PRESENTED TO PTF
9/15/2011

Summit Strategies Group
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Expected Return on Asset Assumption

City of Knoxville Employees' Pension Plan

September 15, 2011

INTRODUCTIONS

Daniel J. Holmes, JD
Managing Director
Investment Experience: 21 years
Consulting Experience: 21 years

Dan is a Managing Director of Summit, a founding member of the firm, and shareholder. As a senior consultant, he serves corporate, public and Taft-Hartley pension funds as well as endowment/foundation and hospital funds. Prior to joining the firm, Dan served as Assistant Prosecuting Attorney in the St. Louis County Prosecuting Attorney's office and was a staff attorney for Landmark Bancshares, a bank holding company. Dan received a finance degree from the University of Notre Dame, his juris doctor degree from Creighton University School of Law, and is a member of the National Association of Public Pension Attorneys and the Missouri Bar Association. He currently serves on the Investment Committee and Board of Directors of Christian Brothers College High School in St. Louis, and the Board of Directors of Catholic Charities, Archdiocese of St. Louis.

Ann R. Bryant, FSA, MAAA
Vice President
Investment Experience: 3 years
Consulting Experience: 11 years

Ann is Vice President of Capital Markets Research, joining the firm in 2011. Her primary responsibilities include pension asset/liability modeling and assisting with other client ad-hoc projects. Prior to joining Summit, Ann was a senior actuarial consultant for three years at Mercer and eight years at Towers Perrin. As an actuarial consultant, Ann served as lead retirement actuary with responsibility for determining and explaining actuarial valuation results, forecasts, and implications. Ann also served as staff actuary at the Lutheran Church-Missouri Synod working with the design, finance, and communication of the pension and welfare benefit programs. Her actuarial career started in the insurance industry at Thrivent Financial for Lutherans. While at Thrivent, Ann was responsible for a variety of life insurance and annuity projects. Ann received her BS in Mathematics from the University of Wyoming. She is a Fellow of the Society of Actuaries and a Member of the American Academy of Actuaries.

TODAY'S DISCUSSION

- The Pension Task Force provided questions earlier this week concerning expected rates of return for the City of Knoxville Pension Plan and other related topics.
- Summit attempted to answer these questions in the short time allowed and provide information and perspective concerning the topics described above.
- Summit views this as the opening of a dialogue with the Pension Task Force and is happy to help in an way.

BRIEF OVERVIEW OF SUMMIT STRATEGIES GROUP

- **An institutional investment consulting firm, currently:**
  - 57 professionals
  - 63 full service retainer clients
  - Approaching $145 billion in aggregate client assets
- **Clients include foundations/endowments, pension funds, healthcare systems, insurance reserves**
  - All institutional – no individual
  - Public, Corporate, Taft-Hartley
- **Complete independence in thought, direction, and revenue**
  - 100% employee-owned
  - 100% hard dollar revenue from retainer consulting clients
  - No conflicts of interest
- **Carefully managed growth**
  - Maintain an entrepreneurial work environment
  - Serve a smaller number of important clients – not "consultant to the world"
- **Registered Investment Adviser with the SEC**

CURRENT CAPITAL MARKET ASSUMPTIONS

	Expected Return	Benchmark Volatility	Expected Excess Return	Manager Tracking Error	Total Return	*Total Volatility
Public Fixed Income:						
Cash	2.75%	2.0%		0.0%	2.8%	2.0%
TIPS	3.25%	5.3%		0.0%	3.3%	5.3%
Governments	3.25%	5.0%		0.0%	3.3%	5.0%
Corporates	4.50%	6.0%	0.50%	1.0%	5.0%	6.1%
Mortgages	3.75%	3.5%	0.25%	0.5%	4.0%	3.5%
Intermediate Core						
Core Fixed	3.75%	3.8%	0.25%	0.5%	4.0%	3.8%
Core Plus	4.25%	4.3%	0.50%	1.0%	4.8%	4.4%
Long Fixed	4.75%	9.0%	0.25%	0.5%	5.0%	9.0%
Int'l Fixed Income	3.25%	10.0%	0.50%	1.0%	3.8%	10.0%
Emerging Mkt Debt	5.25%	8.5%	1.00%	2.0%	6.3%	8.7%
High Yield	5.75%	13.0%	0.75%	1.5%	6.5%	13.1%
Convertibles	5.50%	13.0%	0.50%	1.0%	6.0%	13.0%
Public Equities:						
Large Cap Core	7.50%	19.0%	0.75%	1.5%	8.3%	19.1%
Large Cap Value	7.50%	19.0%	0.75%	1.5%	8.3%	19.1%
Large Cap Growth	7.50%	20.5%	0.75%	1.5%	8.3%	20.6%
Small Cap Core	7.00%	23.5%	1.00%	2.0%	8.0%	23.6%
Small Cap Value	7.50%	22.5%	1.00%	2.0%	8.5%	22.6%
Small Cap Growth	6.50%	26.5%	1.00%	2.0%	7.5%	26.6%
Developed Int Core	8.50%	22.5%	0.75%	1.5%	9.3%	22.5%
Developed Int Value	9.00%	23.5%	0.75%	1.5%	9.8%	23.5%
Developed Int Growth	8.00%	21.7%	0.75%	1.5%	8.8%	21.8%
International Small	8.25%	25.0%	1.00%	2.0%	9.3%	25.1%
Emerging Markets	9.50%	28.0%	1.50%	3.0%	11.0%	28.2%
Alternatives/Strategies:						
Private Core Real Est	7.00%	8.0%		0.0%	7.0%	8.0%
Private Non-Core Real Est	9.00%	20.0%		0.0%	9.0%	20.0%
Public Real Estate (REITs)	6.50%	26.0%		0.0%	6.5%	26.0%
Public Energy (MLPs)	8.00%	18.0%		0.0%	8.0%	18.0%
Private Energy	9.50%	25.0%		0.0%	9.5%	25.0%
AIG Commodities	3.50%	20.5%	3.0%	6.0%	6.5%	21.4%
Private Equity (50/25/25)	10.50%	21.0%		0.0%	10.5%	21.0%
Private Debt	8.25%	15.0%		0.0%	8.3%	15.0%
Hedge Fund: Diversification	6.50%	10.0%		0.0%	6.5%	10.0%
Hedge Fund: Income	5.00%	5.0%		0.0%	5.0%	5.0%
Hedge Fund: Growth	7.50%	11.0%		0.0%	7.5%	11.0%
Hedge Funds	7.75%	8.5%		0.0%	7.8%	8.5%
Hedge Fund: Risk Parity	7.00%	10.0%		0.0%	7.0%	10.0%

*Assumes excess return is not correlated to the benchmark

Notes:

- *Inflation assumption = 2.5%*
- *Returns are net of fees*
- *10-year investment time horizon*

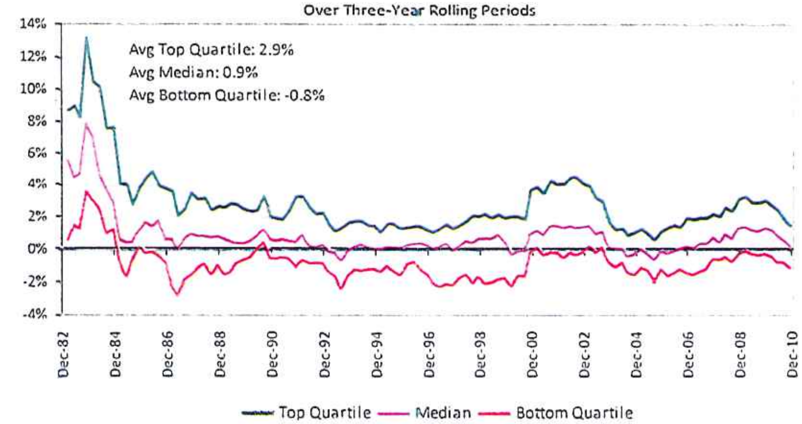
HISTORIC ALPHA EXPERIENCE

Core Fixed Income

Level of Over/Under Performance vs. BC Aggregate Bond Index
Over Three-Year Rolling Periods

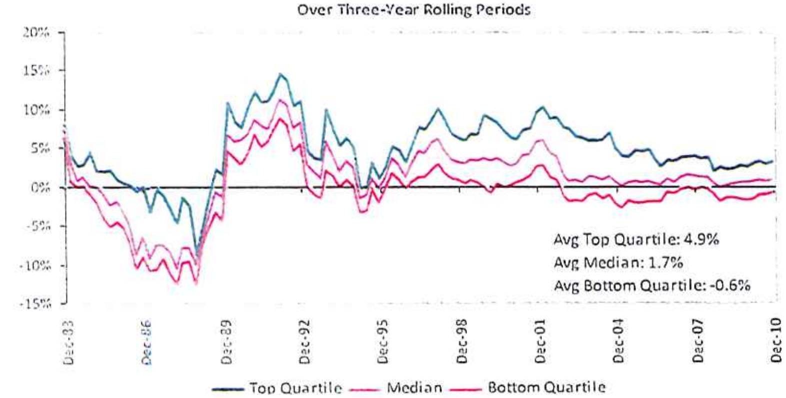
Large Cap Equities

Level of Over/Under Performance vs. Russell 1000 Index
Over Three-Year Rolling Periods



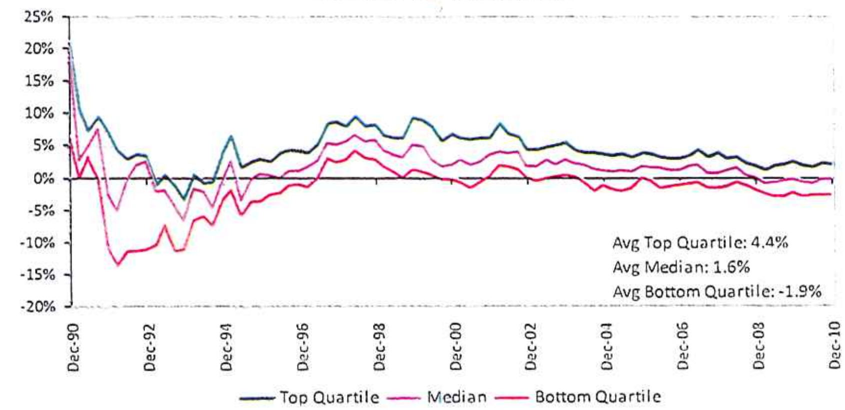
International Large Cap Equities

Level of Over/Under Performance vs. MSCI EAFE Index
Over Three-Year Rolling Periods



Emerging Market Equities

Level of Over/Under Performance vs. MSCI Emerging Markets Index
Over Three-Year Rolling Periods



TARGET ASSET ALLOCATION VERSUS PEERS

Asset Class	Knoxville	Public Plans $500 million - $1 billion	Public Plans $500 million or under
Domestic equities	24%	41%	43%
International equities	27%	17%	16%
Fixed income	24%	31%	30%
Real estate	10%	5%	5%
Private equity	5%	3%	2%
Hedge funds	5%	2%	2%
Other	5%	1%	2%

EXPECTED RETURNS GIVEN CURRENT TARGET ASSET ALLOCATION

Asset Class	Target Allocation
Large cap equities	17.0%
Non-large cap equities	7.0%
International equities	27.0%
Convertibles	4.0%
Private equity	5.0%
Core fixed income	6.0%
Long fixed income	6.0%
High yield	2.0%
TIPs	5.0%
Core real estate	5.0%
Value added real estate	5.0%
Commodities/Energy	5.0%
Hedge funds	5.0%
Cash	1.0%

Expected Returns

With Alpha

One-year Expected Return = 7.8%

Ten-year Expected Return = 7.2%
(Net of volatility with portfolio standard deviation = 12.6%)

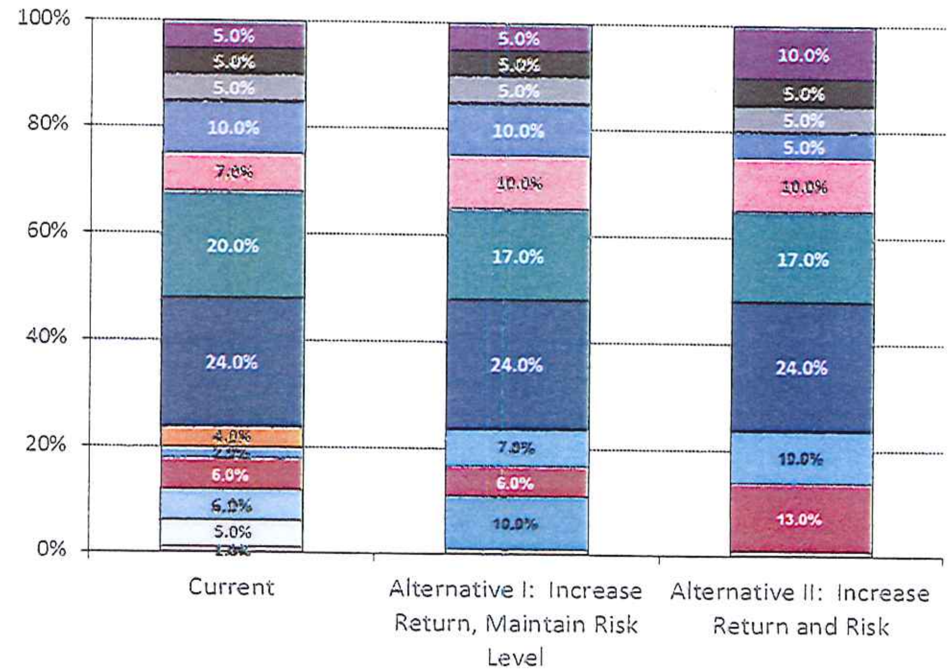
Without Alpha

One-year Expected Return = 7.3%

Ten-year Expected Return = 6.6%
(Net of volatility with portfolio standard deviation = 12.5%)

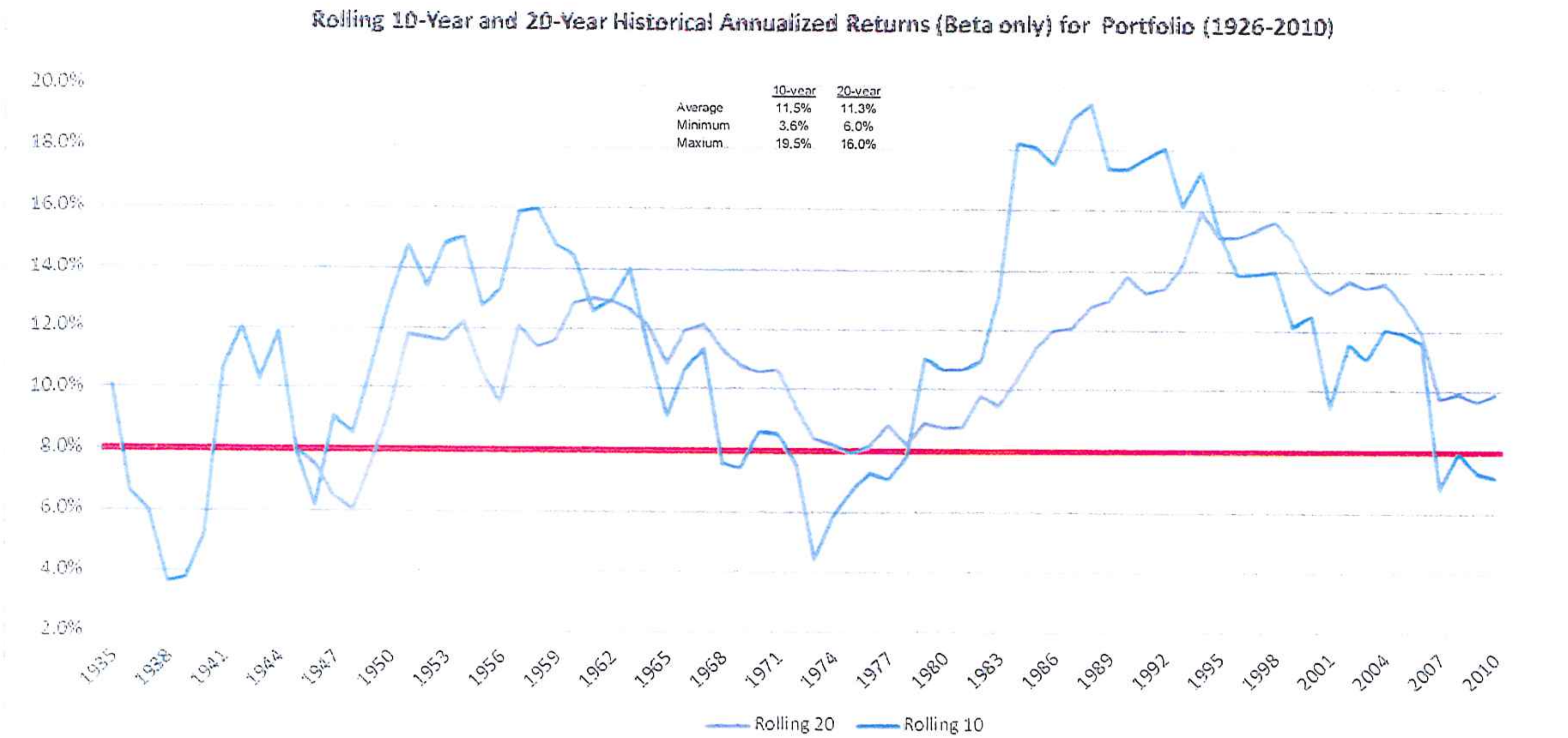
ALTERNATIVE ASSET ALLOCATIONS, EXPECTED RETURNS AND RISKS

- The current portfolio and two illustrative alternative portfolios are shown to indicate risk/return trade-offs needed to achieve higher expected returns.
- Returns shown assume a 10-year time horizon and are net of volatility.



	Current	Alternative I: Increase Return, Maintain Risk Level	Alternative II: Increase Return and Risk
Expected Return	7.2%	7.4%	7.6%
Standard Deviation	12.6%	12.6%	13.5%
Return/Risk	57.1%	58.7%	56.3%

HISTORICAL RETURNS OF A PORTFOLIO SIMILAR TO KNOXVILLE'S CURRENT PORTFOLIO



Historical returns are not available for some asset classes.

Returns from other asset classes were blended as a proxy for the asset classes with missing data.

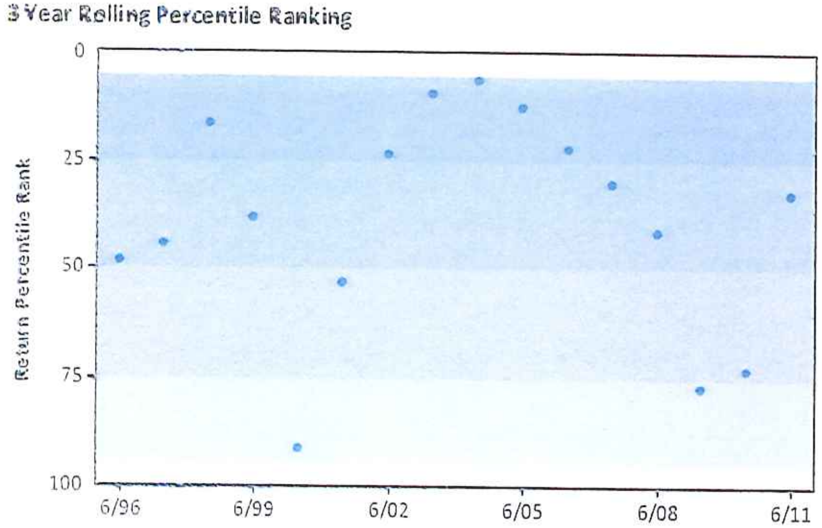
QUESTIONS FOR DISCUSSION

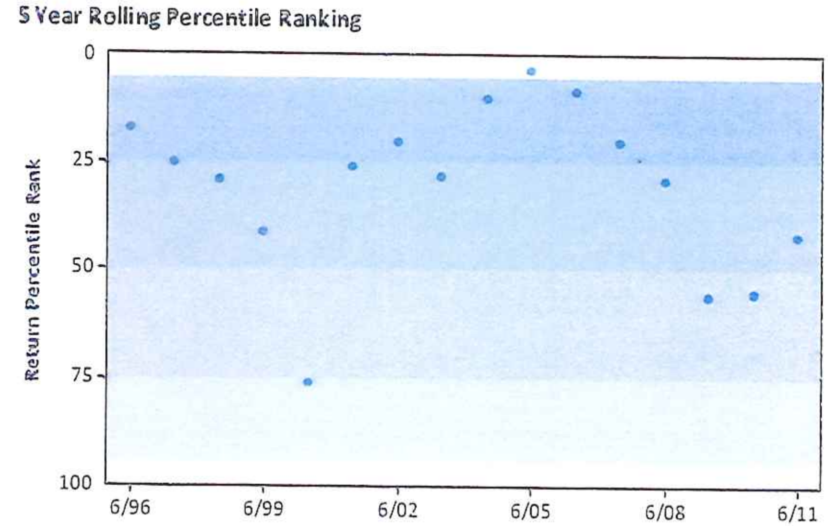
- In his professional opinion, is it realistic to expect a rate of return of 8% or greater over the next 5-10 years? Next 10 years? Next 20 years?
- If so, how can this rate of return be achieved? What asset classes must be utilized? What is the level of risk required? What is the standard deviation of such risk?
- To achieve a rate of return of 7.5%, how would he revise the investment strategy? What would the standard deviation be under such strategy?
- Does he envision a point whereby the portfolio could be immunized? If so, what might the timetable be?
- What steps would he suggest be taken to reduce the substantial increase in level of contribution envisioned by the System's actuary?
- Many plans have lowered their investment return assumption to 7.5-7.75%. What is his experience in that regard?

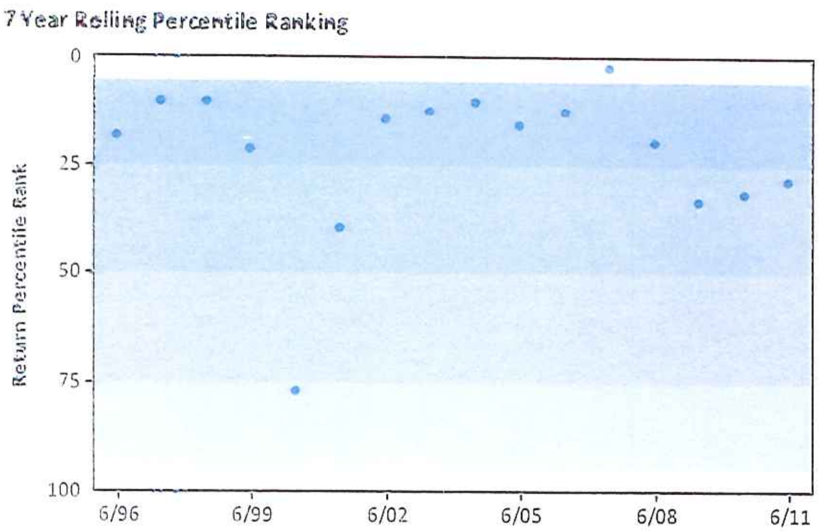
Appendix

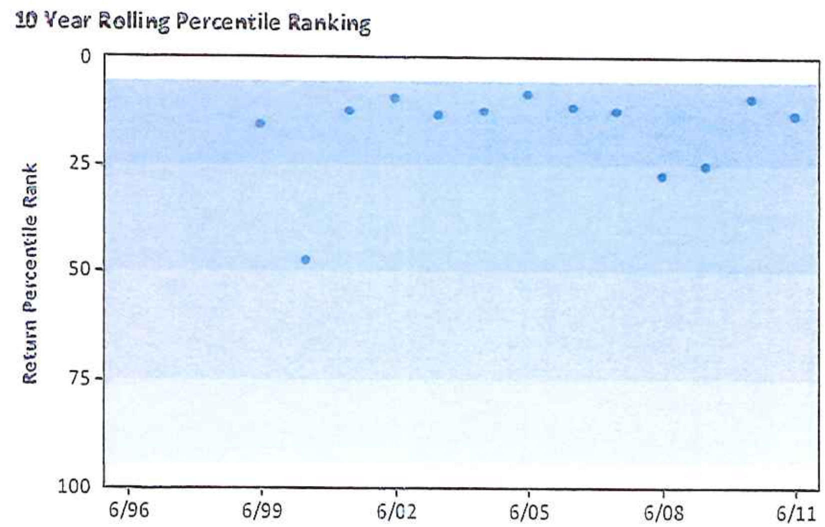
ROLLING PERCENTILE RANKS VS. ALL PUBLIC PLANS - TOTAL FUND

As of June 30, 2011









City of Knoxville Employees' Pension Plan

Total Fund Composite Return

	1 Year	3 Year	5 Year	7 Year	10 Year
June 30, 2011	25.13	5.29	5.09	6.62	6.54
June 30, 2010	14.59	-4.36	2.58	5.71	4.82
June 30, 2009	-18.59	-3.67	1.78	4.41	3.54
June 30, 2008	-6.22	6.77	9.59	7.08	6.58
June 30, 2007	17.09	12.68	12.12	9.01	9.26
June 30, 2006	10.85	12.92	8.00	6.79	9.49
June 30, 2005	10.22	10.92	7.10	6.50	10.10
June 30, 2004	17.84	6.35	5.33	7.82	10.47
June 30, 2003	5.07	2.76	3.65	8.05	8.94
June 30, 2002	-2.85	1.54	6.47	9.75	10.15
June 30, 2001	6.31	5.43	10.99	12.29	11.93
June 30, 2000	1.38	9.84	13.18	11.71	12.41
June 30, 1999	8.73	16.05	15.87	14.06	13.20
June 30, 1998	20.20	18.99	14.51	14.84	--
June 30, 1997	19.58	16.90	13.95	13.53	--
June 30, 1996	17.21	11.05	12.87	12.00	--