



Teacher Retirement System of Texas

Legislative Briefing as of
August 31, 2016



Gabriel Roeder Smith & Company
Consultants & Actuaries
www.gabrielroeder.com



Actuarial Valuation

- ◆ Prepared as of August 31, 2016 using member data, financial data, benefit and contribution provisions, actuarial assumptions and methods as of that date
- ◆ Purposes:
 - Measure the actuarial liabilities
 - Determine adequacy of current statutory contributions
 - Provide other information for reporting
 - CAFR
 - Accounting results provided under separate report
 - Explain changes in actuarial condition of TRS
 - Track changes over time
 - Warn about possible future problems and issues



Actuarial Valuation

– Key Changes and Issues

- ◆ Forecast mostly unchanged from previous valuation:
 - ▶ Market assets returns 7.3%, net of investment expenses
 - ▶ Continued recognition of previous deferred investment losses
 - ▶ Small liability loss primarily due to salary increases larger than expected
 - ▶ Material population growth (+2.3%) held funding period down
- ◆ Funding period of 34 years based on smoothed assets
 - ▶ Assumes all current statutory contribution levels continue and no further benefit enhancements
- ◆ Projections have an expectation of an increasing funded status after existing deferred losses are fully recognized
 - ▶ Although will decrease funded status over the short term if not offset by gains



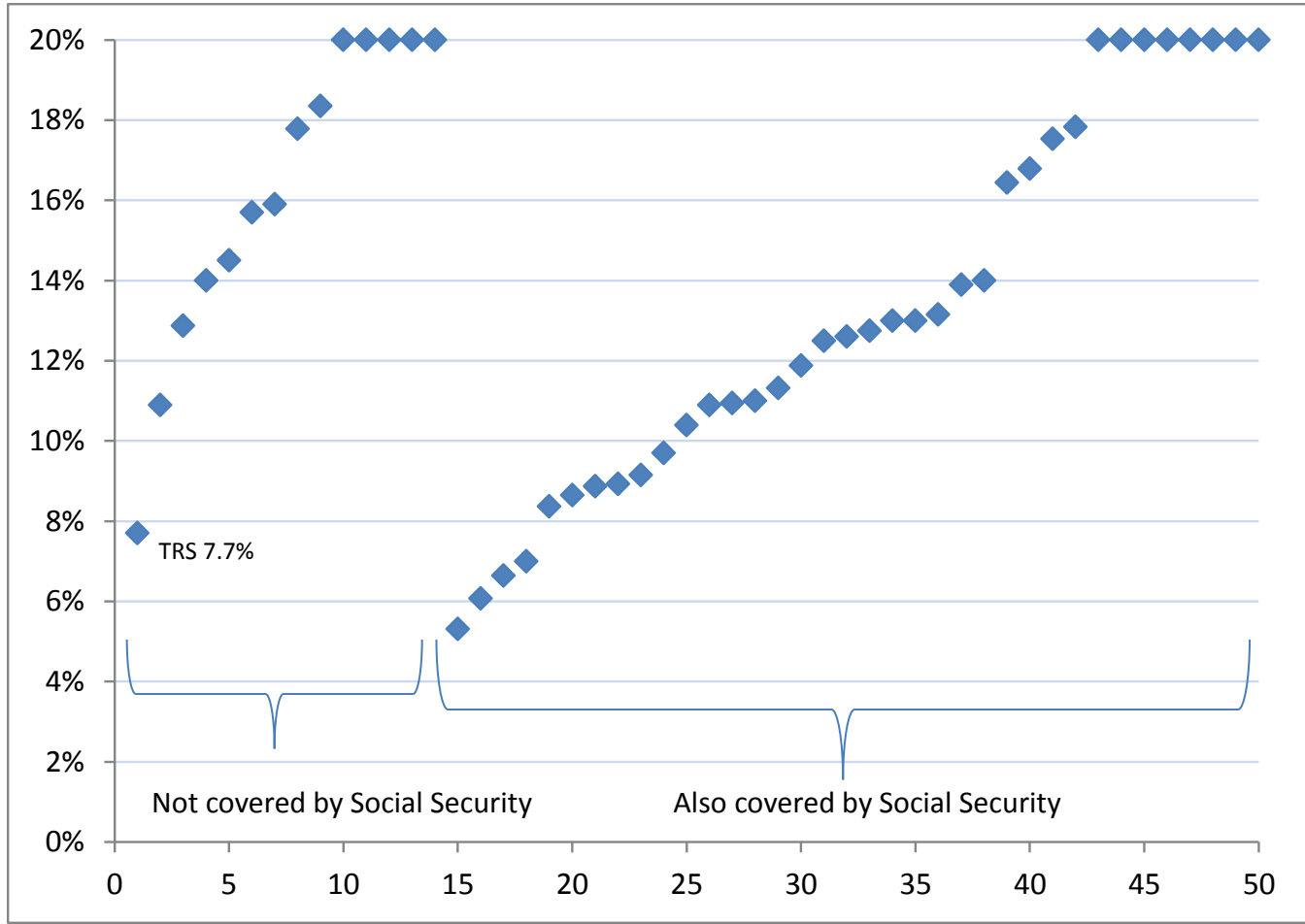
2016 Valuation Results

	2016 Valuation	2015 Valuation	2014 Valuation
Based on Smoothed Asset Value			
UAAL (\$ Billions)	\$35.45	\$32.97	\$31.64
Actuarial Funded Ratio	79.7%	80.2%	80.2%
Funding Period in years*	33.9	33.3	29.8
Increase in Contribution Rate needed to have 30 year funding period	0.26%	0.23%	NA
Based on Market Value			
Actuarial Funded Ratio	76.9%	77.2%	83.0%
Funding Period in years*	54.5	56.4	22.8
Increase in Contribution Rate needed to have 30 year funding period	1.02%	1.06%	NA

*Assumes current statutory contribution rates continue indefinitely

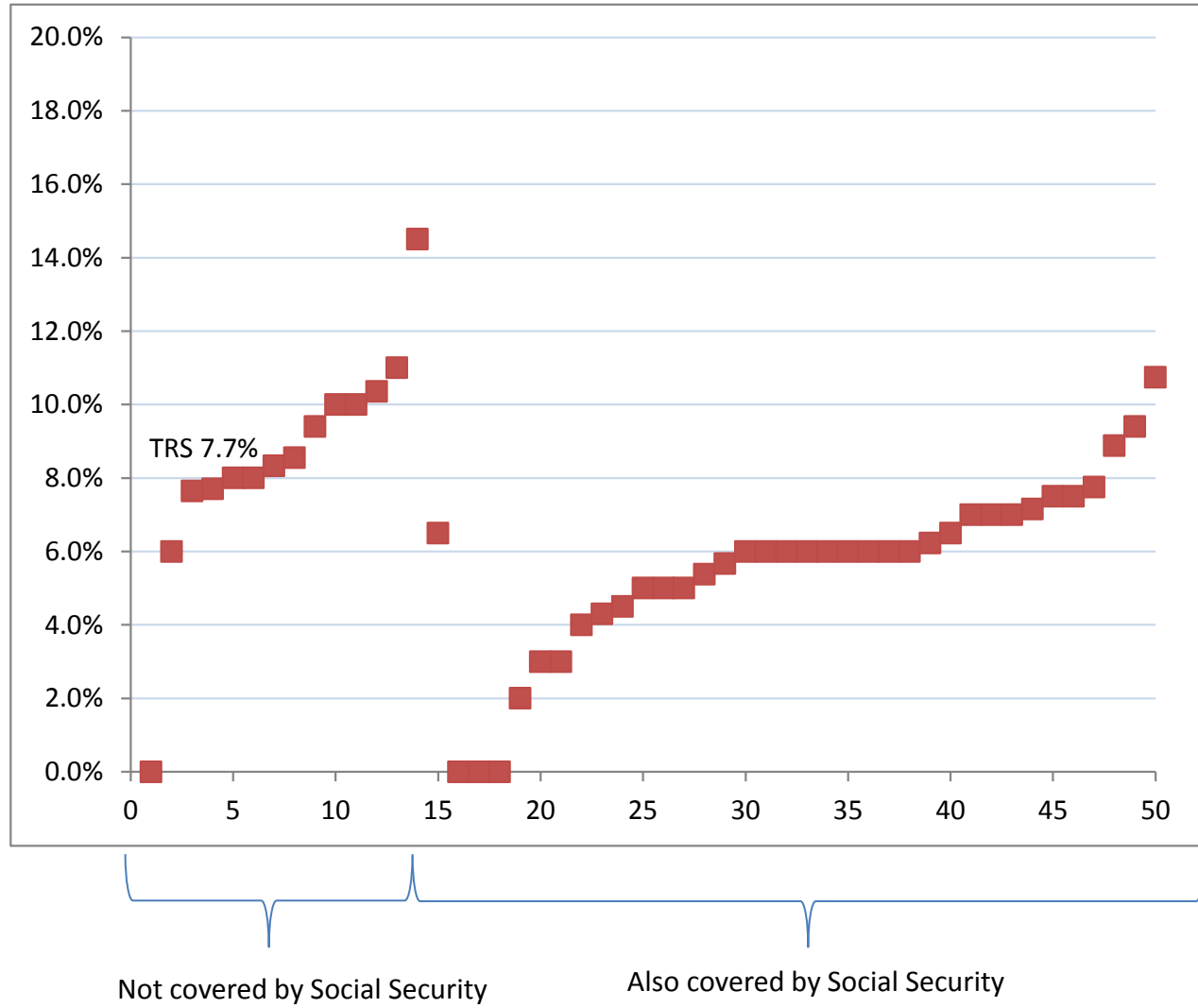


Peer Employer Contribution Rates by State: Teachers Plans

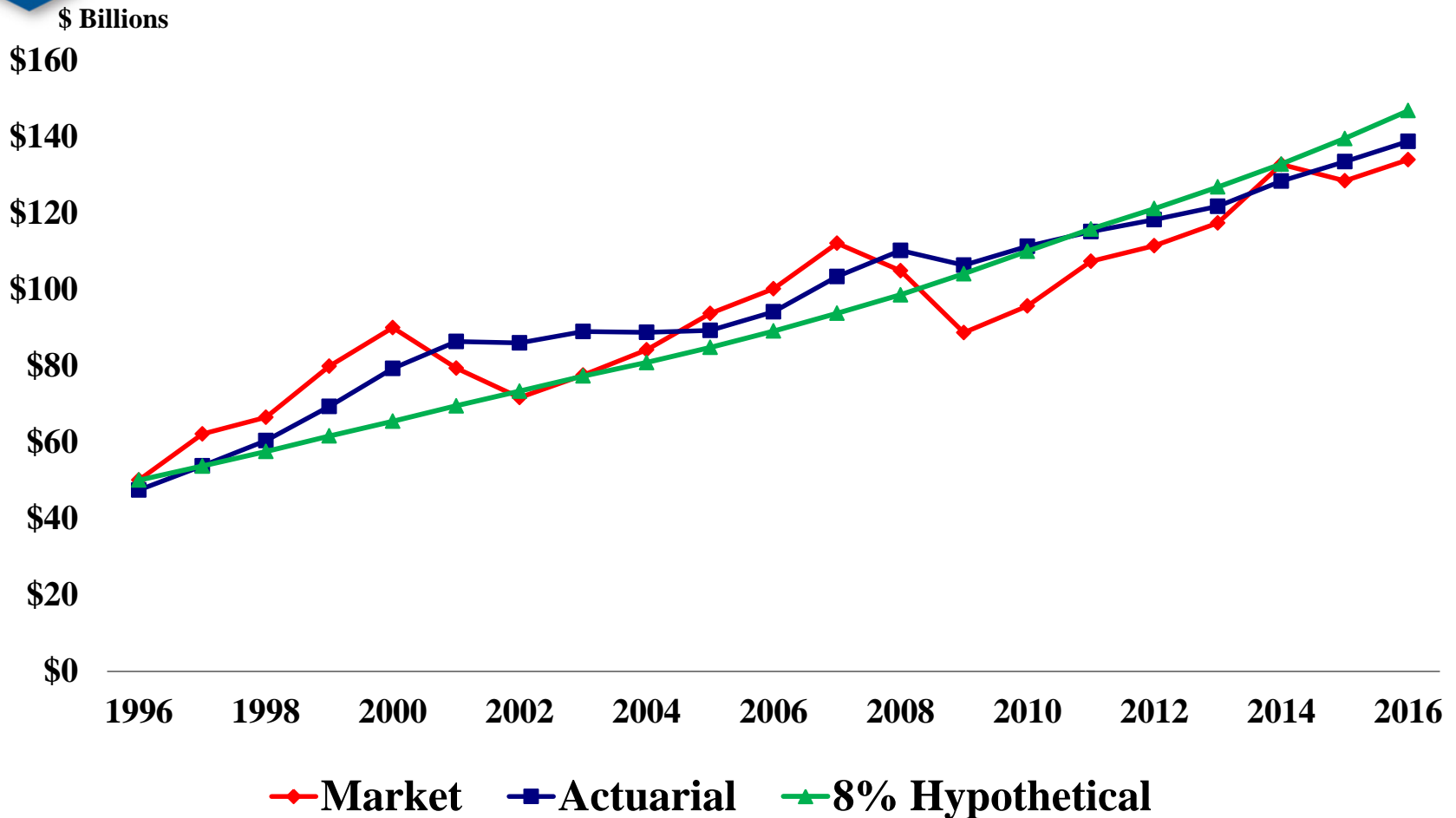




Peer Employee Contribution Rates by State: Teachers Plans



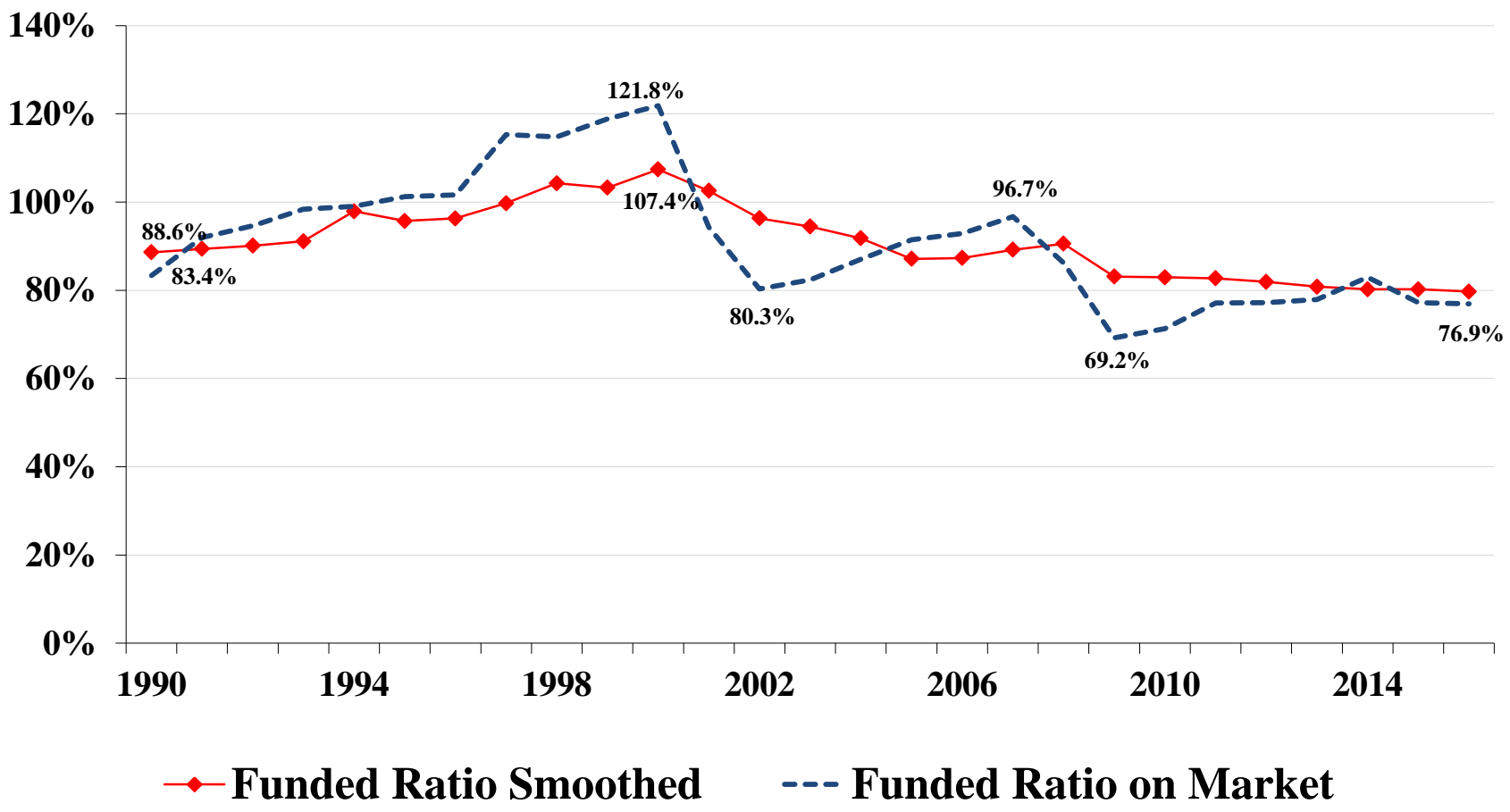
Market and Actuarial Values of Assets



8% Hypothetical assumes 8% had been earned on market every year since 1996, all cash flows unchanged
7.48% average compound return (on market value) over last 20 years.

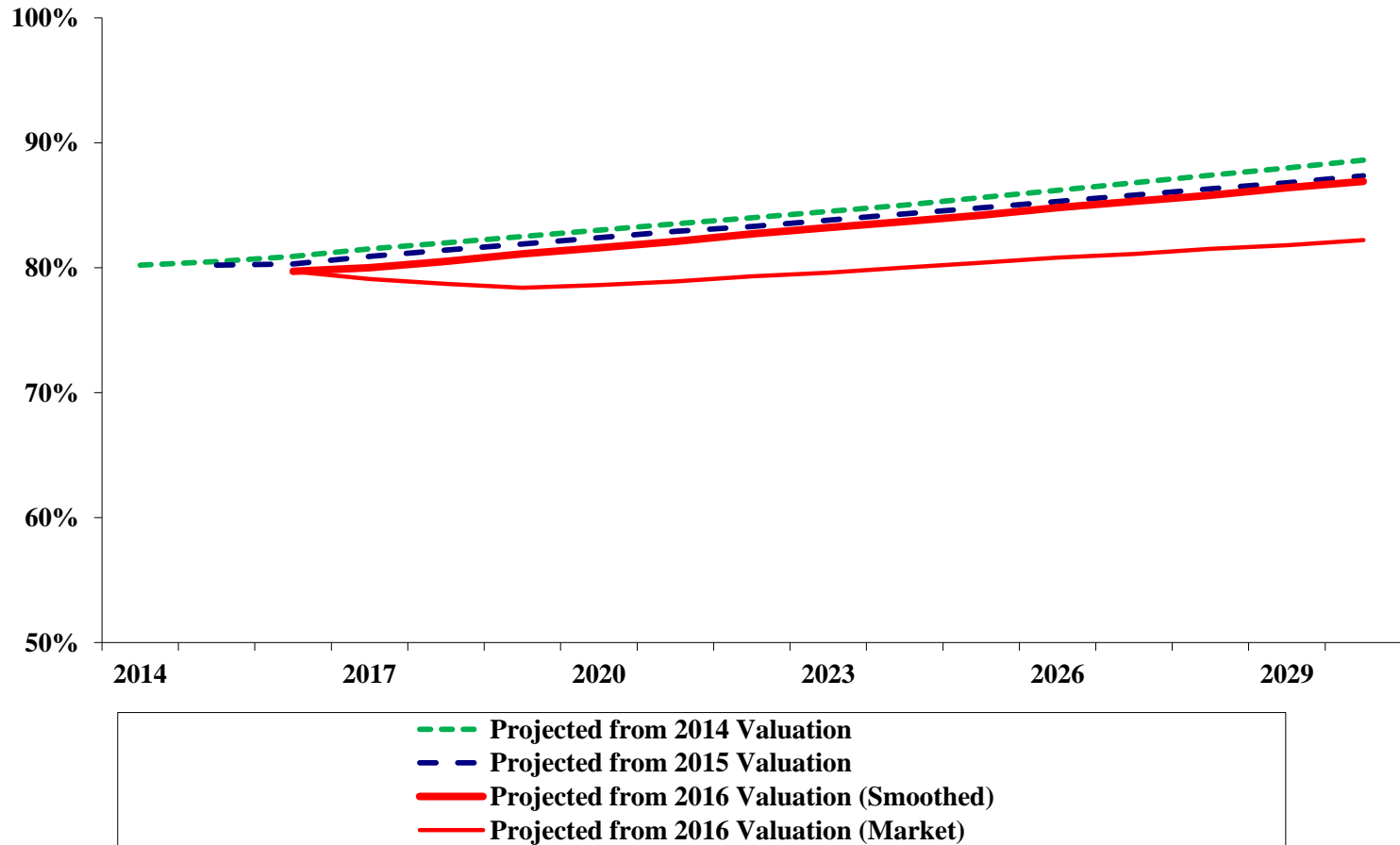


Funded Ratio: Smoothed vs Market





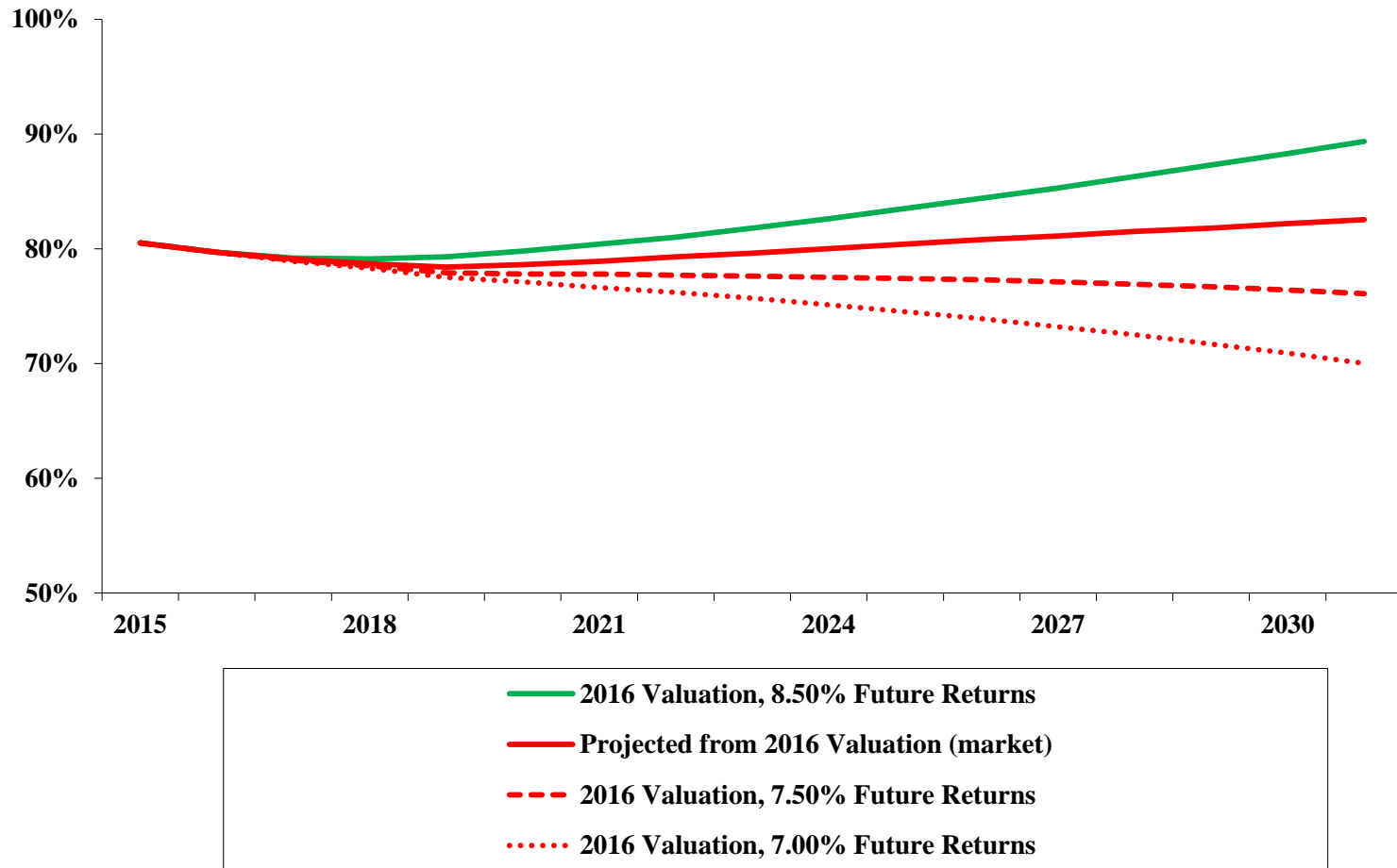
Projection of Funded Ratio



All projections assume contribution policy outlined
in statute continues indefinitely and no future changes to benefits

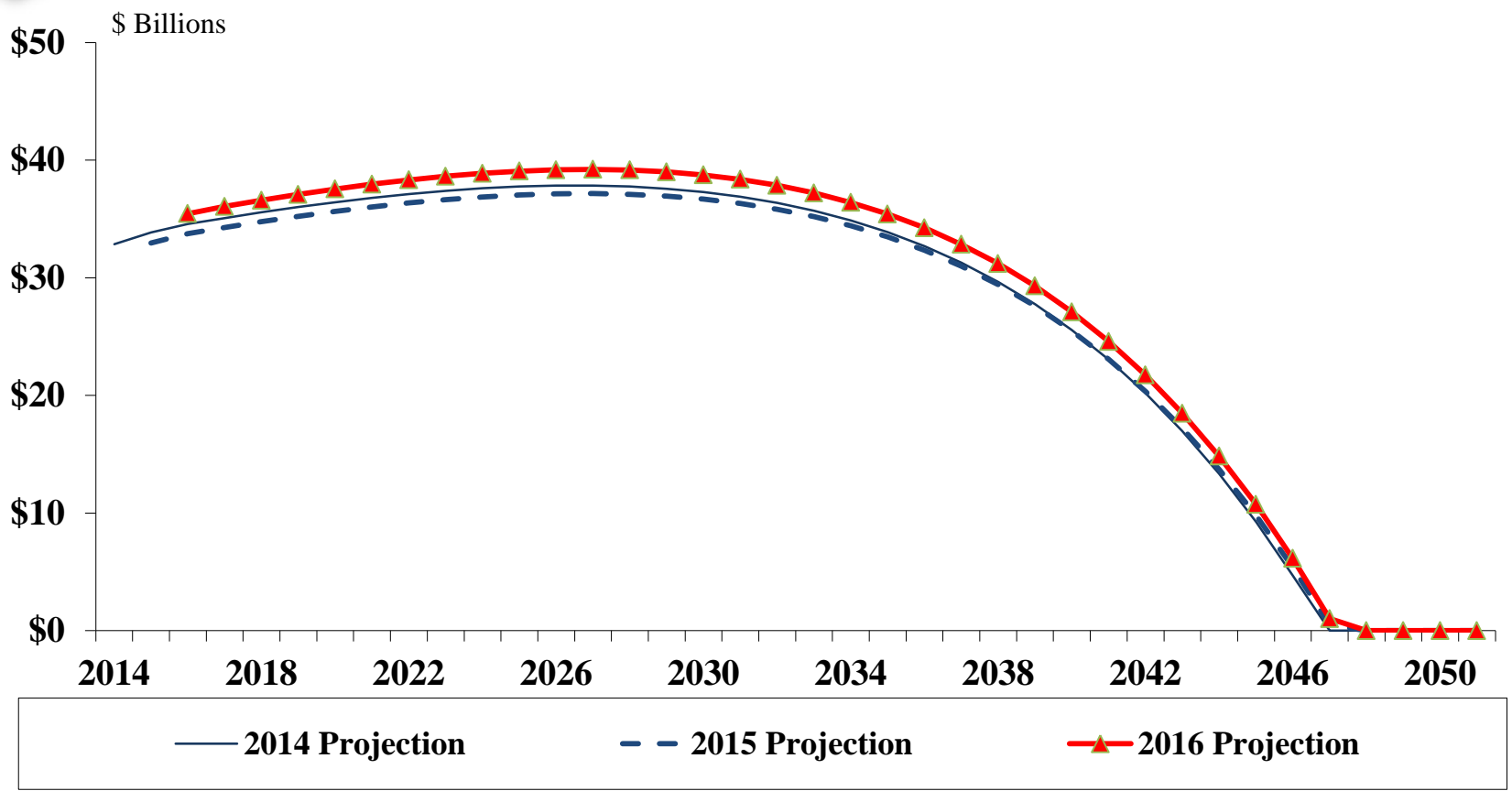


Projection of Funded Ratio Investment Return Sensitivity



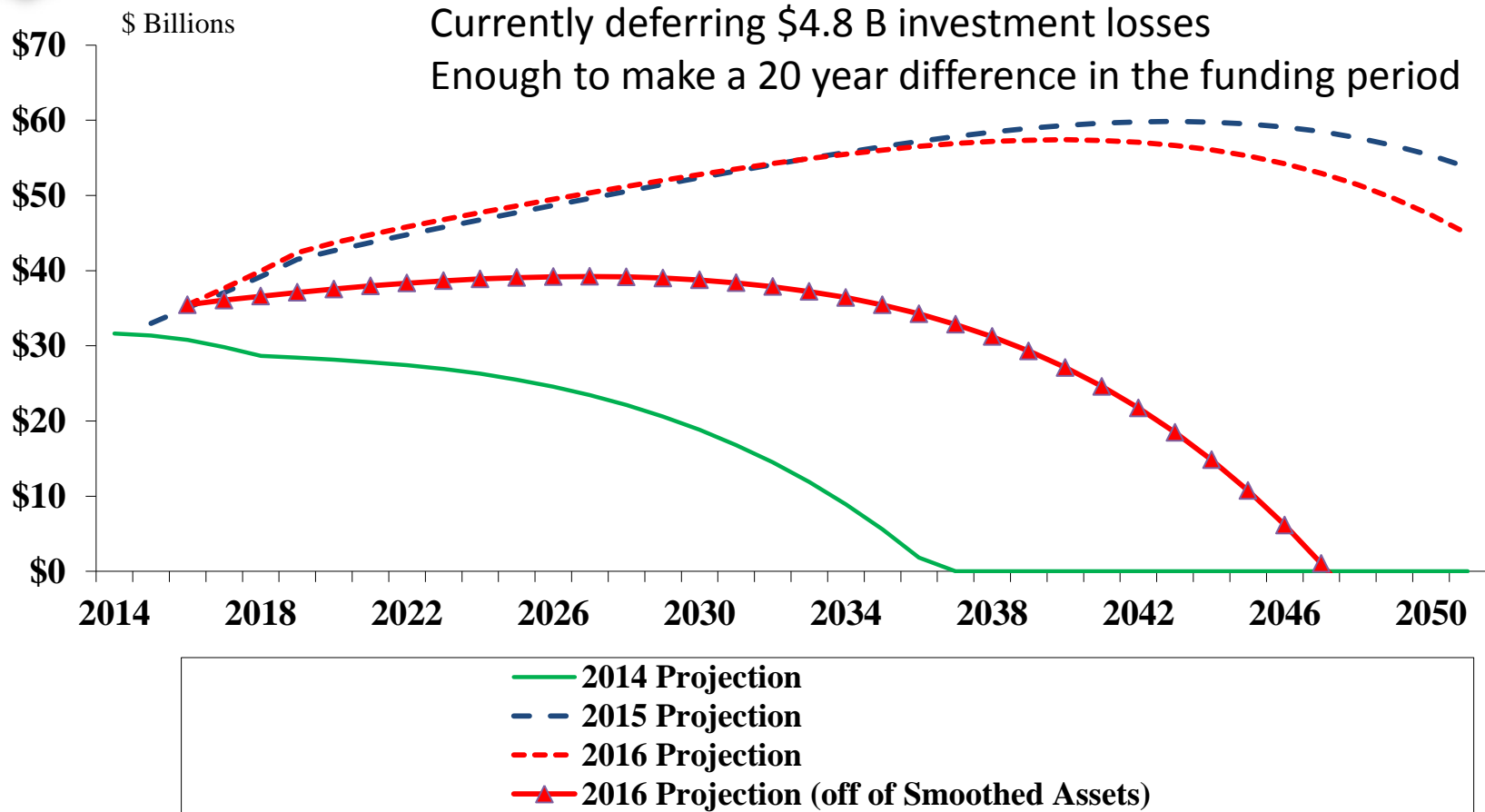
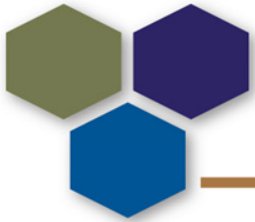


Projection of UAAL (Based on Smoothed Assets)



The above assumes all assumptions exactly met, including 8% annual investment returns
Assumes no changes to benefit policy
Assumes current statutory contribution policy remains throughout period

Projection of UAAL based on Market Asset Values on each Valuation Date (2014, 2015, 2016)



The above assumes all assumptions exactly met, including 8% annual investment returns on current market assets

Assumes no changes to benefit policy

Assumes current statutory contribution policy remains throughout period



Summary

- ◆ Based on Smoothed Assets, the funding period is 34 years

- ◆ However, there are currently deferred investment losses, and it will take either
 - ▶ better than anticipated investment experience
 - ▶ better than anticipated demographic experience
 - ▶ increased contributions
 - ▶ time
 - ▶ or a combination thereof

to attain a funding period at or below 30 years based on the current benefit package

- ◆ Projections expect the UAAL to increase in nominal dollars over the next 15-25 years before beginning to decrease
 - ▶ The ride is likely to be volatile

- ◆ Any future benefit enhancements need to be supported by a representative increase in revenue