

CalPERS Trust Level Review

Trust Summary: Public Employees' Retirement Fund (PERF)



June 30, 2016

Investment Belief 6: Strategic asset allocation is the dominant determinant of portfolio risk and return. CalPERS strategic asset allocation process transforms the fund's targeted rate of return to the market exposures that staff will manage. CalPERS will aim to diversify its overall portfolio across distinct risk factors and return drivers.

PERF Objective

CalPERS' general investment goals are broad in nature. The overall objective of CalPERS' investment program is to provide members and beneficiaries with benefits as required by law. CalPERS has generated strong long-term returns by effectively managing investments to achieve the highest possible return at an acceptable level of risk. The CalPERS portfolio is diversified into several asset classes. A well-diversified portfolio helps reduce investment risk to the extent that losses in one area may be offset by gains in another.

The starting point and most important element of CalPERS' investment is our asset allocation - our diversification among stocks, bonds, cash and other investments. Asset allocation is not an asset-only or liability-only decision. All factors, including liabilities, benefit payments, operating expenses, and employer and member contributions are taken into account in determining the appropriate asset allocation mix. Our goal is to maximize returns at a prudent level of risk - an ever-changing balancing act between market volatility and long-term goals.

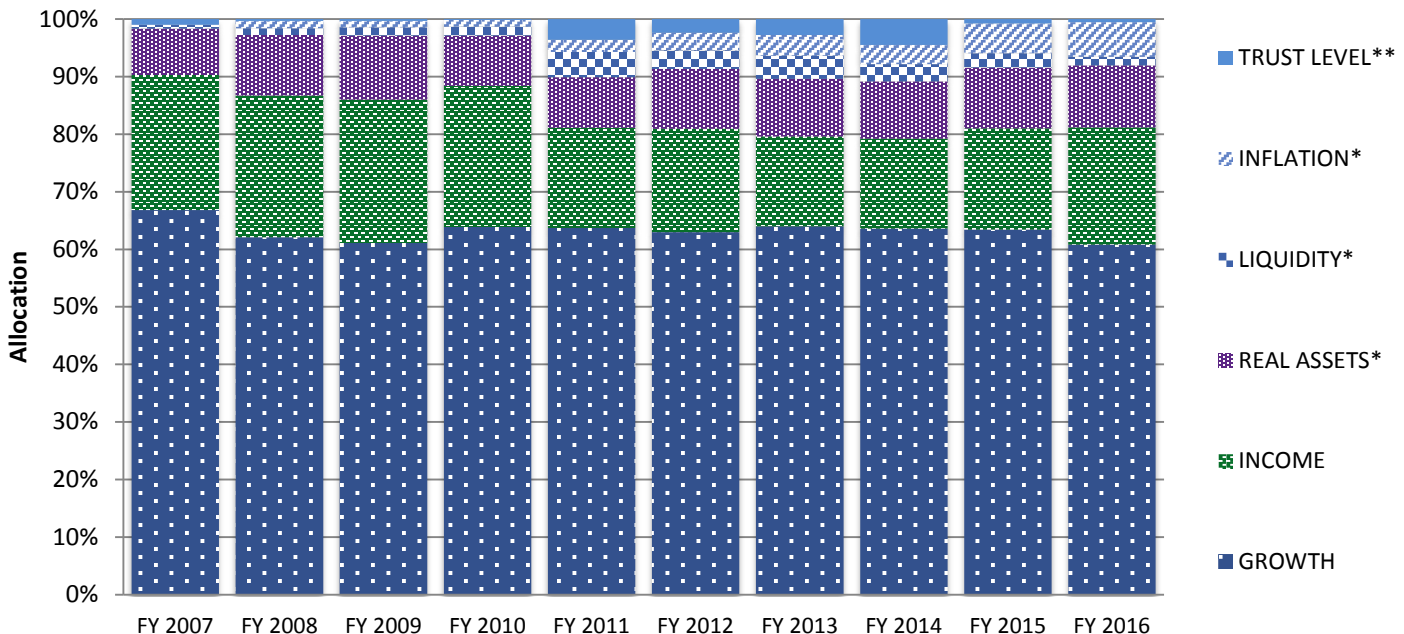
PERF Characteristics

Chief Investment Officer: Theodore Eliopoulos

Assets: \$295.1 Billion

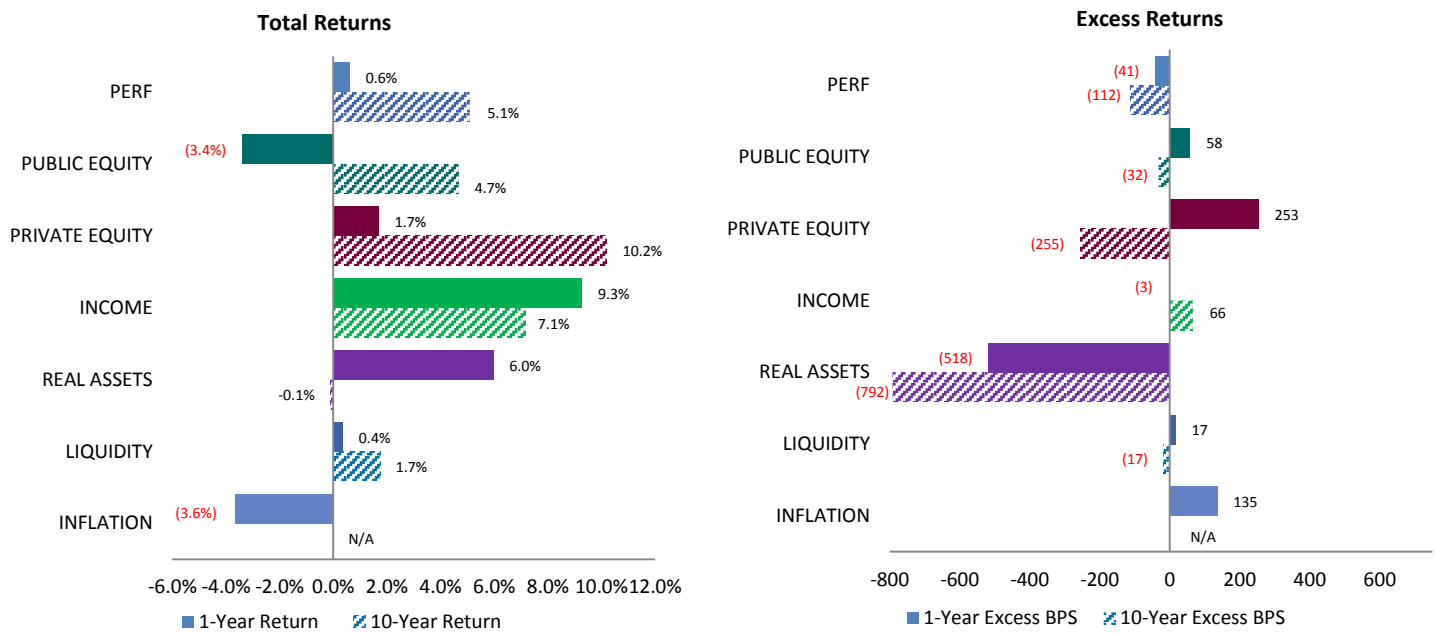
- Investments span domestic and international markets
- Invest ~9% of CalPERS' total assets in California
- Utilize multiple asset classes to diversify investments
 - Global Equity
 - Private Equity
 - Income
 - Liquidity
 - Inflation Assets
 - Real Assets

Actual Asset Allocation



* Inflation, Liquidity and Real Assets were created on July 1, 2011 from existing portfolios; therefore historical values are being represented for prior years.

** Trust Level includes Absolute Return Strategies (ARS), Multi-Asset Class (MAC), and Overlay, Transition and Plan Level Portfolios

PERF PERFORMANCE**PERF Attribution****Total Fund Attribution: For the Year Ending June 30, 2016**

	Average Weight %	Returns %			Contribution to Plan Excess (bps) ¹
		Total Return	Benchmark Return	Excess Return	
Total Excess Return (bps)					(41)
Program Contributions*					3
PUBLIC EQUITY	52.9%	-3.4%	-4.0%	0.6%	31
PRIVATE EQUITY	9.5%	1.7%	-0.8%	2.5%	19
INCOME	19.4%	9.3%	9.3%	0.0%	1
REAL ESTATE	9.2%	7.1%	12.6%	-5.6%	(49)
FORESTLAND	0.7%	-9.6%	2.9%	-12.5%	(10)
INFRASTRUCTURE	0.8%	9.0%	5.0%	4.0%	3
INFLATION	5.3%	-3.6%	-5.0%	1.4%	7
OTHER					1
Allocation Impact*					(20)
Private Asset Class "Proxy" Shortfall²					(21)
Other/Residual					(3)

¹ Contribution figures are calculated on monthly basis and aggregated over the respective period.

² Impact of not obtaining full desired interim policy exposure to private asset classes and proxying these with public assets. Includes the impact of lagged reporting of private asset benchmarks relative to current month reporting of public proxies.

* Contribution from MAC and ARS Programs are included in Allocation Impact

CalPERS Trust Level Review

Trust Summary: Judges' Retirement System II Fund (JRF II)



June 30, 2016

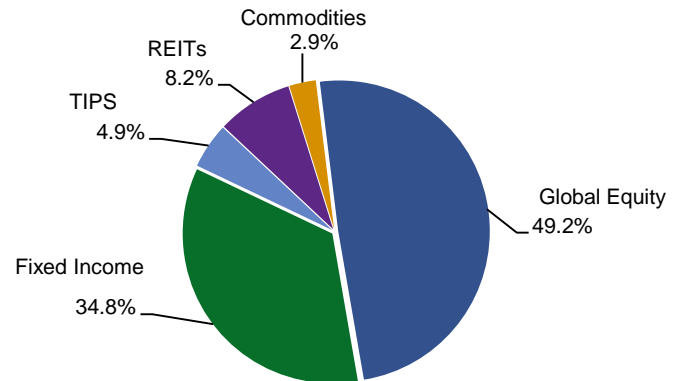
STRATEGIC ASSET ALLOCATION

JRF II Objective

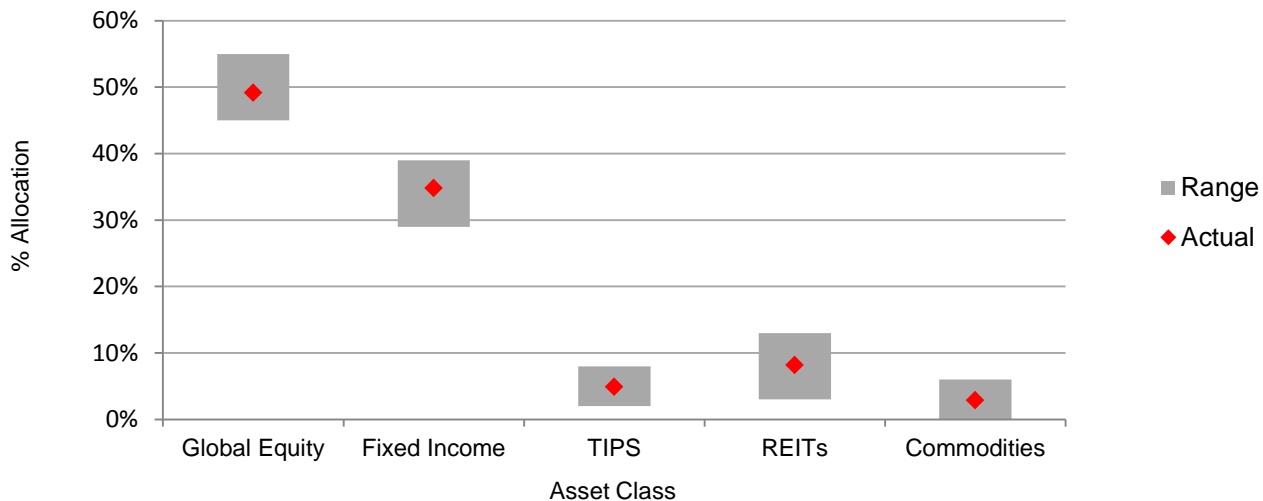
The JRF II was established to provide retirement, death, health and disability benefits for State Supreme and Appellate Court justices, Superior Court judges, and Municipal Court judges appointed or elected on or after November 9, 1994. Funds are allocated across five asset classes, with global equities comprising the predominant share of invested assets.

The Fund is actively managed by CalPERS staff.

Actual Capital Allocation



Strategic Allocation Target Ranges



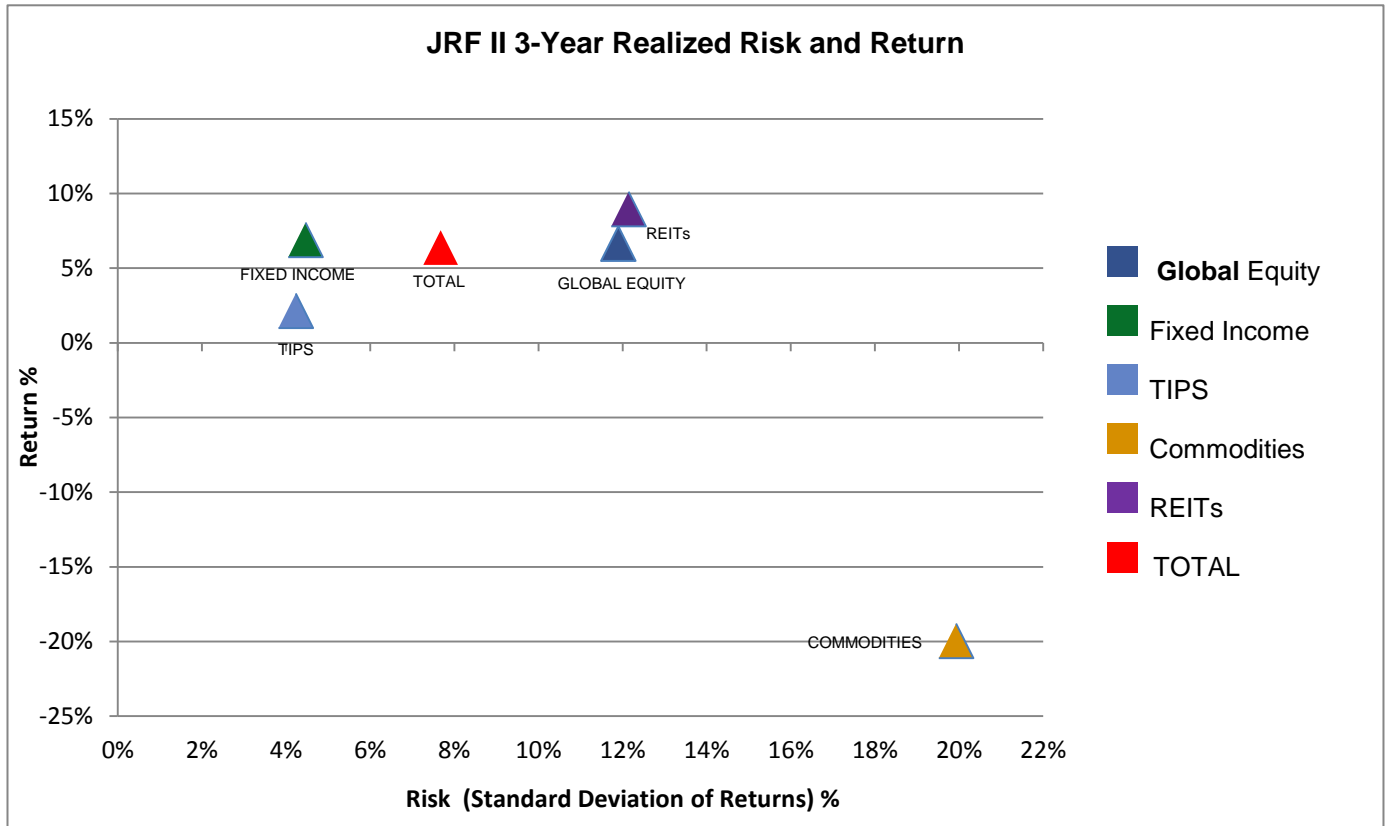
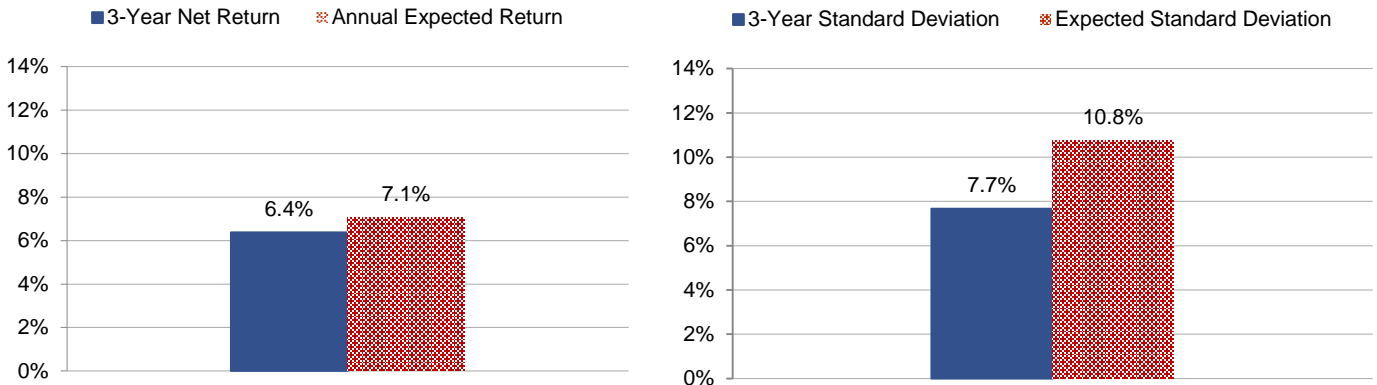
JRF II ASSET ALLOCATION	Current Allocation (%)	Target Allocation (%)	Variance (%)	Current Allocation (millions)	Target Allocation (millions)	Dollar Variance (millions)
Global Equity	49.2%	50.0%	-0.8%	\$ 569.1	\$ 578.3	\$ (9.2)
US Fixed Income	34.8%	34.0%	0.8%	\$ 402.7	\$ 393.2	\$ 9.5
TIPS	4.9%	5.0%	-0.1%	\$ 56.9	\$ 57.8	\$ (0.9)
REITs	8.2%	8.0%	0.2%	\$ 94.5	\$ 92.5	\$ 2.0
Commodities	2.9%	3.0%	-0.1%	\$ 33.4	\$ 34.7	\$ (1.3)
Cash	0.0%	0.0%	0.0%	\$ 0.0	\$ -	\$ 0.0
Total	100.0%	100.0%	0.0%	\$ 1,156.6	\$ 1,156.6	\$ (0.0)

Policy asset allocation targets were approved by the Investment Committee on October 13, 2014.

JRF II RISK AND RETURN

Asset Liability Management Expectations

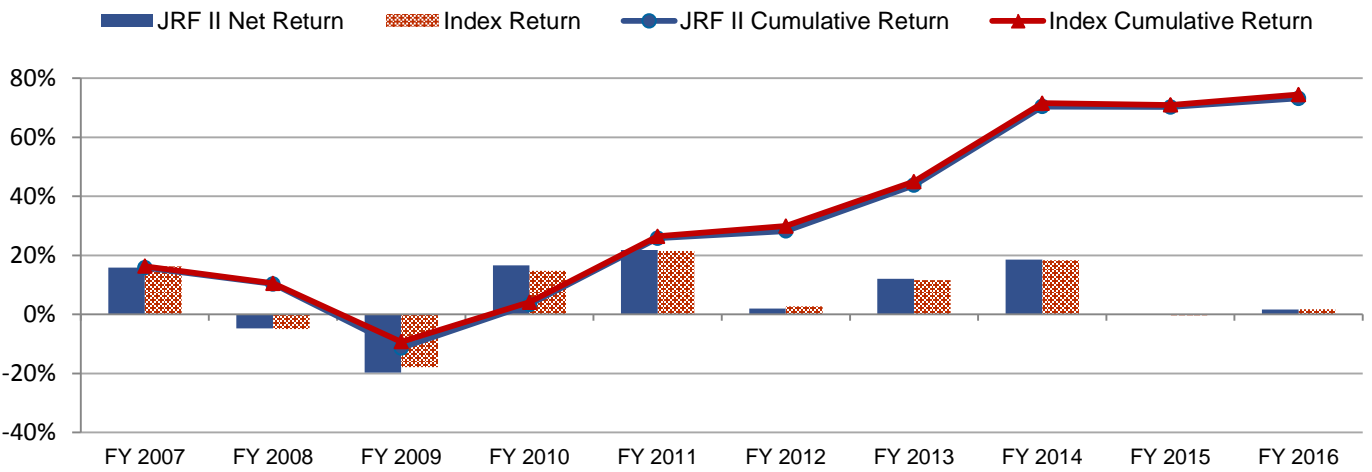
Per the current CalPERS Judges' Retirement System II Fund Statement of Investment Policy.



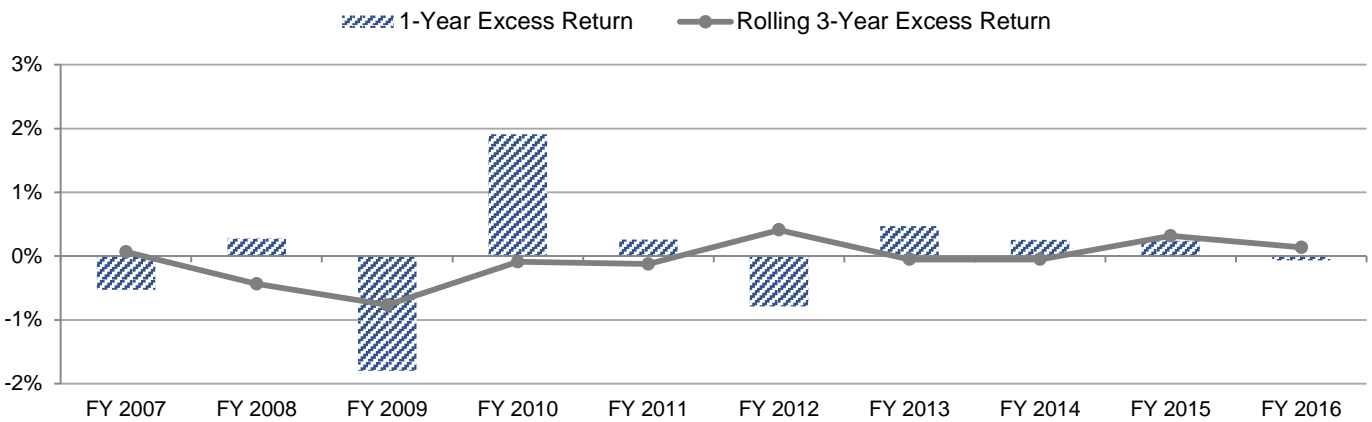
JRF II PERFORMANCE SUMMARY

As of	1 - YEAR			3 - YEAR			5 - YEAR			10 - YEAR			
	06/30/16	Net Returns	Benchmark Return	Excess Bps	Net Returns	Benchmark Return	Excess Bps	Net Returns	Benchmark Return	Excess Bps	Net Returns	Benchmark Return	Excess Bps
GLOBAL EQUITY		(3.83)	(3.97)	14	6.63	6.54	9	6.13	6.06	7	4.47	4.41	5
FIXED INCOME		9.65	9.58	7	6.90	6.16	73	6.55	6.01	55	7.32	6.84	48
TIPS		4.31	4.35	(4)	2.15	2.31	(16)	-	-	-	-	-	-
REITs		12.48	12.57	(9)	8.96	8.94	2	8.59	8.62	(4)	3.41	3.10	31
COMMODITIES		(25.45)	(26.08)	64	(19.96)	(19.81)	(15)	-	-	-	-	-	-
JRF II FUND		1.65	1.72	(7)	6.38	6.25	14	6.59	6.58	1	5.64	5.69	(5)

JRF II CUMULATIVE RETURNS



JRF II 1-YEAR EXCESS AND ROLLING 3-YEAR EXCESS RETURNS



CalPERS Trust Level Review

Trust Summary: Legislators' Retirement System Fund (LRF)



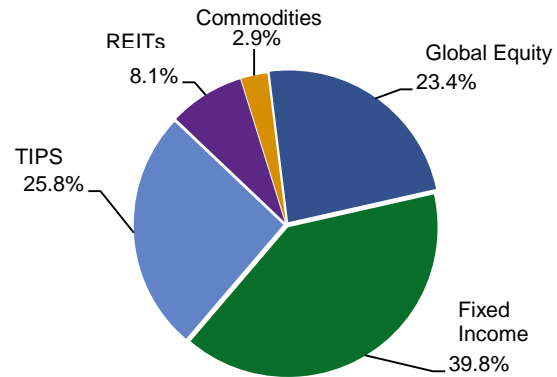
June 30, 2016

STRATEGIC ASSET ALLOCATION

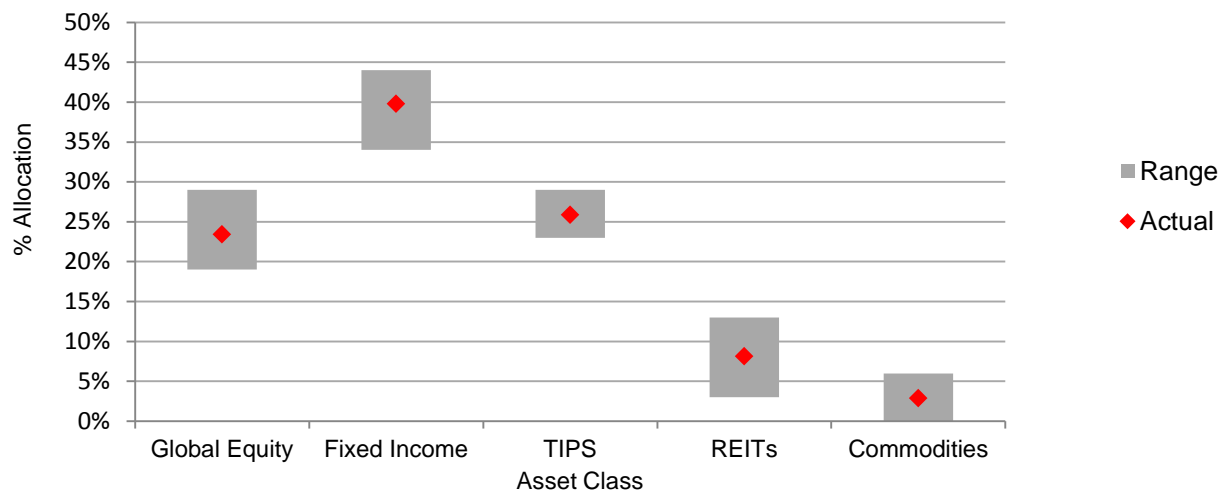
LRF Fund Objective

The Legislators' Retirement System Fund is a supplemental income plan that was available to members of the California Legislature serving prior to November 7, 1990; all elected constitutional officers; and legislative statutory officers. Funds are allocated across five asset classes under a fairly balanced investment strategy.

Actual Capital Allocation



Strategic Allocation Target Ranges



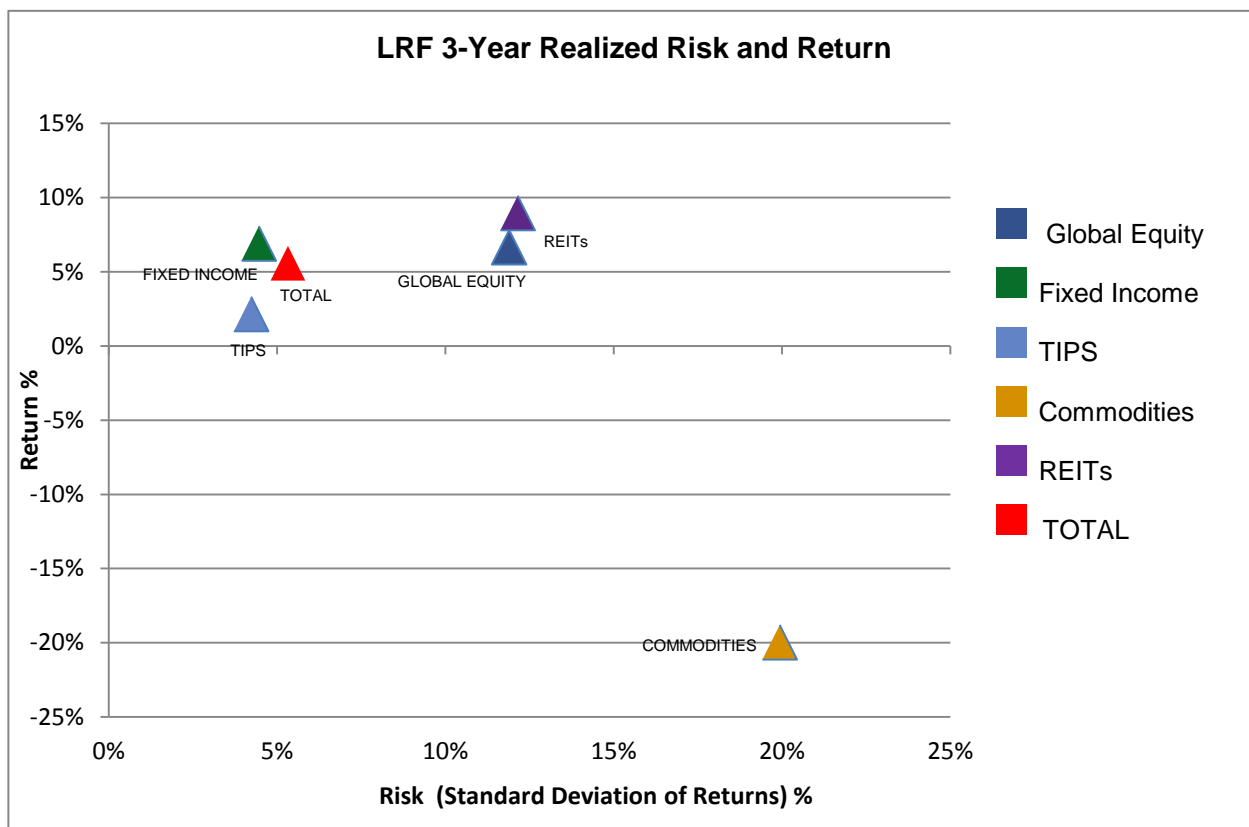
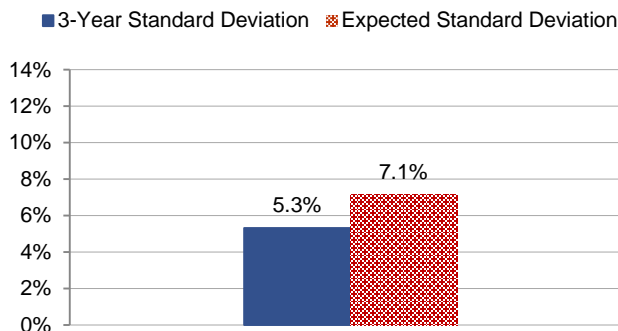
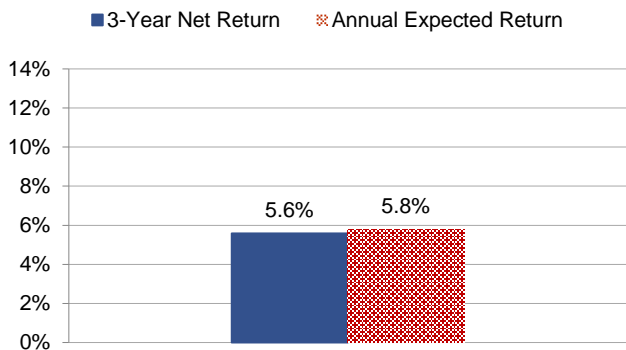
LRF ASSET ALLOCATION	Current Allocation (%)	Target Allocation (%)	Variance (%)	Current Allocation (millions)	Target Allocation (millions)	Dollar Variance (millions)
Global Equity	23.4%	24.0%	-0.6%	\$ 27.8	\$ 28.5	\$ (0.7)
US Fixed Income	39.8%	39.0%	0.8%	\$ 47.2	\$ 46.3	\$ 0.9
TIPS	25.8%	26.0%	-0.2%	\$ 30.7	\$ 30.9	\$ (0.2)
REITs	8.1%	8.0%	0.1%	\$ 9.6	\$ 9.5	\$ 0.1
Commodities	2.9%	3.0%	-0.1%	\$ 3.4	\$ 3.6	\$ (0.2)
Cash	0.0%	0%	0.0%	\$ 0.0	\$ -	\$ 0.0
Total	100.0%	100.0%	0.0%	\$ 118.7	\$ 118.7	\$ 0.0

Policy asset allocation targets were approved by the Investment Committee on August 15, 2011.

LRF RISK AND RETURN

Asset Liability Management Expectations

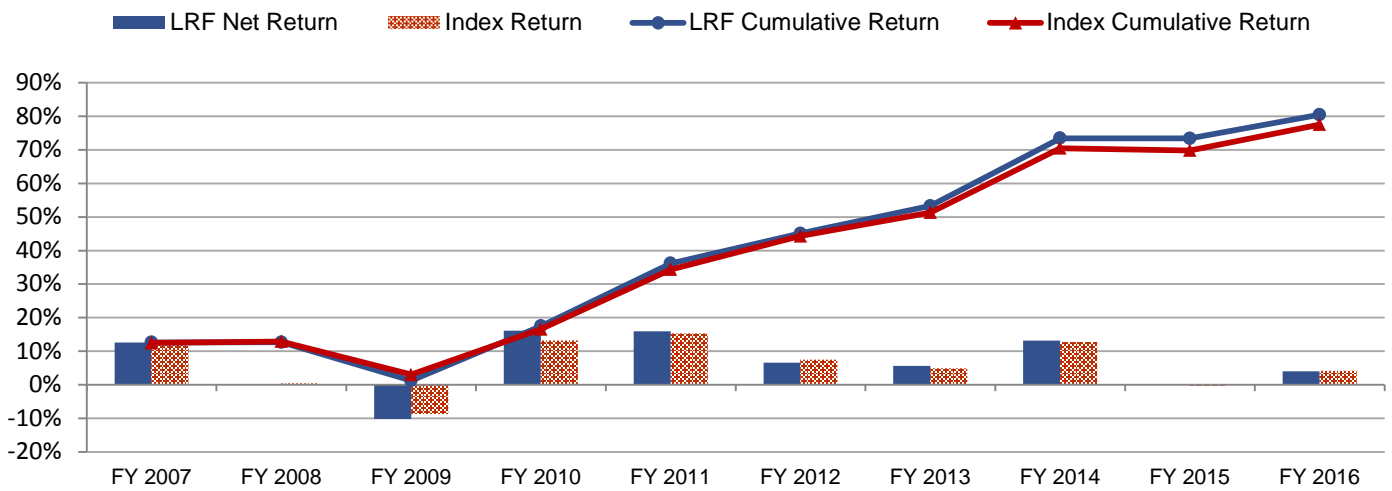
Per the current CalPERS Legislators' Retirement System Fund Statement of Investment Policy.



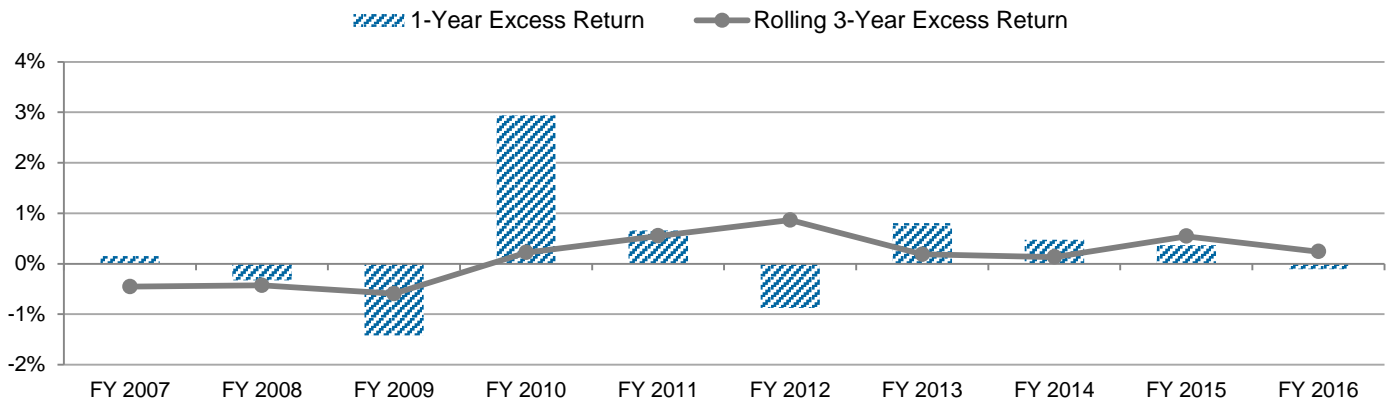
LRF PERFORMANCE SUMMARY

As of	1 - YEAR			3 - YEAR			5 - YEAR			10 - YEAR		
	06/30/16	Net Returns	Benchmark Return	Excess Bps	Net Returns	Benchmark Return	Excess Bps	Net Returns	Benchmark Return	Excess Bps	Net Returns	Benchmark Return
GLOBAL EQUITY	(3.77)	(3.97)	20	6.64	6.54	11	6.29	6.22	8	4.54	4.48	6
FIXED INCOME	9.63	9.58	5	6.91	6.16	75	6.56	6.01	56	7.35	6.86	49
TIPS	4.31	4.35	(5)	2.16	2.31	(16)	2.57	2.63	(7)	4.84	4.79	5
REITs	12.50	12.57	(7)	8.96	8.94	3	-	-	-	-	-	-
COMMODITIES	(25.43)	(26.08)	65	(19.97)	(19.81)	(16)	-	-	-	-	-	-
LRF FUND	4.04	4.15	(11)	5.58	5.34	24	5.78	5.65	13	6.08	5.87	21

LRF CUMULATIVE RETURNS



LRF ROLLING 3-YEAR EXCESS RETURNS



CalPERS Trust Level Review

Trust Summary: Long-Term Care Fund (LTCF)



June 30, 2016

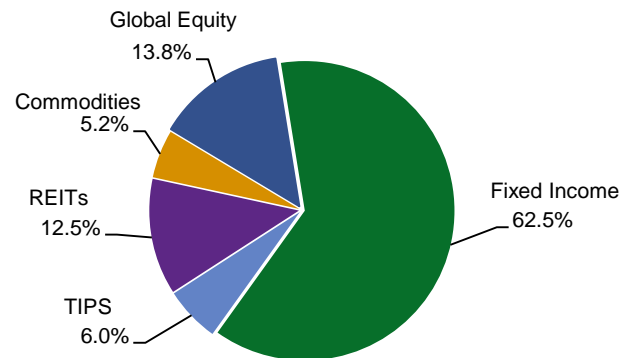
STRATEGIC ASSET ALLOCATION

Long-Term Care Fund Objective

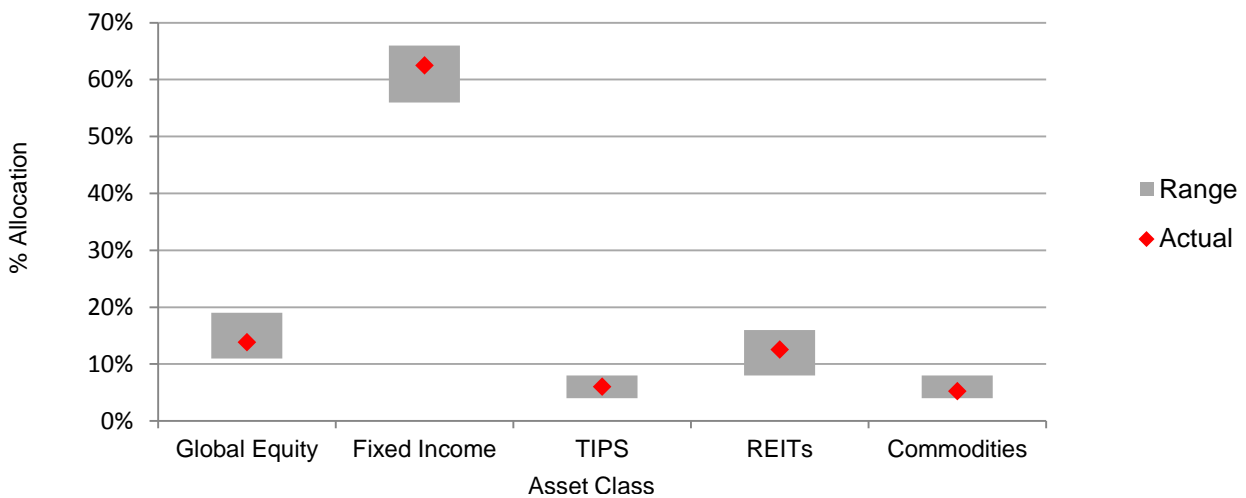
CalPERS offers optional long-term care benefits to members, funded entirely by enrollee premiums. The Long-Term Care Program was established to administer and finance the program. Funds are allocated across five asset classes, predominantly in fixed income.

The Fund is passively managed by State Street Global Advisors.

Actual Capital Allocation



Strategic Allocation Target Ranges



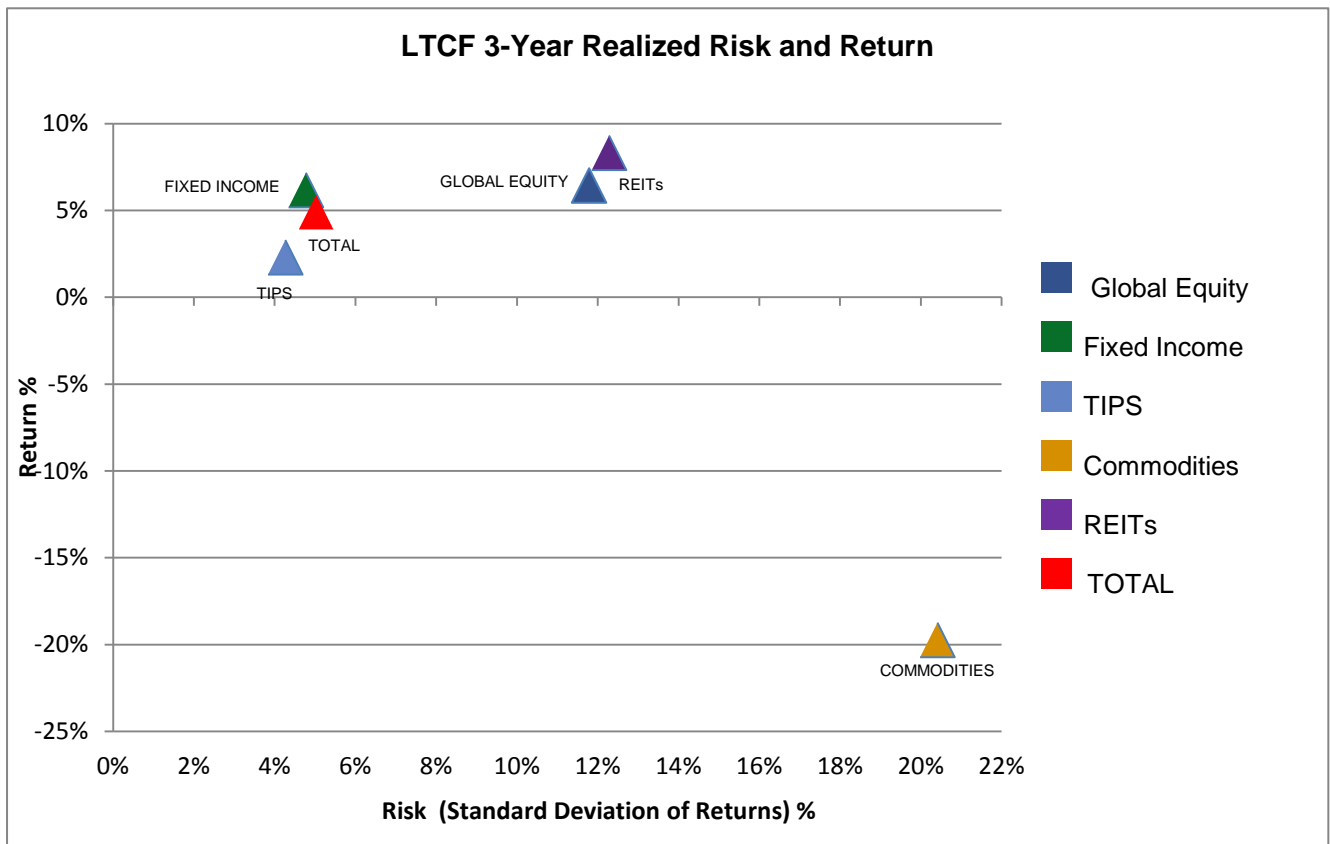
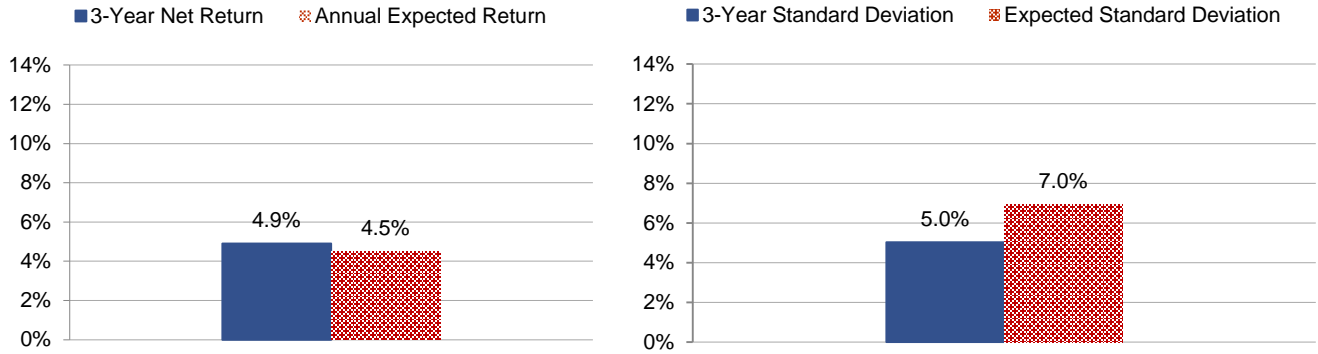
LTCF FUND ASSET ALLOC	Current Allocation (%)	Target Allocation (%)	Variance (%)	Current Allocation (millions)	Target Allocation (millions)	Dollar Variance (millions)
Global Equity	13.8%	15.0%	-1.2%	\$ 597.1	\$ 648.1	\$ (51.0)
US Fixed Income	62.5%	61.0%	1.5%	\$ 2,698.5	\$ 2,635.6	\$ 62.9
TIPS	6.0%	6.0%	0.0%	\$ 258.7	\$ 259.2	\$ (0.5)
REITs	12.5%	12.0%	0.5%	\$ 540.9	\$ 518.5	\$ 22.4
Commodities	5.2%	6.0%	-0.8%	\$ 225.2	\$ 259.2	\$ (34.0)
Cash	0.0%	0%	0.0%	\$ 0.2	\$ -	\$ 0.2
Total	100.0%	100.0%	0.0%	\$ 4,320.7	\$ 4,320.7	\$ (0.0)

Policy asset allocation targets were approved by the Investment Committee on April 16, 2012.

LTCF RISK AND RETURN

Asset Liability Management Expectations

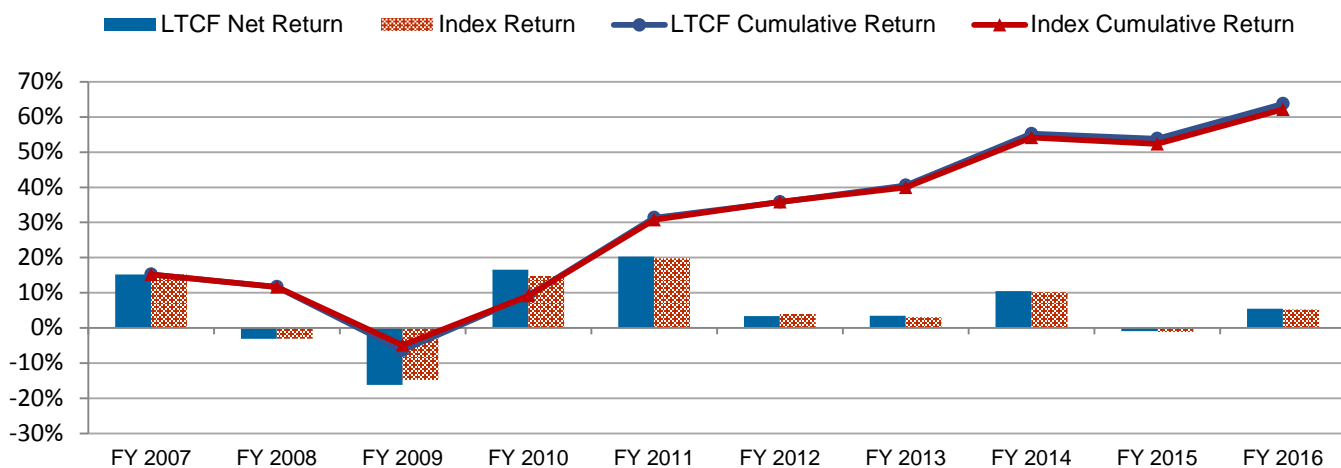
Per the current CalPERS Long-Term Care Fund Statement of Investment Policy.



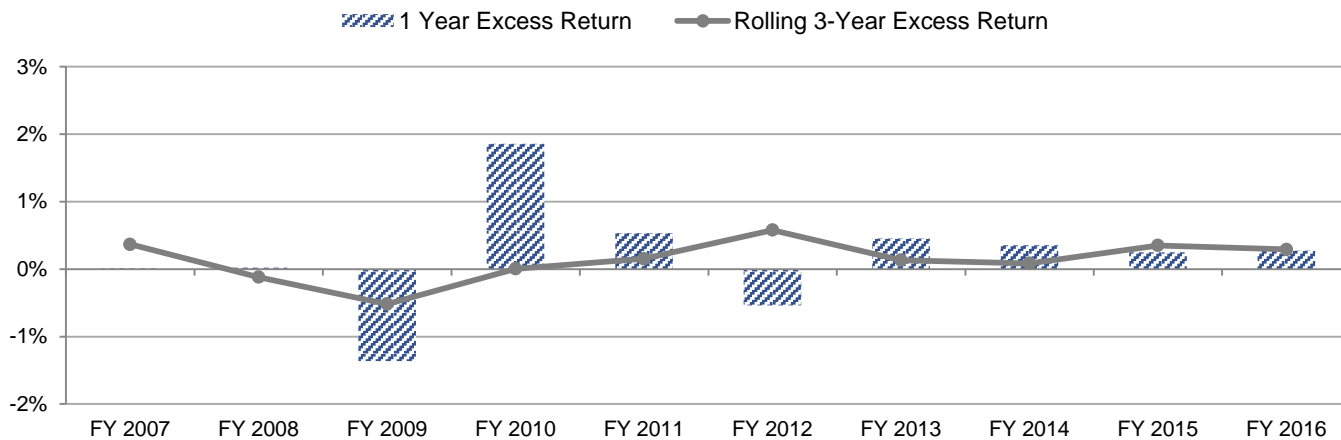
LTCF PERFORMANCE SUMMARY

As of 06/30/16	1 - YEAR			3 - YEAR			5 - YEAR			10 - YEAR		
	Net Returns	Benchmark Return	Excess Bps	Net Returns	Benchmark Return	Excess Bps	Net Returns	Benchmark Return	Excess Bps	Net Returns	Benchmark Return	Excess Bps
GLOBAL EQUITY	(3.51)	(3.87)	36	6.44	6.13	31	6.37	6.20	17	4.55	4.48	7
FIXED INCOME	9.60	9.58	2	6.18	6.16	1	5.97	6.01	(4)	7.04	6.85	20
TIPS	4.33	4.35	(3)	2.30	2.31	(1)	2.60	2.63	(4)	4.86	4.79	6
REITs	12.06	11.15	91	8.32	7.60	72	8.09	7.66	43	2.96	2.65	31
COMMODITIES	(25.88)	(26.08)	20	(19.74)	(19.81)	7	-	-	-	-	-	-
LTCF CARE FUND	5.48	5.20	27	4.91	4.61	29	4.31	4.15	16	4.96	4.83	13

LONG-TERM CARE FUND CUMULATIVE RETURNS



LONG-TERM CARE FUND 1-YEAR EXCESS AND ROLLING 3-YEAR EXCESS RETURNS



CalPERS Trust Level Review

Trust Summary: CERBT Strategy 1



June 30, 2016

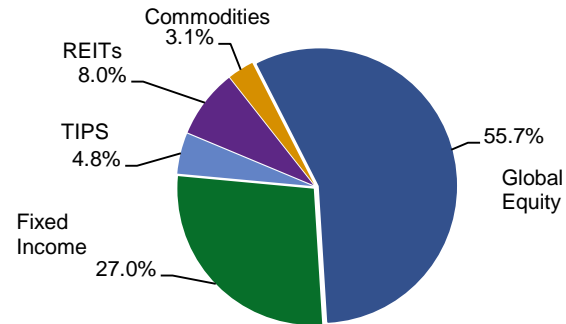
STRATEGIC ASSET ALLOCATION

CERBT Strategy 1 Objective

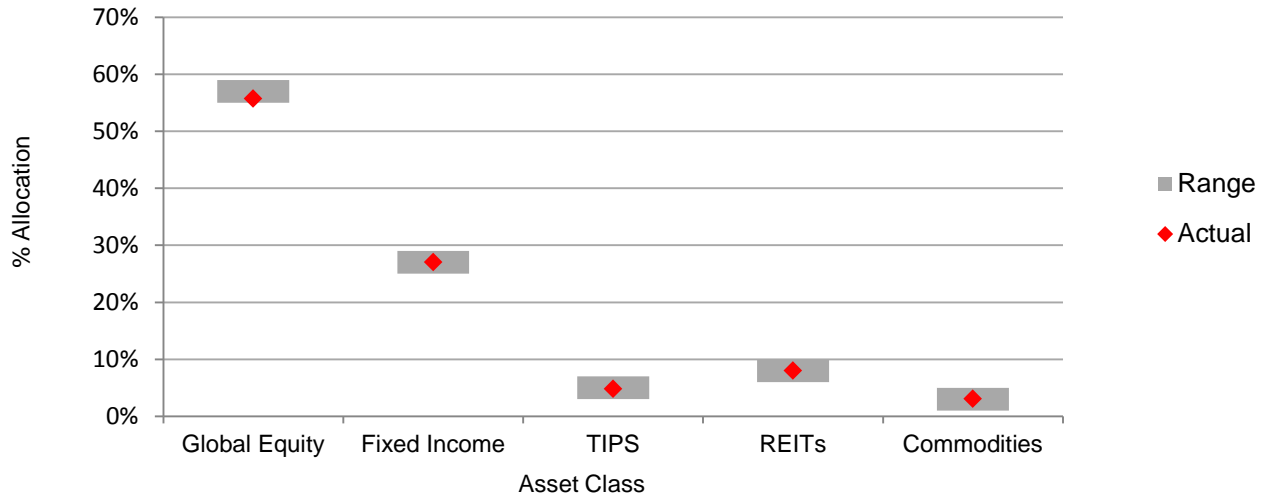
The California Employer Retirees' Benefit Trust (CERBT) was established in March 2007 for public employers to pre-fund their retiree health and other post-employment benefit obligations. Employers may choose among three different CERBT investment strategies. Compared with Strategies 2 and 3, this portfolio consists of a higher percentage of equities than bonds and other assets.

Fixed income, TIPS and commodities asset classes are managed by CalPERS staff. Global equity and REITs are passively managed by State Street Global Advisors.

Actual Capital Allocation



Strategic Allocation Target Ranges



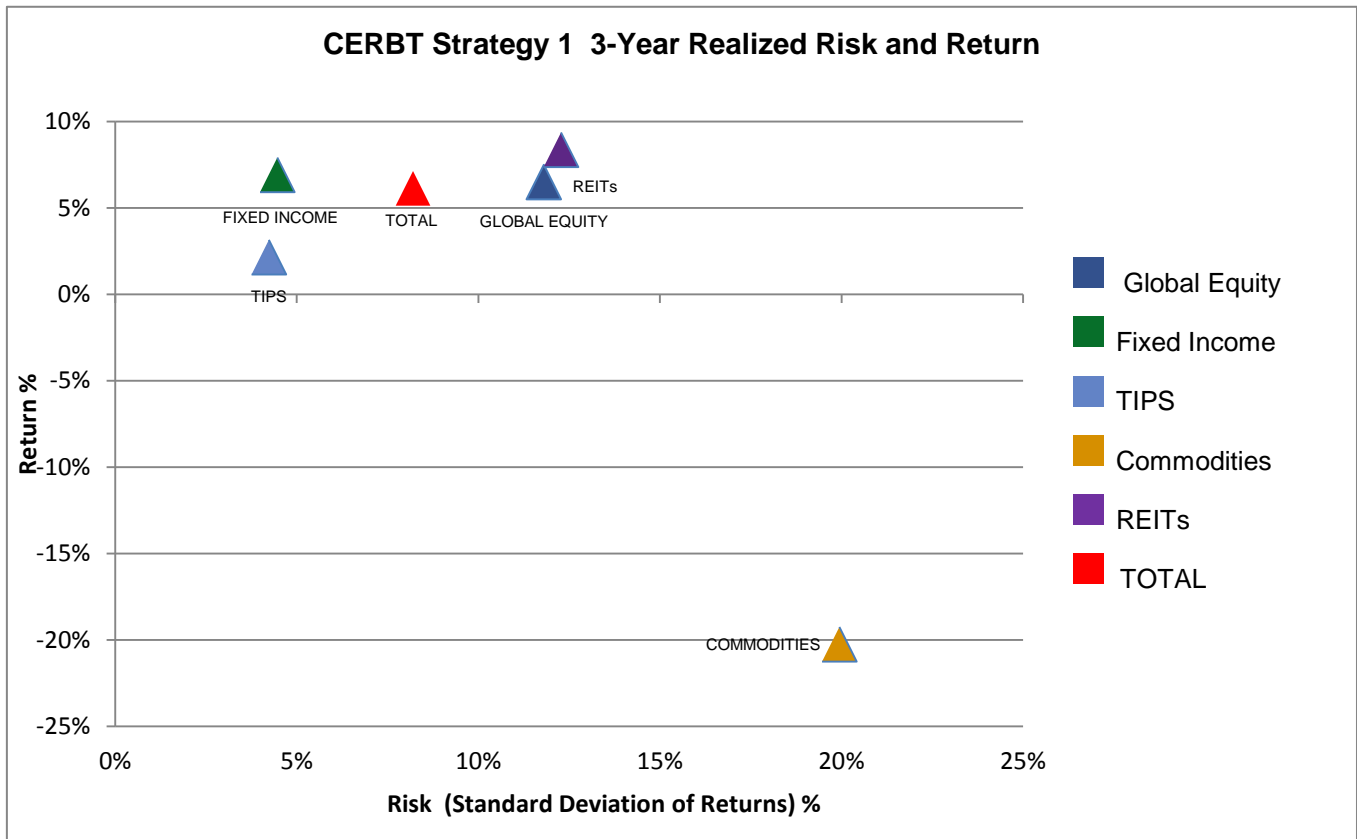
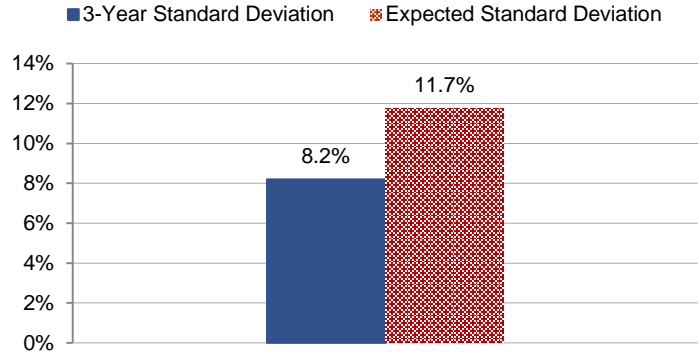
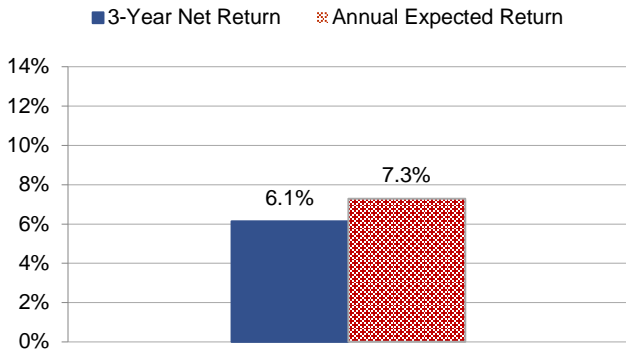
CERBT S1 ASSET ALLOCATION	Current Allocation (%)	Target Allocation (%)	Variance (%)	Current Allocation (millions)	Target Allocation (millions)	Dollar Variance (millions)
Global Equity	55.7%	57.0%	-1.3%	\$ 2,328.3	\$ 2,382.9	\$ (54.6)
US Fixed Income	27.0%	27.0%	0.0%	\$ 1,130.6	\$ 1,128.7	\$ 1.9
TIPS	4.8%	5.0%	-0.2%	\$ 199.4	\$ 209.0	\$ (9.6)
REITs	8.0%	8.0%	0.0%	\$ 332.9	\$ 334.4	\$ (1.5)
Commodities	3.1%	3.0%	0.1%	\$ 128.4	\$ 125.4	\$ 3.0
Cash	1.5%	0.0%	1.5%	\$ 60.9	\$ -	\$ 60.9
Total	100.0%	100.0%	0.0%	\$ 4,180.5	\$ 4,180.5	\$ 0.0

Policy asset allocation targets were approved by the Investment Committee on April 16, 2012.

CERBT STRATEGY 1 RISK AND RETURN

Asset Liability Management Expectations

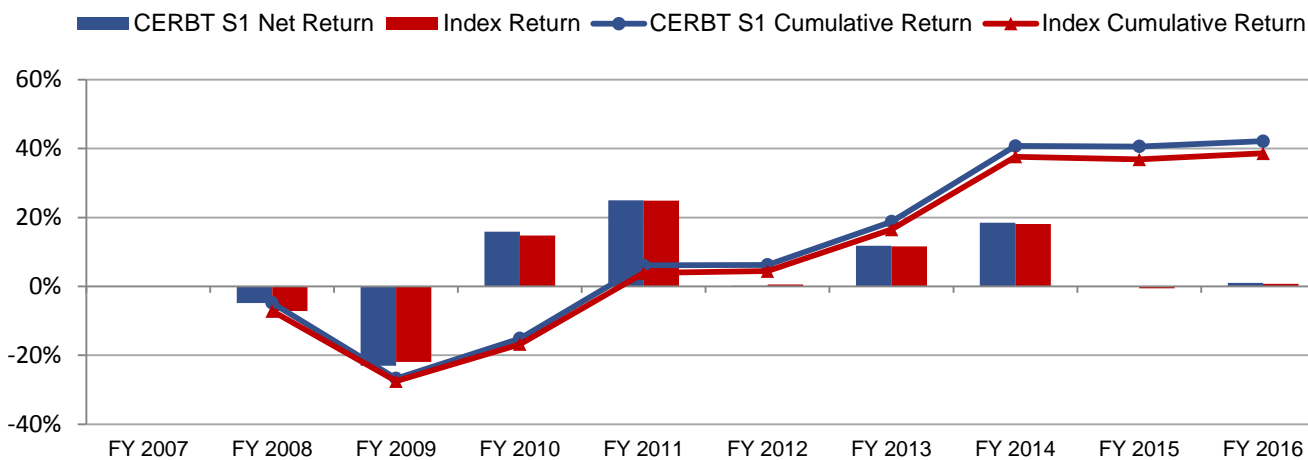
Per the current CERBT Fund Statement of Investment Policy.



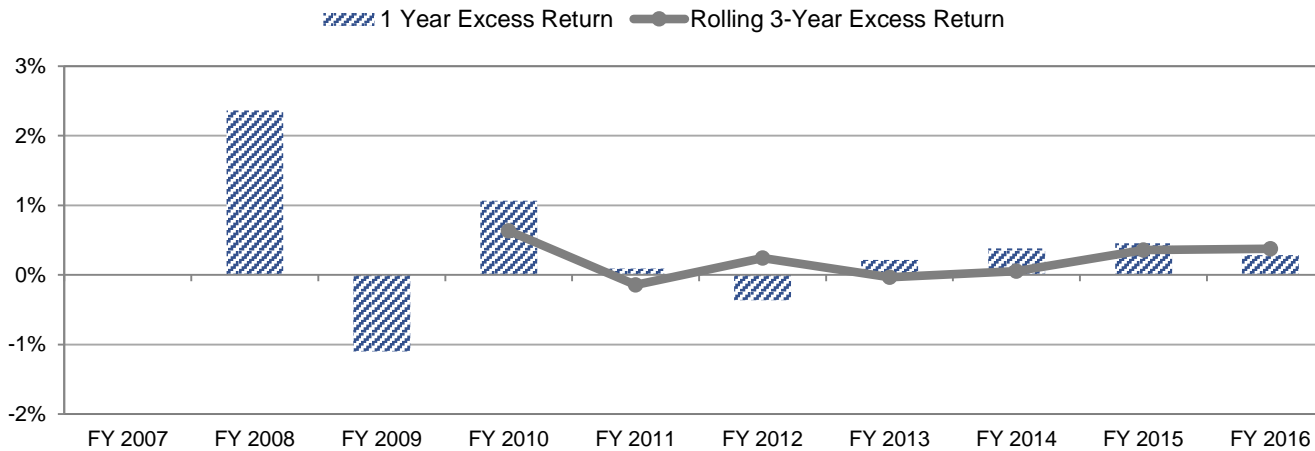
CERBT STRATEGY 1 PERFORMANCE SUMMARY

As of 06/30/16	1 - YEAR			3 - YEAR			5 - YEAR			10 - YEAR		
	Net Returns	Benchmark Return	Excess Bps	Net Returns	Benchmark Return	Excess Bps	Net Returns	Benchmark Return	Excess Bps	Net Returns	Benchmark Return	Excess Bps
GLOBAL EQUITY	(3.44)	(3.87)	43	6.50	6.13	37	6.25	6.02	24	-	-	-
FIXED INCOME	9.65	9.58	7	6.92	6.16	76	6.57	6.01	56	-	-	-
TIPS	4.32	4.35	(3)	2.16	2.31	(16)	-	-	-	-	-	-
REITs	12.05	11.15	90	8.37	7.60	77	8.11	7.66	45	-	-	-
COMMODITIES	(26.46)	(26.08)	(37)	(20.24)	(19.81)	(44)	-	-	-	-	-	-
CERBT Strategy 1	1.00	0.71	29	6.14	5.76	38	6.01	5.82	19	-	-	-

CERBT STRATEGY 1 CUMULATIVE RETURNS



CERBT STRATEGY 1 1-YEAR EXCESS AND ROLLING 3-YEAR EXCESS RETURNS



CalPERS Trust Level Review
Trust Summary: CERBT Strategy 2



June 30, 2016

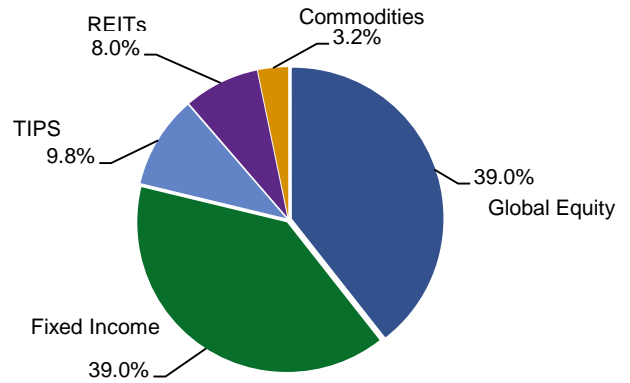
STRATEGIC ASSET ALLOCATION

CERBT Strategy 2 Objective

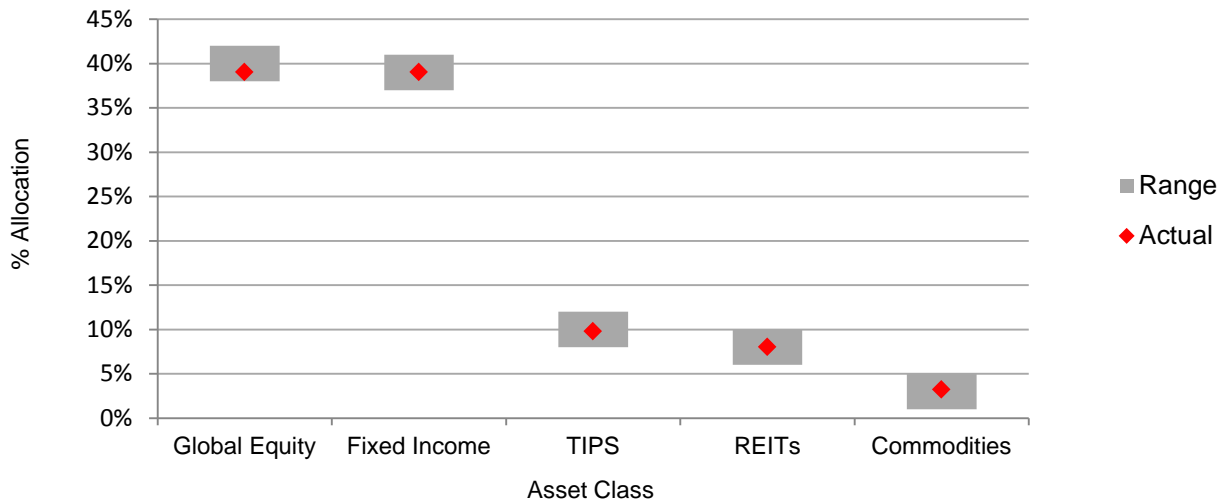
The California Employer Retirees' Benefit Trust (CERBT) was established in March 2007 for public employers to pre-fund their retiree health and other post-employment benefit obligations. Employers may choose among three different CERBT investment strategies. Compared with Strategies 1 and 3, this portfolio consists of a more moderate allocation of equities, bonds, and other assets.

Fixed income, TIPS and commodities asset classes are managed by CalPERS staff. Global equity and REITs are passively managed by State Street Global Advisors.

Actual Capital Allocation



Strategic Allocation Target Ranges



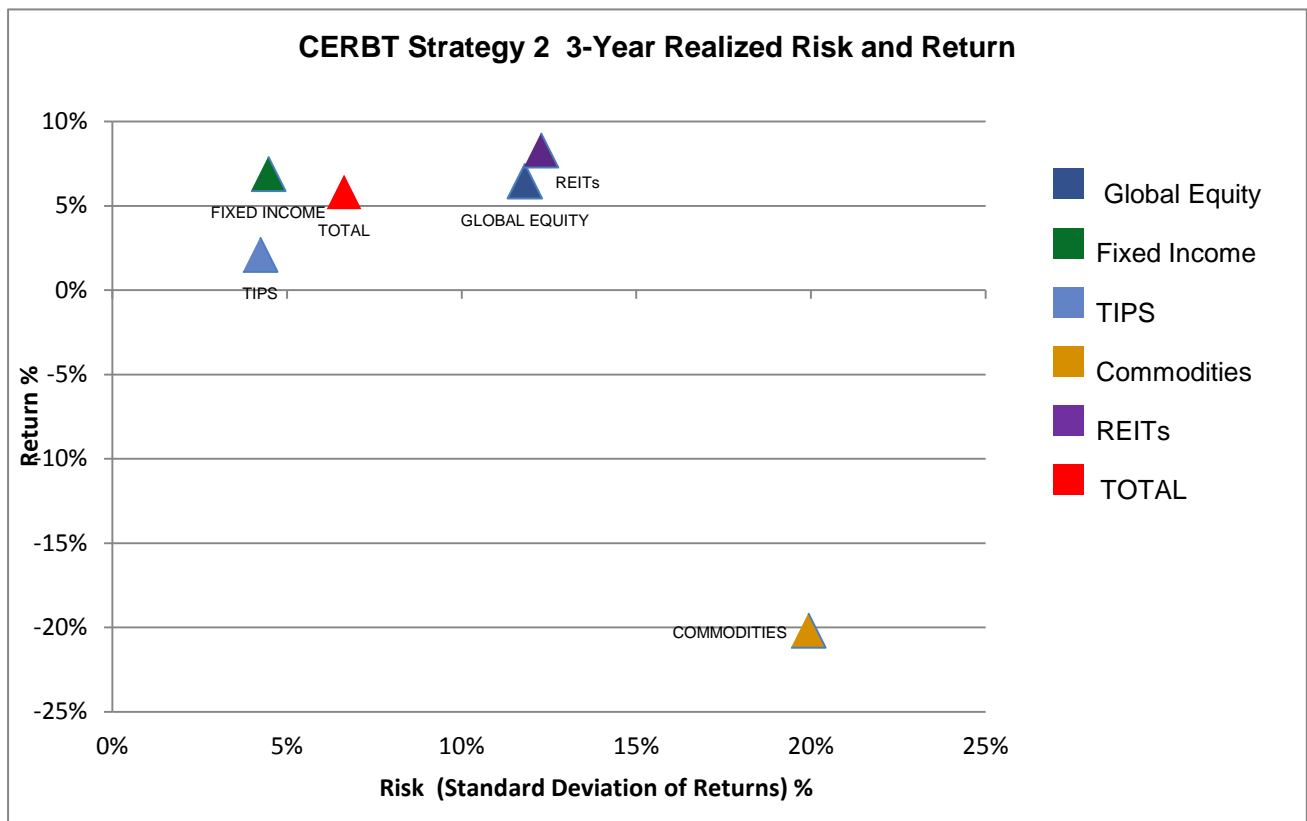
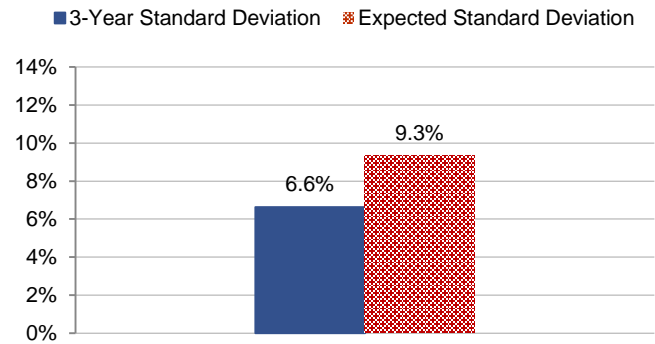
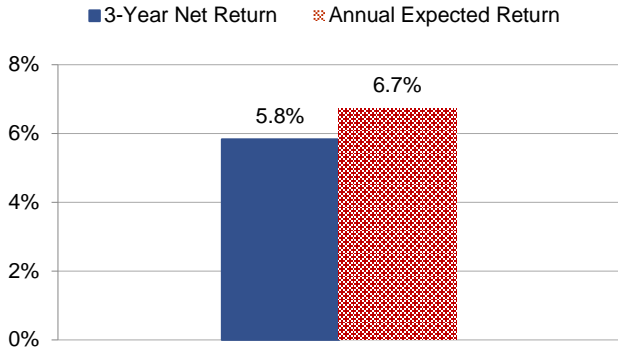
CERBT S2 ASSET ALLOCATION	Current Allocation (%)	Target Allocation (%)	Variance (%)	Current Allocation (millions)	Target Allocation (millions)	Dollar Variance (millions)
Global Equity	39.0%	40.0%	-1.0%	\$ 286.9	\$ 294.0	\$ (7.1)
US Fixed Income	39.0%	39.0%	0.0%	\$ 286.8	\$ 286.7	\$ 0.1
TIPS	9.8%	10.0%	-0.2%	\$ 72.0	\$ 73.5	\$ (1.5)
REITs	8.0%	8.0%	0.0%	\$ 58.9	\$ 58.8	\$ 0.1
Commodities	3.2%	3.0%	0.2%	\$ 23.7	\$ 22.1	\$ 1.7
Cash	0.9%	0%	0.9%	\$ 6.7	\$ -	\$ 6.7
Total	100.0%	100.0%	0.0%	\$ 735.1	\$ 735.1	\$ (0.0)

Policy asset allocation targets were approved by the Investment Committee on April 16, 2012.

CERBT STRATEGY 2 RISK AND RETURN

Asset Liability Management Expectations

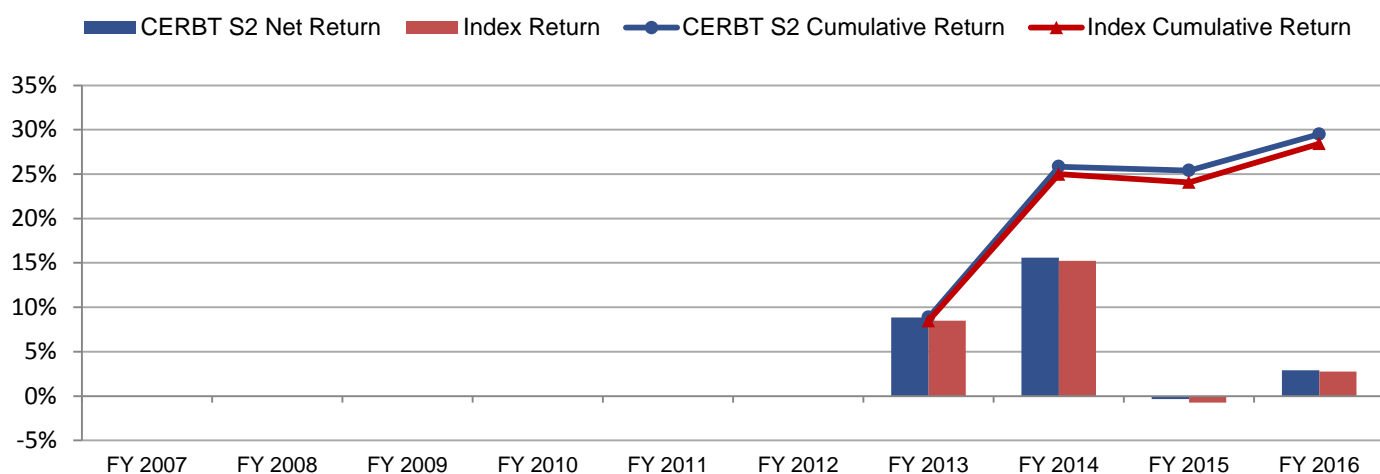
Per the current CERBT Fund Statement of Investment Policy.



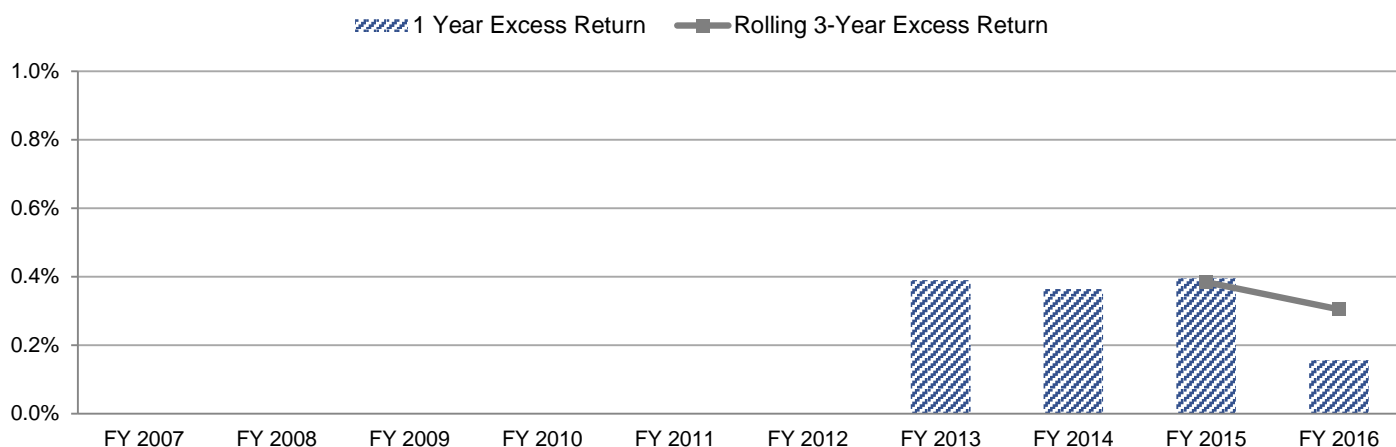
CERBT STRATEGY 2 PERFORMANCE SUMMARY

As of	1 - YEAR			3 - YEAR			5 - YEAR			10 - YEAR			
	06/30/16	Net Returns	Benchmark Return	Excess Bps	Net Returns	Benchmark Return	Excess Bps	Net Returns	Benchmark Return	Excess Bps	Net Returns	Benchmark Return	Excess Bps
GLOBAL EQUITY		(3.53)	(3.87)	34	6.45	6.13	31	-	-	-	-	-	-
FIXED INCOME		9.64	9.58	6	6.91	6.16	75	-	-	-	-	-	-
TIPS		4.30	4.35	(5)	2.12	2.31	(20)	-	-	-	-	-	-
REITs		12.03	11.15	88	8.30	7.60	70	-	-	-	-	-	-
COMMODITIES		(26.35)	(26.08)	(27)	(20.17)	(19.81)	(36)	-	-	-	-	-	-
CERBT Strategy 2		2.91	2.75	16	5.83	5.53	30	-	-	-	-	-	-

CERBT STRATEGY 2 CUMULATIVE RETURNS



CERBT STRATEGY 2 1-YEAR EXCESS AND ROLLING 3-YEAR EXCESS RETURNS



CalPERS Trust Level Review

Trust Summary: CERBT Strategy 3



June 30, 2016

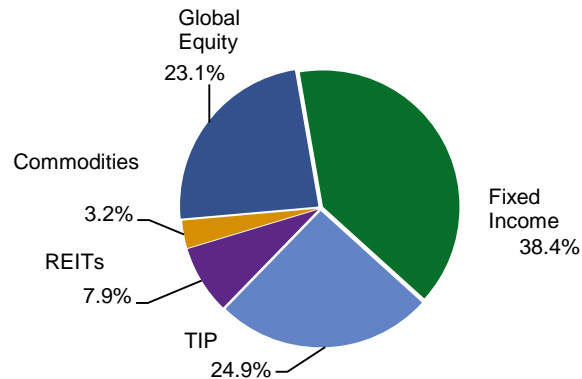
STRATEGIC ASSET ALLOCATION

CERBT Strategy 3 Objective

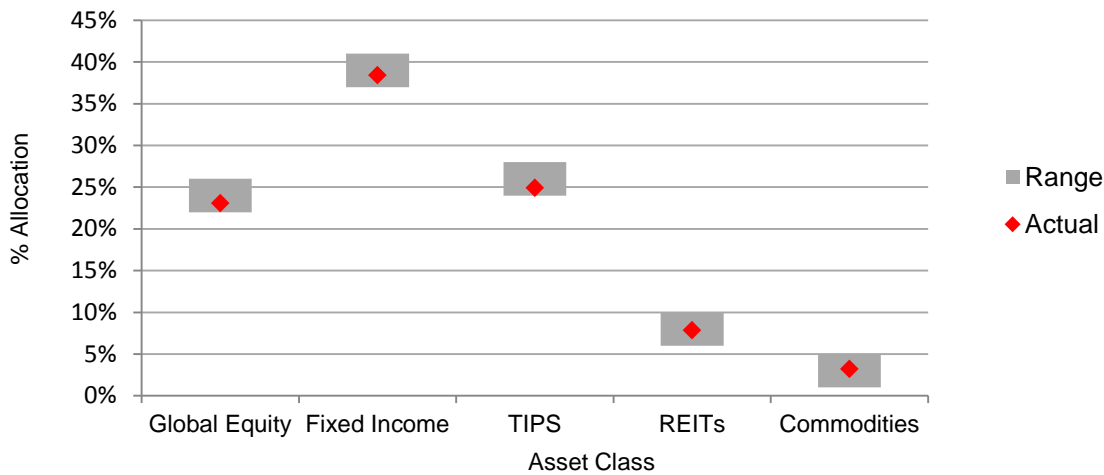
The California Employer Retirees' Benefit Trust (CERBT) was established in March 2007 for public employers to pre-fund their retiree health and other post-employment benefit obligations. Employers may choose among three different CERBT investment strategies. Compared with Strategies 1 and 2, this portfolio consists of a higher percentage of bonds and other assets and a lesser percentage of equities.

Fixed income, TIPS and commodities asset classes are managed by CalPERS staff. Global equity and REITs are passively managed by State Street Global Advisors.

Actual Capital Allocation



Strategic Allocation Target Ranges



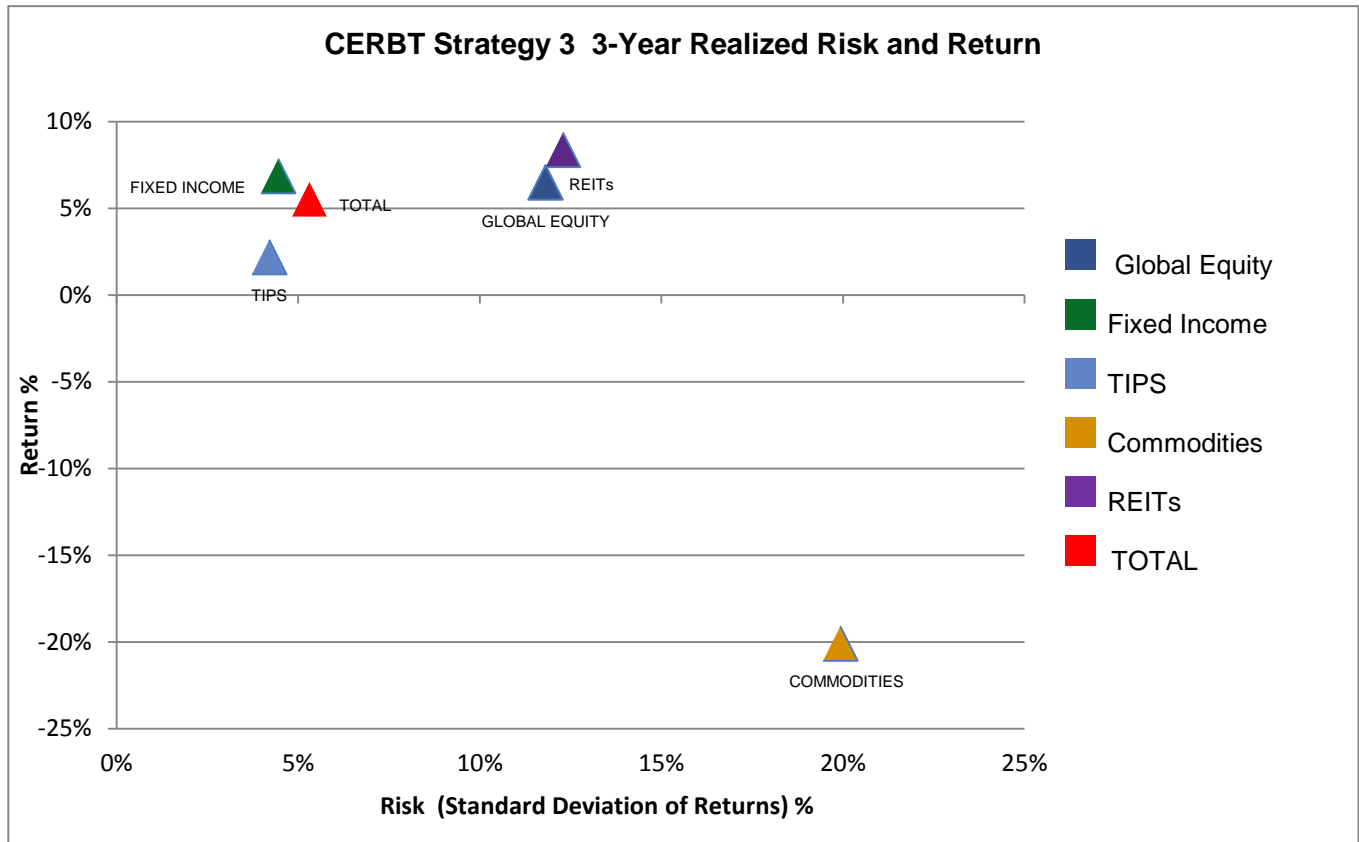
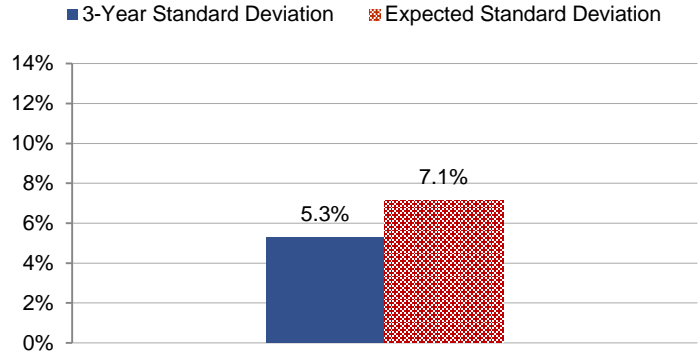
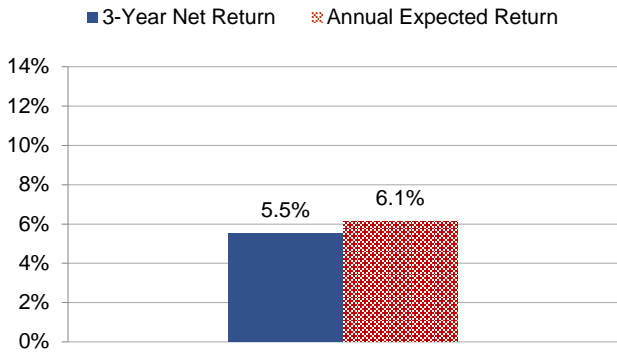
CERBT S3 ASSET ALLOCATION	Current Allocation (%)	Target Allocation (%)	Variance (%)	Current Allocation (millions)	Target Allocation (millions)	Variance (millions)
Global Equity	23.1%	24.0%	-0.9%	\$ 41.6	\$ 43.2	\$ (1.7)
US Fixed Income	38.4%	39.0%	-0.6%	\$ 69.2	\$ 70.3	\$ (1.0)
TIPS	24.9%	26.0%	-1.1%	\$ 44.9	\$ 46.8	\$ (1.9)
REITs	7.9%	8.0%	-0.1%	\$ 14.2	\$ 14.4	\$ (0.3)
Commodities	3.2%	3.0%	0.2%	\$ 5.8	\$ 5.4	\$ 0.3
Cash	2.5%	0%	2.5%	\$ 4.5	\$ -	\$ 4.5
Total	100.0%	100.0%	0.0%	\$ 180.1	\$ 180.1	\$ (0.0)

Policy asset allocation targets were approved by the Investment Committee on April 16, 2012.

CERBT STRATEGY 3 RISK AND RETURN

Asset Liability Management Expectations

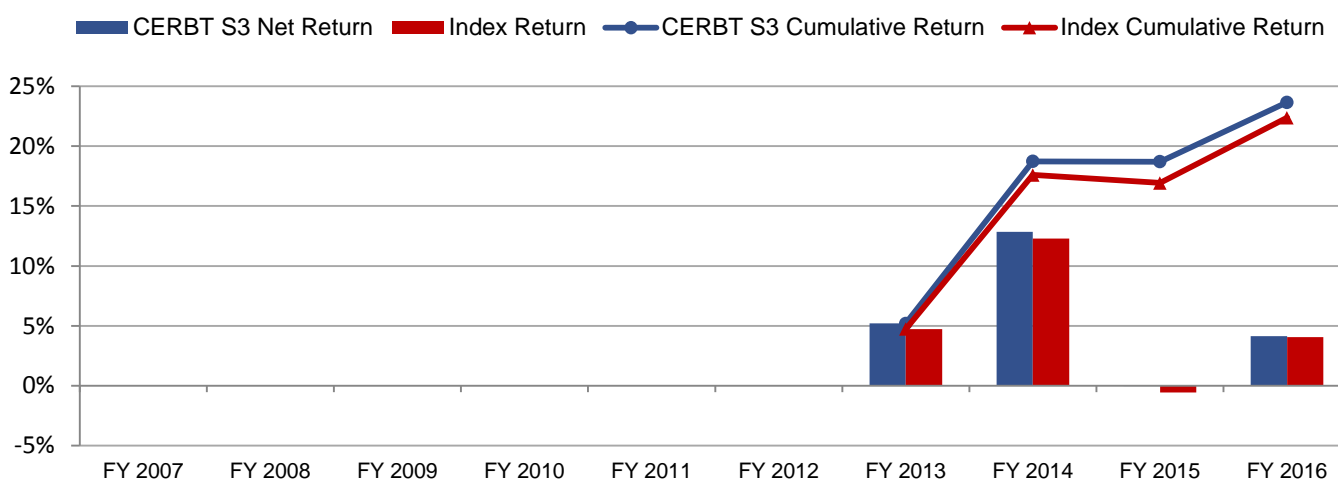
Per the current CERBT Fund Statement of Investment Policy.



CERBT STRATEGY 3 PERFORMANCE SUMMARY

As of 06/30/16	1 - YEAR			3 - YEAR			5 - YEAR			10 - YEAR		
	Net Returns	Benchmark Return	Excess Bps	Net Returns	Benchmark Return	Excess Bps	Net Returns	Benchmark Return	Excess Bps	Net Returns	Benchmark Return	Excess Bps
GLOBAL EQUITY	(3.46)	(3.87)	40	6.49	6.13	36	-	-	-	-	-	-
FIXED INCOME	9.64	9.58	6	6.86	6.16	70	-	-	-	-	-	-
TIPS	4.31	4.35	(4)	2.19	2.31	(12)	-	-	-	-	-	-
REITs	12.01	11.15	87	8.37	7.60	77	-	-	-	-	-	-
COMMODITIES	(26.33)	(26.08)	(24)	(20.08)	(19.81)	(28)	-	-	-	-	-	-
CERBT Strategy 3	4.14	4.07	8	5.52	5.13	40	-	-	-	-	-	-

CERBT STRATEGY 3 CUMULATIVE RETURNS



CERBT STRATEGY 3 1-YEAR EXCESS AND ROLLING 3-YEAR EXCESS RETURNS

