



Monthly Risk-Return Report As of April 30, 2018

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Based on actual BNY Mellon data through March 2018 and preliminary data for April 2018.
Private asset valuations and returns are presented with a quarterly lag per industry standard.



Asset Allocation and Policy Guidelines

As of April 30, 2018

Asset Class	Assets and Allocation		Policy Target	Minimum Target	Maximum Target	Difference	
	\$ (MM)	%				From Policy Target	Within Target?
Public Markets Equity	5,714	46.0%	45.0%	40.0%	50.0%	1.0%	Yes
Global Equity	339	2.7%	3.0%	0.0%	10.0%	-0.3%	Yes
US Equity	2,312	18.6%	18.0%	13.0%	23.0%	0.6%	Yes
Non-US Equity Developed	1,951	15.7%	15.0%	11.0%	19.0%	0.7%	Yes
Non-US Equity Emerging	1,112	9.0%	9.0%	5.0%	13.0%	0.0%	Yes
Fixed Income and Cash	2,925	23.5%					
Risk-Reducing Fixed Income	2,196	17.7%	18.0%	13.0%	24.0%	-0.3%	Yes
Return-Seeking Fixed Income	728	5.9%	6.0%	0.0%	12.0%	-0.1%	Yes
Opportunistic	1,024	8.2%	8.0%	0.0%	15.0%	0.2%	Yes
Private Assets	2,763	22.2%	23.0%	10.0%		-0.8%	Yes
Real Estate	1,095	8.8%	9.0%	5.0%	12.0%	-0.2%	Yes
Private Equity	863	6.9%	8.0%	3.0%	10.0%	-1.1%	Yes
Private Real Assets	805	6.5%	6.0%	3.0%	8.0%	0.5%	Yes
Total Invested	12,426	100.0%					



Portfolio and Benchmark Returns

As of April 30, 2018

	MTD	QTD	FYTD	CYTD	1 Year	3 Years	5 Years
SDCERA Total Trust Fund	0.5%	0.5%	8.3%	0.5%	10.6%	6.1%	6.2%
SDCERA Policy Benchmark	0.6%	0.6%	7.9%	-0.1%	9.9%	6.4%	6.2%
Balanced Benchmark	0.5%	0.5%	7.6%	-0.4%	9.8%	5.8%	6.8%
Actuarial Rate of Return	0.6%	0.6%	6.0%	2.4%	7.3%	7.4%	7.5%

SDCERA Public Markets	0.4%	0.4%	7.9%	-0.4%	10.1%	4.1%	5.8%
Balanced Benchmark	0.5%	0.5%	7.6%	-0.4%	9.8%	5.8%	6.8%
Total Public Markets Equity	0.8%	0.8%	12.2%	0.3%	15.3%	5.6%	7.8%
MSCI ACWI IMI	0.9%	0.9%	11.4%	0.0%	14.3%	7.6%	9.0%
Total Fixed Income and Cash	-0.2%	-0.2%	0.3%	-1.0%	0.9%	2.1%	1.7%
Bloomberg Barclays US Intermediate Aggregate	-0.5%	-0.5%	-0.9%	-1.6%	-0.6%	0.8%	1.2%

Opportunistic							
Opportunistic	0.1%	0.1%	7.0%	-2.3%	6.5%	4.6%	6.6%
Balanced Benchmark	0.5%	0.5%	7.6%	-0.4%	9.8%	5.8%	6.8%

Private Assets							
<i>The industry standard is to present private asset returns with a quarterly lag</i>							
Real Estate	1.7%	1.7%	8.4%	3.5%	11.6%	11.6%	11.7%
NCREIF ODCE	0.7%	0.7%	6.3%	2.6%	7.3%	8.8%	10.3%
Private Equity	0.0%	0.0%	13.3%	5.6%	18.4%	11.6%	13.1%
MSCI ACWI IMI	0.9%	0.9%	11.4%	0.0%	14.3%	7.6%	9.0%
Private Real Assets	-0.3%	-0.3%	7.5%	1.4%	10.5%	4.1%	6.4%
MSCI ACWI IMI	0.9%	0.9%	11.4%	0.0%	14.3%	7.6%	9.0%

Equities by Sub-Asset Class							
Global Equity	0.6%	0.6%	13.5%	0.8%	16.1%	8.8%	10.0%
MSCI ACWI IMI	0.9%	0.9%	11.4%	0.0%	14.3%	7.6%	9.0%
US Equity	0.3%	0.3%	10.9%	-0.4%	12.8%	9.1%	11.1%
MSCI USA IMI	0.4%	0.4%	10.5%	-0.4%	12.5%	9.6%	12.1%
Non-US Equity Developed	2.2%	2.2%	10.6%	0.6%	14.5%	5.2%	
MSCI EAFE IMI	2.1%	2.1%	11.4%	0.9%	15.3%	5.8%	
Non-US Emerging	-0.3%	-0.3%	16.8%	1.1%	21.0%	7.2%	4.7%
MSCI Emerging Markets	-0.4%	-0.4%	17.0%	1.0%	21.7%	6.0%	4.7%

Fixed Income by Sub-Asset Class							
Risk-Reducing Fixed Income	-0.5%	-0.5%	-0.3%	-1.2%	0.3%		
Bloomberg Barclays US Intermediate Aggregate	-0.5%	-0.5%	-0.9%	-1.6%	-0.6%		
Return-Seeking Fixed Income	0.5%	0.5%	2.3%	-0.3%	3.0%		
ICE BofA Merrill Lynch US High Yield	0.7%	0.7%	2.2%	-0.3%	3.2%		

Please note: The Non-US Equity Developed and MSCI EAFE IMI 5 yr returns are blank because the current composite returns calculated by BNY Mellon do not cover these time periods. The Risk-Reducing Fixed Income, Return-Seeking Fixed Income and ICE BofA Merrill Lynch US High Yield 3 and 5 yr returns are blank because the current composite returns calculated by BNY Mellon do not cover these time periods. SDCERA Benchmark returns are before fees.



Portfolio Risk and Tracking Error

As of April 30, 2018	2/28/18 Trailing three years		3/31/18 Trailing three years		4/30/18 Trailing three years	
Total Trust Fund	Volatility	Tracking Error	Volatility	Tracking Error	Volatility	Tracking Error
SDCERA Total Trust Fund Assets	5.4%	N/A	5.5%	N/A	5.5%	N/A
SDCERA Policy Benchmark	6.5%	1.8%	6.5%	1.8%	6.5%	1.8%

	Forecasted		Forecasted		Forecasted	
Total Trust Fund	Volatility	Tracking Error	Volatility	Tracking Error	Volatility	Tracking Error
SDCERA Total Trust Fund Assets	6.0%	N/A	6.0%	N/A	6.0%	N/A
SDCERA Policy Benchmark	7.5%	1.8%	7.6%	1.8%	7.5%	1.9%
Balanced Benchmark	7.2%	1.6%	7.3%	1.7%	7.2%	1.8%
SDCERA Public-Only Assets	6.9%	N/A	7.0%	N/A	6.9%	N/A
SDCERA Public Benchmark	7.3%	0.7%	7.3%	0.7%	7.3%	0.7%

Equities						
Global Equity	10.0%		10.1%		10.0%	
MSCI ACWI IMI	10.2%	2.1%	10.3%	2.1%	10.3%	2.1%
US Equity	10.0%		10.1%		10.1%	
MSCI USA IMI	10.0%	0.5%	10.0%	0.5%	10.0%	0.5%
Non-US Equity Developed	12.0%		12.0%		11.9%	
MSCI EAFE IMI	11.8%	0.8%	11.8%	0.8%	11.7%	0.8%
Non-US Emerging	14.9%		14.9%		14.9%	
MSCI Emerging Markets	15.0%	0.9%	15.0%	0.9%	15.0%	0.9%

Fixed Income						
Risk-Reducing Fixed Income	1.7%		1.9%		1.9%	
Bloomberg Barclays US Intermediate Aggregate	2.1%	0.3%	2.1%	0.2%	2.2%	0.2%
Return-Seeking Fixed Income	4.4%		4.4%		4.4%	
ICE BofA Merrill Lynch US High Yield	5.3%	1.1%	5.3%	1.1%	5.2%	1.1%

Opportunistic						
Opportunistic	5.9%		6.1%		5.7%	
Balanced Benchmark	7.2%	6.0%	7.3%	6.1%	7.2%	5.8%

Private Assets						
Real Estate	7.3%		7.5%		10.6%	
NCREIF ODCE	8.7%	8.8%	8.6%	8.8%	8.6%	10.8%
Private Equity	7.5%		7.5%		7.6%	
MSCI ACWI IMI	10.2%	4.8%	10.3%	4.8%	10.3%	4.7%
Private Real Assets	11.2%		11.2%		11.5%	
MSCI ACWI IMI	10.2%	13.3%	10.3%	13.3%	10.3%	13.5%



Public Markets Portfolio Changes in April 2018

Allocation Changes (millions)

Decrease Cantab: \$50

Portfolio %		Portfolio \$ millions		Summary Comments
Begin	End	Begin	End	
1.7%	1.3%	\$213	\$163	Complete portfolio rebalance and increase manager alignment

Private Market Portfolio Changes in April 2018

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 7.25 percent.
- The SDCERA Policy benchmark is composed as follows: 45% MSCI ACWI Investable Market Index (IMI), 18% Bloomberg Barclays US Intermediate Aggregate Index, 6% ICE BofA Merrill Lynch U. S. High Yield Index, 8% Balanced Benchmark, 23% SDCERA Private Asset Benchmark.
- The SDCERA Balanced Benchmark is composed of 70% MSCI ACWI IMI and 30% Bloomberg Barclays U.S. Intermediate Aggregate Index.
- The Total Public Markets Equity Benchmark is the MSCI ACWI IMI.
- The Global Equity Benchmark is the MSCI ACWI IMI.
- The US Equity Benchmark is the MSCI USA IMI.
- The Non-US Equity (Developed) Benchmark is the MSCI EAFE IMI.
- The Non-US Equity Emerging Markets Benchmark is the MSCI Emerging Markets Index.
- The Risk-Reducing Fixed Income Benchmark is the Bloomberg Barclays U.S. Intermediate Aggregate Index.
- The Return-Seeking Fixed Income Benchmark is the ICE BofA Merrill Lynch U.S. High Yield Index.
- The Opportunistic Benchmark is 70% MSCI ACWI IMI and 30% Bloomberg Barclays U.S. Intermediate Aggregate Index.
- The Total Private Assets Benchmark is composed of 1/3 NCREIF and 2/3 MSCI ACWI IMI.
- The Real Estate Benchmark is the NCREIF ODCE Index.
- The Private Equity Benchmark is the MSCI ACWI IMI.
- The Private Real Assets Benchmark is the MSCI ACWI IMI.
- The MSCI ACWI IMI captures large, mid and small cap representation across 23 Developed Markets (DM) and 24 Emerging Markets (EM) countries.
- The SDCERA Public Markets Risk Benchmark is an aggregate of 3.9% MSCI ACWI IMI, 23.4% MSCI USA IMI, 19.5% MSCI EAFE IMI, 11.7% MSCI Emerging Markets Index, 23.4% Bloomberg Barclays U.S. Intermediate Aggregate Index, 7.8% ICE BofA Merrill Lynch US High Yield Index, and 10.3% Balanced Benchmark.