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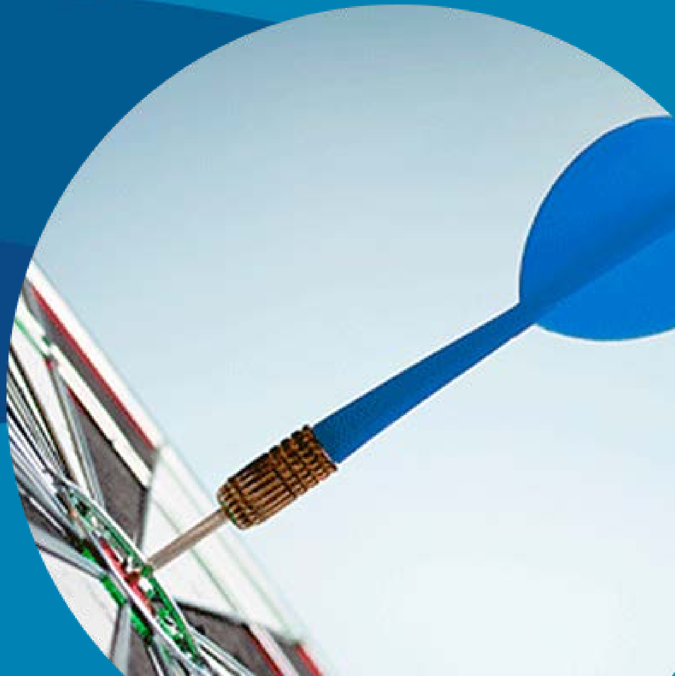
NEW MEXICO EDUCATIONAL RETIREMENT BOARD

Actuarial Valuation Report
as of June 30, 2017

Presented to Board of Trustees by
R. Ryan Falls on October 20, 2017



Actuarial Valuation

- Prepared as of June 30, 2017, 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 #67 and #68
    - CAFR (Consolidated Annual Financial Report)
  - Explain changes in the actuarial condition of ERB
  - Track changes over time
  - Provide early warning on new trends

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Key Results

	June 30, 2016 *Final*	June 30, 2016 *Reflecting Assumption Changes*	June 30, 2017 *Final*
Actuarial Funded Ratio	64.2%	61.5%	62.9%
Unfunded Actuarial Accrued Liability (UAAL)	$6.6 billion	$7.4 billion	$7.4 billion
Normal Cost Rate	13.00%	13.62%	13.62%
Funding Period ***Closed Group Valuation***	44.9 years	139.4 years	124.6 years
Funding Period ***Open Group Projection****	46 years	84 years	61 years

** Reflects: (1) lower normal cost for future members, (2) future COLAs less than 1.9%, (3) current market value of assets.*

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Recent Events

- Experience gains totaled $203 million
  - Measured experience against prior assumptions
  - Includes $68 million gain due to actual COLA less than assumed
    - CPI-U was 1.3% and most retirees received a COLA of 1.04%
  - Member salaries grew less than expected
    - Actual increases were about 2.5% less than expected
- Changes of assumptions generated a loss of $823 million
  - Decreased inflation assumption from 3.00% to 2.50%
  - Maintained real rate of return assumption of 4.75%
  - Decreased nominal investment return assumption from 7.75% to 7.25%
  - Decreased wage inflation from 3.75% to 3.25%
  - Decreased payroll growth assumption from 3.50% to 3.00%
  - Decreased the annual assumed COLA from 2.00% to 1.90%

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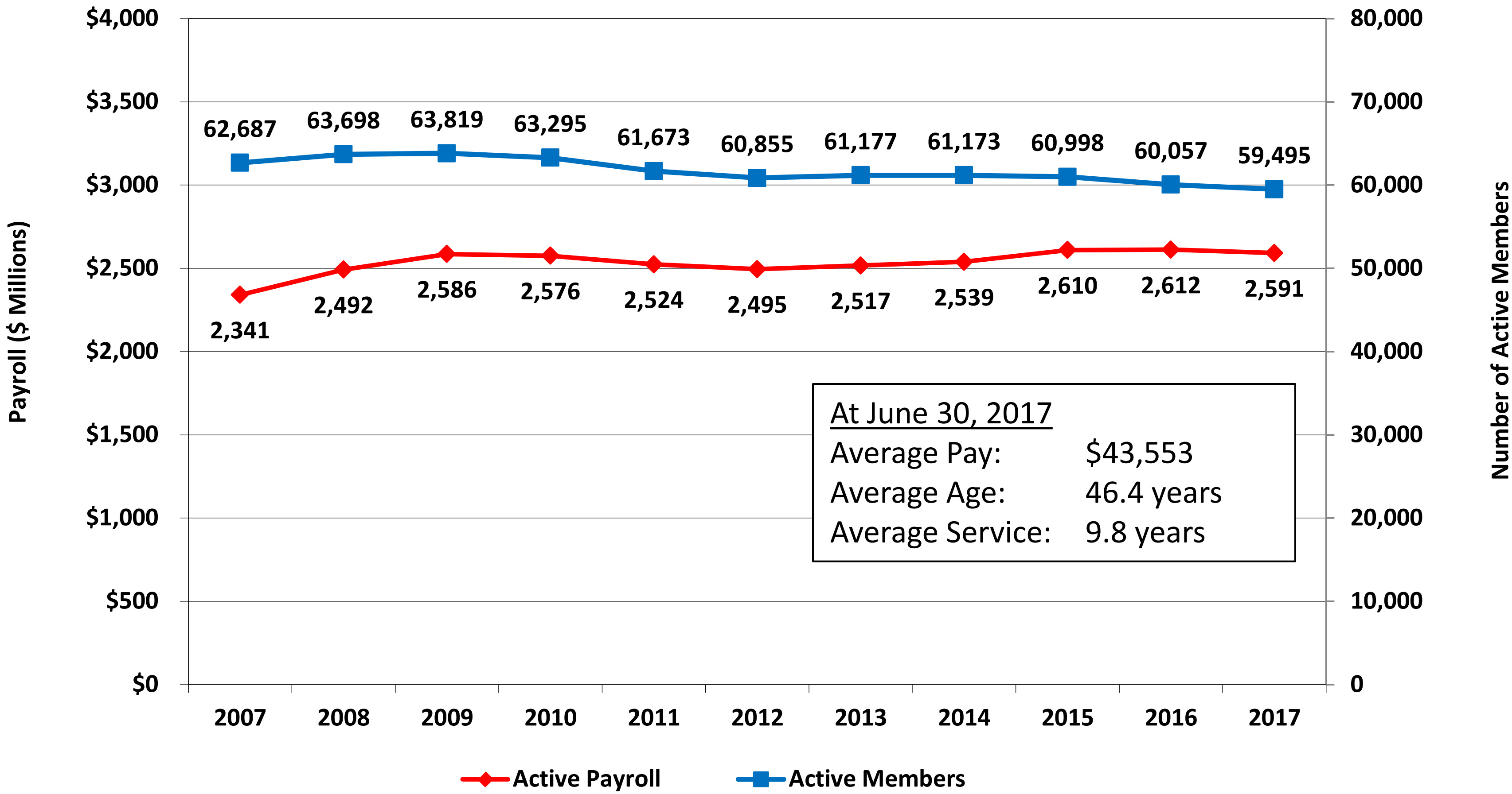
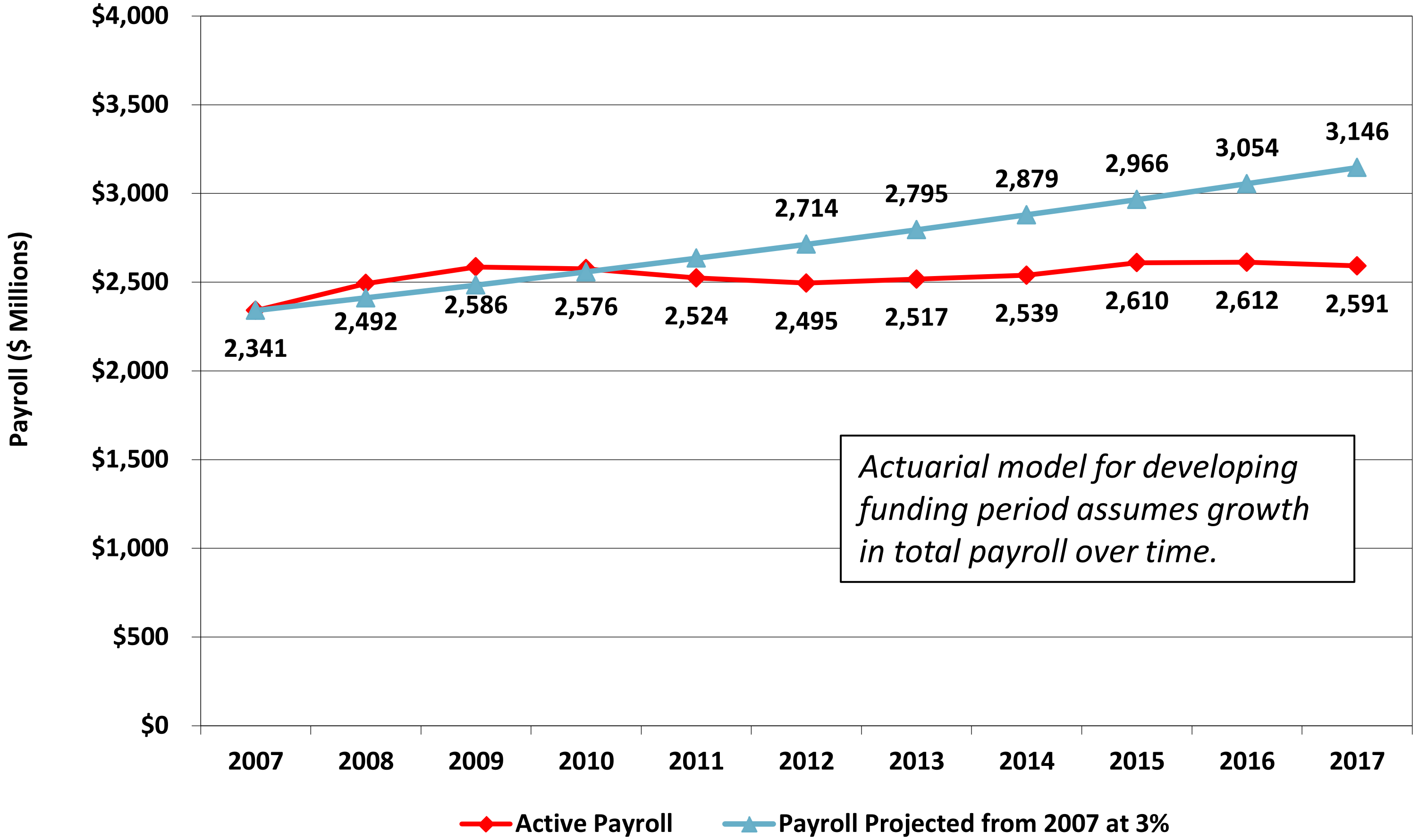
Recent Events

- The return on the market value of assets was 11.8%
  - Rudimentary calculation by GRS that is consistent with our methods
  - May differ from more sophisticated returns reported by investment team
- The return on the actuarial (smoothed) value of assets was 8.2%
  - Compare actual returns to assumed 7.75% return
    - Will compare returns to 7.25% assumption going forward
  - Recognized an actuarial gain of $54 million in this valuation
  - $1.5 million in deferred gains to be recognized in future valuations

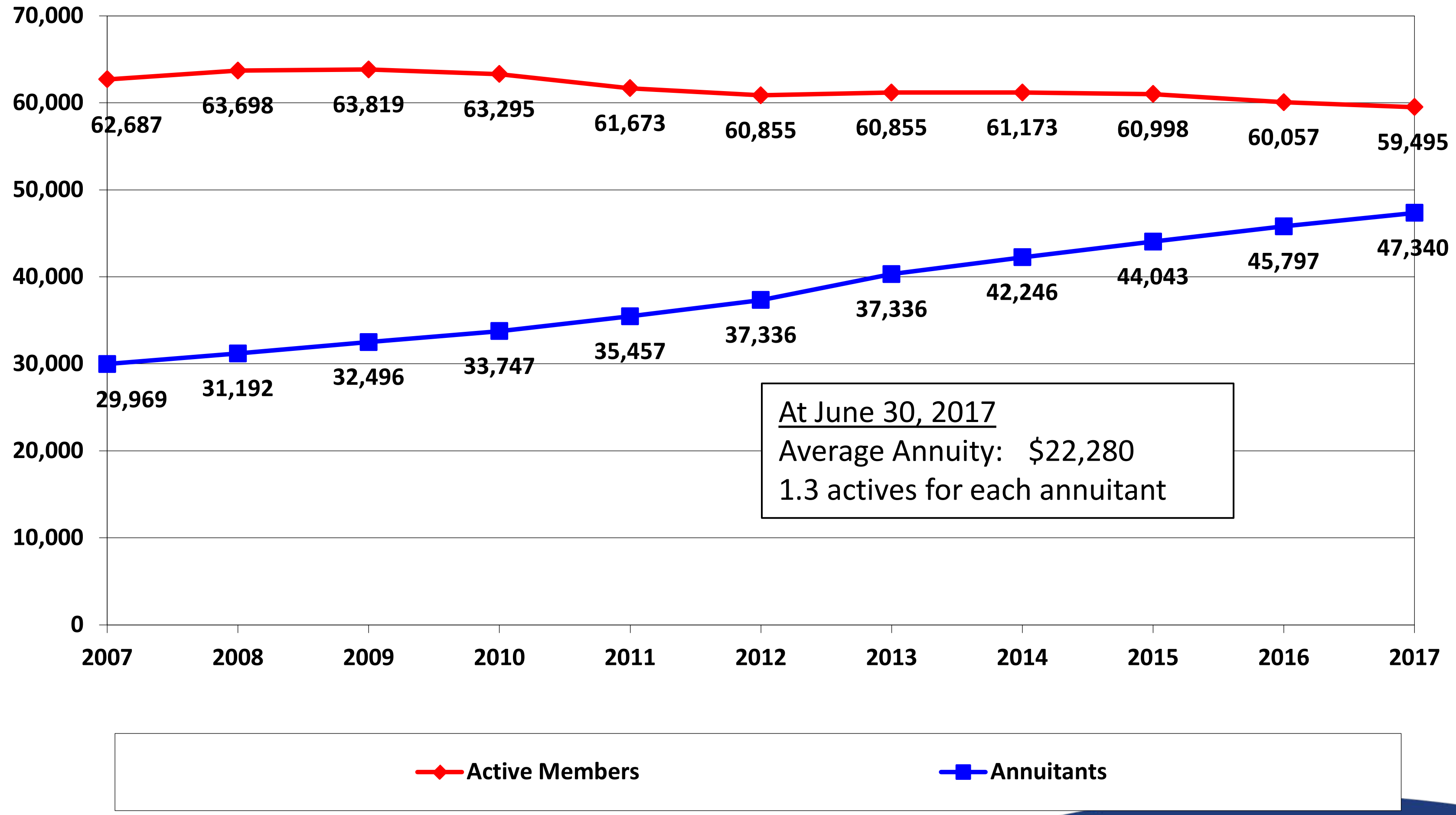
Membership – Actives



Membership – Actives



Membership – Actives vs. Annuitants



Assets

- Fair market value increased from $ 11,532.8 million to $12,509.4 million as of June 30, 2017
- Contributions
  - Member contributions = $296 million, including service purchases
    - Currently 10.70% of pay
  - Employer contributions = $390 million
    - Currently 13.90% of pay
  - ARP contribution = $6 million (3% of ARP payroll)
- Total contributions of $692 million, compared to $693 million last year

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Assets

- Total distributions—benefit payments, refunds and administrative expenses—totaled $1,063 million
- Therefore, net external cash flow was -$371 million, or -3.0% of market value of assets at end of year
  - Typical for a mature DB plan where investment earnings are expected to finance a large portion of benefit payments
  - Not projected to go below -5%
- Return of approximately 11.8% in FY 2017 (net of administrative and investment expenses)
  - 8.6% for last five years
  - 5.2% for last 10 years
  - 7.2% for last 15 years
  - 6.4% for last 20 years

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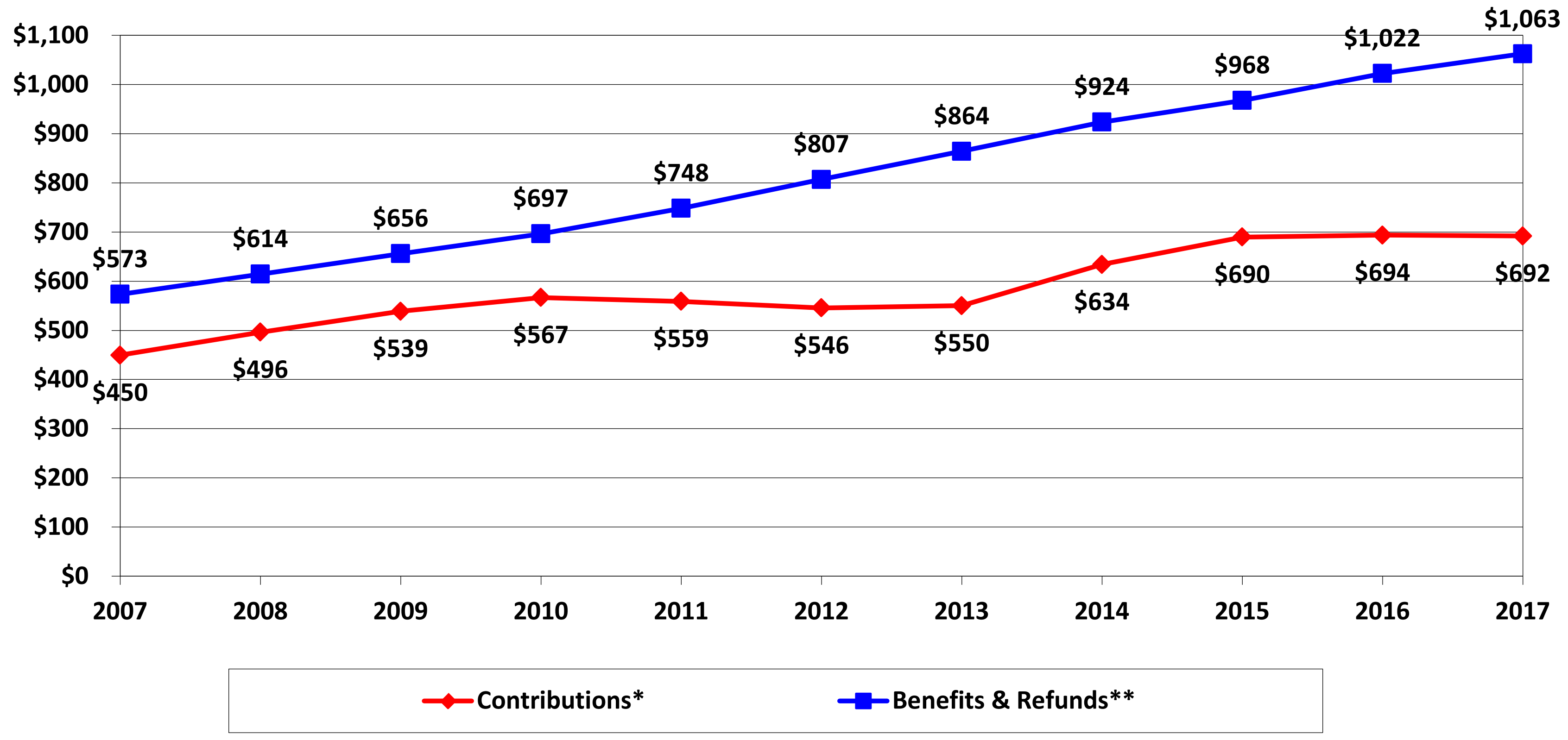
Contributions vs. Benefits and Refunds



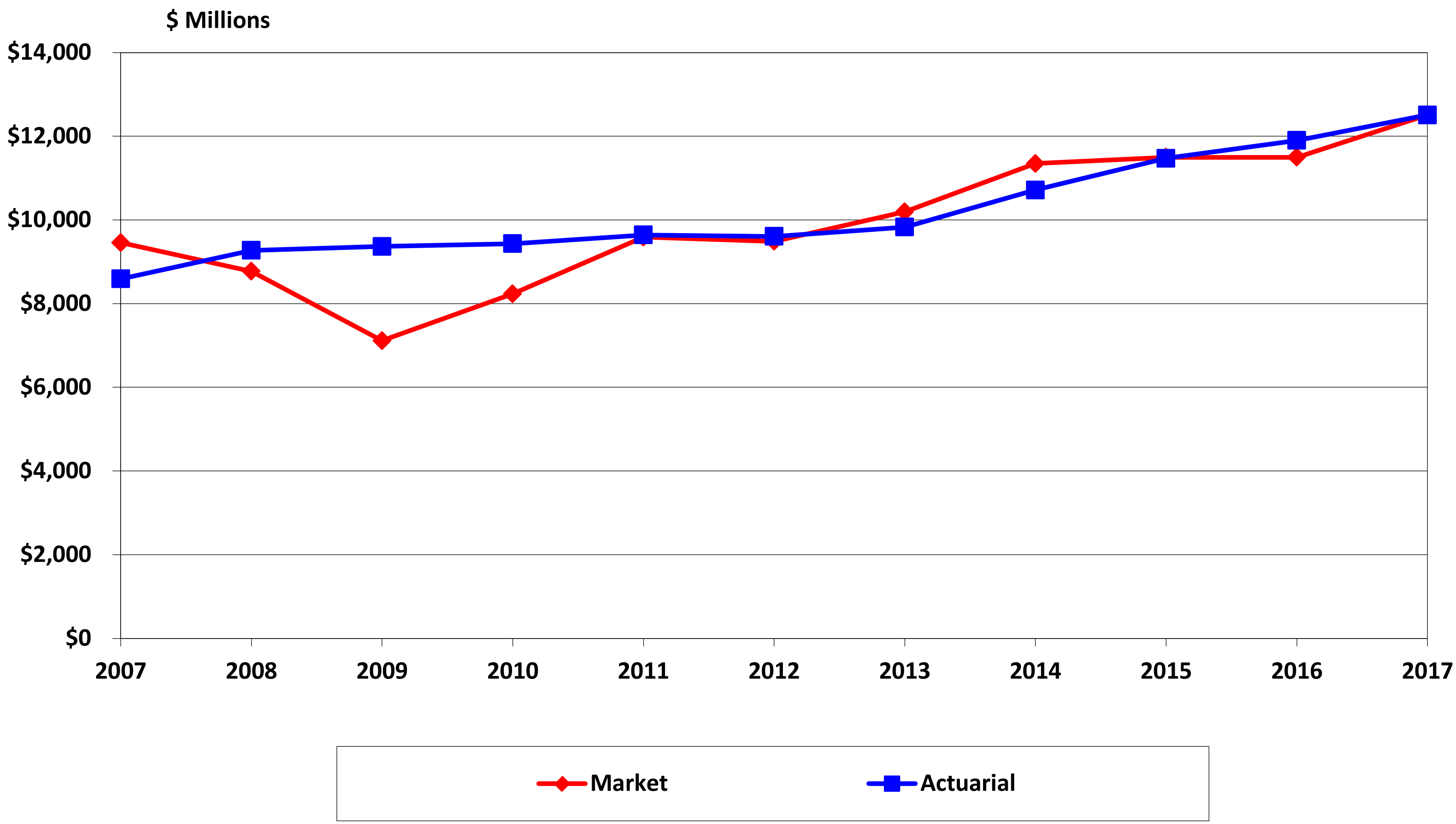
* Includes member contributions, employer contributions, and service purchases

** Includes administrative expenses

Smoothed Assets

- Most actuarial calculations are based on actuarial value of assets, not market value
- Actuarial value only reflects a portion of the actual market returns over the past five years
  - Recognize 20% of the unexpected asset gain/loss each year
- Actuarial value is now $12,508 million, compared to $11,906 million last year
  - Actuarial return was 8.2% in FY 2017, compared to 6.7% in FY 2016
- $1.5 million in deferred gains, not yet recognized

Actuarial and Market Values of Assets



Funding Valuation Results

- Unfunded actuarial accrued liability (UAAL) increased from $6,630 million to $7,363 million
  - The increase in the UAAL is primarily due to assumption changes
- Funded ratio (actuarial assets divided by actuarial accrued liability) decreased from 64.2% to 62.9%
  - Ratio using market value increased from 62.2% to 63.0%
- 13.90% employer contribution for FY 2017 comprised of:
  - Employer normal cost: 2.92%
  - Amortization payment: 10.98%

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Funding Valuation Results

- “Valuation” Funding Period is 124.6 years
  - Based on the Actuarial Value of Assets, the current normal cost level, and a 1.9% COLA assumption for each year in the future
- “Open Group” Funding Period is 61 years
  - Based on the market value of assets, lower normal cost rate in the future for Tier 3 benefits, and accumulated savings from COLAs lower than 1.9%
- Funding Policy Contribution is 20.19%
  - 25-year amortization (30 years from 2012), plus employer normal cost
  - Shortfall (20.19% - 13.90%) of 6.29%
  - Does not incorporate lower normal cost for future members and future COLAs less than 1.9%

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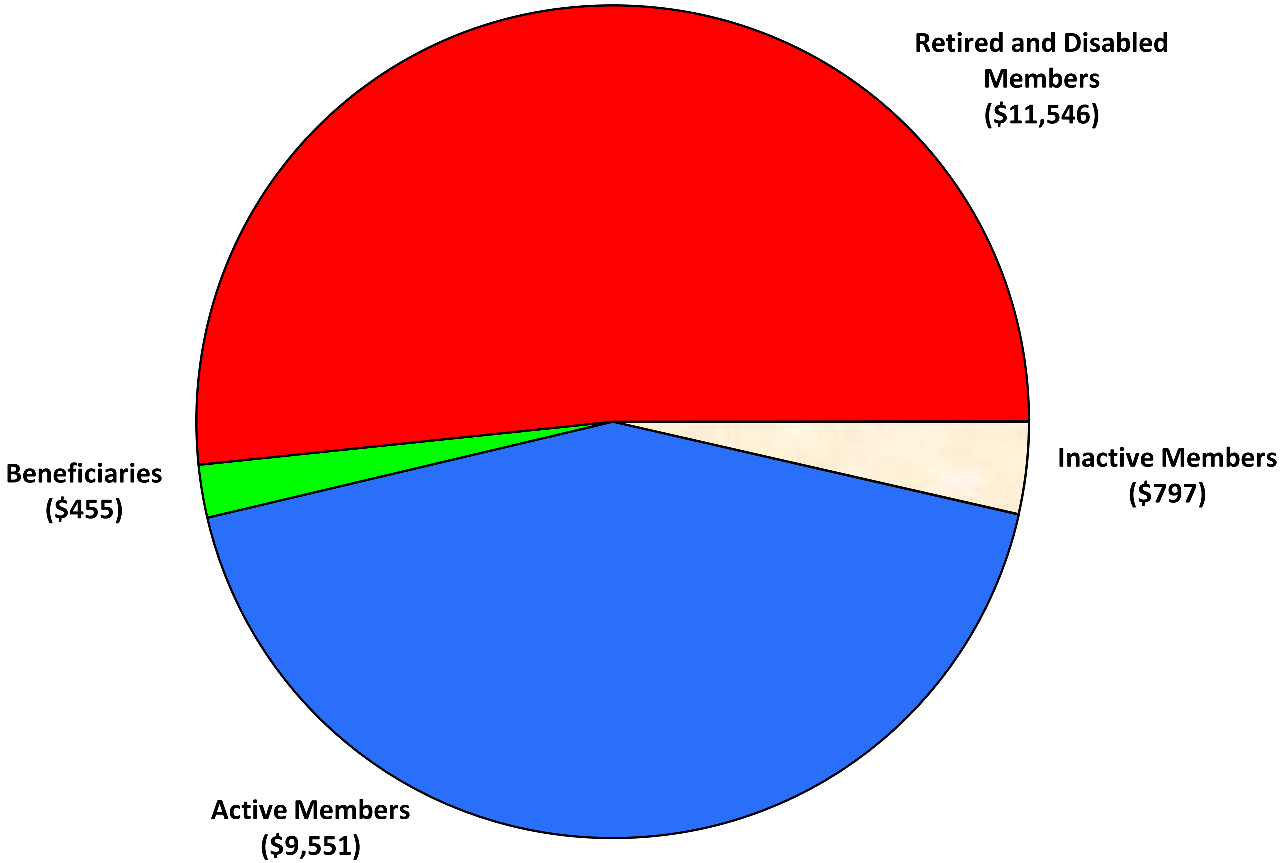
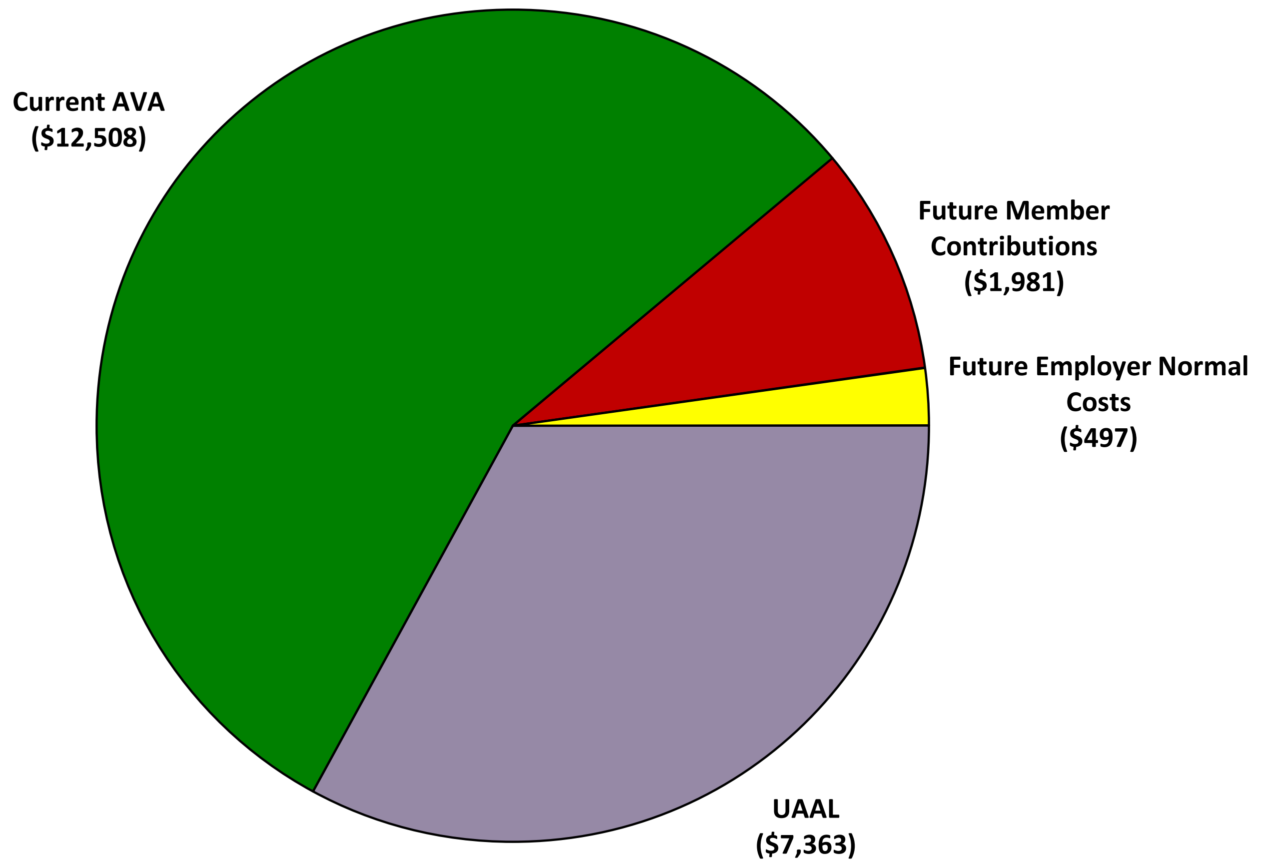
Where the Present Value of Future Benefits ($22,349 Million) Will Go



How Present Value of Future Benefits ($22,349 Million) Will be Funded



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Change in UAAL for the Year ($ in millions)

	Year Ending	
Basis	June 30, 2017	June 30, 2016
(1)	(2)	(3)
1. UAAL at prior valuation	$ 6,630.5	$ 6,542.0
2. Increases/(decreases) due to:		
a. Interest on UAAL	513.9	507.0
b. Amortization payments	(347.2)	(348.9)
c. Liability experience	(135.5)	(54.6)
d. Asset experience	(54.0)	123.3
e. Actual COLA More/(Less) than Expected	(67.9)	(138.3)
f. Changes in actuarial assumptions	823.1	0.0
g. Benefit changes	0.0	0.0
h. Total	$ 732.4	$ 88.5
3. Current UAAL (1+2h)	$ 7,362.9	$ 6,630.5

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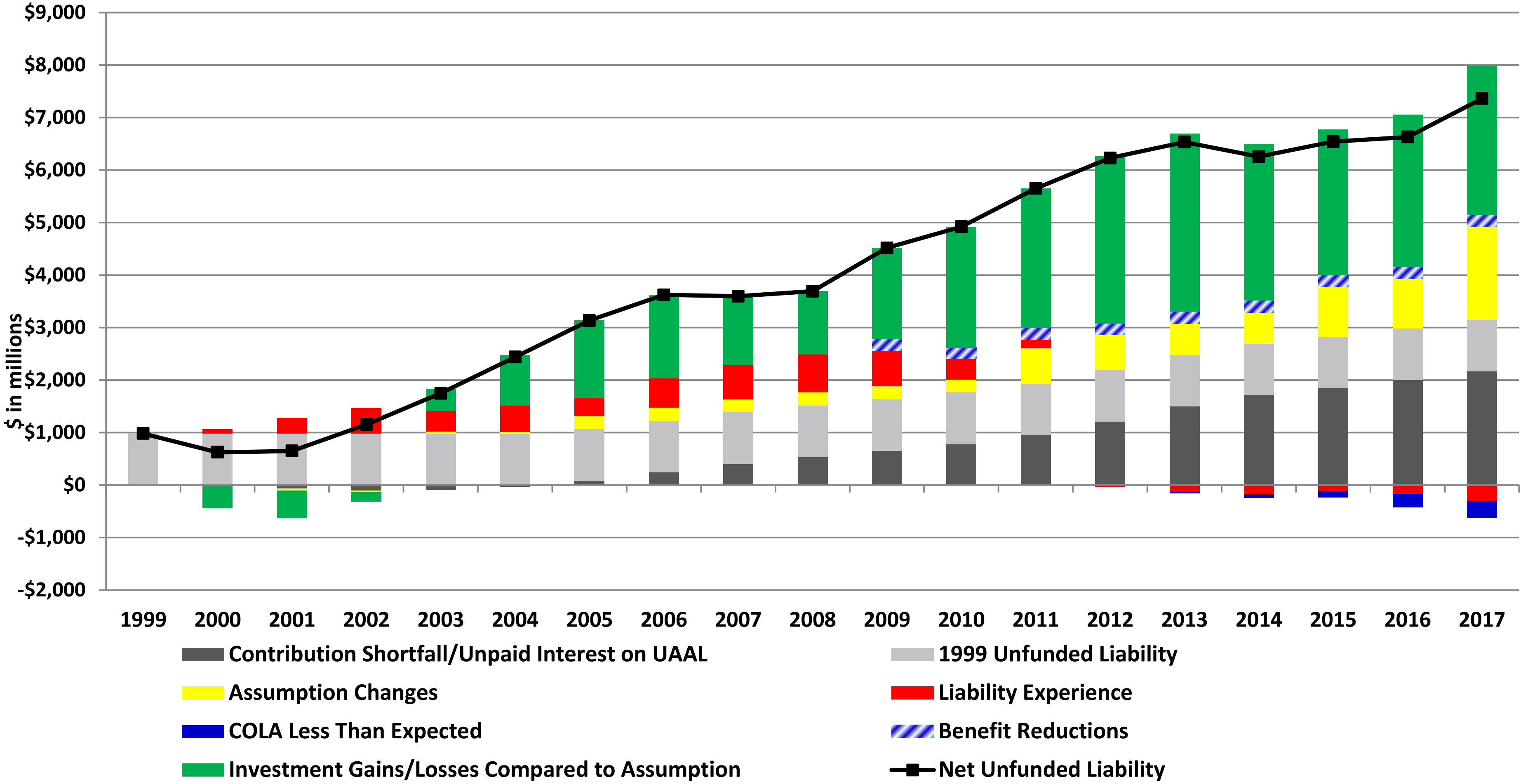
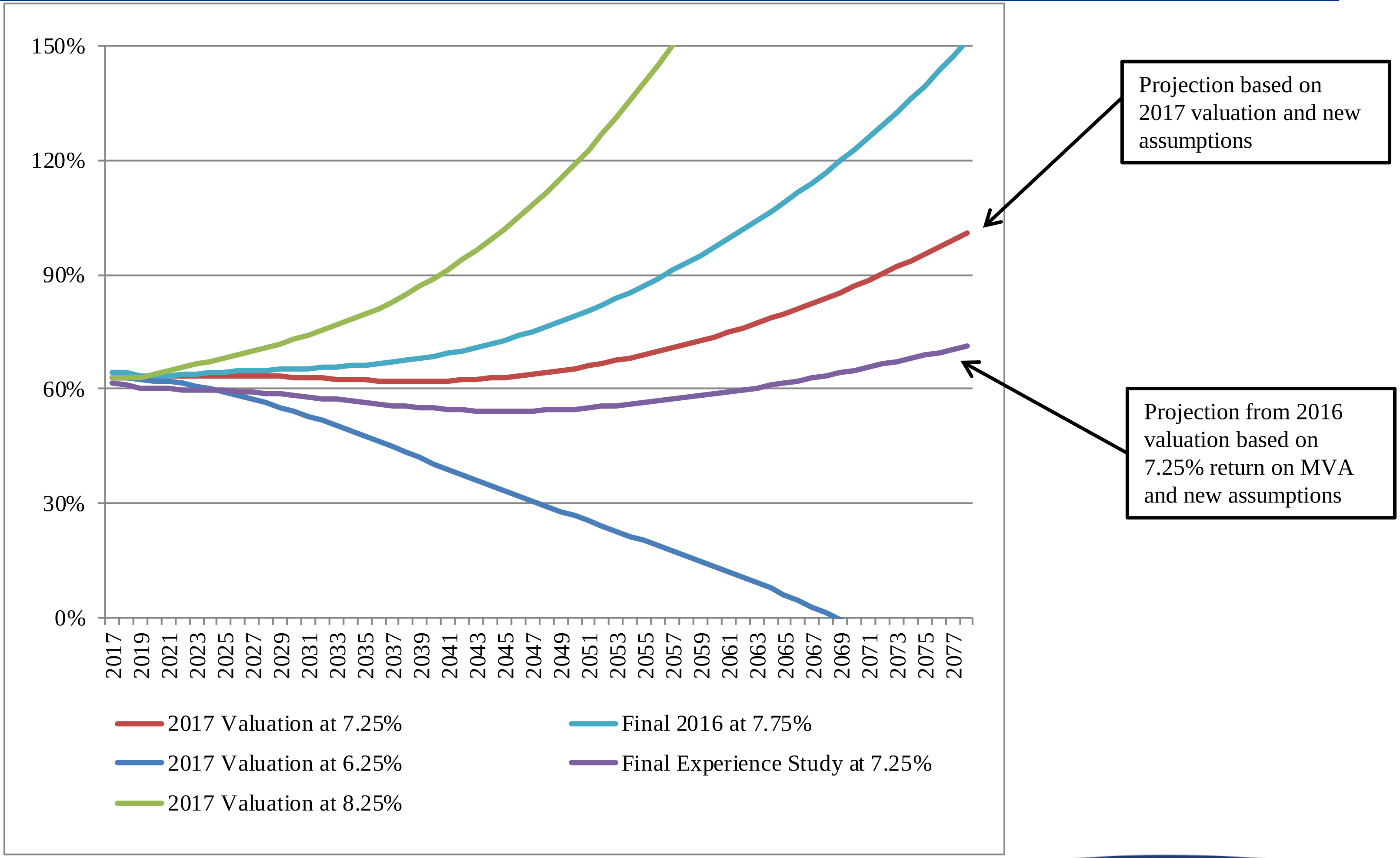
Growth in UAAL



Projection – Funded Ratios



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Disclaimers

- This presentation is intended to be used in conjunction with the final draft of the actuarial valuation report issued on October 18, 2017. This presentation should not be relied on for any purpose other than the purpose described in the valuation report.
- This presentation shall not be construed to provide tax advice, legal advice or investment advice.

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