

# PSERS' Investment Portfolio

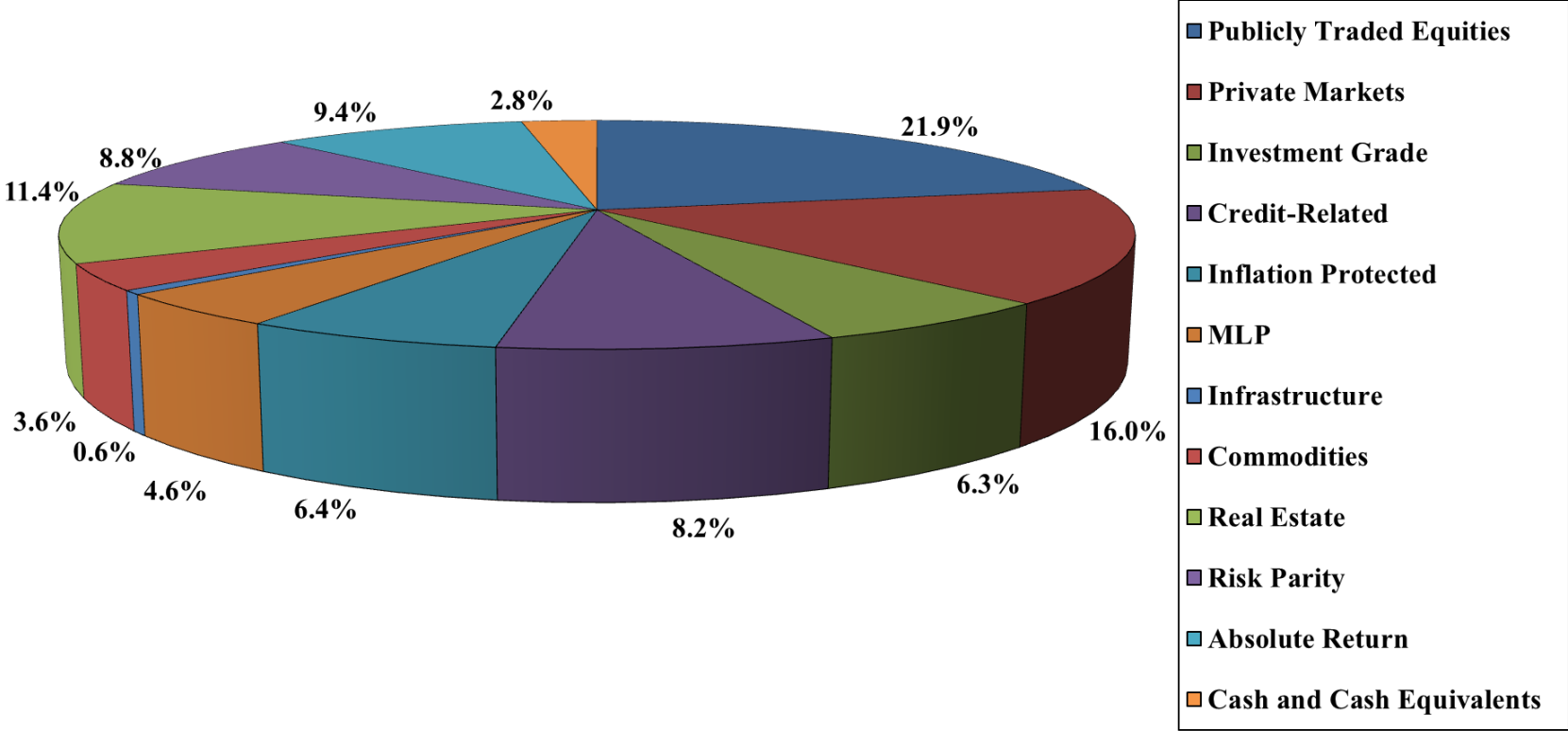
## Asset Allocation as of June 30, 2016 (Unaudited)

Asset Class	Market Value (in millions)	% of Total	Target Allocations	Policy Ranges
Publicly-Traded Global Equity	\$10,770.2	21.9%		
Private Markets	<u>\$7,892.7</u>	<u>16.0%</u>		
Total Equities	\$18,662.9	37.9%	37.50%	+/- 10.0%
Investment Grade	\$3,096.5	6.3%		
Credit-Related	\$4,045.8	8.2%		
Inflation Protected	<u>\$3,150.0</u>	<u>6.4%</u>		
Total Fixed Income	\$10,292.3	20.9%	20.00%	+/- 10.0%
Master Limited Partnership (MLP)	\$2,273.0	4.6%		
Infrastructure	\$276.7	0.6%		
Commodities	\$1,783.9	3.6%		
Real Estate	<u>\$5,607.8</u>	<u>11.4%</u>		
Total Real Assets	\$9,941.4	20.2%	21.00%	+/- 10.0%
Risk Parity	\$4,309.3	8.8%	8.50%	+/- 5.0%
Absolute Return	\$4,645.0	9.4%	10.00%	+/- 4.0%
Cash and Cash Equivalents*	<u>\$1,380.7</u>	<u>2.8%</u>	<u>3.00%</u>	
<b>TOTAL INVESTMENT PORTFOLIO</b>	<b>\$49,231.6</b>	<b>100.0%</b>	<b>100.00%</b>	
Net Other Assets and Liabilities	<u>\$919.0</u>			
<b>PSERS TOTAL NET ASSETS</b>	<b><u>\$50,150.6</u></b>			

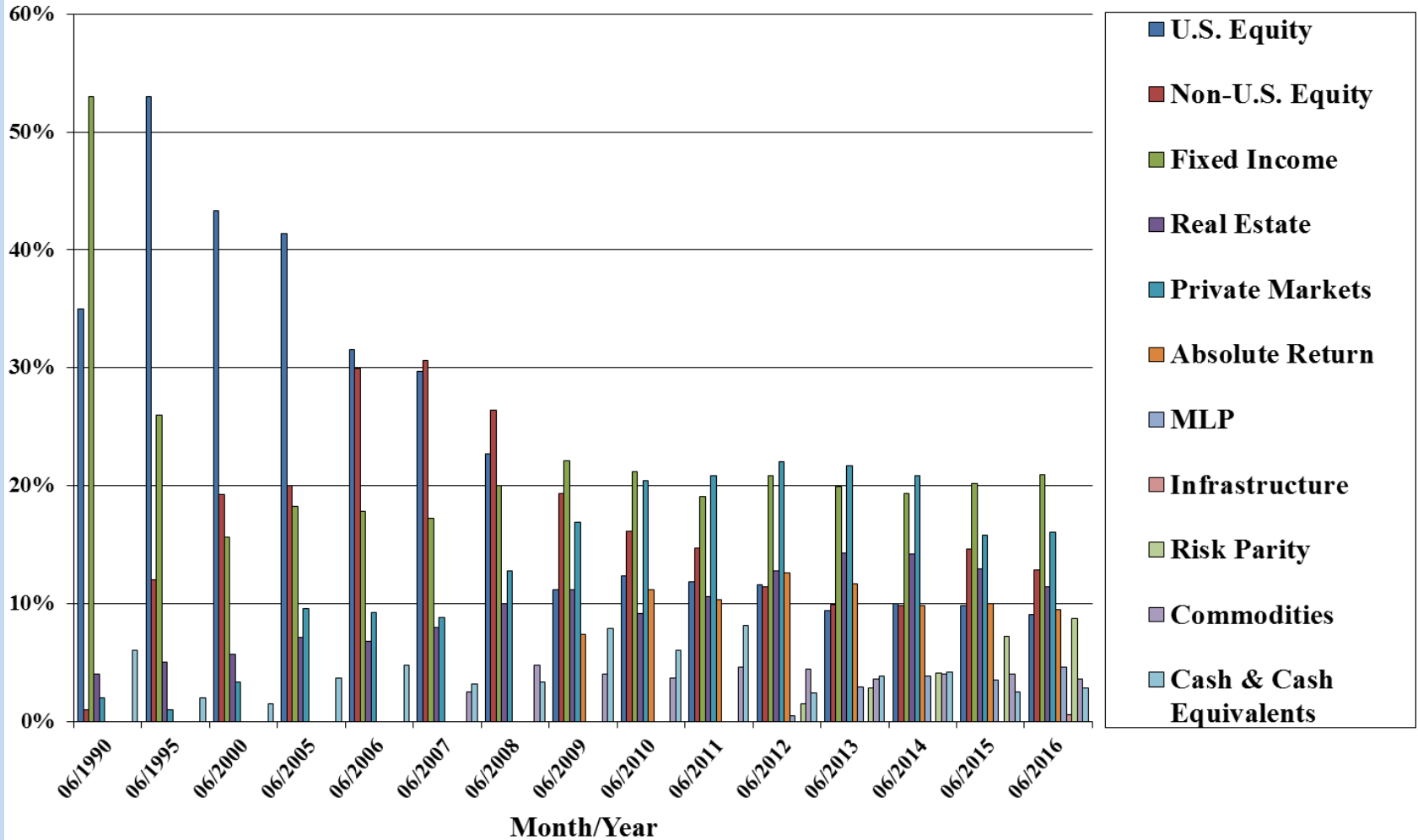
\* - includes Cash, Cash Equivalents, and net asset value accounting adjustments

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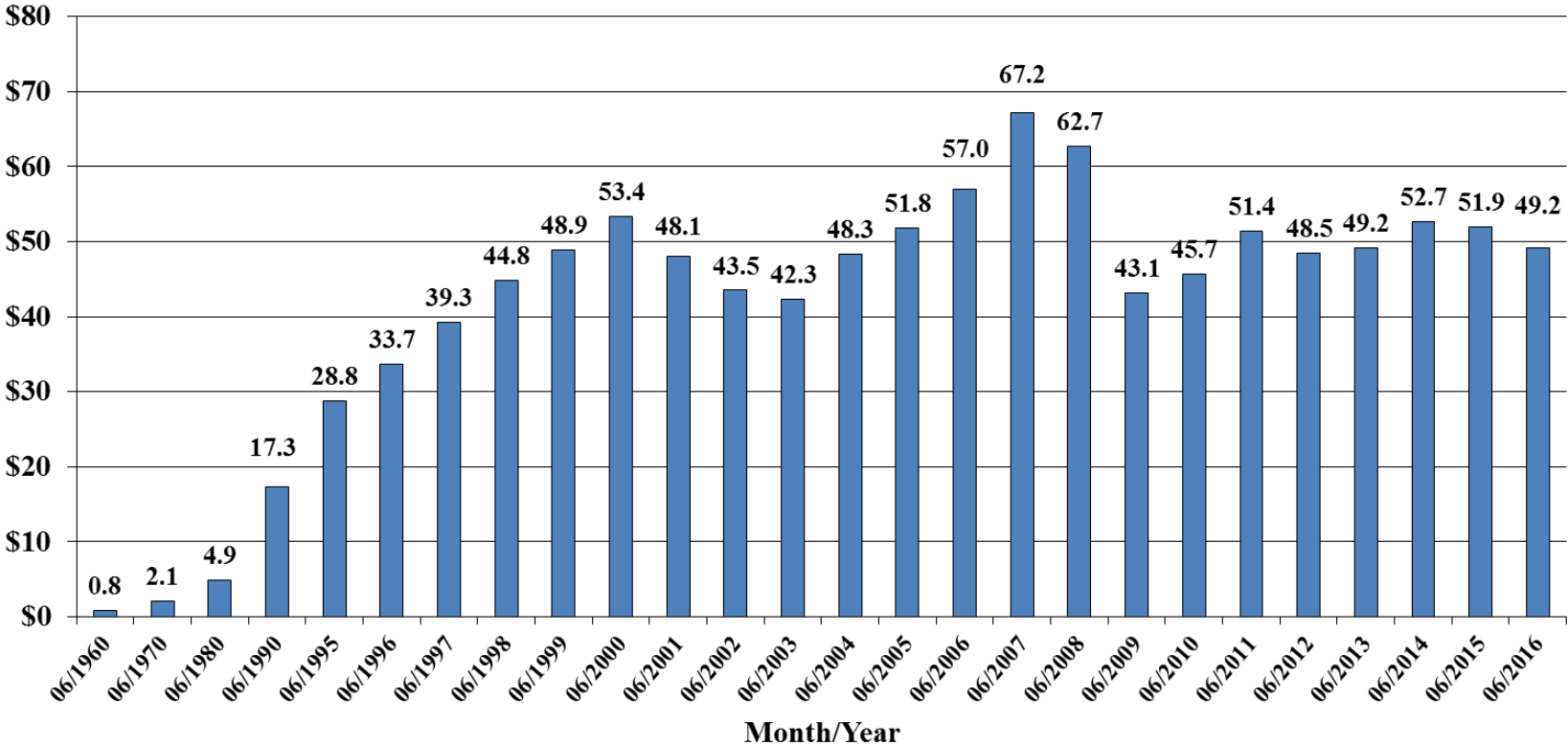
## Asset Allocation as of June 30, 2016 (Unaudited)



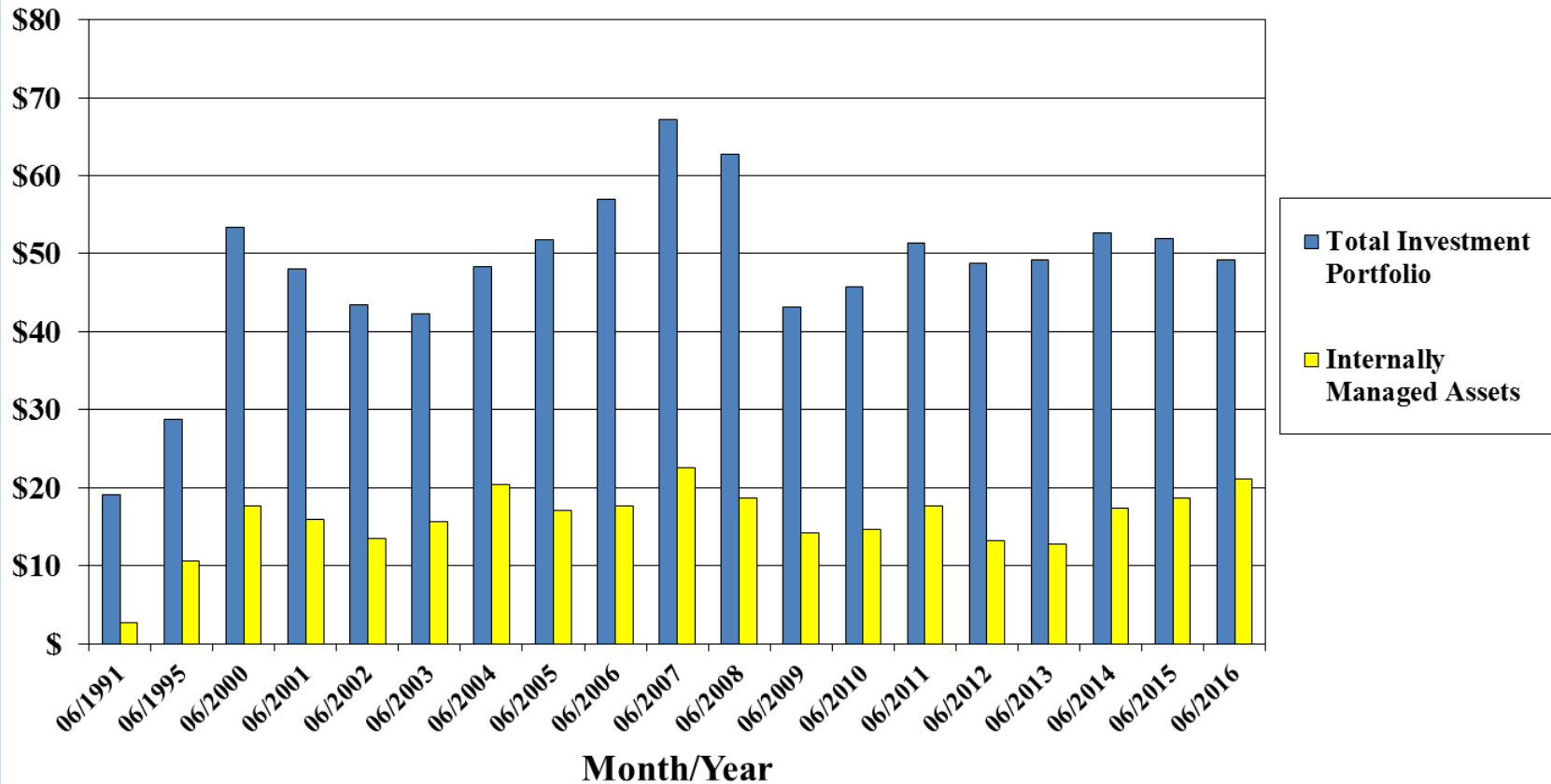
# PSERS' Historical Asset Allocation



# PSERS' Investment Portfolio Total Market Value (in billions)



# PSERS' Investment Portfolio Internally Managed Assets (in billions)



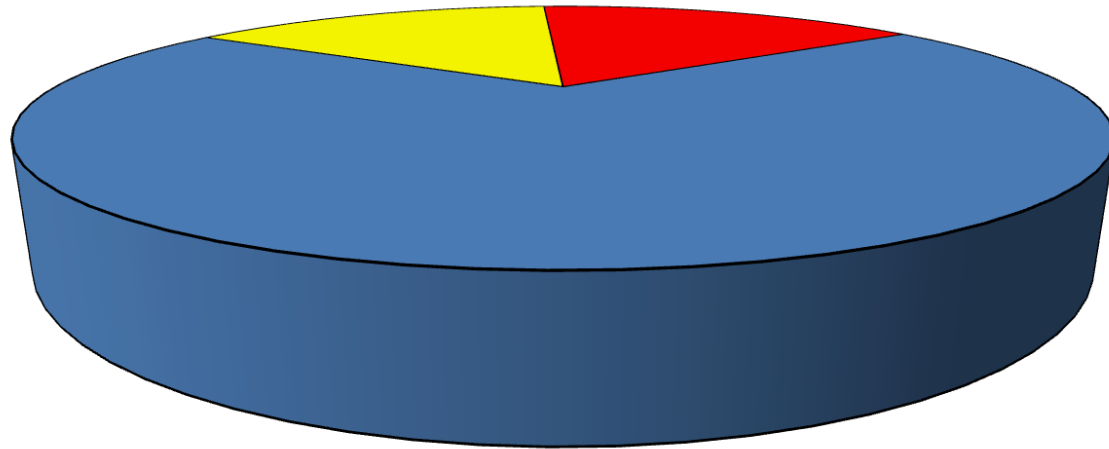
## PSERS' Summary Statements of Changes in Plan Net Assets For the Fiscal Years Ended June 30, 2015, 2014, and 2013

Additions:	2015 (\$ in millions)	2014 (\$ in millions)	2013 (\$ in millions)
• Member Contributions	985	967	991
• Employer Contributions	2,597	1,992	1,446
• Net Investment Income	1,328	7,098	4,126
<b>Total Additions</b>	<b>4,910</b>	<b>10,057</b>	<b>6,563</b>
Deductions:			
• Pension Benefits	6,221	6,053	6,044
• Administrative Expenses	42	39	37
<b>Total Deductions</b>	<b>6,263</b>	<b>6,092</b>	<b>6,081</b>
<b>Net Increase/(Decrease) in Plan Net Assets</b>	<b>(1,353)</b>	<b>3,965</b>	<b>482</b>

## PSERS' Sources of Funding 20 Year History (1996 to 2015)

Employee Contributions  
\$15.4 Billion (15.3% of Total)

Employer Contributions  
\$16.3 Billion (16.1% of Total)



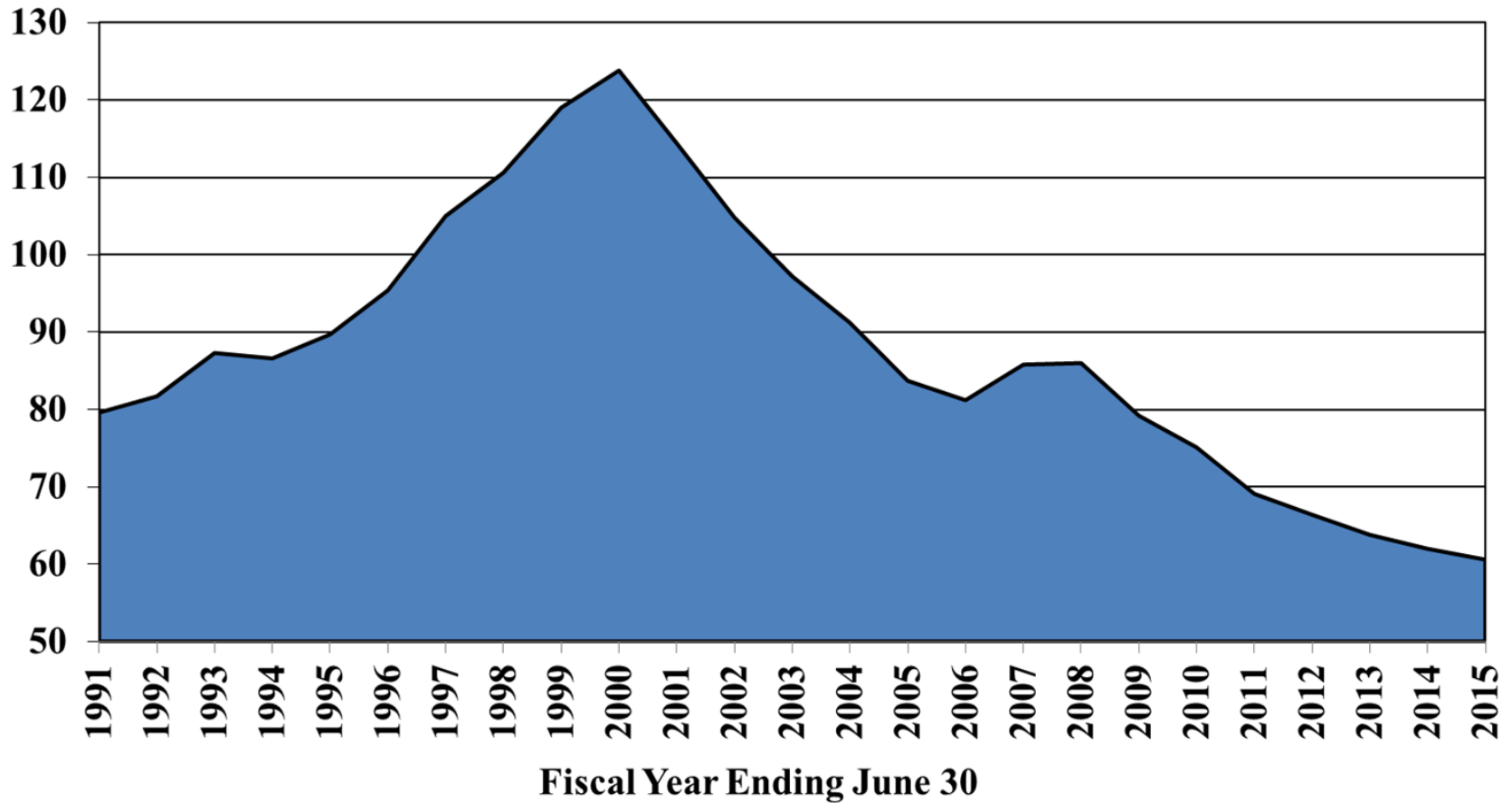
Investment Earnings  
\$69.3 Billion (68.6% of Total)

## PSERS' Funded Ratio – 1991 to 2015 (in millions)

FY Ending June 30	Accrued Liability (\$)	Valuation Assets (\$)	Unfunded (Overfunded) Accrued Liability (\$)	Funded Ratio (%)
2015	94,698	57,362	37,336	60.6
2014	92,465	57,344	35,121	62.0
2013	90,052	57,454	32,598	63.8
2012	87,854	58,321	29,533	66.4
2011	85,752	59,252	26,500	69.1
2010	79,122	59,424	19,698	75.1
2009	75,626	59,887	15,739	79.2
2008	70,941	61,018	9,923	86.0
2007	66,593	57,155	9,438	85.8
2006	64,720	52,558	12,162	81.2
2005	61,226	51,219	10,007	83.7
2004	57,124	52,095	5,029	91.2
2003	54,443	52,900	1,543	97.2
2002	51,796	54,296	(2,500)	104.8
2001	47,917	54,830	(6,913)	114.4
2000	39,823	49,293	(9,470)	123.8
1999	37,499	44,606	(7,107)	119.0
1998	36,136	39,969	(3,833)	110.6
1997	33,210	34,873	(1,663)	105.0
1996	31,630	30,171	1,459	95.4
1995	30,073	26,971	3,102	89.7
1994	28,348	24,552	3,796	86.6
1993	25,947	22,644	3,303	87.3
1992	24,570	20,068	4,502	81.7
1991	22,574	17,962	4,612	79.6



## PSERS' Funded Ratio – 1991 to 2015 (percentage)

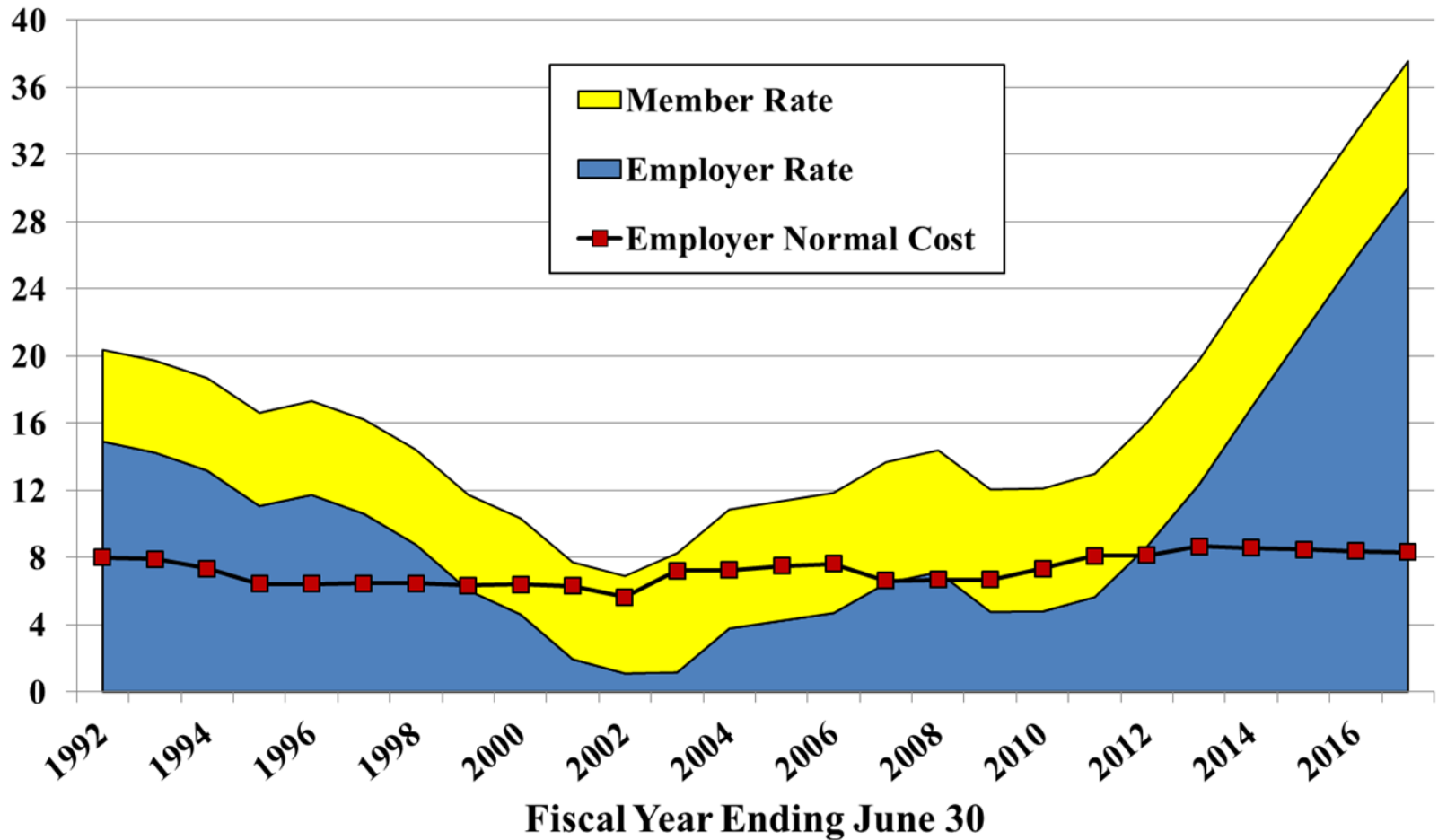


## Total Contribution Rates Since 1991-92

<b>Fiscal Year</b>	<b>Employer Rate (%)*</b>	<b>Member Rate (%)</b>	<b>Total Contribution Rate (%)</b>
2016-17	30.03	7.52	37.55
2015-16	25.84	7.49	33.33
2014-15	21.40	7.46	28.86
2013-14	16.93	7.43	24.36
2012-13	12.36	7.40	19.76
2011-12	8.65	7.37	16.02
2010-11	5.64	7.34	12.98
2009-10	4.78	7.32	12.10
2008-09	4.76	7.29	12.05
2007-08	7.13	7.25	14.38
2006-07	6.46	7.21	13.67
2005-06	4.69	7.16	11.85
2004-05	4.23	7.12	11.35
2003-04	3.77	7.08	10.85
2002-03	1.15	7.10	8.25
2001-02	1.09	6.43	7.52
2000-01	1.94	5.77	7.71
1999-2000	4.61	5.72	10.33
1998-99	6.04	5.69	11.73
1997-98	8.76	5.65	14.41
1996-97	10.60	5.62	16.22
1995-96	11.72	5.59	17.31
1994-95	11.06	5.55	16.61
1993-94	13.17	5.51	18.68
1992-93	14.24	5.48	19.72
1991-92	14.90	5.46	20.36

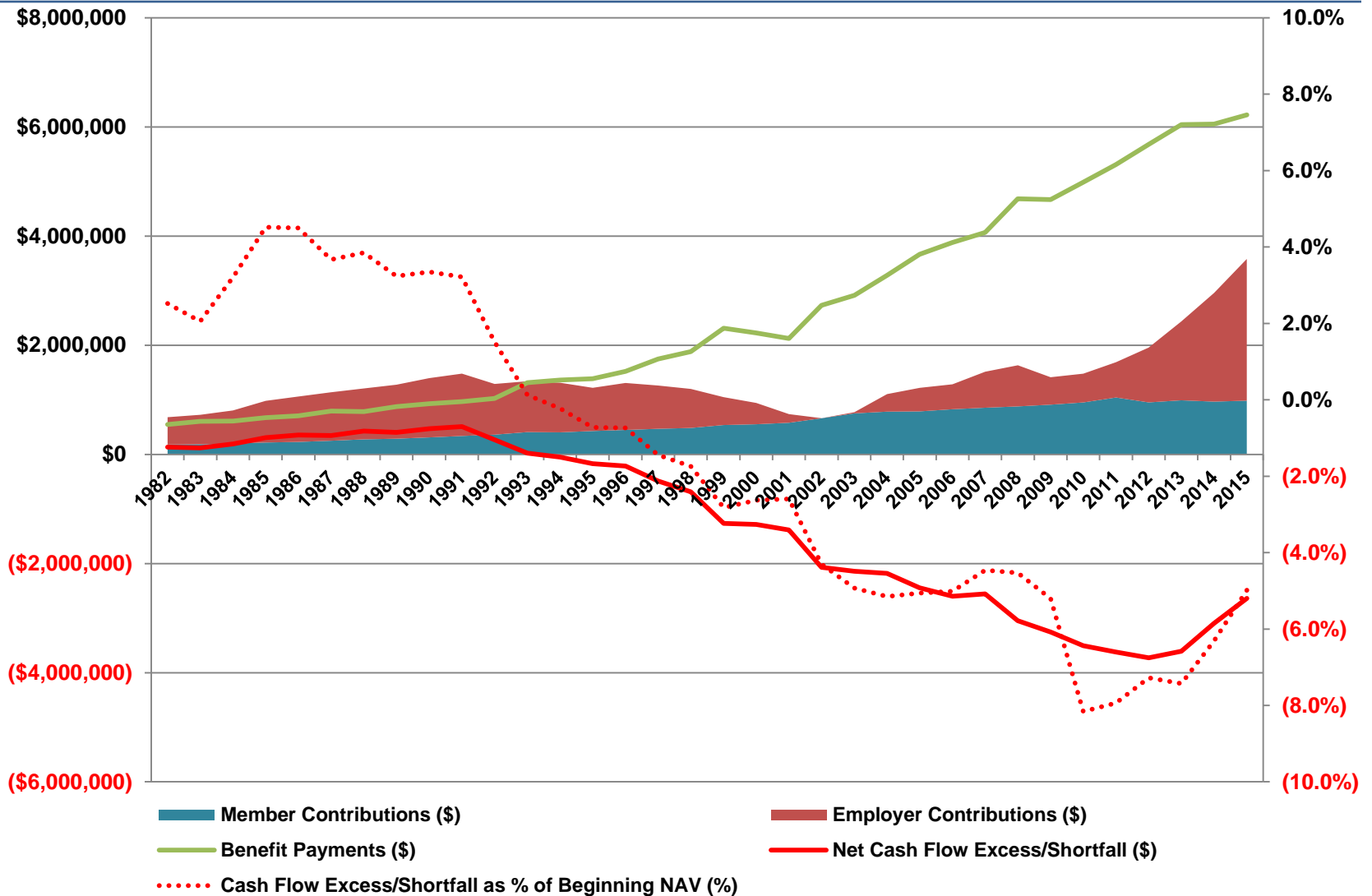
\* NOTE - The 2010-11 Employer Rate reflects the 5.64% rate prescribed by Act 2010-46 which supercedes the 8.22% rate prescribed in the June 30, 2009 actuarial valuation prepared by Buck Consultants. The 2011-12 Employer Rate reflects the funding provisions of HB 2497. The years 2012-13 through 2016-17 Employer Rates reflect the funding provisions of Act 120.

# History of Member and Employer Contribution Rates Since 1991-92



NOTE - The 2010-11 Employer Rate reflects the 5.64% rate prescribed by Act 2010-46 which supersedes the 8.22% rate prescribed in the June 30, 2009 actuarial valuation prepared by Buck Consultants. The 2011-12 Employer Rate reflects the funding provisions of HB 2497. The years 2012-13 through 2016-17 Employer Rates reflect the funding provisions of Act 120.

# PSERS Annual Cash Flows History – Since 1982 (000's)



# PSERS Annual Cash Flows History – Since 2001 (000's)

