# Florida Retirement System 

The Actuarial Assumption Estimating Conference Including Preliminary July 1, 2006 Actuarial Valuation Results

September 26, 2006

## Disclaimer

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## Overview

- Historical Analysis
- 2006 Valuation
- Discussion Points
- Projections
- Appendix


## Actuarial Primer

## $0 \infty$



The Harvard Business Review 1965

## Historical Analysis

- Membership \& Employer Payroll
- Market \& Actuarial Value of Assets
- Liabilities
- Funding Target
- Contributions
- Plan Cash Flows
- Historic Asset Returns


## Membership \& Employer Payroll



## Market \& Actuarial Value of Assets

## $\infty \infty$



## Liabilities



## Funding Target

## Actuarial Value of Assets / Actuarial Liabilities



## Contributions

(Contribution rate shown in year developed; contribution amount adjusted for budget lag*)


* For example, contributions for fiscal year 2006 are shown in 2004.


## Plan Cash Flows



## Historic Asset Returns



## 2006 Valuation

- Valuation Highlights
- Composite Funding Levels
- Normal Cost Rates
- Summary of PEORP Elections
- Effect of Salary Distribution on Normal Cost Rates


## 2006 Valuation Highlights

- Results are based on the 2006 actuarial assumptions and methods as established by the July 1, 1998 June 30, 2003 experience study
- FRS remains in a surplus position (i.e. "Fully Funded")
- Favorable Asset Performance
- MVA exceeds AVA by $1.0 \%$ or $\$ 1.2$ billion


## Asset Smoothing

Five-Year smoothing method helps alleviate heavy losses (on an actuarial basis) at times of unfavorable asset performance. However, large gains are also not "felt" at once.

## Assets: MVA vs. AVA

(\$ Billions)

| Year | MVA | MVA Return | AVA | AVA Return |
| :---: | :---: | :---: | :---: | :---: |
| 1999 | \$ 96.1 | 13.76\% | \$ 77.8 | 14.80\% |
| 2000 | 106.5 | 10.82 | 88.5 | 13.79 |
| 2001 | 98.4 | -6.93 | 95.5 | 8.82 |
| 2002 | 89.7 | -7.62 | 99.4 | 5.44 |
| 2003 | 90.5 | 3.76 | 101.9 | 5.10 |
| 2004 | 102.4 | 15.73 | 106.7 | 6.93 |
| 2005 | 110.2 | 10.71 | 111.5 | 7.43 |
| 2006 | 118.3 | 10.44 | 117.1 | 8.02 |

In recent years the AVA exceeded the MVA, representing the smoothed impact of the three years of unfavorable MVA returns experienced in 2001-2003. However, after three years of favorable MVA returns over the 7.75\% assumed return, the MVA once again exceeds the AVA. MVA Return in 2005-06 was 10.44\%.

## Composite Funding Levels

## (\$ Billions)

|  | $\underline{2005}$ | $\underline{2006}$ | $\underline{\text { Change }}$ |
| ---: | :---: | :---: | :---: |
| Actuarial Liability | $\$ 102.5$ | $\$ 109.5$ | $6.8 \%$ |
| Actuarial Value of Assets | $\$ 111.5$ | $\$ 117.1$ | $5.0 \%$ |
| Unfunded Actuarial |  |  |  |
| Liability | $(\$ 9.0)$ | $(\$ 7.6)$ | $(15.6 \%)$ |
| \% Funded | $108.8 \%$ | $107.0 \%$ |  |

## Normal Cost Rates

| Employer | Date of Actuarial Valuation |  |  |
| :---: | :---: | :---: | :---: |
|  | 07101/2005 | 07101/2006 | Change |
| FRS Regular | 9.55\% | 9.59\% | 0.04\% |
| Special Risk |  |  |  |
| Regular | 21.96\% | 22.01\% | 0.05\% |
| Administration | 12.65\% | 11.90\% | -0.75\% |
| Elected Officer's Class |  |  |  |
| Judicial | 20.44\% | 20.46\% | 0.02\% |
| Leg-Atty-Cab | 14.80\% | 14.99\% | 0.19\% |
| County | 17.08\% | 17.15\% | 0.07\% |
| Senior Management | 13.29\% | 13.35\% | 0.06\% |
| Composite Rate | 11.43\% | 11.52\% | 0.09\% |
| Composite Rate with DROP at 8.22\% last year and 9.80\% this year | 11.20\% | 11.40\% | 0.20\% |
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## PEORP - July 1, 2006

| Employer | $\frac{\text { Remaining "Original" }}{\underline{\text { Participants }}}$ | Contingent Liability (000 omitted) |
| :---: | :---: | :---: |
| FRS Regular | 12,134 | \$216,895 |
| Special Risk |  |  |
| Regular | 435 | 11,703 |
| Administration | 2 | (30) |
| Elected Officer's Class |  |  |
| Judicial | 9 | (752) |
| Leg-Atty-Cab | 7 | 180 |
| County | 23 | 149 |
| Senior Management | 311 | 10,320 |
| 2006 TOTAL | 12,921 | \$238,465 |
| 2005 TOTAL | 14,567 | \$249,949 |
| 2004 TOTAL | 16,523 | \$263,399 |
| 2003 TOTAL | 21,043 | \$312,915 |
| Net Assets transferred to PEORP in 2003: Milliman |  | \$353,193 |
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## Discussion Points

- The Pension Protection Act limits the asset smoothing period to 24 months (effective in 2008). Florida may need to amend applicable statutes in order to maintain the current Five-Year smoothing method.
- We continue to recommend changes to the method of funding DROP.


## Actuarial Liability and Asset Projections

- Assuming 7.75\% constant investment returns
- Assuming -7.75\% investment returns for one year followed by constant 7.75\% returns
- Assuming -7.75\% investment returns for two years followed by constant 7.75\% returns
- Assuming a 2007 MVA of $\$ 80$ billion, followed by constant $7.75 \%$ investment returns
*** All returns are on a Market Value Basis


## Comparison of Actuarial Liabilities \& Assets Assuming Constant 7.75\% Investment Returns



Contributions assumed to be $10.37 \%$ of payroll. Rate set to equal FY06-07 composite reduced rate.

## Comparison of Actuarial Liabilities \& Assets Assuming -7.75\% Return Followed by Constant 7.75\% Investment Returns


$\square$ Actuarial Liability

- Actuarial Value of Assets

Contributions assumed to be $10.37 \%$ of payroll. Rate set to equal FY0607 composite reduced rate.

## Comparison of Actuarial Liabilities \& Assets

 Assuming two years with a -7.75\% Return Followed by Constant 7.75\% Investment Returns
$\square$ Actuarial Liability

- Actuarial Value of Assets

Contributions assumed to be $10.37 \%$ of payroll. Rate set to equal FY0607 composite reduced rate.

## Comparison of Actuarial Liabilities \& Assets Assuming a 2007 MVA of $\$ 80$ Billion, Followed by Constant 7.75\% Investment Returns


$\square$ Actuarial Liability

- Actuarial Value of Assets

Contributions assumed to be $10.37 \%$ of payroll. Rate set to equal FY0607 composite reduced rate.

## Appendix

- Salary Experience
- Compare last two years
- Compare last six year


## Salary Experience All Actives - Last Two Fiscal Years



## Salary Experience All Actives - By Fiscal Years



## Conclusion

The purpose of this presentation is to provide preliminary results of the July 1, 2006 actuarial valuation of the Florida Retirement System Pension Plan and compare them to results from prior valuations. The results are not yet final and are subject to review and possible revision.

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, plan provisions, employee data, and financial information. Census data provided to us by the Division has been reviewed for reasonableness and for consistency with data used in prior valuations. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised.

The actuarial assumptions used in performing this valuation have been recommended by the actuary and adopted by the Actuarial Assumption Conference based on Milliman's most recent review of the System's experience completed during Fiscal Year 2004. We believe the assumptions used reflect our best estimate of anticipated future experience of the plan. The results of this report are dependent upon future experience conforming to these assumptions. To the extent that future experience deviates from these assumptions, the true cost of the plan could vary from our results.

