TEACHERS' RETIREMENT SYSTEM OF OKLAHOMA

Actuarial Valuation as of June 30, 2009

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on November 18, 2009

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Actuarial Valuation

- Prepared as of June 30, 2009, using member data, financial data, benefit and contribution provisions, actuarial assumptions and methods
- Purposes:
  - Measure the actuarial liabilities
  - Determine adequacy of current statutory contributions
  - Provide other information for reporting
    - GASB #25
    - CAFR
    - State Pension Commission
  - Explain changes in the actuarial condition of TRS
  - Track changes over time

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Membership – Actives and Inactives

- The number of active members increased by 710, from 88,678 to 89,388
  - 0.8% increase, following a 0.6% increase last year
  - Over last ten years, active membership has increased an average of 0.9% per year
- Payroll for members active on June 30, 2009 increased from 3,751 million to $3,808 million, a 1.5% increase
  - Payroll has increased by 44% in the last ten years, an average increase of 3.7% per year
    - We assume a 3.5% average annual increase

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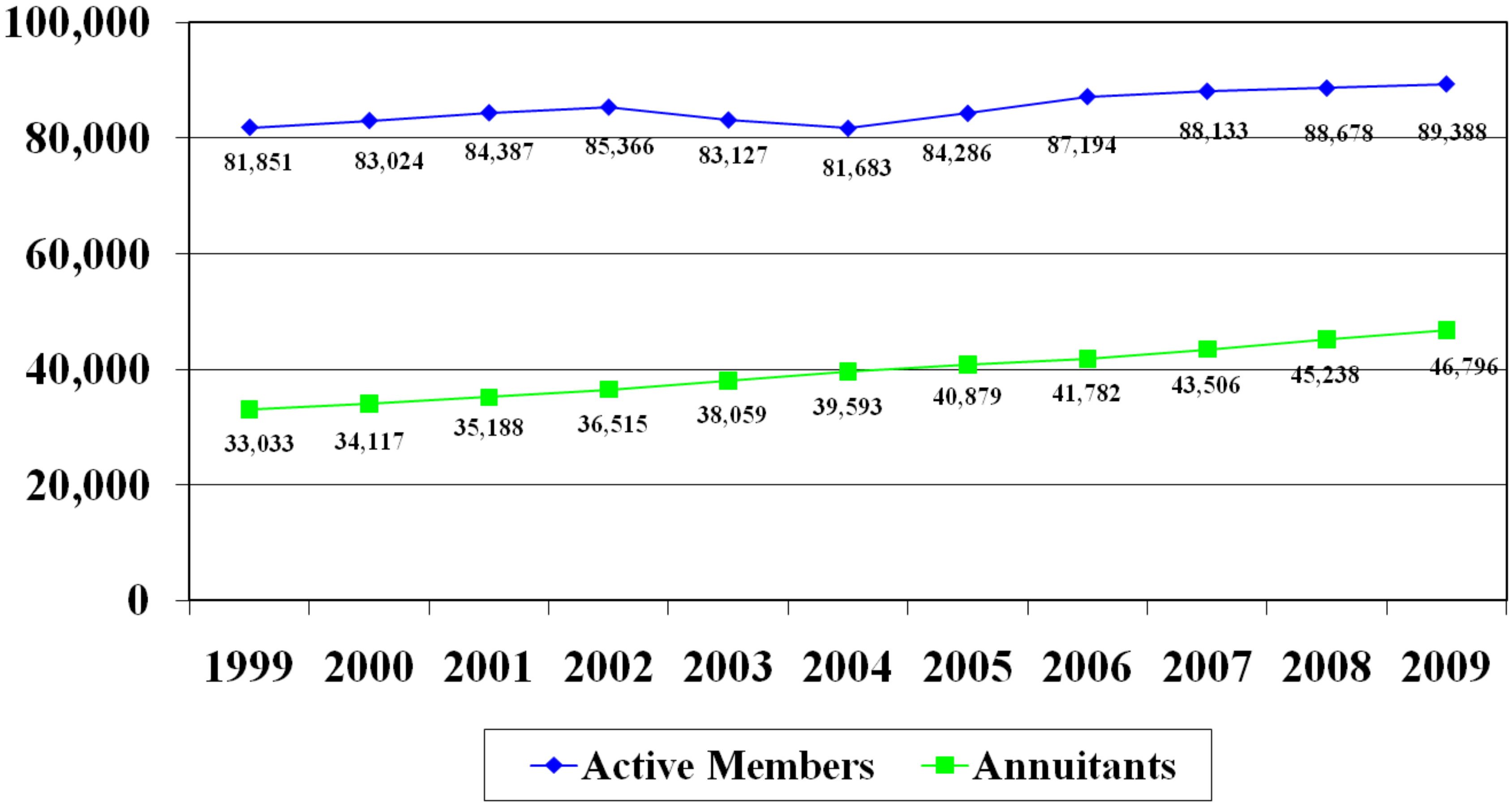
Membership – Actives and Inactives

- Average pay for active members increased 0.7%, from $42,304 to $42,600
- Average age of active members increased to 46.0, from 45.9 and from 44.4 ten years ago
- Average years of service remained at 11.5, and increased compared to 11.2 ten years ago
- There are also 7,379 inactive vested members, and 7,542 inactive nonvested members

Membership – Annuitants

- The number of annuitants increased by 1,558, from 45,238 to 46,796, a 3.4% increase
  - Number includes service retirees, disabled retirees, special retirees, and beneficiaries receiving benefits
  - Over the last ten years, the number of annuitants has grown an average of 3.5% per year
- Average annual annuitant benefit is $17,775
- There are 1.9 active members for each annuitant
- Ratio is slowly decreasing, was 2.5 ten years ago
- Over last ten years, the number of actives has increased 9%, while the number of annuitants has increased 42%

Active Members vs. Annuitants



0.9% average increase for active members over last ten years
3.5% average increase for annuitants over last ten years
1.9 active members per annuitant

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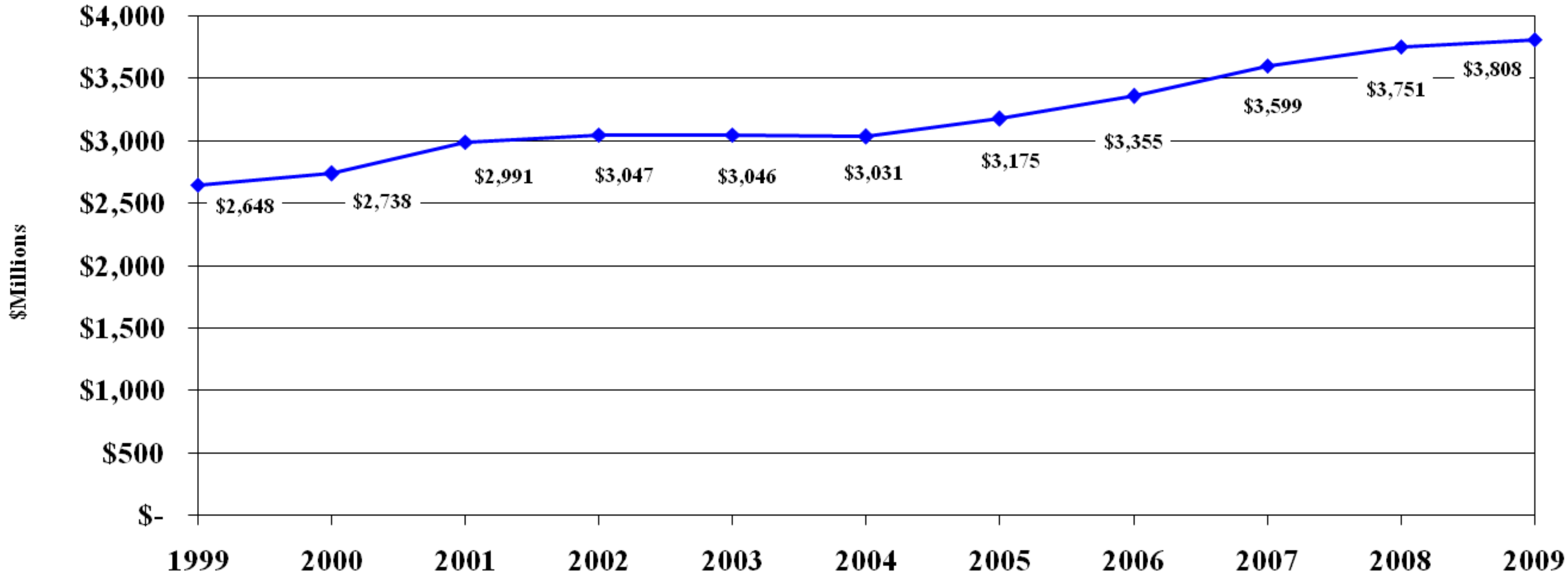
Payroll



3.7% average increase over last ten years

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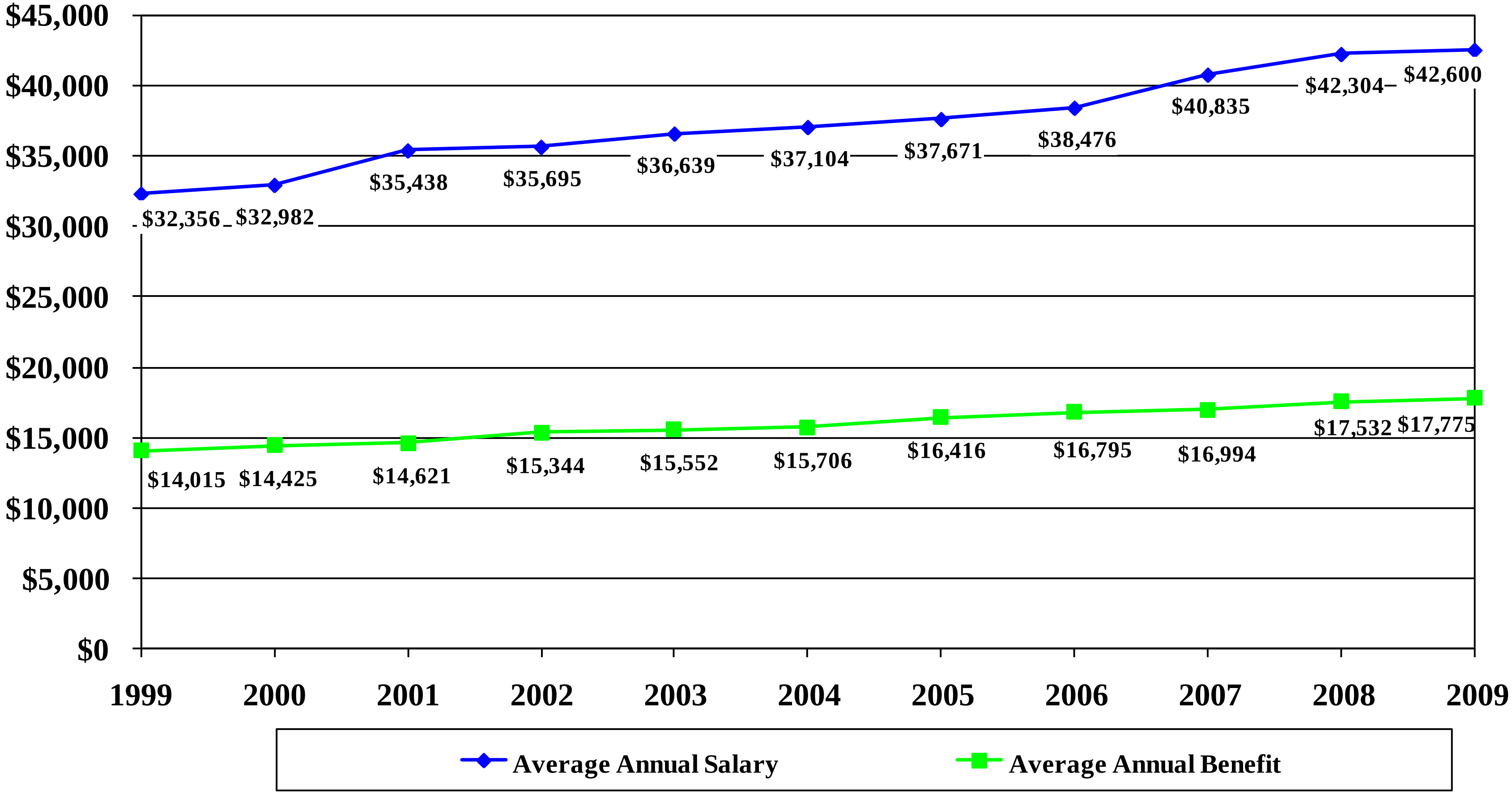
Average Salary and Average Benefit



2.8% average increase in average salary over last ten years
2.4% average increase in average benefits over last ten years

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Assets

- Fair market value decreased from $8,634 million to $7,227 million
  - Assets shown exclude 403(b) accounts
  - 55% in equities, 45% cash and fixed income
- Four sources of contributions
  - Member contributions (7.00% of pay = $288 million)
    - Includes service purchases, redeposits and EESIP payments
  - Employer contributions = $339 million
    - EESIP employers: 8.50%/9.00%
    - Non-EESIP employers: 7.55%/8.05%
    - Current rates scheduled to increase on Jan. 1, 2010 to 9.50% (EESIP) and 8.55% (non-EESIP)
  - State contribution (5.00% of tax revenues = $257 million)
  - Federal matching contributions (7.50%, $23 million)

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Assets

- Total contributions of $907 million, compared to $884 million in FY 2008
- The distributions (benefit payments, refunds and administrative expenses) totaled $914 million
- Therefore, there is a negative external cash flow of $7 million
  - -0.1% of market value at end of year
  - Not significant

Assets

- Return on market of approximately -16.2% in FY 2009
  - Average return for last ten years was 3.5%
    - 1.9% for last five years
    - 7.7% for last fifteen years

Assets

- All actuarial calculations are based on actuarial value of assets (AVA), not market value
- AVA reflects 20% of the difference between last year's expected return on market and the actual return
  - 40% of FY 2008 difference, 60% of FY 2007 difference and 80% of FY 2006 difference
  - AVA now $9,439 million vs. $ 9,257 million last year

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Assets

- Actuarial return was 2.0% in FY 2009
- AVA is 130.6% of fair market value (was 107.2 % last year)
- $2,212 million in deferred losses, not yet recognized
  - Will be recognized over next four years

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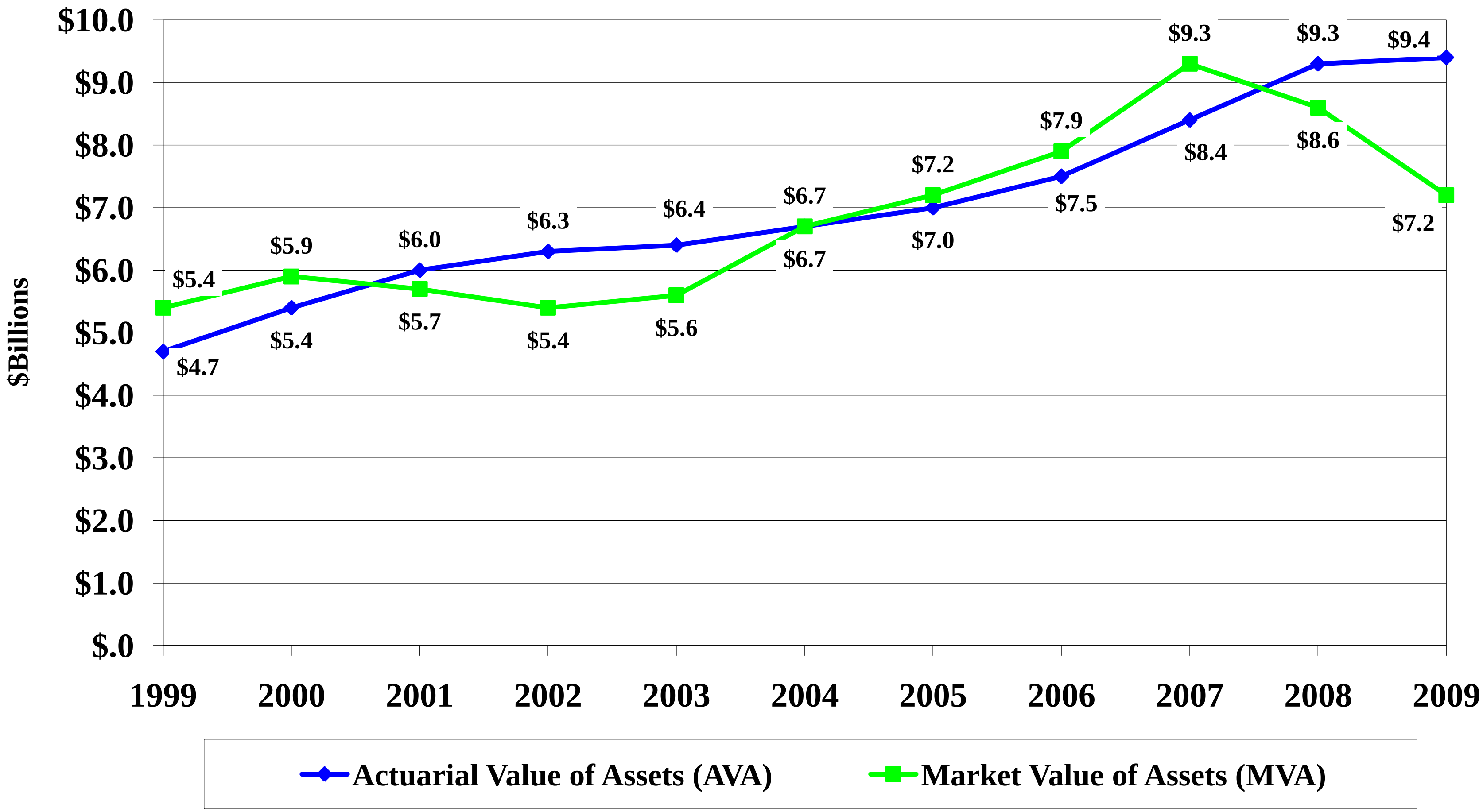
Actuarial and Market Values of Assets



AVA is 130.6% of MVA
Deferred losses of $2,212 million

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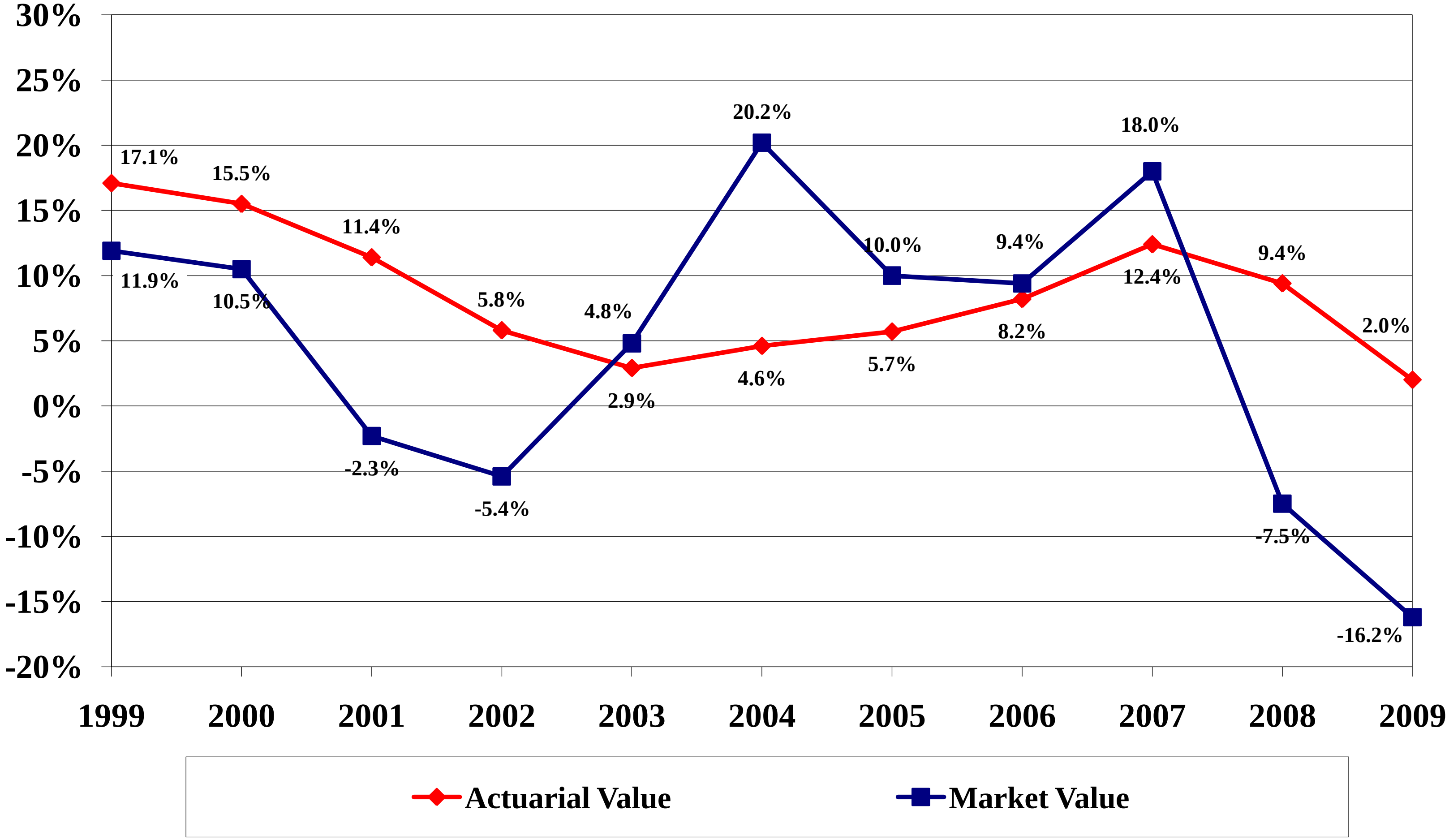
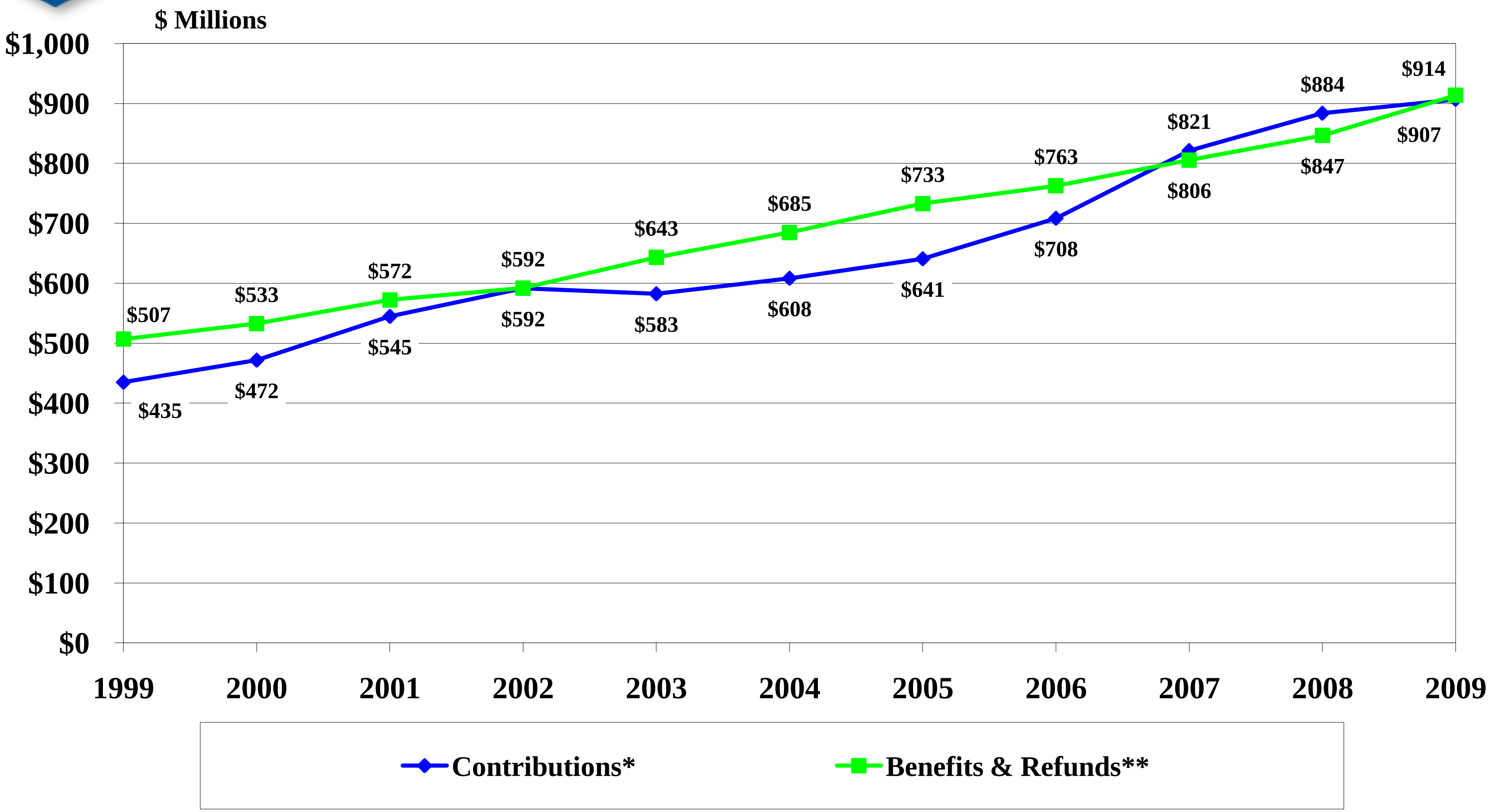
Estimated Yield Based on Actuarial and Market Values of Assets



3.5% average compound return on market value over the last ten years
7.7% average compound return on actuarial value over the last ten years

Contributions vs. Benefits & Refunds by Fiscal Year



* Includes member, state, employer and federal contributions

** Includes administrative expenses

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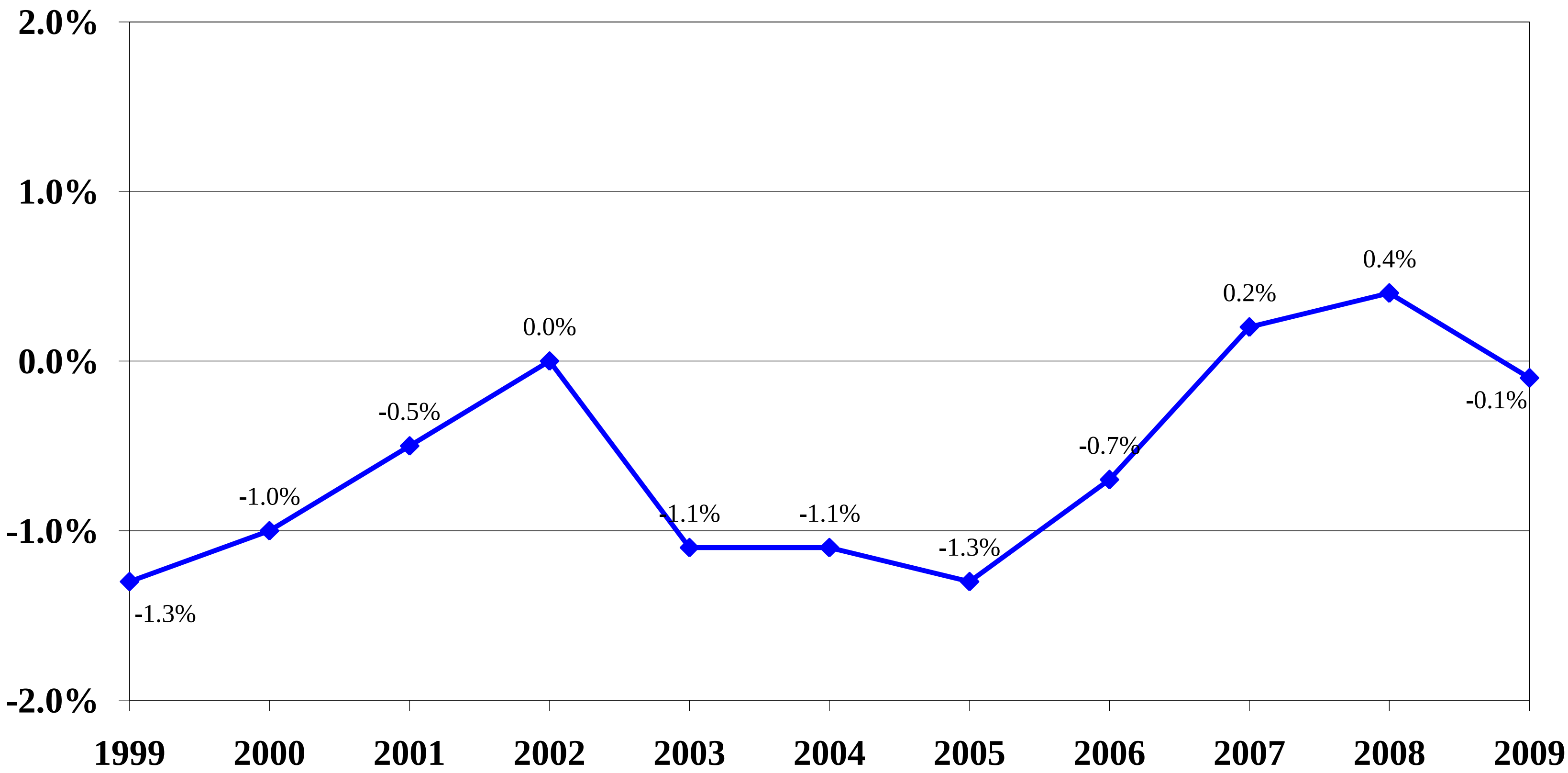
External Cash Flow
As Percentage of Market Value



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Benefit and Contribution Structure Changes

- The benefits and contribution structure used in this report are unchanged from last year.

Changes in Actuarial Assumptions and Methods

- The actuarial assumptions and methods used in this report are unchanged from last year.
- Assumptions were set by the Board based on experience study following June 30, 2004 actuarial valuation
  - Retirement rates modified in 2006 for EESIP
  - The 2% annual COLA assumption was adopted for the prior valuation.
- Next experience study scheduled to follow this actuarial valuation, next spring

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Actuarial Results

- Unfunded actuarial accrued liability (UAAL) increased from $9,090 million to $9,512 million
- The increase in the UAAL is principally due to an asset loss of $557 million. The loss was partially offset by a gain from the experience deviating from assumptions including a 2% COLA not being granted July 1, 2009.

Change in UAAL for The Year (In $ Millions)

	FY 2009	FY 2008
1. UAAL, beginning of year	$9,090.1	$7,602.5
2. Expected increase (decrease)	246.4	130.2
3. Liability loss / (gain)	(223.6)	30.5
4. Asset loss / (gain)	556.8	(117.7)
5. Actual vs. expected contributions	(3.0)	(28.8)
6. Ad hoc COLA different than assumed	(154.7)	67.3
7. Increase in future ad hoc COLA assumption	0.0	1,406.0
8. UAAL, end of year	$9,512.0	$9,090.1

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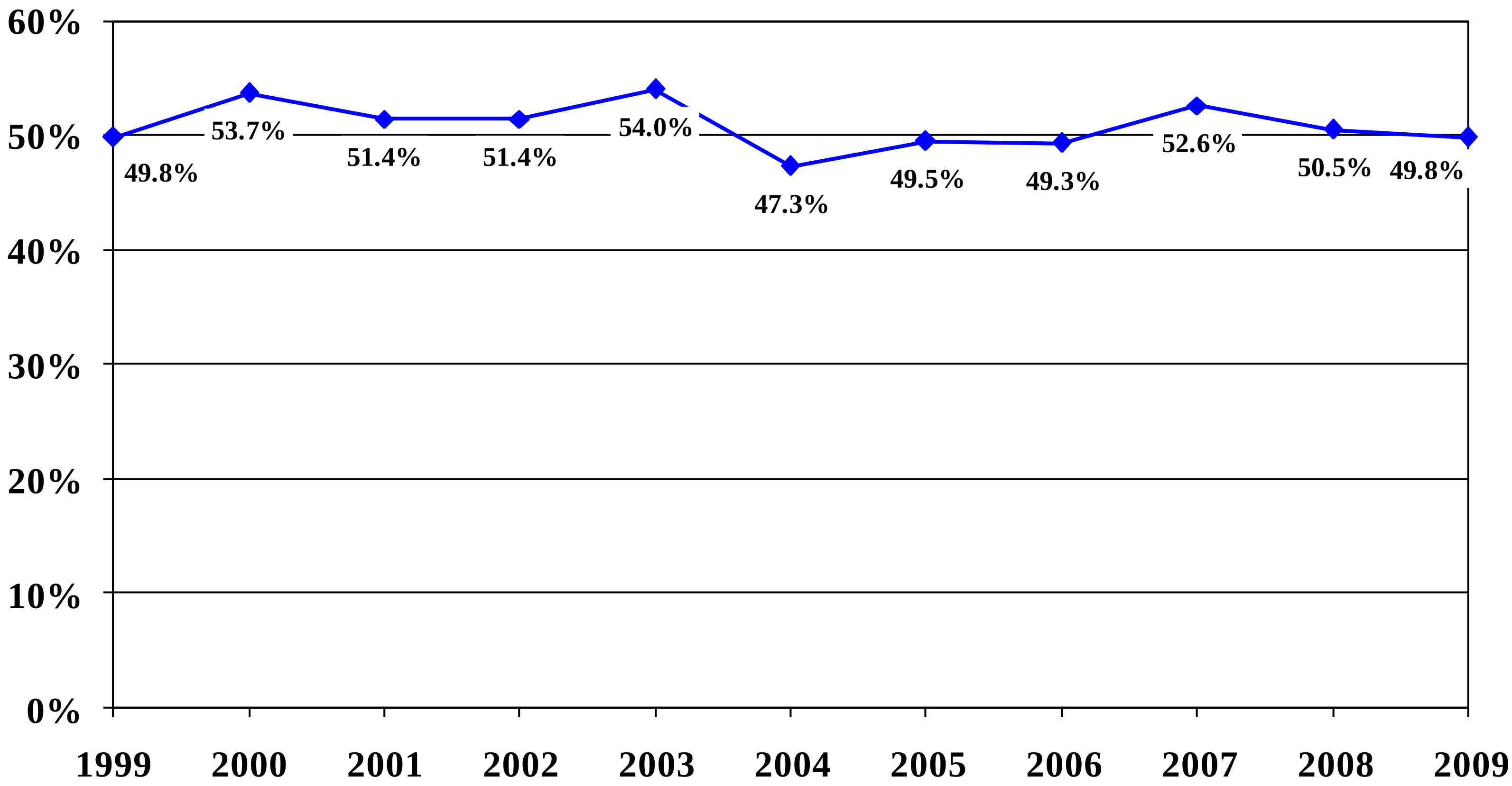
GASB #25 Funded Ratio



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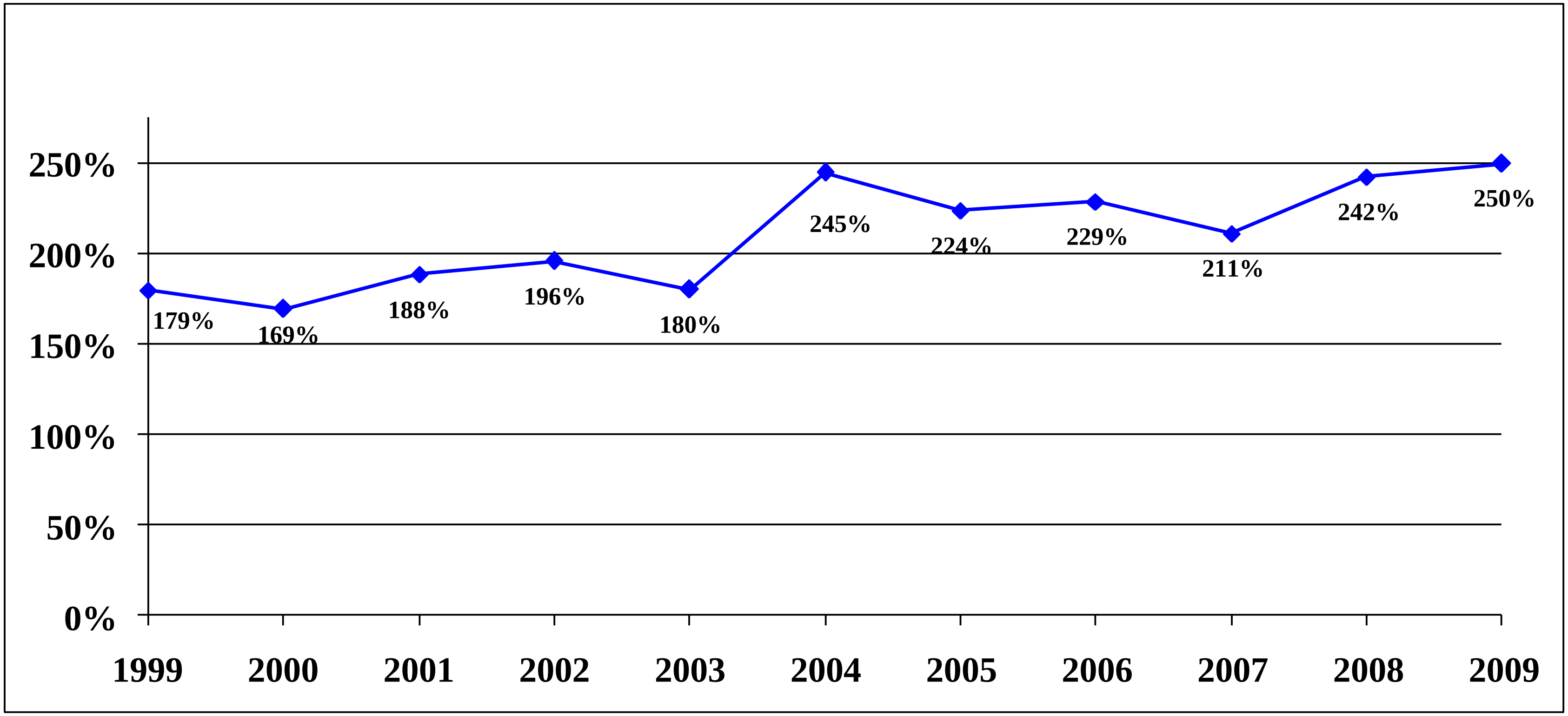
UAAL as a Percentage of Covered Payroll



Actuarial Results

- Annual required contribution (GASB #25 ARC = normal cost plus 30-year funding of UAAL, using level percent of pay) of $742 million vs. $ 714 million last year
  - 18.62% vs. 18.19 %

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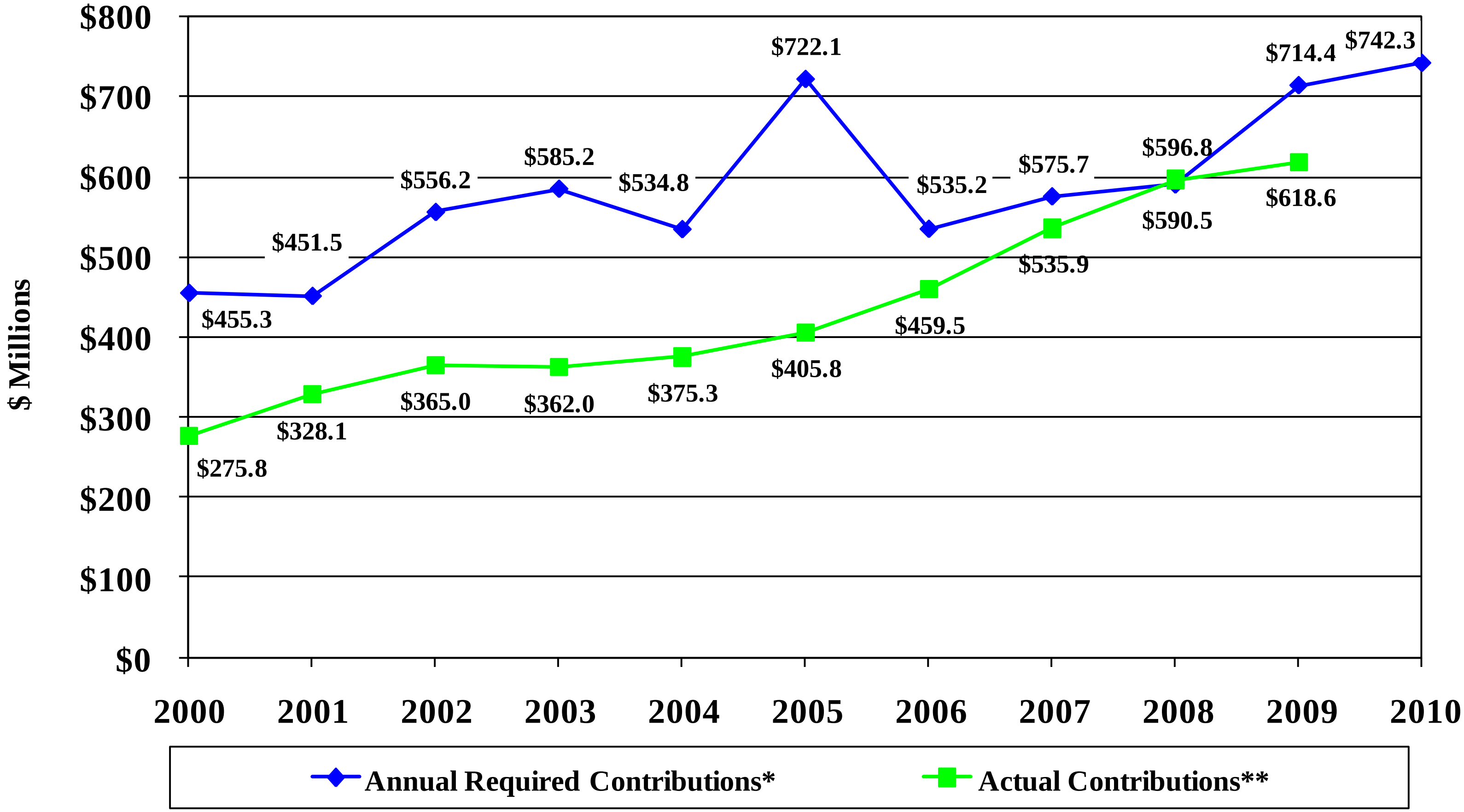
Annual Required Contribution (ARC) vs. Actual Contributions



* Normal cost, plus 30-year level percent of pay amortization of UAAL since FY 2006
Normal cost, plus 40-year level dollar amortization of UAAL before that
** Employer, state and federal matching contributions

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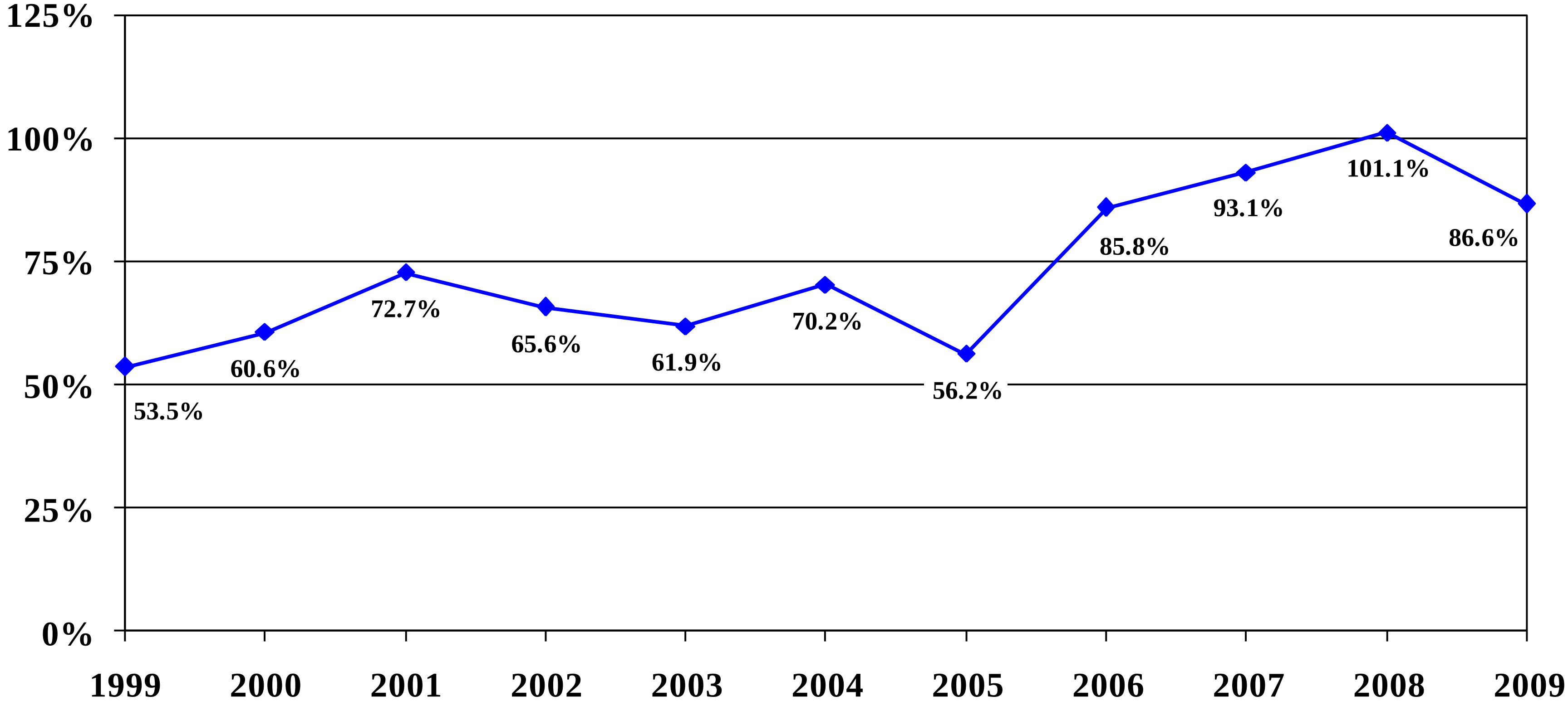
Actual Contributions as Percentage Of Annual Required Contribution



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Actuarial Results

- Funding period increased from 54.4 years to “infinite”
  - The increase is driven primarily by asset losses. The statutory contribution levels are insufficient to cover the normal cost and the interest on the UAAL.
- Therefore, the UAAL is never expected to be fully amortized.

Actuarial Results

- Funding period and UAAL projections based on projection that:
  - Reflects scheduled contribution rate increases
  - Assumes net 8.00% market return each year
  - Phases in deferred asset losses
  - Assumes no benefit changes or other gains/losses
  - Assumes no change in number of active members
  - Projects state revenue starting from OSF estimate for FY 2010--$267 million--increasing at 2.25% for FY 2011, then increasing 3.50% per year
  - Starting pay for each cohort of replacement hires increases 3.50% each year

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Reporting for State Pension Commission

- Specified assumptions
  - Investment return rate: 7.50% vs. 8.00% in regular valuation
  - Future COLAs: 2.00%/year (same as under regular valuation)
  - Mortality: RP-2000 with projections, vs. OTRS tables
  - Funding: 30-year amortization (level dollar vs. level %)

Reporting for State Pension Commission

- Actuarial results:
  - Actuarial accrued liability: $20.2 billion vs. $19.0 billion in regular valuation
  - Actuarial assets: $9.4 billion (no difference)
  - UAAL: $10.8 billion vs. $9.5 billion in regular valuation
  - Funded ratio: 46.7% vs. 49.8% in regular valuation

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Reporting for State Pension Commission

- Calculated contribution (in millions)

Total	$1,393	34.96%
Less members:	(279)	-7.00%
Less employers:	(360)	-9.04%
Less federal:	(24)	-0.61%
Net (State)	$730	18.31%

- Was net $711 million last year, or 18.10%