#### FUND EVALUATION REPORT

# Massachusetts Housing Finance Agency Retirement System

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Quarterly Review June 30, 2017

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MEKETA INVESTMENT GROUP

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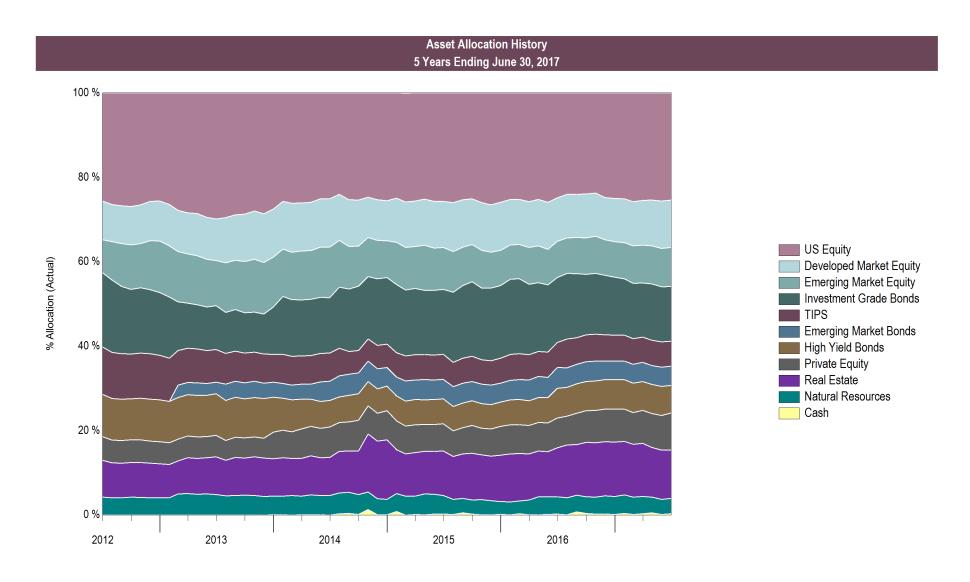
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System Summary As of June 30, 2017

	Allocation vs. Tar	gets and Policy			
	Current Balance	Current Allocation	Policy	Policy Range	Within IPS Range?
US Equity	\$34,188,772	25%	25%	20% - 30%	Yes
Developed Market Equity	\$15,068,712	11%	10%	6% - 14%	Yes
Emerging Market Equity	\$12,433,298	9%	10%	6% - 14%	Yes
Investment Grade Bonds	\$17,515,917	13%	15%	12% - 18%	Yes
TIPS	\$7,944,082	6%	6%	4% - 8%	Yes
Emerging Market Bonds	\$6,098,724	5%	5%	3% - 7%	Yes
High Yield Bonds	\$8,813,739	7%	6%	3% - 9%	Yes
Private Equity	\$11,788,101	9%	8%	5% - 11%	Yes
Real Estate	\$15,415,164	11%	10%	7% - 13%	Yes
Natural Resources	\$4,895,012	4%	5%	3% - 7%	Yes
Cash	\$376,506	0%	0%	0% - 5%	Yes
Total	\$134,538,026	100%	100%		







	Asset Class Perforn	nance Sumi	mary							
	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Total Retirement System	134,538,026	100.0	2.2	6.7	11.2	3.8	7.1	4.4	5.4	Jul-01
60% MSCI ACWI / 40% Barclays Global Aggregate			3.6	8.6	10.0	2.9	6.7	4.0	5.8	Jul-01
Domestic Equity Assets	34,188,772	25.4	3.0	8.8	18.6	9.1	14.5	7.3	6.6	Jul-01
Russell 3000			3.0	8.9	18.5	9.1	14.6	7.3	6.8	Jul-01
Total International Developed Market Equity	15,068,712	11.2	6.8	14.9	21.4	2.5	10.0	2.5	6.3	Jul-01
MSCI EAFE			6.1	13.8	20.3	1.1	8.7	1.0	5.2	Jul-01
International Emerging Market Equity Assets	12,433,298	9.2	4.6	16.7	22.2	-1.5	2.4	0.6	0.6	Jul-07
MSCI Emerging Markets			6.3	18.4	23.7	1.1	4.0	1.9	1.9	Jul-07
Investment Grade Bond Assets	17,515,917	13.0	1.6	2.4	-0.1	2.6	2.1	4.7	4.8	Jul-01
BBgBarc US Aggregate TR			1.4	2.3	-0.3	2.5	2.2	4.5	4.7	Jul-01
High Yield Bond Assets	8,813,739	6.6	2.5	4.6	10.1	4.8	6.8	6.7	6.7	Feb-05
CSFB High Yield Index			2.0	4.4	13.0	4.2	6.7	7.2	7.2	Feb-05
TIPS Assets	7,944,082	5.9	-0.4	0.9	-0.8	0.6	0.2	4.2	4.2	Jul-07
BBgBarc US TIPS TR			-0.4	0.9	-0.6	0.6	0.3	4.3	4.3	Jul-07
Emerging Market Debt Assets	6,098,724	4.5	2.6	8.1	4.7	-4.5			-4.9	Mar-13
JP Morgan GBI EM Global Diversified TR USD			3.6	10.4	6.4	-2.8	-0.7	3.9	-2.8	Mar-13
Real Estate Assets	15,415,164	11.5	1.6	3.8	8.6	11.3	10.9	3.3	5.7	Apr-05
NCREIF-ODCE			1.7	3.5	7.9	11.3	11.8	5.2	7.6	Apr-05
Private Equity Assets	11,788,101	8.8	0.5	6.3	10.6	6.0	8.8	6.3	5.0	Oct-03
Russell 3000 + 3%			3.8	10.5	22.0	12.4	18.0	10.5	12.4	Oct-03
Natural Resources & Commodities Assets	4,895,012	3.6	-9.1	-9.8	-1.1	-15.6	-6.9		-7.5	Jul-11
S&P Global Natural Resources Index TR USD			-0.9	2.0	15.3	-4.7	0.5	-0.5	-2.9	Jul-11
Cash	376,506	0.3								



	Trailin	g Gross Pe	rformanc	е							
	Market Value (\$)	% of Portfolio	% of Sector	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Total Retirement System	134,538,026	100.0		2.2	6.7	11.2	3.8	7.1	4.4	5.4	Jul-01
60% MSCI ACWI / 40% Barclays Global Aggregate				3.6	8.6	10.0	2.9	6.7	4.0	5.8	Jul-01
Domestic Equity Assets	34,188,772	25.4	25.4	3.0	8.8	18.6	9.1	14.5	7.3	6.6	Jul-01
Russell 3000				3.0	8.9	18.5	9.1	14.6	7.3	6.8	Jul-01
SSgA Russell 1000 Value Index-NL	15,470,726	11.5	45.3	1.4	4.7	15.6	7.4	14.0	5.6	7.3	Jan-05
Russell 1000 Value				1.3	4.7	15.5	7.4	13.9	5.6	7.2	Jan-05
SSgA Russell 1000 Growth-NL	15,567,356	11.6	45.5	4.7	14.0	20.5	11.1	15.3	8.9	8.9	Jul-07
Russell 1000 Growth				4.7	14.0	20.4	11.1	15.3	8.9	8.9	Jul-07
SSgA Russell 2000 Index-NL	3,150,690	2.3	9.2	2.5	5.0	24.7	7.5	13.8		13.5	Aug-10
Russell 2000				2.5	5.0	24.6	7.4	13.7	6.9	13.4	Aug-10
Total International Developed Market Equity	15,068,712	11.2	11.2	6.8	14.9	21.4	2.5	10.0	2.5	6.3	Jul-01
MSCI EAFE				6.1	13.8	20.3	1.1	8.7	1.0	5.2	Jul-01
SSgA MSCI EAFE Index-NL	11,065,764	8.2	73.4	6.3	14.1	20.7	1.5	9.0		6.9	Aug-10
MSCI EAFE				6.1	13.8	20.3	1.1	8.7	1.0	6.6	Aug-10
SSgA MSCI EAFE Small Cap Index-NL	4,002,948	3.0	26.6	8.2	16.9	23.4	5.8	13.1		10.5	Aug-10
MSCI EAFE Small Cap				8.1	16.7	23.2	5.6	12.9	3.4	10.2	Aug-10



Total Retirement System	Total	Retirement System
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									,	As of June 3	30, 2017
	Market Value (\$)	% of Portfolio	% of Sector	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
International Emerging Market Equity Assets	12,433,298	9.2	9.2	4.6	16.7	22.2	-1.5	2.4	0.6	0.6	Jul-07
MSCI Emerging Markets				6.3	18.4	23.7	1.1	4.0	1.9	1.9	Jul-07
DFA (Net)	2,454,776	1.8	19.7	2.8	17.4	27.6	0.8	3.8	1.3	1.3	Jul-07
MSCI Emerging Markets				6.3	18.4	23.7	1.1	4.0	1.9	1.9	Jul-07
LMCG Emerging Markets	4,767,750	3.5	38.3	7.1	19.2	23.5				7.4	Aug-15
MSCI Emerging Markets				6.3	18.4	23.7	1.1	4.0	1.9	8.5	Aug-15
KB Investors Emerging Markets Equity	5,210,772	3.9	41.9	3.2	14.2	18.6				13.7	Oct-15
MSCI Emerging Markets				6.3	18.4	23.7	1.1	4.0	1.9	17.5	Oct-15
Investment Grade Bond Assets	17,515,917	13.0	13.0	1.6	2.4	-0.1	2.6	2.1	4.7	4.8	Jul-01
BBgBarc US Aggregate TR				1.4	2.3	-0.3	2.5	2.2	4.5	4.7	Jul-01
McDonnell Core Bond	17,515,917	13.0	100.0	1.6	2.4	-0.1	2.6	2.1	4.7	4.8	Jul-01
BBgBarc US Aggregate TR				1.4	2.3	-0.3	2.5	2.2	4.5	4.7	Jul-01
High Yield Bond Assets	8,813,739	6.6	6.6	2.5	4.6	10.1	4.8	6.8	6.7	6.7	Feb-05
CSFB High Yield Index				2.0	4.4	13.0	4.2	6.7	7.2	7.2	Feb-05
Columbia Insitutional High Yield	8,813,739	6.6	100.0	2.5	4.6	10.1	4.8	6.8		6.6	Mar-12
BBgBarc US High Yield TR				2.2	4.9	12.7	4.5	6.9	7.7	6.8	Mar-12
TIPS Assets	7,944,082	5.9	5.9	-0.4	0.9	-0.8	0.6	0.2	4.2	4.2	Jul-07
BBgBarc US TIPS TR				-0.4	0.9	-0.6	0.6	0.3	4.3	4.3	Jul-07
SSgA TIPS-NL	7,944,082	5.9	100.0	-0.4	0.9	-0.8	0.6	0.2	4.2	4.2	Jul-07
BBgBarc US TIPS TR				-0.4	0.9	-0.6	0.6	0.3	4.3	4.3	Jul-07
Emerging Market Debt Assets	6,098,724	4.5	4.5	2.6	8.1	4.7	-4.5			-4.9	Mar-13
JP Morgan GBI EM Global Diversified TR USD				3.6	10.4	6.4	-2.8	-0.7	3.9	-2.8	Mar-13
Logan Circle Emerging Markets Debt (Net)	2,932,229	2.2	48.1	2.7	8.1					6.6	Nov-16
50% JPM EMBI GD / 50% JPM GBI-EM				2.9	8.3	6.3	1.3	2.5	5.7	3.9	Nov-16
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#### Massachusetts Housing Finance Agency Retirement System

#### **Total Retirement System** As of June 30, 2017 Market Value % of % of QTD YTD 1 Yr 3 Yrs 5 Yrs 10 Yrs Return Since (\$) Portfolio Sector (%) (%) (%) (%) (%) (%) (%) Aberdeen Emerging Markets Bond Fund 3,166,495 2.4 51.9 2.6 8.0 8.0 Dec-16 50% JPM EMBI GD / 50% JPM GBI-EM 2.9 8.3 6.3 2.5 5.7 1.3 10.0 Dec-16 **Real Estate Assets** 15.415.164 11.5 11.5 1.6 3.8 8.6 11.3 10.9 3.3 5.7 Apr-05 NCREIF-ODCE 1.7 3.5 7.9 11.3 11.8 5.2 7.6 Apr-05 AG Realty Fund IV 4.232 0.0 0.0 TA Associates Realty Fund IX 525.016 0.4 3.4 TA Associates Realty Fund X 2,499,758 1.9 16.2 Intercontinental U.S. REIF (Net) 5,272,054 3.9 34.2 1.2 2.6 11.0 10.7 Oct-14 7.9 11.3 5.2 NCREIF-ODCE 1.7 3.5 11.8 11.1 Oct-14 AEW Core Property Trust (Net) 7,114,104 5.3 46.2 1.3 3.1 6.7 9.6 Oct-14 NCREIF-ODCE 1.7 3.5 7.9 11.3 5.2 11.8 11.1 Oct-14 6.3 **Private Equity Assets** 11,788,101 8.8 8.8 0.5 6.3 10.6 6.0 8.8 5.0 Oct-03 10.5 Russell 3000 + 3% 3.8 10.5 22.0 12.4 18.0 12.4 Oct-03 Ascent Venture Partners - Fund II 133,255 0.1 1.1 Ascent Venture Partners - Fund III 83,896 0.1 0.7 Ascent Venture Partners - Fund IV 138,162 0.1 1.2 Ascent Venture Partners - Fund V 935,281 7.9 0.7 Ascent Venture Partners - Fund VI 666.990 0.5 5.7 Constitution Capital Partners Ironsides III 1.824.172 1.4 15.5

AG Realty Fund IV, TA Associates Realty Fund IX, and TA Associates Realty Fund X are based on March 31, 2017 fair market value, adjusted for subsequent cash flows.

Private Equity Assets: Based on March 31, 2017 fair market value, adjusted for subsequent cash flows.



	Market Value (\$)	% of Portfolio	% of Sector	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Constitution Capital Partners Ironsides IV	267,144	0.2	2.3								
Constitution Capital Direct IV	1,510,774	1.1	12.8								
Goldman Sachs PEP 2005	1,155,283	0.9	9.8								
HarbourVest Partners VIII	1,205,195	0.9	10.2								
HarbourVest Partners IX	3,096,341	2.3	26.3								
HarbourVest X Buyout Fund	771,608	0.6	6.5								
Natural Resources & Commodities Assets	4,895,012	3.6	3.6	-9.1	-9.8	-1.1	-15.6	-6.9		-7.5	Jul-11
S&P Global Natural Resources Index TR USD				-0.9	2.0	15.3	-4.7	0.5	-0.5	-2.9	Jul-11
RS Global Natural Resources (Net)	4,895,012	3.6	100.0	-9.1	-9.8	-1.1	-15.6	-6.9		-7.5	Jul-11
S&P Global Natural Resources Index TR USD				-0.9	2.0	15.3	-4.7	0.5	-0.5	-2.9	Jul-11
Cash	376,506	0.3	0.3								
Cash STIF	376,506	0.3	100.0								



								,	to or ouric o	0, 2011
	Calendar Ye	ar Perform	ance							
	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)	2008 (%)	2007 (%)
Total Retirement System	9.6	-2.7	4.3	10.9	12.2	2.2	12.5	17.7	-24.7	7.9
Domestic Equity Assets	13.1	0.4	12.4	33.5	16.3	1.0	17.5	30.8	-38.3	3.9
Russell 3000	12.7	0.5	12.6	33.6	16.4	1.0	16.9	28.3	-37.3	5.1
SSgA Russell 1000 Value Index-NL	17.3	-3.7	13.4	32.5	17.4	0.4	15.6	20.0	-36.8	-0.1
Russell 1000 Value	17.3	-3.8	13.5	32.5	17.5	0.4	15.5	19.7	-36.8	-0.2
SSgA Russell 1000 Growth-NL	7.2	5.6	13.1	33.5	15.4	2.6	16.7	37.2	-38.4	
Russell 1000 Growth	7.1	5.7	13.0	33.5	15.3	2.6	16.7	37.2	-38.4	11.8
SSgA Russell 2000 Index-NL	21.5	-4.4	5.0	38.9	16.4	-4.1				
Russell 2000	21.3	-4.4	4.9	38.8	16.3	-4.2	26.9	27.2	-33.8	-1.6
Total International Developed Market Equity	1.6	2.0	-4.7	24.4	18.1	-12.6	11.4	36.3	-41.5	9.8
MSCI EAFE	1.0	-0.8	-4.9	22.8	17.3	-12.1	7.8	31.8	-43.4	11.2
SSgA MSCI EAFE Index-NL	1.4	-0.5	-4.6	23.1	17.7	-11.9				
MSCI EAFE	1.0	-0.8	-4.9	22.8	17.3	-12.1	7.8	31.8	-43.4	11.2
SSgA MSCI EAFE Small Cap Index-NL	2.4	9.7	-4.7	29.5	20.1	-15.0				
MSCI EAFE Small Cap	2.2	9.6	-4.9	29.3	20.0	-15.9	22.0	46.8	-47.0	1.4
International Emerging Market Equity Assets	11.7	-18.1	-4.4	-3.8	18.8	-25.6	22.1	92.3	-53.9	
MSCI Emerging Markets	11.2	-14.9	-2.2	-2.6	18.2	-18.4	18.9	78.5	-53.3	39.4
DFA (Net)	19.8	-18.8	-4.4	-3.8	18.8	-25.6	22.1	92.3	-53.9	
MSCI Emerging Markets	11.2	-14.9	-2.2	-2.6	18.2	-18.4	18.9	78.5	-53.3	39.4
LMCG Emerging Markets	7.0									
MSCI Emerging Markets	11.2	-14.9	-2.2	-2.6	18.2	-18.4	18.9	78.5	-53.3	39.4



	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)	2008 (%)	2007 (%)
KB Investors Emerging Markets Equity	12.0									
MSCI Emerging Markets	11.2	-14.9	-2.2	-2.6	18.2	-18.4	18.9	78.5	-53.3	39.4
Investment Grade Bond Assets	2.7	0.8	6.1	-3.1	4.6	8.5	6.7	9.7	3.8	6.2
BBgBarc US Aggregate TR	2.6	0.5	6.0	-2.0	4.2	7.8	6.5	5.9	5.2	7.0
McDonnell Core Bond	2.7	0.8	6.1	-3.1	4.6	8.5	6.7	9.7	3.8	6.2
BBgBarc US Aggregate TR	2.6	0.5	6.0	-2.0	4.2	7.8	6.5	5.9	5.2	7.0
High Yield Bond Assets	11.5	-0.2	4.1	6.0	13.6	6.2	12.9	43.2	-23.3	2.2
CSFB High Yield Index	18.3	-4.9	1.9	7.5	14.7	5.5	14.4	54.2	-26.2	2.6
Columbia Insitutional High Yield	11.5	-0.2	4.1	6.0						
BBgBarc US High Yield TR	17.1	-4.5	2.5	7.4	15.8	5.0	15.1	58.2	-26.2	1.9
TIPS Assets	4.5	-1.4	3.6	-8.6	6.9	13.5	6.3	11.3	-2.4	
BBgBarc US TIPS TR	4.7	-1.4	3.6	-8.6	7.0	13.6	6.3	11.4	-2.4	11.6
SSgA TIPS-NL	4.5	-1.4	3.6	-8.6	6.9	13.5	6.3	11.3	-2.4	
BBgBarc US TIPS TR	4.7	-1.4	3.6	-8.6	7.0	13.6	6.3	11.4	-2.4	11.6
Emerging Market Debt Assets	10.0	-15.2	-8.5							
JP Morgan GBI EM Global Diversified TR USD	9.9	-14.9	-5.7	-9.0	16.8	-1.8	15.1	22.0	-5.2	18.1
Logan Circle Emerging Markets Debt (Net)	<del></del>									
50% JPM EMBI GD / 50% JPM GBI-EM	10.2	-7.1	0.7	-7.1	17.2	2.8	13.8	26.0	-8.6	12.0
Aberdeen Emerging Markets Bond Fund										
50% JPM EMBI GD / 50% JPM GBI-EM	10.2	-7.1	0.7	-7.1	17.2	2.8	13.8	26.0	-8.6	12.0



As of June 30, 2017

	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)	2008 (%)	2007 (%)
Real Estate Assets	9.0	13.8	12.8	10.1	12.5	16.7	12.7	-38.9	-14.2	23.6
NCREIF-ODCE	8.8	15.0	12.5	13.9	10.9	16.0	16.4	-29.8	-10.0	16.0
AG Realty Fund IV										
TA Associates Realty Fund IX										
TA Associates Realty Fund X										
Intercontinental U.S. REIF (Net)	10.9	12.5								
NCREIF-ODCE	8.8	15.0	12.5	13.9	10.9	16.0	16.4	-29.8	-10.0	16.0
AEW Core Property Trust (Net)	7.6	12.8								
NCREIF-ODCE	8.8	15.0	12.5	13.9	10.9	16.0	16.4	-29.8	-10.0	16.0
Private Equity Assets	6.3	0.8	13.5	9.5	9.2	7.9	19.9	-14.2	-2.8	17.3
Russell 3000 + 3%	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1	-35.3	8.3

Ascent Venture Partners - Fund II

Ascent Venture Partners - Fund III

Ascent Venture Partners - Fund IV

Ascent Venture Partners - Fund V

Ascent Venture Partners - Fund VI

Constitution Capital Partners Ironsides III

Constitution Capital Partners Ironsides IV

Constitution Capital Direct IV

Goldman Sachs PEP 2005



							To	tal Retire	ement Sy	/stem
								ļ	As of June 3	0, 2017
	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)	2008 (%)	2007 (%)
HarbourVest Partners VIII										
HarbourVest Partners IX										
HarbourVest X Buyout Fund										
Natural Resources & Commodities Assets	53.7	-38.0	-22.6	-0.3	6.5					
S&P Global Natural Resources Index TR USD	32.3	-24.0	-9.7	1.5	7.2	-14.9	11.0	36.1	-38.3	41.7
RS Global Natural Resources (Net)	53.7	-38.0	-22.6	-0.3	6.5					
S&P Global Natural Resources Index TR USD	32.3	-24.0	-9.7	1.5	7.2	-14.9	11.0	36.1	-38.3	41.7
Cash										
Cash STIF										



		Statistics Sum	ımary			
		5 Years Ending Jun	e 30, 2017			
	Anlzd Return	Anlzd Standard Deviation	Information Ratio	Beta	Sharpe Ratio	Tracking Error
Total Retirement System	7.1%	6.1%	0.2	0.9	1.1	1.9%
60% MSCI ACWI / 40% Barclays Global Aggregate	6.7%	6.8%	-	1.0	1.0	0.0%
Total Equity	10.7%	10.1%	-1.0	0.9	1.0	4.0%
Russell 3000	14.6%	9.8%		1.0	1.5	0.0%
Domestic Equity Assets	14.5%	9.8%	-0.5	1.0	1.5	0.1%
Russell 3000	14.6%	9.8%		1.0	1.5	0.0%
SSgA Russell 1000 Value Index-NL	13.8%	9.9%	-1.4	1.0	1.4	0.1%
Russell 1000 Value	13.9%	9.9%		1.0	1.4	0.0%
SSgA Russell 1000 Growth-NL	15.2%	10.1%	-2.5	1.0	1.5	0.0%
Russell 1000 Growth	15.3%	10.1%		1.0	1.5	0.0%
SSgA Russell 2000 Index-NL	13.7%	13.9%	-0.5	1.0	1.0	0.1%
Russell 2000	13.7%	13.9%		1.0	1.0	0.0%
Total International Equity	6.0%	12.5%	-0.7	1.1	0.5	2.9%
MSCI ACWI ex USA IMI Gross	8.0%	11.5%		1.0	0.7	0.0%
Total International Developed Market Equity	10.0%	11.6%	1.1	1.0	0.8	1.1%
MSCI EAFE	8.7%	11.7%		1.0	0.7	0.0%
SSgA MSCI EAFE Index-NL	8.9%	11.8%	1.8	1.0	0.7	0.1%
MSCI EAFE	8.7%	11.7%		1.0	0.7	0.0%
SSgA MSCI EAFE Small Cap Index-NL	12.9%	11.6%	-0.3	1.0	1.1	0.2%
MSCI EAFE Small Cap	12.9%	11.7%		1.0	1.1	0.0%



	Anlzd Return	Anlzd Standard Deviation	Information Ratio	Beta	Sharpe Ratio	Tracking Error
International Emerging Market Equity Assets	2.5%	15.3%	-0.5	1.0	0.1	3.1%
MSCI Emerging Markets	4.0%	14.4%		1.0	0.3	0.0%
DFA	3.8%	16.2%	0.0	1.1	0.2	3.9%
MSCI Emerging Markets	4.0%	14.4%		1.0	0.3	0.0%
LMCG Emerging Markets						
MSCI Emerging Markets	4.0%	14.4%		1.0	0.3	0.0%
KB Investors Emerging Markets Equity						
MSCI Emerging Markets	4.0%	14.4%		1.0	0.3	0.0%
Total Fixed Income	2.1%	4.0%	-0.4	1.3	0.5	1.9%
BBgBarc US Universal TR	2.7%	2.8%		1.0	0.9	0.0%
nvestment Grade Bond Assets	2.1%	3.0%	-0.3	1.1	0.6	0.3%
BBgBarc US Aggregate TR	2.2%	2.9%		1.0	0.7	0.0%
McDonnell Core Bond	2.1%	3.0%	-0.3	1.1	0.6	0.3%
BBgBarc US Aggregate TR	2.2%	2.9%		1.0	0.7	0.0%
High Yield Bond Assets	6.7%	4.7%	0.0	0.8	1.4	2.2%
CSFB High Yield Index	6.7%	5.3%		1.0	1.2	0.0%
Columbia Insitutional High Yield	6.7%	4.7%	-0.1	0.8	1.4	1.9%
BBgBarc US High Yield TR	6.9%	5.3%		1.0	1.3	0.0%
ΓIPS Assets	0.2%	4.5%	-0.5	1.0	0.0	0.0%
BBgBarc US TIPS TR	0.3%	4.5%		1.0	0.0	0.0%
SSgA TIPS-NL	0.2%	4.5%	-0.8	1.0	0.0	0.1%
BBgBarc US TIPS TR	0.3%	4.5%		1.0	0.0	0.0%
Emerging Market Debt Assets						
JP Morgan GBI EM Global Diversified TR USD	-0.7%	11.0%		1.0	-0.1	0.0%



	Anlzd Return	Anlzd Standard Deviation	Information Ratio	Beta	Sharpe Ratio	Tracking Error
Logan Circle Emerging Markets Debt						
50% JPM EMBI GD / 50% JPM GBI-EM	2.5%	8.4%	-	1.0	0.3	0.0%
Aberdeen Emerging Markets Bond Fund				-		
50% JPM EMBI GD / 50% JPM GBI-EM	2.5%	8.4%		1.0	0.3	0.0%
Real Estate Assets	10.9%	4.5%	-0.8	0.9	2.4	1.2%
NCREIF-ODCE	11.8%	4.8%		1.0	2.4	0.0%
AG Realty Fund IV	0.0%	0.0%	-2.4	0.0		4.8%
NCREIF-ODCE	11.8%	4.8%		1.0	2.4	0.0%
TA Associates Realty Fund IX	10.9%	5.4%	-0.3	0.9	2.0	2.9%
NCREIF-ODCE	11.8%	4.8%		1.0	2.4	0.0%
TA Associates Realty Fund X				-		
NCREIF-ODCE	11.8%	4.8%		1.0	2.4	0.0%
Intercontinental U.S. REIF				-		
NCREIF-ODCE	11.8%	4.8%		1.0	2.4	0.0%
AEW Core Property Trust				-		
NCREIF-ODCE	11.8%	4.8%		1.0	2.4	0.0%
Private Equity Assets	8.8%	5.8%	-0.8	0.0	1.5	11.4%
Russell 3000 + 3%	18.0%	9.8%		1.0	1.8	0.0%
Natural Resources & Commodities Assets	-6.9%	24.5%	-0.6	1.3	-0.3	13.5%
S&P Global Natural Resources Index TR USD	0.5%	16.1%		1.0	0.0	0.0%
RS Global Natural Resources	-6.9%	24.5%	-0.6	1.3	-0.3	13.5%
S&P Global Natural Resources Index TR USD	0.5%	16.1%		1.0	0.0	0.0%



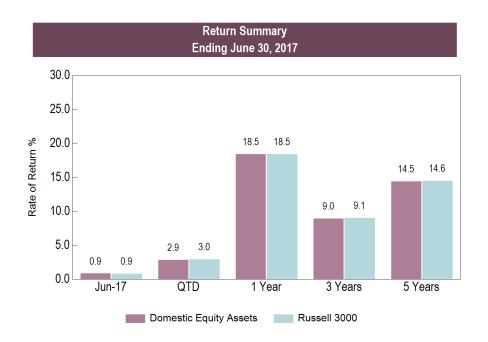
System Detail As of June 30, 2017

# **Domestic Equity Assets**

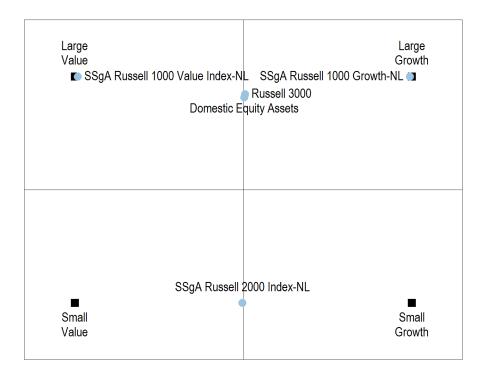
### **Domestic Equity Assets**

As of June 30, 2017

Asset Allocation on June 30, 2017			
	Actual	Actual	
SSgA Russell 1000 Growth-NL	\$15,567,356	45.5%	
SSgA Russell 1000 Value Index-NL	\$15,470,726	45.3%	
SSgA Russell 2000 Index-NL	\$3,150,690	9.2%	
Total	\$34,188,772	100.0%	



#### Domestic Equity Assets Style Map 3 Years Ending June 30, 2017





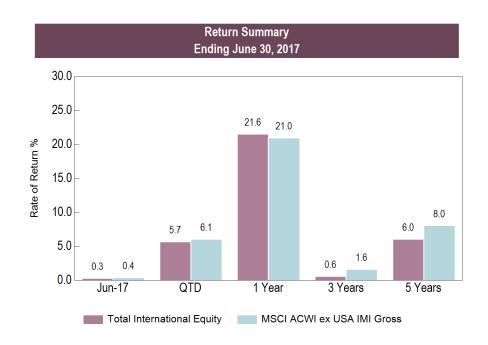
# Domestic Equity Assets

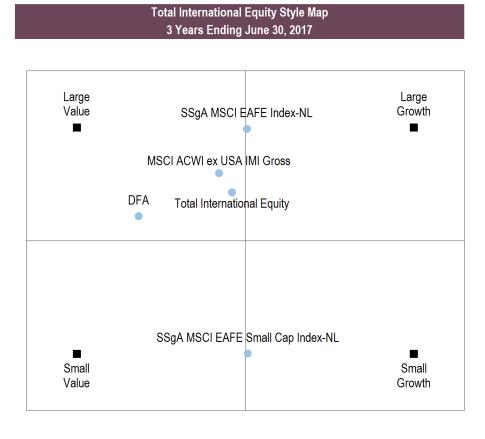
Domestic Equi	ty Assets Characteristics	
	Portfolio	Index
	Q2-17	Q2-17
Characteristics		
Weighted Avg. Market Cap. (\$B)	127.4	128.5
Median Market Cap (\$B)	1.9	1.6
P/E Ratio	25.5	24.7
Yield	1.9	1.9
EPS Growth - 5 Yrs.	10.0	9.5
Price to Book	5.0	4.2
Beta (holdings; domestic)	1.0	1.0
Company Size Distribution		
Weighted Avg. Market Cap. (\$B)	127.4	128.5
Median Market Cap. (\$B)	1.9	1.6
Large Cap. (%)	40.5	40.9
Medium/Large Cap. (%)	26.1	26.5
Medium Cap. (%)	16.4	17.0
Medium/Small Cap. (%)	9.7	9.5
Small Cap. (%)	7.3	6.1

Domestic Equity Assets Equity Characteristics vs Russell 3000			
	Q2-17	Q2-17	
Sector Distribution			
Energy	5.41	5.59	
Materials	3.39	3.38	
Industrials	10.73	10.69	
Consumer Discretionary	12.61	12.63	
Consumer Staples	7.84	8.01	
Health Care	13.93	14.02	
Financials	14.84	15.07	
Information Technology	21.55	21.44	
Telecommunication Services	1.91	1.96	
Utilities	3.11	3.18	
Real Estate	3.97	4.03	
Sector Performance			
Energy	-7.41	-7.66	
Materials	2.94	2.62	
Industrials	4.56	4.20	
Consumer Discretionary	3.02	3.02	
Consumer Staples	1.41	1.26	
Health Care	7.26	7.36	
Financials	4.12	3.77	
Information Technology	4.13	4.28	
Telecommunication Services	-6.78	-6.56	
Utilities	2.29	2.22	
Real Estate	2.50	2.33	



Asset Allocation on June 30, 2017			
	Actual	Actual	
DFA	\$2,454,776	8.9%	
KB Investors Emerging Markets Equity	\$5,210,772	18.9%	
LMCG Emerging Markets	\$4,767,750	17.3%	
SSgA MSCI EAFE Index-NL	\$11,065,764	40.2%	
SSgA MSCI EAFE Small Cap Index-NL	\$4,002,948	14.6%	
Total	\$27,502,010	100.0%	







Total Internation	nal Equity Characteristics	
	Portfolio	Index
	Q2-17	Q2-17
Characteristics		
Weighted Avg. Market Cap. (\$B)	41.7	57.8
Median Market Cap (\$B)	1.2	7.6
P/E Ratio	18.9	21.0
Yield	3.1	2.9
EPS Growth - 5 Yrs.	6.7	5.3
Price to Book	2.7	2.6
Beta (holdings; domestic)	1.1	1.1
Company Size Distribution		
Weighted Avg. Market Cap. (\$B)	41.7	57.8
Median Market Cap. (\$B)	1.2	7.6
Large Cap. (%)	58.4	75.8
Medium Cap. (%)	18.7	19.5
Small Cap. (%)	22.9	4.8

Total International Equity Equity Characteristics vs MSCI ACWI ex USA Gross			
	Portfolio	Index	
	Q2-17	Q2-17	
Sector Distribution			
Energy	6.99	6.35	
Materials	7.86	7.15	
Industrials	11.80	12.05	
Consumer Discretionary	11.53	11.30	
Consumer Staples	7.25	9.87	
Health Care	6.36	8.21	
Financials	25.29	23.40	
Information Technology	11.64	10.84	
Telecommunication Services	3.26	4.43	
Utilities	2.74	3.16	
Real Estate	4.74	3.22	
Sector Performance			
Energy	-4.41	-2.65	
Materials	4.02	1.74	
Industrials	7.42	7.00	
Consumer Discretionary	4.88	5.72	
Consumer Staples	7.10	7.59	
Health Care	7.75	7.22	
Financials	7.28	5.91	
Information Technology	8.06	13.03	
Telecommunication Services	3.08	4.22	
Utilities	4.63	5.37	
Real Estate	6.90	5.88	



Total International Equity Region Allocation			
	vs MSCI ACWI ex USA Gross		
Region	% of Total	% of Bench	% Diff
North America ex U.S.	0.0%	6.6%	-6.6%
United States	0.4%	0.0%	0.4%
Europe Ex U.K.	24.8%	31.8%	-7.0%
United Kingdom	9.7%	12.4%	-2.7%
Pacific Basin Ex Japan	10.3%	8.5%	1.8%
Japan	14.1%	16.4%	-2.4%
Emerging Markets	40.1%	23.6%	16.5%
Other	0.5%	0.7%	-0.1%
Total	100.0%	100.0%	0.0%



Total International Equity Country Allocation			
vs MSCI ACWI ex USA Gross			
Country	% of Total	% of Bench	% Diff
ARGENTINA	0.0%	0.0%	0.0%
AUSTRALIA	3.8%	5.0%	-1.2%
AUSTRIA	0.2%	0.2%	0.1%
BAHRAIN	0.0%	0.0%	0.0%
BANGLADESH	0.0%	0.0%	0.0%
BELGIUM	0.7%	0.8%	0.0%
BRAZIL	1.7%	1.6%	0.2%
BULGARIA	0.0%	0.0%	0.0%
CANADA	0.0%	6.6%	-6.6%
CHILE	2.4%	0.3%	2.2%
CHINA	9.9%	6.7%	3.2%
COLOMBIA	0.0%	0.1%	-0.1%
CROATIA	0.0%	0.0%	0.0%
CZECH REPUBLIC	0.0%	0.0%	0.0%
DENMARK	1.0%	1.3%	-0.2%
EGYPT	0.0%	0.0%	0.0%
ESTONIA	0.0%	0.0%	0.0%
FINLAND	0.7%	0.7%	-0.1%
FRANCE	4.9%	7.4%	-2.5%
GERMANY	4.8%	6.1%	-1.3%
GREECE	0.0%	0.1%	-0.1%
HONG KONG	5.4%	2.5%	2.9%
HUNGARY	0.3%	0.1%	0.2%
INDIA	3.0%	2.1%	0.9%



Country	% of Total	% of Bench	% Diff
INDONESIA	1.7%	0.6%	1.1%
IRELAND	0.3%	0.3%	0.0%
ISRAEL	0.4%	0.5%	-0.1%
ITALY	1.5%	1.6%	-0.1%
JAPAN	14.1%	16.4%	-2.4%
JORDAN	0.0%	0.0%	0.0%
KAZAKHSTAN	0.0%	0.0%	0.0%
KENYA	0.0%	0.0%	0.0%
KOREA	4.4%	3.7%	0.7%
KUWAIT	0.0%	0.0%	0.0%
LEBANON	0.0%	0.0%	0.0%
LITHUANIA	0.0%	0.0%	0.0%
LUXEMBOURG	0.1%	0.0%	0.1%
MALAYSIA	1.1%	0.6%	0.5%
MAURITIUS	0.0%	0.0%	0.0%
MEXICO	1.0%	0.9%	0.1%
MOROCCO	0.0%	0.0%	0.0%
NETHERLANDS	2.0%	2.5%	-0.4%
NEW ZEALAND	0.2%	0.1%	0.1%
NIGERIA	0.0%	0.0%	0.0%
NORWAY	0.5%	0.4%	0.1%
OMAN	0.0%	0.0%	0.0%
OTHER	0.2%	0.0%	0.2%
PAKISTAN	0.0%	0.0%	0.0%
PERU	0.0%	0.1%	-0.1%
PHILIPPINES	0.1%	0.3%	-0.2%
POLAND	0.4%	0.3%	0.0%



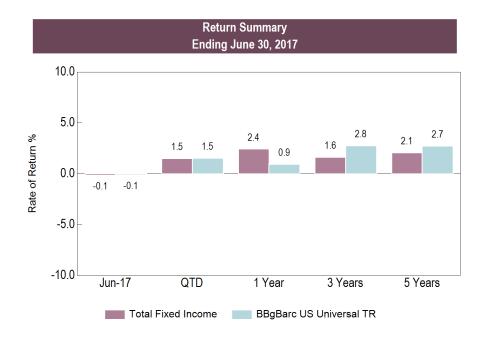
Country	% of Total	% of Bench	% Diff
PORTUGAL	0.1%	0.1%	0.0%
QATAR	0.0%	0.2%	-0.2%
ROMANIA	0.0%	0.0%	0.0%
RUSSIA	0.9%	0.8%	0.2%
SERBIA	0.0%	0.0%	0.0%
SINGAPORE	0.9%	0.9%	-0.1%
SLOVENIA	0.0%	0.0%	0.0%
SOUTH AFRICA	2.2%	1.6%	0.6%
SPAIN	1.8%	2.4%	-0.7%
SRI LANKA	0.0%	0.0%	0.0%
SWEDEN	2.0%	2.0%	0.0%
SWITZERLAND	4.2%	6.0%	-1.7%
TAIWAN	6.5%	3.0%	3.5%
THAILAND	2.8%	0.5%	2.3%
TUNISIA	0.0%	0.0%	0.0%
TURKEY	1.2%	0.3%	0.9%
UKRAINE	0.0%	0.0%	0.0%
UNITED ARAB EMIRATES	0.5%	0.2%	0.4%
UNITED KINGDOM	9.7%	12.4%	-2.7%
UNITED STATES	0.4%	0.0%	0.4%
VIETNAM	0.0%	0.0%	0.0%
Total	100.0%	100.0%	0.0%



# **Total Fixed Income**

### Total Fixed Income

Asset Allocation on June 30, 2017			
	Actual	Actual	
Aberdeen Emerging Markets Bond Fund	\$3,166,495	7.8%	
Columbia Insitutional High Yield	\$8,813,739	21.8%	
Logan Circle Emerging Markets Debt	\$2,932,229	7.3%	
McDonnell Core Bond	\$17,515,917	43.4%	
SSgA TIPS-NL	\$7,944,082	19.7%	
Total	\$40,372,461	100.0%	



Total Fixed Income Fixed Income Characteristics				
vs. BBgBarc US Univ	ersal TR			
	Portfolio	Index		
	Q2-17	Q2-17		
Fixed Income Characteristics				
Yield to Maturity	3.07	2.88		
Average Duration	5.29	5.80		
Average Quality	Α	AA		
Weighted Average Maturity	7.78	11.97		
US Sector Allocation				
UST/Agency	35.72	36.76		
Corporate	44.33	31.72		
MBS	14.28	25.28		
ABS	2.86	0.40		
Foreign		4.79		
Muni		1.05		
Other	1.37			
Cash	1.44			
Credit Quality Allocation				
AAA	54.75	60.21		
AA	2.15	4.64		
A	8.69	11.66		
BBB	11.06	14.64		
BB and Below	23.36	8.72		
Not Rated		0.12		



# Portfolio Reviews As of June 30, 2017

# SSgA Russell 1000 Value Index-NL

Account Information				
Account Name	SSgA Russell 1000 Value Index-NL			
Account Structure	Commingled Fund			
Investment Style	Passive			
Inception Date	1/01/05			
Account Type	Equity			
Benchmark	Russell 1000 Value			
Universe	eA US Large Cap Value Equity Gross			

Portfolio Performance Summary						
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	Return (%)	Since
SSgA Russell 1000 Value Index-NL	1.4	15.6	7.4	14.0	7.3	Jan-05
Russell 1000 Value	1.3	15.5	7.4	13.9	7.2	Jan-05
eA US Large Cap Value Equity Gross Rank	72	67	53	50	79	Jan-05

Top 10 Holdings	
EXXON MOBIL	2.9%
BERKSHIRE HATHAWAY 'B'	2.7%
JP MORGAN CHASE & CO.	2.7%
JOHNSON & JOHNSON	2.5%
WELLS FARGO & CO	2.1%
BANK OF AMERICA	2.0%
AT&T	2.0%
PROCTER & GAMBLE	1.8%
PFIZER	1.7%
CHEVRON	1.7%
Total	22.1%

SSGA Russell	1000 Value Index-		
	Portfolio	Index	Portfolio
	Q2-17	Q2-17	Q1-17
Market Value			
Market Value (\$M)	15.5		15.5
Number Of Holdings	710	719	692
Characteristics			
Weighted Avg. Market Cap. (\$B)	109.6	108.9	115.4
Median Market Cap (\$B)	8.6	8.5	8.3
P/E Ratio	22.4	20.9	22.2
Yield	2.5	2.4	2.4
EPS Growth - 5 Yrs.	7.1	5.9	5.7
Price to Book	2.3	2.6	2.3
Beta (holdings; domestic)	1.0	1.0	1.0
Sector Distribution			
Energy	10.5	10.5	11.9
Materials	2.7	2.8	2.9
Industrials	8.6	8.6	9.8
Consumer Discretionary	6.9	6.9	4.4
Consumer Staples	9.2	9.2	8.3
Health Care	14.2	14.2	10.6
Financials	25.7	25.6	25.9
Information Technology	8.1	8.0	9.8
Telecommunication Services	3.1	3.1	3.5
Utilities	6.2	6.1	6.1
Real Estate	4.8	4.9	4.5



# SSgA Russell 1000 Growth-NL

Acc	ount Information
Account Name	SSgA Russell 1000 Growth-NL
Account Structure	Commingled Fund
Investment Style	Passive
Inception Date	7/01/07
Account Type	Equity
Benchmark	Russell 1000 Growth
Universe	eA US Large Cap Value Equity Gross

Portfolio Performance Summary						
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	Return (%)	Since
SSgA Russell 1000 Growth-NL	4.7	20.5	11.1	15.3	8.9	Jul-07
Russell 1000 Growth	4.7	20.4	11.1	15.3	8.9	Jul-07
eA US Large Cap Value Equity Gross Rank	4	25	3	22	9	Jul-07

Top 10 Holdings	
APPLE	6.5%
MICROSOFT	4.5%
AMAZON.COM	3.3%
FACEBOOK CLASS A	3.1%
ALPHABET 'A'	2.4%
ALPHABET 'C'	2.4%
HOME DEPOT	1.6%
UNITEDHEALTH GROUP	1.5%
VISA 'A'	1.5%
COMCAST 'A'	1.5%
Total	28.4%

SSgA Russ		NL Characteristics	
	Portfolio	Index	Portfolio
	Q2-17	Q2-17	Q1-17
Market Value			
Market Value (\$M)	15.6		15.1
Number Of Holdings	553	557	607
Characteristics			
Weighted Avg. Market Cap. (\$B)	170.7	170.4	160.4
Median Market Cap (\$B)	10.0	10.0	9.4
P/E Ratio	28.7	28.0	26.8
Yield	1.4	1.4	1.5
EPS Growth - 5 Yrs.	12.8	12.5	13.4
Price to Book	8.2	7.0	7.5
Beta (holdings; domestic)	1.0	1.0	1.0
Sector Distribution			
Energy	0.8	0.8	0.5
Materials	3.8	3.9	3.5
Industrials	12.0	12.2	10.8
Consumer Discretionary	18.3	18.6	20.9
Consumer Staples	7.5	7.6	9.1
Health Care	13.5	13.7	15.9
Financials	3.4	3.4	2.8
Information Technology	35.7	36.2	32.7
Telecommunication Services	0.9	1.0	1.0
Utilities	0.0	0.0	0.0
Real Estate	2.6	2.6	2.7



# SSgA Russell 2000 Index-NL

Acc	ount Information
Account Name	SSgA Russell 2000 Index-NL
Account Structure	Commingled Fund
Investment Style	Passive
Inception Date	8/01/10
Account Type	Equity
Benchmark	Russell 2000
Universe	eA US Small Cap Core Equity Gross

Portfolio Perfor	mance Su	ımmary				
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	Return (%)	Since
SSgA Russell 2000 Index-NL	2.5	24.7	7.5	13.8	13.5	Aug-10
Russell 2000	2.5	24.6	7.4	13.7	13.4	Aug-10
eA US Small Cap Core Equity Gross Rank	47	34	68	74	81	Aug-10

Top 10 Holdings	
KITE PHARMA	0.3%
BLUEBIRD BIO	0.2%
CHAMBERS STREET PROPS.	0.2%
PAREXEL INTL.	0.2%
CATALENT	0.2%
MEDIDATA SOLUTIONS	0.2%
HEALTHSOUTH	0.2%
IDACORP	0.2%
WGL HOLDINGS	0.2%
FAIR ISAAC	0.2%
Total	2.3%

22.4.5	W 0000 L L	NII 01 ( : (:	
SSgA Russ		NL Characteristics	5 16 11
	Portfolio	Index	Portfolio
	Q2-17	Q2-17	Q1-17
Market Value			
Market Value (\$M)	3.2		3.1
Number Of Holdings	2010	2010	1939
Characteristics			
Weighted Avg. Market Cap. (\$B)	2.0	2.0	2.2
Median Market Cap (\$B)	0.8	0.8	0.8
P/E Ratio	25.6	23.9	26.2
Yield	1.3	1.1	1.4
EPS Growth - 5 Yrs.	8.8	8.2	8.2
Price to Book	3.5	3.0	3.3
Beta (holdings; domestic)	1.3	1.3	1.3
Sector Distribution			
Energy	3.5	3.4	3.4
Materials	4.4	4.4	5.2
Industrials	14.6	14.6	14.3
Consumer Discretionary	12.5	12.5	12.3
Consumer Staples	2.7	2.7	3.0
Health Care	15.0	15.1	12.9
Financials	18.6	18.6	19.5
Information Technology	17.0	17.1	17.4
Telecommunication Services	0.9	0.9	0.7
Utilities	3.7	3.7	3.7
Real Estate	7.1	7.1	7.5



# SSgA MSCI EAFE Index-NL

Account Information			
Account Name	SSgA MSCI EAFE Index-NL		
Account Structure	Commingled Fund		
Investment Style	Passive		
Inception Date	8/01/10		
Account Type	Equity		
Benchmark	MSCI EAFE		
Universe	eA EAFE Core Equity Gross		

Portfolio Performance Summary						
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	Return (%)	Since
SSgA MSCI EAFE Index-NL	6.3	20.7	1.5	9.0	6.9	Aug-10
MSCI EAFE	6.1	20.3	1.1	8.7	6.6	Aug-10
eA EAFE Core Equity Gross Rank	75	56	82	81	90	Aug-10

Top 10 Holdings			
NESTLE 'R'	2.0%		
NOVARTIS 'R'	1.3%		
HSBC HDG. (ORD \$0.50)	1.3%		
ROCHE HOLDING	1.3%		
TOYOTA MOTOR	1.0%		
BRITISH AMERICAN TOBACCO	0.9%		
ROYAL DUTCH SHELL A(LON)	0.8%		
TOTAL	0.8%		
BP	0.8%		
SANOFI	0.8%		
Total	11.2%		

	Portfolio	Index	Portfolio
	Q2-17	Q2-17	Q1-17
Market Value			
Market Value (\$M)	11.1		10.4
Number Of Holdings	944	927	938
Characteristics			
Weighted Avg. Market Cap. (\$B)	55.8	55.8	53.0
Median Market Cap (\$B)	10.2	10.2	9.4
P/E Ratio	22.6	21.0	22.8
Yield	3.0	3.0	3.0
EPS Growth - 5 Yrs.	4.4	4.3	3.8
Price to Book	3.0	2.5	3.0
Beta (holdings; domestic)	1.1	1.1	1.1
Sector Distribution			
Energy	4.7	4.8	5.0
Materials	7.5	6.9	7.9
Industrials	14.4	14.6	14.3
Consumer Discretionary	12.0	12.1	12.2
Consumer Staples	11.4	11.5	11.4
Health Care	10.7	11.0	10.7
Financials	21.4	21.6	21.2
Information Technology	6.0	6.1	5.
Telecommunication Services	4.2	4.3	4.4
Utilities	3.4	3.4	3.4
Real Estate	3.6	3.7	3.



# SSgA MSCI EAFE Small Cap Index-NL

Account Information				
Account Name	SSgA MSCI EAFE Small Cap Index-NL			
Account Structure	Commingled Fund			
Investment Style	Passive			
Inception Date	8/01/10			
Account Type	Equity			
Benchmark	MSCI EAFE Small Cap			
Universe	eA EAFE Small Cap Core Gross			

Portfolio Performance Summary						
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	Return (%)	Since
SSgA MSCI EAFE Small Cap Index-NL	8.2	23.4	5.8	13.1	10.5	Aug-10
MSCI EAFE Small Cap	8.1	23.2	5.6	12.9	10.2	Aug-10
eA EAFE Small Cap Core Gross Rank	43	68	71	86	91	Aug-10

Top 10 Holdings	
WIRECARD	0.3%
SMURFIT KAPPA GROUP	0.3%
TELEPERFORMANCE	0.3%
MTU AERO ENGINES HLDG.	0.3%
INFORMA	0.3%
MICRO FOCUS INTL.	0.3%
CLARIANT	0.3%
RENTOKIL INITIAL	0.3%
MELROSE INDUSTRIES	0.3%
LEG IMMOBILIEN	0.3%
Total	3.0%

	E Small Cap Index- Portfolio	Index	Portfolio
	Q2-17	Q2-17	Q1-17
Market Value	Q2 17	Q2 11	Q 1 11
Market Value (\$M)	4.0		3.7
Number Of Holdings	2268	2265	2218
Characteristics			
Weighted Avg. Market Cap. (\$B)	2.6	2.6	2.4
Median Market Cap (\$B)	1.1	1.1	1.0
P/E Ratio	21.9	20.3	21.8
Yield	2.3	2.2	2.3
EPS Growth - 5 Yrs.	12.1	11.1	10.7
Price to Book	3.0	2.5	2.9
Beta (holdings; domestic)	0.9	0.9	0.9
Sector Distribution			
Energy	2.4	2.4	2.8
Materials	9.1	9.1	9.4
Industrials	22.3	22.4	22.1
Consumer Discretionary	15.8	15.9	15.9
Consumer Staples	6.7	6.8	6.6
Health Care	7.0	7.0	7.2
Financials	11.5	11.3	11.4
Information Technology	11.2	11.3	10.8
Telecommunication Services	1.3	1.3	1.2
Utilities	2.1	2.0	2.0
Real Estate	10.4	10.5	10.6



#### DFA

Account Inform	nation
Account Name	DFA
Account Structure	Mutual Fund
Investment Style	Active
Inception Date	7/01/07
Account Type	Equity
Benchmark	MSCI Emerging Markets
Universe	eA Emg Mkts Equity Net

Portfolio Performance Summary						
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	Return (%)	Since
DFA	2.8	27.6	0.8	3.8	1.3	Jul-07
MSCI Emerging Markets	6.3	23.7	1.1	4.0	1.9	Jul-07
eA Emg Mkts Equity Net Median	6.4	22.8	1.7	5.2	2.5	Jul-07
eA Emg Mkts Equity Net Rank	93	17	74	77	82	Jul-07

Top 10 Holdings	
CHINA CON.BANK 'H'	3.0%
RELIANCE INDUSTRIES	2.1%
INDL.& COML.BK.OF CHINA 'H'	1.6%
HYUNDAI MOTOR	1.5%
BANK OF CHINA 'H'	1.4%
PTT FB	1.0%
STANDARD BK.GP.	1.0%
VALE PN	1.0%
OAO GAZPROM ADS (LON)	0.9%
POSCO	0.8%
Total	14.2%

	DFA Characte	ristics	
	Portfolio	Index	Portfolio
	Q2-17	Q2-17	Q1-17
Market Value			
Market Value (\$M)	2.5		2.4
Number Of Holdings	2249	845	2210
Characteristics			
Weighted Avg. Market Cap. (\$B)	18.7	68.1	19.5
Median Market Cap (\$B)	0.4	5.4	0.4
P/E Ratio	14.1	20.5	15.1
Yield	2.9	2.4	2.9
EPS Growth - 5 Yrs.	-0.8	9.7	0.1
Price to Book	1.3	2.8	1.3
Beta (holdings; domestic)	1.2	1.1	1.2
Sector Distribution			
Energy	12.4	6.5	13.8
Materials	16.6	7.0	16.9
Industrials	9.3	5.7	9.5
Consumer Discretionary	10.1	10.6	9.8
Consumer Staples	3.6	6.7	3.7
Health Care	0.4	2.4	0.5
Financials	29.8	23.6	29.3
Information Technology	9.9	26.8	9.0
Telecommunication Services	2.2	5.4	2.1
Utilities	1.6	2.6	1.7
Real Estate	4.0	2.6	3.6



# LMCG Emerging Markets

Account Information			
Account Name	LMCG Emerging Markets		
Account Structure	Commingled Fund		
Investment Style	Active		
Inception Date	8/01/15		
Account Type	Equity		
Benchmark	MSCI Emerging Markets		
Universe	eA Emg Mkts Equity Gross		

Portfolio Performance Summary						
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	Return (%)	Since
Aberdeen Emerging Markets Bond Fund	2.6		-		8.0	Dec-16
50% JPM EMBI GD / 50% JPM GBI-EM	2.9	6.3	1.3	2.5	10.0	Dec-16

Top 10 Holdings			
SAMSUNG ELECTRONICS	5.0%		
TAIWAN SEMICON.MNFG.	4.5%		
TENCENT HOLDINGS	4.4%		
HON HAI PRECN.IND.	2.3%		
ALIBABA GROUP HLDG.SPN. ADR 1:1	2.1%		
CHINA CON.BANK 'H'	2.0%		
GEELY AUTOMOBILE HDG.	1.5%		
BANK OF CHINA 'H'	1.4%		
INDL.& COML.BK.OF CHINA 'H'	1.4%		
ITAU UNIBANCO HOLDING PN	1.4%		
Total	26.0%		

LMCG En	nerging Markets	Characteristics	
	Portfolio	Index	Portfolio
	Q2-17	Q2-17	Q1-17
Market Value			
Market Value (\$M)	4.8		4.5
Number Of Holdings	123	845	113
Characteristics			
Weighted Avg. Market Cap. (\$B)	64.1	68.1	53.9
Median Market Cap (\$B)	8.7	5.4	8.3
P/E Ratio	17.6	20.5	15.4
Yield	3.1	2.4	3.0
EPS Growth - 5 Yrs.	11.7	9.7	9.8
Price to Book	3.2	2.8	2.6
Beta (holdings; domestic)	1.1	1.1	1.1
Sector Distribution			
Energy	7.6	6.5	7.8
Materials	8.4	7.0	6.8
Industrials	4.8	5.7	6.0
Consumer Discretionary	12.1	10.6	7.9
Consumer Staples	5.8	6.7	5.4
Health Care	4.2	2.4	3.7
Financials	20.6	23.6	24.6
Information Technology	26.8	26.8	22.7
Telecommunication Services	4.5	5.4	2.8
Utilities	2.6	2.6	2.1
Real Estate	2.6	2.6	3.2



## KB Investors Emerging Markets Equity

Account Information				
Account Name	KB Investors Emerging Markets Equity			
Account Structure	Commingled Fund			
Investment Style	Active			
Inception Date	10/01/15			
Account Type	Equity			
Benchmark	MSCI Emerging Markets			
Universe	eA Emg Mkts Equity Gross			

Portfolio Performance Summary						
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	Return (%)	Since
KB Investors Emerging Markets Equity	3.2	18.6			13.7	Oct-15
MSCI Emerging Markets	6.3	23.7	1.1	4.0	17.5	Oct-15
eA Emg Mkts Equity Gross Median	6.4	24.0	2.6	5.9	18.7	Oct-15
eA Emg Mkts Equity Gross Rank	91	79			88	Oct-15

Top 10 Holdings	
BANCO SANTANDER CHILE	12.4%
IRPC	9.8%
CHINA CON.BANK 'H'	7.7%
INDL.& COML.BK.OF CHINA 'H'	7.6%
BANK OF CHINA 'H'	6.4%
AGRICULTURAL BK.OF CHIN. 'H'	4.5%
ASTRA INTERNATIONAL	2.7%
WISTRON	2.1%
MATAHARI DEPARTMENT SOE.	2.1%
SINO-OCEAN LAND HOLDINGS	2.0%
Total	57.3%

KB Investors Emerging Markets Equity Characteristics					
	Portfolio	Index	Portfolio		
	Q2-17	Q2-17	Q1-17		
Market Value					
Market Value (\$M)	5.2	-	5.0		
Number Of Holdings	130	845	125		
Characteristics					
Weighted Avg. Market Cap. (\$B)	31.7	68.1	30.1		
Median Market Cap (\$B)	6.2	5.4	6.3		
P/E Ratio	11.8	20.5	13.1		
Yield	4.3	2.4	3.9		
EPS Growth - 5 Yrs.	6.8	9.7	9.3		
Price to Book	1.6	2.8	2.3		
Beta (holdings; domestic)	1.2	1.1	1.0		
Sector Distribution					
Energy	12.8	6.5	8.8		
Materials	2.7	7.0	6.7		
Industrials	5.1	5.7	7.4		
Consumer Discretionary	7.0	10.6	9.2		
Consumer Staples	1.3	6.7	4.3		
Health Care	0.8	2.4	1.0		
Financials	48.0	23.6	28.1		
Information Technology	11.2	26.8	26.0		
Telecommunication Services	1.9	5.4	5.4		
Utilities	2.5	2.6	4.0		
Real Estate	5.1	2.6	3.4		

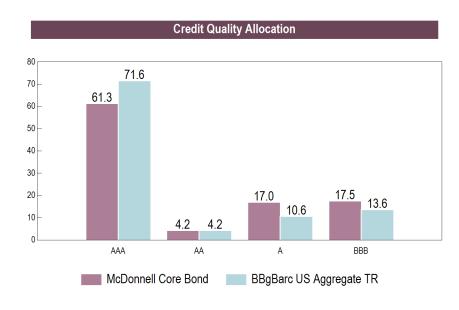


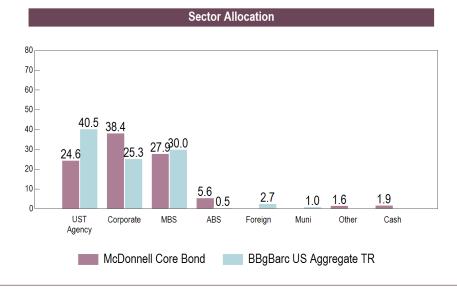
### McDonnell Core Bond

Account	Account Information					
Account Name	McDonnell Core Bond					
Account Structure	Separate Account					
Investment Style	Active					
Inception Date	7/01/01					
Account Type	Fixed					
Benchmark	BBgBarc US Aggregate TR					
Universe	eA US Core Fixed Inc Gross					

Portfolio Performance Summary						
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	Return (%)	Since
McDonnell Core Bond	1.6	-0.1	2.6	2.1	4.8	Jul-01
BBgBarc US Aggregate TR	1.4	-0.3	2.5	2.2	4.7	Jul-01
eA US Core Fixed Inc Gross Median	1.6	0.3	2.8	2.7	5.2	Jul-01
eA US Core Fixed Inc Gross Rank	46	77	71	93	87	Jul-01

McDonnell Characteristics								
	vs. BBgBarc US Aggregate TR							
	Portfolio	Index	Portfolio					
	Q2-17	Q2-17	Q1-17					
Fixed Income Characteristics								
Yield to Maturity	2.6	2.5	2.6					
Average Duration	5.9	6.0	5.6					
Average Quality	AA	AA	AA					
Weighted Average Maturity	7.9	13.0	7.4					





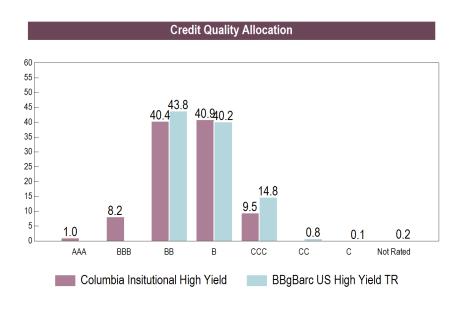


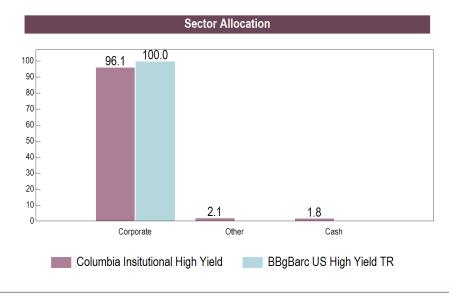
### Columbia Insitutional High Yield

Account Information					
Account Name	Columbia Insitutional High Yield				
Account Structure	Commingled Fund				
Investment Style	Active				
Inception Date	3/01/12				
Account Type	Fixed				
Benchmark	BBgBarc US High Yield TR				
Universe	eA US High Yield Fixed Inc Gross				

Portfolio Performance Summary							
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	Return (%)	Since	
Columbia Insitutional High Yield	2.5	10.1	4.8	6.8	6.6	Mar-12	
BBgBarc US High Yield TR	2.2	12.7	4.5	6.9	6.8	Mar-12	
eA US High Yield Fixed Inc Gross Median	2.1	11.7	4.3	6.8	6.7	Mar-12	
eA US High Yield Fixed Inc Gross Rank	20	73	34	51	53	Mar-12	

Columbia Insitutional High Yield Characteristics vs. BBgBarc US High Yield TR								
	Portfolio	Index	Portfolio					
	Q2-17	Q2-17	Q1-17					
Fixed Income Characteristics								
Yield to Maturity	4.8	6.1	5.4					
Average Duration	3.9	3.9	4.1					
Average Quality	BB	В	BB					
Weighted Average Maturity	7.0	6.3	6.9					





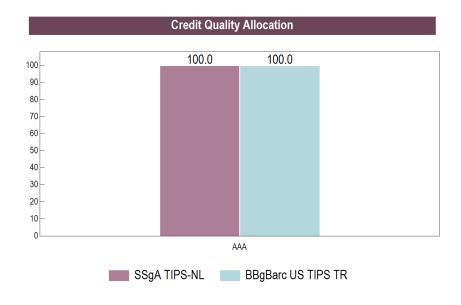


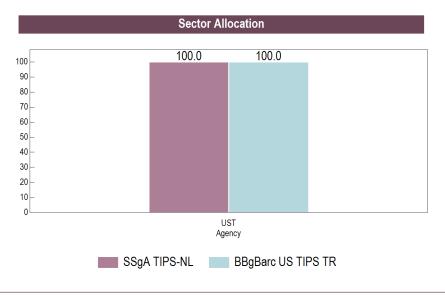
### SSgA TIPS-NL

Ac	count Information
Account Name	SSgA TIPS-NL
Account Structure	Commingled Fund
Investment Style	Passive
Inception Date	7/01/07
Account Type	Fixed
Benchmark	BBgBarc US TIPS TR
Universe	eA TIPS / Infl Indexed Fixed Inc Gross

Portfolio Performance Summary						
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	Return (%)	Since
SSgA TIPS-NL	-0.4	-0.8	0.6	0.2	4.2	Jul-07
BBgBarc US TIPS TR	-0.4	-0.6	0.6	0.3	4.3	Jul-07
eA TIPS / Infl Indexed Fixed Inc Gross Median	-0.4	-0.3	0.7	0.4	4.4	Jul-07
eA TIPS / Infl Indexed Fixed Inc Gross Rank	72	95	63	93	66	Jul-07

SSgA TIPS-NL Characteristics vs. BBgBarc US TIPS TR							
	Portfolio	Index	Portfolio				
	Q2-17	Q2-17	Q1-17				
Fixed Income Characteristics							
Yield to Maturity	2.2	0.4	2.3				
Average Duration	5.4	5.4	5.7				
Average Quality	AAA	AAA	AAA				
Weighted Average Maturity	8.5	8.5	8.3				





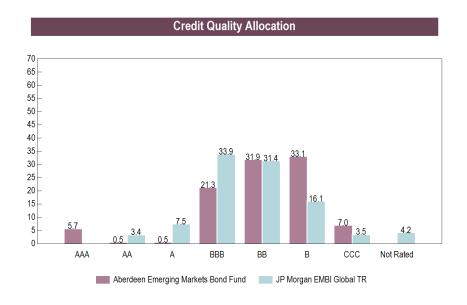


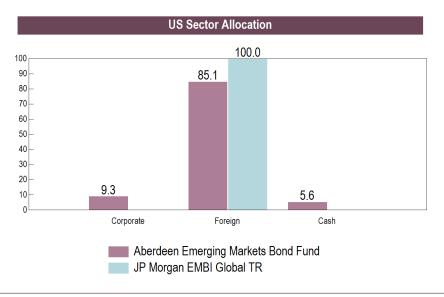
### Aberdeen Emerging Markets Bond Fund

Account Information					
Account Name	Aberdeen Emerging Markets Bond Fund				
Account Structure	Commingled Fund				
Investment Style	Passive				
Inception Date	12/01/16				
Account Type	Fixed				
Benchmark	50% JPM EMBI GD / 50% JPM GBI-EM				
Universe					

Portfolio Performance Summary								
	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Aberdeen Emerging Markets Bond Fund	2.4	7.8					7.8	Dec-16
50% JPM EMBI GD / 50% JPM GBI-EM	2.9	8.3	6.3	1.3	2.5	5.7	10.0	Dec-16

Aberdeen Emerging Markets Bond Fund Fixed Income Characteristics vs. JP Morgan EMBI Global TR								
	Portfolio	Index	Portfolio					
	Q1-17	Q1-17	Q4-16					
Fixed Income Characteristics								
Yield to Maturity	6.3	5.4						
Average Duration	6.2	6.8						
Average Quality	BB	BB						
Weighted Average Maturity	10.3	10.8						





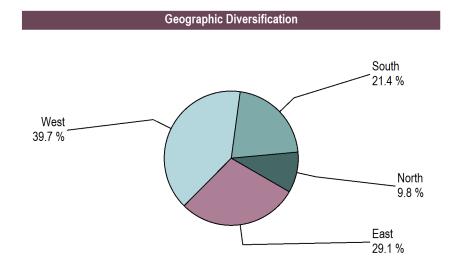


### Intercontinental U.S. REIF

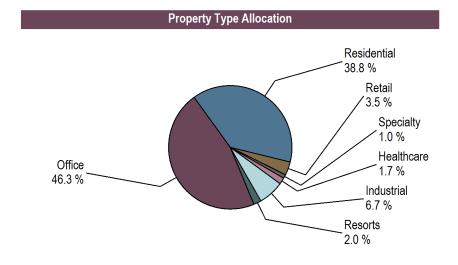
As of June 30, 2017

Accoun	Account Information				
Account Name	Intercontinental U.S. REIF				
Account Structure	Commingled Fund				
Investment Style	Active				
Inception Date	10/01/14				
Account Type	Real Estate				
Benchmark	NCREIF-ODCE				
Universe					

Portfolio Performance Summary						
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	Return (%)	Since
Intercontinental U.S. REIF	1.4	13.0			12.8	Oct-14
NCREIF-ODCE	1.7	7.9	11.3	11.8	11.1	Oct-14



North represents Midwest.



Note: Number of investments is 114.

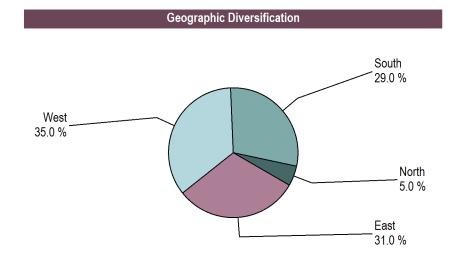


### AEW Core Property Trust

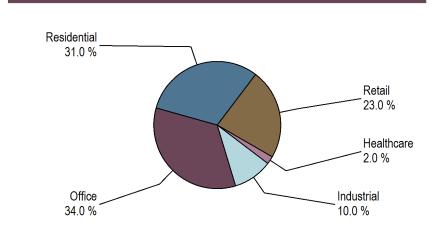
As of June 30, 2017

Account Information				
Account Name	AEW Core Property Trust			
Account Structure	Commingled Fund			
Investment Style	Active			
Inception Date	10/01/14			
Account Type	Real Estate			
Benchmark	NCREIF-ODCE			
Universe				

Portfolio Performance Summary						
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	Return (%)	Since
AEW Core Property Trust	1.5	7.5			10.6	Oct-14
NCREIF-ODCE	1.7	7.9	11.3	11.8	11.1	Oct-14



North represents Midwest.



Property Type Allocation

Note: Number of investments is 63 and Net IRR is 9.77%.

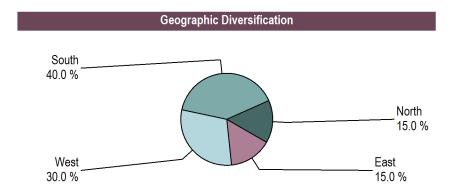


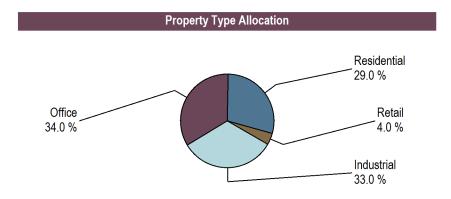
### TA Associates Realty Fund IX

As of June 30, 2017

Account Information				
Account Name	TA Associates Realty Fund IX			
Account Structure	Other			
Investment Style	Active			
Inception Date	5/01/10			
Account Type	Real Estate			
Benchmark	NCREIF-ODCE			
Universe				

Non-Marketable Securities Overview As of June 30, 2017								
Account Type	Account	Vintage Year	Commitment	Cumulative Takedown	Cumulative Distributions	Value (RV)	Total Value (RV + Dist)	Unfunded Commitment
Real Estate	TA Associates Realty Fund IX  Total Account	2010	\$3,000,000 <b>\$3,000,000</b>	\$2,880,000 <b>\$2,880,000</b>	\$4,213,886 <b>\$4,213,886</b>	\$518,158 <b>\$518,158</b>	\$4,732,044 <b>\$4,732,044</b>	\$120,000 <b>\$120,000</b>





**Investment Strategy:** TA Associates Realty Fund IX uses a value-added strategy to create a diversified portfolio of direct real estate investments. Fund IX expects to invest in office, industrial, retail, and multifamily properties located primarily in major U.S. markets. Historically, TA Realty commingled funds have received about two-thirds of return from income and maintained moderate leverage of approximately 50% to 55% of the aggregate value of the Fund's real estate investments. Most value-added improvements include re-development, re-positioning, re-tenanting or recapitalization. TA Realty expects to proactively manage tenant and industry exposure with no significant concentration towards either.

Note: As of December 31,2016, the number of investments is 62 and Net IRR is 10.86%.

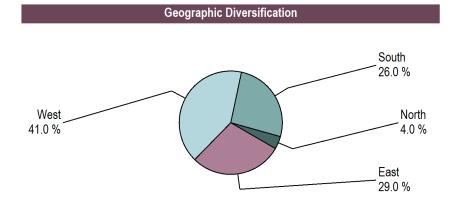


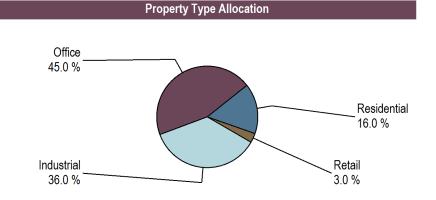
### TA Associates Realty Fund X

As of June 30, 2017

Account Information				
Account Name	TA Associates Realty Fund X			
Account Structure	Other			
Investment Style	Active			
Inception Date	4/01/13			
Account Type	Real Estate			
Benchmark	NCREIF-ODCE			
Universe				

Non-Marketable Securities Overview As of June 30, 2017								
Account Type	Account	Vintage Year	Commitment	Cumulative Takedown	Cumulative Distributions	Value (RV)	Total Value (RV + Dist)	Unfunded Commitment
Real Estate	TA Associates Realty Fund X  Total Account	2013	\$3,000,000 <b>\$3,000,000</b>	\$3,005,227 <b>\$3,005,227</b>	\$1,626,037 <b>\$1,626,037</b>	\$2,499,758 <b>\$2,499,758</b>	\$4,125,795 <b>\$4,125,795</b>	-\$5,227 <b>-\$5,227</b>





**Investment Strategy:** TA Associates Realty Fund X uses a value-added strategy to create a diversified portfolio of direct real estate investments. The strategy is anticipated to target under-leased office, industrial, multifamily, and retail assets that are expected to be well-located, functional buildings with strong net operating income (NOI) growth potential. Geographically, the fund will target over 35 U.S. markets with broad regional diversification targets of 25% to 40% in the west, 20% to 35% in the east, 20% to 30% in the south, and 10% to 20% in the Midwest. The fund will target 35% leverage, with a maximum of 50%. Most value-added improvements include redevelopment, repositioning, retenanting, or recapitalization.

Note: As of December 31, 2016, the number of investments is 89 and Net IRR is 12.30%.



### AG Realty Fund IV

As of June 30, 2017

Account Information				
Account Name	AG Realty Fund IV			
Account Structure	Commingled Fund			
Investment Style	Active			
Inception Date				
Account Type	Real Estate			
Benchmark	NCREIF-ODCE			
Universe				

Non-Marketable Securities Overview As of June 30, 2017								
Account Type	Account	Vintage Year	Commitment	Cumulative Takedown	Cumulative Distributions	Value (RV)	Total Value (RV + Dist)	Unfunded Commitment
Real Estate	AG Realty Fund IV  Total Account	2004	\$1,000,000 <b>\$1,000,000</b>	\$950,000 <b>\$950,000</b>	\$1,332,500 <b>\$1,332,500</b>	\$0 <b>\$0</b>	\$1,332,500 <b>\$1,332,500</b>	\$50,000 <b>\$50,000</b>

**Investment Strategy:** Funded in 1999, Angelo Gordon's Fund IV is an opportunistic real estate portfolio. Leverage on the portfolio is about 50%. About 75% of return is expected to result from capital appreciation, with the remaining 25% coming from income. The portfolio's emphasis is on purchasing sub-performing and non-performing commercial properties in the \$30 million range. The firm then enhances these properties through redevelopment or other measures. Angelo Gordon seeks to limit downside risk in the portfolio through diversification.

Note: Number of investments is 0.



# Ascent Venture Partners - Fund II

As of June 30, 2017

	Account Information
Account Name	Ascent Venture Partners - Fund
Account Structure	Othe
Investment Style	Activ
Inception Date	
Account Type	Private Equit
Benchmark	

Non-Marketable Securities Overview by Account Type								
Account Type	Account	Vintage Year	Commitment	Cumulative Takedown	Cumulative Distributions	Value (RV)	Total Value (RV + Dist)	Unfunded Commitment
Private Equity	Ascent Venture Partners - Fund II  Total Account	1995	\$500,000 <b>\$500,000</b>	\$484,254 <b>\$484,254</b>	\$1,458,918 <b>\$1,458,918</b>	\$133,255 <b>\$133,255</b>	\$1,592,173 <b>\$1,592,173</b>	\$15,746 <b>\$15,746</b>

#### **Investment Strategy:**

Ascent Venture Partners seeks to build private equity portfolios that are balanced with respect to industry (high and low technology ventures), and diverse with respect to company growth stage (from seed through buyout and re capitalization). Ascent favors proven management teams and reasonable valuations. Ascent has shifted their focus to liquidating the remaining investments in the partnership.

Note: As of September 30,2016, the Net IRR is 26.6%.



## Ascent Venture Partners - Fund III

As of June 30, 2017

	Account Information
Account Name	Ascent Venture Partners - Fund III
Account Structure	Other
Investment Style	Active
Inception Date	
Account Type	Private Equity
Benchmark	

	Non-Marketable Securities Overview by Account Type								
Account Type	Account	Vintage Year	Commitment	Cumulative Takedown	Cumulative Distributions	Value (RV)	Total Value (RV + Dist)	Unfunded Commitment	
Private Equity	Ascent Venture Partners - Fund III Total Account	1999	\$1,500,000 <b>\$1,500,000</b>	\$1,395,000 <b>\$1,395,000</b>	\$1,697,063 <b>\$1,697,063</b>	\$83,896 <b>\$83,896</b>	\$1,780,959 <b>\$1,780,959</b>	\$105,000 <b>\$105,000</b>	

#### **Investment Strategy:**

Ascent Venture Partners seeks to build private equity portfolios that are balanced with respect to industry (high and low technology ventures), and diverse with respects to company growth stage (from seed through buyout and re-capitalization). Ascent favors proven management teams and reasonable valuations. Ascent has shifted their focus to liquidating the remaining investments in the partnership.

Note: As of September 30,2016, the Net IRR is 4.0%.



# Ascent Venture Partners - Fund IV

As of June 30, 2017

	Account Information
Account Name	Ascent Venture Partners - Fund IV
Account Structure	Other
Investment Style	Active
Inception Date	
Account Type	Private Equity
Benchmark	

	Non-Marketable Securities Overview by Account Type								
Account Type	Account	Vintage Year	Commitment	Cumulative Takedown	Cumulative Distributions	Value (RV)	Total Value (RV + Dist)	Unfunded Commitment	
Private Equity	Ascent Venture Partners - Fund IV Total Account	2003	\$1,000,000 <b>\$1,000,000</b>	\$1,000,000 <b>\$1,000,000</b>	\$155,588 <b>\$155,588</b>	\$138,162 <b>\$138,162</b>	\$293,750 <b>\$293,750</b>	\$0 <b>\$0</b>	

#### **Investment Strategy:**

Located in Boston, Ascent Venture Partners (formerly known as Pioneer Capital) was formed in 1999, after Landmark Partners purchased Pioneer's interest. Ascent focuses primarily on high growth companies in the information technology sector. Ascent is an active investor, typically taking a board seat in portfolio companies. As a result, Ascent has focused its investments in the Eastern United States.

Note: As of September 30,2016, the Net IRR is -21.1%.



# Ascent Venture Partners - Fund V

As of June 30, 2017

	Account Information	
Account Name	Ascent Venture Partners - Fur	nd V
Account Structure	0	ther
Investment Style	Ac	ctive
Inception Date		
Account Type	Private Eq	uity
Benchmark		

	Non-Marketable Securities Overview by Account Type								
Account Type	Account	Vintage Year	Commitment	Cumulative Takedown	Cumulative Distributions	Value (RV)	Total Value (RV + Dist)	Unfunded Commitment	
Private Equity	Ascent Venture Partners - Fund V Total Account	2010	\$1,000,000 <b>\$1,000,000</b>	\$880,000 <b>\$880,000</b>	\$569,783 <b>\$569,783</b>	\$935,281 <b>\$935,281</b>	\$1,505,065 <b>\$1,505,065</b>	\$120,000 <b>\$120,000</b>	

#### **Investment Strategy:**

Ascent Venture Partners V is an early stage venture capital fund focused on making investments within the technology products and services industry. Specific areas of interest include next generation software (open source and Software-as-a-Service), data management and analysis, automated computing, security and compliance, financial services, and applications associated with the convergence of remote devices. The GP is located in Boston and will invest in the eastern United States and Canada. The Fund will target companies that have pre-money valuations of \$3 to \$15 million and have the potential for a \$100 million exit value.

Note: As of September 30,2016, the Net IRR is 11.1%.



## Ascent Venture Partners - Fund VI

	Account Information
Account Name	Ascent Venture Partners - Fund V
Account Structure	Other
Investment Style	Active
Inception Date	6/30/15
Account Type	Private Equity
Benchmark	

	Non-Marketable Securities Overview by Account Type								
Account Type	Account	Vintage Year	Commitment	Cumulative Takedown	Cumulative Distributions	Value (RV)	Total Value (RV + Dist)	Unfunded Commitment	
Private Equity	Ascent Venture Partners - Fund VI Total Account	2015	\$1,500,000 <b>\$1,500,000</b>	\$540,000 <b>\$540,000</b>	\$0 <b>\$0</b>	\$666,990 <b>\$666,990</b>	\$666,990 <b>\$666,990</b>	\$960,000 <b>\$960,000</b>	



# Goldman Sachs PEP 2005

As of June 30, 2017

Account Information						
Account Name	Goldman Sachs PEP 2005					
Account Structure	Other					
Investment Style	Active					
Inception Date	8/01/06					
Account Type	Private Equity					
Benchmark						

	Non-Marketable Securities Overview by Account Type								
Account Type	Account	Vintage Year	Commitment	Cumulative Takedown	Cumulative Distributions	Value (RV)	Total Value (RV + Dist)	Unfunded Commitment	
Private Equity	Goldman Sachs PEP 2005 Total Account	2006	\$3,000,000 <b>\$3,000,000</b>	\$2,926,055 <b>\$2,926,055</b>	\$2,626,994 <b>\$2,626,994</b>	\$1,155,283 <b>\$1,155,283</b>	\$3,782,277 <b>\$3,782,277</b>	\$73,945 <b>\$73,945</b>	

#### **Investment Strategy:**

Goldman Sachs Private Equity Partners 2005 is a fund of funds formed to create a diversified portfolio of 18 to 25 partnerships. The Fund will invest opportunistically in order to commit to the "very best managers." The Fund expects to commit approximately \$40 million to each partnership. Previous funds have invested approximately 30% outside the U.S.



### HarbourVest Partners VIII

As of June 30, 2017

Accou	Account Information						
Account Name	HarbourVest Partners VIII						
Account Structure	Other						
Investment Style	Active						
Inception Date							
Account Type	Private Equity						
Benchmark							

	Non-Marketable Securities Overview by Account Type								
Account Type	Account	Vintage Year	Commitment	Cumulative Takedown	Cumulative Distributions	Value (RV)	Total Value (RV + Dist)	Unfunded Commitment	
Private Equity	HarbourVest Partners VIII Total Account	2006	\$2,500,000 <b>\$2,500,000</b>	\$2,350,000 <b>\$2,350,000</b>	\$2,594,231 <b>\$2,594,231</b>	\$1,205,195 <b>\$1,205,195</b>	\$3,799,426 <b>\$3,799,426</b>	\$150,000 <b>\$150,000</b>	

#### **Investment Strategy:**

HarbourVest Partners, known as Hancock Venture Partners until 1997, was founded in 1982 to invest in private equity partnerships. The HarbourVest Partners VIII Investment Program consists of three separate fund of funds, each dedicated to distinct private equity strategies: buyout, venture capital and mezzanine debt partnerships. Each vehicle will invest primarily in newly raised funds, but will also invest a portion of assets in secondary interest.

Note: As of September 30,2016, the Net IRR is 10.0%.



# HarbourVest Partners IX

As of June 30, 2017

Account Information					
Account Name	HarbourVest Partners IX				
Account Structure	Other				
Investment Style	Active				
Inception Date					
Account Type	Private Equity				
Benchmark					

Non-Marketable Securities Overview  As of June 30, 2017  As of June 30, 2017								
Account Type	Account	Vintage Year	Commitment	Cumulative Takedown	Cumulative Distributions	Value (RV)	Total Value (RV + Dist)	Unfunded Commitment
Private Equity	HarbourVest Partners IX Total Account	2010	\$5,000,000 <b>\$5,000,000</b>	\$3,012,500 <b>\$3,012,500</b>	\$1,071,292 <b>\$1,071,292</b>	\$3,096,341 <b>\$3,096,341</b>	\$4,167,633 <b>\$4,167,633</b>	\$1,987,500 <b>\$1,987,500</b>

#### **Investment Strategy:**

HarbourVest Partners, known as Hancock Venture Partners until 1997, was founded in 1982 to invest in private equity partnerships. The HarbourVest Partners IX Fund consists of three separate fund of funds, each dedicated to distinct private equity strategies: buyout, venture capital, and mezzanine debt partnerships. Each vehicle will invest primarily in newly-raised funds, but will also invest a portion of assets in secondary interests.

Note: As of September 30,2016, the Net IRR is 14.9%.



### HarbourVest X Buyout Fund

As of June 30, 2017

Account Information						
Account Name	HarbourVest X Buyout Fund					
Account Structure	Other					
Investment Style	Passive					
Inception Date	4/06/16					
Account Type	Private Equity					
Benchmark						

As of June 30, 2017								
Account Type	Account	Vintage Year	Commitment	Cumulative Takedown	Cumulative Distributions	Value (RV)	Total Value (RV + Dist)	Unfunded Commitment
Private Equity	HarbourVest X Buyout Fund	2016	\$6,500,000	\$478,827	\$0	\$0	\$0	\$6,021,173
	Total Account		\$6,500,000	\$478,827	\$0	\$0	\$0	\$6,021,173

#### **Investment Strategy:**

HarbourVest Partners, known as Hancock Venture Partners until 1997, was founded in 1982 to invest in private equity partnerships. The HarbourVest Partners IX Fund consists of three separate fund of funds, each dedicated to distinct private equity strategies: buyout, venture capital, and mezzanine debt partnerships. Each vehicle will invest primarily in newly-raised funds, but will also invest a portion of assets in secondary interests.

Note: As of September 30,2016, the Net IRR is 14.9%.



### Constitution Capital Partners Ironsides III

As of June 30, 2017

Account Information					
Account Name	Constitution Capital Partners Ironsides III				
Account Structure	Other				
Investment Style	Active				
Inception Date					
Account Type	Private Equity				
Benchmark					

Non-Marketable Securities Overview									
	As of June 30, 2017								
Account Type	Account	Vintage Year	Commitment	Cumulative Takedown	Cumulative Distributions	Value (RV)	Total Value (RV + Dist)	Unfunded Commitment	
Private Equity	Constitution Capital Partners Ironsides III	2014	\$5,000,000	\$1,346,869	\$119,753	\$0	\$119,753	\$3,653,131	
	Total Account		\$5,000,000	\$1,346,869	\$119,753	\$0	\$119,753	\$3,653,131	

#### **Investment Strategy:**

Constitution Capital seeks investments in underlying private equity funds ranging in size from \$200 million to approximately \$1.0 billion, with a few larger potentially. Constitution has noted their preference to invest the majority of capital to funds of less than \$1 billion. Constitution has noted their preference to invest the majority of capital to funds of less than \$1 billion. Constitution targets a variety of fund types (domestic middle-market buyout, special situations, growth equity, distressed, and sector-specific) and will allocate amongst them opportunistically. The group will not invest in early-stage venture capital funds or mega buyout funds. The portfolio will have 12 to 15 underlying fund investments of approximately \$10 million to \$20 million to \$20 million to \$20 million to \$20 million to \$25 million. The enterprise values of the underlying companies are expected to range from \$100 million to \$1.5 billion.

Note: As of September 30, 2016, the Gross IRR is 7.2%.



### Constitution Capital Partners Ironsides IV

As of June 30, 2017

Account Information					
Account Name	Constitution Capital Partners Ironsides IV				
Account Structure	Mutual Fund				
Investment Style	Passive				
Inception Date					
Account Type	Private Equity				
Benchmark					

Non-Marketable Securities Overview								
Account Type	Account	Vintage Year	Commitment	Cumulative Takedown	Cumulative Distributions	Value (RV)	Total Value (RV + Dist)	Unfunded Commitment
Private Equity	Constitution Capital Partners Ironsides IV	2016	\$2,500,000	\$238,723	\$0	\$0	\$0	\$2,261,277
	Total Account		\$2,500,000	\$238,723	\$0	\$0	\$0	\$2,261,277

#### **Investment Strategy:**

Constitution Capital seeks investments in underlying private equity funds ranging in size from \$200 million to approximately \$1.0 billion, with a few larger potentially. Constitution has noted their preference to invest the majority of capital to funds of less than \$1 billion. Constitution has noted their preference to invest the majority of capital to funds of less than \$1 billion. Constitution targets a variety of fund types (domestic middle-market buyout, special situations, growth equity, distressed, and sector-specific) and will allocate amongst them opportunistically. The group will not invest in early-stage venture capital funds or mega buyout funds. The portfolio will have 12 to 15 underlying fund investments of approximately \$10 million to \$20 million

Note: As of September 30, 2016, the Gross IRR is 7.2%.



# Constitution Capital Direct IV

Account Information						
Account Name	Constitution Capital Direct IV					
Account Structure	Other					
Investment Style	Active					
Inception Date						
Account Type	Private Equity					
Benchmark						

Non-Marketable Securities Overview								
Account Type	Account	Vintage Year	Commitment	Cumulative Takedown	Cumulative Distributions	Value (RV)	Total Value (RV + Dist)	Unfunded Commitment
Private Equity	Constitution Capital Direct IV	2016	\$2,500,000	\$1,238,019	\$472,771	\$0	\$472,771	\$1,261,981
	Total Account		\$2,500,000	\$1,238,019	\$472,771	\$0	\$472,771	\$1,261,981



### RS Global Natural Resources

Account Information					
Account Name	RS Global Natural Resources				
Account Structure	Mutual Fund				
Investment Style	Active				
Inception Date	7/01/11				
Account Type	Equity				
Benchmark	S&P Global Natural Resources Index TR USD				
Universe					

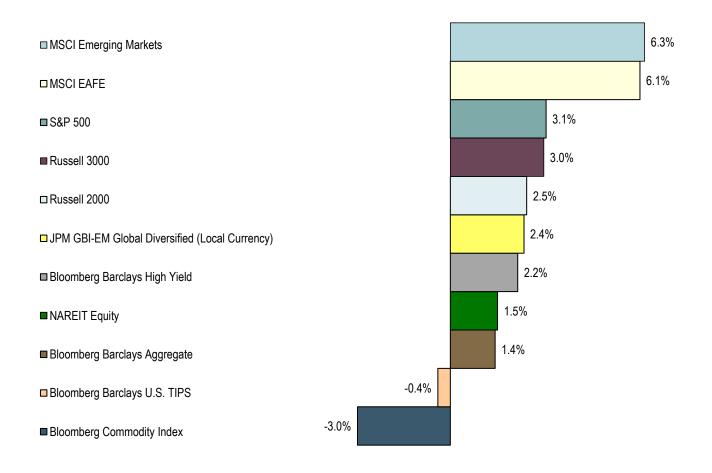
Portfolio Performance Summary							
	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	Return (%)	Since
RS Global Natural Resources	-9.1	-9.8	-1.1	-15.6	-6.9	-7.5	Jul-11
S&P Global Natural Resources Index TR USD	-0.9	2.0	15.3	-4.7	0.5	-2.9	Jul-11

RS Global Natural Resources Characteristics				
	Portfolio			
	Q1-17			
Market Value				
Market Value (\$M)	5.4			
Number Of Holdings	21			
Characteristics				
Weighted Avg. Market Cap. (\$B)	5.4			
Median Market Cap (\$B)	3.6			
P/E Ratio	21.6			
Yield	0.8			
EPS Growth - 5 Yrs.	-3.5			
Price to Book	3.0			
Beta (holdings; domestic)	1.6			
Sector Distribution				
Energy	56.2			
Materials	38.7			
Industrials	0.0			
Consumer Discretionary	0.0			
Consumer Staples	0.0			
Health Care	0.0			
Financials	0.0			
Information Technology	0.0			
Telecommunication Services	0.0			
Utilities	5.1			
Real Estate	0.0			



# The World Markets Second Quarter of 2017

### The World Markets<sup>1</sup> Second Quarter of 2017



<sup>&</sup>lt;sup>1</sup> Source: Thomson Reuters.



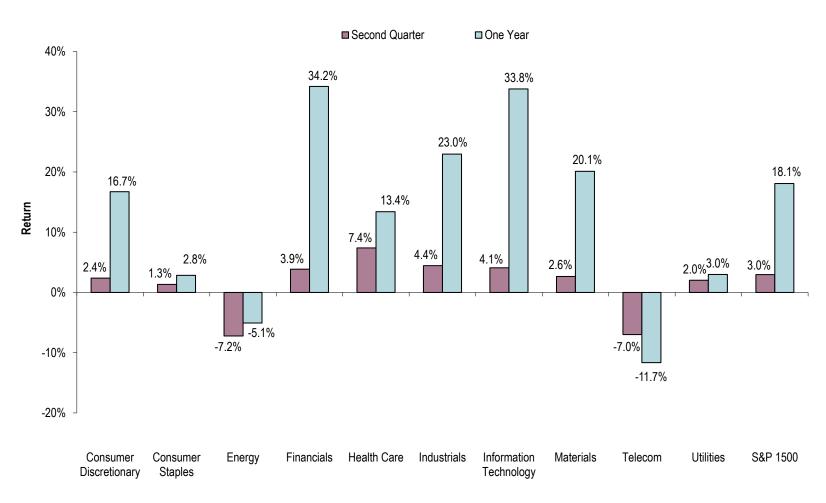
### Index Returns<sup>1</sup>

	2Q17 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
Domestic Equity					
Russell 3000	3.0	18.5	9.1	14.6	7.3
Russell 1000	3.1	18.0	9.3	14.7	7.3
Russell 1000 Growth	4.7	20.4	11.1	15.3	8.9
Russell 1000 Value	1.3	15.5	7.4	13.9	5.6
Russell MidCap	2.7	16.5	7.7	14.7	7.7
Russell MidCap Growth	4.2	17.0	7.8	14.2	7.9
Russell MidCap Value	1.4	15.9	7.5	15.1	7.2
Russell 2000	2.5	24.6	7.4	13.7	6.9
Russell 2000 Growth	4.4	24.4	7.6	14.0	7.8
Russell 2000 Value	0.7	24.9	7.0	13.4	5.9
Foreign Equity					
MSCI ACWI (ex. U.S.)	5.8	20.5	0.8	7.2	1.1
MSCI EAFE	6.1	20.3	1.1	8.7	1.0
MSCI EAFE (Local Currency)	2.7	22.1	7.0	12.5	2.0
MSCI EAFE Small Cap	8.1	23.2	5.6	12.9	3.4
MSCI Emerging Markets	6.3	23.7	1.1	4.0	1.9
MSCI Emerging Markets (Local Currency)	6.6	21.8	6.1	7.6	4.3
Fixed Income					
Bloomberg Barclays Universal	1.5	0.9	2.8	2.7	4.7
Bloomberg Barclays Aggregate	1.4	-0.3	2.5	2.2	4.5
Bloomberg Barclays U.S. TIPS	-0.4	-0.6	0.6	0.3	4.3
Bloomberg Barclays High Yield	2.2	12.7	4.5	6.9	7.7
JPM GBI-EM Global Diversified (Local Currency)	2.4	6.7	7.0	6.6	8.2
Other					
NAREIT Equity	1.5	-1.7	8.4	9.5	6.0
Bloomberg Commodity Index	-3.0	-6.5	-14.8	-9.2	-6.5
HFRI Fund of Funds	0.2	5.8	1.3	3.7	0.8

<sup>&</sup>lt;sup>1</sup> Source: Thomson Reuters.



### S&P Sector Returns<sup>1</sup>

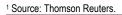


<sup>&</sup>lt;sup>1</sup> Source: Thomson Reuters. Represents S&P 1500 (All Cap) data.



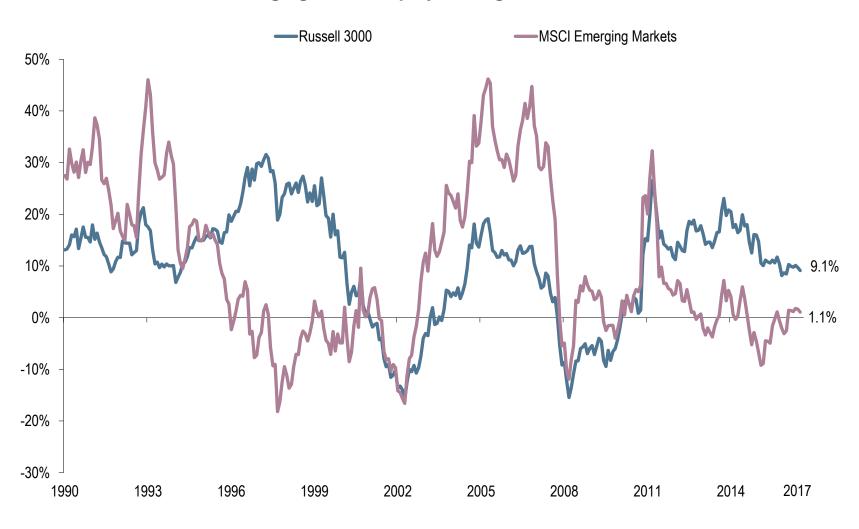
### U.S. and Developed Market Foreign Equity Rolling Three-Year Returns<sup>1</sup>

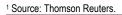






### U.S. and Emerging Market Equity Rolling Three-Year Returns<sup>1</sup>

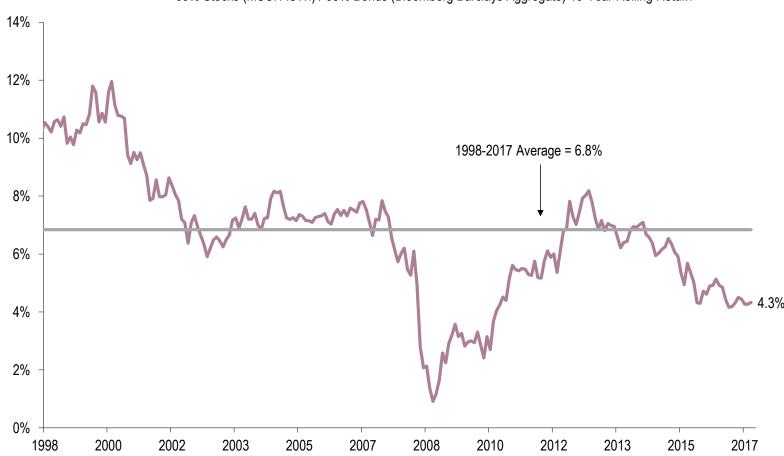






### Rolling Ten-Year Returns: 65% Stocks and 35% Bonds<sup>1</sup>

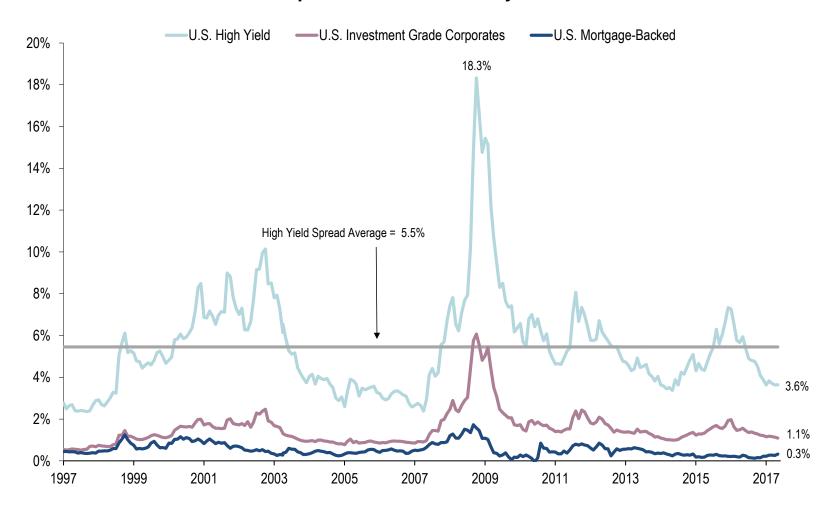
——65% Stocks (MSCI ACWI) / 35% Bonds (Bloomberg Barclays Aggregate) 10-Year Rolling Return







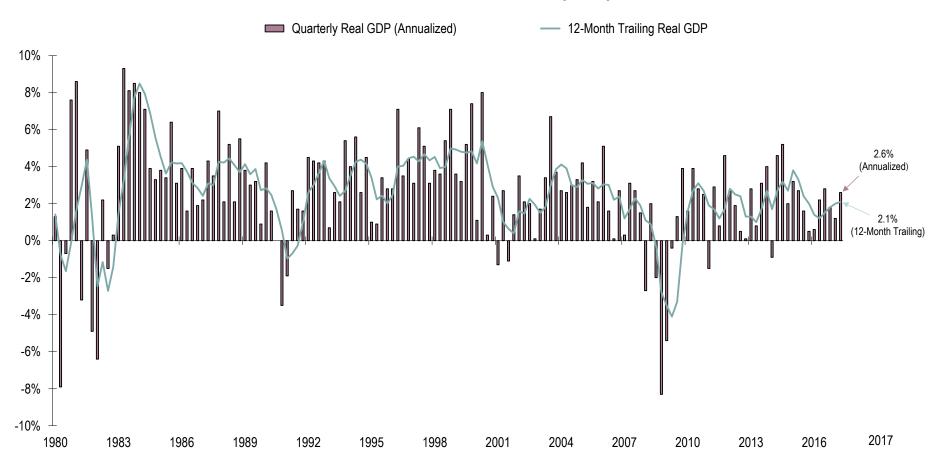
## Credit Spreads vs. U.S. Treasury Bonds<sup>1,2</sup>



<sup>&</sup>lt;sup>1</sup> Source: Barclays Live. <sup>2</sup> The median high yield spread was 5.0% from 1997-2017.



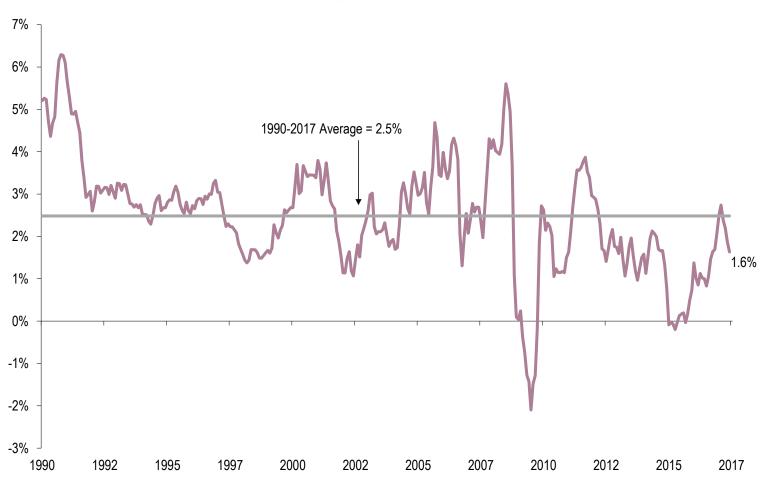
### U.S. Real Gross Domestic Product (GDP) Growth<sup>1</sup>



<sup>&</sup>lt;sup>1</sup> Source: Bureau of Economic Analysis. Data is as of the second quarter of 2017 and represents the first estimate.



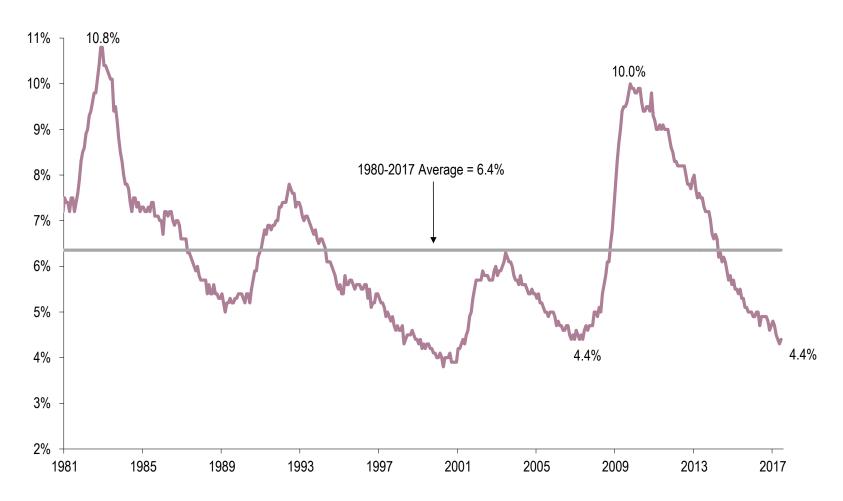
U.S. Inflation (CPI)
Trailing Twelve Months<sup>1</sup>



<sup>1</sup> Source: Bureau of Labor Statistics. Data is non-seasonally adjusted CPI, which may be volatile in the short-term. Data is as of June 30, 2017.



### U.S. Unemployment<sup>1</sup>



<sup>&</sup>lt;sup>1</sup> Source: Bureau of Labor Statistics. Data is as of June 30, 2017.

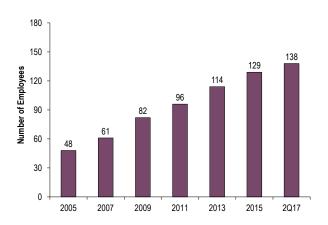


# Meketa Investment Group Corporate Update

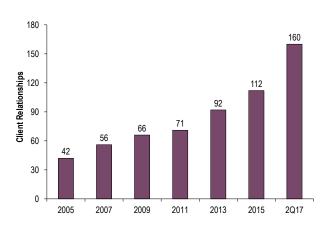
- Staff of 138, including 91 investment professionals and 28 CFA Charterholders
- 160 clients, with over 270 funds throughout the United States
- Significant investment in staff and resources
- Offices in Boston, Chicago, Miami, Portland (OR), San Diego, and London
- We advise on over \$500 billion in client assets
  - Over \$70 billion in assets committed to alternative investments
    - Private Equity
- Infrastructure
- Natural Resources

- Real Estate
- Hedge Funds
- Commodities

### **Employee Growth**



### **Client Growth**



Meketa Investment Group is proud to work for over 5 million American families everyday.



### **Asset Classes Followed Intensively by Meketa Investment Group**

Domestic	International	Private	Real	Fixed	Hedge
Equities	Equities	Equity	Assets	Income	Funds
<ul> <li>Passive</li> <li>Enhanced Index</li> <li>Large Cap</li> <li>Midcap</li> <li>Small Cap</li> <li>Microcap</li> <li>130/30</li> </ul>	<ul> <li>Large Cap         Developed</li> <li>Small Cap         Developed</li> <li>Emerging         Markets</li> <li>Frontier Markets</li> </ul>	<ul> <li>Buyouts</li> <li>Venture Capital</li> <li>Private Debt</li> <li>Special Situations</li> <li>Secondaries</li> <li>Fund of Funds</li> </ul>	<ul> <li>Public REITs</li> <li>Core Real Estate</li> <li>Value Added Real Estate</li> <li>Opportunistic Real Estate</li> <li>Infrastructure</li> <li>Timber</li> <li>Natural Resources</li> <li>Commodities</li> </ul>	<ul> <li>Short-Term</li> <li>Core</li> <li>Core Plus</li> <li>TIPS</li> <li>High Yield</li> <li>Bank Loans</li> <li>Distressed</li> <li>Global</li> <li>Emerging Markets</li> </ul>	<ul> <li>Long/Short Equity</li> <li>Event Driven</li> <li>Relative Value</li> <li>Fixed Income Arbitrage</li> <li>Multi Strategy</li> <li>Market Neutral</li> <li>Global Macro</li> <li>Fund of Funds</li> <li>Portable Alpha</li> </ul>



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Meketa Investment Group has prepared this report on the basis of sources believed to be reliable. The data are based on matters as they are known as of the date of preparation of the report, and not as of any future date, and will not be updated or otherwise revised to reflect information that subsequently becomes available.

In general, the valuation numbers presented in this report are prepared by the custodian bank for listed securities, and by the fund manager or appropriate General Partner in the case of unlisted securities. The data used in the market comparison sections of this report are sourced from various databases. These data are continuously updated and are subject to change.

This report does not contain all the information necessary to fully evaluate the potential risks of any of the investments described herein. Because of inherent uncertainties involved in the valuations of investments that are not publicly traded, any estimated fair values shown in this report may differ significantly from the values that would have been used had a ready market for the underlying securities existed, and the differences could be material. Note that for unlisted securities the valuations may be lagged by one or more calendar quarters, or may reflect original cost.

This document may contain certain forward-looking statements, forecasts, estimates, projections, and opinions ("Forward Statements"). No representation is made or will be made that any Forward Statements will be achieved or will prove to be correct. A number of factors, in addition to any risk factors stated in this material, could cause actual future results to vary materially from the Forward Statements. No representation is given that the assumptions disclosed in this document upon which Forward Statements may be based are reasonable. There can be no assurance that the investment strategy or objective of any fund or investment will be achieved, or that the Retirement System will receive a return of the amount invested.

In some cases Meketa Investment Group assists the Board Members in handling capital calls or asset transfers among investment managers. In these cases we do not make any representations as to the managers' use of the funds, but do confirm that the capital called or transferred is within the amounts authorized by the Retirement Board.

**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.

**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 is 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%.

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

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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.