



North Dakota Teachers' Fund for Retirement

Actuarial Valuation as of July 1, 2014

October 29, 2014

Presented By:

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Discussion Topics – Valuation and Projections



**Segal
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- **Overview of Valuation Process**
 - **Summary of Valuation Highlights**
 - **Membership and Demographics**
 - **Valuation Results and Projections**

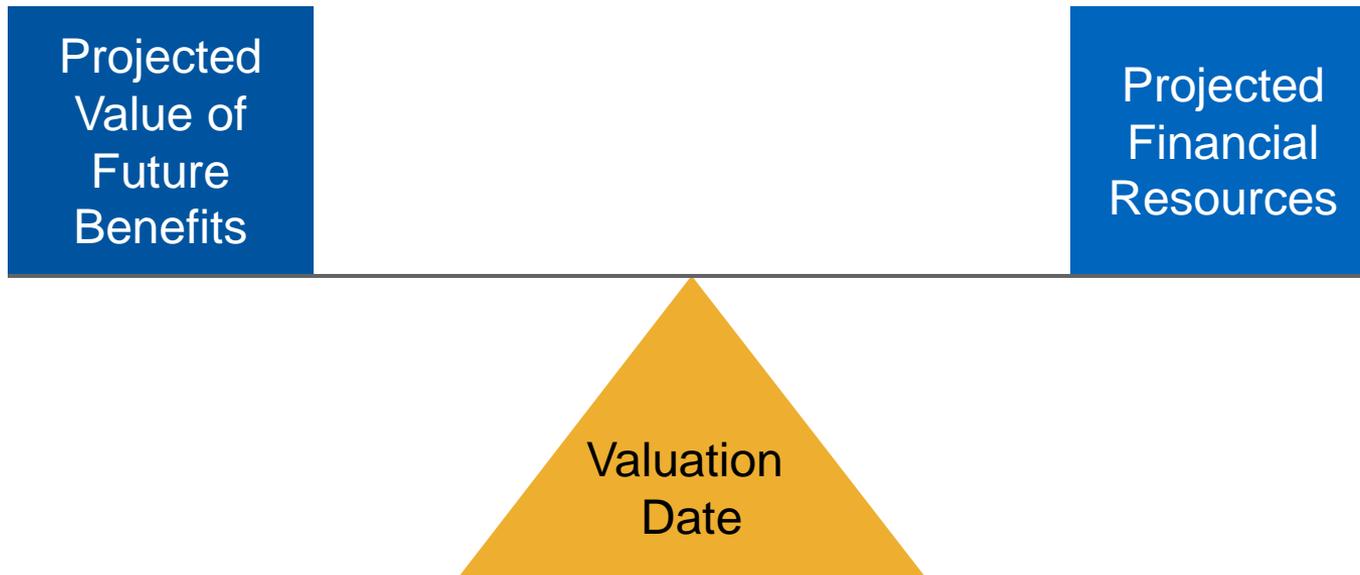
Purposes of the Actuarial Valuation

- Report the Fund's actuarial assets
- Calculate the Fund's liabilities
- Determine the funding policy Actuarially Determined Contribution (ADC) for fiscal year 2015
- Provide information for annual financial statements
- Identify emerging trends

How is an Actuarial Valuation Performed?

- Gather data as of the valuation date
 - Participant data
 - Financial data
- Project a benefit for each member, for each possible benefit
- Apply assumptions about:
 - Economic (investment return, inflation, salary raises)
 - People or demographic (death, disability, retirement, turnover)
- Apply assumptions to benefits to determine a total liability and assign liabilities to service
- Apply the funding policy to determine the actuarially determined contribution (ADC)
 - Based on actuarial cost method and asset valuation method

Actuarial Balance



Over the life of a pension system,

$\text{Benefits} + \text{Expenses} = \text{Contributions} + \text{Investment Return}$

$\text{Contributions} = \text{Benefits} + \text{Expenses} - \text{Investment Return}$

Actuarial Assumptions

Two types:

Demographic

- Retirement
- Disability
- Death in active service
- Withdrawal
- Death after retirement

Economic

- Inflation
- Interest rate (return on assets)
- Salary increases
- Payroll growth

Actuaries make assumptions as to when and why a member will leave active service, and estimate the amount and duration of the pension benefits paid.

Economic Assumptions

➤ Interest rate

- 8%, net of all expenses

➤ Salary increase rates

- Based on service
- Ranges from 14.75% for new members to 4.5% for members with 25 or more years of service

➤ Payroll growth

- 3.25%

Actuarial Methods

➤ Asset valuation method (actuarial value of assets)

- Smoothing of investment gains or losses
- TFFR uses a five-year smoothing method
 - Investment returns above or below the expected return are recognized over five years
- 20% market value corridor is applied (e.g., actuarial value must fall within 80% to 120% of market value)

➤ Cost method

- Allocation of liability between past service and future service
 - TFFR uses the entry age normal cost method
 - Most retirement systems use the entry age normal cost method

➤ Amortization method

- 30-year “closed” period to pay off unfunded actuarial accrued liability, effective with the July 1, 2013, actuarial valuation
 - 29 years remaining as of July 1, 2014
- Based on level percentage of payroll

Entry Age Normal Cost Method

Allocates Cost Between Past and Future service

- **Normal Cost:** Cost of annual benefit accrual as a level percent of salary
- **Actuarial Accrued Liability:** Represents accumulated value of past normal costs (or difference between total cost and future normal costs)
- **Unfunded Actuarial Accrued Liability:** Actuarial accrued liability minus actuarial value of assets
- **Actuarially Determined Contribution:**
 - Normal cost plus
 - Amortization payment of unfunded accrued liability over a 29-year closed period as a percent of payroll
 - 30-year closed period began July 1, 2013

Actuarial Accrued Liability and Normal Cost

The **actuarial accrued liability** is the portion of the total liability that is allocated to members' past years of service

➤ **Retirees and beneficiaries:**

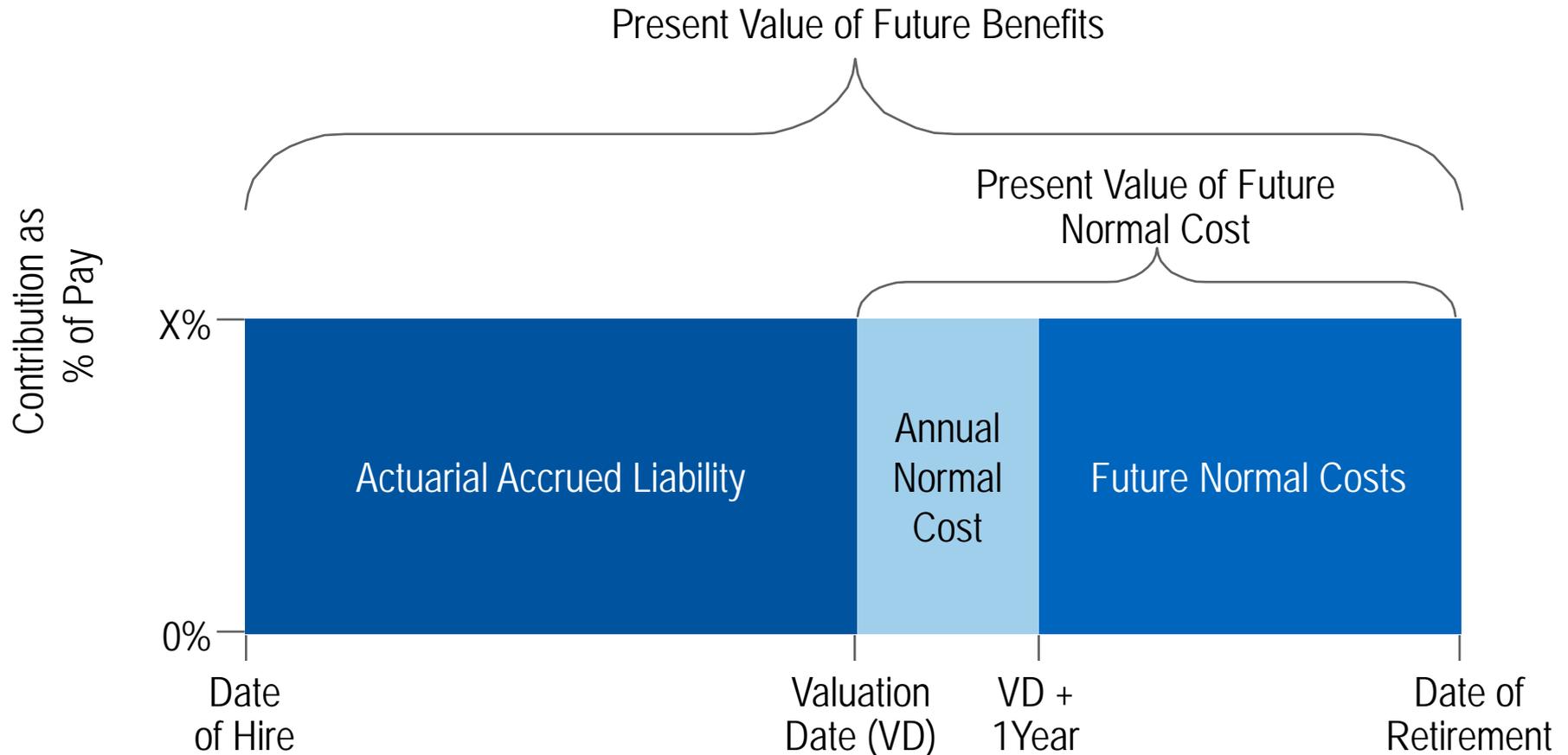
- All years of service are in the past, so the **actuarial accrued liability** is equal to the total liability

➤ **Active members:**

- The **actuarial accrued liability** represents the portion of the total liability that is attributable to the years of service that the members have already worked
- The **normal cost** represents the anticipated growth in the accrued liability in the coming year

The actuarial accrued liability is compared to the assets as a measure of funding progress.

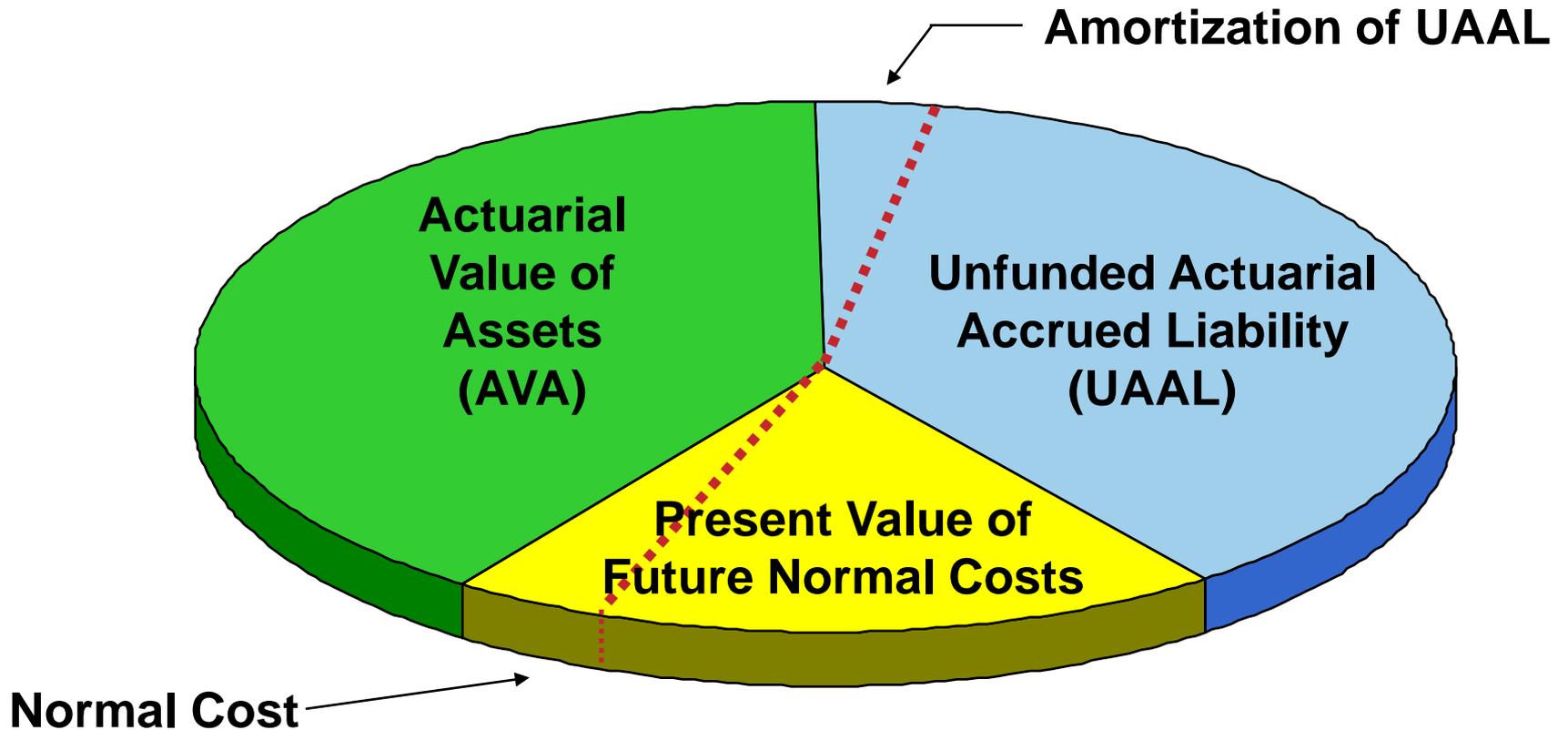
Funding Process



$$\text{Actuarial Accrued Liability} - \text{Assets} = \text{Unfunded Actuarial Accrued Liability}$$

Actuarially Determined Contribution

Present Value of Future Benefits



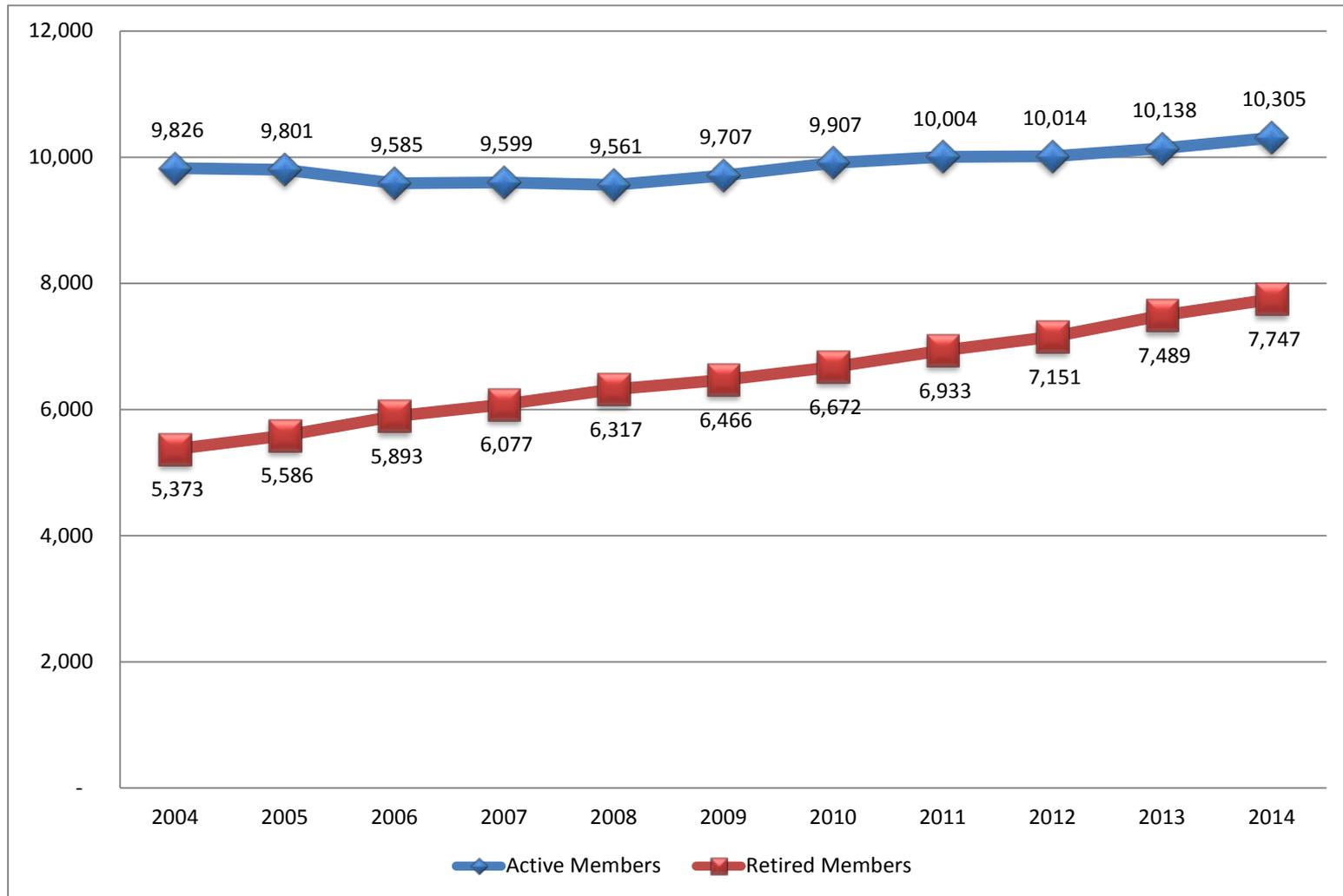
Summary of Valuation Highlights

- Valuation reflects increases in contribution rates contained in HB 1134
 - Member rate increased from 9.75% to 11.75% on July 1, 2014
 - Employer rate increased from 10.75% to 12.75% on July 1, 2014
 - Increases will revert to 7.75% for both members and employers once the funded ratio reaches 100% (measured using the actuarial value of assets)
- Market value of assets returned 16.1% for year ending 6/30/14 (Segal calculation)
 - Gradual recognition of deferred gains resulted in 12.6% return on actuarial value of assets
- Net impact on funded ratio was an increase from 58.8% (as of 7/1/2013) to 61.8% (as of 7/1/2014)
- Effective amortization period decreased from 28 years (as of 7/1/2013) to 24 years (as of 7/1/2014)
- Net impact on actuarially determined contribution (ADC) was an increase from 10.26% of payroll (FY14) to 11.57% of payroll (FY15)
 - The 10.26% ADC from FY14 reflected the present value of the 4% total increase in contributions effective July 1, 2014, and was compared to the 10.75% employer rate for a contribution sufficiency of 0.49% of payroll
 - Based on the employer contribution rate of 12.75% for FY15, the contribution sufficiency has increased to 1.18% of payroll

Membership

	2014	2013	Change
Active:			
• Number	10,305	10,138	+1.6%
• Payroll (annualized)	\$557.2 mil	\$526.7 mil	+5.8%
• Average Age	42.9 years	43.2 years	- 0.3 years
• Average Service	12.8 years	13.2 years	- 0.4 years
Retirees and Beneficiaries			
• Number	7,747	7,489	+3.4%
• Total Annual Benefits	\$165.8 mil	\$154.8 mil	+7.1%
• Average Monthly Benefit	\$1,783	\$1,722	+3.5%

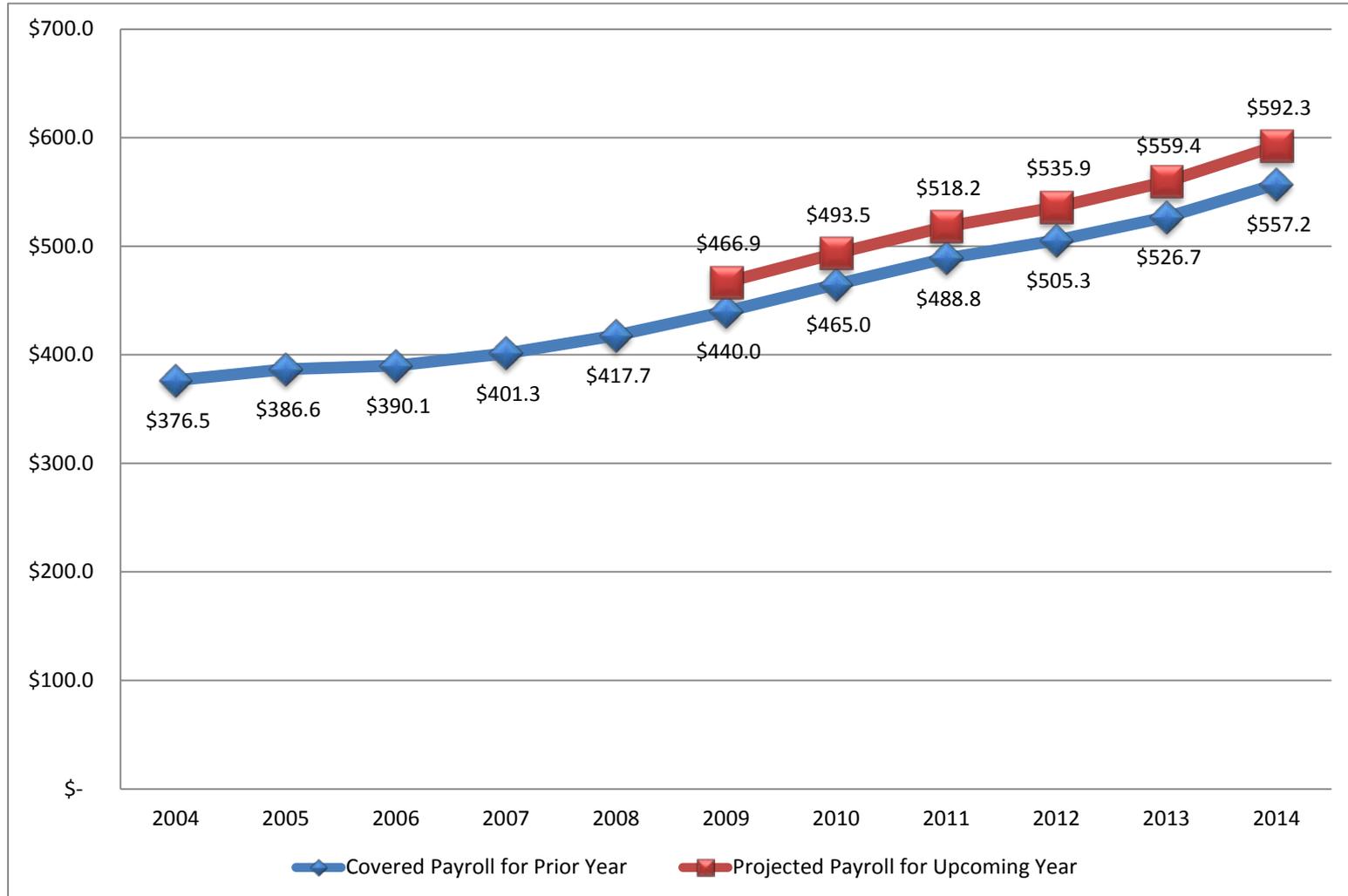
Active and Retired Membership



Since 2004, number of retirees and beneficiaries has increased 3.7% per year on average.

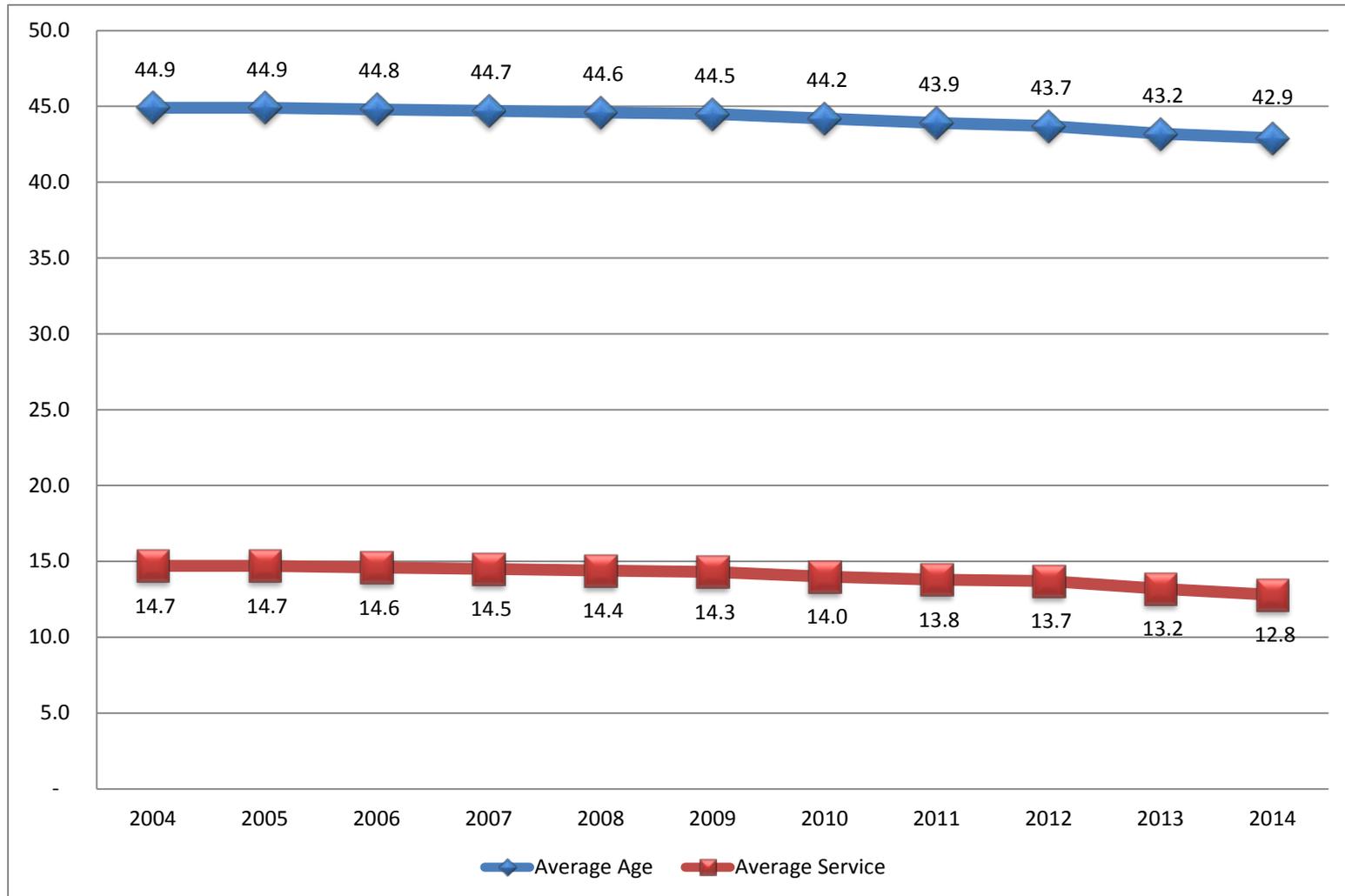
Active Payroll

\$ Millions



Since 2004, active payroll has increased, on average, 4.0% per year.

Average Age and Service of Active Members



Average Salary and Average Benefit



Since 2004, average salary has increased, on average, 3.5% per year. Average annual benefit has also increased by 3.6% per year.

Assets

- The market value of assets increased from \$1.839 billion (as of June 30, 2013) to \$2.091 billion (as of June 30, 2014)
 - Segal determined the investment return was 16.1%, net of investment and administrative expenses

- The actuarial value of assets – which smoothes investment gains and losses over five years – increased from \$1.762 billion (as of June 30, 2013) to \$1.940 billion (as of June 30, 2014)
 - Investment return of 12.6%, net of investment and administrative expenses
 - Actuarial value is 92.8% of market
 - There is a total of \$151 million of deferred net investment gains that will be recognized in future years

- The average annual return on market assets
 - 10-year average is 6.8%
 - 20-year average is 7.6%

- The average annual return on actuarial assets
 - 10-year average is 5.2%
 - 20-year average is 6.9%

Market Value of Assets (\$ in millions)

Fiscal Year Ending June 30, 2014	
Beginning of Year	\$1,839
Contributions:	
• Employer	62
• Member	57
• Service Purchases	2
• Total	121
Benefits and Refunds	(162)
Investment Income (net)	293
End of Year	\$2,091
Rate of Return	16.1%

Actuarial Value of Assets (\$ in millions)

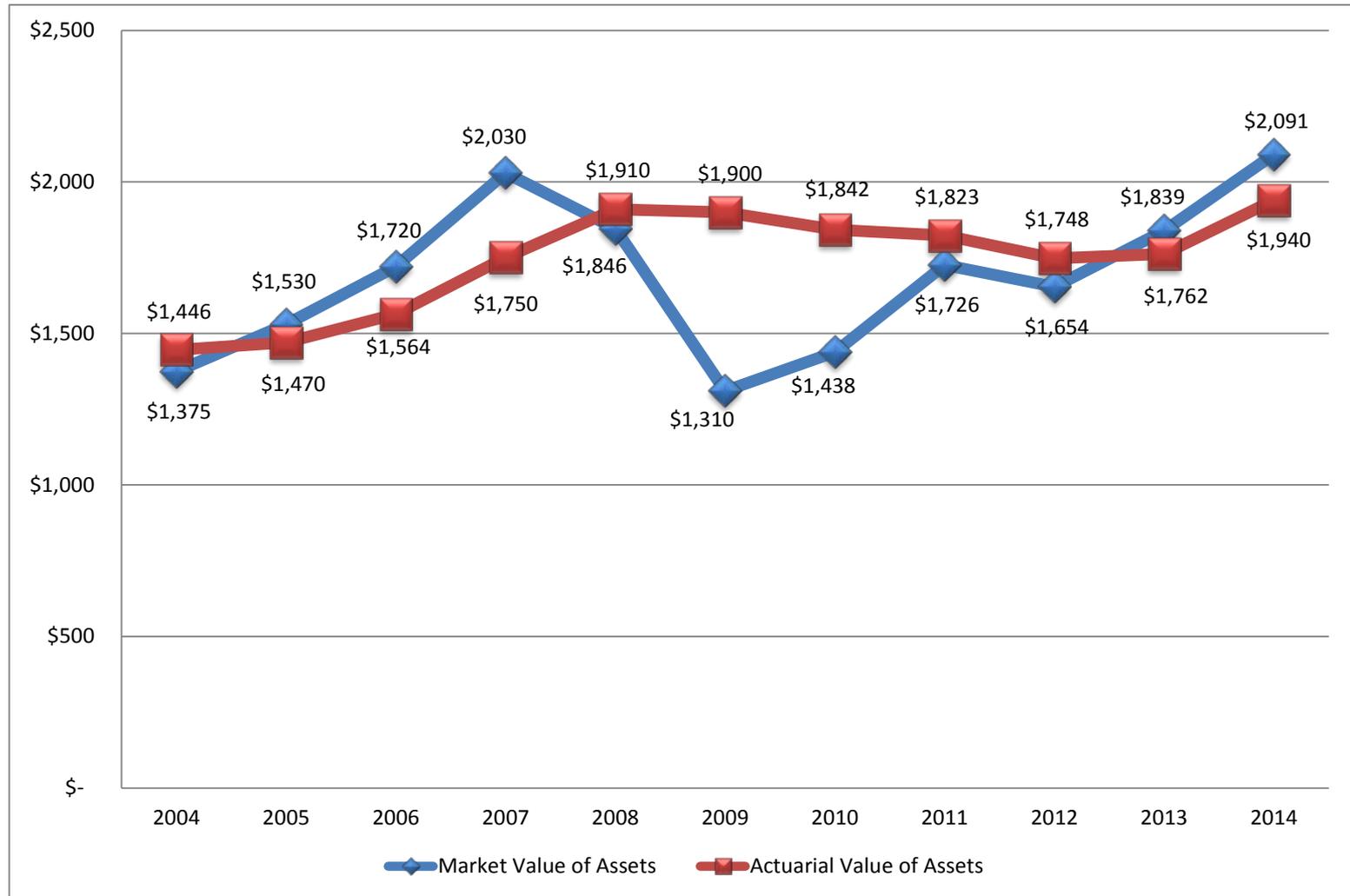
1. Market Value of Assets as of June 30, 2013	\$1,839
2. Contributions and Benefits for FYE June 30, 2014	(41)
3. Expected Return	<u>146</u>
4. Expected Market Value of Assets (1) + (2) + (3)	\$1,944
5. Actual Market Value of Assets on June 30, 2014	2,091
6. Excess/(Shortfall) for FYE June 30, 2014 (5) – (4)	147
Excess/(Shortfall) Returns:	

Year	Initial Amount	Deferral %	Unrecognized Amount
2014	\$147	80%	\$118
2013	87	60%	53
2012	(159)	40%	(64)
2011	220	20%	44
2010	74	0%	<u>0</u>
7. Total			\$151

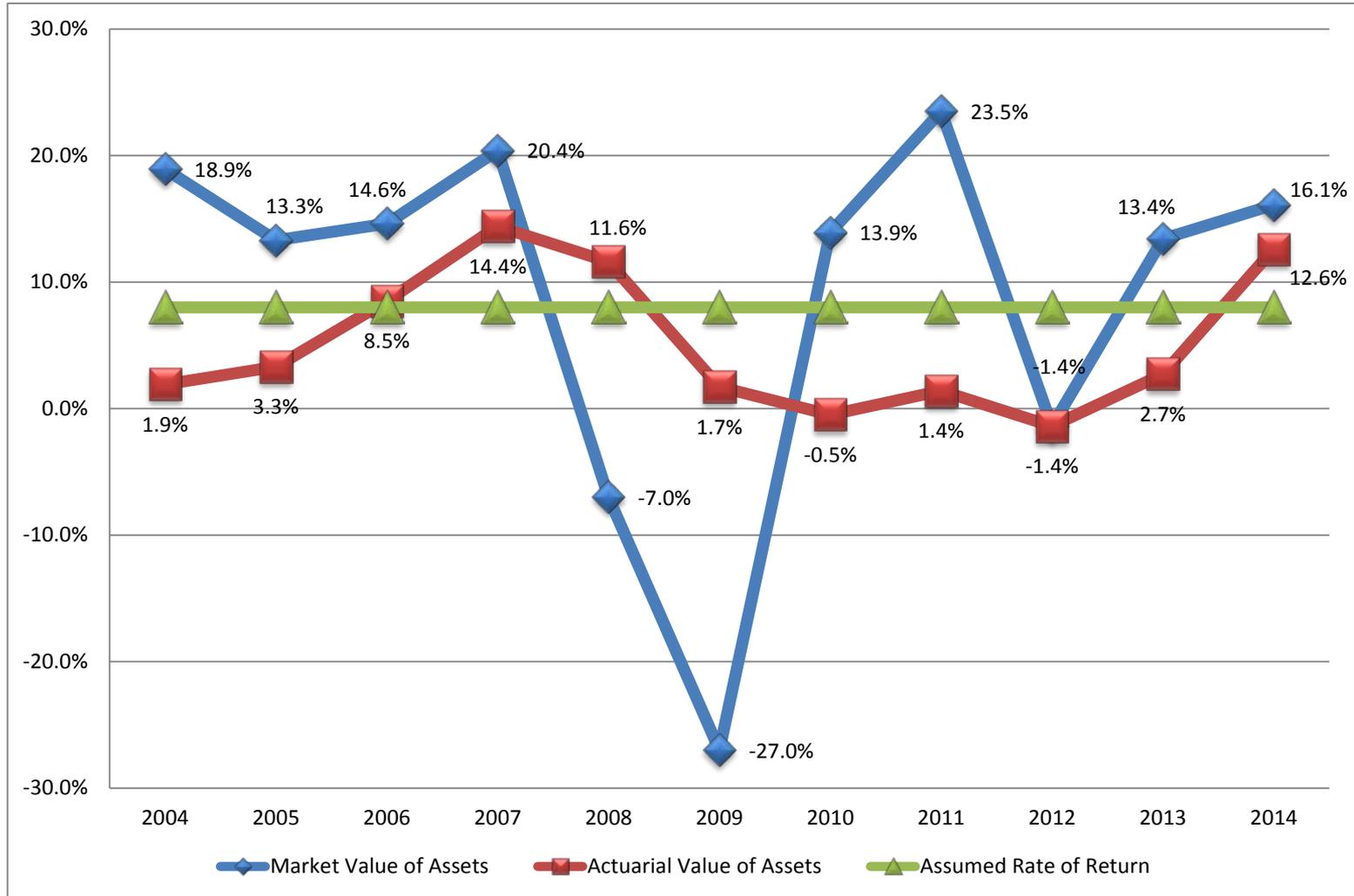
8. Actuarial Value of Assets as of June 30, 2014 (5) - (7)	\$1,940
9. Actuarial Value of Assets as a % of Market Value of Assets	92.8%

Market and Actuarial Values of Assets

\$ Millions

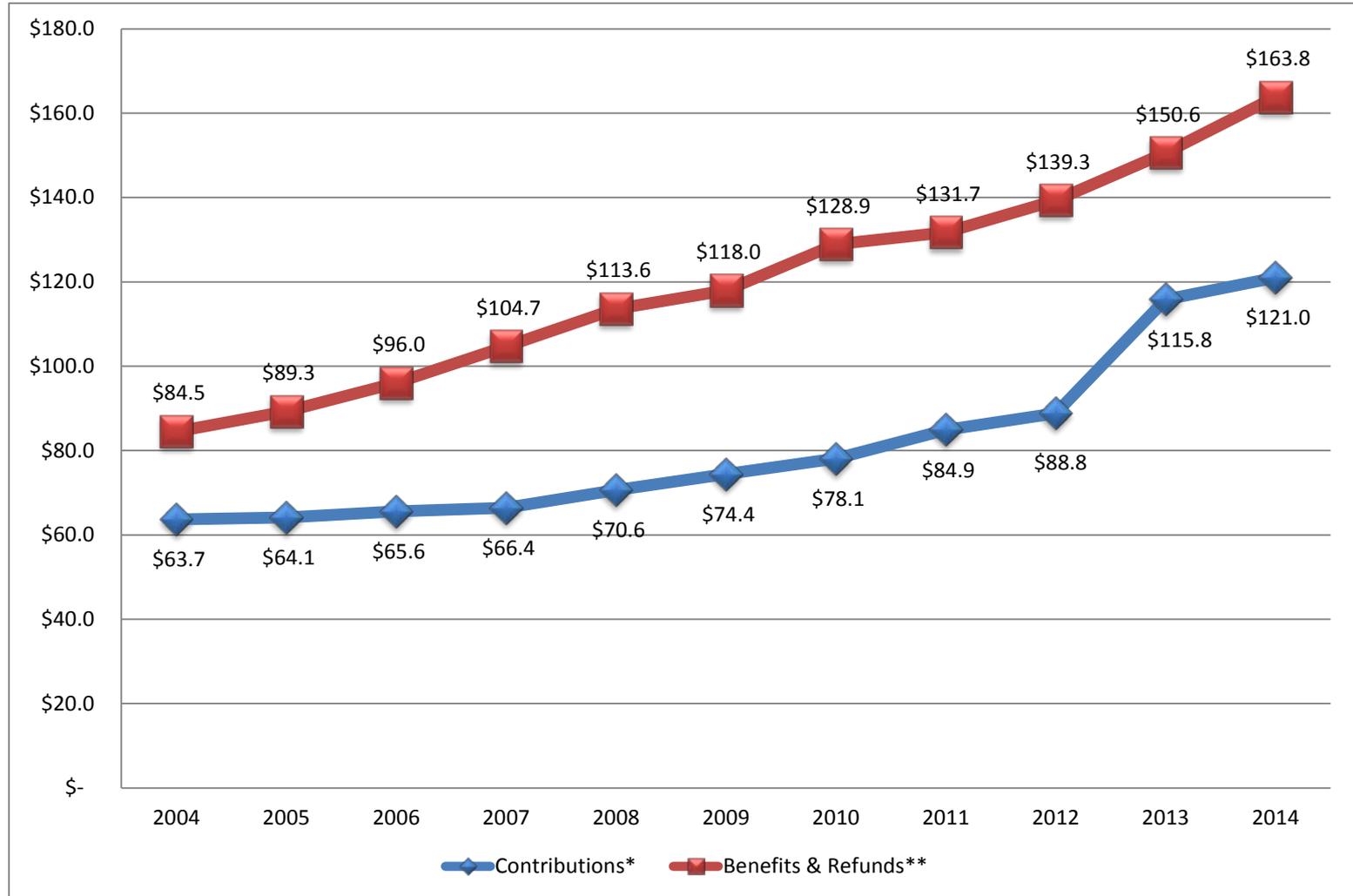


Asset Returns



Contributions vs. Benefits and Refunds

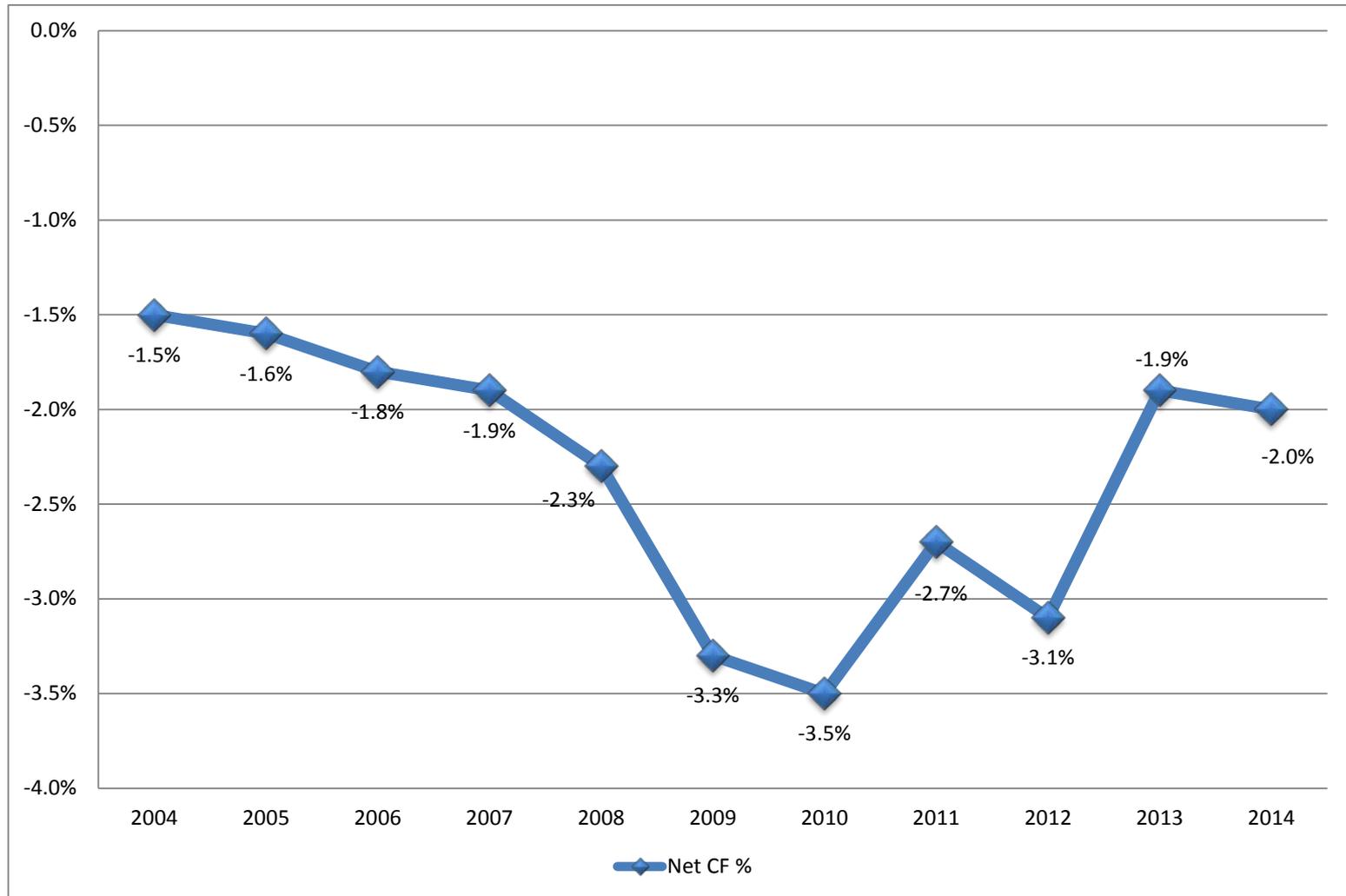
\$ Millions



* Includes member and employer contributions, and service purchases

** Includes administrative expenses

Net Cash Flow as a % of Market Value



Valuation Results (\$ in millions)

	July 1, 2014	July 1, 2013
Actuarial Accrued Liability:		
• Active Members	\$1,398	\$1,371
• Inactive Members	79	74
• Retirees and Beneficiaries	<u>1,662</u>	<u>1,552</u>
Total	\$3,139	\$2,997
Actuarial Assets	<u>1,940</u>	<u>1,762</u>
Unfunded Accrued Liability	\$1,198	\$1,235
Funded Ratio	61.8%	58.8%

Actuarially Determined Contribution

	July 1, 2014	July 1, 2013*
Normal Cost Rate	10.63%	10.15%
Member Rate	<u>11.75%</u>	<u>9.75%</u>
Employer Normal Cost Rate	-1.12%	0.40%
Adjusted for Timing	-1.12%	0.41%
Amortization of UAAL*	<u>12.69%</u>	<u>9.85%</u>
Actuarially Determined Contribution	11.57%	10.26%
Employer Rate	12.75%	10.75%
Contribution Sufficiency/(Deficiency)	1.18%	0.49%

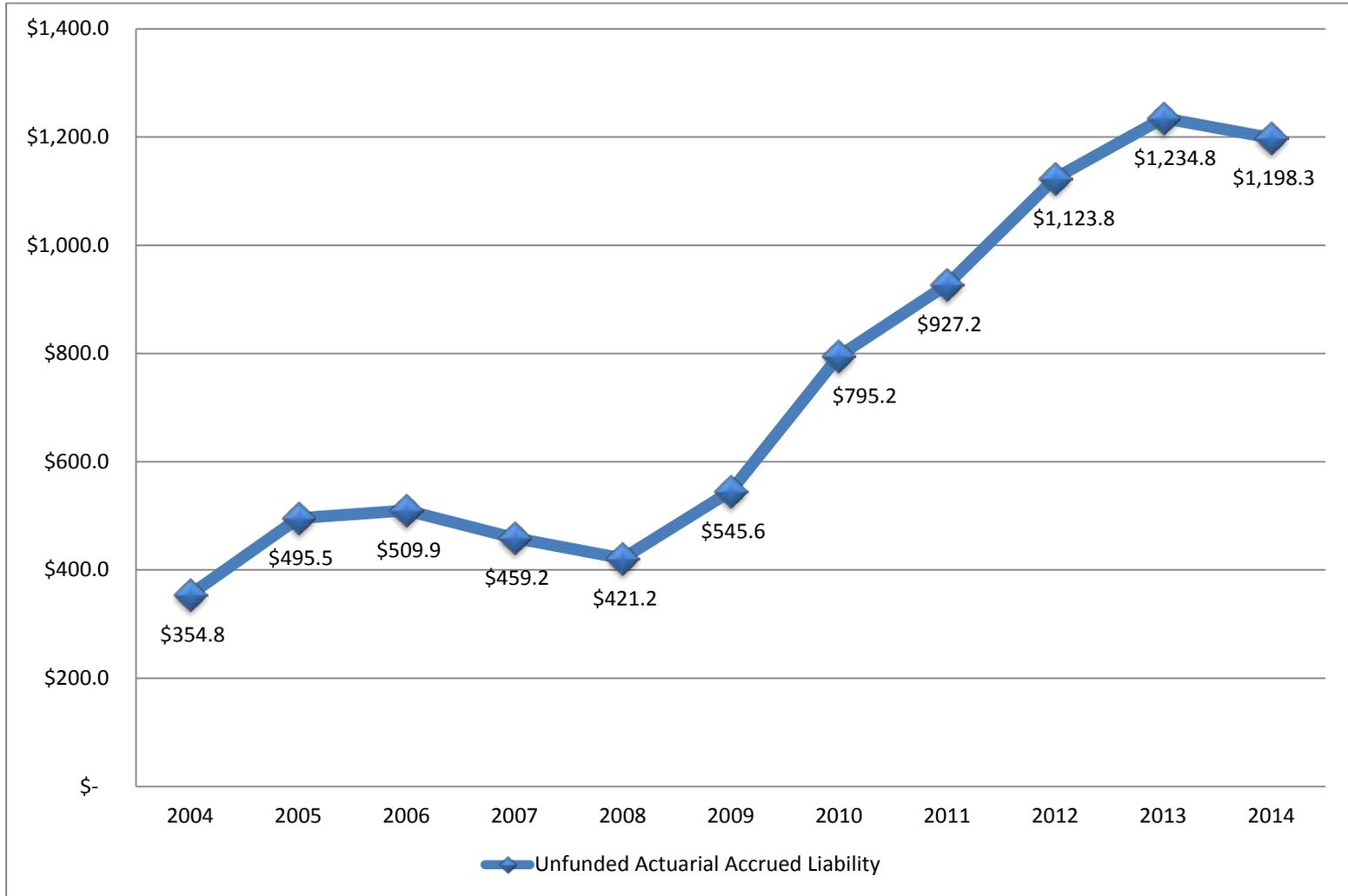
* For July 1, 2013, reflects the actuarial present value of the increased statutory contributions scheduled to occur July 1, 2014.

Valuation Results - Comments

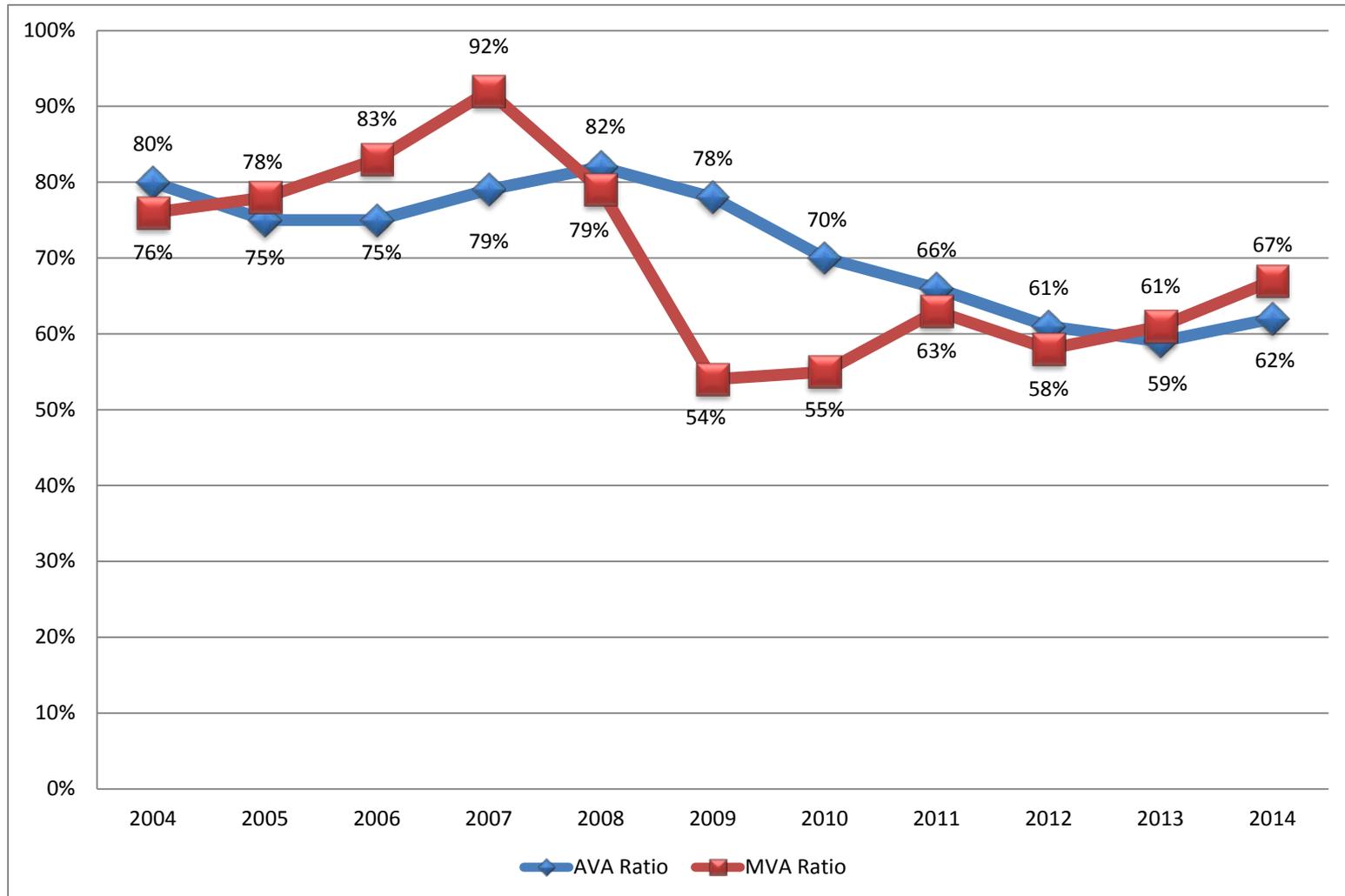
- The actuarial accrued liability increased from \$2.997 billion (as of June 30, 2013) to \$3.139 billion (as of June 30, 2014)
- The unfunded actuarial accrued liability (UAAL) decreased from \$1.235 billion to \$1.198 billion
- The funded ratio on an AVA basis increased from 59% to 62%
 - On a market value basis, the funded ratio increased from 61% to 67%
- The actuarially determined contribution (ADC) increased from 10.26% of payroll to 11.57% of payroll
 - This increase was primarily due to removing the adjustment for reflecting the value of the July 1, 2014, contribution rate increases from the ADC calculation
 - For FY15, the increases are now reflected in the employer normal cost and employer contribution rate
 - Compared to 12.75% employer contribution, results in a contribution sufficiency of 1.18%
 - The effective amortization period is 24 years

Unfunded Actuarial Accrued Liability

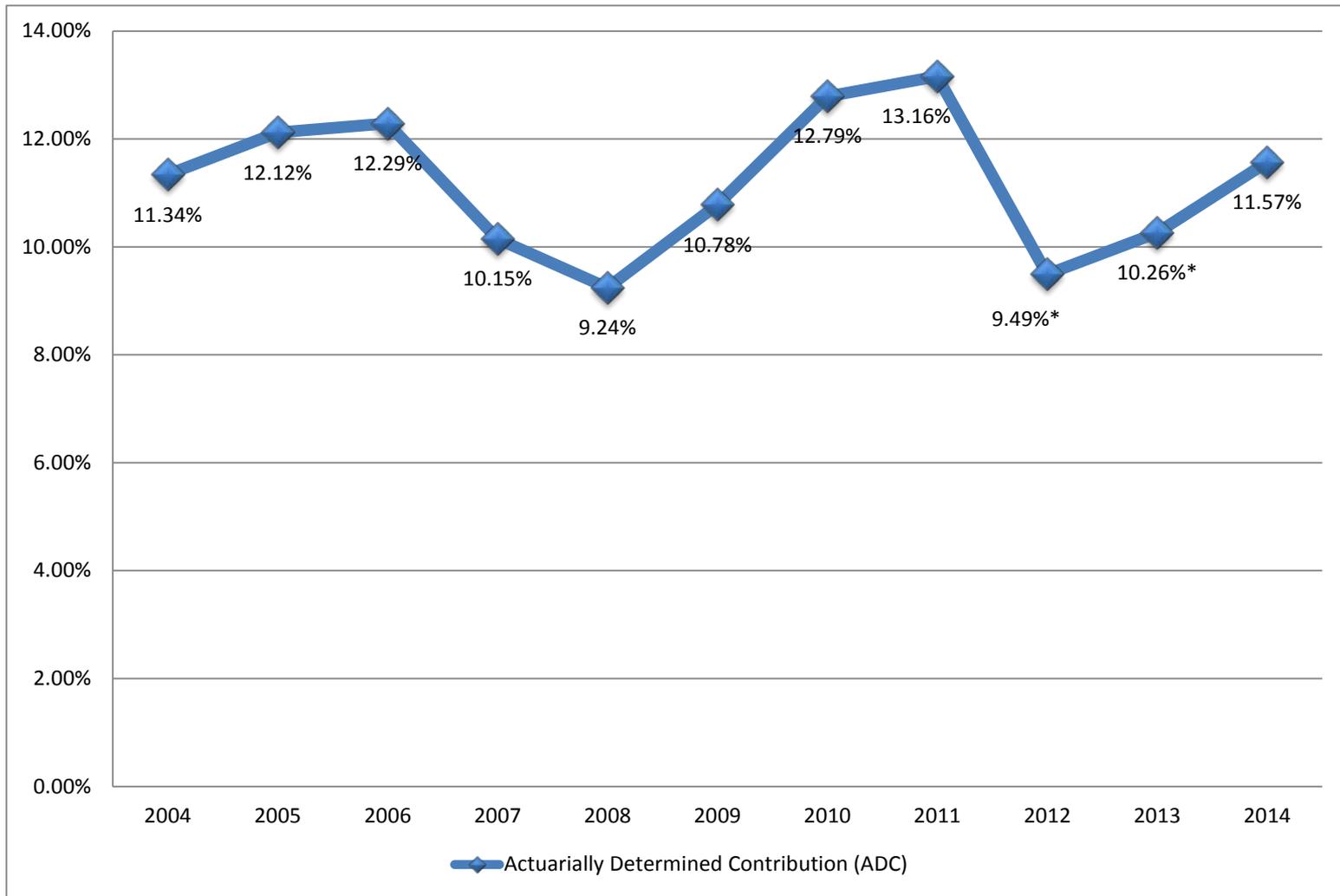
\$ Millions



Funded Ratios



Actuarially Determined Contribution (ADC)



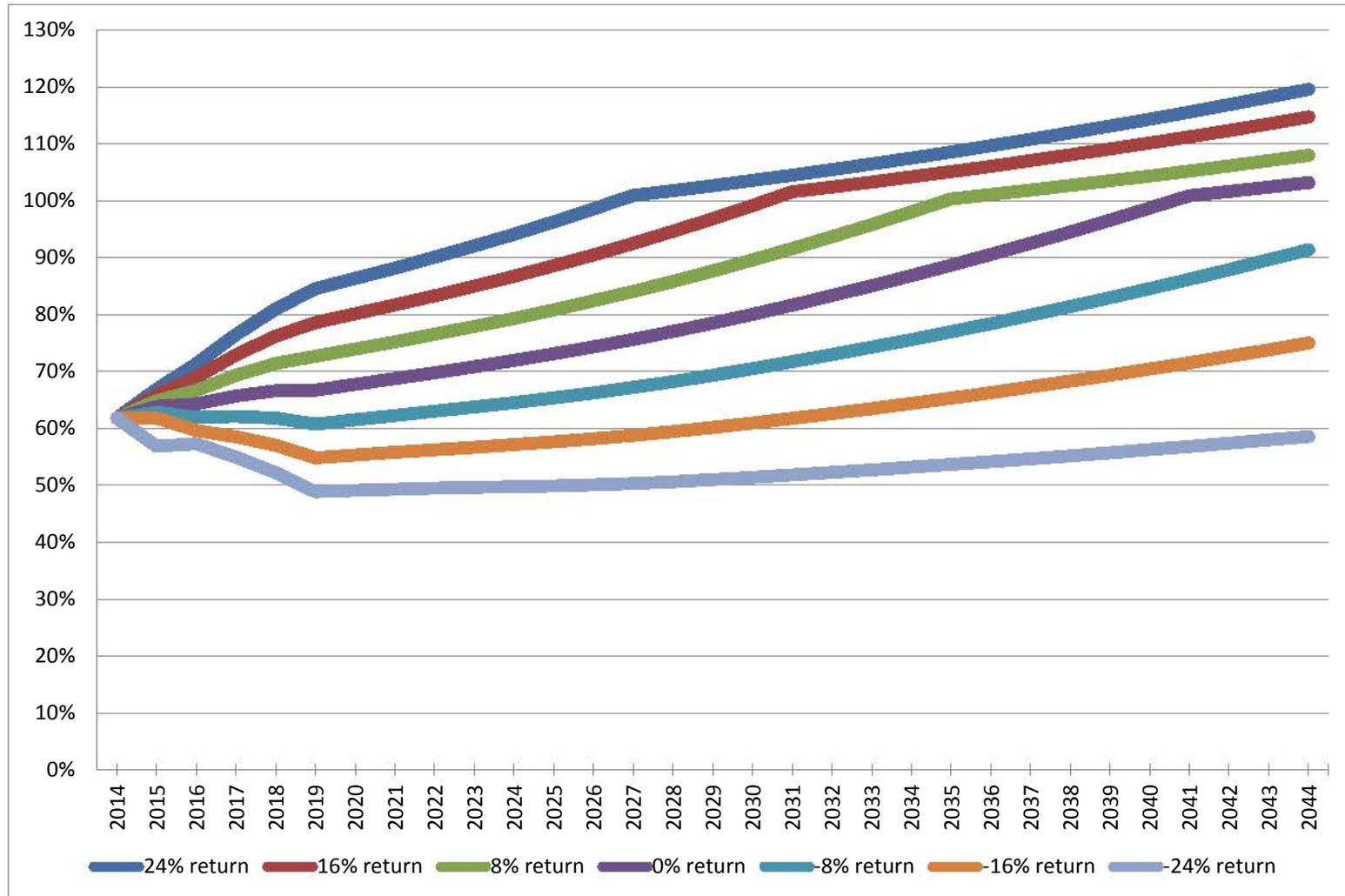
- Prior to 2005, the ADC calculation was based on a 20-year open amortization period.
- From 2005 - 2012, the calculation of the ADC was based on a 30-year open level percentage of payroll amortization.
- Beginning in 2013, the period is 30-year closed.
- * Reflects the actuarial present value of contribution increases effective July 1, 2014.

Projections

- Projections of estimated funded ratios for 30 years
 - Based on FY15 investment return scenarios ranging from -24% to +24%
 - Assumes Fund earns 8% per year in FY16 and each year thereafter
 - Additional projections assuming Fund earns 7% or 9% per year every year
 - All other experience is assumed to emerge as expected

- Includes contribution rates from HB 1134
 - Member rate is 11.75% for FY15 and thereafter
 - Employer rate is 12.75% for FY15 and thereafter
 - Increases “sunset” back to 7.75% once the funded ratio reaches 100% (based on actuarial assets)

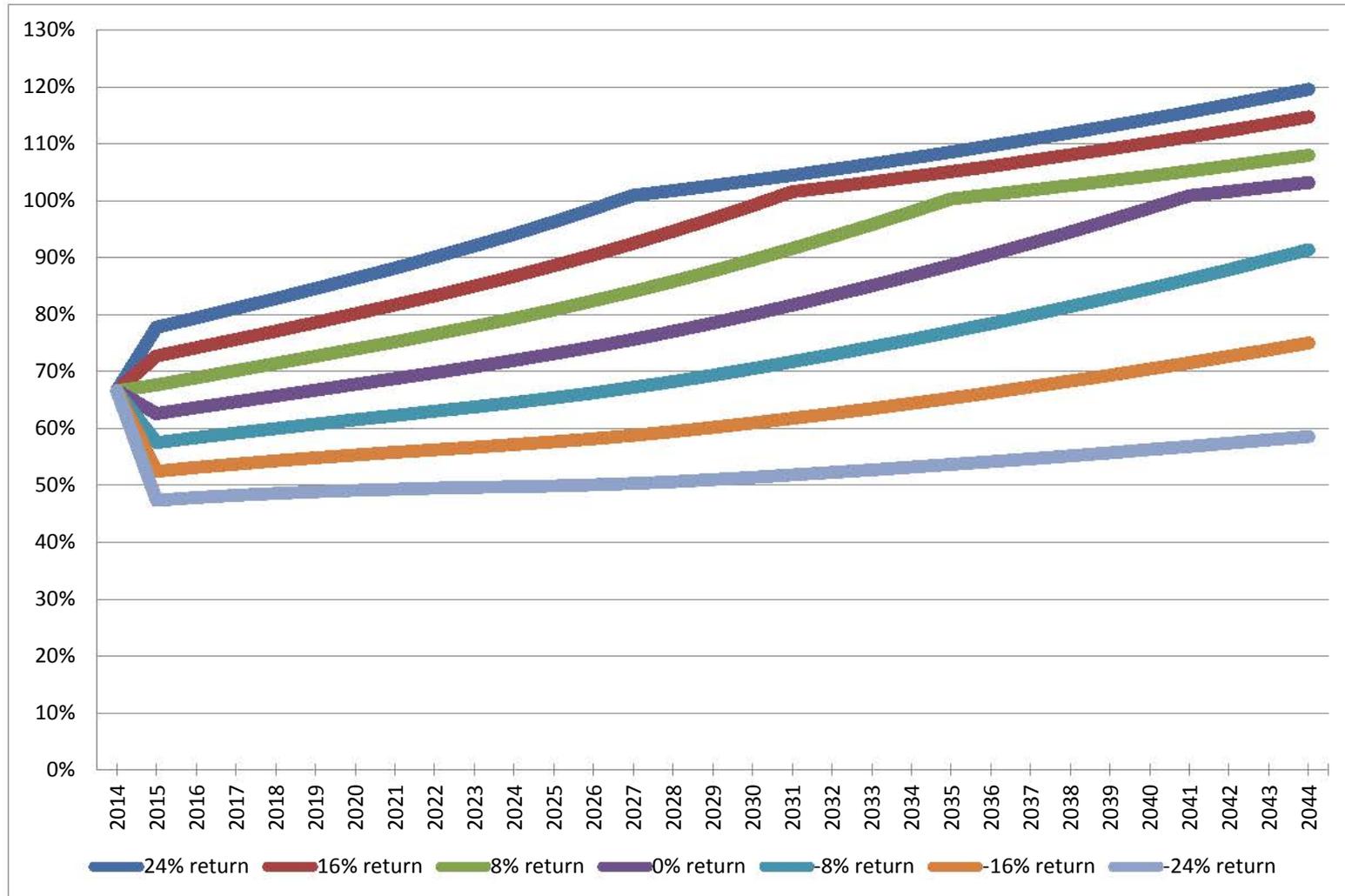
Projected Funded Ratios (AVA Basis)



Projected Funded Ratios (AVA Basis)

Valuation Year	24% for FY2015	16% for FY2015	8% for FY2015	0% for FY2015	-8% for FY2015	-16% for FY2015	-24% for FY2015
2014	62%	62%	62%	62%	62%	62%	62%
2015	67%	66%	65%	64%	63%	62%	57%
2016	71%	69%	67%	64%	62%	60%	57%
2017	77%	73%	69%	66%	62%	59%	55%
2018	81%	76%	71%	67%	62%	57%	52%
2019	85%	79%	73%	67%	61%	55%	49%
2024	94%	87%	79%	72%	65%	57%	50%
2029	103%	97%	88%	79%	69%	60%	51%
2034	108%	104%	98%	87%	76%	64%	53%
2039	113%	109%	104%	97%	83%	69%	56%
2044	120%	115%	108%	103%	91%	75%	59%

Projected Funded Ratios (MVA Basis)



Projected Funded Ratios (MVA Basis)

Valuation Year	24% for FY2015	16% for FY2015	8% for FY2015	0% for FY2015	-8% for FY2015	-16% for FY2015	-24% for FY2015
2014	67%	67%	67%	67%	67%	67%	67%
2015	78%	73%	68%	63%	58%	52%	47%
2016	79%	74%	69%	64%	58%	53%	48%
2017	81%	76%	70%	65%	59%	54%	48%
2018	83%	77%	71%	66%	60%	54%	49%
2019	85%	79%	73%	67%	61%	55%	49%
2024	94%	87%	79%	72%	65%	57%	50%
2029	103%	97%	88%	79%	69%	60%	51%
2034	108%	104%	98%	87%	76%	64%	53%
2039	113%	109%	104%	97%	83%	69%	56%
2044	120%	115%	108%	103%	91%	75%	59%

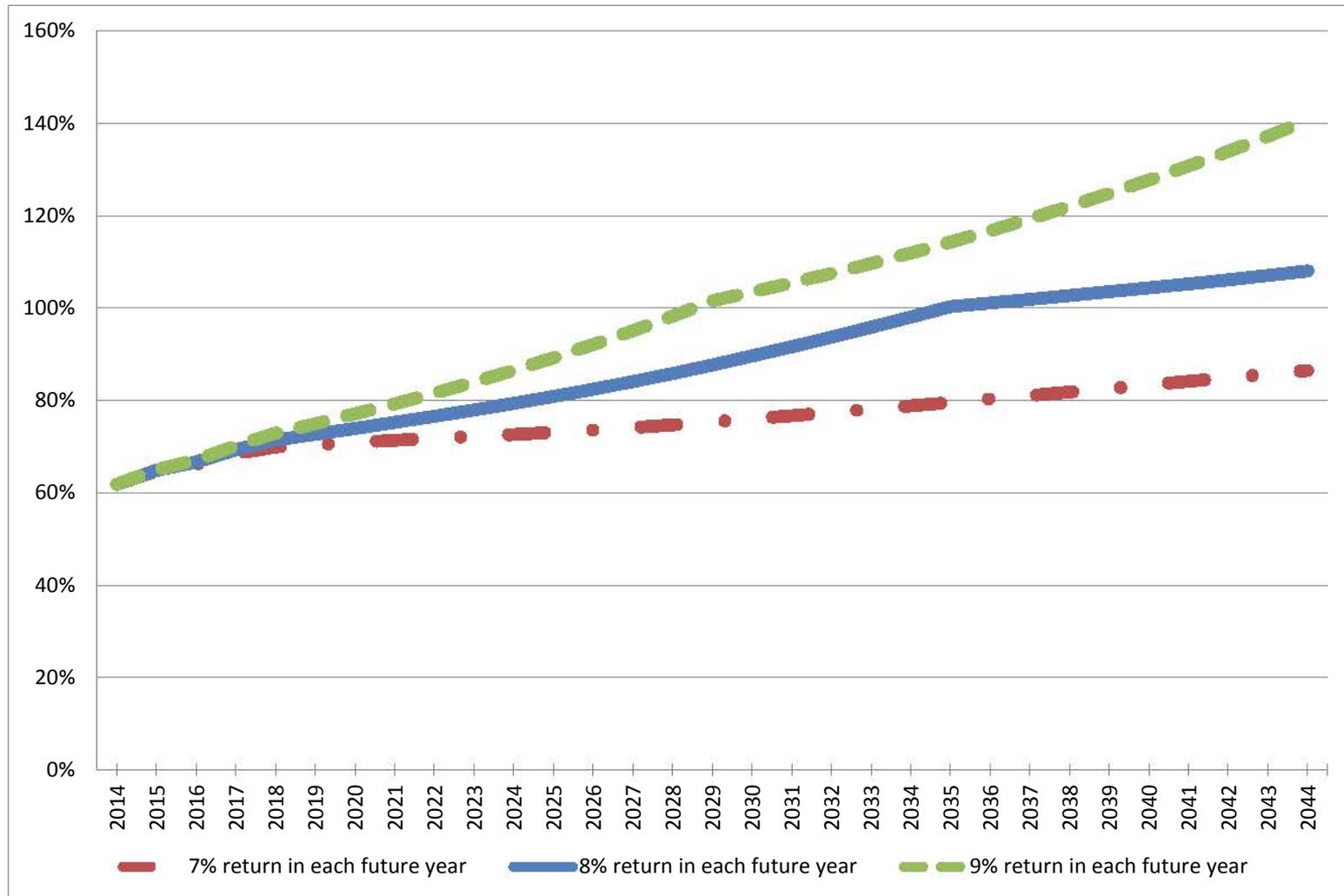
Projected Margin (AVA Basis)

Valuation Year	24% for FY2015	16% for FY2015	8% for FY2015	0% for FY2015	-8% for FY2015	-16% for FY2015	-24% for FY2015
2014	1.18%	1.18%	1.18%	1.18%	1.18%	1.18%	1.18%
2015	2.61%	2.26%	1.91%	1.57%	1.22%	0.87%	-0.82%
2016	3.84%	3.02%	2.20%	1.38%	0.55%	-0.27%	-1.09%
2017	5.41%	4.11%	2.81%	1.52%	0.22%	-1.08%	-2.38%
2018	6.83%	5.05%	3.27%	1.49%	-0.28%	-2.06%	-3.84%
2019	7.98%	5.71%	3.45%	1.18%	-1.08%	-3.34%	-5.61%
2024	11.22%	7.95%	4.69%	1.43%	-1.83%	-5.09%	-8.36%
2029	5.66%	12.07%	7.15%	2.23%	-2.69%	-7.61%	-12.53%
2034	7.26%	6.11%	12.28%	4.35%	-3.59%	-11.52%	-19.45%
2039	9.26%	7.82%	5.82%	11.07%	1.09%	-8.90%	-18.88%
2044	11.85%	10.02%	7.49%	5.67%	6.88%	-5.77%	-18.42%

* The projected margin is based on a 30-year closed period starting July 1, 2013. Once the period declines to 10 years remaining, the projected margin is based on a 10-year open period.

** If an overfunding exists, the surplus is amortized over a 30-year open period.

Projected Funded Ratios (AVA Basis) Actual Returns +1% or -1% of Assumed



Projected Funded Ratios (AVA Basis)

Actual Returns +1% or -1% of Assumed

Valuation Year	7% Return in Each Future Year	8% Return in Each Future Year	9% Return in Each Future Year
2014	62%	62%	62%
2015	65%	65%	65%
2016	66%	67%	67%
2017	68%	69%	70%
2018	70%	71%	73%
2019	70%	73%	75%
2024	73%	79%	87%
2029	75%	88%	102%
2034	79%	98%	112%
2039	83%	104%	125%
2044	86%	108%	141%



 Segal Consulting

North Dakota Public Employees Retirement System

DISCUSSION OF VALUATION RESULTS AND PROJECTIONS

Actuarial Valuation as of July 1, 2014

October 29, 2014

Presented by:

Brad Ramirez, FSA, MAAA, EA, FCA
Tammy Dixon, FSA, MAAA, EA



Discussion Topics

- Actuarial Methods
- Assumptions
- Summary of Valuation Highlights
- Membership and Demographics
- Valuation Results and Projections

Actuarial Methods

- **Asset Valuation Method** (actuarial value of assets)
 - PERS uses a five-year smoothing method
 - Investment returns above or below the expected return are recognized over five years
- **Cost Method** (Allocation of liability between past service and future service)
 - PERS uses the entry age normal cost method (as do most retirement systems)
 - Retiree Health Insurance Credit Fund (RHIC) uses the projected unit credit cost method
- **Amortization Method**
 - 20-year “open” period to pay off unfunded actuarial accrued liability (16 years remaining “closed” period for RHIC Fund)
 - Based on level percentage of payroll
 - An open amortization period will yield contributions that reduce the unfunded actuarial accrued liability, but will not pay it off

Assumptions

➤ Discount Rate and Expected Rate of Return on Investments

- 8%

➤ Salary Increase Rates

- Based on service and age
- Ranges from 8.25% for new members to 4.86% for members with 5 or more years of service (5.0% for all years for Judges)

➤ Payroll Growth

- 4.5% (4.0% for Judges)

➤ Mortality

- RP 2000 Combined Healthy Mortality Table, set back three years

➤ Experience Study Update

Summary of Valuation Highlights – PERS and HPRS

- Market value of assets returned 16.2% for year ending 6/30/14 (Segal estimate)
 - Gradual recognition of deferred gains resulted in 12.2% return on actuarial assets
 - Unrecognized investment gains represent about 16.9% of market assets
- Net impact on funded ratio on AVA was an increase from 62.0% as of 7/1/2013 to 64.5% as of 7/1/2014 using actuarial value of assets
- Market value of combined assets for PERS and HPRS was \$2.347 billion vs. \$2.015 billion last year
- Actuarial value of combined assets for PERS and HPRS was \$1.950 billion vs. \$1.732 billion last year
- Actuarial value of assets is 83.1% of market value of assets

Summary of Valuation Highlights

Statutory Contributions	Member Rate	Employer Rate
Main System Full-Time Employees	7.00%	7.12%
Main System Part-Time Employees	14.12	N/A
Judges	8.00	17.52
National Guard	4.50	7.00
Law Enforcement with Prior Main System Service	5.50 ¹	N/A
Law Enforcement without Prior Main System Service	5.50	N/A
Highway Patrol	13.30	19.70
Retiree Health	0.00	1.14
Job Service	0.00	0.00

Board Set Rates	Member Rate	Employer Rate
Law Enforcement with Prior Main System Service	N/A	9.81% ²
Law Enforcement without Prior Main System Service	N/A	7.93

¹ 6.00% for BCI

² 10.31% for BCI

Summary of Valuation Highlights

EMPLOYER CONTRIBUTION AS A PERCENT OF PAYROLL

	Recommended		Statutory Rate
	2014 – 2015	2013 – 2014	
Main	11.06%	12.14%	7.12%
Judges	14.80%	16.66%	17.52%
National Guard	8.14%	9.07%	7.00%
Law Enforcement with Prior Service	9.52%	11.18%	9.81% ¹
Law Enforcement without Prior Service	7.42%	8.11%	7.93%
Highway Patrol	21.70%	25.11%	19.70%
Retiree Health	0.64%	0.77%	1.14%
Job Service	0.00%	0.00%	0.00%

¹ 10.31% for BCI

Summary of Valuation Highlights

FUNDED RATIO USING ACTUARIAL VALUE OF ASSETS

	July 1, 2014	July 1, 2013
Main	64.1%	61.6%
Judges	90.9%	86.7%
National Guard	87.8%	78.2%
Law Enforcement with Prior Service	64.4%	60.5%
Law Enforcement without Prior Service	80.9%	68.6%
PERS	64.5%	62.0%
Highway Patrol	72.3%	68.2%
Retiree Health	66.8%	57.8%
Job Service	119.4%	114.9%

Membership

Main System

	2014	2013	Change
Actives			
• Number	21,814	21,201	2.9%
• Payroll	\$946.2 million	\$865.9 million	9.3%
• Average Age	46.7 years	47.1 years	-0.4 years
• Average Service	10.1 years	10.4 years	-0.3 years
Retirees and Beneficiaries¹			
• Number	9,199	8,637	6.5%
• Total Monthly Benefits	\$9.4 million	\$8.5 million	10.6%
• Average Monthly Benefit	\$1,024	\$985	4.0%

¹ Does not include 24 suspended retirees as of 2014 and 21 as of 2013.

Membership

Judges

	2014	2013	Change
Actives			
• Number	50	49	2.0%
• Payroll	\$7.0 million	\$6.6 million	5.5%
• Average Age	58.7 years	58.6 years	0.1 years
• Average Service	16.8 years	18.3 years	-1.5 years
Retirees and Beneficiaries			
• Number	38	36	5.6%
• Total Monthly Benefits	\$143,410	\$127,563	12.4%
• Average Monthly Benefit	\$3,774	\$3,543	6.5%

Membership

National Guard

	2014	2013	Change
Actives			
• Number	27	39	-30.8%
• Payroll	\$1.2 million	\$1.7 million	-29.1%
• Average Age	37.6 years	36.5 years	1.1 years
• Average Service	6.6 years	5.5 years	1.1 years
Retirees and Beneficiaries			
• Number	10	10	0%
• Total Monthly Benefits	\$9,727	\$9,727	0%
• Average Monthly Benefit	\$973	\$973	0%

Membership

Law Enforcement with Prior Main System Service

	2014	2013	Change
Actives			
• Number	288	229	25.8%
• Payroll	\$15.5 million	\$11.7 million	32.7%
• Average Age	38.3 years	38.5 years	-0.2 years
• Average Service	7.0 years	7.3 years	-0.3 years
Retirees and Beneficiaries			
• Number	52	46	13.0%
• Total Monthly Benefits	\$82,075	\$79,915	2.7%
• Average Monthly Benefit	\$1,578	\$1,737	-9.2%

Membership

Law Enforcement without Prior Main System Service

	2014	2013	Change
Actives			
• Number	83	70	18.6%
• Payroll	\$3.6 million	\$2.6 million	40.6%
• Average Age	38.2 years	37.5 years	0.7 years
• Average Service	3.6 years	3.3 years	0.3 years
Retirees and Beneficiaries			
• Number	1	1	0%
• Total Monthly Benefits	\$816	\$816	0%
• Average Monthly Benefit	\$816	\$816	0%

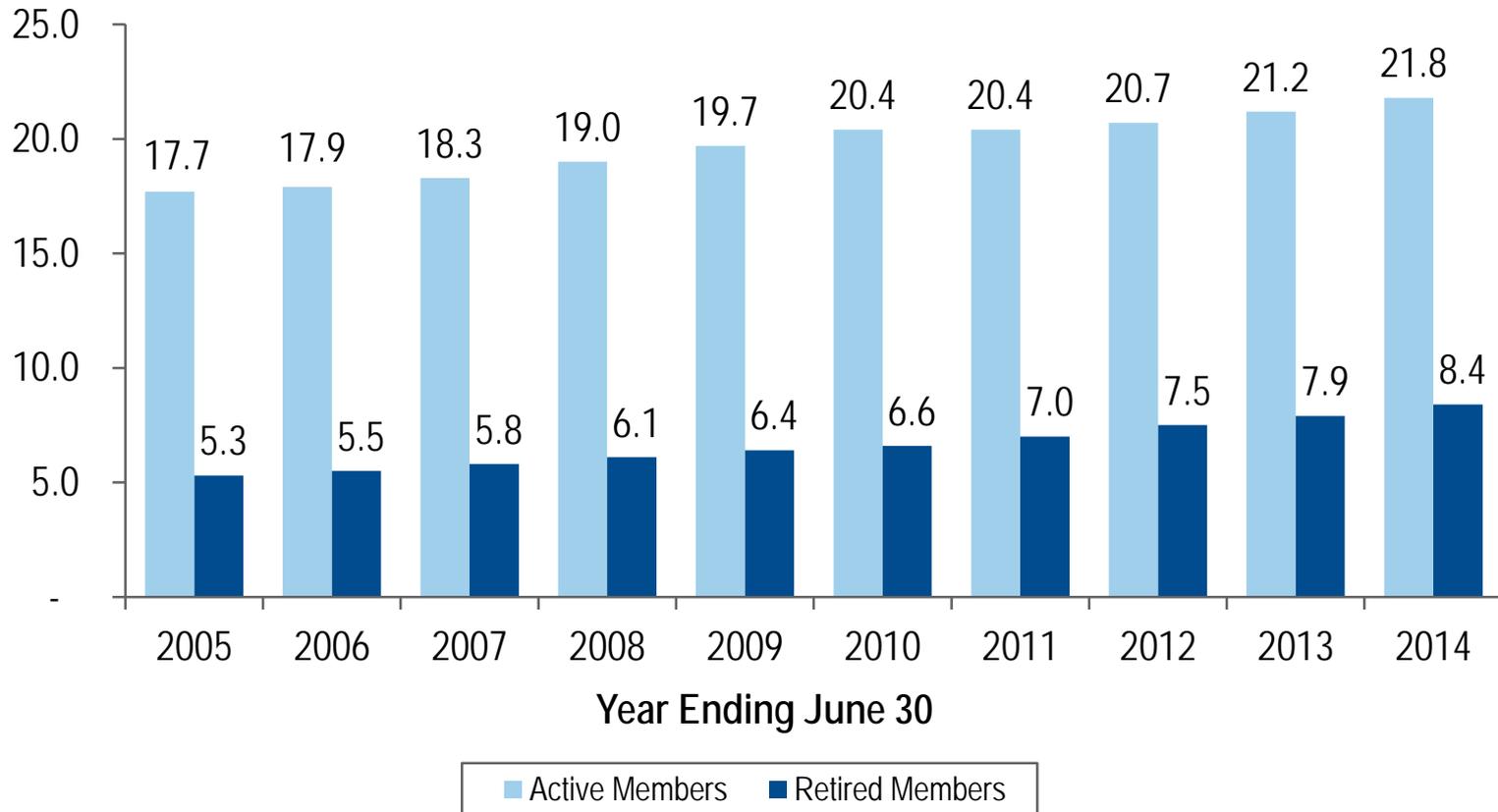
Membership

PERS

	2014	2013	Change
Actives			
• Number	22,262	21,588	3.1%
• Payroll	\$973.6 million	\$888.5 million	9.6%
• Average Age	46.6 years	47.0 years	-0.4 years
• Average Service	10.0 years	10.4 years	-0.4 years
Retirees and Beneficiaries			
• Number	9,300	8,730	6.5%
• Total Monthly Benefits	\$9.7 million	\$8.7 million	11.5%
• Average Monthly Benefit	\$1,038	\$999	3.9%

Main System

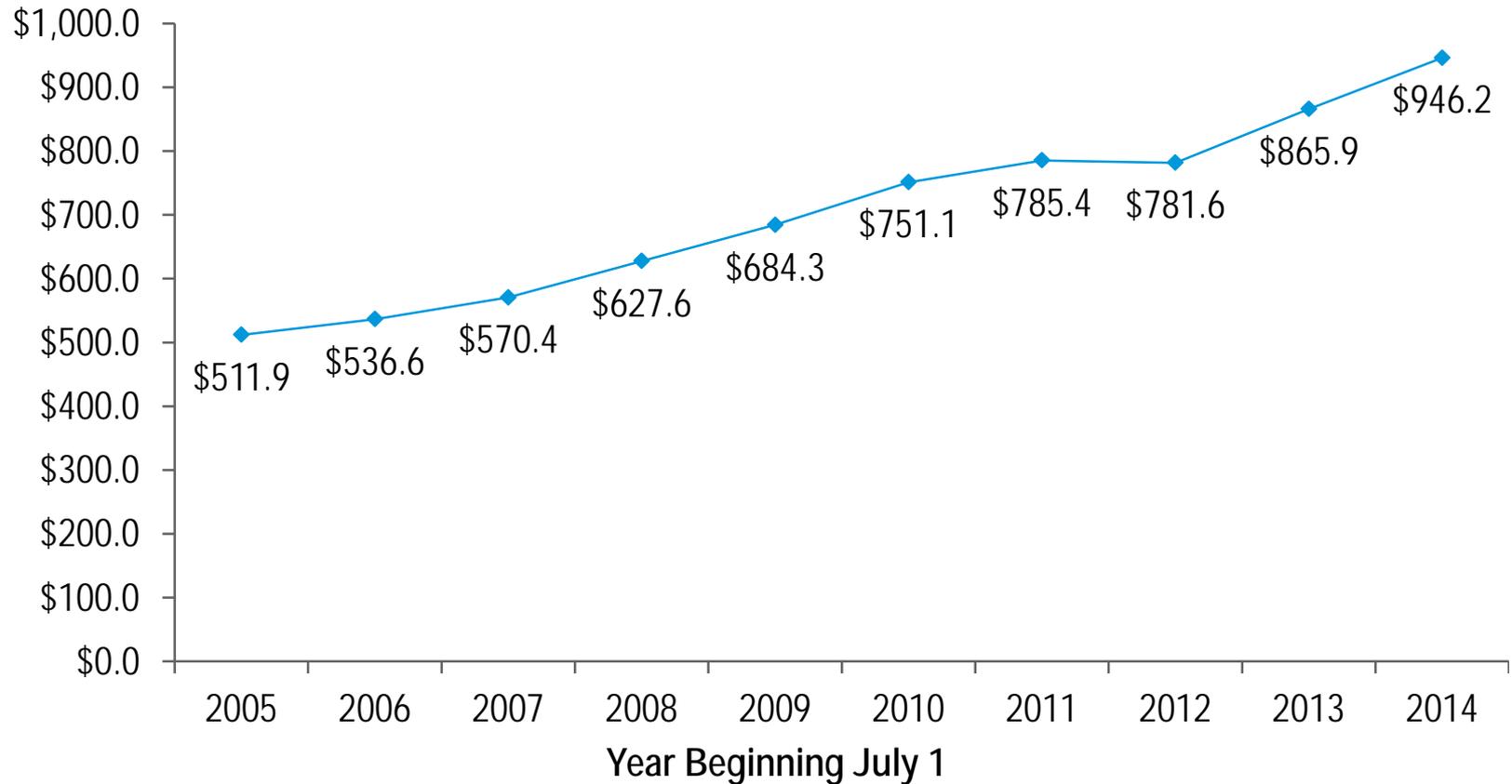
ACTIVE AND RETIRED MEMBERSHIP (In Thousands)



**Active Population increased 2.9% from 21,201 to 21,814.
Retired Members, excluding beneficiaries, increased 7.1% from 7,853 to 8,409.**

Main System

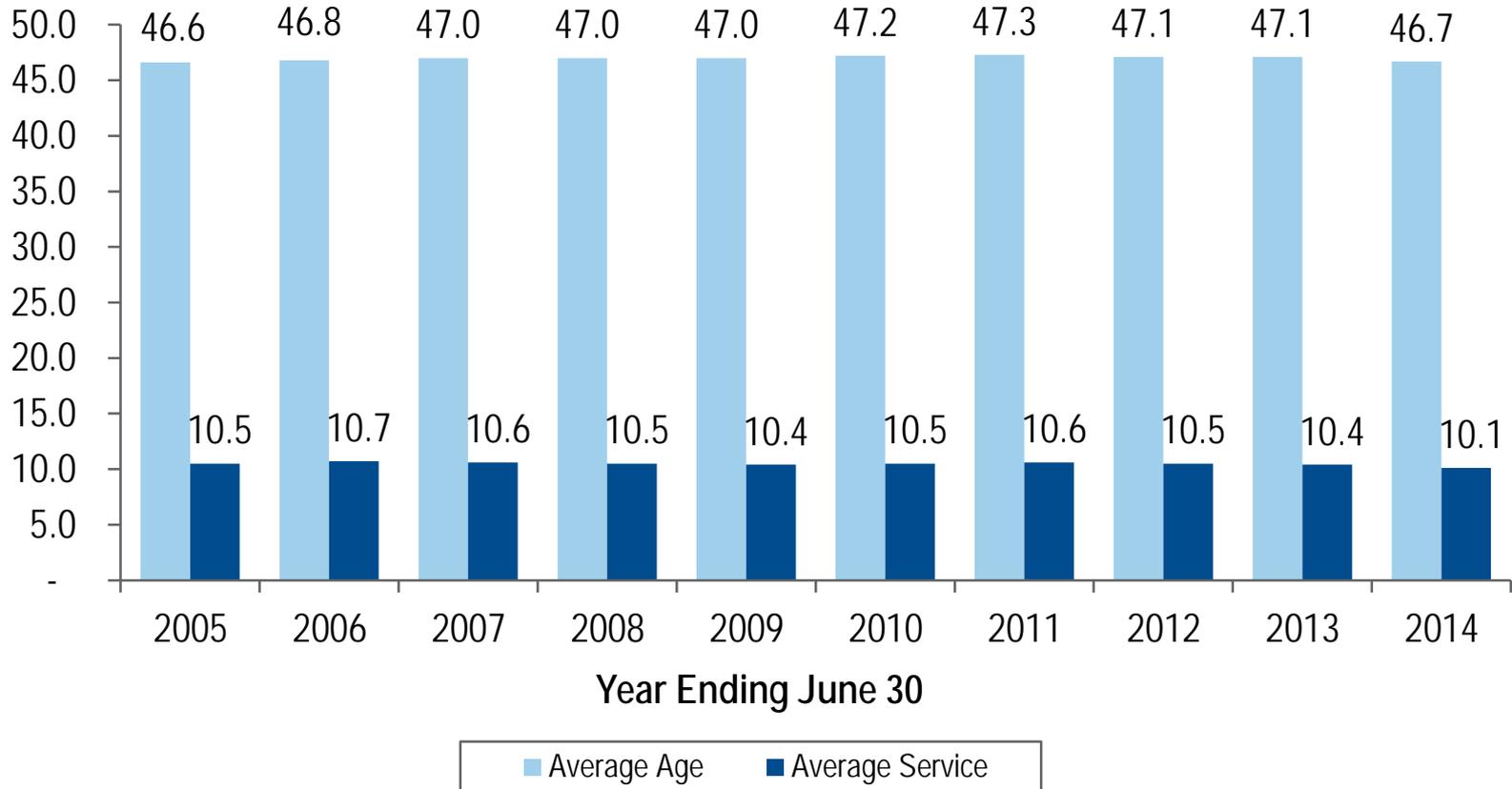
ACTIVE PAYROLL (In Thousands)



Total compensation projected for the upcoming year increased 9.3% from \$865.9 million to \$946.2 million.

Main System

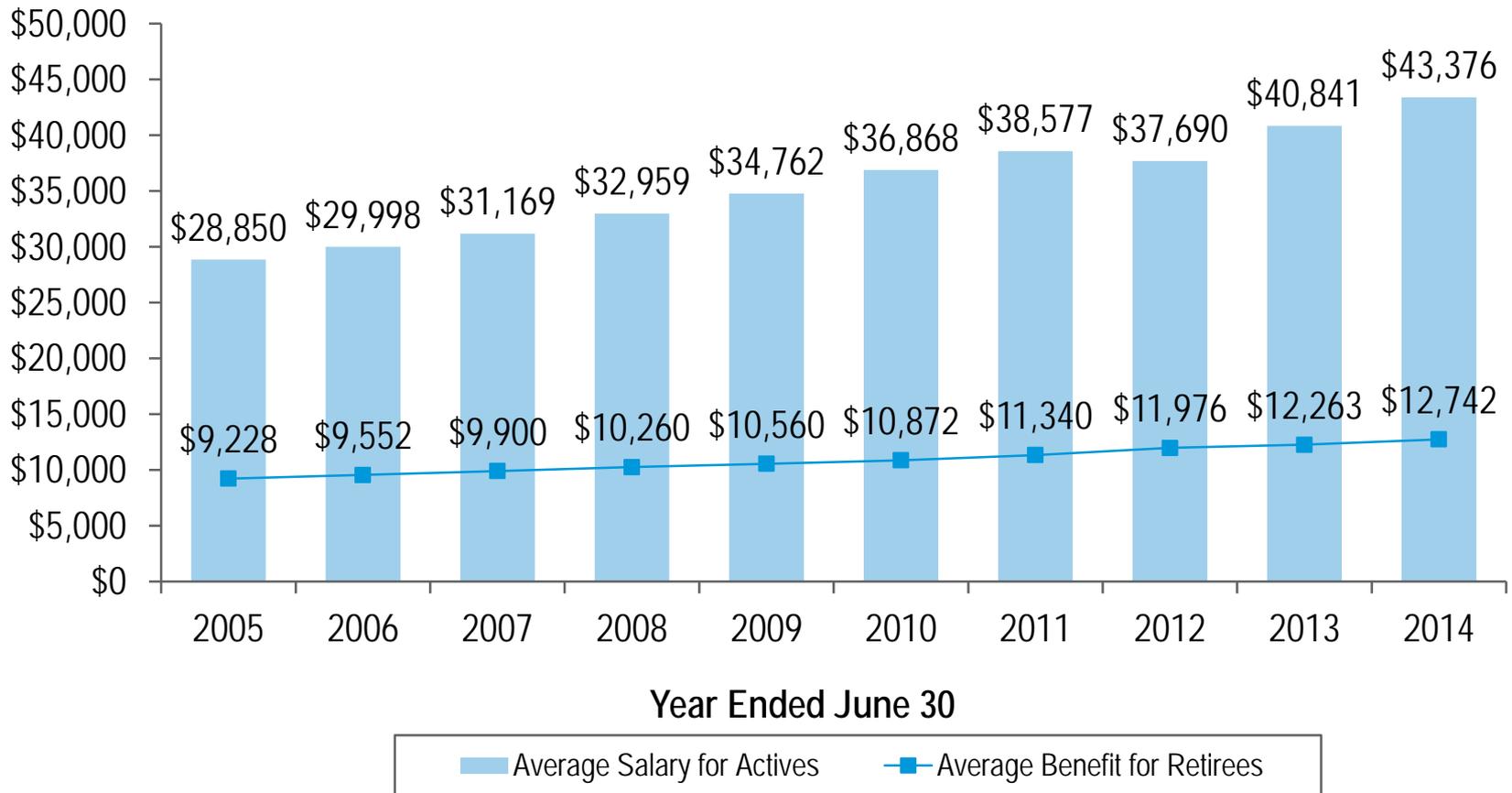
AVERAGE AGE AND SERVICE OF ACTIVE MEMBERS



The average service has decreased slightly as new participants with lower service replace retiring and refunded participants. For 2014, the relationship between the average age and service implies an entry age of 36.6 years ($46.7 - 10.1$).

Main System

AVERAGE SALARY AND AVERAGE ANNUAL BENEFIT



Average Salary for Actives increased 6.2% from \$40,841 to \$43,376. Average Benefit for Retired Members, excluding beneficiaries, increased 3.9% from \$12,263 to \$12,742.

Assets

PERS and HPRS

- The market value of assets increased from \$2.015 billion as of June 30, 2013 to \$2.347 billion as of June 30, 2014
 - Segal determined the investment return was 16.2%, net of investment expenses
- The actuarial value of assets—which smooths investment gains and losses over five years—increased from \$1.732 billion as of June 30, 2013 to \$1.950 billion as of June 30, 2014
 - Investment return of 12.2%, net of investment expenses
 - Actuarial value is 83.1% of market value
 - There is a total of \$396.9 million of deferred investment gains that will be recognized in future years
- The average annual return on market assets over the past 10 years is 7.1%
- The average annual return on actuarial assets over the past 10 years is 5.8%

Market Value of Assets

PERS and HPRS – Historical Returns

Year Ending June 30	Market Value	Actuarial Value
2005	14.17%	4.36%
2006	12.04	7.79
2007	19.63	15.84
2008	(5.21)	8.51
2009	(24.05)	1.72
2010	13.25	1.48
2011	21.09	3.31
2012	(0.20)	(0.15)
2013	13.41	3.93
2014	16.15	12.20

Market Value of Assets (\$ in billions)

PERS and HPRS

Fiscal Year Ending June 30, 2014	
Beginning of Year	\$2.015
Contributions:	
• Employer	0.063
• Member	0.061
• Service Purchases	0.008
• Total	0.132
Benefits, Expenses and Refunds	(0.126)
Investment Income (net)	0.326
End of Year	\$2.347
Rate of Return	16.15%

Actuarial Value of Assets (\$ in billions)

PERS and HPRS

1. Market Value of Assets as of June 30, 2013	\$2.015
2. Contributions, Interest, Dividends, Benefits and Expenses	0.039
3. Preliminary Market Value as of June 30, 2014	2.054
4. Actual Market Value as of June 30, 2014	\$2.347
5. Excess/(Shortfall) Return for Year Ended June 30, 2014	0.293

Excess/(Shortfall) Returns:

Year	Initial Amount	Deferral %	Unrecognized Amount
2014	\$0.293	80%	\$0.235
2013	0.201	60%	0.120
2012	(0.040)	40%	(0.016)
2011	0.289	20%	0.058
2010	0.153	0%	0.000
6. Total			\$0.397

7. Actuarial Value of Assets as of June 30, 2014: #4 - #6 =	\$1.950
8. Actuarial Value of Assets as a % of Market Value of Assets	83.1%

Market Value of Assets (\$ in millions)

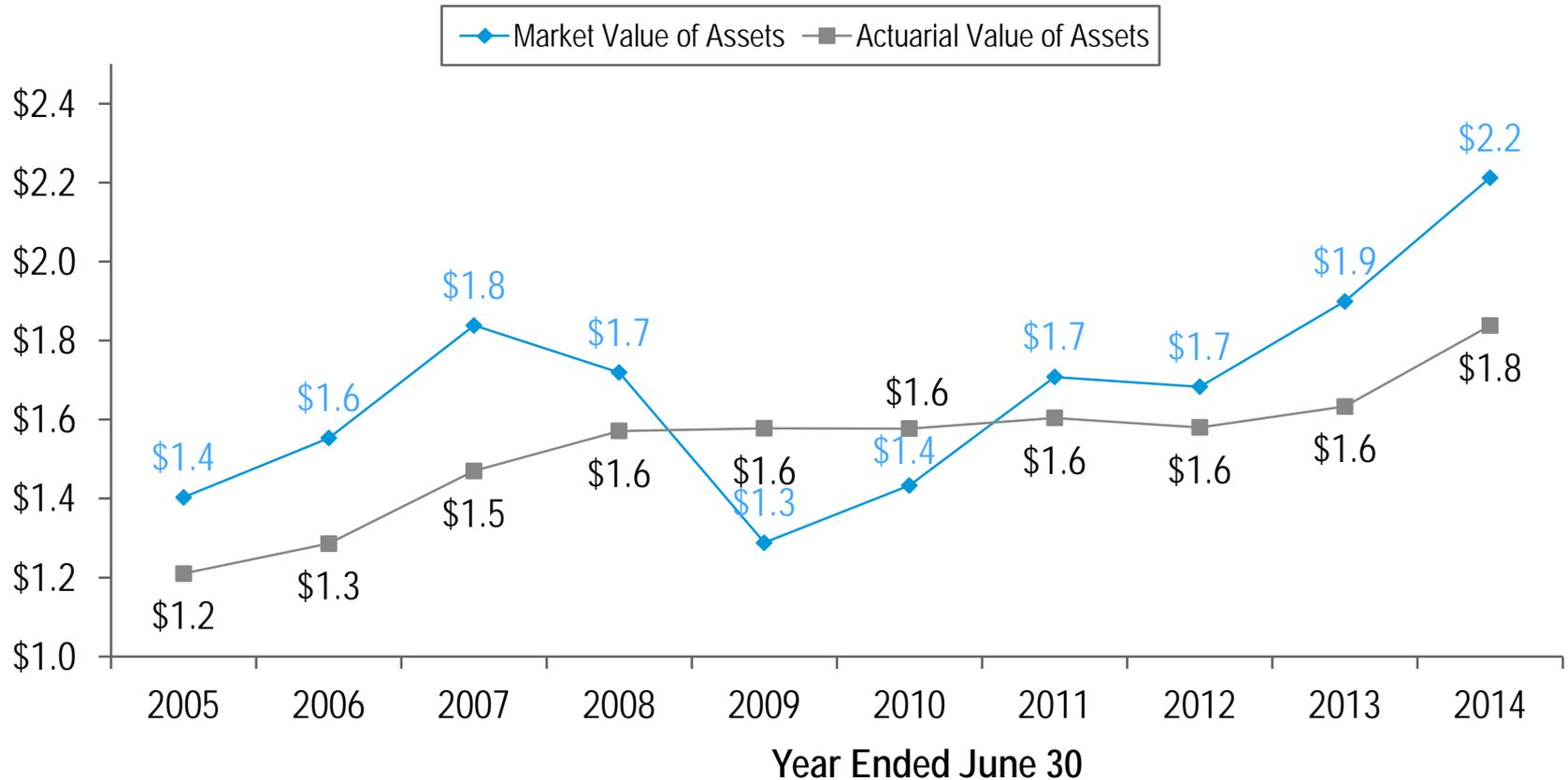
PERS

FISCAL YEAR ENDING JUNE 30, 2014

	Law Enforcement					Total PERS
	Main	Judges	National Guard	With Prior Service	Without Prior Service	
Beginning of Year	\$1,899.5	\$36.5	\$2.7	\$17.8	\$1.2	\$1,957.7
Contributions	124.5	1.9	0.2	2.0	0.9	129.5
Benefits, Refunds and Expenses	(119.1)	(1.6)	(0.2)	(1.1)	(0.1)	(122.1)
Investment Income (net)	307.0	6.0	0.4	3.0	0.2	316.6
End of Year	\$2,211.9	\$42.8	\$3.1	\$21.7	\$2.2	\$2,281.7
Rate of Return	16.14%	16.27%	16.31%	16.20%	14.15%	16.15%

Main System

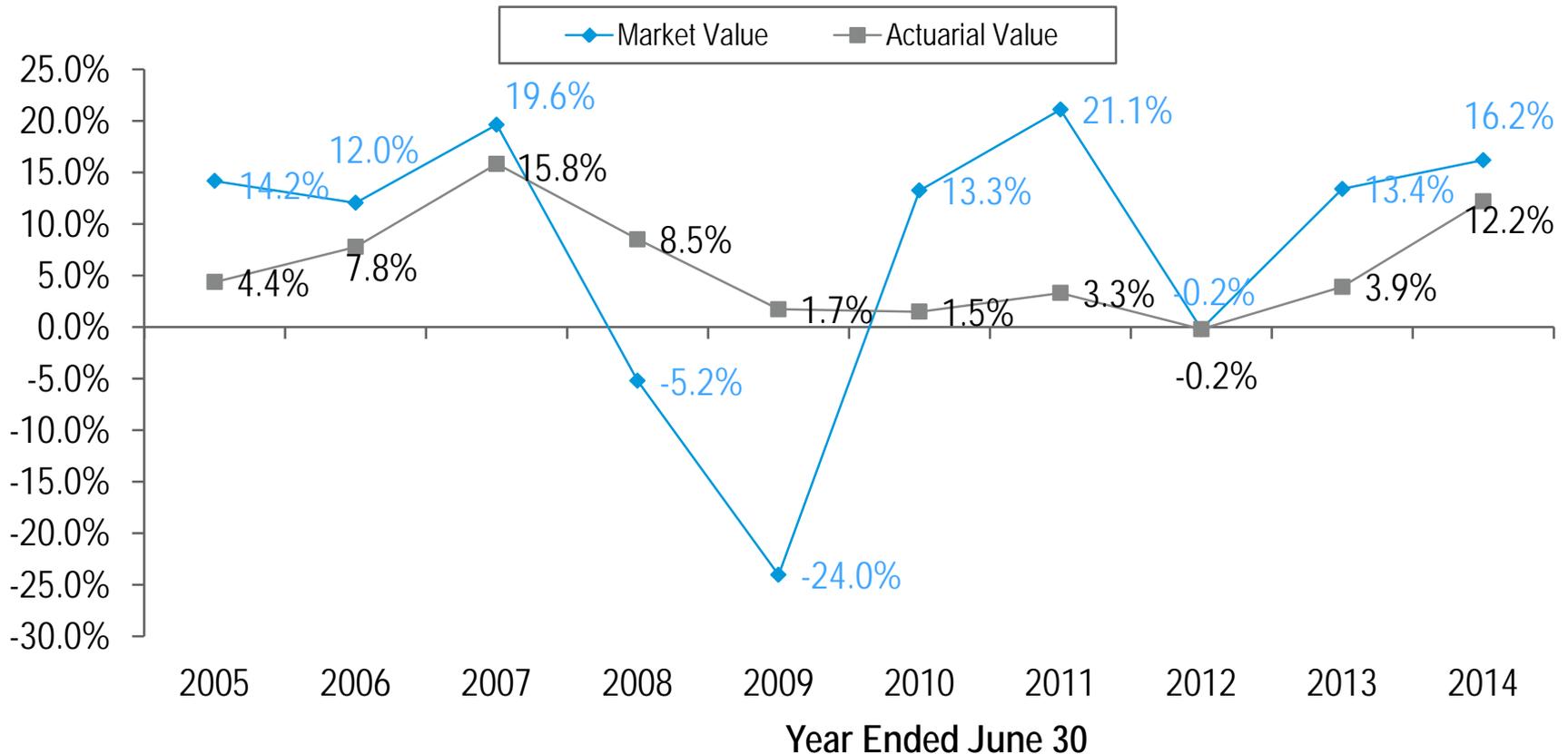
MARKET AND ACTUARIAL VALUE OF ASSETS (\$ In Billions)



In the year ended June 30, 2014, the Plan experienced a market value gain of \$154.8 million and an actuarial value investment gain of \$68.7 million.

PERS and HPRS

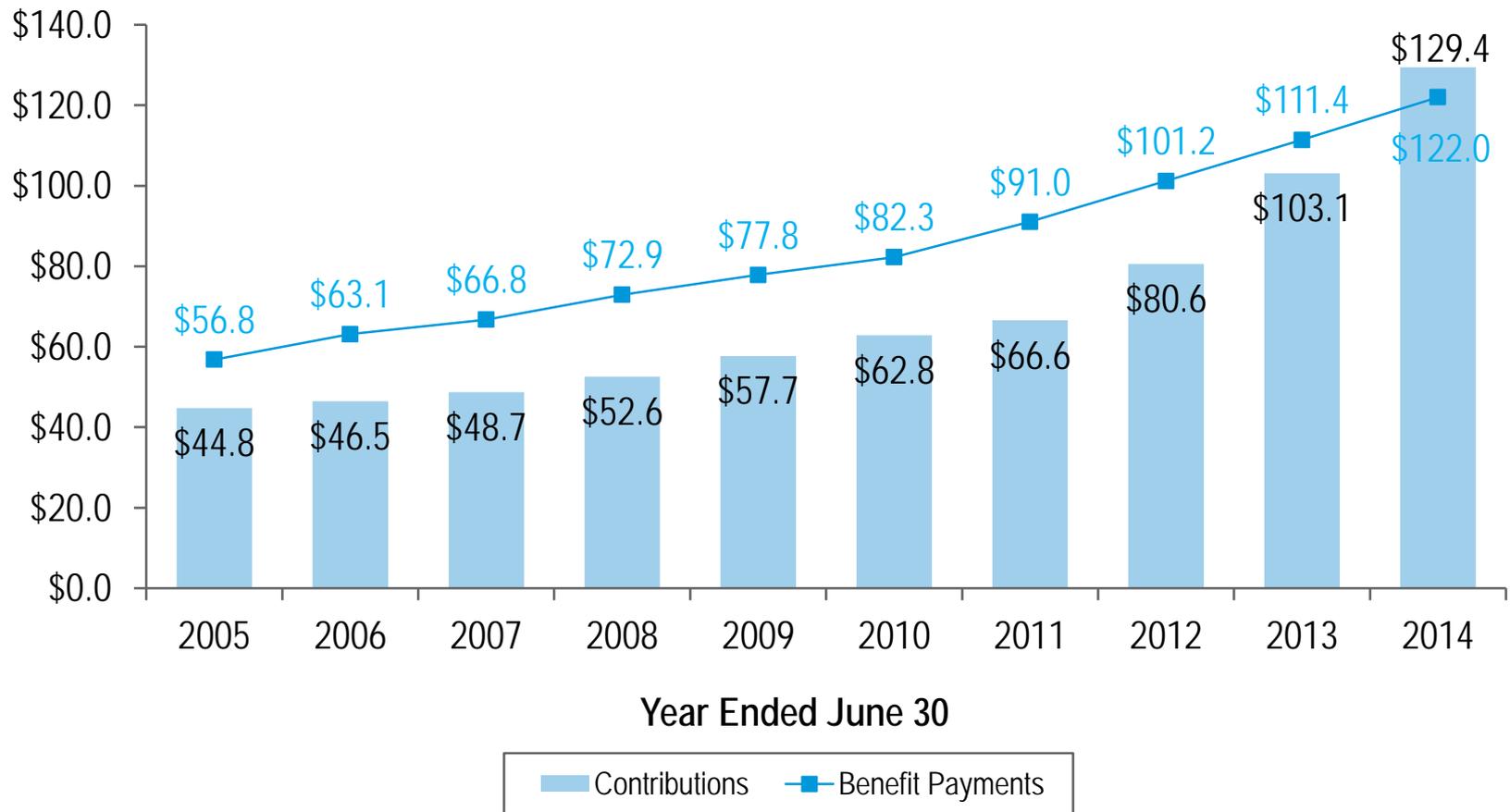
MARKET AND ACTUARIAL RATES OF RETURN



For 2014, the market value return was 16.2% and the actuarial value return was 12.2%. The assumed rate of return shown for all years was 8.0%. The average annual return over the past 10 years is 7.1% on market assets and 5.8% on actuarial assets.

PERS

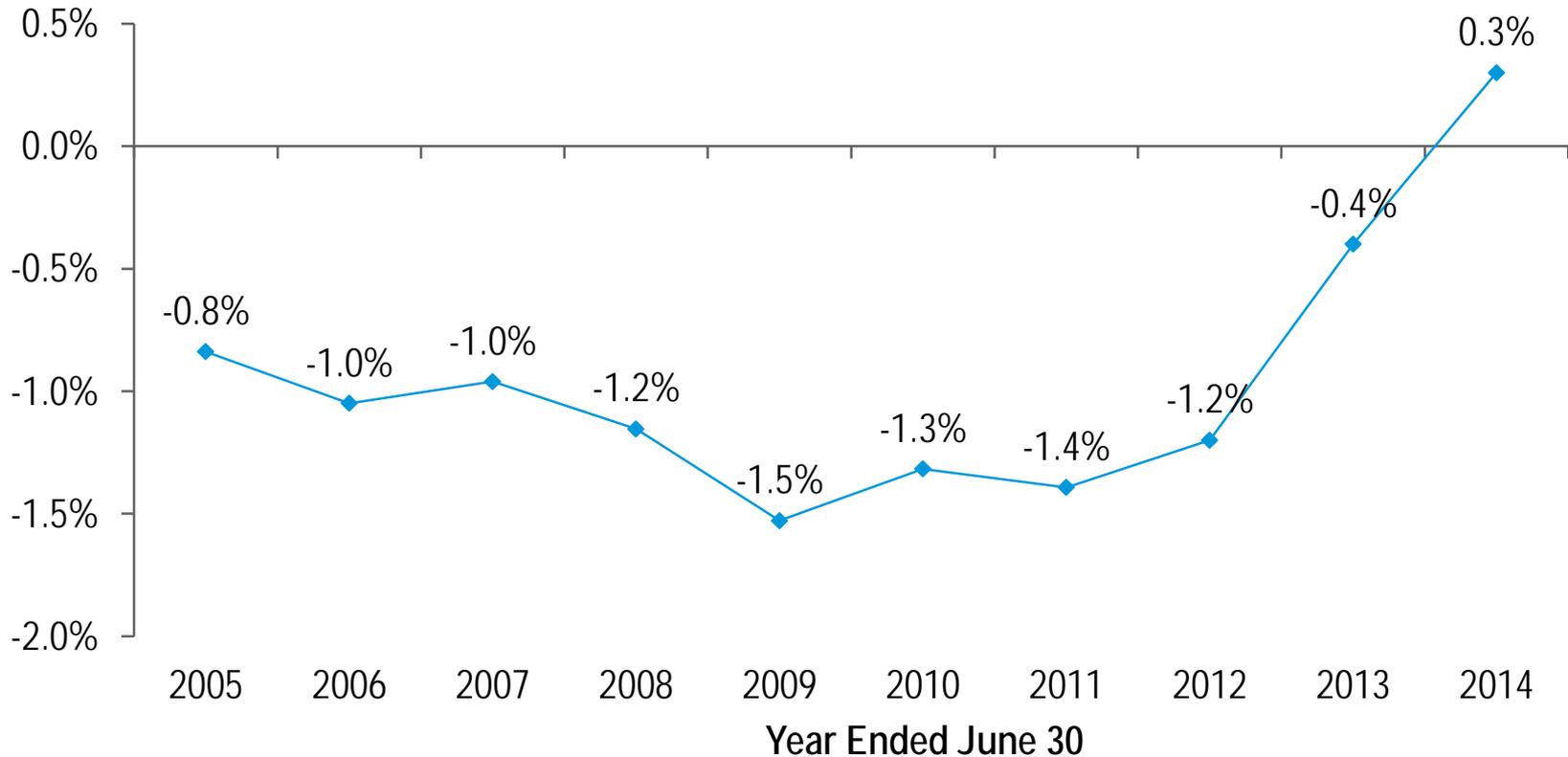
CONTRIBUTIONS VS BENEFIT PAYMENTS (\$ In Millions)



Benefit Payments have generally exceeded Contributions. However for 2014, benefit payments totaled \$122.0 million and contributions were \$129.4 million.

PERS

EXTERNAL CASH FLOW AS OF PERCENT OF MARKET VALUE



The net cash flow each year is very small, allowing the market value of assets to continue to grow.

July 1, 2014 Valuation Results (\$ in millions)

PERS

	Law Enforcement					
	Main	Judges	National Guard	With Prior Service	Without Prior Service	Total PERS
Actuarial Accrued Liability (AAL):						
• Active Members	\$1,643	\$21	\$1	\$16	\$2	\$1,683
• Inactive Members	177	<2	<1	1	<1	18
• Retirees and Beneficiaries	1,047	16	1	11	<1	1,075
Total AAL	\$2,867	\$39	\$3	\$28	\$2	\$2,939
<i>Prior year Total AAL</i>	<i>2,651</i>	<i>36</i>	<i>3</i>	<i>25</i>	<i>1</i>	<i>2,717</i>
Actuarial Assets	1,838	\$35	\$3	\$18	\$2	\$1,896
<i>Prior year Actuarial Assets</i>	<i>1,633</i>	<i>31</i>	<i>2</i>	<i>15</i>	<i>1</i>	<i>1,683</i>
Unfunded Accrued Liability (UAAL)	\$1,029	\$4	<\$1	\$10	<\$1	\$1,043
<i>Prior Year UAAL</i>	<i>1,018</i>	<i>5</i>	<i><1</i>	<i>10</i>	<i><\$1</i>	<i>1,034</i>
Funded Ratio	64.1%	90.9%	87.8%	64.4%	80.9%	64.5%
<i>Prior Year Funded Ratio</i>	<i>61.6%</i>	<i>86.7%</i>	<i>78.2%</i>	<i>60.5%</i>	<i>68.6%</i>	<i>62.0%</i>
<i>Funded Ratio on Market Value</i>	<i>77.2%</i>	<i>109.4%</i>	<i>105.7%</i>	<i>77.5%</i>	<i>97.4%</i>	<i>77.6%</i>

July 1, 2014 Actuarially Recommended Contribution PERS (Shown as a % of Payroll)

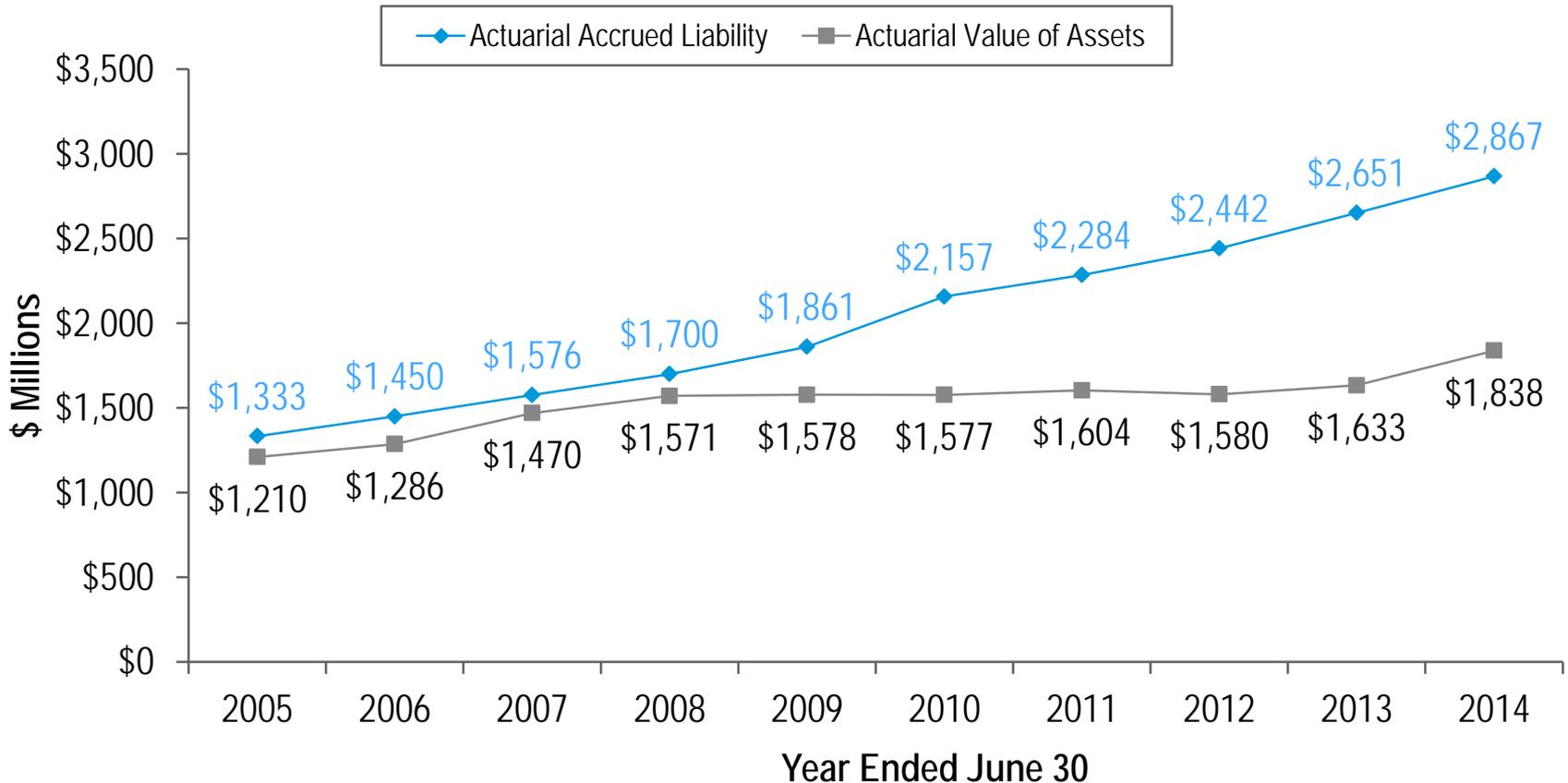
	Law Enforcement				
	Main	Judges	National Guard	With Prior Service	Without Prior Service
Normal Cost Rate	10.36%	19.00%	10.30%	10.62%	11.88%
Member Rate	7.00%	8.00%	4.50%	5.59%*	5.50%
Employer Normal Cost Rate	3.36%	11.00%	5.80%	5.03%	6.38%
<i>Prior Year Employer Normal Cost Rate</i>	3.81%	11.25%	6.24%	5.19%	6.58%
20 Year Amortization of UAAL	7.70%	3.80%	2.34%	4.50%	1.04%
<i>Prior Year Amortization of UAAL</i>	8.33%	5.41%	2.83%	5.99%	1.53%
Actuarially Recommended Contribution	11.06%	14.80%	8.14%	9.52%	7.42%
<i>Prior Year Actuarially Recommended Contribution</i>	12.14%	16.66%	9.07%	11.18%	8.11%
Employer Rate	7.12%	17.52%	7.00%	9.90%**	7.93%
Contribution Sufficiency/(Deficiency)	(3.94%)	2.72%	(1.14%)	0.38%	0.51%
<i>Prior Year Contribution Sufficiency/(Deficiency)</i>	(4.52%)	1.36%	(1.82%)	(1.07%)	0.07%
Contribution Sufficiency/(Deficiency) on Market Value	(1.18%)	10.25%	1.93%	2.02%	1.23%
<i>Prior Year Contribution Sufficiency/(Deficiency) on Market Value</i>	(2.37%)	7.00%	(0.26%)	0.42%	0.51%

* 6% for BCI, 5.50% for others

** 10.31% for BCI, 9.81% for others

Main System

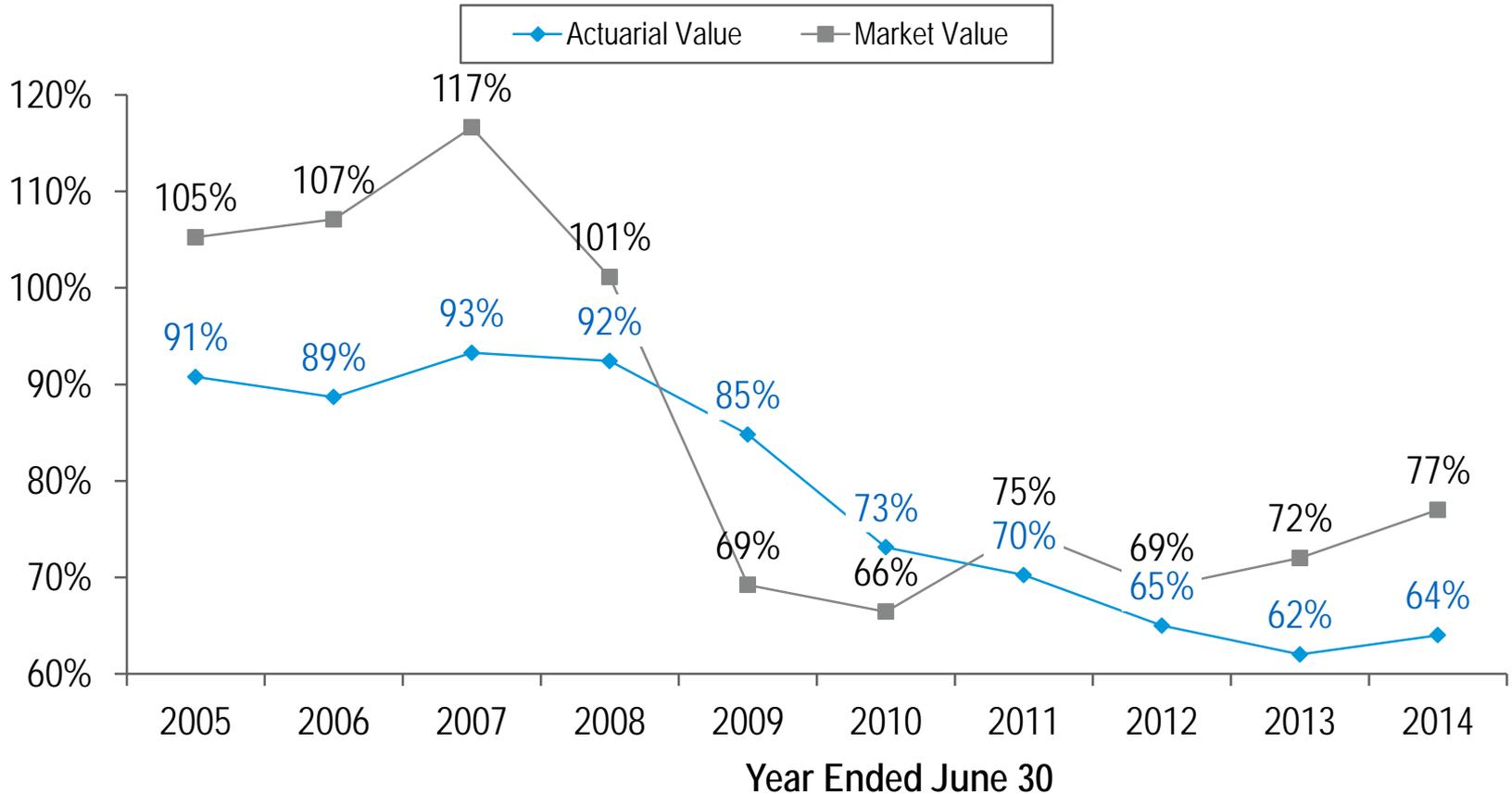
ACTUARIAL VALUE OF ASSETS AND ACTUARIAL ACCRUED LIABILITY



The Unfunded Actuarial Accrued Liability is the difference between the blue line and the grey line. The UAL is \$1.029 billion as of July 1, 2014.

Main System

FUNDED RATIOS



Due to the investment gain in 2014, the ratio based on both actuarial value and market value of assets has increased.

Membership

Highway Patrol

	2014	2013	Change
Actives			
• Number	156	149	4.7%
• Payroll	\$10.1 million	\$9.3 million	8.6%
• Average Age	37.3 years	37.3 years	0.0 years
• Average Service	11.2 years	10.8 years	0.4 years
Retirees and Beneficiaries			
• Number	117	116	0.9%
• Total Annual Benefits	\$3.8 million	\$3.7 million	2.7%
• Average Monthly Benefit	\$2,723	\$2,694	1.1%

Assets

Highway Patrol

- The market value of assets increased from \$57.0 million as of June 30, 2013 to \$65.7 million as of June 30, 2014
 - Segal determined the investment return was 16.3%, net of investment expenses
- The actuarial value of assets—which smoothes investment gains and losses over five years—increased from \$49.0 million as of June 30, 2013 to \$54.6 million as of June 30, 2014
 - Investment return of 12.6%, net of investment expenses
 - Actuarial value is 83.1% of market
 - There is a total of \$11.1 million of deferred investment gains that will be recognized in future years
- The average annual return on market assets for PERS and HPRS over the past 10 years is 7.1%
- The average annual return on actuarial assets for PERS and HPRS over the past 10 years is 5.8%

Valuation Results (\$ in millions)

Highway Patrol

	July 1, 2014	July 1, 2013
Actuarial Accrued Liability:		
• Active Members	\$33.551	\$31.412
• Inactive Members	3.577	2.500
• Retirees and Beneficiaries	38.336	37.980
Total	\$75.464	\$71.892
Actuarial Assets	54.563	49.039
Unfunded Accrued Liability	\$20.901	\$22.853
Funded Ratio	72.3%	68.2%
Funded Ratio on Market Value	87.0%	79.3%

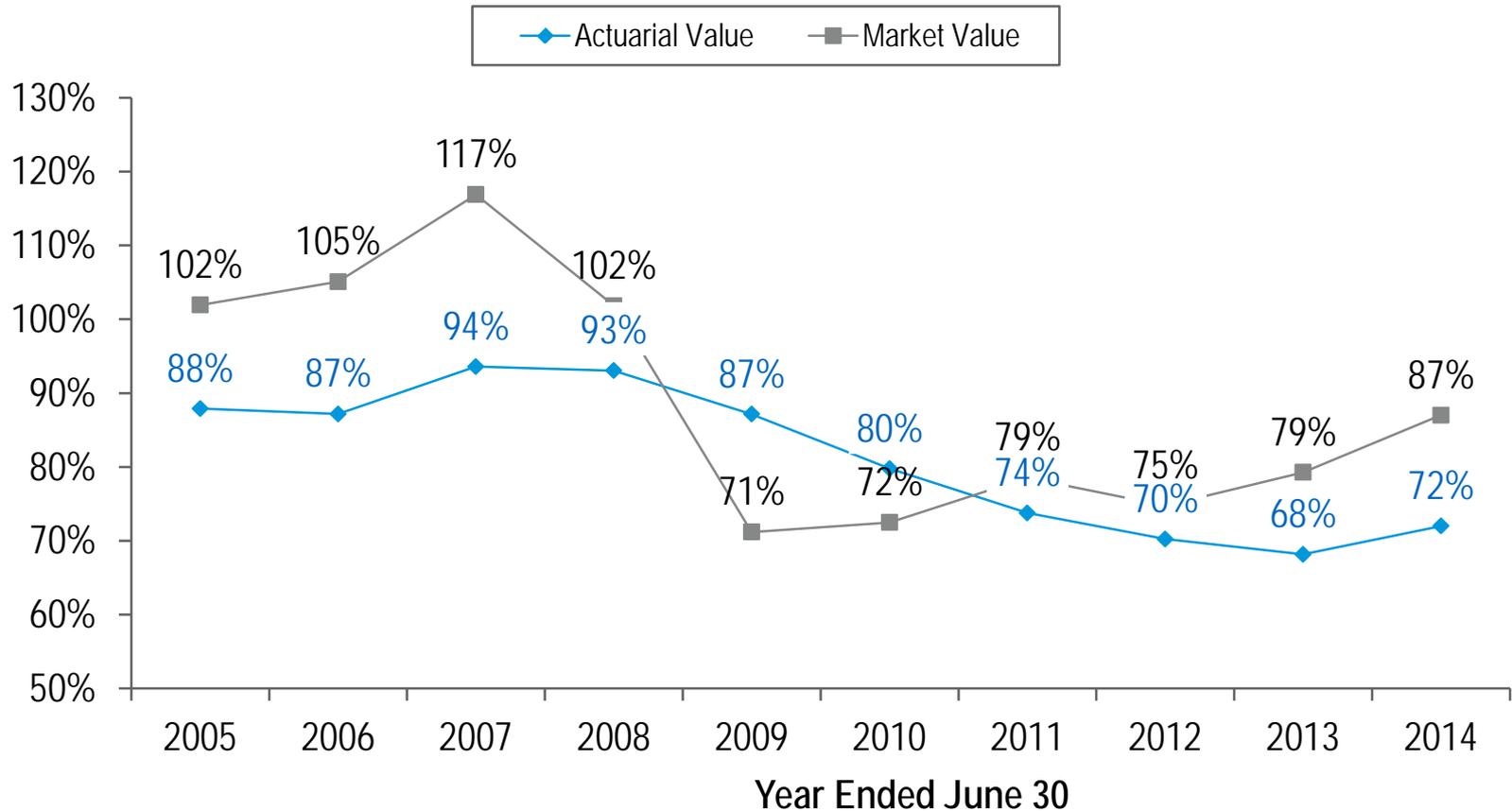
Actuarially Recommended Contribution

Highway Patrol

	July 1, 2014	July 1, 2013
Normal Cost Rate	20.44%	20.66%
Member Rate	13.30%	12.80%
Employer Normal Cost Rate	7.14%	7.86%
20-Year Amortization of UAAL	14.56%	17.25%
Actuarially Recommended Contribution	21.70%	25.11%
Employer Rate	19.70%	18.70% –19.70%
Contribution Sufficiency/(Deficiency)	(2.00%)	(4.91%)
Contribution Sufficiency/(Deficiency) on Market Value	5.64%	1.06%

Highway Patrolmen's Retirement System

FUNDED RATIOS



Due to the investment gain in 2014, the ratio based on both actuarial value and market value of assets has increased.

Membership

Job Service

	2014	2013	Change
Actives			
• Number	13	15	-13.3%
• Projected payroll	\$0.8 million	\$0.8 million	0.0%
• Average Age	60.4 years	59.3 years	1.1 years
• Average Service	37.6 years	36.5 years	1.1 years
Retirees and Beneficiaries			
Non-Travelers			
• Number	140	137	2.2%
• Total Monthly Benefits	\$330,262	\$313,664	5.3%
• Average Monthly Benefit	\$2,359	\$2,290	3.0%
Travelers			
• Number	73	76	-3.9%
• Total Monthly Benefits	\$55,227	\$53,983	2.3%
• Average Monthly Benefit	\$757	\$710	6.6%

Assets

Job Service

- The market value of assets increased from \$90.4 million as of June 30, 2013 to \$97.7 million as of June 30, 2014
 - Segal determined the investment return was 13.5%, net of investment expenses

- The actuarial value of assets—which smoothes investment gains and losses over five years—increased from \$76.3 million as of June 30, 2013 to \$78.2 million as of June 30, 2014
 - Investment return of 8.7%, net of investment expenses
 - Actuarial value is 80.0% of market value
 - There is a total of \$19.5 million of deferred investment gains that will be recognized in future years

Valuation Results (\$ in millions)

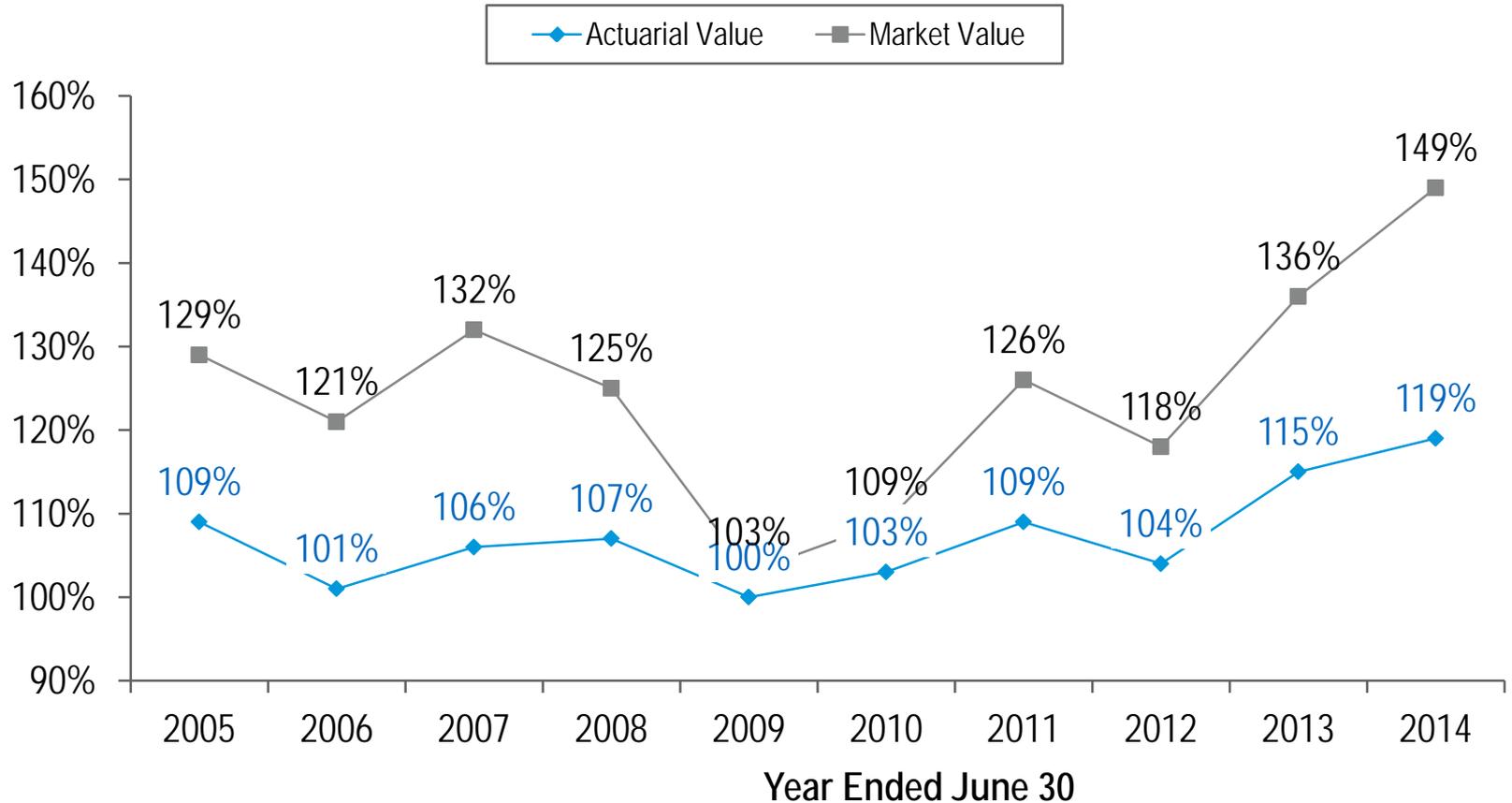
Job Service

	July 1, 2014	July 1, 2013
Present Value of Benefits:		
• Active Members	\$7.629	\$7.858
• Inactive Members	0.011	1.915
• Retirees and Beneficiaries	57.839	56.672
Total	\$65.479	\$66.445
Actuarial Assets	78.157	76.325
Unfunded/(Overfunded) Accrued Liability	\$(12.678)	\$(9.880)
Funded Ratio*	119.4%	114.9%
Funded Ratio on Market Value	149.2%	136.0%

*No contributions are scheduled as long as the funded ratio exceeds 100%.

Job Service Employees Retirement Plan

FUNDED RATIOS



The Funded Ratios are Based on Present Value of Benefits.

Membership

Retiree Health Insurance Credit Fund

	2014	2013	Change
Actives			
• Number	22,642*	21,955	3.1%
• Payroll	\$1,001.2 million	\$914.4 million	9.5%
• Average Age	46.6 years	46.9 years	-0.3 years
• Average Service	10.1 years	10.3 years	-0.2 years
Retirees and Beneficiaries			
• Number	4,829**	4,635	4.2%
• Total Monthly Benefits	\$0.6 million	\$0.6 million	0.0%
• Average Monthly Benefit	\$119	\$119	0.0%

* Includes 224 Defined Contribution Plan Participants.

** Includes 8 Defined Contribution Plan Participants.

Assets

Retiree Health Insurance Credit Fund

- The market value of assets increased from \$75.6 million as of June 30, 2013 to \$92.0 million as of June 30, 2014
 - Segal determined the investment return was 15.9%, net of investment expenses

- The actuarial value of assets—which smoothes investment gains and losses over five years—increased from \$66.0 million as of June 30, 2013 to \$77.9 million as of June 30, 2014
 - Investment return of 11.6%, net of investment expenses
 - Actuarial value is 84.7% of market
 - There is a total of \$14.1 million of deferred investment gains that will be recognized in future years

Valuation Results (\$ in millions)

Retiree Health Insurance Credit Fund

	July 1, 2014	July 1, 2013
Actuarial Accrued Liability:		
• Active Members	\$57.317	\$57.098
• Retirees and Beneficiaries	59.316	56.955
Total	\$116.633	\$114.053
Actuarial Assets	77.925	65.972
Unfunded Accrued Liability	\$38.708	\$48.081
Funded Ratio	66.8%	57.8%
Funded Ratio on Market Value	78.9%	66.2%

Actuarially Recommended Contribution

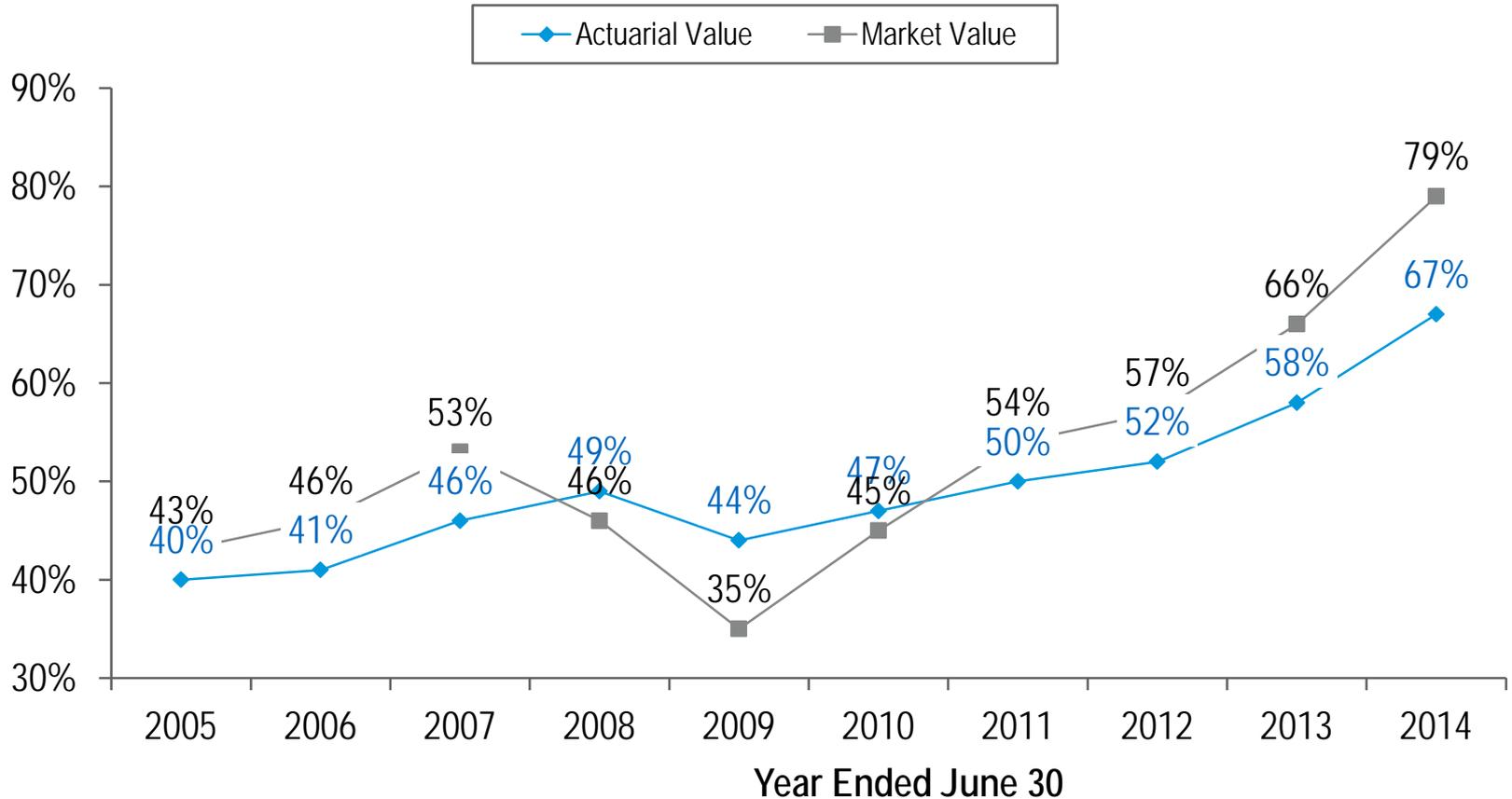
Retiree Health Insurance Credit Fund

	July 1, 2014	July 1, 2013
Normal Cost Rate	0.32%	0.35%
16-Year Amortization of UAAL*	0.32%	0.42%
Actuarially Recommended Contribution	0.64%	0.77%
Employer Rate	1.14%	1.14%
Contribution Sufficiency/(Deficiency)	0.50%	0.37%
Contribution Sufficiency/(Deficiency) on Market Value	0.61%	0.46%

* The amortization period is scheduled to end June 30, 2030

Retiree Health Insurance Credit Fund

FUNDED RATIOS



Due to the investment gain in 2014, the ratio based on both actuarial value and market value of assets has increased.

Valuation Results

Comments

- Potential risks to the system:
 - Investment Risk
 - Longevity Risk
 - Demographic Risk
 - Other Risks
- Board should consider projections, studies, etc., to help quantify these risks, and make changes to the system, if appropriate (Actuarial Standards Board Risk ASOP)
- The asset valuation and amortization methods should be reviewed to make sure that they are in line with the Board's funding objectives
- Contributions are being made in accordance with the funding policy but the Plans remain unfunded. A change in the policy could accelerate an improvement of the funded ratios.

Projections

➤ Projections of estimated funded ratios for 30 years:

- Investment return scenarios ranging from -16% to +16% for 2014/2015, and 8% thereafter
- Investment returns of level 7% and 9% (for all years)
- 10% of new entrants will elect Defined Contribution Plan participation during the 4-year election period.
- Benefit payments for the Main System are projected to grow annually by 8% for 10 years, then 6% for 10 years, then 4%. Benefit payment for other groups are also projected to grow each year.

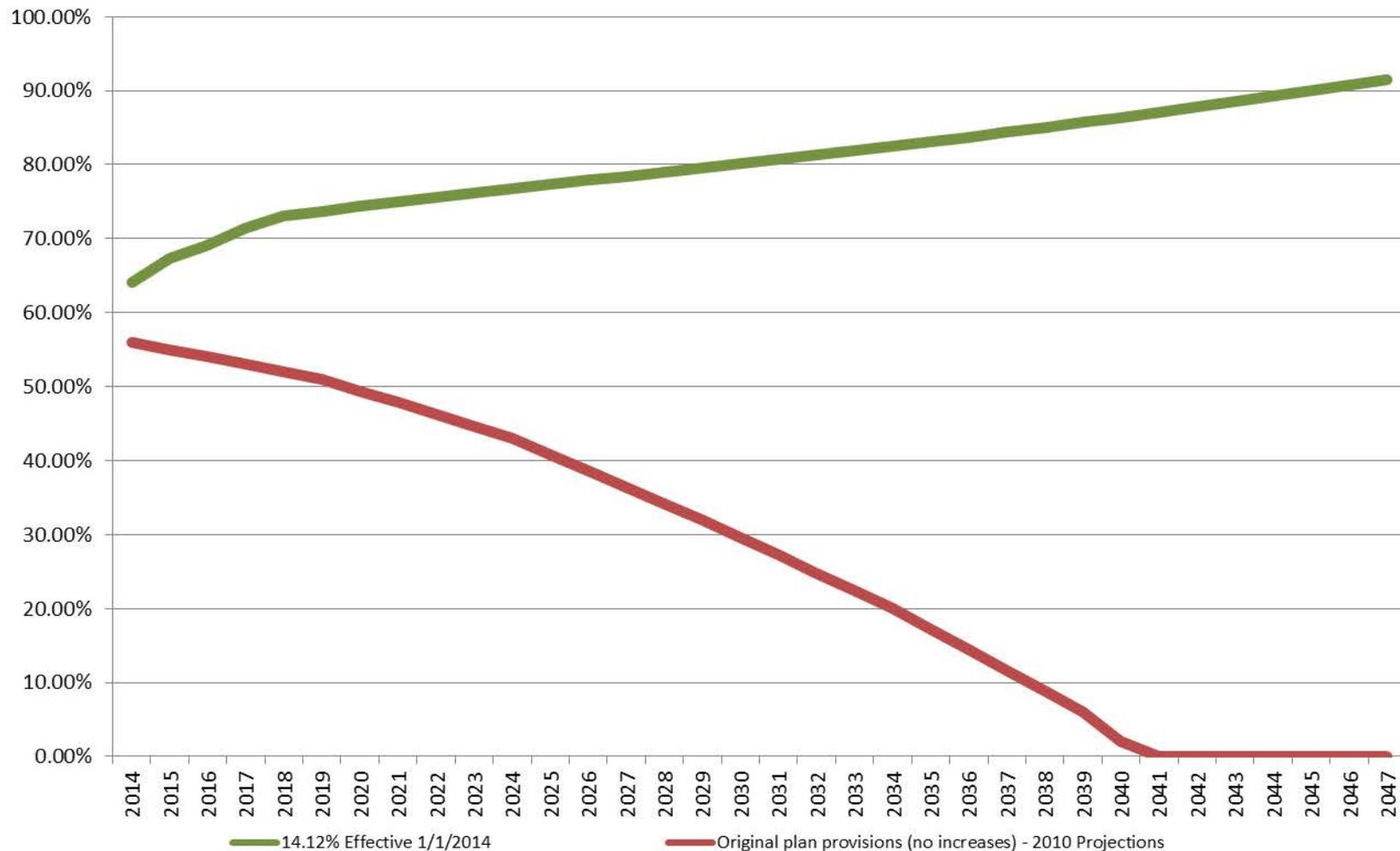
➤ Target Funded Ratios:

- Investment return scenarios ranging from -16% to +16% for 2014/2015
- Assume Fund earns indicated return thereafter

Projections, by their nature, are not a guarantee of future results. The modeling projections are intended to serve as illustrations of future financial outcomes that are based on the information available to us at the time the modeling is undertaken and completed, and the agreed-upon assumptions and methodologies described herein. Emerging results may differ significantly if the actual experience proves to be different from these assumptions or if alternative methodologies are used. Actual experience may differ due to such variables as demographic experience, the economy, stock market performance and the regulatory environment.

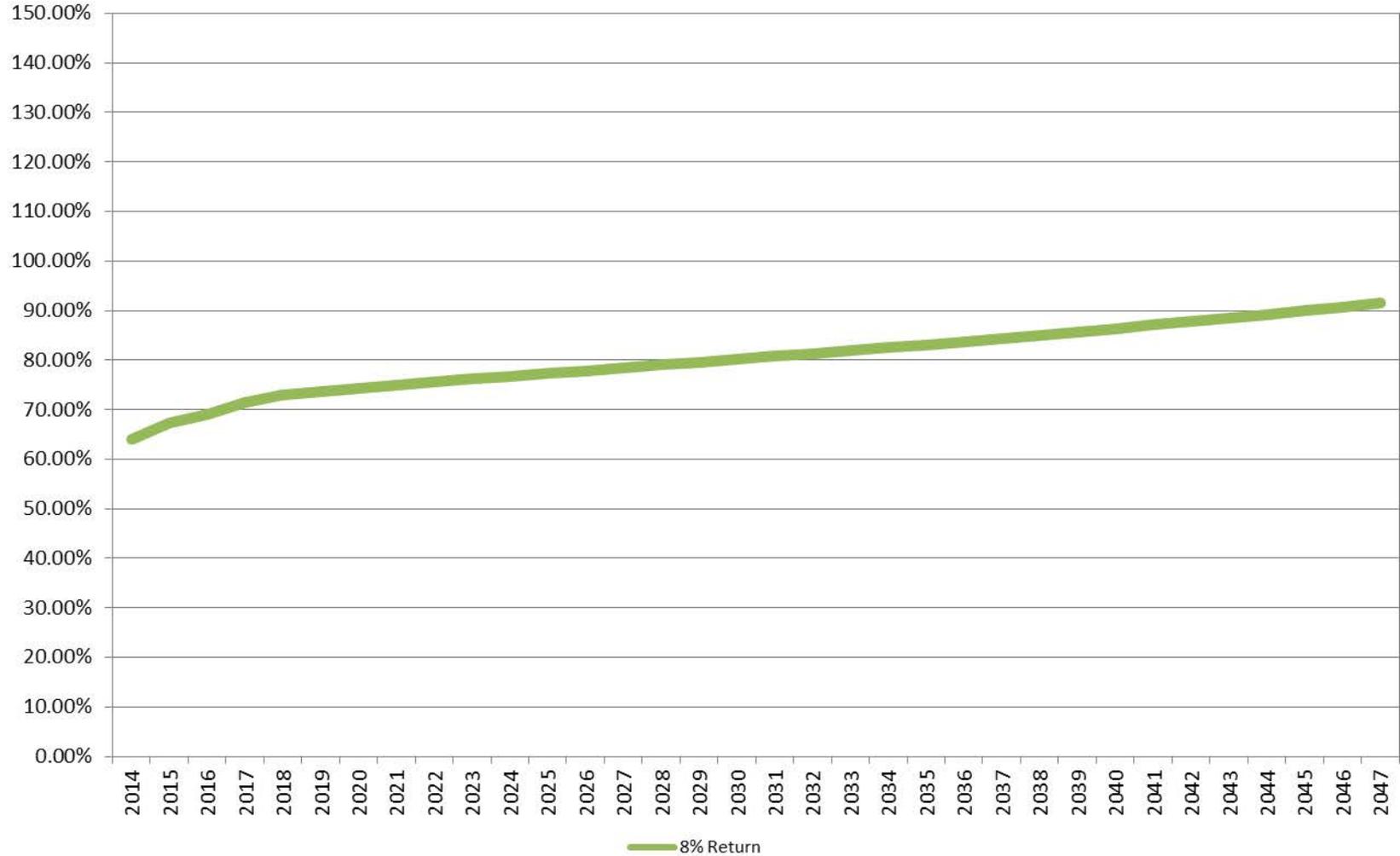
Projected Funded Ratios (AVA Basis)

Main System—Current Plan vs. Original Plan (2010 Projection)



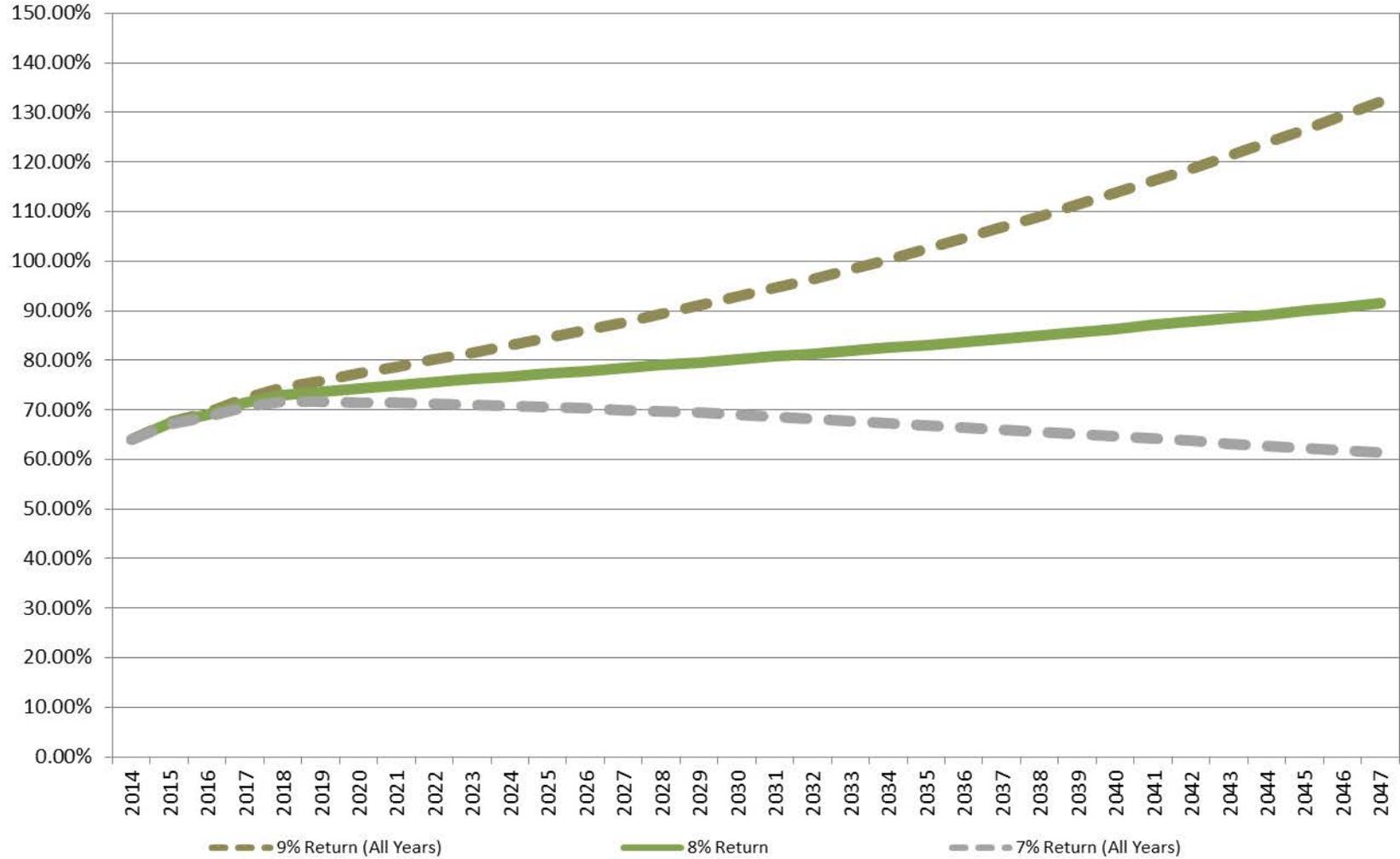
Projected Funded Ratios (AVA Basis)

Main System



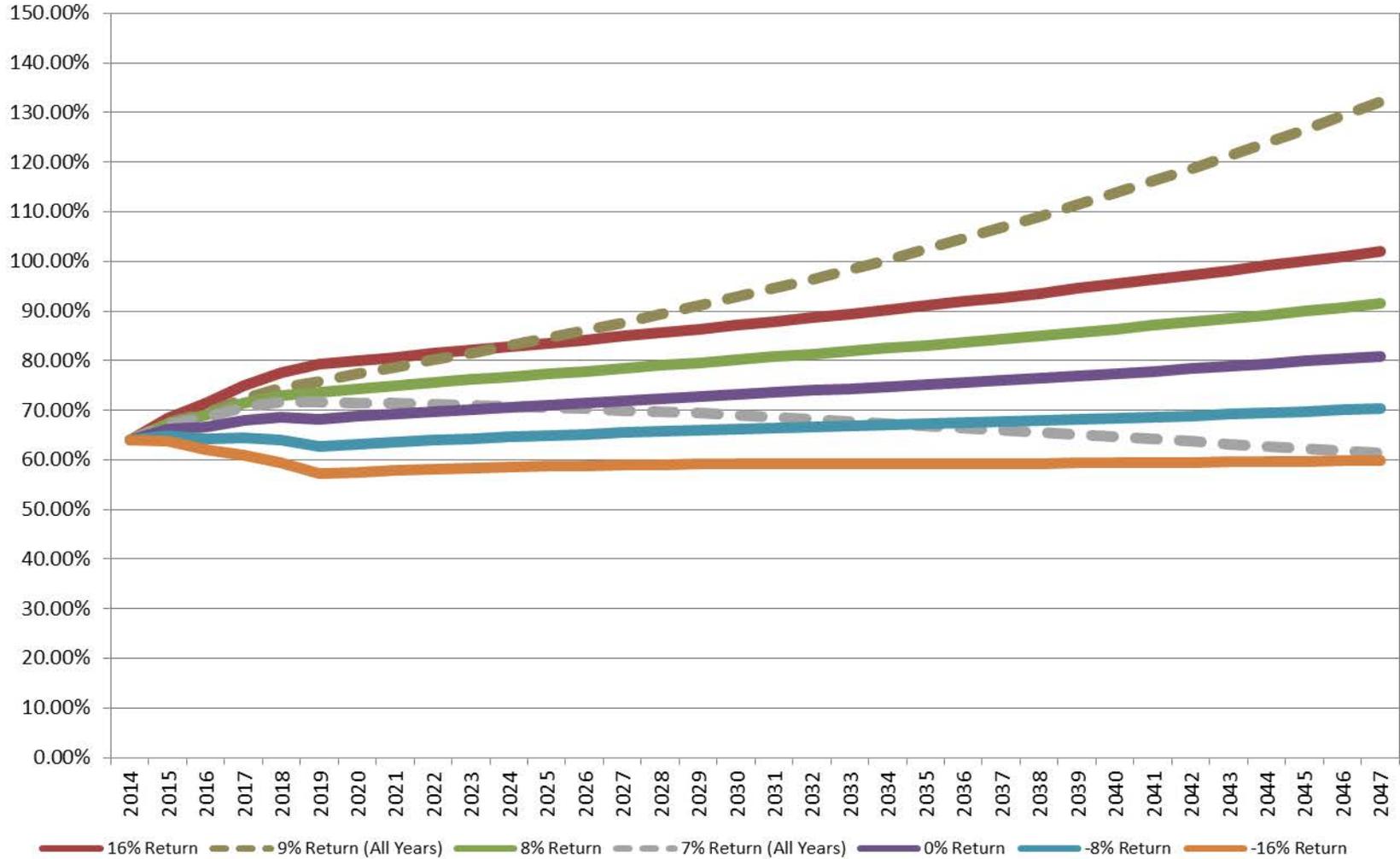
Projected Funded Ratios (AVA Basis)

Main System



Projected Funded Ratios (AVA Basis)

Main System



Target Funded Ratios

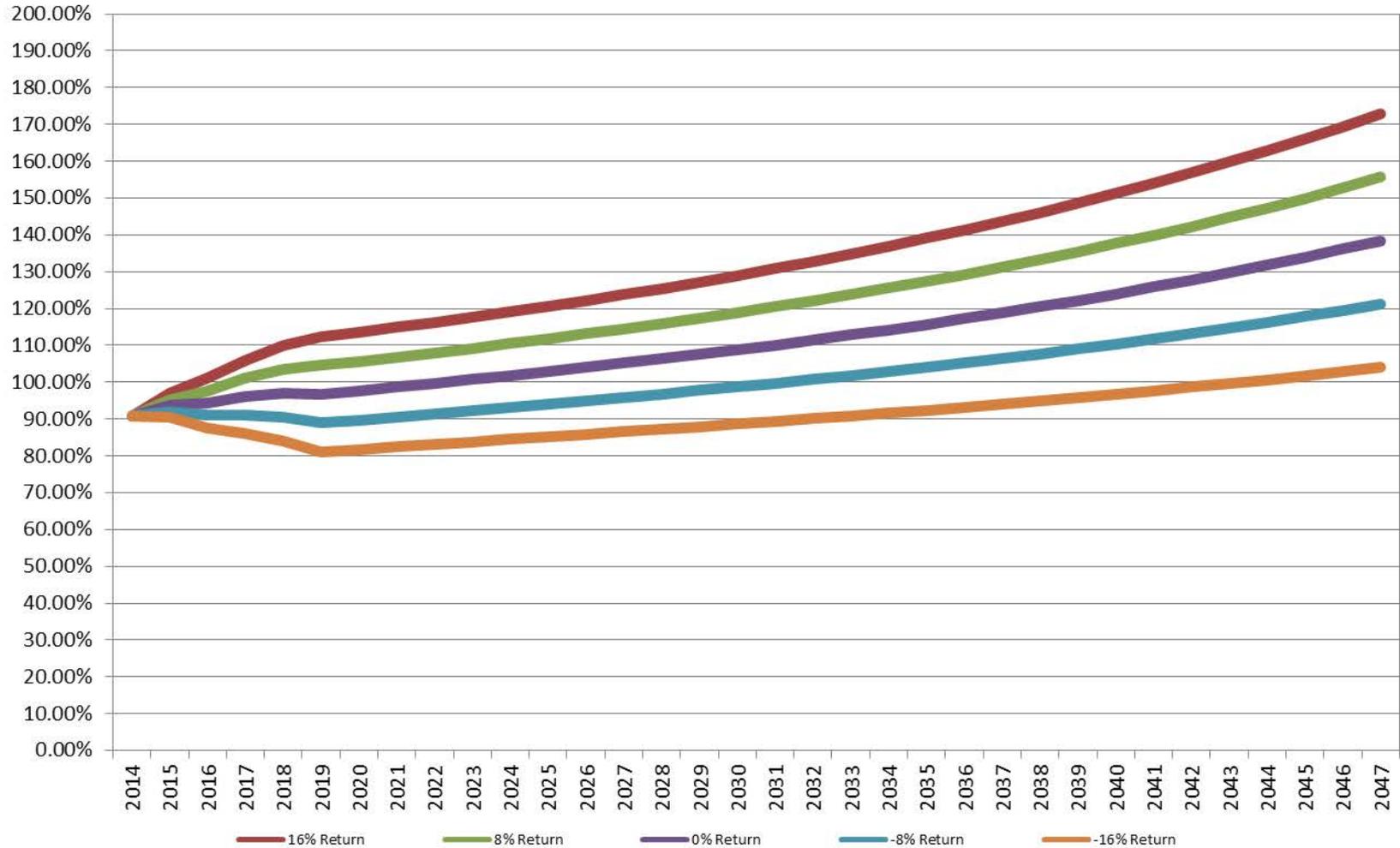
Main System

**RATE OF RETURN REQUIRED FOR ALL YEARS
BEGINNING ON AND AFTER 2015/2016 TO ACHIEVE TARGET IN 2034**

	Assumed 2014/2015 Return				
Target Funded Ratio	16.0%	8.0%	0.0%	-8.0%	-16.0%
70%	6.7%	7.1%	7.7%	8.2%	8.9%
80%	7.4%	7.8%	8.4%	8.9%	9.6%
90%	8.0%	8.5%	9.0%	9.6%	10.2%
100%	8.6%	9.1%	9.6%	10.1%	10.8%

Projected Funded Ratios (AVA Basis)

Judges



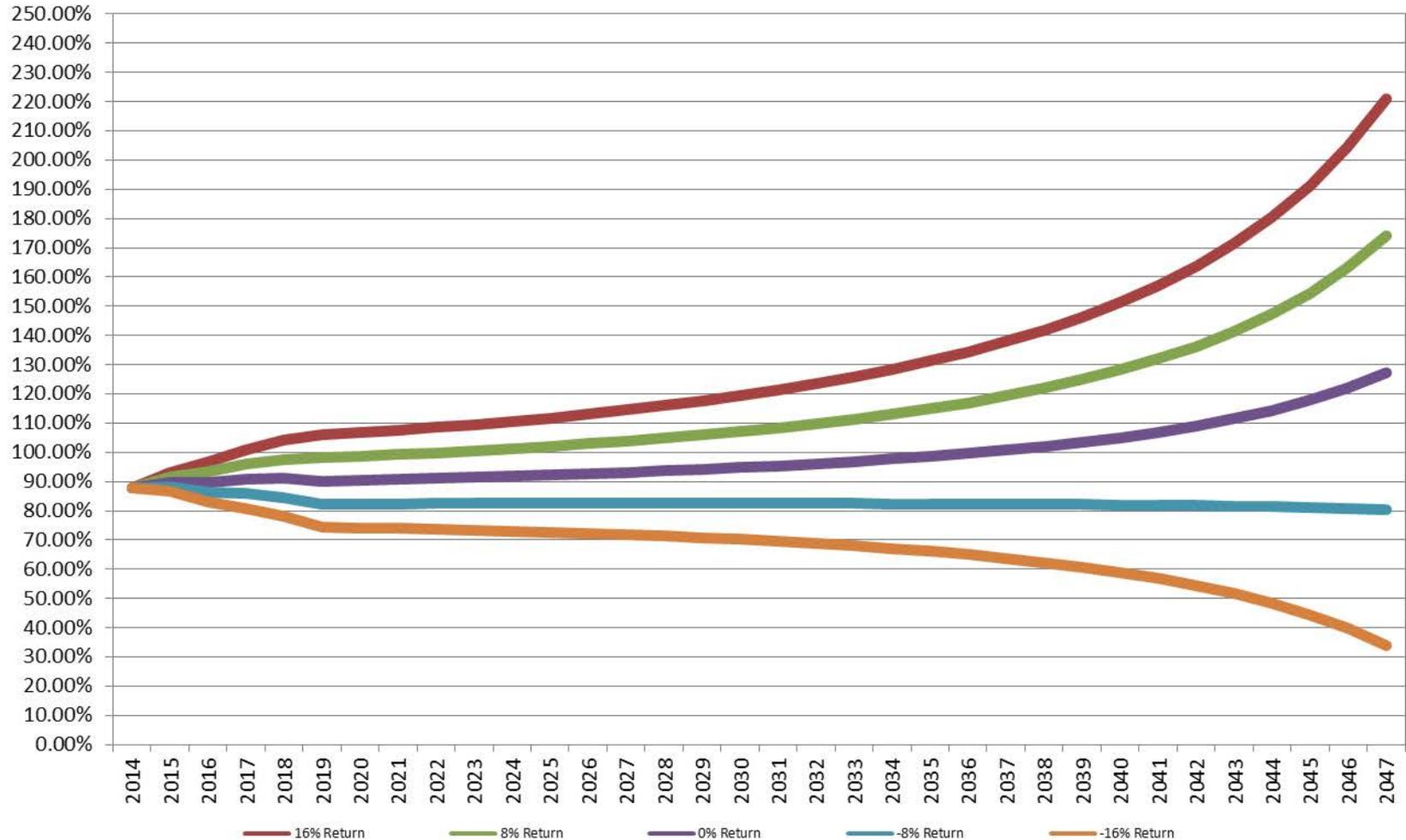
Target Funded Ratios

Judges

RATE OF RETURN REQUIRED FOR ALL YEARS BEGINNING ON AND AFTER 2015/2016 TO ACHIEVE TARGET IN 2034

Target Funded Ratio	Assumed 2014/2015 Return				
	16.0%	8.0%	0.0%	-8.0%	-16.0%
70%	4.5%	4.9%	5.5%	6.0%	6.6%
80%	5.1%	5.6%	6.1%	6.7%	7.3%
90%	5.7%	6.2%	6.7%	7.3%	7.9%
100%	6.3%	6.8%	7.3%	7.9%	8.5%

Projected Funded Ratios (AVA Basis) National Guard



Target Funded Ratios

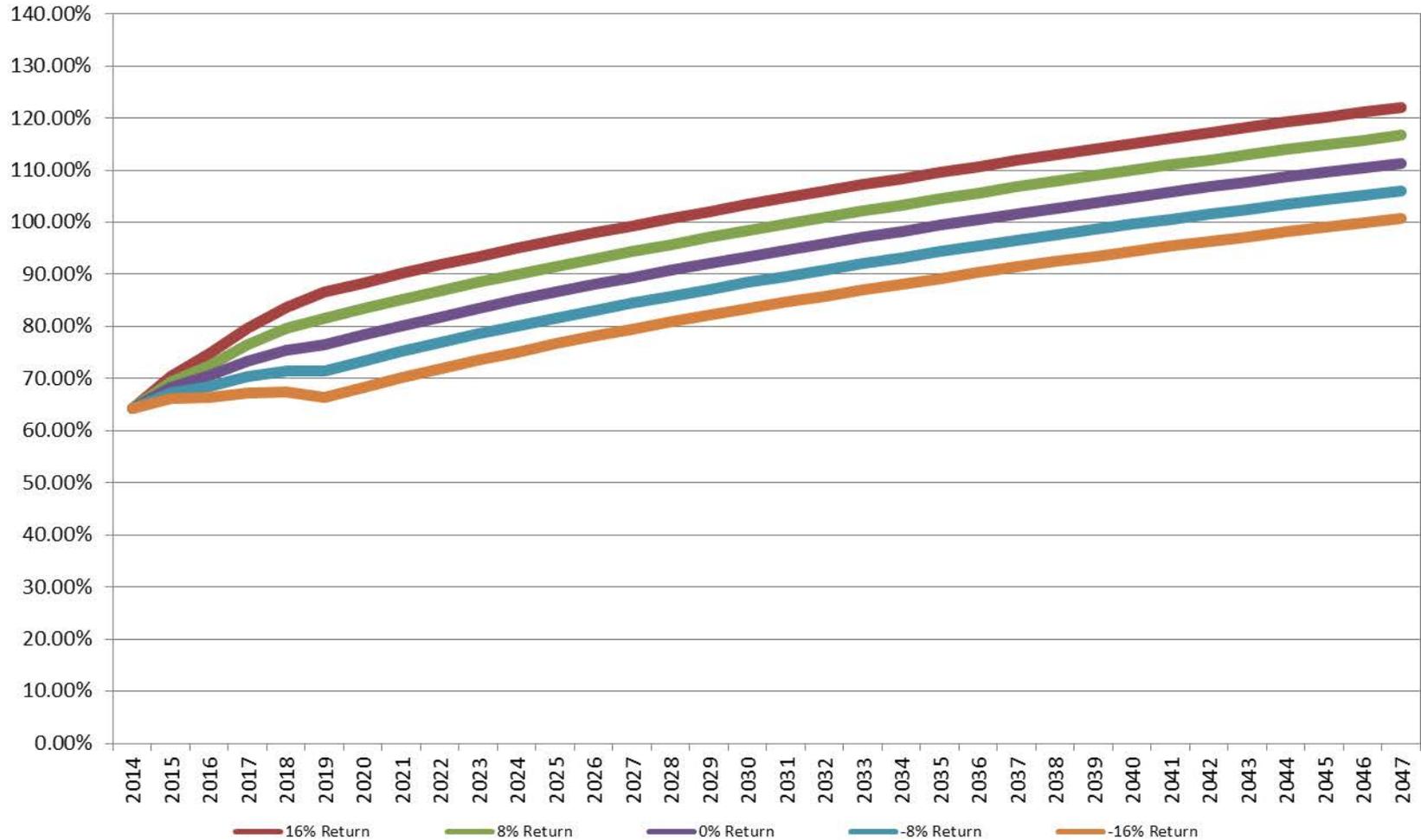
National Guard

**RATE OF RETURN REQUIRED FOR ALL YEARS
BEGINNING ON AND AFTER 2015/2016 TO ACHIEVE TARGET IN 2034**

Target Funded Ratio	Assumed 2014/2015 Return				
	16.0%	8.0%	0.0%	-8.0%	-16.0%
70%	5.6%	6.1%	6.7%	7.4%	8.2%
80%	6.1%	6.6%	7.2%	7.9%	8.6%
90%	6.5%	7.1%	7.7%	8.4%	9.1%
100%	6.9%	7.5%	8.1%	8.8%	9.5%

Projected Funded Ratios (AVA Basis)

Law Enforcement with Prior Main System Service



Target Funded Ratios

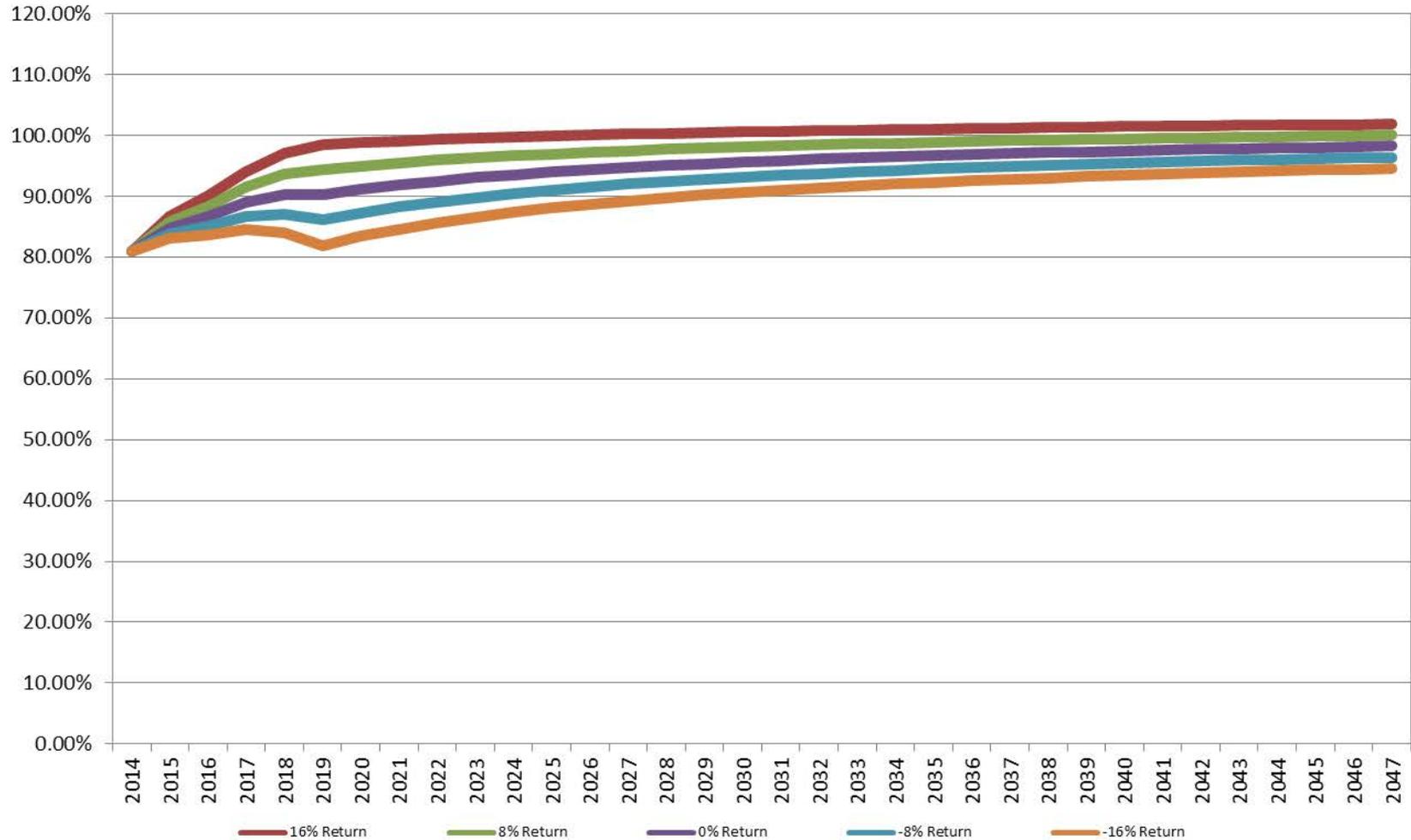
Law Enforcement with Prior Main System Service

**RATE OF RETURN REQUIRED FOR ALL YEARS
BEGINNING ON AND AFTER 2015/2016 TO ACHIEVE TARGET IN 2034**

Target Funded Ratio	Assumed 2014/2015 Return				
	16.0%	8.0%	0.0%	-8.0%	-16.0%
70%	4.8%	5.1%	5.5%	5.9%	6.3%
80%	5.8%	6.1%	6.5%	6.9%	7.3%
90%	6.6%	7.0%	7.4%	7.7%	8.2%
100%	7.4%	7.8%	8.1%	8.5%	9.0%

Projected Funded Ratios (AVA Basis)

Law Enforcement without Prior Main System Service



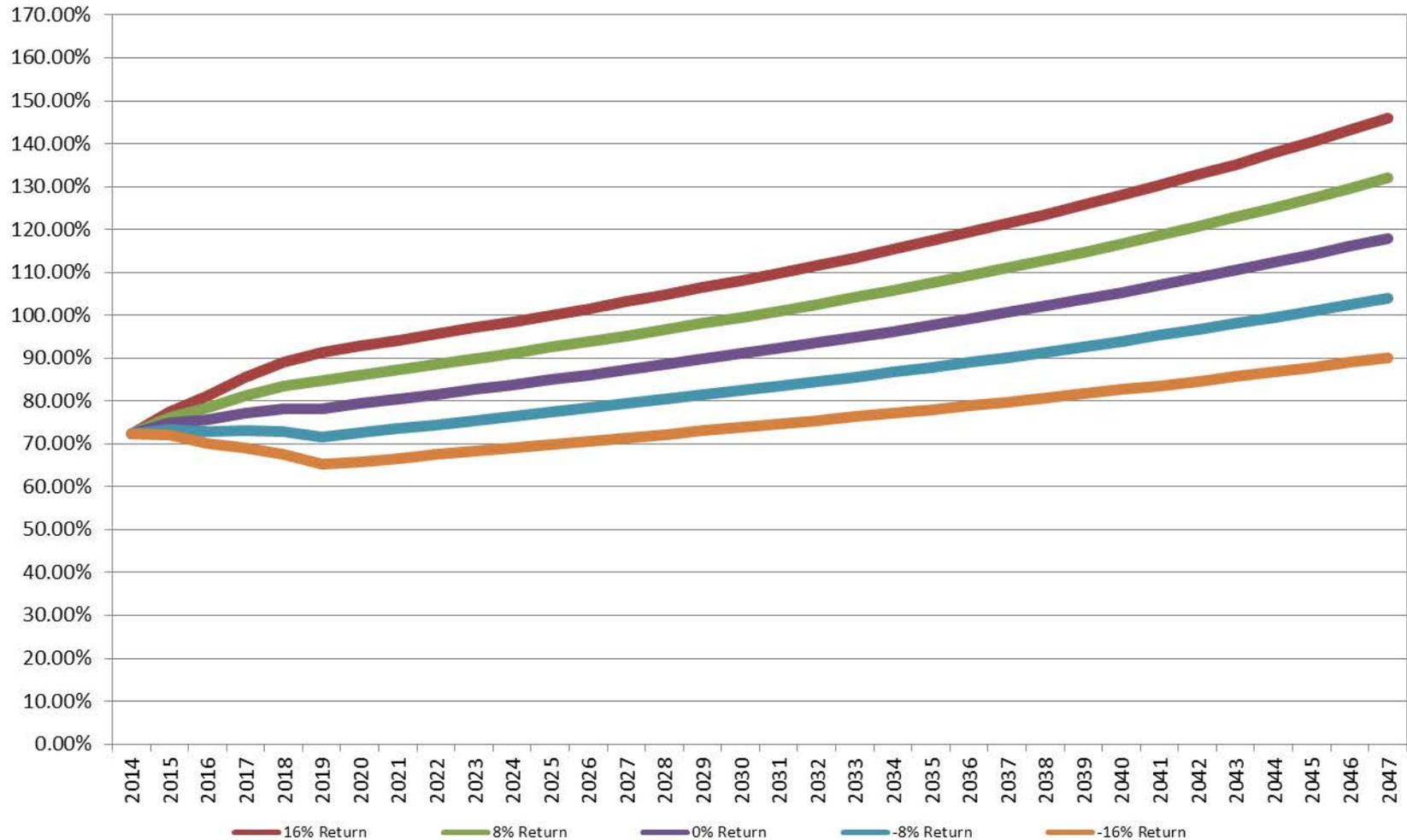
Target Funded Ratios

Law Enforcement without Prior Main System Service

**RATE OF RETURN REQUIRED FOR ALL YEARS
BEGINNING ON AND AFTER 2015/2016 TO ACHIEVE TARGET IN 2034**

Target Funded Ratio	Assumed 2014/2015 Return				
	16.0%	8.0%	0.0%	-8.0%	-16.0%
70%	4.5%	4.7%	4.8%	5.0%	5.3%
80%	5.8%	6.0%	6.2%	6.4%	6.6%
90%	6.9%	7.1%	7.3%	7.6%	7.8%
100%	7.9%	8.1%	8.3%	8.6%	8.8%

Projected Funded Ratios (AVA Basis) *Highway Patrol*



Target Funded Ratios

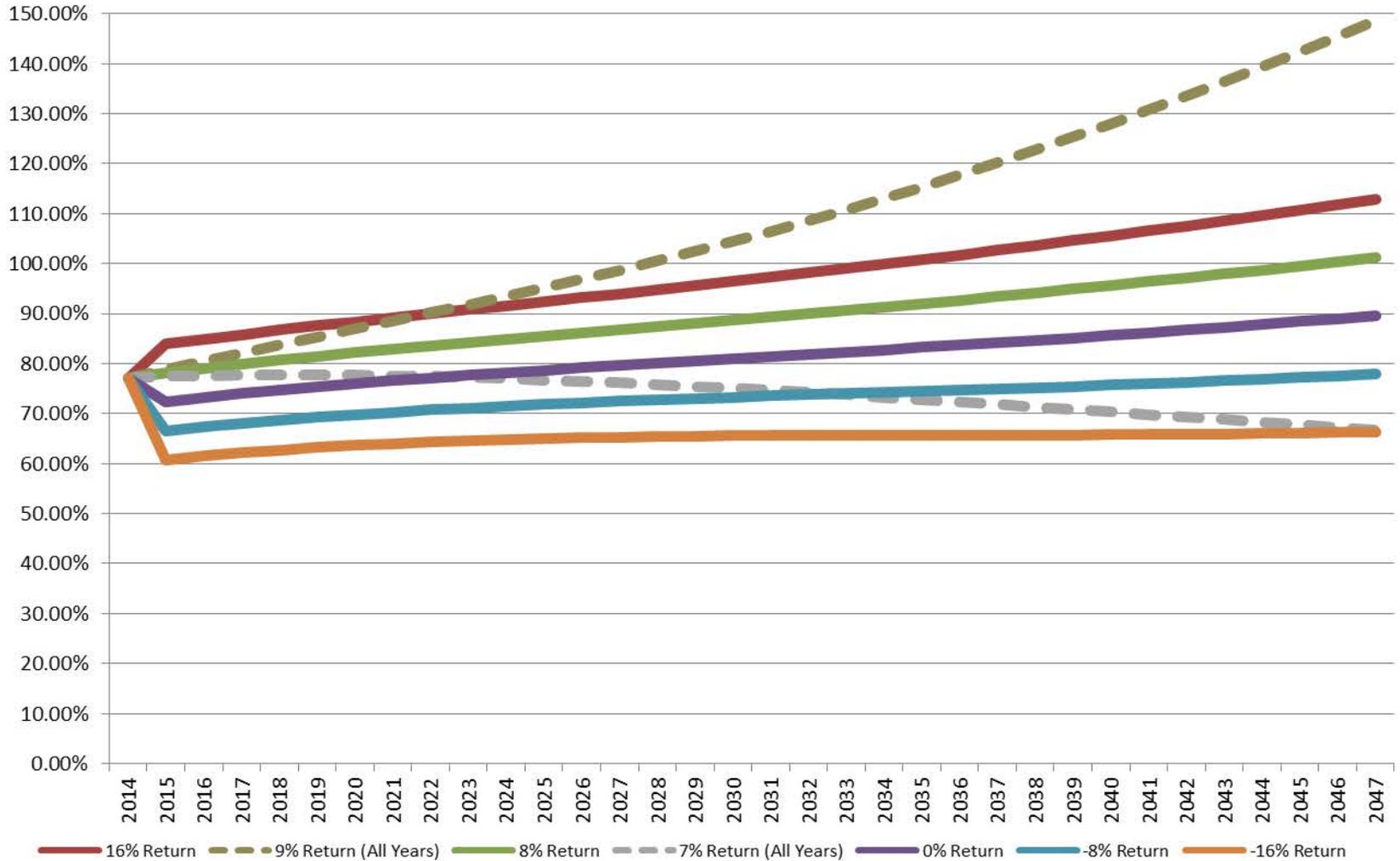
Highway Patrol

**RATE OF RETURN REQUIRED FOR ALL YEARS
BEGINNING ON AND AFTER 2015/2016 TO ACHIEVE TARGET IN 2034**

	Assumed 2014/2015 Return				
Target Funded Ratio	16.0%	8.0%	0.0%	-8.0%	-16.0%
70%	5.3%	5.8%	6.3%	6.9%	7.5%
80%	6.0%	6.5%	7.0%	7.6%	8.2%
90%	6.6%	7.1%	7.6%	8.2%	8.9%
100%	7.2%	7.7%	8.2%	8.8%	9.4%

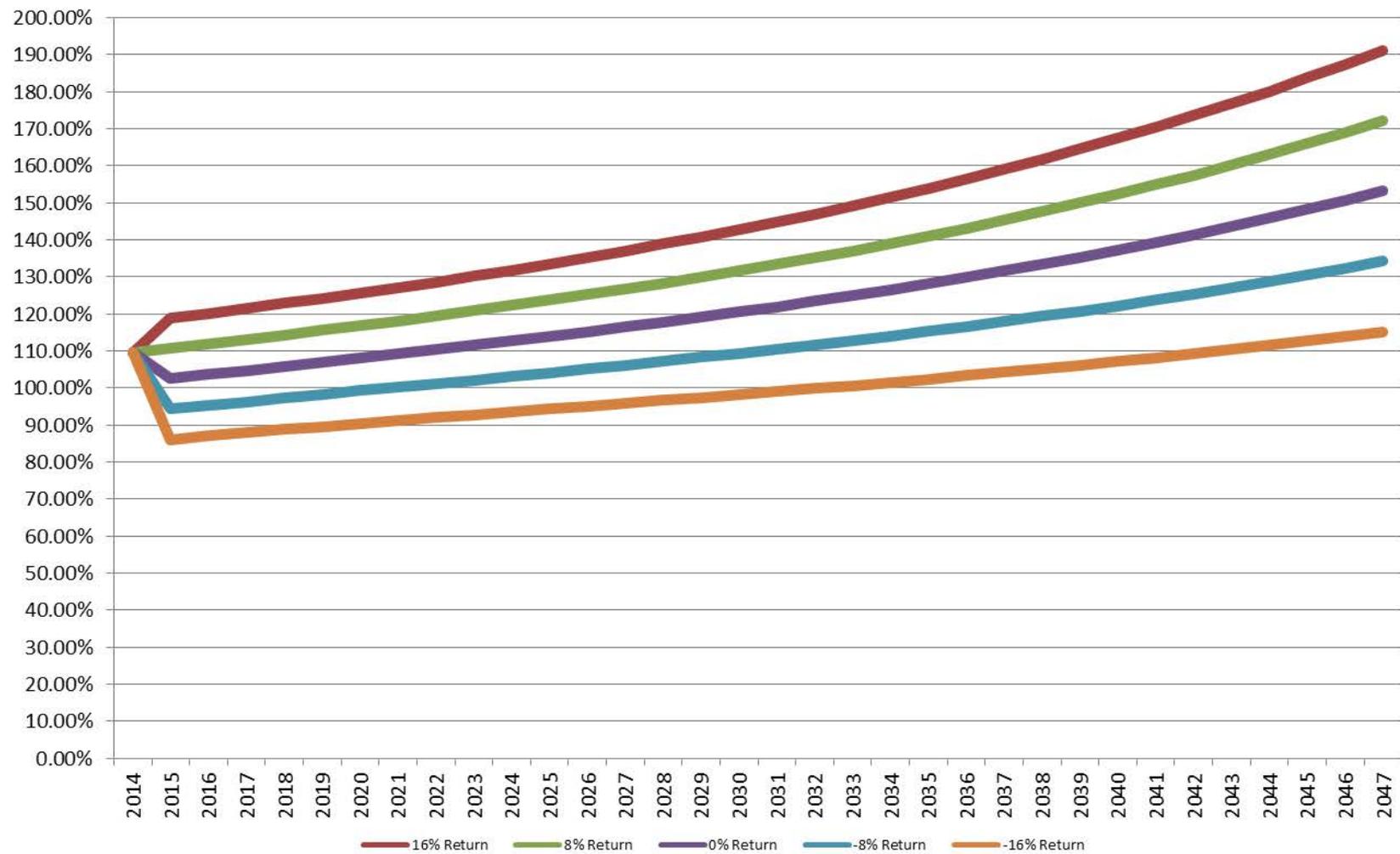
Projected Funded Ratios (MVA Basis)

Main System

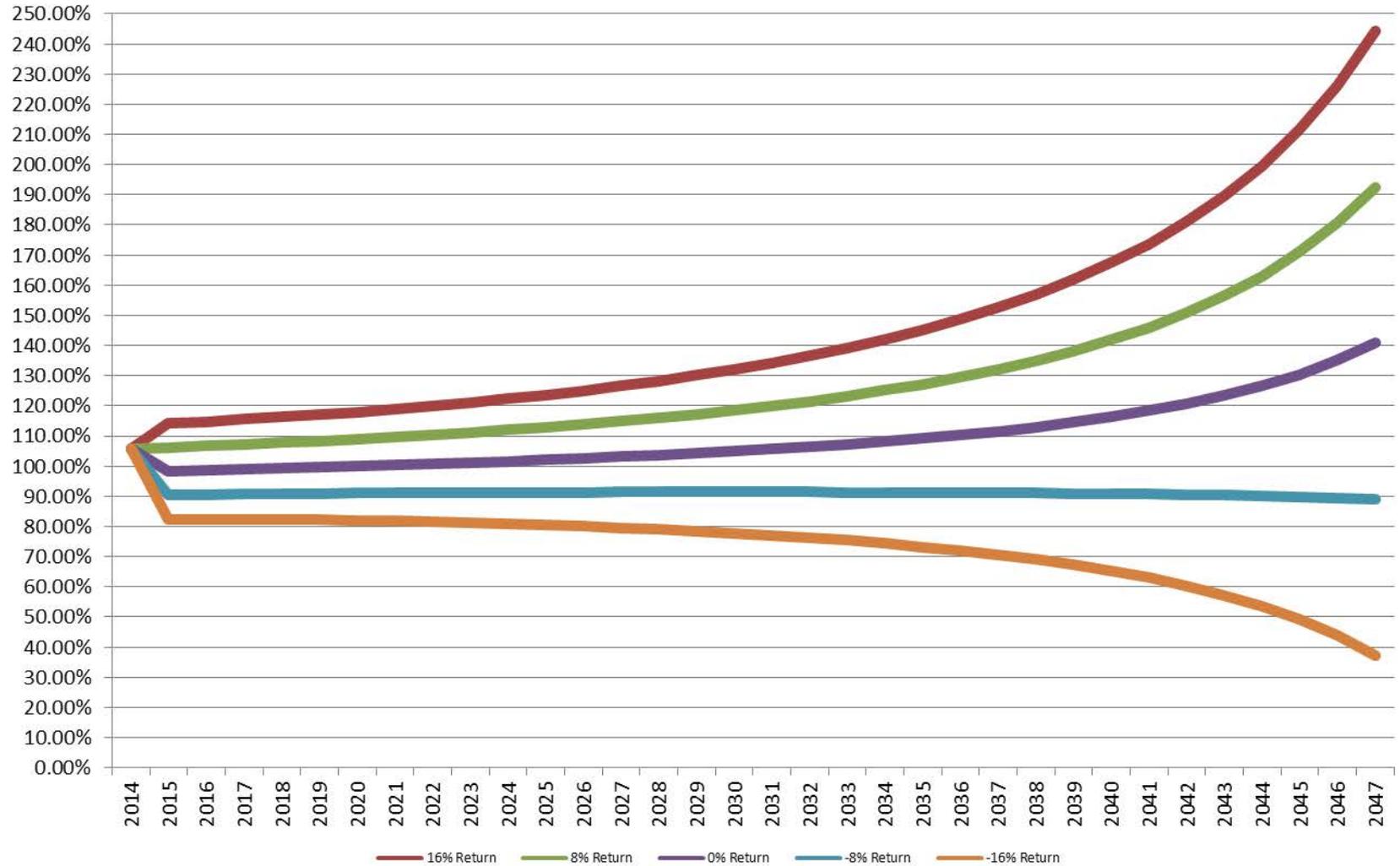


Projected Funded Ratios (MVA Basis)

Judges

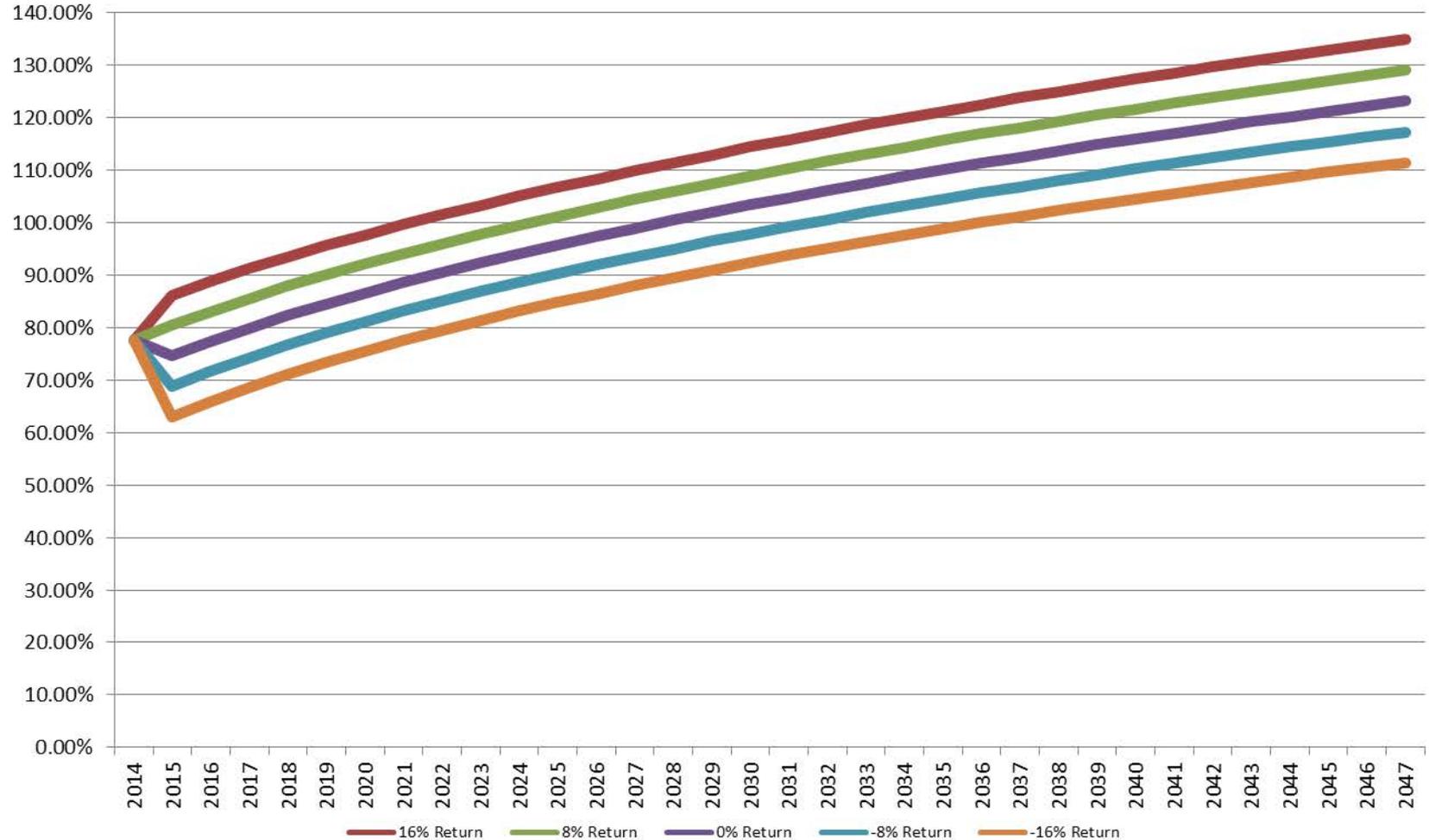


Projected Funded Ratios (MVA Basis) *National Guard*



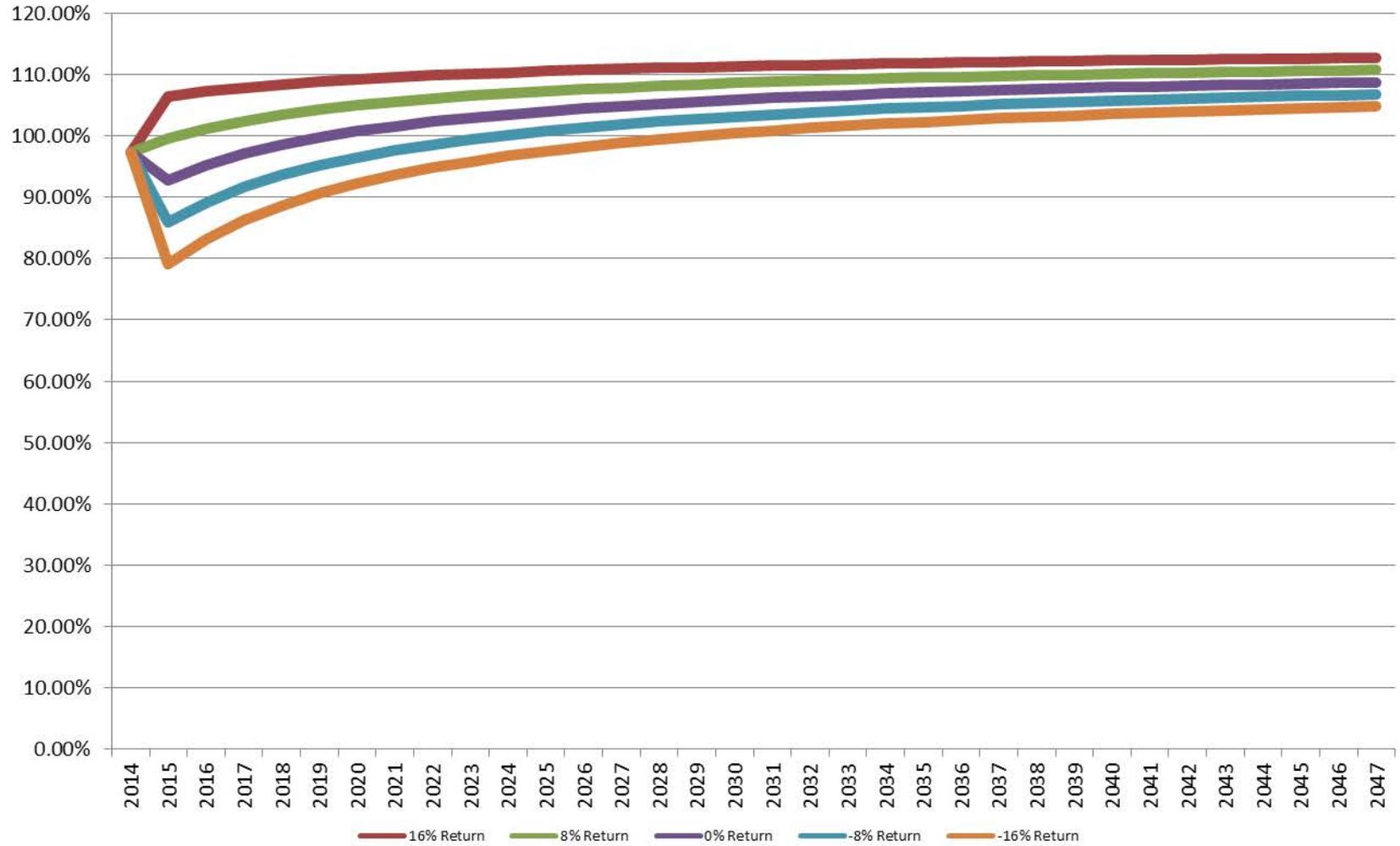
Projected Funded Ratios (MVA Basis)

Law Enforcement with Prior Main System Service



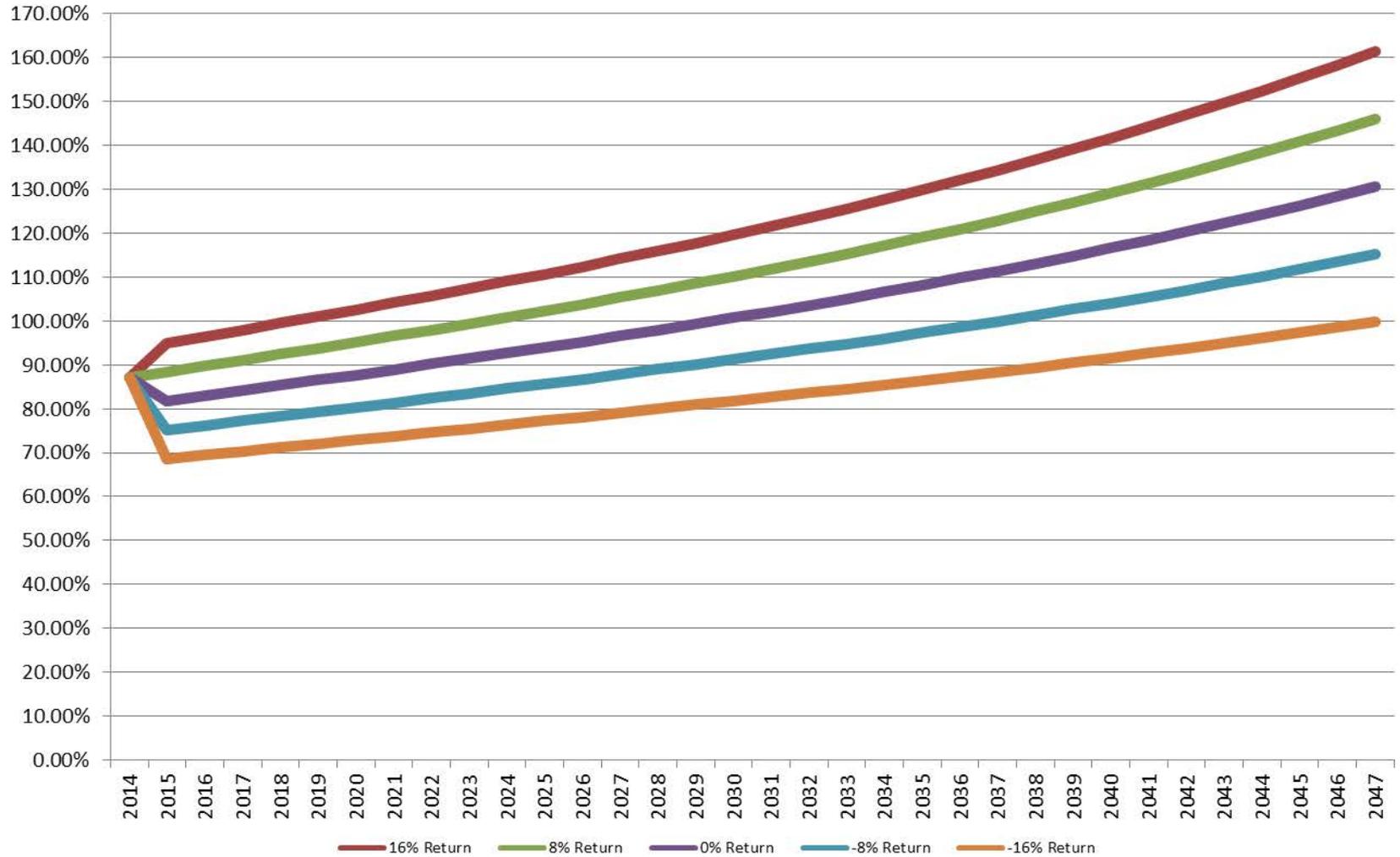
Projected Funded Ratios (MVA Basis)

Law Enforcement without Prior Main System Service



Projected Funded Ratios (MVA Basis)

Highway Patrol



Questions?

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North Dakota PERS and TFFR

GASB ACCOUNTING HIGHLIGHTS

For the Fiscal Year Ending June 30, 2014

October 29, 2014

Presented by:

Brad Ramirez, FSA, MAAA, EA, FCA
Matt Strom, FSA, MAAA, EA

Discussion Topics – GASB 67 and 68



**Segal
Consulting**

- **Overview of New Requirements**
- **GASB Objectives and Goals**
- **Requirements for Cost-sharing Plans**
- **Proportionate Share – Sample**

Overview of the New GASB Requirements

- GASB 67 provides for accounting with respect to plans (replaces GASB 25)
- GASB 68 provides for financial reporting by employers (replaces GASB 27)
- Net pension liability reported on the employer's balance sheet and in the plan's notes to the financial statements
- Accounting and financial reporting divorced from contribution requirements
- Annual pension expense (for employers) is essentially equal to change in net pension liability during the year, with deferrals of certain items

GASB Objectives and Goals

Financial Reporting Focus

- GASB establishes accounting and financial reporting, *not funding policies*
- Focus is on pension obligation, changes in obligation, and attribution of expense

Long-Term Nature of Governments

- Cost of services to long-term operation
- “Interperiod equity” matches current period resources and costs

Employer-Employee Exchange

- Employer incurs an obligation to its employees for pension benefits
- Transaction is in context of a career-long relationship

Net Pension Liability

- Net pension liability (NPL) is required to be reported on the employer's balance sheet
 - Total pension liability (TPL) minus market value of assets

- NPL is calculated using:
 - Projected future benefits, which includes:
 - Projected future service and salary increases
 - Cost of ad hoc COLAs if “substantially automatic”
 - A new blended discount rate
 - Determined using projections of contributions and benefit payments
 - “Entry age” actuarial cost method
 - Most commonly used method
 - Market value of assets
 - Called “Fiduciary Net Position”
 - No actuarial smoothing



Accounting NPL will be more volatile than the current unfunded accrued liability (which will still be used for funding).

New Requirements for Cost-Sharing Plans

- Prior to GASB 68, employers of cost-sharing plans recognized an annual pension expense equal to the statutorily required contribution
 - Pension liabilities (“Net Pension Obligation/Asset” under GASB 27) arose from the difference between contributions required and contributions actually made
 - Employer’s UAAL was not reported

- Now under GASB 68, employers will be required to recognize and disclose their proportionate share of the collective pension amounts for all benefits provided by the plan, which include:
 - Net pension liability
 - Deferred outflows of resources
 - Deferred inflows of resources
 - Pension expense

New Requirements for Cost-Sharing Plans *continued*

- When the collective total pension liability (TPL) is greater* than the market value of assets, each employer will need to report its proportionate share of the net pension liability (NPL) in its financial statements
- This is significant because the employer's proportionate share of the collective NPL will appear on the employer's balance sheet
 - Will appear with employer's other long-term liabilities for the first time
 - Not only will NPL be material relative to other liabilities, but it might be the largest long-term liability of the employer
 - Changes in NPL from year to year will be recognized as pension expense, with some deferrals being recognized as deferred outflows/inflows of resources
- Greatly expanded employer disclosures, including:
 - Description of the plan and assumptions
 - Policy for determining contributions
 - Sensitivity analysis of the impact on NPL of changes in liability discount rate
 - Changes in the NPL for the past 10 years
 - Development of long-term earnings assumption

* When TPL is less than the market value of assets, a Net Pension Asset results

Cost-Sharing Plans—Proportionate Share

- Determining an employer’s “proportionate share”
 - Basis should be **consistent with the way required contributions are determined**
 - “The use of the projected long-term contribution effort of the employer(s) ... is encouraged.”
 - If “different contribution rates are assessed based on separate relationships that constitute the net pension liability ... the determination of the employer’s net pension liability should ... reflect those separate relationships.”
 - “For example, separate rates are calculated based on an internal allocation of liabilities and assets for different classes or tiers of employees”
- Employer’s proportion should be established as of the measurement date
 - Unless employer’s proportion is actuarially determined (in which case use date of the actuarial valuation)

PERS and TFFR plan to use covered payroll of active members as the basis for allocating the collective NPL.

Net Pension Liability – Collective TFFR

	June 30, 2014	June 30, 2013
Total Pension Liability at 8.00%	\$3,138,799,773	\$2,997,139,087
Net Plan Position (i.e., MVA)	2,090,977,056	1,839,583,960
Net Pension Liability (NPL)	1,047,822,717	1,157,555,127
Sensitivity to changes in discount rate		
• 1% decrease (7.00%)	\$1,414,755,083	\$1,511,142,356
• Current discount rate (8.00%)	1,047,822,717	1,157,555,127
• 1% increase (9.00%)	739,221,908	860,669,595

June 30, 2014, Proportionate Share – Sample (TFFR)

	Covered Employee Payroll	Proportionate Share	Allocated NPL
Fargo Public Schools	\$63,192,777	10.894306%	\$114,153,013
Bismarck Public Schools	61,729,312	10.642008%	111,509,377
West Fargo School	43,479,882	7.495843%	78,543,146
Grand Forks School	41,737,522	7.195464%	75,395,706
Minot School	40,092,868	6.911929%	72,424,762
⋮	⋮	⋮	⋮
Hebron School	1,090,884	0.188066%	1,970,598
Wishek School	1,090,646	0.188025%	1,970,169
⋮	⋮	⋮	⋮
Horse Creek Elementary School	34,500	0.005948%	62,324
Bakker Elementary School	33,500	0.005775%	60,512
Earl Elementary School	<u>30,500</u>	<u>0.005258%</u>	<u>55,095</u>
Grand Totals	\$580,053,235	100.000000%	\$1,047,822,707*

* Total allocated NPL may not match TFFR NPL due to rounding.

Valuation Results - GASB 67 (\$ in millions) (PERS)

- Liability to be reported under new accounting standards
- Not for funding purposes
- Blended discount rate based on projected benefits and assets (8% for 2013/2014 fiscal year)

	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
Main	\$2,846.6	\$2,211.9	\$634.7
Judges	39.0	42.7	(3.7)
National Guard	2.9	3.1	(0.2)
Law Enforcement with Prior Service	27.9	21.7	6.2
Law Enforcement without Prior Service	2.2	2.2	(0.0)
Total PERS	\$2,918.6	\$2,281.6	\$636.8
Highway Patrol	\$75.4	\$65.7	\$9.8
Retire Health	130.0	92.0	37.9
Job Service	65.0	97.7	(32.7)

June 30, 2014, GASB 68 Proportionate Share – Sample (Main)

	Covered Employee Payroll	Proportionate Share	Allocated NPL
State of North Dakota (Combined)	\$234,701,222	27.861710%	\$176,829,720
Other State (to be broken out later)	238,314,139	28.290605%	179,551,782
All Counties (to be broken out later)	145,980,386	17.329536%	109,985,243
•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•
Grand Totals	\$842,379,091	100.000000%	\$634,669,296*

* Total allocated NPL may not match Main System NPL due to rounding

Questions?



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