2011 ERSRI Asset/Liability Study
Selecting a Policy Portfolio

Rhode Island State Investment Commission

June 22, 2011

by

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Agenda

I. Process Recap and Executive Summary

II. Optimization Concepts

III. Risk / Reward Tradeoffs

IV. Efficient Frontiers

V. Recommendation

VI. Appendix
   i. Asset liability Model Notes
   ii. Role of Fixed Income
   iii. Role of Real Estate

Recap from Prior Meetings

- SIC has discussed the following:
  - Review of Strategic Asset Classes
  - Review of PCA Capital Market Assumptions
    - Returns
    - Risk
    - Correlations
- As a result of those discussions the SIC has made the following decisions:
  - Approved investment assumption, and
  - Allocation constraints for all potential investment classes

- SIC has discussed plan liabilities
  - Funding ratios
  - Contribution levels
  - Contribution variability

Today's Meeting

Today's meeting – the emphasis is on risk/reward of various policy asset allocations

- Examine and discuss the results of simulated portfolio return projections of ERS Plan
  - Expected Impact on Costs / Funding Level
- Discuss / Select asset allocation policy portfolio

Executive Summary

- Process:
  - Identified portfolios on the efficient frontier
  - Selected three portfolios and integrated with plan liabilities - focusing on next ten years
    - Portfolios are variations on the Current Rhode Island Policy Portfolio
- Initial Findings:
  - Funded Ratio will probably increase over the next decade for all three portfolios under average market scenarios
    - Provided employers contribute the full actuarial cost
  - Cost as a % of Payroll are high, due to several factors including past return experience and demographics
    - For the next decade, Cost as a % of Payroll will increase to 44-45% of payroll as past losses are recognized
    - 50% probability that Cost will be between 31% and 51% in 10 years
    - Impact of investment results will increase as Plan becomes better funded

Executive Summary

- Implications:
  - Investment performance is unlikely to solve the funding challenge or materially reduce Employer contributions over the next decade
    - 50% probability of Funded Ratio between 48% and 72% in 10 years
  - Initially, employer contributions will be the primary factor that will improve the financial condition of the plan
    - Gradually, as funding improves, employer contributions will decline in significance
- Recommendation:
  - Lower funding levels now reduce impact of investment return on employer cost, technically allowing riskier investments
  - Policy issues may trump the technical, making a substantial increase in risk unwise
  - Recommend Portfolio #10
    - Similar to Current Policy Portfolio with increased diversification

Asset-Liability Model of ERS Plan

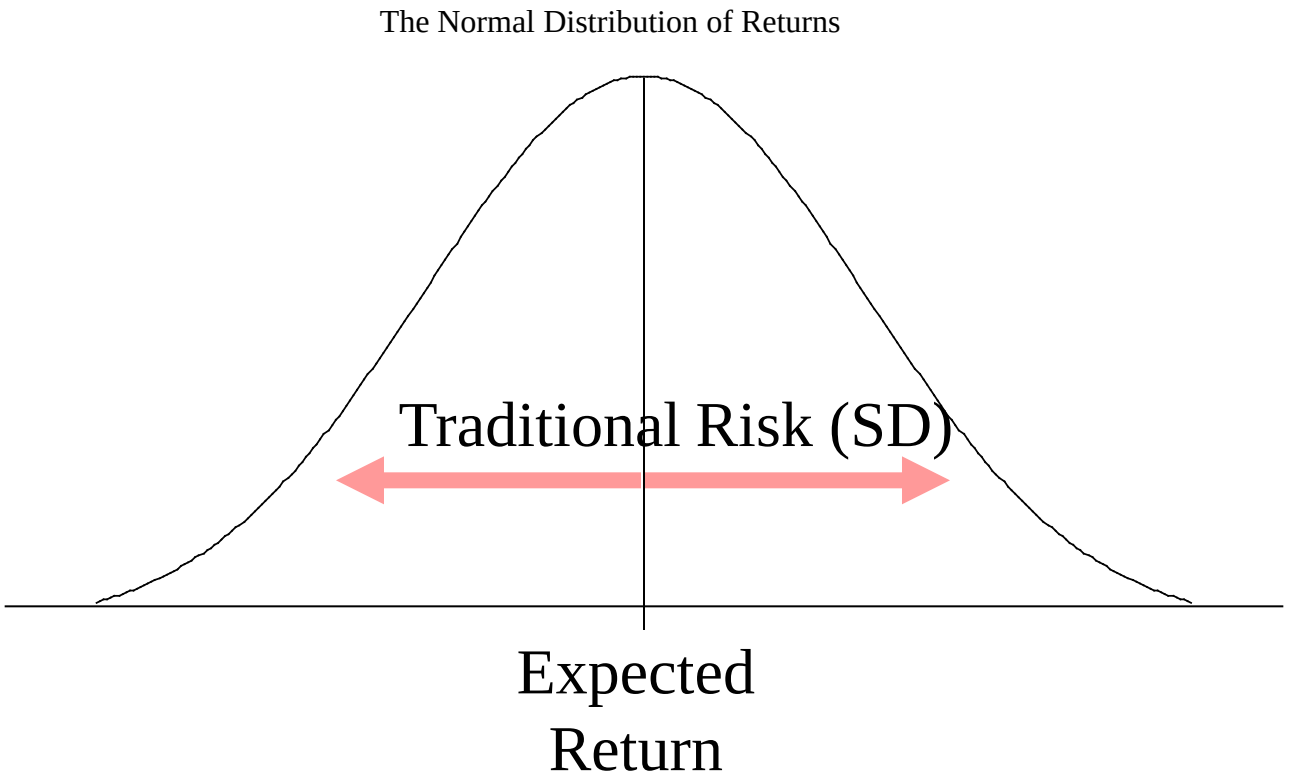
Optimization Concepts

- Risk Measures often used in Asset Allocation
  - Total investment return volatility (annualized standard deviation)
  - Risk of loss (probability of not achieving target, conditional variance, downside deviation)
  - Volatility of funding ratios
  - Volatility of surplus
  - Potential for higher-than-expected employer contributions

Risk tolerance is a function of emphasis on certain risk measure(s)

Optimization Concepts

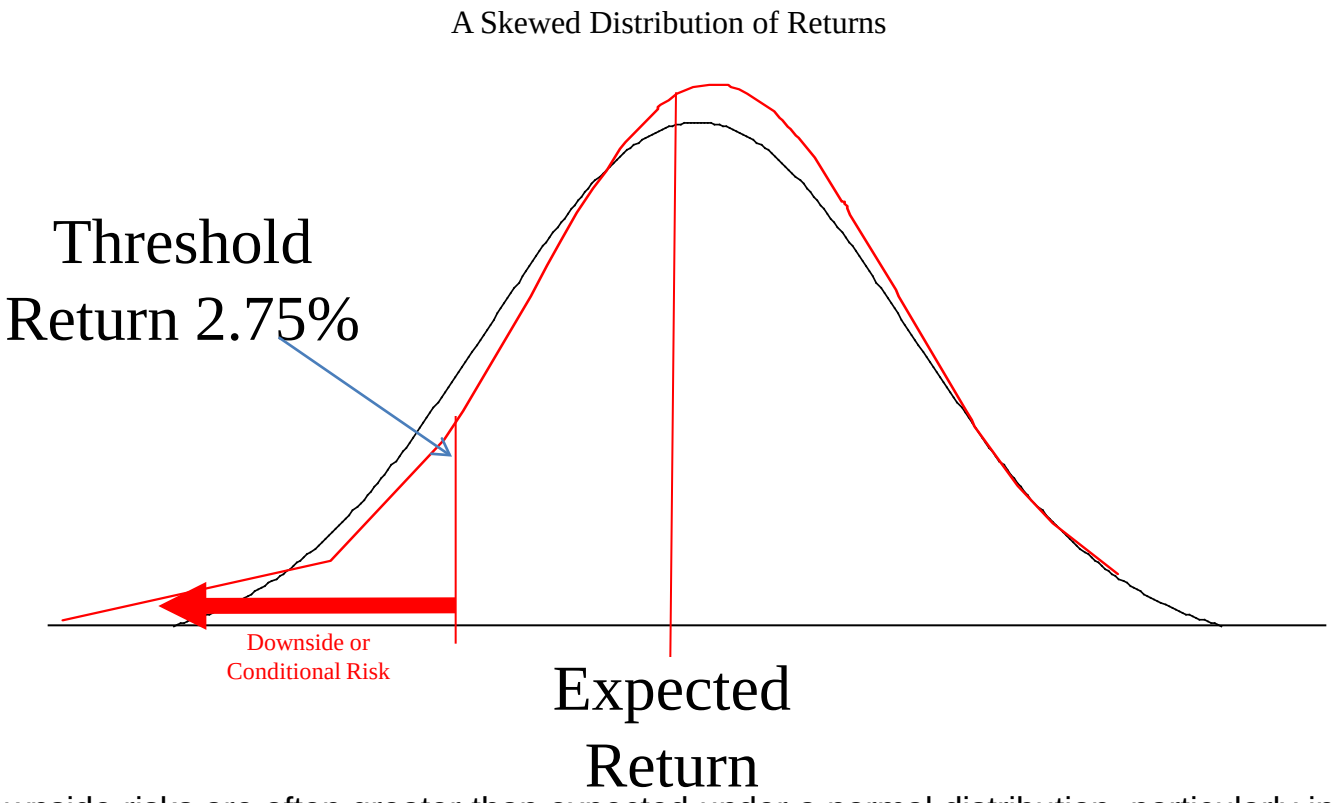
- Risk Measures Used in Asset Allocation



- …but , in the real world, investment returns are not necessarily normally distributed like this…

Optimization Concepts

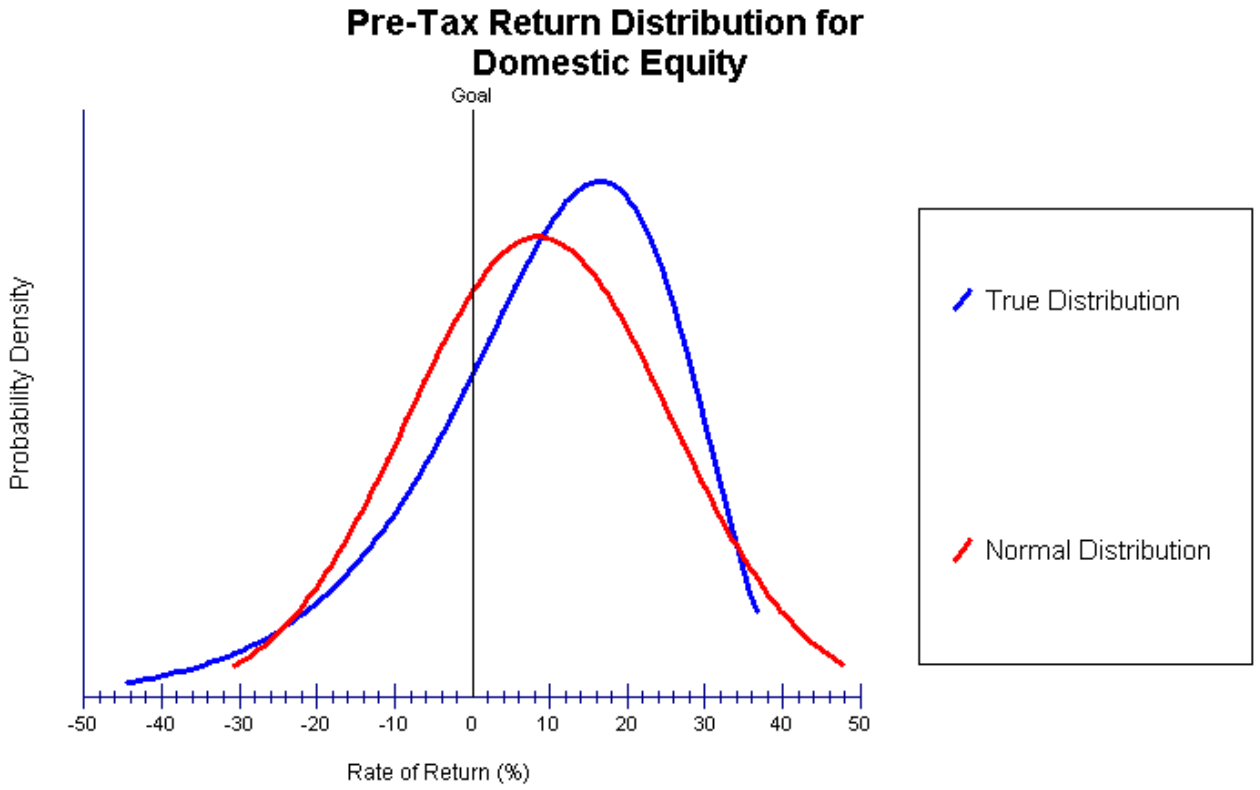
- Risk Measures Used in Asset Allocation



- …downside risks are often greater than expected under a normal distribution, particularly in public equities

Optimization Concepts

- True Risk vs. Normally-distributed Risk (Domestic Equity)



- Domestic Equity negatively-skewed, significant downside fat tail

Source: PCA, various sources

Optimization Concepts

- Summary

  - Traditional standard deviation risk measure does not emphasize downside risk

  - Strategic investment classes exhibit not only different risks, but different *downside* risks
    - Example: public equity downside risk may be greater than its standard deviation indicates

  - PCA has adjusted the optimization process to account for these downside risk issues

  - Efficient frontier captures downside risk (downside deviation) instead of traditional Standard Deviation

Risk / Reward Tradeoff

Risk / Reward tradeoff - Asset space

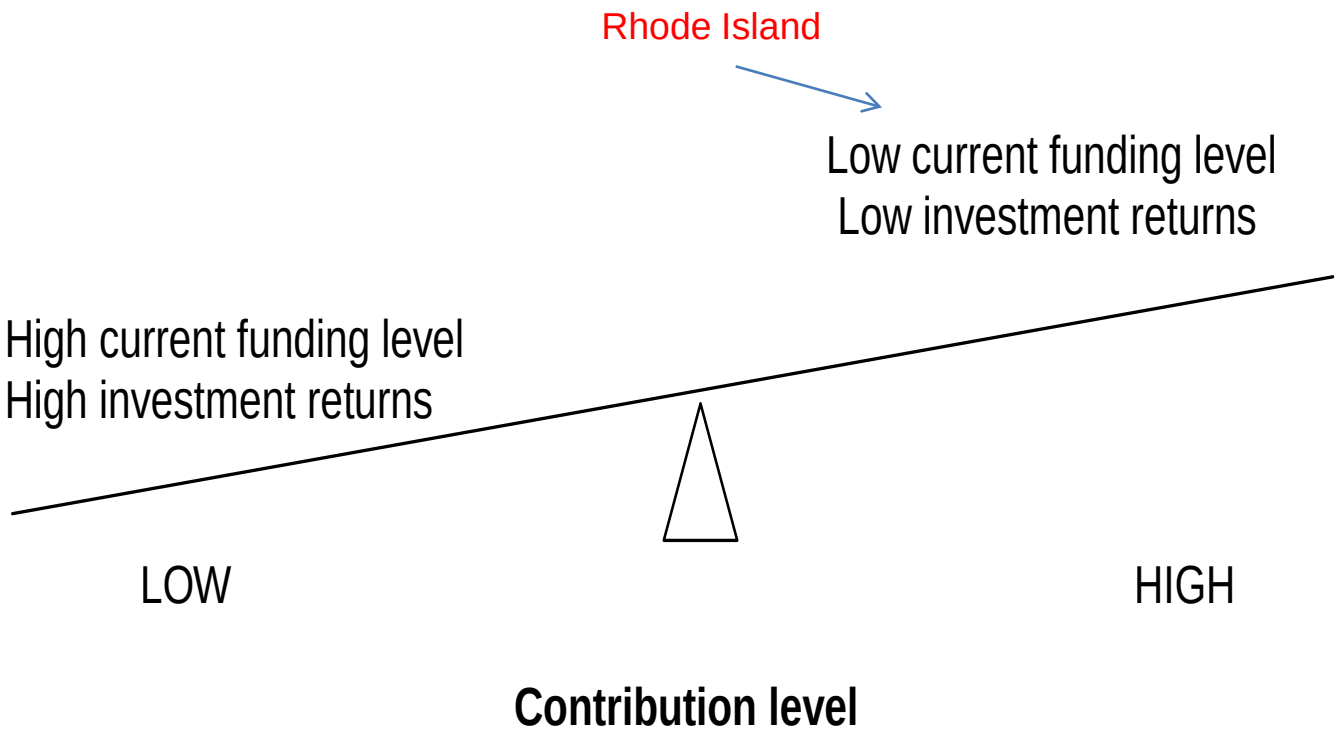
- Risk – Higher return volatility
- Reward – Higher Return
- Over the long term – Higher expected return portfolios have higher risk (return volatility)
- There is no risk free investment that delivers a high return

Risk / Reward Tradeoff

How do you define risk outside asset space?

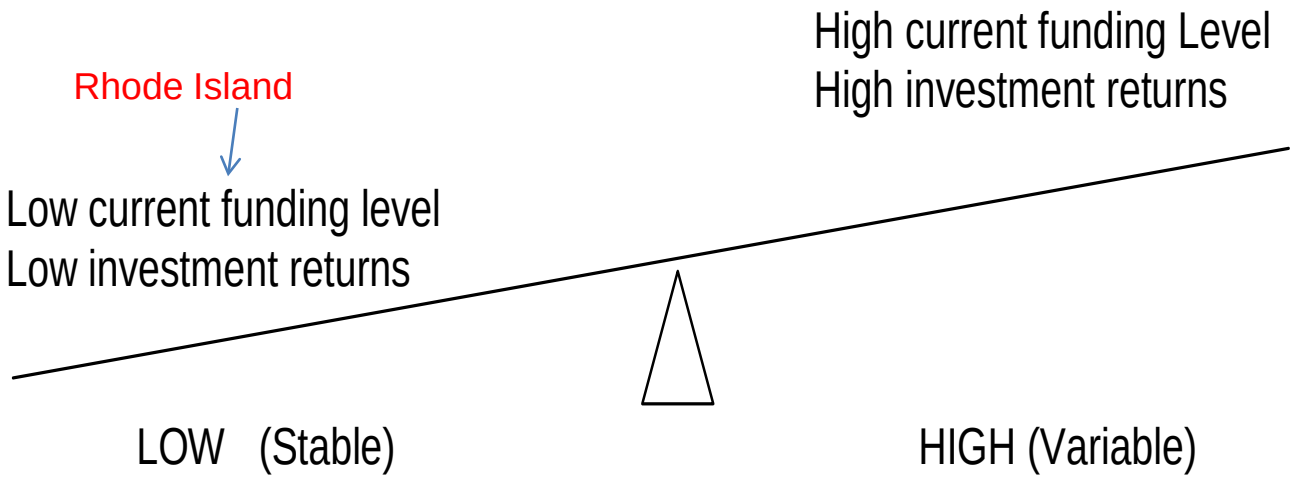
- Assets exist to fund plan's liabilities
- Benefit Payments = Contributions + Investment Earnings - Expenses
- Focus on:
  - Level of contribution:
    - Annual budget expense to fund pension liabilities
  - Variability of contributions:
    - How much the annual budget expense varies from year to year
  - Funding ratio

Risk / Reward Tradeoff



- Rhode Island has HIGH contribution level
- See Appendix for more detail

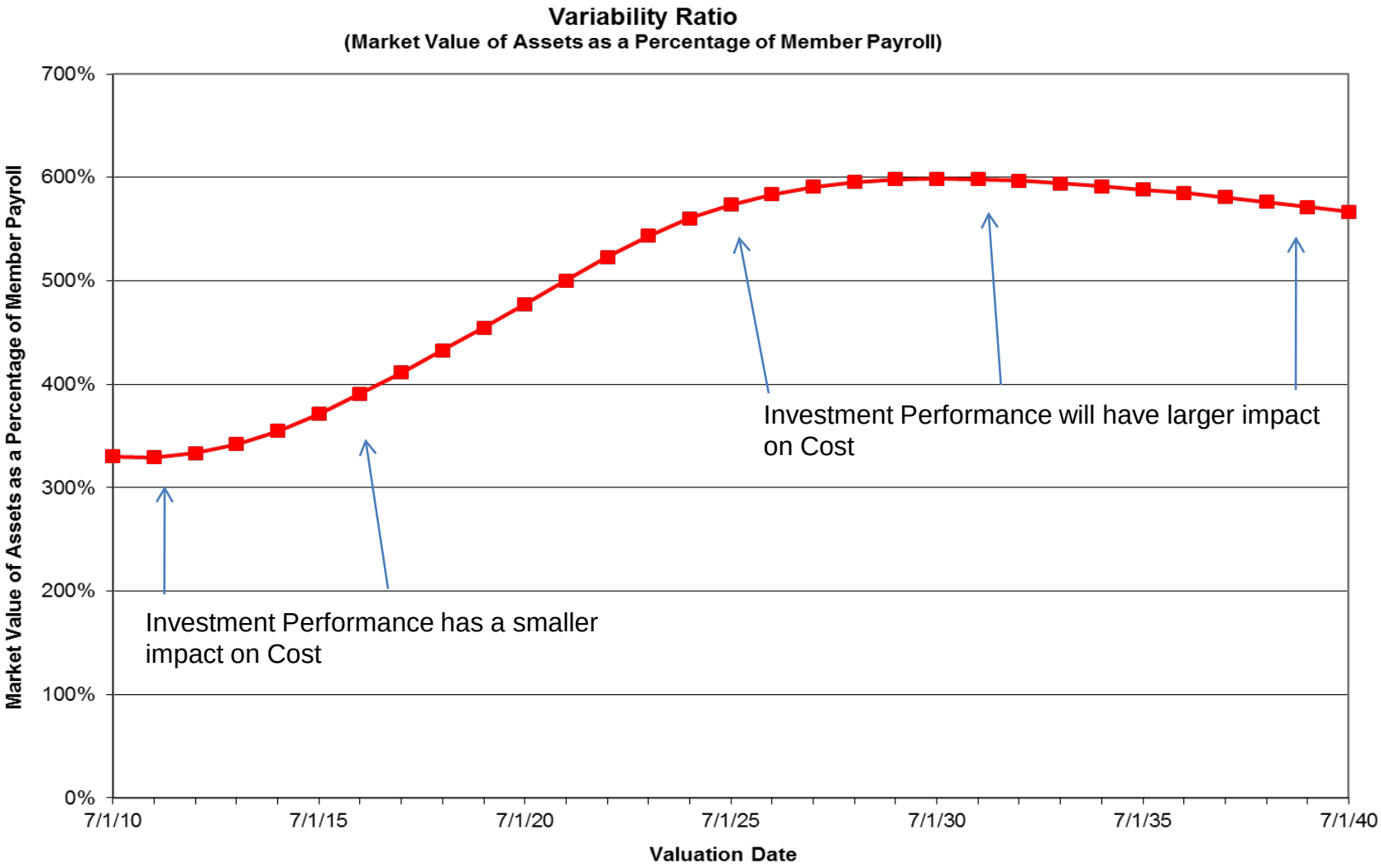
Risk / Reward Tradeoff



- Contributions are expected to be relatively STABLE, but at high levels
- See Appendix for more detail

Asset-Liability Model of ERS Plan

Projected market value of assets as a percent of payroll under **current actuarial** assumptions



Liabilities Summary

- Where is Rhode Island ERS today based upon current plan characteristics?
- Mature plan
- Low funding ratio (large unfunded liability)
- Low Variability Ratio – expected to rise in the future
  - Taking investment risk today when variability ratio is lower than expected in the future may be desirable
- Negative Cash Flow
  - Benefit payments > Contributions by $300 million per year
    - At some point this may be a constraint on illiquid investments
- Investment returns alone will not solve the funding challenge

Efficient Frontier Analyses

- Applying modified SIC constraints
- Specific options from constrained efficient frontier
- Unconstrained efficient frontier

Notes To Asset Modeling

- Efficient Frontier Portfolios optimized on
  - Return – arithmetic
  - 10 year downside deviation

- Downside Threshold Risk set at 2.75% (PCA inflation assumption)

- Three Portfolios identified to run with Liabilities (next page)
  - Current RI Policy Portfolio

  - Portfolio # 10
    - Same expected return as Current policy portfolio
    - Lower downside risk

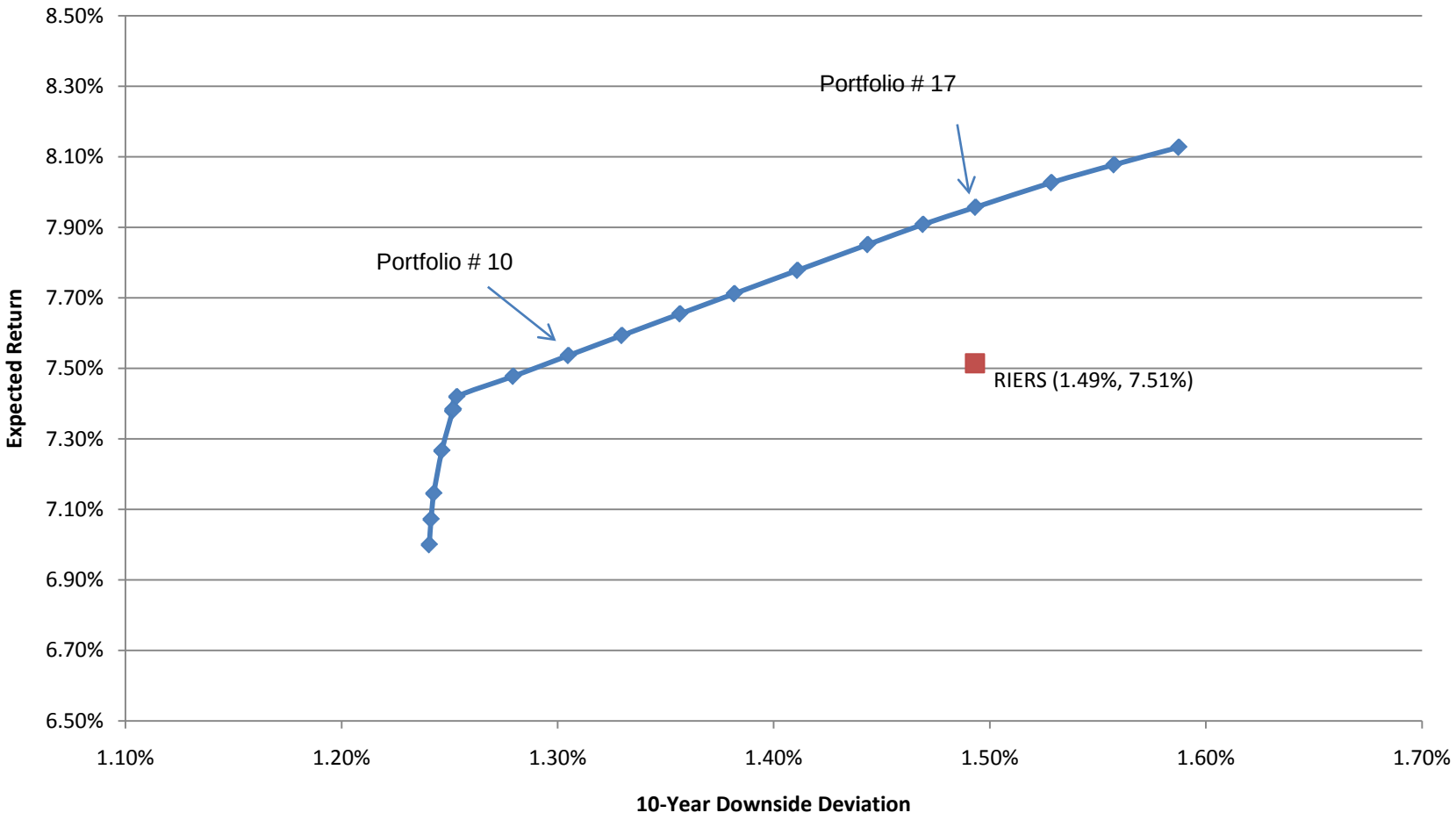
  - Portfolio #17
    - Same downside risk as Current policy portfolio
    - Higher return

- Constraints were expanded to allow for a wider range of outcomes
  - Changes to constraints in Appendix

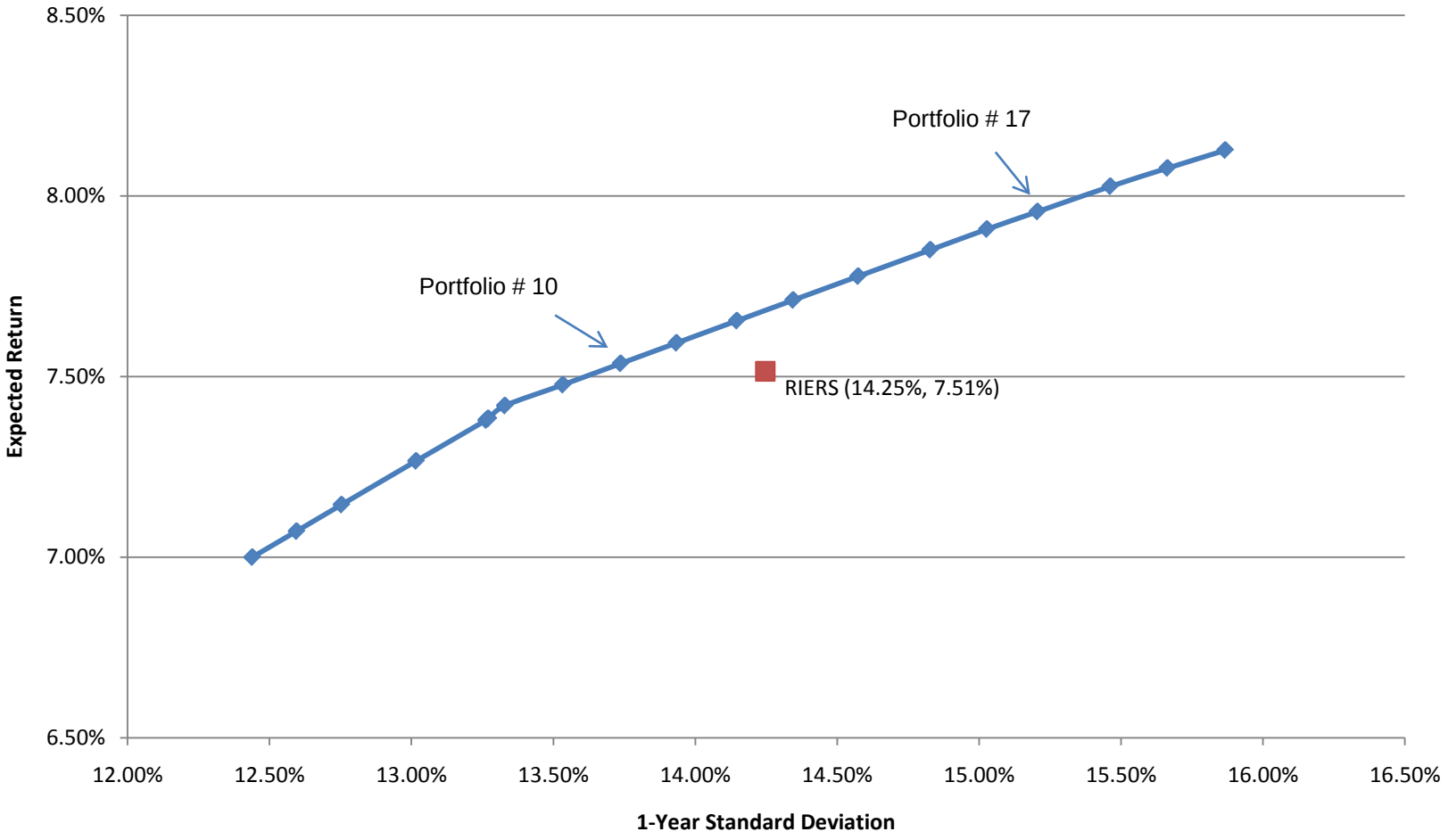
Portfolios for Consideration – Summary Statistics

	Portfolio # 10		Portfolio # 17		Rhode Island
Asset Mix					Current Policy
Cash	3%		3%		2%
Fixed Income	20%		13%		22%
Real Estate	8%		8%		5%
Real Return	11%		11%		10%
Global Equity	51%		57%		54%
Private Equity	7%		8%		7%
Global Statistics					
Expected Return	7.54%		7.96%		7.51%
Percent Upside Volatility	47.52%		47.30%		46.68%
Percent Downside Volatility	52.48%		52.70%		53.32%
Volatility Skewness	0.91		0.90		0.88
Statistics for 10-Year Holding Period					
Standard Deviation	4.34%		4.81%		4.51%
2.75% Goal Statistics					
Downside Deviation	1.30%		1.49%		1.49%
Downside Probability	13.60%		13.95%		14.38%
Average Downside Deviation	2.63%		2.96%		2.90%
Sortino Ratio	1.95		1.87		1.75
Statistics for 1-Year Holding Period					
Standard Deviation	13.74%		15.21%		14.25%
2.75% Goal Statistics					
Downside Deviation	7.83%		8.77%		8.41%
Downside Probability	34.29%		34.31%		34.06%
Average Downside Deviation	10.21%		11.40%		10.91%
Sortino Ratio	0.61		0.59		0.57
ExpectedROR Geometric	6.66%		6.88%		6.57%

Efficient Portfolios – 10 year Downside Deviation



Efficient Portfolios



Initial Output – Efficient Frontier Portfolios

Efficient Portfolio	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Rhode Island
																					Current policy
Asset Mix																					
Cash	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	2%
Fixed Income	30%	28%	27%	25%	23%	23%	23%	22%	21%	20%	19%	18%	17%	16%	15%	14%	13%	12%	11%	10%	22%
Real Estate	5%	6%	6%	7%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	5%
Real Return	10%	10%	10%	10%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	10%
Global Equity	46%	47%	47%	48%	49%	49%	49%	49%	50%	51%	52%	53%	53%	54%	55%	56%	57%	58%	59%	60%	54%
Private Equity	6%	6%	7%	7%	6%	6%	6%	7%	7%	7%	7%	7%	8%	8%	8%	8%	8%	8%	8%	8%	7%
Global Statistics																					
Expected Return	7.00%	7.07%	7.15%	7.27%	7.38%	7.38%	7.38%	7.42%	7.48%	7.54%	7.59%	7.65%	7.71%	7.78%	7.85%	7.91%	7.96%	8.03%	8.08%	8.13%	7.51%
Standard Deviation	12.4%	12.6%	12.8%	13.0%	13.3%	13.3%	13.3%	13.3%	13.5%	13.7%	13.9%	14.1%	14.3%	14.6%	14.8%	15.0%	15.2%	15.5%	15.7%	15.9%	14.2%
Downside Deviation	1.24%	1.24%	1.24%	1.25%	1.25%	1.25%	1.25%	1.25%	1.28%	1.30%	1.33%	1.36%	1.38%	1.41%	1.44%	1.47%	1.49%	1.53%	1.56%	1.59%	1.49%
ExpectedROR Geometric	6.27%	6.33%	6.38%	6.47%	6.56%	6.56%	6.56%	6.59%	6.62%	6.66%	6.69%	6.72%	6.75%	6.79%	6.83%	6.86%	6.88%	6.91%	6.94%	6.96%	6.57%

Asset Allocation Impact on Funding Ratio

- Funding level should improve over the next 10 years under the average outcome for all three portfolios
  - Assuming Employer makes Actuarially Required Contributions (ARC)

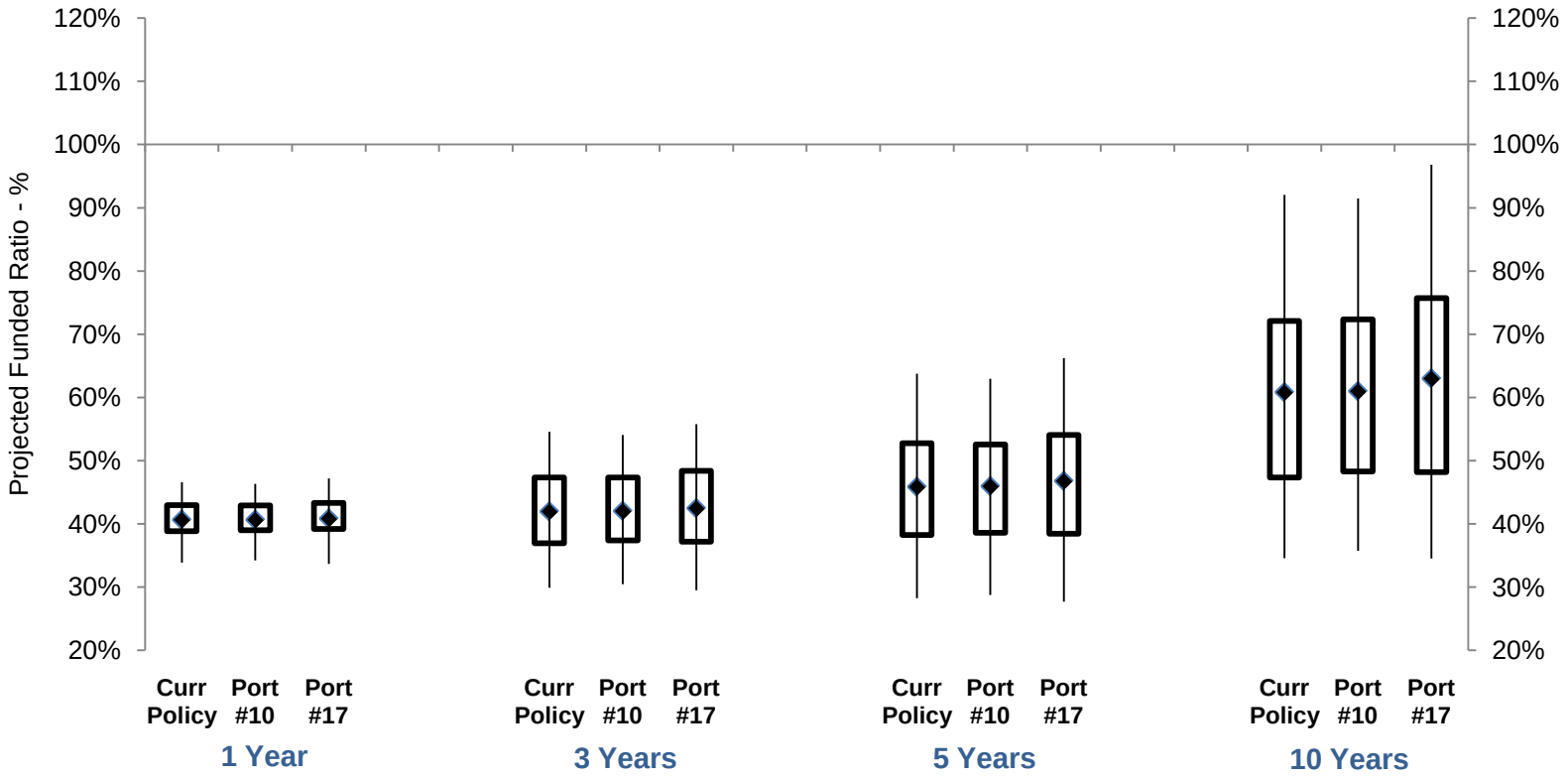
- Portfolio #17 is a slightly most aggressive portfolio and has a marginally larger upside impact on funding levels in the longer term

- **Issue to consider:**
  - Asset allocation will not have a large impact on funding level over the next decade

Asset Allocation Impact on Funding Ratio

		Highest			Lowest	
	Portfolio	**5th Pct**	**25th Pct**	**Average**	**75th Pct**	**95th Pct**
1st Year	*Current Policy*	*47%*	*43%*	*41%*	*39%*	*34%*
	Port #10	46%	43%	41%	39%	34%
	Port #17	47%	43%	41%	39%	34%
3rd Year	*Current Policy*	*55%*	*47%*	*42%*	*37%*	*30%*
	Port #10	54%	47%	42%	37%	30%
	Port #17	56%	48%	42%	37%	29%
5th Year	*Current Policy*	*64%*	*53%*	*46%*	*38%*	*28%*
	Port #10	63%	53%	46%	39%	29%
	Port #17	66%	54%	47%	38%	28%
10th Year	*Current Policy*	*92%*	*72%*	*61%*	*47%*	*35%*
	Port #10	91%	72%	61%	48%	36%
	Port #17	97%	76%	63%	48%	35%

Asset Allocation Impact on Funding Ratio



Asset Allocation Impact on Cost as % Active Payroll

- Cost as a % of Active Payroll will increase in the next 5 years under the average outcome for all three portfolios

- Out 10 years Costs could decline from the 5 year peak level
  - The increase in Cost is due to:
    - Past loss recognition
    - Demographics
    - Changes in actuarial assumptions
    - Shortening amortization period

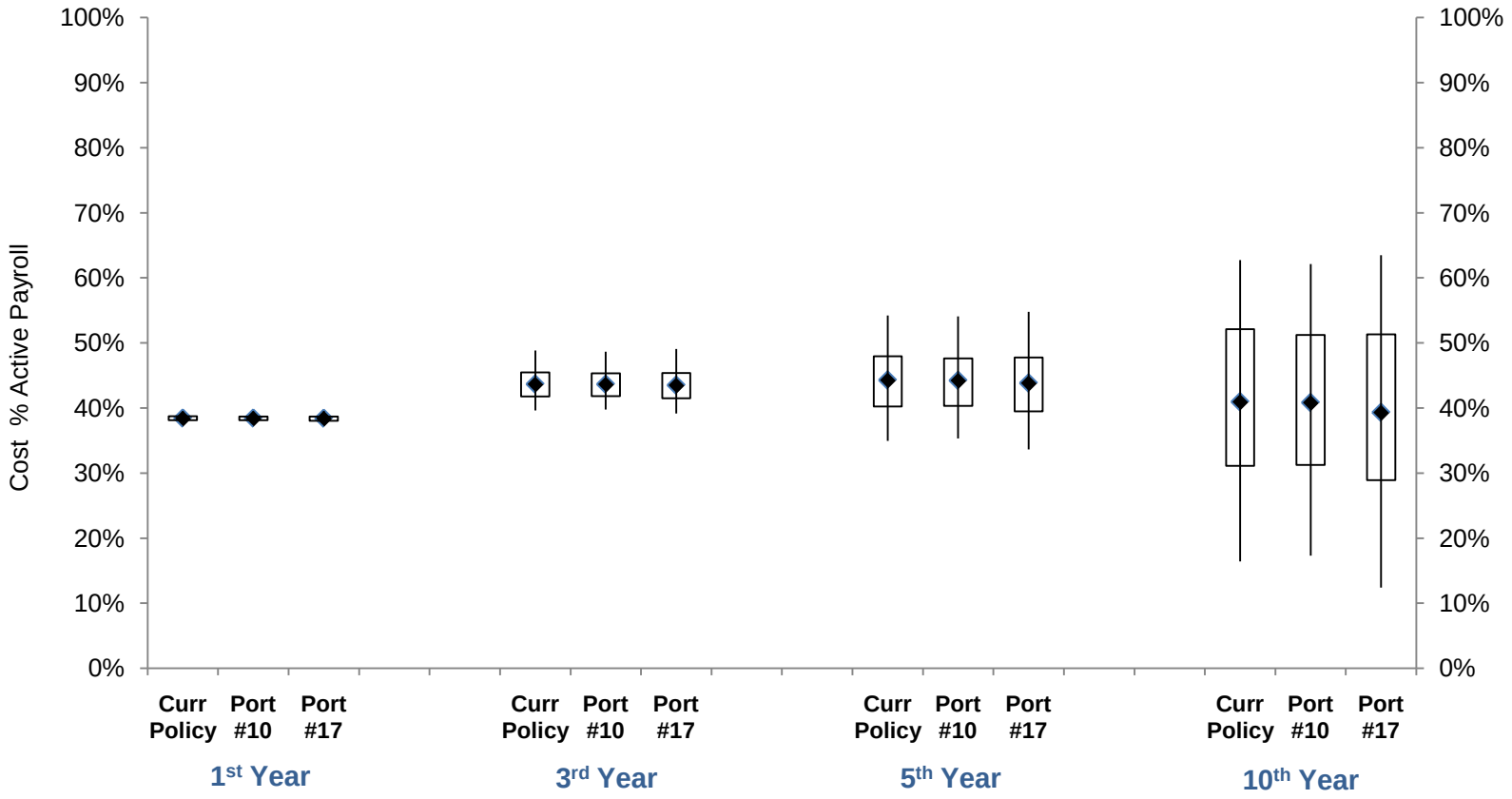
- As with Funding Ratio, Portfolio #17 a slightly most aggressive portfolio and has a marginally larger upside impact on cost in the longer term

- **Issue to consider:**
  - Asset allocation will not have a large impact on costs over the next decade

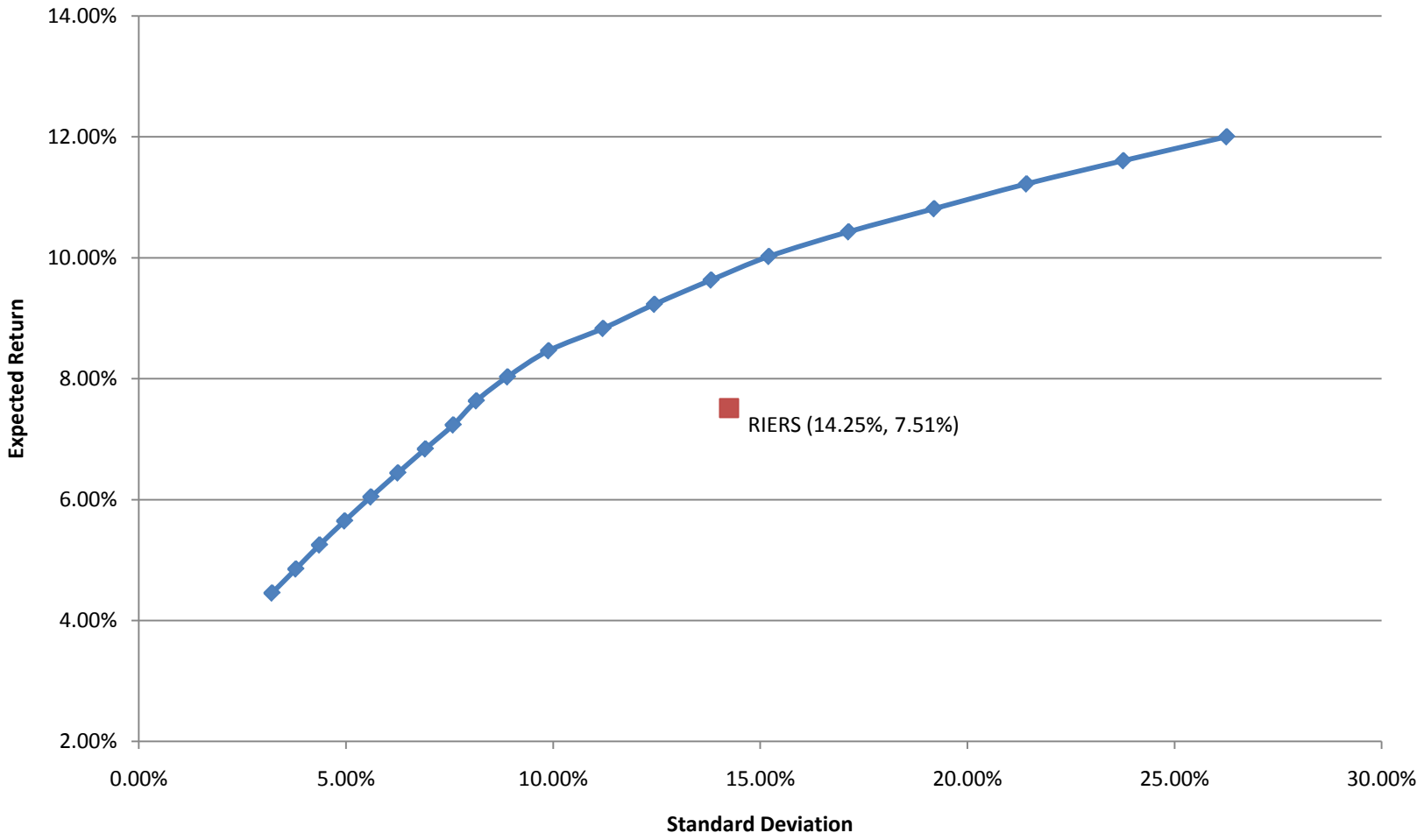
Asset Allocation Impact on Cost as % Active Payroll

		Highest			Lowest	
	Portfolio	**5th Pct**	**25th Pct**	**Average**	**75th Pct**	**95th Pct**
1st Year	*Current Policy*	*38%*	*38%*	*38%*	*39%*	*40%*
	Port #10	38%	38%	38%	39%	39%
	Port #17	38%	38%	38%	39%	40%
3rd Year	*Current Policy*	*40%*	*42%*	*44%*	*45%*	*49%*
	Port #10	40%	42%	44%	45%	49%
	Port #17	39%	41%	44%	45%	49%
5th Year	*Current Policy*	*35%*	*40%*	*44%*	*48%*	*54%*
	Port #10	35%	40%	44%	48%	54%
	Port #17	34%	39%	44%	48%	55%
10th Year	*Current Policy*	*16%*	*31%*	*41%*	*52%*	*63%*
	Port #10	17%	31%	41%	51%	62%
	Port #17	12%	29%	39%	51%	63%

Asset Allocation Impact on Cost as % Active Payroll



Efficient Portfolios – Unconstrained



Initial Output Efficient Frontier Portfolios – Unconstrained

Efficient Portfolio	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	RI
																					Current
Asset Mix																					
Cash	58%	45%	38%	31%	24%	16%	9%	2%	1%	1%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	2%
Fixed Income	12%	19%	16%	14%	11%	9%	6%	3%	2%	1%	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	22%
Real Estate	10%	14%	17%	19%	22%	25%	27%	30%	37%	45%	53%	71%	68%	48%	53%	44%	34%	23%	12%	0%	5%
Real Return	17%	17%	24%	31%	38%	45%	52%	59%	51%	42%	32%	12%	5%	14%	4%	2%	0%	0%	0%	0%	10%
Global Equity	0%	1%	1%	1%	1%	1%	1%	1%	1%	0%	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	54%
Private Equity	3%	4%	4%	4%	4%	4%	5%	5%	8%	11%	15%	15%	23%	38%	43%	54%	65%	77%	88%	100%	7%
Global Statistics																					
Expected Return	4.45%	4.85%	5.25%	5.65%	6.04%	6.44%	6.84%	7.23%	7.63%	8.03%	8.46%	8.83%	9.23%	9.63%	10.02%	10.43%	10.81%	11.22%	11.60%	12.00%	7.51%
Standard Deviation	3.21%	3.79%	4.36%	4.96%	5.60%	6.25%	6.91%	7.58%	8.14%	8.90%	9.89%	11.20%	12.44%	13.81%	15.20%	17.13%	19.19%	21.42%	23.76%	26.26%	14.25%
Exp ROR Geo	4.40%	4.78%	5.16%	5.53%	5.90%	6.26%	6.61%	6.97%	7.32%	7.66%	8.01%	8.25%	8.52%	8.76%	8.96%	9.09%	9.14%	9.14%	9.05%	8.88%	6.57%

PCA Policy Recommendation

- Low funding levels and plan demographics will have a large influence on funding costs over the next decade
- Portfolio return will have a smaller impact on costs

<u>Recommendation:</u>

- Adopt Portfolio #10
  - Portfolio #10 has similar impact on funding levels and costs as the Current Policy Portfolio, and
  - Is marginally more diversified with a similar expected return as the Current Policy Portfolio

PCA Policy Portfolio Recommendation

Efficient Portfolio	Portfolio # 10		Rhode Island		Change vs.
			Current Policy		Current Policy
Asset Mix					
Cash	**3%**		**2%**		**1%**
Fixed Income	**20%**		**22%**		**-2%**
Real Estate	**8%**		**5%**		**3%**
Real Return	**11%**		**10%**		**1%**
Global Equity	**51%**		**54%**		**-3%**
Private Equity	**7%**		**7%**		**0%**
Global Statistics					
Expected Return	**7.54%**		**7.51%**		
Standard Deviation	**13.74%**		**14.25%**		
Downside Deviation	**1.30%**		**1.49%**		
ExpectedROR Geometric	**6.66%**		**6.57%**		

Next Steps

- Investment Policy documentation

- Implementation Plan including,
  - Asset Class Rebalancing Ranges

APPENDIX

Asset Liability Model Notes

PCA 2011 Capital Market Assumptions

	Expected Avg. Nominal Annual Return	Expected Geo. Compound Nominal Annual Return	Expected Risk of Nominal Returns (Annl. SD)
Cash	3.00	3.00	2.00
Treasury Infl. Protected Securities	3.75	3.60	6.00
Domestic US Fixed Income	3.30	3.20	4.50
International Fixed Income	3.30	2.80	10.00
Global Fixed Income	3.30	3.00	8.00
Core Real Estate	7.00	6.50	10.00
Real Return	6.50	6.20	8.00
Domestic Equity	8.75	7.30	17.00
International Equity	9.00	7.00	20.00
Global Equity	8.90	7.40	17.50
Hedged International Equity	8.90	7.10	19.00
Private Equity/Venture Capital	12.00	8.90	25.00
Inflation	2.75	2.75	2.00

Asset Class Model Constraints - Update

Modeled Class	Current Policy	Min.	Max.
Cash	2.0%	3%	3%
Fixed Income	22.0%	15%	30%
Real Estate	5.0%	3%	8%
Real Return	10.0%	5%	15%
Global Equity	53 .5%	35%	60%
Private Equity	7.5%	5%	8%

- Cash: Max 3%
- Real Return: MAX raised to 15%
- Private Equity: MAX lowered to 8%
- Global Equity: Added

Summary of Findings: Plan Liabilities (May Meeting)

- Demographic maturity
  - Significant number of older, longer service members relative to other plans
  - Inactive funded ratio is nearly 70% now, about 20% higher than other plans
  - Limits flexibility in adjusting benefits, costs
  - Assets backing inactive members about 2/3 of total assets, when fully funded
  - Variation in inactive assets can only be funded over active payroll; inactive asset risk pushed onto actives (GM effect)
- Level of employer cost
  - Employer cost is increasing
  - Employer cost around 44% of pay for next 10+ years with current benefits
- Variability of employer cost
  - Lots of variability in plan cost
  - Variability is increasing as the plan becomes better funded
  - Upper quartile of employer cost is over 50% in 10 years
  - Some simulation trials exceed 70%
- Changing risk profile of ERS
  - As funding improves, variability ratio will increase
  - Sensitivity of employer cost to market variation will probably double
  - Downsizing/outsourcing will make the situation worse, reducing active payroll
- Risk/reward tradeoff
  - Asset mixes with an array of risk profiles are available
    - Cost stability comes at the expense of return and employer cost

Risk / Reward Tradeoff

Level of Contributions:

- How much will it cost to fund the pension obligations?
  - Function of Current funding level
    - Low current funding level = high contributions
      - In addition to normal cost, unfunded liability must be paid down
    - High current funding level = low contributions
      - Only normal cost, and small unfunded liability to be paid down
  - Function of Investment returns
    - higher investment returns = lower contributions
    - lower investment returns = higher contributions
- Benefit payments come from only two sources contributions or investment earnings

Risk / Reward Tradeoff

Volatility of Contributions:

- How stable will the contributions be over time?
  - Function of Current funding level
    - Low current funding level = Stable contributions
      - Contributions are stable, but at high levels
    - High current funding level = Variable contributions
      - Contributions are variable, but at low level
  - Function of Investment returns
    - Higher investment returns = Variable contributions
      - Higher investment returns are more volatile, therefore contributions are more variable, but at lower level
    - Lower investment returns = Stable contributions
      - Lower investment returns are less volatile, therefore contributions are less variable, but at higher levels

Variability Ratio

- Variability Ratio is the ratio of plan assets to active member payroll
  - Measures the effect of variations in investment return on plan cost
  - The more assets relative to payroll, the more plan cost is influenced by investment returns
  - Typical ratios: 5 for general service, 10 for public safety
- Example

	Assets = 3 X Pay	Assets = 6 X Pay
Return	-2.5%	-2.5%
Investment Loss	10%	10%
Investment Loss as Percent of Member Pay	30%	60%
Estimated Impact on Employer Contribution (10 Years)	3%	6%

ROLE OF FIXED INCOME

Role of Fixed Income

Fixed Income- Traditional Roles

- Diversification
  - Low correlation w/ Equity – 60%+ of the total fund
  - Reduces total fund return volatility
  - Protects in market meltdown
- Income
  - Coupon return (Yield) is a large component of Fixed Income return
- Return-orientated
  - Source of additional portfolio return
  - Primarily credit risk
- Liability-orientated
  - Match up with plan liabilities

- All are legitimate Roles for Fixed Income

Role of Fixed Income

How did we get here?

- Fixed Income yields have experienced a secular decline for the past 20+ years with a corresponding reduction in expected return
- Institutional investors have sought to keep yields up by increasing investment in riskier – higher yielding strategies
- Investment managers compete on returns, adding to the proliferation of Core-plus strategies
- Institutional Investors' Fixed Income portfolios' became less core-like while the allocation to Fixed Income also declined – thus providing even less protection to the portfolio
- Manager guideline changes have been skewed to adding return not reducing risk
- 2008 challenged the appropriateness of this trend

Role of Fixed Income

Fixed Income Management Styles:

- Core Portfolio
  - U.S. Treasury obligations
  - Govt-sponsored mortgage-backed obligations
  - High quality Corporate obligations

- Core Plus Portfolio
  - Core portfolio, plus
  - High Yield Bonds – low quality
  - CLOs, Structured products
  - Private mortgages
  - Levered loans
  - Emerging Markets

Role of Fixed Income

Risk Management:

- Determining the Role of Fixed Income (or any asset class) is a risk management exercise
  - Individual asset classes should not be managed as silos
  - If each asset class is managed to maximize expected return of that asset class there will likely be little or no portfolio protection in a down market
- Institutional Investors spend lots of time, effort and expense to find diversifying assets to equity (growth) assets - .i.e. Hedge funds, timber, real assets, etc.
  - Core Fixed Income can fill that requirement fairly efficiently – if dull and unexciting
- What is the role of Fixed Income?
  - Reasonable people can disagree on the role Fixed Income should play
  - When role is determined structure Fixed Income portfolio to match the role
  - Manager guidelines should be consistent with the role
- The Opportunistic Portfolio allocation is available for selective value added investments

Role of Fixed Income

Fixed Income Management Styles:

	Core	Core-Plus
Returns (long-run)	Lower	Higher
Risk (Volatility)	Lower	Higher
Income (Yield)	Lower	Higher
Correlation w/ Equity	Lower	Higher – very high in a crisis
Advantage	Can't get too risky You know what you have	Higher expected ROR in long-run More opportunity to add alpha
Disadvantage	Lower expected ROR	Can get risky at the wrong time Possible negative surprise

ROLE OF REAL ESTATE

Role of Real Estate

Real Estate - Traditional Roles:

- Diversification
  - Low correlation w/ Equity – 60%+ of the total fund
  - Reduces total fund return volatility
- Income
  - Income (Yield) can be a large component of Real Estate return
- Return-orientated
  - Value Added Real Estate
  - Opportunistic Real Estate
- Inflation Protection
- All are legitimate Roles for Real Estate

Role of Real Estate

How did we get here?

- Real Estate cap rates have experienced a secular decline with a corresponding reduction in expected returns (in 2010 and 2011)
- Institutional investors have sought to keep returns up by increasing investment in riskier strategies
  - Traditional Core strategies fell out of favor from 2005-2009
  - Many Core strategies stretched to add return from 2005-2009
- Greater use of leverage to boost returns in a low cap rate environment
- Investment managers compete on returns, adding to the proliferation of Value-added and Opportunistic products
- 2008 challenged the appropriateness of this trend when institutional investors found that their opportunistic real estate resembled a Private Equity portfolio

Role of Real Estate

Real Estate – Styles of Management:

- **Core Real Estate**
  - Fully leased
  - Stable tenant base
  - Modest leverage
  - Income is large portion of expected return

- **Value-added and Opportunistic Real Estate**
  - May be partially leased
  - Changeable tenant base
  - Higher leverage
  - Vintage/concentration risk
  - Price appreciation is large portion of expected return

Role of Real Estate

Real Estate Management Styles:

	Core	**Val Added and Opportunistic**
Returns (long-run)	Lower	Higher
Risk (Volatility)	Lower	Higher
Income (Yield)	Higher	Lower
Leverage	Lower	Higher
Correlation w/ Equity	Lower	Higher – high in a crisis
Advantage	Fairly predictable Low Equity correlation	Higher expected ROR in L-R More opportunity to add alpha
Disadvantage	Lower expected ROR	Can get risky at the wrong time Possible negative surprise

Role of Real Estate

Risk Management:

- Determining the Role of Real Estate (or any asset) is a risk management exercise
- Reasonable people can disagree on the role Real Estate should play
- The risk characteristics of the fund's other assets should substantially determine the role of real estate
  - Avoid managing in a silo
- When role is determined structure Real Estate portfolio to match the role
  - Macro risks such as the economy, capital markets, local supply/demand, occupancy
- Institutional Investors spend lots of time, effort and expense to find diversifying assets to equity (growth) assets - .i.e. Hedge funds, timber, real assets, etc.
  - Core Real Estate can fill that requirement fairly efficiently – if dull and unexciting