



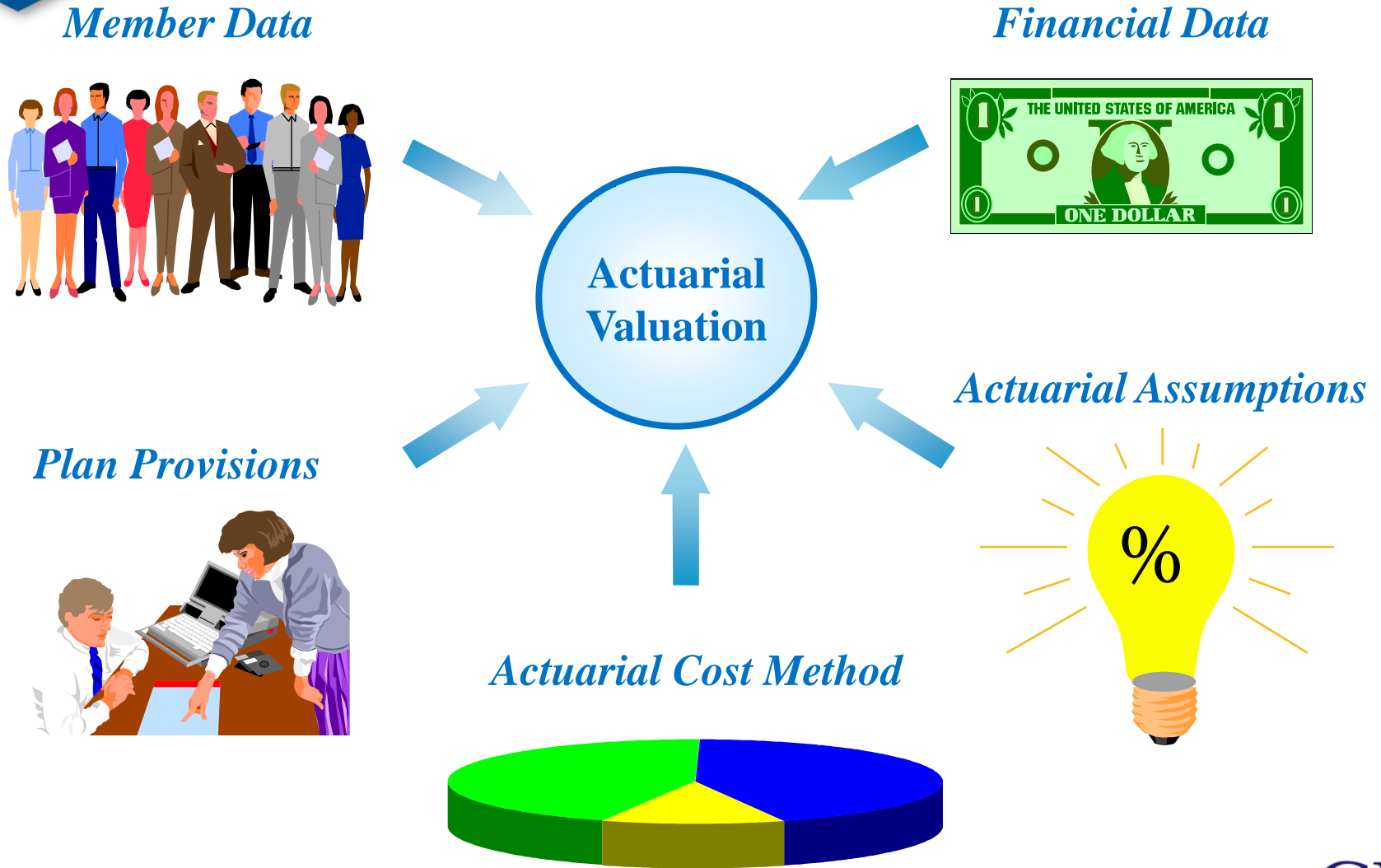
Michigan Public School Employees Retirement System

Pension Actuarial Valuation Results
as of September 30, 2011



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

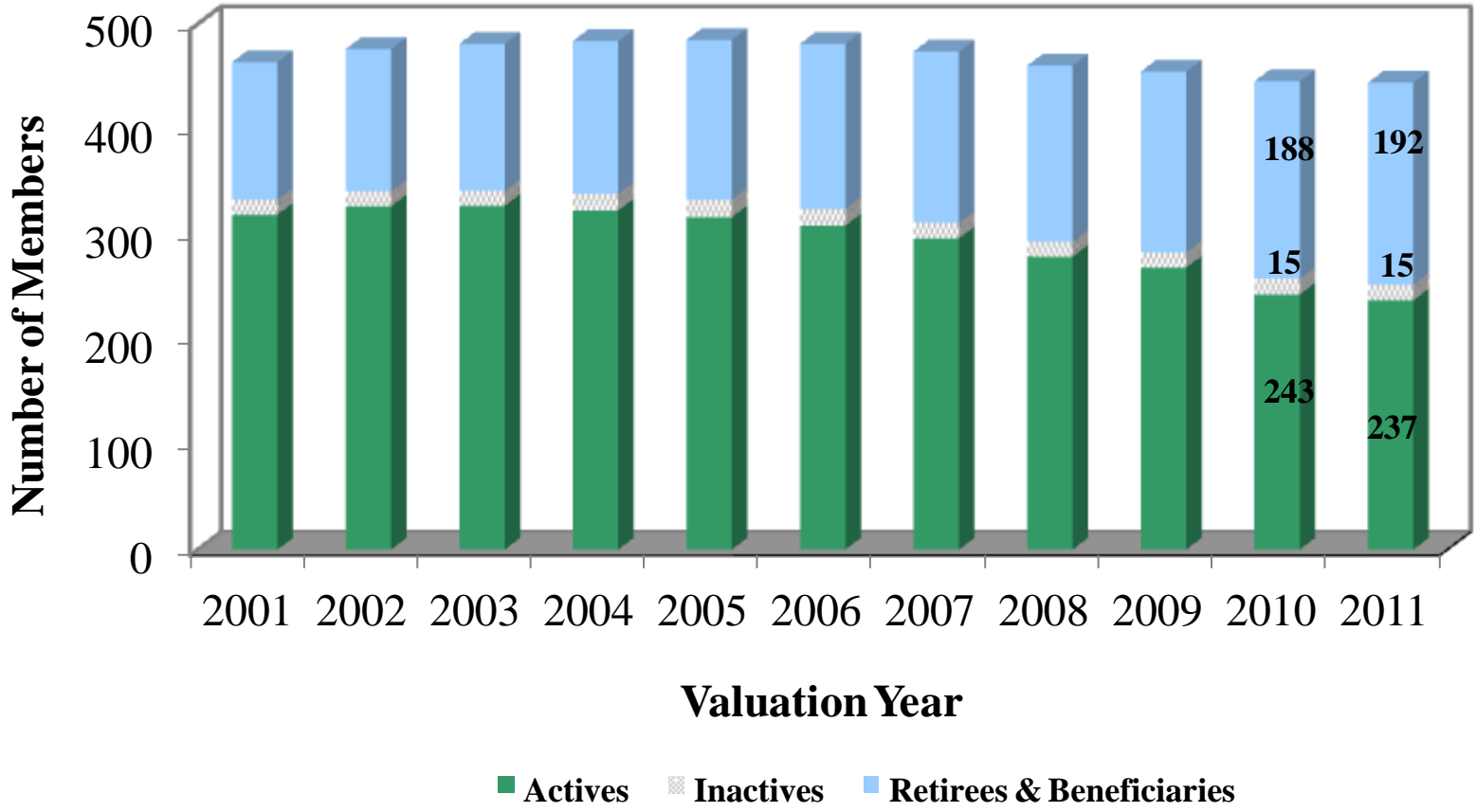
Actuarial Valuation Process





Membership Data

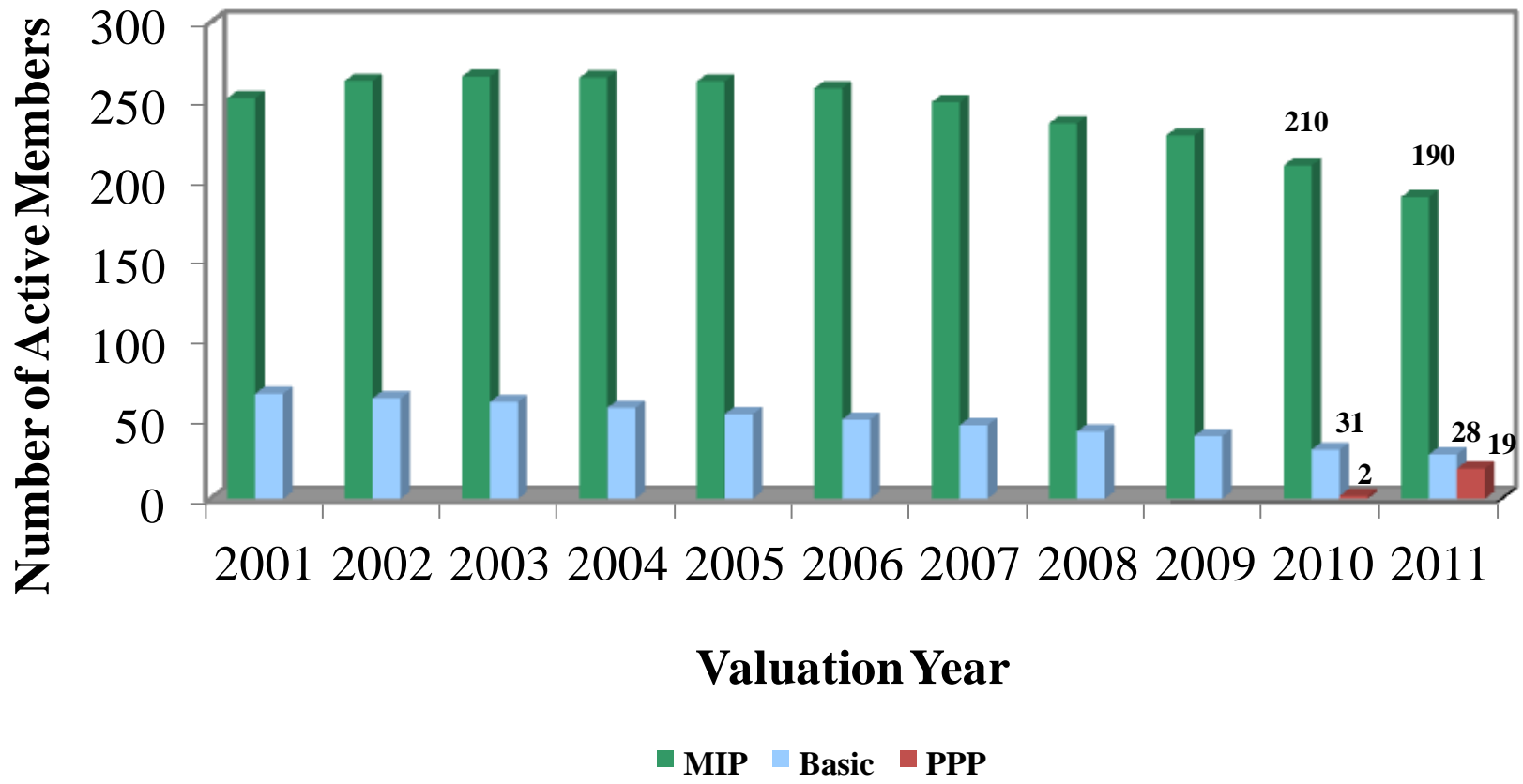
(Counts in Thousands)





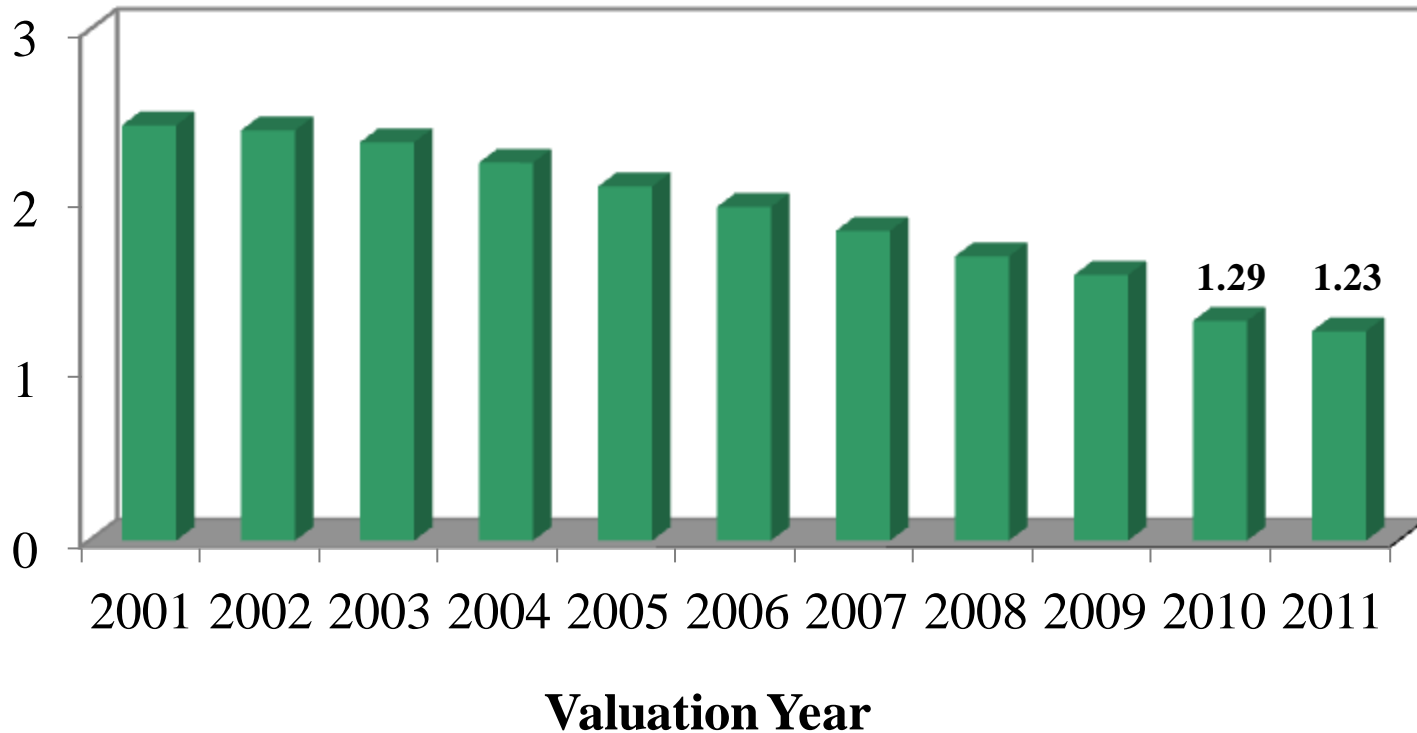
Active Members by Plan

(Counts in Thousands)



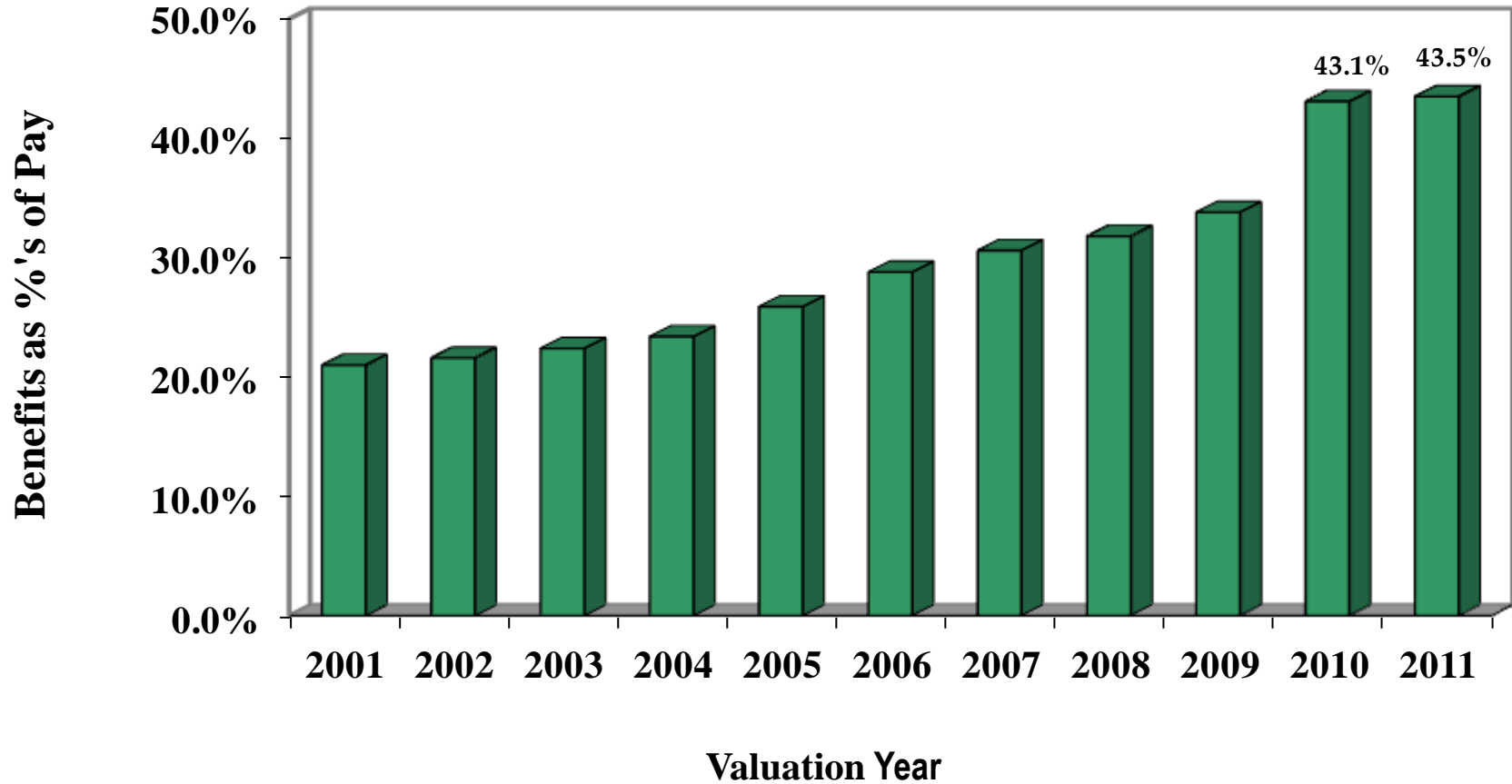


Ratio of Active Members to Pension Benefit Recipients



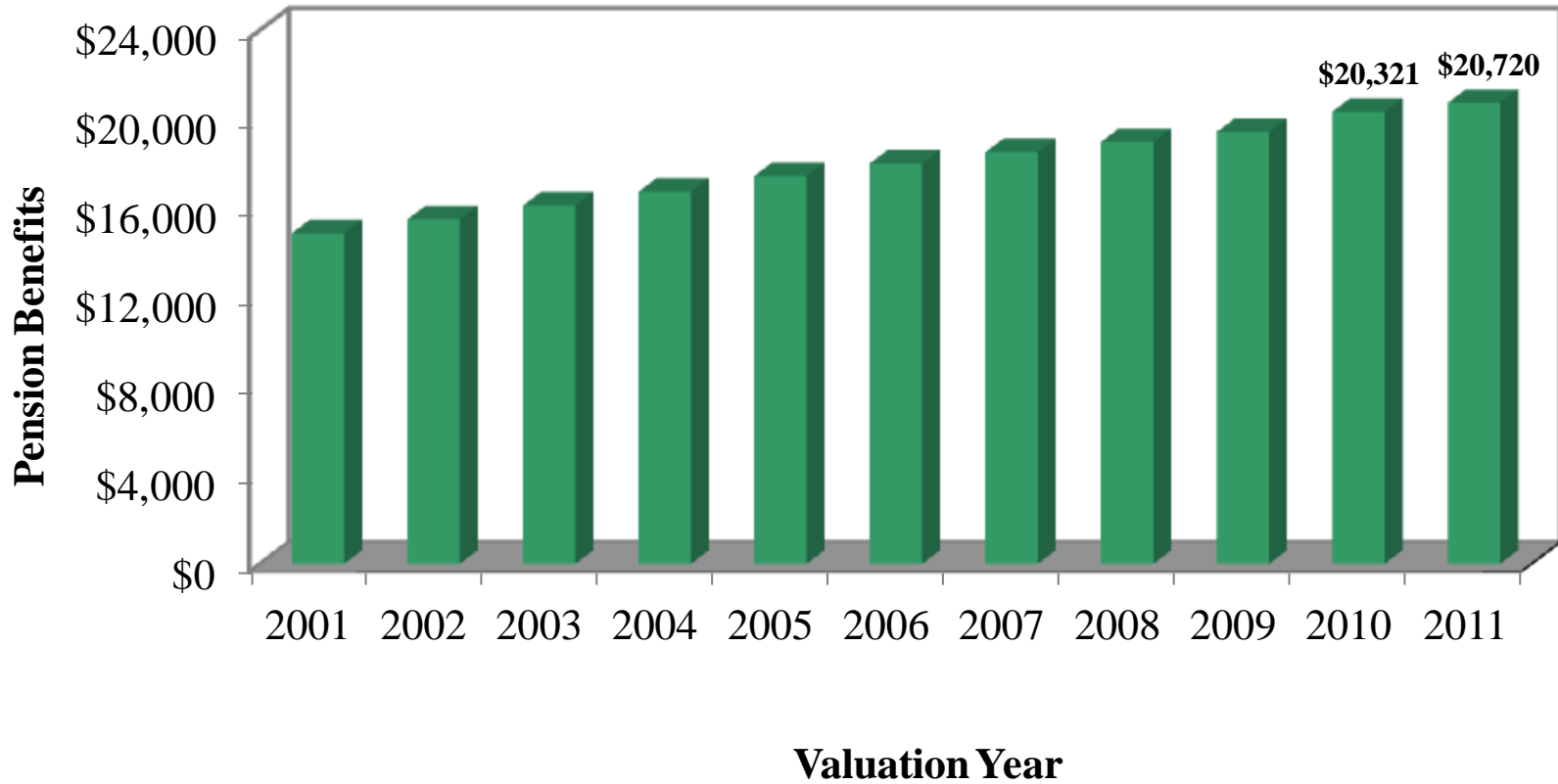


Pension Benefits Expressed as %'s of Active Member Pay





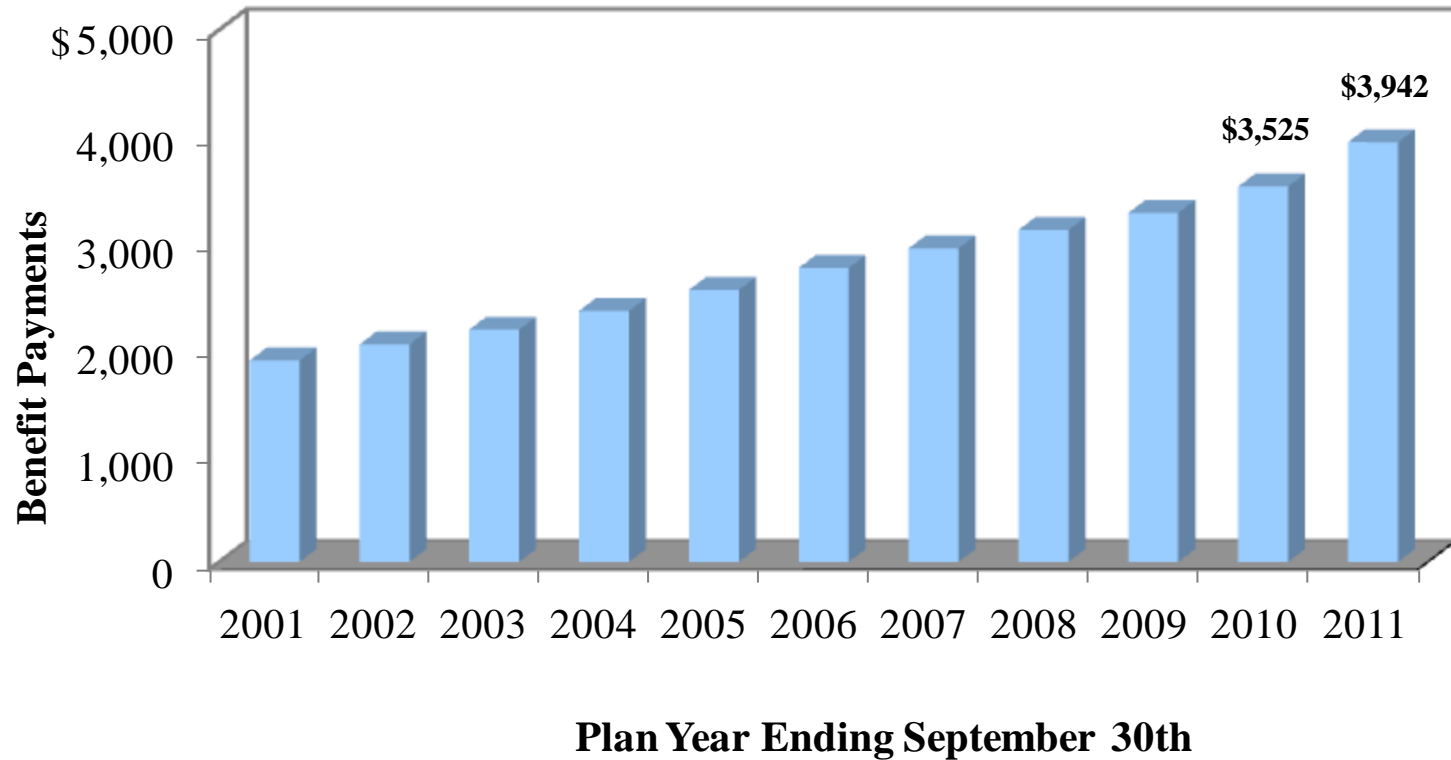
Average Annual Pensions





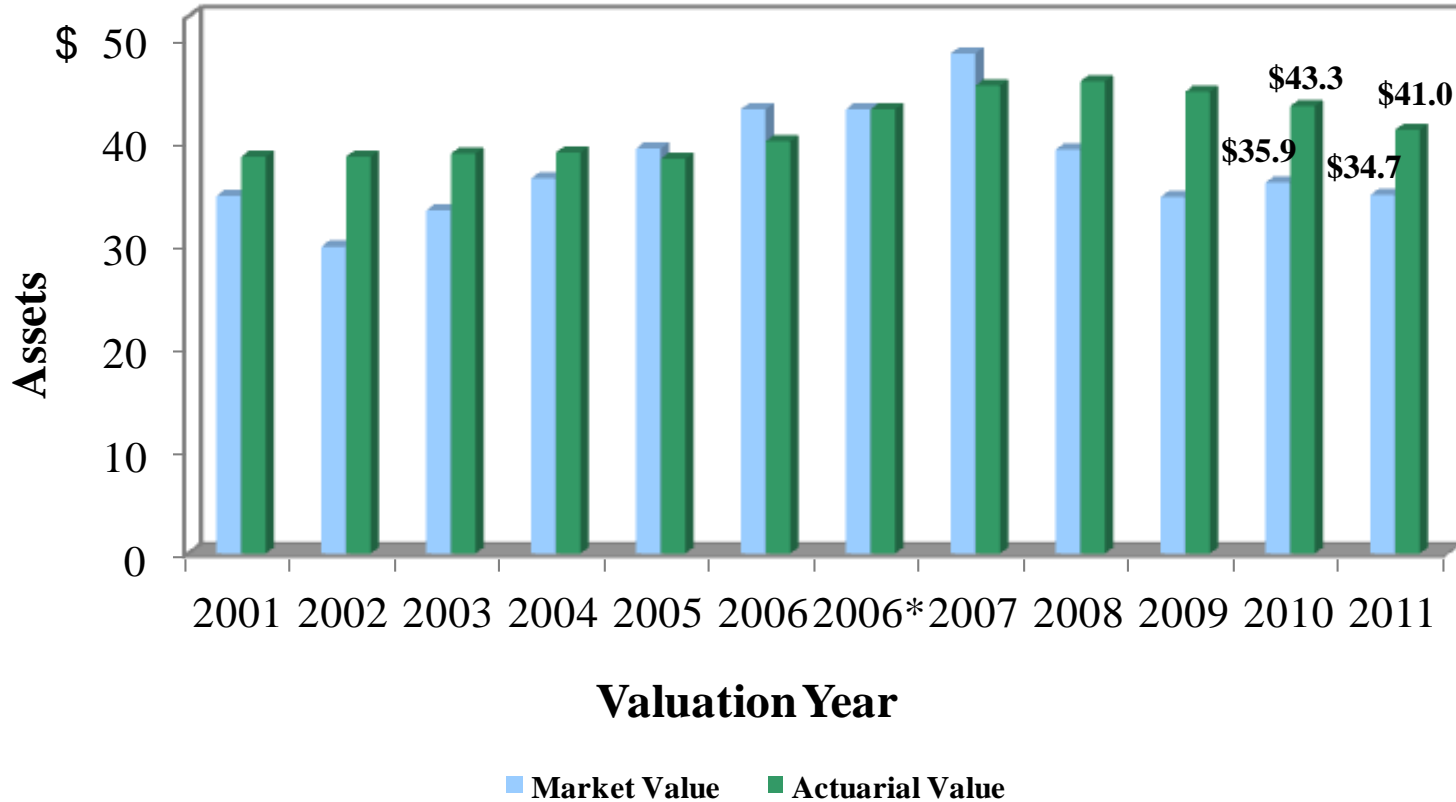
Benefit Payments by Fiscal Year

(Amounts in Millions)



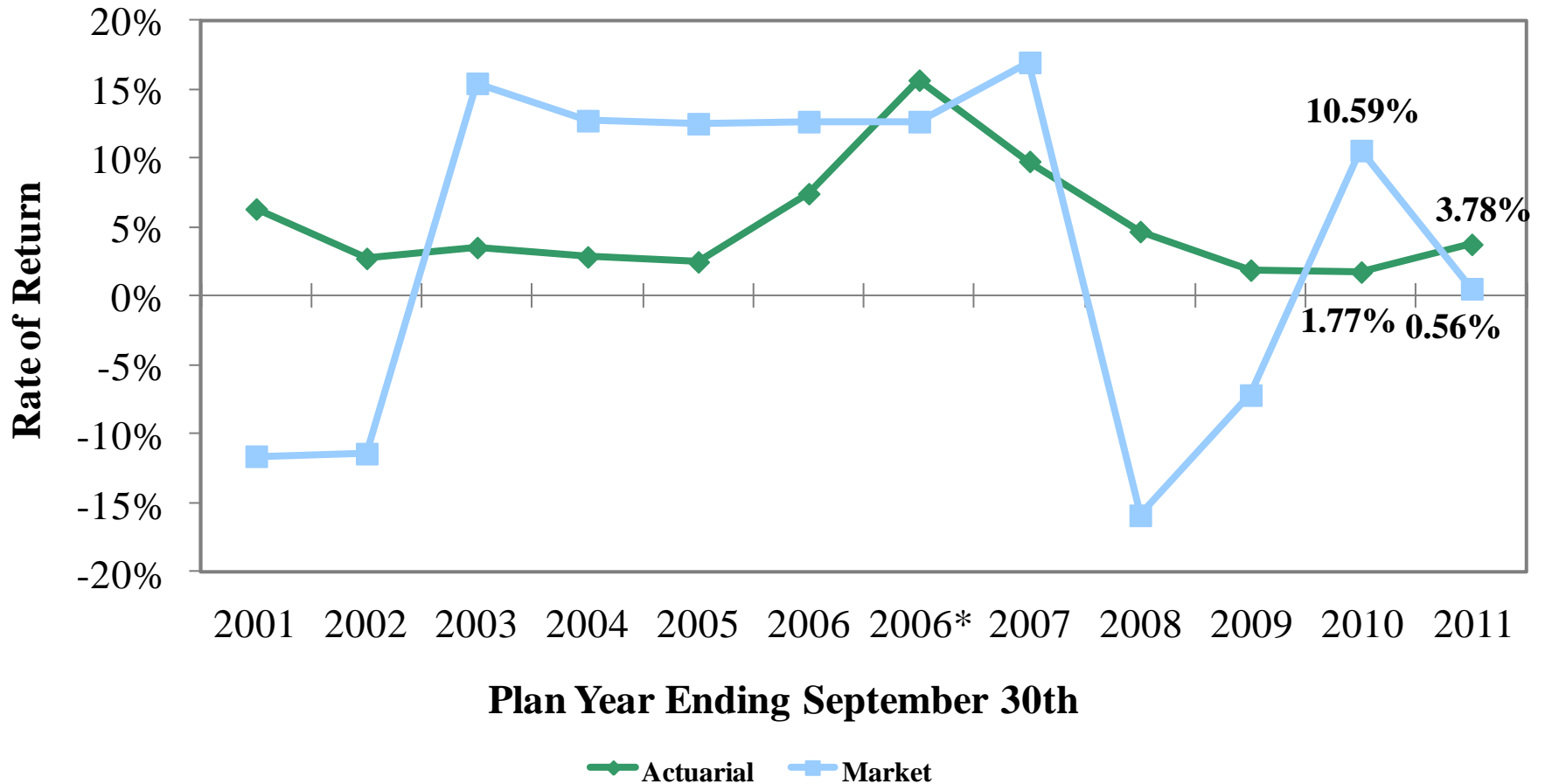


Growth of Pension Assets (Amounts in Billions)



* After adjusting to market value.

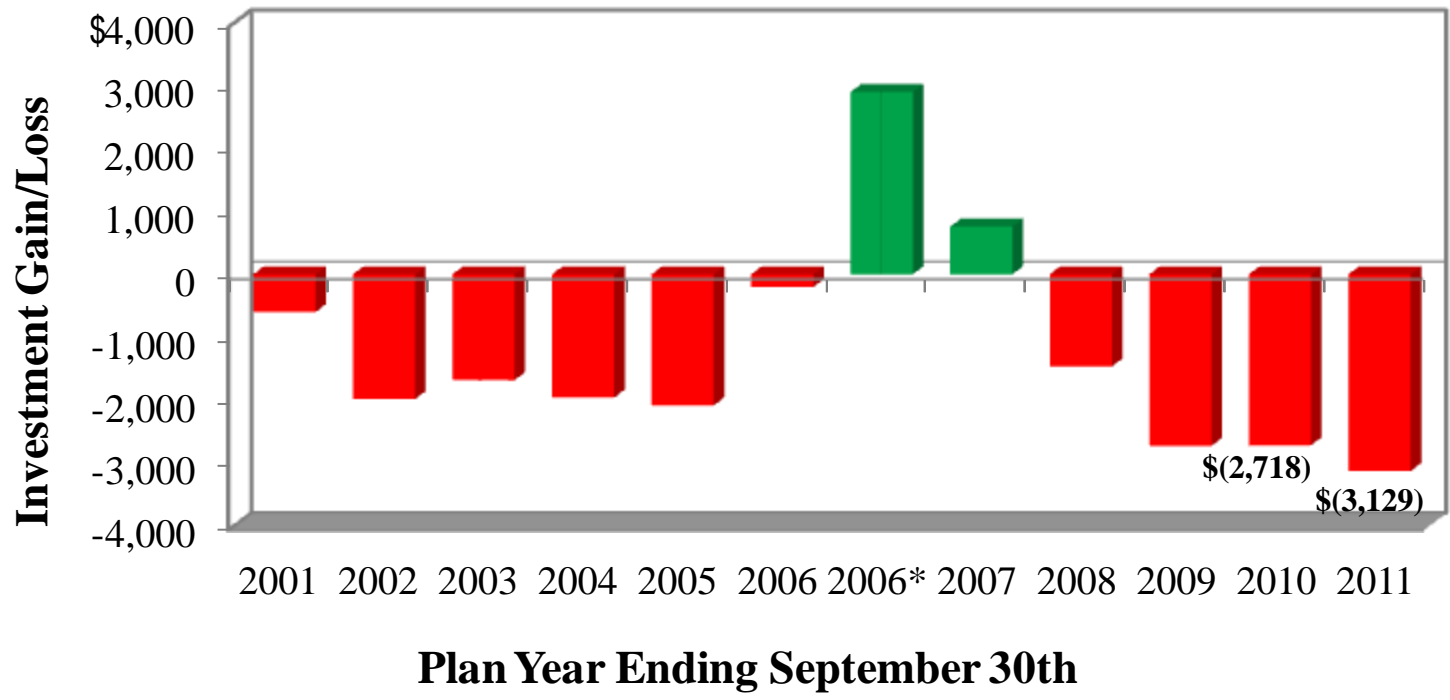
Actuarial & Market Net Rates of Return



* After adjusting to market value.



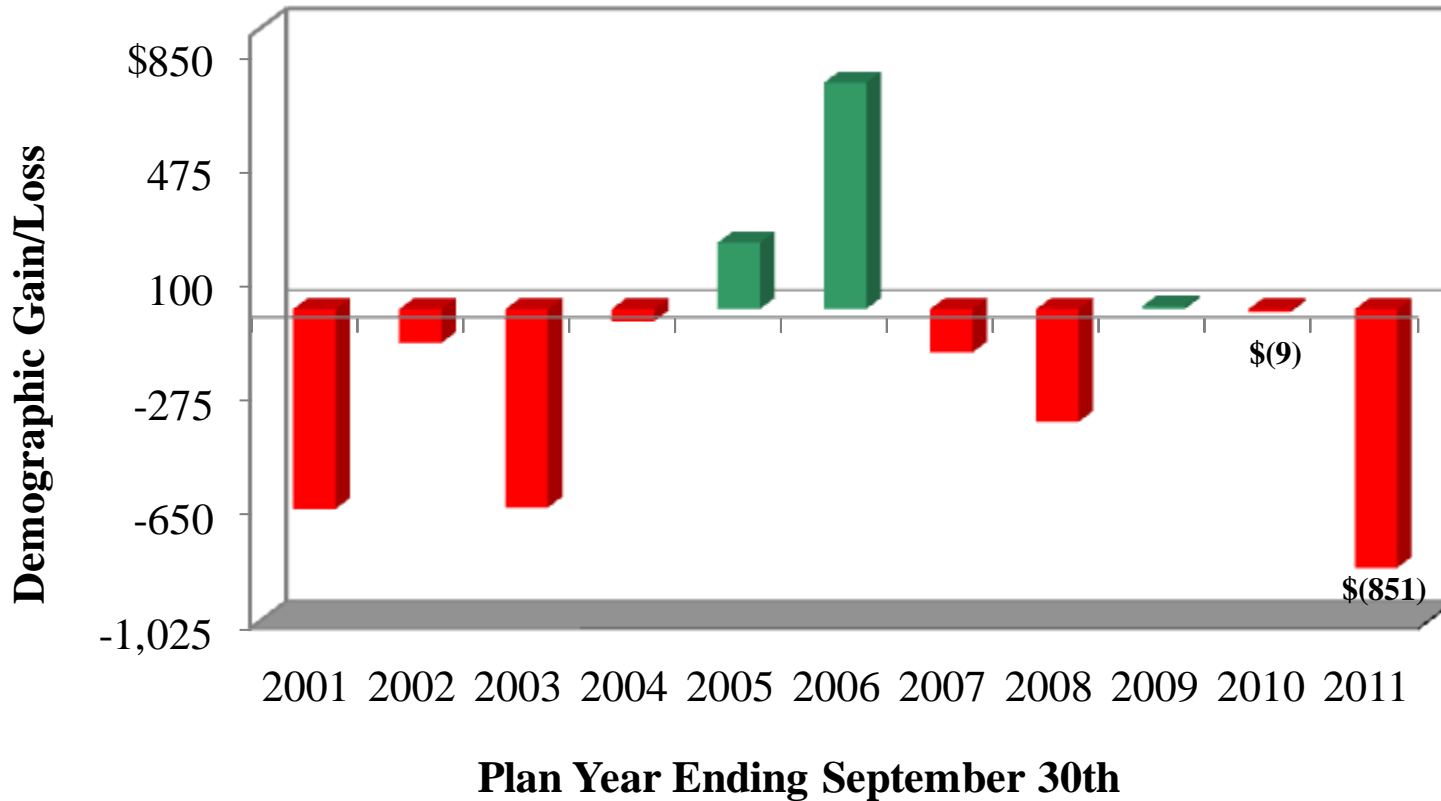
Investment Gain/Loss (Amounts in Millions)



* After adjusting to market value.



Demographic Gain/Loss (Amounts in Millions)





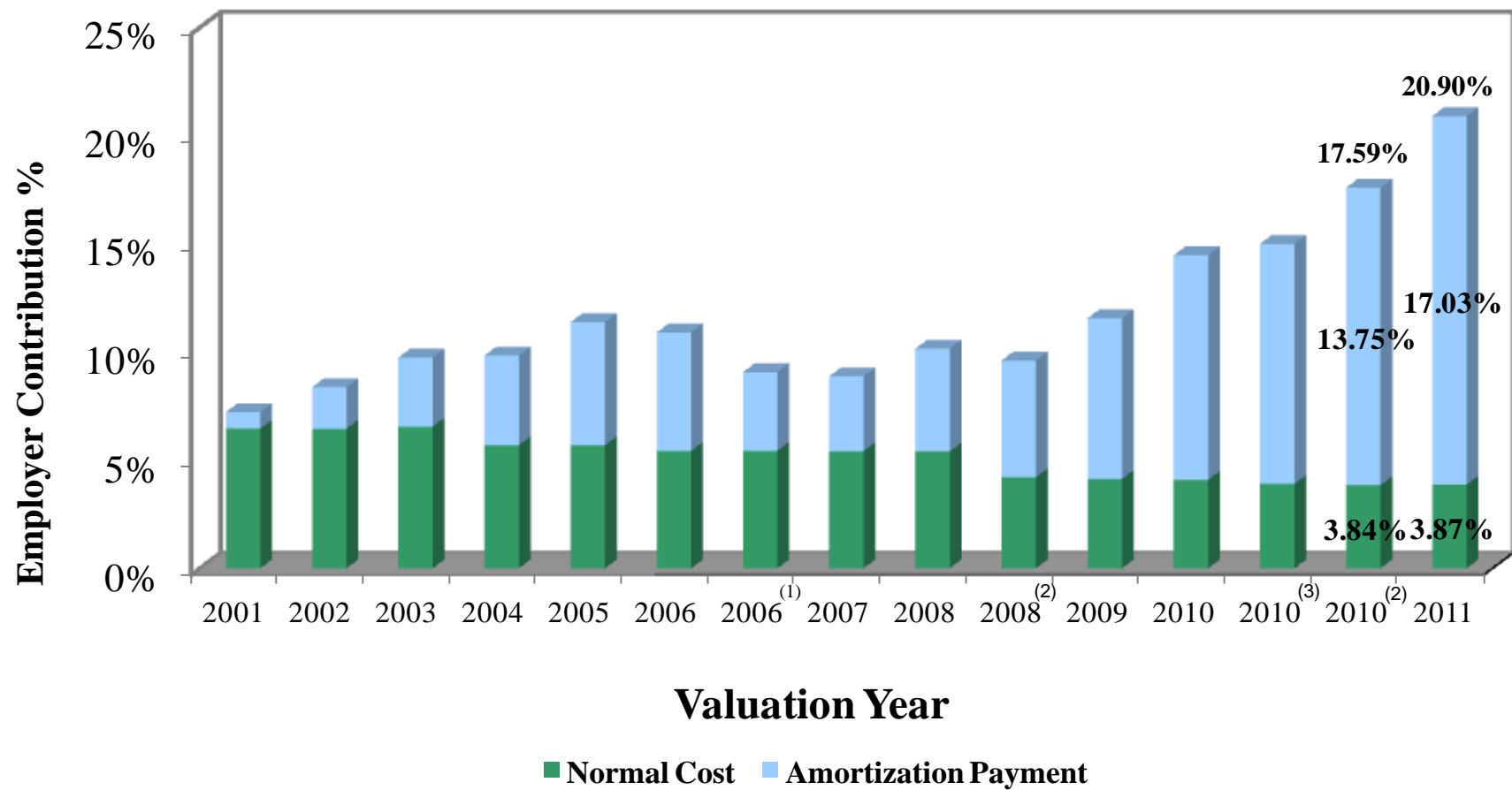
Gain/(Loss) by Type of Activity

(Amounts in Millions)

Plan Year Ending 9/30	2007	2008	2009	2010	2011
New Entrants	\$ (90.0)	\$ (97.2)	\$ (91.1)	\$ (60.0)	\$ (74.6)
Retiree Deaths	(231.4)	(158.0)	(259.4)	(259.6)	(707.4)
Investments	756.8	(1,463.6)	(2,727.8)	(2,718.2)	(3,129.1)
Pay Increases	17.1	(320.2)	487.8	114.1	(255.4)
Withdrawal	3.1	10.5	(21.4)	(0.5)	(29.4)
Retirements	35.4	80.5	150.7	(19.6)	17.6
Other	123.0	113.7	(258.0)	216.5	197.8
Total	614.0	(1,834.3)	(2,719.2)	(2,727.3)	(3,980.5)

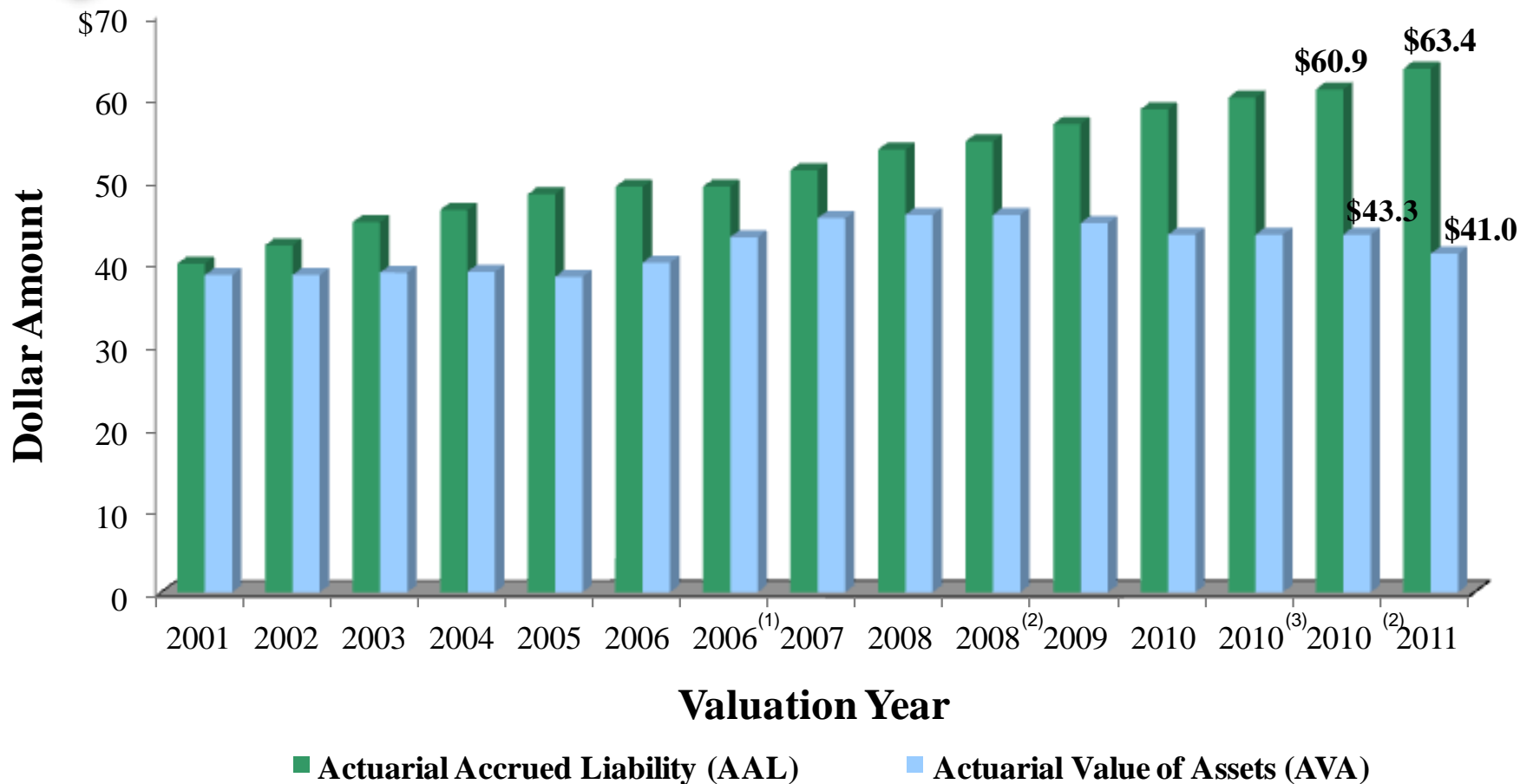


Historical Employer Contribution %'s Valuation as of September 30



(1) After adjusting to market value.
 (2) Revised benefit provisions.
 (3) Reflects actuarial assumptions and methods change.

Actuarial Accrued Liability Compared to Actuarial Value of Assets (in Billions)



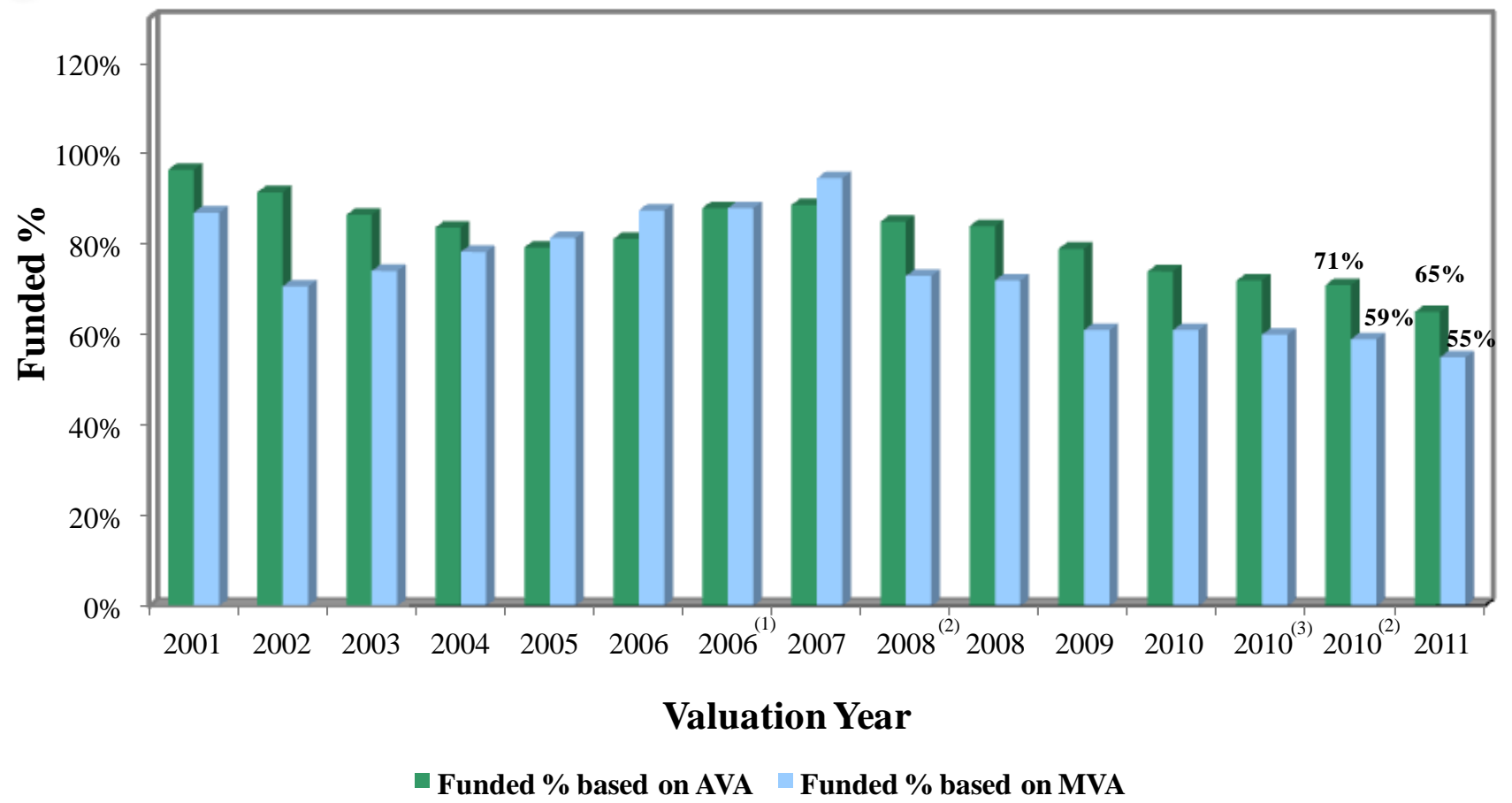
(1) After adjusting to market value.

(2) Revised benefit provisions.

(3) Reflects actuarial assumptions and methods change.



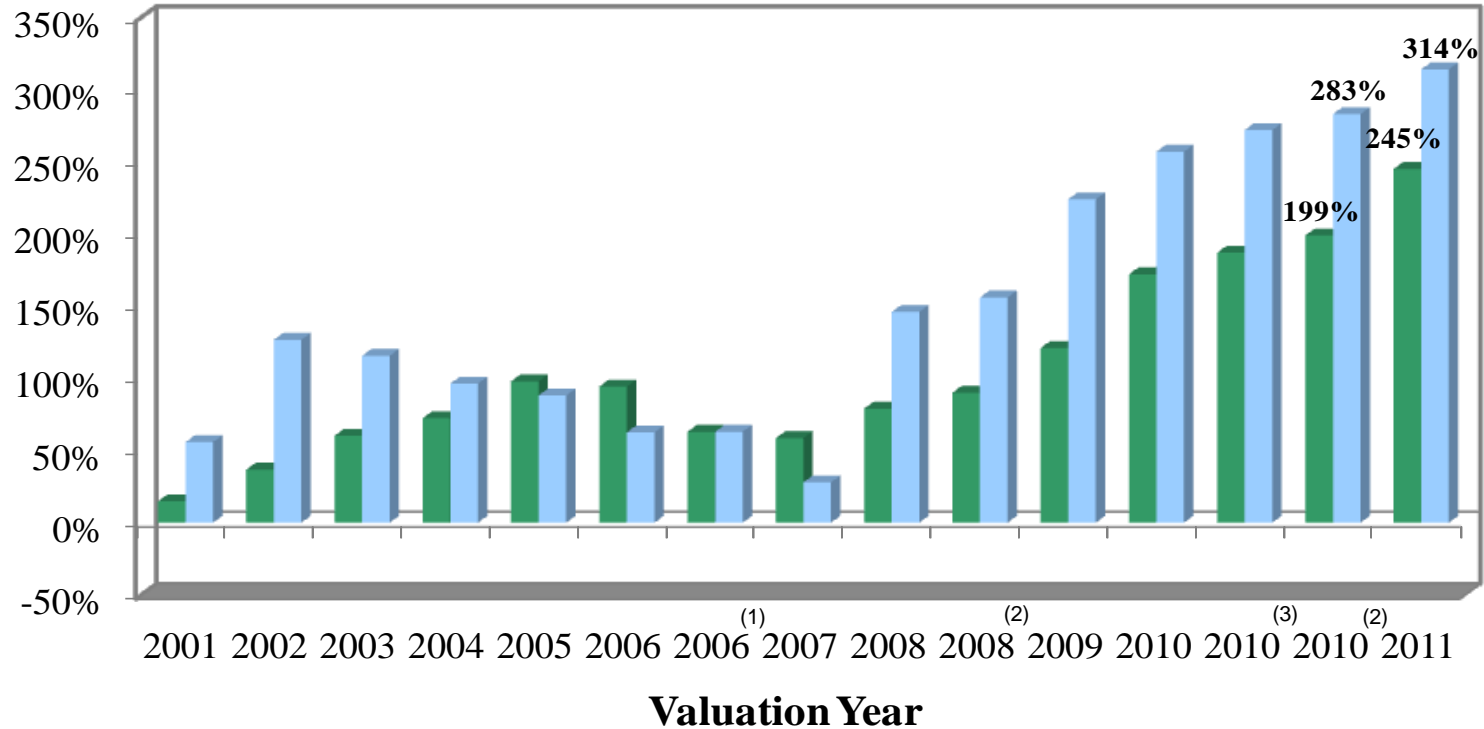
Retirement System Funded % Based on Actuarial Value and Market Value of Assets



(1) After adjusting to market value.
(2) Revised benefit provisions.
(3) Reflects actuarial assumptions and methods change.



Unfunded as Percentage of Payroll



■ UAAL (AVA) as % of Payroll ■ UAAL (MVA) as % of Payroll

- (1) After adjusting to market value.
- (2) Revised benefit provisions.
- (3) Reflects actuarial assumptions and methods change.



Comments on the Investment Markets

- ◆ Investment markets have been very volatile.
- ◆ Valuation is based on a 5-year smoothed value of assets.
 - Reduces the volatility of the valuation results.
- ◆ 9/30/2011 smoothed value of assets was higher than market value.
 - Meeting the actuarial assumption will require average future market returns over 8%.
- ◆ 9/30/2011 valuation results based on market value:
 - Funded percent would be 55% (instead of 65%).
 - Employer contribution would be 25.30% of payroll (instead of 20.90%).



Circular 230 Notice: Pursuant to regulations issued by the IRS, to the extent this presentation concerns tax matters, it is not intended or written to be used, and cannot be used, for the purpose of (i) avoiding tax-related penalties under the Internal Revenue Code or (ii) marketing or recommending to another party any tax-related matter addressed within. Each taxpayer should seek advice based on the individual's circumstances from an independent tax advisor.

This presentation shall not be construed to provide tax advice, legal advice or investment advice.