

FUND EVALUATION REPORT

Worcester Retirement System

Interim Update
April 30, 2019



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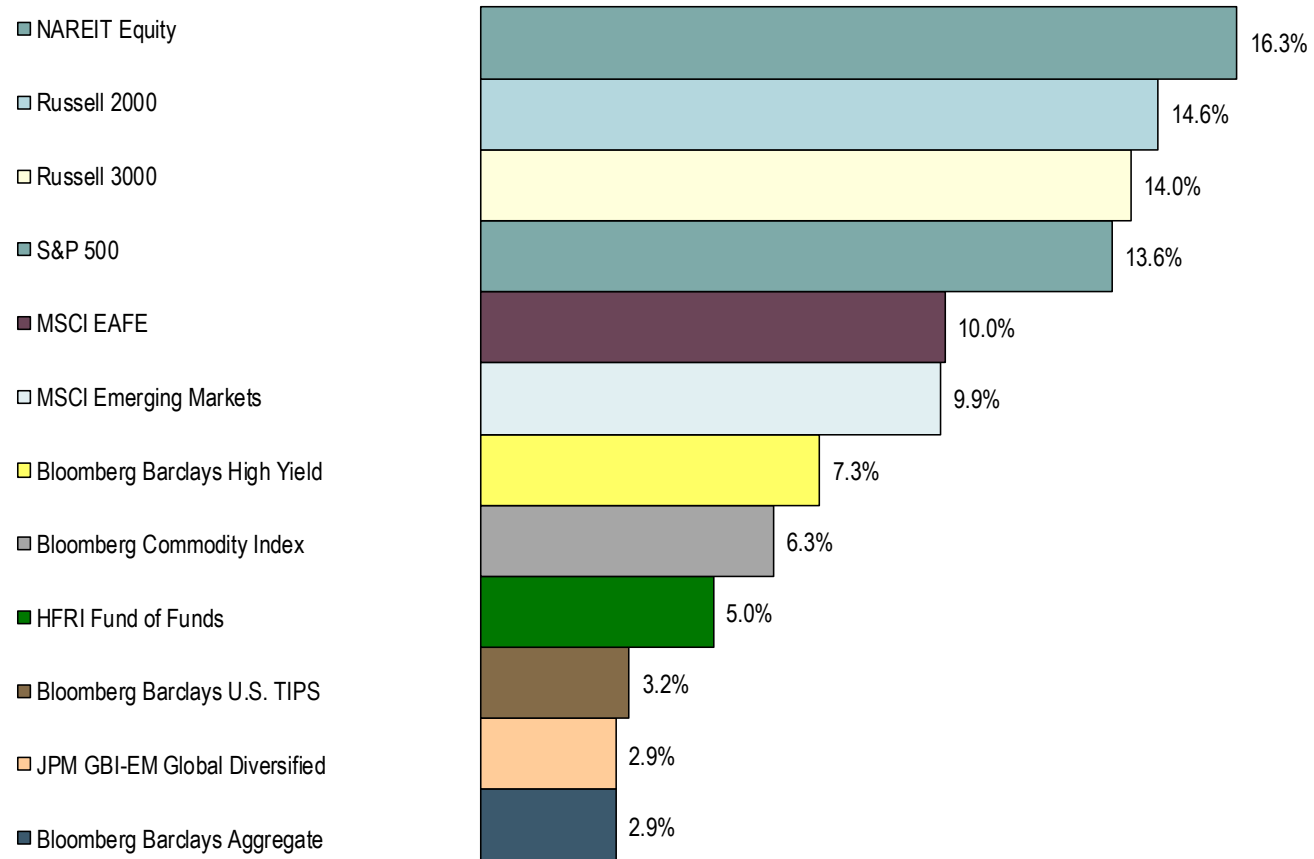
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- 1. The World Markets in the First Quarter of 2019**
- 2. Interim Update as of April 30, 2019**
- 3. Disclaimer, Glossary and Notes**

The World Markets First Quarter of 2019

The World Markets¹ First Quarter of 2019



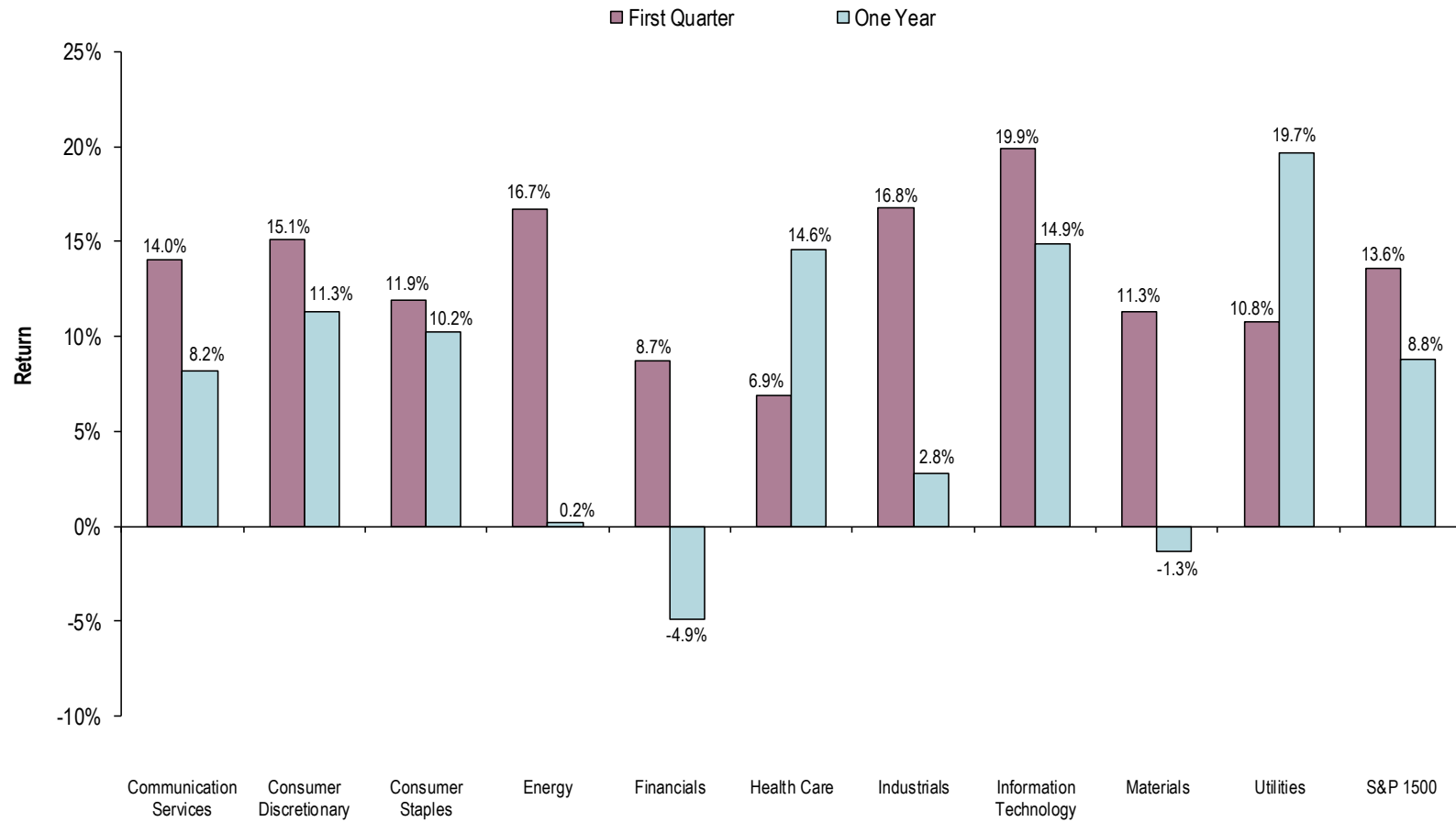
¹ Source: InvestorForce.

Index Returns¹

	1Q19 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
Domestic Equity					
S&P 500	13.6	9.5	13.5	10.9	15.9
Russell 3000	14.0	8.8	13.5	10.4	16.0
Russell 1000	14.0	9.3	13.5	10.6	16.0
Russell 1000 Growth	16.1	12.7	16.5	13.5	17.5
Russell 1000 Value	11.9	5.7	10.5	7.7	14.5
Russell MidCap	16.5	6.5	11.8	8.8	16.9
Russell MidCap Growth	19.6	11.5	15.1	10.9	17.6
Russell MidCap Value	14.4	2.9	9.5	7.2	16.4
Russell 2000	14.6	2.0	12.9	7.1	15.4
Russell 2000 Growth	17.1	3.9	14.9	8.4	16.5
Russell 2000 Value	11.9	0.2	10.9	5.6	14.1
Foreign Equity					
MSCI ACWI (ex. U.S.)	10.3	-4.2	8.1	2.6	8.8
MSCI EAFE	10.0	-3.7	7.3	2.3	9.0
MSCI EAFE (Local Currency)	10.6	2.8	8.5	6.0	9.8
MSCI EAFE Small Cap	10.7	-9.4	7.5	4.5	12.8
MSCI Emerging Markets	9.9	-7.4	10.7	3.7	8.9
MSCI Emerging Markets (Local Currency)	10.1	-1.7	11.3	7.2	10.2
Fixed Income					
Bloomberg Barclays Universal	3.3	4.5	2.6	3.0	4.4
Bloomberg Barclays Aggregate	2.9	4.5	2.0	2.7	3.8
Bloomberg Barclays U.S. TIPS	3.2	2.7	1.7	1.9	3.4
Bloomberg Barclays High Yield	7.3	5.9	8.6	4.7	11.3
JPM GBI-EM Global Diversified	2.9	-7.6	3.3	-0.8	4.3
Other					
NAREIT Equity	16.3	20.3	6.0	9.0	18.2
Bloomberg Commodity Index	6.3	-5.3	2.2	-8.9	-2.6
HFRI Fund of Funds	5.0	0.5	4.1	2.3	3.6

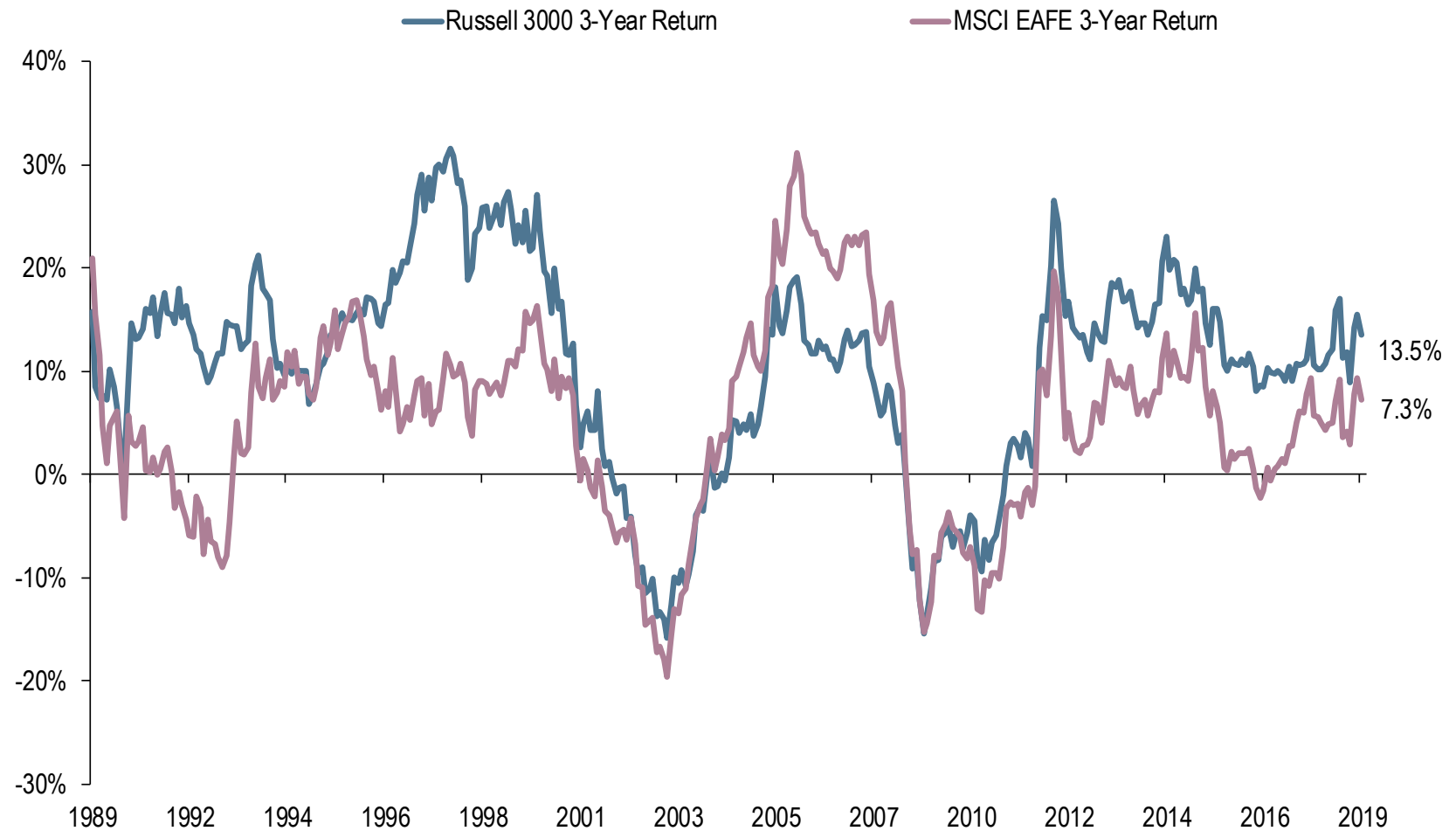
¹ Source: InvestorForce.

S&P Sector Returns¹



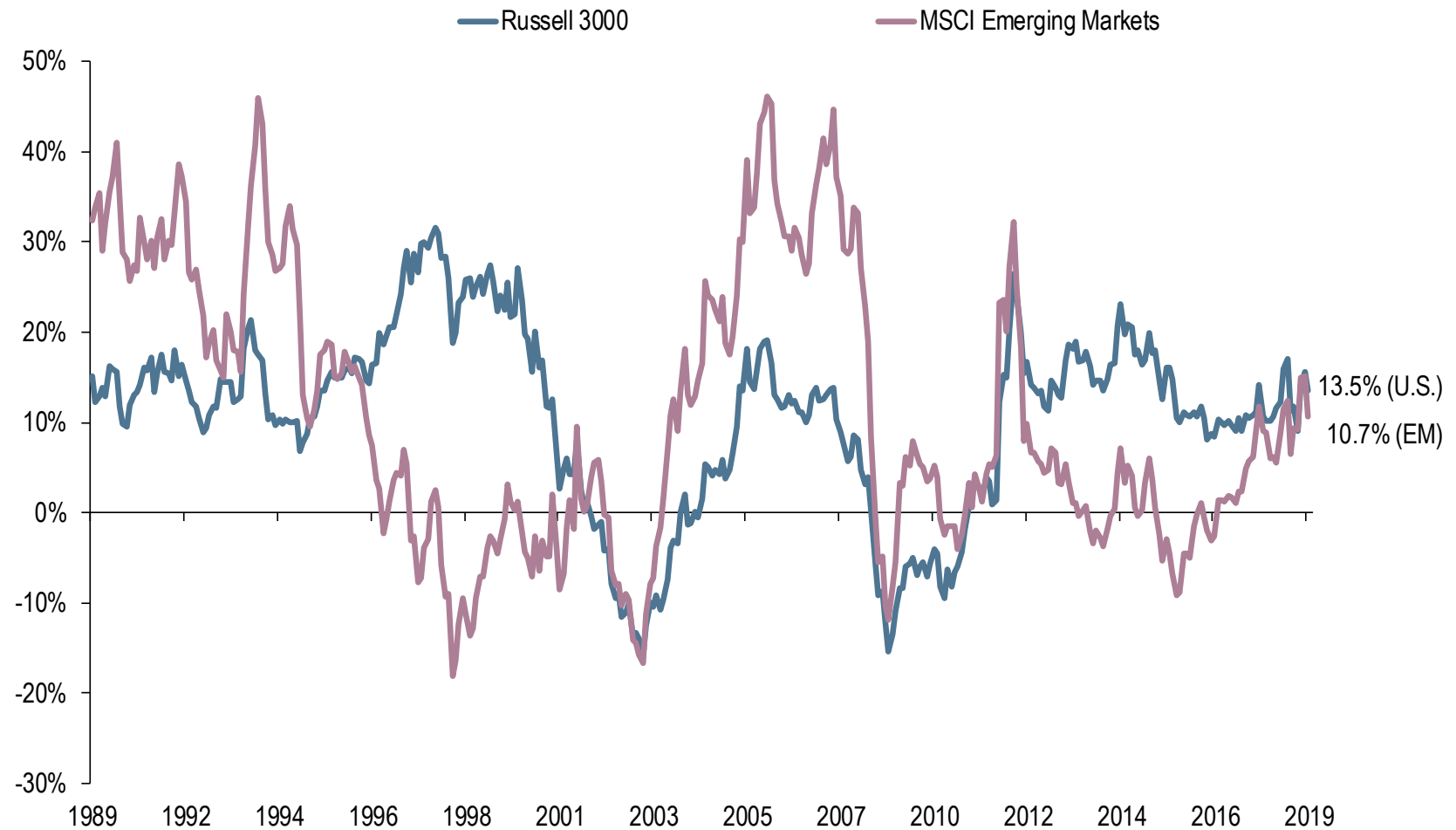
¹ Source: InvestorForce. Represents S&P 1500 (All Cap) data.

U.S. and Developed Market Foreign Equity Rolling Three-Year Returns¹



¹ Source: InvestorForce.

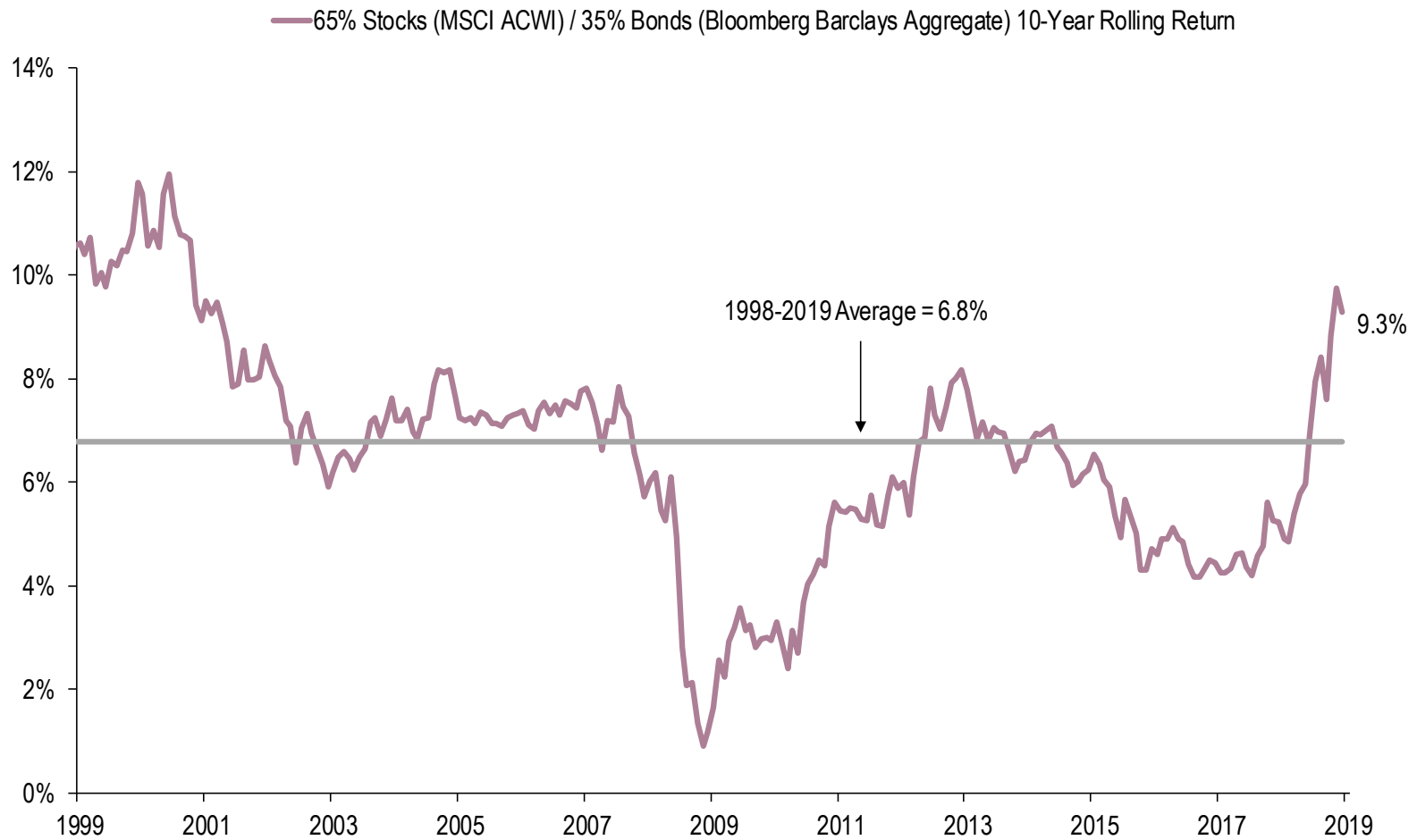
U.S. and Emerging Market Equity Rolling Three-Year Returns¹



¹ Source: InvestorForce.



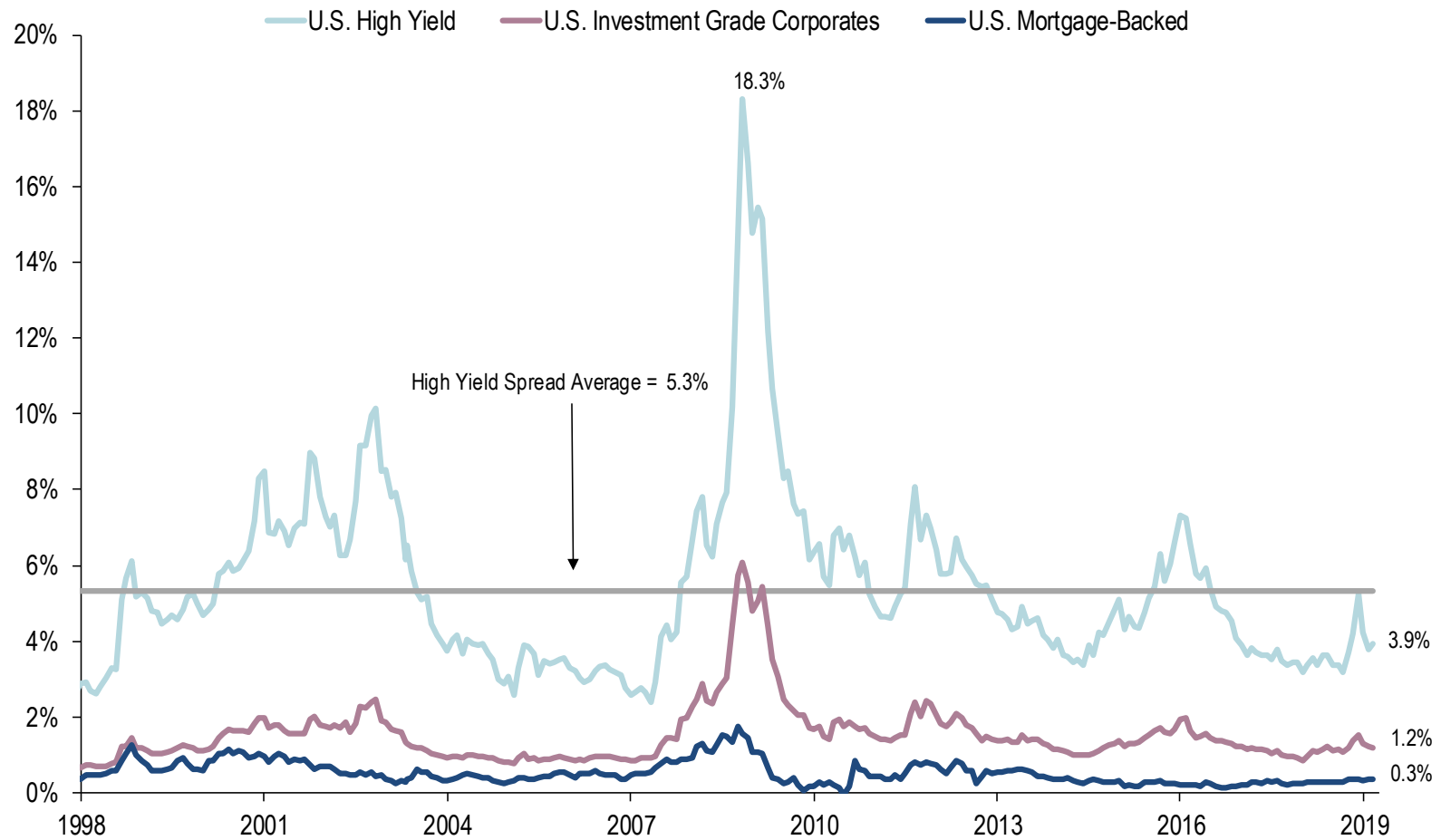
Rolling Ten-Year Returns: 65% Stocks and 35% Bonds¹



¹ Source: InvestorForce.



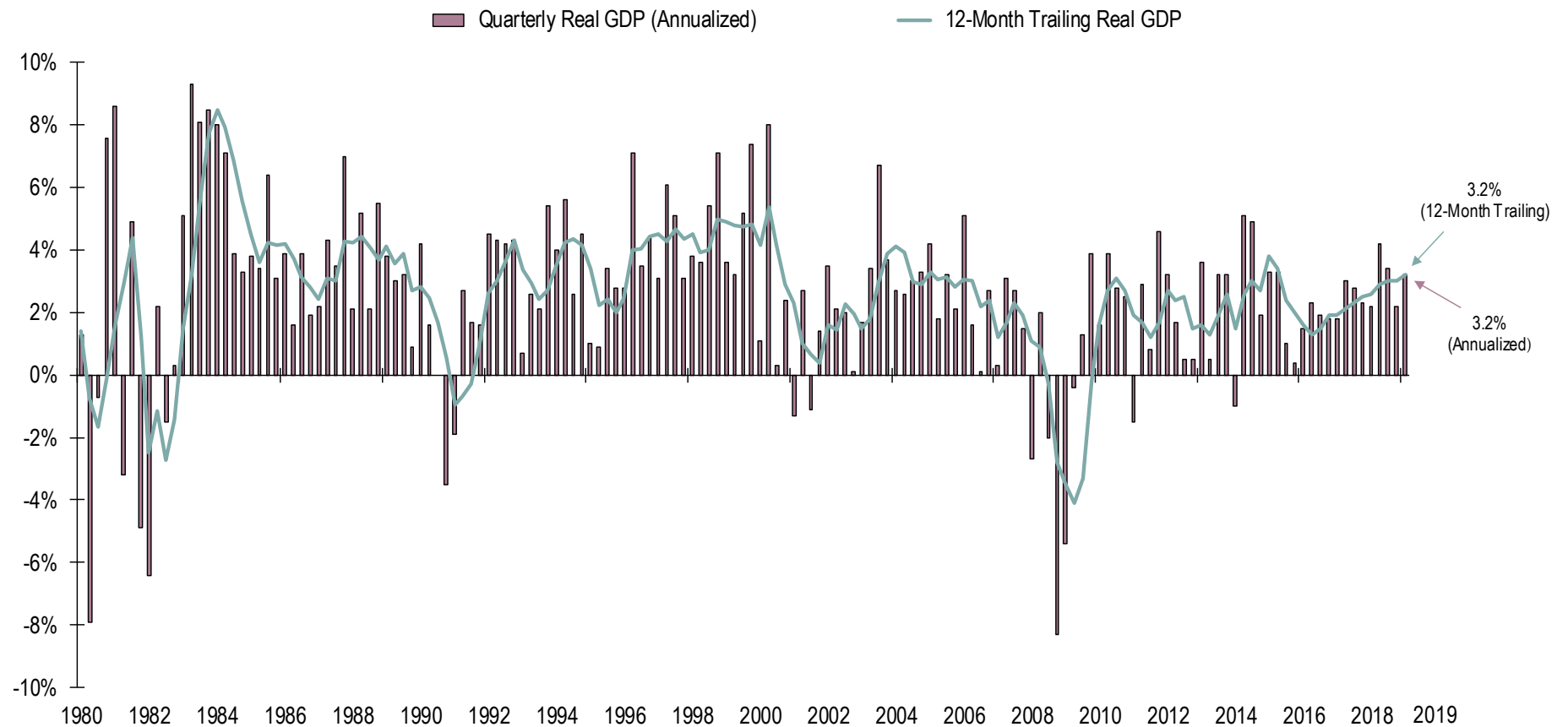
Credit Spreads vs. U.S. Treasury Bonds^{1,2}



¹ Source: Barclays Live.

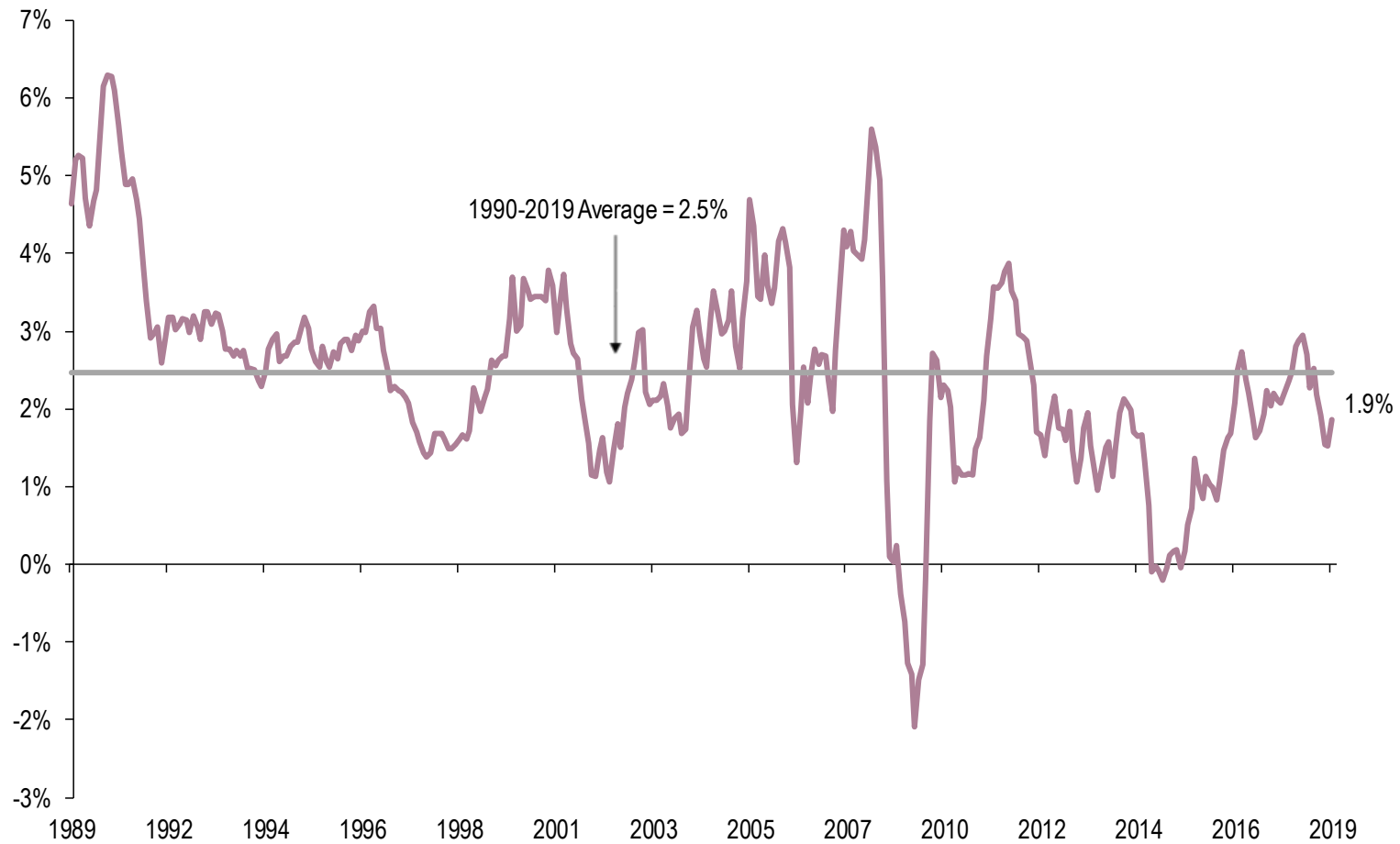
² The median high yield spread was 4.8% from 1997-2019.

U.S. Real Gross Domestic Product (GDP) Growth¹



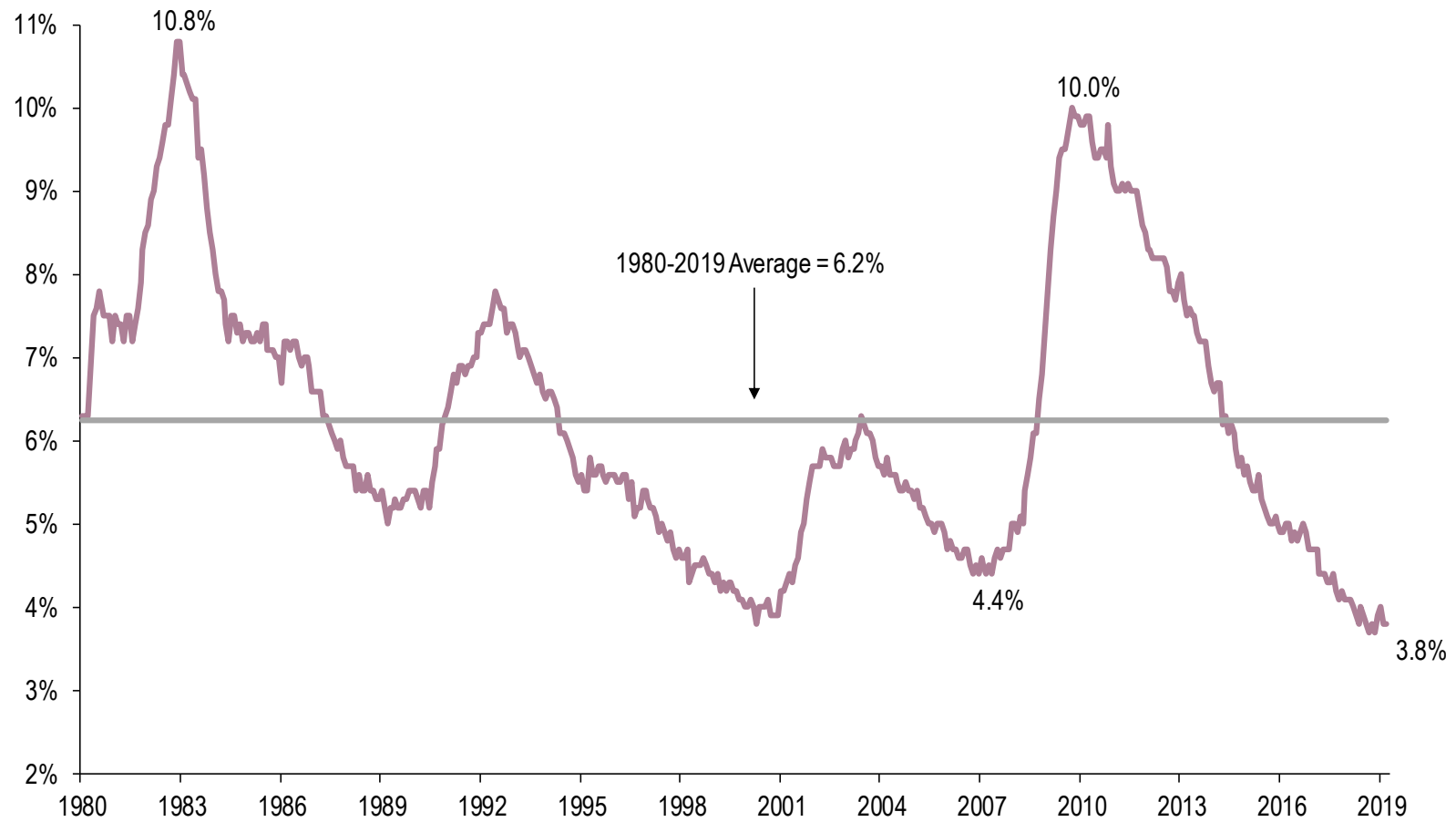
¹ Source: Bureau of Economic Analysis. Data is as of Q1 2019 and represents the first estimate.

U.S. Inflation (CPI) Trailing Twelve Months¹



¹ Source: Bureau of Labor Statistics. Data is non-seasonally adjusted CPI, which may be volatile in the short-term. Data is as of March 31, 2019.

U.S. Unemployment¹



¹ Source: Bureau of Labor Statistics. Data is as of March 31, 2019.

Interim Update
As of April 30, 2019

PRIT Look Through Analysis
Aggregate Assets
As of April 30, 2019

	Actual Asset Allocation ^{1,2} (%)	PRIT Actual Asset Allocation ¹ (%)
Total Retirement System		
Global Equity Assets	45	43
<i>Domestic Equity Assets</i>	20	22
<i>International Developed Market Equity Assets</i>	14	15
<i>International Emerging Market Equity Assets</i>	11	6
Fixed Income Assets	23	21
<i>Core Fixed Income Assets³</i>	14	13
<i>Value-Added Fixed Income Assets⁴</i>	9	8
Real Estate Assets	10	10
Private Equity Assets	10	11
Portfolio Completion Strategies / Hedge Funds / GTAA	2	10
Real Assets (Natural Resources, Timber, Infrastructure)	9	4
Cash	<1	1

¹ Numbers may not sum to 100% due to rounding.

² Asset classes include a pro-rata allocation of the System's 26% holding of the PRIT Core Fund.

³ Retirement System figures include investment grade bonds and TIPS.

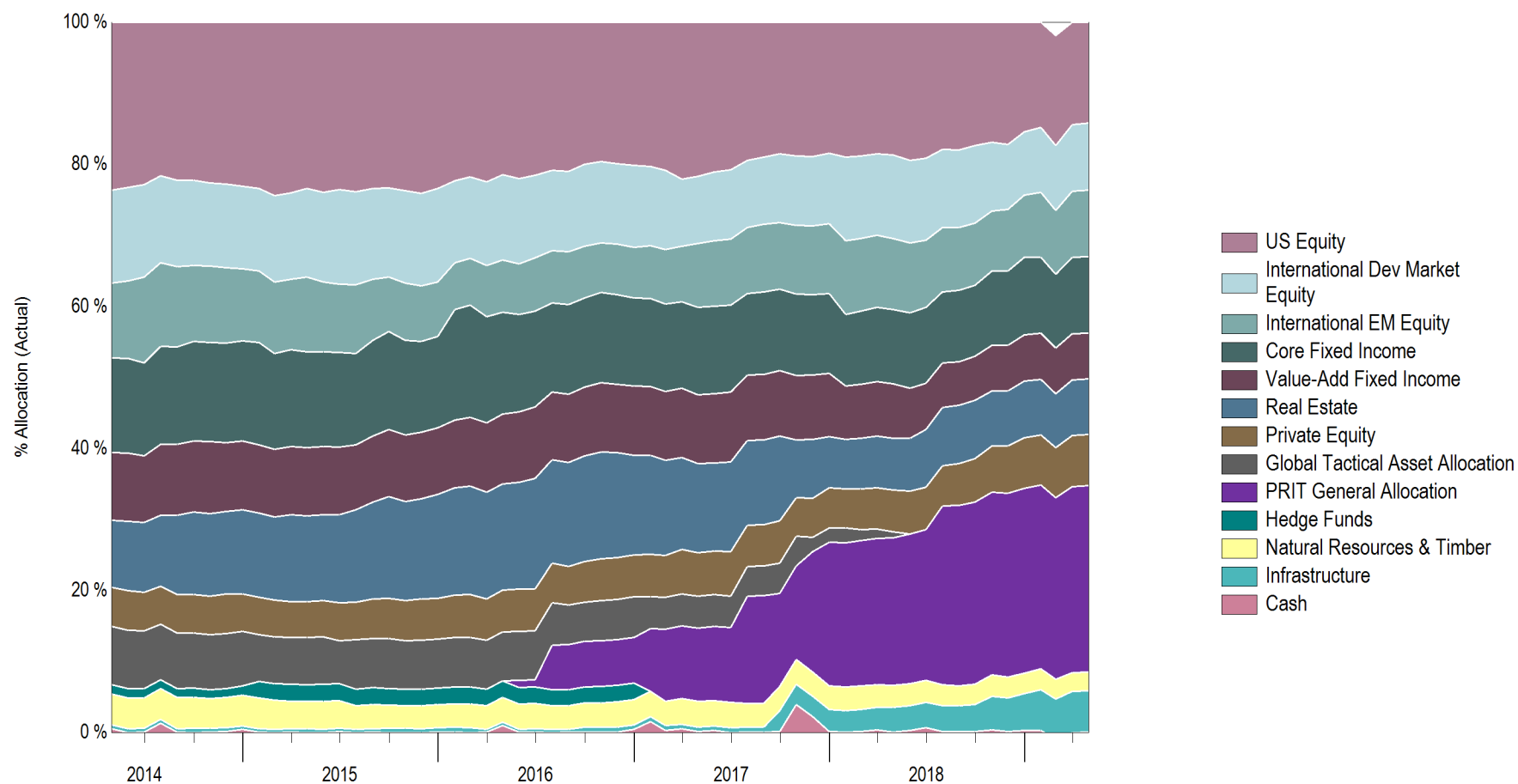
⁴ Retirement System figures include high yield fixed income and emerging market debt.



Allocation vs. Targets and Policy

	Current Balance	Current Allocation	Policy	Policy Range	Within IPS Range?
US Equity	\$135,385,987	14%	14%	9% - 19%	Yes
International Dev Market Equity	\$90,818,865	9%	8%	4% - 12%	Yes
International EM Equity	\$89,698,014	9%	8%	4% - 12%	Yes
Core Fixed Income	\$102,331,407	11%	10%	5% - 15%	Yes
Value-Add Fixed Income	\$62,139,237	6%	4%	2% - 6%	No
Real Estate	\$74,312,145	8%	6%	4% - 8%	Yes
Private Equity	\$68,944,769	7%	7%	4% - 10%	Yes
PRIT General Allocation	\$251,386,133	26%	35%	0% - 50%	Yes
Natural Resources & Timber	\$24,962,802	3%	3%	1% - 5%	Yes
Infrastructure	\$55,283,991	6%	5%	2% - 8%	Yes
Cash	\$970,350	0%	0%	0% - 5%	Yes
Total	\$956,233,698	100%	100%		

Asset Allocation History
5 Years Ending April 30, 2019



As of April 30, 2019

Asset Class Performance Summary

	Market Value (\$)	% of Portfolio	1 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Retirement System	956,233,698	100.0	1.5	8.1	4.1	8.5	5.8	9.0	7.5	Oct-95
Total Retirement System (Net of Fees)			1.5	8.1	4.0	8.4	5.7	8.8	7.2	
<i>Custom Benchmark - Target Allocation</i>			1.7	10.2	4.9	8.5	6.2	9.2	--	Oct-95
<i>60% ACWI / 40% Barclays Global Aggregate</i>			1.9	10.2	3.6	7.2	4.6	8.0	6.1	Oct-95
Domestic Equity Assets	135,385,987	14.2	4.0	18.3	12.2	14.4	11.1	15.5	6.5	Aug-00
<i>Russell 3000</i>			4.0	18.6	12.7	14.7	11.2	15.3	6.3	Aug-00
International Developed Market Equity	90,818,865	9.5	2.6	13.0	-4.8	7.8	3.5	9.3	5.1	Aug-00
<i>MSCI EAFE</i>			2.8	13.1	-3.2	7.2	2.6	8.0	3.6	Aug-00
International Emerging Market Equity	89,698,014	9.4	2.0	13.3	-4.6	12.1	4.4	9.1	6.9	Aug-06
<i>MSCI Emerging Markets</i>			2.1	12.2	-5.0	11.3	4.0	7.5	5.3	Aug-06
Core Fixed Income	102,331,407	10.7	0.3	3.2	4.7	2.0	2.2	3.9	4.2	May-05
<i>Custom Benchmark - Fixed Income</i>			0.1	3.0	4.7	1.8	2.2	3.5	3.8	May-05
Value Added Fixed Income	62,139,237	6.5	0.6	6.1	3.2	5.8	3.8	7.2	7.1	May-05
<i>Custom High Yield Benchmark</i>			1.0	6.4	3.9	5.8	3.8	--	--	May-05
Real Estate	74,312,145	7.8	0.0	4.9	9.0	8.6	9.9	8.8	7.8	Oct-00
<i>NCREIF ODCE</i>			0.0	1.4	7.5	8.0	10.2	8.7	8.0	Oct-00
Private Equity	68,944,769	7.2	0.0	0.1	8.0	10.9	8.0	8.5	9.2	Oct-00
<i>Cambridge Associates Fund of Funds Composite 1-Quarter Lag</i>			0.0	-0.1	9.7	10.0	10.1	10.7	4.7	Oct-00
PRIT General Allocation	251,386,133	26.3	1.7	8.1	4.9	--	--	--	9.3	Jun-16
<i>60% ACWI / 40% Barclays Global Aggregate</i>			1.9	10.2	3.6	7.2	4.6	8.0	7.6	Jun-16
Real Assets	80,246,793	8.4	0.0	-0.7	4.9	7.1	4.4	3.9	3.8	Oct-06
<i>CPI +3%</i>			0.6	1.9	5.0	5.2	4.5	4.8	4.8	Oct-06
Cash	970,350	0.1								

Custom Benchmark - Fixed Income is comprised of 70% Barclays US Aggregate Index and 30% Barclays 1-10 Year TIPS Index.

Custom High Yield Benchmark is comprised of one third Barclays High Yield Index, one third Credit Suisse Leveraged Loans Index, and the final third being split evenly between JPMorgan's Emerging Market Bond Index and Emerging Markets Government Bond Index.



As of April 30, 2019

Trailing Performance

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Retirement System	956,233,698	100.0	100.0	1.5	1.5	8.1	4.1	8.5	5.8	9.0	7.5	Oct-95
Total Retirement System (Net of Fees)				1.5	1.5	8.1	4.0	8.4	5.7	8.8	7.2	
<i>Custom Benchmark - Target Allocation</i>				1.7	1.7	10.2	4.9	8.5	6.2	9.2	--	Oct-95
<i>60% ACWI / 40% Barclays Global Aggregate</i>				1.9	1.9	10.2	3.6	7.2	4.6	8.0	6.1	Oct-95
Domestic Equity Assets	135,385,987	14.2	14.2	4.0	4.0	18.3	12.2	14.4	11.1	15.5	6.5	Aug-00
<i>Russell 3000</i>				4.0	4.0	18.6	12.7	14.7	11.2	15.3	6.3	Aug-00
SSgA S&P 500 Index (Net of Fees)	38,582,054	4.0	28.5	4.1	4.1	18.2	13.5	14.9	11.7	15.4	6.8	Aug-98
<i>S&P 500</i>				4.0	4.0	18.2	13.5	14.9	11.6	15.3	6.8	Aug-98
SSgA Russell 1000 Growth Index (Net of Fees)	34,761,947	3.6	25.7	4.5	4.5	21.3	17.4	18.6	14.5	--	15.7	Nov-09
<i>Russell 1000 Growth</i>				4.5	4.5	21.3	17.4	18.6	14.5	17.0	15.8	Nov-09
SSgA Russell 1000 Value Index (Net of Fees)	40,277,380	4.2	29.8	3.6	3.6	15.9	9.0	11.0	8.3	13.8	7.5	Jul-05
<i>Russell 1000 Value</i>				3.5	3.5	15.9	9.1	11.0	8.3	13.8	7.5	Jul-05
SSgA S&P Midcap 400 Index (Net of Fees)	9,615,278	1.0	7.1	4.0	4.0	19.1	7.0	12.2	9.5	15.1	9.6	Sep-06
<i>S&P 400 MidCap</i>				4.0	4.0	19.1	7.0	12.3	9.5	15.1	9.6	Sep-06
Lee Munder Small Cap Value (Net of Fees)	12,149,328	1.3	9.0	3.7	3.7	18.0	4.0	9.7	8.2	--	12.0	Nov-09
<i>Russell 2000 Value</i>				3.8	3.8	16.2	2.2	11.5	6.9	12.9	11.8	Nov-09
International Developed Market Equity	90,818,865	9.5	9.5	2.6	2.6	13.0	-4.8	7.8	3.5	9.3	5.1	Aug-00
<i>MSCI EAFE</i>				2.8	2.8	13.1	-3.2	7.2	2.6	8.0	3.6	Aug-00
SSgA MSCI EAFE Index	67,417,839	7.1	74.2	2.9	2.9	13.3	-3.0	7.6	2.9	8.3	5.9	Sep-04
<i>MSCI EAFE</i>				2.8	2.8	13.1	-3.2	7.2	2.6	8.0	5.6	Sep-04
Acadian Non-U.S. Small Cap Equity (Net of Fees)	23,401,026	2.4	25.8	1.8	1.8	11.7	-10.6	8.2	5.7	12.8	7.8	Feb-05
<i>MSCI EAFE Small Cap</i>				3.0	3.0	14.0	-7.9	7.8	5.3	11.5	6.5	Feb-05

												As of April 30, 2019	
	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)		Inception (%)	Inception Date
International Emerging Market Equity	89,698,014	9.4	9.4	2.0	2.0	13.3	-4.6	12.1	4.4	9.1		6.9	Aug-06
MSCI Emerging Markets				2.1	2.1	12.2	-5.0	11.3	4.0	7.5		5.3	Aug-06
PRIT Emerging Markets (Net of Fees)	89,698,014	9.4	100.0	2.0	2.0	13.3	-4.6	--	--	--		10.5	Sep-16
MSCI Emerging Markets				2.1	2.1	12.2	-5.0	11.3	4.0	7.5		9.6	Sep-16
Core Fixed Income	102,331,407	10.7	10.7	0.3	0.3	3.2	4.7	2.0	2.2	3.9		4.2	May-05
Custom Benchmark - Fixed Income				0.1	0.1	3.0	4.7	1.8	2.2	3.5		3.8	May-05
IR&M Aggregate Bond	66,002,877	6.9	64.5	0.2	0.2	3.2	5.4	2.2	2.9	--		3.0	Feb-14
BBgBarc US Aggregate TR				0.0	0.0	3.0	5.3	1.9	2.6	3.7		2.7	Feb-14
IR&M Intermediate TIPS	36,328,530	3.8	35.5	0.4	0.4	3.1	3.3	1.6	1.4	--		1.5	Feb-14
BBgBarc US TIPS 1-10 Yr TR				0.4	0.4	3.0	3.3	1.6	1.4	2.8		1.5	Feb-14
Value Added Fixed Income	62,139,237	6.5	6.5	0.6	0.6	6.1	3.2	5.8	3.8	7.2		7.1	May-05
Custom High Yield Benchmark				1.0	1.0	6.4	3.9	5.8	3.8	--		--	May-05
High Yield Bonds	24,531,620	2.6	39.5	1.5	1.5	7.3	4.9	6.1	4.1	7.9		6.1	Jun-08
50% BBgBarc US High Yield/ 50% Credit Suisse Leveraged Loans				1.5	1.5	7.1	5.6	6.7	4.5	8.7		6.6	Jun-08
Loomis Sayles High Yield	13,201,901	1.4	53.8	1.4	1.4	8.8	5.6	7.6	4.8	10.1		7.9	Jan-96
BBgBarc US High Yield TR				1.4	1.4	8.8	6.7	7.7	4.8	10.1		7.1	Jan-96
Loomis Sayles Bank Loans	11,329,719	1.2	46.2	1.5	1.5	5.5	4.2	4.6	3.9	5.9		4.3	Oct-05
Credit Suisse Leveraged Loans				1.6	1.6	5.4	4.5	5.8	4.1	7.3		4.6	Oct-05
Total Emerging Markets Debt	29,476,929	3.1	47.4	0.0	0.0	6.0	-1.0	3.5	0.8	--		0.8	Aug-13
50% JPM EMBI GD / 50% JPM GBI-EM				0.0	0.0	5.0	0.5	3.9	2.2	5.8		2.6	Aug-13
Lazard Emerging Market Debt Blend	29,476,929	3.1	100.0	0.0	0.0	6.0	-1.0	3.5	0.8	--		1.4	Aug-13
50% JPM EMBI GD / 50% JPM GBI-EM				0.0	0.0	5.0	0.5	3.9	2.2	5.8		2.6	Aug-13

Custom Benchmark - Fixed Income is comprised of 70% Barclays US Aggregate Index and 30% Barclays 1-10 Year TIPS Index.

Custom High Yield Benchmark is comprised of one third Barclays High Yield Index, one third Credit Suisse Leveraged Loans Index, and the final third being split evenly between JPMorgan's Emerging Market Bond Index and Emerging Markets Government Bond Index.



As of April 30, 2019

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Mezzanine Debt	8,130,688	0.9	13.1	0.0	0.0	3.4	11.6	12.7	12.3	9.4	--	Oct-02
Northstar Mezzanine Partners VI	5,469,037	0.6	67.3									
Newstone Capital Partners II	701,784	0.1	8.6									
Northstar Mezzanine Partners V	1,672,082	0.2	20.6									
Northstar Mezzanine Partners IV	211,856	0.0	2.6									
Newstone Capital Partners	1,712	0.0	0.0									
Northstar Mezzanine Partners III	74,217	0.0	0.9									
Real Estate	74,312,145	7.8	7.8	0.0	0.0	4.9	9.0	8.6	9.9	8.8	7.8	Oct-00
<i>NCREIF ODCE</i>				<i>0.0</i>	<i>0.0</i>	<i>1.4</i>	<i>7.5</i>	<i>8.0</i>	<i>10.2</i>	<i>8.7</i>	<i>8.0</i>	<i>Oct-00</i>
Open-End Real Estate	67,473,280	7.1	90.8	0.0	0.0	4.8	8.1	8.1	9.5	7.9	7.3	Jan-99
PRIT Real Estate	67,473,280	7.1	100.0	0.0	0.0	4.8	8.1	7.7	9.6	--	11.1	Apr-10
<i>NCREIF ODCE</i>				<i>0.0</i>	<i>0.0</i>	<i>1.4</i>	<i>7.5</i>	<i>8.0</i>	<i>10.2</i>	<i>8.7</i>	<i>12.1</i>	<i>Apr-10</i>
<i>NCREIF ODCE Equal Weighted</i>				<i>0.0</i>	<i>0.0</i>	<i>1.7</i>	<i>7.7</i>	<i>8.2</i>	<i>10.4</i>	<i>8.5</i>	<i>12.1</i>	<i>Apr-10</i>
<i>Custom Benchmark</i>				<i>-0.3</i>	<i>-0.3</i>	<i>3.8</i>	<i>8.2</i>	<i>7.7</i>	<i>9.7</i>	<i>9.9</i>	<i>11.7</i>	<i>Apr-10</i>
Non-Core Real Estate	6,838,865	0.7	9.2	0.0	0.0	6.7	17.8	13.6	14.5	14.4	12.8	Oct-05
AEW Partners VII	4,651,660	0.5	68.0									
AEW Partners VI	2,187,205	0.2	32.0									

Custom Benchmark comprised of 80% NCREIF ODCE, 10% NAREIT Equity, and 10% FTSE NAREIT Developed ex US.



As of April 30, 2019

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Private Equity	68,944,769	7.2	7.2	0.0	0.0	0.1	8.0	10.9	8.0	8.5	9.2	Oct-00
<i>Cambridge Associates Fund of Funds Composite 1-Quarter Lag</i>				<i>0.0</i>	<i>0.0</i>	<i>-0.1</i>	<i>9.7</i>	<i>10.0</i>	<i>10.1</i>	<i>10.7</i>	<i>4.7</i>	<i>Oct-00</i>
Buyouts	43,407,332	4.5	63.0	0.0	0.0	0.3	11.8	14.1	10.3	10.2	12.1	Oct-05
American Securities Partners VI	3,323,516	0.3	7.7									
Riverside Capital Appreciation Fund VI	5,948,369	0.6	13.7									
Vitruvian Investment Partnership I	4,333,207	0.5	10.0									
Riverside Micro Cap Fund III	7,033,429	0.7	16.2									
Ridgemont II	7,898,831	0.8	18.2									
Capital International Private Equity Fund VI	6,039,478	0.6	13.9									
Harvest Partners V	968,130	0.1	2.2									
TA XII	6,700,037	0.7	15.4									
Riverside Capital Fund V	724,023	0.1	1.7									
Riverside Europe III	213,982	0.0	0.5									
Charlesbank Equity Fund VI	224,330	0.0	0.5									

As of April 30, 2019

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Fund of Funds	15,809,969	1.7	22.9	0.1	0.1	1.4	2.7	-3.0	-5.5	-1.6	6.5	Oct-05
PRIT Vintage Year 2016	5,001,406	0.5	31.6									
PRIT Vintage Year 2017	7,221,153	0.8	45.7									
European Strategic Partners	73,604	0.0	0.5									
INVESCO Private Capital II	85,219	0.0	0.5									
PRIT Vintage Year 2018	3,397,857	0.4	21.5									
PRIT Vintage Year 2019	30,730	0.0	0.2									
Venture Capital Funds	9,727,467	1.0	14.1	0.0	0.0	-2.8	-3.5	1.6	1.6	4.9	6.1	Oct-05
Ascent Venture Partners V	4,317,324	0.5	44.4									
Ascent Venture Partners VI	4,089,104	0.4	42.0									
Boston Millennia Partners III	525,565	0.1	5.4									
Boston Millennia Partners II	458,444	0.0	4.7									
Ascent Venture Partners II	23,112	0.0	0.2									
Ascent Venture Partners IV	75,272	0.0	0.8									
Ascent Venture Partners III	238,647	0.0	2.5									
PRIT General Allocation	251,386,133	26.3	26.3	1.7	1.7	8.1	4.9	--	--	--	9.3	Jun-16
60% ACWI / 40% Barclays Global Aggregate				1.9	1.9	10.2	3.6	7.2	4.6	8.0	7.6	Jun-16
PRIT General Allocation Fund (Net of Fees)	251,386,133	26.3	100.0	1.7	1.7	8.1	4.9	9.1	--	--	9.3	Jun-16
60% ACWI / 40% Barclays Global Aggregate				1.9	1.9	10.2	3.6	7.2	4.6	8.0	7.6	Jun-16

As of April 30, 2019

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Real Assets	80,246,793	8.4	8.4	0.0	0.0	-0.7	4.9	7.1	4.4	3.9	3.8	Oct-06
<i>CPI +3%</i>				<i>0.6</i>	<i>0.6</i>	<i>1.9</i>	<i>5.0</i>	<i>5.2</i>	<i>4.5</i>	<i>4.8</i>	<i>4.8</i>	<i>Oct-06</i>
Natural Resources Assets	15,082,135	1.6	18.8	-0.1	-0.1	-2.2	-4.7	5.5	-2.5	--	--	
<i>S&P Global Natural Resources Index TR USD</i>				<i>0.0</i>	<i>0.0</i>	<i>12.4</i>	<i>-4.8</i>	<i>9.5</i>	<i>1.3</i>	<i>4.4</i>	<i>--</i>	
Natural Resources (Public)	8,589,302	0.9	57.0	-0.2	-0.2	12.1	0.3	9.4	0.1	--	-2.0	May-11
SSgA Global Natural Resources Stock Index	8,589,302	0.9	100.0	-0.2	-0.2	12.1	0.3	9.4	0.1	--	-2.0	May-11
<i>S&P Global LargeMidCap Commodity and Resources GR USD</i>				<i>-0.2</i>	<i>-0.2</i>	<i>12.2</i>	<i>0.4</i>	<i>9.4</i>	<i>0.1</i>	<i>4.9</i>	<i>-1.7</i>	<i>May-11</i>
Natural Resources (Private)	6,492,833	0.7	43.0	0.0	0.0	-16.2	-10.2	0.9	-8.9	--	5.4	Jul-10
White Deer Energy II	6,221,415	0.7	95.8									
White Deer Energy	271,418	0.0	4.2									
Timber	9,880,667	1.0	12.3	0.0	0.0	-9.1	-11.2	-5.1	-2.8	-1.1	0.7	Oct-05
<i>NCREIF Timberland</i>				<i>0.0</i>	<i>0.0</i>	<i>0.1</i>	<i>2.4</i>	<i>3.3</i>	<i>4.6</i>	<i>3.8</i>	<i>6.7</i>	<i>Oct-05</i>
RMK Select Timberland Investment Fund I	4,379,515	0.5	44.3									
Hancock Timberland VII	1,538,177	0.2	15.6									
RMK Select Timberland Investment Fund II	2,754,275	0.3	27.9									
RMK Balanced Timberland B	1,208,700	0.1	12.2									

As of April 30, 2019

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Infrastructure	55,283,991	5.8	68.9	0.1	0.1	1.5	12.8	18.0	27.6	19.8	15.9	Jun-08
<i>DJ Brookfield Global Infrastructure Net TR USD</i>				<i>0.7</i>	<i>0.7</i>	<i>16.5</i>	<i>11.7</i>	<i>8.2</i>	<i>5.2</i>	<i>12.8</i>	<i>7.0</i>	<i>Jun-08</i>
IFM Global Infrastructure (Net of Fees)	39,018,652	4.1	70.6	0.1	0.1	2.7	13.8	--	--	--	15.8	Sep-17
Global Infrastructure Partners	5,203,281	0.5	9.4									
Global Infrastructure Partners III	11,062,057	1.2	20.0									
Cash	970,350	0.1	0.1									
State Street STIF - Cash	970,350	0.1	100.0									

Disclaimer, Glossary, and Notes

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SIGNIFICANT EVENTS MAY OCCUR (OR HAVE OCCURRED) AFTER THE DATE OF THIS REPORT AND THAT IT IS NOT OUR FUNCTION OR RESPONSIBILITY TO UPDATE THIS REPORT. ANY OPINIONS OR RECOMMENDATIONS PRESENTED HEREIN REPRESENT OUR GOOD FAITH VIEWS AS OF THE DATE OF THIS REPORT AND ARE SUBJECT TO CHANGE AT ANY TIME. ALL INVESTMENTS INVOLVE RISK. THERE CAN BE NO GUARANTEE THAT THE STRATEGIES, TACTICS, AND METHODS DISCUSSED HERE WILL BE SUCCESSFUL.

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CERTAIN INFORMATION CONTAINED IN THIS REPORT MAY CONSTITUTE "FORWARD - LOOKING STATEMENTS," WHICH CAN BE IDENTIFIED BY THE USE OF TERMINOLOGY SUCH AS "MAY," "WILL," "SHOULD," "EXPECT," "AIM," "ANTICIPATE," "TARGET," "PROJECT," "ESTIMATE," "INTEND," "CONTINUE" OR "BELIEVE," OR THE NEGATIVES THEREOF OR OTHER VARIATIONS THEREON OR COMPARABLE TERMINOLOGY. ANY FORWARD - LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION ARE BASED UPON CURRENT ASSUMPTIONS. CHANGES TO ANY ASSUMPTIONS MAY HAVE A MATERIAL IMPACT ON FORWARD - LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS. ACTUAL RESULTS MAY THEREFORE BE MATERIALLY DIFFERENT FROM ANY FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION.

PERFORMANCE DATA CONTAINED HEREIN REPRESENT PAST PERFORMANCE. PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS.

Credit Risk: Refers to the risk that the issuer of a fixed income security may default (i.e., the issuer will be unable to make timely principal and/or interest payments on the security.)

Duration: Measure of the sensitivity of the price of a bond to a change in its yield to maturity. Duration summarizes, in a single number, the characteristics that cause bond prices to change in response to a change in interest rates. For example, the price of a bond with a duration of three years will rise by approximately 3% for each 1% decrease in its yield to maturity. Conversely, the price will decrease 3% for each 1% increase in the bond's yield. Price changes for two different bonds can be compared using duration. A bond with a duration of six years will exhibit twice the percentage price change of a bond with a three-year duration. The actual calculation of a bond's duration is somewhat complicated, but the idea behind the calculation is straightforward. The first step is to measure the time interval until receipt for each cash flow (coupon and principal payments) from a bond. The second step is to compute a weighted average of these time intervals. Each time interval is measured by the present value of that cash flow. This weighted average is the duration of the bond measured in years.

Information Ratio: This statistic is a measure of the consistency of a portfolio's performance relative to a benchmark. It is calculated by subtracting the benchmark return from the portfolio return (excess return), and dividing the resulting excess return by the standard deviation (volatility) of this excess return. A positive information ratio indicates outperformance versus the benchmark, and the higher the information ratio, the more consistent the outperformance.

Jensen's Alpha: A measure of the average return of a portfolio or investment in excess of what is predicted by its beta or "market" risk. $\text{Portfolio Return} - [\text{Risk Free Rate} + \text{Beta} * (\text{market return} - \text{Risk Free Rate})]$.

Market Capitalization: For a firm, market capitalization is the total market value of outstanding common stock. For a portfolio, market capitalization is the sum of the capitalization of each company weighted by the ratio of holdings in that company to total portfolio holdings; thus it is a weighted-average capitalization. Meketa Investment Group considers the largest 65% of the broad domestic equity market as large capitalization, the next 25% of the market as medium capitalization, and the smallest 10% of stocks as small capitalization.

Market Weighted: Stocks in many indices are weighted based on the total market capitalization of the issue. Thus, the individual returns of higher market-capitalization issues will more heavily influence an index's return than the returns of the smaller market-capitalization issues in the index.

Maturity: The date on which a loan, bond, mortgage, or other debt/security becomes due and is to be paid off.

Prepayment Risk: The risk that prepayments will increase (homeowners will prepay all or part of their mortgage) when mortgage interest rates decline; hence, investors' monies will be returned to them in a lower interest rate environment. Also, the risk that prepayments will slow down when mortgage interest rates rise; hence, investors will not have as much money as previously anticipated in a higher interest rate environment. A prepayment is any payment in excess of the scheduled mortgage payment.

Price-Book Value (P/B) Ratio: The current market price of a stock divided by its book value per share. Meketa Investment Group calculates P/B as the current price divided by Compustat's quarterly common equity. Common equity includes common stock, capital surplus, retained earnings, and treasury stock adjusted for both common and nonredeemable preferred stock. Similar to high P/E stocks, stocks with high P/B's tend to be riskier investments.

Price-Earnings (P/E) Ratio: A stock's market price divided by its current or estimated future earnings. Lower P/E ratios often characterize stocks in low growth or mature industries, stocks in groups that have fallen out of favor, or stocks of established blue chip companies with long records of stable earnings and regular dividends. Sometimes a company that has good fundamentals may be viewed unfavorably by the market if it is an industry that is temporarily out of favor. Or a business may have experienced financial problems causing investors to be skeptical about its future. Either of these situations would result in lower relative P/E ratios. Some stocks exhibit above-average sales and earnings growth or expectations for above average growth. Consequently, investors are willing to pay more for these companies' earnings, which results in elevated P/E ratios. In other words, investors will pay more for shares of companies whose profits, in their opinion, are expected to increase faster than average. Because future events are in no way assured, high P/E stocks tend to be riskier and more volatile investments. Meketa Investment Group calculates P/E as the current price divided by the I/B/E/S consensus of twelve-month forecast earnings per share.

Quality Rating: The rank assigned a security by such rating services as Fitch, Moody's, and Standard & Poor's. The rating may be determined by such factors as (1) the likelihood of fulfillment of dividend, income, and principal payment of obligations; (2) the nature and provisions of the issue; and (3) the security's relative position in the event of liquidation of the company. Bonds assigned the top four grades (AAA, AA, A, BBB) are considered investment grade because they are eligible bank investments as determined by the controller of the currency.

Sharpe Ratio: A commonly used measure of risk-adjusted return. It is calculated by subtracting the risk free return (usually three-month Treasury bill) from the portfolio return and dividing the resulting excess return by the portfolio's total risk level (standard deviation). The result is a measure of return per unit of total risk taken. The higher the Sharpe ratio, the better the fund's historical risk adjusted performance.

Standard Deviation: A measure of the total risk of an asset or a portfolio. Standard deviation measures the dispersion of a set of numbers around a central point (e.g., the average return). If the standard deviation is small, the distribution is concentrated within a narrow range of values. For a normal distribution, about two thirds of the observations will fall within one standard deviation of the mean, and 95% of the observations will fall within two standard deviations of the mean.

STIF Account: Short-term investment fund at a custodian bank that invests in cash-equivalent instruments. It is generally used to safely invest the excess cash held by portfolio managers.

Style: The description of the type of approach and strategy utilized by an investment manager to manage funds. For example, the style for equities is determined by portfolio characteristics such as price-to-book value, price-to-earnings ratio, and dividend yield. Equity styles include growth, value, and core.

Yield to Maturity: The yield, or return, provided by a bond to its maturity date; determined by a mathematical process, usually requiring the use of a “basis book.” For example, a 5% bond pays \$5 a year interest on each \$100 par value. To figure its current yield, divide \$5 by \$95—the market price of the bond—and you get 5.26%. Assume that the same bond is due to mature in five years. On the maturity date, the issuer is pledged to pay \$100 for the bond that can be bought now for \$95. In other words, the bond is selling at a discount of 5% below par value. To figure yield to maturity, a simple and approximate method is to divide 5% by the five years to maturity, which equals 1% pro rata yearly. Add that 1% to the 5.26% current yield, and the yield to maturity is roughly 6.26%.

$$\frac{5\% \text{ (discount)}}{5 \text{ (yrs. to maturity)}} = 1\% \text{ pro rata, plus } 5.26\% \text{ (current yield)} = 6.26\% \text{ (yield to maturity)}$$

Sources: Investment Terminology, International Foundation of Employee Benefit Plans, 1999.
The Handbook of Fixed Income Securities, Fabozzi, Frank J., 1991.

Benchmark Notes

Custom Benchmark

Custom Benchmark is composed of 23% Russell 3000, 22% MSCI ACWI ex US, 6% Cambridge Associates Fund of Funds Composites 1q lagged, 7% Barclays Aggregate, 6% Barclays High Yield, 3% blended benchmark comprised of 50% JPM EMBI GD 50% JPM GBI-EM, 6% Barclays US TIPS, 3% NCREIF Timberland, 10% NCREIF ODCE, 2% DJ Brookfield Global Infrastructure, 7% of a blended benchmark comprising 60% MSCI ACWI and 40% Barclays Global Aggregate Bond indices, 2% S&P North American Natural Resources Sector and 2% HFRI Fund of Funds Composite.

Spliced Benchmark

60% MSCI ACWI and 40% Barclays Global Aggregate Bond indexes since June 2015, Barclay's US Tips 1-10 Year prior.

SSgA MSCI EAFE

SSgA MSCI EAFE index fund performance is based on the aggregate of the daily liquidity fund and the semi-monthly liquidity fund.

PRIT Real Estate

PRIT Real Estate inception date shown is based on the first full quarter invested.

Custom Real Estate Benchmark

Custom Benchmark is composed of 80% NCREIF ODCE, 10% NAREIT Equity and 10% FTSE EPRA NAREIT Developed ex. U.S. REIT.

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Throughout this report, numbers may not sum due to rounding.

Returns for periods greater than one year are annualized throughout this report.

Values shown are in millions of dollars, unless noted otherwise.