in South Carolina's strategic partnerships were classified as Alternatives. Beginning in FY 12-13, South Carolina has presented these investments as cash and cash equivalents under Short Term Investments / Fixed Income.



# Investment Risks Not Fully Reported

- Volatility
- Illiquidity
- Leverage
- Valuation and Investment Returns
- Complexity
- Transparency
- Counterparty

# Investment Fees and Administrative Expenses (in millions)



# Annualized Investment Returns Ending FY 14-15

	1-Year	3-Year	5-Year	10-Year
South Carolina	1.73%	8.96%	9.07%	5.21%
Other Public Pensions	3.11%	10.52%	10.62%	6.91%
Vanguard Balanced Index Fund (60% Stocks, 40% Bonds)	4.95%	10.99%	11.71%	6.95%

# Factors to Consider When Selecting an Assumed Rate of Return

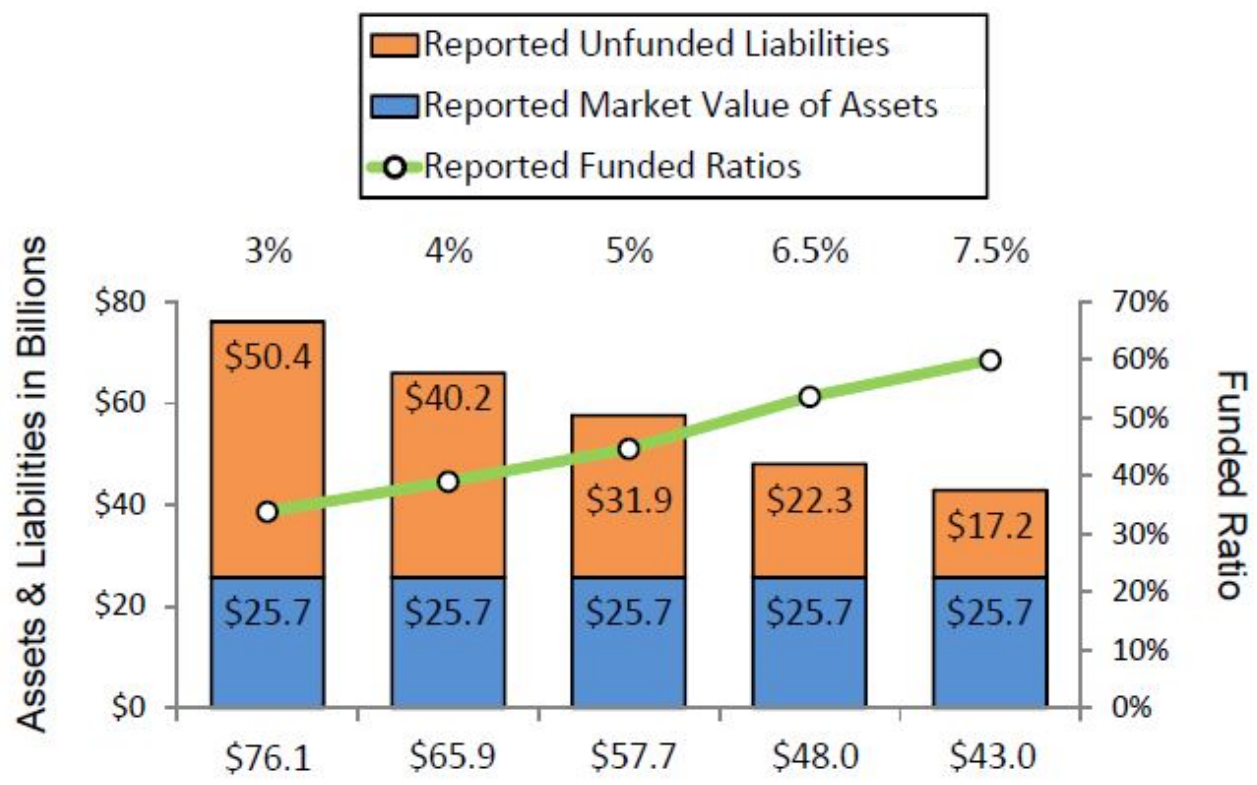
- Tolerance for risk.
- Asset allocations, categories of risk, and degrees of risk associated with various assumed rates of return.
- Degree to which asset volatility and correlation change over time.
- Probability of significant investment underperformance.
- Impact of various assumed rates of return on the present value of pension liabilities and the funded ratio based on the market value of assets.

# Potential Underreporting of Pension Liabilities

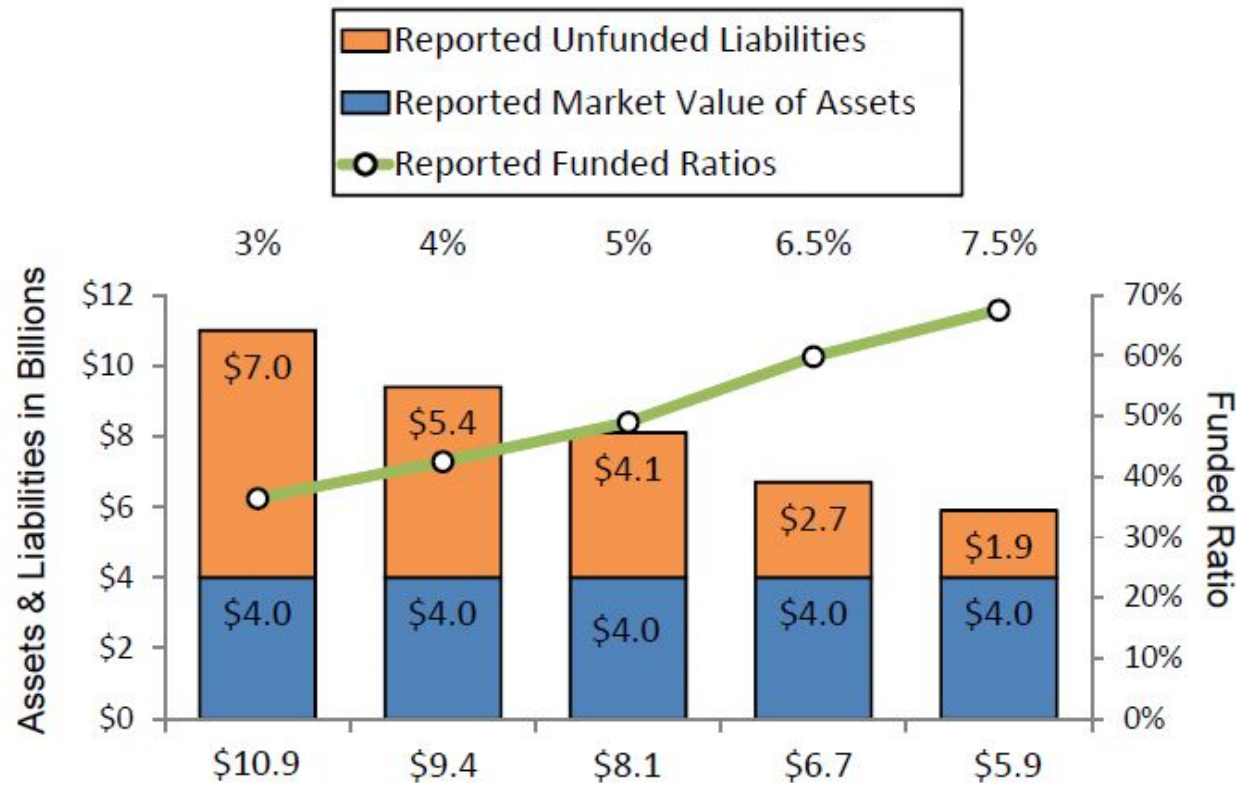
By using higher discount rates, public pensions nationwide may be underreporting their liabilities when compared with the pension reporting practices of:

- A major bond credit rating agency
- Corporations
- Financial economists

# Various Discount Rates and their Effect on SCRS Liabilities as of 6/30/2014



# Various Discount Rates and their Effect on PORS Liabilities as of 6/30/2014



# Amortizing Unfunded Pension Liabilities

- In principle, each generation of public employees should fully pay the amount necessary to fund its own pension obligations.
- South Carolina Law permits pension liabilities to be amortized over 30 years.
- Therefore, some generations are paying the pension liabilities of other generations.
- Moody's bond credit rating agency uses a 20-year amortization period when evaluating pensions.
- The Society of Actuaries recommends using a 15- to 20-year amortization period.



# Pension Staff and Governance Issues

- State employees accepting jobs from companies with state contracts
- Initiation of pension investments by RSIC commissioners
- Placement agents