



Monthly Risk-Return Report As of May 31, 2019

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Based on actual BNY Mellon data through April 2019 and preliminary data for May 2019.
Private asset valuations and returns are presented with a quarterly lag per industry standard.



Asset Allocation and Policy Guidelines

As of May 31, 2019

Asset Class	Assets and Allocation		Policy Target	Minimum Target	Maximum Target	Difference	
	\$ (MM)	%				From Policy Target	Within Target?
Public Markets Equity	5,663	45.3%	45.0%	40.0%	50.0%	0.3%	Yes
Global Equity	426	3.4%	3.0%	0.0%	10.0%	0.4%	Yes
US Equity	2,579	20.6%	20.0%	15.0%	25.0%	0.6%	Yes
Non-US Equity Developed	1,855	14.8%	15.0%	11.0%	19.0%	-0.2%	Yes
Non-US Equity Emerging	804	6.4%	7.0%	3.0%	11.0%	-0.6%	Yes
Fixed Income and Cash	3,259	26.1%					
Risk-Reducing Fixed Income	2,471	19.8%	18.0%	13.0%	24.0%	1.8%	Yes
Return-Seeking Fixed Income	788	6.3%	6.0%	0.0%	12.0%	0.3%	Yes
Opportunistic	894	7.2%	8.0%	0.0%	15.0%	-0.8%	Yes
Private Assets	2,683	21.5%	23.0%	10.0%		-1.5%	Yes
Real Estate	1,185	9.5%	9.0%	5.0%	12.0%	0.5%	Yes
Private Equity	798	6.4%	8.0%	3.0%	10.0%	-1.6%	Yes
Private Real Assets	701	5.6%	6.0%	3.0%	8.0%	-0.4%	Yes
Total Invested	12,500	100.0%					



Portfolio and Benchmark Returns

As of May 31, 2019

	MTD	QTD	FYTD	CYTD	1 Year	3 Years	5 Years
SDCERA Total Trust Fund	-2.6%	-0.7%	1.8%	6.0%	1.3%	7.3%	5.2%
SDCERA Policy Benchmark	-3.7%	-1.5%	1.0%	7.4%	0.6%	7.0%	4.9%
Balanced Benchmark	-3.8%	-1.5%	0.7%	7.6%	0.3%	7.0%	4.5%

SDCERA Public Markets	-3.5%	-1.4%	0.6%	7.0%	-0.2%	7.1%	3.4%
Balanced Benchmark	-3.8%	-1.5%	0.7%	7.6%	0.3%	7.0%	4.5%
Total Public Markets Equity	-5.9%	-2.8%	-1.6%	9.0%	-2.7%	9.2%	3.9%
MSCI ACWI IMI	-6.0%	-2.9%	-1.8%	9.1%	-2.4%	8.9%	5.2%
Total Fixed Income and Cash	0.6%	1.0%	4.8%	4.2%	4.9%	3.0%	2.4%
Bloomberg Barclays US Intermediate Aggregate	1.3%	1.4%	5.7%	3.8%	5.7%	2.1%	2.3%

Opportunistic							
Opportunistic	-2.8%	-1.0%	-1.2%	5.2%	-3.0%	2.5%	5.3%
Balanced Benchmark	-3.8%	-1.5%	0.7%	7.6%	0.3%	7.0%	4.5%

Private Assets							
	<i>The industry standard is to present private asset returns with a quarterly lag</i>						
Real Estate	1.3%	2.0%	8.7%	5.1%	9.0%	9.1%	11.5%
NCREIF ODCE	0.4%	0.8%	5.5%	2.0%	6.1%	6.8%	9.0%
Private Equity	2.1%	4.0%	9.7%	2.7%	9.9%	13.5%	11.6%
MSCI ACWI IMI	-6.0%	-2.9%	-1.8%	9.1%	-2.4%	8.9%	5.2%
Private Real Assets	0.1%	-0.8%	0.4%	-1.0%	0.6%	7.3%	4.6%
MSCI ACWI IMI	-6.0%	-2.9%	-1.8%	9.1%	-2.4%	8.9%	5.2%

Equities by Sub-Asset Class							
Global Equity	-5.3%	-2.7%	-2.0%	7.8%	-3.9%	8.7%	5.4%
MSCI ACWI IMI	-6.0%	-2.9%	-1.8%	9.1%	-2.4%	8.9%	5.2%
US Equity	-6.5%	-2.7%	1.5%	11.1%	2.1%	11.2%	7.8%
MSCI USA IMI	-6.5%	-2.9%	1.3%	10.7%	2.0%	10.9%	8.7%
Non-US Equity Developed	-4.7%	-1.9%	-4.5%	8.4%	-5.7%	6.1%	1.2%
MSCI EAFE IMI	-4.9%	-2.2%	-5.4%	7.7%	-6.7%	5.8%	1.6%
Non-US Emerging	-6.9%	-5.1%	-4.6%	4.3%	-8.6%	9.7%	1.6%
MSCI Emerging Markets	-7.3%	-5.3%	-4.7%	4.1%	-8.7%	9.9%	1.8%

Fixed Income by Sub-Asset Class							
Risk-Reducing Fixed Income	1.3%	1.3%	5.2%	3.4%	5.3%	2.2%	
Bloomberg Barclays US Intermediate Aggregate	1.3%	1.4%	5.7%	3.8%	5.7%	2.1%	
Return-Seeking Fixed Income	-1.5%	0.1%	3.1%	6.5%	3.4%	6.1%	
ICE BofA Merrill Lynch US High Yield	-1.3%	0.1%	5.0%	7.5%	5.4%	7.1%	

Please note: The Risk-Reducing Fixed Income, Return-Seeking Fixed Income and ICE BofA Merrill Lynch US High Yield 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 May 31, 2019	3/31/19 Trailing three years		4/30/19 Trailing three years		5/31/19 Trailing three years	
Total Trust Fund	Volatility	Tracking Error	Volatility	Tracking Error	Volatility	Tracking Error
SDCERA Total Trust Fund Assets	5.4%	N/A	5.4%	N/A	5.7%	N/A
SDCERA Policy Benchmark	6.8%	1.8%	6.9%	1.9%	7.3%	2.0%

	Forecasted		Forecasted		Forecasted	
Total Trust Fund	Volatility	Tracking Error	Volatility	Tracking Error	Volatility	Tracking Error
SDCERA Total Trust Fund Assets	6.3%	N/A	6.1%	N/A	6.0%	N/A
SDCERA Policy Benchmark	7.6%	1.8%	7.5%	1.7%	7.7%	1.9%
Balanced Benchmark	7.8%	2.0%	7.8%	2.0%	8.0%	2.2%
SDCERA Public-Only Assets	7.3%	N/A	7.4%	N/A	7.5%	N/A
SDCERA Public Benchmark	7.7%	0.6%	7.7%	0.6%	7.9%	0.7%

Equities						
Global Equity	10.8%	N/A	10.9%	N/A	11.2%	N/A
MSCI ACWI IMI	11.1%	1.9%	11.2%	1.9%	11.6%	1.9%
US Equity	11.6%	N/A	11.7%	N/A	12.1%	N/A
MSCI USA IMI	11.5%	0.4%	11.6%	0.4%	12.0%	0.4%
Non-US Equity Developed	11.9%	N/A	11.9%	N/A	12.1%	N/A
MSCI EAFE IMI	11.8%	0.7%	11.8%	0.7%	12.0%	0.7%
Non-US Emerging	15.5%	N/A	15.5%	N/A	15.8%	N/A
MSCI Emerging Markets	15.3%	0.8%	15.3%	0.8%	15.6%	0.8%

Fixed Income						
Risk-Reducing Fixed Income	1.7%	N/A	1.7%	N/A	1.8%	N/A
Bloomberg Barclays US Intermediate Aggregate	2.1%	0.3%	2.1%	0.3%	2.1%	0.3%
Return-Seeking Fixed Income	4.5%	N/A	4.6%	N/A	4.6%	N/A
ICE BofA Merrill Lynch US High Yield	5.5%	1.1%	5.5%	1.1%	5.5%	1.1%

Opportunistic						
Opportunistic	6.5%	N/A	6.5%	N/A	6.7%	N/A
Balanced Benchmark	7.8%	5.1%	7.8%	5.1%	8.0%	5.2%

Private Assets						
Real Estate	10.7%	N/A	6.5%	N/A	6.7%	N/A
NCREIF ODCE	5.4%	8.1%	0.9%	6.4%	0.9%	6.6%
Private Equity	6.9%	N/A	3.6%	N/A	3.8%	N/A
MSCI ACWI IMI	11.1%	5.9%	11.2%	8.3%	11.6%	8.4%
Private Real Assets	10.8%	N/A	10.7%	N/A	10.7%	N/A
MSCI ACWI IMI	11.1%	13.2%	11.2%	13.5%	11.6%	13.7%



Public Markets Portfolio Changes in May 2019

Allocation Changes (millions)

Decrease: BlackRock MSCI US Equity Index \$40
 Decrease: BlackRock MSCI USA Small Cap \$10
 Increase: Allianz Global Equity \$50

Portfolio %		Portfolio \$ millions		Summary Comments
Begin	End	Begin	End	
8.5%	7.9%	\$1,094	\$988	Rebalance U.S. Equity back towards policy target
1.3%	1.2%	\$168	\$146	Rebalance U.S. Equity back towards policy target
2.6%	3.0%	\$340	\$370	Increase exposure to global equities

Private Markets Portfolio Changes in May 2019

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, 26.0% MSCI USA IMI, 19.5% MSCI EAFE IMI, 9.1% 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.

Glossary

MSCI ACWI IMI: Morgan Stanley Capital International All Country World - Investable Market Index. A capitalization-weighted stock index that captures large, mid and small cap representation across 23 Developed Markets (DM) and 24 Emerging Markets (EM) countries. The index is comprised of 8,675 equity securities that cover approximately 99% of the global equity investment opportunity set as of March 31, 2019.

Bloomberg Barclays U.S. Intermediate Aggregate: A market value-weighted index consisting of U.S. Treasury securities, corporate bonds and mortgage-related and asset-backed securities with one to ten years to maturity and an outstanding par value of \$250 million or greater.

NCREIF ODCE: National Council of Real Estate Investment Fiduciaries – Open End Diversified Core Equity Index. A capitalization weighted index comprised of open-end, Core funds investing in commercial real estate properties. The funds that constitute the index are subject to certain geographic and property type diversification requirements as well as leverage restrictions. The index returns reflect the property-level leverage contained within each underlying fund. The returns shown in this report are net of management fees of the respective funds included in the index.

MSCI USA IMI: Morgan Stanley Capital International USA - Investable Market Index. A capitalization-weighted stock index designed to measure the performance of the large, mid and small cap segments of the U.S. market. The index is comprised of 2,411 equity securities that cover approximately 99% of the free float-adjusted market capitalization in the U.S. as of March 31, 2019.

MSCI EAFE IMI: Morgan Stanley Capital International Europe Australasia and Far East - Investable Market Index A capitalization-weighted index of stocks that captures large, mid and small cap representation across Developed Markets countries around the world, excluding the U.S. and Canada. The index is comprised of 3,251 equity securities that cover approximately 99% of the free float-adjusted market capitalization in each country as of March 31, 2019.

MSCI Emerging Markets Index: A capitalization-weighted index of stocks that captures large and mid-cap representation across 24 Emerging Markets (EM) countries. The Index is comprised of 1,136 equity securities that cover approximately 85% of the free float-adjusted market capitalization in each country as of March 31, 2019.

ICE BofAML U.S. High Yield Index: Intercontinental Exchange Bank of America Merrill Lynch. A market capitalization-weighted index that tracks the performance of U.S. dollar-denominated below investment grade corporate debt publicly issued in the U.S. domestic market.