Interest Rate Actuarial Assumption Change
Discussion Points

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Background

- Interest rate assumption should be a long term (30-50 year) assumption, not short term focused.
- Recent economic analysis provided by SBI focuses mainly on the next 10 years. Those shorter-term projections tend to be pessimistic, reflecting recent adverse experience.
- Long-term historical rates of return:
    - SBI: 8.8% annually for past 20 years, 8.9% for past 25 years and 10.1% since 1980
    - DTRFA: 8.4% annually for past 20 years and 8.6% for past 25 years
- Interest assumption should not be changed in isolation. Should examine full set of assumptions (including inflation, salary and payroll growth) as part of the experience study process.
- Interest assumption is important and has significant financial impacts on the retirement systems. There is a need to understand those financial implications before acting and develop a plan to address the financial impacts through contribution or benefit changes.

Financial Impact of 8% Investment Assumption

	MSRS	PERA	TRA	DTRFA
Projected liabilities	Increase by $600 million	Increase by $1 billion	Increase by $1.3 billion	Increase by $14 million
Funded ratio	Decreases by 5% (from 87% to 82%)	Decreases by 4% (from 76% to 72%)	Decreases by 4% (from 78% to 73.5%)	Decreases by 3% (from 73% to 70%)
Sufficiency/ (Deficiency)*	(1.0%) deficiency rises to (3.1%) deficiency	1.0% sufficiency becomes (0.8%) deficiency	(0.4%) deficiency rises to (3.2%) deficiency	(2.7%) deficiency rises to (4.6%) deficiency

* Includes future contribution increases scheduled in law.

Alternative Select & Ultimate Approach

- Select and ultimate approach would use a lower rate during a select period and then revert to the higher rate after the select period.
- MN public pension funds already use select & ultimate for several other assumptions: salary increases, withdrawal rates, retirement age.
- Advantages of this approach are:
    - Allows recognition that rate of return expectations are lower in the near term. Reflects current market pessimism for short-term, retains historical market returns for longer-term.
    - Recognizes data provided by actuaries showing that rolling 30-year compound returns for a portfolio of 80% S&P500 and 20% corporate bonds in last 54 years have been above 8.5% in all years except for two, in 1957 and 1958.
    - Provides time to evaluate whether there is sufficient evidence that there have been fundamental structural changes in the economic markets that require a lower long term rate
    - Takes a more incremental approach that will require a continual review of the assumption and evaluation of market conditions
- Prepared actuarial analysis of 8.25% for 10 years and 8.5% thereafter (see next page)

<u>TRA Board Position</u>: Maintain interest assumption at 8.5% as long-term assumption

<u>DTRFA Board Position</u>: Evaluate interest assumption after conducting experience study that examines all assumptions

Actuarial Analysis
Select and Ultimate Option: 8.25% for 10 years, 8.5% thereafter

TRA actuarial estimates

(July 1, 2011 Estimated Valuation Results)

	8.5% Return (current assumption)	8.0% Return (for all years)	Select/Ultimate 8.25% for 10 Yrs, 8.5% thereafter
Actuarial Accrued Liability	$ 22.0 billion	$23.3 billion	$22.3 billion
Unfunded Liability	$4.8 billion	$6.2 billion	$5.2 billion
Funded Ratio	77.9%	73.5%	76.7%
Contribution Surplus (Deficiency)*	(0.4%) of pay	(3.2%) of pay	(1.1%) of pay
		Adds 2.8% of pay to costs	Adds 0.7% of pay to costs

Source: Cavanaugh Macdonald estimates for TRA, letters dated 9/7/2011 and 11/2/2011

* Includes future contribution increases scheduled in law (3% additional through 2014).

DTRFA Actuarial Estimates

(Based on July 1, 2011 Valuation Results)

	8.5% Return (current assumption)	8.0% Return (for all years)	Select/Ultimate 8.25% for 10 Yrs, 8.5% thereafter
Actuarial Accrued Liability	$ 321.1 million	$335.1 million	$326.0 million
Unfunded Liability	$86.0 million	$100.0 million	$90.9 million
Funded Ratio	73.2%	70.2%	72.1%
Contribution Surplus (Deficiency)*	(2.7%) of pay	(4.6%) of pay	(3.3%) of pay
		Adds 1.9% of pay to costs	Adds 0.6% of pay to costs

Source: The Segal Company, November 2011

* Includes future contribution increases scheduled in law (1% additional through 2012).