

The background of the slide features a sunset sky with a warm orange and yellow glow. In the foreground, several saguaro cacti are silhouetted against the bright light of the setting sun. The cacti vary in height and shape, with some having multiple arms.

Prepared for:

***The Defined Contribution and
Retirement Study Committee***

***Informational Presentation on the
Arizona State Retirement System***

Prepared by:
Arizona State Retirement System

September 15, 2011

Estimates are utilized



- 1. Background Information**
- 2. Benefit Structure**
- 3. Fiscal Status, Causality, and Past Initiatives**
- 4. Fiscal Projections**
- 5. Additional Fiscal Information**
- 6. Investment Management**



1. Background Information



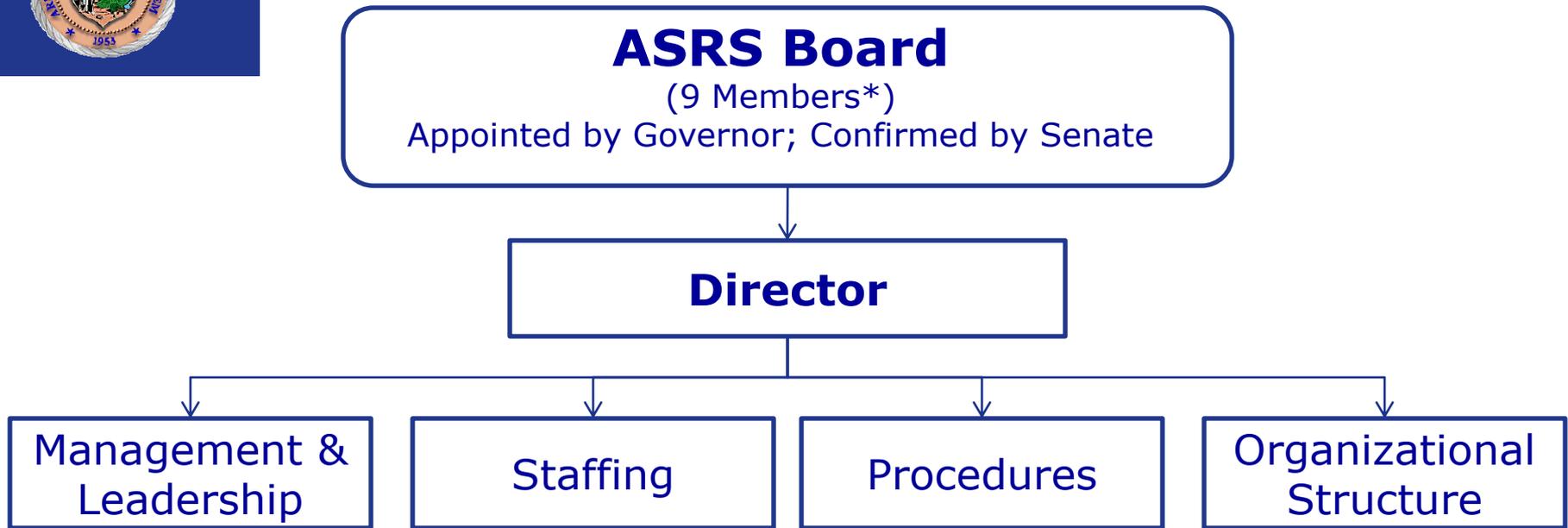
ASRS Statistics

(June 30, 2010)

- ❑ Total membership approximately 525,000**
- ❑ Appropriated FY2011 Budget \$24.7 million**
 - Not a State General Fund Budget**
- ❑ Annual distributions \$2.3 billion**
- ❑ Annual contributions \$1.7 billion**
- ❑ Employee paid 50% of all costs
(53% as of July 20, 2011)**
- ❑ Average annual retirement benefit: \$19,840;
Average annual pension including survivors and QDRO: \$19,428**
- ❑ Average years of service of retiree: 19.5**
- ❑ Average age of retiree: 69.6 years**



Organization Chart



*

5 ASRS Members

- Educator, political subdivision employee, retired member, state employee, at large member
- Must have at least 5 years administrative management experience

4 Public Members

4 Members must have 10 years of substantial investment experience



A.R.S. 38-712 Conveys Primary Intent of ASRS

- Provide incentive in recruitment and retention**
- Contribute toward competitive total compensation package**
- Provide employers with the benefits of a stable workforce**
- Promote a high level of public service**
- Provide a base retirement benefit**



2. Benefit Structure



Membership

- Approved state, counties, municipalities, education, other employers**
- 20/20 Eligibility Criteria**
 - 20 or more hours per week for 20 weeks or more per fiscal year
- Applies to full-time and seasonal or temporary positions, with some exceptions**
- Effective July 20, 2011 new state employees are not eligible for ASRS membership before the 27th week of employment**



Normal Retirement

- ❑ **Unreduced, lifetime, monthly pension:**
 - 80 Points = Age + Years of Service
 - Age 60 + 25 years of service and Age 55 + 30 years of service for members hired after June 30, 2011
 - Age 62 with 10 or more Years of Service
 - Age 65

- ❑ **Provides a lifetime guaranteed retirement benefit based on a formula**



Normal Retirement Calculation

TOTAL CREDITED SERVICE

X

GRADED MULTIPLIER

X

AVERAGE MONTHLY
COMPENSATION

=

RETIREMENT BENEFIT

The period of employment during which contributions are made to the ASRS plus any service purchase that is credited to the account.

A percentage set by statute. Based on total years of service at retirement.

Highest 36 or 60 consecutive months of salary averaged.

Paid on a monthly basis for the member's lifetime.



Graded Multiplier

0.00 to 19.99 years of service	2.10%
20.0 to 24.99 years of service	2.15%
25.0 to 29.99 years of service	2.20%
30.0+ years of service	2.30%

$$\text{(Years of Service)} \times \text{(Multiplier)} \times \text{(Final Average Salary)} \\ = \text{Benefit}$$



Service Purchase

- Allows active and disabled members to increase their years of service with the ASRS by purchasing time worked for other public entities**
- Cost determined as Actuarial Present Value (APV) of increased benefit**
- Limits the amount of service credit that may be purchased to 60 months**
- Requires a member to have 10 years of service credit before initiating a request to purchase**



Leaving Employment

Inactive: leave money on deposit

- Save for future retirement
- Maintain survivor benefit
- Retain membership rights

Refund: forfeit future ASRS benefits

- Employee balance plus interest
- Refund schedule on employer contributions for members hired before July 1, 2011
- Roll over or distribute to member (with tax withholding)

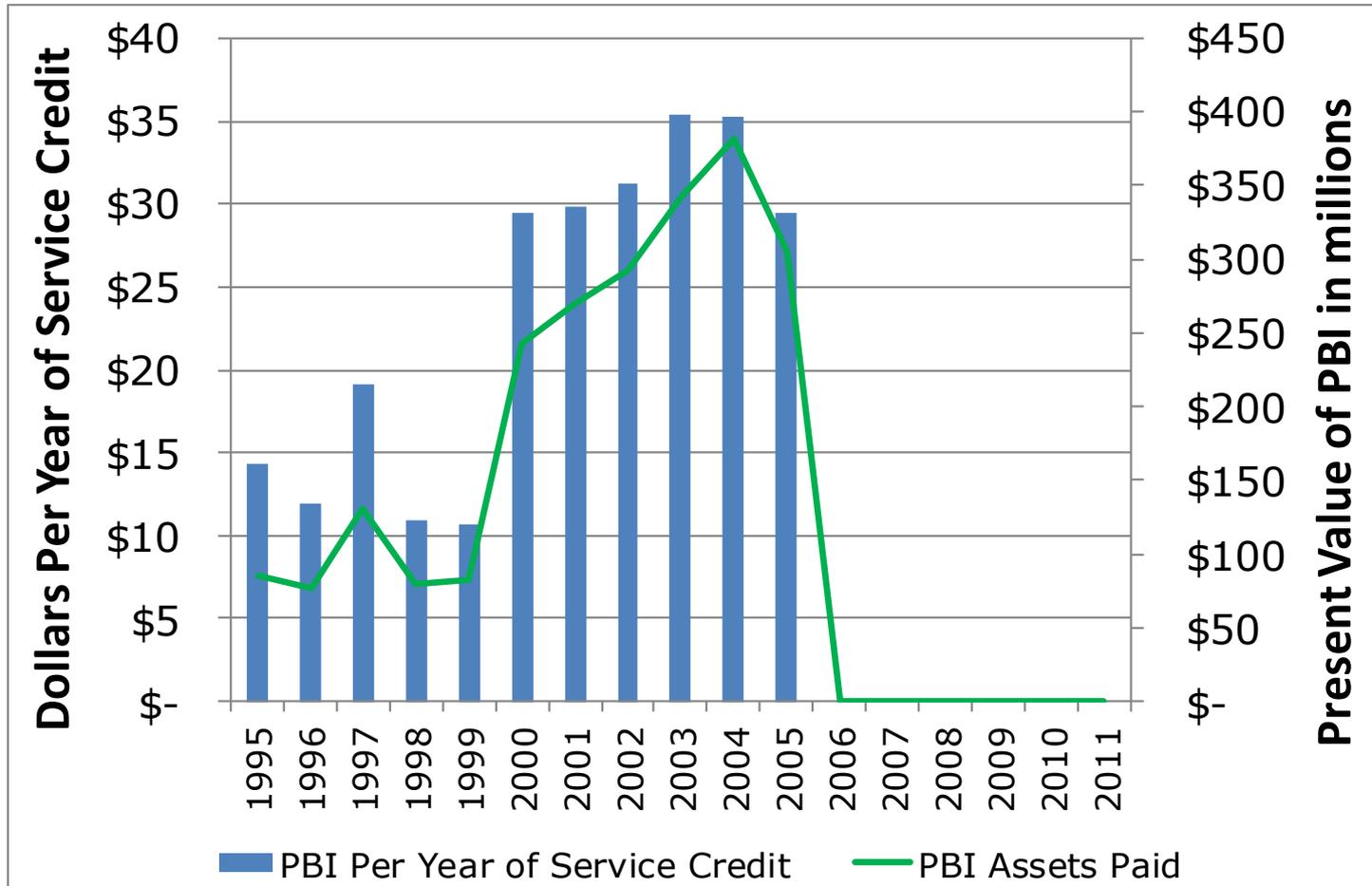


Permanent Benefit Increases (PBIs)

- Post-retirement increases**
- Based on excess actuarial earnings, not inflation or cost of living index**
- No excess earnings available to pay a PBI beginning July 1, 2006**



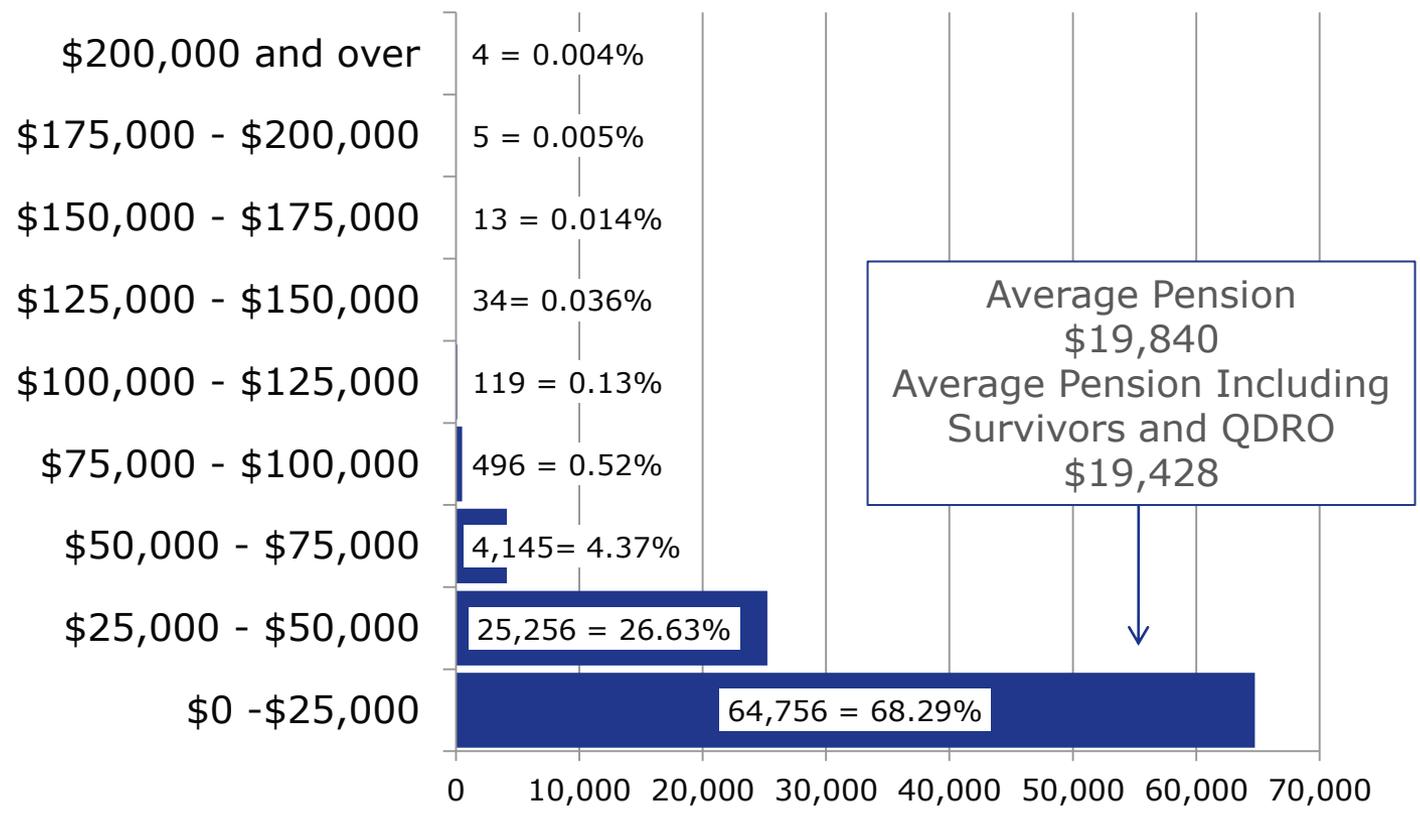
PBI History





Distribution of Pensions as of June 30, 2010

Average Years of Service
36.7
37.3
34.9
33.8
33.8
33.5
32.3
28.5
15.1



*QDRO: Qualified Domestic Relations Order



Distribution of Retired and Active Members as of June 30, 2010

Retired Membership				
Type of Employer	Number of Members	Average Annual Pension	Average Age	Average Years of Service
Higher Education	12,068	\$21,276	71.1	19.2
K-12 Education	54,212	\$20,640	69.4	20.6
City	6,180	\$21,300	67.4	19.1
County	10,884	\$15,228	69.9	16.9
State	16,985	\$16,332	69.9	18.3
Political Subdivisions	<u>978</u>	<u>\$18,348</u>	<u>66.6</u>	<u>16.4</u>
Total	101,307	\$19,428	69.6	19.5

Active Membership				
Type of Employer	Number of Members	Average Annual Salary	Average Age	Average Years of Service
Higher Education	23,884	\$50,110	46.7	9.5
K-12 Education	116,000	\$39,170	44.8	8.9
City	17,702	\$55,362	44.9	9.4
County	22,324	\$47,306	46.6	9.3
State	27,424	\$47,218	47.0	10.3
Political Subdivisions	<u>6,196</u>	<u>\$56,238</u>	<u>45.6</u>	<u>7.4</u>
Total	213,530	\$44,115	45.5	9.2



3. Fiscal Status, Causality, and Past Initiatives



Statistics (June 30, 2011)*

□ **Approximate Plan Membership:**

- Active 213,530
- Inactive 209,605
- Retired & Survivors 101,307

Assets		Liabilities	Funded Status	
Actuarial	Market	Discounted at 8%	Actuarial	Market
\$27.6 B	\$26.4 B	\$36.6 B	75.3%	72.3%

□ **ER Contribution Rate:**

- FY 2012 – 9.87%
- FY 2013 – 10.04%

*Based on June 30, 2010 member data and un-audited June 30, 2011 financial data. Projections with constant 8% Investment Return and 0% Population Growth



Reasons for Recent Changes in Funded Status

- Low investment returns during FYs 2001-03 and FYs 2008-09**

- Change from EAN to PUC* (1989)**
 - Low contribution rates during 1990s+

- Benefit improvements prior to 2002**

- Certain expensive and ineffective plan design features (most remedied)**

- Improving life expectancies of retirees**

* Entry Age Normal (EAN) and Projected Unit-Credit (PUC) are actuarial methods used to calculate liabilities



Issues Past & Present

- DB Plan Membership Decreases Not a Plan Design Feature
- Permanent Benefit Increase Potential Long Term Issue. Remedy Under Analysis.
- Return to Work Contributions Remedy Initiated by ASRS in 2008/09, Legislation Passed 2011.

□ Remedies Initiated by ASRS and Implemented:

- Service Purchase Inequities: Remedies 2004
- Refund Accruals: Remedies 2004
- Early Retirement Incentives: Remedies 2004
- Miscellaneous: Remedies 2004+
- Modified Deferred Retirement Option: Remedies 2006
- Increasing Longevity: Remedies 2006, 2010
- Salary Spiking*: Remedies 2009, 2010
- Refund Amounts: Remedies 2010

* Salary Spiking occurs when members inflate salary prior to retirement. Taking a second job or working overtime are examples.

ASRS Cost Savings Initiatives

Estimated as of June 30, 2010, in Millions of Dollars

Action	Calendar Year Proposed	Calendar Year Adopted	Reduction in Total Contribution Rate*	Annual Reduction in Total Contribution Amount	Present Value of Savings on Closed Group Basis		Present Value of Savings on Open Group (No Growth**) Basis	
					Past	Future	Past	Future
Cost Savings Initiatives Contained in Current Valuation & Reflected in Lower Current Contribution Rate¹					Past	Future	Past	Future
Change basis for service purchases from normal cost to actuarial present value (APV)	2003	2004	0.60%	\$56.52	\$470.31	\$509.69	\$470.31	\$1,614.70
Correction of Permanent Benefit Increase (PBI) reserve	2003	2004	0.04%	\$3.77	\$31.18	\$47.53	\$31.18	\$47.53
Decrease interest credited on withdrawn contributions from 8% to 4%	2004	2004	0.27%	\$25.43	\$211.73	\$253.78	\$211.73	\$661.77
sub-total, past and future			0.91%	\$85.72	\$713.22	\$811.00	\$713.22	\$2,324.00
sub-total, savings in current valuation			0.91%	\$85.72	\$1,524.22		\$3,037.22	
Cost Savings Initiatives Contained in Future Experience²					Past	Future	Past	Future
Long Term Disability (LTD) program design changes	2003	2004	0.02%	\$1.88	\$16.16	\$28.04	\$16.16	\$45.14
Reimbursements for early retirement incentives	2003	2004	0.18%	\$16.96	\$140.98	\$205.14	\$140.98	\$330.27
Increase interest rate on payroll deduction agreements (PDAs) from 0% to 8%	2004	2004	0.16%	\$15.07	\$125.66	\$186.34	\$125.66	\$299.51
Pop-up restrictions	2005	2006	0.41%	\$40.37	\$225.10	\$470.16	\$225.10	\$756.96
Rescinding modified Deferred Retirement Option Plan (mDROP)	2005	2006	0.50%	\$47.06	\$274.41	\$572.09	\$274.41	\$919.45
LTD changes to offsets and pre-existing condition period	2005	2007	0.15%	\$14.13	\$64.93	\$107.99	\$64.93	\$318.46
Recapture of unclaimed monies	2007	2008	0.01%	\$0.60	\$2.88	\$7.38	\$2.88	\$11.88
Eliminate 80% cap on retirement benefits	2008	2009	0.04%	\$3.77	\$4.59	\$49.46	\$4.59	\$79.63
Require 20/20 Rule for dual employment situations	2009	2009	0.04%	\$3.49	\$4.24	\$51.39	\$4.24	\$51.39
Eliminate enhanced refunds	2005	2010	0.16%	\$15.07		\$331.85		\$331.85
Replace Rule of 80 with Rule of 85	2006	2010	0.30%	\$28.26		\$278.02		\$278.02
Replace 36-month average salary with 60-month average	2006	2010	0.25%	\$23.55		\$303.29		\$303.29
sub-total, past and future			2.22%	\$210.21	\$858.95	\$2,591.15	\$858.95	\$3,725.85
sub-total, savings emerging in experience			2.22%	\$210.21	\$3,450.10		\$4,584.80	
GRAND TOTAL			3.13%	\$295.93	\$4,974.32		\$7,622.02	

*These changes to the total contribution rate are multiplied by current payroll to give annual savings amounts in the next column. The annual savings amounts are then converted to the present values shown in the last two columns. These values include both accumulated past savings and estimated future savings. The savings from basing service purchases on actuarial present value is a reduction in future service liabilities. For the reduction in the interest crediting rate and the changes to LTD offsets and pre-existing condition period, the savings arise from reductions in future service and past service liabilities. Other Actuarial Valuation Basis savings are reductions to past service liabilities, i.e., capitalizations of the annual savings amounts over 30 years. Recapture of unclaimed monies will occur every year, but the numbers above are converted to a level annual savings amount.

** No growth scenario means that the projection maintains the size and age distribution characteristics of the current active population.

Costs above give the combined effect of each bill -- if a bill changes three plan provisions, the cost of each reflects the adoption of the other two provisions.

Some of these changes will not be reflected in their entirety in the current valuation report, but will be captured in future reports as actuarial gains. For example, the Plan valuation contains no assumption on Payroll Deduction Agreements (PDAs), so the absence of interest charges in the past has been reflected as an actuarial loss. The change to 8% interest charges will end the losses and eventually reduce the total contribution rate by 0.15%.

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Explanation of Cost Reduction Initiatives

¹ASRS changed the basis for service purchases from the average normal cost rate to the actuarial present value rate. In this way, members who buy service pay the entire cost of their service purchases, and the purchases have no effect on contribution rates.

¹ASRS reduced the rate of interest credited on members' account balances from 8% to 4% as of July 1, 2005.

¹The 2001 addition to the Permanent Benefit Increase reserve was overstated in that year. ASRS corrected the reserve and thereby reduced the reserve committed to future Permanent Benefit Increase awards.

²Members can enter into Payroll Deduction Agreements to purchase service over time through payroll deduction. ASRS revised the method of calculating payments under these agreements to include 8% annual interest.

²ASRS members have been able to change the form of benefit they elect (e.g., joint & survivor to straight life) after they have begun to receive payments, and to do so as many times as they want whenever they want. By legislative action, this ability will be limited to a one-time election to change to a single life pension.

²Some ASRS employers have offered their employees incentives to retire early. These incentives can increase ASRS liabilities. By legislative action, future incentives will be funded by the employers who offer them.

²By legislative action, the modified Deferred Retirement Option Plan, which would have allowed members to earn as much as six years of service for three years of work, was rescinded.

²The legislature closed certain loopholes in the Long Term Disability program that allowed members to receive benefits for a longer period than intended.

²Legislation increased the offsets for Social Security income to 85% and extended the pre-existing condition period to six months.

²2008 Legislation exempts ASRS from unclaimed property procedures and allows ASRS to recapture assets abandoned after participant's age 73.5.

²2009 Legislation eliminated the 80% cap on benefits that had been in place since 2001.

²2009 Legislation requires a member to meet membership (20/20 Rule) in ASRS before contributing to a second employer, subject to a grandfathering clause.

²Upon withdrawal, members receive 25-100% of employer contributions depending on years of service. 2010 Legislation eliminates the return of employer contributions for members hired on or after July 1, 2011.

²Normal retirement can be achieved when a member's age + years of service equals 80 (points). 2010 Legislation requires members hired on or after July 1, 2011 to reach 85 points for normal retirement.

²Retirement benefits are calculated based on an average of the member's highest 36 months of salary in the 10 years prior to retirement. 2010 Legislation substitutes a 60 month average for members hired on or after July 1, 2011.

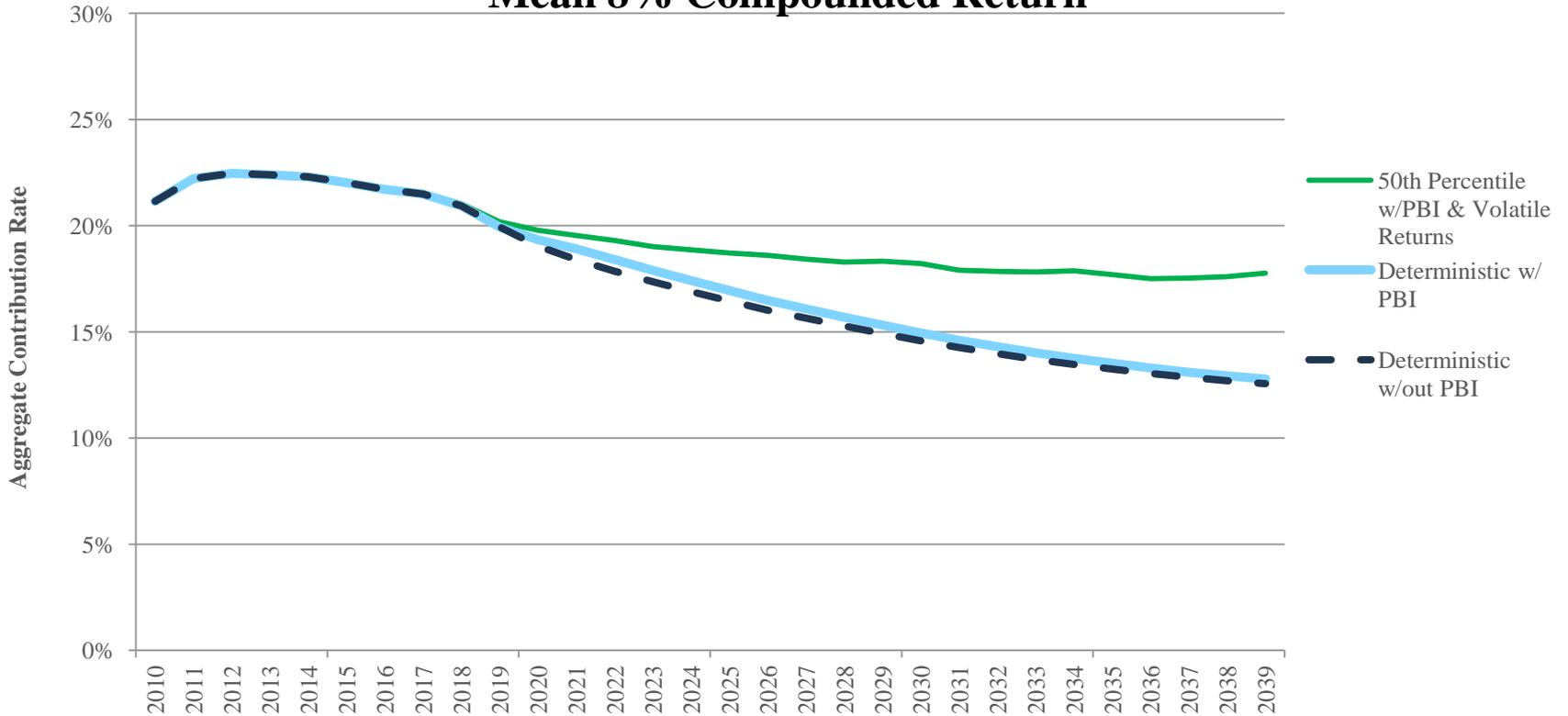


4. Fiscal Projections



Contribution Rates – Preliminary Estimates (June 30, 2011)

**Contribution Rates as a Percentage of Payroll Retirement Portion of Plan
Mean 8% Compounded Return**

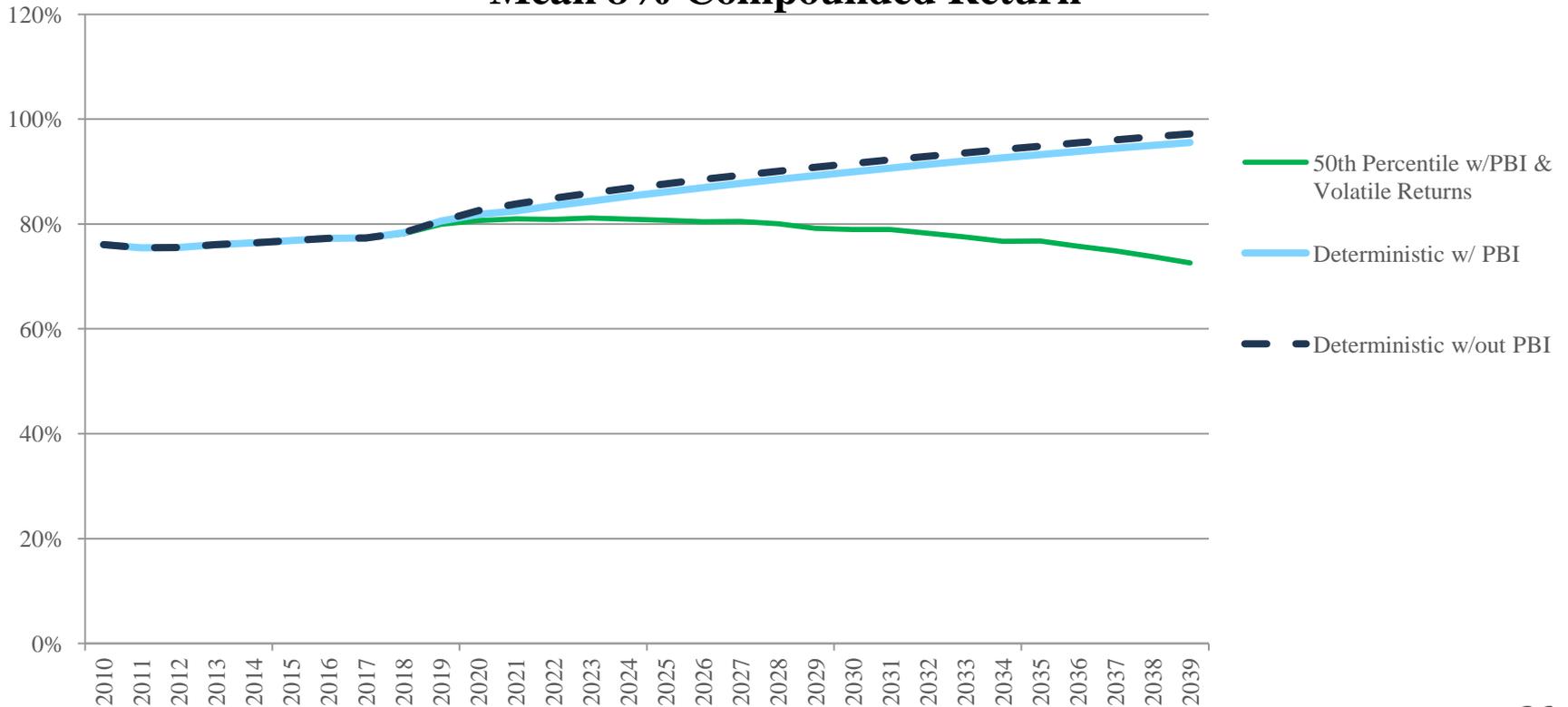


Based on June 30, 2010 member data and un-audited June 30, 2011 financial data.



Funded Status Projections - Preliminary Estimates (June 30, 2011)

Funded Status Based on Actuarial Value of Assets
Retirement Portion of Plan
Mean 8% Compounded Return



Based on June 30, 2010 member data and un-audited June 30, 2011 financial data.



Concerns with Permanent Benefit Increase

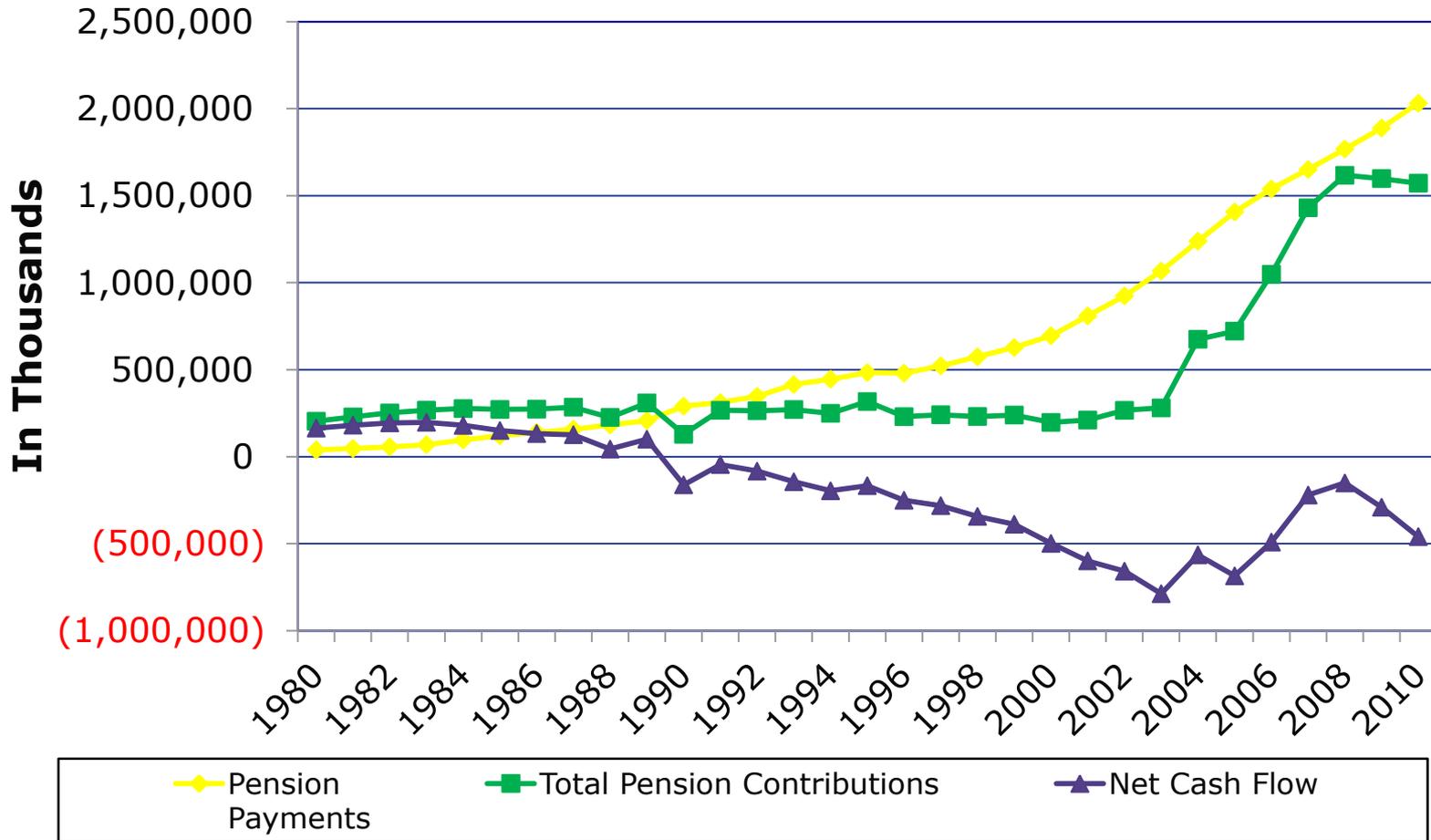
- Inequitable distribution**
- Distribution not determined by fiscal health of the trust, current contribution levels, or actual inflation**
- Cost of future payments is unknown and could be highly variable**



5. Additional Fiscal Information



Historical Pension Cash Flows

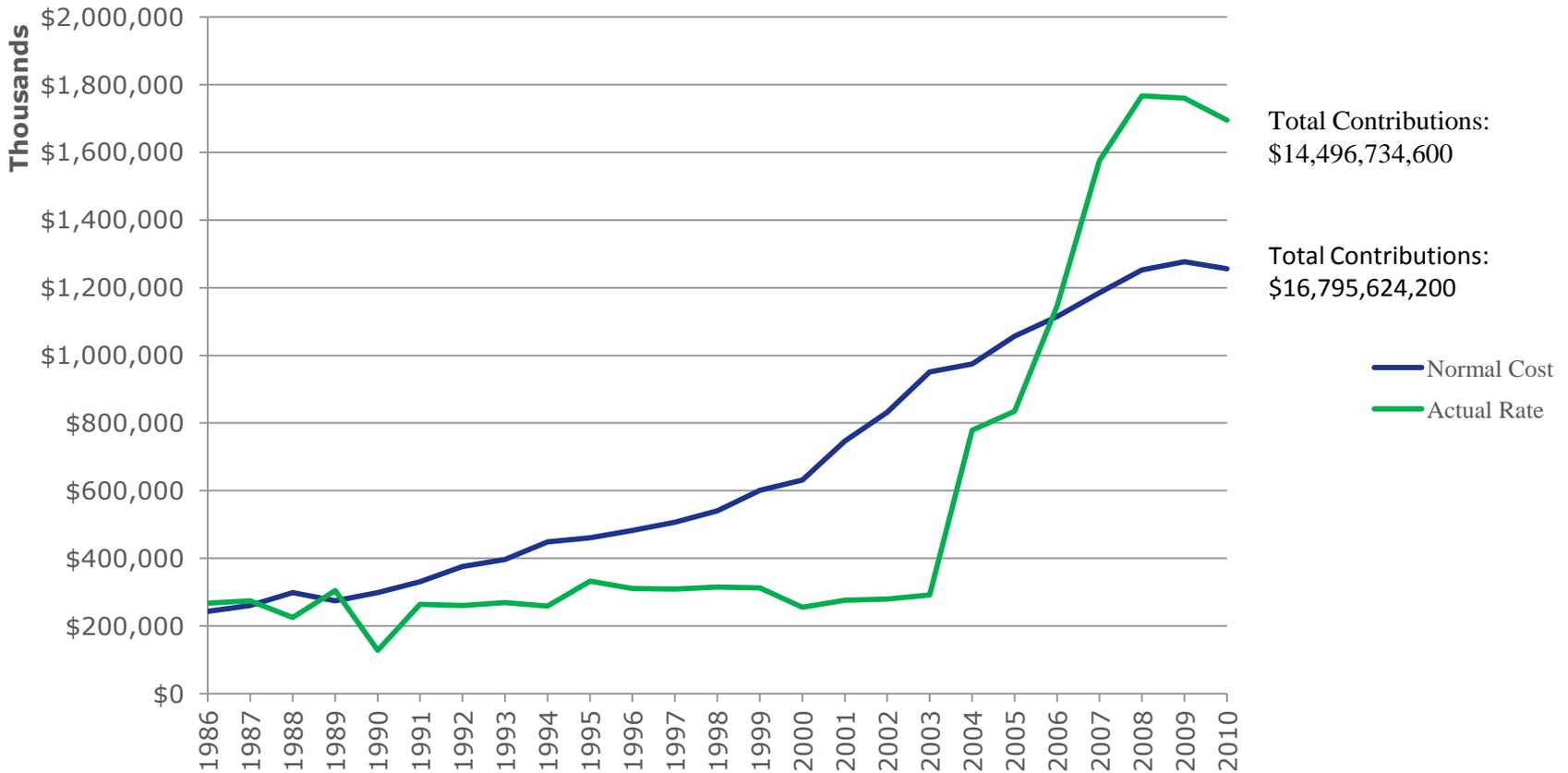


*Prior to 1996 Long-Term Disability contributions were a component of the Pension contributions



Historical Contributions

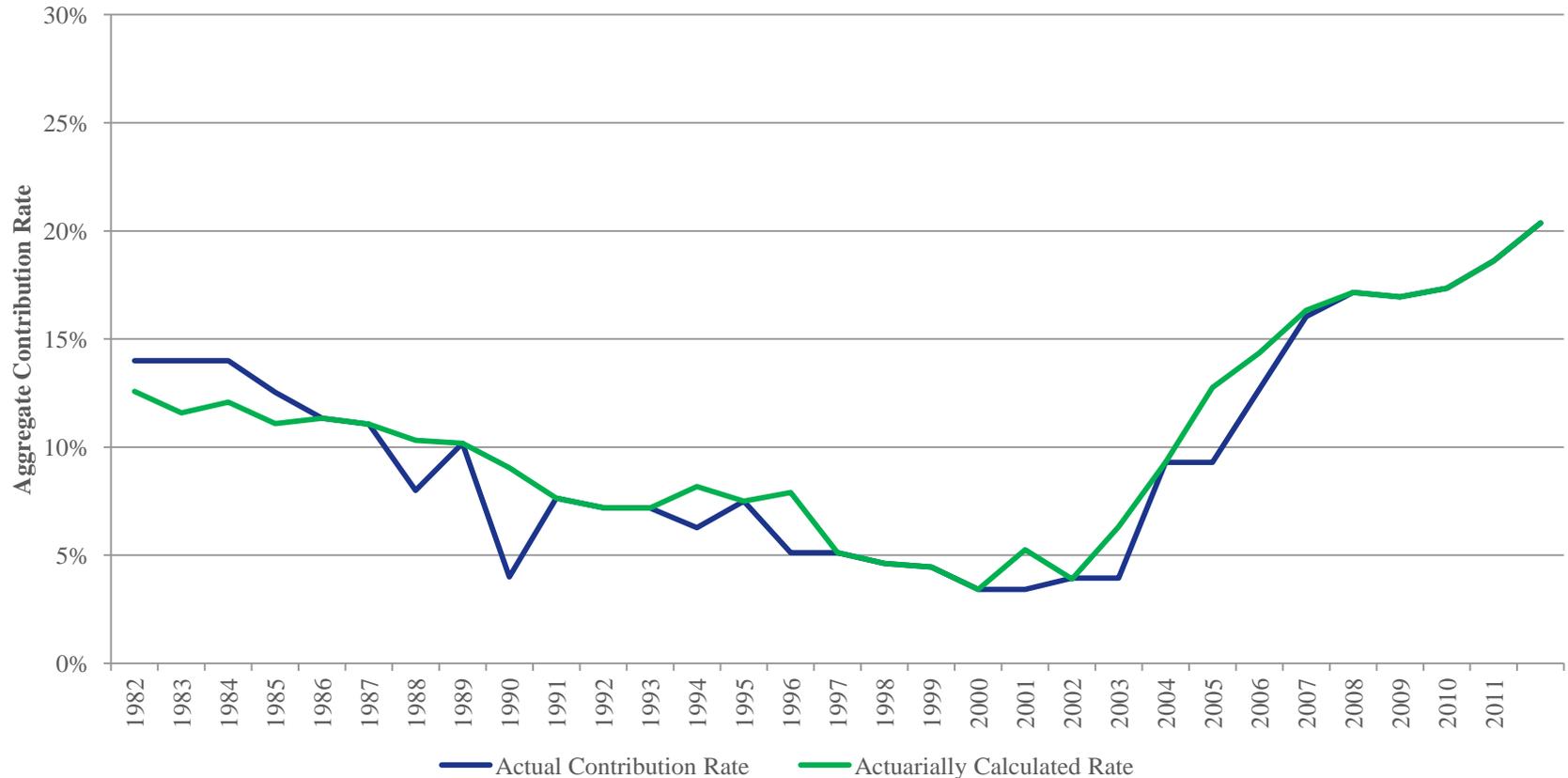
Historic Contributions





Historic Contribution Rates

Contribution Rates as a Percentage of Payroll
Penion Portion of the Plan

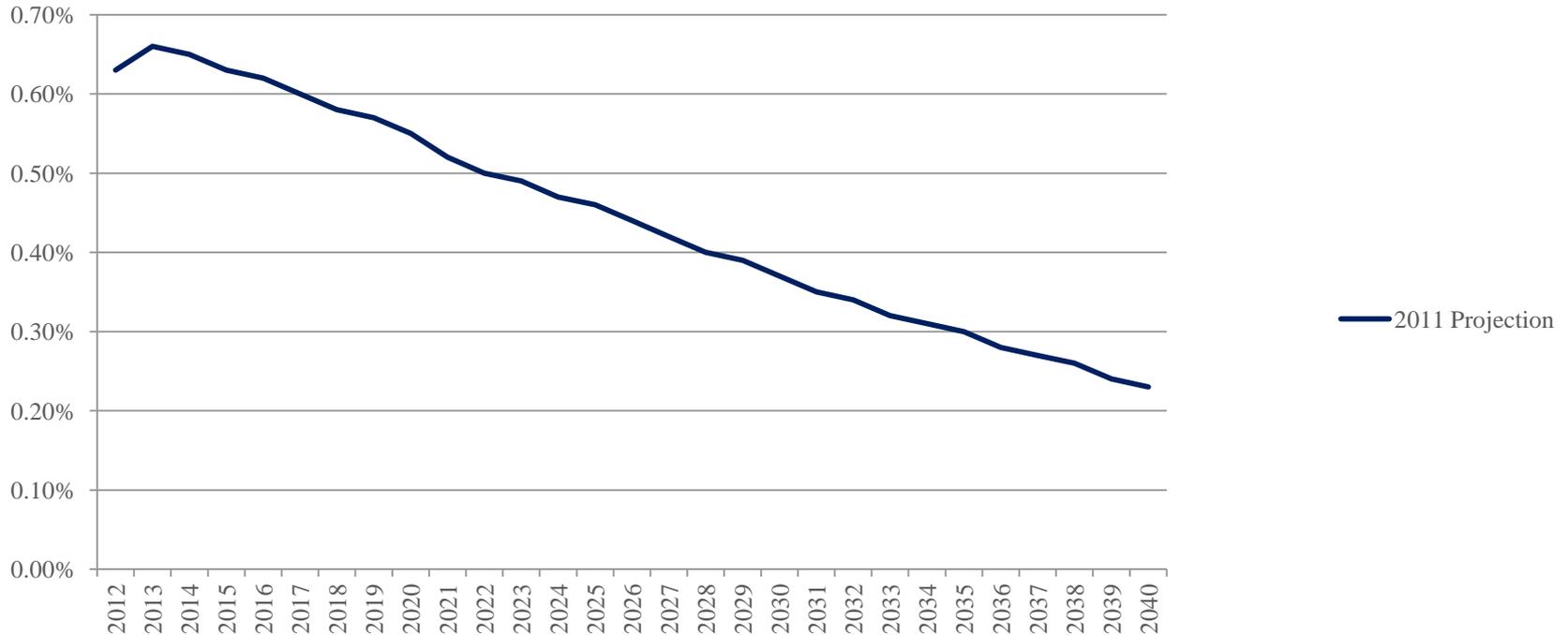


*Health Benefit Supplement contribution was a component of the Plan rate prior to 1997



Contribution Rates – Preliminary Estimates: Health Insurance (June 30, 2011)

Health Insurance Contribution Rate

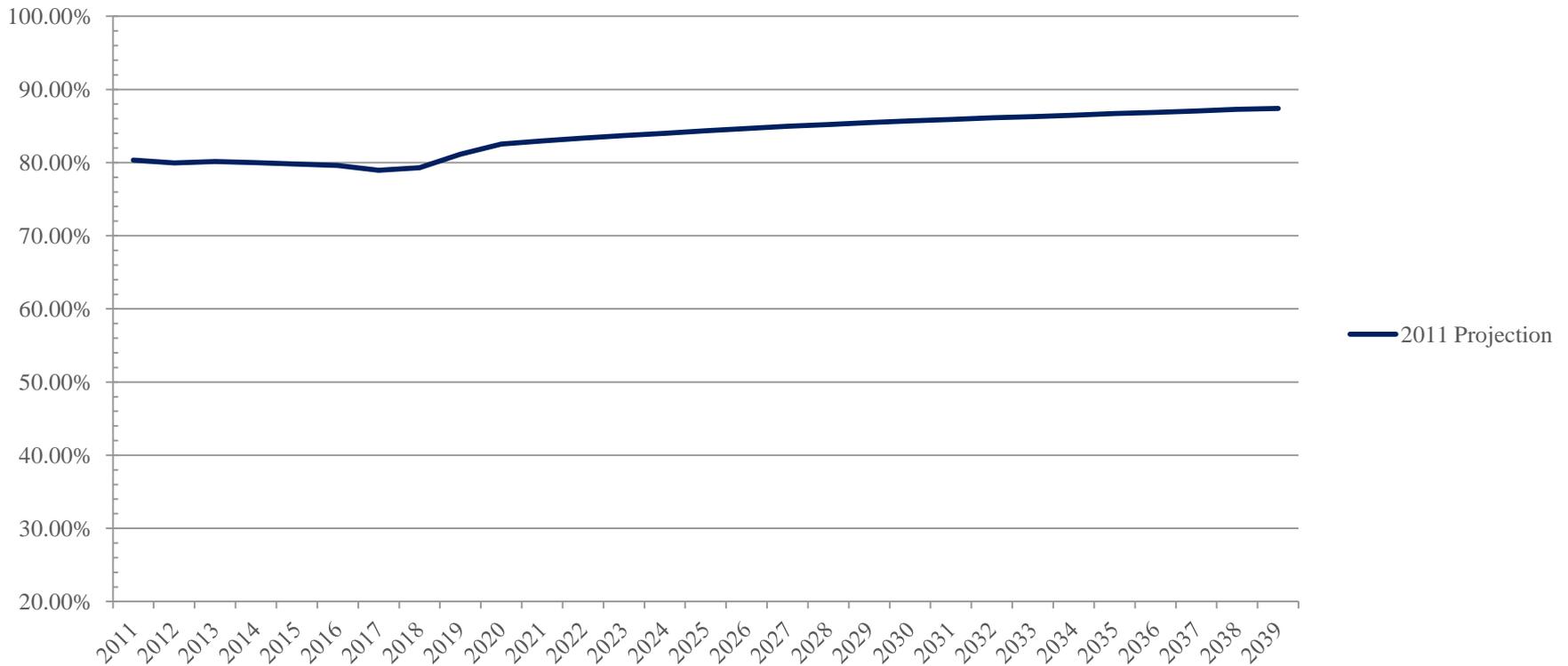


Based on June 30, 2010 member data and un-audited June 30, 2011 financial data.



Funded Status Projections Health Insurance- Preliminary Estimates (June 30, 2011)

Health Insurance Funded Status - Actuarial Value



Based on June 30, 2010 member data and un-audited June 30, 2011 financial data.



6. Investment Management



Investment Asset Allocation

Investment Category	Policy Target	Policy Range
U.S. Fixed Income	26%	16-36%
Core	24%	
High Yield	2%	
U.S. Equity	40%	30-50%
Large Cap	28%	
Mid Cap	6%	
Small Cap	6%	
International Equity	18%	8-28%
Developed Large Cap	13%	
Developed Small Cap	2%	
Emerging Markets	3%	
Private Equity	7%	5-9%
Real Estate	6%	4-8%
Inflation Linked Assets	3%	0-10%
Commodities	3%	0-5%
TIPS	0%	0-5%
Risk Parity	0%	0-5%
Absolute Return	0%	0-5%
Opportunistic	0%	0-10%
GTAA* (Included in allocation above)	10%	8-12%

Green: Denotes asset classes typically absent from DC investment options.



Investment Returns (June 30, 2011)

Annualized Rates of Return						
ASRS Total Fund	1 YR FYTD (6/30/2011)	2 Year	3 Year	5 Year	10 Year	Inception (7/1/1975)
Net of Investment Fees	24.6%	19.6%	5.2%	4.8%	5.2%	10.0%
Gross of Investment Fees	25.1%	20.0%	5.55	5.1%	5.5%	10.1%