



Cavanaugh Macdonald
CONSULTING, LLC

The experience and dedication you deserve

Montana Teachers' Retirement System

Valuation Results July 1, 2013

Presented September 27, 2013
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Benefit Financing



➤ Basic Retirement Funding Equation

$$C + I = B + E$$

C = Contributions

I = Investment Income

B = Benefits Paid

E = Expenses (administration)



Benefit Financing



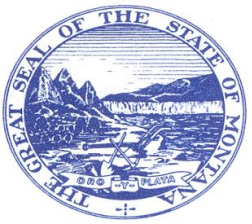
$$C + I = B + E$$

B depends on

- Plan Provisions
- Experience

C depends on

- Short Term: Actuarial Assumptions
Actuarial Cost Method
- Long Term: I, B, E



Results



Comments on Valuation



- Asset returns
 - Market asset return 12.94% vs. 7.75% expected return (5.19% greater than expected).
 - Actuarial asset return 11.99% vs. 7.75% expected (4.24% greater than expected).
- Funded Ratio
 - Funding improved from 59.24% to 66.80%
- Changes Since Previous Valuation
 - HB 377 passed during 2013 legislative session
 - Significant positive impact on the Retirement System



Comments on Valuation



- HB 377
 - Additional Funding
 - Supplemental Contributions
 - Both the members and the employers must contribute a supplemental contribution beginning July 1, 2013
 - Member supplemental contribution rate is equal to an additional 1.00%.
 - Employers supplemental contribution rate is equal to an additional 1.0% and will increase 0.1% per year until it reaches 2.0%
 - State will contribute \$25 million annually to TRS
 - One time cash infusion from trustees of local school districts that maintain a separate retirement fund (estimated to be \$14.7 million on October 1, 2013)
 - Changes in benefit structure
 - Created a Tier Two benefit structure for new hires who join the System on or after July 1, 2013.
 - Tier One members
 - Reduced GABA until System is at least 90% funded



Comments on Valuation



- HB 377
 - Changes in benefit structure (Continued)
 - Tier Two members
 - Reduced GABA until System is at least 90% funded
 - 8.15% Employee Contribution Rate
 - Normal Retirement
 - » Age 55 and 30 Years of Service
 - » Age 60 and 5 Years of Service
 - Early Retirement
 - » Age 55 and 5 Years of Service
 - Professional Retirement Option
 - » A member age 60 with at least 30 years of service will receive a retirement allowance equal to 1.85% of compensation times years of service. Otherwise the multiplier will be equal to 1.67%
 - Eligible for GABA between 0.50% - 1.50% as set by the Board once the System is 90% funded



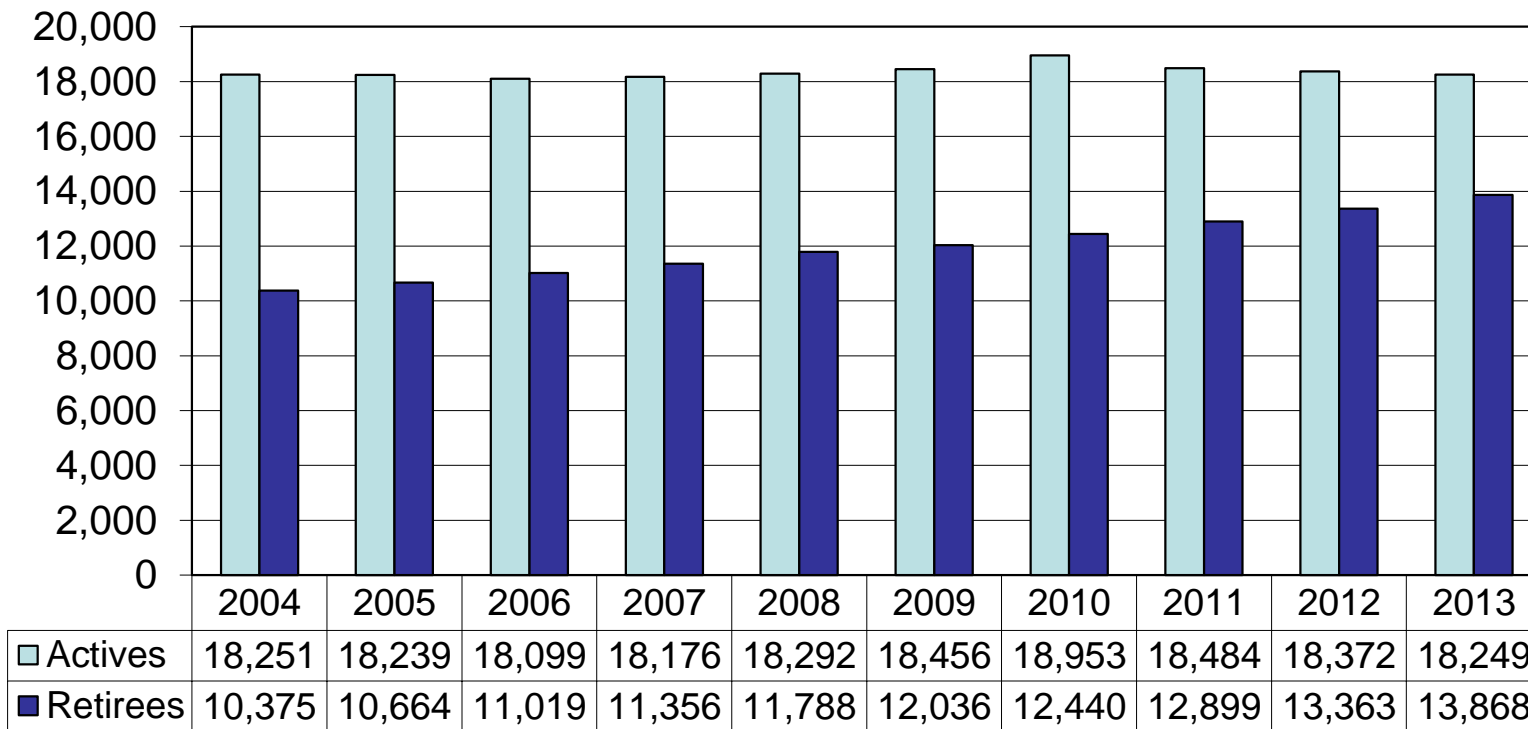
Comments on Valuation



- HB 377
 - Financial Impact
 - Reduced Unfunded Liability by \$371.1 million
 - Additional funding and temporary reduction in GABA primarily responsible for the reduction in the amortization period of the unfunded actuarial accrued liability from infinite to 20 years.
- HB 34
 - Each employer must remit 9.85% of total compensation paid to all retired TRS members who are employed in a TRS reportable position.



Active and Retired Membership



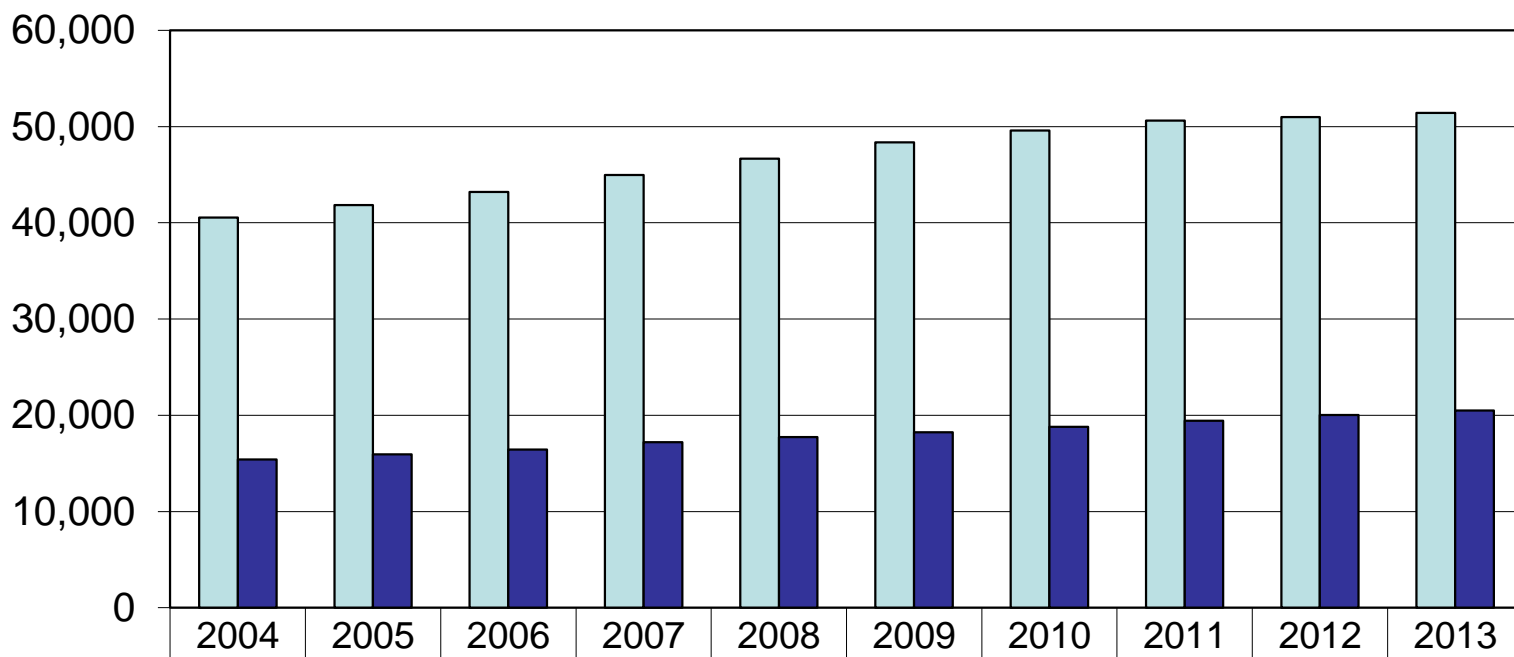
0.0% annual increase for active members since 2004; 0.67% decrease for 2013.

3.3% annual increase for retired members since 2004; 3.8% increase for 2013.

0.6 retirees per active 9 years ago; 0.8 retirees per active now.



Average Salary and Benefits



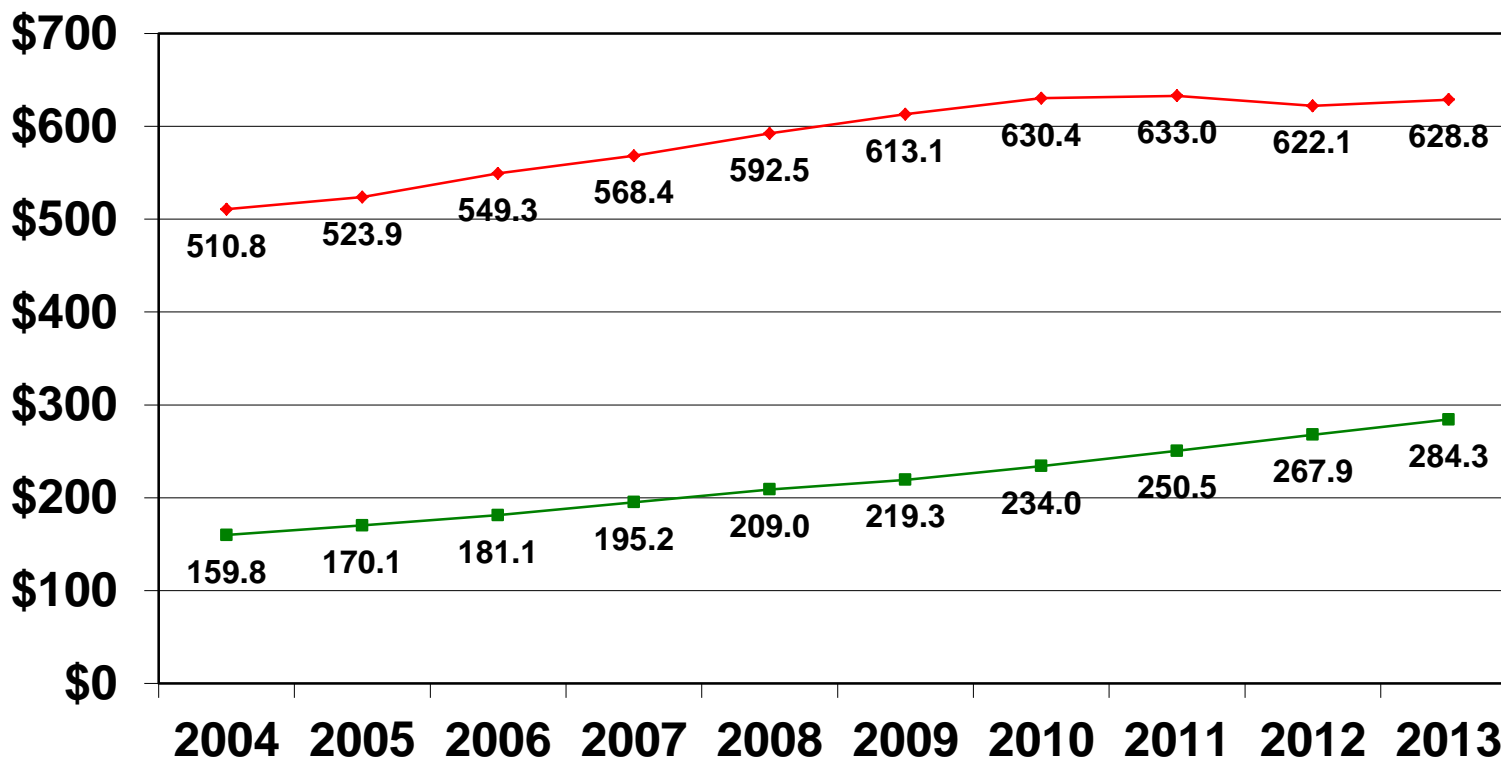
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Full-Time Salary	40,537	41,836	43,198	44,986	46,677	48,377	49,598	50,616	50,987	51,421
Retirees Benefits	15,400	15,954	16,436	17,192	17,729	18,218	18,814	19,420	20,044	20,503

2.7% annual increase for average salary since 2004; 0.9% increase for 2013.

3.2% annual increase for average benefits since 2004; 2.3% increase for 2013.

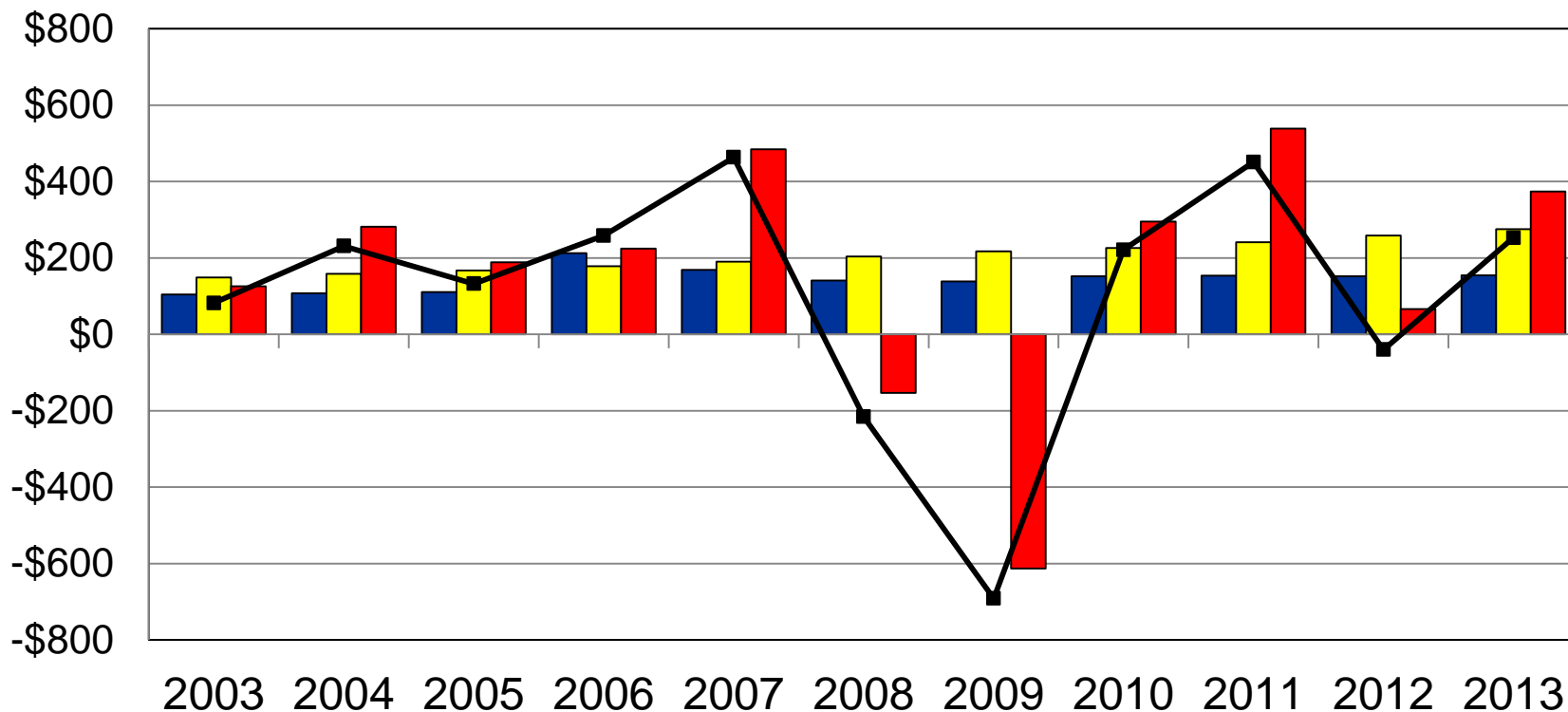


Payroll & Benefits (Millions)



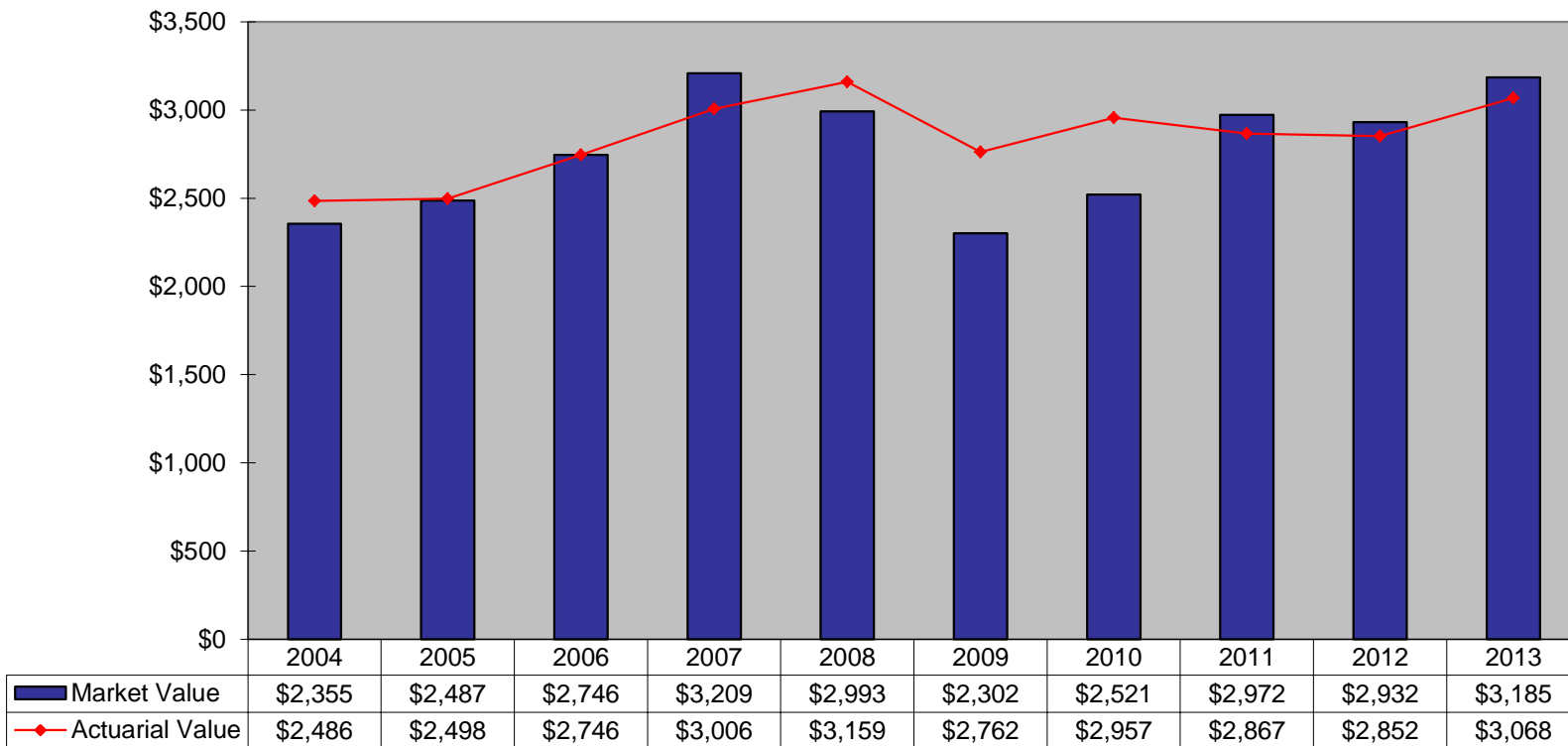


Historical Cash Flow (in Millions)





Assets (\$ Millions)



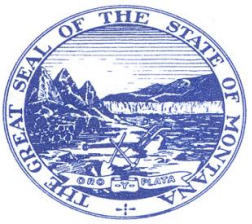
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Market Return	13.3%	8.0%	8.9%	17.6%	(4.9)%	(20.8)%	12.9%	21.7%	2.2%	12.9%
Actuarial Return	2.1%	2.7%	8.5%	10.2%	7.2%	(10.3)%	9.8%	(0.1)%	3.2%	12.0%



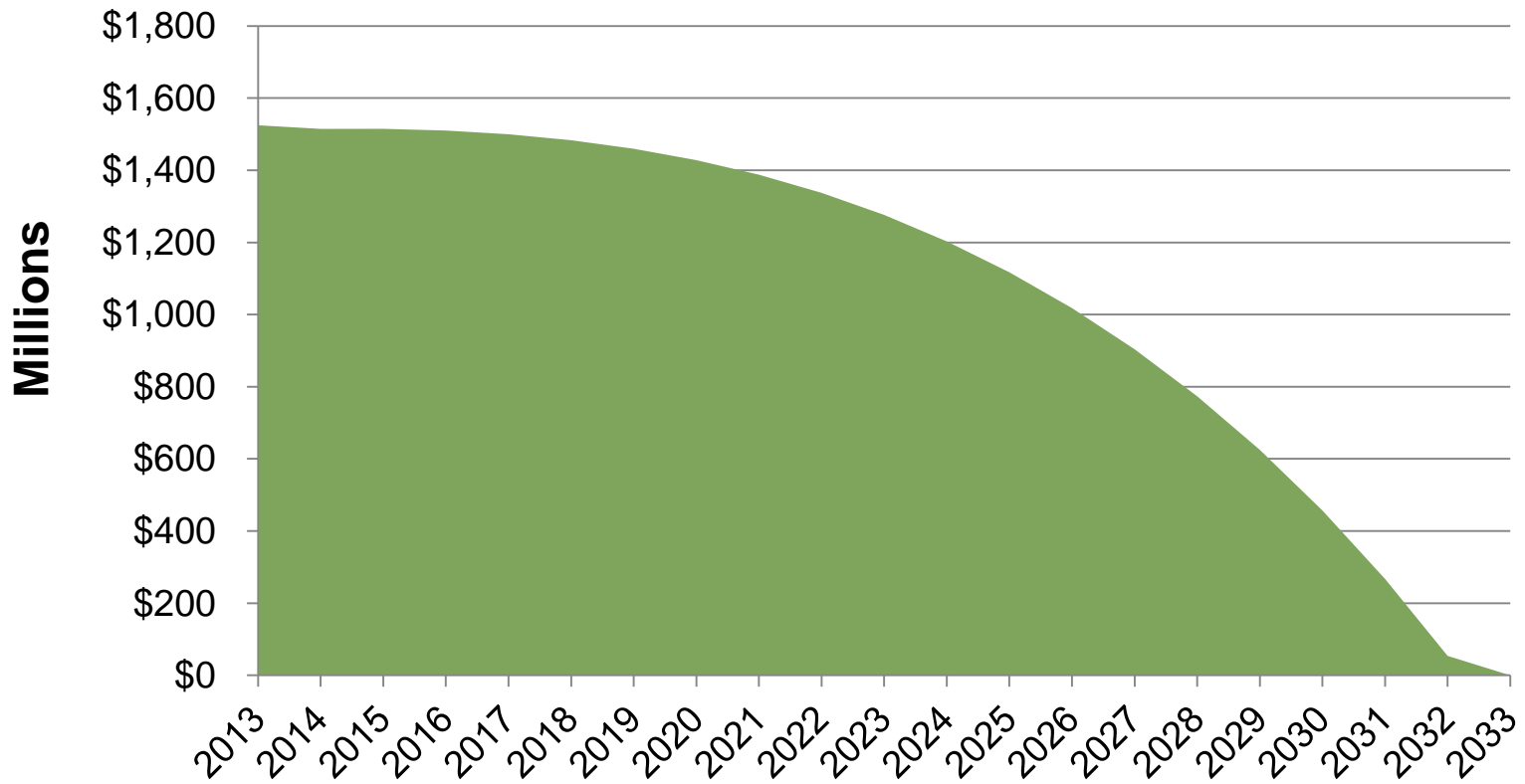
Funding Results



	July 1, 2013 Valuation	July 1, 2012 Valuation
Total Normal Cost Rate	9.20%	9.65%
Less Member Rate	<u>8.15%</u>	<u>7.15%</u>
Employer Normal Cost Rate	1.05%	2.50%
Rate to Amortize UAL	<u>9.91%</u>	<u>7.46%</u>
Total Employer Statutory Rate	10.96%	9.96%
Actuarial Accrued Liability	\$4,592.7 million	\$4,814.7 million
Actuarial Value of Assets	\$3,067.9 million	\$2,852.0 million
Unfunded Accrued Liability	\$1,524.8 million	\$1,962.7 million
Amortization Period	20 Years	Infinite
Minimum Required Statutory Contribution Rate Increase in order to Fund System within Parameters Defined by Funding Policy	N/A	4.89%

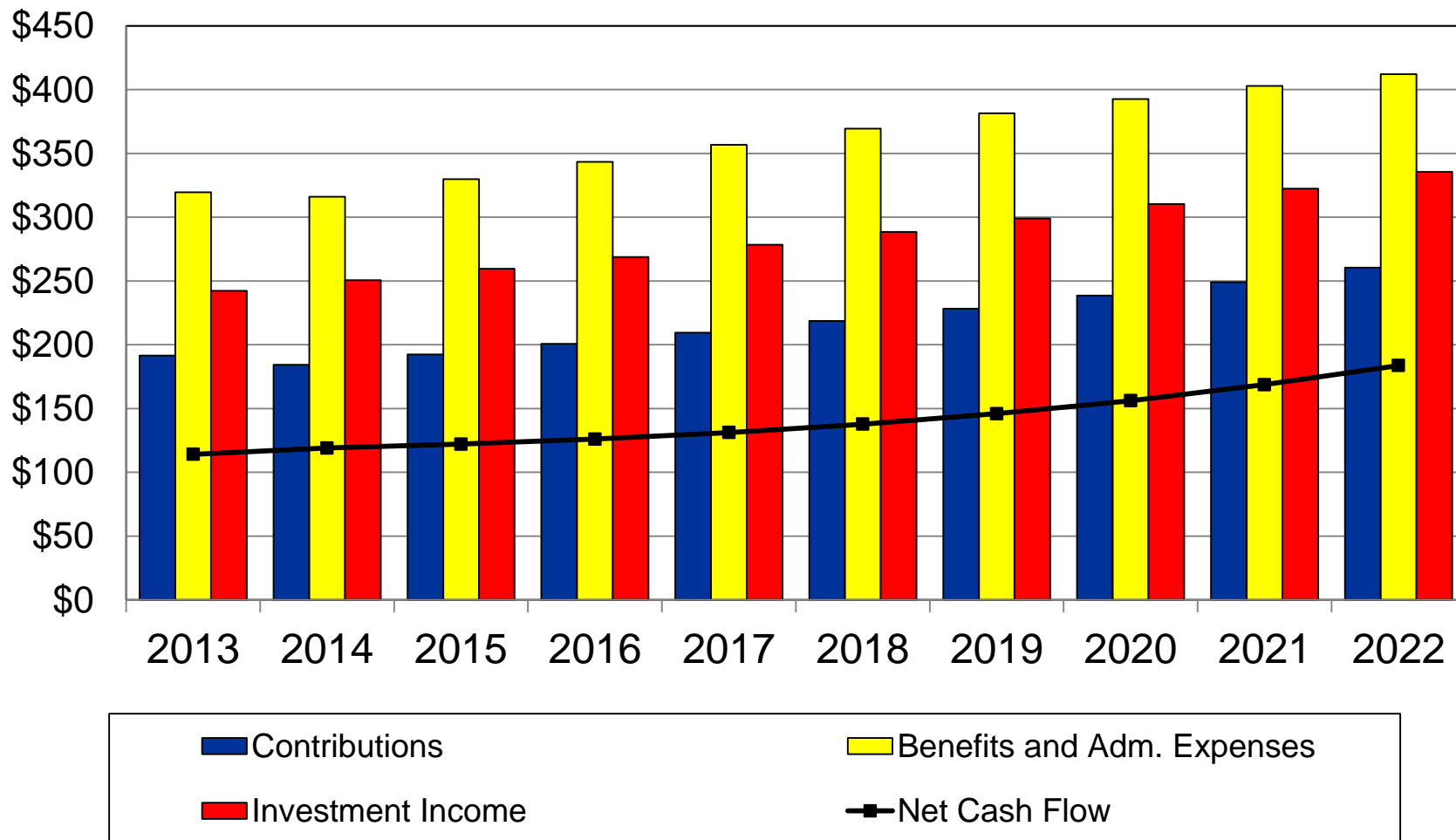


Progress toward 100% Funding





Projected Cash Flow (in Millions)





Sensitivity Analysis (GABA Provision of HB 377)



	Excluding GABA Provision	Including GABA Provision
	July 1, 2013 Valuation	July 1, 2013 Valuation
Total Normal Cost Rate	9.62%	9.20%
Less Member Rate	<u>8.15%</u>	<u>8.15%</u>
Employer Normal Cost Rate	1.47%	1.05%
Rate to Amortize UAL	<u>9.49%</u>	<u>9.91%</u>
Total Employer Statutory Rate	10.96%	10.96%
Actuarial Accrued Liability	\$4,963.8 million	\$4,592.7 million
Actuarial Value of Assets	\$3,067.9 million	\$3,067.9 million
Unfunded Accrued Liability	\$1,895.9 million	\$1,524.8 million
Amortization Period	29 Years	20 Years