Florida Retirement System
Actuarial Assumption Estimating Conference
Executive Summary for October 2, 2013

The Florida Retirement System Actuarial Assumption Conference met on October 2, 2013, and retained the assumptions used in prior years for the actuarial valuation of Florida's Retirement System (FRS). The preliminary results show that the FRS continues to have an unfunded actuarial liability (UAL). As updated, the projected UAL has moderately increased from last year's $19.3 billion (as finally reported in the December 2013 Actuarial Valuation) to $21.0 billion. Currently, the system is 86.2% funded on an actuarial basis.

This is the fifth consecutive year that the FRS was not in a surplus position. While asset performance was favorable in both the 2009-10 and 2010-11 fiscal years, Fiscal Year 2011-12 had asset performance well below the desired return (0.22% versus 7.75%). For Fiscal Year 2012-13, asset performance was strong at 13.1%.

The 2013 Legislature fully funded the UAL at the recommended contribution rate as provided in the 2012 valuation report. This action and continued full funding of the recommended UAL rate, as committed to by the Legislature, will result in the gradual increase of the funded ratio in future years. The UAL contribution rate is calculated assuming the liability will be funded over a period of 30 years. The contribution rates should remain stable as long as contributions are made as recommended and actual experience mirrors projections. However, there are many factors that affect these calculations and can cause the contribution rates to increase or decrease over time.

The preliminary report addressed information received through July 1, 2013. The final report will be based on these assumptions and released in December 2013.

KEY ECONOMIC ASSUMPTIONS
Used in 2009, 2010, 2011, 2012 and 2013 Actuarial Valuations

	2009	2010	2011	2012	2013
• Investment Earnings	7.75%*	Same	Same	Same	Same
• General Wage Increase	4.00%**	Same	Same	Same	Same
• Post-Retirement Benefit Increase	3.00%	Same	Same	Same	Same
• Growth in Membership	0.00%	Same	Same	Same	Same

*Includes a 3.0% inflation assumption.
**Inflation and additional salary increases due to promotions and longevity.

Florida Retirement System

The Actuarial Assumption Estimating Conference
Including Preliminary July 1, 2013 Actuarial Valuation Results

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October 2, 2013

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Overview

- Introduction & Guiding Objectives
- Projected Benefit Payments
- Normal Cost, Actuarial Liability & Funded Status
- Actuarial Liability & Asset Projection
- Contribution Rates
- Other Items
  - DROP rates, IP plan elections, upcoming experience study, new GASB statements

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Introduction

- Today, we are presenting preliminary results of our July 1, 2013 actuarial valuation to assist policymakers in:
  - Setting contribution rates for July 2014 – June 2015
  - Assessing funded status for the defined benefit program
- Except for certain statutory constraints, policymakers have leeway in setting contribution rate policy
  - The key components of a contribution rate policy are:
    - Assumptions (especially long-term investment return)
    - Cost allocation method
    - Amortization method
    - Asset measurement method

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Guiding Objectives

- Given the inherent flexibility in setting contribution rate policy, guiding objectives can be useful in evaluating both current policy and possible policy alternatives
- Some of the objectives can compete with each other, particularly in periods with significant investment return volatility
- Overall system funding policies should seek an appropriate balance between competing objectives

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Commonly Used Guiding Objectives

- Protection of funded status
- Contribution rate stability
- Contribution rate predictability
- Intergenerational equity
- Transparency and understandability
- Actuarial soundness

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Basis of Preliminary 2013 Valuation Results

- While a wide variety of potential approaches could be used, the preliminary results discussed today were prepared with the methods and assumptions used in the 2012 valuation
  - The methods were endorsed at previous assumption estimating conferences
  - The assumptions, except where modified in response to legislated benefit provision changes, were established concurrent with the most recent actuarial experience study which reviewed system experience from 2003 – 2008
- Our presentation will highlight key assumptions and methods
  - We can discuss alternatives and/or flag certain items for detailed review

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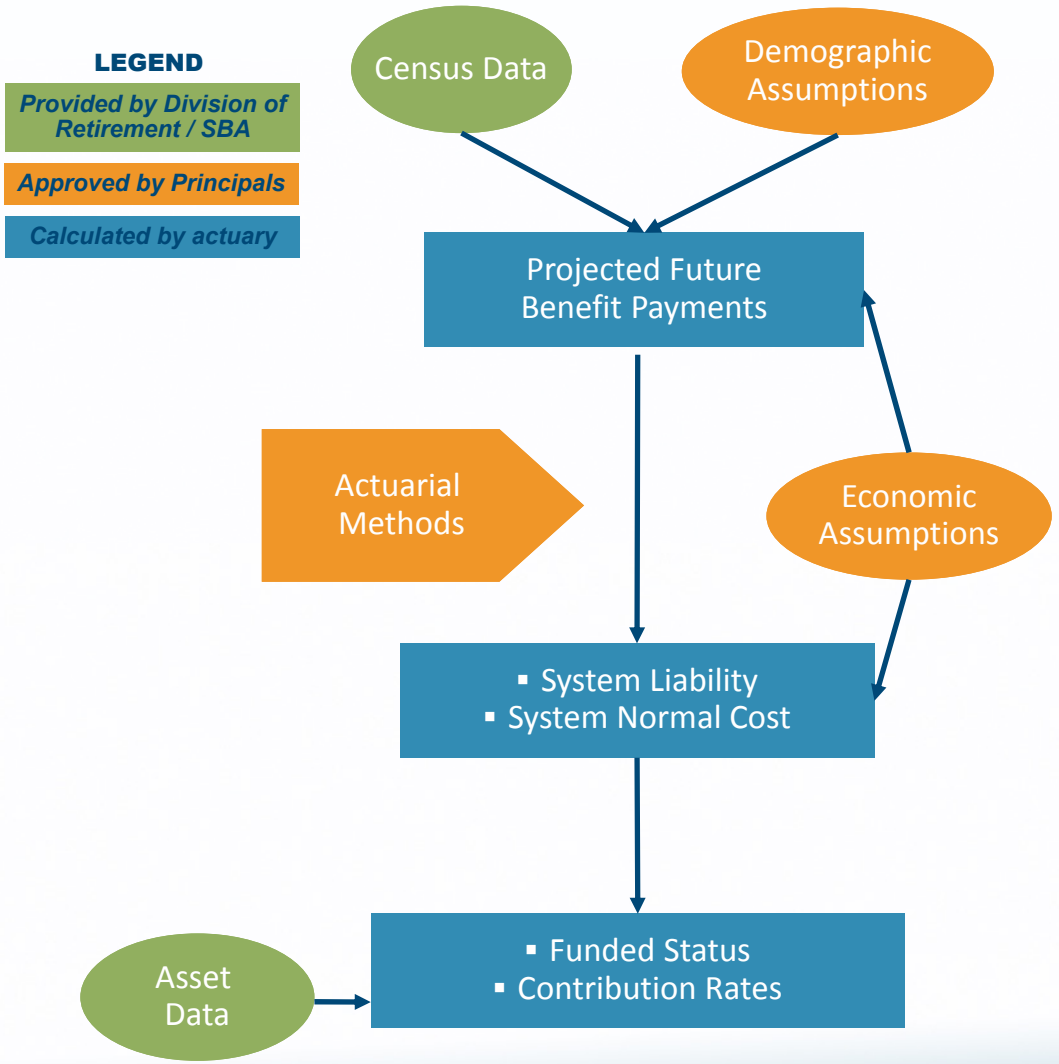
Valuation Process

- This graphic illustrates the valuation process
- Demographic and certain economic assumptions affect projected future benefit payments
- Methods and other economic assumptions affect contribution rate calculations and funded status



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Projected Benefit Payments

- Projected benefit payments are developed using:
  - Census data provided by Division of Retirement
  - Demographic assumptions
    - Mortality
    - Timing of retirement / entry into DROP
    - Likelihood of termination of employment prior to unreduced benefit
    - Incidence of disability
  - Annual salary increase assumption for individual members

Census data is provided annually

Assumptions listed above are typically set every five years as part of the actuarial experience study

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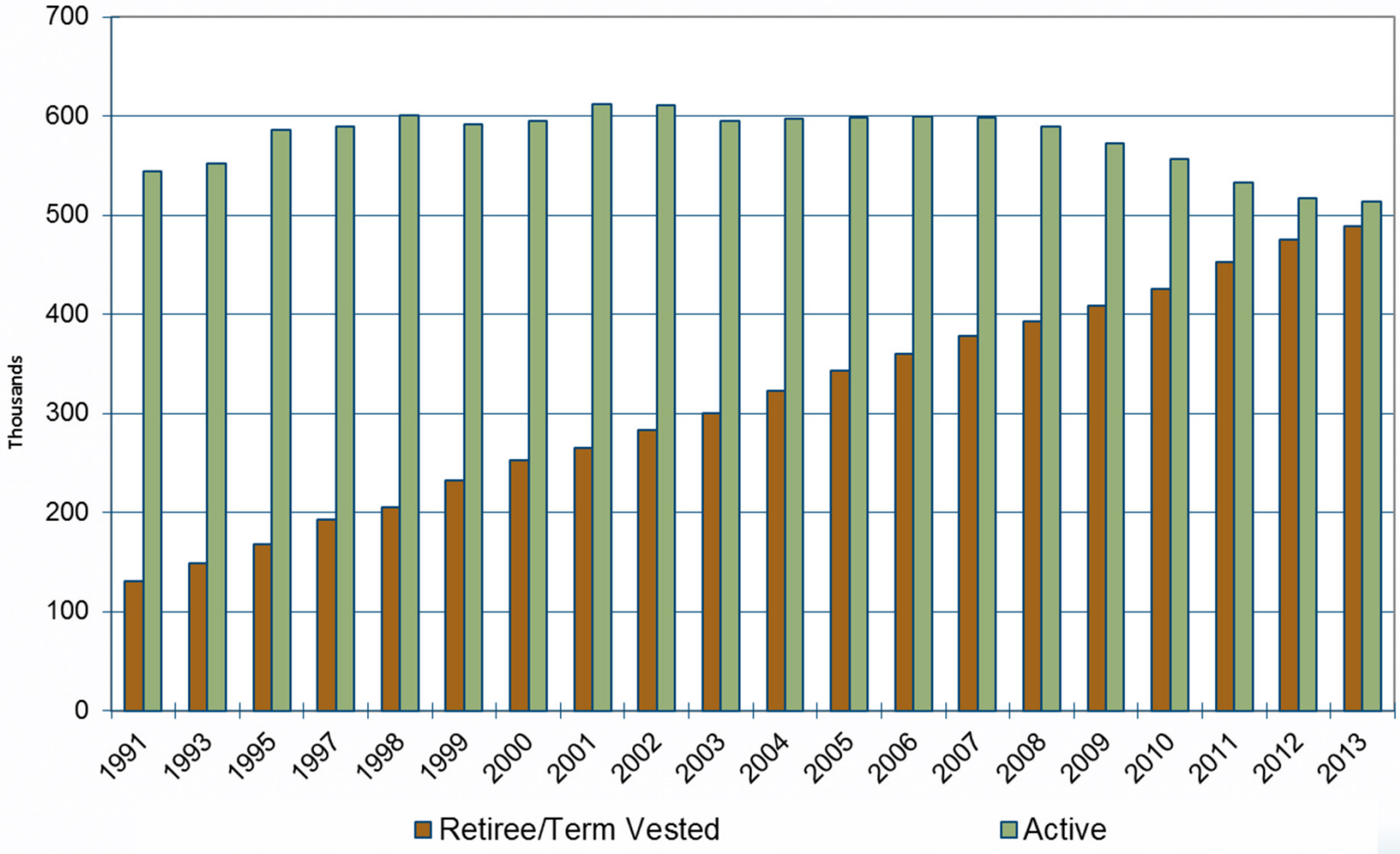
Membership



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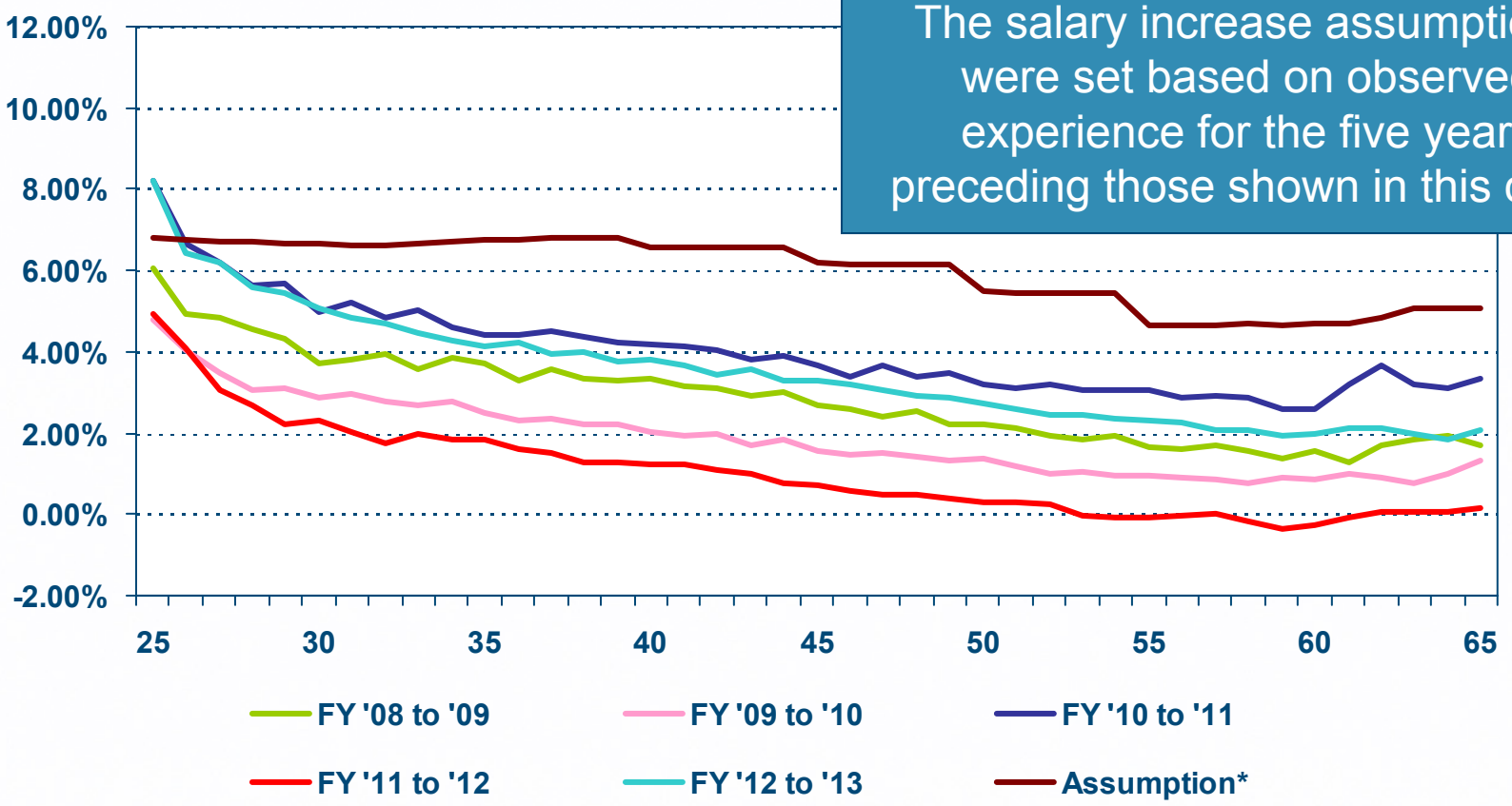
Actual Salary Experience vs. Assumption
(All actives – last five years)



The salary increase assumptions were set based on observed experience for the five years preceding those shown in this chart

***Plotted against compressed salary scale assumption first effective with the July 1, 2009 valuation. Salary scale assumptions vary by age and service; single line developed based on actual age and service of exposures during 2003-2008 experience period.**

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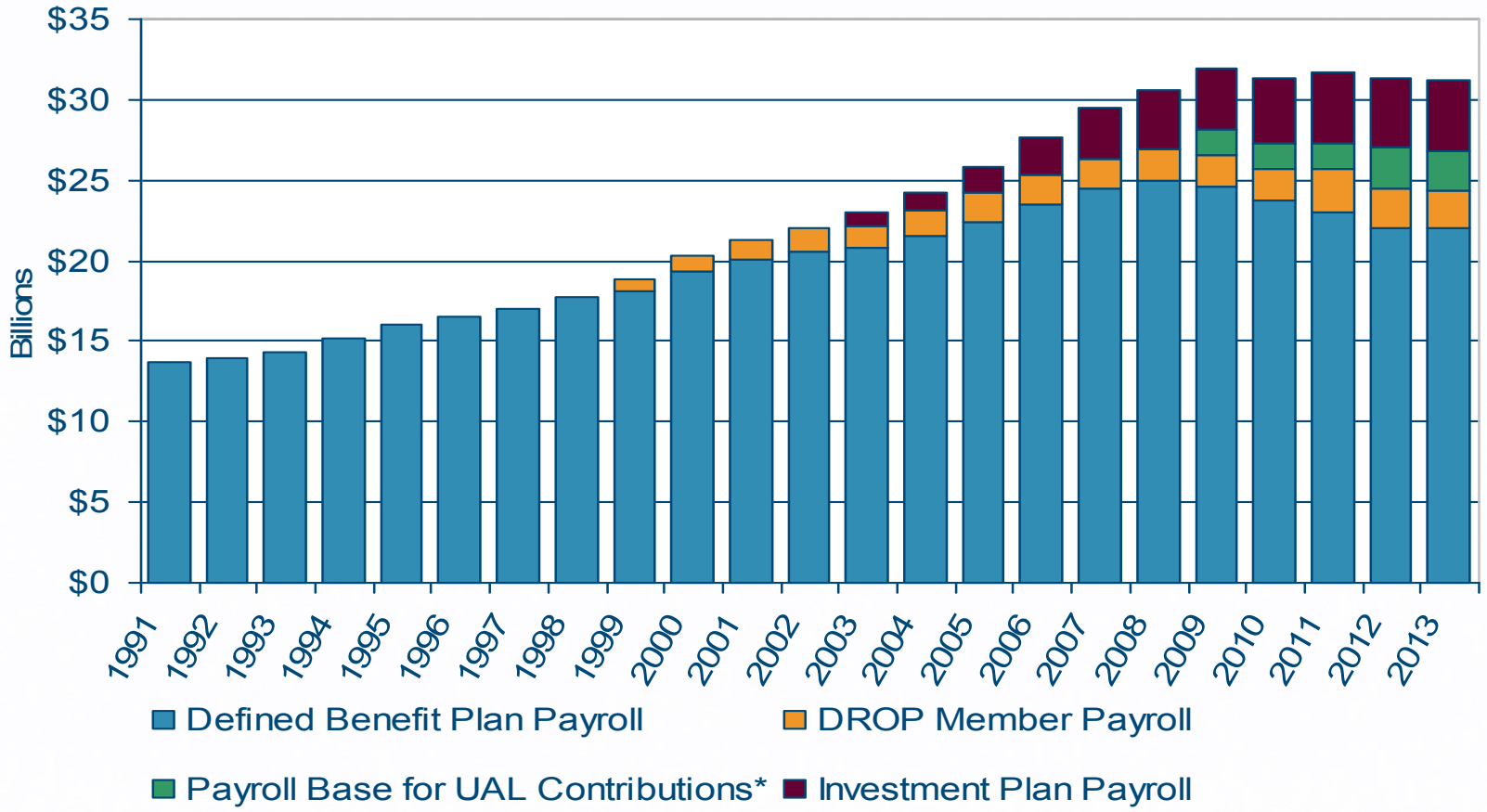
Florida Retirement System Payroll



*Includes payroll for participants in certain non-FRS defined contribution plans upon which UAL rate contributions to the FRS are made.

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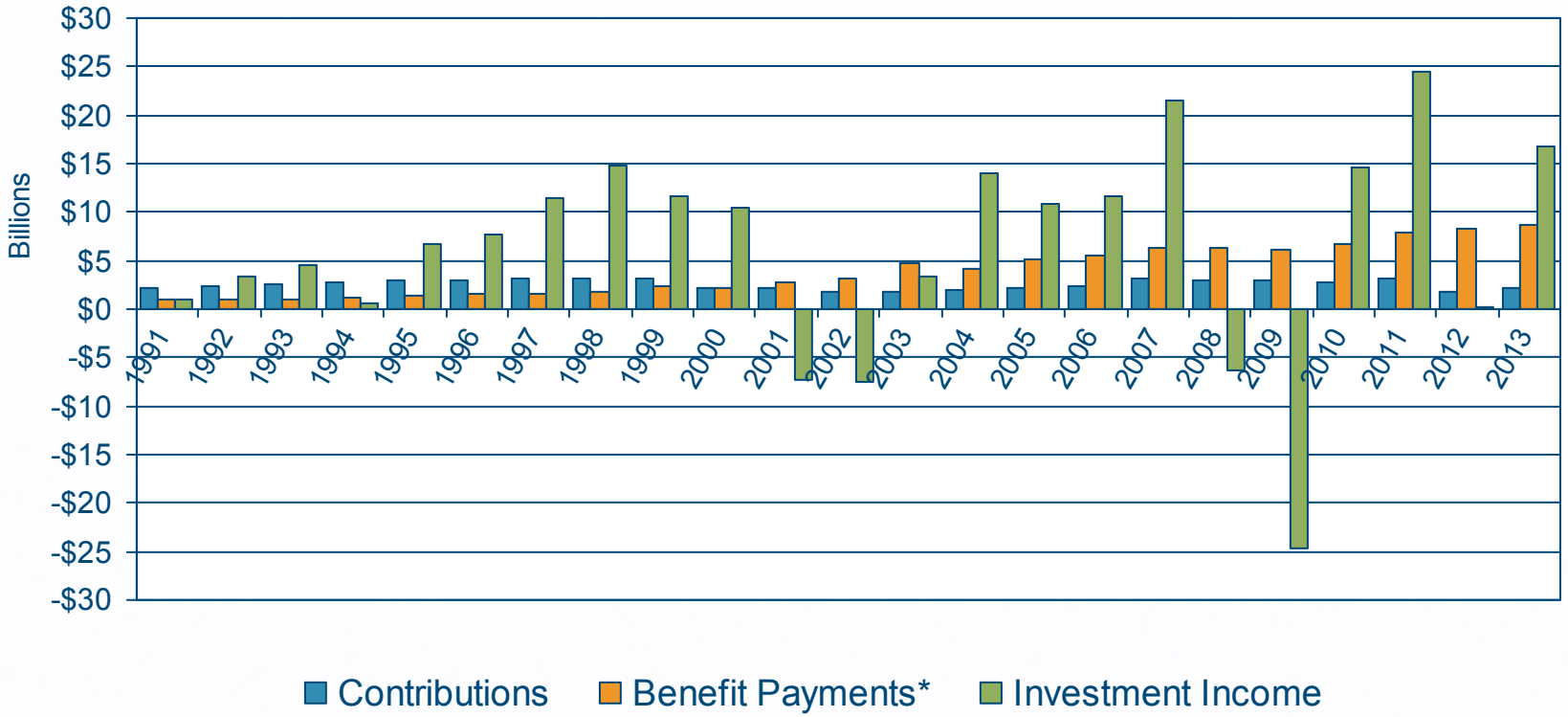
Plan Cash Flows



* Includes transfers to IP; Initial transfers in 2003 were $353 Million.

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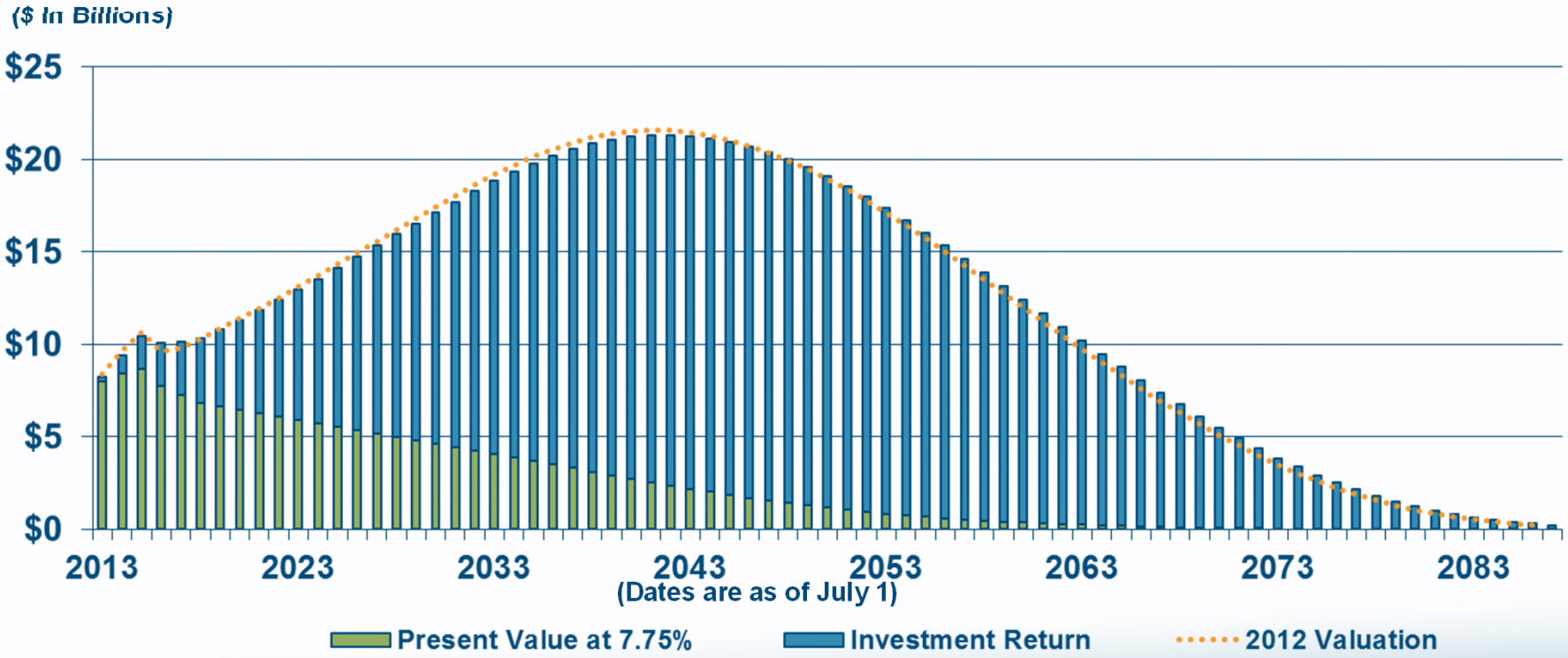
Projected Benefit Payments – 2013 Valuation

The chart represents the effect of the time-value of money on promised benefit payments to current and former members (no future hires). In each year, the total bar is equal to expected benefit payments (exclusive of transfers to the Investment Plan). The green portion represents each year's benefit payments, discounted at 7.75% to July 1, 2013 (ie., the value of benefit payments in "today's dollars.") The blue portion of each bar represents the difference in dollars between the total value to be paid that year less the value in today's dollars.



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System Liability – Assumptions & Methods

- We discount projected future benefit payments back to July 2013 to establish a net present value in today's dollars
  - A key assumption is the long-term **investment return assumption** used to discount future benefit dollars to today for budgeting
- The portion of the net present value allocated to:
  - Past service is called the Actuarial Liability
  - Current year service is called the Normal Cost
  - Projected service beyond the current year is in future normal costs
- The past versus current split is set via a **cost allocation method**
- Liabilities are then compared to assets calculated using an **asset measurement method** to assess unfunded actuarial liability (UAL)

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Long-Term Investment Return Assumption

- What level of assets today would be needed to pay projected benefit payments?
- This present day value assessment of liabilities is much more speculative than determining the value of system assets
- When judging the sufficiency of current assets to pay future benefits, the assumption about future investment returns plays a central role
  - The long-duration nature of benefit payments means that liability calculations are very sensitive to the investment return assumption

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Setting the Return Assumption

Given that we do not know what the fund will earn, how should the assumption be set?

- Prudently select a best estimate
- Solicit forecasts from investment professionals
- Recognize that hoping for a result does not make it happen; the assumption does not affect actual investment returns
- Don't be myopic --- the objective is to make a sound long-term estimate, not to get a single individual year right
- Neither ignore historical results nor be 100% beholden to them
- Since actual results will vary from assumption, review a forecast's probability range and consider a margin for variance

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Investment Return 30-Year Forecast

- Forecast is based on current target long-term asset allocation
- We are not credentialed investment advisors, but are presenting results based on market outlook assumptions developed by Milliman's credentialed investment professionals

Percentile	Milliman
25th	5.84%
35th	6.45%
45th	7.00%
50th	**7.26%**
55th	7.53%
65th	8.08%
75th	8.70%

- The Milliman forecast model uses 3.00% inflation and a 0.25% deduction for plan expenses
- The return assumption used in the 2012 valuation and the 2013 preliminary results is **7.75%**
- The recent HEK study indicated a 50th percentile return expectation of approximately **7.00%** using 2.35% inflation

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General Wage Increase Assumption

- For the 2012 and preliminary 2013 valuations, the long-term general wage increase/payroll growth assumption is **4.00%**
- The 4.00% assumption consists of:
  - 3.00% assumption for long-term average general inflation, plus
  - 1.00% assumption for productivity increases
- This assumption was established concurrent with the most recent actuarial experience study which reviewed system experience from 2003 - 2008

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Cost Allocation Method

- The net present value of projected future benefits is calculated by projecting all benefits with assumptions and discounting to present dollars based on the investment return assumption
- The cost allocation method separates the net present value of projected future benefits into three categories:
  - Past service (Actuarial Liability)
  - Current year service (Normal Cost)
  - Projected future service (future normal costs)
- The cost allocation method does not impact this net present value
- Recommended contribution rates =
  - Normal Cost plus amortization of Unfunded Actuarial Liability

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Entry Age Normal Cost Allocation Method

- By far the most commonly used cost allocation method for state systems is Entry Age Normal (EAN)
  - Conceptually, EAN charges a level normal cost rate as a percentage of payroll over a member's full projected working career
- There are different variations of EAN, including:
  - Individual EAN (most commonly used)
  - Ultimate EAN (used by FRS)

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Individual EAN Cost Allocation Method

- The most commonly used allocation method is **Individual EAN**
  - GASB recently mandated its use for financial reporting calculations
  - Its use is not required for contribution rate calculations
- The best way to understand the differences between Individual EAN and the EAN variation used by FRS is development of the normal cost rate for a Tier 1 member
- A Tier 1 member's Individual EAN normal cost rate is the level % of payroll contribution needed during a member's career to fund a Tier 1 level of benefits if experience follows assumptions
  - The bifurcated nature of Tier 1 COLA benefits means that Tier 1 members with the same age at hire but differing years of hire will have different Individual EAN normal cost rates

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Ultimate EAN Cost Allocation Method

- The cost allocation method used by FRS is **Ultimate EAN**
- Ultimate EAN calculates the normal cost rate for all members as if they all participate in the newest, or ultimate, tier
- Our sample Tier 1's Ultimate EAN normal cost rate is the career level % of payroll contribution needed to fund a Tier 2 level of benefits if experience follows assumptions
  - Members with the same age at hire will all have the same normal cost rates under Ultimate EAN regardless of year of hire or tier
- The total projected benefit levels calculated for individual members do reflect tier and year of hire
  - Cost method only affects allocation between past, current & future

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Individual EAN v. Ultimate EAN Comparison

- Individual EAN's normal cost rate is higher than Ultimate EAN's
- Similarly, Individual EAN has a higher present value of all future normal costs than Ultimate EAN
- Because Ultimate EAN allocates less of total projected benefits to future years of service, Individual EAN has a lower Actuarial Liability than Ultimate EAN
  - Actuarial Liability = (net present value of projected future benefits) minus (costs allocated to future service)
- Even though Ultimate EAN has a higher Actuarial Liability and Unfunded Actuarial Liability (UAL), the amortization of that higher UAL is only a partial offset to the higher normal cost rate of Individual EAN

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Individual EAN v. Ultimate EAN Comparison

	Individual EAN	Ultimate EAN
Calculation of Tier 1 Normal Cost	Reflects career average cost of Tier 1 benefit	Reflects career average cost of Tier 2 benefit
Present Value of Future Normal Costs (PVFNC)	Higher under this method	Lower under this method
Total Present Value of Projected Benefits (PVPB)	**Equivalent regardless of allocation method**	**Equivalent regardless of allocation method**
Actuarial Liability (= PVPB minus PVFNC)	Lower under this method	Higher under this method
System Average Normal Cost	Drifts down over time as Tier 2s replace Tier 1s	Remains level over time

A change to individual EAN allocation would increase Normal Cost and decrease Actuarial Liability, while not affecting projected benefit payment levels

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Normal Cost Rate – Ultimate EAN 2012 & 2013

Employer	2012 VAL (A)	2013 VAL (B)	Change (B) – (A)
FRS Regular	3.53%	3.53%	0.00%
Special Risk			
Regular	10.75%	10.76%	0.01%
Administration	3.76%	3.68%	-0.08%
Elected Officers' Class			
Judicial	9.98%	10.02%	0.04%
Leg-Atty-Cab	6.42%	6.14%	-0.28%
Local	8.30%	8.21%	-0.09%
Senior Management Service	4.77%	4.76%	-0.01%
Composite Rate (without DROP)	4.68%	4.67%	-0.01%
Composite Rate with DROP equals 4.63% in 2012 and 5.26% in 2013	4.68%	4.73%	0.05%

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Normal Cost Rate – Ultimate v. Individual

Individual EAN results are very preliminary

Employer	2013 Valuation Ultimate EAN (A)	Individual EAN (B)	Difference (B) – (A)
FRS Regular	3.53%	5.50%	1.97%
Special Risk			
Regular	10.76%	15.49%	4.73%
Administration	3.68%	10.73%	7.05%
Elected Officers' Class			
Judicial	10.02%	12.33%	2.31%
Leg-Atty-Cab	6.14%	7.38%	1.24%
Local	8.21%	9.94%	1.73%
Senior Management Service	4.76%	6.67%	1.91%
Composite Rate (without DROP)	4.67%	7.05%	2.38%
Composite Rate with DROP equals 5.26% under Ultimate and 6.49% under Individual	4.73%	7.00%	2.27%

The 2.27% higher composite normal cost rate under Individual EAN would be partially offset by a composite UAL rate approximately 1.0% to 1.1% of payroll lower under Individual EAN

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Individual EAN v. Ultimate EAN Comparison

- The differences between Individual EAN and Ultimate EAN can be assessed through the prism of the guiding objectives:
  - Protection of funded status
  - Contribution rate stability
  - Contribution rate predictability
  - Intergenerational equity
  - Transparency and understandability
  - Actuarial soundness
- Contribution rate policies differ significantly in their funding patterns and effects on funded status projections if future experience follows assumptions

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Asset Measurement Method

- Contribution rates established annually based on the reported unfunded actuarial liability (UAL)
  - UAL compares Actuarial Liability against a system asset measure
- The asset measure used by FRS is specified by statute, and employs an "asset smoothing" technique
  - The mandated method annually recognizes 20% of investment return deviations from assumption
  - Five years is the smoothing period most commonly used by state systems
- The statutory calculation approach includes a "corridor" to ensure smoothed assets vary no more than 20% from fair market value

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Asset Smoothing

- Five-year smoothing method recognizes heavy losses gradually following times of unfavorable asset performance
- The smoothing is symmetrical, so that any large investment gains are also not “felt” all at once, but instead serve as a cushion against potential future unfavorable asset performance
- The objective of asset smoothing is to keep long-term contribution levels appropriately linked to actual investment performance, and to have year-to-year contribution rate changes be less volatile and more predictable

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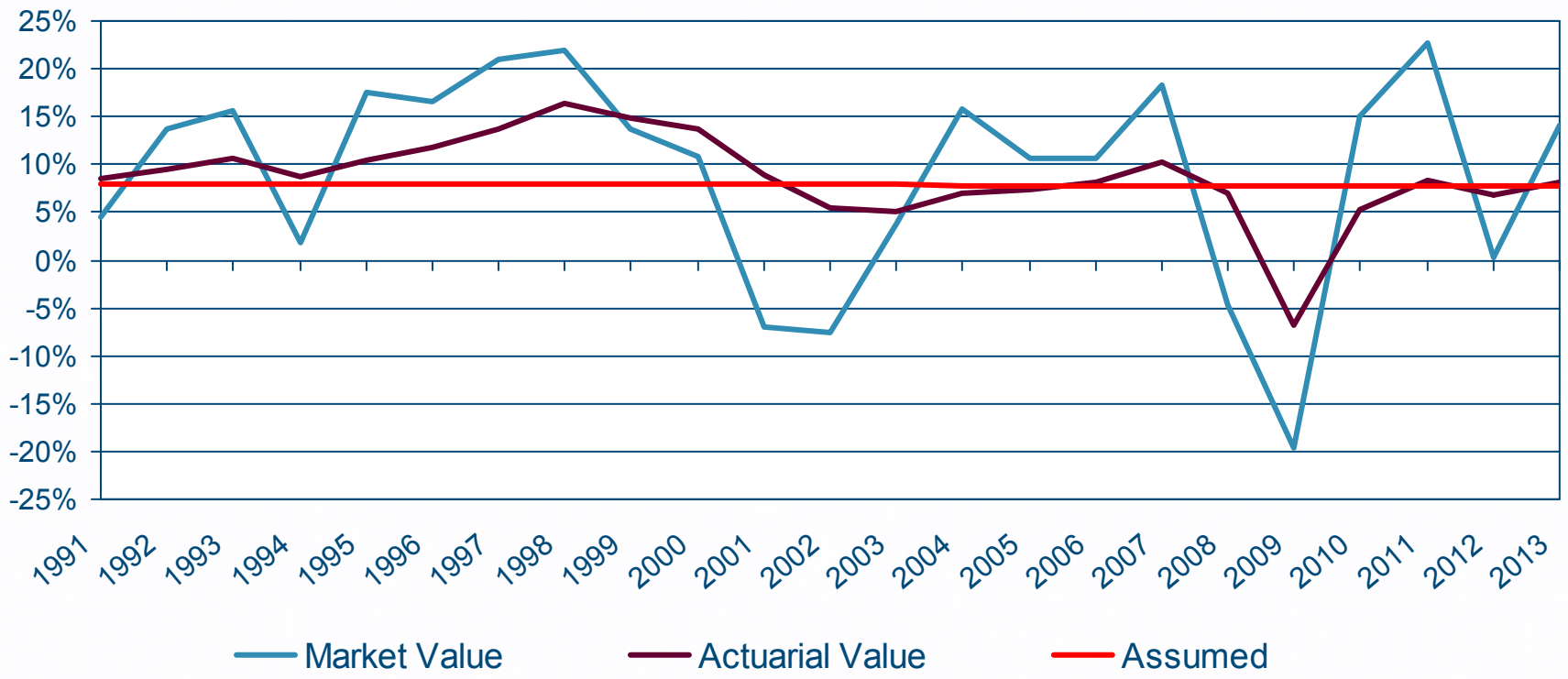
Historic Asset Returns



2012-13 returns were 14.01% on a market basis and 8.09% on an actuarial basis

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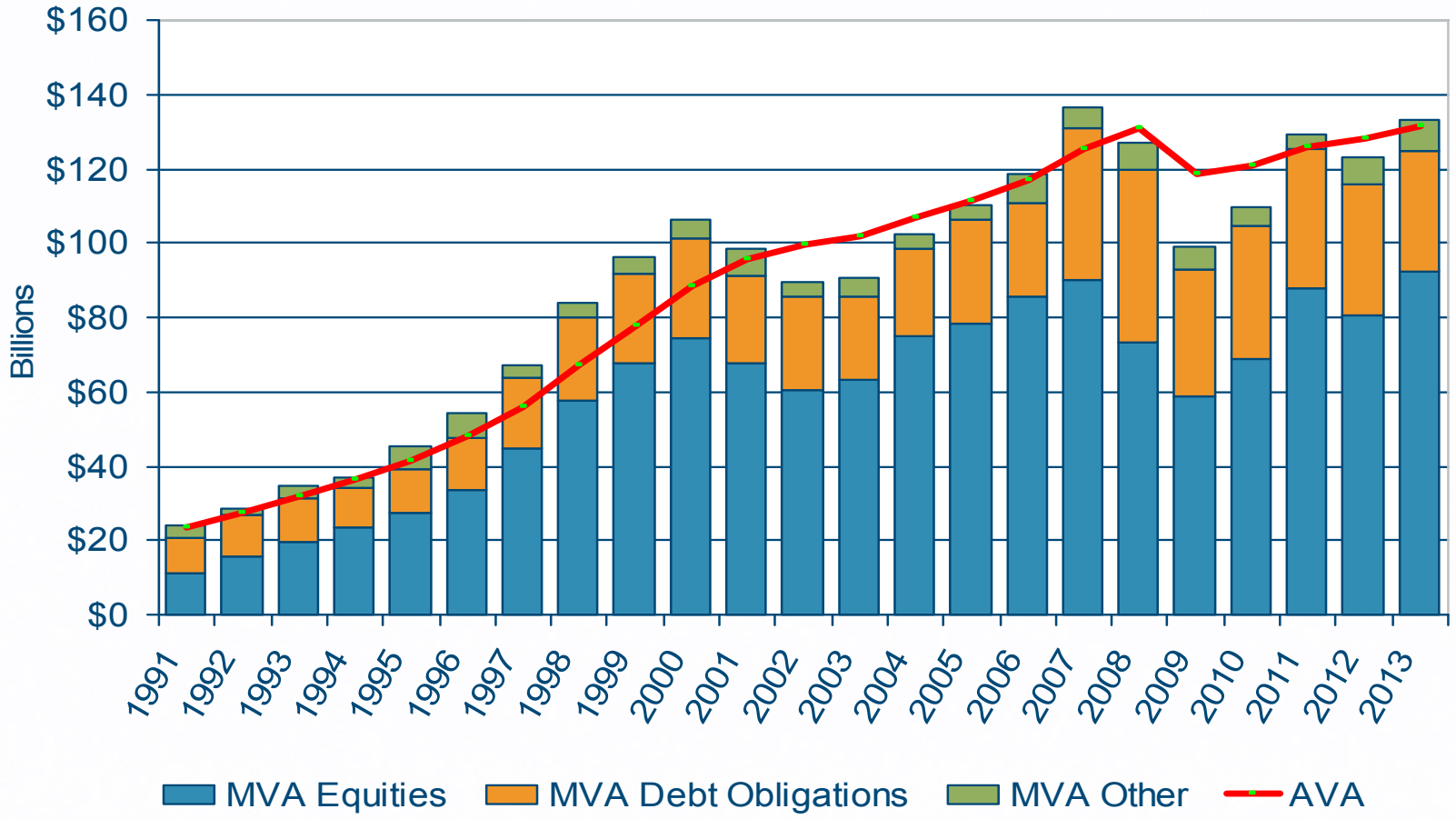
Market & Actuarial Value of Assets



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Assets: MVA vs. AVA ($ in Billions)

Year	MVA	MVA Return	AVA	AVA Return
2004	$ 102.4	15.73%	$ 106.7	6.93%
2005	110.2	10.71	111.5	7.43
2006	118.5	10.65	117.2	8.06
2007	136.7	18.38	125.6	10.16
2008	126.9	-4.65	130.7	6.98
2009	99.0	-19.71	118.8	-6.74
2010	109.5	15.03	120.9	5.30
2011	129.1	22.79	126.1	8.39
2012	122.9	0.21	127.9	6.74
2013	133.0	14.01	131.3	8.09

In 2008 through 2010 the AVA exceeded the MVA, representing the smoothed impact of two years of extremely unfavorable MVA returns. The MVA return in 2010-11 was a very favorable 22.79%, but deferred losses in prior years dampened the impact on the AVA, as did the following year of unfavorable returns. The MVA return in 2012-13 was 14.01%; the AVA return trailed at 8.09% due to deferred losses from 2009 and 2012, however it still exceeded the 7.75% assumed return.

Allocation of Assets

($ Shown in Billions)

		Special Risk		Elected Officers			Senior		Grand Total
	Regular	Reg	Admin	Judicial	Leg-Atty-Cab	Local	Mgmt Service	DROP	
1. Actuarial Liability	$101.5	$26.4	$0.1	$1.1	$0.1	$0.6	$3.7	$18.8	$152.3
2. Unadjusted AVA	89.9	21.3	0.1	0.7	0.1	0.3	2.0	16.9	131.3
3. UAL: (1) – (2)	11.6	5.1	0.0	0.4	0.0	0.3	1.7	1.9	21.0
4. Aggregate Funded Percentage: (2) / (1)									86.2%
5. DROP Assets required to meet Aggregate Funded Percentage								$16.2	
6. Proportion of DROP Liability	0.7153	0.2340	0.0003	0.0147	0.0007	0.0032	0.0318	0.0000	1.0000
7. DROP Assets to be reallocated	$0.4	$0.1	$0.0	$0.0	$0.0	$0.0	$0.1	($0.6)	-
8. Allocated AVA: (2) + (7)	90.3	21.5	0.1	0.7	0.1	0.3	2.1	16.2	131.3
9. Final UAL: (1) – (8)	$11.2	$4.9	$0.0	$0.4	$0.0	$0.3	$1.6	$2.6	$21.0

DROP Assets were allocated from all classes; the allocation is less than $50 Million in classes where line 7 equals $0.0.

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Actuarial Liability/Composite Funding Levels

($ in Billions)

	2012 Val	2013 Val	Percentage Increase
Actuarial Liability	$147.2	$152.3	3.5%
Actuarial Value of Assets	$127.9	$131.3	2.7%
Unfunded Actuarial Liability	$19.3	$21.0	8.8%
% Funded	86.9%	86.2%	

Both asset and liability growth were close to assumed. At last year's conference our projection model forecasted an 86.3% 2013 funded status.

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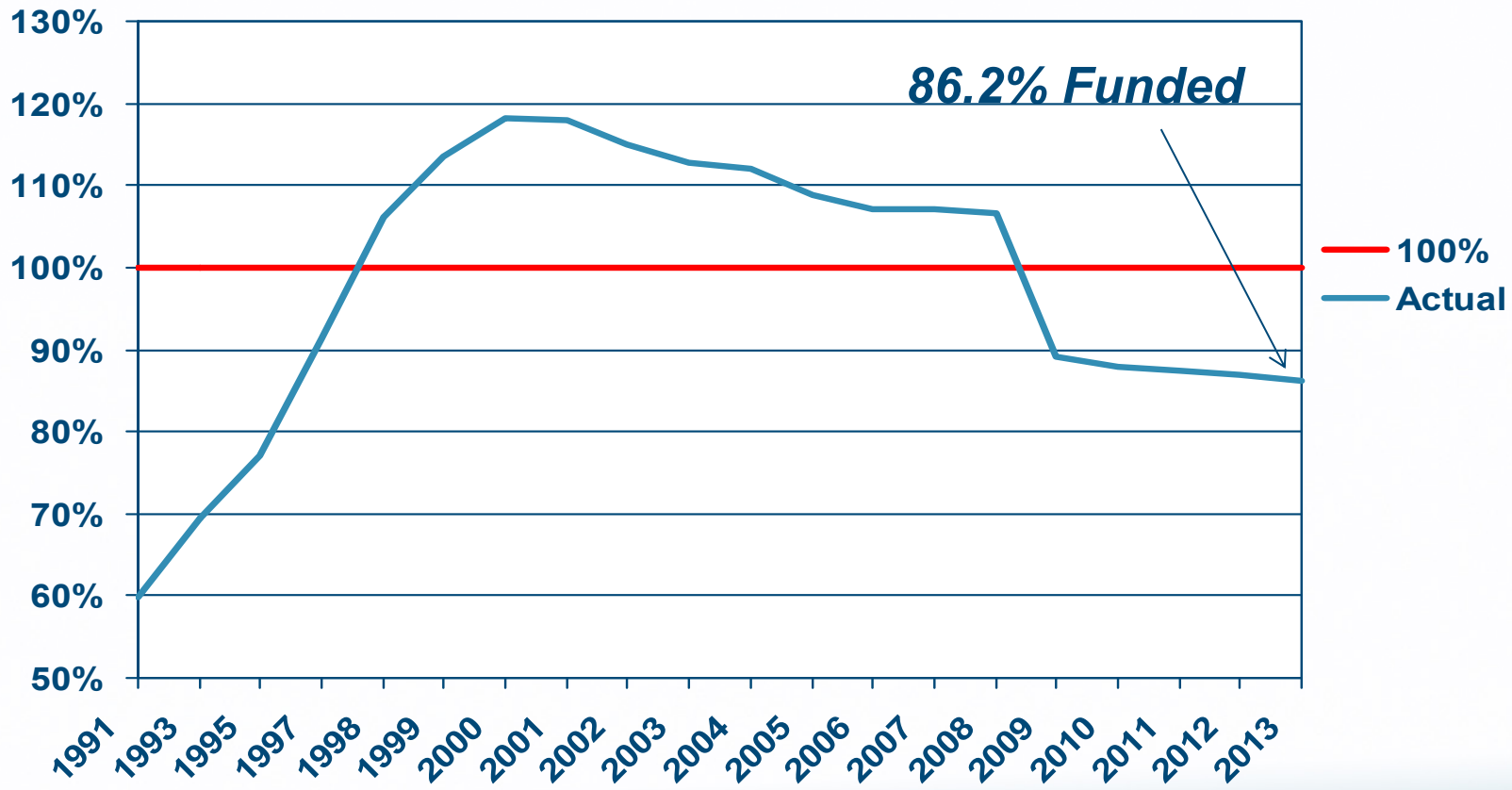
Funding Target:

Actuarial Value of Assets / Actuarial Liabilities



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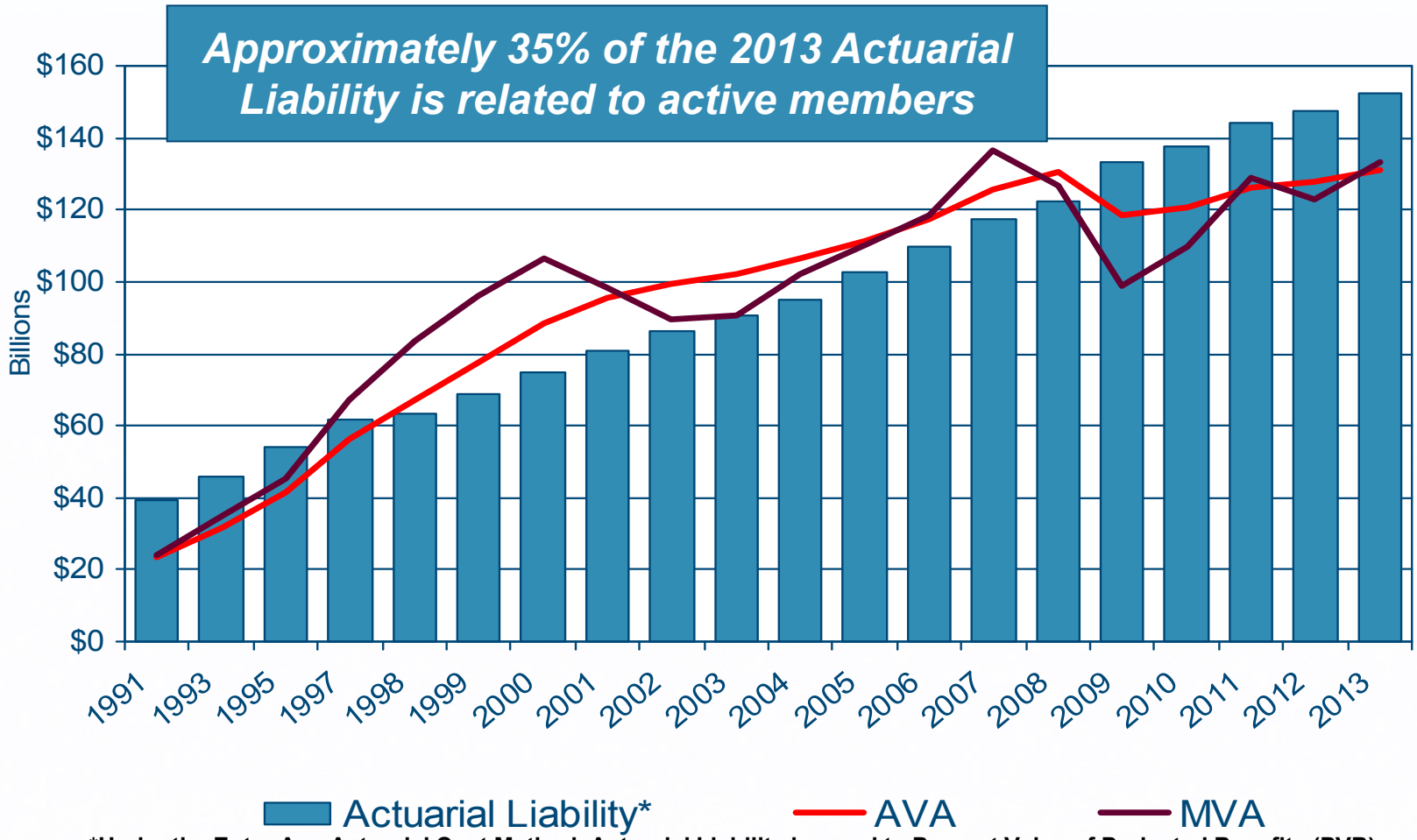
Assets and Liabilities



***Under the Entry Age Actuarial Cost Method, Actuarial Liability is equal to Present Value of Projected Benefits (PVB) less Present Value of Future Normal Cost (PVFNC)**

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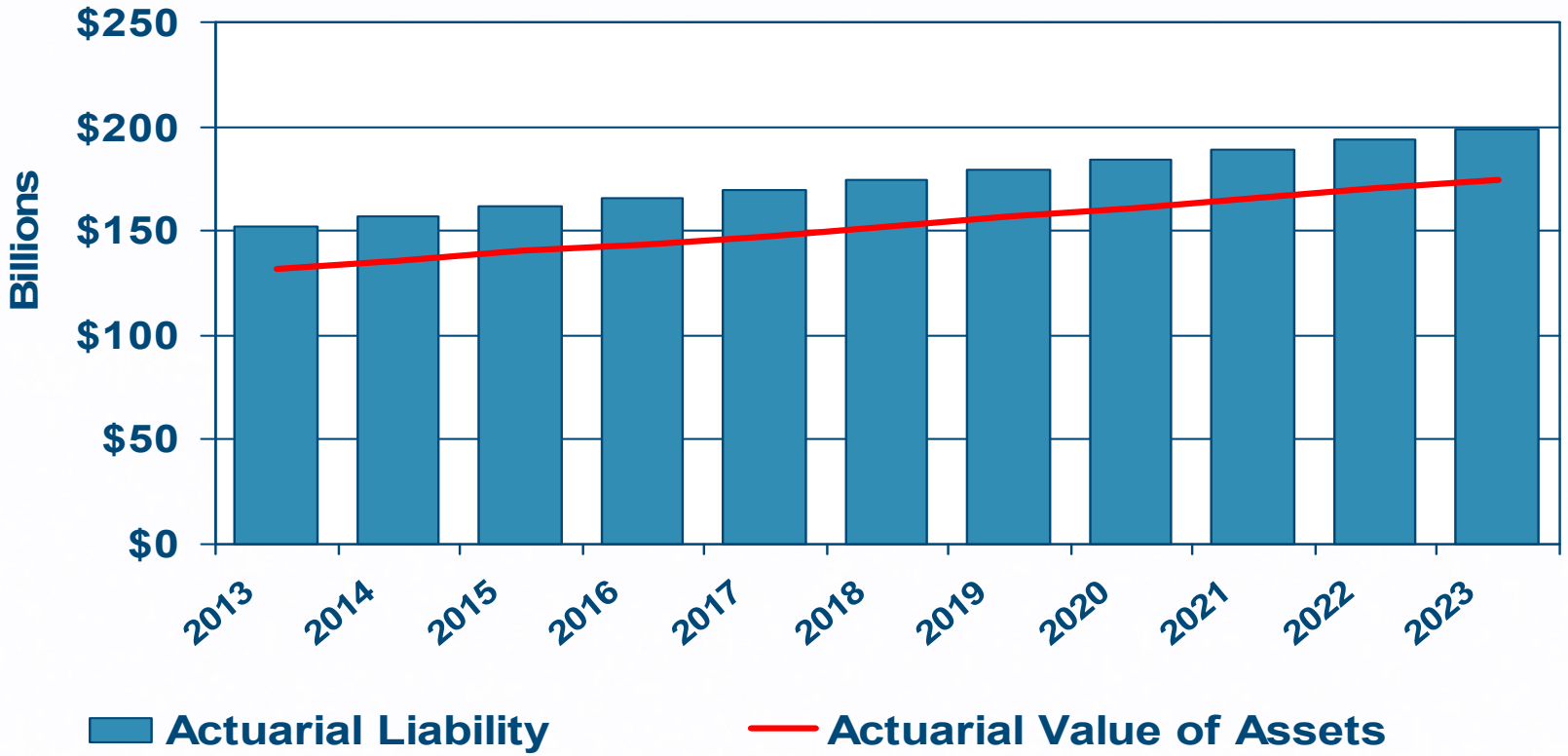
Actuarial Liability & Asset Projection

Assumes constant 7.75% investment returns on a market value basis



Combined employer plus member contributions assumed to be 11.2% of payroll, which is the Fiscal Year 2013 - 2014 composite rate

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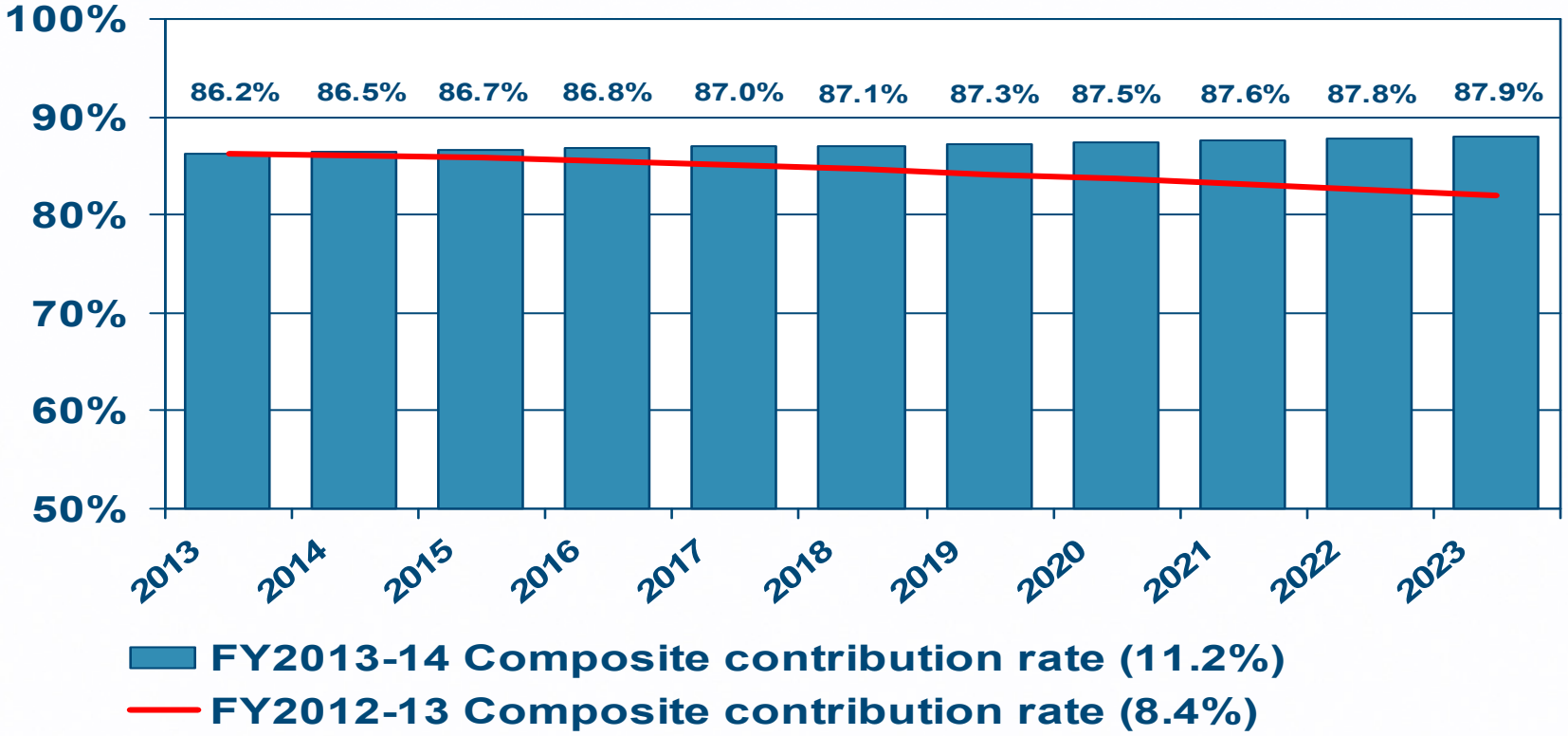
Funded Status Projection

(Assuming constant 7.75% investment returns on a market value basis)



Funded status is Actuarial Liability divided by Actuarial Value of Assets. Employer plus member contributions assumed constant at composite contribution rate of payroll in all future years.

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Contribution Rate Calculations

- Contribution rates have two components:
  - Normal cost rate
    - Cost assigned to current year benefits by the allocation method
  - UAL rate
    - Rate calculated to eliminate UAL in a systematic manner over a specified time period if future experience follows assumptions
- To calculate the UAL rate, an additional assumption and an additional method are needed
  - For amortizations as a level percentage of projected payroll, the system's **general wage increase** assumption affects the rate
  - In addition, the length of the **amortization period** affects the rate

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Amortization Period

- Each year, the system experiences an "actuarial gain" or "actuarial loss" by comparing actual experience to assumed
  - Gains decrease UAL, while losses increase UAL
  - Both investment and demographic experience create gains & losses
- Current policy has been to amortize each year's gain or loss over a closed 30-year period as a level percentage of projected payroll
  - This is the most commonly used amortization period by state systems
- Upcoming guidance from the Pension Funding Task Force may denote 30 year amortizations as less than optimum
  - The potential guidance is driven by the initial "negative amortization" that occurs in a 30-year level percentage of pay amortization

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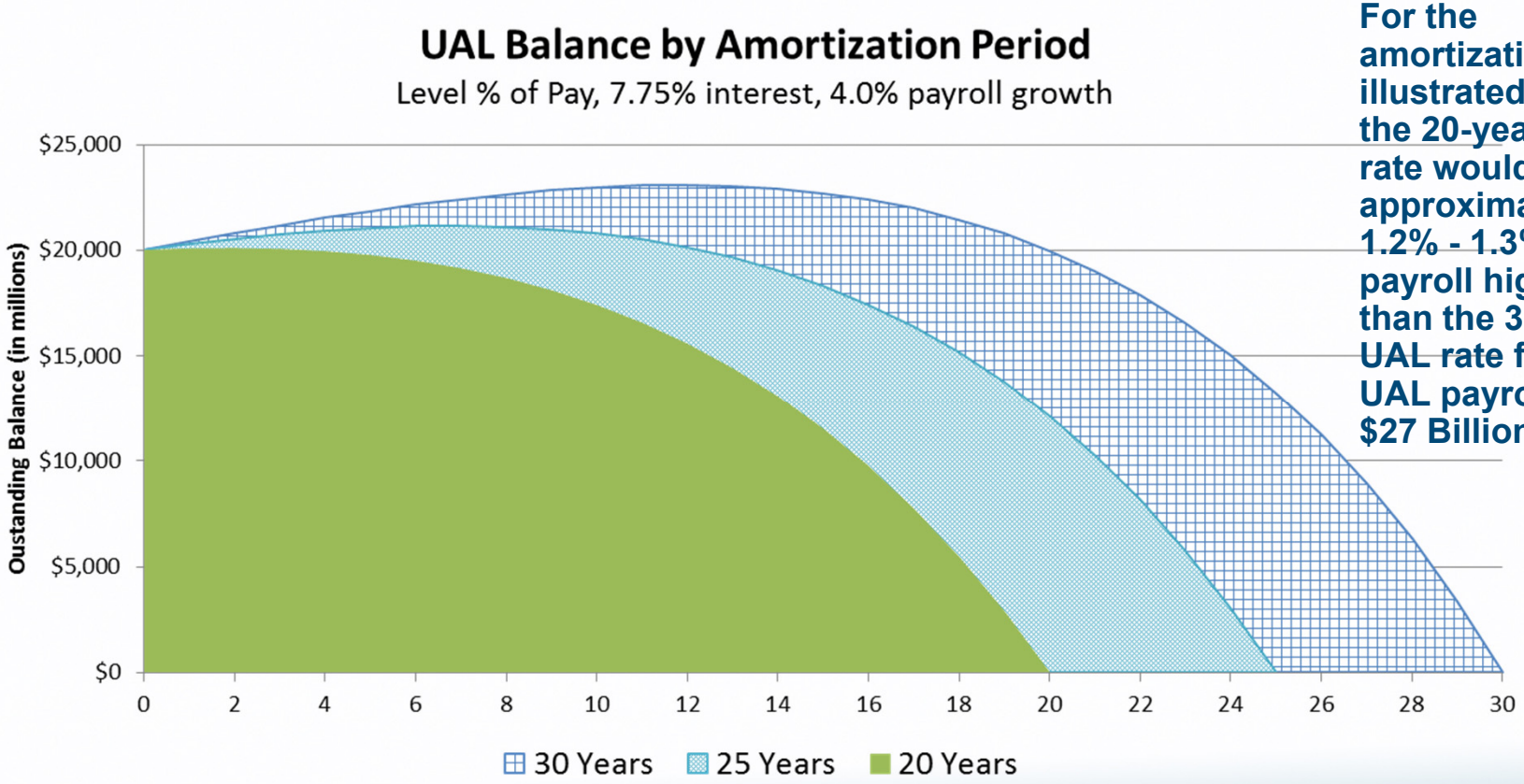
Amortization Period

This slide illustrates the amortization pattern of a $20 billion UAL over several alternative amortization periods



For the amortization illustrated here, the 20-year UAL rate would be approximately 1.2% - 1.3% of payroll higher than the 30-year UAL rate for a UAL payroll of $27 Billion

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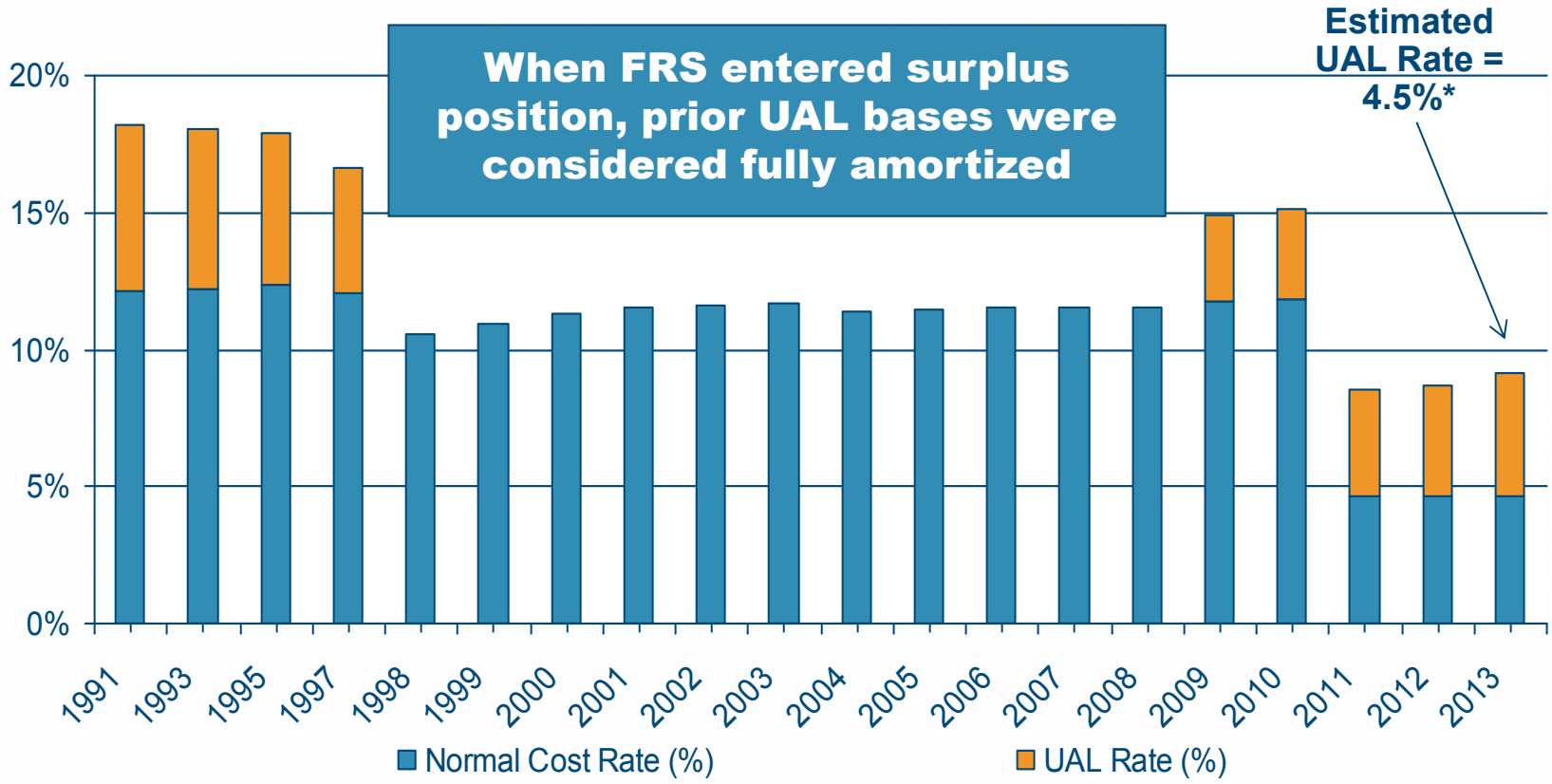
Recommended DB Contribution Rates

(Composite contribution rate shown in year developed)



* For purposes of this chart, the 2013 UAL rate was approximated as the rate needed to amortize the entire UAL within 30 years. The methodology for the final contribution rate differs, as annual experience for prior single years are amortized over separate closed 30 year periods.

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Recommended vs. Legislated DB Contributions

FY13-14 legislated rates were set equal to recommended rates

	Fiscal Year 2010-2011		Fiscal Year 2011-2012		Fiscal Year 2012-2013		Fiscal Year 2013-2014	
Membership Class	Rec.	Leg.	Rec.	Leg.	Rec.	Leg.	Rec.	Leg.
FRS Regular	12.01%	9.69%	12.07%	3.35%	5.90%	4.13%	6.09%	6.09%
Special Risk Regular	29.67%	22.23%	29.06%	12.13%	19.06%	14.05%	18.88%	18.88%
Special Risk Admin	31.29%	12.22%	37.10%	3.60%	40.57%	4.56%	45.91%	45.91%
EOC – Judicial	32.99%	20.71%	31.32%	10.09%	27.64%	10.78%	28.37%	28.37%
EOC – Leg-Atty-Cab	38.63%	15.69%	41.46%	6.76%	43.79%	7.63%	40.92%	40.92%
EOC – Local	43.54%	17.76%	43.69%	8.27%	40.70%	9.23%	41.87%	41.87%
Senior Management Svc	24.04%	13.99%	24.38%	4.22%	19.53%	5.23%	21.01%	21.01%
Composite w/o DROP	14.97%	11.70%	14.97%	4.69%	8.24%	5.63%	8.37%	8.37%
DROP	20.07%	11.14%	19.57%	3.31%	10.54%	4.33%	11.64%	11.64%
Composite w/ DROP	15.34%	11.66%	15.31%	4.60%	8.46%	5.51%	8.67%	8.67%

- **The above recommended DB employer rates are further blended with the Investment Plan contribution rates to derive the uniform blended rates employers contribute.**
- **DB employer contribution rates shown above do not include the 3% employee contribution required beginning in Fiscal year 2011-12 .**

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Legislated & Composite Contribution Rates

Contribution rates developed for the DB plan are blended with the contribution rates of the Investment Plan

	Fiscal Year 2012-13 Legislated Rates			Fiscal Year 2013-14 Legislated Rates		
	NC	UAL	Total	NC	UAL	Total
DB composite employer rate	4.6%	0.9%	**5.5%**	4.7%	4.0%	**8.7%**
IP composite employer rate	4.9%	0.0%	4.9%	4.9%	0.0%	4.9%
Blended employer rate	4.7%	0.7%	**5.4%**	4.7%	3.5%	**8.2%**
Employee contribution rate			3.0%			3.0%
Composite blended employer + employee rate			**8.4%**			**11.2%**

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DROP Contribution Rate Calculations

- We continue to recommend changes to the DROP funding method that would explicitly recognize the impact of DROP on each class
  - Funding of DROP should be consistent with the rest of the System, meaning the contribution rate of each membership class should be based on the benefits provided to that class of members
- In conjunction with the 2006, 2009 and 2010 actuarial valuations, we studied two alternative (more traditional) ways to fund DROP. In each, the contribution rates for each class of membership would include the cost of its members electing DROP:
  - DROP members treated as retirees (i.e., DROP payroll not used in developing the amount of contributions)
  - DROP members treated as actives with a DROP participation assumption that is separate from the retirement assumption

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Current DROP Funding Method

- Special study completed in the mid-1990s prior to the implementation of DROP showed a material cost increase
  - Current method of funding DROP was designed so that implementation of the program would not affect the contribution rates of the various membership classes
- Interclass inequity: employer contributions are the same for all DROP members regardless of membership class
  - Non-DROP benefits are funded through contribution rates that vary by membership class based on the benefits provided to those members

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Current DROP Funding Method (Cont.)

- Generates actuarial losses
  - DROP accelerates retirement in as much as entering DROP is considered retiring
  - Funding valuation reflects retirement decrement as if DROP were not an option: Assumes 50% of members who DROP would otherwise retire if DROP did not exist
  - The other 50% of members who enter DROP are considered unexpected retirements, thereby generating actuarial losses
- Current method does not allow DROP to influence the retirement assumptions because that would affect the contribution rates
  - Not prefunding DROP is inconsistent with the prefunding of other plan benefits during each member's working career

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Future Percentage Electing Investment Plan

- When the IP was initially enacted, the employer contribution rate was set approximately equal to the DB plan normal cost rate. Thus, the ongoing annual costs for the two plans were designed to be approximately the same. Since then:
  - SB 2100 (2011)
    - Mandated 3% employee contributions from all current and future members of the IP and DB Plan, with a proportional reduction in employer contribution rates
    - Reduced the potential level and value of benefits for both current and future enrollees in the DB Plan beginning July 1, 2011
  - HB 5005 (2012)
    - Further reduced the employer IP contribution rate
- It is possible that these changes will induce a greater percentage of future enrollees to select the IP rather than the DB Plan or vice-versa. The time lag since the 2012 change is too brief to see any trends. These plan election decisions may have an impact on future results.

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Upcoming Experience Study

- Milliman will review the System's experience during Fiscal Years 2008-2013. The review will examine both economic and demographic trends. We will interact with SBA on the economic assumptions.
- While the demographic experience is more System focused, the general economic and market outlook drive the economic assumptions. These assumptions include investment return, inflation, general wage increase and payroll growth.
- Since completion of the last experience study covering Fiscal Years 2003-2008, nation-wide we have experienced a severe recession, followed by continued high unemployment and extremely low bond yields, and on a system-specific basis, Senate Bill 2100 (2011).

Upcoming Experience Study

- Last year, we discussed that actual payroll growth (impacts the calculation of the UAL amortization payment) was falling short of our assumed growth rate of 4% per annum, thereby deferring contributions into the future.
- Last year, we completed an estimate of the impact to the DB Plan of using a lower investment return assumption. Lowering the assumptions from 7.75% to 7.50% would have increased the July 1, 2012 Actuarial Liability by approximately 3.2%, or $4.7 billion. We would expect the impact on 2013 results to be comparable.
- In keeping with Actuarial Standard of Practice 27, which requires that economic assumptions be internally consistent, the assumptions for inflation, payroll growth and investment return should be reviewed and modified together.

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New GASB Statements

- New GASB Statements will significantly affect financial reporting
  - GASB 67 affects system financials (effective FY 13-14)
  - GASB 68 affects participating employer CAFRs (effective FY 14-15)
- Prior statements emphasis: annual income statement expense
  - Expense calculation had flexibility, reflecting a variety of sponsor contribution approaches
- New statements emphasize year-end balance sheet
  - Focus is now on consistency and comparability systems
- GASB 68 will be a major change for participating employers
  - Most significantly, each participating employer will record a share of the System's UAL on their balance sheet
    - Assets in the GASB 68 UAL are measured on a fair market basis

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New GASB Statements

- As long as either of the following policies is continued, we will need to perform two different sets of liability calculations:
  - Current DROP funding method
  - Use of Ultimate EAN cost allocation method
- Modifying both policies would make our contribution calculation approach consistent with GASB 67/68 methodology, and require only one set of liability calculations

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Summary

- Policymakers have significant flexibility in setting funding policy, and guiding objectives can be useful in assessing alternatives
- Current capital market outlooks from both HEK & Milliman indicate 50th percentile expected returns below 7.75%
- Five straight years salary increase experience below assumption
  - Assumptions to be reviewed in the actuarial experience study
- Changes to both the cost allocation method and DROP funding approach would be needed to have one set of actuarial numbers for both accounting and setting contribution rates

Disclaimer

At your request, we have provided these draft results prior to completion of the July 1, 2013 Actuarial Valuation Report. Because these are draft results, Milliman does not make any representation or warranty regarding the contents of the presentation. Milliman advises any reader not to take any action in reliance on anything contained in this presentation. All results from this presentation are subject to revision or correction prior to the release of the final July 1, 2013 Actuarial Valuation Report, and such changes or corrections may be material. No distribution of this presentation may be made without our express prior written consent.

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Impact of FY 13-14 Legislated Rates

- For FY 13-14, legislated contribution rates equal those recommended by the 2012 valuation
  - The increase in contribution rate took effect July 1, 2013, so those contributions will not be reflected in the calculation of the UAL until the July 1, 2014 valuation
  - The positive result of this action is reflected on slide 37 which shows a steady, gradual increase in the funded ratio as opposed to the steady decrease in funded ratio had the contribution rates remained at the FY 12-13 level

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Year-to-Year Change in UAL Rates

- The estimated UAL rate on slide 41 is 4.5%, while the currently legislated composite UAL rate is approximately 4.0%
- The UAL rate is a long-term amortization calculation designed to remain steady if the following two conditions are met in a year
  - Recommended contributions are made
  - Experience follows assumption
- Variations from those two conditions during FY 12-13 explain much of the year-to-year increase in the UAL Rate
  - The positive 14.01% market investment return for 2012-13 had a very modest impact on UAL rate changes due the to actuarial asset smoothing method, as asset returns on a smoothed basis were 8.09%

Year-to-Year Change in UAL Rates

- For FY 12-13, legislated contributions were approximately $825 million below recommendation, or 3.05% of payroll
  - Deferring a portion of the recommended contribution in a single year creates a "carrying charge" to amortize the deferral over the subsequent 30 years
  - The UAL rate carrying charge for the deferral is 0.15% - 0.20% of payroll
- For any given UAL level, the lower the payroll the higher the UAL rate
  - Year-to-year, the payroll on which UAL rates are charged decreased about 0.7%, compared to the 4.0% annual increase assumption
  - The increase in the UAL rate for this effect is 0.15% - 0.25% of payroll

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Asset Liability / Asset Allocation Review

IAC Meeting
September 23, 2013

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Table of Contents

Prior Asset Liability / Asset Allocation Studies & Actions

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Introduction

- Historically, prior to 2010, the Florida SBA conducted a full asset-liability study every three years and reviewed updated results in the years in between
- Since 2010, the level and frequency of oversight of the asset allocation policy by the Investment Advisory Council and the Trustees has increased
- HEK has provided an updated asset liability / asset allocation study each year since 2010 that includes
  - Updated capital market assumptions on key asset classes (return, risk, and correlation)
  - Updated equity risk premium (average of four consulting firms)
  - Updated liability information
  - Asset allocation scenarios
  - Recommendations
- Also conducted Fiduciary Training (by Groom Law) for the Investment Advisory Council and Trustees in 2011 that covered, among other topics:
  - Duty of Prudence
  - Duty of Loyalty
  - Duty to Diversify

2010 Update

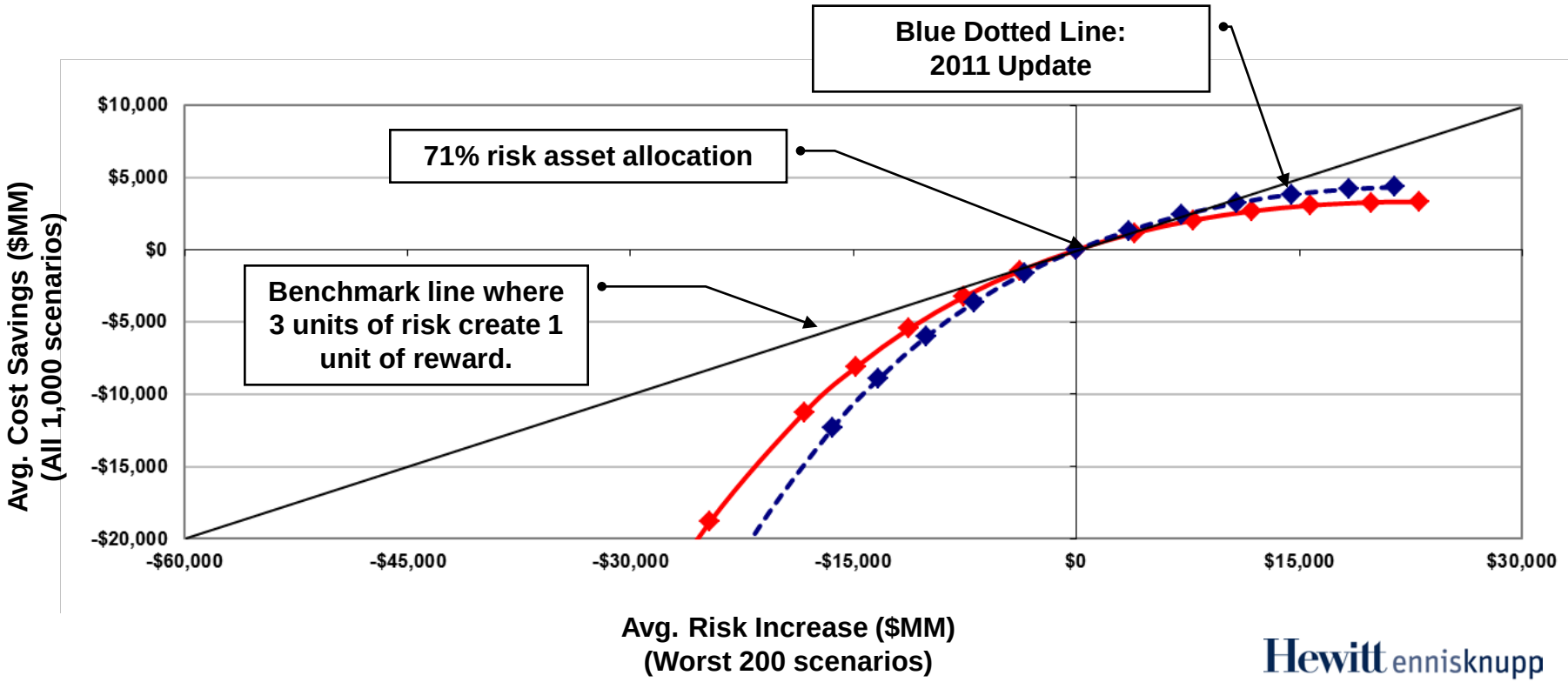
- Current allocation to risk assets remained appropriate – no change to the risky vs. non-risky split but acknowledge an opportunity to improve diversification (that lowers cost)
- Policy changes:
  - Add a policy weight to Strategic Investments and increase Private Equity policy alloc.
  - Combine U.S. / non-U.S. equity into a Global Equity asset class

Asset Class	Prior Policy* (before July 2010)	Current or Transitional Policy** (as of July 2010)	Expanded Authority Policy**
Global Equity	58%	56%	52%
Fixed Income (Investment Grade)	28	26	24
High Yield	2	N/A	N/A
Real Estate	7	7	7
Private Equity	4	4	5
Strategic Investments	--***	6	11
Cash	1	1	1
Total	**100%**	**100%**	**100%**

*Prior to July 2010, Global Equity was composed of two asset classes, Domestic Equities and Foreign Equities, with target allocations of 38% and 20%, respectively.
**Global Equity asset class includes existing Domestic Equity , Foreign Equity and Global Equity mandates
*** In recognition of the dynamic nature of this asset class, there is no specific expected weight. Its actual allocation will vary within the policy range depending on the mix of included strategies at any given time.

2011 Update

- Equity risk premium (defined as the difference between the expected return on US equities and expected return on US bonds) increased slightly, due mainly to lower yields on bonds, shifting the risk-reward curve slightly in favor of more risk (see chart below)
- Determined that current allocation to risk assets remained appropriate – no change to the risky vs. non-risky split
- No other policy changes made



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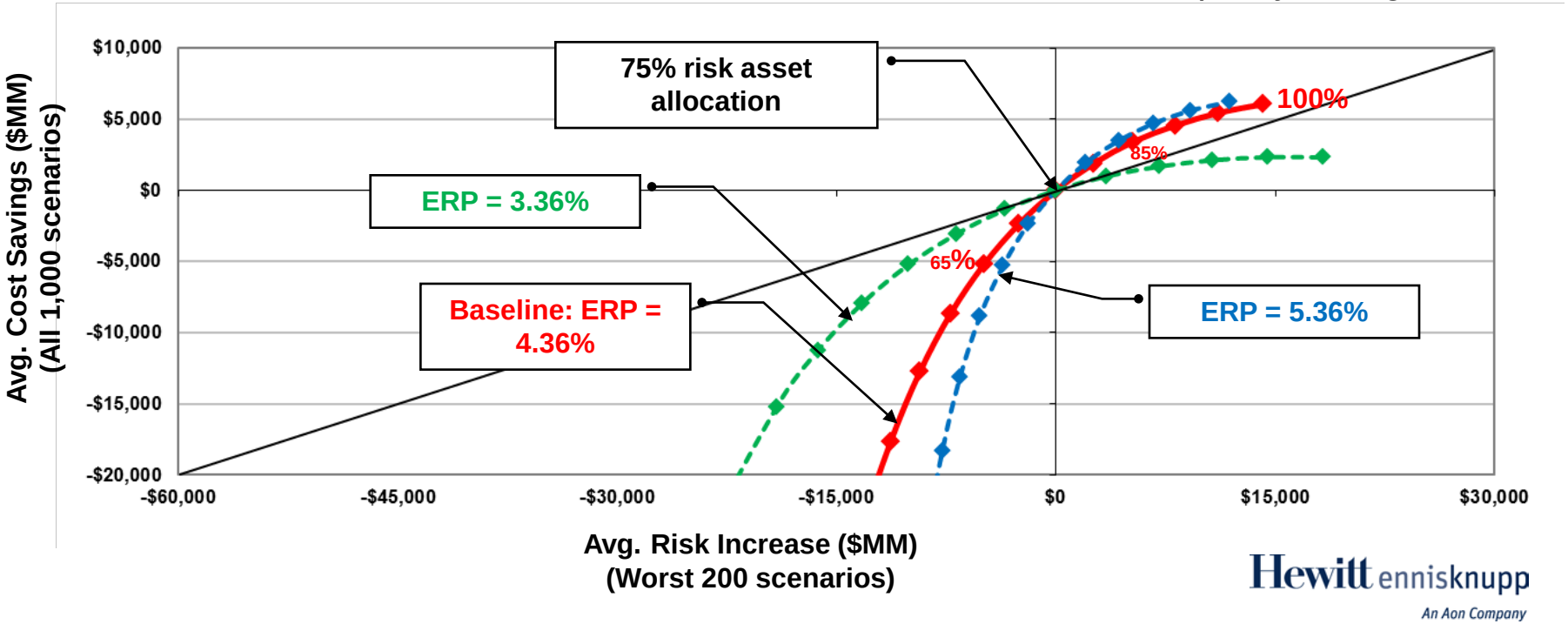
2012 Update

- Equity risk premium increased by 0.57% from 3.79% in 2011 to 4.36% in 2012
- The risk-reward curve shifted in the direction of suggesting a higher allocation to risk assets
  - Almost entirely due to the increased risk premium (mainly due to low bond yields that are driving low return expectations for bonds)
- Discussed the reason to avoid more short-term risk exposure
  - Significant funded ratio shortfall in the near term could be difficult to recover from (5th percentile funded ratio trend line now trends down instead of staying flat after 10 years)
- Recommendation was to maintain 75% risk asset allocation; no other policy changes made



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2013 Update (In Progress)

- Equity risk premium increased for 4th year in a row by 0.40% from 4.36% in 2012 to 4.76% in 2013

	Equity Risk Premium			
	2010 Asset/ Liability Study	2011 Asset/ Liability Update	2012 Asset/ Liability Update	2013 Asset/ Liability Update
HEK	2.40%	3.60%	4.50%	5.10%
Callan	4.00	4.25	4.50	5.15
Wilshire	3.25	3.50	4.65	4.50
Mercer	3.80	3.80	3.80	4.30
Average	**3.36%**	**3.79%**	**4.36%**	**4.76%**

- Risk-reward curve again suggests a higher allocation to risk assets due to the temporarily high equity risk premium driven by low bond yields
- Policy Changes to Date:
  - Lower duration of Fixed Income (change the benchmark from Barclays Aggregate Bond Index to the Barclays Intermediate Aggregate Bond Index)
  - Raise the upper range of policy allocation for Global Equity from 60% to 65%

Update on Asset Liability Results

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Agenda

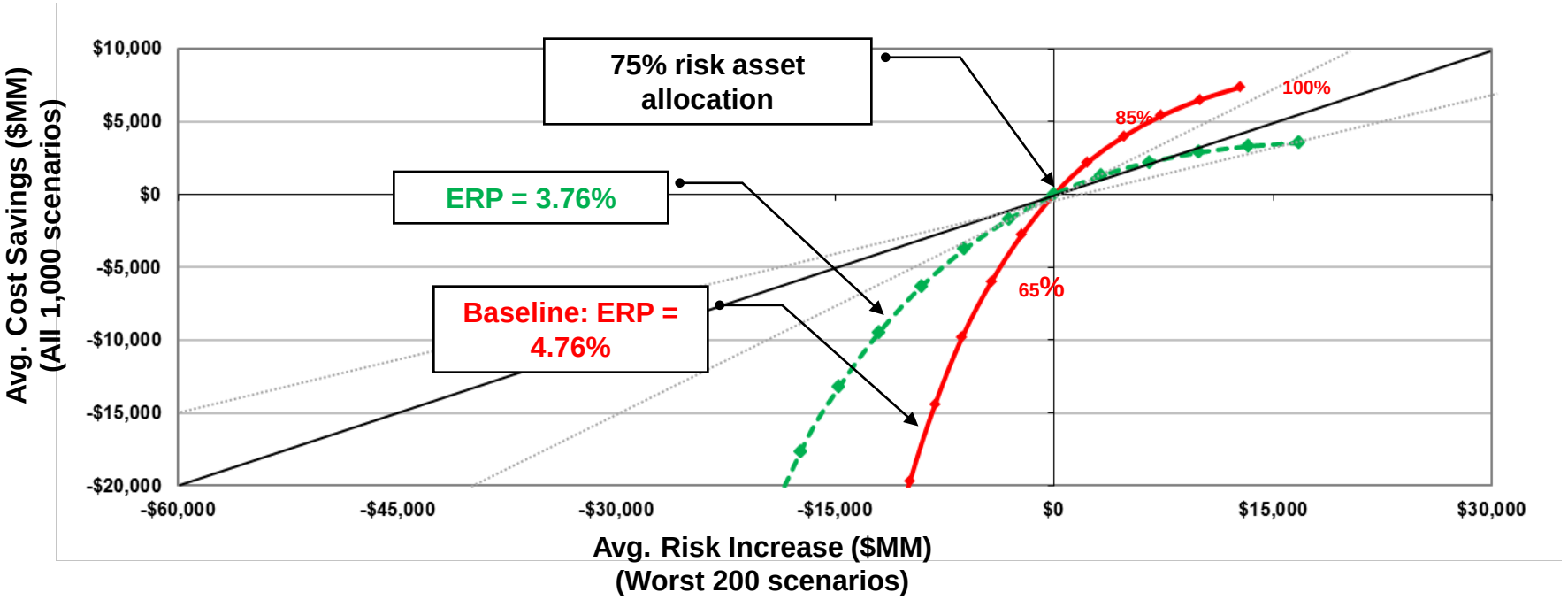
- Where we left off at June IAC meeting
- What has changed since the initial March analysis
  - Actual investment returns through 6/30/2013 = strong
  - Interest rates = up
  - Inflation expectations = down
  - Forward-looking return expectations
    - Fixed income = up
    - Equities = down
    - Equity risk premium = down significantly
- Updated risk reward analysis
- Looking at some selected scenarios from the model
- Special analysis of high inflation
- Discussion of “financial repression” concept

From June 24 Meeting

Asset Liability Study: Strategic Investment Policy

- For purposes of the long-term strategic investment policy, we believe the current 75% allocation target for risk assets remains appropriate, and recommend no change.
- Basis for our view:
  - Risk-reward analysis from the asset-liability study:
    - Although the baseline results (using a 4.76% equity risk premium assumption) provide support for increasing the risk asset allocation target, we believe this is due entirely to the reduced near-term expectations for fixed income returns, i.e. it is based on a temporary condition that is likely to disappear fairly soon.
    - Long-term policy targets should not change based on temporary conditions.
    - The risk-reward analysis using a 3.76% equity risk premium supports the current 75% risk asset allocation. This equity risk premium level is above the historical average of 3.26%, and we believe this level represents a better forward-looking estimate without the temporary impact of lowered fixed income return expectations.
  - An increased allocation to risk assets would increase downside risk over the next five years.
  - Uncertainty remains regarding future changes in the FRS benefit structure. If changes are made, they almost all would point towards a possible lowering of the risk asset allocation target.
- We believe that actions to potentially mitigate the temporary fixed income return issue are best handled within the fixed income sector, either with tactical moves and/or with changes in the benchmark for the fixed income asset class.

March 2013 Risk-Reward Analysis:
Sensitivity to Equity Risk Premium Assumption



Observation: The green line above, based on a 3.76% equity risk premium assumption supports the current 75% allocation to risk assets. This puts a special focus on the fact that the current baseline equity risk premium assumption of 4.76% may be temporary, and will become lower as fixed income return expectations return to more normal levels.

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Special Analysis Based on Issues Raised

- We did special analysis for several issues raised by IAC members
- Sensitivity to higher assumed inflation rates: showed very little change in the risk reward curve
- Reducing the tail-risk exposure for equities: showed a modest shift in the risk reward curve towards more risk
- Sensitivity to more volatile fixed income returns: showed a modest shift in the risk reward curve towards more risk

Changes Since March Analysis

- Actual investment performance through 6/30/2013 was strong
  - Total portfolio return was 13.12%
  - This will push the funded ratio up somewhat, relative to what was anticipated in the March model results
  - Higher funded ratios will shift the risk reward curve towards somewhat less risk
- Interest rates have moved up sharply
  - The 10-year Treasury yield was 1.67% at 6/30/2012 and 1.78% at 12/31/2012 (when we initially set up our AL model)
  - The 10-year Treasury yield at 6/30/2013 is now 2.52%
  - Our model had expected the 6/30/2013 yield to be around 2.37%, and that further increases would ultimately take the yield (on average) to a level of about 3.65%
  - Based on these projected estimates, we have now experienced just less than half of the total expected yield adjustment (from 1.67% to 3.65%)
  - During the 12 month period from 7/1/2012 through 6/30/2013, the return on the Barclay's Aggregate Index was -0.69% (versus the estimate from the initial AL model of around +0.5%)

Changes Since March Analysis, continued

- Inflation expectations are lower
  - Market-based expectations, as embedded in the 10-year "breakeven" rate (the difference between the yield on the 10-year Treasury bond and the 10-year TIPS bond), have gone from 2.45% at 12/31/2012 down to 1.99% at 6/30/2013
  - The Hewitt EnnisKnupp 15-year forward estimate has gone from 2.40% down to 2.15% for the current quarterly update of capital market expectations
- Forward looking return expectations have changed for the three consulting firms that provide regular quarterly updates
  - US equity return expectations are lower, reflecting the recent increase in valuation levels
  - Fixed income return expectations are higher, reflecting higher yields
  - The average resulting change in the equity risk premium estimate is -1.20%, which would make the ERP estimate 3.56% (closer to the historical average of 3.26% over the last 50+ years)

Change in expected returns Q3 vs Q1

	HEK	*Mercer*	*Wilshire*	*Average*
Domestic equity*	-0.50%	-0.65%	-0.50%	-0.55%
Core US bonds**	1.05%	0.40%	0.50%	0.65%
Equity risk premium	**-1.55%**	**-1.05%**	**-1.00%**	**-1.20%**

* Broad market (e.g. Wilshire 5000, Russell 3000, etc.)

** E.g. Barclay Capital Aggregate Index

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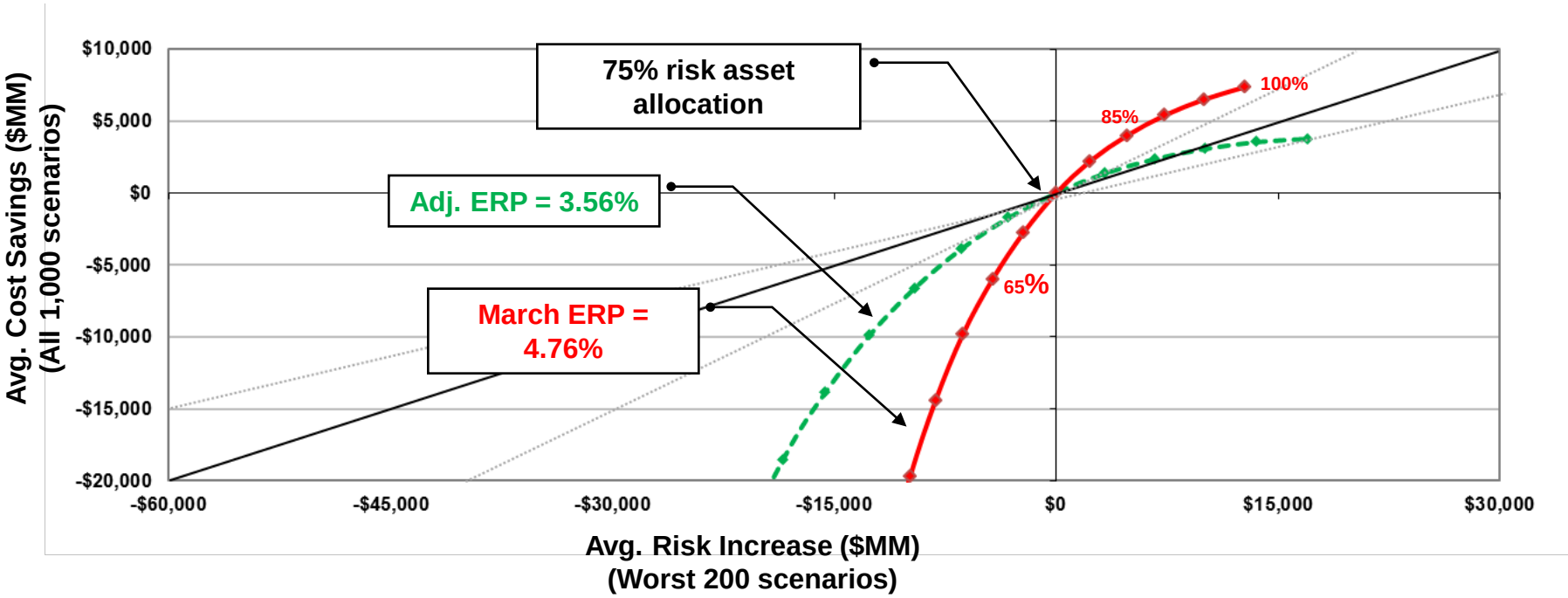
Updated Risk-Reward Analysis:
Reflecting Adjusted Return Expectations, Lower ERP and Higher Funded Ratio



Observation: The green line above, based on the adjusted 3.56% equity risk premium assumption and reflecting a better than expected funded ratio at 6/30/2013, shifts toward lower risk and supports the current 75% allocation to risk assets.

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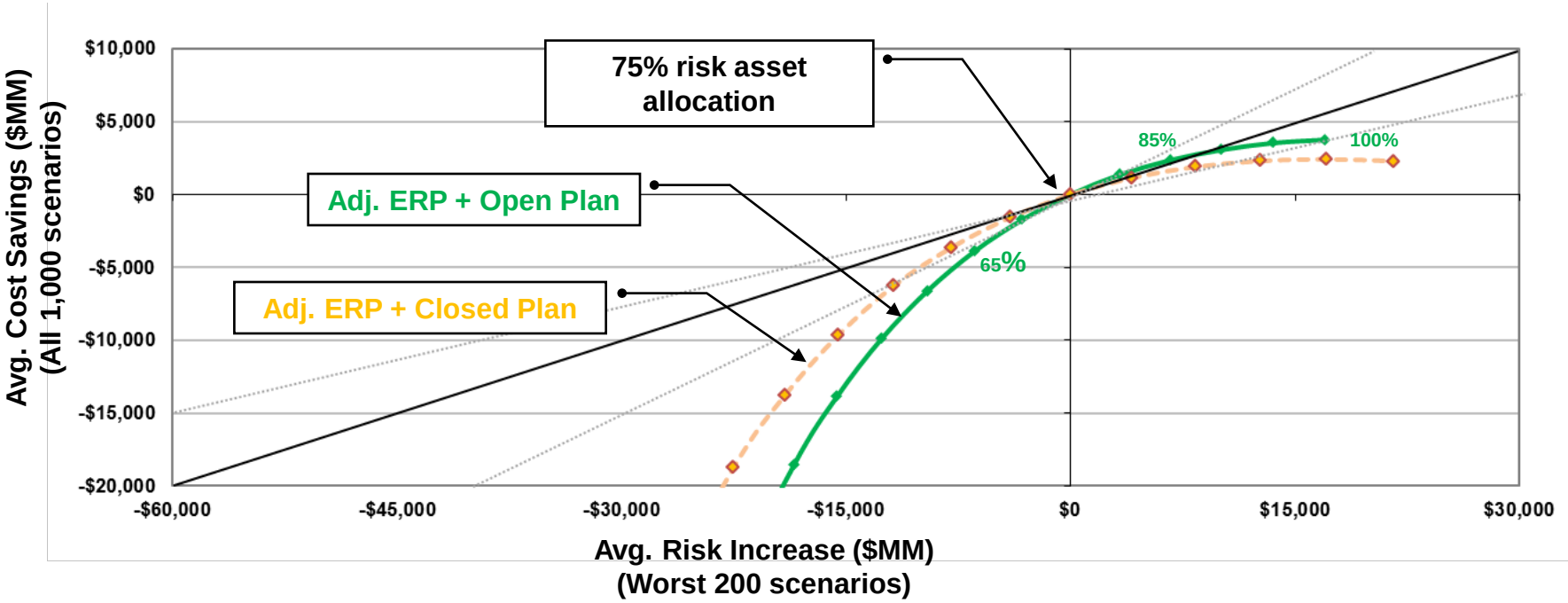
Updated Risk-Reward Analysis:
Sensitivity to Closing Pension Plan for New Hires



Observation: The orange line above reflects the initial impact of closing the plan to new hires, which effectively shortens the time horizon and shifts the curve toward lower risk. Further shifting in this direction would occur as time passes and the closed group of participants matures.

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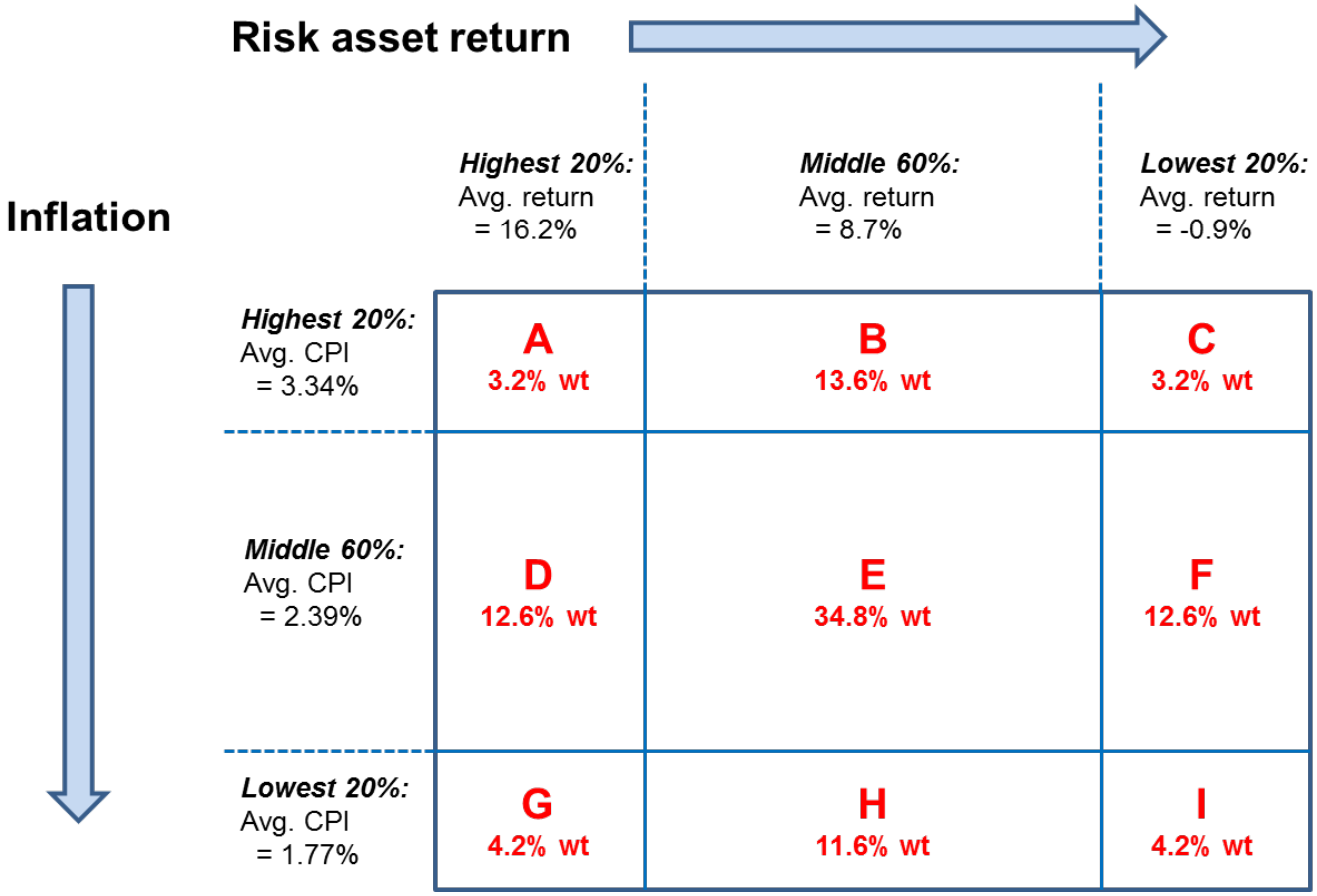
Analysis of Model Scenarios

- The set of 1,000 scenarios used in the model can be “sliced-and-diced” based on selected criteria. Here we have looked at each scenario and measured the 15-year average level of inflation and return on risk assets, allowing us to create nine separate subsets:



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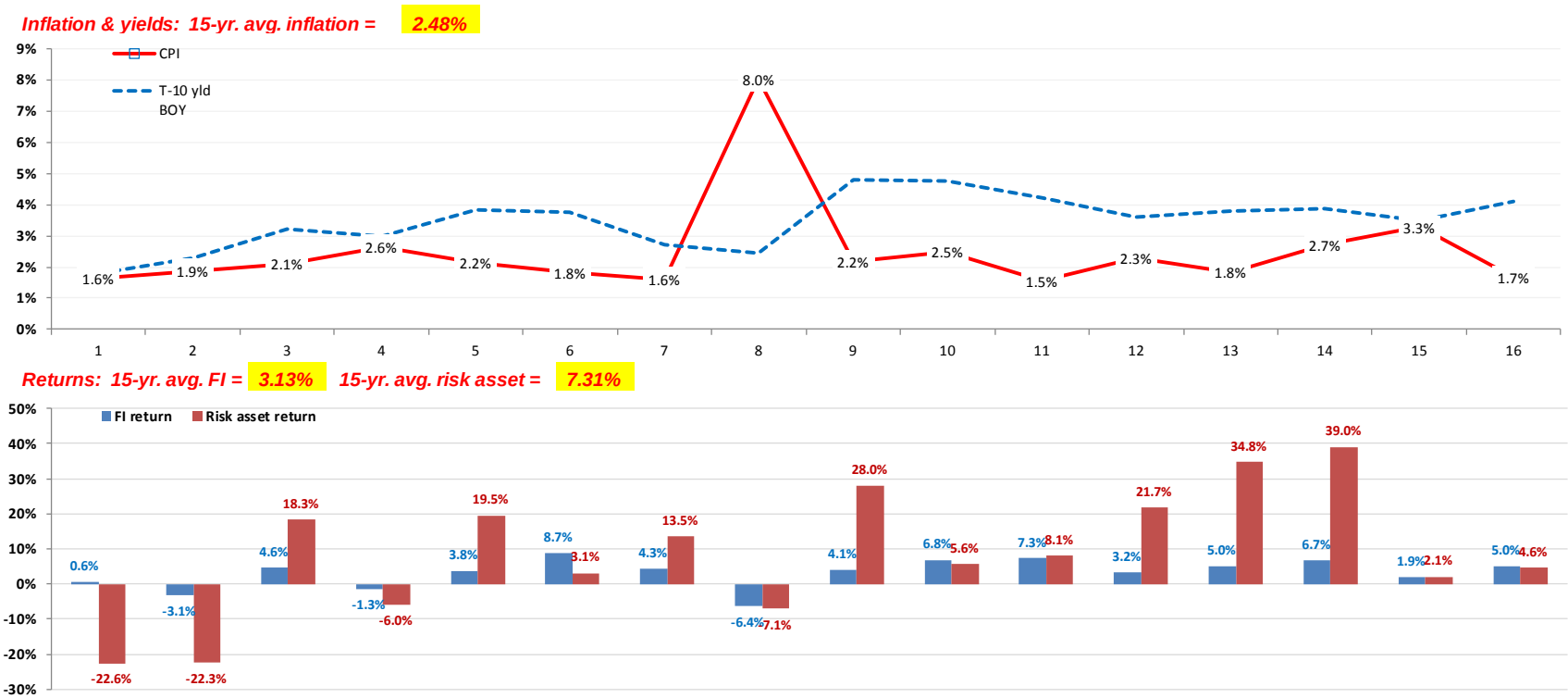
Scenario from Subset E (“Average”)

- Subset E is the largest subset, containing almost 350 of the 1,000 total scenarios with results that are relatively close to the average expectations for inflation and risk asset returns – here is one scenario selected from this subset



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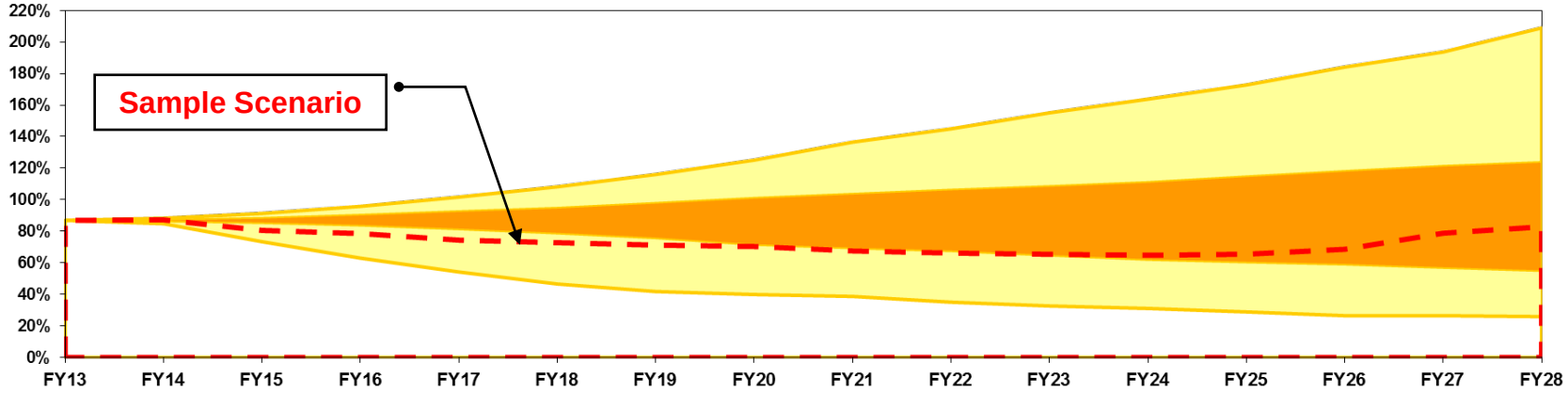
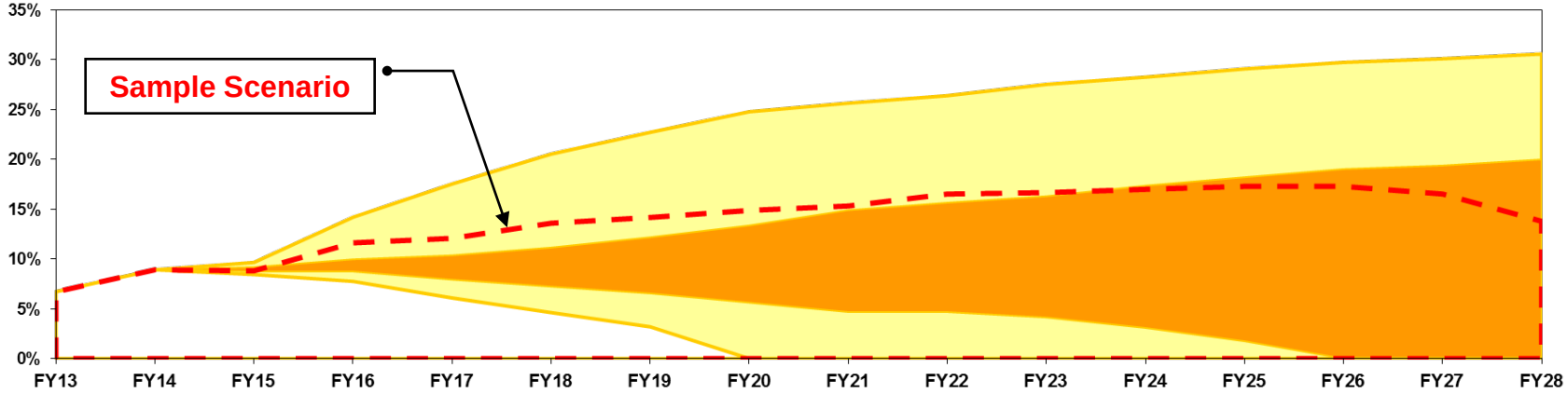
Scenario from Subset E ("Average") – Plan Results

Note: Dark shaded area is the 50% probability range, and the light shaded area is the 90% probability range.

Projected Funded Ratio



Projected Contribution Rate



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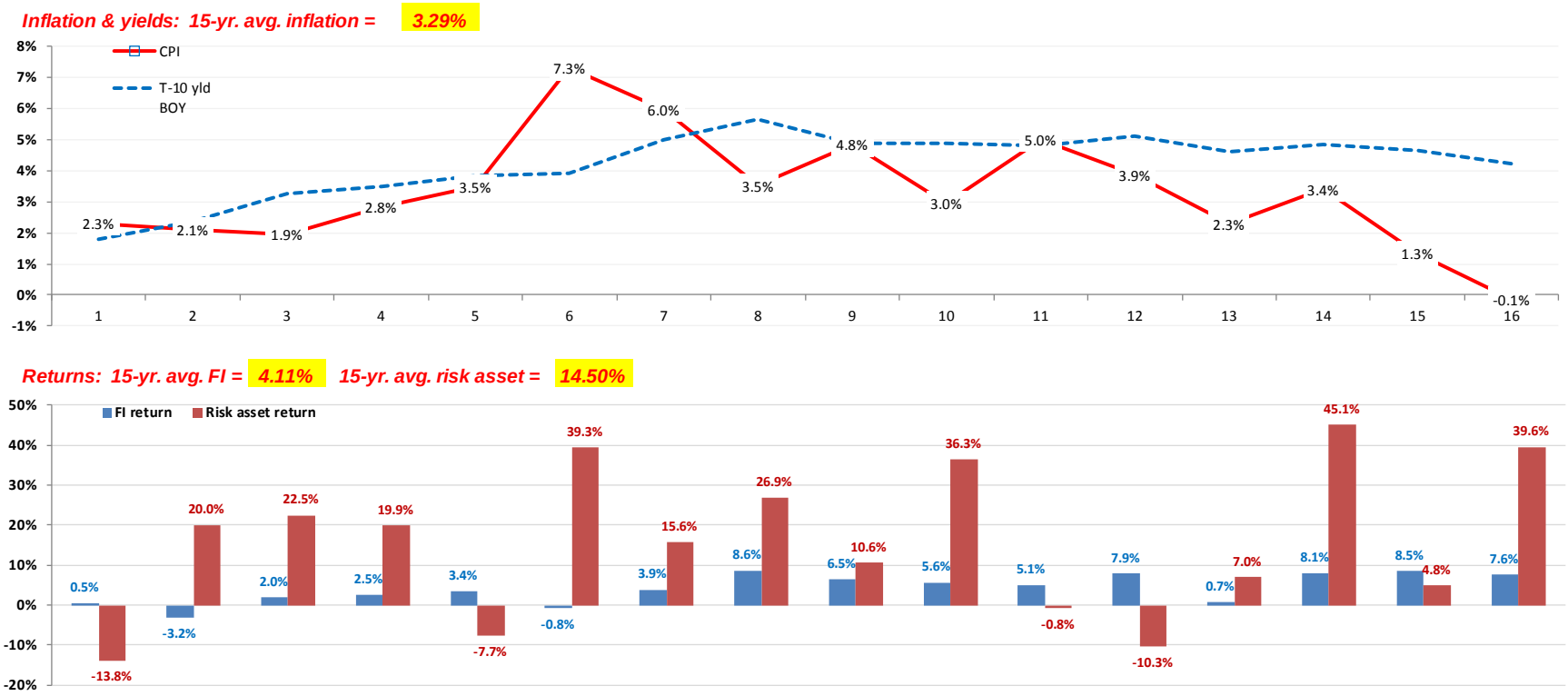
Scenario from Subset A ("High Inflation + High Returns")

- Subset A contains the 32 scenarios with both the highest average inflation and the highest average return on risk assets – here is one scenario selected from this subset



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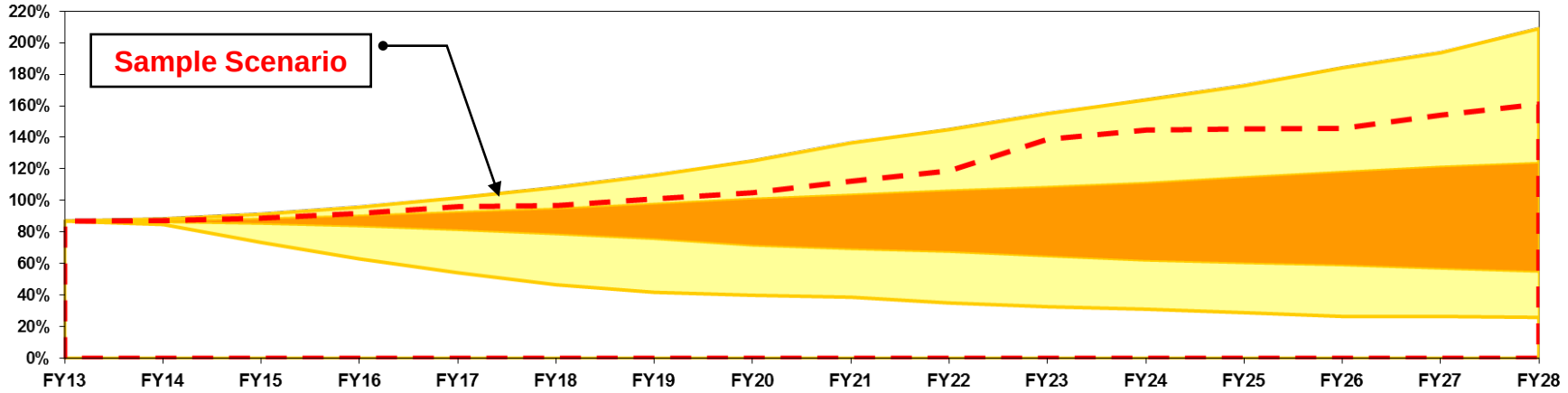
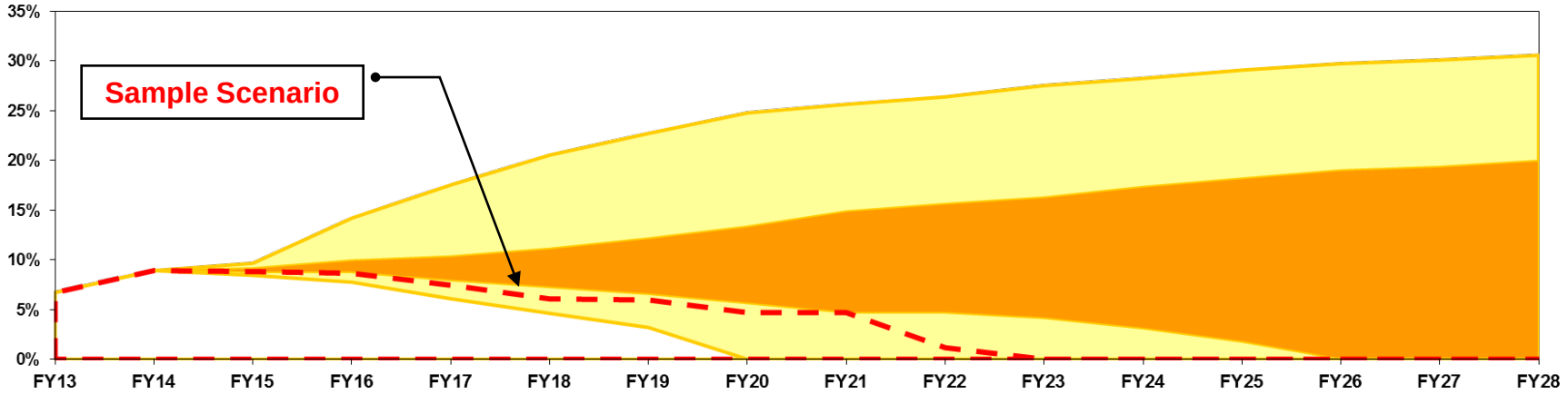
Scenario from Subset A ("High Inflation + High Returns") – Plan Results

Note: Dark shaded area is the 50% probability range, and the light shaded area is the 90% probability range.

Projected Funded Ratio



Projected Contribution Rate



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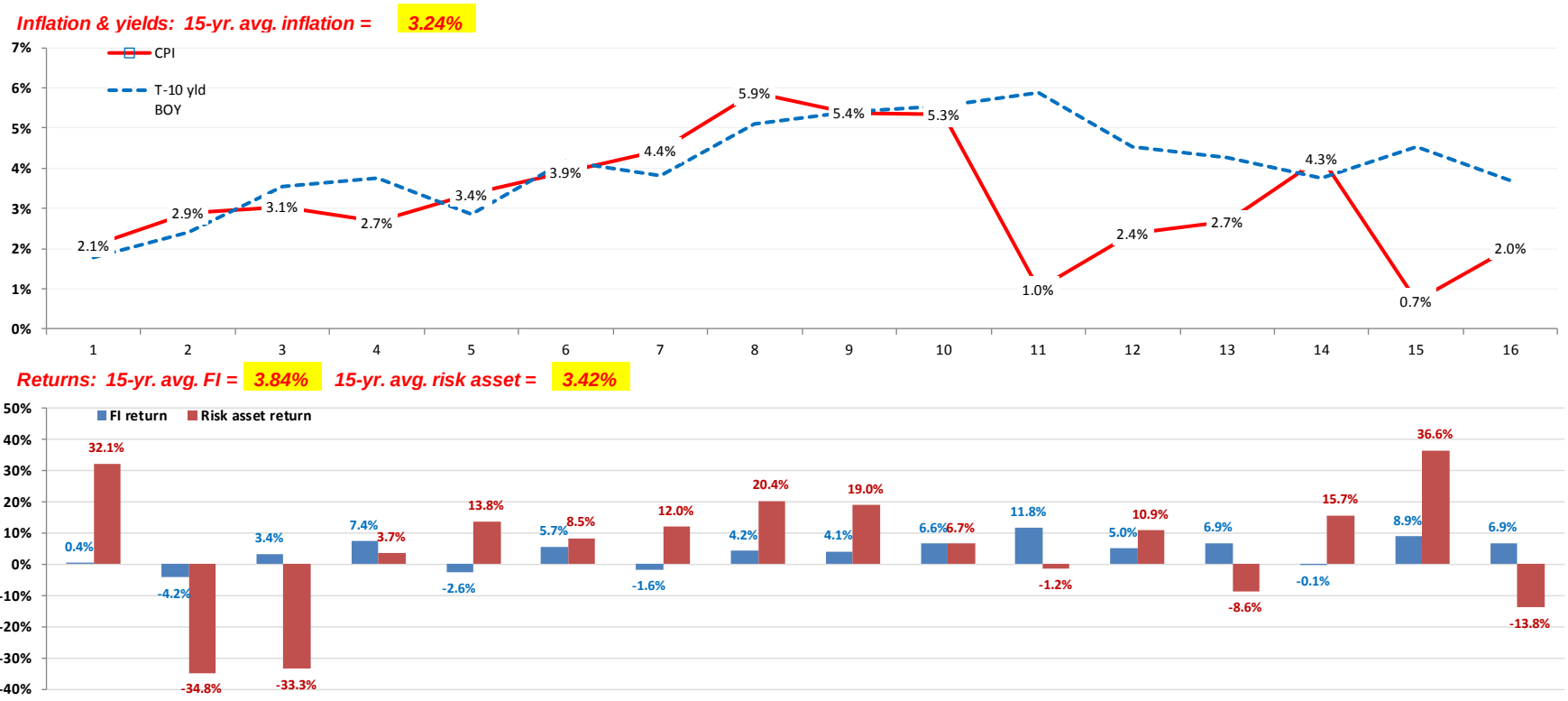
Scenario from Subset C ("High Inflation + Low Returns")

- Subset C contains the 32 scenarios with both the highest average inflation and the lowest average return on risk assets – here is one scenario selected from this subset



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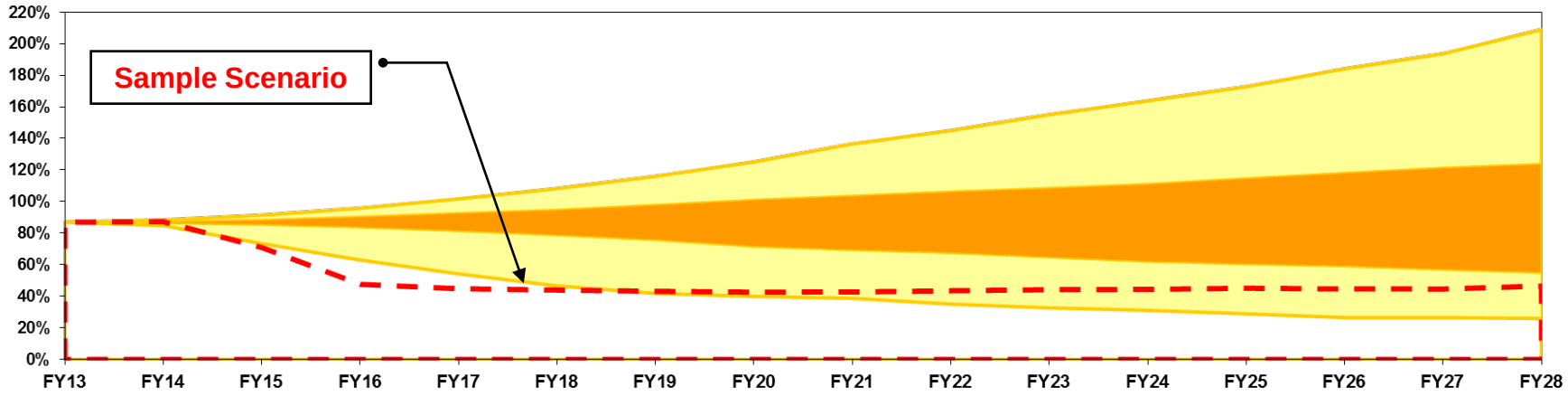
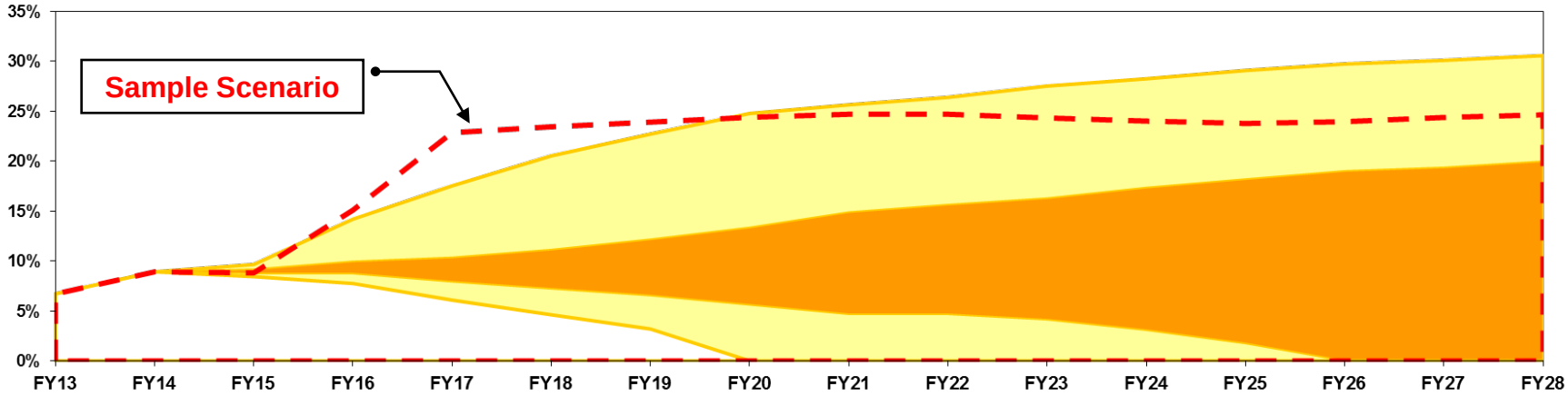
Scenario from Subset C ("High Inflation + Low Returns") – Plan Results

Note: Dark shaded area is the 50% probability range, and the light shaded area is the 90% probability range.

Projected Funded Ratio



Projected Contribution Rate



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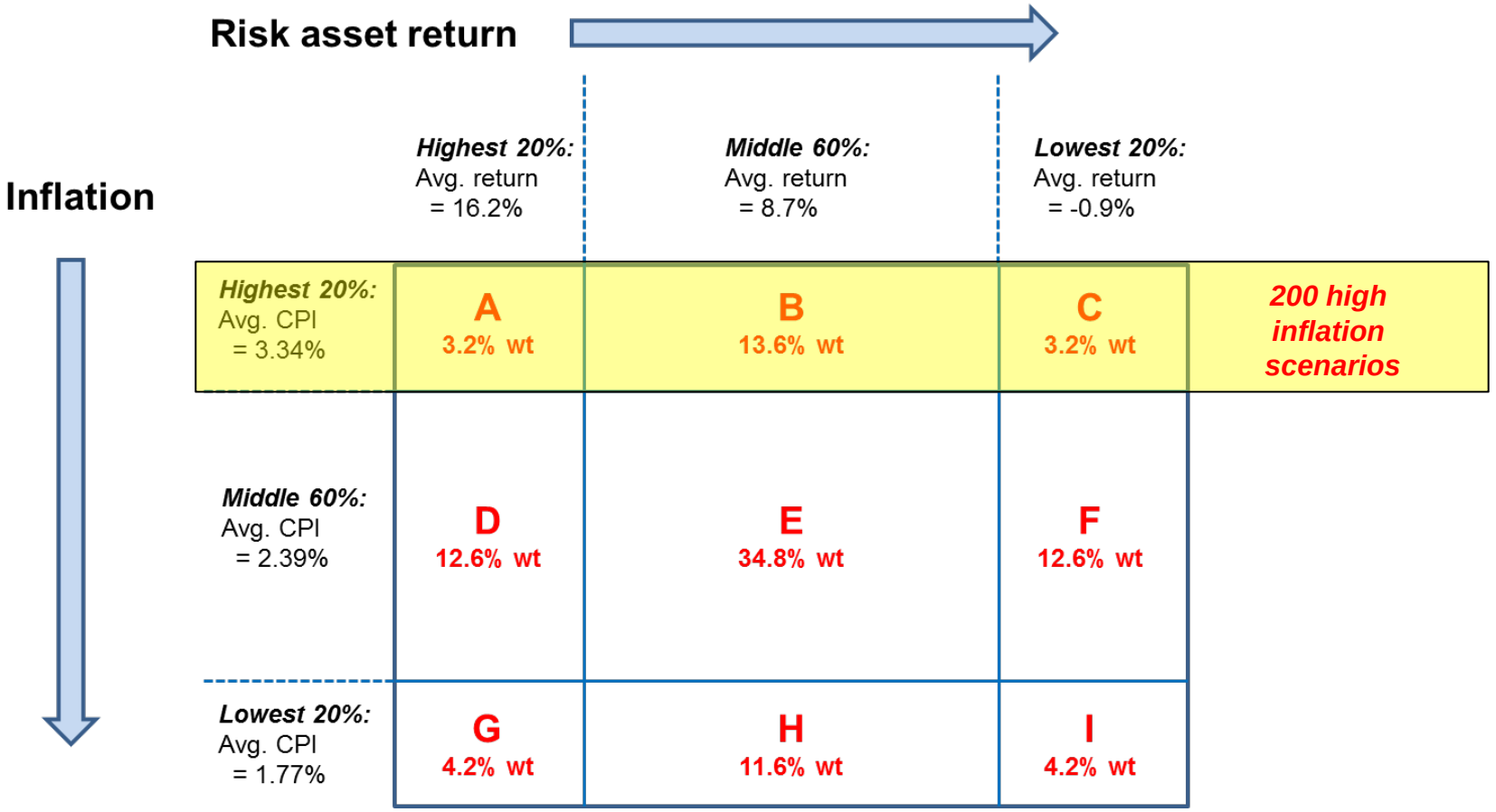
Special Risk Reward Analysis – High Inflation

- We can take the 200 scenarios with the highest inflation (subsets A + B + C) and create a risk reward curve based only on those scenarios



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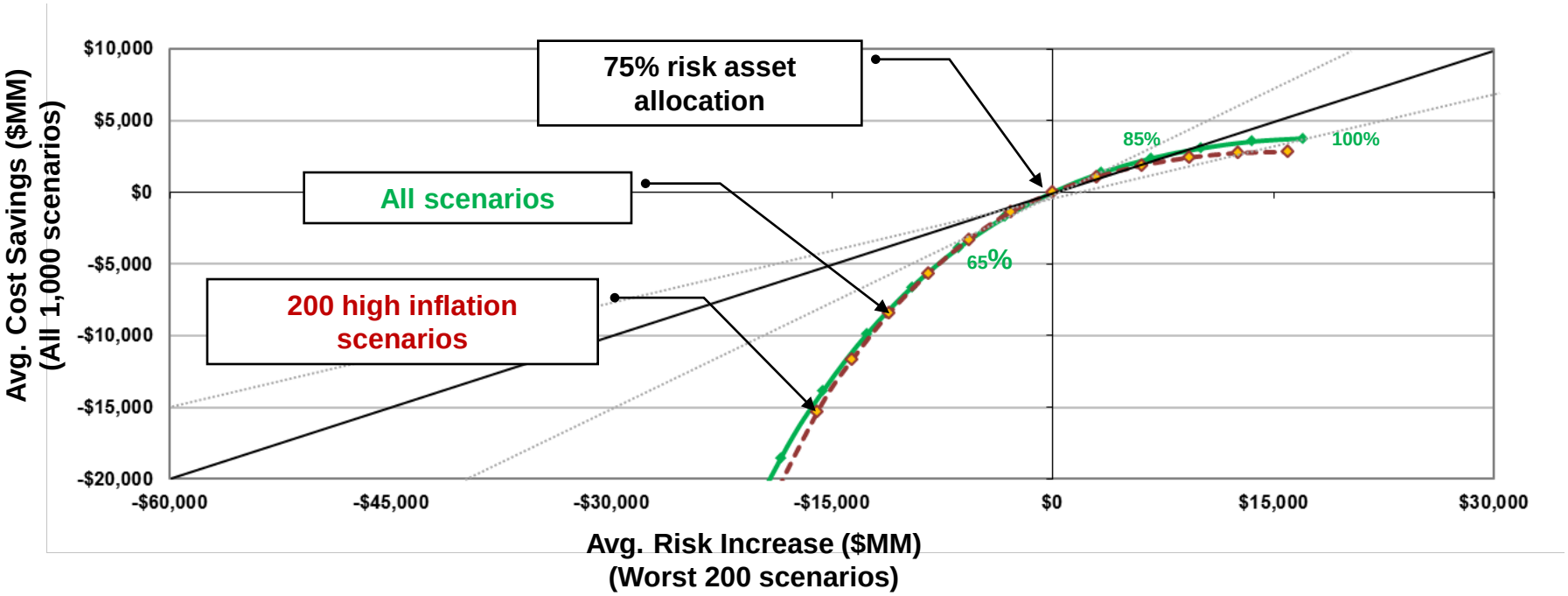
Updated Risk-Reward Analysis: Sensitivity to High Inflation



Observation: The red line above reflects the results using only the 200 high inflation scenarios, and there is only minimal change in the risk reward curve.

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Concept of “Financial Repression”

- The term “financial repression” is used to describe an economic era when the government undertakes deliberate measures to keep nominal interest rates lower than the nominal rate of GDP growth, in order to force the debt/GDP ratio downward, even without higher taxes, lower spending, or actual debt restructuring. The goal would be to keep real interest rates negative (or at least very low) while allowing inflation to accelerate to above target levels.
- Issues for discussion:
  - Is the Fed likely to maintain negative real rates, even if inflation rises?
    - Why?
    - Using what tools?
    - Would they need congressional support?
  - If there is “financial repression”, will it be severe? Or mild?
  - How will equities respond in an era of prolonged financial repression?

Asset Allocation Scenarios

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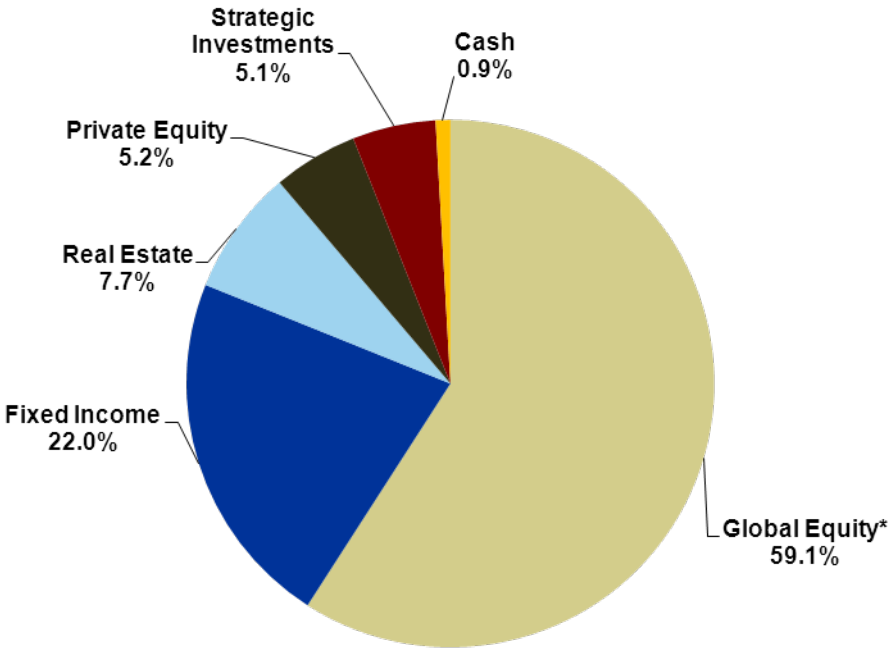
Introduction

- The next few slides provide risk and return characteristics of alternative asset allocation scenarios to consider relative to the current target policy allocation
- We note that the ranges around the target allocation provide SBA Investment Staff with sufficient flexibility to make material shorter-term allocation decisions within the policy ranges established by the investment policy statement
- The actual allocation of the FRS is already significantly overweight to global equity and underweight fixed income relative to policy targets
- When setting asset allocation there are two key Florida statutes that must be taken into account:
  - Section 215.47 (15) that limits the overall allocation to alternative investments to 20% of total fund assets
  - Section 215.47 (20) that limits the investment in foreign securities (corporate obligations and securities of any kind of a foreign corporation) to 35% of total fund assets

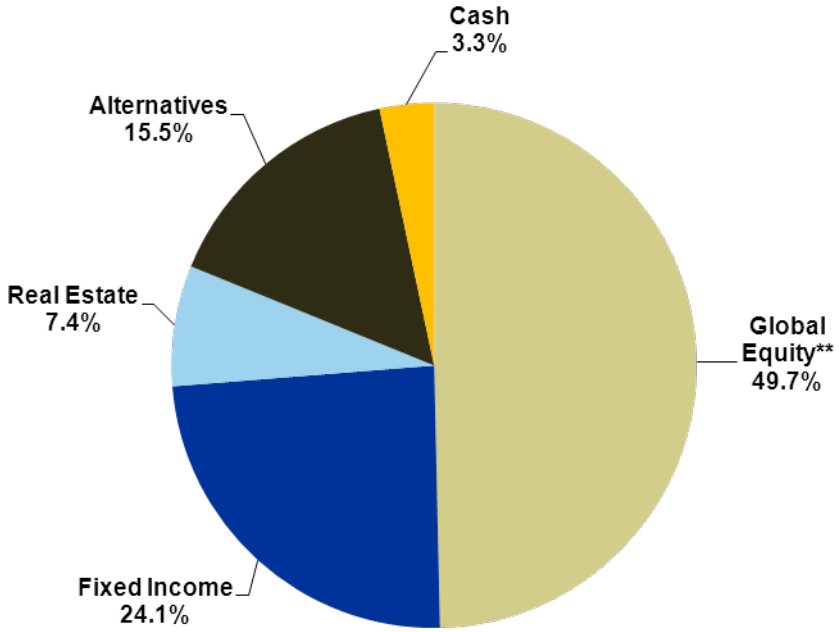
Comparison of Asset Allocation
As of 6/30/2013

FRS Pension Plan vs. Top Ten Defined Benefit Plans

FRS TOTAL FUND



TUCS TOP TEN



*Global Equity Allocation: 27.4% Domestic Equities; 28.3% Foreign Equities;3.5% Global Equities. Percentages are of the Total FRS Fund.

**Global Equity Allocation: 31.1% Domestic Equities; 18.6% Foreign Equities.

Note: The TUCS Top Ten Universe includes $1,159.9 billion in total assets. The median fund size was $115.9 billion and the average fund size was $116.0 billion.

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Asset Allocation Scenarios

Asset Class	Current Target Allocation	Current Actual Allocation	Policy Ranges	Fixed Income to Global Equity (3%)	Fixed Income to SI, PE, & RE (3%)	Fixed Income to SI & RE (7%)**	No Fixed Income
Global Equities	52%	60%	44% - 65%	55%	52%	52%	76%
Fixed Income*	24%	21%	16% - 32%	21%	21%	17%	0%
Real Estate	7%	7%	2% - 12%	7%	8%	8%	7%
Private Equity	5%	5%	0% - 7%	5%	6%	5%	5%
Strategic Investments	11%	5%	0% – 20%	11%	12%	17%	11%
Cash	1%	1%	0% - 9%	1%	1%	1%	1%
Total	100%	100%	--	100%	100%	100%	100%
Expected Nominal Return	7.1%	7.3%	--	7.3%	7.3%	7.5%	8.2%
Expected Real Return	4.6%	4.8%	--	4.8%	4.8%	5.0%	5.7%
Risk	13.1%	14.6%	--	13.7%	13.4%	13.5%	18.1%
Sharpe Ratio	0.382	0.354	--	0.375	0.387	0.397	0.335

**Benchmark: Barclays Intermediate Aggregate Bond Index*

***This scenario includes 22% in alternatives, which is higher than the current statutory limit of 20%*

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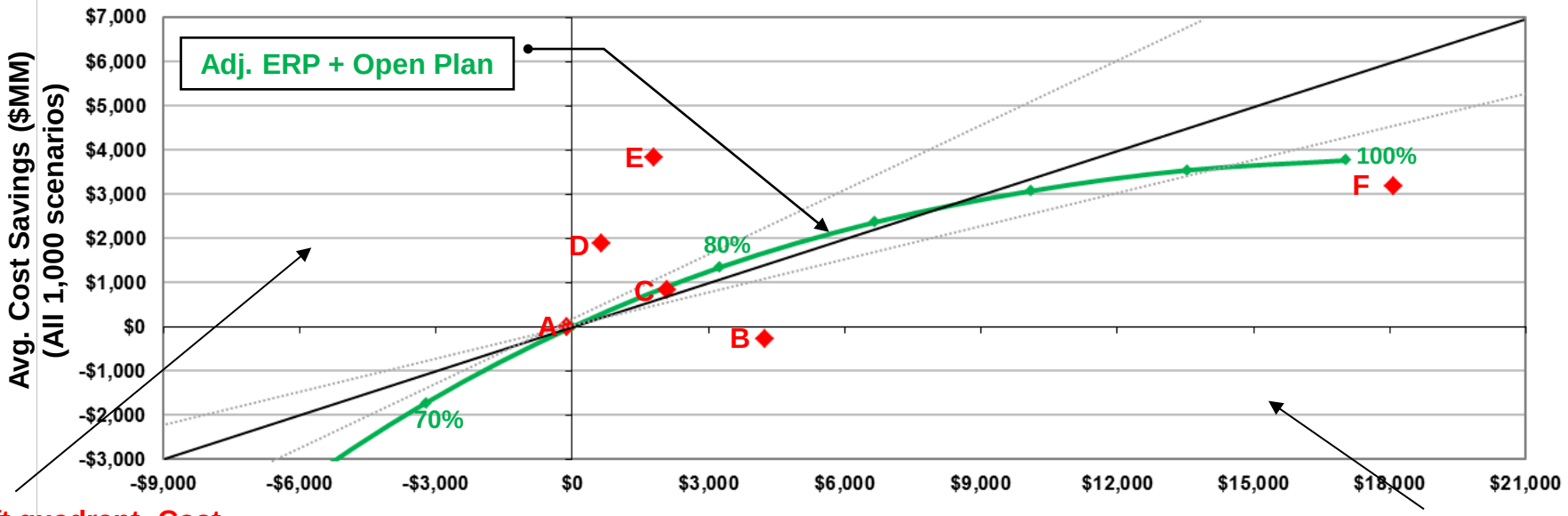
Updated Risk-Reward Analysis: Asset Allocation Options

The red points on the graph indicate the alternative asset allocation scenarios



Top left quadrant: Cost savings with lower risk

Bottom right quadrant: Higher cost with higher risk

	A Current Target	*B* Current Actual	*C* FI to GE (3%)	*D* FI to SI,PE,RE (3%)	*E* FI to SI, RE (7%)	*F* No FI
Risk (increase for worst 20%)	$ (125)	$ 4,255	$ 2,087	$ 642	$ 1,790	$ 18,085
Reward (avg. cost savings)	$ (5)	$ (283)	$ 830	$ 1,886	$ 3,841	$ 3,191
Risk-reward ratio			**2.51**	**0.34**	**0.47**	**5.67**

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Additional Asset Allocation Scenarios

- Below are additional asset allocation scenarios that SBA Staff and HEK considered, but do not view as compelling options compared with those shown on the previous slide
- The first two result in incrementally lower Sharpe ratios as more fixed income is moved to global equity; the third option reflects similar results to moving 3% of fixed income proportionately to SI, PE, and RE (see slide 30), and the last option provides little improvement in the risk-adjusted return relative to moving 6% to SI and 1% to RE (see slide 30)

Asset Class	Fixed Income to Global Equity (5%)	Fixed Income to Global Equity (7%)	Fixed Income to SI (3%)	Fixed Income to Global Equity and SI (7%)
Global Equities	57%	59%	52%	56%
Fixed Income*	19%	17%	21%	17%
Real Estate	7%	7%	7%	7%
Private Equity	5%	5%	5%	5%
Strategic Investments	11%	11%	14%	14%
Cash	1%	1%	1%	1%
Total	100%	100%	100%	100%
Expected Nominal Return	7.3%	7.4%	7.2%	7.4%
Expected Real Return	4.9%	5.0%	4.8%	5.0%
Risk	14.1%	14.6%	13.2%	14.1%
Sharpe Ratio	0.371	0.366	0.388	0.379

**Benchmark: Barclays Intermediate Aggregate Bond Index*

Review of 2013 Asset-Liability Update

IAC Meeting
March 18, 2013

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Agenda

Section 1	Asset Liability Update: - Executive summary - Assumptions - Projected range of results under current policy: Employer cost rate, Funded ratio - Risk reward analysis: Long term economic cost, short term funded ratio shortfall risk - Forward looking issues
Section 2	The Role of Fixed Income
Section 3	Real Return Objective
Section 4	Appendix: Liquidity Analysis

Asset-Liability Update

Executive Summary

- The projected results look very similar to last year:
  - Stable trend lines for both cost rates and funded ratios.
  - Significant range of uncertainty, especially for cost rates.
  - With poor investment results, the funded ratio distributions continue to show that the funding method may be unable to provide a stable “floor” to the plan funded position.
- The baseline risk reward curve supports an increased allocation to risk assets, driven by a relatively high equity risk premium assumption, due to depressed return expectations for fixed income.
  - Sensitivity results using a 100 bp lower equity risk premium support the current policy. Arguably this is a more normal, or equilibrium, assumption.
  - Raises possible issues of tactical moves vs. strategic policy change.
- Some important issues remain unsettled:
  - Legislative changes that might reduce, or eliminate, any future new entrants to the pension plan.
  - Revisions in the actuarial assumptions and/or funding methods.
  - Whether full funding of actuarial contributions will return, after three consecutive years with funding about $1 billion below full levels.

Assumptions

- Equity risk premium assumption
- Asset class and total portfolio expected returns
- Range of results under the simulation model

SBA Approach: Equity Risk Premium[1]

To dampen year-to-year volatility of long-term return assumptions, the SBA averages the U.S. equity risk premiums from four consulting firms and then uses that average risk premium to scale HEK's expected returns for the "Risk Assets"

2013 Average U.S. Equity Risk Premium = Average (U.S. Equity Return – U.S. Bond Return) = ***4.76%***

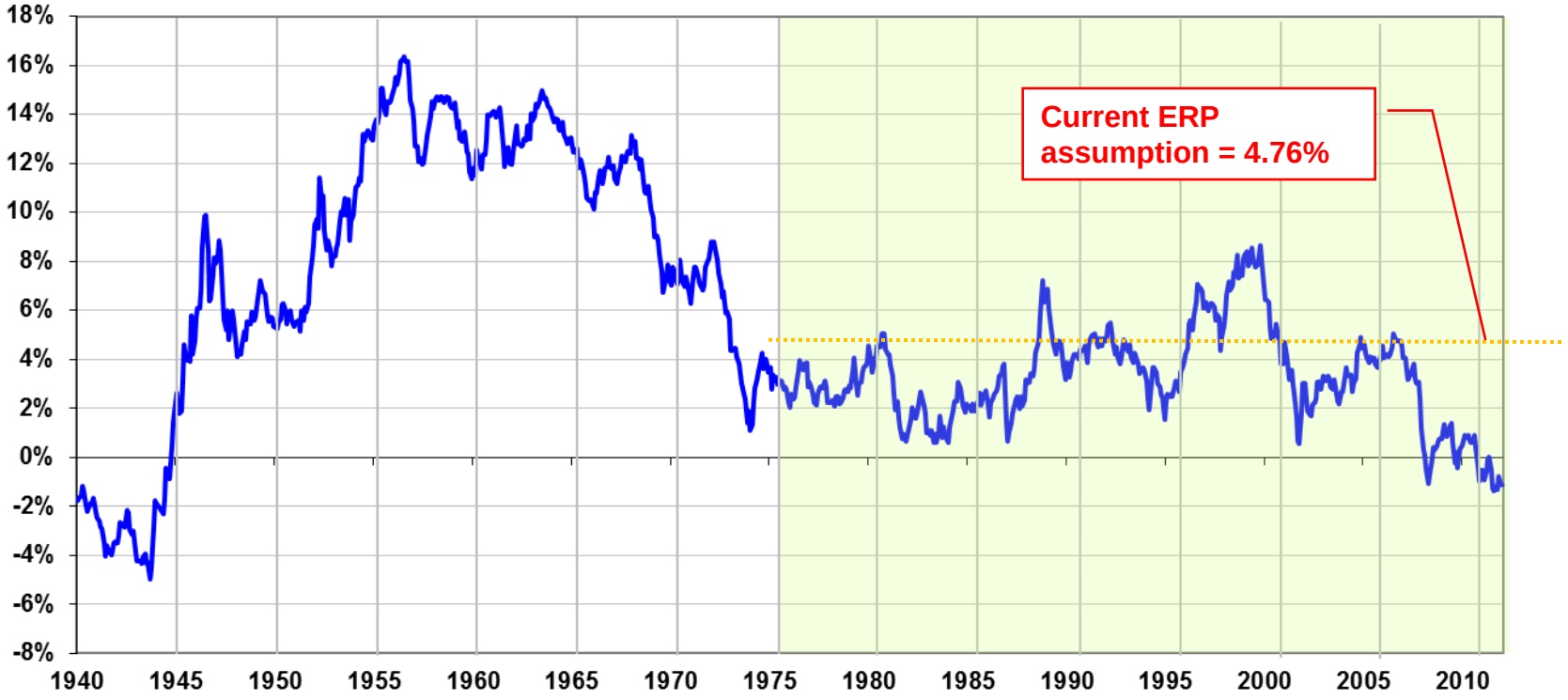
	Equity Risk Premium			
	2010 Asset/ Liability Study	2011 Asset/ Liability Update	2012 Asset/ Liability Update	2013 Asset/ Liability Update
HEK	2.40%	3.60%	4.50%	5.10%
Callan	4.00	4.25	4.50	5.15
Wilshire	3.25	3.50	4.65	4.50
Mercer	3.80	3.80	3.80	4.30
Average	**3.36%**	**3.79%**	**4.36%**	**4.76%**

All returns are 15-year geometric average (compounded) expected returns.

[1]Equity Risk Premium is defined as the excess return earned over bonds that compensates investors for taking on higher risk.

Historical and Expected Equity Risk Premium

- This graph shows the historical 15-year moving average of the U.S. equity risk premium. The shaded section captures the experience since 1960 – so basically the last 50+ years. During this period the average ERP has been 3.26%.



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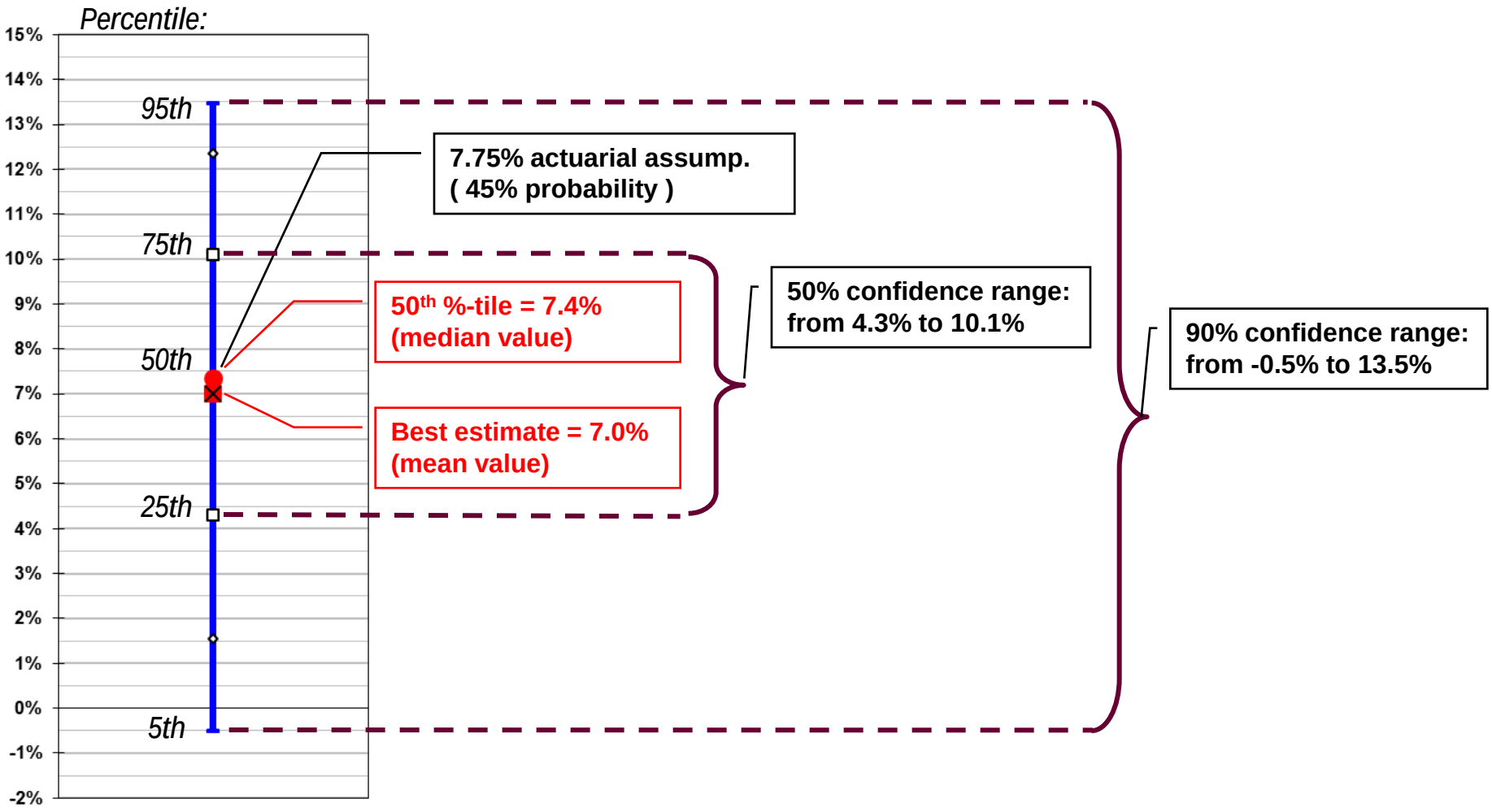
Best Estimate Returns:
Current Investment Policy (75% Risk Assets / 25% Fixed Income)

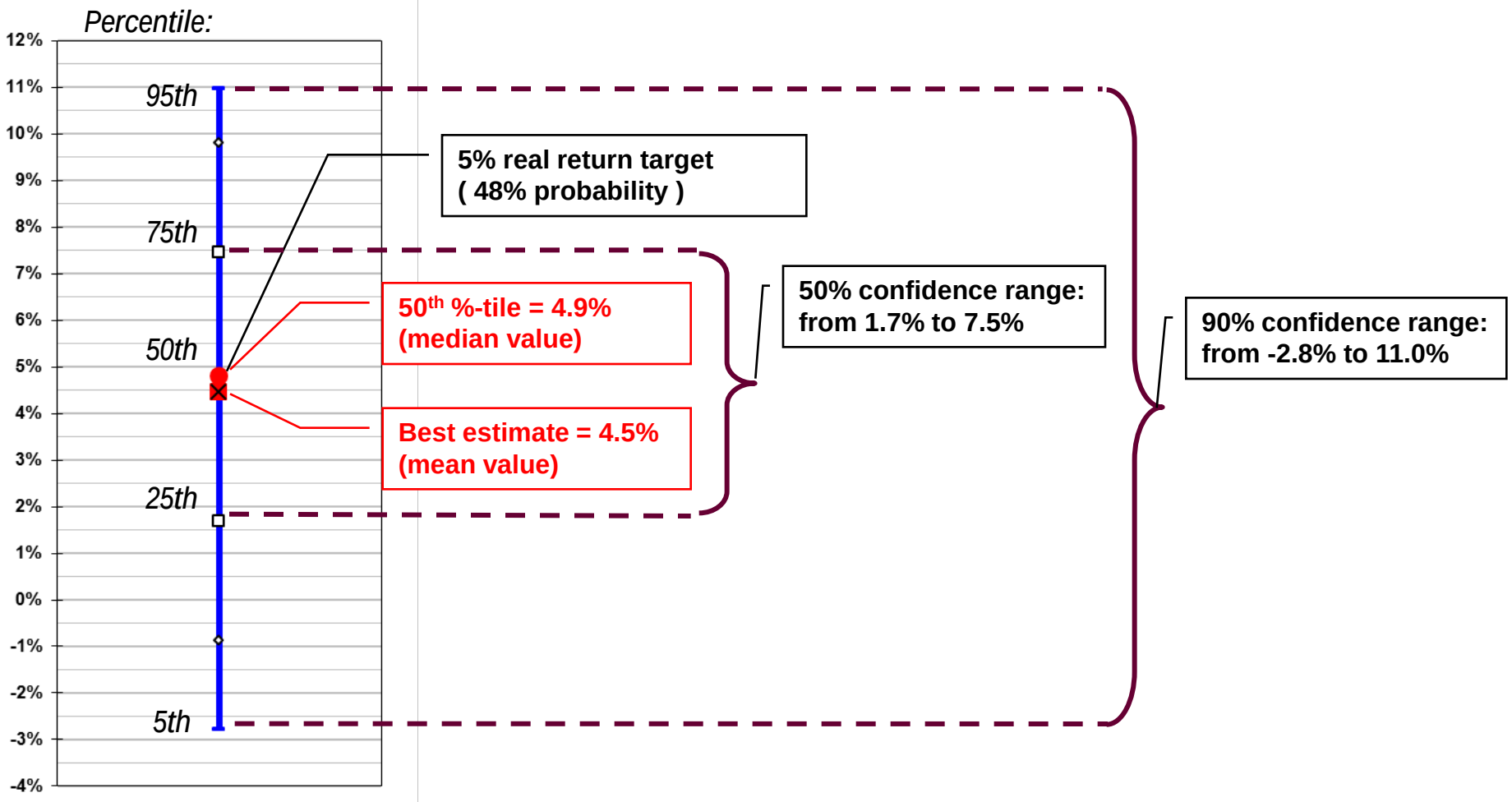
	Current Policy Allocation Target*	Expected 15-Year Return	Volatility (Standard Deviation)**	
Global Equity	52%	7.90%	21.5%	Risk Assets
Private Equity	5%	9.50%	28.0%	
Real Estate	7%	7.30%	15.5%	
Strategic Investments				
Debt-Oriented	3%	6.90%	12.2%	
Hedge Funds (Absolute Return)	2%	5.90%	8.3%	
Hedge Funds (Equity Long/Short)	2%	6.50%	11.2%	
Hedge Funds (Open Mandate)	2%	7.10%	8.2%	
Infrastructure	2%	8.10%	18.0%	
US Bonds	24%	2.75%	3.7%	Fixed Income
Cash	1%	2.10%	1.5%	
Inflation		2.35%	--	
Total Portfolio Expected 15-Year Return Statistics				
Nominal Expected Return (Gross)		7.14%	--	
Expenses		0.14%	--	
Nominal Expected Return (Net)		**7.00%**	13.1%	
Real (After-Inflation) Expected Return (Net)		**4.50%**	--	

** Allocation targets based on "Expanded Authority" policy, with typical diversification within the "Strategic" class*
*I** In two out of three years, expect annual asset class return to be within +/-1 standard deviation of expected return*

Range of Possible 15-Year Compound Returns – Net Nominal



Range of Possible 15-Year Compound Returns – Net Real



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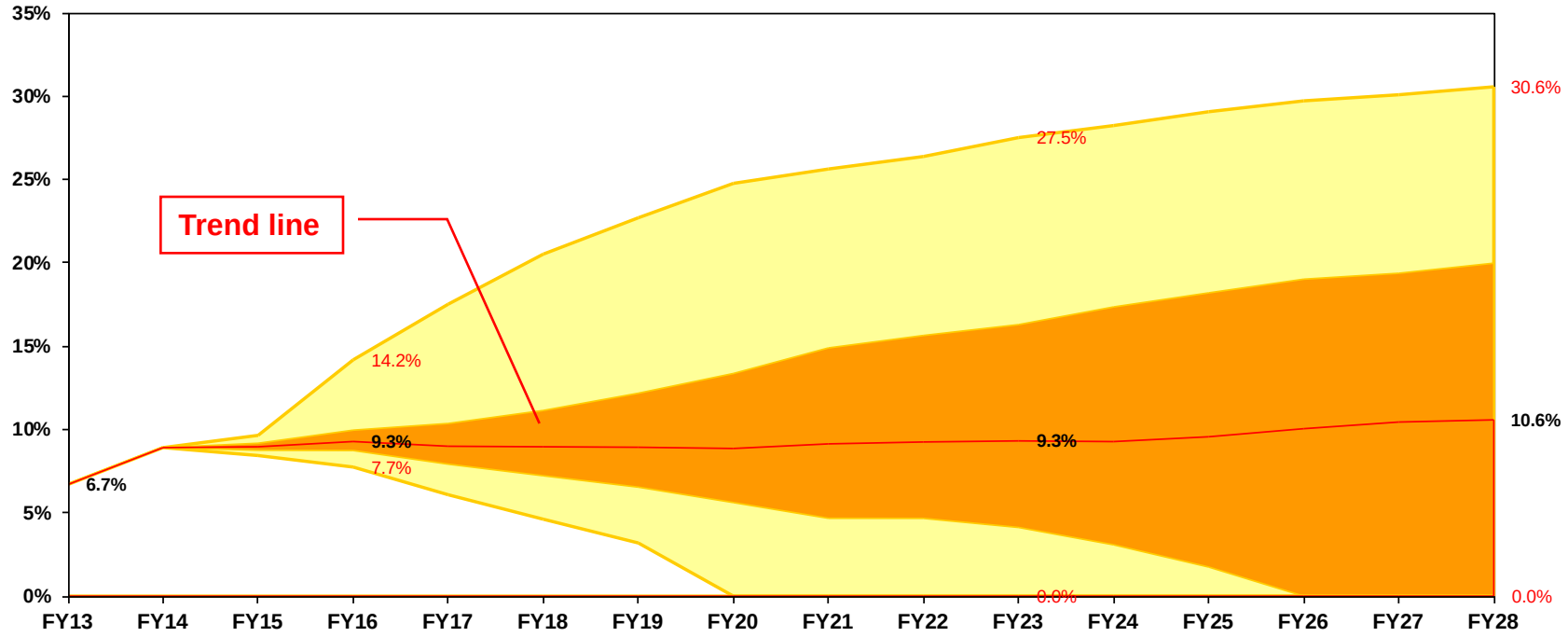
Projected Results From the Asset-Liability Model

- Range of results for the next 15 years:
  - Employer contribution rate, based on current actuarial methods and assumptions
  - Funded ratio
    - Assumes actuarial contributions are fully funded
    - Based on the smoothed asset value
- Assumes that defined benefit pension plan remains open, and that 75% of new hires elect into the pension plan

Range of Employer Contribution Rates (DB Plan Only) – Current 75% Risk Asset Allocation



%-tile values:

5%	6.7%	8.9%	8.4%	7.7%	6.1%	4.6%	3.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
25%	6.7%	8.9%	8.8%	8.7%	7.9%	7.2%	6.5%	5.6%	4.7%	4.7%	4.1%	3.1%	1.7%	0.0%	0.0%	0.0%
50%	**6.7%**	**8.9%**	**9.0%**	**9.3%**	**9.0%**	**9.0%**	**8.9%**	**8.9%**	**9.1%**	**9.2%**	**9.3%**	**9.3%**	**9.6%**	**10.0%**	**10.4%**	**10.6%**
75%	6.7%	8.9%	9.2%	10.0%	10.4%	11.1%	12.2%	13.4%	14.9%	15.6%	16.3%	17.3%	18.2%	19.0%	19.4%	20.0%
95%	6.7%	8.9%	9.6%	14.2%	17.5%	20.5%	22.7%	24.8%	25.6%	26.4%	27.5%	28.2%	29.1%	29.7%	30.1%	30.6%

Dark shaded area indicates the 50% probability zone, and light shaded area indicates the 90% probability zone.

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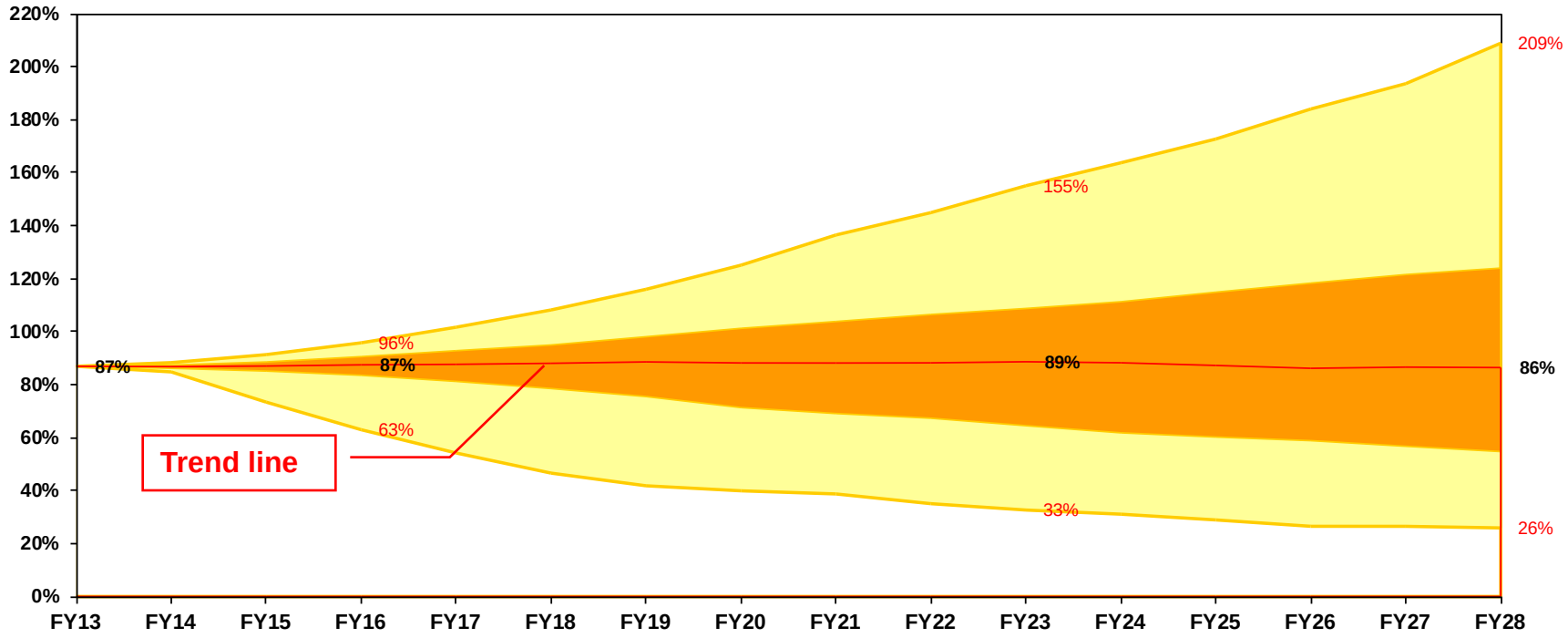
Range of Funded Ratios – Current 75% Risk Asset Allocation



%-tile values:

5%	87%	85%	73%	63%	54%	47%	42%	40%	39%	35%	33%	31%	29%	26%	26%	26%
25%	87%	86%	85%	83%	81%	78%	75%	71%	69%	67%	64%	62%	60%	59%	57%	55%
50%	**87%**	**87%**	**87%**	**87%**	**88%**	**88%**	**89%**	**88%**	**88%**	**88%**	**89%**	**88%**	**87%**	**86%**	**87%**	**86%**
75%	87%	87%	89%	91%	93%	95%	98%	101%	104%	106%	109%	111%	115%	118%	122%	124%
95%	87%	88%	91%	96%	102%	108%	116%	125%	136%	145%	155%	164%	173%	184%	194%	209%

Dark shaded area indicates the 50% probability zone, and light shaded area indicates the 90% probability zone.

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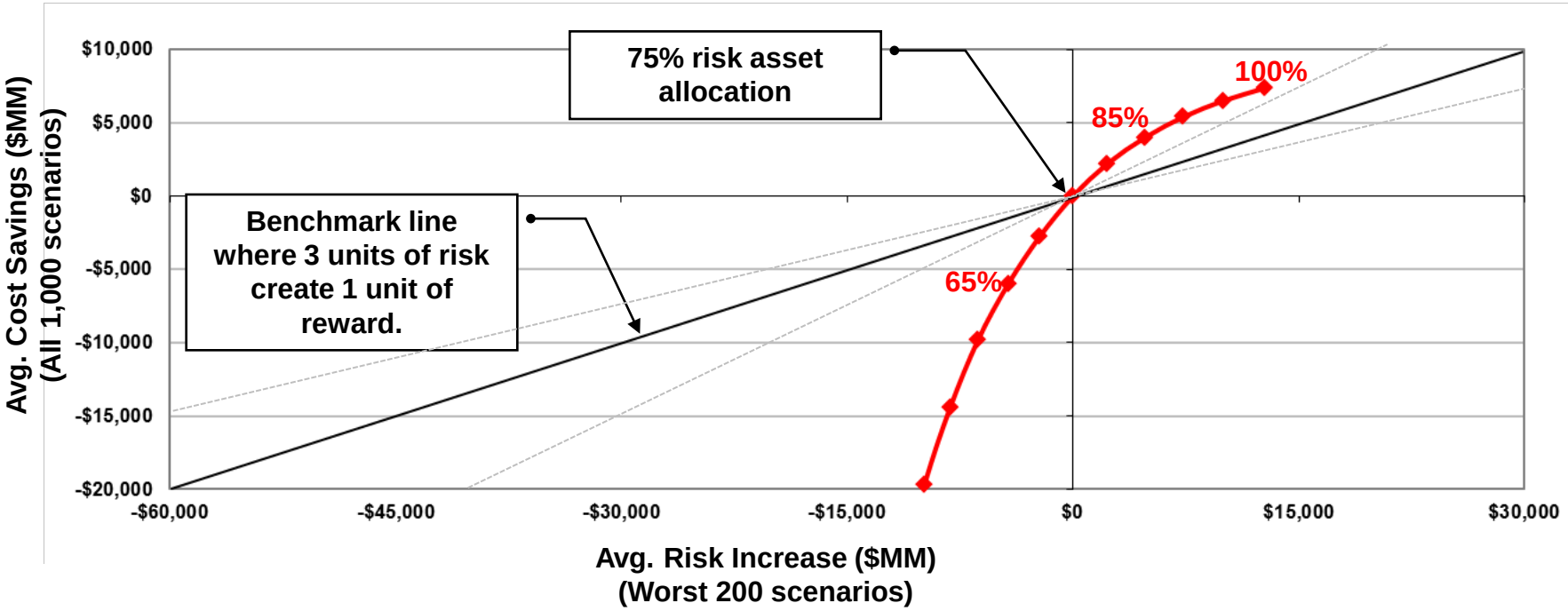
Risk – Reward Analysis

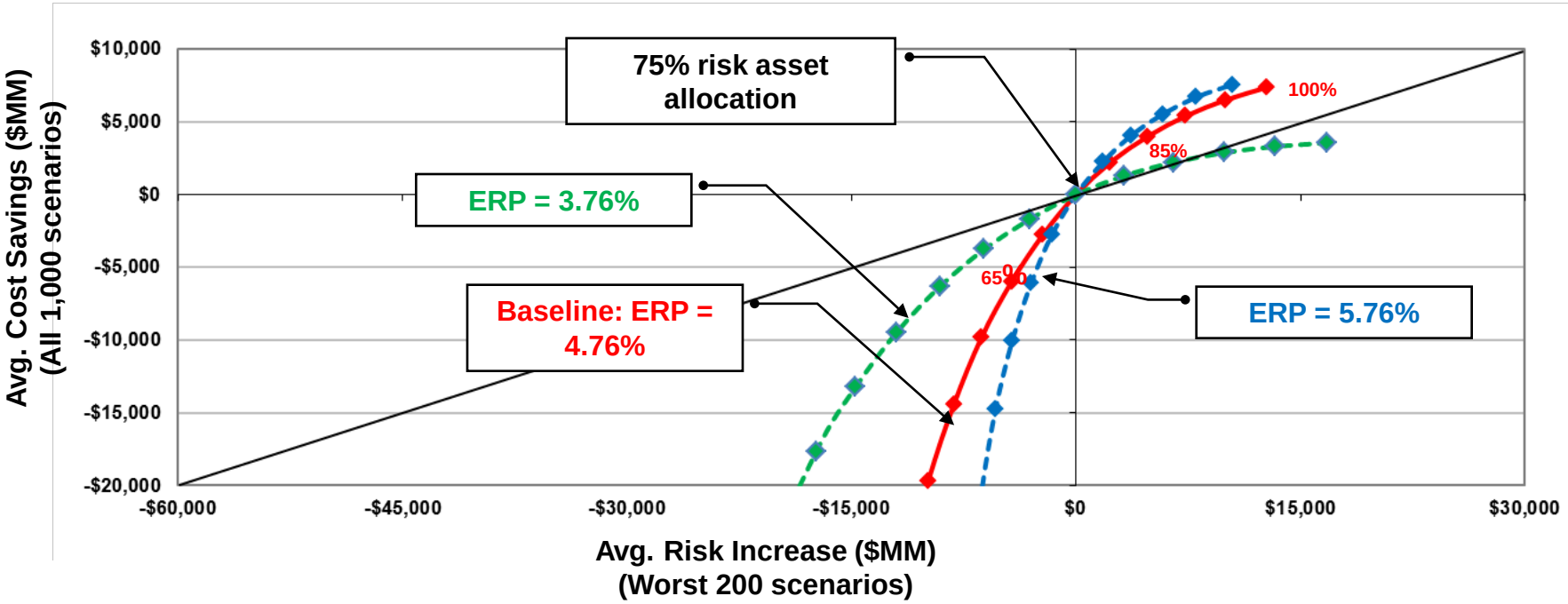
- Long-term risk-reward based on “Economic Cost”
  - Economic Cost reflects the contributions required over the next 15 years, plus (or minus) an adjustment to reflect the plan’s unfunded liability (or surplus) at the end of the 15 year projection period.
  - Our reward measure is the average Economic Cost across all 1,000 scenarios.
  - Our risk measure is the average Economic Cost for the worst 20%, or 200 scenarios, reflecting the higher cost when investment returns underperform expectations.
- Short-term risk analysis, focused on funded ratio shortfall probabilities.

2013 Risk-Reward Analysis:
Based on Long-Term Economic Cost



Observation: The risk-reward curve continues to suggest a higher allocation to risk assets. However, there are no significant marginal gains beyond an 85% allocation target.

2013 Risk-Reward Analysis:
Sensitivity to Equity Risk Premium Assumption

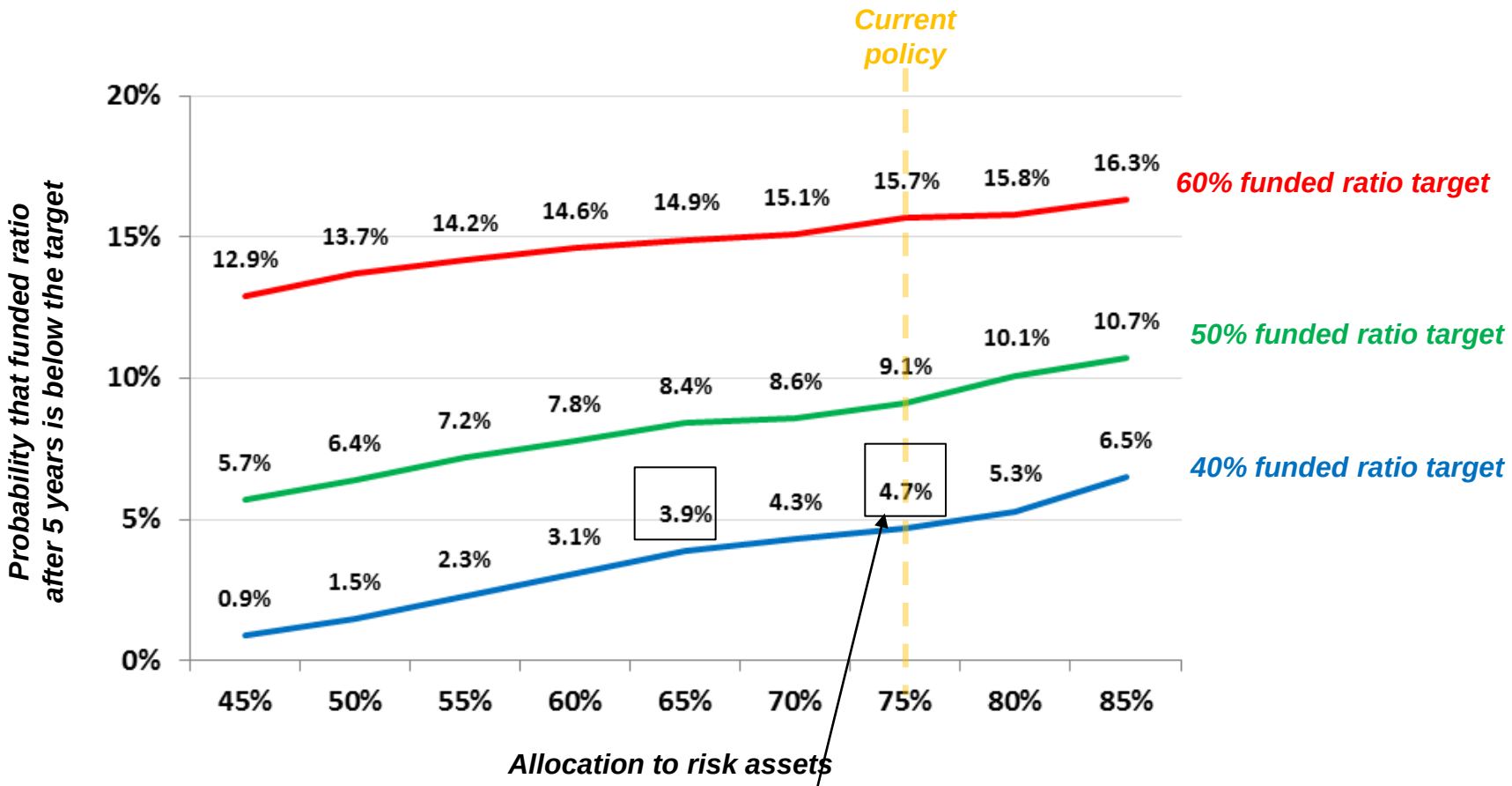


Observation: The green line above, based on a 3.76% equity risk premium assumption supports the current 75% allocation to risk assets. This puts a special focus on the fact that the current baseline equity risk premium assumption of 4.76% may be temporary, and will become lower as fixed income return expectations return to more normal levels.

Short-Term Risk

- Controlling short-term risk is an important part of the investment policy.
- We can use the asset-liability results to explore short term risk by using a funded ratio shortfall metric, for example “What is the probability that the funded status after 5 years falls to 60% or below?”

Short-Term Funded Ratio Shortfall Analysis



Under current policy there is a 4.7% chance that the funded ratio after 5 years will be below 40%. With a 65% risk asset allocation, this probability falls to 3.9%.

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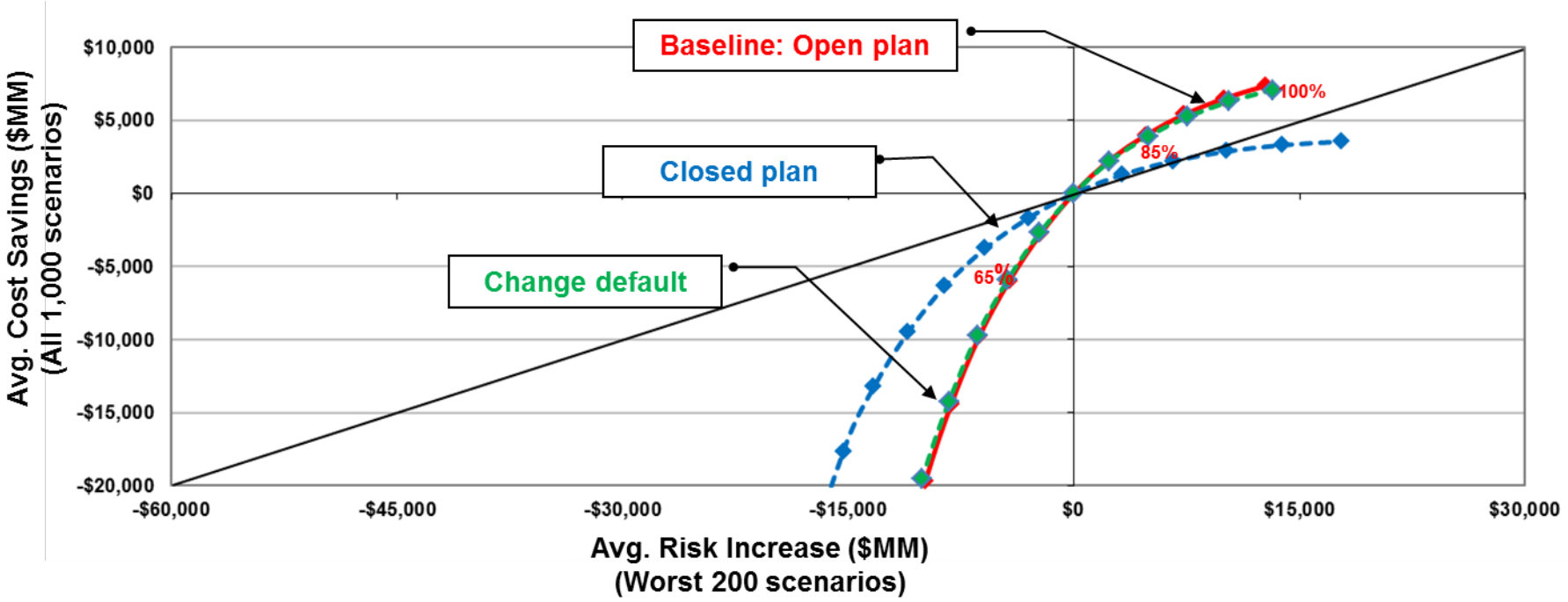
Impact of Pension Funding and/or Benefit Policy Changes

- Issue -- Continue to defer funding of UAL.
  - In each of the last three years funding has been about $1bn short of the full actuarial rate.
  - Shortfall is amortized over 30 years and added to future cost rate.
  - Current expectation is that state will return to full funding.
- Issue – Change in actuarial assumptions for cost calculations
  - For example, lower assumed return assumption from 7.75% to 7.25% and lower wage increase assumption from 4% to 3%.
  - Employer cost would increase (maybe about 2% of payroll).
  - Reported funded status would decrease (maybe about 7-8 percentage points).
  - The last Actuarial Assumption Estimating Conference deferred consideration of any changes.
- Issue – Revised funding cost methodology
  - Goal would be to provide more funding support if return targets are not met, and mitigate the risk of persistent low funded ratios if returns fall below target levels.
  - Could include changes in the amortization method (either shorter period and/or level dollar amounts, instead of level percent of payroll method).
  - Could include a change in the actuarial cost method (switch to “traditional” Entry Age, from the current “ultimate” Entry Age method).
  - The last Actuarial Assumption Estimating Conference deferred consideration of any changes.

Impact of Pension Funding and/or Benefit Policy Changes (cont'd.)

- Issue -- Switch the default election from DB pension (now) to Investment Plan.
  - Projected IP elections likely to move from 25% up to 50%+. We ran model with a 50% IP election rate.
  - The risk reward curve shift is very slight.
- Issue -- Close the DB pension to new hires.
  - The risk reward curve shifts toward a more conservative policy, reflecting a shortened time horizon. The effect will be more pronounced over time, and/or as the equity risk premium moves down from its current level. This curve offers support for the current policy.



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The Role of Fixed Income

Role of Fixed Income

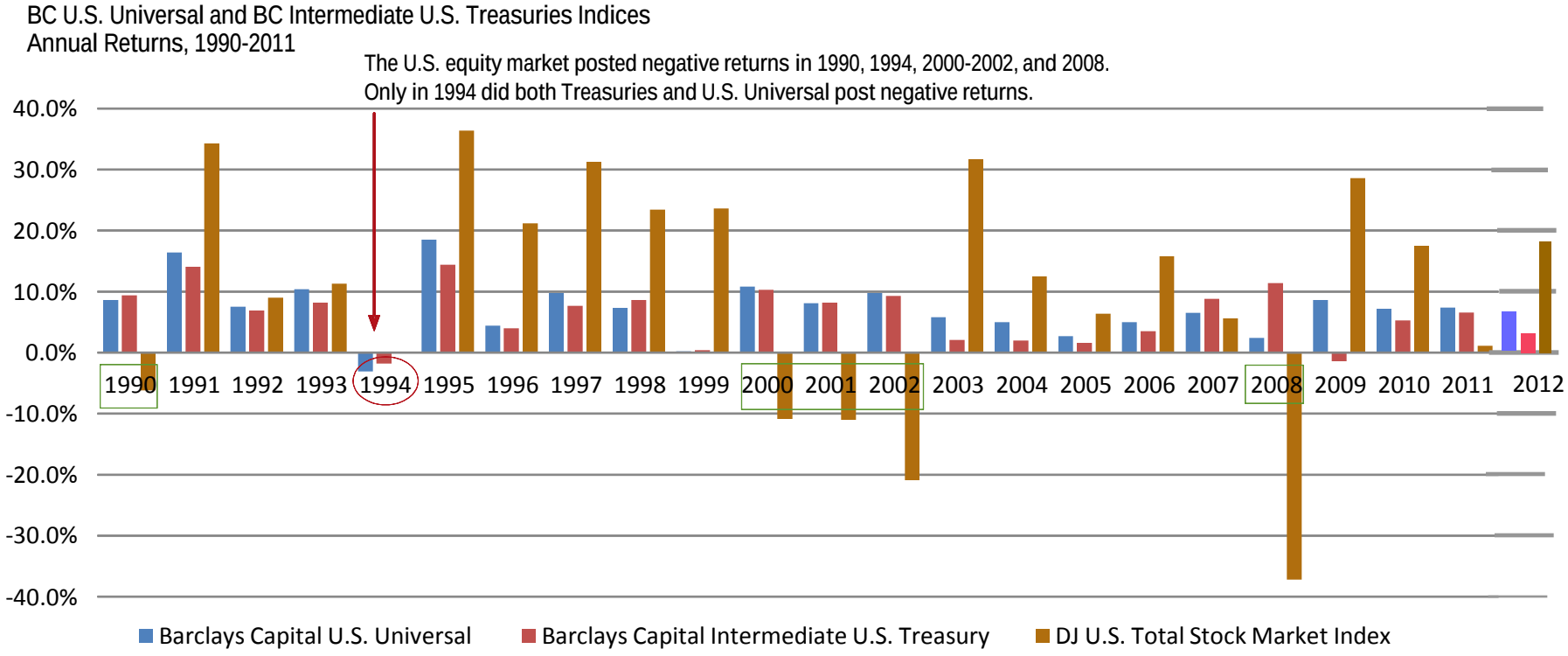
- Downside Protection: *Anchor to Windward*
  - Primary goal is to diversify “risky” assets
  - Higher-quality bias, and significant Treasury exposure to be effective
  - Dampens overall portfolio volatility
  - Avoids non-investment grade
  - Performs well in periods of stress and flight to quality, but lags in normal and rising markets
  - Tail hedge: long Treasury bonds

- Source of Value-Added: *Total Return*
  - Risk diversification is still a significant goal
  - Total return achieved through active management
  - Active decisions regarding duration, yield curve, sector allocations, security selection that may differ, sometimes significantly, from the composition and characteristics of the benchmark
  - Exposure to non-dollar bonds, emerging market debt and high yield (non-investment grade)
  - Seldom hold meaningful allocations to U.S. Treasury securities
  - Capital appreciation is a component of the mandate, not solely income

- Match duration of liabilities: *Liability Driven Investing*
  - More appropriate for corporate pension plans that discount liabilities based on corporate bond rates

Downside Protection

- High-quality, investment-grade bonds and Treasury securities provide strong downside protection in times of equity market stress.



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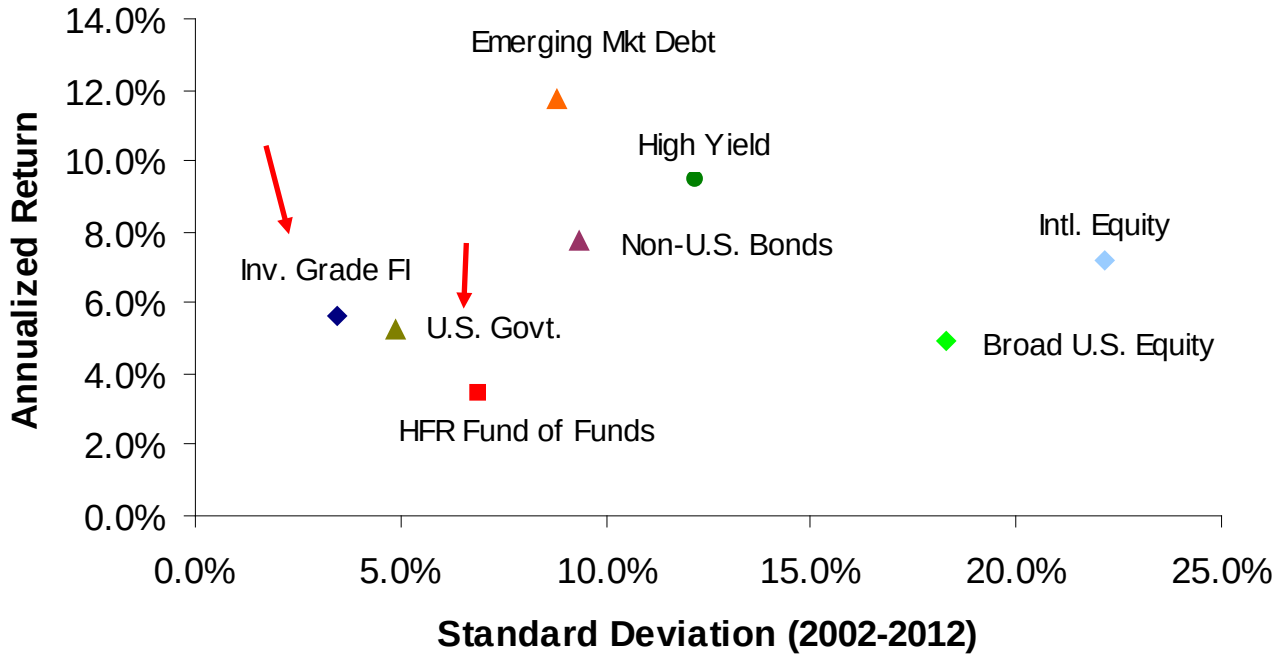
Lower Risk than Equities

- US Treasuries and investment grade fixed income exhibit lower risk than other riskier bond sectors and equities



As of 12/31/2012

Source: Barclays Live

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Low Correlation to Equities

Correlation Matrix

11 Years Ending 12/31/2012

	DJ U.S. Total Stock Market Index	MSCI All-Country World ex-U.S. Index	Barclays US Govt Index	Barclays Aggregate Bond Index	Barclays High Yield Bond Index	JPM EMBI Global Index	SSB NON-U.S. WORLD GOV'T BOND	HFR Fund of Funds Index
DJ U.S. Total Stock Market Index	**1.00**							
MSCI All-Country World ex-U.S. Index	0.92	**1.00**						
Barclays US Govt Index	-0.60	-0.55	**1.00**					
Barclays Aggregate Bond Index	-0.32	-0.24	0.89	**1.00**				
Barclays High Yield Bond Index	0.79	0.77	-0.51	-0.11	**1.00**			
JPM EMBI Global Index	0.63	0.62	-0.11	0.24	0.80	**1.00**		
SSB NON-U.S. WORLD GOV'T BOND	0.02	0.20	0.44	0.53	0.01	0.20	**1.00**	
HFR Fund of Funds Index	0.76	0.86	-0.55	-0.26	0.72	0.54	0.03	**1.00**

- Investment grade fixed income provides desired diversification benefit with low to negative correlation to major risky asset classes

Fixed Income Duration Comparison

Asset Class	Florida Retirement System	Teachers' Retirement System of Texas	New Jersey Division of Investment	New York State Teachers	New York State Common	Employees' Retirement System of Texas	Colorado Public Employees' Retirement Association
Fixed Income Policy Allocation	24%	18%	26%	28%	22%	15%	25%
Duration	4.7	13.6	9.4	3.4	4.7	3.8	5.0
Fixed Income Benchmark	Barclays U.S. Aggregate Index	Barclays Long Treasury Index/Barclays U.S. TIPS Index	Composite Benchmark[1]	Composite Benchmark[2]	Barclays U.S. Aggregate Index	U.S. Intermediate Treasury Index	Barclays Universal Index

Notes on the Table:

- The Employees' Retirement System of Texas also allocates 10% to Global Credit – high yield, emerging market debt, and bank loans and is considered part of the "risky" asset category along with equities, alternatives, and real assets

- The Teacher Retirement System of Texas' duration is a weighted average of the benchmark durations and policy weight as the actual duration was unavailable

- New York State Common also holds an additional 8% in Treasury Inflation Protected Securities (TIPS) that is benchmarked to the Salomon Smith Barney TIPS Index

- 2% of Colorado Public Employees' Retirement Association's fixed income asset class benchmark is the Barclays Long Government/Credit Index

[1]Composite Benchmark = 9% Barclays U.S. Government Bond Index, 48% Barclays U.S. Credit Index, 14% Long TIPS, 5% Barclays Long Government Bond Index, 24% Barclays U.S. Long Credit Index

[2]Composite Benchmark = Barclays U.S. Aggregate Bond Index, Barclays Global Aggregate Bond Index, and Barclays CMBS Index

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Observations

- Interest rates are difficult to predict
  - Example:
    - Rates were at a historic lows in October 2011 (10-year: 1.8%; 30-year: 2.8%)
    - Investors had significant concerns about rates
    - By July 2012, rates were even lower (10-year: 1.5%; 30-year: 2.5%)

- Long term perspective
  - Duration of liabilities (13 years) is significantly longer than duration of fixed income (4.7 years)

- Options to address concern about rates:
  - Shorten duration
  - Diversify into other sectors of the bond market including bank loans, emerging market debt, and high yield
  - Lower overall allocation to fixed income

➔ Evaluate these options in the context of the asset/liability study

Real Return Objective

Overview

- Investment Policy Statement: “The investment objective of the Board is to provide investment returns sufficient for the plan to be maintained in a manner that ensures the timely payment of promised benefits to current and future participants and keeps the plan cost at a reasonable level. To achieve this, a long-term real return approximating 5% per annum (compounded and net of investment expenses) should be attained, consistent with the actuarial investment return assumption of 7.75%. To manage these risks, the volatility of annual returns should be reasonably controlled.”

- To achieve these goals set by the Investment Policy Statement, the Board is responsible for setting asset allocation policy and risk level for the FRS with
  - Considerations for diversification, liquidity, governance, risk tolerance, and resources
  - Recommendations from IAC, SBA staff, and consultants

- The actuarial assumed rate of return (30+ year nominal return assumption – currently 7.75%) is then driven in part by the policy asset allocation

Absolute Nominal Target Rate of Return & Actuarial Return Assumption

Absolute Nominal Target Rate of Return: CPI + 5%	**Actuarial Return Assumption: 7.75%**
▪ Approved by Trustees as part of the Investment Policy Statement ▪ Provides a measure of long term investment success (policy and implementation) ▪ More responsive to economic conditions than nominal return ▪ Real return objective is appropriate because liabilities affected by price and wage inflation ▪ Set to be roughly consistent with 7.75% and with capital market assumptions ▪ Consistent with investment objectives of some non-pension investors ▪ Not universal public pension plan practice to set an explicit target rate of return	▪ Annually set by Actuarial Estimating Conference ▪ Rate of return assumption needed to discount liabilities and for calculation of the plan's long term cost ▪ Intended to be driven by, not drive, asset allocation policy ▪ Intended to reflect the expectation of the plan's investment return based on the long-term asset allocation policy ▪ Actuarial expected return used by all public plans

Total Fund Benchmarks Used in Reporting[1]

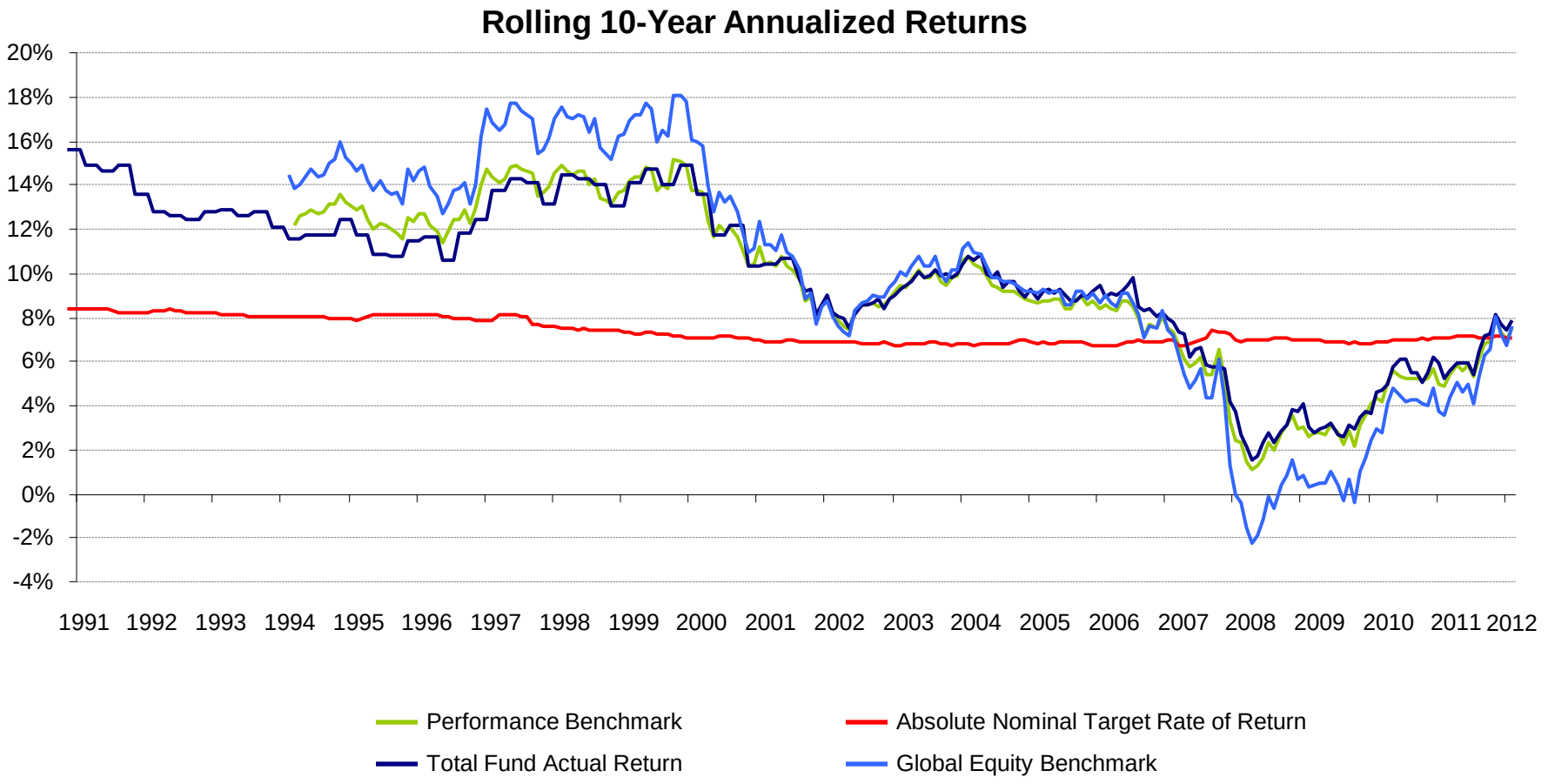
Two Total Fund Benchmarks

- Absolute Nominal Target Rate of Return = Inflation (CPI) + 5%
  - Corresponds to the Board's **absolute** investment objective described previously

- Performance Benchmark = Weighted average of the returns to passive benchmarks for each of the asset classes
  - In order to achieve the investment objective, the Board sets a **relative** objective for the Executive Director: achieve or exceed the return on a performance benchmark consistent with the chosen investment strategy (asset allocation)
  - The expectation is that this return will equal or exceed the absolute target rate of return long-term

[1] Benchmark descriptions adapted from the Florida Retirement System Defined Benefit Plan Investment Policy Statement

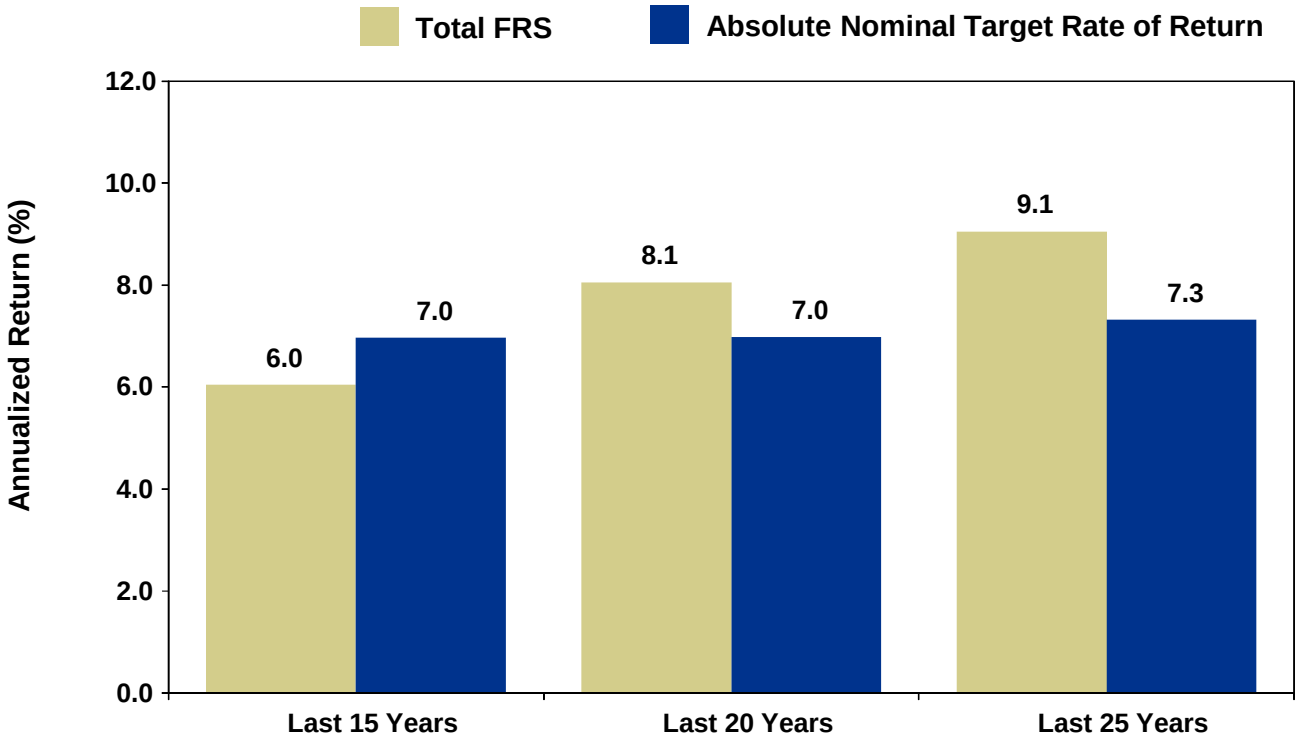
Historical Actual and Benchmark Performance



Hewitt enniskupp
An Aon Company

FRS Pension Plan Investment Results: Periods Ending 12/31/2012

Long-Term FRS Pension Plan Performance Results
vs. SBA's Long-Term Investment Objective



Hewitt enniskupp
An Aon Company

Appendix: Liquidity Analysis

Sources and Uses of Liquidity

Outflow: Benefit Payments (Annuities / DROP / ABO Transfers)

	------ Annual as % of fund ------				
Percentile	***FY2014***	***FY2015***	***FY2016***	***FY2017***	***FY2018***
95%	7.6%	11.6%	11.6%	13.7%	15.8%
75%	6.9%	9.1%	8.1%	8.7%	9.1%
50%	6.7%	8.3%	7.1%	7.0%	7.3%
25%	6.5%	7.7%	6.3%	6.1%	6.1%
5%	6.2%	6.9%	5.5%	5.0%	4.9%

Inflow: Employer & Employee Contributions

	------ Annual as % of fund ------				
Percentile	***FY2014***	***FY2015***	***FY2016***	***FY2017***	***FY2018***
95%	2.6%	3.4%	5.0%	7.5%	9.5%
75%	2.4%	2.5%	2.7%	3.0%	3.3%
50%	2.3%	2.3%	2.3%	2.2%	2.2%
25%	2.2%	2.1%	2.0%	1.8%	1.6%
5%	2.1%	1.8%	1.6%	1.2%	1.0%

Sources and Uses of Liquidity (Cont.)

Net Cash Outflow: Benefit Payments – Employer & Employee Contributions

	------ Annual as % of fund ------				
Percentile	***FY2014***	***FY2015***	***FY2016***	***FY2017***	***FY2018***
95%	5.0%	8.3%	6.9%	6.9%	7.0%
75%	4.5%	6.5%	5.3%	5.4%	5.6%
50%	4.4%	6.0%	4.8%	4.8%	4.9%
25%	4.2%	5.6%	4.4%	4.3%	4.4%
5%	4.0%	5.0%	3.9%	3.7%	3.9%

Internal Fund Cash Flow

Recurring Cash Yield on Investments

		Cash Return Estimate	
Asset Class	Policy Allocation	Long-Term	Stressed
U.S. Equities	23%	3.6%	2.0%
Foreign Equities	29%	4.2	2.0
Core Fixed Income	24%	2.7	2.7
Cash	1%	1.0	1.0
Real Estate	7%	4.3	3.0
Private Equity	5%	0.0	0.0
Strategic Investments	11%	0.0	0.0
Total Fund	**100%**	**3.0%**	**1.9%**

Non-Recurring Cash Flow – Range for RE + PE + SI combined likely to be -0.5% to -1.5% of total fund value.

Alternative Approaches

- Current: use 1% cash + asset class liquidity assessments, as required.
- Increase cash allocation
  - Right now the difference between our expected 15-year returns for cash vs core fixed income are relatively minor.
  - With a normal yield curve, the cash drag effect would be more significant.
- Liquid beta using futures overlay
- Liquidity barbell as part of fixed income class
  - Modeled last year, with results showing feasibility in broad terms.

Appendix: Impact of Changing Risk Asset Allocation from 75% to 85%

- **This table shows the change in the distribution of projected employer cost rates:**

	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028
Current 75% risk asset allocation:																
Percentiles:																
5%	6.7%	8.9%	8.4%	7.7%	6.1%	4.6%	3.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
10%	6.7%	8.9%	8.6%	8.1%	6.8%	5.3%	4.6%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
25%	6.7%	8.9%	8.8%	8.7%	7.9%	7.2%	6.5%	5.6%	4.7%	4.7%	4.1%	3.1%	1.7%	0.0%	0.0%	0.0%
50%	6.7%	8.9%	9.0%	9.3%	9.0%	9.0%	8.9%	8.9%	9.1%	9.2%	9.3%	9.3%	9.6%	10.0%	10.4%	10.6%
75%	6.7%	8.9%	9.2%	10.0%	10.4%	11.1%	12.2%	13.4%	14.9%	15.6%	16.3%	17.3%	18.2%	19.0%	19.4%	20.0%
90%	6.7%	8.9%	9.4%	11.1%	14.6%	16.4%	18.5%	21.4%	23.2%	23.8%	24.8%	25.5%	26.0%	26.5%	26.7%	27.0%
95%	6.7%	8.9%	9.6%	14.2%	17.5%	20.5%	22.7%	24.8%	25.6%	26.4%	27.5%	28.2%	29.1%	29.7%	30.1%	30.6%
Average	6.7%	8.9%	9.0%	9.7%	9.8%	10.0%	10.2%	10.3%	10.5%	10.6%	10.7%	10.9%	11.1%	11.3%	11.5%	11.7%
85% risk asset allocation:																
Percentiles:																
5%	6.7%	8.9%	8.4%	7.5%	5.5%	3.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
10%	6.7%	8.9%	8.6%	7.9%	6.3%	4.6%	2.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
25%	6.7%	8.9%	8.8%	8.6%	7.6%	6.7%	5.7%	4.7%	4.1%	2.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
50%	6.7%	8.9%	9.0%	9.2%	8.8%	8.6%	8.4%	8.3%	8.5%	8.4%	8.2%	8.2%	8.3%	8.8%	9.1%	9.0%
75%	6.7%	8.9%	9.2%	9.9%	10.3%	11.2%	12.2%	13.5%	15.0%	16.0%	16.8%	17.7%	18.7%	19.3%	19.7%	20.5%
90%	6.7%	8.9%	9.4%	11.3%	15.2%	17.4%	19.6%	22.2%	24.4%	24.9%	25.8%	26.6%	27.0%	27.3%	27.6%	27.8%
95%	6.7%	8.9%	9.6%	14.9%	18.5%	21.6%	23.9%	26.0%	26.9%	27.5%	28.6%	29.8%	30.4%	30.7%	31.2%	31.6%
Mean	6.7%	8.9%	9.0%	9.7%	9.7%	9.8%	9.8%	9.9%	10.1%	10.2%	10.3%	10.5%	10.7%	10.9%	11.0%	11.2%
Change:																
Percentiles:																
5%	0.0%	0.0%	0.0%	-0.2%	-0.6%	-1.2%	-3.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
10%	0.0%	0.0%	0.0%	-0.2%	-0.5%	-0.7%	-1.8%	-3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
25%	0.0%	0.0%	0.0%	-0.1%	-0.3%	-0.5%	-0.8%	-0.9%	-0.6%	-2.1%	-4.1%	-3.1%	-1.7%	0.0%	0.0%	0.0%
50%	0.0%	0.0%	0.0%	-0.1%	-0.2%	-0.3%	-0.5%	-0.6%	-0.7%	-0.8%	-1.1%	-1.1%	-1.2%	-1.2%	-1.3%	-1.6%
75%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.1%	0.0%	0.1%	0.1%	0.4%	0.5%	0.4%	0.5%	0.3%	0.3%	0.6%
90%	0.0%	0.0%	0.0%	0.2%	0.6%	1.0%	1.2%	0.8%	1.2%	1.1%	1.0%	1.1%	1.1%	0.8%	0.9%	0.8%
95%	0.0%	0.0%	0.0%	0.7%	1.0%	1.1%	1.1%	1.2%	1.2%	1.1%	1.1%	1.5%	1.3%	1.0%	1.1%	1.1%
Mean	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.2%	-0.4%	-0.4%	-0.4%	-0.4%	-0.5%	-0.5%	-0.5%	-0.5%	-0.5%	-0.5%

Appendix: Impact of Changing Risk Asset Allocation from 75% to 85%

- **This table shows the change in the distribution of projected funded ratio results:**

	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028
Current 75% risk asset allocation:																
Percentiles:																
5%	87%	85%	73%	63%	54%	47%	42%	40%	39%	35%	33%	31%	29%	26%	26%	26%
10%	87%	85%	82%	72%	66%	60%	52%	47%	46%	44%	41%	41%	40%	37%	36%	35%
25%	87%	86%	85%	83%	81%	78%	75%	71%	69%	67%	64%	62%	60%	59%	57%	55%
50%	87%	87%	87%	87%	88%	88%	89%	88%	88%	88%	89%	88%	87%	86%	87%	86%
75%	87%	87%	89%	91%	93%	95%	98%	101%	104%	106%	109%	111%	115%	118%	122%	124%
90%	87%	88%	90%	94%	98%	103%	109%	115%	122%	128%	136%	141%	148%	156%	166%	173%
95%	87%	88%	91%	96%	102%	108%	116%	125%	136%	145%	155%	164%	173%	184%	194%	209%
Average	87%	87%	86%	85%	85%	85%	85%	86%	87%	88%	89%	91%	92%	94%	95%	97%
85% risk asset allocation:																
Percentiles:																
5%	87%	85%	71%	60%	51%	43%	38%	36%	35%	31%	29%	28%	25%	24%	24%	23%
10%	87%	85%	81%	70%	63%	57%	50%	44%	43%	41%	39%	39%	37%	35%	34%	33%
25%	87%	86%	85%	84%	81%	79%	75%	71%	69%	67%	64%	61%	60%	58%	56%	55%
50%	87%	87%	87%	88%	89%	89%	90%	90%	91%	91%	92%	92%	92%	91%	92%	93%
75%	87%	87%	89%	91%	94%	97%	102%	106%	110%	114%	118%	122%	129%	133%	138%	142%
90%	87%	88%	91%	95%	101%	109%	117%	126%	134%	143%	153%	160%	170%	183%	197%	209%
95%	87%	88%	92%	97%	108%	117%	125%	139%	152%	165%	178%	191%	203%	219%	234%	254%
Mean	87%	87%	86%	85%	86%	86%	88%	89%	91%	93%	95%	98%	100%	103%	106%	109%
Change:																
Percentiles:																
5%	0.0%	0.0%	-2.0%	-2.5%	-2.8%	-3.7%	-3.4%	-3.9%	-3.9%	-4.1%	-3.2%	-3.3%	-3.4%	-2.7%	-2.3%	-3.1%
10%	0.0%	0.0%	-0.3%	-1.6%	-3.0%	-2.9%	-2.2%	-3.4%	-3.3%	-3.0%	-2.6%	-2.5%	-2.9%	-2.2%	-2.6%	-2.5%
25%	0.0%	0.0%	0.1%	0.2%	0.0%	0.1%	-0.4%	-0.3%	-0.4%	-0.8%	-0.2%	-0.5%	-0.4%	-0.4%	-0.2%	-0.1%
50%	0.0%	0.0%	0.2%	0.5%	1.0%	1.4%	1.8%	2.0%	2.6%	3.2%	3.6%	4.1%	4.3%	5.1%	5.7%	6.3%
75%	0.0%	0.0%	0.3%	0.8%	1.4%	2.5%	3.7%	5.2%	5.9%	7.6%	8.8%	10.5%	13.9%	14.9%	16.4%	17.6%
90%	0.0%	0.0%	0.5%	1.3%	2.8%	6.0%	8.7%	10.6%	12.3%	14.8%	17.5%	19.4%	21.7%	26.9%	30.9%	36.1%
95%	0.0%	0.0%	0.6%	1.6%	6.0%	8.5%	9.2%	13.5%	15.9%	19.8%	22.9%	27.2%	30.6%	34.9%	40.6%	45.1%
Mean	0.0%	0.0%	0.0%	0.3%	0.8%	1.5%	2.2%	3.0%	4.0%	4.8%	5.9%	7.0%	8.1%	9.3%	10.7%	12.2%

State Board of Administration

FRS Pension Plan Performance Review

Actuarial Assumptions Estimating Conference

October 2, 2013

SBA FLORIDA
STATE BOARD OF ADMINISTRATION

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Executive Summary

- The Pension Plan assets totaled $132.4 billion as of June 30, 2013 which represents a $9.6 billion increase since June 30, 2012 despite net benefit payouts of $6.2 billion.
- As of June 30, 2013, the Pension Plan, when measured against the Performance Benchmark, outperformed over the trailing one-, three-, five-, ten-, fifteen-, twenty- and twenty five-year periods.
- As of June 30, 2013, relative to the Absolute Nominal Target Rate of Return or long-term return objective and the Actuarial Return Assumption, the Pension Plan has lagged over the trailing fifteen-year time period; however it has outperformed over the trailing twenty-, twenty five- and thirty-year time periods.

Executive Summary

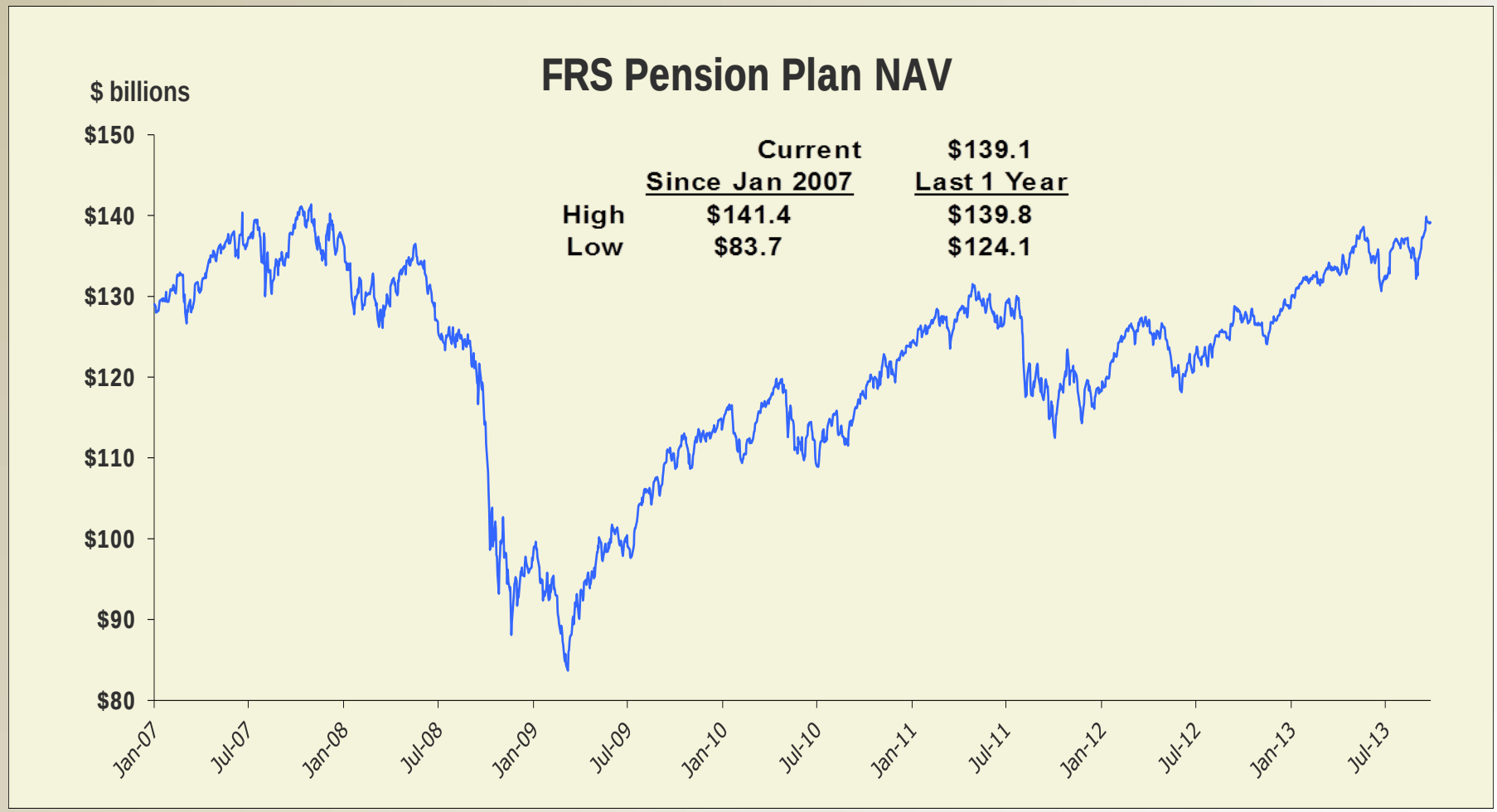
- The Pension Plan's rate of return is ranked in the top quartile over the trailing one- and ten-year time periods versus the top ten defined benefit plans of the TUCS universe.
- The Pension Plan assets totaled $139.1 billion as of September 27, 2013, which represents a $6.7 billion increase since June 30, 2013 despite net benefit payouts of $1.2 billion.
- As of September 27, 2013, the Pension Plan's fiscal year-to-date return is 6.1%.

FRS Pension Plan Change in Market Value For Quarter and Fiscal Year Ending 6/30/2013

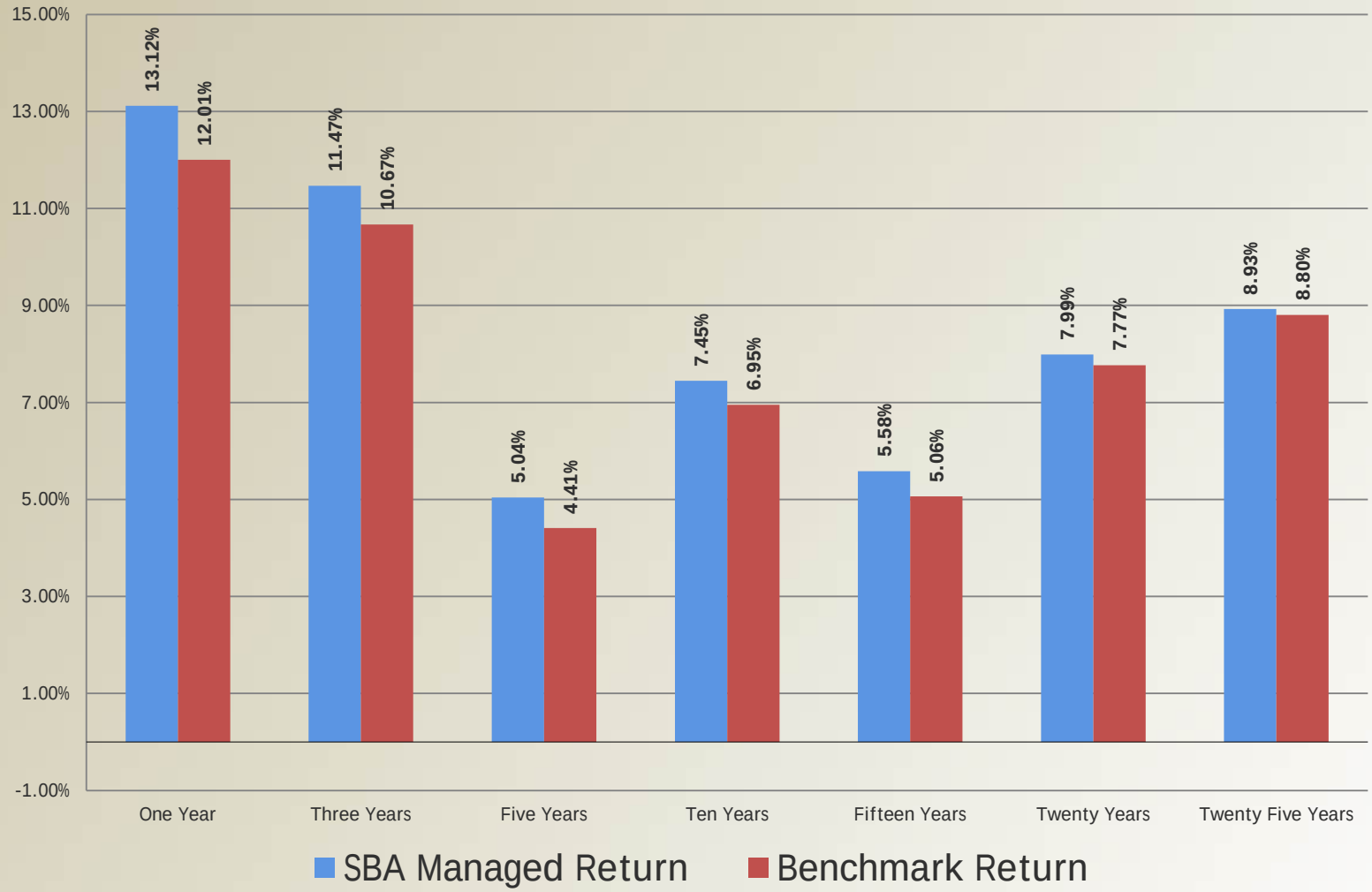
Summary of Cash Flows		
	Second Quarter	Fiscal YTD*
Beginning Market Value	$133,650,630,998	$122,745,973,551
+/- Net Contributions/(Withdrawals)	($1,473,938,583)	($6,189,055,380)
Investment Earnings	$206,222,851	$15,825,997,095
= Ending Market Value	$132,382,915,266	$132,382,915,266
Net Change	($1,267,715,732)	$9,636,941,715

*Period July 2012 – June 2013

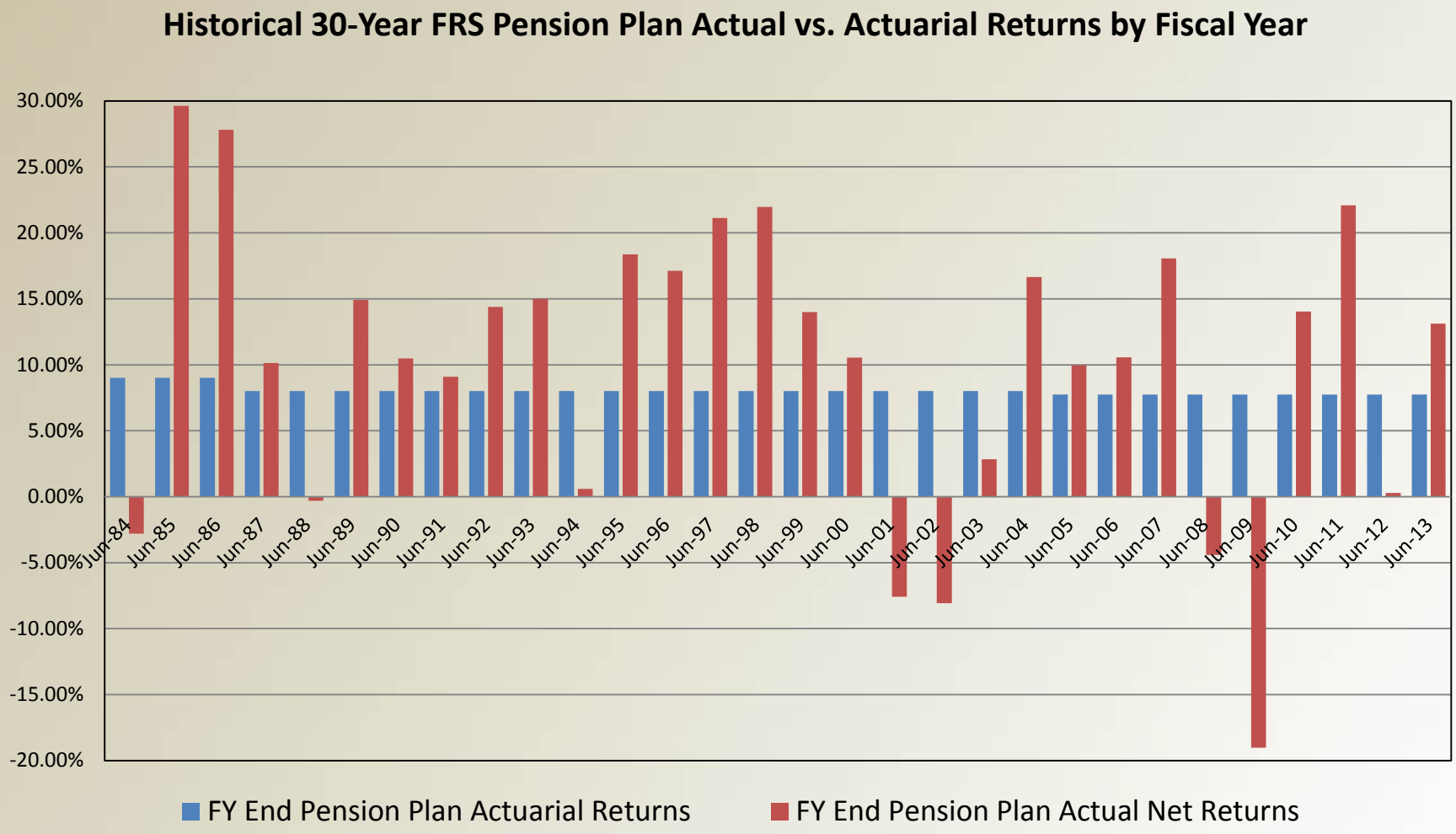
FRS Pension Plan Change in Market Value From January 31, 2007 to September 27, 2013



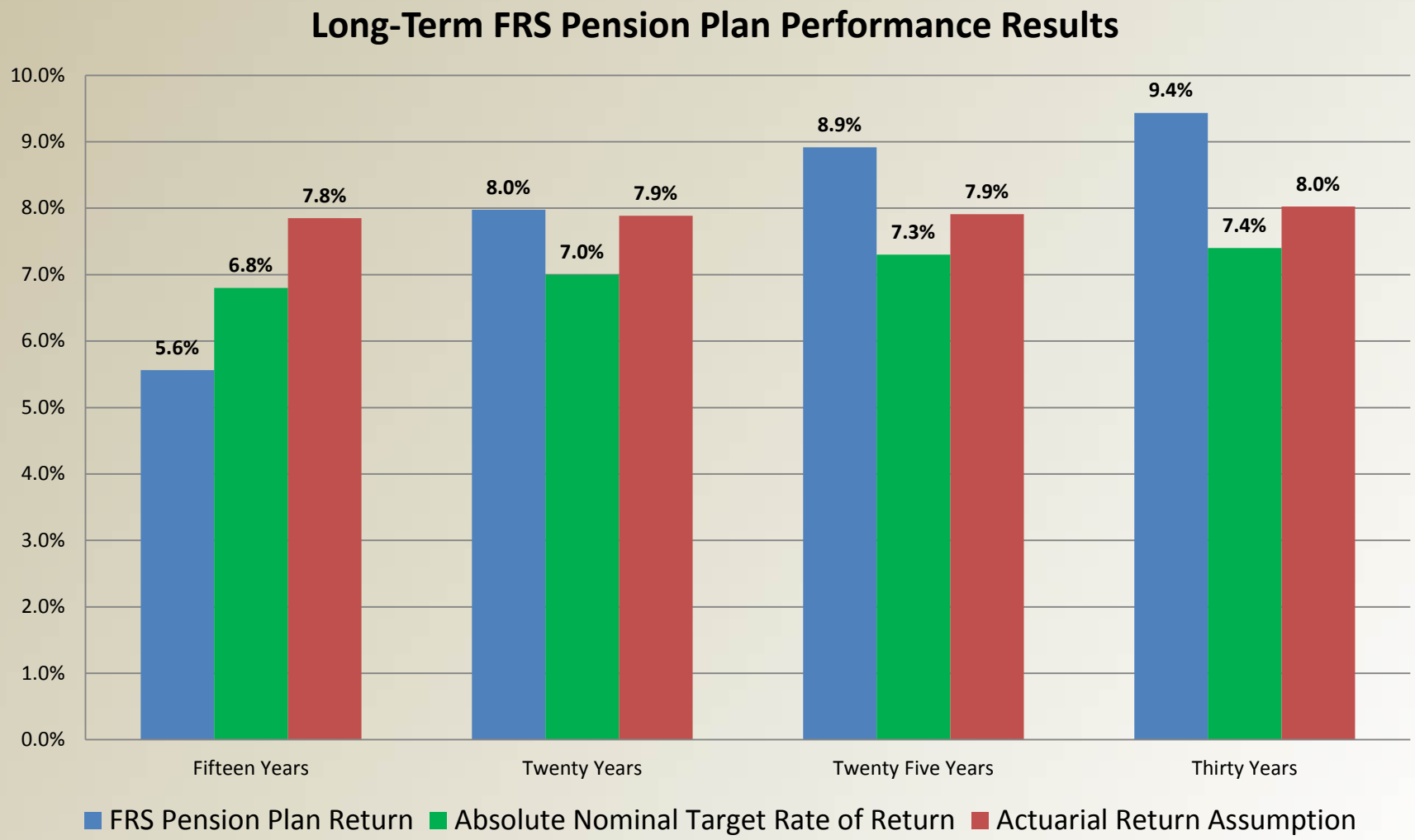
FRS Pension Plan Investment Results
Periods Ending 6/30/2013



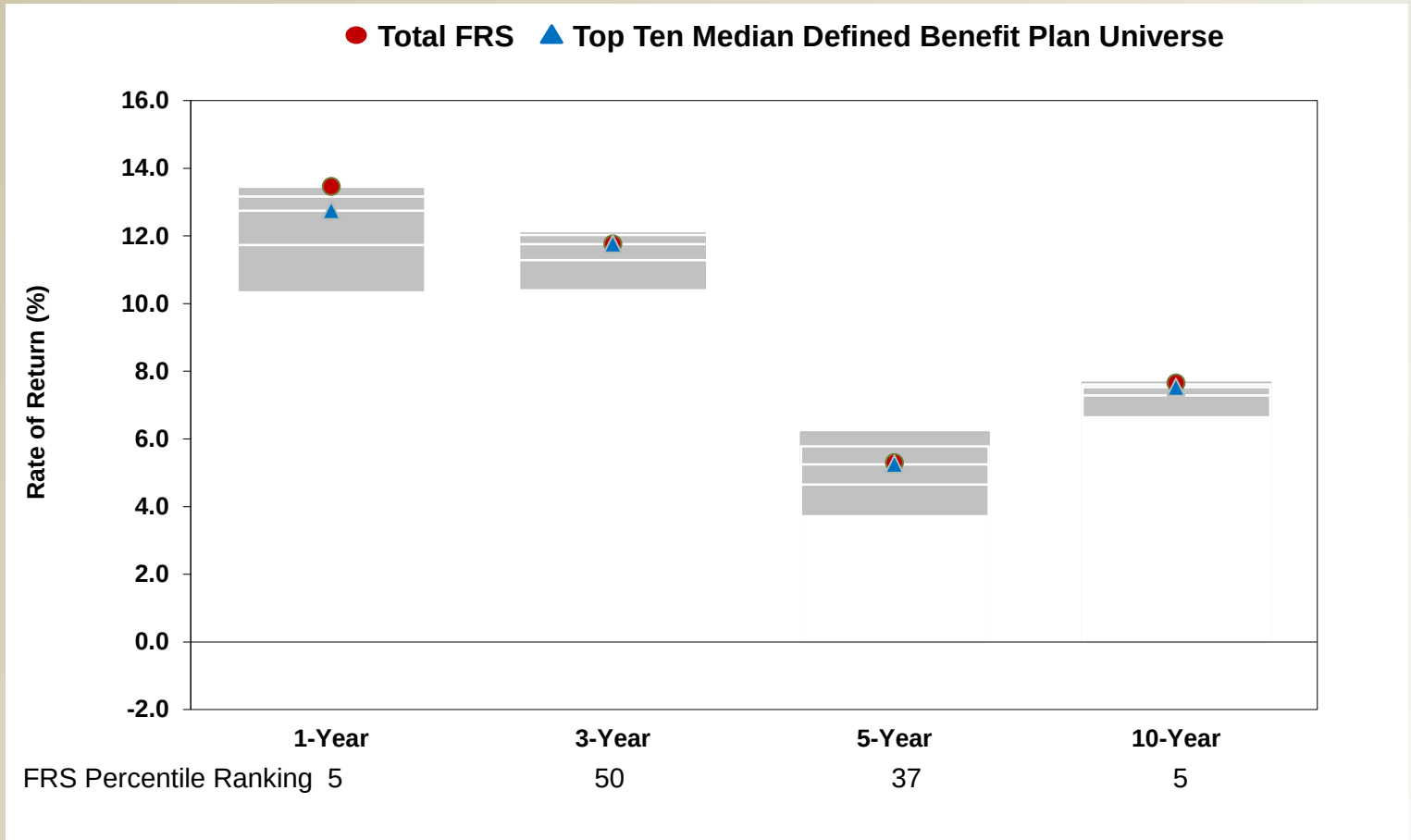
FRS Pension Plan Investment Results Periods Ending 6/30/2013



FRS Pension Plan Investment Results Periods Ending 6/30/2013



Top Ten Defined Benefit Plans Universe Comparison (TUCS)
Periods Ending 6/30/2013



Note: The TUCS Top Ten Universe includes $1,159.9 billion in total assets. The median fund size was $115.9 billion and the average fund size was $116.0 billion.

Supplemental Materials

Appendix

HISTORIC ACTUARIAL REQUIRED RETURNS VS. ACTUAL NET MANAGED RETURNS

	FRS Pension Plan (PP)		FRS Investment Plan (IP)			
FY Ending	FY End Pension Plan Actuarial Returns	FY End Pension Plan Actual Net Returns	FY End IP Net Returns*	FY End IP Bmrk Returns*	FY End IP MBF Net Returns^	FY End IP MBF Bmrk Returns^
Jun-77	7.00%	13.50%	-	-	-	-
Jun-78	7.00%	-0.29%	-	-	-	-
Jun-79	7.00%	6.88%	-	-	-	-
Jun-80	8.50%	0.22%	-	-	-	-
Jun-81	8.50%	-3.81%	-	-	-	-
Jun-82	8.50%	3.67%	-	-	-	-
Jun-83	9.00%	43.48%	-	-	-	-
Jun-84	9.00%	-2.80%	-	-	-	-
Jun-85	9.00%	29.62%	-	-	-	-
Jun-86	9.00%	27.80%	-	-	-	-
Jun-87	8.00%	10.13%	-	-	-	-
Jun-88	8.00%	-0.31%	-	-	-	-
Jun-89	8.00%	14.92%	-	-	-	-
Jun-90	8.00%	10.49%	-	-	-	-
Jun-91	8.00%	9.10%	-	-	-	-
Jun-92	8.00%	14.38%	-	-	-	-
Jun-93	8.00%	14.99%	-	-	-	-
Jun-94	8.00%	0.60%	-	-	-	-
Jun-95	8.00%	18.36%	-	-	-	-
Jun-96	8.00%	17.13%	-	-	-	-
Jun-97	8.00%	21.13%	-	-	-	-
Jun-98	8.00%	21.97%	-	-	-	-
Jun-99	8.00%	13.99%	-	-	-	-
Jun-00	8.00%	10.54%	-	-	-	-
Jun-01	8.00%	-7.58%	-	-	-	-
Jun-02	8.00%	-8.07%	-	-	-	-
Jun-03	8.00%	2.83%	8.37% **	8.08% **	9.05% **	8.95% **
Jun-04	8.00%	16.65%	14.38%	14.76%	14.97%	15.11%
Jun-05	7.75%	9.97%	8.45%	8.69%	9.01%	9.60%
Jun-06	7.75%	10.56%	10.18%	9.33%	10.08%	9.69%
Jun-07	7.75%	18.07%	16.01%	16.29%	16.81%	17.06%
Jun-08	7.75%	-4.42%	-4.69%	-5.99%	-5.44%	-5.75%
Jun-09	7.75%	-19.03%	-15.16%	-15.45%	-15.81%	-16.80%
Jun-10	7.75%	14.03%	11.07%	10.32%	11.43%	10.94%
Jun-11	7.75%	22.09%	18.10%	17.23%	16.41%	16.12%
Jun-12	7.75%	0.29%	1.07%	1.17%	1.53%	1.56%
Jun-13	7.75%	13.12%	10.12%	9.68%	9.52%	9.12%

* Asset Weighted return; assumes that all members were in all products.

** 11 months (Aug-02 to Jun-03).

^ 75% of all active FRS IP members have some or all assets allocated to the FRS IP Moderate Balanced Fund.

Supplemental Materials

FRS Pension Plan

Returns For Periods Ending June 30, 2013

	Actual Return	Benchmark Return	Act. Over (Under) Bmk.
One Year	13.12%	12.01%	1.11%
Three Years	11.47%	10.67%	0.80%
Five Years	5.04%	4.41%	0.63%
Ten Years	7.45%	6.95%	0.49%
Fifteen Years	5.58%	5.06%	0.51%
Twenty Years	7.99%	7.77%	0.22%
Twenty Five Years	8.93%	8.80%	0.12%

- All returns are annualized for periods indicated through June 30, 2013.
- Benchmark is a weighted blend of individual asset class target indices as applicable; weights and benchmarks are established in the FRS Pension Plan Investment Policy Statement.

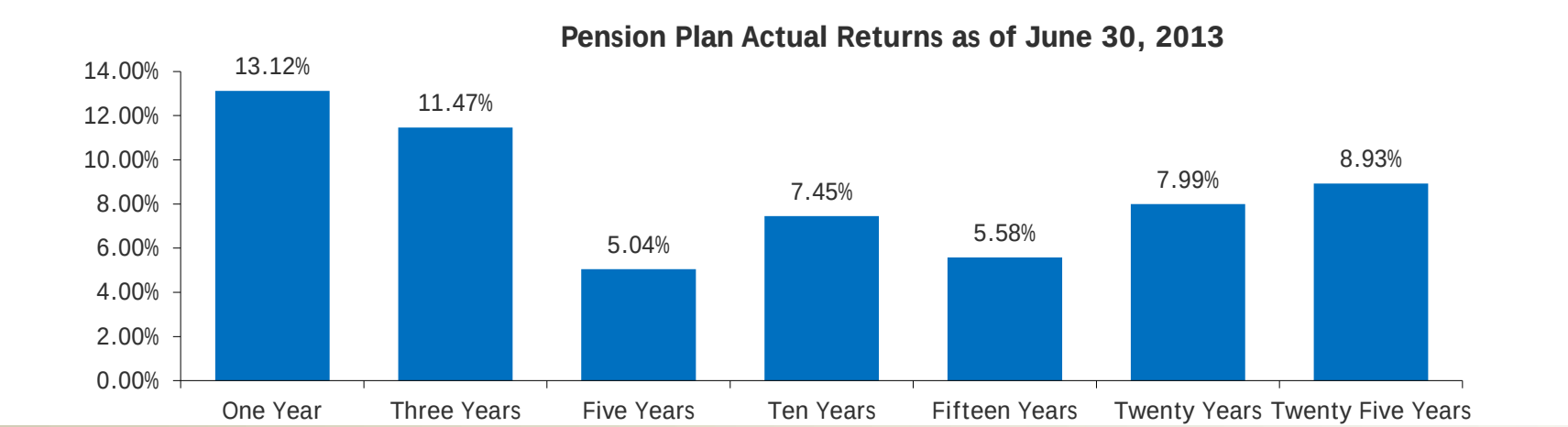
FRS Investment Plan

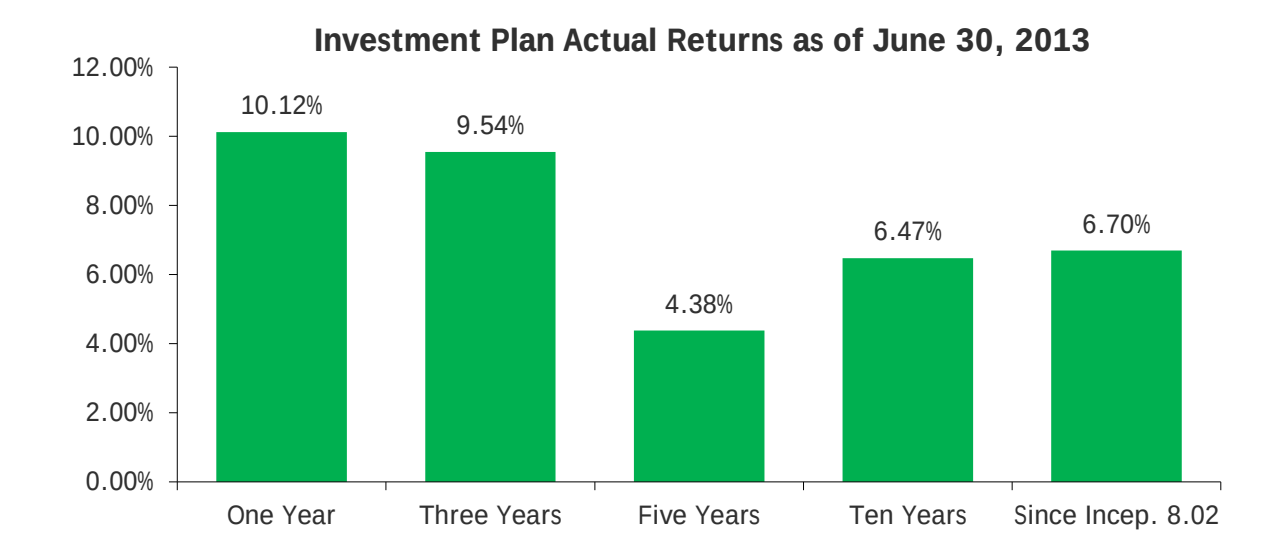
Returns For Periods Ending June 30, 2013

	Actual Return	Benchmark Return	Act. Over (Under) Bmk.
One Year	10.12%	9.68%	0.45%
Three Years	9.54%	9.16%	0.38%
Five Years	4.38%	3.94%	0.43%
Ten Years	6.47%	6.11%	0.36%
Since Incep. 8.02	6.70%	6.33%	0.36%

- All returns are annualized for periods indicated through June 30, 2013.
- Benchmark is a weighted blend of individual asset class target indices as applicable per the FRS Investment Plan Investment Policy Statement; weights are based on contemporaneous market valuations, per participant asset allocation choices.
- Inception of the fund is August, 2002.

Supplemental Materials





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FRS Pension Fund Performance Review

Actuarial Assumptions Estimating Conference

October 2, 2013

SBA FLORIDA
STATE BOARD OF ADMINISTRATION

FLORIDA RETIREMENT SYSTEM

Actuarial Valuation
as of
July 1, 2013

December 2013

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December 3, 2013

Mr. Dan Drake
State Retirement Director
Division of Retirement
PO Box 9000
Tallahassee, FL 32315-9000

Dear Mr. Drake:

At your request, we have conducted our annual actuarial valuation of the Florida Retirement System (FRS) as of July 1, 2013, for assessing plan funded status and determining actuarially calculated contribution rates for plan year 2014-2015. The major findings of the valuation are contained in the following report.

Section I contains an Executive Summary of the results of our valuation followed by four sections containing detailed information on FRS Assets (Section II), Liabilities (Section III), Contributions (Section IV), and Accounting Statements (Section V). In the Appendices, we provide information regarding actuarial methods and assumptions, a summary of plan provisions, membership statistics, cost projections, comparisons/reconciliation, and a glossary of terms.

All costs and liabilities shown in this report have been determined on the basis of actuarial assumptions and methods set forth in Appendix A. The actuarial assumptions used in performing this valuation have been presented by the actuary and adopted by the committee at the October 2, 2013 Actuarial Assumption Conference based on Milliman's most recent review of the System's experience for the period July 1, 2003 through June 30, 2008, as modified by the February 16, 2010 study on House Bill 479 and the July 1, 2011 study on Senate Bill 2100, both of which were enacted into law.

A single set of assumptions was used in the report with one notable exception. Sections III and IV, which develop actuarially calculated contribution rates for the 2014-2015 plan year, use lower retirement rate assumptions than Section V, which develops accounting results for purposes of financial reporting under GASB Statements No. 25 and No. 27. The differences in the retirement assumptions used in the sections are related to the Deferred Retirement Option Program (DROP) available to eligible FRS members.

GASB requires financial reporting liabilities to be calculated in a manner that treats entry into the DROP as if it were equivalent to retirement. The retirement assumptions used in Section V are consistent with that GASB directive, with the rates used based on our most recent system experience review as noted above.

When the DROP was established, the Legislature required the DROP's effect on contribution rates to be handled in a manner that does not follow the typical funding structure used for a FRS benefit improvement. In addition, the funding structure does not follow that used by most systems that provide a DROP. First, the legislative directive asked FRS to assess the impact of DROP at a system, rather than at a membership class, basis. To computationally accomplish this directive, the retirement rate assumptions used for each membership class in Sections III and IV calculations do not explicitly recognize the probability of a member electing DROP participation, and the related impact on each class' liabilities and actuarially calculated contribution rates. As such, the retirement rates used in Sections III and IV are lower than those used in Section V. The difference between the Actuarial Liability and Normal Cost calculated on this legislatively directed basis and the basis for the same metrics calculated for Section V GASB financial reporting is converted into a "DROP contribution rate" which does not vary by membership class and is charged on the payroll of DROP members.

With the exception of the retirement assumption used in Sections III and IV per the legislative directives noted above, we believe the assumptions and methods used in this report are reasonable.

The results of this report are dependent upon future experience conforming to the assumptions disclosed in this report. Future actuarial measurements may differ significantly from the current measurements presented in this report due to many factors, including: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period) and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements.

Actuarial computations presented in this report are for purposes of assessing funded status and determining the actuarially calculated contribution rates for the System. Actuarial computations under GASB Statements No. 25 and No. 27 are for purposes of fulfilling financial reporting requirements. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and of GASB Statements No. 25 and No. 27. Determinations for purposes other than meeting those requirements referenced in this paragraph may be significantly different from

the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

In preparing our report we relied, without audit, on information (some oral and some written) supplied by the Division of Retirement. This information includes, but is not limited to, statutory provisions, employee census, and financial information. In our examination of these data, we have found them to be reasonably consistent and comparable with data used for other purposes. Since the valuation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised.

This actuarial valuation was prepared and completed by us and those under our direct supervision, and we acknowledge responsibility for the results. To the best of our knowledge, the results are complete and accurate, and in our opinion, the techniques and assumptions used, other than the assumption used for future payroll growth for amortization purposes, are reasonable and meet the requirements and intent of Part VII, Chapter 112, Florida Statutes. As noted previously, the payroll growth assumption was adopted by the FRS Assumptions Conference. There is no benefit provision or related expense to be provided by the plan and/or paid from the plan's assets for which liabilities or current costs have not been established or otherwise taken into account in the valuation. To the best of our knowledge, there were no known events that were not taken into account in the valuation.

Milliman's work product was prepared exclusively for the internal business use of Florida Department of Management Services, Division of Retirement, for a specific and limited purpose. It is a complex technical analysis that assumes a high level of knowledge concerning the Florida Retirement System's operations, and uses Division data, which Milliman has not audited. To the extent that Milliman's work is not subject to disclosure under applicable public record laws, Milliman's work may not be provided to third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of its work product. Milliman's consent to release its work product to any third party may be conditioned on the third party signing a Release, subject to the following exceptions:

(a) The Division of Retirement may provide a copy of Milliman's work, in its entirety, to the System's professional service advisors who are subject to a duty of confidentiality and who agree to not use Milliman's work for any purpose other than to benefit the System.

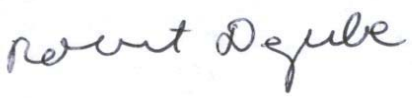
(b) The Division of Retirement may provide a copy of Milliman's work, in its entirety, to other governmental entities, as required by law.

No third party recipient of Milliman's work product should rely upon Milliman's work product. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with Actuarial Standards of Practice, the Code of Professional Conduct and Qualification Standards for Public Statements of Actuarial Opinion of the American Academy of Actuaries. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Respectfully submitted,



Robert S. Dezube, F.S.A
Consulting Actuary, EA #11-3397

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SECTION I

EXECUTIVE SUMMARY

This report presents the results of our July 1, 2013 actuarial valuation of the Florida Retirement System (FRS) Defined Benefit Program. Key results of the valuation are:

- On a fair Market Value of Assets (MVA) basis, System funded status improved from 83.5% to 86.8%, with the MVA $20.3 billion lower than Actuarial Liability as of July 1, 2013. This funded status improvement was driven by a plan year investment return, measure on a fair market basis, of 13.63%.

- On the smoothed Actuarial Value of Assets (AVA) basis used to determine actuarially calculated System contribution rates, funded status decreased from 86.9% to 85.9% during the plan year. The associated Unfunded Actuarial Liability (UAL) was $21.6 billion as of July 1, 2013, which is an increase from the $19.3 billion UAL calculated at the prior valuation. The plan year investment return on the smoothed asset measure was 8.02%, reflecting the manner in which the AVA measure reflects the effects of single-year market returns in a systematic manner over several years. The strong 2012-2013 MVA returns were offset by poor 2011-2012 MVA returns, leading to a smoothed AVA return close to the 7.75% assumption.

- The composite actuarially calculated employer contribution rate, which includes Normal Cost, UAL Cost and DROP funding components, increased by 0.50%, from 8.67% of payroll in the prior valuation to 9.17% of payroll in this valuation, with the increase driven by the UAL Cost component of the composite rate. Increases in the total rates (Normal Cost plus UAL Cost) vary significantly by classification. Rate changes were +0.45%, +0.83%, and -0.62% for the Regular class, Special Risk Regular class and DROP payrolls, respectively. Increases for other member classifications were more significant. The causes for the composite rate increase of the UAL Cost component are discussed in more detail immediately below. The cumulative effect of three years (July 2010 – June 2013) of legislative funding rates being below actuarially calculated rates is that the composite UAL Cost rate in this valuation is approximately 0.50% of payroll higher than it otherwise would have been.

This valuation is used to determine actuarially calculated rates for the 2014-2015 plan year. The actual contribution rates paid by participating employers during that plan year will be determined by Florida Statute. The most notable result of this year's rate calculations is an increase in the actuarially calculated "UAL Cost". The UAL Cost is calculated to eliminate the UAL systematically over a specified time period if future experience follows assumptions. The composite UAL Cost increased by 0.54% of applicable payroll, from 4.00% to 4.54%, when compared to the composite rate from the prior valuation. Causes of the composite UAL Cost increase since last year are the following, in decreasing order of approximate magnitude:

1) Plan experience during the year, which increased the 2013 UAL by $1.2 billion (approximately 25 basis points, or 0.25% of applicable payroll)when compared to

expected levels – The $1.2 billion experience-driven UAL increase is a net figure that encompasses all sources of positive and negative deviations from long-term assumptions during the plan year for both member census and investment returns on the smoothed asset measure used for the UAL calculation. The largest line item contributor to the net increase was a one-time increase in 2013 UAL of approximately $2.5 billion due to improved reporting of census data for some newly inactive members and DROP participants by the Division of Retirement. By comparison, the plan year investment return on the smoothed AVA measure was a line item experience-driven UAL decrease of approximately $0.3 billion.

Based on discussions with the Division of Retirement, we believe that this large magnitude increase in liability due to census reporting improvements will be a one-time event. Continuing monitoring efforts by the Division of Retirement could potentially identify other adjustments in the future. The identification of the members in the improved census reporting are part of a coordinated effort between the Division of Retirement and Milliman in response to a review of the previous valuation by Gabriel, Roeder, Smith & Company on behalf of the Florida Legislature's Office of Program Policy & Governmental Accountability. The effort is focused on increased transparency and understandability in the actuarial valuation report, with a particular emphasis on the explanation of the sources of year-to-year experience gains and losses which affect the reported UAL.

The system had strong investment performance, earning 13.63% during the plan year on a fair market basis. However, as noted above, the UAL calculation uses a smoothed AVA measure that systematically recognizes good or bad single-year fair market investment experience over a multi-year period. The smoothed asset measure earned 8.02% during the plan year (compared to the 7.75% assumption) as investment underperformance from previous years is still being systematically recognized. The portion of this year's strong investment performance not currently recognized in the smoothed AVA will be recognized in future years.

Additional details and discussion on the effects of the items noted above can be found in the experience section of this executive summary. Please note that prior to the next valuation we will conduct an actuarial experience study that will review the long-term assumptions and methods used to perform the valuation calculations. The study will review observed plan experience from the 2008-2009 to 2012-2013 plan years, and any recommendations from that study which are adopted by the Assumptions Conference will be reflected in the 2014 actuarial valuation, which determines actuarially calculated rates for the 2015-2016 plan year.

2) Actual payroll growth less than assumed (approximately 20 basis points, or 0.20% of payroll) – Actuarially calculated contribution rates are developed each year so as to systematically eliminate UAL over a specified period of time if future experience follows assumptions. The amortization calculation is done to make amortization payments level as a percentage of projected payroll. Payroll growth from 2012 to 2013 was flat, compared to the long-term valuation assumption of 4% annual growth. This payroll experience led to an upward adjustment in the amortization rates, as the UAL is being amortized over a lower than anticipated payroll.

3) Plan year contributions lower than the actuarially calculated rate (approximately 15 basis points, or 0.15% of payroll) – The actuarially calculated composite rate for the 2012-2013 plan year, reflecting a systematic amortization of UAL, was approximately 2.95% of payroll above the composite contribution level for the 2012-2013 plan year as established by Florida Statute. This meant that actual 2012-2013 plan year contributions were approximately $725 million below those related to actuarially calculated rate levels. This single-year funding below the actuarially calculated level created additional UAL for the System. There is a "carrying charge" in future years for deferring funding in a single plan year below actuarially calculated levels. The UAL Cost increase for the 2012-2013 plan year deferral is a 30-year amortization of approximately 0.15% of applicable payroll, when calculated at a composite level. For member classifications other than FRS Regular, this single-year effect is markedly higher than 0.15% as the difference between the 2012-2013 actuarially calculated rates and the legislated 2012-2013 contribution rates for those classes was far higher than 2.95% of payroll.

   In addition, please note that legislated contribution rates were below the actuarially calculated rates for all membership classes for a three-year period from July 2010 to June 2013, creating an underfunding rate disparity between the actuarially calculated and legislated rates for a three-year period. That disparity ended with the rates enacted by the Legislature effective July 2013. The 0.15% of payroll amount shown above is the effect of the single-year underfunding for the 2012-2013 plan year.

   The composite underfunding for the two plan years preceding the 2012-2013 year, measured as a percentage of composite payroll, was moderately more pronounced. Composite underfunding was 3.68% and 3.31% of payroll for the 2010-2011 and 2011-2012 plan years, respectively. The cumulative effect of the three years with underfunding rate disparities is that composite UAL Cost rates in this valuation are approximately 0.50% of payroll higher than they would have been without the three years (June 2010-June 2013) of rate disparities.

Please note that the effects of the three-year underfunding on the UAL Cost rate vary significantly by class. Classes with greater magnitudes of underfunding, when measured as a percent of payroll, have larger accumulated three-year increases for this "carrying cost" effect in the 2014-2015 plan year rates calculated in this 2013 valuation report.

We also would like to point out several other key items regarding this valuation:

- The composite employer Normal Cost Rate, excluding DROP, remained essentially flat at 4.67% of payroll on July 1, 2013. The rate calculation methodology approved by the Assumptions Conference uses the Ultimate Entry Age Normal (Ultimate EAN) actuarial cost allocation method. Under Ultimate EAN, the Normal Cost is calculated as the rate that would be applicable if the plan provisions of Senate Bill 2100 for members hired on or after July 1, 2011 applied to all members from entry into the FRS. Of course, the present value of total projected benefits calculated for each member reflects the actual tier in which the member participates. As such, the rate methodology used understates Normal Cost but overstates Actuarial Liability when compared to some alternative rate calculation methodologies, such as the Individual Entry Age Normal (Individual EAN) methodology that will be mandated by GASB for future year financial reporting calculations under GASB Statements 67 & 68.

- The Ultimate EAN cost allocation method being used for liability and rate calculations, like any actuarial cost method, divides the present value of total projected benefits for each active member between past service (Actuarial Liability, or AL) and future service (present value of future normal costs). The cost allocation method does not impact the calculation of the present value of total projected benefits. Just as there are various cost allocation methods which can be selected by sponsors to set contribution policy, there can be multiple possible approaches to the application of a particular cost allocation method. The approach to Ultimate EAN being used in this valuation, consistent with past practice, calculates the portion of total projected benefits allocated to future service based on the assumption that the length of the Tier I member's future service period follows Tier II assumptions. An alternate approach to Ultimate EAN would use an expected future service period based on Tier I assumptions. Generally, the alternate approach would allocate less of the total projected benefits to future service and more to the past service (Actuarial Liability). We will be reviewing the cost allocation method, along with all other assumptions and methods, during the upcoming experience study. If the Assumptions Conference elects to continue use of the Ultimate EAN method for rate calculations, we would anticipate recommending adoption of the alternate approach noted above for the Ultimate EAN method. If that change had been made for this valuation, the associated increase in reported Actuarial Liability would have been approximately $765 million. The Normal Cost under either approach is equivalent.

In general, throughout this report, any reference to FRS refers to the FRS Defined Benefit Program, unless noted to the contrary.

The tables immediately following compare July 1, 2012 actuarial valuation results with July 1, 2013 actuarial results. The difference column shows the change between the July 1, 2013 valuation results and the July 1, 2012 results.

A. Assets, Liabilities, and Funded Status

A comparison of the Actuarial Liabilities and Actuarial Value of Assets (AVA) follows. These figures are based upon the actuarial assumptions used to determine the actuarial costs of the FRS (see Appendix A). Under current methodology, and as required by Florida law, the AVA cannot be less than 80% or greater than 120% of the Market Value of Assets (MVA). This corridor restriction does not come into play unless there are dramatic asset gains or losses in the prior plan year. The purpose of the corridor is to ensure that the "smoothed" value of assets does not vary from the market value by more than 20%. As of July 1, 2013, the AVA is 98.99% of the MVA.

	Valuation Results (numbers in $ billions)		
	July 1, 2012	July 1, 2013	Difference
1. Actuarial Liability	$147.2	$153.3	$ 6.1
2. Actuarial Value of Assets	$127.9	$131.7	$ 3.8
3. Unfunded Actuarial Liability (1 – 2)	$ 19.3	$ 21.6	$ 2.3
4. Funded Status (2 / 1)	86.9%	85.9%	(1.0%)

In Section V of this report we present an additional measure of funded status, the "accumulated benefit obligation" (ABO), based on both the AVA and the MVA.

B. Contributions

Actuarially calculated contribution rates by class are determined annually in the actuarial valuation. Actual contribution rates paid by employers for each class are set by statute and consist of Normal Cost and UAL Cost components. For the 2013-2014 plan year, the actuarially calculated rates set by the 2012 valuation and the legislated rates are equivalent. The 2014-2015 actual contribution rates will be set during the 2014 legislative session, with advice from this valuation. The Unfunded Actuarial Liability amortization payment will consist primarily of costs or savings associated with plan changes, assumption changes, differences in actual and expected experience, or changes in actuarial methodology (if applicable). As of July 1, 2013 the FRS has a UAL of $21.6 billion. The UAL Cost is calculated to eliminate the UAL over a pre-determined period if future experience follows assumptions.

The comparative FRS Regular and Special Risk contribution rates resulting from this valuation and the prior valuation are as follows. See Section IV for more details on rate development and valuation results for all classes.

	July 1, 2012 Valuation (2013-2014 Rates)		July 1, 2013 Valuation (2014-2015 Rates)		Difference	
	FRS Reg	Special Risk	FRS Reg	Special Risk	FRS Reg	Special Risk
Normal Cost	3.53%	10.75%	3.53%	10.76%	0.00%	0.01%
UAL Cost	2.56%	8.13%	3.01%	8.95%	0.45%	0.82%
Preliminary FRS Contribution Rate	6.09%	18.88%	6.54%	19.71%	0.45%	0.83%

C. Membership

The total membership (active, terminated vested, retired, and DROP) of the FRS Defined Benefit Program increased by 13,840 members from 992,686 as of July 1, 2012, to 1,006,526 as of July 1, 2013, an increase of 1.4%. The total annualized projected payroll of non-DROP active members decreased by 0.14%, from $22.09 billion for the 2012-2013 plan year to $22.06 billion for the 2013-2014 plan year, a $0.03 billion decrease in payroll. Note that the payroll on which UAL Cost rates are determined is higher, and includes the payroll of DROP and members in Optional Retirement Plans subject to the UAL contribution.

A summary of membership change by status follows:

	Valuation Results: Counts		
	July 1, 2012	July 1, 2013	% Change
Active Members	517,287	513,823	-0.7%
Terminated Vested Members	103,151	105,346	2.1%
Retired Members	331,694	345,189	4.1%
DROP Members	40,554	42,168	4.0%
Total Members	992,686	1,006,526	1.4%

D. Experience

Several factors contributed to the changes in the assets, liabilities and contribution rates for FRS between July 1, 2012 and July 1, 2013. These factors included:

1. Assets:

The assets of the FRS, measured on an AVA basis (i.e., smoothed), increased by $3.789 billion. This change was attributable to the following:

Change Due to:

- Contributions Received $2.084
- Payment of Benefits, and Expenses (8.302)
- Plan Year Investment Returns 10.007

Total $3.789 billion

Of this total change, an increase of $3.452 billion was expected, based on our assumption that the assets of the FRS would earn 7.75% during plan year 2012-2013. However, the actual annualized investment return on the AVA was 8.02% resulting in an investment gain of $0.337 billion. On a market value basis, the assets of the FRS earned 13.63%.

On a year-by-year basis, the assets earned the following:

	Rates of Return*		
Asset Bases	2010/2011	2011/2012	2012/2013
Market Value	22.79%	0.21%	13.63%
Actuarial Value	8.39%	6.74%	8.02%

* Assumes net cash-flow occurs mid-year

2. Liabilities:

The Actuarial Liability of the FRS increased by $6.110 billion. This increase is attributable to the following:

Change due to:

• Expected Increase, Due to Combined Effects of Normal Cost less Benefit Payments plus Interest-Related Growth in the Actuarial Liability	$4.608	
• Plan, Assumption or Method Changes	$0	
Plan Year Experience Liability (Gains) / Losses		
• Retired, Disabled, & Beneficiary Mortality	(0.010)	
• Inactive/DROP Members Due to Improved Reporting	2.493	
• Exits from Active Service	0.385	[1]
• Salary Increases Less Than Assumed	(1.626)	
• New Active Members (Includes Rehires)	0.415	
• Other Demographic Causes Not Noted Above	(0.155)	
Total Increase	$6.110	Billion

[1] Includes the net effects of retirement, DROP entry, second election transfers to the Investment Plan and all other cessations of active service, when compared against assumed experience.

3. Unfunded Liability:

The net change in the UAL of the FRS was an increase of $2.321 billion, from $19.301 billion to $21.622 billion. The increase is attributable to the following:

Change due to:

• Expected Increase, Based on Actual Contributions	$1.156	
• Investment Plan Year Experience	(0.337)	
• Liability Plan Year Experience	1.502	
Total	$2.321	Billion

See table on the following page for total gains/losses by class.

UAL 2012 – 2013 Plan Year (Gain)/Loss Experience by Source
(All Amounts in Thousands)

	FRS	---- Special Risk ----		-- Elected Officers' Class --			Senior	
	Regular	Regular	Administration	Judges	Leg-Atty-Cab	County	Management	Grand Total
Investment (Gain)/Loss (excluding DROP)	($230,976)	($54,025)	($184)	($1,749)	($140)	($766)	($5,258)	($293,098)
Allocation of DROP Investment (Gain)/Loss	(34,467)	(8,062)	(28)	(261)	(21)	(114)	(785)	(43,737)
Total Investment Plan Year Experience (Gain)/Loss	**($265,442)**	**($62,087)**	**($212)**	**($2,010)**	**($161)**	**($880)**	**($6,042)**	**($336,835)**
Liability Plan Year Experience (Gain)/Loss by Source								
Mortality for Retired, Disabled & Beneficiary Members	$2,961	($8,966)	($87)	($5,184)	$106	($475)	$1,968	($9,677)
Inactive/DROP Members Due to Improved Reporting	1,983,994	393,876	420	22,872	5,569	13,640	71,872	2,492,243
Exits from Active Service [1]	136,566	245,055	(514)	7,575	1,447	3,871	(9,075)	384,925
Salary Increases Less Than Assumed	(1,216,861)	(369,866)	(322)	(12,137)	(659)	(392)	(25,872)	(1,626,109)
New Active Members (Includes Rehires)	323,175	65,080	0	3,436	747	4,506	18,228	415,172
Other Demographic Changes Not Noted Above	(18,063)	(192,074)	415	2,674	(1,768)	(376)	54,424	(154,768)
Total Liability Plan Year Experience (Gain)/Loss	**$1,211,772**	**$133,105**	**($88)**	**$19,236**	**$5,442**	**$20,774**	**$111,545**	**$1,501,786**
Total UAL Plan Year Experience (Gain)/Loss	**$946,329**	**$71,018**	**($300)**	**$17,227**	**$5,280**	**$19,893**	**$105,503**	**$1,164,951**

[1] Includes the net effects of retirement, DROP entry, second elections to join the Investment Plan and all other cessations of active service, when compared to assumption. Transfers between membership classes are valued as withdrawals from the prior membership class and new entrants into the new membership class.

4. Contributions:

On a level-rate-of-pay basis, the FRS contribution rates for each membership class changed as follows:

		FRS	----- Special Risk -----		-- Elected Officers' Class --			Senior
		Regular	Regular	Administration	Judicial	Leg-Atty-Cab	County	Management
A	• July 1, 2012 Employer Normal Cost	3.53%	10.75%	3.76%	9.98%	6.42%	8.30%	4.77%
	• UAL Cost	2.56%	8.13%	42.15%	18.39%	34.50%	33.57%	16.24%
	• Total July 1, 2012 Actuarially Calculated Employer Contribution Rate	6.09%	18.88%	45.91%	28.37%	40.92%	41.87%	21.01%
B	• July 1, 2013 Employer Normal Cost	3.53%	10.76%	3.68%	10.02%	6.14%	8.21%	4.76%
	• UAL Cost (See Table IV-11)	3.01%	8.95%	51.44%	23.69%	50.85%	46.01%	20.03%
	• Total July 1, 2013 Actuarially Calculated Employer Contribution Rate	6.54%	19.71%	55.12%	33.71%	56.99%	54.22%	24.79%
C	• Change in Total Actuarially Calculated Employer Contribution Rate	0.45%	0.83%	9.21%	5.34%	16.07%	12.35%	3.78%

E. Graphs

Chart A: ASSET / LIABILITIES

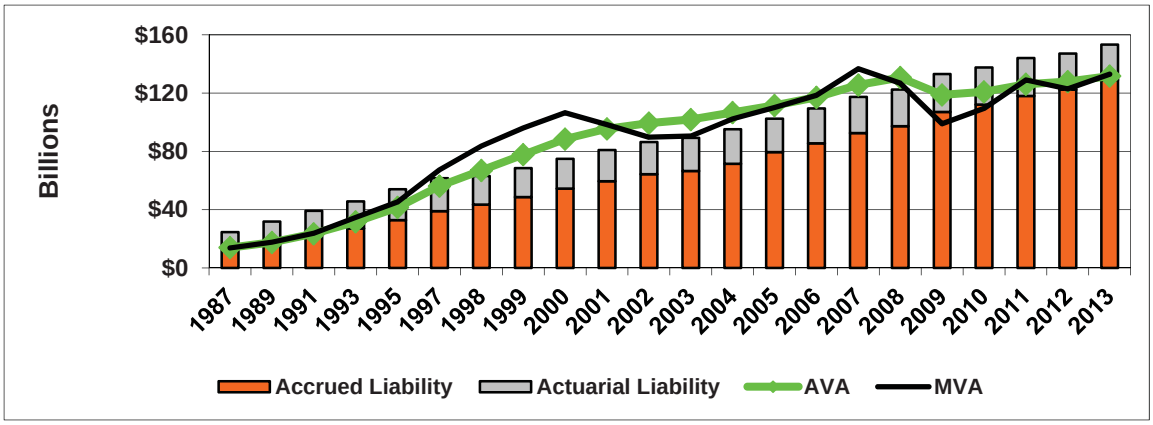


Chart B: CASH FLOWS

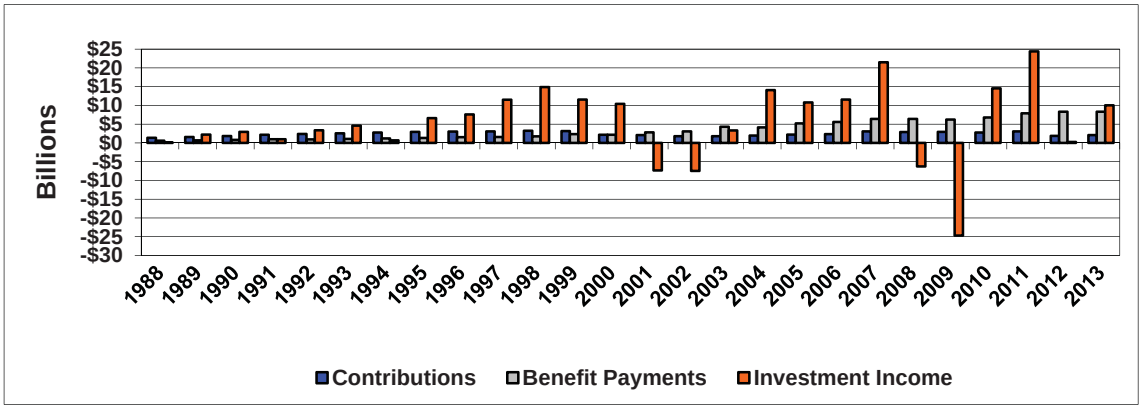


Chart C: ACTUARIALLY CALCULATED CONTRIBUTION RATES (as % of Payroll)

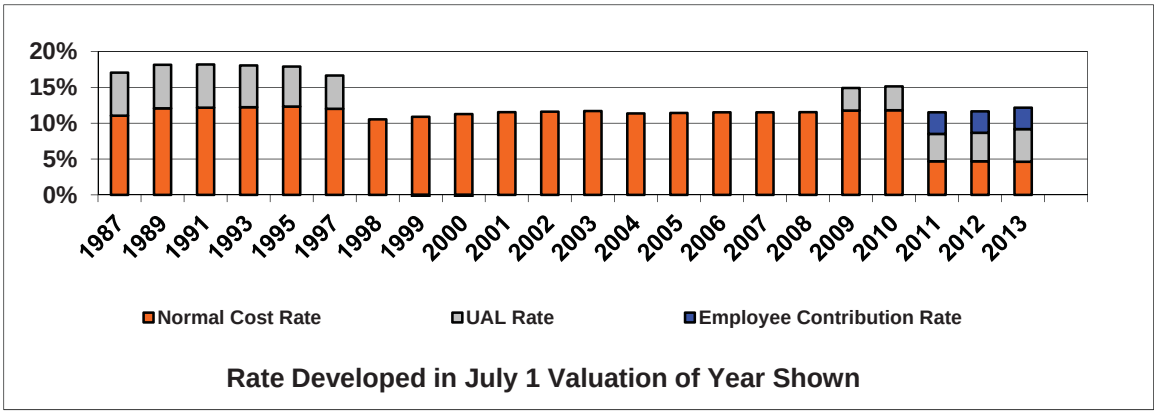
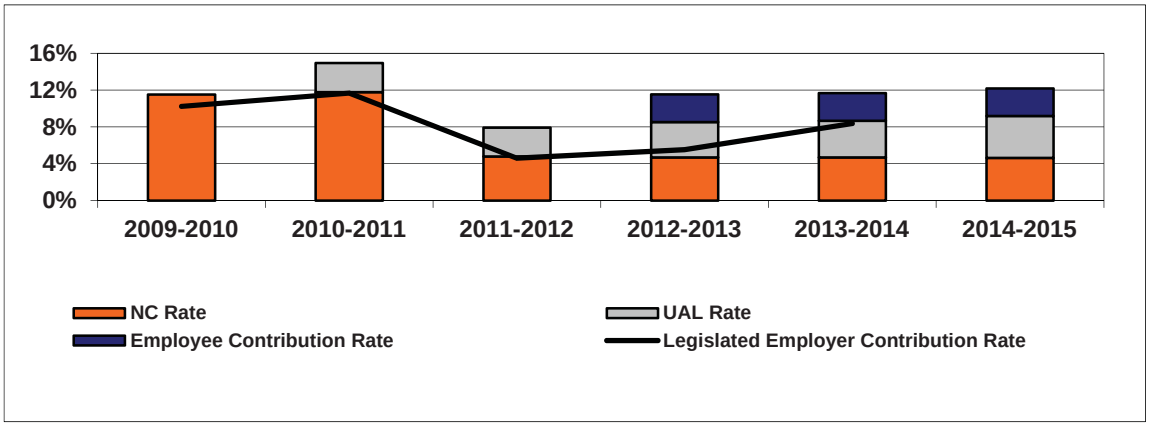


Chart D: ACTUARIALLY CALCULATED vs. LEGISLATED EMPLOYER CONTRIBUTION RATES (as % of Payroll)



F. Summary Comments

We caution that the results herein are applicable only for the next plan year. More than anything, future investment results will impact future contribution rates.

- The most recent experience study covered the period from July 1, 2003 to June 30, 2008. Experience studies are performed every five years and compare actual plan experience to the assumptions set forth in this report. This valuation reflects the assumption changes proposed by the June 30, 2008 experience study and adopted in plan year 2009–2010, as modified by the February 16, 2010 study on House Bill 479 and the July 1, 2011 study on Senate Bill 2100, both of which were enacted into law. The next regularly scheduled experience study will occur prior to completion of the July 1, 2014 actuarial valuation.

- As discussed at the 2013 Assumption Conference, there are several areas which we anticipate will receive significant discussion during the experience study. These include the payroll growth assumption, since observed payroll growth has lagged assumption over the past several years. Other areas of focus will include the cost allocation method, amortization policy and the funding structure for the DROP.

In attempting to anticipate future rates for the System, it is important to remain cognizant of the Investment Plan (IP) defined contribution program, which is available as an alternative to the defined benefit program for employees. The existence of the IP affects the DB plan contribution rates insomuch as active members can elect to participate in either the DB plan or the IP. Thus, plan election decisions can affect the demographic composition of the DB plan. Current IP membership is near 17% of total active membership.

We mention these caveats because the actuarial process merely measures the impact of these factors on FRS costs and liabilities after they have occurred. Unanticipated benefit or salary changes, changes in member behavior (e.g., withdrawal rates, rates of retirement, etc.), or changes in investment return could necessitate a change in the contribution rates.

Finally, we caution the readers of this report not to overemphasize the results of any single valuation as long-term trends are more important.

G. DROP Contribution Rate

When DROP was enacted into law, guidance from the legislature directed that it be funded in such a way that its enactment not impact the contribution rates of the classes of membership. The Florida Legislature has annually approved this funding method. To comply with this directive, we have developed a non-traditional funding mechanism in which the DROP is funded through a separate contribution rate to be paid by the employers of DROP participants. In addition, the asset reallocation developed in Table II-6 is based on the presumption that assets assigned to the current DROP members equal the same percentage of DROP liabilities as the funded percentage of the FRS. This prevents the under or over funding of the DROP from affecting the UAL contribution rates of the other membership classes.

To comply with GASB standards (both current and forthcoming standards), we do a second actuarial valuation where we explicitly recognize the DROP. Specifically, the expected retirement assumptions include the probability of participants electing the DROP. Adjustments are made for the value of future DROP liabilities versus the liability associated with traditional retirements.

For purposes of developing actuarially determined contribution rates for other than DROP participants, which includes recognizing prior Legislative guidance and Assumption Conference approval, we must ignore the existence of the DROP. To accomplish this, we complete the valuation assuming that one-half of those participants who elect the DROP would immediately retire had DROP not been enacted into law. The other 50% would retire in accordance with the retirement (non-DROP) assumptions developed as a result of the most recent experience study.

The first component of the DROP contribution rate (referred to as the Normal Cost component) is based on the difference in the results of the aforementioned two separate valuations:

- Funding Scenario – one in which DROP did not exist. In this scenario we estimated that half of those electing to go into DROP would have retired in the absence of the DROP.

- GASB Scenario – one in which the DROP exists as it does today, and retirement rates include expectation of members entering DROP.

The difference in these two scenarios represents the additional cost of assuming current active members will elect the DROP in the future. The difference in the dollar amount of the normal cost and the amortization cost of the two scenarios (using a 30-year level dollar amortization) represents the DROP contribution associated with future participation in DROP. This dollar amount is divided by current DROP payroll to

determine the DROP contribution rate of 4.30%, compared with 4.63% determined by the July 1, 2012 valuation. The total DROP contribution rate for the July 1, 2013 valuation is 11.02% of DROP payroll (the sum of the 4.30% DROP contribution rate plus the 6.72% UAL contribution).

The second part of the DROP contribution rate is referred to as the UAL component and is consistent with the UAL component of the other membership classes. Essentially, DROP employers are assigned a proportional share of the AVA. To accomplish this, assets are reallocated so that the DROP percent funded is the same as the overall System. This asset re-allocation results in a UAL contribution rate of 6.72% of current DROP payroll increasing at the 4% payroll growth assumption.

SECTION II

ASSETS

In many respects, an actuarial valuation can be considered similar to an inventory process. The inventory is taken annually as of the actuarial valuation date, which for this valuation is July 1, 2013. On that date the assets available for the payment of current and future benefits are appraised. These assets are compared with the inventory of Actuarial Liabilities. This inventory process leads to a method of calculating what contributions by members and/or their employers are needed to systematically eliminate any shortfall. The calculations are based on input from the Assumptions Conference for the appropriate length of time over which to systematically eliminate the shortfall, which is technically referred to as Unfunded Actuarial Liability, if future experience follows assumptions.

This section of the report deals with the asset determination. In the next section, the Actuarial Liabilities will be discussed. Section IV will deal with the process for determining required contributions, based upon the relationship between the assets and Actuarial Liabilities.

Two measures of FRS assets are presented in the valuation:

> The market value of assets provides the most accurate fair market "snapshot date" assessment of plan resources at a given date, and will be used on the balance sheet statements of position for the System and participating employers when upcoming GASB financial reporting standards come into effect. It tends to be the more volatile of the two asset measures and therefore is not used for determining the required payroll contribution rates.
>
> The actuarial value of assets is a second inventory measure of FRS asset holdings. It is related to the market value of assets, but uses a smoothing technique applied to mitigate year-to-year market fluctuations by recognizing actual single year investment returns different from the long-term 7.75% assumption systematically over a multi-year period. It is used to stabilize year-to-year changes in the FRS contribution rates we calculate in the valuation.

The actuarial smoothed asset valuation measure, implemented in 1989, reflects a five-year averaging methodology, as required by Florida Law (S.121.031(3)(a), Florida Statutes). Under this method, the expected actuarial value of assets is determined by crediting the rate of investment return assumed in our valuation (7.75% beginning July 1, 2004) to the prior year's actuarial value of assets. Then, 20% of the difference between the actual market value and the expected actuarial value of assets is recognized. The actuarial value of assets is also restricted by a 20% corridor around the market value of assets, so that the actuarial value cannot be greater than 120% or less than 80% of the market value. Table II-4 presents the

details of this calculation. As of July 1, 2013 the actuarial value of assets is 98.99% of the market value of assets.

Seven tables are presented in this section, summarizing the financial resources of the System on July 1, 2013. Table II-1 reconciles the market value of assets, as provided by the Division, to the asset values used in this valuation. Table II-2 shows the reconciliation of valuation assets from June 30, 2012 to June 30, 2013. The assets are presented by category in Table II-3. Table II-4 provides a detailed development of the July 1, 2013 actuarial value of assets. In Table II-5, the actuarial value of assets is allocated to each employee group, based on estimated cash flows, and the reallocation of assets from the various classes to the DROP class (see Table II-6). Table II-6 shows the derivation of reallocation of assets to/from the DROP class in order that DROP as a class is funded to the same extent as the System as a whole. (This reallocation ensures that the accumulation of assets in the DROP class does not impact the contribution rates of the other classes). Finally Table II-7 presents rates of return and a comparison of asset allocation figures between 2012 and 2013.

The Market Value of Assets as of July 1, 2013 was furnished to us by the Division of Retirement. The values have been accepted for use in this report without audit, but have been reviewed for consistency and reasonableness, when compared to prior reports.

The FRS Trust Fund is comprised of several distinct funds. The Florida Retirement System Trust Fund Only represents defined benefit plan assets. The Operating Trust Fund is the Division of Retirement's mechanism for spending its annual appropriation from the FRS Trust Fund. The Contribution Clearing Trust Fund is the fund into which all employer and employee contributions are made, and then transferred back out to the appropriate funds (DB Plan, IP Trust, optional annuity plans, etc.) In Table II-1 we have denoted DB Plan assets as the sum of the FRS Trust Fund Only plus the Operating Trust Fund. Assets appearing in the Contribution Clearing Trust Fund as of the June 30, 2013 report date are generally designated for transfer to the Investment Plan, so are excluded from the DB Plan assets reflected in this valuation.

It is our understanding that FRS treats monthly member balance increases and interest crediting on those accumulated balances for DROP participants as a balance sheet "Accrued DROP Liability" in its financial statements. In other words, the Accrued DROP Liability is reported as a deduction from the overall value of Trust assets in the System's financial statements. While these accumulating DROP member balances are indeed linked to future DROP single sum payments, the assets underlying those amounts are still held in the Trust as of the actuarial valuation date. Additionally, the Actuarial Liabilities shown in this valuation report reflect the full value of projected future disbursements from the Trust for future single

sum DROP benefits, since those benefits have not yet been distributed from the Trust. As such, the DROP Accrued Liability is not deducted from the assets used in our valuation so that assets and Actuarial Liabilities are appropriately matched. That is the reason for the adjustment shown in Table II-1.

Similarly, the benefit payments shown in FRS's financial statements include increases in the Accrued DROP Liability. The pension payments listed in Table II-2 are net of the increase in the Accrued DROP Liability from June 30, 2012 to June 30, 2013. The increase in Accrued DROP Liability reflects additional monthly credit and interest accumulation for future single sum DROP benefits that have not been disbursed from the Trust as of June 30, 2013. That accumulation is included in the benefit payments entry on the System's financial statements. Since the accumulated amounts have not been disbursed from the Trust assets as of plan year end, that accumulation is netted out of the reported benefit payment entry to get an actuarial benefit payment entry representing the Trust disbursements. As noted above, measured Actuarial Liabilities at the valuation date include the full present value of the projected future single sum disbursements from the Trust for the DROP.

Table II-1
Florida Retirement System

FRS Trust Fund

	DB Plan Trust [1]	Contribution Clearing Trust	FRS Trust Total
Market Value of Assets on June 30, 2012 for Actuarial Valuation	**$ 122,912,825,273**	**$ 8,563,145**	**$ 122,921,388,418**
- Adjustment for June 30, 2012 DROP Liability	(2,939,923,585)	-	(2,939,923,585)
Net Assets Held in Trust for Pension Benefits on June 30, 2012	**$ 119,972,901,688**	**$ 8,563,145**	**$ 119,981,464,833**
+ Contributions by Source:			
Pension Contributions - State	$ 273,350,642	$ 53,146,281	$ 326,496,923
Pension Contributions - Non-State	1,064,090,231	150,187,600	1,214,277,831
Pension Contributions - Employees	694,910,997	135,706,450	830,617,447
Transfers from IP - Second Elections	43,883,824	0	43,883,824
Transfer from ORP	7,319,091	-	7,319,091
Transfer from OAP	11,815	-	11,815
General Revenue	15,714,207	-	15,714,207
Total Contributions	$ 2,099,280,807	$ 339,040,331	$ 2,438,321,138
+ Interest and Dividends:			
Interest Income	$ 1,043,513,692	$ -	$ 1,043,513,692
Dividend Income	1,992,763,342	-	1,992,763,342
Real Estate Income	471,728,292	-	471,728,292
Other	210,560,687	-	210,560,687
Less Investment Activity Expense	(436,875,409)	-	(436,875,409)
Total Investment Income	$ 3,281,690,604	$ -	$ 3,281,690,604
+Net Realized and Unrealized Appreciation:	$ 13,052,082,047	$ -	$ 13,052,082,047
- Deductions by Source:			
Pension Payments[3]	$ 7,903,656,618	$ -	$ 7,903,656,618
Benefit Payments - General Revenue Funded	15,714,207	-	15,714,207
Contribution Refunds	5,033,571	-	5,033,571
Disbursements to IP - Second Elections	794,361,419	338,240,038	1,132,601,457
Administrative Expenses[2]	15,645,493	-	15,645,493
Transfers to Other Funds and Departments	894,370	7,924,838	8,819,208
Total Deductions	$ 8,735,305,678	$ 346,164,876	$ 9,081,470,554
Net Assets Held in Trust for Pension Benefits on June 30, 2013	**$ 129,670,649,468**	**$ 1,438,600**	**$ 129,672,088,068**
+ Adjustment for June 30, 2013 DROP Liability	3,357,306,300	-	3,357,306,300
Market Value of Assets on June 30, 2013 for Actuarial Valuation	**$ 133,027,955,768**	**$ 1,438,600**	**$ 133,029,394,368**

[1] "DB Plan Trust" denotes the FRS Trust Only plus Division of Retirement Operating Trust Fund

[2] Effective with the implementation of GASB #25, certain investment expenses (contractual services and fees) are used to offset investment income rather than being classified as expenses.

[3] Includes $417,382,715 increase in Accrued DROP Liability for future single sum benefits not yet paid for DROP participants.

Table II-2
Florida Retirement System

Reconciliation of Market Value of Assets Used for Valuation
DB Plan Trust

Market Value of Assets for Actuarial Valuation as of June 30, 2012	**$122,921,388,418**
Adjustment for Contribution Clearing Trust	(8,563,145) [1]
Contributions by Source:	
Pension Contributions - State	273,350,642
Pension Contributions - Non-State	1,064,090,231
Pension Contributions - Employees	694,910,997
Transfers from IP - Second Elections	43,883,824
Transfer from ORP	7,319,091
Transfer from OAP	11,815
Other	-
Interest and Dividends:	
Interest Income	1,043,513,692
Dividend Income	1,992,763,342
Real Estate Income	471,728,292
Other	210,560,687
Less Investment Activity Expense	(436,875,409) [2]
Net Realized and Unrealized Appreciation	13,052,082,047
Pension Payments	(7,486,273,903) [3]
Contribution Refunds	(5,033,571)
Disbursements to IP - Second Elections	(794,361,419)
Administrative Expenses	(15,645,493) [2]
Transfers to Other Funds and Departments	(894,370)
Market Value of Assets for Actuarial Valuation as of June 30, 2013	**$133,027,955,768**

[1] Assets shown at June 30, 2012 included $8,563,145 being held in the Contribution Clearing Trust Fund.

[2] Effective with the implementation of GASB #25, certain investment expenses (contractual services and fees) are used to offset investment income rather than being classified as expenses.

[3] Pension Payments shown above are net of the increase in Accrued DROP Liability from June 30, 2012 to June 30, 2013. The increase in Accrued DROP Liability reflects accumulated amounts for future single sum DROP benefits that have not been disbursed from the Trust as of June 30, 2013. Measured actuarial liabilities at that date include the full present value of the projected future single sum disbursements from the Trust for the DROP.

Table II-3
Florida Retirement System
Summary of Market Value of Assets for Actuarial Valuation
(by Asset Category)
($ in Thousands)

Asset Category	Market Value as of July 1, 2012	2013
1. Common Stock	$80,785,299	$92,223,803
2. Bonds	$34,937,695	$32,629,902
3. Real Estate	$8,176,282	$9,040,776
4. Temporary Investments	$4,954,524	$3,548,406
5. Cash - Including Certificates of Deposit	$1,120,565	$2,280,387
6. Receivables	$2,421,857	$3,518,622
7. Miscellaneous	$363	$424
8. Reverse Purchase Agreements	$2,055,000	$750,000
Gross Assets	$134,451,585	$143,992,320
9. Current Liabilities and Reserves	($11,530,197)	($10,964,364)
Market Value of Assets for Actuarial Valuation	**$122,921,388**	**$133,027,956**

Table II-4
Florida Retirement System
Development of 2013
Actuarial Value of Assets

1. FRS Market Value of Assets on June 30, 2012 for Actuarial Valuation	$122,921,388,418
2. Actuarial Value of Assets on July 1, 2012	$127,891,781,409
3. 2012/2013 Net Cash Flow (Contributions less Benefits and Expenses)	($6,218,642,157)
4. Preliminary Actuarial Value of Assets, July 1, 2013, if Items 2 and 3 earned an assumed rate of 7.75%	$131,343,779,928
5. Market Value of Assets, June 30, 2013 for Actuarial Valuation	$133,027,955,768
6. Net Assets (Actuarial Value Basis) Available for Benefits Prior to Application of 80%/20% Corridor 4 + ((5 - 4) x 20%)	$131,680,615,103
7. 120% of Market Value [120% (5)]	$159,633,546,922
8. 80% of Market Value [80% (5)]	$106,422,364,614
9. Actuarial Value of Assets on July 1, 2013 Lesser of (6) and (7), but not less than (8)	**$131,680,615,103**
10. Ratio of July 1, 2013 Actuarial Value of Assets to Market Value on June 30, 2013 for Actuarial Valuation	**98.99%**

Table II-5
Florida Retirement System
Development of Actuarial Value of Assets
By Membership Class
($ in Thousands)

	FRS	----- Special Risk -----		-- Elected Officers' Class --			Senior		Total
	Regular	Regular	Administration	Judicial	Leg-Atty-Cab	County	Management	DROP	System
1. Allocated Actuarial Value of Assets by Class, July 1, 2012	$87,763,493	$20,296,396	$71,697	$674,314	$55,010	$301,604	$2,006,655	$16,722,612	$127,891,781
2. Total Contribution for the Plan Year	1,345,364	575,574	164	14,747	652	5,271	40,502	101,293	2,083,567
3. Benefit Payments and other Disbursements	(5,739,390)	(1,140,609)	(6,509)	(68,079)	(6,712)	(41,062)	(157,951)	(1,141,895)	(8,302,207)
4. Allocated Investment Earnings on AVA Basis	6,862,379	1,605,101	5,495	51,941	4,169	22,752	156,222	1,299,415	10,007,474
5. Unadjusted Actuarial Value of Assets (1) + (2) + (3) + (4)	90,231,846	21,336,462	70,847	672,923	53,119	288,565	2,045,428	16,981,425	131,680,615
6. Net Reallocation (see Table II-6)	(516,466)	(160,920)	(175)	(9,683)	(496)	(2,147)	(22,114)	712,001	0
7. Allocated Actuarial Value of Assets by Class, July 1, 2013: (5) + (6)	$89,715,380	$21,175,542	$70,672	$663,240	$52,623	$286,418	$2,023,314	$17,693,426	$131,680,615

Table II-6
Florida Retirement System
Reallocation of Actuarial Value of Assets
By Membership Class
($ in Thousands)

	FRS	----- Special Risk -----		-- Elected Officers' Class --			Senior		Total
	Regular	Regular	Administration	Judicial	Leg-Atty-Cab	County	Management	DROP	System
1. Actuarial Accrued Liability, July 1, 2013								$20,597,701	$153,302,772
2. Unadjusted Actuarial Value of Assets, July 1, 2013 prior to reallocation								16,981,425	131,680,615
3. Unfunded Actuarial Liability (UAL): (1) - (2)								$3,616,277	$21,622,157
4. Aggregate Funded Percentage: (2) / (1)								82.44%	85.90%
5. DROP Assets Required to Meet Aggregate Funded Percentage: (1) x (4) [Total System] - (2)								$712,001	
6. Proportion of DROP Liability by Class	0.7254	0.2260	0.0002	0.0136	0.0007	0.0030	0.0311	N/A	1.0000
7. Assets to be Reallocated	($516,466)	($160,920)	($175)	($9,683)	($496)	($2,147)	($22,114)	$712,001	0

Table II-7
Florida Retirement System

A. Rates of Return on Investments[1]

Asset Bases	Rates of Return 2010/2011	2011/2012	2012/2013
Market Value	22.79%	0.21%	13.63%
Actuarial Value	8.39%	6.74%	8.02%

[1] Assumes net cash flow occurs mid-year

B. Allocation of Assets at Market Value

Asset Category	July 1, 2012	July 1, 2013
Stocks	65.72%	69.33%
Bonds	28.42%	24.53%
Real Estate	6.65%	6.80%
Temporary Investments	4.03%	2.67%
Cash	0.91%	1.71%
Other (includes receivables & payables)	-5.73%	-5.04%
	100%	100%

SECTION III

LIABILITIES

In the previous section, an actuarial valuation was compared to an inventory process, and an analysis was given of the inventory of assets of the FRS as of the valuation date, July 1, 2013. In this section, the discussion will focus upon the commitments of the FRS, which will be referred to as its Actuarial Liabilities. In later sections, other liabilities are presented (Section V) based on accounting principles of the Financial Account Standards Board (FASB) and Governmental Accounting Standards Board (GASB). It is important to note that the accounting liabilities are presented for disclosure and comparison purposes and that the Actuarial Liabilities in this section are used for determining the FRS contribution requirements.

A fundamental principle in financing a retirement program is that the projected cost of retirement benefits should be accrued during the period in which service is performed, rather than during the post-retirement period of benefit distribution. There are several methods that can be used in making such an allocation.

As part of the actuarial rate calculation methodology approved by the Assumptions Conference, the System's Normal Cost and Actuarial Liability are calculated using the Ultimate Entry Age (Ultimate EAN) actuarial cost allocation method. The cost method does not affect the calculation of overall projected system benefits (Present Value of Benefits), but it does affect the allocation of those benefits over a member's projected working career between past (Actuarial Liability), current year (Normal Cost) and all future year projected (Present Value of Future Normal Costs) service. The Present Value of Benefits is equal to the sum of the Actuarial Liability and the Present Value of Future Normal Costs.

For a system such as FRS with two membership tiers, Ultimate EAN calculates the Normal Cost allocation for individual members as if each member participates in the tier available to new hires for his or her full working career. For members in Tier I, this means the Normal Cost under the Ultimate EAN method will be based on the benefit plan provisions in Tier II. Because Tier II results in lower expected benefit payments than under Tier I, the calculated Normal Cost rate is lower than it would be if the member's actual plan provisions were used.

The actuarial cost allocation method does not affect the calculation of the Present Value of Benefits, which are based on the plan provisions specific to each member's enrollment date. The Actuarial Liability is the Present Value of Benefits minus the Present Value of Future Normal Costs. Thus, the Ultimate EAN method used in this valuation leads to a lower Normal Cost and a higher Actuarial Liability for Tier I members than would be calculated under a method that based the Normal Costs of Tier I members on the Tier I benefit plan provisions.

The difference between the Actuarial Liability and the Actuarial Value of Assets accumulated as of the valuation date is referred to as the Unfunded Actuarial Liability (UAL). (If the difference is negative, the excess of the funds accumulated

over the liabilities may be referred to as the surplus.) The UAL is amortized in accordance with the schedules in Section IV of this report.

Please note that the recently issued Statements 67 & 68 of the Governmental Accounting Standards Board (GASB) do not permit the use of the Ultimate EAN cost allocation method for accounting calculations. The Ultimate EAN method and the GASB 67 & 68 mandated variation of EAN ("Individual" EAN) will produce different Actuarial Liability and Normal Cost results. Determining which EAN methodology (Ultimate or Individual) generates higher current contribution rates depends on the period used to amortize the Unfunded Actuarial Liability. For FRS, the amortization periods used in the methodology approved by the Assumptions Conference will lead to the Ultimate EAN methodology having lower current calculated contribution rates than the Individual EAN methodology. As the number of Tier I active participants decreases, the Individual EAN Normal Cost would trend downward toward the Tier II Normal Cost. When all Tier I active participants have left the workforce the contribution results of the two variations should converge.

The UAL will grow with interest and Normal Cost, while contributions will reduce it. Benefit improvements, actuarial gains and losses (variations in investment results and demographics from assumption), and changes in actuarial procedures and methodologies will also have an effect on the total Actuarial Liability and on the UAL.

After the amount of the UAL has been determined, as part of the rate calculation methodology approved by the Assumptions Conference, the actuarially calculated contribution rates include a component for the amortization of the UAL. A schedule of contributions is established to amortize the UAL. In Section IV of the report, we discuss the contribution schedules in detail.

Table III-1 contains a breakdown of the Actuarial Liabilities and Unfunded Actuarial Liabilities in the FRS for the 2012 valuation and the 2013 valuation. In Table III-2, the 2013 liabilities are shown for each employee group.

Legislation enacted in 2001 "walls off," for 25 years, the actuarial gains arising from former Defined Benefit Plan participants electing the Investment Plan option. The "walled off" amount is called the contingent liability. The Actuarial Liabilities generally do not include the contingent liability. However, surplus, if any, used for contribution rate reductions is net of the contingent liability. Table III-3 shows the contingent liability and the number of current active participants, by class, who elected to transfer from the Defined Benefit Plan to the Investment Plan during the original 2002-2003 election periods for members who were active when the IP became effective.

Table III-1
Florida Retirement System
Actuarial Liabilities
($ in Thousands)

	July 1, 2012 Valuation	July 1, 2013 Valuation
1. Actuarial Liabilities for:		
(a) Active Members	$52,972,250	$52,626,743
(b) Retired, Disabled and Beneficiary Members	69,915,462	74,843,720
(c) Terminated Vested Members	5,059,727	5,234,608
(d) DROP	19,245,727	20,597,701
2. Total Actuarial Liability	$147,193,166	$153,302,772
3. Actuarial Value of Assets	$127,891,781	$131,680,615
4. Unfunded Actuarial Liability / (Surplus)	$19,301,385	$21,622,157
5. Investment Plan Contingent Liability [1]	$235,098	$233,810
6. Surplus Available for Rate Reduction	$0	$0

[1] See Table III-3.

Table III-2
Florida Retirement System
Actuarial Liabilities
July 1, 2013
($ in Thousands)

	FRS	----- Special Risk -----		-- Elected Officers' Class --			Senior		Total
	Regular	Regular	Administration	Judicial	Leg-Atty-Cab	County	Management	DROP	System
1. Present Value of Benefits for:									
a. Active Members	$50,789,317	$17,464,037	$9,530	$486,753	$23,497	$175,846	$1,836,999	$0	$70,785,979
b. Retired, Disabled and Beneficiary Members	57,512,939	14,063,402	76,731	700,027	75,591	444,850	1,970,180	20,597,701	95,441,421
c. Terminated Vested Members	4,306,006	694,395	1,259	19,788	10,705	24,890	177,565	0	5,234,608
d. Total Present Value of Benefits (a)+(b)+(c)	112,608,262	32,221,834	87,520	1,206,568	109,793	645,586	3,984,744	20,597,701	171,462,008
2. Present Value of Future Normal Cost (Actives):	$11,661,437	$6,010,429	$1,042	$129,995	$3,898	$35,102	$317,333	$0	$18,159,236
3. Actuarial Liabilities for:									
a. Active Members (1a) - (2)	$39,127,880	$11,453,608	$8,488	$356,758	$19,599	$140,744	$1,519,666	$0	$52,626,743
b. Retired, Disabled and Beneficiary Members (1b)	57,512,939	14,063,402	76,731	700,027	75,591	444,850	1,970,180	20,597,701	95,441,421
c. Terminated Vested Members (1c)	4,306,006	694,395	1,259	19,788	10,705	24,890	177,565	0	5,234,608
d. Total Actuarial Liability (a)+(b)+(c)	$100,946,825	$26,211,405	$86,478	$1,076,573	$105,895	$610,484	$3,667,411	$20,597,701	$153,302,772
4. Actuarial Value of Assets	$89,715,380	$21,175,542	$70,672	$663,240	$52,623	$286,418	$2,023,314	$17,693,426	$131,680,615
5. Unfunded Actuarial Liability / (Surplus)	$11,231,445	$5,035,863	$15,806	$413,333	$53,272	$324,066	$1,644,097	$2,904,275 [1]	$21,622,157
6. Present Value of Future Pay	$172,173,558	$42,067,902	$15,114	$980,577	$44,608	$325,622	$3,790,551	$0	$219,397,932

[1] This is a bookkeeping item. DROP liabilities include the total present value of benefits to all members currently in DROP. When a member leaves DROP, their liability is transferred to the class of membership from which they retired.

Table III-3
Investment Plan
Contingent Actuarial Liabilities
July 1, 2013
($ in Thousands)

	FRS	----- Special Risk -----		-- Elected Officers' Class --			Senior		Total
	Regular	Regular	Administration	Judicial	Leg-Atty-Cab	County	Management	DROP	System
As of July 1, 2012									
Contingent Liability	$215,005	$10,652	($24)	($654)	$201	$102	$9,815	NA	$235,098
Participant Counts	7,686	253	1	5	5	10	189	NA	8,149
As of July 1, 2013									
Contingent Liability[1 & 2]	$214,547	$10,253	($25)	($705)	$173	$110	$9,457	NA	$233,810
Participant Counts	7,118	226	1	5	4	10	169	NA	7,533

[1] The contingent liability is not included in the actuarial liabilities of FRS and is removed from the surplus.

[2] The contingent liability as of July 1, 2013 is calculated as the July 1, 2003 contingent liability increased by ten years of interest, adjusted for the proportion of original transfers remaining in the Investment Plan.

SECTION IV

CONTRIBUTIONS

Differences between the Actuarial Liabilities and the assets can be made up through (1) future contributions in excess of the Normal Costs to amortize the shortfall and/or (2) the excess of actual investment returns over assumed returns. An actuarial valuation sets out a schedule of future contributions that will deal with this deficiency in a systematic manner if future experience follows the assumptions. By contrast, in prior years when the FRS had an actuarial surplus, legislated contribution rates were generally below the Normal Cost. In this section we develop and present the FRS contribution rates based on the July 1, 2013 membership data to be effective for the Plan Year beginning July 1, 2014.

First, we present a description of the actuarial method used to determine the actuarially calculated FRS contributions for the 2014-2015 plan year. This is followed by a series of tables presenting the details of our calculations.

A. Funding Methods

The actuarial cost method used to determine the pattern of future contributions is called the Ultimate Entry Age Normal (Ultimate EAN) actuarial cost method . Under this method (as is the case for most actuarial cost methods), the contributions required are based on two elements:

- The Normal Cost
- The amortization payment to liquidate the Unfunded Actuarial Liability (UAL) or surplus.

These elements are described in more detail below.

1. Normal Cost

Under the Ultimate EAN method, the Normal Cost rate is that level percentage of pay which would fully fund a member's benefit at retirement, if paid from the year of entry (i.e., "entry age") to the year of retirement if future experience were to exactly match the actuarial assumptions. For a system such as FRS, with two membership tiers, Ultimate EAN determines the Normal Cost allocation for individual members as if each member participates in the tier available to new hires for his or her full working career. For members in Tier I, this means the Normal Cost under the Ultimate EAN method will be based on the benefit plan provisions in Tier II. Because Tier II results in lower expected benefits than under Tier I, the calculated Normal Cost rate is lower than it would be if the member's actual plan provisions were used. This lower Normal Cost rate leads to a higher Actuarial Liability, all else equal, as is discussed below.
We have determined the Normal Cost rates for the FRS separately by member class and benefit. These are summarized in Table IV-1.

2. Unfunded Actuarial Liability (UAL)

The Actuarial Liability is the difference between the Actuarial Present Value of Projected Benefits (PVB) and the Present Value of Future Normal Costs (PVFNC). Because Ultimate EAN produces lower Normal Costs than would be determined if each individual's applicable benefit plan provisions were used, the Actuarial Liability is higher than it would be if those plan provisions were used.

The term "fully funded" is often applied to a system where contributions at the Normal Cost rate are completely adequate to fund the projected future benefits of all existing members if future experience follows the assumptions. Currently, most systems are not fully funded, either because payments for benefit improvements in the past have not been completely made, because actuarial deficiencies have occurred due to experience that has not been as favorable as anticipated, or both. Under these circumstances, a UAL exists. For the FRS, this is the fifth consecutive year that a UAL exists, or that the Plan does not have a surplus. Prior to that time, the Actuarial Value of Assets exceeded the Actuarial Liability for the valuations from 1998 through 2008 and no UAL existed in those valuations.

Tables IV-2 through IV-10 show how the UAL contribution rates were derived for the FRS. Table IV-2 shows the calculations on a composite basis, while Tables IV-3 through IV-10 show the calculations for each individual membership class and sub-class and the DROP.

As part of the funding policy selected by the Florida Legislature, the actuarially calculated contribution rate is based on a "layered" approach that includes closed 30-year charge and credit bases for the amortization of the UAL. Starting in the 1998 actuarial valuation, the Legislature required all UAL bases in existence at that time to be considered fully amortized, since the Plan was in a surplus position. Since then, bases were created whenever there were changes in plan provisions or changes in assumptions pursuant to an experience study. Now that the UAL has reemerged, all experience gains and losses are also subject to amortization. In this valuation, we show the amortization of each plan/assumption change since 1998 and experience gains/losses starting in 2009. The plan changes include those attributable to House Bill 479 in 2010 and Senate Bill 2100 in 2011.

For a given base of UAL amortization, annual amortization payments are calculated as increasing by 4% per year ("level percent of payroll amortization"), consistent with the valuation's long-term annual payroll growth assumption. If future experience follows the actuarial assumptions, this should result in amortization payments that keep pace with the assumed growth in overall compensation. Please note that with the current amortization period of 30 years, amortization payments will not be large enough to cover interest on the UAL for several years, which means that as a dollar amount the

UAL is expected to grow for a period of time. Under current assumptions, the expected UAL for a newly established amortization base will grow until the amortization period is down to 18 years. After that time, the amortization payments will be large enough that the amortization payments will cover both interest and principal, and the UAL as a dollar amount will be projected to decrease in each subsequent year. After approximately 20 years, the unamortized balance for the base will be approximately at the same level as the initial amount of the base.

The benefit changes legislated by Senate Bill 2100 reduced the Normal Cost, PVFNC and the PVB for current and future active members. All members initially enrolled before July 1, 2011 (Tier I) will continue to earn benefits at levels greater than those annually earned by members initially enrolled on or after July 1, 2011 (Tier II). While the base benefits are higher for Tier I members than Tier II members, the projected benefit levels for Tier I members are decreased from what they would have been absent Senate Bill 2100 due to the determination of the annual COLA percentage increase being based on the prorated pre-July 2011 service over total service.

As noted on the prior page, the Actuarial Liability is defined as PVB less PVFNC. For some membership classes the percentage, decrease in the PVFNC was larger than the percentage decrease in the PVB, resulting in an increase in an Actuarial Liability. For the remaining membership classes, the percentage decrease in the PVFNC was smaller than the percentage decrease in the PVB, resulting in a decrease in the Actuarial Liability. The variation is due to the different demographics, benefit multipliers and unique interrelation of the modified benefit provisions of each membership class. The PVB will be lower in future valuations than it would have been had Senate Bill 2100 not been adopted.

B. EMPLOYER CONTRIBUTION RATES

Table IV-11 presents the actuarially calculated employer contribution rates.

The reader should note that the payroll base for UAL contributions is approximately $2.45 billion larger than the payroll base for normal cost contributions. This is because Florida Statute requires the employers of certain defined contribution program participants to make UAL contributions based on their payroll. Thus, the total contribution shown is an arithmetic sum, but the actual contribution percentage will vary by employer based on their workforce percentage of defined contribution program employees.

Table IV-12 compares the legislated employer contribution rates to those calculated in the actuarial valuations for the prior plan years. The legislated rates for the 2012-2013 plan year were the same as the actuarially calculated rates in the 2012 actuarial valuation. In the previous three years, the legislated rates were less than the actuarially calculated rates.

Table IV-1
Florida Retirement System
Normal Cost Rates by Decrement
July 1, 2013

	FRS	----- Special Risk -----		----- Elected Officers' Class -----			Senior		
	Regular	Regular	Administration	Judicial	Leg-Atty-Cab	County	Management	DROP	Total
1. Vested Benefits and Early Retirement	1.50%	2.05%	1.87%	1.70%	3.90%	3.22%	1.52%	NA	1.59%
2. Regular Retirement	4.03%	10.03%	3.45%	10.14%	4.10%	6.92%	5.10%	NA	4.98%
3. Non-Duty Death	0.13%	0.26%	0.06%	0.48%	0.20%	0.28%	0.15%	NA	0.15%
4. Line of Duty Death	0.09%	0.25%	0.19%	0.18%	0.14%	0.16%	0.11%	NA	0.12%
5. Non-Duty Disability	0.22%	0.47%	0.15%	0.38%	0.18%	0.21%	0.17%	NA	0.25%
6. Line of Duty Disability	0.04%	0.48%	0.28%	0.09%	0.06%	0.06%	0.04%	NA	0.10%
7. Refund of Employee Contributions	0.49%	0.24%	0.61%	0.06%	0.50%	0.31%	0.63%	NA	0.46%
8. Total Normal Cost	6.50%	13.78%	6.61%	13.03%	9.08%	11.16%	7.72%	NA	7.65%
9. Expected Employee Contributions[1]	-2.97%	-3.02%	-2.93%	-3.01%	-2.94%	-2.95%	-2.96%	NA	-2.98%
10. Employer Normal Cost	3.53%	10.76%	3.68%	10.02%	6.14%	8.21%	4.76%	NA	4.67%

[1] The actual rate of employee contribution is 3.00%. The rates shown are based on pay rates as of the date of the valuation and reflect actuarial methodology which includes the timing of salary increases, expected turnover and other decrements.

Table IV-2
Florida Retirement System
Unfunded Actuarial Liability (UAL) Bases
July 1, 2013
Composite System
($ in Thousands)

(a)	(b)	(c)	(d)	(e)	(f) = (d) / (e)	(g)	(h)	(i)	(j) = (h) / (i)
Date Established	Description	Remaining Payments as of Valuation Date	Balance as of Valuation Date	Amortization Factor	Amortization Payment for FY 2013-2014	Remaining Payments one year after Valuation Date	Balance One Year After Valuation Date	Amortization Factor	Amortization Payment for FY 2014-2015
June 30, 1999	Assumption Change from 1998 Experience Study	17	$ (393,251)	12.5224	$ (31,404)	16	$ (391,130)	11.9758	$ (32,660)
June 30, 2000	Special Risk 65% In-Line-Of-Duty Disability (2000)	18	(2,540)	13.0500	(195)	17	(2,535)	12.5224	(202)
June 30, 2000	Special Risk-Regular 12% Pre-2000 Retired Benefit Increase (2000)	18	323,601	13.0500	24,797	17	322,940	12.5224	25,789
June 30, 2004	Assumption Change from 2003 Experience Study	22	(3,468,873)	14.9829	(231,523)	21	(3,497,383)	14.5250	(240,784)
June 30, 2009	Assumption Change from 2008 Experience Study	27	6,632,800	17.0439	389,159	26	6,742,885	16.6604	404,726
June 30, 2009	2008-2009 Experience (Gains) / Losses	27	20,814,631	17.0439	1,221,235	26	21,160,090	16.6604	1,270,084
June 30, 2009	Unrecognized (Gains)/Losses while in Surplus	27	(6,088,463)	17.0439	(357,222)	26	(6,189,513)	16.6604	(371,511)
June 30, 2009	2009-2010 Plan Changes (HB 479)	27	(1,258,684)	17.0439	(73,849)	26	(1,279,575)	16.6604	(76,803)
June 30, 2010	2009-2010 Experience (Gains) / Losses	28	1,120,982	17.4141	64,372	27	1,141,038	17.0439	66,947
June 30, 2010	2010-2011 Plan Changes (SB 2100)	28	(1,227,877)	17.4141	(70,510)	27	(1,249,846)	17.0439	(73,331)
June 30, 2011	2010-2011 Experience (Gains) / Losses	29	2,711,474	17.7714	152,575	28	2,763,236	17.4141	158,678
June 30, 2012	2011-2012 Experience (Gains) / Losses	30	(108,266)	18.1163	(5,976)	29	(110,453)	17.7714	(6,215)
June 30, 2013	2012-2013 Experience (Gains) / Losses		2,566,624		-	30	2,765,537	18.1163	152,655
		UAL as of Valuation Date	$ 21,622,157					Total:	$ 1,277,372
								Projected FY 2014-2015 UAL Payroll:	$ 28,112,859
								UAL Contribution Rate:	4.54%

Table IV-3
Florida Retirement System
Unfunded Actuarial Liability (UAL) Bases
July 1, 2013
FRS Regular
($ in Thousands)

(a)	(b)	(c)	(d)	(e)	(f) = (d) / (e)	(g)	(h)	(i)	(j) = (h) / (i)
Date Established	Description	Remaining Payments as of Valuation Date	Balance as of Valuation Date	Amortization Factor	Amortization Payment for FY 2013-2014	Remaining Payments one year after Valuation Date	Balance One Year After Valuation Date	Amortization Factor	Amortization Payment for FY 2014-2015
June 30, 1999	Assumption Change from 1998 Experience Study	17	$ (299,577)	12.5224	$ (23,923)	16	$ (297,961)	11.9758	$ (24,880)
June 30, 2004	Assumption Change from 2003 Experience Study	22	(3,064,570)	14.9829	(204,538)	21	(3,089,757)	14.5250	(212,720)
June 30, 2009	Assumption Change from 2008 Experience Study	27	5,395,406	17.0439	316,559	26	5,484,953	16.6604	329,221
June 30, 2009	2008-2009 Experience (Gains) / Losses	27	33,144,809	17.0439	1,944,671	26	33,694,911	16.6604	2,022,457
June 30, 2009	Unrecognized (Gains)/Losses while in Surplus	27	(25,999,097)	17.0439	(1,525,418)	26	(26,430,602)	16.6604	(1,586,434)
June 30, 2009	2009-2010 Plan Changes (HB 479)	27	(989,532)	17.0439	(58,058)	26	(1,005,955)	16.6604	(60,380)
June 30, 2010	2009-2010 Experience (Gains) / Losses	28	1,249,615	17.4141	71,759	27	1,271,973	17.0439	74,629
June 30, 2010	2010-2011 Plan Changes (SB 2100)	28	(1,586,344)	17.4141	(91,095)	27	(1,614,726)	17.0439	(94,739)
June 30, 2011	2010-2011 Experience (Gains) / Losses	29	1,341,268	17.7714	75,473	28	1,366,873	17.4141	78,492
June 30, 2012	2011-2012 Experience (Gains) / Losses	30	480,358	18.1163	26,515	29	490,062	17.7714	27,576
June 30, 2013	2012-2013 Experience (Gains) / Losses		1,559,109		-	30	1,679,939	18.1163	92,731
		UAL as of Valuation Date	$ 11,231,445					Total:	$ 645,953
								Projected FY 2014-2015 UAL Payroll:	$ 21,427,460
								UAL Contribution Rate:	3.01%

Table IV-4
Florida Retirement System
Unfunded Actuarial Liability (UAL) Bases
July 1, 2013
Special Risk - Regular
($ in Thousands)

(a)	(b)	(c)	(d)	(e)	(f) = (d) / (e)	(g)	(h)	(i)	(j) = (h) / (i)
Date Established	Description	Remaining Payments as of Valuation Date	Balance as of Valuation Date	Amortization Factor	Amortization Payment for FY 2013-2014	Remaining Payments one year after Valuation Date	Balance One Year After Valuation Date	Amortization Factor	Amortization Payment for FY 2014-2015
June 30, 1999	Assumption Change from 1998 Experience Study	17	$ (90,699)	12.5224	$ (7,243)	16	$ (90,210)	11.9758	$ (7,533)
June 30, 2000	Special Risk 65% In-Line-Of-Duty Disability (2000)	18	(2,592)	13.0500	(199)	17	(2,586)	12.5224	(207)
June 30, 2000	Special Risk-Regular 12% Pre-2000 Retired Benefit Increase (2000)	18	323,601	13.0500	24,797	17	322,940	12.5224	25,789
June 30, 2004	Assumption Change from 2003 Experience Study	22	(626,064)	14.9829	(41,785)	21	(631,210)	14.5250	(43,457)
June 30, 2009	Assumption Change from 2008 Experience Study	27	529,944	17.0439	31,093	26	538,739	16.6604	32,337
June 30, 2009	2008-2009 Experience (Gains) / Losses	27	7,302,493	17.0439	428,452	26	7,423,692	16.6604	445,590
June 30, 2009	Unrecognized (Gains)/Losses while in Surplus	27	(2,423,164)	17.0439	(142,172)	26	(2,463,381)	16.6604	(147,859)
June 30, 2009	2009-2010 Plan Changes (HB 479)	27	(184,819)	17.0439	(10,844)	26	(187,887)	16.6604	(11,277)
June 30, 2010	2009-2010 Experience (Gains) / Losses	28	(397,014)	17.4141	(22,798)	27	(404,117)	17.0439	(23,710)
June 30, 2010	2010-2011 Plan Changes (SB 2100)	28	443,633	17.4141	25,475	27	451,570	17.0439	26,495
June 30, 2011	2010-2011 Experience (Gains) / Losses	29	249,961	17.7714	14,065	28	254,733	17.4141	14,628
June 30, 2012	2011-2012 Experience (Gains) / Losses	30	(535,660)	18.1163	(29,568)	29	(546,481)	17.7714	(30,751)
June 30, 2013	2012-2013 Experience (Gains) / Losses		446,243		-	30	480,827	18.1163	26,541
		UAL as of Valuation Date	$ 5,035,863					Total:	$ 306,586
							Projected FY 2014-2015 UAL Payroll:		$ 3,425,251
								UAL Contribution Rate:	8.95%

Table IV-5
Florida Retirement System
Unfunded Actuarial Liability (UAL) Bases
July 1, 2013
Special Risk - Administration
($ in Thousands)

(a)	(b)	(c)	(d)	(e)	(f) = (d) / (e)	(g)	(h)	(i)	(j) = (h) / (i)
Date Established	Description	Remaining Payments as of Valuation Date	Balance as of Valuation Date	Amortization Factor	Amortization Payment for FY 2013-2014	Remaining Payments one year after Valuation Date	Balance One Year After Valuation Date	Amortization Factor	Amortization Payment for FY 2014-2015
June 30, 1999	Assumption Change from 1998 Experience Study	17	$ (326)	12.5224	$ (26)	16	$ (324)	11.9758	$ (27)
June 30, 2000	Special Risk 65% In-Line-Of-Duty Disability (2000)	18	51	13.0500	4	17	51	12.5224	4
June 30, 2004	Assumption Change from 2003 Experience Study	22	10,452	14.9829	698	21	10,538	14.5250	725
June 30, 2009	Assumption Change from 2008 Experience Study	27	1,275	17.0439	75	26	1,296	16.6604	78
June 30, 2009	2008-2009 Experience (Gains) / Losses	27	19,163	17.0439	1,124	26	19,481	16.6604	1,169
June 30, 2009	Unrecognized (Gains)/Losses while in Surplus	27	(21,267)	17.0439	(1,248)	26	(21,620)	16.6604	(1,298)
June 30, 2010	2009-2010 Experience (Gains) / Losses	28	1,142	17.4141	66	27	1,163	17.0439	68
June 30, 2010	2010-2011 Plan Changes (SB 2100)	28	(521)	17.4141	(30)	27	(530)	17.0439	(31)
June 30, 2011	2010-2011 Experience (Gains) / Losses	29	2,733	17.7714	154	28	2,785	17.4141	160
June 30, 2012	2011-2012 Experience (Gains) / Losses	30	564	18.1163	31	29	575	17.7714	32
June 30, 2013	2012-2013 Experience (Gains) / Losses		2,540		-	30	2,737	18.1163	151
		UAL as of Valuation Date	$ 15,806					Total:	$ 1,032
								Projected FY 2014-2015 UAL Payroll:	$ 2,007
								UAL Contribution Rate:	51.44%

Table IV-6
Florida Retirement System
Unfunded Actuarial Liability (UAL) Bases
July 1, 2013
Elected Officers' Class - Judicial
($ in Thousands)

(a)	(b)	(c)	(d)	(e)	(f) = (d) / (e)	(g)	(h)	(i)	(j) = (h) / (i)
Date Established	Description	Remaining Payments as of Valuation Date	Balance as of Valuation Date	Amortization Factor	Amortization Payment for FY 2013-2014	Remaining Payments one year after Valuation Date	Balance One Year After Valuation Date	Amortization Factor	Amortization Payment for FY 2014-2015
June 30, 1999	Assumption Change from 1998 Experience Study	17	$ 42	12.5224	$ 3	16	$ 42	11.9758	$ 3
June 30, 2004	Assumption Change from 2003 Experience Study	22	27,617	14.9829	1,843	21	27,844	14.5250	1,917
June 30, 2009	Assumption Change from 2008 Experience Study	27	19,478	17.0439	1,143	26	19,801	16.6604	1,189
June 30, 2009	2008-2009 Experience (Gains) / Losses	27	492,741	17.0439	28,910	26	500,919	16.6604	30,066
June 30, 2009	Unrecognized (Gains)/Losses while in Surplus	27	(267,293)	17.0439	(15,683)	26	(271,730)	16.6604	(16,310)
June 30, 2009	2009-2010 Plan Changes (HB 479)	27	(24,617)	17.0439	(1,444)	26	(25,025)	16.6604	(1,502)
June 30, 2010	2009-2010 Experience (Gains) / Losses	28	(21,320)	17.4141	(1,224)	27	(21,702)	17.0439	(1,273)
June 30, 2010	2010-2011 Plan Changes (SB 2100)	28	3,065	17.4141	176	27	3,120	17.0439	183
June 30, 2011	2010-2011 Experience (Gains) / Losses	29	80,790	17.7714	4,546	28	82,333	17.4141	4,728
June 30, 2012	2011-2012 Experience (Gains) / Losses	30	6,300	18.1163	348	29	6,427	17.7714	362
June 30, 2013	2012-2013 Experience (Gains) / Losses		96,530		-	30	104,011	18.1163	5,741
		UAL as of Valuation Date	$ 413,333					Total:	$ 25,104
								Projected FY 2014-2015 UAL Payroll:	$ 105,953
								UAL Contribution Rate:	23.69%

Table IV-7
Florida Retirement System
Unfunded Actuarial Liability (UAL) Bases
July 1, 2013
Elected Officers' Class - Leg-Atty-Cab
($ in Thousands)

(a)	(b)	(c)	(d)	(e)	(f) = (d) / (e)	(g)	(h)	(i)	(j) = (h) / (i)
Date Established	Description	Remaining Payments as of Valuation Date	Balance as of Valuation Date	Amortization Factor	Amortization Payment for FY 2013-2014	Remaining Payments one year after Valuation Date	Balance One Year After Valuation Date	Amortization Factor	Amortization Payment for FY 2014-2015
June 30, 1999	Assumption Change from 1998 Experience Study	17	$ 2	12.5224	$ 0	16	$ 2	11.9758	$ 0
June 30, 2004	Assumption Change from 2003 Experience Study	22	2,079	14.9829	139	21	2,096	14.5250	144
June 30, 2009	Assumption Change from 2008 Experience Study	27	1,955	17.0439	115	26	1,987	16.6604	119
June 30, 2009	2008-2009 Experience (Gains) / Losses	27	59,873	17.0439	3,513	26	60,867	16.6604	3,653
June 30, 2009	Unrecognized (Gains)/Losses while in Surplus	27	(34,241)	17.0439	(2,009)	26	(34,809)	16.6604	(2,089)
June 30, 2009	2009-2010 Plan Changes (HB 479)	27	(777)	17.0439	(46)	26	(790)	16.6604	(47)
June 30, 2010	2009-2010 Experience (Gains) / Losses	28	2,776	17.4141	159	27	2,825	17.0439	166
June 30, 2010	2010-2011 Plan Changes (SB 2100)	28	126	17.4141	7	27	128	17.0439	8
June 30, 2011	2010-2011 Experience (Gains) / Losses	29	8,144	17.7714	458	28	8,299	17.4141	477
June 30, 2012	2011-2012 Experience (Gains) / Losses	30	(3,799)	18.1163	(210)	29	(3,876)	17.7714	(218)
June 30, 2013	2012-2013 Experience (Gains) / Losses		17,135		-	30	18,463	18.1163	1,019
		UAL as of Valuation Date	$ 53,272					Total:	$ 3,231
							Projected FY 2014-2015 UAL Payroll:		$ 6,355
								UAL Contribution Rate:	50.85%

Table IV-8
Florida Retirement System
Unfunded Actuarial Liability (UAL) Bases
July 1, 2013
Elected Officers' Class - County
($ in Thousands)

(a)	(b)	(c)	(d)	(e)	(f) = (d) / (e)	(g)	(h)	(i)	(j) = (h) / (i)
Date Established	Description	Remaining Payments as of Valuation Date	Balance as of Valuation Date	Amortization Factor	Amortization Payment for FY 2013-2014	Remaining Payments one year after Valuation Date	Balance One Year After Valuation Date	Amortization Factor	Amortization Payment for FY 2014-2015
June 30, 1999	Assumption Change from 1998 Experience Study	17	$ 5	12.5224	$ 0	16	$ 5	11.9758	$ 0
June 30, 2004	Assumption Change from 2003 Experience Study	22	34,957	14.9829	2,333	21	35,244	14.5250	2,426
June 30, 2009	Assumption Change from 2008 Experience Study	27	11,365	17.0439	667	26	11,554	16.6604	693
June 30, 2009	2008-2009 Experience (Gains) / Losses	27	233,281	17.0439	13,687	26	237,153	16.6604	14,235
June 30, 2009	Unrecognized (Gains)/Losses while in Surplus	27	(57,759)	17.0439	(3,389)	26	(58,718)	16.6604	(3,524)
June 30, 2009	2009-2010 Plan Changes (HB 479)	27	(7,051)	17.0439	(414)	26	(7,168)	16.6604	(430)
June 30, 2010	2009-2010 Experience (Gains) / Losses	28	2,032	17.4141	117	27	2,068	17.0439	121
June 30, 2010	2010-2011 Plan Changes (SB 2100)	28	290	17.4141	17	27	295	17.0439	17
June 30, 2011	2010-2011 Experience (Gains) / Losses	29	13,456	17.7714	757	28	13,712	17.4141	787
June 30, 2012	2011-2012 Experience (Gains) / Losses	30	(5,461)	18.1163	(301)	29	(5,571)	17.7714	(313)
June 30, 2013	2012-2013 Experience (Gains) / Losses		98,953		-	30	106,622	18.1163	5,885
	UAL as of Valuation Date		$ 324,066					Total:	$ 19,898
								Projected FY 2014-2015 UAL Payroll:	$ 43,248
								UAL Contribution Rate:	46.01%

Table IV-9
Florida Retirement System
Unfunded Actuarial Liability (UAL) Bases
July 1, 2013
Senior Management
($ in Thousands)

(a)	(b)	(c)	(d)	(e)	(f) = (d) / (e)	(g)	(h)	(i)	(j) = (h) / (i)
Date Established	Description	Remaining Payments as of Valuation Date	Balance as of Valuation Date	Amortization Factor	Amortization Payment for FY 2013-2014	Remaining Payments one year after Valuation Date	Balance One Year After Valuation Date	Amortization Factor	Amortization Payment for FY 2014-2015
June 30, 1999	Assumption Change from 1998 Experience Study	17	$ (2,699)	12.5224	$ (216)	16	$ (2,685)	11.9758	$ (224)
June 30, 2004	Assumption Change from 2003 Experience Study	22	214,721	14.9829	14,331	21	216,486	14.5250	14,904
June 30, 2009	Assumption Change from 2008 Experience Study	27	62,658	17.0439	3,676	26	63,698	16.6604	3,823
June 30, 2009	2008-2009 Experience (Gains) / Losses	27	1,220,353	17.0439	71,600	26	1,240,607	16.6604	74,465
June 30, 2009	Unrecognized (Gains)/Losses while in Surplus	27	(276,995)	17.0439	(16,252)	26	(281,593)	16.6604	(16,902)
June 30, 2009	2009-2010 Plan Changes (HB 479)	27	(51,888)	17.0439	(3,044)	26	(52,749)	16.6604	(3,166)
June 30, 2010	2009-2010 Experience (Gains) / Losses	28	33,637	17.4141	1,932	27	34,239	17.0439	2,009
June 30, 2010	2010-2011 Plan Changes (SB 2100)	28	(88,126)	17.4141	(5,061)	27	(89,703)	17.0439	(5,263)
June 30, 2011	2010-2011 Experience (Gains) / Losses	29	126,365	17.7714	7,111	28	128,777	17.4141	7,395
June 30, 2012	2011-2012 Experience (Gains) / Losses	30	64,519	18.1163	3,561	29	65,822	17.7714	3,704
June 30, 2013	2012-2013 Experience (Gains) / Losses		341,553		-	30	368,024	18.1163	20,315
		UAL as of Valuation Date	$ 1,644,097					Total:	$ 101,059
								Projected FY 2014-2015 UAL Payroll:	$ 504,625
								UAL Contribution Rate:	20.03%

Table IV-10
Florida Retirement System
Unfunded Actuarial Liability (UAL) Bases
July 1, 2013
DROP
($ in Thousands)

(a)	(b)	(c)	(d)	(e)	(f) = (d) / (e)	(g)	(h)	(i)	(j) = (h) / (i)
Date Established	Description	Remaining Payments as of Valuation Date	Balance as of Valuation Date	Amortization Factor	Amortization Payment for FY 2013-2014	Remaining Payments one year after Valuation Date	Balance One Year After Valuation Date	Amortization Factor	Amortization Payment for FY 2014-2015
June 30, 2004	Assumption Change from 2003 Experience Study	22	$ (68,065)	14.9829	$ (4,543)	21	$ (68,624)	14.5250	$ (4,725)
June 30, 2009	Assumption Change from 2008 Experience Study	27	610,721	17.0439	35,832	26	620,857	16.6604	37,265
June 30, 2009	2008-2009 Experience (Gains) / Losses	27	(21,658,081)	17.0439	(1,270,722)	26	(22,017,539)	16.6604	(1,321,551)
June 30, 2009	Unrecognized (Gains)/Losses while in Surplus	27	22,991,353	17.0439	1,348,948	26	23,372,939	16.6604	1,402,905
June 30, 2010	2009-2010 Experience (Gains) / Losses	28	250,114	17.4141	14,363	27	254,589	17.0439	14,937
June 30, 2011	2010-2011 Experience (Gains) / Losses	29	888,758	17.7714	50,011	28	905,725	17.4141	52,011
June 30, 2012	2011-2012 Experience (Gains) / Losses	30	(115,087)	18.1163	(6,353)	29	(117,412)	17.7714	(6,607)
June 30, 2013	2012-2013 Experience (Gains) / Losses		4,561		-	30	4,914	18.1163	271
	UAL as of Valuation Date		$ 2,904,275					Total:	$ 174,508
								Projected FY 2014-2015 UAL Payroll:	$ 2,597,960
								UAL Contribution Rate:	6.72%

Table IV-11
Florida Retirement System
Actuarially Calculated Employer Contribution Rates
July 1, 2013 Valuation for Fiscal Year Beginning July 1, 2014

No surplus available for rate reduction

	FRS	----- Special Risk -----		-- Elected Officers' Class --			Senior	Composite		Composite
	Regular	Regular	Administration	Judicial	Leg-Atty-Cab	County	Management	(excluding DROP)	DROP [1]	(including DROP)
1. Employer Normal Cost	3.53%	10.76%	3.68%	10.02%	6.14%	8.21%	4.76%	4.67% [2]	4.30%	4.63%
2. UAL Cost	3.01%	8.95%	51.44%	23.69%	50.85%	46.01%	20.03%	4.32%	6.72%	4.54%
3. Total Employer Cost [(1) + (2)]	6.54%	19.71%	55.12%	33.71%	56.99%	54.22%	24.79%	8.99%	11.02%	9.17%
4. UAL Cost Paid from Surplus	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
5. Rate Reduction from Surplus	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
6. Total Adjusted Employer Contribution for FRS Trust Fund [(3) + (4) + (5)]	6.54%	19.71%	55.12%	33.71%	56.99%	54.22%	24.79%	8.99%	11.02%	9.17%

[1] DROP rates are special charges to cover the assumed cost of DROP participants; they are not Normal Cost or UAL Cost in the traditional sense. See Section G of Executive Summary for description of mandated rate calculation methodology.

[2] Due to the relatively different payrolls by membership class, this year the composite contribution rate is 0.01% less than last year's rate of 4.68%.

Table IV-12
Florida Retirement System
Actuarially Calculated vs. Legislated Defined Benefit Plan Contribution Rates (Before Blending) [1 & 2]

Plan Year 2013-2014 rates were set equal to the actuarially calculated rates
Plan Year 2014-2015 rates will be set by the Legislature during the 2014 Legislative Session

		Plan Year 2012-2013		Plan Year 2013-2014		Plan Year 2014-2015	
	Membership Class	Actuarially Calculated	Legislated	Actuarially Calculated	Legislated	Actuarially Calculated	Legislated
1.	FRS Regular	5.90%	4.13%	6.09%	6.09%	6.54%	TBD
2.	Special Risk Regular	19.06%	14.05%	18.88%	18.88%	19.71%	TBD
3.	Special Risk Administration	40.57%	4.56%	45.91%	45.91%	55.12%	TBD
4.	Elected Officers' Class - Judicial	27.64%	10.78%	28.37%	28.37%	33.71%	TBD
5.	Elected Officers' Class - Leg-Atty-Cab	43.79%	7.63%	40.92%	40.92%	56.99%	TBD
6.	Elected Officers' Class - County	40.70%	9.23%	41.87%	41.87%	54.22%	TBD
7.	Senior Management Service	19.53%	5.23%	21.01%	21.01%	24.79%	TBD
8.	Composite without DROP	8.24%	5.63%	8.37%	8.37%	8.99%	TBD
9.	DROP	10.54%	4.33%	11.64%	11.64%	11.02%	TBD
10.	Composite with DROP	8.46%	5.51%	8.67%	8.67%	9.17%	TBD

[1] The above rates (applied to DB plan payroll) are combined with the Investment Plan contribution rates (applied to IP payroll) to derive the uniform blended rates employers contribute.

[2] Contribution rates show above do not include the 3% required employee contribution rate.

SECTION V

ACCOUNTING STATEMENTS

The liabilities presented in this report differ by whether future anticipated salary increases or service credits are included in the calculation. Actuarial Liabilities in Section III include the effects of projected future salary increases and service credits.

Accounting Standards Codification (ASC) 960 - - Plan Accounting - - Defined Benefit Pension Plans, formerly titled Statement No. 35 of the Financial Accounting Standards Board (FASB) previously required the FRS to disclose certain information regarding the Plan's funded status. ASC accounting liabilities do not include either future salary increases or future service credits.

Statement No. 25 of the Governmental Standards Board (GASB) establishes standards for disclosure of pension information by public employee retirement systems (PERS) and governmental employers in notes to financial statements and supplementary information.[1] The GASB Statement No. 25 accounting liabilities developed in this section include the effects of projected future salary increases and service credits. Different from the liabilities shown in Section III, the GASB Statement No. 25 liabilities, consistent with that statement's directives, are calculated based on DROP participants being included in the class of membership in which they participate, and active liabilities are based on the full retirement rates (see our cover letter for further discussion).

The ASC 960 disclosures are intended to provide a "snap shot" view of how the Plan's assets compare to its liabilities if contributions stopped and accrued benefit claims had to be satisfied. The accrued benefits obligation (ABO) is determined based on each member's accrued benefit, that is, the benefit based on employee service and compensation earned up to the valuation date. We assume that the plan is ongoing and that members continue to terminate employment, retire, and otherwise act in accordance with the actuarial assumptions. Liabilities are discounted at the assumed valuation interest rate of 7.75% per annum.

Table V-1 presents the ABO for the FRS determined as of July 1, 2013. All of the calculations presented in that table are based on the actuarial assumptions used in the valuation, as described in Appendix A, except salaries are not projected to increase. Values of the ABO are shown by type of member and by class. The active members' values are also divided between the employee-financed (accumulated member contributions) and employer-financed portions, with the employer-financed portions shown separately for vested benefits and non-vested

[1] In 2012, GASB issued Statements No. 67 and No. 68 which will supersede Statements Nos 25 and 27, respectively. Statement Number 67 will be effective for fiscal year 2013-2014, while Statement Number 68 will be effective for fiscal year 2014-2015. The impact of these two new promulgations is not reflected in this report.

benefits. For purposes of calculating the ABO, post-Senate Bill 2100, we based the COLA percentage based on 3% multiplied by service through June 30, 2011 divided by projected service at the time of retirement.

Table V-2 presents the total ABO for the FRS for current and prior valuations.

Table V-3 reconciles the ABO determined as of the prior valuation, July 1, 2012, to the ABO as of July 1, 2013. This reconciliation indicates the impact of the assumption changes and plan changes, if any.

GASB Statement No. 25 requires the Actuarial Accrued Liability (AAL) to be compared with the Actuarial Value of Assets used for funding purposes. The report includes two tables for GASB Statement No. 25 disclosures and a third table used in the Comprehensive Annual Financial Report (CAFR). Table V-4 shows the GASB Statement No. 25 Accounting Statement Information by membership class. Table V-5 shows similar information for the total FRS, comparing several years' results in addition to the July 1, 2013 results. Table V-6 shows the Solvency Test for the FRS for the 2011, 2012, and 2013 valuations. The Solvency Test compares the Actuarial Accrued Liability to the market value of assets. GASB Statement No. 25 liabilities are based on DROP retirees being included in the class of membership from which they retired, and active liabilities are based on the full retirement rates (per Section G of the Executive Summary.)

The trend of the FRS's funded status, as measured by the unfunded AAL or ABO over a period of time, is one indication of the progress being made in accumulating sufficient assets to pay benefits when due. Some of the basic trend data for this valuation and the prior two valuations (i.e., as of July 1, 2011 and July 1, 2012) for the FRS are shown in Table V-2 (ABO) and Table V-5 (AAL). Past and future results are affected by changes in actuarial assumptions, benefit provisions, accounting policies, etc.

As of June 30, 2010, FRS had a negative Net Pension Obligation (NPO) as the result of contributing more than the Annual Required Contribution (ARC) on a cumulative basis, with both the ARC and the actual contributions adjusted for interest. For fiscal year 2010-2011 through fiscal year 2012-2013, actual contributions were less than the ARC, meaning the FRS employers contributed less than the actuarially determined contributions, assuming 30-year amortization of the UAL. As of June 30, 2012, a positive NPO had emerged as that the cumulative contributions did not exceed actuarially determined contributions.

The Annual Required Contribution (ARC) of $2,091,343,000 for FY 2012-2013 was developed in the 2011 annual valuation. The ARC included the sum of the composite contribution rate (including DROP) of 4.83% plus the minimum UAL

amortization payment required by GASB. As shown on Table V-7, the Annual Pension Cost (APC) was $2,096,269,000 and the total employer contribution was actually $1,388,656,000. Therefore, as of June 30, 2013, the State's CAFR must reflect an NPO of $918,344,000, as compared to an NPO of $210,731,000 as of the prior year.

Table V-1
Florida Retirement System
Accumulated Benefit Obligation - ASC 960
July 1, 2013
(All Amounts in Thousands)

	FRS	----- Special Risk -----		-- Elected Officers' Class --			Senior		
	Regular	Regular	Administration	Judicial	Leg-Atty-Cab	County	Management	DROP	Total
A. Accumulated Benefit Obligation									
1. Active Members									
a. Accumulated Member Contributions	$1,001,593	$188,616	$112	$5,932	$427	$2,679	$28,918	$0	$1,228,277
b. Employer-Financed Vested Benefits	19,563,939	5,080,053	4,651	196,841	10,766	78,400	847,905	0	25,782,555
c. Employer-Financed Non-Vested Benefits	1,045,583	268,950	329	8,274	989	5,478	29,633	0	1,359,236
d. Total	$21,611,115	$5,537,619	$5,092	$211,047	$12,182	$86,557	$906,456	$0	$28,370,068
2. Annuitants	$57,512,939	$14,063,402	$76,731	$700,027	$75,591	$444,850	$1,970,180	$20,597,701	$95,441,421
3. Other Inactive Members	$4,306,006	$694,395	$1,259	$19,788	$10,705	$24,890	$177,565	$0	$5,234,608
4. Total Accumulated Benefit Obligation	$83,430,060	$20,295,416	$83,082	$930,862	$98,478	$556,297	$3,054,201	$20,597,701	$129,046,097
B. Assets Available for Benefits									
1. Market	$90,633,338	$21,392,208	$71,395	$670,026	$53,161	$289,349	$2,044,016	$17,874,463	$133,027,956
2. Actuarial Basis	$89,715,380	$21,175,542	$70,672	$663,240	$52,623	$286,418	$2,023,314	$17,693,426	$131,680,615
C. Unfunded / (Surplus) Total Accumulated Benefit Obligation, Assets at:									
1. Market	($7,203,278)	($1,096,792)	$11,687	$260,836	$45,317	$266,948	$1,010,185	$2,723,238	($3,981,859)
2. Actuarial Basis	($6,285,320)	($880,126)	$12,410	$267,622	$45,855	$269,879	$1,030,887	$2,904,275	($2,634,518)
D. Percent of Accumulated Obligation Funded, Assets at:									
1. Market	108.63%	105.40%	85.93%	71.98%	53.98%	52.01%	66.92%	86.78%	103.09%
2. Actuarial Basis	107.53%	104.34%	85.06%	71.25%	53.44%	51.49%	66.25%	85.90%	102.04%

Table V-2
Florida Retirement System
Analysis of Funding Progress - ASC 960
(All Amounts in Thousands)

	July 1, 2011 Valuation Basis	July 1, 2012 Valuation Basis	July 1, 2013 Valuation Basis
A. Accumulated Benefit Obligation			
1. Active Members			
a. Accumulated Member Contributions	$31,339	$681,638	$1,228,277
b. Employer-Financed Vested Benefits	26,655,302	25,988,973	25,782,555
c. Employer-Financed Non-Vested Benefits	1,811,167	1,540,804	1,359,236
d. Total	$28,497,808	$28,211,415	$28,370,068
2. Annuitants	$64,903,070	$69,915,462	$74,843,720
3. Other Inactive Members	$4,637,774	$5,059,727	$5,234,608
4. DROP	$20,084,177	$19,245,727	$20,597,701
5. Total Accumulated Benefit Obligation	$118,122,829	$122,432,331	$129,046,097
B. Assets Available for Benefits			
1. Market	$129,123,355	$122,921,388	$133,027,956
2. Actuarial Basis	$126,078,053	$127,891,781	$131,680,615
C. Unfunded/(Surplus) Total Accumulated Benefit Obligation, Assets at:			
1. Market	($11,000,526)	($489,057)	($3,981,859)
2. Actuarial Basis	($7,955,224)	($5,459,450)	($2,634,518)
D. Percent of Accumulated Benefit Obligation Funded, Assets at:			
1. Market	109.31%	100.40%	103.09%
2. Actuarial Basis	106.73%	104.46%	102.04%
E. Annual Salaries[1]	$25,686,138	$24,491,371	$24,568,642
F. Unfunded/(Surplus) Accumulated Benefit Obligation as a Percent of Salary, Assets at:			
1. Market	-42.83%	-2.00%	-16.21%
2. Actuarial Basis	-30.97%	-22.29%	-10.72%

[1] Includes Drop Salaries

Table V-3
Florida Retirement System
Statement of Changes in Total Actuarial Present Value of All Accrued Benefits
(All Amounts in Thousands)

	Accumulated Benefit Obligation
Actuarial Present Value of Accrued Benefits at July 1, 2012	$122,432,331
Increase (Decrease) During Year Attributable to:	
Increase for Interest Due to Decrease in Discount Period	$9,172,798
Benefits Paid - PY 2013	($8,302,209)
Benefits Accrued, & Other Gains/Losses	$5,743,177
Plan Provision / Assumption Changes	$0
Net Increase (Decrease)	$6,613,766
Actuarial Present Value of Accrued Benefits at July 1, 2013	$129,046,097

Table V-4
Florida Retirement System
Accounting Statement Information - GASB Statement #25
July 1, 2013
(All Amounts in Thousands)

	FRS	----- Special Risk -----		----- Elected Officers' Class -----			Senior	
	Regular	Regular	Administration	Judicial	Leg-Atty-Cab	County	Management	Total
1. Actuarial Accrued Liability:								
a. Active Member Contributions	$1,001,593	$188,616	$112	$5,932	$427	$2,679	$28,918	$1,228,277
b. Annuitants	72,453,957	18,718,714	81,784	980,146	89,935	506,953	2,609,932	95,441,421
c. Other Inactive Members	4,306,006	694,395	1,259	19,788	10,705	24,890	177,565	5,234,608
d. Active Members	38,739,602	11,458,713	8,430	354,971	19,143	139,597	1,501,191	52,221,647
2. Total Actuarial Accrued Liability [1(a) + 1(b) + 1(c) + 1(d)]	$116,501,158	$31,060,438	$91,585	$1,360,837	$120,210	$674,119	$4,317,606	$154,125,953
3. Actuarial Value of Assets	103,147,271	24,645,714	85,834	844,945	69,296	380,400	2,507,157	131,680,617
4. Unfunded Actuarial Accrued Liability / (Surplus) (UAAL), [2 - 3]	$13,353,887	$6,414,724	$5,751	$515,892	$50,914	$293,719	$1,810,449	$22,445,336
5. Funded Ratio	88.54%	79.35%	93.72%	62.09%	57.65%	56.43%	58.07%	85.44%
6. Covered Payroll	$20,212,981	$3,630,613	$2,367	$125,476	$7,265	$47,213	$542,727	$24,568,642
7. UAAL / (Surplus) as a % of Payroll	66.07%	176.68%	242.97%	411.15%	700.81%	622.11%	333.58%	91.36%

Table V-5
Florida Retirement System
Accounting Statement Information - GASB Statement #25
(All Amounts in Thousands)

	July 1, 2011 Valuation Basis	July 1, 2012 Valuation Basis	July 1, 2013 Valuation Basis
1. Actuarial Accrued Liability:			
a. Active Member Contributions	$31,339	$681,638	$1,228,277
b. Annuitants	84,987,246	89,161,189	95,441,421
c. Other Inactive Members	4,637,774	5,059,727	5,234,608
d. Active Members	55,378,116	53,147,042	52,221,647
2. Total Actuarial Accrued Liability [1(a) + 1(b) + 1(c) + 1(d)]	$145,034,475	$148,049,596	$154,125,953
3. Actuarial Value of Assets	$126,078,053	$127,891,781	$131,680,617
4. Unfunded Actuarial Accrued Liability / (Surplus) (UAAL), [2 - 3]	$18,956,422	$20,157,815	$22,445,336
5. Funded Ratio	86.93%	86.38%	85.44%
6. Covered Payroll[1]	$25,686,138	$24,491,371	$24,568,642
7. UAAL / (Surplus) as a % of Payroll	73.80%	82.31%	91.36%

[1] Includes Drop Salaries

Table V-6
Florida Retirement System
Solvency Test
(All Amounts in Thousands)

	July 1, 2011 Valuation Basis	July 1, 2012 Valuation Basis	July 1, 2013 Valuation Basis
1. Actuarial Accrued Liability for:			
a. Retired and Disabled Members, and Survivors	$84,987,246	$89,161,189	$95,441,421
b. Vested Deferred and Inactive Status Members	4,637,774	5,059,727	5,234,608
c. Active Members			
i) Accumulated employee contributions with interest	31,339	681,638	1,228,277
ii) Employer-financed liabilities	55,378,116	53,147,042	52,221,647
d. Total	$145,034,475	$148,049,596	$154,125,953
2. Net Assets Available for Benefits at Market Value	$129,123,354	$122,921,388	$133,027,956
3. Ratio of Market Value of Assets to Actuarial Accrued Liabilities: [2 / 1]	89.03%	83.03%	86.31%

Table V-7
Florida Retirement System
Net Pension Obligation - GASB Statement #27
(All Amounts in Thousands)

		ACTUAL		PROJECTED
		7/1/2011 - 6/30/2012	7/1/2012 - 6/30/2013	7/1/2013 - 6/30/2014
1.	Unfunded Actuarial Liability (UAL) / (Surplus)	$16,512,765	$18,956,422	$20,157,815
2.	Amortization of UAL	893,787	1,026,055	1,091,082
3.	Normal Cost	1,069,029	1,065,288	1,112,726
4.	Annual Required Contribution: [2 + 3]	$1,962,816	$2,091,343	$2,203,808
5.	Interest on Net Pension Obligation:	(42,922)	16,332	71,172
6	Adjustment to Annual Required Contribution:	29,977	(11,406)	(49,707)
7.	Annual Pension Cost: [4 + 5 + 6]	$1,949,871	$2,096,269	$2,225,273
8.	Contributions Made:	$1,185,310	$1,388,656	NA
9.	Percent Contributed: [8 / 4]	60%	66%	NA
10.	Increase in Net Pension Obligation: [7 - 8]	764,561	707,613	NA
11.	Net Pension Obligation at Beginning of Year:	(553,830)	210,731	918,344
12.	Net Pension Obligation at End of Year:	210,731	918,344	NA

APPENDIX A

ACTUARIAL METHODS, PROCEDURES AND ASSUMPTIONS

The actuarial procedures and assumptions used in this valuation are described herein.

Table A-l summarizes the assumptions. The pre-and post-retirement mortality rates are taken from the sources listed. The other rates were developed from the experience of the FRS and are illustrated in Tables A-2 through A-9, as noted.

The actuarial assumptions are intended to estimate the future experience of the members of the FRS and of the FRS in other areas that affect the projected benefit flow and anticipated investment earnings. Any variations in future experience from that expected from these assumptions will result in corresponding changes in the estimated costs of the FRS' benefits. These assumptions are based on Milliman's most recent review of the System's experience for the period July 1, 2003 through June 30, 2008, as adopted by the FRS Assumptions Conference and as modified by the February 16, 2010 study on House Bill 479 (2009) and the July 1, 2011 study on Senate Bill 2100 (2011) which were enacted into law.

All tables in this section give independent rates of decrement expressed as percentages. The independent rates of decrement are referred to by the general symbol "q'" in actuarial notation. The underlying theory is described more fully in Life Contingencies, by C. Wallace Jordan, Society of Actuaries (Second Edition, 1967), page 278.

ACTUARIAL COST METHOD

As part of the actuarial rate calculation methodology approved by the Assumptions Conference, the System's Normal Cost and Actuarial Liability are calculated using the "Ultimate Entry Age (Ultimate EAN)" actuarial cost allocation method. The cost method does not affect the calculation of overall projected system benefits (Present Value of Benefits), but it does affect the allocation of those benefits over a member's projected working career between past (Actuarial Liability), current year (Normal Cost) and all future year projected (present value of future normal costs) service. The Present Value of Benefits is equal to the sum of the Actuarial Liability and the Present Value of Future Normal Costs.

For a system such as FRS with two membership tiers, Ultimate EAN calculates the Normal Cost allocation for individual members as if each member participates in the tier available to new hires (Tier II) for his or her full working career. For members in Tier I, this means the Normal Cost under the Ultimate EAN method will be based on the benefit plan provisions in Tier II. Because Tier II results in lower expected benefit payments than under Tier I, the calculated Normal Cost rate is lower than it would be if the member's actual plan provisions were used.

Just as there are various cost allocation methods which can be selected by sponsors to set contribution policy, there can be multiple possible approaches to the application of a particular cost allocation method. The approach to Ultimate EAN being used in this valuation, consistent with past practice, calculates the portion of total projected benefits allocated to future service based on the assumption that the length of the Tier I member's future service period follows Tier II assumptions.

The actuarial cost allocation method does not affect the calculation of the Present Value of Benefits, which continues to be based on the plan provisions specific to each member's enrollment date. The Actuarial Liability is the Present Value of Benefits minus the Present Value of Future Normal Costs. Thus, the Ultimate EAN method used in this section leads to a lower Normal Cost and a higher Actuarial Liability for Tier I members than would be calculated under a method that based the Normal Costs of Tier I members on the Tier I benefit plan provisions.

Please note that the recently issued Statements 67 & 68 of the Governmental Accounting Standards Board (GASB) do not permit the use of the Ultimate EAN cost allocation method for accounting calculations. The Ultimate EAN method and the GASB 67 & 68 mandated variation of EAN ("Individual" EAN) will produce different Actuarial Liability and Normal Cost results. Determining which EAN methodology (Ultimate or Individual) generates higher current contribution rates depends on the period used to amortize the Unfunded Actuarial Liability. For FRS, the amortization periods used in the methodology approved by the Assumptions Conference will lead to the Ultimate EAN methodology having lower current calculated contribution rates than the Individual EAN methodology. As the number of Tier I active participants decreases, the Individual EAN Normal Cost would trend downward toward the Tier II Normal Cost. When all Tier I active participants have left the workforce the contribution results of the two variations should converge.

RECORDS AND DATA

The data used in this valuation consist of financial information and records of age, service and income of active members, annuitants and other inactive members. All of the data was supplied by the FRS, and was accepted for valuation purposes without audit.

REPLACEMENT OF TERMINATED MEMBERS

The ages and relative salaries at entry of future members are assumed to follow a new entrant distribution based on the current active population. Under this assumption, the normal cost rates for active members will remain valid in future years, unless the governing law or actuarial assumptions are changed.

GROWTH IN MEMBERSHIP

The membership of the FRS is assumed to grow at the rate of 0.0% per year. This assumption was changed in the July 1, 1997 valuation from 1.50% in the July 1, 1995 valuation, as required by GASB Statement No. 25.

ADMINISTRATIVE EXPENSE

It is assumed that investments will yield 7.75% net of all administrative and investment expenses.

VALUATION OF ASSETS

The asset valuation method determines the actuarial value as follows:

Step 1. Determine the total yield on the investments of the FRS using the full investment return (including capital gains) measured by the difference in the actuarial value of the assets at the beginning of the plan year just ended and the market value of assets at the end of the year.

Step 2. Calculate the excess of the yield determined in Step 1 over the expected yield for the same year according to the actuarial assumptions.

Step 3. Calculate an adjusted yield equal to the expected yield plus one-fifth of the yield determined in Step 2.

Step 4. The Actuarial Value of Assets used in this valuation equals the amount that would have existed if the actual yield on the assets had been at the yield determined in Step 3.

The resulting actuarial value of the assets shall not be less than 80% or more than 120% of the market value.

This method conforms to Section 121.031(3)(a), Florida Statutes, calling for an averaging method acceptable under U.S. Treasury Regulations in effect on August 16, 2008.

INVESTMENT EARNINGS

The future investment earnings of the assets of the FRS are assumed to accrue at an annual rate of 7.75%, compounded annually, net of investment and administrative expenses.

POST-RETIREMENT BENEFIT INCREASES

Senate Bill 2100 (2011) eliminated post-retirement benefit increases on benefits earned on and after July 1, 2011. Benefits earned before July 1, 2011 will receive post-retirement benefit increases of 3% per year. Tier II members (those initially enrolled on and after July 1, 2011) will receive no post-retirement benefit increases. Tier I members (those initially enrolled before July 1, 2011) will receive post-retirement benefit increases equal to 3% per year multiplied by a fraction, the numerator of which is service through June 30, 2011 and the denominator of which is total service at retirement.

INTEREST ON EMPLOYEE CONTRIBUTIONS

Interest is only credited on accounts held by members of TRS. A 6.5% annual rate of interest is assumed to be credited on these accounts.

FUTURE SALARIES

Salaries are assumed to increase between 4.00% and 10.00% per year depending on the member's age and service. In addition to increases in salary due to promotions and longevity, this scale includes an assumed 4.00% per annum rate of increase in the average wage level of the membership. Table A-2 shows merit (i.e., promotion and longevity) scale rates at representative ages, by class.

SERVICE RETIREMENT

For purposes of the valuation that develops actuarially calculated contribution rates, members are assumed to take unreduced retirement at the rates shown in Table A-3. As described in section G of the Executive Summary, these rates were

developed assuming that one half of those electing to go into DROP would have retired in the absence of DROP, and the other half would remain active.

GASB requires financial reporting liabilities to be calculated in a manner that treats entry into DROP as if it were equivalent to retirement. The rates of retirement used in Section V (and listed in the GASB columns below) differ from the rates shown in Table A-3 (and listed in the funding columns below) in that the rates at first eligibility used for GASB include the full probability of a member entering DROP, and the rates used for the funding valuation include 50% of the probability of a member entering DROP. The table below compares the "funding" and the "GASB" retirement rates at specific ages for Tier I members of the Regular class:

	Tier I FRS Regular – Retirement at First Eligibility			
	Funding Retirement Rates		GASB Retirement Rates	
Age	Men	Women	Men	Women
45	11.4%	13.1%	18.4%	23.7%
50	25.1	21.9	39.5	35.9
55	31.3	26.7	49.9	44.8
60	39.4[1]	35.5	63.0[1]	57.7
65	23.5	29.2	37.9	49.3

[1] A 60 year old male Tier I member in the Regular class is assumed to exit active status and begin an immediate pension with 15.8% probability, and enter DROP with 47.2% probability. Thus, the GASB retirement rate equals the sum of the two probabilities, and the funding retirement rate equals the probability of direct retirement (15.8%) plus 50% of the probability of DROP entry (50% of 47.2%).

Rates of reduced early retirement are included in rates of other terminations of employment.

All members who have attained age 80 (age 70 for TRS and IFAS) in active service are assumed to retire immediately.

DISABILITY

Note that the frequency of disability reflects not only the impairments but also the policies underlying the approval of claims and the administration of disability benefits. The more liberal the administration or conditions under which an employee may qualify for disability, the greater the expected incidence of disability.

Line-of-Duty Disability Incidence Rates

The rates used to estimate the likelihood of line-of-duty disability were initially based on Social Security disability experience reported in the Social Security Administration's disability study published as Actuarial Study Number 74, adjusted to recognize the FRS line-of-duty disability incidence experience. The most recent study looked at the line-of-duty disability incidence experience for the five fiscal years ending June 30, 2008, and adjusted the current tables slightly.

Not-in-Line-of-Duty Disability Incidence Rates

The rates used to estimate the likelihood of not-in-line-of-duty disability were initially based on Social Security disability experience reported in the Social Security Administration's disability study published as Actuarial Study Number 74, adjusted to recognize the FRS not-in-line-of-duty disability incidence experience. These rates were modified to be more in line with FRS experience during the five plan years ending June 30, 2008.

The rates of disablement used in the valuation are illustrated in Tables A-4 and A-5.

PRE-RETIREMENT MORTALITY

Mortality rates for members who die in service are based on the RP–2000 Employee Mortality tables for males and females. Table A-6 shows these rates at representative ages.

To allocate active member deaths between duty and non-duty death, the following percentages of total active member deaths were assumed to be duty deaths.

	FRS-Special Risk		FRS-All Other Groups	
Age	Men	Women	Men	Women
37	60%	60%	25%	15%
42	40	40	25	15
47	30	30	15	10
52	25	25	15	10

POST-RETIREMENT MORTALITY

Mortality rates for all members once in retirement status are based on the RP-2000 Healthy White Collar tables for males and females, as projected from the year 2000 using Projection Scale AA, adjusted by the following percentages:

	Males	Females
Regular and Special Risk Class	90.9%	95.8%
ECO, ESO, Judges, Senior Management and Special Risk Administrative	82.4%	56.7%

As a generational table, it reflects mortality improvement both before and after the measurement date. Table A-7 shows these rates for representative ages.

DISABILITY MORTALITY RATES

Disability mortality rates are based on the RP–2000 Disabled Retiree Table for males and the PBGC Disabled with Social Security Table for females, adjusted by the following percentages:

	Adjustment Factor
Males	
Under age 45	92.4%
Age 51 and over	73.9%
Ages 46 – 50 are interpolated between the two factors	
Females	
Under age 65	82.9%
Age 65 and over	88.1%

Representative rates of disability mortality are illustrated in Table A-8.

OTHER TERMINATIONS OF EMPLOYMENT

Table A-9 shows, for representative ages, the rates assumed in this valuation for future withdrawal from active service for reasons other than death, disability or retirement with an unreduced benefit. These rates contain the probability of retiring with a reduced immediate pension. For Special Risk members entitled to benefits and terminating employment before age 45, we assume benefit commencement at age 45. For others entitled to benefits and terminating before age 55, we assume benefit commencement at age 55. Members leaving after those ages and entitled to benefits are assumed to commence benefits immediately at termination of employment.

ELIGIBLE SURVIVORS

It is assumed that 80% of deceased active members will have survivors eligible for lifetime benefits upon their death. Males are assumed to be three years older than their female spouses.

MILITARY SERVICE AND OUT-OF-STATE SERVICE CREDITS

Each member is assumed to have the following additional years of service credit purchased:

	FRS-Special Risk		FRS-All Other Groups	
Type of Service Credit	Men	Women	Men	Women
Military Service Credit [1)]	0.2818	0	0.1853	0
Out-of-State Service Credit [2)]	0	0	0.0910	0.0910

1) Pre-1987 hires only; service is eligible for the COLA.

2) Pre-July 1, 2011 enrollees; service is eligible for the COLA.

No extra service credit was assumed for TRS and IFAS participants.

ANNUAL LEAVE CREDIT

Unused annual leave in the amount of 139 hours is assumed to be credited to each retiring member to increase the salary used for calculating the retirement benefits. We reflect this assumption by applying a load of 1.013 to the average monthly compensation of active Tier I members, and a load of 1.008 to the average monthly compensation of active Tier II members.

TABLE A-1
Summary of Valuation Assumptions
July 1, 2013

I. Economic Assumptions	
A. General Wage Increases	4.00%*
B. Investment Earnings	7.75%*
C. Growth in Membership	0.00%
D. Post-Retirement Benefit Increases	Varies based on date of enrollment
* Including a 3.0% inflation assumption.	
II. Non-Economic Assumptions	
A. Salary Increases Due to Promotion and Longevity	Table A-2
B. Service Retirement	Table A-3; rates reflect the enactment of 2009 House Bill 479 and 2011 Senate Bill 2100
C. Disablement	Tables A-4 and A-5
D. Pre-Retirement Mortality	RP–2000 Mortality Tables for males and females. Table A-6
E. Post-Retirement Mortality	RP–2000 Healthy White Collar Tables for males and females, projected from 2000 using Projection Scale AA. Table A-7
F. Disabled Termination (Mortality and Recovery)	Table A-8
G. Other Terminations of Employment	Table A-9

Table A-2
Salary

REGULAR – Male

Combined Years of Service	Attained Age 20	25	30	35	40	45	50	55	60	65
0	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%
1	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%
2	2.99%	2.99%	2.99%	2.99%	2.99%	2.99%	2.99%	2.99%	2.99%	2.99%
3	2.84%	2.84%	2.84%	2.84%	2.84%	2.84%	2.84%	2.84%	2.84%	2.84%
4	2.62%	2.62%	2.62%	2.62%	2.62%	2.62%	2.62%	2.62%	2.62%	2.62%
5	2.47%	2.47%	2.47%	2.47%	2.47%	2.47%	2.47%	2.47%	2.47%	2.47%
6	2.47%	2.47%	2.47%	2.47%	2.47%	2.47%	2.47%	2.47%	2.47%	2.47%
7	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%
8	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%
9	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%
10 or more	3.00%	3.00%	3.00%	3.00%	2.50%	2.00%	1.50%	0.50%	0.50%	0.50%

REGULAR - Female

Combined Years of Service	Attained Age 20	25	30	35	40	45	50	55	60	65
0	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
1	4.23%	4.23%	4.23%	4.23%	4.23%	4.23%	4.23%	4.23%	4.23%	4.23%
2	2.62%	2.62%	2.62%	2.62%	2.62%	2.62%	2.62%	2.62%	2.62%	2.62%
3	2.62%	2.62%	2.62%	2.62%	2.62%	2.62%	2.62%	2.62%	2.62%	2.62%
4	2.47%	2.47%	2.47%	2.47%	2.47%	2.47%	2.47%	2.47%	2.47%	2.47%
5	2.47%	2.47%	2.47%	2.47%	2.47%	2.47%	2.47%	2.47%	2.47%	2.47%
6	2.47%	2.47%	2.47%	2.47%	2.47%	2.47%	2.47%	2.47%	2.47%	2.47%
7	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%
8	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%
9	1.97%	1.97%	1.97%	1.97%	1.97%	1.97%	1.97%	1.97%	1.97%	1.97%
10 or more	3.00%	3.00%	3.00%	3.00%	2.50%	2.00%	1.00%	0.00%	0.00%	0.00%

ECO, ESO – Male and Female

Combined Years of Service	Attained Age 20	25	30	35	40	45	50	55	60	65
0	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%
1	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%
2	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%
3	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%
4	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%
5	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%
6	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%
7	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%
8	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%
9	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%
10 or more	0.43%	0.43%	0.43%	0.43%	0.43%	0.23%	0.03%	0.00%	0.00%	0.00%

Table A2 (cont.)
Salary

JUDGES – Male and Female

Combined Years of Service	Attained Age 20	25	30	35	40	45	50	55	60	65
0	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%
1	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%
2	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%
3	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%
4	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%
5	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%
6	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%
7	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%
8	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%
9	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%
10 or more	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.00%	0.00%	0.00%	0.00%

SENIOR MANAGEMENT – Male

Combined Years of Service	Attained Age 20	25	30	35	40	45	50	55	60	65
0	4.38%	4.38%	4.38%	4.38%	4.38%	4.38%	4.38%	4.38%	4.38%	4.38%
1	4.38%	4.38%	4.38%	4.38%	4.38%	4.38%	4.38%	4.38%	4.38%	4.38%
2	3.94%	3.94%	3.94%	3.94%	3.94%	3.94%	3.94%	3.94%	3.94%	3.94%
3	3.72%	3.72%	3.72%	3.72%	3.72%	3.72%	3.72%	3.72%	3.72%	3.72%
4	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
5	3.06%	3.06%	3.06%	3.06%	3.06%	3.06%	3.06%	3.06%	3.06%	3.06%
6	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%
7	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%
8	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%
9	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%
10 or more	2.18%	2.18%	2.18%	2.18%	1.74%	1.30%	0.86%	0.86%	0.86%	0.86%

SENIOR MANAGEMENT - Female

Combined Years of Service	Attained Age 20	25	30	35	40	45	50	55	60	65
0	4.02%	4.02%	4.02%	4.02%	4.02%	4.02%	4.02%	4.02%	4.02%	4.02%
1	4.02%	4.02%	4.02%	4.02%	4.02%	4.02%	4.02%	4.02%	4.02%	4.02%
2	4.02%	4.02%	4.02%	4.02%	4.02%	4.02%	4.02%	4.02%	4.02%	4.02%
3	4.02%	4.02%	4.02%	4.02%	4.02%	4.02%	4.02%	4.02%	4.02%	4.02%
4	4.02%	4.02%	4.02%	4.02%	4.02%	4.02%	4.02%	4.02%	4.02%	4.02%
5	3.41%	3.41%	3.41%	3.41%	3.41%	3.41%	3.41%	3.41%	3.41%	3.41%
6	2.59%	2.59%	2.59%	2.59%	2.59%	2.59%	2.59%	2.59%	2.59%	2.59%
7	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%
8	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%
9	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%
10 or more	2.18%	2.18%	2.18%	2.18%	1.36%	1.15%	0.54%	0.00%	0.00%	0.00%

Table A-2 (cont.)
Salary

SPECIAL RISK – Male

Combined Years of Service	Attained Age 20	25	30	35	40	45	50	55	60	65
0	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
1	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
2	3.22%	3.22%	3.22%	3.22%	3.22%	3.22%	3.22%	3.22%	3.22%	3.22%
3	2.99%	2.99%	2.99%	2.99%	2.99%	2.99%	2.99%	2.99%	2.99%	2.99%
4	2.99%	2.99%	2.99%	2.99%	2.99%	2.99%	2.99%	2.99%	2.99%	2.99%
5	2.99%	2.99%	2.99%	2.99%	2.99%	2.99%	2.99%	2.99%	2.99%	2.99%
6	2.95%	2.95%	2.95%	2.95%	2.95%	2.95%	2.95%	2.95%	2.95%	2.95%
7	2.90%	2.90%	2.90%	2.90%	2.90%	2.90%	2.90%	2.90%	2.90%	2.90%
8	2.68%	2.68%	2.68%	2.68%	2.68%	2.68%	2.68%	2.68%	2.68%	2.68%
9	2.68%	2.68%	2.68%	2.68%	2.68%	2.68%	2.68%	2.68%	2.68%	2.68%
10 or more	2.50%	2.50%	2.50%	2.50%	2.50%	2.00%	1.00%	0.50%	0.50%	0.50%

SPECIAL RISK – Female

Combined Years of Service	Attained Age 20	25	30	35	40	45	50	55	60	65
0	5.47%	5.47%	5.47%	5.47%	5.47%	5.47%	5.47%	5.47%	5.47%	5.47%
1	4.57%	4.57%	4.57%	4.57%	4.57%	4.57%	4.57%	4.57%	4.57%	4.57%
2	3.22%	3.22%	3.22%	3.22%	3.22%	3.22%	3.22%	3.22%	3.22%	3.22%
3	2.77%	2.77%	2.77%	2.77%	2.77%	2.77%	2.77%	2.77%	2.77%	2.77%
4	2.55%	2.55%	2.55%	2.55%	2.55%	2.55%	2.55%	2.55%	2.55%	2.55%
5	2.55%	2.55%	2.55%	2.55%	2.55%	2.55%	2.55%	2.55%	2.55%	2.55%
6	2.55%	2.55%	2.55%	2.55%	2.55%	2.55%	2.55%	2.55%	2.55%	2.55%
7	2.54%	2.54%	2.54%	2.54%	2.54%	2.54%	2.54%	2.54%	2.54%	2.54%
8	2.52%	2.52%	2.52%	2.52%	2.52%	2.52%	2.52%	2.52%	2.52%	2.52%
9	2.52%	2.52%	2.52%	2.52%	2.52%	2.52%	2.52%	2.52%	2.52%	2.52%
10 or more	2.50%	2.50%	2.50%	2.50%	2.00%	1.50%	1.25%	0.75%	0.75%	0.75%

SPECIAL RISK ADMIN – Male and Female

Combined Years of Service	Attained Age 20	25	30	35	40	45	50	55	60	65
0	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%
1	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%
2	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%
3	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%
4	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%
5	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%
6	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%	3.46%
7	2.61%	2.61%	2.61%	2.61%	2.61%	2.61%	2.61%	2.61%	2.61%	2.61%
8	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%
9	2.19%	2.19%	2.19%	2.19%	2.19%	2.19%	2.19%	2.19%	2.19%	2.19%
10 or more	1.97%	1.97%	1.97%	1.97%	1.55%	1.12%	0.91%	0.91%	0.91%	0.91%

Table A-3
Unreduced Retirement Annual Rates – Tier I Members

REGULAR

	Male		Female	
Age	Retirement at First Eligibility	Retirement Beyond First Eligibility	Retirement at First Eligibility	Retirement Beyond First Eligibility
40	0.0%	0.0%	0.0%	0.0%
45	11.4%	3.0%	13.1%	1.7%
50	25.1%	9.5%	21.9%	6.2%
55	31.3%	9.1%	26.7%	7.6%
60	39.4%	10.4%	35.5%	14.6%
65	23.5%	11.0%	29.2%	19.0%
70	24.6%	12.3%	22.6%	15.1%
75	23.6%	12.3%	21.2%	15.1%
80	64.8%	43.6%	58.0%	44.1%

ELECTED OFFICERS' GROUPS: ECO, ESO [1]

	Male		Female	
Age	Retirement at First Eligibility	Retirement Beyond First Eligibility	Retirement at First Eligibility	Retirement Beyond First Eligibility
40	0.0%	0.0%	0.0%	0.0%
45	8.0%	0.0%	7.8%	1.2%
50	9.6%	0.7%	12.8%	1.2%
55	14.3%	1.5%	17.0%	4.0%
60	19.3%	4.9%	13.8%	7.2%
65	21.8%	9.6%	17.4%	10.7%
70	27.3%	15.2%	21.3%	13.4%
75	27.3%	13.4%	21.3%	13.4%
80	57.3%	52.6%	12.9%	58.4%

[1] Rates for the ECO and ESO groups differ only at age 64, retirement at first eligibility for males. Otherwise, the tables are identical.

JUDICIAL

	Male		Female	
Age	Retirement at First Eligibility	Retirement Beyond First Eligibility	Retirement at First Eligibility	Retirement Beyond First Eligibility
40	0.0%	0.0%	0.0%	0.0%
45	8.0%	0.0%	7.8%	1.2%
50	9.6%	0.7%	12.8%	1.2%
55	12.0%	1.5%	17.0%	4.0%
60	12.1%	4.9%	18.4%	7.2%
65	20.0%	9.6%	18.2%	10.7%
70	25.0%	15.2%	16.5%	13.4%
75	25.0%	13.4%	16.5%	13.4%
80	55.0%	52.6%	8.1%	58.4%

Table A-3 (cont.)
Unreduced Retirement Annual Rates – Tier I Members

SENIOR MANAGEMENT SERVICE

	Male		Female	
Age	Retirement at First Eligibility	Retirement Beyond First Eligibility	Retirement at First Eligibility	Retirement Beyond First Eligibility
40	0.0%	0.0%	0.0%	0.0%
45	10.3%	2.1%	12.1%	0.4%
50	24.2%	11.1%	20.9%	5.9%
55	29.1%	10.3%	25.3%	6.6%
60	37.2%	14.9%	40.0%	12.8%
65	31.7%	21.5%	35.2%	21.4%
70	19.3%	18.1%	18.8%	17.1%
75	18.3%	18.1%	17.5%	17.1%
80	64.5%	60.1%	66.8%	54.9%

TRS

	Male		Female	
Age	Retirement at First Eligibility[2]	Retirement Beyond First Eligibility	Retirement at First Eligibility[2]	Retirement Beyond First Eligibility
40	N/A	0.0%	N/A	0.0%
45	N/A	2.5%	N/A	1.5%
50	N/A	2.5%	N/A	1.5%
55	N/A	13.5%	N/A	9.0%
60	N/A	56.5%	N/A	55.5%
65	N/A	56.5%	N/A	57.5%
70	N/A	58.0%	N/A	57.0%
75	N/A	58.0%	N/A	57.0%
80	N/A	58.0%	N/A	57.0%

SPECIAL RISK

	Male		Female	
Age	Retirement at First Eligibility	Retirement Beyond First Eligibility	Retirement at First Eligibility	Retirement Beyond First Eligibility
40	2.4%	0.9%	2.4%	0.9%
45	7.6%	0.9%	4.1%	4.7%
50	20.9%	4.5%	14.6%	4.4%
55	16.5%	4.7%	13.5%	4.8%
60	12.1%	4.9%	17.0%	7.9%
65	39.8%	14.5%	31.7%	10.6%
70	71.3%	13.6%	71.7%	9.2%
75	71.3%	25.5%	71.7%	65.0%
80	71.3%	65.0%	71.7%	65.0%

IFAS: It is assumed that IFAS participants will retire upon the later of attainment of age 62 and 10 years of covered service or immediately, if beyond that time.

[2] All active TRS members are beyond first eligibility for retirement.

Table A-3 (cont.)
Unreduced Retirement Annual Rates – Tier I Members

SPECIAL RISK ADMINISTRATIVE SUPPORT

	Male		Female	
Age	Retirement at First Eligibility	Retirement Beyond First Eligibility	Retirement at First Eligibility	Retirement Beyond First Eligibility
40	0.0%	0.0%	0.0%	0.0%
45	11.3%	0.0%	11.3%	0.0%
50	18.0%	4.5%	18.0%	4.5%
55	33.0%	5.8%	56.5%	5.8%
60	24.8%	11.6%	42.6%	11.6%
65	69.2%	56.0%	69.5%	56.0%
70	78.2%	65.0%	78.5%	65.0%
75	78.2%	65.0%	78.5%	65.0%
80	78.2%	65.0%	78.5%	65.0%

Table A-3
Unreduced Retirement Annual Rates – Tier II Members

REGULAR

	Male		Female	
Age	Retirement at First Eligibility	Retirement Beyond First Eligibility	Retirement at First Eligibility	Retirement Beyond First Eligibility
40	0.0%	0.0%	0.0%	0.0%
45	11.4%	3.0%	13.1%	1.7%
50	25.1%	9.5%	21.9%	6.2%
55	31.3%	9.1%	26.7%	7.6%
60	39.4%	10.4%	35.5%	14.6%
65	32.6%	11.0%	38.3%	19.0%
70	24.6%	12.3%	22.6%	15.1%
75	23.6%	12.3%	21.2%	15.1%
80	64.8%	43.6%	58.0%	44.1%

ELECTED OFFICERS' GROUPS: ECO, ESO

	Male		Female	
Age	Retirement at First Eligibility	Retirement Beyond First Eligibility	Retirement at First Eligibility	Retirement Beyond First Eligibility
40	0.0%	0.0%	0.0%	0.0%
45	8.0%	0.0%	7.8%	1.2%
50	9.6%	0.7%	12.8%	1.2%
55	14.3%	1.5%	17.0%	4.0%
60	19.3%	4.9%	13.8%	7.2%
65	29.8%	9.6%	25.4%	10.7%
70	27.3%	15.2%	21.3%	13.4%
75	27.3%	13.4%	21.3%	13.4%
80	57.3%	52.6%	12.9%	58.4%

JUDICIAL

	Male		Female	
Age	Retirement at First Eligibility	Retirement Beyond First Eligibility	Retirement at First Eligibility	Retirement Beyond First Eligibility
40	0.0%	0.0%	0.0%	0.0%
45	8.0%	0.0%	7.8%	1.2%
50	9.6%	0.7%	12.8%	1.2%
55	12.0%	1.5%	17.0%	4.0%
60	12.1%	4.9%	18.4%	7.2%
65	28.0%	9.6%	26.2%	10.7%
70	25.0%	15.2%	16.5%	13.4%
75	25.0%	13.4%	16.5%	13.4%
80	55.0%	52.6%	8.1%	58.4%

Table A-3 (cont.)
Unreduced Retirement Annual Rates – Tier II Members

SENIOR MANAGEMENT SERVICE

	Male		Female	
Age	Retirement at First Eligibility	Retirement Beyond First Eligibility	Retirement at First Eligibility	Retirement Beyond First Eligibility
40	0.0%	0.0%	0.0%	0.0%
45	10.3%	2.1%	12.1%	0.4%
50	24.2%	11.1%	20.9%	5.9%
55	29.1%	10.2%	25.3%	6.6%
60	37.2%	14.9%	40.0%	12.8%
65	40.3%	21.5%	43.8%	21.4%
70	19.3%	18.1%	18.8%	17.1%
75	18.3%	18.1%	17.5%	17.1%
80	64.5%	60.1%	66.8%	54.9%

SPECIAL RISK

	Male		Female	
Age	Retirement at First Eligibility	Retirement Beyond First Eligibility	Retirement at First Eligibility	Retirement Beyond First Eligibility
40	2.4%	0.9%	2.4%	0.9%
45	7.6%	0.9%	4.1%	4.7%
50	20.9%	4.5%	14.6%	4.4%
55	24.8%	4.7%	19.7%	4.8%
60	12.1%	4.9%	17.0%	7.9%
65	39.8%	14.5%	31.7%	10.6%
70	71.3%	13.6%	71.7%	9.2%
75	71.3%	25.5%	71.7%	65.0%
80	71.3%	65.0%	71.7%	65.0%

There are no separate Tier II retirement rates for Special Risk Administrative Support, IFAS, or TRS.

Table A-4
Line-of-Duty Disability Annual Rates

REGULAR		
Age	Male	Female
20	0.002%	0.000%
25	0.002%	0.001%
30	0.003%	0.001%
35	0.005%	0.003%
40	0.009%	0.005%
45	0.014%	0.008%
50	0.022%	0.010%
55	0.034%	0.016%
60	0.048%	0.022%
65	0.050%	0.020%
70	0.047%	0.017%
75	0.046%	0.013%
80	0.046%	0.011%

ECO, ESO, JUDGES, SENIOR MANAGEMENT		
Age	Male	Female
20	0.004%	0.001%
25	0.004%	0.001%
30	0.005%	0.001%
35	0.007%	0.002%
40	0.011%	0.003%
45	0.017%	0.005%
50	0.029%	0.007%
55	0.044%	0.011%
60	0.044%	0.014%
65	0.044%	0.013%
70	0.044%	0.013%
75	0.044%	0.013%
80	0.044%	0.013%

Table A-4 (cont.)
Line-of-Duty Disability Annual Rates

SPECIAL RISK, SPECIAL RISK ADMINISTRATIVE		
Age	Male	Female
20	0.012%	0.008%
25	0.012%	0.008%
30	0.017%	0.016%
35	0.029%	0.037%
40	0.051%	0.068%
45	0.087%	0.106%
50	0.138%	0.153%
55	0.215%	0.152%
60	0.301%	0.151%
65	0.231%	0.143%
70	0.231%	0.143%
75	0.231%	0.143%
80	0.231%	0.143%

TRS
Same as Non-Duty Disability

Table A-5
Non-Duty Disability Annual Rates

REGULAR		
Age	Male	Female
20	0.000%	0.000%
25	0.027%	0.010%
30	0.053%	0.026%
35	0.066%	0.049%
40	0.092%	0.070%
45	0.122%	0.114%
50	0.203%	0.184%
55	0.339%	0.294%
60	0.445%	0.419%
65	0.215%	0.105%
70	0.202%	0.105%
75	0.139%	0.105%
80	0.139%	0.105%

ECO, ESO, JUDGES, SENIOR MANAGEMENT		
Age	Male	Female
20	0.000%	0.002%
25	0.000%	0.002%
30	0.016%	0.017%
35	0.022%	0.030%
40	0.033%	0.047%
45	0.072%	0.096%
50	0.121%	0.151%
55	0.210%	0.162%
60	0.313%	0.162%
65	0.156%	0.106%
70	0.156%	0.106%
75	0.154%	0.106%
80	0.100%	0.106%

Table A-5 (cont.)
Non-Duty Disability Annual Rates

SPECIAL RISK, SPECIAL RISK ADMINISTRATIVE		
Age	Male	Female
20	0.037%	0.036%
25	0.037%	0.036%
30	0.043%	0.046%
35	0.055%	0.075%
40	0.087%	0.118%
45	0.140%	0.209%
50	0.292%	0.254%
55	0.244%	0.328%
60	0.206%	0.328%
65	0.206%	0.328%
70	0.206%	0.328%
75	0.206%	0.328%
80	0.206%	0.328%

TRS		
Age	Male	Female
20	0.149%	0.089%
25	0.149%	0.089%
30	0.190%	0.154%
35	0.264%	0.262%
40	0.396%	0.382%
45	0.616%	0.580%
50	1.044%	0.914%
55	1.818%	1.532%
60	2.724%	1.876%
65	3.436%	1.924%
70	3.436%	1.924%
75	3.436%	1.924%
80	3.436%	1.924%

Table A-6
Pre-Retirement Mortality Annual Rates

REGULAR, ECO, ESO, JUDGES, SENIOR MANAGEMENT

	Male		Female	
Age	Duty Death	Non-Duty Death	Duty Death	Non-Duty Death
20	0.01%	0.03%	0.00%	0.02%
25	0.01%	0.03%	0.00%	0.02%
30	0.01%	0.03%	0.00%	0.02%
35	0.02%	0.06%	0.01%	0.04%
40	0.03%	0.08%	0.01%	0.06%
45	0.02%	0.13%	0.01%	0.10%
50	0.03%	0.18%	0.02%	0.14%
55	0.04%	0.21%	0.02%	0.18%
60	0.06%	0.33%	0.03%	0.28%
65	0.09%	0.52%	0.05%	0.42%
70	0.12%	0.68%	0.06%	0.55%
75	0.18%	1.04%	0.09%	0.81%
80	0.31%	1.77%	0.15%	1.33%

SPECIAL RISK, SPECIAL RISK ADMINISTRATIVE

	Male		Female	
Age	Duty Death	Non-Duty Death	Duty Death	Non-Duty Death
20	0.02%	0.01%	0.01%	0.01%
25	0.02%	0.02%	0.01%	0.01%
30	0.03%	0.02%	0.02%	0.01%
35	0.05%	0.03%	0.03%	0.02%
40	0.04%	0.06%	0.03%	0.04%
45	0.05%	0.11%	0.03%	0.08%
50	0.05%	0.16%	0.04%	0.13%
55	0.08%	0.23%	0.06%	0.17%
60	0.10%	0.29%	0.08%	0.24%
65	0.15%	0.46%	0.12%	0.35%
70	0.20%	0.60%	0.15%	0.46%
75	0.31%	0.92%	0.23%	0.68%
80	0.52%	1.57%	0.37%	1.11%

Table A-6 (cont.)
Pre-Retirement Mortality Annual Rates

TRS

Age	Male	Female
20	0.05%	0.02%
25	0.05%	0.03%
30	0.07%	0.04%
35	0.09%	0.05%
40	0.13%	0.08%
45	0.20%	0.11%
50	0.38%	0.17%
55	0.65%	0.25%
60	1.00%	0.39%
65	1.59%	0.69%
70	2.63%	1.16%
75	0.00%	0.00%
80	0.00%	0.00%

IFAS

Age	Male	Female
20	0.03%	0.02%
25	0.04%	0.02%
30	0.04%	0.03%
35	0.08%	0.05%
40	0.11%	0.07%
45	0.15%	0.11%
50	0.21%	0.17%
55	0.30%	0.25%
60	0.49%	0.39%
65	0.76%	0.58%
70	0.99%	0.76%
75	0.00%	0.00%
80	0.00%	0.00%

Table A-7 [1]
Post-Retirement Mortality Annual Rates

REGULAR AND SPECIAL RISK		
Age	Male	Female
20	0.15%	0.01%
25	0.19%	0.02%
30	0.23%	0.03%
35	0.29%	0.05%
40	0.35%	0.09%
45	0.44%	0.14%
50	0.54%	0.23%
55	0.49%	0.33%
60	0.60%	0.54%
65	1.06%	0.87%
70	1.75%	1.46%
75	3.06%	2.46%
80	5.40%	4.13%
85	9.52%	7.11%
90	16.21%	12.09%
95	24.32%	18.64%
100	31.32%	22.76%
105	36.17%	28.09%
110	36.36%	34.94%
115	36.36%	38.33%
120	90.91%	95.83%

ECO, ESO, J, SM, and SRA		
Age	Male	Female
20	0.14%	0.01%
25	0.17%	0.01%
30	0.21%	0.02%
35	0.26%	0.03%
40	0.32%	0.05%
45	0.40%	0.09%
50	0.49%	0.14%
55	0.45%	0.20%
60	0.54%	0.32%
65	0.96%	0.52%
70	1.59%	0.86%
75	2.77%	1.46%
80	4.89%	2.44%
85	8.62%	4.21%
90	14.68%	7.15%
95	22.03%	11.03%
100	28.37%	13.46%
105	32.77%	16.62%
110	32.94%	20.67%
115	32.94%	22.68%
120	82.35%	56.70%

[1] Rates are shown for 2000. Rates are projected to the valuation date using projection Scale AA.

Table A-8
Disabled Termination
(Mortality and Recovery)

	All Groups	
Age	Male	Female
20	2.09%	2.18%
25	2.09%	2.18%
30	2.09%	1.96%
35	2.09%	1.77%
40	2.09%	1.73%
45	2.09%	1.86%
50	2.14%	2.13%
55	2.62%	2.44%
60	3.11%	2.74%
65	3.71%	3.26%
70	4.63%	3.62%
75	6.07%	4.33%
80	8.08%	6.57%
85	10.47%	9.93%
90	13.56%	14.81%
95	19.77%	22.24%
100	25.47%	33.37%
105	29.41%	50.05%

Table A-9
Other Terminations of Employment Annual Rates

REGULAR – Male

Combined Years of Service	Attained Age 20	25	30	35	40	45	50	55	60	65
0	32.8%	27.2%	25.8%	25.8%	24.4%	24.4%	23.4%	27.4%	27.4%	27.4%
1	25.4%	18.5%	15.4%	14.3%	12.6%	12.5%	12.2%	12.2%	12.2%	12.2%
2	22.7%	17.2%	14.0%	12.8%	12.0%	11.6%	10.7%	10.7%	10.7%	10.7%
3	18.4%	14.6%	13.2%	12.6%	10.7%	10.3%	9.4%	9.3%	9.3%	9.3%
4	15.8%	12.7%	11.8%	10.9%	9.0%	8.8%	7.9%	7.8%	7.8%	7.8%
5	11.7%	9.7%	8.8%	8.5%	7.4%	6.8%	6.0%	6.8%	6.8%	6.8%
6	11.1%	8.5%	7.8%	7.5%	6.7%	6.5%	5.5%	5.4%	5.4%	5.4%
7	11.1%	8.4%	7.1%	6.8%	6.2%	6.0%	5.3%	5.2%	5.1%	5.1%
8	11.0%	7.7%	6.4%	6.2%	5.8%	5.1%	4.6%	4.4%	4.3%	4.3%
9	10.0%	6.3%	5.5%	5.3%	5.3%	5.1%	4.6%	4.3%	4.2%	4.2%
10 or more	9.8%	6.2%	4.7%	4.2%	3.0%	2.7%	3.0%	4.5%	5.3%	3.7%

REGULAR – Female

Combined Years of Service	Attained Age 20	25	30	35	40	45	50	55	60	65
0	30.3%	26.6%	25.4%	25.4%	24.4%	24.4%	23.2%	23.2%	23.2%	23.2%
1	25.8%	19.8%	16.9%	15.9%	14.0%	13.9%	13.4%	13.4%	13.4%	13.4%
2	22.1%	17.1%	14.5%	13.5%	12.1%	11.9%	11.0%	11.0%	11.0%	11.0%
3	17.4%	13.0%	11.6%	11.2%	10.0%	9.8%	8.8%	8.7%	8.7%	8.7%
4	15.4%	12.9%	11.3%	10.9%	9.1%	8.8%	8.4%	8.3%	8.3%	8.3%
5	13.5%	10.7%	9.4%	9.0%	7.0%	6.7%	6.2%	6.1%	6.1%	6.1%
6	11.4%	9.7%	8.7%	8.0%	6.5%	6.5%	5.9%	5.8%	5.8%	5.8%
7	11.3%	9.2%	8.1%	7.8%	6.3%	6.1%	5.5%	5.4%	5.4%	5.4%
8	10.5%	7.8%	7.1%	6.8%	6.1%	5.8%	5.5%	5.4%	5.4%	5.4%
9	10.2%	7.1%	6.5%	6.2%	5.0%	4.7%	4.6%	4.5%	4.5%	4.5%
10 or more	11.6%	5.3%	5.4%	4.6%	3.3%	3.0%	3.0%	3.0%	3.0%	3.0%

ECO – Male

Combined Years of Service	Attained Age 20	25	30	35	40	45	50	55	60	65
0	8.2%	8.2%	8.2%	8.2%	8.2%	8.2%	8.2%	8.2%	8.2%	8.2%
1	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%
2	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%
3	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
4	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
5	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%
6	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%
7	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%
8	13.8%	13.8%	13.8%	13.8%	13.8%	13.8%	13.6%	13.4%	13.3%	11.5%
9	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.6%	4.4%	4.3%	2.5%
10 or more	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.6%	5.3%	5.2%	3.5%

Table A-9 (cont.)
Other Terminations of Employment Annual Rates

ECO – Female

Combined Years of Service	Attained Age 20	25	30	35	40	45	50	55	60	65
0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%
2	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
3	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
4	18.1%	18.1%	18.1%	18.1%	18.1%	18.1%	18.1%	18.1%	18.1%	18.1%
5	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%
6	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
7	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
8	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	11.9%	11.7%	11.6%	10.2%
9	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.1%	2.8%	2.7%	1.0%
10 or more	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.1%	3.9%	3.8%	2.4%

ESO – Male

Combined Years of Service	Attained Age 20	25	30	35	40	45	50	55	60	65
0	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%
1	4.3%	4.3%	4.3%	4.3%	4.3%	4.3%	4.3%	4.3%	4.3%	4.3%
2	11.7%	11.7%	11.7%	11.7%	11.7%	11.7%	11.7%	11.7%	11.7%	11.7%
3	3.9%	3.9%	3.9%	3.9%	3.9%	3.9%	3.9%	3.9%	3.9%	3.9%
4	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
5	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
6	10.6%	10.6%	10.6%	10.6%	10.6%	10.6%	10.6%	10.6%	10.6%	10.6%
7	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
8	20.2%	20.2%	20.2%	20.2%	20.2%	20.8%	20.0%	18.7%	18.4%	16.7%
9	6.6%	6.6%	6.6%	6.6%	6.6%	7.2%	6.4%	5.2%	4.9%	3.1%
10 or more	6.7%	6.7%	6.7%	6.7%	6.7%	7.1%	6.6%	5.7%	5.5%	4.2%

ESO – Female

Combined Years of Service	Attained Age 20	25	30	35	40	45	50	55	60	65
0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1	9.1%	9.1%	9.1%	9.1%	9.1%	9.1%	9.1%	9.1%	9.1%	9.1%
2	15.9%	15.9%	15.9%	15.9%	15.9%	15.9%	15.9%	15.9%	15.9%	15.9%
3	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
4	16.3%	16.3%	16.3%	16.3%	16.3%	16.3%	16.3%	16.3%	16.3%	16.3%
5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
6	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%
7	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
8	17.8%	17.8%	17.8%	17.8%	17.8%	18.4%	17.6%	16.3%	16.0%	14.3%
9	3.5%	3.5%	3.5%	3.5%	3.5%	4.1%	3.3%	2.1%	1.8%	0.0%
10 or more	10.8%	10.8%	10.8%	10.8%	10.8%	11.4%	10.6%	9.4%	9.1%	7.3%

Table A-9 (cont.)
Other Terminations of Employment Annual Rates

JUDGES - Male

Combined Years of Service	Attained Age 20	25	30	35	40	45	50	55	60	65
0	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%
1	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%
2	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%
3	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%
4	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
5	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
6	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
7	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
8	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
9	1.3%	1.3%	1.3%	1.2%	1.2%	1.2%	1.1%	0.8%	0.7%	0.5%
10 or more	2.0%	2.0%	2.0%	1.9%	1.9%	1.9%	1.7%	1.3%	1.1%	0.7%

JUDGES – Female

Combined Years of Service	Attained Age 20	25	30	35	40	45	50	55	60	65
0	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
1	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
3	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
4	4.6%	4.6%	4.6%	4.6%	4.6%	4.6%	4.6%	4.6%	4.6%	4.6%
5	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
6	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
7	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
8	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
9	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.4%	1.1%	1.0%	0.8%
10 or more	2.9%	2.9%	2.9%	2.7%	2.7%	2.7%	2.4%	2.0%	1.8%	1.4%

SENIOR MANAGEMENT – Male

Combined Years of Service	Attained Age 20	25	30	35	40	45	50	55	60	65
0	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%
1	27.9%	23.3%	20.7%	19.4%	18.9%	18.8%	18.8%	18.8%	18.8%	18.8%
2	24.9%	21.4%	19.3%	18.0%	17.2%	16.9%	16.8%	16.8%	16.8%	16.8%
3	19.5%	18.5%	17.7%	17.1%	16.7%	16.4%	16.2%	16.0%	16.0%	16.0%
4	15.5%	14.9%	14.5%	13.6%	12.9%	12.6%	12.4%	12.3%	12.2%	12.2%
5	10.9%	10.5%	10.0%	9.7%	9.3%	8.6%	8.2%	8.1%	8.0%	8.0%
6	10.6%	10.3%	9.8%	9.3%	9.0%	8.7%	8.4%	8.3%	8.1%	8.1%
7	10.5%	10.2%	9.7%	9.2%	8.8%	8.5%	8.3%	8.1%	8.0%	8.0%
8	9.6%	9.5%	9.1%	8.8%	8.5%	8.3%	8.1%	8.0%	7.9%	7.8%
9	6.6%	6.6%	6.3%	6.1%	5.9%	5.7%	5.6%	5.4%	5.3%	5.3%
10 or more	4.8%	4.8%	4.1%	3.6%	3.2%	2.9%	3.0%	3.1%	3.5%	2.6%

Table A-9 (cont.)
Other Terminations of Employment Annual Rates

SENIOR MANAGEMENT – Female

Combined Years of Service	Attained Age 20	25	30	35	40	45	50	55	60	65
0	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%
1	25.8%	21.7%	19.6%	18.5%	18.1%	18.0%	18.0%	18.0%	18.0%	18.0%
2	22.8%	20.0%	18.3%	17.3%	16.7%	16.5%	16.4%	16.4%	16.4%	16.4%
3	19.0%	18.0%	17.3%	16.7%	16.2%	15.9%	15.7%	15.6%	15.6%	15.6%
4	14.6%	14.0%	13.5%	13.0%	12.7%	12.4%	12.1%	12.0%	11.8%	11.8%
5	12.1%	11.3%	10.5%	9.9%	9.4%	9.0%	8.7%	8.6%	8.5%	8.5%
6	10.9%	10.6%	10.1%	9.7%	9.4%	9.1%	8.8%	8.7%	8.5%	8.5%
7	10.3%	10.1%	9.6%	9.2%	8.8%	8.6%	8.4%	8.2%	8.1%	8.1%
8	7.7%	7.6%	7.1%	6.8%	6.5%	6.2%	6.0%	5.9%	5.8%	5.7%
9	7.4%	7.4%	6.9%	6.5%	6.1%	5.8%	5.5%	5.3%	5.1%	5.1%
10 or more	4.8%	4.8%	3.9%	3.2%	2.7%	2.4%	2.1%	1.9%	1.9%	1.9%

SPECIAL RISK – Male

Combined Years of Service	Attained Age 20	25	30	35	40	45	50	55	60	65
0	21.4%	20.6%	20.6%	20.6%	20.6%	20.6%	20.6%	20.6%	20.6%	20.6%
1	10.3%	9.8%	9.5%	8.8%	8.0%	7.3%	6.5%	5.8%	5.3%	5.3%
2	8.6%	8.1%	7.7%	7.4%	6.8%	6.0%	5.3%	4.7%	4.7%	4.7%
3	8.4%	7.9%	7.5%	7.2%	6.7%	6.0%	5.3%	4.7%	4.7%	4.7%
4	7.5%	7.0%	6.7%	6.5%	6.0%	5.5%	5.0%	4.6%	4.6%	4.6%
5	5.3%	5.3%	5.3%	5.3%	4.8%	4.3%	3.8%	3.3%	3.3%	3.3%
6	5.2%	5.2%	5.2%	5.1%	4.6%	4.1%	3.6%	3.2%	3.2%	3.2%
7	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%
8	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%
9	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%
10 or more	2.3%	2.3%	2.1%	2.0%	1.9%	1.8%	1.8%	1.8%	1.8%	1.8%

SPECIAL RISK – Female

Combined Years of Service	Attained Age 20	25	30	35	40	45	50	55	60	65
0	21.3%	21.3%	21.3%	21.3%	21.3%	21.3%	21.3%	21.3%	21.3%	21.3%
1	15.5%	14.2%	13.2%	12.2%	11.2%	10.2%	9.2%	8.4%	8.4%	8.4%
2	12.3%	11.6%	10.6%	9.6%	8.6%	7.6%	6.6%	5.8%	5.8%	5.8%
3	10.3%	9.8%	9.3%	8.8%	8.3%	7.6%	6.6%	5.6%	5.6%	5.6%
4	9.7%	9.2%	8.7%	8.4%	7.6%	7.0%	6.4%	5.4%	5.4%	5.4%
5	6.1%	6.1%	6.1%	6.1%	6.1%	6.1%	6.1%	5.3%	5.3%	5.3%
6	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.1%	5.1%	5.1%
7	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
8	4.2%	4.2%	4.2%	4.2%	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%
9	4.2%	4.2%	4.2%	4.1%	4.1%	4.1%	4.0%	4.0%	4.0%	4.0%
10 or more	1.9%	1.9%	1.7%	1.5%	2.5%	2.5%	1.6%	4.0%	4.0%	4.0%

Table A-9 (cont.)
Other Terminations of Employment Annual Rates

SPECIAL RISK ADMINISTRATIVE – Male

Combined Years of Service	Attained Age 20	25	30	35	40	45	50	55	60	65
0	14.6%	13.9%	13.9%	13.9%	13.9%	13.9%	13.9%	13.9%	13.9%	13.9%
1	11.3%	10.8%	10.3%	9.9%	9.7%	9.5%	9.4%	9.4%	9.4%	9.4%
2	10.4%	9.7%	9.3%	8.9%	8.7%	8.5%	8.4%	8.4%	8.4%	8.4%
3	9.7%	9.1%	8.7%	8.3%	7.9%	7.8%	7.7%	7.6%	7.6%	7.6%
4	8.8%	8.3%	8.0%	7.8%	7.6%	7.4%	7.4%	7.4%	7.4%	7.4%
5	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
6	4.4%	4.4%	4.4%	4.2%	3.9%	3.9%	3.9%	3.9%	3.9%	3.9%
7	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%
8	3.4%	3.4%	3.4%	3.4%	3.4%	3.4%	3.4%	3.4%	3.4%	3.4%
9	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%
10 or more	3.9%	3.9%	3.6%	3.4%	3.2%	3.3%	3.6%	7.5%	7.5%	7.5%

SPECIAL RISK ADMINISTRATIVE – Female

Combined Years of Service	Attained Age 20	25	30	35	40	45	50	55	60	65
0	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%
1	19.4%	18.0%	17.1%	16.5%	16.1%	15.9%	15.7%	15.7%	15.7%	15.7%
2	17.5%	16.9%	16.5%	16.2%	15.9%	15.8%	15.7%	15.7%	15.7%	15.7%
3	20.3%	19.8%	19.3%	19.0%	18.7%	18.6%	18.4%	18.4%	18.4%	18.4%
4	20.8%	20.2%	19.8%	19.4%	19.0%	18.8%	18.7%	18.7%	18.7%	18.7%
5	18.8%	18.8%	18.8%	18.8%	18.8%	18.8%	18.8%	18.8%	18.8%	18.8%
6	18.7%	18.7%	18.7%	18.7%	18.7%	18.7%	18.7%	18.7%	18.7%	18.7%
7	17.9%	17.9%	17.9%	17.9%	17.9%	17.9%	17.9%	17.9%	17.9%	17.9%
8	17.8%	17.8%	17.7%	17.7%	17.7%	17.6%	17.6%	17.6%	17.6%	17.6%
9	17.8%	17.8%	17.8%	17.8%	17.7%	17.7%	17.6%	17.6%	17.6%	17.6%
10 or more	18.4%	18.4%	18.1%	17.8%	17.6%	17.7%	18.0%	21.0%	21.0%	21.0%

APPENDIX B

SUMMARY OF PLAN PROVISIONS

All actuarial calculations are based upon our understanding of Florida Statutes regarding the retirement provisions of the retirement systems. These provisions are briefly summarized below for reference purposes, along with corresponding references to the Statutes. This summary encompasses the major provisions; it does not attempt to cover all of the detailed provisions.

PART I: FLORIDA RETIREMENT SYSTEM (FRS)

The benefit and contribution provisions of the FRS are set forth in Chapter 121 of the Florida Statutes. Provisions relating to other State-administered retirement systems are set forth in other sections of the Florida Statutes, under Chapters 112, 122, and 238.

EFFECTIVE DATE

The effective date of the FRS was December 1, 1970. The FRS was created with closure and consolidation of the Teachers' Retirement System, the State and County Officers and Employees' Retirement System, and the Highway Patrol Pension Fund. In 1972, the Judicial Retirement System was also consolidated with the FRS. The FRS was created to provide a defined benefit retirement, disability, and survivor program for participating public employees. Social Security coverage is also required for all members.

Beginning in 2002, the FRS became one system with two primary programs, the existing Defined Benefit Program and a defined contribution plan alternative to the defined benefit plan known as the Investment Plan (IP). The earliest that any member could participate in the IP was July 1, 2002.

As of July 1, 2007, the Institute for Food and Agricultural Sciences Supplemental Retirement Program was consolidated under the FRS as a closed group.

(Section 121.011(2))

MEMBERSHIP

Membership is a condition of employment for all new state, county, or other participating agency employees filling regularly established positions and employed on or after December 1, 1970, or who elected to transfer from an existing System. Employees may be full-time or part-time and can be elected, appointed, or employed in state government, county government, a state university, or a community college. A city or special district may join the FRS at its option.

Effective July 1, 1978, a member in an existing retirement system who is re-employed after termination of employment may remain in that system, provided his or her member contributions have not been withdrawn.

Members of the FRS Defined Benefit Program when the IP was created were provided an educational period about their plan choice options prior to a 90-day election period to elect between the Defined Benefit Program and the Investment Plan (IP). Members newly hired after the IP became effective are provided five months after their month of hire to file an election between the two primary programs. Members who do not make an election default into the Defined Benefit Program.

After the initial active or default election to participate in the Defined Benefit Program or the IP, the employee has one opportunity, at the employee's discretion before termination or retirement, to choose to move from the Defined Benefit Program to the IP or from the IP to the Defined Benefit Program.

(Sections 121.051, 121.4501)

CLASSIFICATION

There are five separate classes of members: Regular Class, Special Risk Class, Special Risk Administrative Support Class, Elected Officers' Class, and Senior Management Service Class. In addition, the Deferred Retirement Option Program is available to defined benefit program members who meet the requirements for normal retirement under the Defined Benefit Program of the FRS.

Regular Class – members who are not classified as members of the Special Risk Class, Special Risk Administrative Support Class, Elected Officers' Class, or Senior Management Service Class.

Special Risk Class – members employed as law enforcement officers, emergency medical technicians, paramedics, firefighters, firefighter trainers, fire prevention inspectors, correctional officers, correctional probation officers, certain professional health care positions within the Department of Children and Family Services and the Department of Corrections, youth custody officers, or certain forensic positions within a law enforcement agency, or a medical examiner's office who meet the criteria set forth in the Florida Retirement System law and rules.

Special Risk Administrative Support Class – former Special Risk members employed as law enforcement officers, firefighters, correctional officers, or emergency medical technicians who have been moved or been re-assigned

to non-Special Risk administrative support positions within a Florida Retirement System Special Risk employing agency.

Elected Officers' Class **–** members include the governor, lieutenant governor, cabinet officers, legislators, Supreme Court justices, district court of appeals judges, circuit judges, county court judges, state attorneys, public defenders, and elected county officers. Also included are city and special district officers if the employer chose to place their elected officials in this class. All such elected officers may withdraw from the Florida Retirement System, or elect membership in the Senior Management Service Class or, if state officers, in the Senior Management Service Optional Annuity Program.

Senior Management Service Class **–** members who hold positions in the Senior Management Service of the State of Florida; community college presidents; appointed school board superintendents; county and city managers; selected managerial staff of the Legislature; the Auditor General and managerial staff; the Executive Director of the Ethics Commission; the State University System Executive Service and university presidents; selected managerial staff of the State Board of Administration; judges of compensation claims; selected managerial staff with the Judicial Branch; Chief Deputy Court Administrator; capital collateral regional counsels and assistant capital collateral regional counsels; assistant state attorneys; assistant public defenders; assistant statewide prosecutors or assistant attorneys general; and nonelective managerial positions designated for SMSC membership by local government agencies. Members in this class have either chosen not to participate or are not eligible to participate in the elective Senior Management Service Optional Annuity Program for state senior managers or to withdraw from the FRS if employed by non-state employers. This class became effective February 1, 1987, and members of an existing retirement system and members of the Special Risk or Special Risk Administrative Support Classes who were employed prior to February 1, 1987 could elect to remain in such system or class.

Deferred Retirement Option Program **–** allows members of the Defined Benefit Program of the FRS in any of the above five classes to elect to retire and have their FRS benefits accumulate in the FRS Trust Fund, earning interest, while the member continues to work for an FRS employer. DROP membership is for a specific and limited period.

(Sections 121.021(12), 121.0515, 121.052, 121.055, 121.091 (13))

CONTRIBUTIONS

From January 1, 1975, for the state and for school boards, and from October 1, 1975, for other agencies, through June 30, 2011, the total cost of the System was paid by the participating employers.

Beginning July 1, 2011, all Defined Benefit and IP members, except those participating in DROP, are required to pay member contributions equal to 3% of compensation. TRS members already require employee contributions. Member contributions do not accrue interest except for TRS members.

(Section 121.071 (2))

The employer contribution rates enacted for the July 1, 2013 – June 30, 2014 plan year are as follows:

	FRS	Special Risk		Elected Officers Class			Senior	
	Regular	Regular	Administration	Judicial	Leg-Atty-Cab	County	Management	DROP
Defined Benefit Plan								
- Normal Cost Rate	3.55%	10.75%	3.76%	9.98%	6.42%	8.30%	4.77%	4.63%
- UAL Rate	2.55	8.08	41.56	18.37	34.70	33.62	16.20	7.01
- Total DB Rate	6.10	18.83	45.32	28.35	41.12	41.92	20.97	11.64
Investment Plan								
- Employer Rate	3.55%	12.33%	5.40%	10.96%	6.79%	8.75%	4.93%	n/a
- UAL Rate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	n/a
- Total IP Rate	3.55	12.33	5.40	10.96	6.79	8.75	4.93	n/a
Blended Uniform Contribution Rates								
- Normal Cost Rate	3.53%	11.00%	4.17%	10.05%	6.52%	8.44%	4.81%	4.63%
- UAL Rate	2.19	6.83	30.56	17.00	24.85	23.36	12.27	7.01
- Total Rate	5.72	17.83	34.73	27.05	31.37	31.80	17.08	11.64

The above rates exclude the 0.03% administrative charge for Investment Plan administration and education (except DROP), and the 1.11% for the financing of the health insurance subsidy described later in this part.

(Section 121.71)

COMPENSATION

"Compensation" means the monthly salary paid a member by his or her employer for work performed arising from that employment.

(a) Compensation shall include:

1. Overtime payments paid from a salary fund.

2. Accumulated annual leave payments.

3. Payments in addition to the employee's base rate of pay if all the following apply:

a.The payments are paid according to a formal written policy that applies to all eligible employees equally;

b. The policy provides that payments shall commence no later than the 11th year of employment;

c. The payments are paid for as long as the employee continues his or her employment; and

d. The payments are paid at least annually.

4. Amounts withheld for tax sheltered annuities or deferred compensation programs, or any other type of salary reduction plan authorized under the Internal Revenue Code.

5. Payments made in lieu of a permanent increase in the base rate of pay, whether made annually or in 12 or 26 equal payments within a 12-month period, when the member's base pay is at the maximum of his or her pay range. When a portion of a member's annual increase raises his or her pay range and the excess is paid as a lump sum payment, such lump sum payment shall be compensation for retirement purposes.

(b) Compensation for a member participating in the pension plan or the investment plan of the Florida Retirement System may not include:

1. Fees paid professional persons for special or particular services or salary payments made from a faculty practice plan authorized by the Board of Governors of the State University System for eligible clinical faculty at a college in a state university that has a faculty practice plan; or

2. Any bonuses or other payments prohibited from inclusion in the member's average final compensation.

(c) For all purposes under this chapter, the member's compensation or gross compensation contributed as employee-elective salary reductions or deferrals to any salary reduction, deferred compensation, or tax-sheltered annuity program authorized under the Internal Revenue Code shall be deemed to be the

compensation or gross compensation which the member would receive if he or she were not participating in such program and shall be treated as compensation for retirement purposes under this chapter. Any public funds otherwise paid by an employer into an employee's salary reduction, deferred compensation, or tax-sheltered annuity program on or after July 1, 1990 (the date as of which all employers were notified in writing by the division to cease making contributions to the System Trust Fund based on such amounts), shall be considered a fringe benefit and shall not be treated as compensation for retirement purposes under this chapter. However, if an employer was notified in writing by the division to cease making such contributions as of a different date, that employer shall be subject to the requirements of said written notice. (d) For any person who first becomes a member on or after July 1, 1996, compensation for any plan year shall not include any amounts in excess of the s. 401(a)(17), Internal Revenue Code limitation (as amended by the Omnibus Budget Reconciliation Act of 1993), which limitation of $150,000 effective July 1, 1996, shall be adjusted as required by federal law for qualified government plans and shall be further adjusted for changes in the cost of living in the manner provided by s. 401(a)(17)(B), Internal Revenue Code. For any person who first became a member prior to July 1, 1996, compensation for all plan years beginning on or after July 1, 1990, shall not include any amounts in excess of the compensation limitation (originally $200,000) established by s. 401(a)(17), Internal Revenue Code prior to the Omnibus Budget Reconciliation Act of 1993, which limitation shall be adjusted for changes in the cost of living since 1989, in the manner provided by s. 401(a)(17) of the Internal Revenue Code of 1991. This limitation, which has been part of the Florida Retirement System since plan years beginning on or after July 1, 1990, shall be adjusted as required by federal law for qualified government plans.

"Annual compensation" means the total compensation paid a member during a year. A "year" is 12 continuous months.

(Section 121.021(22) and (23))

FRS DEFINED BENEFIT PROGRAM

NORMAL RETIREMENT BENEFIT

Eligibility – Members initially enrolled before July 1, 2011 (Tier I)

- Regular Class

  1. 30 years of creditable service at any age.

  2. Age 62 and 6 or more years of creditable service.

  (Section 121.021(29)(a)(1))

- Special Risk Class

  1. 25 years of special risk service at any age; or

  2. Age 55 and 6 or more years of special risk service; or

  3. Age 52 and 25 years of creditable service, including special risk service and up to a maximum of four years of active duty wartime military service credit.

  4. 30 years of any creditable service, at any age, or age 62 and 6 or more years of creditable service (same requirement as the Regular Class).

  (Section 121.021(29)(b)(1))

- Special Risk Administrative Support Class
  (with six or more years of Special Risk Class service, the same requirements as apply to the Special Risk Class, otherwise same as apply to the Regular Class)

  (Section 121.021(29)(b)(1))

- Elected Officers' Class
  (same requirements as apply to Regular Class)

  (Section 121.021(29)(a)(1))

- Senior Management Service Class
  (same requirements as apply to Regular Class)

  (Section 121.021(29)(a)(1))

Eligibility – Members initially enrolled on and after July 1, 2011 (Tier II)

- Regular Class

  1. 33 years of creditable service at any age.

  2. Age 65 and 8 or more years of creditable service.

  (Section 121.021(29)(a)(2))

- Special Risk Class

  1. 30 years of special risk service at any age; or

  2. Age 60 and 8 or more years of special risk service; or

  3. 33 years of any creditable service, at any age, or age 65 and 8 or more years of creditable service (same requirement as the Regular Class).

  (Section 121.021(29)(b)(2))

- Special Risk Administrative Support Class
  (with eight or more years of Special Risk Class service, the same requirements as apply to the Special Risk Class, otherwise same as apply to the Regular Class)

  (Section 121.021(29)(b)(2))

- Elected Officers' Class
  (same requirements as apply to Regular Class)

  (Section 121.021(29)(a)(2))

- Senior Management Service Class
  (same requirements as apply to Regular Class)

  (Section 121.021(29)(a)(2))

Normal Form

Straight life benefit (Option 1), payable on the last state working day of each month, with a guarantee that benefits paid will at least equal member contributions.

(Section 121.091(1))

Optional Forms

10-year certain and life benefit (Option 2), 100% joint and survivor benefit (Option 3), or 66-2/3% joint and survivor benefit (Option 4). If the joint annuitant is the member's non-disabled child, payment ceases upon attainment of the joint annuitant's 25th birthday under the 100% and 66- 2/3% joint and survivor benefit.

(Section 121.091(6))

Dual Retirement

In the event a member accumulates retirement benefits to commence at different normal retirement ages by virtue of having performed duties for an employer which would entitle him or her to benefits as both a Special Risk Class member and a member of another class, the amount of the benefits payable shall be computed separately with respect to each such age, and the sum of such computed amounts shall be paid. Note that this does not apply to a Special Risk Administrative Support Class member with at least 6 years of Special Risk Class Membership (8 years for members enrolled on or after July 1, 2011) when the Special Risk and Special Risk Administrative Support Classes are the only memberships held because such a member is treated as a Special Risk Class member.

(Section 121.091(2))

Regular Benefit Amount

The monthly FRS allowance is the product of:

1. Average monthly compensation
    a. For members initially enrolled before July 1, 2011, is the average of the highest five plan years of creditable service;
    b. For members initially enrolled on or after July 1, 2011, is the average of the highest eight plan years of creditable service;

2. Creditable service during the applicable period; and

3. The appropriate benefit percentage for periods of service.

All benefits are limited to 100% of average monthly compensation.

(Sections 121.021(17), (24) and (25), 121.091(1))

The appropriate benefit percentages are as follows:

- For Members initially enrolled before July 1, 2011, for Creditable Service as a Regular Class member Subsequent to November 30, 1970:

Retirement at:	Percentage
Age 62 with 6 years of creditable service, or 30 years of creditable service	1.60%
Age 63 with 6 years of creditable service, or 31 years of creditable service	1.63
Age 64 with 6 years of creditable service, or 32 years of creditable service	1.65
Age 65 with 6 years of creditable service, or 33 years of creditable service	1.68

- For Members initially enrolled on or after July 1, 2011, for Creditable Service as a Regular Class member Subsequent to November 30, 1970:

Retirement at:	Percentage
Age 65 with 8 years of creditable service, or 33 years of creditable service	1.60%
Age 66 with 8 years of creditable service, or 34 years of creditable service	1.63
Age 67 with 8 years of creditable service, or 35 years of creditable service	1.65
Age 68 with 8 years of creditable service, or 36 years of creditable service	1.68

(Section 121.091(1))

Service as a Special Risk Class member:

Retirement on or After July 1, 2001 with Service Performed During:	Percentage
December 1, 1970 to September 30, 1974	2.00%
October 1, 1974 and thereafter	3.00

(Section 121.091(1))

- For Members initially enrolled before July 1, 2011, for Creditable Service as a Special Risk Administrative Support Class member Subsequent to November 30, 1970:

Retirement at:	Percentage
Age 55 with 6 years of creditable service, or age 52 with 25 years of creditable service, which may include up to four years of active duty wartime military service, or 25 years of creditable service	1.60%
Age 56 with 6 years of creditable service, or age 53 with 26 years of creditable service, which may include up to four years of active duty wartime military service, or 26 years of creditable service	1.63
Age 57 with 6 years of creditable service, or age 54 with 27 years of creditable service, which may include up to four years of active duty wartime military service, or 27 years of creditable service	1.65
Age 58 with 6 years of creditable service, or age 55 with 28 years of creditable service, which may include up to four years of active duty wartime military service, or 28 years of creditable service	1.68

- For Members initially enrolled on or after July 1, 2011, for Creditable Service as a Special Risk Administrative Support Class member Subsequent to November 30, 1970:

Retirement at:	Percentage
Age 60 with 8 years of creditable service, or age 57 with 30 years of creditable service, which may include up to four years of active duty wartime military service, or 30 years of creditable service	1.60%
Age 61 with 8 years of creditable service, or age 58 with 31 years of creditable service, which may include up to four years of active duty wartime military service, or 31 years of creditable service	1.63
Age 62 with 8 years of creditable service, or age 59 with 32 years of creditable service, which may include up to four years of active duty wartime military service, or 32 years of creditable service	1.65
Age 63 with 8 years of creditable service, or age 60 with 33 years of creditable service, which may include up to four years of active duty wartime military service, or 33 years of creditable service	1.68

(Section 121.091(1))

- For Service as an Elected Officers' Class member:
  3% for each year of creditable service in such class, except 3-1/3% for service in the judicial class. Military service credit is at the rate for Regular Class members.

  (Sections 121.052(5)(a) and (d), 121.091(1))

- For Service as a Senior Management Service Class member:
  2% for each year of creditable service in such class, after January 31, 1987.

  (Section 121.055(4)(d))

ADDITIONAL BENEFIT AMOUNT

In addition, members may receive an additional retirement allowance under the pre-1971 existing systems. The benefit is a percentage of average compensation times the creditable service in that system up to November 30, 1970. The system percentages are:

State and County Officers and Employees' Retirement System:

2.00% for creditable service rendered under Division A prior to Social Security coverage; and 1.50% for creditable service rendered under Division B subsequent to Social Security coverage.

Teachers Retirement System:

Plan E: 2.00%

(Sections 121.091(1)(c), 122.28, 238.07(7)(a))

MINIMUM BENEFIT

Eligibility

The month following attainment of age 65 by a pensioner, or, in the case of a beneficiary receiving the survivor's portion of a member's benefit, the 65th anniversary of the deceased member's birth. The member must have earned at least 10 years of creditable service and retired under normal retirement.

Benefit Amount

An eligible benefit recipient will receive a benefit adjustment to bring the benefit to the calculated minimum benefit. Effective July 1, 2013, the minimum monthly benefit is $27.84 multiplied by years of creditable service prior to application of the reduction factor for electing an optional form of payment. For retirements on or after July 1, 1987, creditable service for the minimum benefit calculation does not include any service earned on or after that date.

(Section 112.362)

HEALTH INSURANCE SUBSIDY

A subsidy of $5 per month per year of creditable service, with a minimum of $30, and a maximum of $150 per month, shall be paid to retirees and surviving beneficiaries to subsidize health insurance premiums. This benefit is not indexed with the cost of living.

Further, the benefit is funded separately, on a pay-as-you-go basis, and is not part of this actuarial valuation.

(Section 112.363)

EARLY RETIREMENT

Eligibility

For members initially enrolled before July 1, 2011, six years of creditable service for all classes of membership.

For members initially enrolled on or after July 1, 2011, eight years of creditable service for all classes of membership.

(Section 121.021(30))

Benefit Amount

The normal retirement benefit accrued to the date of early retirement, reduced by 5/12% for each month that the early retirement date precedes the normal retirement date based upon age. The normal retirement date is as follows:

1. Special Risk Class members:
    a. Initially enrolled before July 1, 2011: Age 55
    b. Initially enrolled on or after July 1, 2011: Age 60
2. Members in all other Classes
    a. Initially enrolled before July 1, 2011: Age 62
    b. Initially enrolled on or after July 1, 2011: Age 65

(Sections 121.021(30), 121.091(3))

NON-DUTY DISABILITY RETIREMENT

Eligibility

Members are eligible if totally and permanently disabled:

After completing at least 8 years of creditable service (or after 6 years if disability retirement is ordered for a judge by the Supreme Court).

Benefit Amount

Same as for normal retirement, but based on average monthly compensation and creditable service to the date of disability retirement.

Minimum Benefit Amount

25% of average monthly compensation.

If the Supreme Court orders disability retirement for a judge, the minimum is two-thirds of compensation at disability. This benefit for a defined benefit plan member is not paid from the FRS Trust Fund. This benefit for an Investment Plan member is paid from the FRS Trust Fund after the member's IP account balance is transferred to the FRS Trust Fund.

(Section 121.091(4))

LINE-OF-DUTY DISABILITY

Eligibility

Members are eligible if totally and permanently disabled during the actual performance of duty. There is no service credit requirement.

Benefit Amount

Same as for normal retirement, but based on average monthly compensation and creditable service to the date of disability retirement.

Minimum Benefit Amount

42% of average monthly compensation, except for the Special Risk and the Special Risk Administrative Support classes whose members are entitled to 65% of average monthly compensation.

If the Supreme Court orders disability retirement for a judge, the minimum is two-thirds of compensation at disability. This benefit for a defined benefit plan member is not paid from the FRS Trust Fund.

(Section 121.091(4))

POST-RETIREMENT DEATH BENEFITS

Based on the optional form elected.

NON-DUTY PRE-RETIREMENT DEATH BENEFITS

Eligibility

Employment is terminated by death after vested for all classes of membership.

Benefit Amount

The normal or early retirement benefit amount for which the member would have been eligible had the member retired on his or her date of death and elected the 100% joint and survivor form of payment in favor of his or her beneficiary who is the surviving spouse or other eligible dependent. The monthly benefit is normally payable to the member's beneficiary for the beneficiary's lifetime. If the beneficiary is the member's non-disabled child, payment ceases upon attainment of the beneficiary's 25th birthday.

If the member is more than 10 years away from normal retirement age, the reduction is 5% for each year the member would be younger than the normal retirement age at retirement. There are exceptions if within 10 years of normal retirement:

1. For members initially enrolled before July 1, 2011 who were within 10 years of normal retirement eligibility, the reduction for early retirement is applied from the earlier of age 62 (age 55 for Special Risk Class and Special Risk Administrative Support Class members) or the date on which the member

would have completed 30 years of creditable service, had he or she continued employment.

2. For members initially enrolled on or after July 1, 2011 who were within 10 years of normal retirement eligibility, the reduction for early retirement is applied from the earlier of age 65 (age 60 for Special Risk Class and Special Risk Administrative Support Class members) or the date on which the member would have completed 33 years of creditable service, had he or she continued employment. The value of this benefit may not be less than the member's accumulated contributions, if any.

(Sections 121.091(3) and (7))

LINE-OF-DUTY PRE-RETIREMENT DEATH BENEFITS

Eligibility

Member died during the actual performance of duty. There is no service credit requirement.

Benefit Amount

The surviving spouse will receive one-half of the member's monthly compensation at death. If the spouse dies, or if there is no surviving spouse, the monthly benefits continue until the youngest child is 18.

A surviving spouse may elect to receive a non-duty death benefit in lieu of the duty death benefit.

(Section 121.091(7))

VESTING

Eligibility

For members initially enrolled before July 1, 2011, six years of creditable service for all classes of membership. For members initially enrolled on or after July 1, 2011, eight years of creditable service for all membership classes.

Benefit Amount

The normal or early retirement benefit amount based on average monthly compensation and creditable service to the date of termination.

(Sections 121.021(45), 121.091(5))

DROP – DEFERRED RETIREMENT OPTION PROGRAM

Eligibility

Vested FRS members are eligible for DROP participation upon attaining eligibility for normal retirement. Deferral of DROP participation for all but K-12 Instructional Personnel is allowed if the eligible participant is enrolled before July 1, 2011 and has completed 30 years of service (or 25 years for Special Risk Class members) and has not reached age 57 (or age 52 for Special Risk Class members). In this case the participant can defer participation in DROP until he reaches age 57 (or age 52 for Special Risk Class members). Deferral of DROP participation for all but K-12 Instructional Personnel is allowed if the eligible participant enrolled on or after July 1, 2011, has completed 33 years of service (or 30 years for Special Risk Class members) and has not reached age 60 (or age 55 for Special Risk Class members). In this case the participant can defer participation in DROP until he reaches age 60 (or age 55 for Special Risk Class members). Instructional Personnel in grades K-12 may defer DROP participation to any age. Participants who reached normal retirement before July 1, 1998 were eligible to participate in DROP for up to 60 months (36 months for Special Risk Class members) beginning July 1, 1998.

Effective July 1, 1998, eligible members can retire without terminating their employment during DROP participation. Monthly retirement benefits will be invested in the FRS Trust Fund, earning tax-deferred interest while the member continues to work for a maximum of 60 months. The interest credit for those entering the DROP prior to July 1, 2011 is 6.5% annually. For those entering the DROP after that date, it is 1.3% annually. Upon completion of the maximum five-year period, DROP participation ends and participants must terminate employment with all FRS employers. At that time, the participant will receive payment of the accumulated DROP benefits, and begin receiving his FRS monthly retirement benefit (in the same amount as determined at retirement, plus annual cost-of-living increases).

Effective July 1, 2003, participants employed in eligible instructional positions with a district school board, the Florida School for the Deaf and Blind, or a developmental research school can extend their participation beyond their initial 60-month period, for up to an additional 36 months. The employer must approve the request for DROP extension as well as the period of extension granted to an eligible DROP participant, if any, within the 36-month limit.

Disabled While in DROP

Participants that became disabled while participating in DROP will continue to accumulate the same monthly benefit in the FRS Trust Fund until termination.

Since the normal retirement benefit commenced upon DROP participation, a disability benefit will not be issued.

Death While in DROP

The designated beneficiary of a participant who dies while participating in DROP will receive all accumulated DROP benefits, and a continuing monthly benefit, if the participant had elected Option 2, 3, or 4. Survivors of DROP participants are not eligible for FRS line-of-duty death benefits.

(Section 121.091 (13))

RETURN OF EMPLOYEE CONTRIBUTIONS

A member who terminates employment but is not eligible to retire, to receive a vested retirement allowance, or to receive a disability pension, or the beneficiary of a member who passed away before satisfying the requirement for a pre-retirement death benefit, will be entitled to a refund of any employee contributions made by the member. No interest is credited on employee contribution accounts.

A vested terminated participant may elect to receive a return of employee contributions in lieu of a retirement benefit.

(Sections 121.071(2)(b), 121.091(7)(a), Sections 121.091(5)(a) and (c))

COST-OF-LIVING ADJUSTMENT

Senate Bill 2100 (2011) eliminated post-retirement benefit increases on benefits earned on and after July 1, 2011. Benefits earned before July 1, 2011 (except for the health insurance subsidy) will receive post-retirement benefit increases of 3% per year. Tier II members (those initially enrolled on and after July 1, 2011) will receive no post-retirement benefit increases. Tier I members (those initially enrolled before July 1, 2011) will receive post-retirement benefit increases equal to 3% per year multiplied by a fraction, the numerator of which is service through June 30, 2011 and the denominator of which is total service at retirement. Cost-of-Living Adjustments take effect annually on July 1. A pro-rated rate may apply in the initial year of applicability.

(Section 121.101)

INVESTMENT PLAN

The Investment Plan (IP) is a defined contribution plan offered to eligible members as an alternative to the FRS Defined Benefit Program. The plan is authorized under sec. 401(a) of the Internal Revenue Code.

BENEFITS

Under the IP, benefits accrue in individual member accounts funded by employer and, employee contributions made on or after July 1, 2011, and earnings thereon. Benefits are provided through employee-directed investments offered by approved investment providers. Vested benefits are payable upon termination or death as a lump-sum distribution, direct rollover distribution, or periodic distribution. In addition to normal benefits and death benefits, the plan also provides disability coverage as described below.

(Sections 121.4501, 121.591)

CONTRIBUTIONS

The employer contributions deposited in each participant's IP account are based upon allocation rates established by law for each membership class. This statutorily prescribed percentage of the participant's gross compensation for the reporting month is deducted from the total amount paid by the employer on behalf of all members in the same class of membership based on the uniform contribution rate established by law. Current IP allocation rates are set forth in the following charts. The allocation rates shown in the first chart below do not include the 0.03% charge for IP administration and education, the separate employer contribution assessed to fund the IP disability program, or the contribution of 1.11% for the financing of the health insurance subsidy described later in this part.

(Sections 121.71, 121.72)

Effective July 1, 2012, the employer allocations to the IP accounts are based on contribution rates as follows:

Classification	2013-2014 Plan Year Rates
Regular	3.30%
Special Risk	11.00
Special Risk Administrative Support	4.95
Elected Officers	
- Judicial	10.23
- State	6.38
- County	8.34
Senior Management Service	4.67

The employer contribution rates to fund the disability benefit under the IP are as follows:

Classification	2013-2014 Plan Year Rates
Regular	0.25%
Special Risk	1.33
Special Risk Administrative Support	0.45
Elected Officers	
- Judicial	0.73
- State	0.41
- County	0.41
Senior Management Service	0.26

(Section 121.73)

HEALTH INSURANCE SUBSIDY

In addition to retirement or death benefits, eligible IP retirees or surviving spouses may receive a subsidy of $5 per month per year of creditable service, with a minimum of $30, and a maximum of $150 per month, to subsidize the cost of health insurance premiums. This benefit is established by law and is not indexed (adjusted

for changes in the cost of living). To qualify for this benefit, IP members must terminate employment, retire (take a distribution as a direct payment or rollover) and meet the normal retirement requirements applicable to Defined Benefit Program members as defined under s. 121.021(29).

This benefit is separately funded, on a pay-as-you-go basis, and is not part of this actuarial valuation.

(Section 112.363)

NON-DUTY DISABILITY RETIREMENT

Eligibility

Investment Plan participants who have completed at least eight years of creditable service (or six years of creditable service if disability retirement is ordered for a judge by the Supreme Court) are eligible for regular disability benefits if they become totally and permanently disabled due to injury or illness suffered while actively employed in an FRS-covered position. Upon approval for disability retirement, the IP participant may choose either to retain his/her IP account balance or to surrender his/her account balance to the Defined Benefit Program and receive guaranteed lifetime monthly disability benefits, assuming the member remains disabled.

Benefit Amount

If the disabled IP participant chooses to retain his/her account balance, he/she may elect to receive the normal benefit payable under the IP. If he/she elects to surrender the account balance and receive lifetime monthly disability benefits, the amount of each monthly payment is calculated in the same manner as provided for regular disability retirement under the Defined Benefit Program and is subject to the same threshold benefit amounts.

(Sections 121.091(4), 121.591(1) and (2))

LINE-OF-DUTY-DISABILITY

Eligibility

IP participants are eligible for in-line-of-duty disability benefits if they become totally and permanently disabled due to injury or illness suffered during the actual performance of duty while actively employed in an FRS-covered position. There

is no service credit requirement for in-line-of-duty disability benefits. Upon approval for disability retirement, the IP member may choose either to retain his/her IP account balance or to surrender his/her account balance to the Defined Benefit Program and receive guaranteed lifetime monthly disability benefits, assuming the member remains disabled.

Benefit Amount

If the disabled IP participant elects to retain his/her account balance, he/she may elect to receive the normal benefit payable under the IP. If he/she elects to surrender the account balance and receive lifetime monthly disability benefits, the amount of each monthly payment is calculated in the same manner as provided for line-of-duty disability retirement under the Defined Benefit Program, and is subject to the same threshold benefit amounts.

(Sections 121.091(4), 121.591(1) and (2))

PART II: TEACHERS' RETIREMENT SYSTEM (TRS)

The benefit and contribution provisions of the Statutes for this closed system are set forth in Chapter 238 of the Florida Statutes. Certain provisions are from other sections of the Florida Statutes.

EFFECTIVE DATE

The effective date of the Retirement System was July 1, 1939.

(Section 238.02)

MEMBERSHIP

All employees who were teachers in public schools, employees of professional non-profit teachers associations, county superintendents, Department of Education employees and the staff of the Teachers' Retirement System, and who were employed prior to December 1, 1970, are members of the Teachers' Retirement System.

Any member who was hired prior to July 1, 1955, and who did not later elect to join Plan E, retains membership in one of Plans A through D.

Any member who was hired on or after July 1, 1955 and prior to December 1, 1970, or who was hired prior to July 1, 1955 and so elected, is a member of Plan E.

(Sections 238.01(4), 238.05, 238.07(3))

MEMBER CONTRIBUTIONS

All members of Plan E make contributions of 6% of earnable compensation. All members of Plans A through D will make contributions, to be determined by the actuary, to provide the annuities called for by the Statutes. All members contribute 0.25% of earnable compensation for survivor benefits.

(Section 238.09)

EMPLOYER CONTRIBUTIONS

The employer will contribute the amount that, when combined with member contributions, will pay the total cost of the benefits payable. This amount, for Plan E, 11.35%; an additional 1.11% is contributed for the financing of the health insurance subsidy described later in this part.

(Section 238.09)

NORMAL RETIREMENT BENEFIT

Eligibility

Plan A: Age 60 and 10 years of creditable service, or 30 years of creditable service at any age.
Plan B: Age 55 and 10 years of creditable service, or 30 years of creditable service at any age.
Plan C: Age 55 and 10 years of creditable service, or 30 years of creditable service at any age.
Plan D: Age 50 and 25 years of creditable service, or 30 years of creditable service at any age.

Plan E:

Members prior to July 1, 1963: Age 60 and 10 years of creditable service, or 30 years of creditable service at any age.

Members on or after July 1, 1963: Age 62 and 10 years of creditable service, or 30 years of creditable service at any age.

(Sections 238.07(2) and (9))

Normal Form

Straight life benefit (Option 1), which will be the total of the pension paid by employer contributions plus an annuity based on the member's accumulated contributions.

(Sections 238.07(4), (5), (6) and (7))

Optional Forms

Modified cash refund annuity (Option 2).
100% joint & survivor (Option 3).
50% joint and survivor (Option 4).

(Section 238.08)

Regular Benefit Amount

The monthly allowance is:

Plans A & B:

The product of 1/140 of the member's average final compensation and years of membership service; plus

1/70 of average final compensation multiplied by the years of certified prior service; plus

an annuity based on the actuarial equivalent of the member's accumulated contributions.

(Section 238.07(4))

Plan C:

The product of 1/120 of the member's average final compensation and years of membership service; plus

1/60 of average final compensation multiplied by the years of certified prior service; plus

an annuity based on the actuarial equivalent of the member's accumulated contributions.

(Section 238.07(5))

Plan D:

The product of 1/100 of the member's average final compensation and years of membership service; plus

1/50 of average final compensation multiplied by the years of certified prior service; plus

an annuity based on the actuarial equivalent of the member's accumulated contributions.

(Section 238.07(6))

Plan E:

2% of the member's average final compensation multiplied by years of creditable service.

(Section 238.07(7)(a))

Average Final Compensation

The larger of the highest ten-year average compensation in the 15 years preceding retirement, or the career average salary.

(Section 238.01(14))

MINIMUM BENEFIT

If a member retires after 30 years of creditable service, he or she shall receive at least $100 per month. If a member retires under Plans A, B, or C with 10 or more years of service, but less than 30, he or she shall receive an annual retirement allowance equal to 1/60 of $2,400 multiplied by years of creditable service (but not more than $100 per month).

(Section 238.07(8))

ADDITIONAL MINIMUM BENEFIT

Eligibility

Attainment of age 65 by a pensioner, or, in the case of a beneficiary receiving the pension, the 65th anniversary of the deceased member's birth. The member must have earned at least 10 years of creditable service.

Benefit Amount

Effective July 1, 2013, the minimum monthly benefit is $27.84 times years of creditable service prior to application of the reduction factor for electing an optional form of payment. For retirements on or after July 1, 1987, creditable service for the minimum benefit calculation does not include any service earned on or after that date.

(Section 112.362)

EARLY RETIREMENT BENEFIT

Eligibility

Only members of Plan E are eligible for early retirement. The requirement is age 55 and 10 years of creditable service.

(Section 238.07(2)(e)2)

Benefit Amount

The actuarial equivalent of the retirement benefit accrued at the early retirement date.

(Section 238.07(7)(b))

DISABILITY RETIREMENT

If a member has 10 or more years of creditable service and is certified mentally or physically incapacitated for the performance of duty, and that the disability is permanent, he or she may retire on a disability retirement.

The member shall receive an allowance, as follows:

Plans A, B, C and D: A total retirement allowance equal to the larger of:

1. A factor times average final compensation times years of creditable service;
2. 25% times average final compensation;
3. $75 per month; and
4. $40 per year times years of creditable service.

However, the disability benefit shall not exceed a factor times average compensation times the possible years of creditable service to the normal retirement date.

The factor is 1/70 for Plans A and B, 1/60 for Plan C, and 1/50 for Plan D.

(Section 238.07(11))

Plan E: The larger of:

1. The accrued benefit based on average final compensation and creditable service at disability; and

2. 25% times average final compensation.

The disability benefit shall not exceed the retirement allowance payable if service had continued to the first date the member would have been eligible for service retirement at the same rate of compensation.

(Section 238.07(11))

HEALTH INSURANCE SUBSIDY

A monthly subsidy of $5 per month per year of creditable service, with a minimum of $30, and a maximum of $150 per month, shall be paid to retirees and surviving beneficiaries to subsidize health insurance premiums. This benefit is not indexed with the cost of living.

Further, this benefit is funded separately, on a pay-as-you-go basis, and is not part of this actuarial valuation.

(Section 112.363)

POST-RETIREMENT DEATH BENEFITS

Based on the optional form elected, plus a $500 lump sum.

(Sections 238.07(16)(b)(7), 238.08(8))

PRE-RETIREMENT DEATH BENEFITS

Payable to Beneficiaries

Minimum Period of Paid Service of Member in Florida as Regular Full-Time Teacher	Beneficiaries of Deceased Member	Benefits
1. One calendar day	Widow or widower who has care of dependent child or children of the deceased member.	$190 per month for one child; $250 per month if more than one child; maximum benefit $250 per month.
2. One calendar day	One or more dependent children if there is no surviving widow or widower.	$190 per month per child; maximum benefit $250 per month if more than one child.
3. One calendar day	Dependent parents 65 years of age or older.	For each parent, $100 per month for life.
4. One calendar day	Designated beneficiary and, if no designated beneficiary, then the executor or administrator of deceased member.	$500 lump-sum death benefit payable only once.
5. One calendar day	Dependent widow or widower 50 years of age and less than 65 years of age.	$150 per month for life.
6. Ten Years	Widow or widower 65 years of age or older.	$175 per month for life.

If the member dies before completing three years of service, the above benefits are reduced for any Social Security benefits payable

The benefits above are payable only if death occurs while in service, or during the following periods after service is terminated:

Years of Service	Period After Florida Service in Which Death Occurs
3 – 5	2 years
6 – 9	5 years
10 or more	10 years

The above restrictions do not apply if the member is receiving disability payments at time of death.

(Section 238.07(16))

Payable to the Surviving Spouse

Before 10 years of service: Return of member contributions with interest.

After 10 years of service: Instead of the death benefit described above, the surviving spouse may elect to receive the return of member contributions with interest or a 100% joint & survivor annuity, calculated assuming the member retired on the date of death.

(Section 238.08(5)(a))

VESTING

Eligibility

After 10 years of creditable service if the member leaves employee contributions in the System.

Benefit Amount

The normal retirement benefit based on average final compensation and creditable service to the retirement date.

(Sections 238.07(9), 238.07(14))

DROP – DEFERRED RETIREMENT OPTION PROGRAM

Eligibility

Vested TRS members are eligible for DROP participation upon attaining eligibility for normal retirement. Deferral of DROP participation for all but K-12 Instructional Personnel is allowed if the eligible participant has completed 30 years of service and has not reached age 57. In this case the participant can defer participation in DROP until he reaches age 57. Instructional Personnel in grades K-12 may defer DROP participation to any age. Participants who reached normal retirement before July 1, 1998, were eligible to participate in DROP for up to 60 months beginning July 1, 1998.

Effective July 1, 1998, eligible members can retire without terminating their employment during DROP participation. Monthly retirement benefits will be invested in the FRS Trust Fund, earning tax-deferred interest while the member continues to work for a maximum of 60 months. Upon completion of the maximum five-year period, DROP participation ends and participants must terminate employment with all FRS employers. At that time, the participant will receive payment of the accumulated DROP benefits, and begin receiving his TRS monthly retirement benefit (in the same amount as determined at retirement, plus annual cost-of-living increases).

Effective July 1, 2003, participants employed in eligible instructional positions with a district school board, the Florida School for the Deaf and Blind, or a developmental research school can extend their participation beyond their initial 60-month period, for up to an additional 36 months. The employer must approve the request for DROP extension as well as the period of extension granted to an eligible DROP participant, if any, within the 36-month limit.

Disabled While in DROP

Participants that became disabled while participating in DROP will continue to accumulate the same monthly benefit in the FRS Trust Fund until termination. Since the normal retirement benefit commenced upon DROP participation, a disability benefit will not be issued.

Death While in DROP

The designated beneficiary of a participant who dies while participating in DROP will receive all accumulated DROP benefits, and a continuing monthly benefit, if the participant had elected Option 2, 3, or 4. Survivors of DROP participants are not eligible for TRS line-of-duty death benefits.

(Section 121.091 (13))

RETURN OF EMPLOYEE CONTRIBUTIONS

A member who terminates employment but is not eligible to retire will be entitled to a refund of any employee contributions made, with interest.

(Sections 238.07(13), 238.10)

COST-OF-LIVING ADJUSTMENTS

Retirees and beneficiaries of deceased retirees are eligible to receive cost-of-living adjustments identical to those for FRS members.

(Section 121.101)

PART III: STATE AND COUNTY OFFICERS AND EMPLOYEES' RETIREMENT SYSTEM (SCOERS)

The benefit and contribution provisions of the Statutes are set forth in Chapter 122 of the Florida Statutes. Certain provisions are drawn from other sections of the Florida Statutes. This is a closed system that no longer includes any members in the high hazard or legislative categories. Effective with the July 1, 2013 valuation, there are no longer any actively employed members of this system. SCOERS retirees are included with the Regular Class in the valuation.

EFFECTIVE DATE

The effective date of the Retirement System was July 1, 1955.
(Section 122.01(2))

MEMBERSHIP

All full-time employees of the state and its counties not covered by another system who were employed prior to December 1, 1970.

Those members who were hired prior to January 1, 1958 and did not elect to join Division B are in Division A. These members do not contribute to the Social Security system.

Those members who elected to join Division B and those members hired after December 31, 1957 and prior to December 1, 1970 are in Division B. These members contribute to the Social Security system.

(Sections 122.01, 122.24)

MEMBER CONTRIBUTIONS

All members of Division A contribute 6% of salary.
All members of Division B contribute 4% of salary.

(Sections 122.03, 122.27)

EMPLOYER CONTRIBUTIONS

Employer contributions are:

Division A	11.10%
Division B	9.10

To these rates 1.11% is added for the financing of the health insurance subsidy described later in this part.

(Section 122.35)

NORMAL RETIREMENT BENEFIT

Eligibility

Members prior to July 1, 1963:	Age 60 and 10 years of service, or 30 years of creditable service.
Members after July 1, 1963:	Age 62 and 10 years of service, or 30 years of creditable service.
Members under former Chapters 121 and 134:	30 years of service.

(Sections 122.08(1), 122.08(8), 122.28)

Normal Form

Straight life benefit (Option 1).

(Section 122.08)

Optional Forms

Modified cash refund annuity (Option 2).
50% joint & survivor (Option 3).
100% joint & survivor (Option 4).

(Section 122.08)

Regular Benefit Amount

Division A: The monthly allowance is 2% of average final compensation for each year of service rendered.

Division B: 2% of average final compensation for each year of service rendered prior to the effective date of Social Security coverage, plus 1.5% of average final compensation for each year of service rendered after the effective date of Social Security coverage.

(Sections 122.08(1), 122.28(1))

Average Final Compensation

The larger of the highest ten-year average compensation in the fifteen years preceding retirement, or the career average salary.

(Section 122.02(2))

MAXIMUM BENEFIT

Division A: No maximum.

Division B: For those who became members after June 30, 1963, monthly allowance plus Social Security primary insurance amount cannot be greater than 80% of average final compensation. For those who became members before July 1, 1963, there is no maximum.

(Sections 122.28(3), 122.08)

MINIMUM BENEFIT

Eligibility

Attainment of age 65 by a pensioner, or, in the case of a beneficiary receiving the pension, the 65th anniversary of the deceased member's birth. The member must have earned at least ten years of creditable service and retired under normal retirement.

Benefit Amount

Effective July 1, 2013, the minimum monthly benefit is $27.84 times years of creditable service prior to application of the reduction factor for electing an optional form of payment. For retirements on or after July 1, 1987, creditable service for the minimum benefit calculation does not include any service earned on or after that date.

(Section 112.362)

EARLY RETIREMENT BENEFIT

Eligibility

Age 55 and 10 years of service.

(Section 122.08(2)(a))

Benefit Amount

The actuarial equivalent of the retirement benefit accrued at the early retirement date.

(Section 122.08(2)(a))

DISABILITY RETIREMENT

Eligibility

A member who has 10 or more years of service and becomes permanently and totally disabled may retire with a disability pension.

Benefit Amount

The benefit will be the same as the regular benefit amount, except that the benefit will not be less than the lesser of 50% of average final compensation or $75. This minimum benefit does not apply to an officer or employee who has attained age 60 or is receiving Social Security disability.

(Section 122.09)

Minimum Benefit

A member of Division B shall receive his or her regular benefit amount, but no less than 20% of his or her average final compensation.

(Section 122.28(2))

Form of Benefit

Straight life annuity. No optional form may be elected.

(Section 122.08(6))

HEALTH INSURANCE SUBSIDY

A monthly subsidy of $5 per month per year of creditable service, with a minimum of $30, and a maximum of $150 per month, shall be paid to retirees and surviving beneficiaries to subsidize health insurance premiums. This benefit is not indexed with the cost of living.

Further, the benefit is funded separately, on a pay-as-you-go basis, and is not part of this actuarial valuation.

(Section 112.363)

POST-RETIREMENT DEATH BENEFITS

Based on the optional form elected.

(Section 122.08(3))

PRE-RETIREMENT DEATH BENEFITS

Eligibility

When employment is terminated by death after 10 years of service if member was eligible for normal or early retirement.

Benefit Amount

1. If surviving spouse has received a refund of the member's contributions, no benefit is payable.

2. If surviving spouse has not received a refund of the member's contributions, or has repaid the member's contributions, with interest, the spouse is entitled to receive a benefit, calculated assuming the member had retired on his or her date of death and had chosen a 100% joint & survivor option.

(Section 122.08(9))

VESTING

Eligibility

After 10 years of service if member leaves employee contributions in the System.

Benefit Amount

The normal or early retirement benefit based on average final compensation and years of service to the date of retirement.

(Section 122.10(1))

DROP – DEFERRED RETIREMENT OPTION PROGRAM

Eligibility

Vested SCOERS members are eligible for DROP participation upon attaining eligibility for normal retirement. Deferral of DROP participation for all but K-12 Instructional Personnel is allowed if the eligible participant has completed 30 years of service, and has not reached age 57. In this case the participant can defer participation in DROP until he reaches age 57. Instructional Personnel in grades K-12 may defer DROP participation to any age. Members who reached normal retirement before July 1, 1998 were eligible to participate in DROP for up to 60 months beginning July 1, 1998.

Effective July 1, 1998, eligible members can retire without terminating their employment during DROP participation. Monthly retirement benefits will be invested in the FRS Trust Fund, earning tax-deferred interest while the member continues to work for a maximum of 60 months. Upon completion of the maximum five-year period, DROP participation ends and participants must terminate employment with all FRS employers. At that time, the participant will receive payment of the accumulated DROP benefits, and begin receiving his SCOERS monthly retirement benefit (in the same amount as determined at retirement, plus annual cost-of-living increases).

Effective either July 1, 2003 or July 1, 2004, participants employed in eligible instructional positions with a district school board (2003), the Florida School for the Deaf and Blind (2004), or a developmental research school (2004) can extend their participation beyond their initial 60-month period, for up to an additional 36 months. The employer must approve the request for DROP extension as well as the period of extension granted to an eligible DROP participant, if any, within the 36-month limit.

Disabled While in DROP

Participants that became disabled while participating in DROP will continue to accumulate the same monthly benefit in the FRS Trust Fund until termination. Since the normal retirement benefit commenced upon DROP participation, a disability benefit will not be issued.

Death While in DROP

The designated beneficiary of a participant who dies while participating in DROP will receive all accumulated DROP benefits, and a continuing monthly benefit, if the participant had elected Option 2, 3, or 4. Survivors of DROP participants are not eligible for SCOERS line-of-duty death benefits.

(Section 121.091 (13))

RETURN OF EMPLOYEE CONTRIBUTIONS

A member who terminates employment but is not eligible to retire, to receive a vested retirement allowance, or to receive a disability pension, or the beneficiary of a member who passed away before satisfying the requirements for a pre-retirement death benefit, will be entitled to a refund of any employee contributions made.

No interest is credited on employee contribution accounts.

(Section 122.10(1))

COST-OF-LIVING BENEFITS

Retirees and beneficiaries of deceased retirees are eligible each July 1 to receive cost-of-living adjustments to their benefits. The adjustments are identical to those for FRS members.

(Section 121.101)

PART IV: INSTITUTE OF FOOD AND AGRICULTURAL SCIENCES SUPPLEMENTAL RETIREMENT PROGRAM (IFAS)

The benefit and contribution provisions of the Statutes are set forth in Chapter 121 of the Florida Statutes. Certain provisions are drawn from other sections of the Florida Statutes. This is a closed system.

EFFECTIVE DATE

The effective date of the Supplemental Retirement Program was July 1, 1985.

(Section 121.40)

MEMBERSHIP

Employees hired on or before July 1, 1983 who:

a. hold both state and federal appointments while employed at the Institute,

b. are not entitled to any benefit from a state-supported retirement system or Social Security based on service as an employee of the Institute, and

c. are participants in the Federal Civil Service Retirement System.

(Section 121.40)

MEMBER CONTRIBUTIONS

The total cost of the Program is paid by the participating employers.

EMPLOYER CONTRIBUTIONS

Effective July 1, 2008, employer contributions are fixed at 18.75%.

(Section 121.40)

NORMAL RETIREMENT BENEFIT

Eligibility

Age 62 and 10 or more years of creditable service, plus immediate eligibility for retirement benefits under the Federal Civil Service Retirement System (i.e., attainment of age 55 and completion of at least 30 years of service or attainment of age 60 and completion of at least 20 years of service or attainment of age 62 and completion of at least 5 years of service).

(Section 121.40)

Normal Form

Straight life benefit (Option 1).

(Section 121.40)

Optional Forms

Modified cash refund annuity (Option 2).
50% joint & survivor (Option 3).
100% joint & survivor (Option 4).

(Section 121.40)

Regular Benefit Amount

The sum of (a) and (b) less (c) where:

a. The amount of a monthly retirement benefit that a participant would be entitled to receive under the FRS calculated as follows:

   The appropriate benefit percentage multiplied by average monthly compensation in the highest five years of credited service, the product then multiplied by the credited years of service, where the appropriate benefit percentage is as follows;

Retirement at:	Percentage
Age 62 with 10 years creditable service, or 30 years creditable service	1.60%
Age 63 with 10 years creditable service, or 31 years creditable service	1.63
Age 64 with 10 years creditable service, or 32 years creditable service	1.65
Age 65 with 10 years creditable service, or 33 years creditable service	1.68

b. An amount equal to the monthly primary insurance amount that a participant would be entitled to receive under Social Security had he been covered for Social Security based only on service after December 1, 1970.

c. The amount of a monthly retirement benefit that a participant would be entitled to receive under the Federal Civil Service Retirement System calculated as follows:

   The sum of (i) and (ii) and (iii) below multiplied by average monthly compensation in the highest three years of credited service:

   i.) 1.50% multiplied by the credited years of service, up to 5, earned after December 1, 1970.

   ii.) 1.75% multiplied by the credited years of service earned after December 1, 1970 in excess of 5 years but not more than 5.

   iii.) 2.00% multiplied by the credited years of service earned after December 1, 1970 in excess of 10 years.

Credited Service

Credited service is earned only for employment subsequent to December 1, 1970. It is awarded as follows:

a. For service from December 1, 1970 through June 30, 1974 one month of credited service will be earned for each calendar month during which the employee is paid a salary payment.

b. For service from July 1, 1974 through June 30, 1979 one month of credited service will be earned for each calendar month during which the employee is paid at least $100 in salary payments. In any month that the employee is paid less than $100 in salary payments, credited service shall be determined by dividing the actual salary payment by $100.

a. For service from July 1, 1979 through June 30, 1985 one month of credited service will be earned for each calendar month during which the employee is paid at least $250 in salary payments. In any month that the employee is paid less than $250 in salary payments, credited service shall be determined by dividing the actual salary payment by $250.

b. For service on or after July 1, 1985 one month of credited service will be earned for each calendar month during which the employee is paid a salary payment.

(Section 121.40))

MAXIMUM BENEFIT

No maximum.

MINIMUM BENEFIT

No minimum.

EARLY RETIREMENT BENEFIT

None.

DISABILITY RETIREMENT

None.

HEALTH INSURANCE SUBSIDY

IFAS members are not eligible for the Health Insurance Subsidy.

POST-RETIREMENT DEATH BENEFITS

Based on the optional form elected.

(Section 122.40)

PRE-RETIREMENT DEATH BENEFITS

Eligibility

When employment is terminated by death after 10 years of creditable service, or death occurs after termination of employment but while eligible for a terminated vested benefit.

Benefit Amount

The regular benefit amount for which the member would have been eligible had the member retired on his or her date of death and elected the 100% joint and survivor form of payment in favor of his or her surviving spouse or other dependent. The monthly benefit commences upon the beneficiary attaining age 62 and is payable to the member's beneficiary for the beneficiary's lifetime.

(Section 121.40)

VESTING

Eligibility

Attainment of age 60 and 20 or more years of service or attainment of age 55 and 30 or more years of service.

Benefit Amount

The normal retirement benefit accrued to the date of termination. Benefits may not commence prior to age 62.

(Section 121.40)

DROP – DEFERRED RETIREMENT OPTION PROGRAM

Eligibility

IFAS members are not eligible for DROP.

COST-OF-LIVING BENEFITS

Retirees and beneficiaries of deceased retirees are eligible each July 1 to receive cost-of-living adjustments to their benefits. The adjustments are identical to those for FRS members.

(Section 121.40)

APPENDIX C

MEMBERSHIP DATA

This valuation is based upon the membership of the System as of July 1, 2013.

The membership of the System includes employees of the State of Florida and participating political subdivisions. The membership is divided into several categories by System.

Tables C-1 through C-5 present distributions of annuitants (including beneficiaries of deceased members), and potential annuitants (terminated vested members). Shown in the tables are the numbers of persons receiving benefits and the total annual benefits received.

Table C-6 summarizes the DROP membership and provides total annual benefits received.

Tables C-7 through C-25 contain summaries of the active members in each category of membership. Values shown in the tables are the numbers of members and their total annual salaries. Table C-25 is the grand total of Tables C-7 through C-24.

Table C-26 presents a summary by System of active membership, payroll, and accumulated employee contributions.

Table C-1
Florida Retirement System
Annuitants at July 1, 2013
Regular and Early Retirement by Age

Age	Men	Women	Total
	Number of Persons		
Under 50	1,623	1,847	3,470
50 to 54	2,666	2,997	5,663
55 to 59	8,285	11,949	20,234
60 to 64	19,754	33,557	53,311
65 to 69	30,842	50,813	81,655
70 to 74	23,864	40,426	64,290
75 to 79	16,166	27,771	43,937
80 & Up	18,927	39,928	58,855
Total	122,127	209,288	331,415
	Annual Benefits (in Thousands)		
Under 50	$20,191	$19,145	$39,336
50 to 54	73,214	40,524	113,738
55 to 59	233,183	183,247	416,430
60 to 64	522,323	624,829	1,147,152
65 to 69	750,712	914,026	1,664,738
70 to 74	538,485	667,829	1,206,314
75 to 79	354,470	455,045	809,515
80 & Up	415,390	639,182	1,054,572
Total	$2,907,968	$3,543,827	$6,451,795

Table C-2
Florida Retirement System
Annuitants at July 1, 2013
Disability Retirement by Age

Age	Men	Women	Total
	Number of Persons		
Under 50	346	483	829
50 to 54	588	915	1,503
55 to 59	945	1,605	2,550
60 to 64	1,098	2,078	3,176
65 to 69	988	1,647	2,635
70 to 74	575	1,063	1,638
75 to 79	279	478	757
80 & Up	222	464	686
Total	5,041	8,733	13,774
	Annual Benefits (in Thousands)		
Under 50	$6,430	$6,144	$12,574
50 to 54	10,529	11,744	22,273
55 to 59	15,432	20,627	36,059
60 to 64	17,235	27,376	44,611
65 to 69	15,959	21,081	37,040
70 to 74	8,788	13,601	22,389
75 to 79	3,951	5,599	9,550
80 & Up	2,885	4,725	7,610
Total	$81,209	$110,897	$192,106

Table C-3
Florida Retirement System
Potential Annuitants at July 1, 2013
Vested Terminated Members by Age for the Regular, Senior Management Service, and Elected Officers' Classes

Age	Men	Women	Total
		Number of Persons	
Under 30	157	372	529
30 to 34	790	2,548	3,338
35 to 39	1,862	5,575	7,437
40 to 44	3,407	8,943	12,350
45 to 49	4,623	11,117	15,740
50 to 54	6,237	13,851	20,088
55 to 59	5,733	12,180	17,913
60 & Up	7,467	14,437	21,904
Total	30,276	69,023	99,299
		Annual Benefits (in Thousands) *	
Under 30	$433	$905	$1,338
30 to 34	3,123	10,020	13,143
35 to 39	9,028	25,226	34,254
40 to 44	19,753	45,196	64,949
45 to 49	33,228	62,119	95,347
50 to 54	49,818	82,677	132,495
55 to 59	47,669	74,896	122,565
60 & Up	44,608	63,574	108,182
Total	$207,660	$364,613	$572,273

* Deferred to Age 62

Table C-4
Florida Retirement System
Potential Annuitants at July 1, 2013
Vested Terminated Members by Age for the
Special Risk Regular & Administrative Support Classes

Age	Men	Women	Total
	Number of Persons		
Under 30	40	23	63
30 to 34	245	112	357
35 to 39	537	256	793
40 to 44	1,079	447	1,526
45 to 49	1,018	416	1,434
50 to 54	744	331	1,075
55 to 59	275	113	388
60 & Up	308	103	411
Total	4,246	1,801	6,047
	Annual Benefits (in Thousands) *		
Under 30	$299	$180	$479
30 to 34	2,278	1,015	3,293
35 to 39	5,523	2,469	7,992
40 to 44	12,762	4,988	17,750
45 to 49	13,561	5,218	18,779
50 to 54	10,473	4,639	15,112
55 to 59	3,576	1,503	5,079
60 & Up	3,091	1,076	4,167
Total	$51,563	$21,088	$72,651

* Deferred to Age 55

Table C-5
Florida Retirement System
Annuitants and Potential Annuitants at July 1, 2013
All Types of Retirement by System

System	Annuitants	Potential Annuitants	Total
		Number of Persons	
Regular	309,952	97,831	407,783
Senior Management Service	3,222	1,087	4,309
Special Risk	29,555	6,031	35,586
Special Risk Administrative	168	16	184
EOC - Judges	773	44	817
EOC - Legislative/Attorneys/Cabinet	207	97	304
EOC - County Officials	1,312	240	1,552
Total	345,189	105,346	450,535
		Annual Benefits (in Thousands)	
Regular	$5,326,205	$545,900	$5,872,105
Senior Management Service	146,666	20,527	167,193
Special Risk	1,057,711	72,537	1,130,248
Special Risk Administrative	5,996	114	6,110
EOC - Judges	62,209	2,004	64,213
EOC - Legislative/Attorneys/Cabinet	6,439	1,178	7,617
EOC - County Officials	38,675	2,664	41,339
Total	$6,643,901	$644,924	$7,288,825

Table C-6
Florida Retirement System
Annuitants at July 1, 2013
DROP Members

Age	Men	Women	Total
	Number of Persons		
Under 50	472	112	584
50 to 54	1,919	1,685	3,604
55 to 59	4,033	6,452	10,485
60 to 64	5,510	11,657	17,167
65 to 69	3,070	6,896	9,966
70 to 74	90	203	293
75 to 79	13	44	57
80 & Up	5	7	12
Total	15,112	27,056	42,168
	Annual Benefits (in Thousands)		
Under 50	$30,410	$5,970	$36,380
50 to 54	111,549	52,711	164,260
55 to 59	164,777	203,923	368,700
60 to 64	150,048	276,646	426,694
65 to 69	62,598	126,402	189,000
70 to 74	1,252	3,099	4,351
75 to 79	126	428	554
80 & Up	39	75	114
Total	$520,799	$669,254	$1,190,053

Table C-7
Florida Retirement System
Members and Their Salaries at July 1, 2013
FRS - Regular: Men

	SERVICE					
	UNDER 5		5 TO 10		10 TO 15	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20	289	2,404,210	1	17,667		
20 to 24	3,606	70,276,981	126	2,816,617		
25 to 29	6,455	185,485,749	2,291	73,694,717	81	3,027,777
30 to 34	4,826	151,270,668	5,568	215,760,190	1,591	64,789,049
35 to 39	3,587	116,868,845	4,264	174,194,993	3,893	180,327,664
40 to 44	3,485	114,801,877	4,034	162,880,214	4,007	186,039,699
45 to 49	3,202	103,428,364	4,073	163,436,939	3,601	164,868,326
50 to 54	3,197	101,052,047	4,407	174,213,731	3,990	181,078,650
55 to 59	2,465	76,292,771	3,871	148,604,125	3,908	173,308,305
60 to 64	1,288	36,715,023	2,877	107,680,851	2,527	112,294,679
65 & UP	833	17,680,383	1,843	55,803,500	1,804	71,345,260
TOTALS	33,233	976,276,918	33,355	1,279,103,544	25,402	1,137,079,409

	SERVICE					
	15 TO 20		20 TO 25		25 TO 30	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29	1	38,572				
30 to 34	46	1,919,414				
35 to 39	1,120	54,653,596	40	2,032,582		
40 to 44	3,680	194,515,369	1,134	61,855,818	82	4,816,284
45 to 49	3,422	176,663,655	3,212	184,396,213	1,534	85,101,610
50 to 54	3,443	175,794,290	3,642	206,660,628	3,903	237,454,770
55 to 59	3,366	167,214,383	3,401	190,403,371	3,580	218,321,026
60 to 64	2,165	105,512,457	1,949	108,445,554	1,777	111,072,040
65 & UP	1,004	44,607,211	599	32,378,526	303	18,719,408
TOTALS	18,247	920,918,947	13,977	786,172,692	11,179	675,485,138

	SERVICE					
	30 TO 35		35 TO 40		40 TO 45	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44						
45 to 49	76	4,111,609				
50 to 54	899	55,024,396	12	670,930		
55 to 59	1,105	72,525,026	130	7,548,586	5	265,907
60 to 64	467	32,956,148	185	13,404,813	44	2,800,228
65 & UP	191	16,628,777	139	13,430,870	104	10,308,608
TOTALS	2,738	181,245,956	466	35,055,199	153	13,374,743

	SERVICE					
	45 TO 50		50 & UP		ALL YEARS	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20					290	2,421,877
20 to 24					3,732	73,093,598
25 to 29					8,828	262,246,815
30 to 34					12,031	433,739,321
35 to 39					12,904	528,077,680
40 to 44					16,422	724,909,261
45 to 49					19,120	882,006,716
50 to 54					23,493	1,131,949,442
55 to 59					21,831	1,054,483,500
60 to 64					13,279	630,881,793
65 & UP	27	2,789,709	8	719,705	6,855	284,411,957
TOTALS	27	2,789,709	8	719,705	138,785	6,008,221,960

Table C-8
Florida Retirement System
Members and Their Salaries at July 1, 2013
FRS - Regular: Women

	SERVICE					
	UNDER 5		5 TO 10		10 TO 15	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20	484	3,672,863				
20 to 24	7,040	148,455,689	164	3,052,025	1	57,211
25 to 29	15,754	480,383,678	5,219	170,989,486	126	4,132,164
30 to 34	9,790	284,803,337	14,951	555,070,799	4,306	167,915,884
35 to 39	7,320	197,422,060	10,825	385,692,579	10,987	462,824,732
40 to 44	7,463	198,538,900	10,358	343,676,655	10,566	420,946,072
45 to 49	6,457	164,040,367	9,745	302,380,828	9,832	359,963,854
50 to 54	5,348	135,645,062	9,113	282,887,474	10,244	357,017,286
55 to 59	3,603	93,484,083	7,204	226,669,359	8,703	307,552,615
60 to 64	1,698	43,349,424	4,430	139,184,073	4,905	176,551,414
65 & UP	826	14,923,604	2,054	50,450,763	2,204	63,838,886
TOTALS	65,783	1,764,719,067	74,063	2,460,054,041	61,874	2,320,800,118

	SERVICE					
	15 TO 20		20 TO 25		25 TO 30	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34	75	2,874,666				
35 to 39	3,077	135,703,923	54	2,439,022		
40 to 44	9,750	456,871,929	2,948	146,486,608	124	5,874,554
45 to 49	8,686	370,792,172	8,159	425,374,704	3,428	178,897,299
50 to 54	9,285	365,566,165	7,941	381,628,241	8,386	462,736,624
55 to 59	8,596	334,494,317	8,125	377,192,514	7,772	404,770,332
60 to 64	4,613	183,080,201	4,822	223,116,541	4,384	228,604,899
65 & UP	1,355	42,737,334	825	31,210,617	519	22,047,775
TOTALS	45,437	1,892,120,707	32,874	1,587,448,247	24,613	1,302,931,483

	SERVICE					
	30 TO 35		35 TO 40		40 TO 45	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44						
45 to 49	87	4,686,159				
50 to 54	1,640	93,240,611	13	642,151		
55 to 59	2,191	129,192,631	224	12,683,287	3	112,938
60 to 64	754	41,765,605	239	13,932,208	56	3,161,404
65 & UP	223	10,103,143	134	6,873,968	95	5,807,296
TOTALS	4,895	278,988,149	610	34,131,614	154	9,081,638

	SERVICE					
	45 TO 50		50 & UP		ALL YEARS	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20					484	3,672,863
20 to 24					7,205	151,564,925
25 to 29					21,099	655,505,328
30 to 34					29,122	1,010,664,686
35 to 39					32,263	1,184,082,316
40 to 44					41,209	1,572,394,718
45 to 49					46,394	1,806,135,383
50 to 54					51,970	2,079,363,614
55 to 59					46,421	1,886,152,076
60 to 64					25,901	1,052,745,769
65 & UP	12	668,647	2	175,097	8,249	248,837,130
TOTALS	12	668,647	2	175,097	310,317	11,651,118,808

Table C-9
Florida Retirement System
Members and Their Salaries at July 1, 2013
FRS - Special Risk: Men

	SERVICE					
	UNDER 5		5 TO 10		10 TO 15	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20	12	327,699				
20 to 24	1,923	64,206,084	81	3,095,800		
25 to 29	3,123	118,418,333	2,501	117,013,644	57	2,932,004
30 to 34	1,748	68,487,975	3,706	196,921,127	1,488	85,961,850
35 to 39	920	35,538,483	2,401	128,670,237	2,539	158,369,330
40 to 44	692	27,318,653	1,731	92,889,717	2,297	146,708,920
45 to 49	503	22,883,297	1,079	57,174,408	1,277	78,853,727
50 to 54	361	17,479,034	718	38,856,479	737	43,685,391
55 to 59	175	7,668,521	409	20,448,330	400	23,447,013
60 to 64	54	2,382,572	183	9,711,467	216	11,474,571
65 & UP	11	698,490	49	2,228,519	75	4,600,115
TOTALS	9,522	365,409,141	12,858	667,009,728	9,086	556,032,921

	SERVICE					
	15 TO 20		20 TO 25		25 TO 30	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34	19	1,159,980				
35 to 39	993	63,533,524	22	1,611,493		
40 to 44	2,561	176,915,419	1,258	92,364,011	38	3,092,272
45 to 49	1,567	105,657,218	2,237	169,738,570	789	64,036,035
50 to 54	784	49,333,825	1,296	95,206,148	684	53,998,430
55 to 59	293	16,992,976	297	19,369,517	200	14,350,676
60 to 64	142	7,861,478	147	9,799,032	78	5,528,066
65 & UP	62	3,781,502	27	1,692,795	17	1,270,672
TOTALS	6,421	425,235,922	5,284	389,781,566	1,806	142,276,151

	SERVICE					
	30 TO 35		35 TO 40		40 TO 45	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44						
45 to 49	6	437,992				
50 to 54	81	6,548,896				
55 to 59	61	4,715,191	9	812,979		
60 to 64	27	1,952,271	14	988,829	1	81,256
65 & UP	12	1,013,070	5	397,724	1	61,739
TOTALS	187	14,667,420	28	2,199,532	2	142,995

	SERVICE					
	45 TO 50		50 & UP		ALL YEARS	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20					12	327,699
20 to 24					2,004	67,301,884
25 to 29					5,681	238,363,981
30 to 34					6,961	352,530,932
35 to 39					6,875	387,723,067
40 to 44					8,577	539,288,992
45 to 49					7,458	498,781,247
50 to 54					4,661	305,108,203
55 to 59					1,844	107,805,203
60 to 64					862	49,779,542
65 & UP					259	15,744,626
TOTALS					45,194	2,562,755,376

Table C-10
Florida Retirement System
Members and Their Salaries at July 1, 2013
FRS - Special Risk: Women

	SERVICE					
	UNDER 5		5 TO 10		10 TO 15	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20	1	31,293				
20 to 24	426	13,615,072	7	267,362		
25 to 29	950	34,008,116	574	24,198,606	6	329,959
30 to 34	484	17,860,248	971	44,645,225	379	20,107,200
35 to 39	289	10,700,230	602	27,849,915	782	42,907,213
40 to 44	236	8,969,869	472	22,385,139	597	32,884,832
45 to 49	144	5,360,101	271	12,163,960	379	20,819,906
50 to 54	86	3,540,338	185	8,221,950	235	11,574,549
55 to 59	61	2,544,957	107	4,831,668	100	5,233,888
60 to 64	16	756,500	45	2,077,414	54	2,524,830
65 & UP	3	103,652	10	431,986	10	438,044
TOTALS	2,696	97,490,376	3,244	147,073,225	2,542	136,820,421

	SERVICE					
	15 TO 20		20 TO 25		25 TO 30	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34	5	296,792				
35 to 39	263	14,837,694	2	103,057		
40 to 44	699	43,209,709	273	18,265,467	7	484,372
45 to 49	466	27,480,897	559	37,996,627	206	14,564,319
50 to 54	294	17,471,371	350	22,881,584	282	17,929,430
55 to 59	89	4,201,822	88	5,305,111	93	5,493,865
60 to 64	50	2,533,051	36	2,172,011	27	1,548,062
65 & UP	9	458,572	5	282,279	2	136,465
TOTALS	1,875	110,489,908	1,313	87,006,136	617	40,156,513

	SERVICE					
	30 TO 35		35 TO 40		40 TO 45	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44						
45 to 49	5	308,236				
50 to 54	15	981,871				
55 to 59	25	1,633,282	2	201,012		
60 to 64	2	148,422				
65 & UP	1	55,951				
TOTALS	48	3,127,762	2	201,012		

	SERVICE					
	45 TO 50		50 & UP		ALL YEARS	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20					1	31,293
20 to 24					433	13,882,434
25 to 29					1,530	58,536,681
30 to 34					1,839	82,909,465
35 to 39					1,938	96,398,109
40 to 44					2,284	126,199,388
45 to 49					2,030	118,694,046
50 to 54					1,447	82,601,093
55 to 59					565	29,445,605
60 to 64					230	11,760,290
65 & UP					40	1,906,949
TOTALS					12,337	622,365,353

Table C-11
Florida Retirement System
Members and Their Salaries at July 1, 2013
FRS - Special Risk Administrative Support: Men

	SERVICE					
	UNDER 5		5 TO 10		10 TO 15	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34			1	28,741	1	34,967
35 to 39					2	71,494
40 to 44						
45 to 49	1	35,988			1	36,750
50 to 54					1	38,667
55 to 59						
60 to 64					1	42,808
65 & UP						
TOTALS	1	35,988	1	28,741	6	224,686

	SERVICE					
	15 TO 20		20 TO 25		25 TO 30	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39	3	195,655				
40 to 44	5	313,282	2	109,937		
45 to 49			1	35,386	1	42,589
50 to 54	1	38,660	2	119,696		
55 to 59						
60 to 64			2	81,966	1	37,041
65 & UP						
TOTALS	9	547,597	7	346,985	2	79,630

	SERVICE					
	30 TO 35		35 TO 40		40 TO 45	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44						
45 to 49						
50 to 54						
55 to 59						
60 to 64						
65 & UP						
TOTALS						

	SERVICE					
	45 TO 50		50 & UP		ALL YEARS	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34					2	63,708
35 to 39					5	267,149
40 to 44					7	423,219
45 to 49					4	150,713
50 to 54					4	197,023
55 to 59						
60 to 64					4	161,815
65 & UP						
TOTALS					26	1,263,627

Table C-12
Florida Retirement System
Members and Their Salaries at July 1, 2013
FRS - Special Risk Administrative Support: Women

	SERVICE					
	UNDER 5		5 TO 10		10 TO 15	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29	1	33,888				
30 to 34					1	35,637
35 to 39					1	40,330
40 to 44						
45 to 49						
50 to 54						
55 to 59						
60 to 64						
65 & UP						
TOTALS	1	33,888			2	75,967

	SERVICE					
	15 TO 20		20 TO 25		25 TO 30	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44	4	168,946				
45 to 49			2	94,340	1	46,289
50 to 54	3	123,920	1	36,876	1	35,386
55 to 59						
60 to 64						
65 & UP						
TOTALS	7	292,866	3	131,216	2	81,675

	SERVICE					
	30 TO 35		35 TO 40		40 TO 45	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44						
45 to 49						
50 to 54						
55 to 59						
60 to 64						
65 & UP						
TOTALS						

	SERVICE					
	45 TO 50		50 & UP		ALL YEARS	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29					1	33,888
30 to 34					1	35,637
35 to 39					1	40,330
40 to 44					4	168,946
45 to 49					3	140,629
50 to 54					5	196,182
55 to 59						
60 to 64						
65 & UP						
TOTALS					15	615,612

Table C-13
Florida Retirement System
Members and Their Salaries at July 1, 2013
EOC - Judicial: Men

	SERVICE					
	UNDER 5		5 TO 10		10 TO 15	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34	3	400,722				
35 to 39	2	280,530	6	719,113	1	134,280
40 to 44	2	194,902	7	990,636	11	1,474,319
45 to 49	8	956,676	11	1,373,245	16	2,210,882
50 to 54	15	1,955,436	13	1,758,855	21	2,870,274
55 to 59	13	1,727,237	20	2,680,435	21	2,994,419
60 to 64	3	426,534	16	2,236,214	21	2,915,288
65 & UP	5	702,992	16	2,197,378	15	2,124,957
TOTALS	51	6,645,029	89	11,955,876	106	14,724,419

	SERVICE					
	15 TO 20		20 TO 25		25 TO 30	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44	7	893,539				
45 to 49	7	995,845	12	1,659,459		
50 to 54	13	1,802,287	13	1,832,519	11	1,532,709
55 to 59	26	3,657,941	26	3,576,771	19	2,657,439
60 to 64	14	1,956,260	23	3,234,380	19	2,661,894
65 & UP	3	426,534	6	837,612	1	134,280
TOTALS	70	9,732,406	80	11,140,741	50	6,986,322

	SERVICE					
	30 TO 35		35 TO 40		40 TO 45	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44						
45 to 49						
50 to 54						
55 to 59	15	2,150,856				
60 to 64	4	560,814				
65 & UP						
TOTALS	19	2,711,670				

	SERVICE					
	45 TO 50		50 & UP		ALL YEARS	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34					3	400,722
35 to 39					9	1,133,923
40 to 44					27	3,553,396
45 to 49					54	7,196,107
50 to 54					86	11,752,080
55 to 59					140	19,445,098
60 to 64					100	13,991,384
65 & UP					46	6,423,753
TOTALS					465	63,896,463

Table C-14
Florida Retirement System
Members and Their Salaries at July 1, 2013
EOC - Judicial: Women

	SERVICE					
	UNDER 5		5 TO 10		10 TO 15	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39	3	336,373	1	142,178	4	496,552
40 to 44	7	844,387	8	1,025,971	9	1,200,104
45 to 49	5	605,451	8	1,057,486	13	1,818,007
50 to 54	4	416,231	12	1,698,238	11	1,531,888
55 to 59	4	552,916	7	972,037	12	1,559,129
60 to 64	3	241,366	3	344,971	2	284,356
65 & UP			2	284,356	1	134,280
TOTALS	26	2,996,724	41	5,525,237	52	7,024,316

	SERVICE					
	15 TO 20		20 TO 25		25 TO 30	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44	9	1,232,214	1	134,280		
45 to 49	16	2,168,233	11	1,533,617		
50 to 54	12	1,691,338	10	1,382,320	11	1,524,468
55 to 59	11	1,462,849	15	2,104,724	13	1,794,869
60 to 64	5	702,992	11	1,548,163	12	1,668,401
65 & UP						
TOTALS	53	7,257,626	48	6,703,104	36	4,987,738

	SERVICE					
	30 TO 35		35 TO 40		40 TO 45	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44						
45 to 49						
50 to 54	1	142,178				
55 to 59	2	268,572				
60 to 64	3	418,636				
65 & UP						
TOTALS	6	829,386				

	SERVICE					
	45 TO 50		50 & UP		ALL YEARS	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39					8	975,103
40 to 44					34	4,436,956
45 to 49					53	7,182,794
50 to 54					61	8,386,661
55 to 59					64	8,715,096
60 to 64					39	5,208,885
65 & UP					3	418,636
TOTALS					262	35,324,131

Table C-15
Florida Retirement System
Members and Their Salaries at July 1, 2013
EOC - Legislators/Attorneys/Cabinet: Men

	SERVICE					
	UNDER 5		5 TO 10		10 TO 15	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29	2	52,393				
30 to 34	5	155,273	1	29,697		
35 to 39	3	82,090	4	207,668	5	148,485
40 to 44	4	108,439	2	75,175	2	59,394
45 to 49	2	48,999	7	187,089	1	72,320
50 to 54					5	127,695
55 to 59	4	217,775	3	89,091	6	393,040
60 to 64	1	29,697	1	19,302	1	29,697
65 & UP			3	89,091	2	59,394
TOTALS	21	694,666	21	697,113	22	890,025

	SERVICE					
	15 TO 20		20 TO 25		25 TO 30	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39	1	29,697				
40 to 44	2	70,734				
45 to 49			1	144,500		
50 to 54	2	169,379	1	130,770	1	120,432
55 to 59	2	59,394	1	150,077	2	185,859
60 to 64	1	150,077	2	300,154	1	150,077
65 & UP	2	186,824				
TOTALS	10	666,105	5	725,501	4	456,368

	SERVICE					
	30 TO 35		35 TO 40		40 TO 45	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44						
45 to 49						
50 to 54						
55 to 59	1	150,077				
60 to 64						
65 & UP						
TOTALS	1	150,077				

	SERVICE					
	45 TO 50		50 & UP		ALL YEARS	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29					2	52,393
30 to 34					6	184,970
35 to 39					13	467,940
40 to 44					10	313,742
45 to 49					11	452,908
50 to 54					9	548,276
55 to 59					19	1,245,313
60 to 64					7	679,004
65 & UP	1	150,077			8	485,386
TOTALS	1	150,077			85	4,429,932

Table C-16
Florida Retirement System
Members and Their Salaries at July 1, 2013
EOC - Legislators/Attorneys/Cabinet: Women

	SERVICE					
	UNDER 5		5 TO 10		10 TO 15	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44						
45 to 49			2	59,394	4	108,740
50 to 54	2	38,604	1	29,697		
55 to 59	3	89,091				
60 to 64	1	29,697	1	29,697		
65 & UP			2	48,999	3	89,091
TOTALS	6	157,392	6	167,787	7	197,831

	SERVICE					
	15 TO 20		20 TO 25		25 TO 30	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44	1	150,077				
45 to 49	1	29,697	2	279,049		
50 to 54						
55 to 59	1	150,077			2	300,154
60 to 64						
65 & UP	1	29,697				
TOTALS	4	359,548	2	279,049	2	300,154

	SERVICE					
	30 TO 35		35 TO 40		40 TO 45	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44						
45 to 49						
50 to 54						
55 to 59						
60 to 64						
65 & UP						
TOTALS						

	SERVICE					
	45 TO 50		50 & UP		ALL YEARS	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44					1	150,077
45 to 49					9	476,880
50 to 54					3	68,301
55 to 59					6	539,322
60 to 64					2	59,394
65 & UP					6	167,787
TOTALS					27	1,461,761

Table C-17
Florida Retirement System
Members and Their Salaries at July 1, 2013
EOC - County Officials: Men

	SERVICE					
	UNDER 5		5 TO 10		10 TO 15	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29	1	36,602	1	34,200		
30 to 34	6	134,059	3	107,908	1	60,317
35 to 39	11	370,669	8	394,225	1	21,844
40 to 44	22	745,180	10	567,048	6	263,325
45 to 49	19	484,318	10	597,404	10	499,274
50 to 54	16	580,064	19	1,023,485	18	749,896
55 to 59	20	586,493	22	882,558	23	943,238
60 to 64	20	1,198,696	21	669,514	12	569,573
65 & UP	20	434,957	34	946,365	17	536,888
TOTALS	135	4,571,038	128	5,222,707	88	3,644,355

	SERVICE					
	15 TO 20		20 TO 25		25 TO 30	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44	5	286,951	4	278,384		
45 to 49	10	530,562	5	313,197	2	200,194
50 to 54	16	892,567	8	729,838	11	890,000
55 to 59	13	606,520	14	1,063,396	6	489,776
60 to 64	10	250,230	16	817,487	7	665,901
65 & UP	14	374,900	9	360,824	7	282,960
TOTALS	68	2,941,730	56	3,563,126	33	2,528,831

	SERVICE					
	30 TO 35		35 TO 40		40 TO 45	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44						
45 to 49	1	97,577				
50 to 54	1	124,413				
55 to 59	3	350,855				
60 to 64	3	95,070				
65 & UP	1	41,143	2	29,599		
TOTALS	9	709,058	2	29,599		

	SERVICE					
	45 TO 50		50 & UP		ALL YEARS	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29					2	70,802
30 to 34					10	302,284
35 to 39					20	786,738
40 to 44					47	2,140,888
45 to 49					57	2,722,526
50 to 54					89	4,990,263
55 to 59					101	4,922,836
60 to 64					89	4,266,471
65 & UP					104	3,007,636
TOTALS					519	23,210,444

Table C-18
Florida Retirement System
Members and Their Salaries at July 1, 2013
EOC - County Officials: Women

	SERVICE					
	UNDER 5		5 TO 10		10 TO 15	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34	1	8,625	2	60,721		
35 to 39	2	114,854	5	218,137	2	66,227
40 to 44	9	400,910	7	226,350	1	31,380
45 to 49	8	317,611	4	111,548	3	144,598
50 to 54	10	295,750	4	241,634	7	399,144
55 to 59	7	203,298	12	344,888	18	919,877
60 to 64	9	221,439	11	493,332	13	800,288
65 & UP	9	205,345	15	558,930	14	692,468
TOTALS	55	1,767,832	60	2,255,540	58	3,053,982

	SERVICE					
	15 TO 20		20 TO 25		25 TO 30	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39	1	21,844				
40 to 44	5	258,186	4	341,019		
45 to 49	2	115,919	6	424,291	6	625,712
50 to 54	3	85,169	8	434,178	10	969,779
55 to 59	9	339,582	9	761,765	16	1,462,378
60 to 64	13	969,883	12	672,304	5	362,097
65 & UP	13	611,714	10	720,567	2	65,836
TOTALS	46	2,402,297	49	3,354,124	39	3,485,802

	SERVICE					
	30 TO 35		35 TO 40		40 TO 45	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44						
45 to 49						
50 to 54	5	432,800				
55 to 59	7	604,023	2	161,735		
60 to 64	1	24,115				
65 & UP	1	9,000				
TOTALS	14	1,069,938	2	161,735		

	SERVICE					
	45 TO 50		50 & UP		ALL YEARS	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34					3	69,346
35 to 39					10	421,062
40 to 44					26	1,257,845
45 to 49					29	1,739,679
50 to 54					47	2,858,454
55 to 59					80	4,797,546
60 to 64					64	3,543,458
65 & UP					64	2,863,860
TOTALS					323	17,551,250

Table C-19
Florida Retirement System
Members and Their Salaries at July 1, 2013
FRS - Senior Management Service: Men

	SERVICE					
	UNDER 5		5 TO 10		10 TO 15	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29	193	8,181,286	3	183,960		
30 to 34	130	5,809,677	87	4,621,721	7	512,595
35 to 39	45	2,650,613	67	4,034,372	63	4,687,089
40 to 44	32	2,149,838	57	4,629,493	75	6,493,303
45 to 49	24	2,224,570	46	4,037,872	45	4,062,677
50 to 54	25	2,870,329	40	3,844,624	50	4,693,832
55 to 59	37	4,139,014	38	3,605,293	77	8,332,814
60 to 64	15	1,419,204	36	3,509,002	41	4,459,918
65 & UP	5	429,829	22	2,663,183	32	3,175,431
TOTALS	506	29,874,360	396	31,129,520	390	36,417,659

	SERVICE					
	15 TO 20		20 TO 25		25 TO 30	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39	16	1,149,598	1	76,554		
40 to 44	91	8,368,124	26	2,345,913	1	71,261
45 to 49	87	8,213,533	130	13,771,157	42	4,514,666
50 to 54	75	7,697,598	109	11,663,062	165	16,838,013
55 to 59	80	7,867,284	102	11,452,879	164	17,996,113
60 to 64	55	5,586,816	49	5,590,633	57	6,601,791
65 & UP	22	2,530,941	28	3,269,128	11	1,349,981
TOTALS	426	41,413,894	445	48,169,326	440	47,371,825

	SERVICE					
	30 TO 35		35 TO 40		40 TO 45	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44						
45 to 49	2	172,444				
50 to 54	18	1,863,462				
55 to 59	45	5,179,613	3	229,831		
60 to 64	19	2,852,346	10	1,509,056		
65 & UP	6	771,033	2	294,228	3	343,077
TOTALS	90	10,838,898	15	2,033,115	3	343,077

	SERVICE					
	45 TO 50		50 & UP		ALL YEARS	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29					196	8,365,246
30 to 34					224	10,943,993
35 to 39					192	12,598,226
40 to 44					282	24,057,932
45 to 49					376	36,996,919
50 to 54					482	49,470,920
55 to 59					546	58,802,841
60 to 64					282	31,528,766
65 & UP	2	524,444			133	15,351,275
TOTALS	2	524,444			2,713	248,116,118

Table C-20
Florida Retirement System
Members and Their Salaries at July 1, 2013
FRS - Senior Management Service: Women

	SERVICE					
	UNDER 5		5 TO 10		10 TO 15	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29	264	10,787,307	6	248,616		
30 to 34	159	7,118,518	94	5,297,358	9	638,823
35 to 39	39	1,720,808	75	4,211,668	107	6,986,910
40 to 44	31	2,126,771	67	4,513,929	98	7,366,061
45 to 49	20	1,266,217	39	2,814,130	53	4,084,425
50 to 54	21	1,449,919	33	2,626,536	38	2,869,438
55 to 59	14	1,196,376	28	2,309,921	42	3,637,789
60 to 64	10	979,715	22	2,177,041	28	2,569,953
65 & UP	2	178,897	8	636,910	10	807,724
TOTALS	560	26,824,528	372	24,836,109	385	28,961,123

	SERVICE					
	15 TO 20		20 TO 25		25 TO 30	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39	22	1,579,284	3	289,152		
40 to 44	104	8,684,017	57	4,389,863	3	304,482
45 to 49	93	7,429,571	157	13,587,294	74	6,060,103
50 to 54	82	6,825,405	127	11,364,445	151	15,315,448
55 to 59	58	4,945,752	88	8,925,872	140	13,685,144
60 to 64	32	2,791,949	44	4,111,352	53	5,529,858
65 & UP	5	431,564	4	394,927	6	746,719
TOTALS	396	32,687,542	480	43,062,905	427	41,641,754

	SERVICE					
	30 TO 35		35 TO 40		40 TO 45	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44						
45 to 49	1	49,780				
50 to 54	35	3,477,314				
55 to 59	22	2,299,588	4	401,119		
60 to 64	11	1,046,551	9	1,208,738	2	176,491
65 & UP	2	359,417	4	428,785	2	175,748
TOTALS	71	7,232,650	17	2,038,642	4	352,239

	SERVICE					
	45 TO 50		50 & UP		ALL YEARS	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29					270	11,035,923
30 to 34					262	13,054,699
35 to 39					246	14,787,822
40 to 44					360	27,385,123
45 to 49					437	35,291,520
50 to 54					487	43,928,505
55 to 59					396	37,401,561
60 to 64					211	20,591,648
65 & UP					43	4,160,691
TOTALS					2,712	207,637,492

Table C-21
Florida Retirement System
Members and Their Salaries at July 1, 2013
TRS - Teachers' Retirement System: Men

	SERVICE					
	UNDER 5		5 TO 10		10 TO 15	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44						
45 to 49						
50 to 54						
55 to 59						
60 to 64						
65 & UP						
TOTALS						

	SERVICE					
	15 TO 20		20 TO 25		25 TO 30	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44						
45 to 49						
50 to 54						
55 to 59						
60 to 64						
65 & UP						
TOTALS						

	SERVICE					
	30 TO 35		35 TO 40		40 TO 45	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44						
45 to 49						
50 to 54						
55 to 59						
60 to 64						
65 & UP					4	399,419
TOTALS					4	399,419

	SERVICE					
	45 TO 50		50 & UP		ALL YEARS	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44						
45 to 49						
50 to 54						
55 to 59						
60 to 64						
65 & UP	3	479,307			7	878,726
TOTALS	3	479,307			7	878,726

Table C-22
Florida Retirement System
Members and Their Salaries at July 1, 2013
TRS - Teachers' Retirement System: Women

	SERVICE					
	UNDER 5		5 TO 10		10 TO 15	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44						
45 to 49						
50 to 54						
55 to 59						
60 to 64						
65 & UP						
TOTALS						

	SERVICE					
	15 TO 20		20 TO 25		25 TO 30	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44						
45 to 49						
50 to 54						
55 to 59						
60 to 64						
65 & UP						
TOTALS						

	SERVICE					
	30 TO 35		35 TO 40		40 TO 45	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44						
45 to 49						
50 to 54						
55 to 59						
60 to 64						
65 & UP					6	485,518
TOTALS					6	485,518

	SERVICE					
	45 TO 50		50 & UP		ALL YEARS	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44						
45 to 49						
50 to 54						
55 to 59						
60 to 64						
65 & UP	4	305,819	1	79,180	11	870,517
TOTALS	4	305,819	1	79,180	11	870,517

Table C-23
Florida Retirement System
Members and Their Salaries at July 1, 2013
IFAS - Institute of Food and Agricultural Sciences: Men

	SERVICE					
	UNDER 5		5 TO 10		10 TO 15	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44						
45 to 49						
50 to 54						
55 to 59						
60 to 64						
65 & UP						
TOTALS						

	SERVICE					
	15 TO 20		20 TO 25		25 TO 30	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44						
45 to 49						
50 to 54						
55 to 59					1	119,909
60 to 64					7	757,323
65 & UP					4	477,109
TOTALS					12	1,354,341

	SERVICE					
	30 TO 35		35 TO 40		40 TO 45	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44						
45 to 49						
50 to 54						
55 to 59						
60 to 64	2	150,369				
65 & UP						
TOTALS	2	150,369				

	SERVICE					
	45 TO 50		50 & UP		ALL YEARS	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44						
45 to 49						
50 to 54						
55 to 59					1	119,909
60 to 64					9	907,692
65 & UP					4	477,109
TOTALS					14	1,504,710

Table C-24
Florida Retirement System
Members and Their Salaries at July 1, 2013
IFAS - Institute of Food and Agricultural Sciences: Women

	SERVICE					
	UNDER 5		5 TO 10		10 TO 15	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44						
45 to 49						
50 to 54						
55 to 59						
60 to 64						
65 & UP						
TOTALS						

	SERVICE					
	15 TO 20		20 TO 25		25 TO 30	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44						
45 to 49						
50 to 54						
55 to 59					1	61,321
60 to 64					6	423,560
65 & UP						
TOTALS					7	484,881

	SERVICE					
	30 TO 35		35 TO 40		40 TO 45	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44						
45 to 49						
50 to 54						
55 to 59	2	160,733				
60 to 64	2	156,711				
65 & UP						
TOTALS	4	317,444				

	SERVICE					
	45 TO 50		50 & UP		ALL YEARS	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44						
45 to 49						
50 to 54						
55 to 59					3	222,054
60 to 64					8	580,271
65 & UP						
TOTALS					11	802,325

Table C-25
Florida Retirement System
Distribution of Active Participants
Grand Totals
July 1, 2013

	SERVICE					
	UNDER 5		5 TO 10		10 TO 15	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20	786	6,436,065	1	17,667		
20 to 24	12,995	296,553,826	378	9,231,804	1	57,211
25 to 29	26,743	837,387,352	10,595	386,363,229	270	10,421,904
30 to 34	17,152	536,049,102	25,384	1,022,543,487	7,783	340,056,322
35 to 39	12,221	366,085,555	18,258	726,335,085	18,387	857,082,150
40 to 44	11,983	356,199,726	16,753	633,860,327	17,669	803,467,409
45 to 49	10,393	301,651,959	15,295	545,394,303	15,235	637,543,486
50 to 54	9,085	265,322,814	14,545	515,402,703	15,357	606,636,710
55 to 59	6,406	188,702,532	11,721	411,437,705	13,310	528,322,127
60 to 64	3,118	87,749,867	7,646	268,132,878	7,821	314,517,375
65 & UP	1,714	35,358,149	4,058	116,339,980	4,187	147,842,538
TOTALS	112,596	3,277,496,947	124,634	4,635,059,168	100,020	4,245,947,232

	SERVICE					
	15 TO 20		20 TO 25		25 TO 30	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29	1	38,572				
30 to 34	145	6,250,852				
35 to 39	5,496	271,704,815	122	6,551,860		
40 to 44	16,923	891,938,496	5,707	326,571,300	255	14,643,225
45 to 49	14,357	700,077,302	14,494	849,348,404	6,083	354,088,816
50 to 54	14,013	627,491,974	13,508	734,070,305	13,616	809,345,489
55 to 59	12,544	541,992,897	12,166	620,305,997	12,009	681,688,861
60 to 64	7,100	311,395,394	7,113	359,889,577	6,434	365,611,010
65 & UP	2,490	96,176,793	1,513	71,147,275	872	45,231,205
TOTALS	73,069	3,447,067,095	54,623	2,967,884,718	39,269	2,270,608,606

	SERVICE					
	30 TO 35		35 TO 40		40 TO 45	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20						
20 to 24						
25 to 29						
30 to 34						
35 to 39						
40 to 44						
45 to 49	178	9,863,797				
50 to 54	2,695	161,835,941	25	1,313,081		
55 to 59	3,479	219,230,447	374	22,038,549	8	378,845
60 to 64	1,295	82,127,058	457	31,043,644	103	6,219,379
65 & UP	437	28,981,534	286	21,455,174	215	17,581,405
TOTALS	8,084	502,038,777	1,142	75,850,448	326	24,179,629

	SERVICE					
	45 TO 50		50 & UP		ALL YEARS	
AGE	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY
UNDER 20					787	6,453,732
20 to 24					13,374	305,842,841
25 to 29					37,609	1,234,211,057
30 to 34					50,464	1,904,899,763
35 to 39					54,484	2,227,759,465
40 to 44					69,290	3,026,680,483
45 to 49					76,035	3,397,968,067
50 to 54					82,844	3,721,419,017
55 to 59					72,017	3,214,097,960
60 to 64					41,087	1,826,686,182
65 & UP	49	4,918,003	11	973,982	15,832	586,006,038
TOTALS	49	4,918,003	11	973,982	513,823	21,452,024,605

Table C-26
Florida Retirement System
Summary Totals for All Systems
Number, Total Annualized Payroll and Accumulated Employee Contributions of Active Members by System

System	Number of Members	Total Payroll Payroll [1] (000's omitted)	Accumulated Employee Contributions (000's omitted)
Florida Retirement System			
Regular	449,102	$18,162,664	$999,540
Senior Management Service	5,425	467,972	28,918
Florida Retirement System - Special Risk			
Non-Administrative	57,531	3,285,025	188,616
Administrative	41	1,930	112
Florida Retirement System - Elected Officers' Class			
Judicial	727	101,261	5,932
Leg. / Atty. / Cabinet	112	6,013	427
County Elected Off.	842	41,598	2,679
Teachers' Retirement System	18	1,786	2,229
State and County Officers' and Employees' Retirement System	0	0	0
Institute of Food and Agricultural Sciences	25	2,356	0
Total	513,823	$22,070,605	$1,228,453
	Average Annual Salary =	$42,954	

[1] Payroll adjusted to represent "Plan Year" payroll.

APPENDIX D

PROJECTIONS

Table D-1 presents a projection of total costs of the employers covered by the FRS (exclusive of the Investment Plan) during the five-year period following the actuarial valuation date, July 1, 2013. The contributions shown beginning with plan year 2014-2015 are based on the assumption that the contribution levels calculated in this report and in conjunction with Florida law (see next paragraph) are extended throughout the projection period. The contributions shown for plan year 2013-2014 are based on the legislated rates (before blending) on page B-4 of this report.

Table D-2 reflects, for each membership class and DROP, the outstanding UAL balance of all amortization bases combined as of July 1, 2013. The table develops the associated duration of the amortization of the combined amortization bases.

Beginning in the July 1, 1998 actuarial valuation with the emergence of the surplus, all UAL bases in existence as that time were considered to be fully amortized. While the Plan was in surplus, the UAL amortization payment or credit was made from the surplus for certain post-1998 benefit increases and the 1998 and 2003 experience studies prior to any use of the surplus for contribution rate reductions or any other FRS uses. Now that the plan is no longer in surplus, the UAL payment will be paid by employers as part of the contribution rate.

Table D-3 estimates the available surplus / (UAL payment) for the next three plan years based on Florida law. The estimates are projections of our July 1, 2013 valuation results, and assume experience occurs as stated in our July 1, 2013 valuation.

All three tables reflect that no surplus is available for rate reduction. The amortization methodology recognizes the time value of money.

Table D-1
Florida Retirement System
Projection of Retirement Costs (Excluding Member Contributions)
July 1, 2013
Based on Contribution Rates Before Blending

(All Amounts in Millions)

	2013 -2014	2014 -2015	2015 -2016	2016 -2017	2017 -2018
A. Employer Normal Cost [1]	$1,145	$1,184	$1,230	$1,280	$1,332
B. UAL Payment / (Surplus Utilization) [2]	$1,081	$1,277 [2]	$1,328 [2]	$1,381 [2]	$1,435 [2]
C. Total	$2,226	$2,461	$2,558	$2,661	$2,767

[1] Includes DROP contributions on behalf of DROP members.

[2] UAL Payment increase is based on assumed increasing payroll, but does not reflect the recognition and funding of deferred investment gains.

Table D-2
Florida Retirement System - July 1, 2013 Valuation
Funding of UAL / (Surplus) by Duration of Amortization

Years to Amortize Surplus

	FRS	----- Special Risk -----		-- Elected Officers' Class --			Senior	
	Regular	Regular	Administration	Judicial	Leg-Atty-Cab	County	Management	DROP
Valuation Date Outstanding UAL Balance / (Surplus)	$11,231,445	$5,035,863	$15,806	$413,333	$53,272	$324,066	$1,644,097	$2,904,275
UAL Cost / (Savings) Rate (see Table IV-11)	3.01%	8.95%	51.44%	23.69%	50.85%	46.01%	20.03%	6.72%
UAL Payroll PY 2014 - 2015 [1]	$21,427,460	$3,425,251	$2,007	$105,953	$6,355	$43,248	$504,625	$2,597,960
Annual Payment / (Savings) for PY 2014 - 2015	$645,953	$306,586	$1,032	$25,104	$3,231	$19,898	$101,059	$174,508
Amortization Period Calculated Assuming								
Level Dollar	NA [2]	NA [2]	NA [2]	NA [2]	NA [2]	NA [2]	NA	NA [2]
Level Percent of Payroll	27	25	22	25	25	25	25	25 [2]

[1] The UAL payroll includes salaries for defined contribution program members who pay only the UAL contribution rate.

[2] Current annual payment / (savings) will never accumulate to the UAL if the earned interest rate is 7.75%.

Table D-3
Florida Retirement System - July 1, 2013 Valuation
Projected Annual Payments of UAL Amortization Bases[1]

Projected PY 2014-2015 and Forward Based on 07/01/2013 Valuation Results and 07/01/2013 Assets

		In Millions		
		2014 - 15	**2015 - 16**	**2016 - 17**
1	Estimated Surplus Available Rate Stabilization Mechanism [2]	$0.0	$0.0	$0.0
2	Increase/(Decrease) in Available Surplus from prior year	$0.0	$0.0	$0.0
	UAL Bases			
3	12% Increase in Special Risk benefits (in pay status before 07/01/2000) [3]	($25.8)	($26.8)	($27.9)
4	Special Risk Minimum In-Line-of-Duty Disability Increased to 65% [4]	$0.2	$0.2	$0.2
5	1993 - 1998 Experience Study Assumption Changes [5]	$32.7	$34.0	$35.3
6	1998 - 2003 Experience Study Assumption Changes [5]	$240.8	$250.4	$260.4
7	2003 - 2008 Experience Study Assumption Changes	($404.7)	($420.9)	($437.8)
8	2009 Experience Gain/(Loss)	($1,270.1)	($1,320.9)	($1,373.7)
9	Unrecognized (Gains)/Losses while in Surplus	$371.5	$386.4	$401.8
10	2009 Plan Change (House Bill 479)	$76.8	$79.9	$83.1
11	2010 Experience Gain/(Loss)	($66.9)	($69.6)	($72.4)
12	2010 Plan Change (Senate Bill 2100)	$73.3	$76.3	$79.3
13	2011 Experience Gain/(Loss)	($158.7)	($165.0)	($171.6)
14	2012 Experience Gain/(Loss)	$6.2	$6.5	$6.7
15	2013 Experience Gain/(Loss)	($152.7)	($158.8)	($165.1)
	Subtotal [(3) through (15)]	**($1,277.4)**	**($1,328.3)**	**($1,381.7)**
16	Across the Board Rate Reduction of 0% [6]	$0.0	$0.0	$0.0
	Total [Subtotal + (16)]	**($1,277.4)**	**($1,328.3)**	**($1,381.7)**
17	Surplus Available / (UAL payment) [(1) + Total] =	($1,277.4)	($1,328.3)	($1,381.7)

[1] Numbers exclude contributions to the Investment Plan.

[2] Projected surplus based on 07/01/2013 valuation results. Using amortization method that reflects interest.

[3] In the absence of a surplus there is an additional cost to the Special Risk Regular Class of 0.75% attributable to the 12% increase in pre-2000 retired benefits.

[4] In the absence of a surplus there is an additional cost to the Special Risk Administration Class of 0.20% and an additional cost to the Special Risk Regular Class of -0.01% attributable to the Increase in Minimum ILOD Disability Benefit.

[5] In the absence of a surplus there is an additional charge or credit to each class. See Tables IV-2 through IV-10 for details.

[6] No surplus available for rate reduction.

APPENDIX E

COMPARISONS/RECONCILIATION

This Appendix contains certain comparative information required by the state. The table below compares actual investment return, aggregate payroll growth, and individual salary increases with the actuarial assumptions.

The next table reconciles the flow of participants from the 2012 actuarial valuation to the 2013 actuarial valuation, while the last table cross-references the required sections of 112.64 with this report.

TABLE E-1
One-Year Comparisons

1. Annual Rate of Investment Return on Actuarial Value of Assets

Period Ending	Actual	Assumed
June 30, 2011	8.39%	7.75%
June 30, 2012	6.74%	7.75%
June 30, 2013	8.02%	7.75%

2. Annual Rate of Payroll Growth

Period Ending	Actual [1]	Assumed [1]
June 30, 2011	-1.42%	4.00%
June 30, 2012	-1.18%	4.00%
June 30, 2013	0.03%	4.00%

3. Individual Rates of Salary Increases for Regular Members and Special Risk Members

Year Ended June 30	Rate of Increase During Year: Regular Members	Special Risk	Assumed [2]
2011	3.7%	5.1%	5.85%
2012	0.7%	1.4%	5.85%
2013	3.2%	3.7%	5.85%

[1] The payroll base compared is used for UAL cost calculations and includes payroll for DROP members and certain defined contribution plan participants for whom only UAL contributions are due. The percentages for the prior years are different than those found in the prior reports due to the change in the payroll basis being measured.

[2] Individual rates vary by age

TABLE E-2
FLORIDA RETIREMENT SYSTEM DEFINED BENEFIT PROGRAM
DATA RECONCILIATION

	Active Members	Disabled Members	Retired Members and Beneficiaries	DROP Participants	Total
Number reported as of July 1, 2012	517,287	13,604	318,090	40,544	889,535
New Entrants	50,798	0	0	0	50,798
Data Adjustment	0	73 [2]	6,006 [2]	0	6,079 [2]
Retirements	(12,600)	636	17,808	(5,844)	0
DROP	(7,458)	0	0	7,458	0
Terminations, IP Transfers and deaths with and without benefit	(34,204)	0	0	0	(34.204)
Cessation of benefit payments	NA	(539)	(10,489)	0	(11,028)
Number reported as of July 1, 2013	513,823	13,774	331,415	42,168	901,180 [1]

[1] The total count excludes the 105,346 Terminated Vested participants.

[2] Due to improved reporting of census data for some newly inactive members and DROP participants by the Division of Retirement.

Table E-3
Florida Retirement System
Cross Reference to Section 112.64 Reporting Requirements

Code Ref	1	General Information:	Page
1.003 (3g)		Includes certification by the enrolled actuary (signed and dated)?	Page 4
1.003 (11)		Do procedures follow commonly accepted procedures and determinations?	Page 4
1.003 (4g)		Disclosure of events not taken into account by actuary?	Page 3
1.003 (4g)		Disclosure of trends not assumed to continue (by actuary)?	Page 3
	2	**Assumptions:**	**Page**
1.003 (3e)		Description and explanation of all actuarial assumptions?	A-1
1.003 (3f)		Is there a comparison of actual to expected salary increases over the preceding 3-year period?	E-1
1.003 (3f)		Is there a comparison of actual to expected investment returns over the preceding 3-year period?	E-1
1.003 (6)		Do assumptions factor in actual experience?	A-1
1.003 (6)		Is impact of inflation considered?	A-9
1.003 (6)		Any consistent experience gains or losses to suggest assumption changes?	No
1.003 (7)		Listing of changed assumptions?	None
	3	**Plan Provisions & Funding Method:**	**Page**
1.003 (4c)		Contain a summary of plan provisions?	B-1
1.003 (4d)		Contain a detailed summary of funding method?	A-1
1.003 (5)		Does funding method provide a contribution sufficient to meet the NC and amortize the UAL?	Section IV
	4	**Assets & Method:**	**Exhibit**
1.003 (3a)		Is the MVA breakdown included (by cash, bonds, stocks, and other)?	II-3
1.003 (3a)		Is the "statement value" breakdown included?	No
1.003 (3a)		Is the derivation of AVA included?	II-4
1.003 (8)		Are administrative expenses being paid on a current basis?	II-1, II-2
		Asset reconciliation, including:	**Exhibit**
1.003 (4j)		- contributions by source	II-1, II-2
1.003 (4j)		- interest and dividends	II-1, II-2
1.003 (4j)		- realized gains / (losses)	II-1, II-2
1.003 (4j)		- unrealized appreciation	II-1, II-2
1.003 (4j)		- pension payments	II-1, II-2
1.003 (4j)		- contribution refunds	II-1, II-2
1.003 (4j)		- expenses	II-1, II-2
1.003 (4j)		- other receipts (identified)	II-1, II-2 (transfer)
1.003 (4j)		- other disbursements (identified)	II-1, II-2 (IP)

	5	**UAL & Amortization Schedule:**	**Exhibit**
1.003 (3b)		Include a plan to amortize any UAL?	IV-1 & D-3
		Does amortization schedule of UAL exist (as of the valuation date) …	**Page**
1.003 (3c)		- on an annual basis for the next 3-years?	Exhibit D-3
1.003 (3c)		- for the final year?	No
1.003 (3c)		Is a statement as to how method was derived included?	A-1
1.003 (3d)		Is a description of actions taken to reduce the UAL included?	Section IV
		Reconciliation of UAL (must include items below):	**Exhibit**
1.003 (4h)		- UAL for prior valuation (w/ start date)	Page I-10
1.003 (4h)		- Normal Cost, contributions, & accrued interest	No
1.003 (4h)		- Impact of changes (assumption, funding method, amendments, gain/loss)	IV-2—IV-10
1.003 (4h)		- UAL for current valuation	IV-2—IV-10
	6	**Results:**	**Exhibit**
1.003 (4a)		Valuation Date clearly indicated?	Page I-1
1.003 (4e)		Are results separated by employee group?	III-2 and Sections IV & V
1.003 (4f)		Is there disclosure of any benefit and expense provided by and/or paid from plan assets for which no liabilities or current costs have been established?	Page 3
1.003 (4i)		Projection of emerging liabilities/cash flow needs for next 10-15 years (optional)	No
1.003 (4l)		Summary of principal results (for current and prior valuation) including:	
		- participant data (counts, total pay, total annual benefits by group)	Appendix C
		- assets (market and actuarial)	II-4
		- PVB (split: active by decrement, tv, ret & ben, dis, and total)	III-2
		- PV of future benefit payments	III-2
		- AL and UAL, i.e., including amount, date, amortization period	III-2
		- PVVB (by group), non-vested PVAB, Total PVAB	V-1
1.003 (4l)		Reconciliation of PVAB, including:	
		- PVAB at beginning of year	V-3
		- changes due to amendment and/or assumptions	V-3
		- change due to decrease in discount period and benefits accrued	V-3
		- Benefits paid	V-3
		- Other changes	V-3
		- Net increase (decrease)	V-3
		- PVAB at end of year	V-3
1.003 (4l)		Pension Cost	
		- Normal cost (shown for each benefit and amount for admin expense)	IV-1
		- Payment to amortize UAL	IV-2—IV-10
		- Expected plan sponsor contribution (i.e. total of above pieces with interest, also as % of pay)	IV-11
		- Amount to be contributed by members (total and % of pay)	Pages B-3—B-4

1.003 (4l)		Past Contributions	
		- Required plan sponsor & member contribution	IV-12 and V-7
		- Actual contributions made by: plan sponsor, members, other	IV-12 and V-7
1.003 (4k)		Active member accumulated contributions with interest	V-2
1.003 (4l)		Net actuarial gain / loss	IV-2—IV-10
1.003 (4l)		Other (PVFS & PVFC at attained age and at entry age, PVFC from other sources, PVF Expected BP)	III-2
	7	**Data:**	**Page**
1.003 (4i)		Are membership demographics and financial statistics included?	C-1
1.003 (4i)		Age/service table for actives included?	C-8—C-28
1.003 (4i)		Data reconciliation?	E-2
	8	**Contribution Rate:**	**Page**
1.003 (4a)		Applicable beginning and ending dates for recommended contribution indicated?	I-7
1.003 (4b)		Are ER and EE contribution rates adequate to meet benefits?	I-7
1.003 (4b)		Are contribution rate changes necessary to achieve or preserve funding?	Yes, Executive Summary and Exhibit IV-11
1.003 (7)		Is the impact of assumption or cost method changes indicated?	NA
1.003 (9)		Were costs to be paid at a later date adjusted for interest and/or salary?	Yes I-6—I-7
1.003 (10)		Is the effective date of recommended changes no later than the next fiscal year?	Yes I-6—I-7

APPENDIX F

GLOSSARY

The following definitions are largely excerpts from a list adopted in 1981 by the major actuarial organizations in the United States. In some cases the definitions have been modified for specific applicability to the FRS.

1. Accrued Benefit:

The amount of an individual's benefit (whether or not vested) as of a specific date, determined in accordance with the terms of a pension plan and based on compensation and service to that date.

2. Accumulated Benefit Obligation (ABO):

The actuarial present value of benefits attributed by the pension benefit formula to employee service rendered before a specified date and based on employee service and compensation prior to that date.

3. Actuarial Assumptions:

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disability, and retirement; changes in compensation, rates of investment earnings, and asset appreciation or depreciation; procedures used to determine the Actuarial Value of Assets; and other relevant items.

4. Actuarial Cost Method:

A procedure for determining the Actuarial Present Value of pension plan benefits and expenses and for developing an actuarially equivalent allocation of such value to time periods, usually in the form of a Normal Cost and an Actuarial Liability.

5. Actuarially Equivalent:

Of equal Actuarial Present Value, determined as of a given date with each value based on the same set of Actuarial Assumptions.

6. Actuarial Gain/Loss:

A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions during the period between two Actuarial Valuation Dates, as determined in accordance with a particular Actuarial Cost Method.

7. Actuarial Liability (AL) :

That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of pension plan benefits and expenses which is not provided for by future Normal Costs.

8. ***Actuarial Present Value of Pension Plan Benefits***

Total projected benefits include all benefits estimated to be payable to plan members as a result of their service through the valuation date and their expected future service. The actuarial present value of total projected benefits as of the valuation date is the present value of the cost to finance benefits payable in the future, discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment.

9. Actuarial Valuation:

The determination, as of a valuation date, of the Normal Cost, Actuarial Liability, Actuarial Value of Assets, and related Actuarial Present Values for a pension plan.

10. Actuarial Value of Assets (AVA):

The value of cash, investments and other property belonging to a pension plan, as used by the actuary for the purpose of an Actuarial Valuation.

11. Amortization:

Paying an interest-bearing liability by gradual reduction through a series of installments, as opposed to one lump-sum payment.

12. Amortization Payment:

That portion of the pension plan contribution which is designed to pay interest on and to amortize the Unfunded Actuarial Liability.

- Level Percent of Pay:
  Produces a level series of payments when expressed as a percent of payroll.
  Cash payment increases in line with payroll growth assumption.

- Level Dollar:

Produces a decreasing pattern of payments when expressed as a percent of payroll.
Cash payment remains level.

13. Annual Pension Cost (APC):

Under GASB, when the Net Pension Obligation is positive, the APC is equal to the Annual Required Contribution plus the Interest on the beginning Net Pension Obligation minus the amortization of the Net Pension Obligation. When the Net Pension Obligation is negative, the APC is equal to the Annual Required Contribution minus the Interest on the beginning Net Pension Obligation plus the amortization of the Net Pension Obligation.

14. Annual Required Contribution (ARC):

Under GASB, this amount is equal to the Normal Cost plus the Amortization Payment. GASB does not require contributions to be equal to the ARC; however it requires the calculation and reporting of the ARC.

15. Entry Age Normal Actuarial Cost Method (EAN):

A method under which the Actuarial Present Value of the Projected Benefits of each individual included in an Actuarial Valuation is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit ages. The portion of this Actuarial Present Value allocated to a valuation year is called the Normal Cost. The portion of this Actuarial Present Value not provided for at a valuation date by the Actuarial Present Value of future Normal Costs is called the Actuarial Liability.

16. Funded Ratio:

Ratio of the assets of a pension plan to its liabilities.

17. Government Accounting Standards Board (GASB):

This Board sets standards of state and local accounting and financial reporting.

18. Interest Rate:

The rate used to discount projected benefit payments to determine the present value in a valuation.

19. Market Value of Assets (MVA):

The price for which an asset could be sold at a particular date. May also be referred to as the Fair Value of Assets.

20. Normal Cost (NC):

That portion of the Actuarial Present Value of pension plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method.

21. Net Pension Obligation (NPO):

Under GASB, the cumulative difference between Annual Pension Cost and the employer's contributions to the plan, including the pension liability or asset at transition, if any.

22. Present Value (PV)/ Actuarial Present Value (APV):

The value of an amount or series of amounts or cash flows payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions, including selected interest rate.

23. Projected Benefits:

Those pension plan benefit amounts which are expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age and anticipated future compensation and service credits.

24. Unfunded Actuarial Liability

The excess of the Actuarial Liability over the Actuarial Value of Assets. When the Actuarial Value of Assets exceed Actuarial Liabilities a surplus exists.

25. Valuation Date:

The date as of which the liabilities are determined.

Preliminary Results of 2014 Actuarial Experience Study

FLORIDA RETIREMENT SYSTEM

August 11, 2014

Presented by:
Robert Dezube, FSA
Matt Larrabee, FSA

Milliman

Agenda

- Introduction
- Demographic Assumptions
  - Timing of Retirement/DROP Entry
- Economic Assumptions
  - Investment Return
  - Individual Member Pay Increase
- Actuarial Methods
  - Amortization Period
  - Actuarial Cost Allocation Method
- Wrap-Up

Introduction

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Overview of an Actuarial Experience Study

- The FRS Experience Study, conducted every five years:
  - Gives policy makers information to periodically review and update valuation assumptions
  - Reviews current methods, identifying possible alternatives for consideration by policy makers

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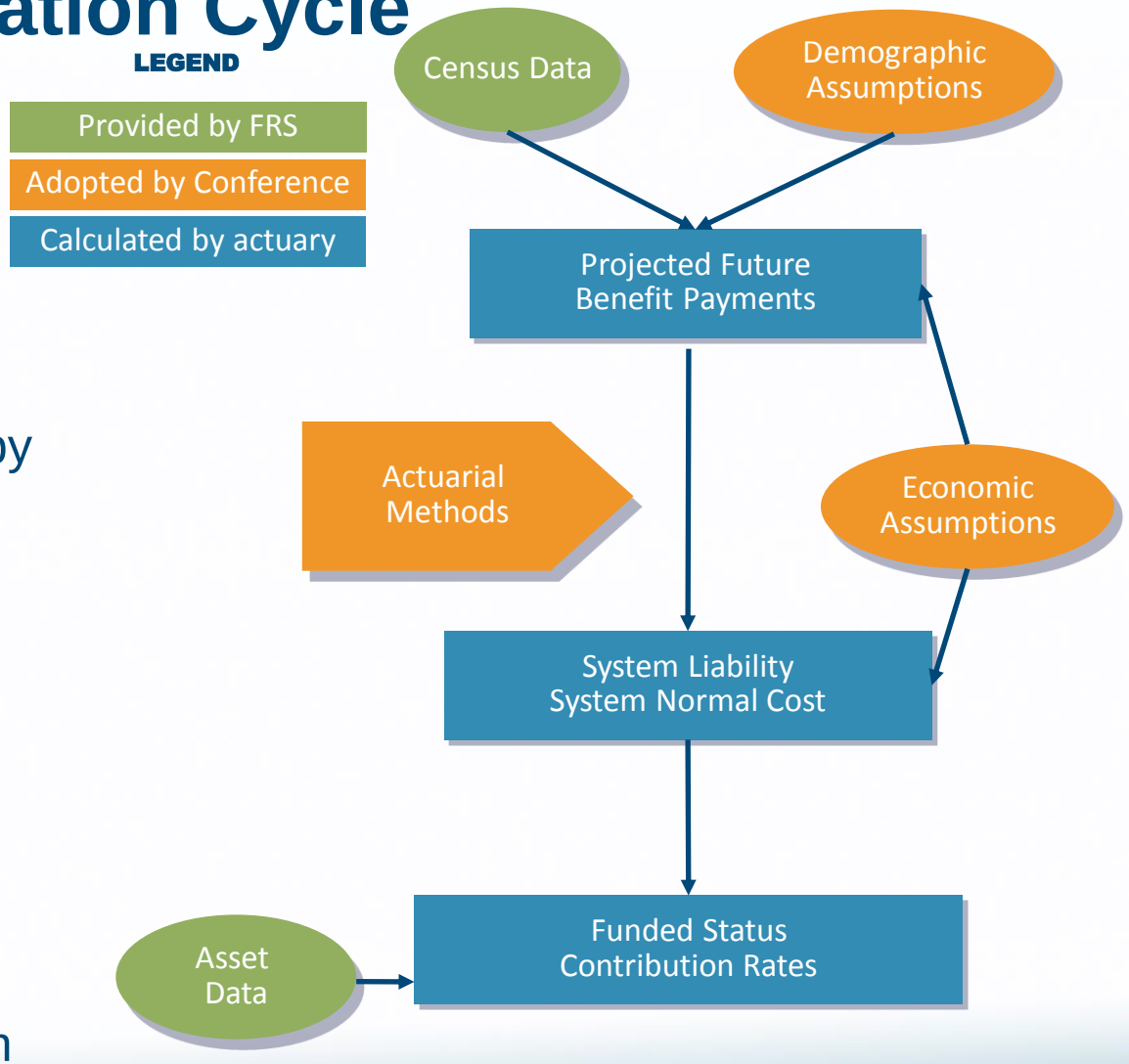
2014 Actuarial Valuation Cycle

- Today: Guidance from FRS Assumption Conference Principals
- September 8: Completion of detailed experience study report including any changes adopted by Conference
- Next Assumptions Conference: Discussion of key valuation results and quantification of any policy alternatives with Conference
- December 1: Completion of valuation report, including actuarially calculated contribution rates



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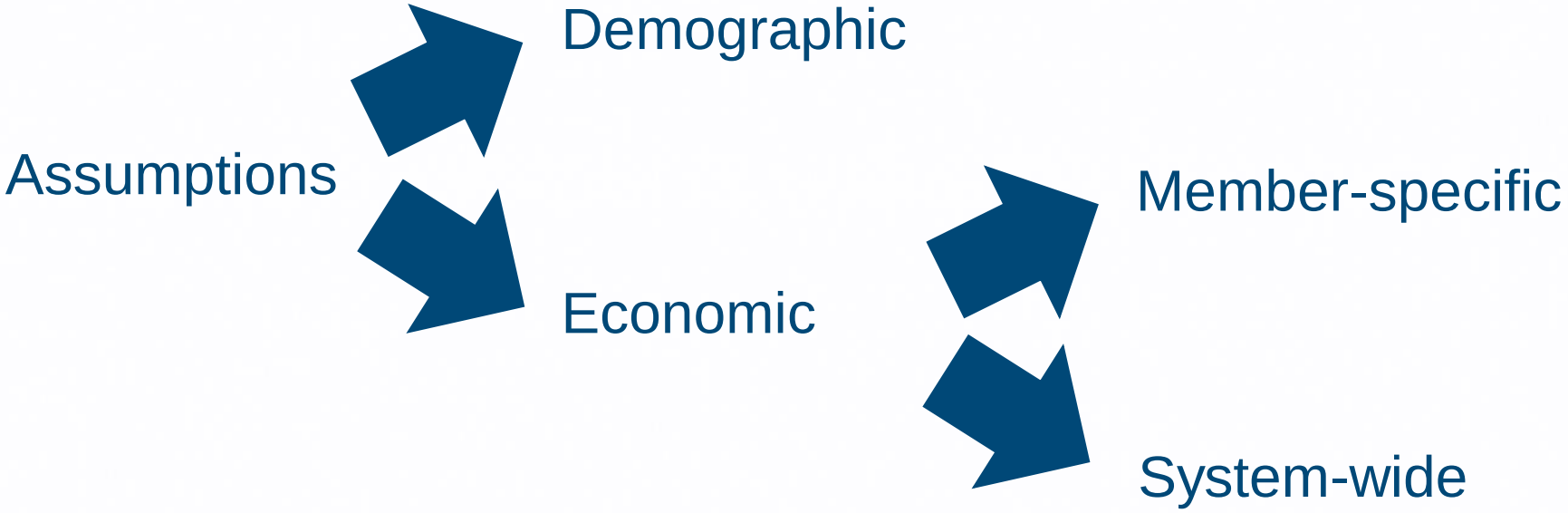
Categories of Valuation Assumptions

- There are different categories of assumptions, with assumptions affecting both the FRS and HIS valuations



Who are the Assumption Experts?

- System actuaries need assumptions for all areas that impact the projection of retirement benefits
- Areas where our expertise is foremost are:
  - Demographic assumptions
  - Member-specific economic assumptions

In both of these areas proposed assumptions are developed by analyzing historical member census data using actuarial and statistical techniques, while also being contemplative of ways in which future experience may vary from recently observed experience for reasons such as:

- Legislative changes
- Short-term economic conditions

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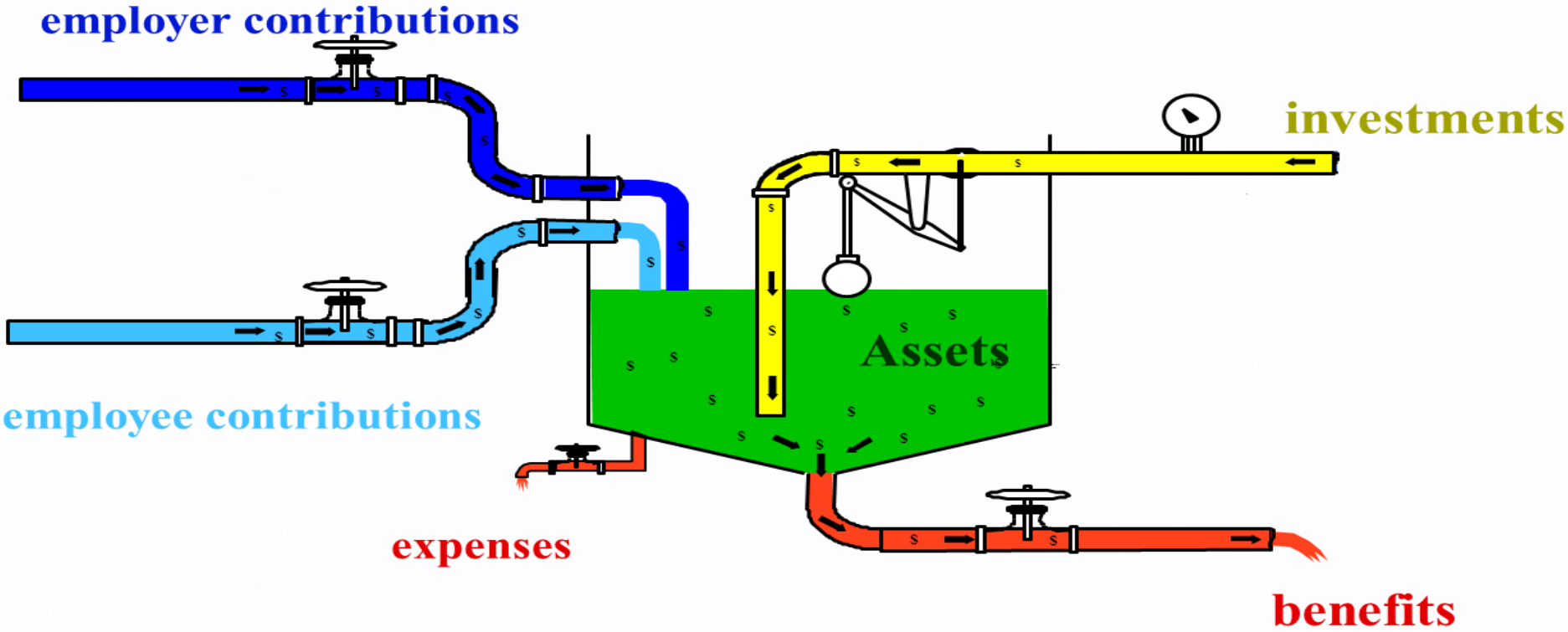
Who are the Assumption Experts?

- In which assumption areas do actuaries have expertise, but are not alone in that regard?
  - System-wide economic
- Key system-wide economic assumptions are average annual:
  - Inflation
  - Payroll growth
  - Investment return

The guidance of SBA and HEK, the outside investment consultant for System assets, is used in selecting the investment return assumption

Guidance in Setting Assumptions



- Assumptions don't determine ultimate long-term System cost
- Ultimately: Contributions + Investments = Benefits + Expenses
- Assumptions only impact the (budget) timing of cost incurrence

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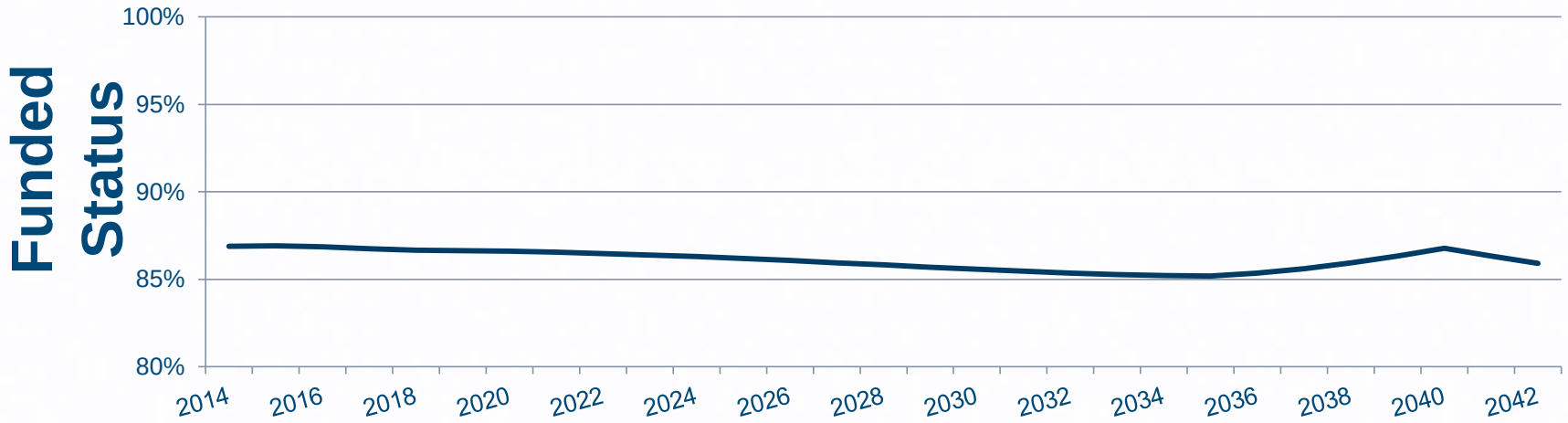
Why Do Assumptions (& Methods) Matter?

- Assumptions & methods don't determine ultimate long-term System cost, but assumptions & methods selected do determine funded status improvement if experience follows assumptions



Excerpt above from a March 2014 Milliman analysis with projected funded status if (a) actual future investments earnings are 7.75% annually, (b) all other assumptions identified in that analysis are met and (c) current methods are used

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Guidance in Setting Assumptions

- Given that assumptions impact budgeting but do not impact ultimate long-term System cost, what guiding principles should be used in selecting assumptions?
  - Identification of best estimates
  - Striving for internal consistency of assumptions
  - Focus on the long time horizon of the calculations
  - Remaining cognizant that hoping for a result:
    - Does not make it so
    - Does not affect the ultimate long-term System cost

"Math is not an opinion" - Italian saying

Guidance Needed from Today's Meeting

- To prepare for the Fall 2014 Actuarial Estimating Conference we request:
  - Approval of the demographic assumptions used for financial reporting calculations under GASB
  - For economic assumptions and actuarial methods either:
    - Identification of approved assumptions

      or

    - Identification of assumption or method alternatives to be studied for comparison at the Fall Conference

Time permitting, any Fall Conference comparative work would reflect updated 2014 investment and member census information

Demographic Assumptions

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Use of Assumptions

- Demographic and salary increase assumptions for individual members are combined with census data provided by the Division of Retirement to develop projected benefit payments
- Economic assumptions are used to state those long-term projected benefit payments as a single net present value

Overview of Demographic Assumptions

- While a variety of demographic assumptions are needed and have been studied, we will focus discussion on the most impactful ones
  - Likelihood of immediate retirement or DROP entry at first eligibility
  - Retiree mortality

These assumptions estimate the answers to two key questions:

When will benefits commence for a member?

For how long will those benefits be paid?

Overview of Demographic Assumptions

- We will illustrate our analysis for the three largest sub-groups of member class and gender (shown in decreasing magnitude of liability)
  - Regular class females
  - Regular class males
  - Special Risk class males

These three sub-groups constitute over 90% of System liability

Demographic Assumptions - Retiree Mortality

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Current Retiree Mortality Assumption

- Current assumption was last updated based on 2003 to 2008 FRS Experience Study recommendations adopted by the Assumptions Conference
- Started with a standard set of mortality tables (RP2000)
- Picked the white collar variation of that table
- Continued to use the "generational" version of that table, which reflects that mortality is likely to continue improving over time
  - Someone who reaches age 62 in 2034 will have a longer life expectancy than someone turning 62 this year

Current Retiree Mortality Assumption

- Tables further modified to match observed FRS experience
  - Regular & Special Risk males: multiplied by 90.9%
  - Regular & Special Risk females: multiplied by 95.8%
    - In the prior Experience Study, the difference in observed retiree mortality between Regular class males and Special Risk males was not statistically significant
    - In this study, a statistically significant difference existed
  - Other member classes: multiplied by lower percentages
- These modifications decreased assumed mortality to match FRS-specific experience
  - The multipliers served to increase calculated life expectancy

Selecting the Proposed Assumption

- The assumption is tested by comparing:
  - Actual retiree deaths during 2008 - 2013 period, to
  - Those expected by the modified standard table
- An actual-to-expected (A/E) ratio near 100% indicates a good assumption
  - If A/E is near 100%, the actual experience during the observation period matches the proposed assumption
- The review is done for three retiree groupings
  - Females (all membership classes)
  - Males (other than Special Risk)
  - Special Risk Males

Selecting the Proposed Assumption

- Since the prior experience study, a Society of Actuaries review indicated mortality has been improving in a different manner than that forecast by the projection scale (Scale AA) used in the current assumption
  - In response, a new projection scale (Scale BB) was developed
  - Projection Scale BB allowed us to match observed experience to standard tables

Current and Proposed Assumption

Retiree Class	Current Assumption	Proposed Assumption
Female Regular & Special Risk	Projection Scale AA 100% White Collar Multiply table by 95.8%	Projection Scale BB 100% White Collar Full table
Male Regular	Projection Scale AA 100% White Collar Multiply table by 90.9%	Projection Scale BB 50% White, 50% Blue Full table
Male Special Risk	Projection Scale AA 100% White Collar Multiply table by 90.9%	Projection Scale BB 10% White, 90% Blue Full table

Proposed Assumption

Retiree Class	Actual Deaths	Expected Deaths	Actual / Expected Ratio
Female Regular & Special Risk	20,191	20,159	100.2%
Male Regular	14,596	14,674	99.5%
Male Special Risk	1,894	1,892	100.1%

Life Expectancy – Retiree Turning 62 in 2014

Retiree Class	Current Assumption	Proposed Assumption	Change
Female Regular & Special Risk	86.4	87.6	1.3
Male Regular	85.1	84.6	(0.5)
Male Special Risk	85.1	84.0	(1.1)

Life Expectancy – Retiree Turning 62 in 2034

Retiree Class	Current Assumption	Proposed Assumption	Change
Female Regular & Special Risk	87.2	89.5	2.3
Male Regular	86.6	86.9	0.3
Male Special Risk	86.6	86.3	(0.3)

Demographic Assumptions - Timing of Retirement / DROP Entry

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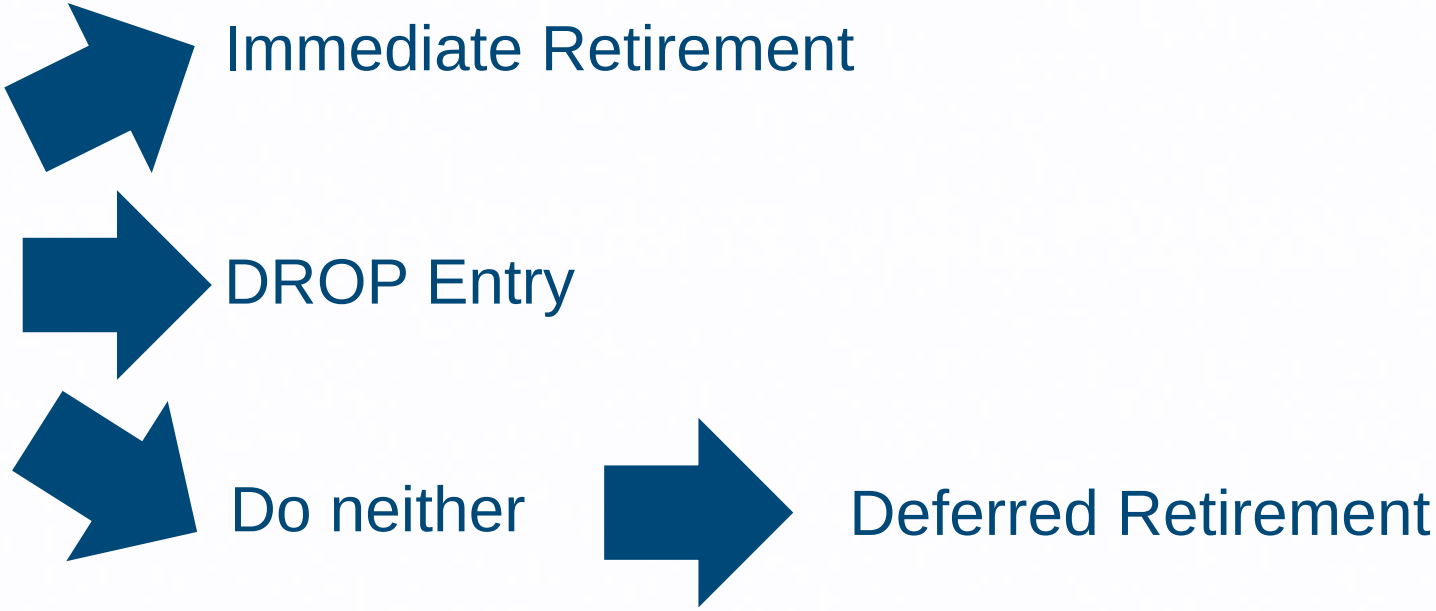
Member Decisions at Initial Eligibility

- When a member first reaches eligibility for unreduced retirement benefits, there are three possible paths



Our study reviewed observed experience for each path

Comparison Basis for Observed Experience

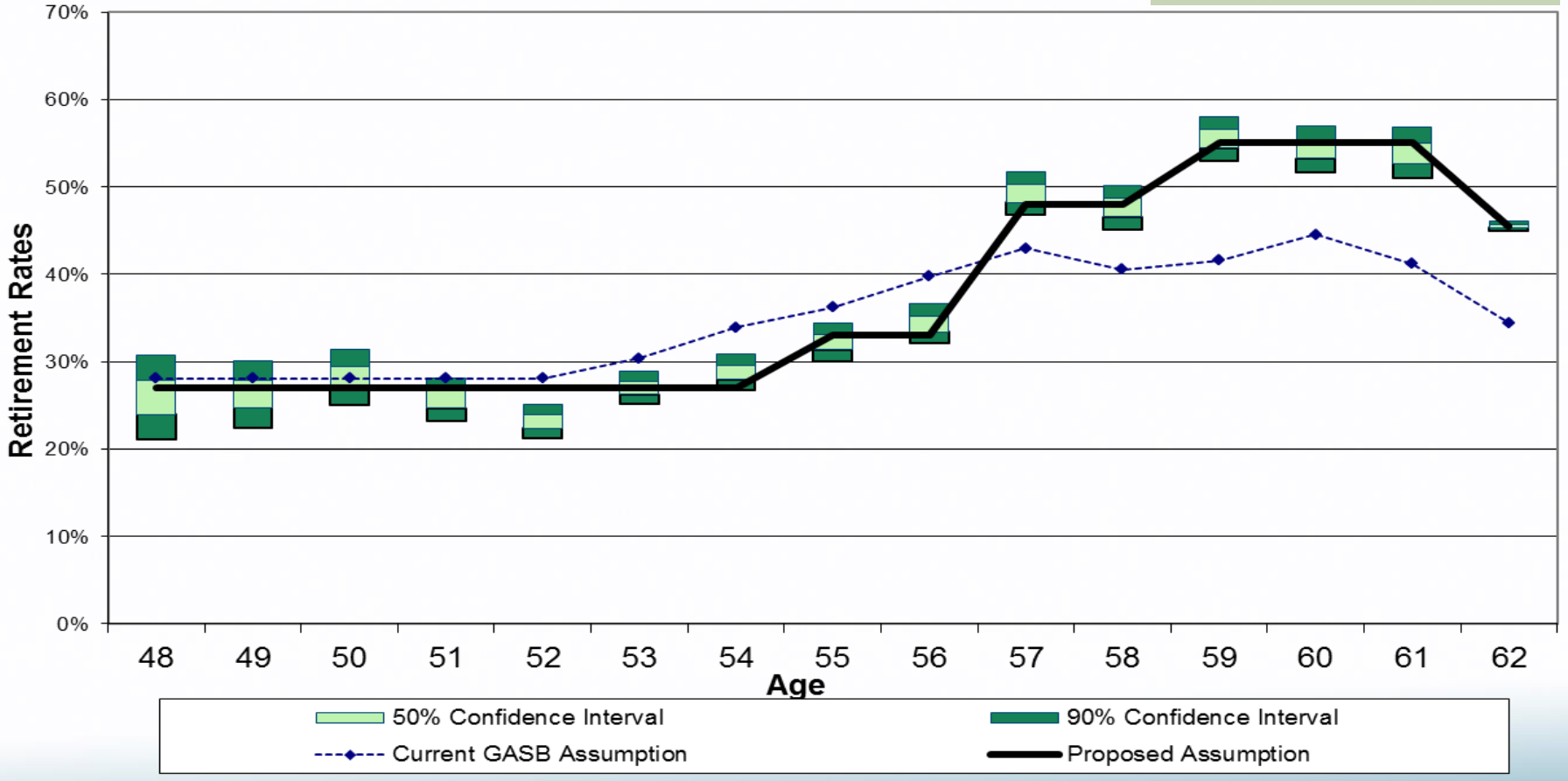
- We compare the observed experience to the assumptions we use currently for financial reporting calculations
- GASB, which sets accounting standards, mandates that entry into DROP is treated as equivalent to immediate retirement in setting assumptions for financial reporting
  - The GASB assumptions from the prior experience study can be seen as the "best estimate" assumptions
- The current retirement assumptions used for determining actuarially calculated contribution rates are more complicated due to legislative directives regarding the DROP
  - Those assumptions are covered later in the presentation

Observation Period Data Used

- In establishing confidence intervals for DROP entry, experience for plan year 2010-2011 was excluded
  - Experience for the two plan years prior to that year was similar to the experience for the two plan years subsequent to that year
- In establishing confidence intervals for immediate and deferred retirement, experience for all five years was used
  - Plan year 2010-2011 experience was similar to that for the other four plan years studied

DROP Entry (Tier I)
Regular Class Females

Retirement assumptions start at age 48



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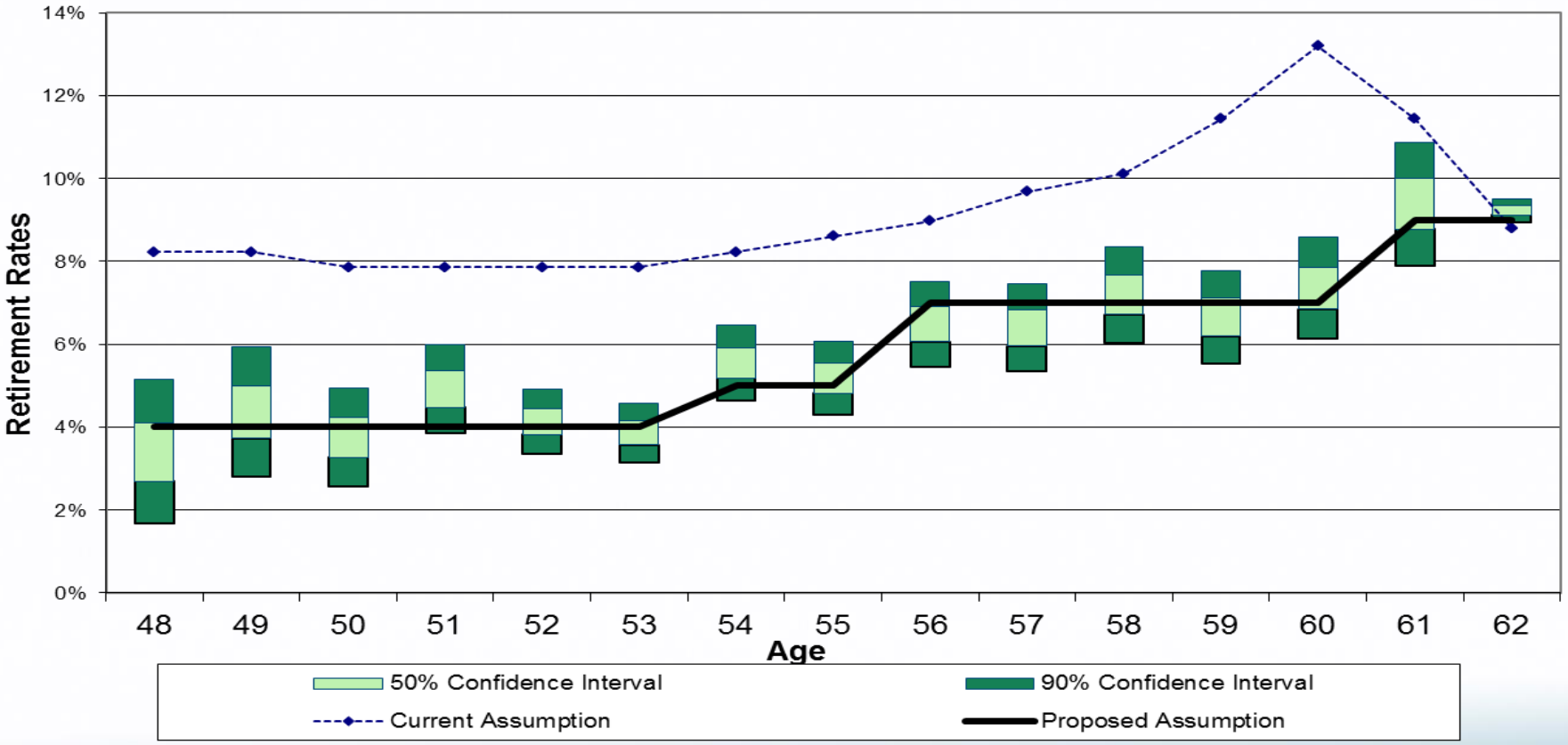
Immediate Retirement (Tier I)
Regular Class Females



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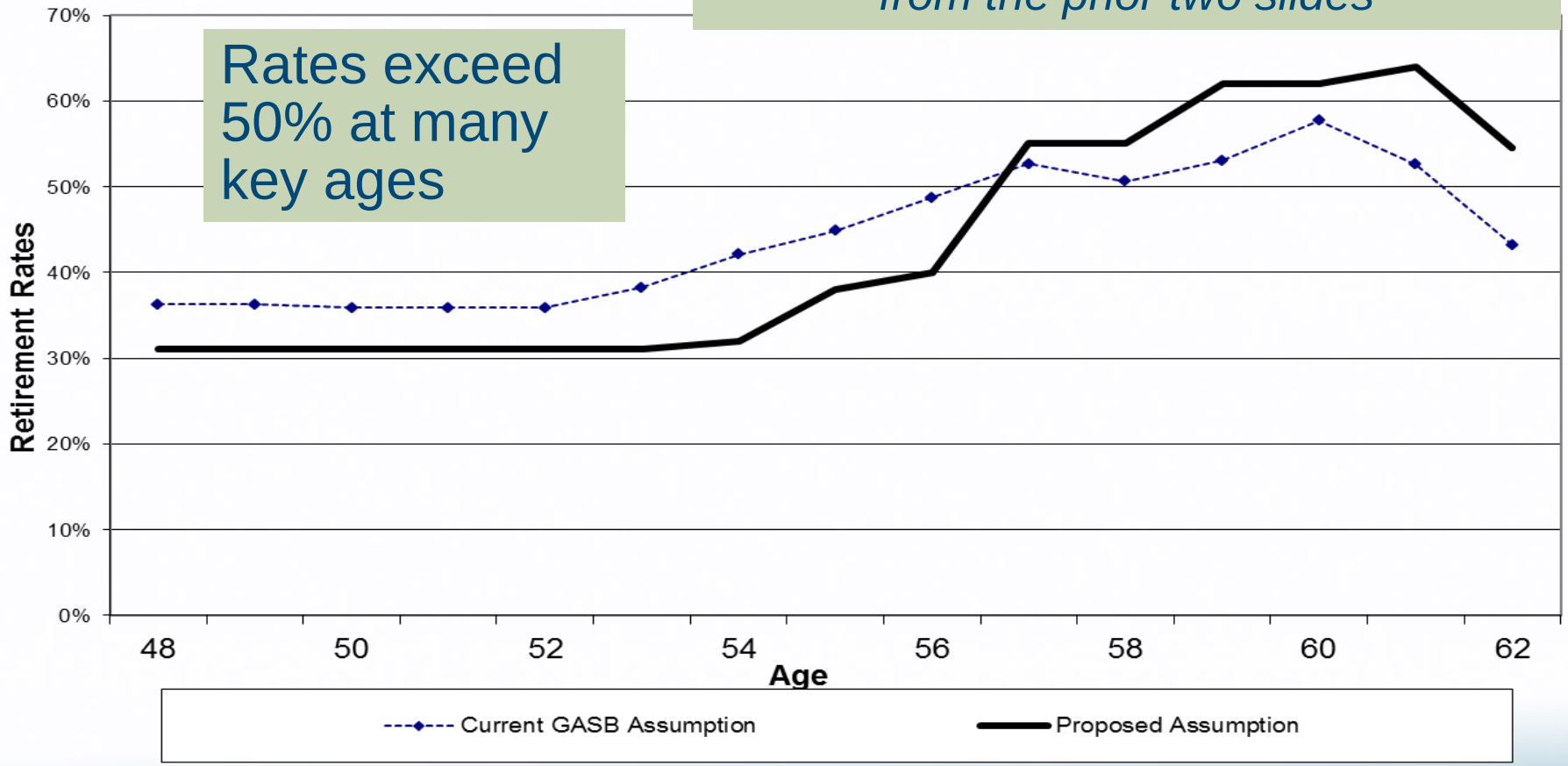
Combined DROP/Immediate Retirement (Tier I) Regular Class Females

This chart combines the assumptions from the prior two slides

Rates exceed 50% at many key ages



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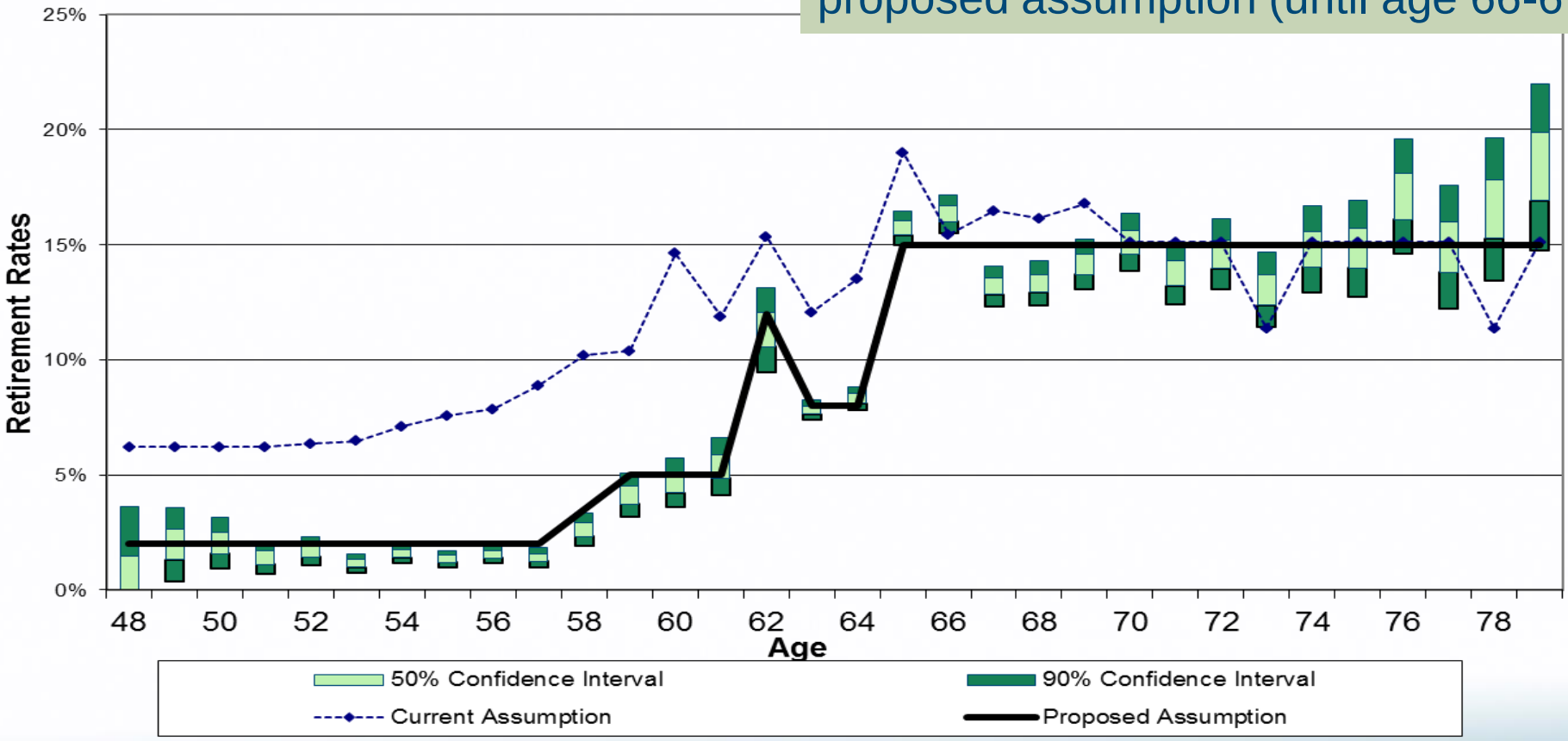
Deferred Retirement (Tier I)
Regular Class Females

Age 55 member defers retirement nearly four more years under proposed assumption (until age 66-67)



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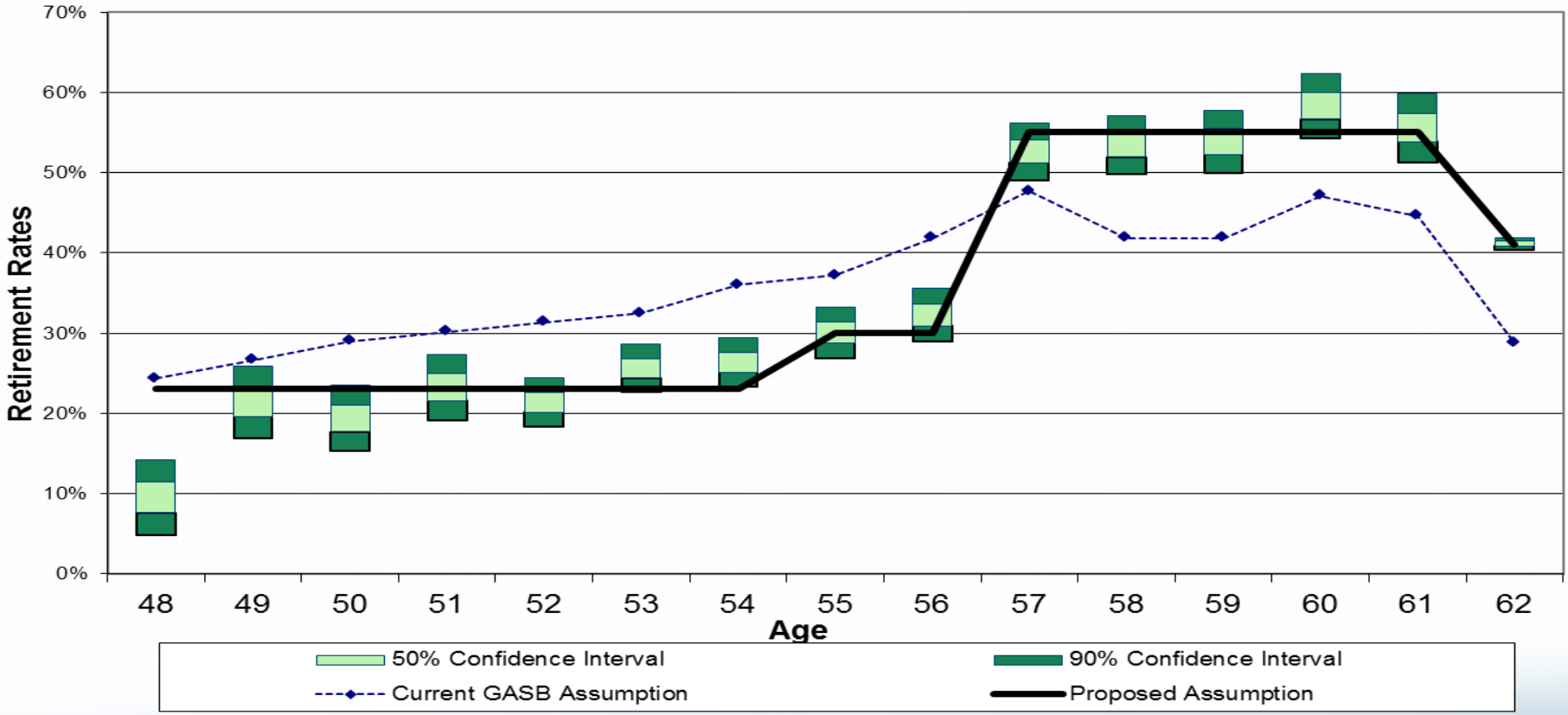
DROP Entry (Tier I)
Regular Class Males

Retirement assumptions start at age 48



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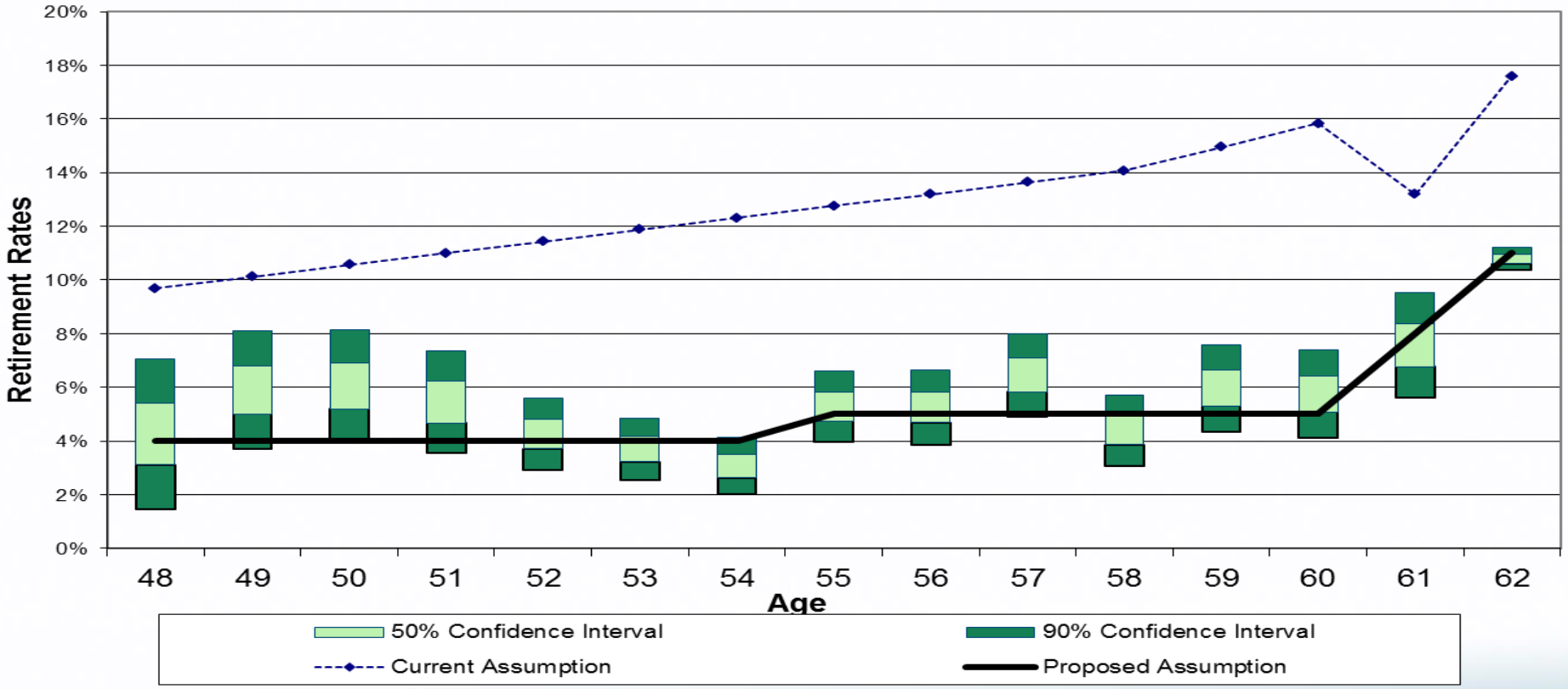
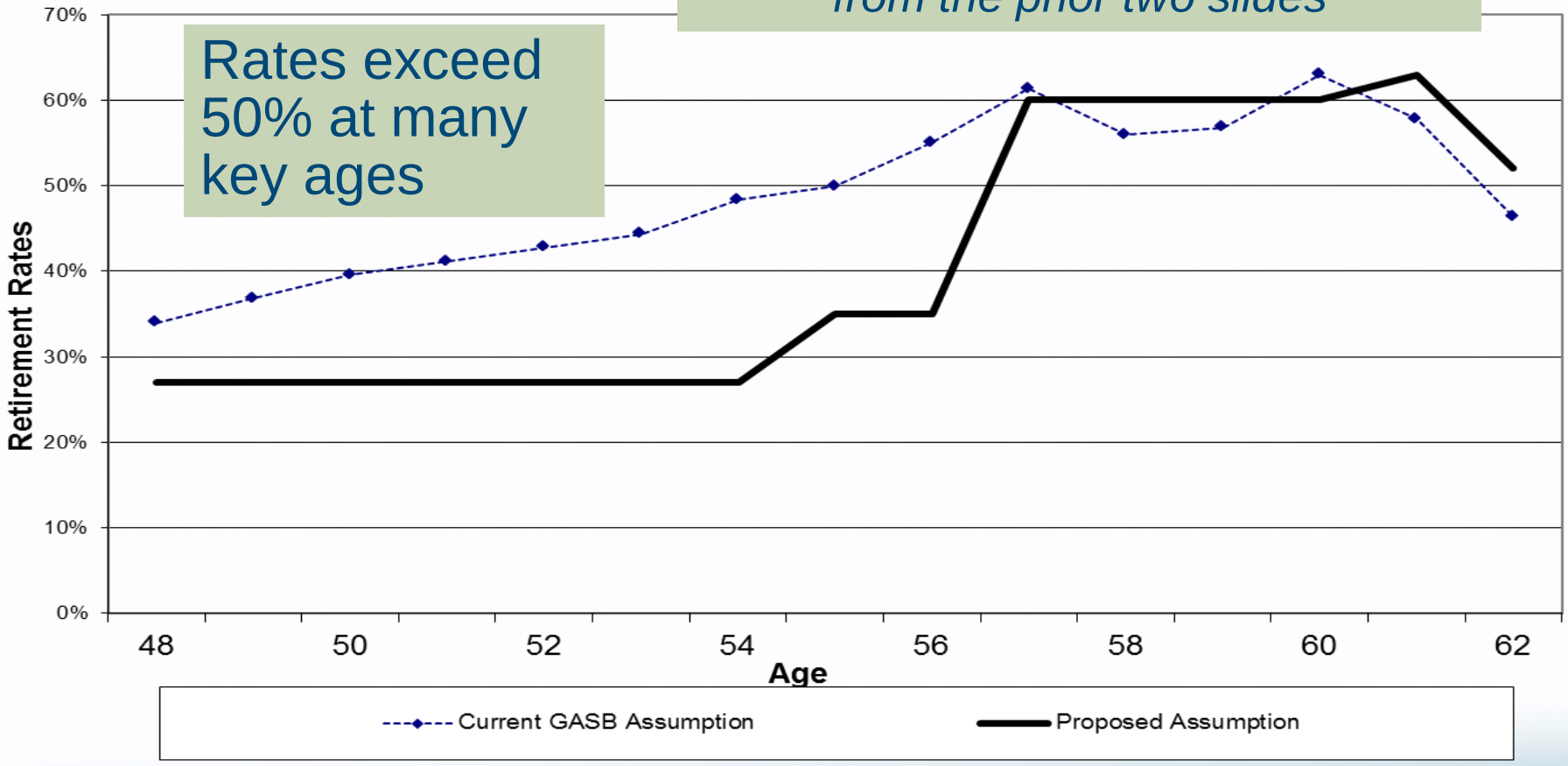
Immediate Retirement (Tier I)
Regular Class Males



Combined DROP/Immediate Retirement (Tier I) Regular Class Males

This chart combines the assumptions from the prior two slides

Rates exceed 50% at many key ages



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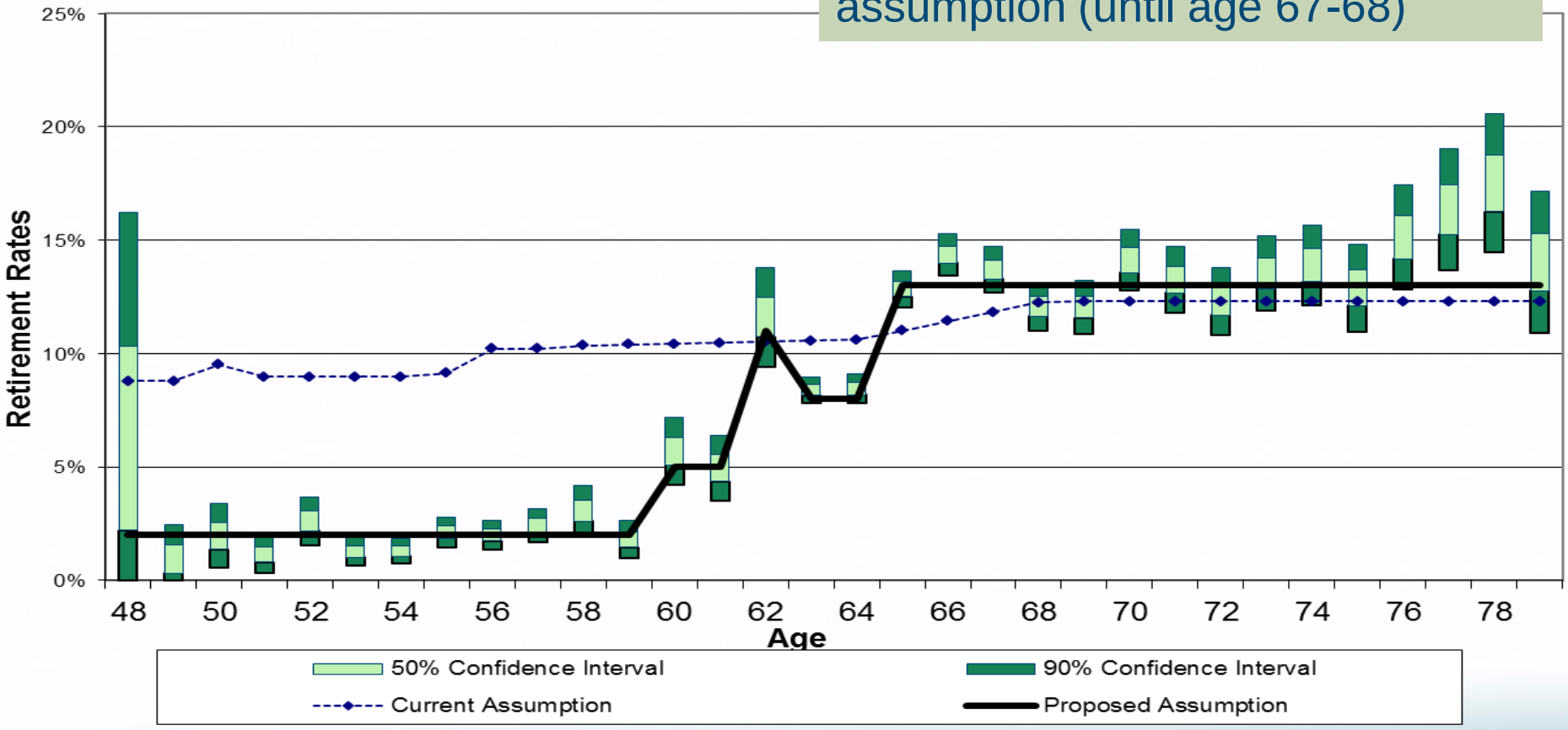
Deferred Retirement (Tier I)
Regular Class Males

Age 55 member defers retirement four more years under proposed assumption (until age 67-68)



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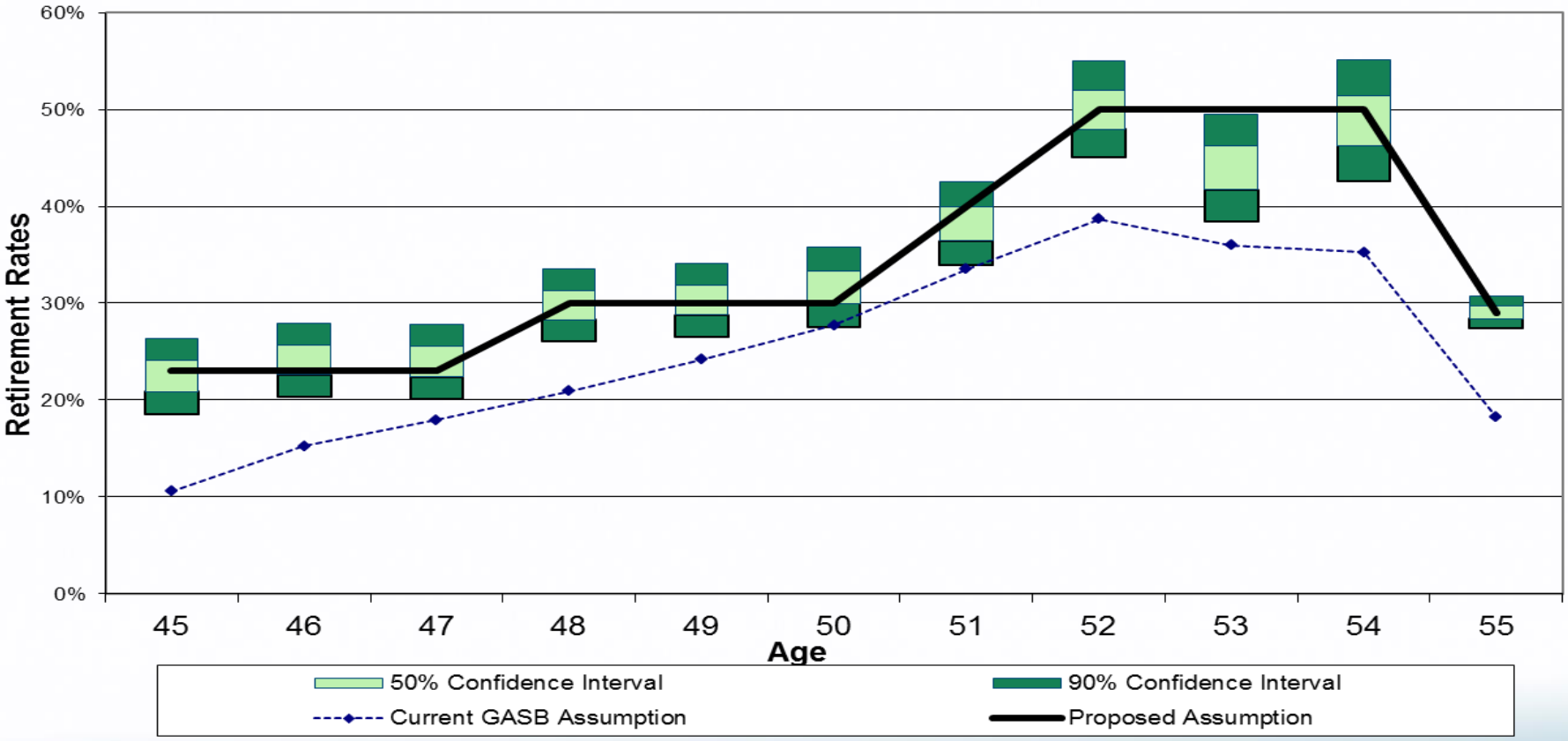
DROP Entry (Tier I)
Special Risk Class Males

Retirement assumptions start at age 45



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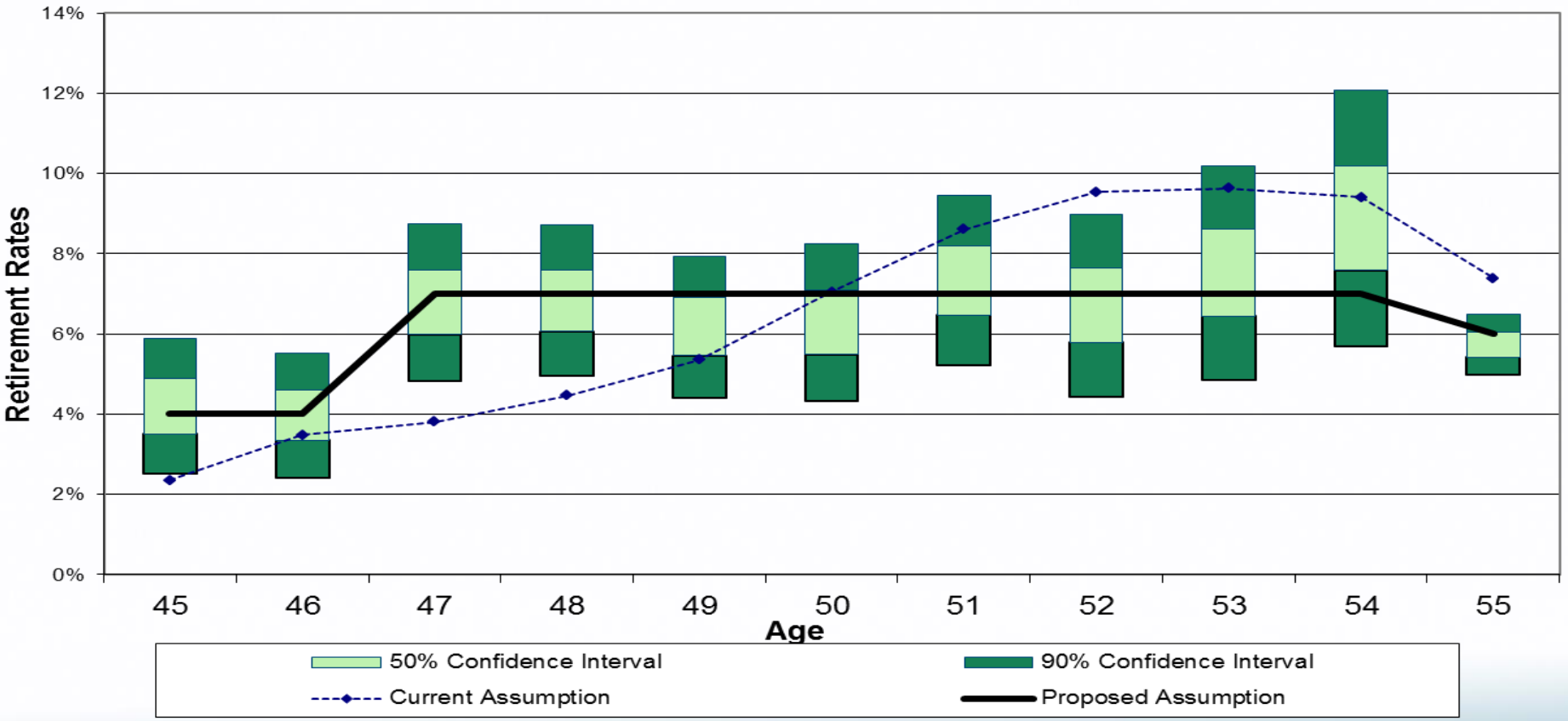
Immediate Retirement (Tier I)
Special Risk Class Males



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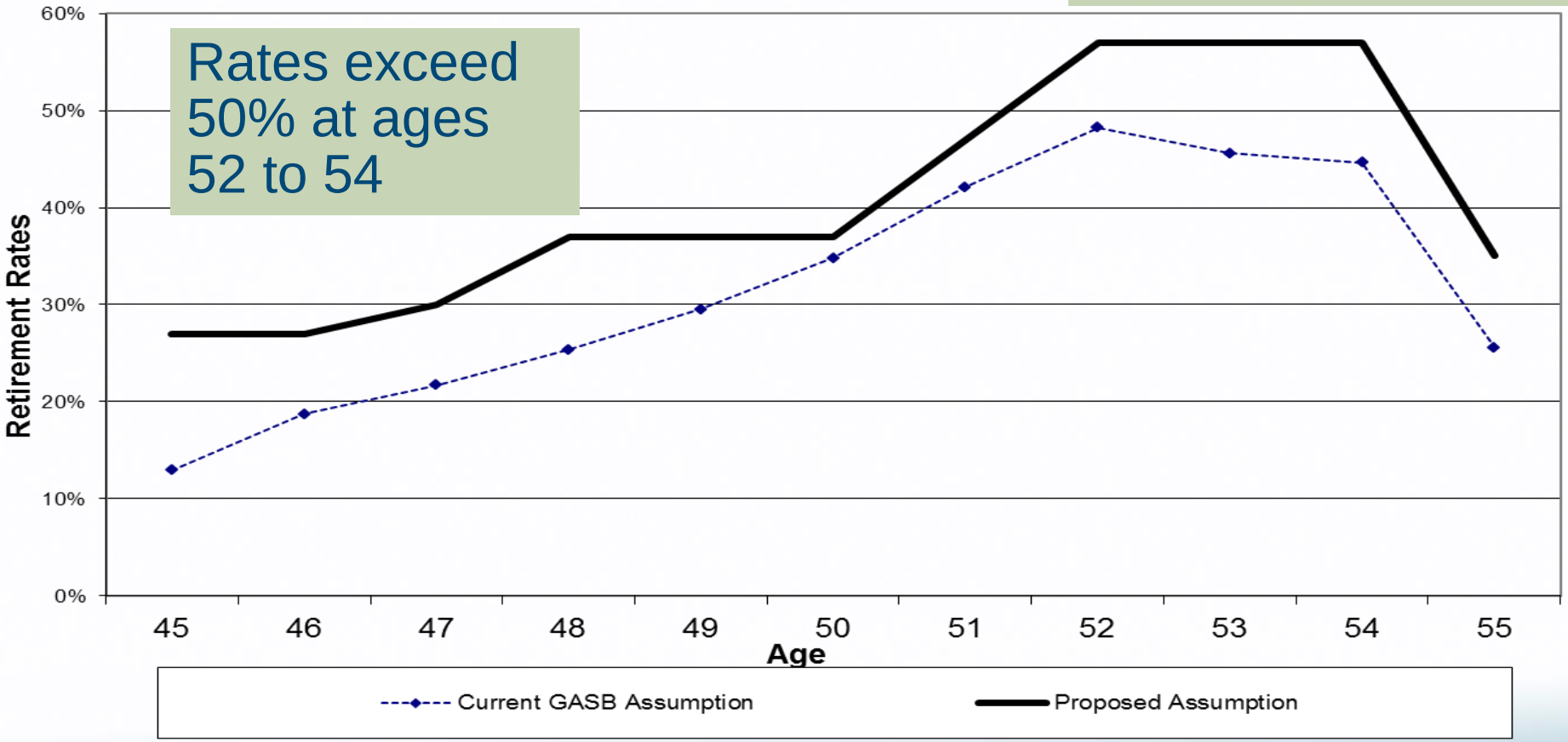
Combined DROP/Immediate Retirement (Tier I) Special Risk Class Males

This chart combines the assumptions from the prior two slides



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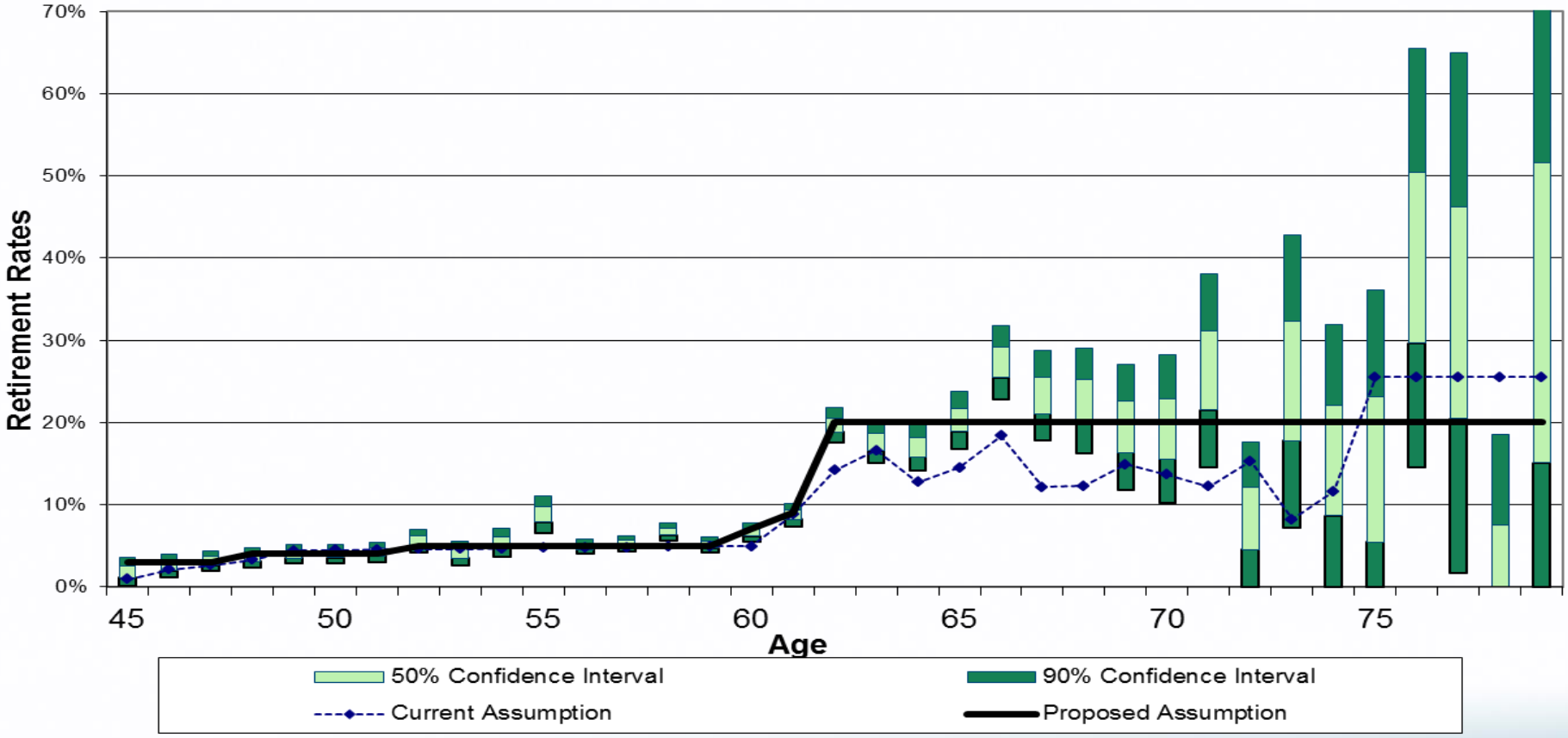
Deferred Retirement (Tier I) Special Risk Class Males

Time until deferred retirement for age 50 member essentially unchanged (until age 61-62)



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Summary –Timing of Retirement/DROP Entry

- Differences in proposed assumptions compared to the current GASB assumptions:
  - DROP entry is higher at ages 57+ for Regular class
  - DROP entry is higher at all ages for Special Risk class
  - Immediate retirement is lower below age 62 for Regular class females, and at all ages for Regular class males
  - Deferred retirement is lower below age 70 for Regular class females, and below age 62 for Regular class males
- For DROP entry, the current assumption used for calculating contribution rates differs from the GASB assumptions
  - This is covered at length in the next section

Demographic Assumptions -

DROP Funding Calculations and Retirement Timing Assumptions

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Background

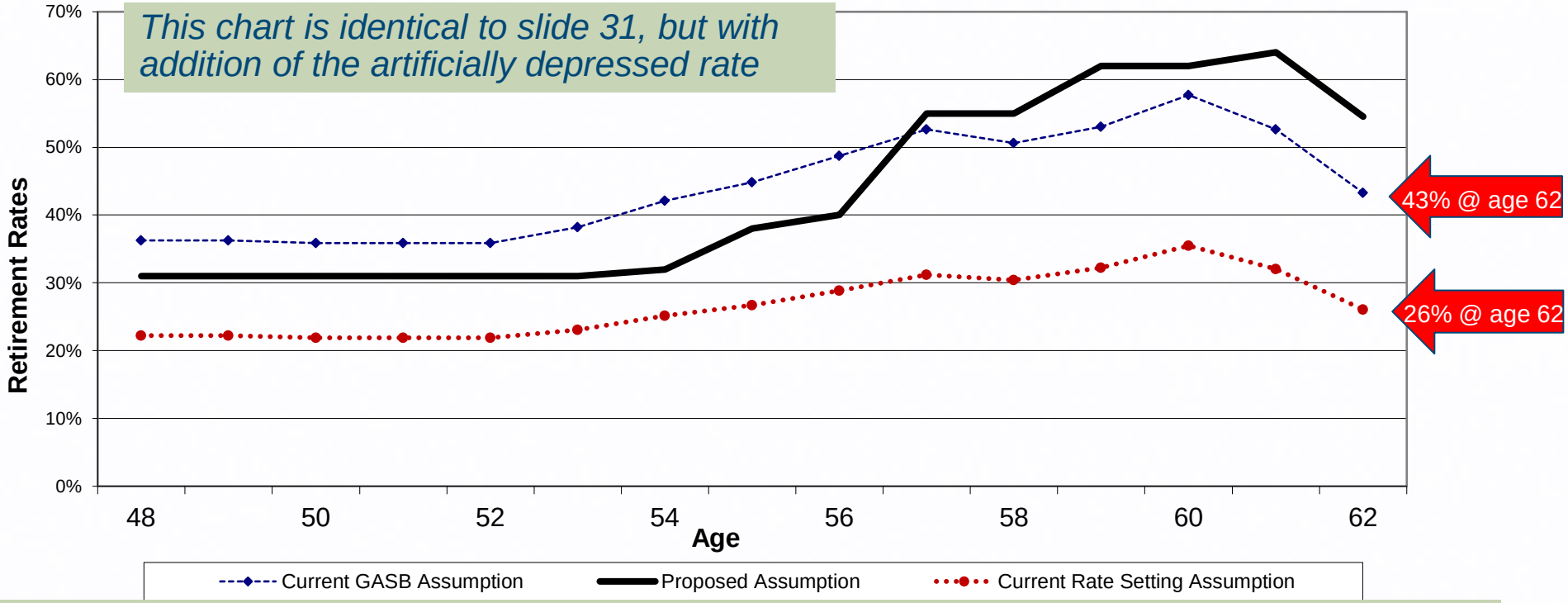
- DROP started in 1998
  - A study completed prior to the DROP's implementation showed a material cost increase from its introduction
- Current method of funding DROP was designed so that implementation of the DROP would not affect the normal cost contribution rates of the various membership classes
- The current funding method has two cornerstone pieces
  - Uniform DROP payroll charge for all membership classes
  - Artificially depressed class-specific retirement assumptions to calculate actuarially determined contribution rates as if the DROP did not exist

Artificially Depressed Retirement Rates

- Retirement assumptions used for financial reporting calculations treat either DROP entry or immediate retirement as equivalent, consistent with GASB requirements
  - Those assumptions are based on best estimates of observed experience, and recommended adjustments were presented in the previous section
- Assumptions used to determine actuarially calculated class-specific contribution rates are different and lower
  - They are artificially depressed by multiplying the likelihood of DROP entry by one-half, to estimate what the initial eligibility retirement rates might be if the DROP did not exist

Artificially Depressed Retirement Rates
Regular Class Females

This chart is identical to slide 31, but with addition of the artificially depressed rate



The retirement assumptions used for contribution rate setting understate the likelihood of DROP entry, which is nearly equivalent to retirement from a System financial perspective

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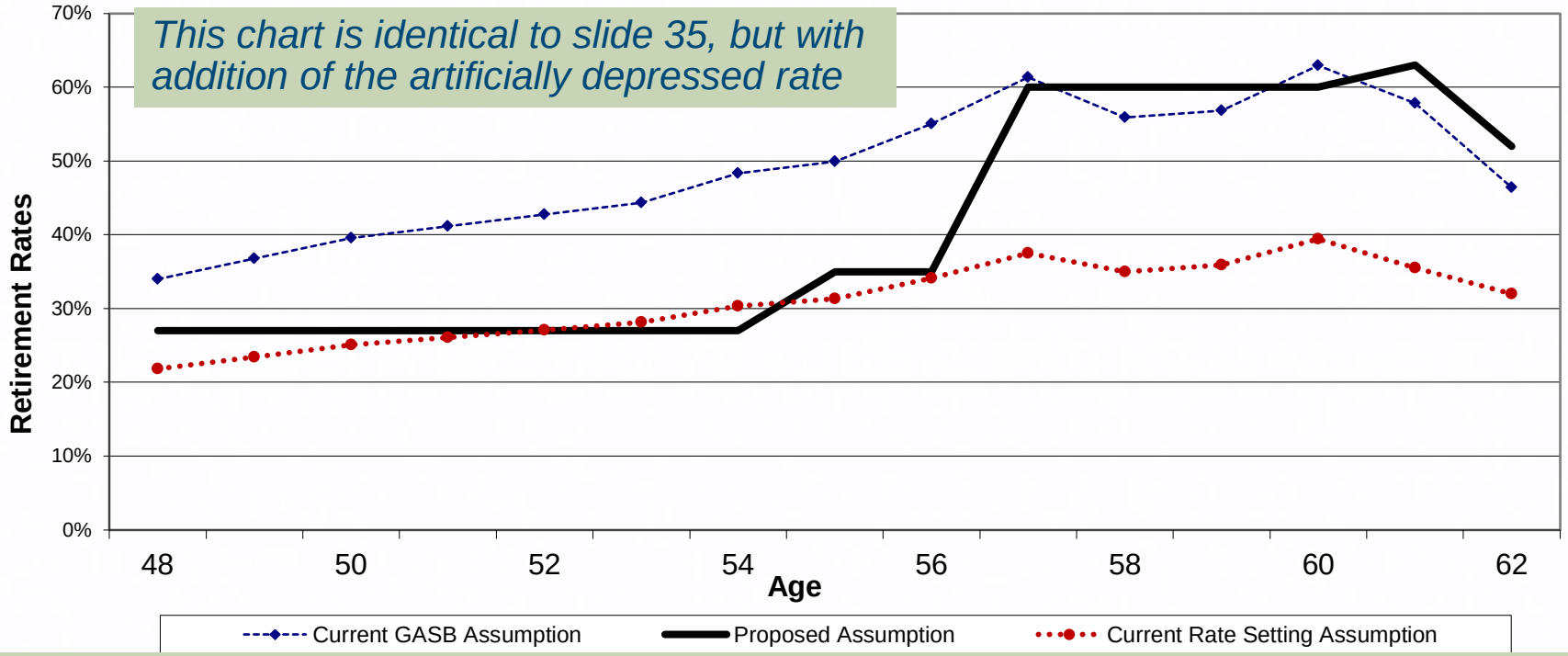
Artificially Depressed Retirement Rates
Regular Class Males

This chart is identical to slide 35, but with addition of the artificially depressed rate



The retirement assumptions used for contribution rate setting understate the likelihood of DROP entry, which is nearly equivalent to retirement from a System financial perspective

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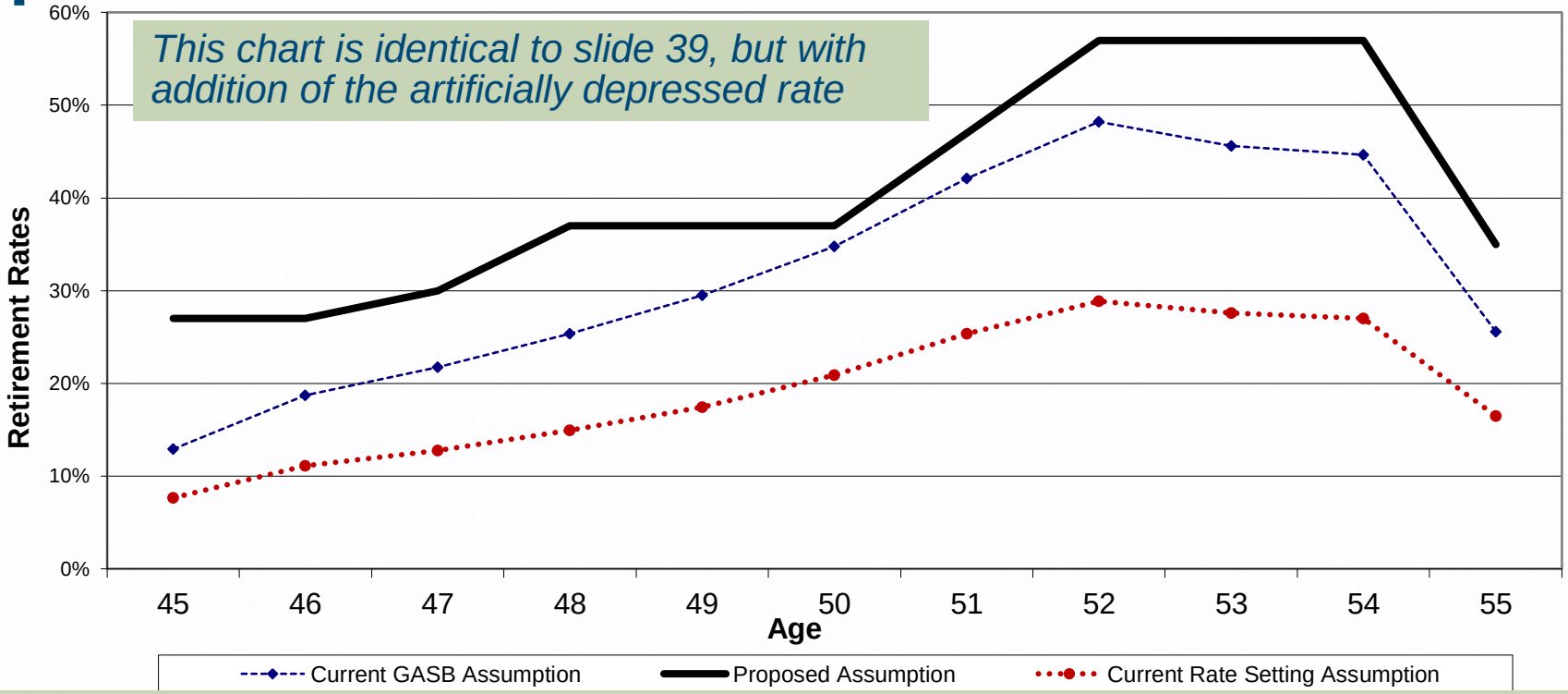
Artificially Depressed Retirement Rates
Special Risk Class Males



The retirement assumptions used for contribution rate setting understate the likelihood of DROP entry, which is nearly equivalent to retirement from a System financial perspective

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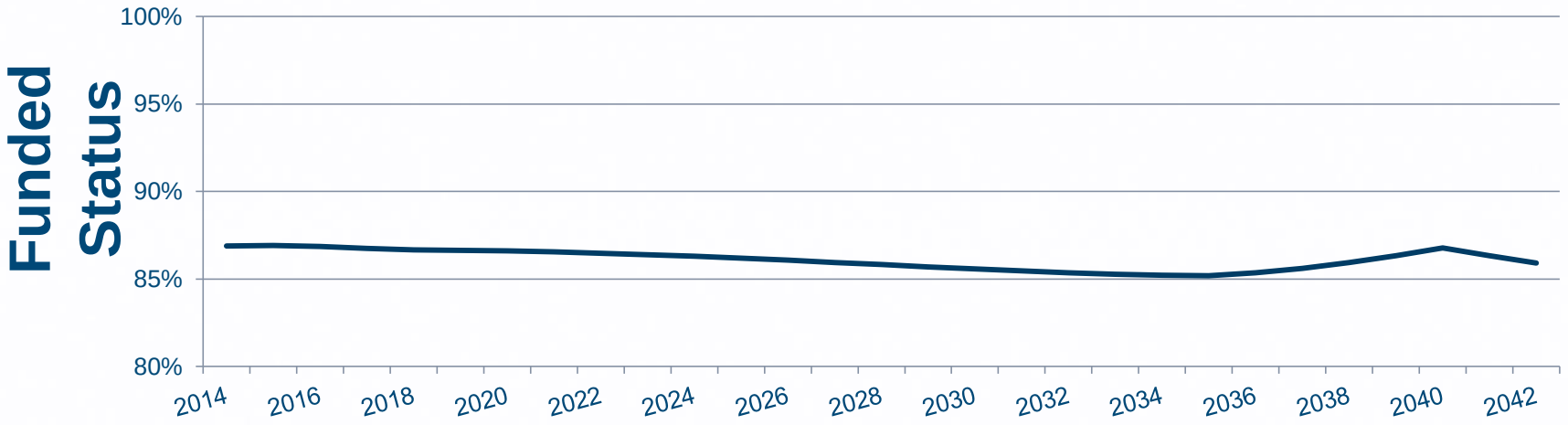
Artificially Depressed Retirement Rates

How does the use of artificially depressed retirement rates affect the projected System funded status in future years?



Excerpt above from a March 2014 Milliman analysis with projected funded status if (a) actual future investments earnings are 7.75% annually, (b) all other assumptions identified in that analysis are met and (c) current methods are used

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DROP Entry vs. Subsequent Retirement

- The most common DROP entry opportunity is for Regular class females turning age 62
  - Our current assumptions estimate that members in that group who choose not enter the DROP or immediately retire work an additional seven years on average
    - That estimate is unchanged in our proposed assumptions
- From a System financial perspective, it is about 20% more expensive for an age 62 Regular class female to enter DROP than to work seven additional years without entering DROP
  - Foregone benefits are more valuable than starting benefit increases from additional service, pay and higher accrual rates

DROP Entry vs. Subsequent Retirement

- So what happens for the group in question (Regular class females turning age 62 and reaching DROP eligibility) when:
  - 26%* of that group have been assumed to enter the DROP (or retire immediately) per the artificially depressed rate-setting assumptions, but
  - 43%* actually do enter the DROP or retire immediately, mirroring current GASB assumptions?

Answer: An "actuarial loss" occurs as more people take the expensive option than the rate-setting assumptions anticipated

*See slide 45 for illustration of assumed retirement rates

DROP Entry vs. Subsequent Retirement

- An actuarial loss is an increase in liability for experience that differs from assumption
  - The liability for the group in question increases by 3%-4% when the higher than estimated (by the assumptions used to set contribution rates) number of entries into the DROP occur
- This dynamic dampens System funded status improvement
  - Each year a new group of members reach DROP eligibility, more enter DROP than estimated by the artificially depressed assumptions used for setting contribution rates, and new actuarial losses arise

DROP Contribution Rate Calculations

- We recommend a change so that:
  - Both contribution rate-setting and GASB calculations would use best-estimate assumptions for DROP entry, instead of the current approach of using artificially depressed rates for contribution rate-setting calculations
- In other words, the recommended change would replace the current bifurcated rate approach for the retirement assumption with a single rate approach
  - Using slides 45-47 as examples, the single solid line would replace the two dashed lines

DROP Contribution Rate Calculations

- This change would lead to better prefunding of DROP during each member's working career, consistent with the prefunding of other System benefit features
- A uniform rate to be charged to DROP payroll could still be calculated to be consistent with legislative directives

Demographic Assumptions - Other Assumptions & Wrap-up

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Other Demographic Assumptions

- We compared observed experience versus expected experience under current assumptions for other demographic events
- For each of the following assumptions, observed experience was reasonably close to current assumptions, with any proposed assumption changes minor in nature and not materially affecting liability or System-average contribution rate calculations
  - Termination of employment prior to unreduced retirement
  - Non-duty-related disability incidence
  - Disability mortality
  - Active member mortality

Duty-Related Disability Assumptions

- Observed incidence of duty-related disability were compared to the expected incidence based on current assumption
- Actual disability incidence was well below expected for Special Risk class and, collectively, for all other membership classes
  - As such, a modification to assumption is proposed
- Proposed rates are set to mirror observed FRS experience
- Rates vary by gender and age, and Special Risk has different rates than other membership classes
  - Male disability incidence approximately twice female incidence
  - Special Risk incidence approximately nine times that for other membership classes

Demographic Assumptions Wrap-Up

- We propose approval of the demographic assumptions summarized in this section for use in 2014 actuarial valuation calculations for both of the following purposes:
  - Actuarially calculated contribution rates
  - GASB financial reporting

Demographic Assumptions Wrap-Up

- Estimated System average impact of the proposed changes in this section on the 2013 actuarial valuation would have been:

Metric	Approximate Effect
Unfunded Actuarial Liability (UAL)	-$1.7 billion
Normal Cost Rate	0.0% of affected payroll
UAL Rate	-0.3% of affected payroll

- The UAL decrease is due to the effect of the mortality assumptions for classes other than Regular class
- The proposed elimination of the artificially depressed retirement rates and the increase in average time worked prior to deferred retirement offset each other

Economic Assumptions

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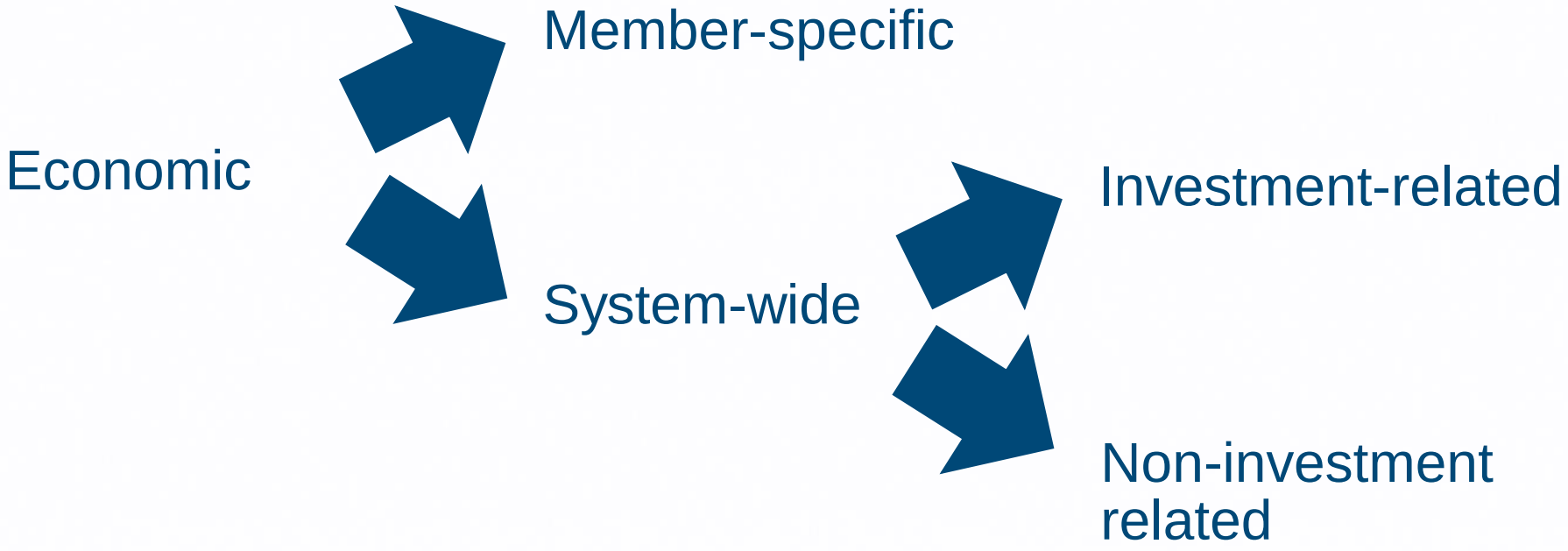
Categories of Economic Assumptions

- There are differing categories of economic assumptions



Economic Assumptions – Inflation & System Payroll Growth

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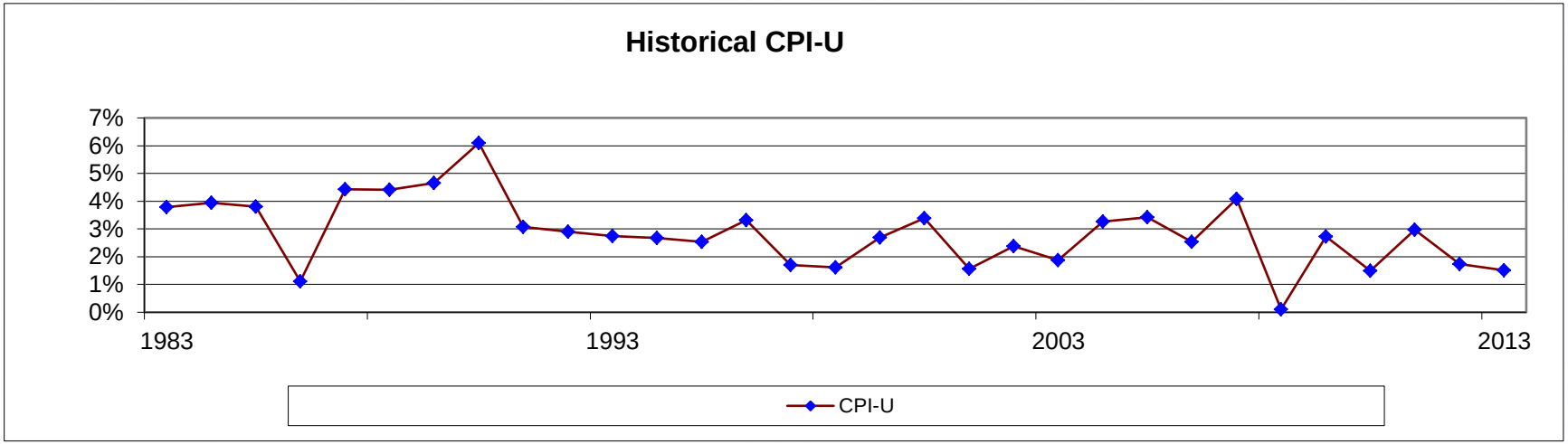
Economic Assumptions

Inflation



- Inflation assumption affects all other economic assumptions, including investment return, payroll growth, and individual member pay increases
- Over the past 30 years average inflation has been 2.82%, while over the past 15 years the average was 2.38% (calculated as a geometric annual average)

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Economic Assumptions

Inflation

- TIPS yields give a market estimate of future inflation

As of 7/31/2014	10-Year	30-Year
Treasury Yield	2.58%	3.32%
TIPS Yield	0.29%	0.96%
Break-even Inflation	2.29%	2.36%

- Social Security's intermediate long-term assumption is 2.70%
  - Combined with its lower near-term assumption, it produces a 30-year average of 2.60%
- The 30-year inflation assumption for HEK/SBA is 2.30%
- We recommend an assumption decrease from 3.00% to 2.50%

Economic Assumptions

System Payroll Growth

- The System payroll growth assumption is an important component of the calculations to amortize the UAL in determining actuarially calculated contribution rates
- Theoretically, payroll growth equals inflation plus real wage growth if active member headcount remains constant
- We recommend an assumption decrease from 4.00% to 3.25%

	Current	Proposed
Inflation	3.00%	2.50%
Real Wage Growth	1.00%	0.75%
Payroll Growth	4.00%	3.25%

Economic Assumptions – Investment Return

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Uses of the Long-Term Return Assumption

- As a “discount rate” for establishing the:
  - Actuarial accrued liability, which is a net present value
  - The associated unfunded actuarial liability (UAL)
- Component of the amortization factor used to calculate the contribution plan to eliminate existing UAL over time if future experience (investment-related and otherwise) follows assumptions and calculated contributions are made

Reflecting expectations for future average annual investment earnings, the assumption helps identify a prudent glide path for employer contribution rates

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Effect of the Assumption on Amortizations

- At the current 7.75% investment return assumption, not enough money is on hand today to fully satisfy obligations
  - The most recent UAL estimate is $20 billion (on a market value of assets basis) from the 2013 actuarial valuation
- To address the UAL, an installment payment schedule with an articulated amortization period is developed with three key components setting the annual payment level
  - Investment return assumption
  - Payroll growth assumption
  - Amortization period
- The installment plan is the “UAL Rate” part of employer rates

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Setting the Investment Return Assumption

Given that we do not know what the actual investment earnings will be, how should one proceed?

- Prudently select a best estimate
- Solicit forecasts from investment professionals
- Recognize that hoping for a result does not make it happen; the assumption does not affect actual investment returns
- Don’t be myopic --- the objective is to make a sound long-term estimate, not to get a single individual year right
- Neither ignore historical results nor be 100% beholden to them
- Since actual results will vary from assumption, review the forecasts’ probability ranges and consider a margin for variance

Investment Return Projections

- We have developed 30-year investment return projections based on:
  - New target asset allocation for FRS
  - Market outlook assumptions developed by Milliman's credentialed investment professionals
- Given the inherent uncertainty of future investment returns, model results are stated as probability ranges
- Today's speakers are not credentialed investment advisors

Milliman Investment Return Model

- Based on FRS newly identified target asset allocation
- Model results in table are geometric annual average net returns, stated as nominal returns, rounded to the nearest 0.1%

Percentile	30 Year Average
65th	7.7%
60th	7.4%
55th	7.2%
50th	**6.9%**
45th	6.6%
40th	6.3%
35th	6.0%

- Milliman model is based on a series of average annual real returns by asset class, plus asset class correlations
- Based on 2.50% inflation assumption and 0.25% deduction for plan expenses
- Model single-year arithmetic mean nominal return is 7.56%
- Model 50th percentile real return (net of inflation) is approximately 4.3%

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HEK/SBA Investment Return Model

- The HEK model is developed on a real return (i.e., return in excess of inflation) basis
  - Investment Policy Statement currently has a long-term goal of 5% real return (net of expense)
- Asset allocation policy is shaped to achieve this goal, using annual updates of assumptions and asset-liability analysis over 15 future years
- Current HEK/SBA assumptions show a 5% real return has more than a 50% probability (51% over 15 years, 54% over 30 years)
- On that basis nominal net returns in the HEK/SBA model are **7.66%** over 30 years (based on a 2.3% inflation assumption)

Effects of Lowering the Return Assumption

- A lower investment return assumption produces higher calculated liabilities and higher near-term actuarially calculated contribution rates
  - An assumption change tilts the expected balance of the fundamental cost equation away from investment earnings and toward contributions
- A lower assumption also lessens the potential for a pattern of increasing contribution rates in future years
  - Actual investment results determine ultimate long-term System cost, so all else being equal contribution rates
    - Go up if investments underperform assumption
    - Go down if investments outperform assumption

System-Wide Economic Assumptions

	Current Assumption	Recommendation
Inflation	3.00%	2.50%
Payroll Growth	4.00%	3.25%
Investment Return	7.75%	Lower assumption

Investment Return Assumption Wrap-Up

- Estimated System average impact of a change solely in the 2013 valuation's return assumption to **7.25%** would have been:

Metric	Approximate Effect
Unfunded Actuarial Liability (UAL)	+$11 billion
Normal Cost Rate	+1% of affected payroll
UAL Rate	+2% of affected payroll

- The amounts are shown are a simplified illustration if no other assumption had been modified
  - A single assumption change is typically not made
  - The effect of coordinated assumption changes (such as to inflation or payroll growth) would modify these estimates

Economic Assumptions – Individual Member Pay Increases

Individual Member Pay Increase Assumption

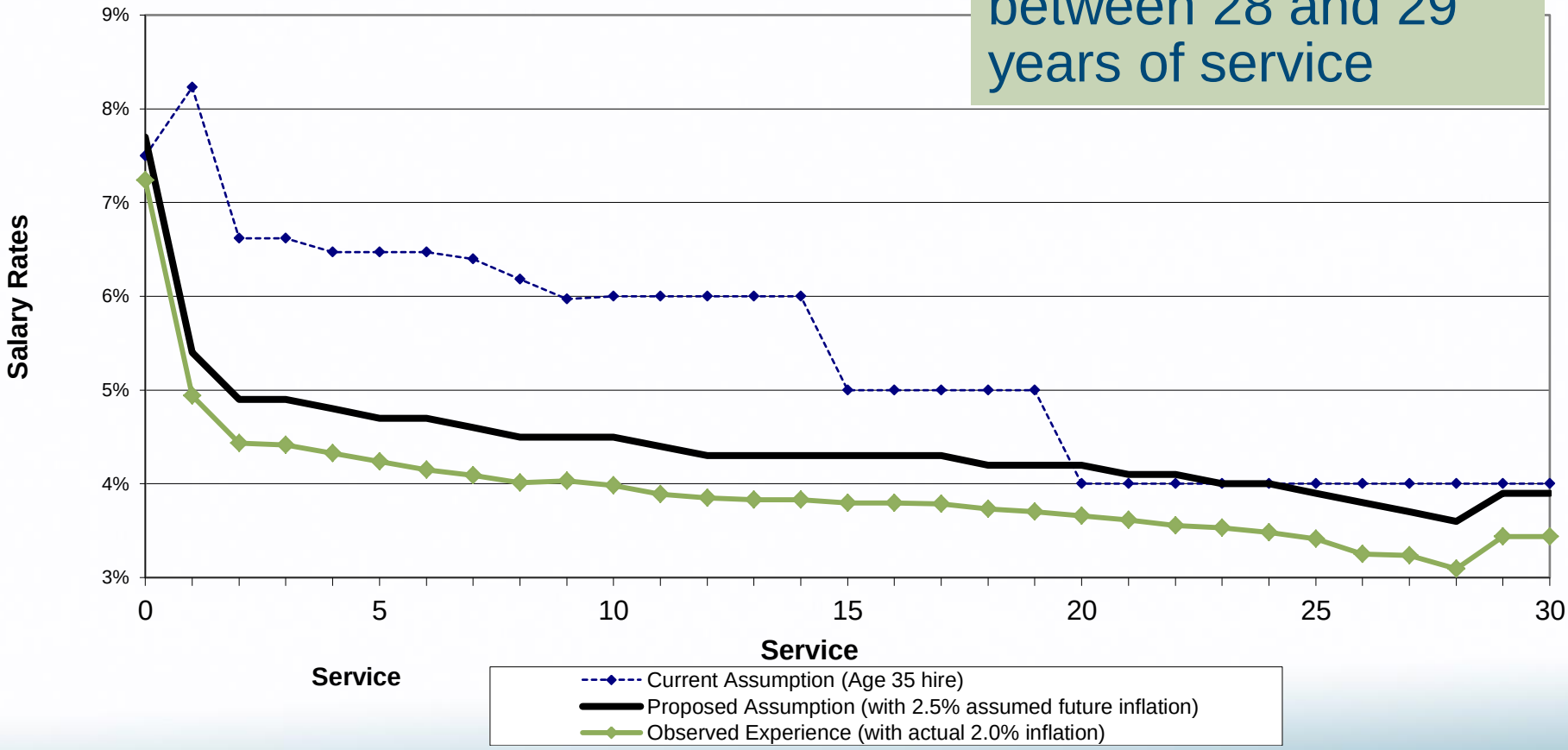
- Pay increases are projected for each individual member's full career, with future increases based on membership class, service and gender
  - Observed differences by gender were minor in our study
- For each member and each individual year, the assumed pay increase can be thought of as having two components
  - Inflation-related factor
  - Non-inflation-related factors
    - Systemic - productivity improvements / market competition
    - Individual – step increases, promotion, etc.

Assumption-Setting Process

- The current assumption is charted on the next slides for each member group
  - It is based on actual 2003 - 2008 observed experience and the current 3.0% long-term future inflation assumption
- Actual 2008 – 2013 observed experience is also charted
  - That experience is based on 2.0% actual average inflation, measured on a one-year lag, during the observation period
- Proposed assumption is developed by adjusting the recently observed experience to levels that would have occurred if actual inflation had been at the proposed 2.5% long-term assumption
  - Sets inflation-linked component at 2.5% assumption
  - Non-inflation-linked component set at observed experience

Individual Member Pay Increase
Regular Class Females

Proposed assumption increases 0.3% between 28 and 29 years of service



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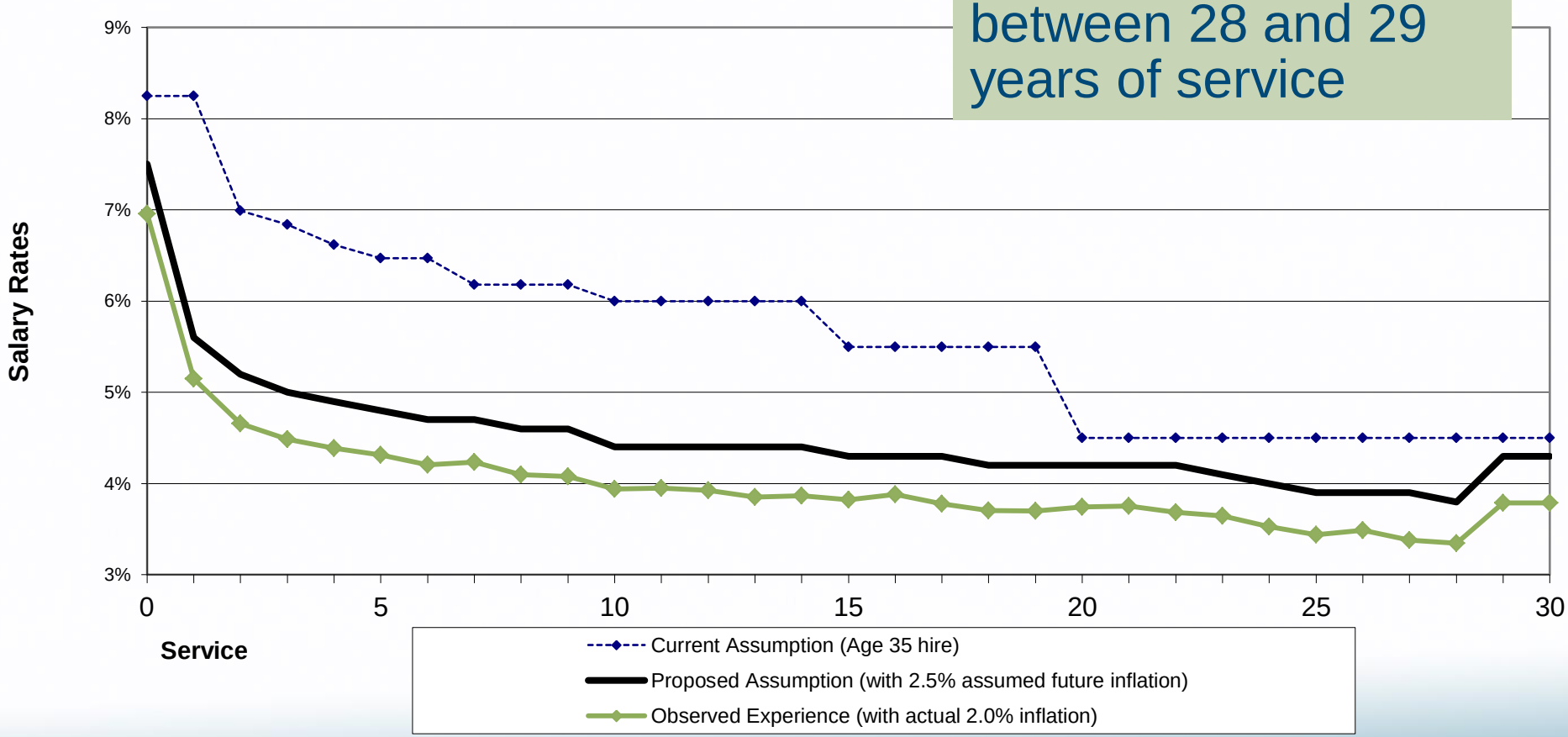
Individual Member Pay Increase
Regular Class Males

Proposed assumption increases 0.5% between 28 and 29 years of service



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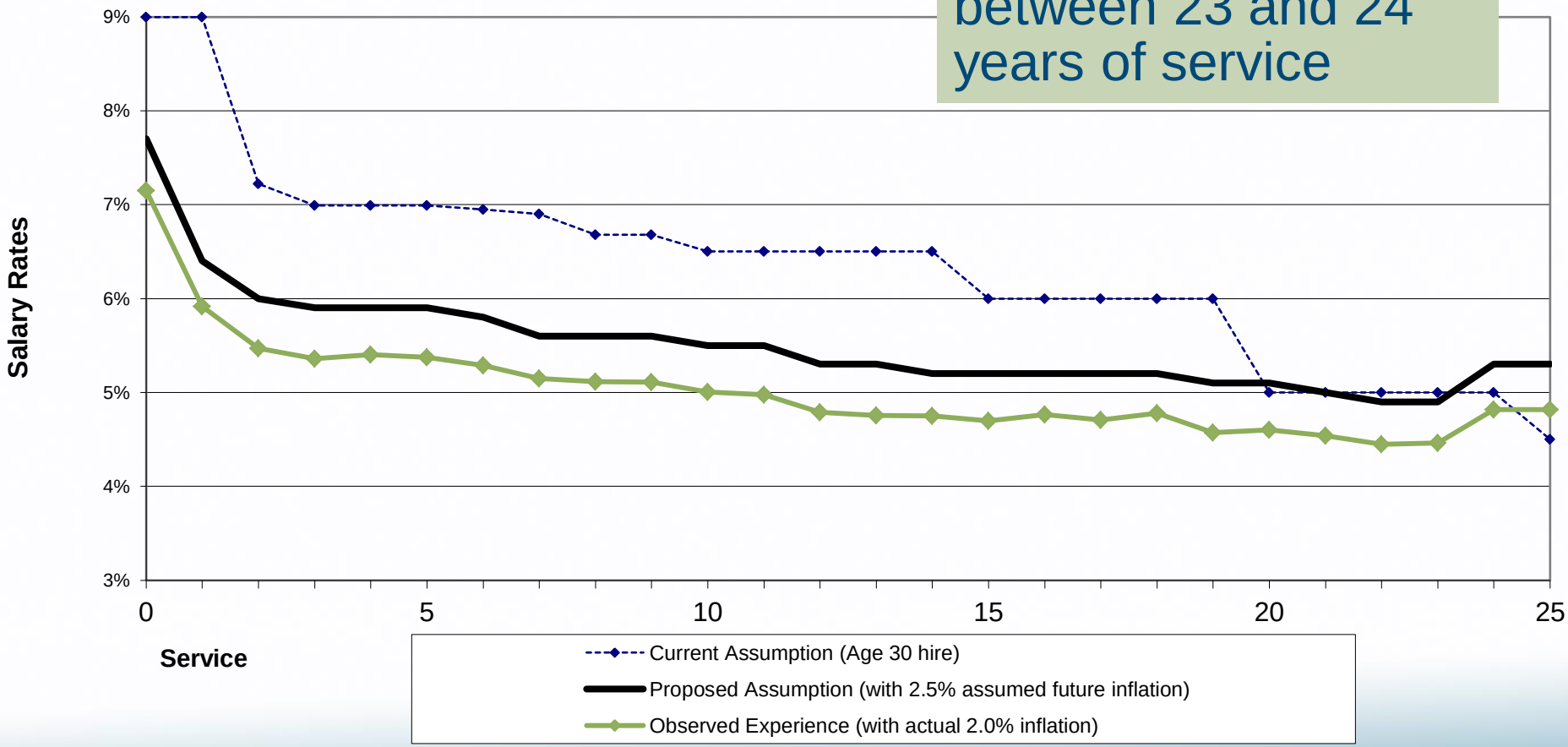
Individual Member Pay Increase
Special Risk Class Males

Proposed assumption increases 0.4% between 23 and 24 years of service



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Summary – Individual Member Pay Increase

- Proposed assumption is markedly lower than current assumption at most service levels
  - Differences are most pronounced in the first half of members' careers
- The decrease has several component pieces
  - Lowering of the inflation-linked piece by 0.50%
  - Lowering of the real wage growth piece by 0.25%
  - Persistent observed experience indicates a decrease in the member-specific, service-linked piece is warranted
    - This piece can also be referred to as the *merit increase* or the *longevity increase*

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Individual Member Pay Increase Wrap-Up

- Estimated System average impact of the proposed changes in this section on the 2013 actuarial valuation would have been:

Metric	Approximate Effect
Unfunded Actuarial Liability (UAL)	-$1.7 billion
Normal Cost Rate	-1.4% of affected payroll
UAL Rate	-0.3% of affected payroll

- The amounts are shown are a simplified illustration if no other assumptions had been modified
  - A single assumption change is typically not made
  - The effect of coordinated assumption changes (such as to inflation or investment return) would modify these estimates

Review of Unused Annual Leave Assumption

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Review of Unused Annual Leave Assumption

- Members are allowed to count an amount of unused annual leave in their final average salary calculations not to exceed the lesser of 500 hours or any employer-specific policy limits
- Current assumption is uniform across all membership classes
- Recent experience indicates an updated assumption is appropriate

Membership Classes	Current Assumption	Proposed Assumption
Special Risk, Senior Management	139	290
Regular, Other Classes Not Noted	139	230

Actuarial Methods

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Use of Actuarial Methods

- Actuarial methods allocate the net present value of the projected benefit payments between past and projected future service, which establishes funded status
  - Calculations are done on a budgeting basis
- Methods selected, when combined with assumptions, also develop the pattern of projected contribution rates

Actuarial Methods
Shortfall Amortization

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Amortization Period

- Each year, the system experiences an “actuarial gain” or “actuarial loss” by comparing actual experience to assumed
  - Gains decrease UAL, while losses increase UAL
  - Gains and losses are created by both
    - Investment experience

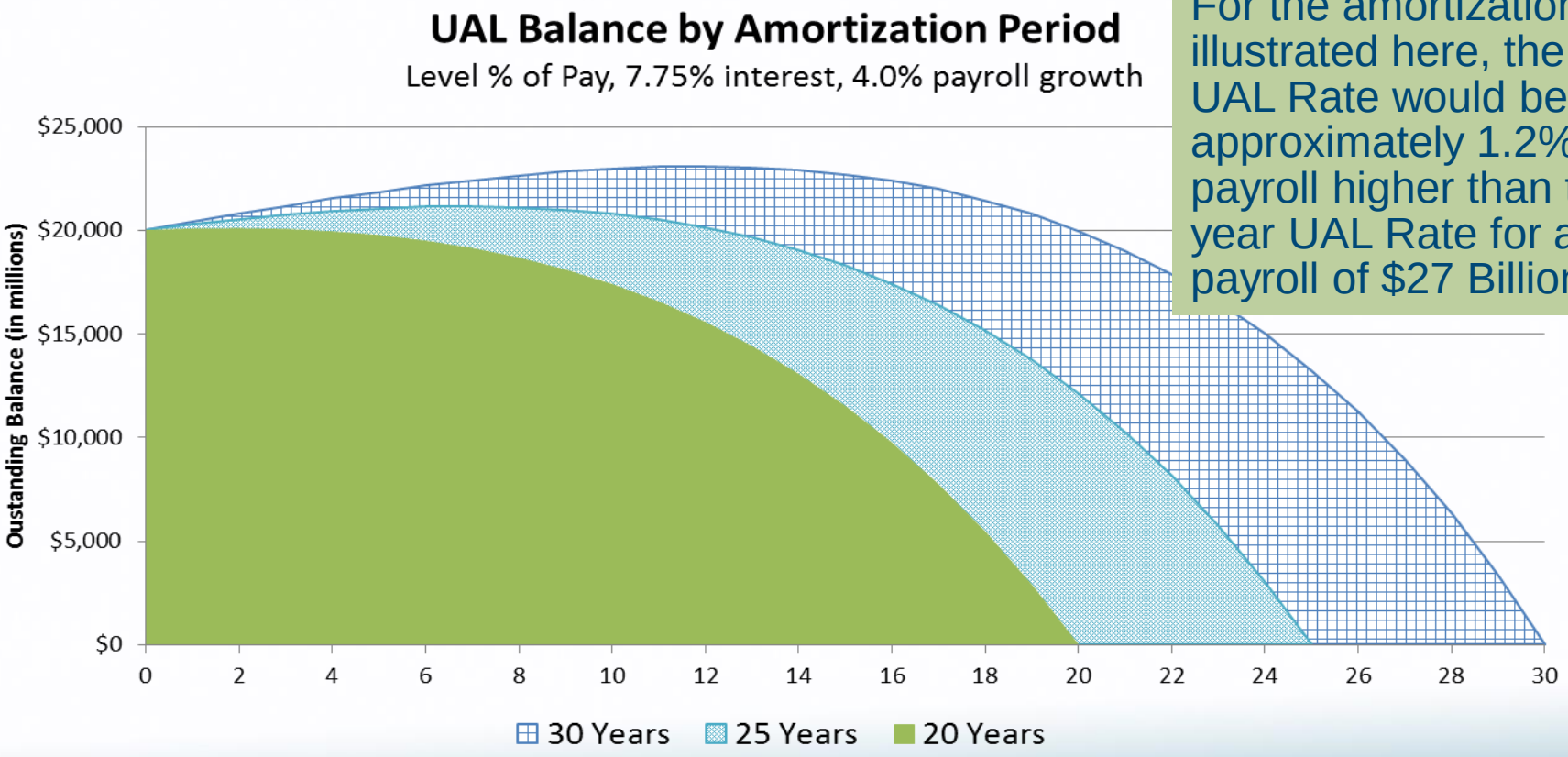
      and
    - Demographic experience

Amortization Period

- Current policy has been to amortize each year's gain or loss over a closed 30-year period as a level percentage of projected payroll
  - Statute limits amortization to a maximum of 30 years
- The Pension Funding Task Force and other study groups view 30 year amortizations as less than optimal
  - That opinion is driven partially by the initial "negative amortization" that occurs in a 30-year level percentage of pay amortization

Amortization Period

This slide illustrates the amortization pattern of a $20 billion UAL over several alternative amortization periods



For the amortization illustrated here, the 20-year UAL Rate would be approximately 1.2%-1.3% of payroll higher than the 30-year UAL Rate for a UAL payroll of $27 Billion

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Shortfall Amortization Periods

- Recent funding policy guidance from organizations such as GFOA recommends periods of twenty years or less for amortizations of most UAL sources as a best practice
  - Guidance indicates that for certain specified UAL sources, amortizations of up to twenty-five years can be considered acceptable
    - Changes in cost allocation method or investment return assumption are two of the UAL sources so identified

Amortization Wrap-Up

- We propose at the next meeting to illustrate the effect of:
  - Current amortization policy

    versus
  - Amortizing all outstanding unfunded actuarial liability (UAL) as of July 1, 2014 over a twenty-year period
    - As a potential variation to the twenty-year amortization alternative, amortizing over twenty-five years the portion of the UAL arising from modifications to:
      - Economic or demographic assumptions
      - Actuarial cost allocation method

Actuarial Methods

Actuarial Cost Allocation Method

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Cost Allocation Methods - Introduction

- The division of the present value of a member's projected benefit payments between past, current & future service is done through use of an actuarial cost allocation method
- The present day value of projected future benefits allocated to a particular working year is the **Normal Cost**
- The present day value of projected future benefits allocated to prior years is the **Actuarial Liability**
- The difference between the Actuarial Value of Assets and the Actuarial Liability is the **Unfunded Actuarial Liability (UAL)**

Entry Age Normal Cost Allocation Method

- By far the most commonly used cost allocation method for state systems is Entry Age Normal (EAN)
  - Conceptually, EAN sets normal cost rate level as a percent of payroll over a member's full projected working career
- There are different categories of EAN, including:
  - Individual EAN (most commonly used)
  - Ultimate EAN (used by FRS)
    - Each of these categories contains different interpretations of how to calculate the key metrics

New GASB standards mandate use of Individual EAN for financial reporting calculations for the System and its employers

Ultimate EAN Cost Allocation Method

- FRS currently uses the Ultimate EAN cost allocation method for calculating employer contribution rates to fund the System
  - Individual EAN is used for financial reporting, per GASB
- Ultimate EAN sets Normal Cost as if each member was in Tier II
  - As such, Normal Cost is lower with Ultimate EAN than it is under Individual Entry Age
- Cost methods do allocate benefits between past and projected future service, but don't affect the level of projected benefits
  - Since Ultimate EAN allocates less of projected benefits to future service, it allocates more to past service and has a higher actuarial liability than Individual Entry Age

Contribution Rates

- Actuarially calculated contribution rates =
  - (Normal Cost) + (Amortization of Unfunded Actuarial Liability)
- The best way to understand the contribution rate differences between Individual EAN and Ultimate EAN is development of the normal cost rate for a Tier I member

Individual EAN Cost Allocation Method

- A Tier I member's Individual EAN normal cost rate is the level % of payroll contribution needed during a member's career to fund a Tier I level of benefits if experience follows assumptions
  - The bifurcated nature of Tier I COLA benefits means that Tier I members with the same age at hire but differing years of service will have different Individual EAN normal cost rates
  - This differs from Ultimate EAN, where the normal cost rate is set for Tier I members as if they do not receive COLA benefits, consistent with the lack of COLA in Tier II benefits

Ultimate EAN Cost Allocation Method

- The cost allocation method used by FRS to calculate employer contribution rates to fund the System is Ultimate EAN
- Ultimate EAN calculates the normal cost rate for all members as if they all participate in the newest, or ultimate, tier
- Our sample Tier I's Ultimate EAN normal cost rate is the career level % of payroll contribution needed to fund a Tier II level of benefits if experience follows assumptions
  - Members with the same age, membership class and gender at hire will all have the same normal cost rates under Ultimate EAN regardless of year of hire or tier

Ultimate EAN Cost Allocation Method

- The total projected benefit levels calculated for individual members do reflect tier and year of hire
  - Cost method only affects allocation between past, current & future

Individual EAN v. Ultimate EAN Comparison

- Individual EAN's normal cost rate is higher than Ultimate EAN's
  - The System average Individual EAN normal cost rate would gradually drift to the Ultimate EAN normal cost rate over time
- Similarly, Individual EAN has a higher present value of all future normal costs than Ultimate EAN
- Because Ultimate EAN allocates less of total projected benefits to future years of service, Individual EAN has a lower Actuarial Liability than Ultimate EAN
  - Actuarial Liability = (Net present value of projected future benefits) - (Costs allocated to projected future service)

Individual EAN v. Ultimate EAN Comparison

- Even though Ultimate EAN has a higher Actuarial Liability and Unfunded Actuarial Liability (UAL), the amortization of that higher UAL is only a partial offset to the higher normal cost rate of Individual EAN

Individual EAN v. Ultimate EAN Comparison

	Individual EAN	Ultimate EAN
Calculation of Tier I Normal Cost Rate	Reflects career average cost of Tier I benefit	Reflects career average cost of Tier II benefit
Present Value of Future Normal Costs (PVFNC)	Higher under this method	Lower under this method
Total Present Value of Projected Benefits (PVPB)	**Equivalent regardless of allocation method**	**Equivalent regardless of allocation method**
Actuarial Liability (= PVPB minus PVFNC)	Lower under this method	Higher under this method
System Average Normal Cost Rate	Drifts down over time as Tier IIs replace Tier Is	Remains level over time

A change to Individual EAN allocation would increase Normal Cost and decrease Actuarial Liability, while not affecting projected benefit payment levels

Individual EAN v. Ultimate EAN Comparison

- The differences between Individual EAN and Ultimate EAN can be assessed through the prism of these guiding principles:
  - Protection of funded status
  - Contribution rate stability
  - Contribution rate predictability
  - Intergenerational equity
  - Transparency and understandability
  - Actuarial soundness
- Contribution rate policies differ significantly in their funding patterns and effects on funded status projections if future experience follows assumptions

Cost Allocation Method Wrap-Up

- We propose at the next meeting to illustrate effects of:
  - Retaining current interpretation of Ultimate Entry Age

    versus
  - Retaining Ultimate Entry Age, but modifying the interpretation approach to allocate future normal costs only to projected service periods based on Tier I retirement timing assumptions for Tier I members

    versus
  - Changing to Individual Entry Age, which is consistent with GASB standards and the most commonly used method

We recommend using either the 2nd or 3rd approach listed above

Wrap-Up

A Look Forward to Next Meeting

- Plan year 2013-2014 investment returns were above assumption
- The part of the accumulated investment gains to be recognized by asset smoothing methodology in 2013-2014 is shown

Metric	Approximate Effect
Unfunded Actuarial Liability (UAL)	-$3 billion
Normal Cost Rate	0.0% of affected payroll
UAL Rate	-0.6% of affected payroll

- In addition, we preliminarily estimate that approximately $10 billion of accumulated investment gains will not yet be recognized in the July 1, 2014 Actuarial Value of Assets (AVA)
  - Systematic recognition occurs in subsequent plan years

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Agenda for Next Meeting

- Compare actuarial calculations under current policies and any proposed alternative policies identified today
  - Calculations will be based on demographic census and System financial information as of July 1, 2014
- Formal approval of all methods and assumptions for use in the 2014 actuarial valuations for FRS and HIS, which will determine actuarially calculated contribution rates for July 2015 - June 2016

Thanks for your time and attention this afternoon

Appendix

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Milliman Capital Market Outlook Assumptions

For assessing the expected portfolio return under Milliman's capital market assumptions, we considered the FRS to be allocated among the model's asset classes as shown below. This allocation is based on our understanding of the most recently revised target allocation policy, titled *"Fixed Income to GE, RE, PE, SI (6%)"* as provided to us by email on July 22, 2014.

	Policy Allocation	Annual Arithmetic Mean	Annualized Geometric Mean	Annual Standard Deviation
Cash	1.0%	3.01%	3.00%	1.65%
Intermediate-Term Bonds	18.0%	4.07%	3.95%	5.15%
High Yield Bonds	3.0%	6.69%	6.15%	10.95%
Broad US Equities	26.5%	8.41%	6.85%	18.90%
Developed Foreign Equities	21.2%	8.56%	6.75%	20.40%
Emerging Market Equities	5.3%	11.48%	7.50%	31.15%
Private Equity	6.0%	11.70%	8.00%	30.00%
Hedge Funds / Absolute Return	7.0%	5.71%	5.25%	10.00%
Real Estate (Property)	12.0%	7.01%	6.25%	13.00%
US Inflation (CPI-U)			2.50%	2.00%
Fund Total (reflecting asset class correlations)	100.0%	**7.56%**	**6.89%**	**12.08%**

* Returns reflects 0.25% reduction for System expenses.

Actuarial Basis

Data

We have based our projection of System liabilities on the data supplied by the Florida Retirement System (FRS) for the five plan year observation period of July 1, 2008 to June 30, 2013. The data was not independently audited by Milliman.

Assets as of June 30, 2014, measured on a fair market value basis are preliminarily estimated to be $148 billion, as communicated verbally to us by FRS personnel during the week of July 28, 2014.

Methods / Policies

Actuarial Cost Method: For determination of actuarially calculated employer contribution rates: Ultimate Entry Age Normal, as described in the 2013 Valuation Report. For plan financial reporting: Individual Entry Age Normal, applied in a manner consistent with recently published GASB standards.

UAL Amortization: The UAL for FRS is currently amortized as a level percentage of projected applicable payroll over a closed period. Any additional UAL that arises each year from variations from the assumptions used for determination of actuarially calculated employer calculation rates is amortized over a 30 year period.

Actuarial Value of Assets: Asset smoothing method described in the 2013 Valuation Report. The method used is consistent with applicable statutes.

Assumptions

In general, all current assumptions are as described in the 2013 Valuation Report.

Provisions

Provisions valued are as described in the 2013 Valuation Report.

Analysis Methodology – Confidence Intervals

- The common statistical technique of *confidence intervals* was used in reviewing patterns in retirement and other categories
- Example: flipping a coin to see if it is fair or biased
  - Say it was flipped ten times and there were four tails
    - We shouldn't conclude it is biased, as there is a 38% chance of four tails or fewer from 10 flips of a fair coin
  - If instead it was flipped 1,000 times and there were 400 tails
    - There is only a 0.00000001% chance the coin is fair

Additional statistical information allows us to draw stronger conclusions about what constitutes an appropriate assumption based on recently observed experience

Caveats and Disclaimers

This presentation discusses actuarial methods and assumptions proposed for use in the valuation of the Florida Retirement System ("FRS" or "the System"). For the most recent complete actuarial valuation results, including cautions regarding the limitations of use of valuation calculations, please refer to our formal Actuarial Valuation Report as of July 1, 2013 ("the 2013 Valuation Report") published on December 3, 2013. The 2013 Valuation Report, including all supporting information regarding data, assumptions, methods, and provisions, is incorporated by reference into this presentation. The statements of reliance and limitations on the use of this material is reflected in the Valuation Report and still apply to this presentation.

In preparing this presentation, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff, as well as capital market expectations provided by SBA and HEK. This information includes, but is not limited to, statutory provisions, employee data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

Milliman's work product was prepared exclusively for the Department of Management Services for a specific and limited purpose. It is a complex, technical analysis that assumes a high level of knowledge concerning FRS's operations, and uses FRS data, which Milliman has not audited. It is not for the use or benefit of any third party for any purpose. To the extent that Milliman's work is not subject to disclosure under applicable public records laws, Milliman's work may not be provided to third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of its work product. Any third party recipient of Milliman's work product who desires professional guidance should not rely upon Milliman's work product, but should engage qualified professionals for advice appropriate to its own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this presentation is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Assumptions Summary – Regular Class Females

Category	Current Assumption	Proposed Assumption
Non-Disabled Mortality	White collar generational, Scale AA, multiplied by 95.8%	White collar generational, Scale BB, generally slightly higher life expectancy than current
Member Salary Increase	Age & service based; average annual increase for 35 year old hire who works 30 years of 5.4%	Service based; lower increases, especially at lower service levels; average increase of 4.4%
Unused Leave	139 hours at time of retirement/DROP entry	230 hours at time of retirement/DROP entry
DROP Entry*	GASB: near 30% at ages 48-56, near 40% at ages 57+ Funding: half of the above rates (artificially depressed)	Both GASB & Funding: Similar to current GASB assumption at ages 48-56; rates near 50% at ages 57+
Immediate Retirement*	8%-10% up to age 58; near 12% ages 59-61; 9% at age 62	4%-5% up to age 55; 7% ages 56-60; 9% at ages 61-62
Deferred Retirement*	5%-10% ages 48-57; 10%-15% at ages 58-64; 12%-18% thereafter	2%-3% to age 57, grading to 5% at ages 59-61; 12% age 62; 8% ages 63-64; 15% thereafter
Termination of Employment	Age & service based; rates for 10+ years of service range from 5.4% (age 30) to 3.0% (age 65)	Retain current assumption
Duty Disability Incidence	Social Security Study 74 table; scaled to match pre-2008 FRS experience	Custom table from FRS-specific experience; markedly lower rates than current assumption
Non-Duty Disability Incidence	Social Security Study 74 table; scaled to match pre-2008 FRS experience	Custom table from FRS-specific experience; slightly lower rates than current assumption

*Rates are shown for Tier I. Tier II rates are equivalent, except where modified to reflect differing age/service requirements for retirement.

Assumptions Summary – Regular Class Males

Category	Current Assumption	Proposed Assumption
Non-Disabled Mortality	White collar generational, Scale AA, multiplied by 90.9%	50% White collar/50% Blue collar generational, Scale BB; slightly higher future mortality improvement
Member Salary Increase	Age & service based; average annual increase for 35 year old hire who works 30 years of 5.7%	Service based; lower increases, especially at lower service levels; average increase of 4.5%
Unused Leave	139 hours at time of retirement/DROP entry	230 hours at time of retirement/DROP entry
DROP Entry*	GASB: near 30% at ages 48-55, near 40% at ages 56+ Funding: half of the above rates (artificially depressed)	Both GASB & Funding: Similar to current GASB assumption at ages 48-56; rate of 55% at ages 57+
Immediate Retirement*	10% grading to 16% at ages 48-60; 13% at age 61; 18% at age 62	4% at ages 48-54; 5% at ages 55-60; 8% age 61; 11% at age 62
Deferred Retirement*	9%-11% ages 48-65; grading to 13% at age 68 and thereafter	2%-5% to ages 61; 11% at age 62; 8% at ages 63-64; 13% thereafter
Termination of Employment	Age & service based; rates for 10+ years of service range from 4.7% (age 30) to 3.7% (age 65)	Retain current assumption
Duty Disability Incidence	Social Security Study 74 table; scaled to match pre-2008 FRS experience	Custom table from FRS-specific experience; markedly lower rates than current assumption
Non-Duty Disability Incidence	Social Security Study 74 table; scaled to match pre-2008 FRS experience	Custom table from FRS-specific experience; slightly lower rates than current assumption

*Rates are shown for Tier I. Tier II rates are equivalent, except where modified to reflect differing age/service requirements for retirement.

Assumptions Summary – Special Risk Class Females

Category	Current Assumption	Proposed Assumption
Non-Disabled Mortality	White collar generational, Scale AA, multiplied by 95.8%	White collar generational, Scale BB, generally slightly higher life expectancy than current
Member Salary Increase	Age & service based; average annual increase for 30 year old hire who works 25 years of 6.2%	Service based; lower increases, especially at lower service levels; average increase of 5.3%
Unused Leave	139 hours at time of retirement/DROP entry	290 hours at time of retirement/DROP entry
DROP Entry*	GASB: 4% grading to 33% ages 45-54, 16% at age 55 Funding: half of the above rates (artificially depressed)	Both GASB & Funding: 20% to age 51 and at ages 53-54; 30%-31% at ages 52 and 55
Immediate Retirement*	Between 2%-10% at all ages from 45-55	4% at ages 45-49; 5% at ages 50-55
Deferred Retirement*	4%-7% to age 60; 9%-20% at ages 61-70; 65% thereafter	3%-5% to age 59, 7%-9% at ages 60-61; 20-25% ages 62-69; 100% thereafter
Termination of Employment	Age & service based; rates for 10+ years of service range from 1.7% (age 30) to 4.0% (age 55)	Retain current assumption
Duty Disability Incidence	Social Security Study 74 table; scaled to match pre-2008 FRS experience	Custom table from FRS-specific experience; markedly lower rates than current assumption
Non-Duty Disability Incidence	Social Security Study 74 table; scaled to match pre-2008 FRS experience	Custom table from FRS-specific experience; slightly lower rates than current assumption

*Rates are shown for Tier I. Tier II rates are equivalent, except where modified to reflect differing age/service requirements for retirement.

Assumptions Summary – Special Risk Class Males

Category	Current Assumption	Proposed Assumption
Non-Disabled Mortality	White collar generational, Scale AA, multiplied by 90.9%	10% White collar/90% Blue collar generational, Scale BB; slightly lower life expectancy than current
Member Salary Increase	Age & service based; average annual increase for 30 year old hire who works 25 years of 6.4%	Service based; lower increases, especially at lower service levels; average increase of 5.5%
Unused Leave	139 hours at time of retirement/DROP entry	290 hours at time of retirement/DROP entry
DROP Entry*	GASB: 11% grading to 39% ages 45-52, near 35% ages 52-54, 18% at age 55 Funding: half of the above rates (artificially depressed)	Both GASB & Funding: 23%-30% to age 50; 40-50% ages 51-54; 29% at ages 55
Immediate Retirement*	Between 2%-10% at all ages from 45-55	4% at ages 45-46; 7% at ages 47-54; 6% at age 55
Deferred Retirement*	3%-5% to age 60; near 15% ages 61-74; 25% thereafter	3%-5% to age 59, 7%-9% at ages 60-61; 20-25% ages 62-69; 100% thereafter
Termination of Employment	Age & service based; rates for 10+ years of service range from 2.1% (age 30) to 1.8% (age 55)	Retain current assumption
Duty Disability Incidence	Social Security Study 74 table; scaled to match pre-2008 FRS experience	Custom table from FRS-specific experience; markedly lower rates than current assumption
Non-Duty Disability Incidence	Social Security Study 74 table; scaled to match pre-2008 FRS experience	Custom table from FRS-specific experience; slightly lower rates than current assumption

*Rates are shown for Tier I. Tier II rates are equivalent, except where modified to reflect differing age/service requirements for retirement.

Assumptions Summary – Elected Officers' Class Females

Category	Current Assumption	Proposed Assumption
Non-Disabled Mortality	White collar generational, Scale AA, multiplied by 56.7%	White collar generational, Scale BB, generally slightly higher life expectancy than current
Member Salary Increase	Age & service based; average annual increase for 35 year old hire who works 30 years of 4.2%	Service based; lower increases, especially at lower service; average increase of 4.0% (J, ECO); 5.1% (ECO)
Unused Leave	139 hours at time of retirement/DROP entry	230 hours at time of retirement/DROP entry
DROP Entry*	GASB: 10% at ages 45-49, near 25% at ages 50-60, near 17% at ages 61-62 Funding: half of the above rates (artificially depressed)	Both GASB & Funding: 30% at age 48, increasing by 2.5% per year through age 61; 50% at age 62; 15% thereafter
Immediate Retirement*	3%-4% to age 59; 3%-10% at ages 60-69; near 12% at ages 70-76; 3.5% thereafter	10% at all ages, starting at age 48
Deferred Retirement*	1%-6% to age 59; 7%-11% at ages 60-65; 5%-8% at ages 66-69; near 13% thereafter	5% at ages 48-61; 15% at age 62; 11% at ages 63-64; 15% thereafter
Termination of Employment	Age & service based; rates for 10+ years of service range from 4.2%/10.8%/2.9% (age 30 ECO/ESO/J) to 2.4%/7.3%/1.4% (age 65 ECO/ESO/J)	Retain current assumption
Duty Disability Incidence	Social Security Study 74 table; scaled to match pre-2008 FRS experience	Custom table from FRS-specific experience consistent with table used for Regular class members
Non-Duty Disability Incidence	Social Security Study 74 table; scaled to match pre-2008 FRS experience	Custom table from FRS-specific experience consistent with table used for Regular class members

*Rates are shown for Tier I. Tier II rates are equivalent, except where modified to reflect differing age/service requirements for retirement.

Assumptions Summary – Elected Officers' Class Males

Category	Current Assumption	Proposed Assumption
Non-Disabled Mortality	White collar generational, Scale AA, multiplied by 82.4%	50% White collar/50% Blue collar generational, Scale BB; slightly higher future mortality improvement
Member Salary Increase	Age & service based; average annual increase for 35 year old hire who works 30 years of 4.2%	Service based; lower increases, especially at lower service; average increase of 4.0% (J, ECO); 4.6% (ECO)
Unused Leave	139 hours at time of retirement/DROP entry	230 hours at time of retirement/DROP entry
DROP Entry*	GASB: near 16% at ages 45-54; near 25% at ages 55-64; near 13% thereafter Funding: half of the above rates (artificially depressed)	Both GASB & Funding: 30% at age 48, increasing by 2.5% per year through age 61; 50% at age 62; 15% thereafter
Immediate Retirement*	2%-8% to age 63; 16% at ages 64-69; 20% thereafter	10% at all ages, starting at age 48
Deferred Retirement*	1%-2% to age 59; 5%-10% at ages 60-69; near 15% thereafter	5% at ages 48-61; 15% at age 62; 11% at ages 63-64; 15% thereafter
Termination of Employment	Age & service based; rates for 10+ years of service range from 5.7%/6.7%/2.0% (age 30 ECO/ESO/J) to 3.5%/4.2%/0.7% (age 65 ECO/ESO/J)	Retain current assumption
Duty Disability Incidence	Social Security Study 74 table; scaled to match pre-2008 FRS experience	Custom table from FRS-specific experience consistent with table used for Regular class members
Non-Duty Disability Incidence	Social Security Study 74 table; scaled to match pre-2008 FRS experience	Custom table from FRS-specific experience consistent with table used for Regular class members

*Rates are shown for Tier I. Tier II rates are equivalent, except where modified to reflect differing age/service requirements for retirement.

Assumptions Summary – Senior Mgmt Svc Class Females

Category	Current Assumption	Proposed Assumption
Non-Disabled Mortality	White collar generational, Scale AA, multiplied by 56.7%	White collar generational, Scale BB, generally slightly higher life expectancy than current
Member Salary Increase	Age & service based; average annual increase for 35 year old hire who works 30 years of 5.4%	Service based; lower increases, especially at lower service levels; average increase of 4.6%
Unused Leave	139 hours at time of retirement/DROP entry	290 hours at time of retirement/DROP entry
DROP Entry*	GASB: near 25% at ages 45-53; near 35% at ages 54-61; 30% at age 62 Funding: half of the above rates (artificially depressed)	Both GASB & Funding: 30% at age 48, increasing by 2.5% per year through age 61; 50% at age 62; 15% thereafter
Immediate Retirement*	9%-14% to age 59; 21% at ages 60-62; 10-19% at ages 63-67; 12% thereafter	5% to age 57, 10% at ages 58-62; 5% thereafter
Deferred Retirement*	6%-11% to age 59; 11%-21% at ages 60-69; near 17% thereafter	5% to age 61; 15% at age 62; 11% at ages 63-64; 15% thereafter
Termination of Employment	Age & service based; rates for 10+ years of service range from 3.9% (age 30) to 1.9% (age 65)	Similar to current assumption, except decrease rates for short service employees based on recently observed experience;
Duty Disability Incidence	Social Security Study 74 table; scaled to match pre-2008 FRS experience	Custom table from FRS-specific experience consistent with table used for Regular class members
Non-Duty Disability Incidence	Social Security Study 74 table; scaled to match pre-2008 FRS experience	Custom table from FRS-specific experience consistent with table used for Regular class members

*Rates are shown for Tier I. Tier II rates are equivalent, except where modified to reflect differing age/service requirements for retirement.

Assumptions Summary – Senior Mgmt Svc Class Males

Category	Current Assumption	Proposed Assumption
Non-Disabled Mortality	White collar generational, Scale AA, multiplied by 82.4%	50% White collar/50% Blue collar generational, Scale BB; slightly higher future mortality improvement
Member Salary Increase	Age & service based; average annual increase for 35 year old hire who works 30 years of 5.7%	Service based; lower increases, especially at lower service levels; average increase of 4.4%
Unused Leave	139 hours at time of retirement/DROP entry	290 hours at time of retirement/DROP entry
DROP Entry*	GASB: near 25% at ages 45-53; near 38% at ages 54-61; 25% at age 62 Funding: half of the above rates (artificially depressed)	Both GASB & Funding: 30% at age 48, increasing by 2.5% per year through age 61; 50% at age 62; 15% thereafter
Immediate Retirement*	12%-17% to age 60; 25-33% at ages 61-62; 10-23% at ages 63-67; 12% thereafter	5% to age 57, 10% at ages 58-62; 5% thereafter
Deferred Retirement*	10%-12% to age 59; 13%-22% at ages 60-69; near 18% thereafter	5% to age 61; 15% at age 62; 11% at ages 63-64; 15% thereafter
Termination of Employment	Age & service based; rates for 10+ years of service range from 4.1% (age 30) to 2.6% (age 65)	Similar to current assumption, except decrease rates for short service employees based on recently observed experience;
Duty Disability Incidence	Social Security Study 74 table; scaled to match pre-2008 FRS experience	Custom table from FRS-specific experience consistent with table used for Regular class members
Non-Duty Disability Incidence	Social Security Study 74 table; scaled to match pre-2008 FRS experience	Custom table from FRS-specific experience consistent with table used for Regular class members

*Rates are shown for Tier I. Tier II rates are equivalent, except where modified to reflect differing age/service requirements for retirement.