



Monthly Risk-Return Report As of October 31, 2016

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Based on actual BNY Mellon data through September 2016 and preliminary data for October 2016.



Asset Allocation and Policy Guidelines

As of October 31, 2016

Asset Class	Assets and Allocation		Policy Target	Minimum Target	Maximum Target	Difference	
	\$ (MM)	%				From Policy Target	Within Target?
Total Public Markets Equity	4,801	44.4%	45.0%	42.0%	48.0%	-0.6%	Yes
Global Equity	642	5.9%	3.0%	0.0%	6.0%	2.9%	Yes
US Equity	1,584	14.6%	18.0%	13.0%	23.0%	-3.4%	Yes
Non-US Equity Developed	1,518	14.0%	15.0%	12.0%	18.0%	-1.0%	Yes
Non-US Equity Emerging	1,057	9.8%	9.0%	6.0%	11.0%	0.8%	Yes
Fixed Income	2,876	26.6%	24.0%	21.0%	27.0%	2.6%	Yes
Alternative Beta/Oppportunistic/Other	763	7.1%	8.0%	7.0%	9.0%	-0.9%	Yes
Total Private Assets	2,378	22.0%	23.0%	10.0%	N/A	-1.0%	Yes
Real Estate	912	8.4%	9.0%	5.0%	N/A	-0.6%	Yes
Private Equity	794	7.3%	8.0%	3.0%	N/A	-0.7%	Yes
Private Real Assets	672	6.2%	6.0%	3.0%	N/A	0.2%	Yes
Total Invested	10,819	100.0%					



Portfolio and Benchmark Returns

As of October 31, 2016

	MTD	QTD	FYTD	CYTD	1 Year	3 Years	5 Years
SDCERA Total Trust Fund	-1.0%	-1.0%	2.9%	5.6%	3.9%	4.5%	6.5%
SDCERA Policy Benchmark	-1.2%	-1.2%	2.6%	5.2%	3.8%	4.0%	6.0%
Balanced Benchmark	-1.6%	-1.6%	2.4%	5.1%	3.1%	3.5%	6.7%
Actuarial Rate of Return	0.6%	0.6%	2.4%	6.2%	7.4%	7.6%	7.8%

SDCERA Public Markets	-1.2%	-1.2%	3.4%	6.7%	3.9%	2.8%	7.8%
Balanced Benchmark	-1.6%	-1.6%	2.4%	5.1%	3.1%	3.5%	6.7%
Total Public Markets Equity	-1.4%	-1.4%	4.7%	6.1%	2.9%	1.1%	9.9%
MSCI ACWI IMI	-1.9%	-1.9%	3.5%	4.9%	2.3%	3.2%	8.2%
Fixed Income	-0.8%	-0.8%	0.6%	6.9%	5.9%	2.3%	2.6%
Barclay's US Intermediate Aggregate	-0.4%	-0.4%	-0.1%	3.7%	3.2%	2.7%	2.4%

Alternative Beta/Oppportunistic/Other/HF							
Hedge Funds and Relative Value	1.1%	1.1%	2.9%	-1.8%	-0.1%	3.9%	4.1%
Managed Futures	-2.4%	-2.4%	-2.7%	1.3%	2.3%	7.8%	5.6%
US T-Bills Plus 500 basis points	0.4%	0.4%	1.7%	4.4%	5.2%	5.1%	5.1%

Private Assets							
	<i>The industry standard is to present private asset returns with a quarterly lag</i>						
Real Estate	-1.9%	-1.9%	3.0%	9.2%	8.9%	13.4%	
NCREIF ODCE Plus 50 basis Points	0.7%	0.7%	2.6%	6.9%	9.2%	11.8%	
Private Equity	0.3%	0.3%	3.4%	8.2%	8.2%	10.4%	12.1%
MSCI ACWI IMI Plus 200 Basis Points	-1.8%	-1.8%	4.2%	6.7%	4.4%	5.3%	10.4%
Private Real Assets	-0.1%	-0.1%	2.2%	-0.7%	-1.3%	4.0%	4.4%
MSCI ACWI IMI Plus 200 Basis Points	-1.8%	-1.8%	4.2%	6.7%	4.4%	5.3%	10.4%

Equities by Sub-Asset Class							
Global Equity	-1.7%	-1.7%	3.7%	5.2%	2.5%	4.1%	9.0%
MSCI ACWI IMI	-1.9%	-1.9%	3.5%	4.9%	2.3%	3.2%	8.2%
US Equity	-2.1%	-2.1%	2.5%	5.9%	5.0%	6.6%	10.3%
MSCI USA IMI	-2.2%	-2.2%	1.9%	5.4%	3.7%	7.6%	12.7%
Non-US Equity Developed	-1.9%	-1.9%	4.6%	0.2%	-2.3%		
MSCI EAFE IMI	-2.2%	-2.2%	4.4%	0.0%	-2.4%		
Non-US Emerging	0.6%	0.6%	9.1%	17.6%	10.2%	-1.8%	1.5%
MSCI Emerging Markets IMI	0.0%	0.0%	8.8%	15.0%	8.6%	-1.9%	0.8%
Total Public Markets Equity	-1.4%	-1.4%	4.7%	6.1%	2.9%	1.1%	9.9%
MSCI ACWI IMI	-1.9%	-1.9%	3.5%	4.9%	2.3%	3.2%	8.2%

Please note: The MSCI EAFE IMI (3 yr & 5 yr) and Real Estate (5 yr) returns are blank because the current composite returns calculated by BNY Mellon do not cover these time periods. The SDCERA Benchmark is before fees and cannot be indexed because Global Stocks + 2% for the private market assets subcomponent and NCREIF ODCE plus 50 basis points for Real Estate subcomponent cannot be indexed.



Portfolio Risk and Tracking Error

As of October 31, 2016	8/31/16 Trailing three years		9/30/16 Trailing three years		10/31/16 Trailing three years	
Total Trust Fund	Volatility	Tracking Error	Volatility	Tracking Error	Volatility	Tracking Error
SDCERA Total Trust Fund Assets	5.5%	N/A	5.3%	N/A	5.2%	N/A
SDCERA Policy Benchmark	6.4%	1.8%	6.2%	1.8%	6.2%	1.8%

Total Trust Fund	Forecasted		Forecasted		Forecasted	
Total Trust Fund	Volatility	Tracking Error	Volatility	Tracking Error	Volatility	Tracking Error
SDCERA Total Trust Fund Assets	7.3%	N/A	6.8%	N/A	6.4%	N/A
SDCERA Policy Benchmark	8.9%	1.9%	8.2%	1.8%	7.6%	1.7%
Balanced Benchmark	9.2%	2.4%	8.6%	2.3%	8.1%	2.2%
SDCERA Public-Only Assets	8.0%	N/A	7.6%	N/A	7.1%	N/A
SDCERA Public Benchmark	8.0%	0.8%	7.4%	0.8%	7.0%	0.8%

Equities						
Global Equity	13.1%		12.3%		11.5%	
MSCI ACWI IMI	13.2%	0.6%	12.3%	0.6%	11.5%	0.6%
US Equity	10.6%		10.0%		9.4%	
MSCI USA IMI	12.1%	1.2%	11.5%	1.1%	10.6%	1.0%
Non-US Equity Developed	15.0%		14.3%		13.7%	
MSCI EAFE IMI	14.8%	0.9%	14.1%	0.9%	13.6%	0.9%
Non-US Emerging	18.8%		17.6%		16.6%	
MSCI Emerging Markets IMI	18.4%	1.0%	17.1%	1.0%	16.1%	1.1%

Fixed Income						
Fixed Income	4.1%		4.0%		3.9%	
Barclay's US Intermediate Aggregate	1.9%	1.7%	1.9%	1.5%	1.9%	1.5%

Alternative Beta/Oppportunistic/HF						
Alternative Beta/Oppportunistic/Other/HF	3.8%		3.8%		3.7%	
50% Barclays CTA, 50% HFRI Macro	4.1%	3.6%	4.1%	3.5%	4.1%	3.6%

Private Assets						
Real Estate	8.7%		8.3%		8.4%	
NCREIF ODCE + 50 bps	11.9%	11.6%	10.4%	11.2%	9.0%	10.2%
Private Equity	8.7%		8.1%		7.6%	
MSCI ACWI IMI + 200 bps	13.2%	6.0%	12.3%	5.8%	11.5%	5.7%
Private Real Assets	11.6%		11.1%		10.5%	
MSCI ACWI IMI + 200 bps	13.2%	11.5%	12.3%	11.5%	11.5%	11.5%



Allocation Changes (millions)

Public Markets Portfolio Changes in October 2016

Portfolio %		Portfolio \$ millions		Summary Comments
Begin	End	Begin	End	

Private Market Portfolio Changes in October 2016

Portfolio %		Portfolio \$ millions		Summary Comments
Begin	End	Begin	End	

Benchmarks

- The actuarial rate of return represents the long-term return assumption adopted by the Board of Retirement based on the analysis provided by SDCERA's actuary. SDCERA's actuarial rate of return is 7.5 percent.
- The SDCERA Policy benchmark is composed as follows: 45% MSCI ACWI IMI, 24% Barclays US Intermediate Aggregate Index, 8% US T-Bills, 23% SDCERA Private Asset Benchmark.
- The SDCERA Balanced benchmark is composed of 70% MSCI ACWI IMI index and 30% Barclay's U.S. Aggregate index – this is an investable index and represents an alternative to asset allocation and to active managers.
- The Total Public Markets Equity Benchmark is the MSCI ACWI IMI Index.
- The Global Equity Benchmark is the MSCI ACWI IMI Index.
- The US Equity Benchmark is the MSCI USA IMI Stock Market Index.
- The Non-US Equity (Developed) Benchmark is the MSCI EAFE IMI Index.
- The Non-US Equity Emerging Markets Benchmark is the MSCI Emerging Markets IMI Index.
- The Total Fixed Income Benchmark is the Barclay's U.S. Intermediate Aggregate Index and is a broad based benchmark that measures the investment grade, U.S. fixed-rate, and taxable bond market.
- The Alternative Beta/ Opportunistic/Other Benchmark is the T-Bills plus 500 basis points.
- The Total Private Assets Benchmark is composed of 1/3 NCREIF and 2/3 MSCI ACWI IMI index plus 200 basis points.
- The Real Estate Benchmark is the NCREIF ODCE Index plus 50 basis points.
- The Private Equity Benchmark is the MSCI ACWI IMI plus 200 basis points.
- The Private Real Assets Benchmark is the MSCI ACWI IMI plus 200 basis points.

- The MSCI ACWI Investable Market Index (IMI) captures large, mid and small cap representation across 23 Developed Markets (DM) and 23 Emerging Markets (EM) countries.
- The SDCERA Public Markets Risk Benchmark is an aggregate of 58.44% ACWI IMI, 31.77% Barclay's Intermediate Aggregate, 5.19% Barclay's CTA, and 5.19% HFRI Macro.
- The Barclay CTA index is an index of 535 representative commodity-trading advisors.
- The HFRI Macro index is based on investment managers which trade a broad range of strategies predicated on movements in underlying economic variables.

Note: The MSCI and T-Bills benchmarks plus a basis point spread (500, 50, and 200) are not investable indexes. The purpose of having a higher-than-market index benchmark, such as MSCI ACWI plus 200 basis points, is to set the expectation for that asset class. For example, the illiquid nature and lower transparency of Private Equity is matched by an expectation of higher returns than can be realized in public markets.