



Board of Trustees
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www.maine.edu

December 7, 2018

TO: Members of the Investment Committee

FR: Ellen N. Doughty, Clerk of the Board

RE: **December 20, 2018 Investment Committee Meeting**

The University of Maine

University of Maine
at Augusta

University of Maine
at Farmington

University of Maine
at Fort Kent

University of Maine
at Machias

University of Maine
at Presque Isle

University of
Southern Maine

The Investment Committee will meet from **9:00 am to 12:00 pm on December 20, 2018**. The meeting will be located at the University of Maine System Executive Offices, Rudman Conference Room, 253 Estabrooke Hall, 15 Estabrooke Drive in Orono. In addition to the Estabrooke Hall location, the following Polycom locations and a conference call connection will also be available:

USM – Wishcamper 327

PHONE: 1-800-605-5167 code – 743544#

Refreshments will be provided at the USM and UMS locations. The meeting materials have been posted to the Diligent Board Portal under the Investment Committee section. Also these materials will be posted on the Board of Trustees website: <http://www.maine.edu/about-the-system/board-of-trustees/meeting-agendas/investment-committee/> If you have questions about the meeting arrangements or accessing the meeting materials please call me at 581-5840.

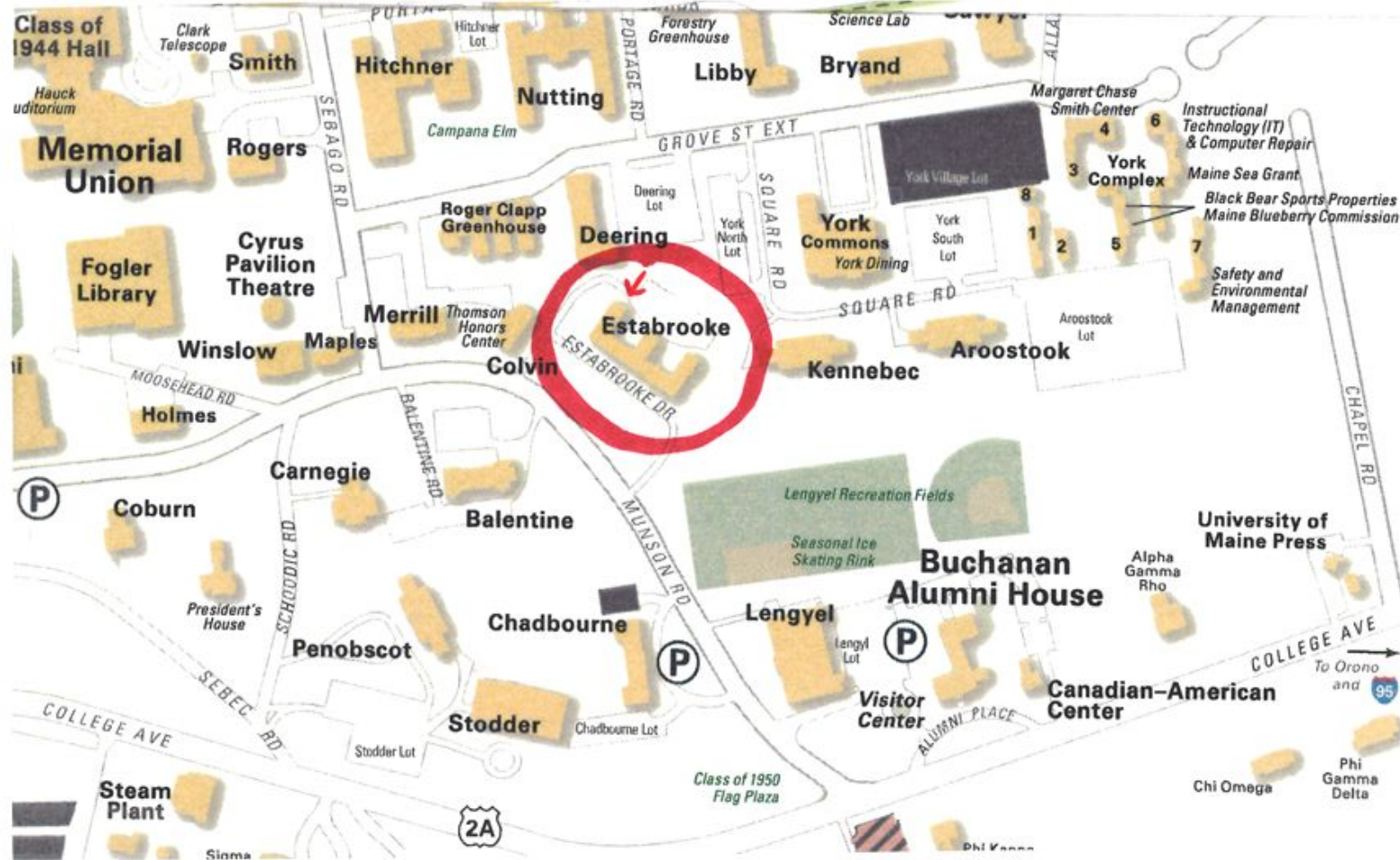
If you have any questions or desire additional information about the agenda items, please call Tracy Elliott at 581-5492.

cc: Chancellor James Page
Trustees who are not members of the Committee
Presidents
Ryan Low
Robert Neely
Kay Kimball
Tracy Elliott

University of Maine System

15 Estabrooke Drive, Orono

Rudman Conference Room
253 Estabrooke Hall, 2nd Floor
15 Estabrooke Drive, Orono



Directions to the UMS located on the UMaine Campus

From the South on I-95: take exit 191 to Kelly Road and turn right. Continue on Kelly Road for 1 mile until you reach the traffic light, then turn left onto Route 2 and go through downtown Orono. Cross the river. Turn left at the lights onto College Avenue. Buchanan Alumni House will be the first campus-related building on your right. Right after the Buchanan Alumni House, take a right onto Muson Road. Estabrooke Hall is the building on the right after Lengyel.

From the North on I-95: take exit 191 to Kelly Road and turn left. Continue on Kelly Road for 1 mile until you reach the traffic light, then turn left onto Route 2 and go through downtown Orono. Cross the river. Turn left at the lights onto College Avenue. Buchanan Alumni House will be the first campus-related building on your right. Right after the Buchanan Alumni House, take a right onto Muson Road. Estabrooke Hall is the building on the right after Lengyel.

The UMS is located on the 2nd floor of Estabrooke Hall. Enter Estabrooke Hall from the back of the building, the entrance closes to Deering Hall.

Board of Trustees

Investment Committee

December 20, 2018

9:00 am to 12:00 pm

Rudman Conference Room, 253 Estabrooke Hall, Orono

AGENDA

9:00 am – 9:15 am

Performance Reviews:

- TAB 1 Executive Summary
- TAB 2 Managed Investment Pool (MIP)
- TAB 3 Defined Benefit Pension Fund
- TAB 4 Operating Cash Fund

9:15 am – 10:00 am

- TAB 5 Emerging Market Small Cap Equity Manager – Presentation

10:00 am – 10:50 am

- TAB 6 Private Equity Discussion & Asset Allocation Recommendation - MIP

10:50 am – 11:00 am

- TAB 7 FY2020 Endowment Spending Rate

11:00 am – 12:00 pm

- TAB 8 Defined Contribution Plan Review

Action items within the Committee purview are noted in green.

Items for Committee decisions and recommendations are noted in red.

Note: Times are estimated based upon the anticipated length for presentation or discussion of a particular topic. An item may be brought up earlier or the order of items changed for effective deliberation of matters before the Committee.



AGENDA ITEM SUMMARY

1. **NAME OF ITEM:** Performance Review Executive Summary – Managed Investment Pool, Pension Fund and Operating Fund

2. **INITIATED BY:** Kelly A. Martin, Chair

3. **BOARD INFORMATION:** X

BOARD ACTION:

4. **OUTCOME:**
Primary Outcomes:
Enhance fiscal positioning

BOARD POLICY:
Section 709 - Investments

5. **BACKGROUND:**

Enclosed for your information is the executive summary performance report for all three portfolios for the quarter ended September 30, 2018 along with October results.

Kelly Regan and Jay Roney of NEPC will provide a brief review at the December 20, 2018 Investment Committee meeting.

12/7/2018

THIRD QUARTER 2018 INVESTMENT REVIEW



UNIVERSITY OF MAINE SYSTEM

December 20, 2018

Jay E. Roney, Partner

Kelly Regan, Senior Consultant















BOSTON | ATLANTA | CHARLOTTE | CHICAGO | DETROIT | LAS VEGAS | PORTLAND | SAN FRANCISCO

MARKET UPDATE

NEPC, LLC

PERFORMANCE OVERVIEW

Q3 Market Summary

Macro			Equity			Credit			Real Assets		
US Dollar	VIX	US 10-Yr	S&P 500	MSCI EAFE	MSCI EM	US Agg.	High Yield	Dollar EMD	Oil	Gold	REITS
											
0.7%	-4.0	20 bps	7.7%	1.4%	-1.1%	0.0%	2.4%	1.9%	-1.2%	-4.8%	0.7%

- **US equities increased during the quarter, supported by strong macroeconomic data and a tight labor market**
- **Emerging market equities broadly declined with ongoing currency weakness and trade tensions weighing on sentiment**
- **The Federal Reserve hiked rates for the third time this year and is expected to hike rates again in December**

Market segment (index representation) as follows: US Dollar (DXY Index), VIX (CBOE Volatility Index), US 10-Year (US 10-Year Treasury Yield), S&P 500 (US Equity), MSCI EAFE Index (International Developed Equity), MSCI Emerging Markets (Emerging Markets Equity), US Agg (Barclays US Aggregate Bond Index), High Yield (Barclays US High Yield Index), Dollar EMD (JPM Emerging Market Bond Index), Crude Oil (WTI Crude Oil Spot), Gold (Gold Price Spot), and REITs (NAREIT Composite Index).



PERFORMANCE SUMMARY AS OF SEPTEMBER 30, 2018

Domestic Equity Benchmarks		Qtr.	YTD	1 Yr.	3 Yr.	5 Yr.	10 Yr.
Large Core	S&P 500	7.7%	10.6%	17.9%	17.3%	13.9%	12.0%
Small Core	Russell 2000	3.6%	11.5%	15.2%	17.1%	11.1%	11.1%
Small Growth	Russell 2000 Growth	5.5%	15.8%	21.1%	18.0%	12.1%	12.7%
Small Value	Russell 2000 Value	1.6%	7.1%	9.3%	16.1%	9.9%	9.5%
Large Core	Russell 1000	7.4%	10.5%	17.8%	17.1%	13.7%	12.1%
Large Growth	Russell 1000 Growth	9.2%	17.1%	26.3%	20.6%	16.6%	14.3%
Large Value	Russell 1000 Value	5.7%	3.9%	9.5%	13.6%	10.7%	9.8%
Mid Core	S&P Mid Cap 400	3.9%	7.5%	14.2%	15.7%	11.9%	12.5%
REIT	NAREIT Composite	0.7%	1.9%	4.3%	9.3%	9.6%	7.9%
Int'l Equity Benchmarks		Qtr.	YTD	1 Yr.	3 Yr.	5 Yr.	10 Yr.
International Developed	MSCI EAFE	1.4%	-1.4%	2.7%	9.2%	4.4%	5.4%
Emerging Equity	MSCI EM	-1.1%	-7.7%	-0.8%	12.4%	3.6%	5.4%
Small Cap Int'l	S&P EPAC SmallCap	-0.4%	-2.2%	4.0%	12.2%	8.3%	9.3%
World ex-US	MSCI ACWI ex-US	0.7%	-3.1%	1.8%	10.0%	4.1%	5.2%
Domestic FI Benchmarks		Qtr.	YTD	1 Yr.	3 Yr.	5 Yr.	10 Yr.
Core Bonds	Barclays Aggregate	0.0%	-1.6%	-1.2%	1.3%	2.2%	3.8%
Municipal Bond	Barclays Municipal	-0.2%	-0.4%	0.3%	2.2%	3.5%	4.8%
High Yield	Barclays US High Yield	2.4%	2.6%	3.0%	8.1%	5.5%	9.5%
Intermediate Gov/Cred	Barclays Intern. Gov/Credit	0.2%	-0.8%	-1.0%	0.9%	1.5%	3.2%
Long Gov/Credit	Barclays Long Gov/Credit	-0.5%	-5.4%	-2.7%	3.4%	5.2%	7.1%
Long Credit	Barclays Long Credit	1.3%	-5.2%	-2.2%	5.2%	5.7%	8.4%
Long Treasuries	Barclays US 20+ Yr Treas	-3.0%	-5.9%	-3.5%	0.8%	4.8%	5.5%
Cash	BofA ML US 3-Month T-Bill	0.5%	1.3%	1.6%	0.8%	0.5%	0.3%
Inflation	Barclays US TIPS 1-10 Yr	-0.4%	-0.2%	0.3%	1.6%	0.9%	2.5%
STRIPS	Barclays 20+ Yr STRIPS	-4.7%	-8.3%	-4.1%	1.5%	7.3%	7.4%
Global FI Benchmarks		Qtr.	YTD	1 Yr.	3 Yr.	5 Yr.	10 Yr.
World Gov. Bonds	Citigroup WGBI	-1.6%	-2.5%	-1.5%	1.7%	0.2%	2.2%
Em. Mkt. Bonds (Local)	JPM GBI-EM Glob. Div.	-1.8%	-8.1%	-7.4%	5.2%	-1.7%	2.7%
Global Inflation	Barclays Global ILB	-1.6%	-3.3%	-0.6%	2.1%	1.4%	3.1%
Diversified Benchmark		Qtr.	YTD	1 Yr.	3 Yr.	5 Yr.	10 Yr.
Diversified	Diversified*	3.3%	4.2%	8.1%	10.4%	7.9%	8.0%
Alternative Benchmarks		Qtr.	YTD	1 Yr.	3 Yr.	5 Yr.	10 Yr.
Commodities	Bloomberg Commodity Index	-2.0%	-2.0%	2.6%	-0.1%	-7.2%	-6.2%
Real Estate	NCREIF Property Index**	1.8%	3.5%	7.2%	8.3%	9.8%	6.2%

* 35% LC, 10% SC, 12% Int'l, 3% Emerging, 25% FI, 5% HY, 5% Global FI, 5% REITS

**As of 6/30/2018



September 30, 2018

PERFORMANCE SUMMARY AS OF NOVEMBER 30, 2018

Equity						
	Nov-18	YTD	1 YR	3 YR	5 YR	10 YR
Global Equity	1.5%	-2.6%	-1.0%	8.6%	6.2%	10.7%
US Large Cap	2.0%	5.1%	6.3%	12.2%	11.1%	14.3%
US Small/Mid Cap	1.9%	1.1%	1.4%	10.0%	8.1%	15.1%
Int'l Developed Equity	-0.1%	-9.4%	-7.9%	4.1%	1.8%	7.5%
Emerging Market Equity	4.1%	-12.2%	-9.1%	9.4%	1.9%	9.1%

Rates/Credit						
	Nov-18	YTD	1 YR	3 YR	5 YR	10 YR
Global Aggregate	0.3%	-3.2%	-2.8%	2.2%	0.6%	2.9%
US Aggregate	0.6%	-1.8%	-1.3%	1.3%	2.0%	3.7%
US Credit	-0.2%	-3.9%	-3.0%	2.5%	2.9%	6.5%
US High Yield	-0.9%	0.1%	0.4%	7.1%	4.4%	12.2%
EM Local Debt	2.8%	-7.4%	-5.5%	4.7%	-1.3%	4.3%

Real Assets						
	Nov-18	YTD	1 YR	3 YR	5 YR	10 YR
Commodities	-0.6%	-4.7%	-1.8%	1.6%	-7.3%	-3.5%
MLPs	-0.8%	-3.4%	1.2%	1.0%	-5.2%	10.2%

Source: Bloomberg, Barclays, MSCI, S&P, Russell, JP Morgan, Alerian



November 30, 2018

Q3 2018 PERFORMANCE UPDATE

NEPC, LLC

MIP PERFORMANCE OVERVIEW

As of September 30, 2018

	Market Value(\$)	% of Portfolio	Policy %	Universe	Fiscal YTD (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
MIP Composite	325,124,530	100.0	100.0		1.1	88	1.2	94	5.1	80	8.0	80	5.3	91	6.7	76
Allocation Index					2.3	52	2.3	71	6.3	64	8.8	61	6.1	71	6.5	84
Policy Index					2.4	46	2.6	65	6.6	57	9.4	43	6.4	58	6.8	74
IF All E&F \$100mm - \$500mm Net Median					2.3		3.1		6.8		9.2		6.6		7.3	
Total Domestic Large Cap	63,489,661	19.5	16.0	eV US Large Cap Core Equity	7.7	29	10.5	25	17.8	29	17.2	15	13.6	24	12.5	13
S&P 500					7.7		10.6		17.9		17.3		13.9		12.0	
SSgA S&P 500	63,489,661	19.5	16.0	eV US Large Cap Core Equity	7.7	29	10.5	25	17.8	29	17.2	16	13.9	19	11.9	27
S&P 500					7.7		10.6		17.9		17.3		13.9		12.0	
Total Domestic Small/Mid Cap	21,892,708	6.7	6.0	eV US Small-Mid Cap Equity	2.9	69	10.3	47	18.3	41	16.6	32	11.4	37	12.4	35
Russell 2500					4.7		10.4		16.2		16.1		11.4		12.0	
Westfield Capital	10,438,532	3.2	3.0	eV US Small-Mid Cap Growth Equity	4.6	89	14.8	74	25.8	47	17.8	45	12.4	31	13.9	26
Russell 2500 Growth					7.2		15.8		23.1		18.0		12.9		13.6	
DFA	11,454,176	3.5	3.0	eV US Small Cap Value Equity	1.5	46	5.3	44	10.0	35	14.3	48	9.7	47	-	
Russell 2000 Value					1.6		7.1		9.3		16.1		9.9		9.5	
Total Int'l & EM	74,295,355	22.9	23.0	eV All ACWI ex-US Equity	-2.0	87	-5.2	87	-0.3	80	7.8	84	3.3	83	5.5	75
MSCI EAFE					1.4		-1.4		2.7		9.2		4.4		5.4	
Morgan Stanley	20,494,838	6.3	6.3	eV All EAFE Equity	0.3	60	-1.4	44	2.3	51	7.6	84	3.8	87	5.3	84
Globeflex	20,810,240	6.4	6.3	eV All EAFE Equity	-0.6	81	-1.4	44	2.3	51	10.4	37	5.9	39	5.9	70
MSCI EAFE					1.4		-1.4		2.7		9.2		4.4		5.4	
Kabouter International	11,778,759	3.6	3.5	eV EAFE Small Cap Equity	-4.7	98	-5.2	64	-		-		-		-	
MSCI EAFE Small Cap					-0.9		-2.2		3.7		12.4		8.0		9.7	
Emerging Markets Equity	21,211,519	6.5	7.0	eV Emg Mkts Equity	-4.0	67	-12.2	77	-5.1	68	5.1	97	-0.1	98		
MSCI Emerging Markets					-1.1		-7.7		-0.8		12.4		3.6		5.4	
Aberdeen Emerging Mkts	10,889,146	3.3	3.5	eV Emg Mkts Equity	-0.7	25	-11.6	74	-7.3	85	8.8	79	1.4	89	-	
MSCI Emerging Markets					-1.1		-7.7		-0.8		12.4		3.6		5.4	
Mondrian EM Small Cap	10,322,373	3.2	3.5	eV Emg Mkts Equity	-7.1	91	-12.8	83	-3.0	48	1.5	99	-		-	
MSCI Emerging Markets Small Cap					-4.2		-12.3		-4.2		7.4		2.7		7.4	
Total Fixed Income	68,271,138	21.0	21.0	eV All US Fixed Inc	0.3	63	0.4	39	1.4	27	3.4	33	3.1	40	5.1	37
BBgBarc US Aggregate TR					0.0		-1.6		-1.2		1.3		2.2		3.8	
Commonfund	16,486,777	5.1	5.0	eV US Core Fixed Inc	0.5	10	-0.4	7	0.0	7	2.5	9	2.8	15	4.8	23
BBgBarc US Aggregate TR					0.0		-1.6		-1.2		1.3		2.2		3.8	
Vanguard Inflation-Protected Securities	25,571,043	7.9	8.0	eV US TIPS / Inflation Fixed Inc	-0.9	73	-1.0	56	0.3	58						
BBgBarc US TIPS TR					-0.8		-0.8		0.4		2.0		1.4		3.3	
Guggenheim US Bank Loans	1,599,052	0.5														
Bain Capital Senior Loan Fund	14,474,660	4.5	5.0	eV US Bank Loan Fixed Inc	-		-		-		-		-		-	
Credit Suisse Leveraged Loans					1.9		4.4		5.6		5.4		4.4		5.8	
Blackrock Strategic Income Opportunities	10,139,606	3.1	3.0	eV US Enh Fixed Inc	0.5	21	-		-		-		-		-	
3-Month Libor Total Return USD					0.6		1.7		2.1		1.3		0.9		0.7	



September 30, 2018

MIP PERFORMANCE OVERVIEW (CONT.)

As of September 30, 2018

	Market Value(\$)	% of Portfolio	Policy %	Universe	Fiscal YTD (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Total GAA	72,791,592	22.4	23.0	eV Global TAA	-0.3	82	-1.7	72	0.5	72	5.1	62	2.8	74		
<i>65% MSCI ACWI / 35% Global Agg</i>					2.4		1.7		5.8		9.4		5.9		6.5	
GMO Global Absolute Return	24,180,933	7.4	7.7	eV Global TAA	0.0	76	-2.2	74	0.8	69	5.6	60	3.0	70	4.7	76
<i>Blended Index</i>					1.0		0.1		1.1		4.0		3.5		5.2	
Wellington	23,667,359	7.3	7.7	eV Global TAA	-3.1	98	-5.4	95	-2.8	91	6.2	53	4.5	45	5.8	60
<i>65% MSCI ACWI / 35% Global Agg</i>					2.4		1.7		5.8		9.4		5.9		6.5	
Newton Global Real Return	24,943,300	7.7	7.7	eV Global TAA	2.1	38	2.6	17	3.4	52	-	-	-	-	-	-
<i>60% MSCI ACWI / 40% Global Agg</i>					2.2		1.4		5.3		8.8		5.5		6.3	
Total Hedge Funds	19,186,078	5.9	6.0		0.1	53	3.0	46	5.2	47	4.0	75	2.6	83	2.7	93
Lighthouse	19,186,078	5.9	6.0	eV Alt - Long/Short Equity	0.1	53	5.2	36	8.2	35	5.6	67	-	-	-	-
<i>Credit Suisse Long Shrt Eqt USD</i>					1.5		2.2		5.5		4.4		5.4		5.7	
Total Real Assets	2,355,663	0.7	3.0		-0.7		-1.2		3.0		1.5		3.0		--	
John Hancock Timber Fund	2,355,663	0.7	3.0		-0.7		-1.2		3.0		1.5		3.0		0.3	
<i>NCREIF Timberland Index</i>					1.0		2.4		4.0		3.6		6.0		4.0	
Private Equity	2,266,261	0.7	2.0		5.2		9.1		23.2		13.2		-		-	
Landmark Equity Partners XV	2,266,261	0.7	2.0		5.2		9.1		23.2		13.2		-		-	
<i>CA US All PE (1 Qtr Lag)</i>					5.8		14.2		18.7		12.7		13.8		10.8	
Total Cash	576,075	0.2	0.0													
Distribution Account	576,075	0.2	0		0.4		1.1		1.4		0.6		0.4		0.3	
<i>91 Day T-Bills</i>					0.5		1.3		1.6		0.9		0.5		0.3	



September 30, 2018

PENSION FUND PERFORMANCE OVERVIEW

Ending September 30, 2018

	Market Value(\$)	% of Portfolio	Policy %	Universe	Fiscal YTD (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Pension Composite	28,081,876	100.0	100.0		0.7		1.0		3.3		5.7		4.3		5.5	
Allocation Index					1.6		1.8		4.8		7.0		5.5		6.1	
Policy Index					1.6		1.6		4.5		7.1		5.7		6.4	
Total Domestic Large Cap	2,282,204	8.1	8.0	eV US Large Cap Equity	7.7	30	10.6	35	17.9	36	17.3	25	13.2	37	10.8	61
S&P 500					7.7		10.6		17.9		17.3		13.9		12.0	
Vanguard S&P 500 Index	2,282,204	8.1	8.0	eV US Large Cap Core Equity	7.7	37	10.6	37	17.9	41	17.3	27	-		-	
S&P 500					7.7		10.6		17.9		17.3		13.9		12.0	
Total Small Cap Composite	1,147,437	4.1	4.0	eV US Small Cap Equity Net Median	3.6	50	11.5	42	15.2	45	17.2	40	10.9	48		
Russell 2000					3.6		11.5		15.2		17.1		11.1		11.1	
SSgA R2000 Index Fund Non Lending	1,147,437	4.1	4.0	eV US Small Cap Equity	3.6	50	11.5	42	15.2	45	17.2	40	10.9	48	-	
Russell 2000					3.6		11.5		15.2		17.1		11.1		11.1	
Total Int'l & EM Equity	2,723,566	9.7	10.0	eV All ACWI ex-US Equity Net Median	-1.9	84	-4.8	82	0.9	67	5.8	95	2.2	92	3.9	92
MSCI EAFE					1.4		-1.4		2.7		9.2		4.4		5.4	
Morgan Stanley Int'l	1,933,960	6.9	7.0	eV All EAFE Equity	0.3	60	-1.4	43	2.3	51	7.8	83	3.9	84	5.3	82
MSCI EAFE					1.4		-1.4		2.7		9.2		4.4		5.4	
Emerging Markets Equity	789,606	2.8	3.0	eV Emg Mkts Equity Net Median	-7.1	91	-12.8	83	-3.0	48	1.5	99	-1.6	99		
MSCI Emerging Markets					-1.1		-7.7		-0.8		12.4		3.6		5.4	
Mondrian EM Small Cap	789,606	2.8	3.0	eV Emg Mkts Equity	-7.1	91	-12.8	83	-3.0	48	1.5	99	-		-	
MSCI Emerging Markets Small Cap					-4.2		-12.3		-4.2		7.4		2.7		7.4	
Total Fixed Income	10,142,153	36.1	35.0	eV All US Fixed Inc Net Median	0.1	72	-0.6	58	0.0	49	2.1	48	2.4	52	5.0	39
BBgBarc US Aggregate TR					0.0		-1.6		-1.2		1.3		2.2		3.8	
Vanguard Total Bond Market Index	5,833,115	20.8	20.0	eV US Core Fixed Inc	0.0	75	-1.6	64	-1.2	66	1.3	73	-		-	
BBgBarc US Aggregate TR					0.0		-1.6		-1.2		1.3		2.2		3.8	
Vanguard Inflation-Protected Securities	2,002,664	7.1	7.0	eV US TIPS / Inflation Fixed Inc	-0.9	73	-0.9	54	0.3	57	-		-		-	
BBgBarc US TIPS TR					-0.8		-0.8		0.4		2.0		1.4		3.3	
Guggenheim US Bank Loans	155,315	0.6														
Bain Capital Senior Loan Fund	1,398,178	5.0	5.0	eV US Bank Loan Fixed Inc	-		-		-		-		-		-	
Credit Suisse Leveraged Loans					1.9		4.4		5.6		5.4		4.4		5.8	
BlackRock Strategic Income Opportunities	752,881	2.7	3.0	eV US Enh Fixed Inc	0.5	22	-		-		-		-		-	
3-Month Libor Total Return USD					0.6		1.7		2.1		1.3		0.9		0.7	



September 30, 2018

PENSION FUND PERFORMANCE OVERVIEW (CONT.)

Ending September 30, 2018

	Market Value(\$)	% of Portfolio	Policy %	Universe	Fiscal YTD (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Total GAA	7,787,470	27.7	27.5	eV Global TAA Net Median	-0.4	85	-1.3	69	0.4	72	5.0	63	2.7	75		
<i>65% MSCI ACWI / 35% Global Agg</i>					2.4		1.7		5.8		9.4		5.9		6.5	
Wellington	3,734,077	13.3	13.8	eV Global TAA	-3.0	98	-5.3	95	-2.7	91	6.3	52	4.6	45	5.7	61
<i>65% MSCI ACWI / 35% Global Agg</i>					2.4		1.7		5.8		9.4		5.9		6.5	
Newton Global Real Return	4,053,393	14.4	13.8	eV Global TAA	2.1	38	2.6	17	3.4	52	-		-		-	
<i>60% MSCI ACWI / 40% WGBI</i>					1.9		1.3		5.2		8.7		5.3		6.0	
Total Hedge Funds	1,643,851	5.9	4.5		0.1	53	3.1	46	5.3	47	4.1	75	3.2	78		
<i>HFRI Fund of Funds Composite Index</i>					0.2		0.9		3.0		3.3		3.2		2.5	
Lighthouse	1,643,851	5.9	4.5	eV Alt - Long/Short Equity	0.1	53	5.2	36	8.2	35	5.6	67	-		-	
<i>Credit Suisse Long Shrt Eqt USD</i>					1.5		2.2		5.5		4.4		5.4		5.7	
Total Real Assets	2,342,830	8.3	8.0													
Principal	2,342,830	8.3	8.0		2.5		6.7		8.6		8.8		10.6		5.2	
<i>NCREIF ODCE</i>					2.1		6.5		8.7		8.8		10.7		5.6	
Total Cash	12,365	0.0	3.0													
Distribution Account	12,365	0.0	3.0		0.5		1.2		1.4		0.6		0.4		0.3	
<i>91 Day T-Bills</i>					0.5		1.3		1.6		0.9		0.5		0.3	



September 30, 2018

OPERATING FUND PERFORMANCE OVERVIEW

Ending September 30, 2018

	Market Value (\$)	% of Portfolio	Policy %	Universe	Fiscal YTD (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Operating Funds Composite	310,263,456	100.0	100.0		0.8		1.1		2.2		3.1		2.1		2.8	
Allocation Index					0.9		1.3		2.5		3.0		2.4			
Liquidity Pool Composite	105,819,606	34.1	25.0		0.4		1.1		1.3		0.8		0.5		0.5	
State Pool	65,573,725	21.1			0.4		1.1		1.4		0.9		0.6		0.5	
BOA General Fund	5,720,199	1.8			0.1		0.3		0.3		0.1		0.1		-	
Federated Gov't Obligations	15,441,090	5.0			0.5		1.2		1.4		-		-		-	
JP Morgan US Gov't Money Market Fund	19,084,592	6.2			0.5		1.2		1.3		-		-		-	
FTSE T-Bill 3 Months TR					0.5		1.3		1.6		0.8		0.5		0.3	--
Income Pool Composite	136,344,337	43.9	50.0		0.4		0.4		0.7		1.9		1.7		3.6	
Income Research + Management	74,636,111	24.1	26.7	eV US Short Duration Fixed Inc	0.4	53	0.4	63	0.2	71	0.9	64	1.0	67	-	
BBGBarc US Govt/Credit 1-3 Yr. TR					0.3		0.4		0.2		0.7		0.8		1.7	
BlackRock Strategic Income Opportunities	17,402,196	5.6	6.7	eV US Enh Fixed Inc	0.5	22	0.0	46	0.8	10	2.8	19	-		-	
3-Month Libor Total Return USD					0.6		1.7		2.1		1.3		0.9		0.7	
Loomis Sayles Bank Loans	18,985,056	6.1	6.7	eV US Bank Loan Fixed Inc	1.5	93	3.0	91	3.9	92	4.0	92	3.4	89	4.8	93
Loomis Bank Loans Custom Index					1.5		3.2		4.3		4.3		4.1		6.1	
Vanguard Total Bond Market Instl' Fund	12,727,593	4.1	5.0	eV All US Fixed Inc	0.0	78	-1.6	80	-1.2	82	1.3	69	2.1	60		
BBGBarc US Aggregate TR					0.0		-1.6		-1.2		1.3		2.2		3.8	
Vanguard Inflation-Protected Securities	12,593,381	4.1	5.0	eV US TIPS / Inflation Fixed Inc	-0.9	73	-0.9	51	0.3	56	-		-		-	
BBGBarc US TIPS TR					-0.8		-0.8		0.4		2.0		1.4		3.3	
Total Return Pool Composite	68,099,513	21.9	25.0		1.8		2.2		5.5		7.9		4.6		5.8	
Lighthouse	14,831,236	4.8	5.0	eV Alt - Long/Short Equity	0.1	53	5.2	36	8.2	35	5.6	67	-		-	
Credit Suisse Long Shrt Eqt USD					1.5		2.2		5.5		4.4		5.4		5.7	
Newton Global Real Return	17,554,296	5.7	6.3	eV Global TAA	2.1	38	2.6	18	3.4	52	-		-		-	
60% MSCI ACWI / 40% Global Agg					2.2		1.4		5.3		8.8		5.5		6.3	
PIMCO All Asset	17,153,866	5.5	6.3	eV Global TAA	0.4	68	-1.8	73	1.3	68	8.2	30	3.4	57	6.0	49
Blended Index					1.0		0.1		1.1		4.0		3.5		5.2	
Vanguard Total World Stock Index	18,560,115	6.0	7.5	eV Global All Cap Equity	4.0	47	3.9	49	9.8	43	13.6	31	9.0	39	-	
FTSE Global All Cap Index					4.1		4.0		10.2		12.6		7.4		6.7	



September 30, 2018

FIXED INCOME MANAGER CHARACTERISTICS

	9.30.18 Market Value (\$mil)	% of Portfolio	Energy Exposure	Actual Energy Portfolio Exposure		Gov't	Agency	AAA	AA	A	BBB	BB	B	CCC & Lower	Not Rated	Cash	Other
Commonfund	\$16.5	5.1%	2.1%	0.1%		14.8%	27.20%	8.6%	3.1%	10.6%	17.2%	4.6%	2.6%	4.0%	1.1%		6.2%
Vanguard TIPS	\$25.6	7.9%	0.0%	0.0%		100.0%											
Bain Capital	\$14.5	4.5%	1.0%	0.0%							3.4%	27.2%	63.8%	2.7%	1.0%	1.9%	
Blackrock SIO	\$10.1	3.1%	3.5%	0.1%				28.6%	5.7%	9.7%	11.2%	10.8%	8.2%	5.5%	7.0%	13.6%	
MIP Subtotal	\$66.7	20.6%	6.7%	0.3%		42.0%	6.7%	6.5%	1.6%	4.1%	6.7%	8.7%	15.7%	2.4%	1.6%	2.5%	1.5%
Vanguard Total Bond	\$5.8	20.8%	2.5%	0.5%		64.2%		6.2%	3.5%	11.6%	14.5%						
Vanguard TIPS	\$2.0	7.1%	0.0%	0.0%		100.0%											
Bain Capital	\$1.4	5.0%	1.0%	0.1%							3.4%	27.2%	63.8%	2.7%	1.0%	1.9%	
Blackrock SIO	\$0.8	2.7%	3.5%	0.1%		0.0%	0.0%	28.6%	5.7%	9.7%	11.2%	10.8%	8.2%	5.5%	7.0%	13.6%	
Pension Subtotal	\$10.0	35.6%	7.0%	0.7%		57.6%	0.0%	5.8%	2.5%	7.5%	9.8%	4.6%	9.6%	0.8%	0.7%	1.3%	0.0%
IR+M	\$74.6	24.1%	1.8%	0.4%		26.1%		42.1%	2.8%	17.1%	11.8%					0.3%	
Blackrock SIO	\$17.4	5.6%	3.5%	0.2%		0.0%	0.0%	28.6%	5.7%	9.7%	11.2%	10.8%	8.2%	5.5%	7.0%	13.6%	
Loomis Sayles Loans	\$19.0	6.1%	0.0%	0.0%		47.8%		2.2%			3.7%	27.0%	16.9%		0.2%	2.2%	
Vanguard Total Bond	\$12.7	4.1%	2.5%	0.1%		64.2%		6.2%	3.5%	11.6%	14.5%						
Vanguard TIPS	\$12.6	4.1%	0.0%	0.0%		100.0%											
Operating Subtotal	\$136.3	44.0%	7.8%	0.7%		36.2%	0.0%	27.6%	2.6%	11.7%	9.8%	5.1%	3.4%	0.7%	0.9%	2.2%	0.0%
Total Portfolios	\$213.0		21.5%	1.7%		39.0%	2.1%	20.0%	2.3%	9.1%	8.8%	6.2%	7.6%	1.2%	1.1%	2.2%	0.5%



FIXED INCOME MANAGER CHARACTERISTICS

	9.30.18 Market Value (\$mil)	% of Portfolio	Energy Exposure	Actual Energy Portfolio Exposure
Commonfund	\$16.5	5.1%	2.1%	0.1%
Vanguard TIPS	\$25.6	7.9%	0.0%	0.0%
Bain Capital	\$14.5	4.5%	1.0%	0.0%
Blackrock SIO	\$10.1	3.1%	3.5%	0.1%
MIP Subtotal	\$66.7	20.6%	6.7%	0.3%
Vanguard Total Bond	\$5.8	20.8%	2.5%	0.5%
Vanguard TIPS	\$2.0	7.1%	0.0%	0.0%
Bain Capital	\$1.4	5.0%	1.0%	0.1%
Blackrock SIO	\$0.8	2.7%	3.5%	0.1%
Pension Subtotal	\$10.0	35.6%	7.0%	0.7%
IR+M	\$74.6	24.1%	1.8%	0.4%
Blackrock SIO	\$17.4	5.6%	3.5%	0.2%
Loomis Sayles Loans	\$19.0	6.1%	0.0%	0.0%
Vanguard Total Bond	\$12.7	4.1%	2.5%	0.1%
Vanguard TIPS	\$12.6	4.1%	0.0%	0.0%
Operating Subtotal	\$136.3	44.0%	7.8%	0.7%
Total Portfolios	\$213.0		21.5%	1.7%



PRIVATE MARKETS UPDATE

- **The System invests in a number of private markets assets, committing capital for longer time periods to obtain illiquidity premiums and exposure to alternative markets**
- **Landmark Equity Partners XV**
 - Secondary Private Equity fund, purchasing interests in venture capital, growth equity and buyout funds, and to a lesser extent, special situation and energy funds
 - Strategy is diversified, investing in ~200 partnerships
 - Fund has a 4 year investment period and 10 year term
 - The System committed \$5 million in 2014 and has a remaining commitment of \$2.2 million
 - Since inception, the strategy has an IRR of 17.2%, net of fees (6/30/18)
- **Hancock Timberland VII**
 - Private Real Asset Timber Fund structured for the purpose of making direct and indirect investments in commercial timberland
 - The System has been invested in the strategy since 2005
 - Fund has a 3 year acquisition period, 8 year investment period, 2 year wind up period and 2 year extension period (estimated)
 - The System committed \$5 million in 2005 and there are no remaining commitments, the Fund is winding up
 - Since inception, the strategy has an IRR of 1.3%, net of fees (9/30/18)



OCTOBER PERFORMANCE UPDATE

NEPC, LLC

University of Maine System Managed Investment Pool

TOTAL PLAN PERFORMANCE

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
MIP Composite	314,961,025	100.0	100.0	-5.2	-4.2	-4.1	-1.9	5.7	4.6	3.6	6.0	7.5
Allocation Index				-5.3	-3.2	-3.2	-0.8	6.8	5.4	4.4	6.2	7.3
Policy Index				-5.1	-2.9	-2.7	-0.3	7.5	6.1	4.8	6.5	7.4
Total Domestic Large Cap	59,422,562	18.9	16.0	-6.8	0.3	3.0	7.3	15.1	11.4	11.1	13.7	13.7
S&P 500				-6.8	0.3	3.0	7.3	15.2	11.5	11.3	14.0	13.2
SSgA S&P 500	59,422,562	18.9	16.0	-6.8	0.3	3.0	7.3	15.1	11.4	11.3	14.0	13.2
S&P 500				-6.8	0.3	3.0	7.3	15.2	11.5	11.3	14.0	13.2
Total Domestic Small/Mid Cap	19,511,887	6.2	6.0	-10.8	-8.2	-1.6	3.4	15.0	10.1	8.1	12.7	13.2
Russell 2500				-10.2	-5.9	-0.8	2.8	13.2	10.0	8.3	12.5	13.6
Westfield Capital	9,184,640	2.9	3.0	-11.9	-7.8	1.2	7.4	18.3	11.0	9.0	13.0	14.7
Russell 2500 Growth				-12.0	-5.7	1.9	5.5	17.2	11.1	9.5	13.2	15.1
DFA	10,327,247	3.3	3.0	-9.8	-8.5	-5.1	-1.5	10.3	8.3	6.6	12.0	--
Russell 2000 Value				-9.0	-7.5	-2.5	-0.6	11.4	10.5	7.2	11.6	10.9
Total International Equity (including emerging markets)	69,765,907	22.2	23.0	-8.6	-10.5	-13.4	-10.6	3.8	2.4	0.8	4.2	7.2
MSCI EAFE				-8.0	-6.7	-9.3	-6.9	7.2	3.6	2.0	5.6	6.9
Morgan Stanley	19,739,177	6.3	6.3	-8.2	-7.9	-9.5	-7.1	7.1	2.5	1.5	5.5	6.3
Globeflex	19,323,408	6.1	6.3	-9.5	-10.1	-10.8	-9.1	7.4	4.1	3.1	6.3	7.6
MSCI EAFE				-8.0	-6.7	-9.3	-6.9	7.2	3.6	2.0	5.6	6.9
Kabouter International Opportunities Offshore Fund II	10,643,057	3.4	3.5	-9.6	-13.9	-14.4	-11.0	--	--	--	--	--
MSCI EAFE Small Cap				-9.6	-10.4	-11.6	-7.8	8.4	6.6	5.2	8.8	11.6
Emerging Markets Equity	20,060,265	6.4	7.0	-7.7	-11.3	-18.9	-15.0	-3.0	0.6	-2.4	0.4	--
MSCI Emerging Markets				-8.7	-9.7	-15.7	-12.5	5.2	6.5	0.8	1.8	7.8
Aberdeen Emerging Mkts	10,547,136	3.3	3.5	-7.4	-8.0	-18.2	-15.4	-0.1	3.9	-0.9	1.5	--
MSCI Emerging Markets				-8.7	-9.7	-15.7	-12.5	5.2	6.5	0.8	1.8	7.8
Mondrian EM Small Cap	9,513,129	3.0	3.5	-8.0	-14.5	-19.8	-14.8	-6.3	-2.7	--	--	--
MSCI Emerging Markets Small Cap				-10.5	-14.3	-21.5	-17.2	0.0	1.5	-0.3	1.8	10.1
Total Fixed Income	70,369,532	22.3	21.0	-0.8	-0.5	-0.4	0.3	1.6	2.7	2.7	3.7	5.6
BBgBarc US Aggregate TR				-0.8	-0.8	-2.4	-2.1	-0.6	1.0	1.8	1.9	3.9
Commonfund	17,980,652	5.7	5.0	-0.9	-0.4	-1.3	-0.9	0.7	2.0	2.5	3.0	5.2
BBgBarc US Aggregate TR				-0.8	-0.8	-2.4	-2.1	-0.6	1.0	1.8	1.9	3.9
Vanguard Inflation-Protected Securities	26,204,546	8.3	8.0	-1.4	-2.2	-2.3	-1.4	-0.8	--	--	--	--
BBgBarc US TIPS TR				-1.4	-2.2	-2.3	-1.2	-0.7	1.5	1.0	0.8	4.1
Guggenheim US Bank Loans	1,599,052	0.5	5.0									



October 31, 2018

University of Maine System Managed Investment Pool

TOTAL PLAN PERFORMANCE

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Blackrock Strategic Income Opportunities	10,104,367	3.2	3.0	-0.3	0.2	--	--	--	--	--	--	--
3-Month Libor Total Return USD				0.2	0.8	1.9	2.2	1.7	1.3	0.9	0.8	0.7
Bain Capital Senior Loan Fund	14,480,914	4.6	5.0	0.0	--	--	--	--	--	--	--	--
Credit Suisse Leveraged Loans				0.0	1.9	4.4	4.9	5.1	5.5	4.2	5.1	7.3
Total GAA	71,032,397	22.6	23.0	-3.8	-4.2	-5.5	-4.7	2.2	2.6	1.4	3.4	--
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				-5.3	-3.0	-3.7	-0.9	6.8	5.6	4.2	5.9	7.6
GMO Global Absolute Return	24,317,296	7.7	7.7	-3.7	-3.7	-5.7	-4.5	3.1	3.1	1.7	4.0	4.6
Blended Index				-1.6	-0.6	-1.5	-0.8	1.5	2.9	2.9	3.4	5.9
Wellington	22,397,365	7.1	7.7	-5.5	-8.4	-10.6	-9.8	2.8	2.9	2.7	4.3	7.0
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				-5.3	-3.0	-3.7	-0.9	6.8	5.6	4.2	5.9	7.6
Newton Global Real Return	24,317,735	7.7	7.7	-2.5	-0.5	0.1	0.2	0.5	--	--	--	--
60% MSCI ACWI (Net) / 40% BBgBarc Global Agg				-4.9	-2.9	-3.6	-1.0	6.2	5.3	3.9	5.5	7.3
Total Hedge Funds	18,237,610	5.8	6.0	-4.9	-4.8	-2.1	-1.4	2.8	1.8	1.2	2.1	2.8
HFRI Fund of Funds Composite Index				-3.0	-2.8	-2.1	-1.2	3.3	1.9	2.3	3.0	2.9
Lighthouse	18,237,610	5.8	6.0	-4.9	-4.8	0.0	0.5	4.4	3.0	--	--	--
Credit Suisse Long Shrt Eqt USD				-4.5	-3.0	-2.4	-1.2	5.6	2.2	3.9	5.5	6.0
Total Real Assets	2,355,663	0.7	3.0	0.0	-0.7	-1.2	3.0	-2.2	1.5	3.0	4.2	--
NCREIF Timberland Index				0.0	1.0	2.4	4.0	3.6	3.6	6.0	6.0	4.0
John Hancock Timber Fund	2,355,663	0.7	3.0	0.0	-0.7	-1.2	3.0	-2.2	1.5	3.0	4.2	0.3
NCREIF Timberland Index				0.0	1.0	2.4	4.0	3.6	3.6	6.0	6.0	4.0
Private Equity	2,211,786	0.7	2.0	0.0	5.2	9.1	23.2	20.2	13.2	--	--	--
Landmark Equity Partners XV	2,211,786	0.7	2.0	0.0	5.2	9.1	23.2	20.2	13.2	--	--	--
Cambridge Associates US All PE (1 Qtr Lag)				0.0	5.8	14.2	18.7	17.8	12.7	13.8	13.1	10.8
Total Cash	2,053,681	0.7	0.0									
Distribution Account	2,053,681	0.7	0.0	0.1	0.6	1.3	1.4	0.9	0.6	0.4	0.3	0.3
91 Day T-Bills				0.2	0.7	1.5	1.7	1.3	0.9	0.6	0.4	0.3

Notes:

Fiscal YTD begins 7/1

Blended Index: 40% BC Aggregate, 30% BC U.S. TIPS 1-10YR, 10% S&P 500, 10% BC High Yield, 10% JPM EMBI+

Returns are net of manager fees

John Hancock Timber market value as of 09/30/18

Landmark market value estimated as of 10/31/18

Cash account includes \$1,385 currently being held in the MetWest account and \$1,119 being held in the TCW account

Guggenheim market value is a holdback.

October 31, 2018

University of Maine System Pension Plan

TOTAL PLAN PERFORMANCE

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Pension Composite	27,454,192	100.0	100.0	-3.3	-2.7	-2.4	-1.1	3.8	3.6	3.1	5.4	6.4
Allocation Index				-3.8	-2.2	-2.1	-0.1	5.2	4.7	4.2	6.1	6.8
Policy Index				-3.7	-2.2	-2.2	-0.2	5.1	4.9	4.3	6.2	7.1
Total Domestic Large Cap	2,126,086	7.7	8.0	-6.8	0.3	3.0	7.3	15.2	11.5	10.7	13.7	12.0
S&P 500				-6.8	0.3	3.0	7.3	15.2	11.5	11.3	14.0	13.2
Vanguard S&P 500 Index	2,126,086	7.7	8.0	-6.8	0.3	3.0	7.3	15.2	11.5	--	--	--
S&P 500				-6.8	0.3	3.0	7.3	15.2	11.5	11.3	14.0	13.2
Total Small Cap Composite	955,102	3.5	4.0	-10.9	-7.7	-0.6	1.8	14.1	10.7	7.8	12.0	--
Russell 2000				-10.9	-7.7	-0.6	1.9	14.1	10.7	8.0	12.2	12.4
SSgA R2000 Index Fund Non Lending	955,102	3.5	4.0	-10.9	-7.7	-0.6	1.8	14.1	10.7	7.8	12.1	--
Russell 2000				-10.9	-7.7	-0.6	1.9	14.1	10.7	8.0	12.2	12.4
Total International Equity (including emerging markets)	2,503,231	9.1	10.0	-8.1	-9.9	-12.6	-9.3	2.7	1.0	-0.1	3.6	5.0
MSCI EAFE				-8.0	-6.7	-9.3	-6.9	7.2	3.6	2.0	5.6	6.9
Morgan Stanley Int'l	1,775,528	6.5	7.0	-8.2	-7.9	-9.5	-7.0	7.1	2.6	1.6	5.6	6.4
MSCI EAFE				-8.0	-6.7	-9.3	-6.9	7.2	3.6	2.0	5.6	6.9
Emerging Markets Equity	727,703	2.7	3.0	-8.0	-14.5	-19.8	-14.8	-6.3	-2.7	-4.0	--	--
MSCI Emerging Markets				-8.7	-9.7	-15.7	-12.5	5.2	6.5	0.8	1.8	7.8
Mondrian EM Small Cap	727,703	2.7	3.0	-8.0	-14.5	-19.8	-14.8	-6.3	-2.7	--	--	--
MSCI Emerging Markets Small Cap				-10.5	-14.3	-21.5	-17.2	0.0	1.5	-0.3	1.8	10.1
Total Fixed Income	9,921,243	36.1	35.0	-0.7	-0.6	-1.3	-0.9	0.3	1.8	2.0	2.9	5.0
BBgBarc US Aggregate TR				-0.8	-0.8	-2.4	-2.1	-0.6	1.0	1.8	1.9	3.9
Vanguard Total Bond Market Index	5,791,096	21.1	20.0	-0.7	-0.7	-2.3	-2.0	-0.6	1.0	--	--	--
BBgBarc US Aggregate TR				-0.8	-0.8	-2.4	-2.1	-0.6	1.0	1.8	1.9	3.9
Vanguard Inflation-Protected Securities	1,825,786	6.7	7.0	-1.4	-2.2	-2.3	-1.4	--	--	--	--	--
BBgBarc US TIPS TR				-1.4	-2.2	-2.3	-1.2	-0.7	1.5	1.0	0.8	4.1
Guggenheim US Bank Loans	155,315	0.6	5.0									
BlackRock Strategic Income Opportunities	750,264	2.7	3.0	-0.3	0.1	--	--	--	--	--	--	--
3-Month Libor Total Return USD				0.2	0.8	1.9	2.2	1.7	1.3	0.9	0.8	0.7
Bain Capital Senior Loan Fund	1,398,782	5.1	5.0	0.0	--	--	--	--	--	--	--	--
Credit Suisse Leveraged Loans				0.0	1.9	4.4	4.9	5.1	5.5	4.2	5.1	7.3



October 31, 2018

University of Maine System Pension Plan

TOTAL PLAN PERFORMANCE

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Total GAA	7,486,724	27.3	27.5	-3.9	-4.3	-5.2	-4.7	1.9	2.4	1.3	3.2	--
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				-5.3	-3.0	-3.7	-0.9	6.8	5.6	4.2	5.9	7.6
Wellington	3,534,941	12.9	13.8	-5.4	-8.3	-10.4	-9.6	2.9	3.0	2.8	4.4	7.0
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				-5.3	-3.0	-3.7	-0.9	6.8	5.6	4.2	5.9	7.6
Newton Global Real Return	3,951,784	14.4	13.8	-2.5	-0.5	0.1	0.2	0.6	--	--	--	--
60% MSCI ACWI (Net) / 40% FTSE WGBI				-4.9	-3.1	-3.7	-1.0	6.0	5.3	3.7	5.2	7.0
Total Alternative Investments	1,562,587	5.7	4.5	-4.9	-4.8	-2.0	-1.4	2.8	1.8	1.8	2.5	--
HFRI Fund of Funds Composite Index				-3.0	-2.8	-2.1	-1.2	3.3	1.9	2.3	3.0	2.9
Lighthouse	1,562,587	5.7	4.5	-4.9	-4.8	0.0	0.5	4.4	3.1	--	--	--
Credit Suisse Long Shrt Eqt USD				-4.5	-3.0	-2.4	-1.2	5.6	2.2	3.9	5.5	6.0
Total Real Assets	2,350,900	8.6	8.0									
Principal	2,350,900	8.6	8.0	0.3	2.8	7.0	8.2	8.5	8.8	10.6	10.9	5.4
NCREIF ODCE				0.0	2.1	6.5	8.7	8.2	8.8	10.7	11.2	5.6
Total Cash	548,317	2.0	3.0									
Distribution Account	548,317	2.0	3.0	0.1	0.6	1.3	1.5	1.0	0.6	0.4	0.3	0.3
91 Day T-Bills				0.2	0.7	1.5	1.7	1.3	0.9	0.6	0.4	0.3

Notes:

Fiscal YTD begins 7/1

Blended Index: 40% BC Aggregate, 30% BC U.S. TIPS 1-10YR, 10% S&P 500, 10% BC High Yield, 10% JPM EMBI+

Returns are net of manager fees

Guggenheim market value is a holdback

October 31, 2018

University of Maine System Operating Fund

TOTAL PLAN PERFORMANCE

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	Fiscal YTD (%)	YTD (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Operating Funds Composite	306,476,816	100.0	100.0	-1.0	-0.3	0.0	2.2	2.4	1.7	2.4	3.1
<i>Allocation Index</i>				-1.0	-0.1	0.2	2.5	2.4	2.0	2.4	--
Liquidity Pool Composite	105,469,540	34.4	25.0	0.2	0.6	1.3	1.1	0.9	0.6	0.5	0.5
State Pool	65,703,122	21.4		0.2	0.5	1.2	1.1	0.9	0.7	0.6	0.6
BOA General Fund	1,045,499	0.3		0.2	0.3	0.5	0.3	0.2	0.1	0.1	--
Federated Gov't Obligations	17,297,844	5.6		0.2	0.6	1.3	1.1	--	--	--	--
JP Morgan US Gov't Money Market Fund	21,423,075	7.0		0.2	0.6	1.4	1.0	--	--	--	--
<i>FTSE T-Bill 3 Months TR</i>				0.2	0.7	1.5	1.2	0.9	0.5	0.4	0.3
Income Pool Composite	136,053,037	44.4	50.0	-0.2	0.2	0.2	1.0	1.7	1.6	2.3	4.0
Income Research + Management	74,698,380	24.4	26.7	0.1	0.5	0.5	0.5	0.9	0.9	--	--
<i>BBgBarc US Govt/Credit 1-3 Yr. TR</i>				0.1	0.4	0.5	0.5	0.8	0.8	0.9	1.7
BlackRock Strategic Income Opportunities	17,341,717	5.7	6.7	-0.3	0.1	-0.4	2.7	2.4	--	--	--
<i>3-Month Libor Total Return USD</i>				0.2	0.8	1.9	1.7	1.3	0.9	0.8	0.7
Loomis Sayles Bank Loans	18,957,352	6.2	6.7	-0.1	1.4	2.9	3.6	4.0	3.2	4.1	6.2
<i>Loomis Bank Loans Custom Index</i>				-0.1	1.5	3.1	3.8	4.3	3.9	4.8	7.6
Vanguard Total Bond Market Instl' Fund	12,635,909	4.1	5.0	-0.7	-0.7	-2.3	-0.6	1.1	1.8	1.8	--
<i>BBgBarc US Aggregate TR</i>				-0.8	-0.8	-2.4	-0.6	1.0	1.8	1.9	3.9
Vanguard Inflation-Protected Securities	12,419,679	4.1	5.0	-1.4	-2.2	-2.3	--	--	--	--	--
<i>BBgBarc US TIPS TR</i>				-1.4	-2.2	-2.3	-0.7	1.5	1.0	0.8	4.1
Total Return Pool Composite	64,954,239	21.2	25.0	-4.6	-2.9	-2.5	5.3	5.1	3.2	4.7	6.2
Lighthouse	14,098,051	4.6	5.0	-4.9	-4.8	0.0	4.4	3.0	--	--	--
<i>Credit Suisse Long Shrt Eqt USD</i>				-4.5	-3.0	-2.4	5.6	2.2	3.9	5.5	6.0
Newton Global Real Return	17,113,915	5.6	6.3	-2.5	-0.5	0.0	0.6	--	--	--	--
<i>60% MSCI ACWI (Net)/ 40% BBgBarc Global Agg</i>				-4.9	-2.9	-3.6	6.2	5.3	3.9	5.5	7.3
PIMCO All Asset	16,624,698	5.4	6.3	-3.1	-2.7	-4.8	3.9	5.9	2.3	3.8	7.1
<i>Blended Index</i>				-1.6	-0.6	-1.5	1.5	2.9	2.9	3.4	5.9
Vanguard Total World Stock Index	17,117,575	5.6	7.5	-7.8	-4.1	-4.2	10.8	8.1	6.4	--	--
<i>FTSE Global All Cap Index</i>				-7.8	-4.0	-4.1	10.5	7.0	4.9	7.3	8.3

Notes:

Returns are net of manager fees.

The inception date for the allocation index is 07/01/2009

Fiscal YTD begins 7/1

Blended Index: 40% BC Aggregate / 30% BC U.S. TIPS 1-10YR / 10% S&P 500 / 10% BC High Yield / 10% JPM EMBI+

Loomis Bank Loans Custom Index blends performance of "S&P/LSTA Leveraged Loan Index" before 9/1/2014 and "S&P/LSTA Leveraged BB Loan Index" after 9/1/2014. Composite excludes external loans.

Blackrock SIO changed its share class in May 2018 to BSIKX



INFORMATION DISCLAIMER AND REPORTING METHODOLOGY

Information Disclaimer

- Past performance is no guarantee of future results.
- All investments carry some level of risk. Diversification and other asset allocation techniques are not guaranteed to ensure profit or protect against losses.
- Some index returns displayed in this report or used in calculation of a policy, allocation or custom benchmark may not be available from the source or may be preliminary and subject to change.
- NEPC's source for portfolio pricing, calculation of accruals, and transaction information is the plan's custodial bank. Information on market indices and security characteristics is received from other sources external to NEPC. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.
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Reporting Methodology

- The client's custodian bank is NEPC's preferred data source unless otherwise directed. NEPC reconciles custodian data to manager data. If the custodian cannot provide accurate data, manager data may be used.
- Trailing time period returns are determined by geometrically linking the holding period returns, from the first full month after inception to the report date. Rates of Return are annualized when the time period is longer than a year. Performance is presented gross and/or net of manager fees as indicated on each page.
- For managers funded in the middle of a month, the "since inception" return will start with the first full month, although actual inception dates and cash flows are taken into account in all Composite calculations.
- This report may contain forward-looking statements that are based on NEPC's estimates, opinions and beliefs, but NEPC cannot guarantee that any plan will achieve its targeted return or meet other goals.





AGENDA ITEM SUMMARY

1. **NAME OF ITEM:** Performance Review – Managed Investment Pool

2. **INITIATED BY:** Kelly A. Martin, Chair

3. **BOARD INFORMATION:** X **BOARD ACTION:**

4. **OUTCOME:** **BOARD POLICY:**
 Primary Outcomes: Section 709 - Investments
 Enhance fiscal positioning

5. **BACKGROUND:**

Enclosed for your information is the Managed Investment Pool performance report for the quarter ended September 30, 2018.

Kelly Regan and Jay Roney of NEPC will provide a brief review at the December 20, 2018 Investment Committee meeting.

12/7/2018

THIRD QUARTER 2018 INVESTMENT REVIEW

UNIVERSITY OF MAINE SYSTEM MANAGED INVESTMENT POOL

December 20, 2018

Jay E. Roney, Partner

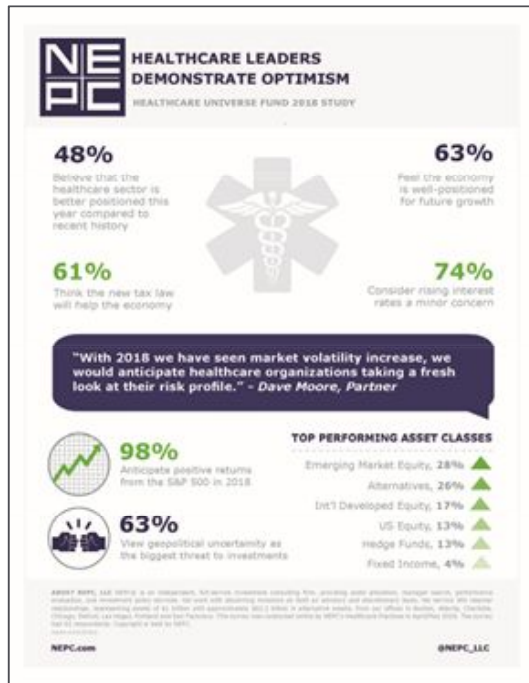
Kelly Regan, Senior Consultant



BOSTON | ATLANTA | CHARLOTTE | CHICAGO | DETROIT | LAS VEGAS | PORTLAND | SAN FRANCISCO

HIGHLIGHTS OF THIRD QUARTER HAPPENINGS AT NEPC

NEPC INSIGHTS



- Taking Stock: Is Technology Driving Low Inflation?
- Taking Stock: Increasing Pension Contributions and Improving Corporate Pension Funding Ratios: Now What?
- NEPC 2018 ESG Flash Poll Results and Infographic
- NEPC 2018 ESG Flash Poll – Healthcare Highlights
- 2018 Second Quarter Market Thoughts
- The Evaluation of Tax Liabilities
- Healthcare Optimistic About Economy But Wary of Volatility and Geopolitical Risks (Healthcare Operating Fund Universe Results/ Infographic)
- Taking Stock: Trouble in Turkey Creates Opportunity in Emerging Markets
- State of the Union: A Look Back on 2018 and What to Expect Moving Forward
- Opportunity Zones: Doing Good in a Tax-Advantaged Way
- Taking Stock: Globalization Backlash: US-China Tariffs are Here to Stay
- Taking Stock: Total Enterprise Management: a 360 View of Investment Strategy
- Market Chatter: Potential End Game for US-China Trade Spat: The Good, the Bad, the Ugly

WEBINAR REPLAYS

- NEPC's Second Quarter 2018 Quarterly Markets Call

To download NEPC's recent insights and webinar replays, visit: www.NEPC.com/insights















MARKET OUTLOOK

NEPC, LLC

PERFORMANCE OVERVIEW

Q3 Market Summary

Macro			Equity			Credit			Real Assets		
US Dollar	VIX	US 10-Yr	S&P 500	MSCI EAFE	MSCI EM	US Agg.	High Yield	Dollar EMD	Oil	Gold	REITS
											
0.7%	-4.0	20 bps	7.7%	1.4%	-1.1%	0.0%	2.4%	1.9%	-1.2%	-4.8%	0.7%

- **US equities increased during the quarter, supported by strong macroeconomic data and a tight labor market**
- **Emerging market equities broadly declined with ongoing currency weakness and trade tensions weighing on sentiment**
- **The Federal Reserve hiked rates for the third time this year and is expected to hike rates again in December**

Market segment (index representation) as follows: US Dollar (DXY Index), VIX (CBOE Volatility Index), US 10-Year (US 10-Year Treasury Yield), S&P 500 (US Equity), MSCI EAFE Index (International Developed Equity), MSCI Emerging Markets (Emerging Markets Equity), US Agg (Barclays US Aggregate Bond Index), High Yield (Barclays US High Yield Index), Dollar EMD (JPM Emerging Market Bond Index), Crude Oil (WTI Crude Oil Spot), Gold (Gold Price Spot), and REITs (NAREIT Composite Index).



PERFORMANCE SUMMARY AS OF SEPTEMBER 30, 2018

Domestic Equity Benchmarks		Qtr.	YTD	1 Yr.	3 Yr.	5 Yr.	10 Yr.
Large Core	S&P 500	7.7%	10.6%	17.9%	17.3%	13.9%	12.0%
Small Core	Russell 2000	3.6%	11.5%	15.2%	17.1%	11.1%	11.1%
Small Growth	Russell 2000 Growth	5.5%	15.8%	21.1%	18.0%	12.1%	12.7%
Small Value	Russell 2000 Value	1.6%	7.1%	9.3%	16.1%	9.9%	9.5%
Large Core	Russell 1000	7.4%	10.5%	17.8%	17.1%	13.7%	12.1%
Large Growth	Russell 1000 Growth	9.2%	17.1%	26.3%	20.6%	16.6%	14.3%
Large Value	Russell 1000 Value	5.7%	3.9%	9.5%	13.6%	10.7%	9.8%
Mid Core	S&P Mid Cap 400	3.9%	7.5%	14.2%	15.7%	11.9%	12.5%
REIT	NAREIT Composite	0.7%	1.9%	4.3%	9.3%	9.6%	7.9%
Int'l Equity Benchmarks		Qtr.	YTD	1 Yr.	3 Yr.	5 Yr.	10 Yr.
International Developed	MSCI EAFE	1.4%	-1.4%	2.7%	9.2%	4.4%	5.4%
Emerging Equity	MSCI EM	-1.1%	-7.7%	-0.8%	12.4%	3.6%	5.4%
Small Cap Int'l	S&P EPAC SmallCap	-0.4%	-2.2%	4.0%	12.2%	8.3%	9.3%
World ex-US	MSCI ACWI ex-US	0.7%	-3.1%	1.8%	10.0%	4.1%	5.2%
Domestic FI Benchmarks		Qtr.	YTD	1 Yr.	3 Yr.	5 Yr.	10 Yr.
Core Bonds	Barclays Aggregate	0.0%	-1.6%	-1.2%	1.3%	2.2%	3.8%
Municipal Bond	Barclays Municipal	-0.2%	-0.4%	0.3%	2.2%	3.5%	4.8%
High Yield	Barclays US High Yield	2.4%	2.6%	3.0%	8.1%	5.5%	9.5%
Intermediate Gov/Cred	Barclays Intern. Gov/Credit	0.2%	-0.8%	-1.0%	0.9%	1.5%	3.2%
Long Gov/Credit	Barclays Long Gov/Credit	-0.5%	-5.4%	-2.7%	3.4%	5.2%	7.1%
Long Credit	Barclays Long Credit	1.3%	-5.2%	-2.2%	5.2%	5.7%	8.4%
Long Treasuries	Barclays US 20+ Yr Treas	-3.0%	-5.9%	-3.5%	0.8%	4.8%	5.5%
Cash	BofA ML US 3-Month T-Bill	0.5%	1.3%	1.6%	0.8%	0.5%	0.3%
Inflation	Barclays US TIPS 1-10 Yr	-0.4%	-0.2%	0.3%	1.6%	0.9%	2.5%
STRIPS	Barclays 20+ Yr STRIPS	-4.7%	-8.3%	-4.1%	1.5%	7.3%	7.4%
Global FI Benchmarks		Qtr.	YTD	1 Yr.	3 Yr.	5 Yr.	10 Yr.
World Gov. Bonds	Citigroup WGBI	-1.6%	-2.5%	-1.5%	1.7%	0.2%	2.2%
Em. Mkt. Bonds (Local)	JPM GBI-EM Glob. Div.	-1.8%	-8.1%	-7.4%	5.2%	-1.7%	2.7%
Global Inflation	Barclays Global ILB	-1.6%	-3.3%	-0.6%	2.1%	1.4%	3.1%
Diversified Benchmark		Qtr.	YTD	1 Yr.	3 Yr.	5 Yr.	10 Yr.
Diversified	Diversified*	3.3%	4.2%	8.1%	10.4%	7.9%	8.0%
Alternative Benchmarks		Qtr.	YTD	1 Yr.	3 Yr.	5 Yr.	10 Yr.
Commodities	Bloomberg Commodity Index	-2.0%	-2.0%	2.6%	-0.1%	-7.2%	-6.2%
Real Estate	NCREIF Property Index**	1.8%	3.5%	7.2%	8.3%	9.8%	6.2%

* 35% LC, 10% SC, 12% Int'l, 3% Emerging, 25% FI, 5% HY, 5% Global FI, 5% REITS

**As of 6/30/2018



September 30, 2018

MACRO PERFORMANCE OVERVIEW

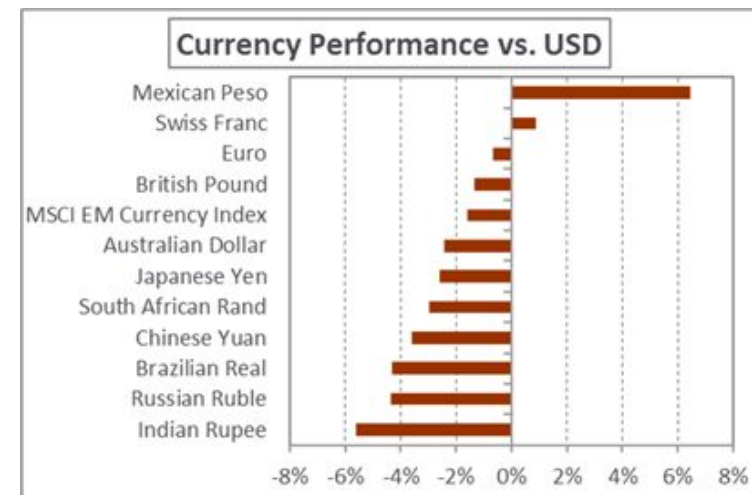
Q3 Macro Market Summary

- **The global growth outlook remains in tact, despite trade policy issues**
- **Global bond yields increased as central banks transition toward tighter monetary policy**
- **Higher rates in the US supported the dollar – adding further pressure to emerging market currencies**

	Yield 06/30/18	Yield 09/30/18	Δ
US 10-Yr	2.86%	3.06%	0.20%
US 30-Yr	2.99%	3.21%	0.22%
US Real 10-Yr	0.74%	0.92%	0.18%
German 10-Yr	0.30%	0.47%	0.17%
Japan 10-Yr	0.04%	0.13%	0.09%
China 10-Yr	3.48%	3.63%	0.15%
EM Local Debt	6.59%	6.62%	0.03%

Source: Bloomberg

Central Banks	Current Rate	CPI YOY	Notes from the Quarter
Federal Reserve	2.00% - 2.25%	2.7%	The Fed increased its benchmark interest rate to 2.00% - 2.25% in September and is expected to hike rates one more time in 2018
European Central Bank	0.0%	2.1%	The ECB maintained its current benchmark interest rate, but continues its plan to scale back its QE Program
Bank of Japan	-0.1%	1.3%	The BoJ will continue its ultra-easy QE program with inflation remaining well below target



Source: Bloomberg



September 30, 2018

EQUITY PERFORMANCE OVERVIEW

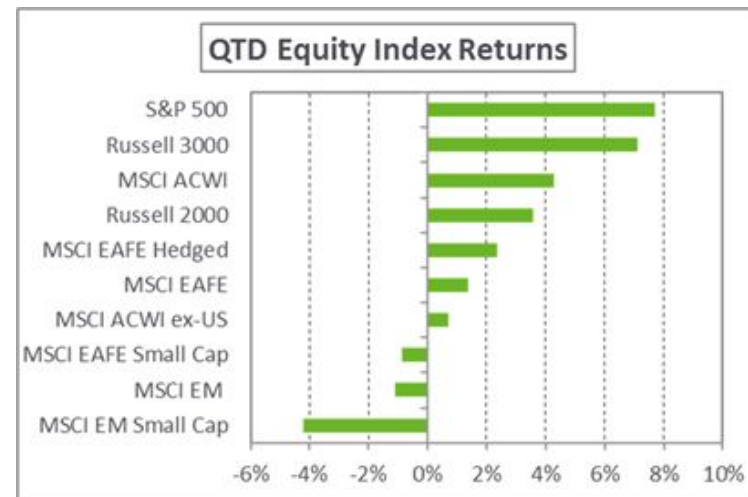
Q3 Equity Market Summary

- **Strong economic data and positive sentiment helped US equities to outperform global equities**
- **Trade-sensitive economies disproportionately declined as escalating trade tensions and currency weakness weighed on returns**

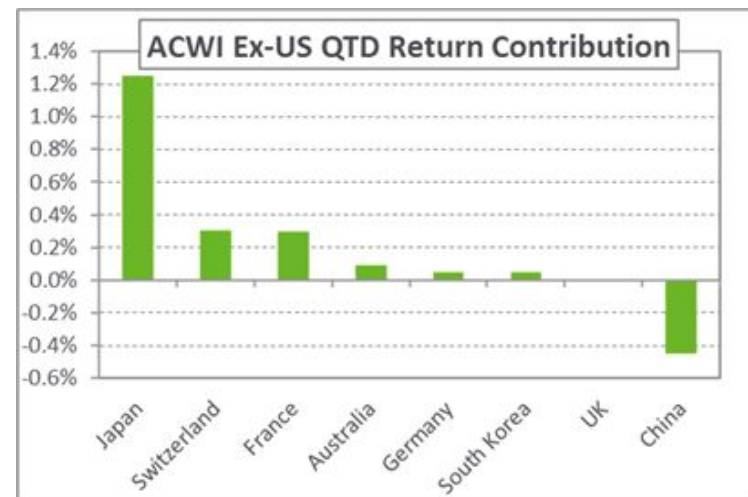
Russell 3000 QTD Sector Return Contribution

Information Technology	1.7%
Consumer Discretionary	0.3%
Financials	0.5%
Industrials	1.4%
Consumer Staples	0.0%
Energy	0.4%
Materials	0.0%
Health Care	0.5%
Real Estate	0.6%
Communication Services	-1.0%
Utilities	0.1%

Source: Russell, Bloomberg



Source: MSCI, Russell, S&P, Bloomberg



Source: MSCI, Bloomberg. QTD top country contributors to index return

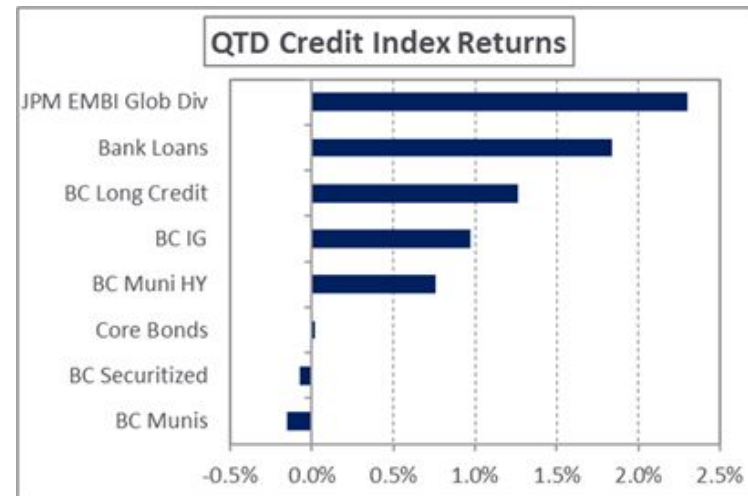
CREDIT PERFORMANCE OVERVIEW

Q3 Credit Market Summary

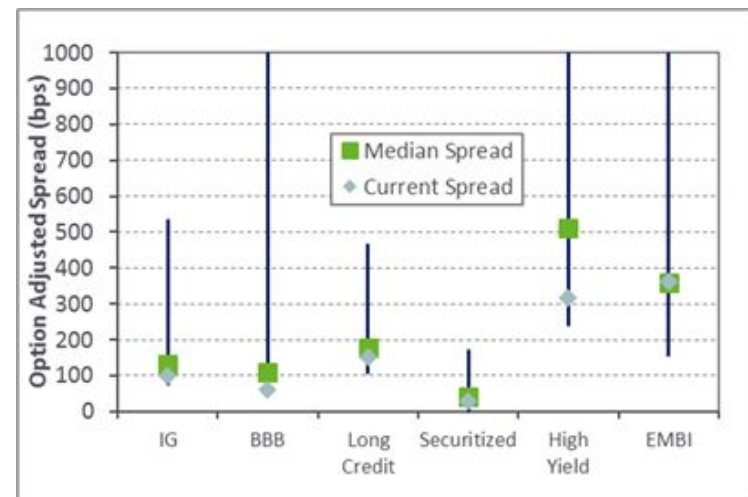
- **Credit spreads broadly declined and remain below medians in most areas of the credit market**
- **Dollar-denominated emerging market debt increased by 2.3% as spreads tightened**

Credit Spread (Basis Points)	06/30/18	09/30/18	Δ
BC IG Credit	116	100	-16
BC Long Credit	174	153	-21
BC Securitized	28	28	0
BC High Yield	363	316	-47
Muni HY	253	198	-55
JPM EMBI	388	362	-26
Bank Loans - Libor	303	281	-22

Source: Barclays, Merrill Lynch, JPM, Bloomberg, NEPC



Source: Barclays, JPM, S&P, Bloomberg



Source: Barclays, JPM, S&P, Bloomberg; as of 01/31/2000

September 30, 2018

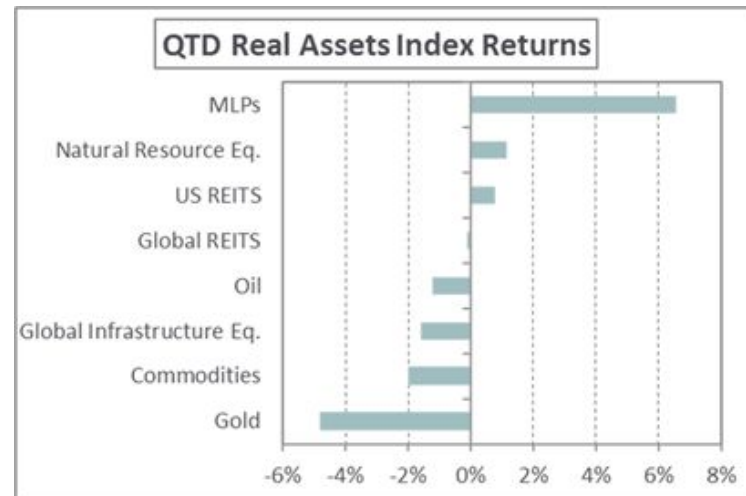
REAL ASSETS PERFORMANCE OVERVIEW

Q3 Real Assets Market Summary

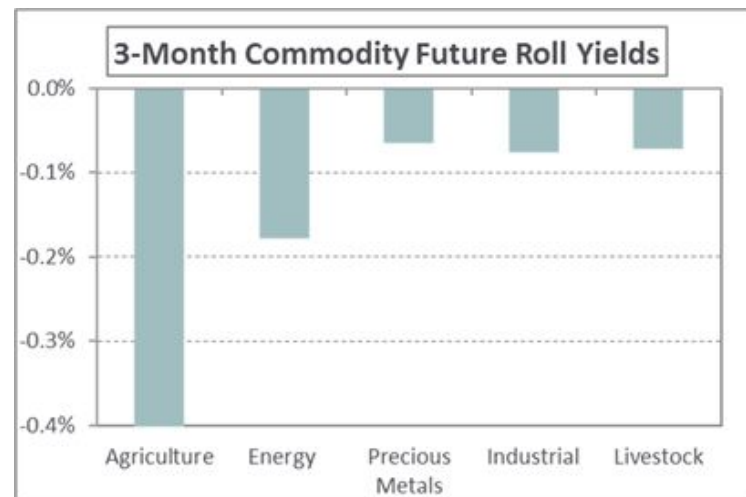
- **Oil declined 1.2% for the quarter, but is up 41.8% for the year**
- **Agricultural commodities declined substantially due to robust supply and trade war-related concerns**
- **MLP's increased 6.6%, supported by rising commodity prices and ongoing industry simplification**

Real Asset Yields	06/30/18	09/30/18
MLPs	8.1%	8.0%
Core Real Estate	4.2%	4.4%
US REITs	4.4%	4.2%
Global REITs	3.7%	3.7%
Global Infrastructure Equities	4.4%	4.5%
Natural Resource Equities	3.5%	3.5%
US 10-Yr Breakeven Inflation	2.1%	2.1%
Commodity Index Roll Yield	0.1%	-1.2%

Source: NCREIF, Alerian, NAREIT, S&P, Bloomberg



Source: S&P, NAREIT, Alerian, Bloomberg



Source: Bloomberg, NEPC Calculated as of 09/28/2018



September 30, 2018

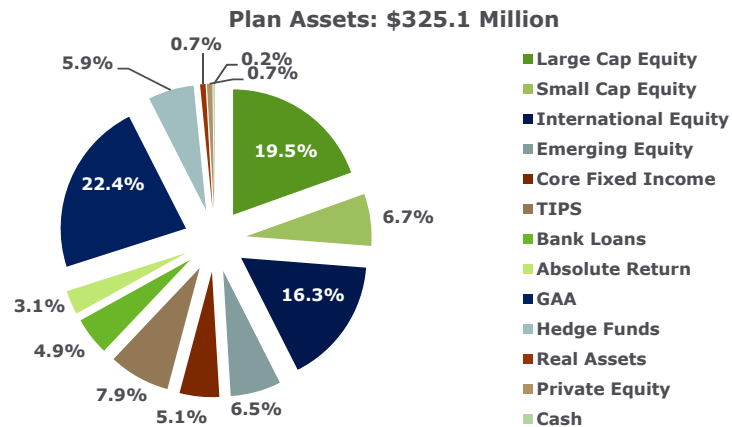
September 30, 2018

EXECUTIVE SUMMARY

NEPC, LLC

EXECUTIVE SUMMARY

ASSET ALLOCATION



PLAN COMMENTS

Asset Allocation

MIP assets were \$325.1 million as of September 30, 2018, a \$7.2 million increase over the quarter. During the 3rd quarter there was a \$1.4 million cash inflow and investment gains of \$5.8 million. All asset classes are within policy ranges.

Performance (Net of Fees)

The Plan returned 1.1% in the 3rd quarter and 1.2% year-to-date, ranking in the 88th and 80th percentiles, respectively.

US Equities were the top contributors to overall performance during the quarter. Emerging market equity, international equity and select global asset allocation managers detracted from overall performance during the quarter.

MIP PERFORMANCE: NET OF FEES

	QTR (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
--	---------	---------	----------	----------	----------	-----------

COMPOSITE	1.1	1.2	5.1	8.0	5.3	6.7
ALLOC. INDEX	2.3	2.3	6.3	8.8	6.1	6.5
POLICY INDEX	2.4	2.6	6.6	9.4	6.4	6.8
RANK (E&F \$100-500M)	88	94	80	80	91	76

RECENT ACTIONS/RECOMMENDATIONS

Recent Actions

Rebalancing was provided over the quarter to cover disbursements.

Recommendations

NEPC provided additional private equity education under separate cover for the Committee's consideration.

Investment Manager Updates

There were no new manager announcements during the third quarter.



DUE DILIGENCE MONITOR

The items below summarize the recent quarter's performance and any changes or announcements from your Plan managers/funds. A "-" indicates there were no material announcements. A "Yes" indicates there was an announcement and a summary is provided separately. NEPC's Due Diligence Committee meets every two weeks to review events as they relate to investment managers and determines if any action should be taken by NEPC and/or by our clients. They rate events: No Action, Watch, Hold, Client Review or Terminate. With respect to Performance, a "-" indicates the manager/fund performed in line with the majority of managers/funds in the category; only outliers (placement in the Top or Bottom Quartile) are highlighted. Your Consultant's Recommendation is refreshed quarterly in view of the recent quarter's developments (performance, manager events, and any of the longer-term trending data). NEPC considers ourselves to be a fiduciary, as ERISA defines the term in Section 3(21).

Fund	Manager Changes/ Announcements (Recent Quarter)	NEPC Due Diligence Committee Recommendations
Aberdeen	No	Maintain Hold
Lighthouse	No	Maintain Watch

NEPC Due Diligence Committee Recommendation Key	
No Action	Informational items have surfaced; no action is recommended.
Watch	Issues have surfaced to be concerned over; manager can participate in future searches, but current and prospective clients must be made aware of the issues.
Hold	Serious issues have surfaced to be concerned over; manager cannot be in future searches unless a client specifically requests, but current and prospective clients must be made aware of the issues.
Client Review	Very serious issues have surfaced with a manager; manager cannot be in future searches unless a client specifically requests. Current clients must be advised to review the manager.
Terminate	We have lost all confidence in the product; manager would not be recommended for searches and clients would be discouraged from using. The manager cannot be in future searches unless a client specifically requests. Current clients must be advised to replace the manager.



TOTAL PLAN PERFORMANCE DETAIL

	Market Value (\$)	% of Portfolio	Policy %	Fiscal YTD (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
MIP Composite	325,124,530	100.0	100.0	1.1	1.2	5.1	7.8	8.0	5.3	7.8	6.7
Allocation Index				2.3	2.3	6.3	8.8	8.8	6.1	8.0	6.5
Policy Index				2.4	2.6	6.6	9.5	9.4	6.4	8.3	6.8
Total Domestic Large Cap	63,489,661	19.5	16.0	7.7	10.5	17.8	18.2	17.2	13.6	16.5	12.5
S&P 500				7.7	10.6	17.9	18.3	17.3	13.9	16.9	12.0
SSgA S&P 500	63,489,661	19.5	16.0	7.7	10.5	17.8	18.2	17.2	13.9	16.8	11.9
S&P 500				7.7	10.6	17.9	18.3	17.3	13.9	16.9	12.0
Total Domestic Small/Mid Cap	21,892,708	6.7	6.0	2.9	10.3	18.3	19.5	16.6	11.4	16.9	12.4
Russell 2500				4.7	10.4	16.2	17.0	16.1	11.4	16.5	12.0
Westfield Capital	10,438,532	3.2	3.0	4.6	14.8	25.8	23.0	17.8	12.4	17.2	13.9
Russell 2500 Growth				7.2	15.8	23.1	21.6	18.0	12.9	17.7	13.6
DFA	11,454,176	3.5	3.0	1.5	5.3	10.0	14.4	14.3	9.7	16.1	--
Russell 2000 Value				1.6	7.1	9.3	14.8	16.1	9.9	15.3	9.5
Total International Equity (including emerging markets)	74,295,355	22.9	23.0	-2.0	-5.2	-0.3	7.5	7.8	3.3	7.0	5.5
MSCI EAFE				1.4	-1.4	2.7	10.6	9.2	4.4	8.3	5.4
Morgan Stanley	20,494,838	6.3	6.3	0.3	-1.4	2.3	9.8	7.6	3.8	8.1	5.3
Globeflex	20,810,240	6.4	6.3	-0.6	-1.4	2.3	11.6	10.4	5.9	9.4	5.9
MSCI EAFE				1.4	-1.4	2.7	10.6	9.2	4.4	8.3	5.4
Kabouter International Opportunities Offshore Fund II	11,778,759	3.6	3.5	-4.7	-5.2	--	--	--	--	--	--
MSCI EAFE Small Cap				-0.9	-2.2	3.7	12.4	12.4	8.0	11.5	9.7
Emerging Markets Equity	21,211,519	6.5	7.0	-4.0	-12.2	-5.1	1.0	5.1	-0.1	3.1	--
MSCI Emerging Markets				-1.1	-7.7	-0.8	10.2	12.4	3.6	5.0	5.4
Aberdeen Emerging Mkts	10,889,146	3.3	3.5	-0.7	-11.6	-7.3	4.1	8.8	1.4	4.2	--
MSCI Emerging Markets				-1.1	-7.7	-0.8	10.2	12.4	3.6	5.0	5.4
Mondrian EM Small Cap	10,322,373	3.2	3.5	-7.1	-12.8	-3.0	-2.4	1.5	--	--	--
MSCI Emerging Markets Small Cap				-4.2	-12.3	-4.2	4.9	7.4	2.7	4.8	7.4
Total Fixed Income	68,271,138	21.0	21.0	0.3	0.4	1.4	1.7	3.4	3.1	4.0	5.1
BBgBarc US Aggregate TR				0.0	-1.6	-1.2	-0.6	1.3	2.2	2.0	3.8
Commonfund	16,486,777	5.1	5.0	0.5	-0.4	0.0	0.8	2.5	2.8	3.3	4.8
BBgBarc US Aggregate TR				0.0	-1.6	-1.2	-0.6	1.3	2.2	2.0	3.8
Vanguard Inflation-Protected Securities	25,571,043	7.9	8.0	-0.9	-1.0	0.3	-0.4	--	--	--	--
BBgBarc US TIPS TR				-0.8	-0.8	0.4	-0.2	2.0	1.4	1.3	3.3
Guggenheim US Bank Loans	1,599,052	0.5									
Blackrock Strategic Income Opportunities	10,139,606	3.1	3.0	0.5	--	--	--	--	--	--	--
3-Month Libor Total Return USD				0.6	1.7	2.1	1.6	1.3	0.9	0.7	0.7
Bain Capital Senior Loan Fund	14,474,660	4.5	5.0	--	--	--	--	--	--	--	--
Credit Suisse Leveraged Loans				1.9	4.4	5.6	5.5	5.4	4.4	5.5	5.8
Total GAA	72,791,592	22.4	23.0	-0.3	-1.7	0.5	3.7	5.1	2.8	4.6	--
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				2.4	1.7	5.8	8.5	9.4	5.9	7.9	6.5



September 30, 2018

TOTAL PLAN PERFORMANCE DETAIL

	Market Value (\$)	% of Portfolio	Policy %	Fiscal YTD (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
GMO Global Absolute Return	24,180,933	7.4	7.7	0.0	-2.2	0.8	4.6	5.6	3.0	4.9	4.7
Blended Index				1.0	0.1	1.1	2.0	4.0	3.5	4.0	5.2
Wellington	23,667,359	7.3	7.7	-3.1	-5.4	-2.8	5.1	6.2	4.5	6.1	5.8
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				2.4	1.7	5.8	8.5	9.4	5.9	7.9	6.5
Newton Global Real Return	24,943,300	7.7	7.7	2.1	2.6	3.4	1.1	--	--	--	--
60% MSCI ACWI (Net)/ 40% BBgBarc Global Agg				2.2	1.4	5.3	7.8	8.8	5.5	7.3	6.3
Total Hedge Funds	19,186,078	5.9	6.0	0.1	3.0	5.2	5.3	4.0	2.6	3.0	2.7
HFRI Fund of Funds Composite Index				0.2	0.9	3.0	4.7	3.3	3.2	3.6	2.5
Lighthouse	19,186,078	5.9	6.0	0.1	5.2	8.2	6.6	5.6	--	--	--
Credit Suisse Long Shrt Eqt USD				1.5	2.2	5.5	7.6	4.4	5.4	6.8	5.7
Total Real Assets	2,355,663	0.7	3.0	-0.7	-1.2	3.0	-2.2	1.5	3.0	4.2	--
NCREIF Timberland Index				1.0	2.4	4.0	3.6	3.6	6.0	6.0	4.0
John Hancock Timber Fund	2,355,663	0.7	3.0	-0.7	-1.2	3.0	-2.2	1.5	3.0	4.2	0.3
NCREIF Timberland Index				1.0	2.4	4.0	3.6	3.6	6.0	6.0	4.0
Private Equity	2,266,261	0.7	2.0	5.2	9.1	23.2	20.2	13.2	--	--	--
Landmark Equity Partners XV	2,266,261	0.7	2.0	5.2	9.1	23.2	20.2	13.2	--	--	--
Cambridge Associates US All PE (1 Qtr Lag)				5.8	14.2	18.7	17.8	12.7	13.8	13.1	10.8
Total Cash	576,075	0.2	0.0								
Distribution Account	576,075	0.2	0.0	0.4	1.1	1.4	0.9	0.6	0.4	0.3	0.3
91 Day T-Bills				0.5	1.3	1.6	1.2	0.9	0.5	0.4	0.3

Notes:

Fiscal YTD begins 7/1

Blended Index: 40% BC Aggregate, 30% BC U.S. TIPS 1-10YR, 10% S&P 500, 10% BC High Yield, 10% JPM EMBI+

Returns are net of manager fees

John Hancock Timber market value as of 09/30/18

Landmark market value as of 09/30/18

PRIVATE MARKETS UPDATE

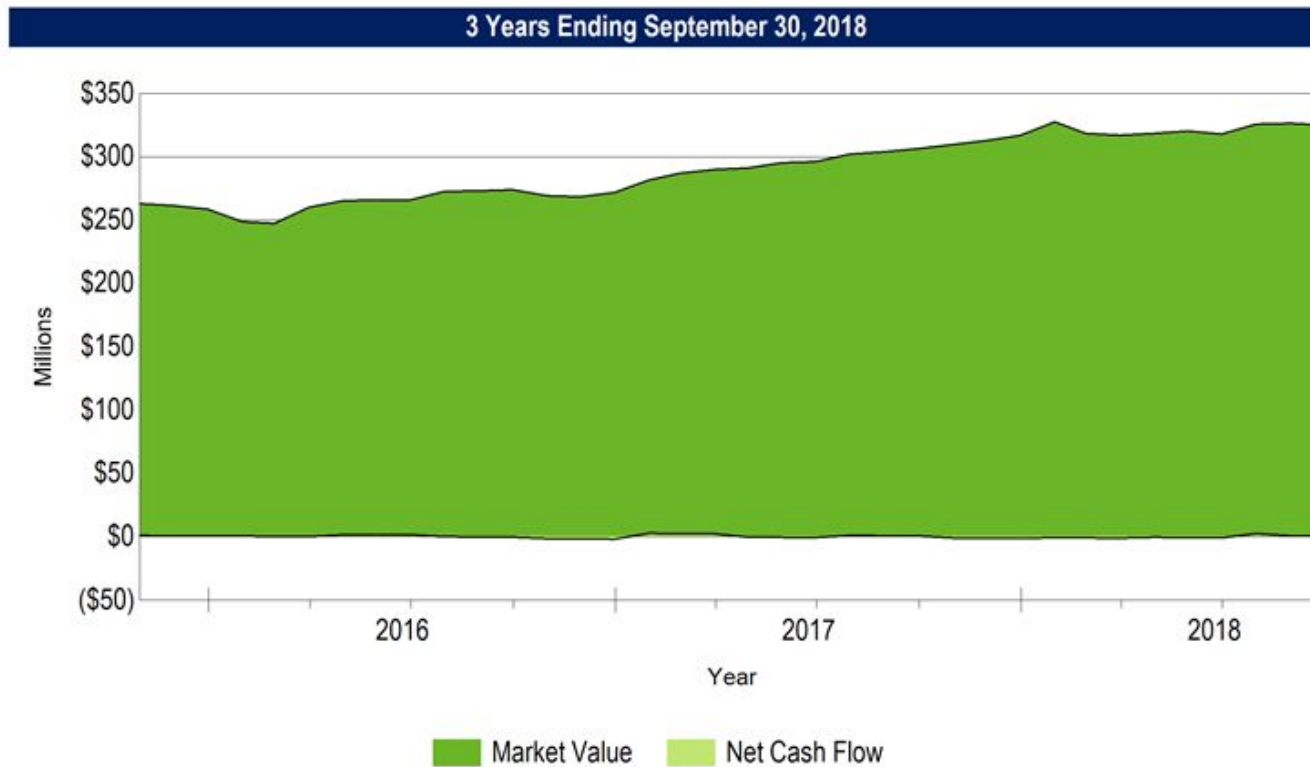
- **The System invests in a number of private markets assets, committing capital for longer time periods to obtain illiquidity premiums and exposure to alternative markets**
- **Landmark Equity Partners XV**
 - Secondary Private Equity fund, purchasing interests in venture capital, growth equity and buyout funds, and to a lesser extent, special situation and energy funds
 - Strategy is diversified, investing in ~200 partnerships
 - Fund has a 4 year investment period and 10 year term
 - The System committed \$5 million in 2014 and has a remaining commitment of \$2.2 million
 - Since inception, the strategy has an IRR of 17.2%, net of fees (6/30/18)
- **Hancock Timberland VII**
 - Private Real Asset Timber Fund structured for the purpose of making direct and indirect investments in commercial timberland
 - The System has been invested in the strategy since 2005
 - Fund has a 3 year acquisition period, 8 year investment period, 2 year wind up period and 2 year extension period (estimated)
 - The System committed \$5 million in 2005 and there are no remaining commitments, the Fund is winding up
 - Since inception, the strategy has an IRR of 1.3%, net of fees (9/30/18)



PLAN SUMMARY AND STATISTICS

NEPC, LLC

ASSET GROWTH SUMMARY



	Fiscal Year-To-Date	Year-To-Date	One Year	Three Years
Beginning Market Value	\$317,888,826	\$316,868,984	\$306,415,299	\$250,747,309
Net Cash Flow	\$1,430,450	\$1,915,158	-\$117,051	\$486,163
Net Investment Change	\$5,805,254	\$6,340,387	\$18,826,282	\$73,891,058
Ending Market Value	\$325,124,530	\$325,124,530	\$325,124,530	\$325,124,530



September 30, 2018

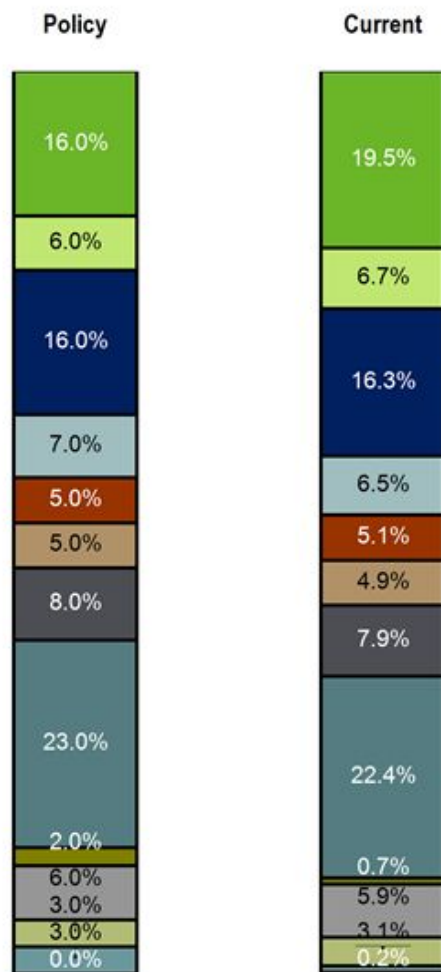
CASH FLOW SUMMARY

	3 Months Ending September 30, 2018					Ending Market Value
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Net Investment Change	
Aberdeen Emerging Mkts	\$9,713,461	\$1,300,000	-\$30,512	\$1,269,488	-\$93,804	\$10,889,146
Bain Capital Senior Loan Fund	--	\$14,390,000	-\$5,914	\$14,384,086	\$90,573	\$14,474,660
Blackrock Strategic Income Opportunities	\$8,395,349	\$1,700,000	-\$13,428	\$1,686,572	\$57,685	\$10,139,606
Commonfund	\$16,406,077	\$0	-\$6,597	-\$6,597	\$87,297	\$16,486,777
DFA	\$11,284,133	\$0	-\$11,873	-\$11,873	\$181,916	\$11,454,176
Distribution Account	\$17,742	\$18,704,016	-\$18,155,642	\$548,374	\$9,959	\$576,075
Globeflex	\$20,943,544	\$0	-\$39,327	-\$39,327	-\$93,977	\$20,810,240
GMO Global Absolute Return	\$24,125,389	\$0	-\$60,592	-\$60,592	\$116,136	\$24,180,933
Guggenheim US Bank Loans	\$15,883,264	\$0	-\$15,998,519	-\$15,998,519	\$1,714,308	\$1,599,052
John Hancock Timber Fund	\$2,717,239	\$0	-\$345,750	-\$345,750	-\$15,826	\$2,355,663
Kabouter International Opportunities Offshore Fund II	\$12,356,473	\$0	-\$29,625	-\$29,625	-\$548,090	\$11,778,759
Landmark Equity Partners XV	\$2,386,259	\$47,285	-\$279,083	-\$231,798	\$111,800	\$2,266,261
Lighthouse	\$19,166,995	\$0	\$0	\$0	\$19,083	\$19,186,078
Mondrian EM Small Cap	\$10,496,261	\$600,000	-\$72,114	\$527,886	-\$701,774	\$10,322,373
Morgan Stanley	\$20,429,738	\$0	-\$48,666	-\$48,666	\$113,766	\$20,494,838
Newton Global Real Return	\$24,436,322	\$0	-\$49,830	-\$49,830	\$556,808	\$24,943,300
SSgA S&P 500	\$58,959,272	\$0	-\$14,534	-\$14,534	\$4,544,924	\$63,489,661
Vanguard Inflation-Protected Securities	\$25,791,470	\$0	-\$4,495	-\$4,495	-\$215,932	\$25,571,043
Wellington	\$24,391,014	\$0	-\$106,570	-\$106,570	-\$617,085	\$23,667,359
Westfield Capital	\$9,988,825	\$2,747	-\$40,527	-\$37,780	\$487,487	\$10,438,532
Total	\$317,888,826	\$36,744,048	-\$35,313,598	\$1,430,450	\$5,805,254	\$325,124,530



September 30, 2018

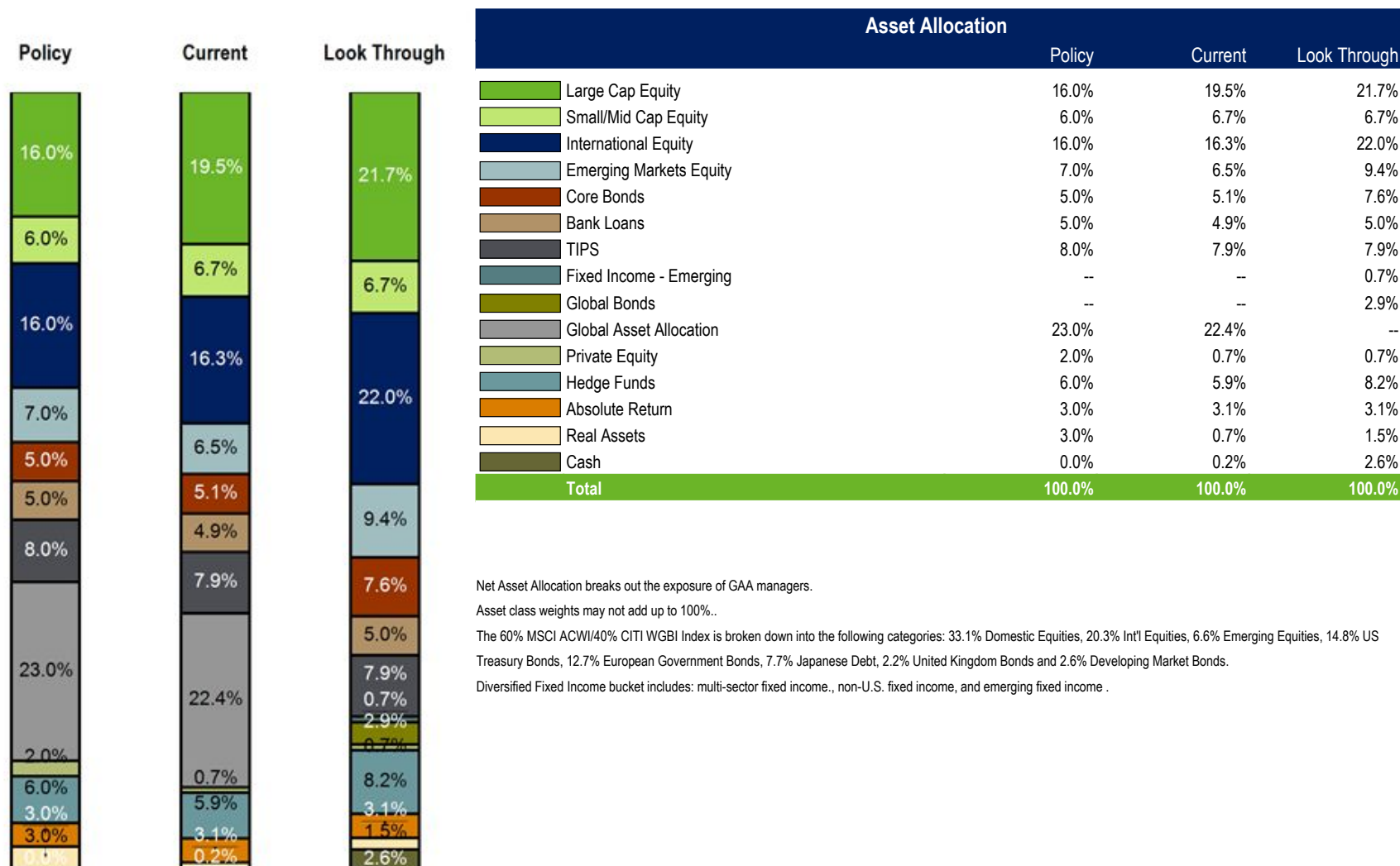
ASSET CLASS ALLOCATIONS



Asset Allocation vs. Target							
	Current	Policy	Current	Difference	Policy Range	Within Range	
Large Cap Equity	\$63,489,661	16.0%	19.5%	3.5%	11.0% - 21.0%	Yes	
Small/Mid Cap Equity	\$21,892,708	6.0%	6.7%	0.7%	0.0% - 9.0%	Yes	
International Equity	\$53,083,836	16.0%	16.3%	0.3%	11.0% - 21.0%	Yes	
Emerging Markets Equity	\$21,211,519	7.0%	6.5%	-0.5%	0.0% - 10.0%	Yes	
Core Bonds	\$16,486,777	5.0%	5.1%	0.1%	0.0% - 10.0%	Yes	
Bank Loans	\$16,073,712	5.0%	4.9%	-0.1%	0.0% - 8.0%	Yes	
TIPS	\$25,571,043	8.0%	7.9%	-0.1%	4.0% - 12.0%	Yes	
Global Asset Allocation	\$72,791,592	23.0%	22.4%	-0.6%	18.0% - 28.0%	Yes	
Private Equity	\$2,266,261	2.0%	0.7%	-1.3%	0.0% - 5.0%	Yes	
Hedge Funds	\$19,186,078	6.0%	5.9%	-0.1%	0.0% - 15.0%	Yes	
Absolute Return	\$10,139,606	3.0%	3.1%	0.1%	0.0% - 100.0%	Yes	
Real Assets	\$2,355,663	3.0%	0.7%	-2.3%	0.0% - 6.0%	Yes	
Cash	\$576,075	0.0%	0.2%	0.2%	0.0% - 10.0%	Yes	
Total	\$325,124,530	100.0%	100.0%				

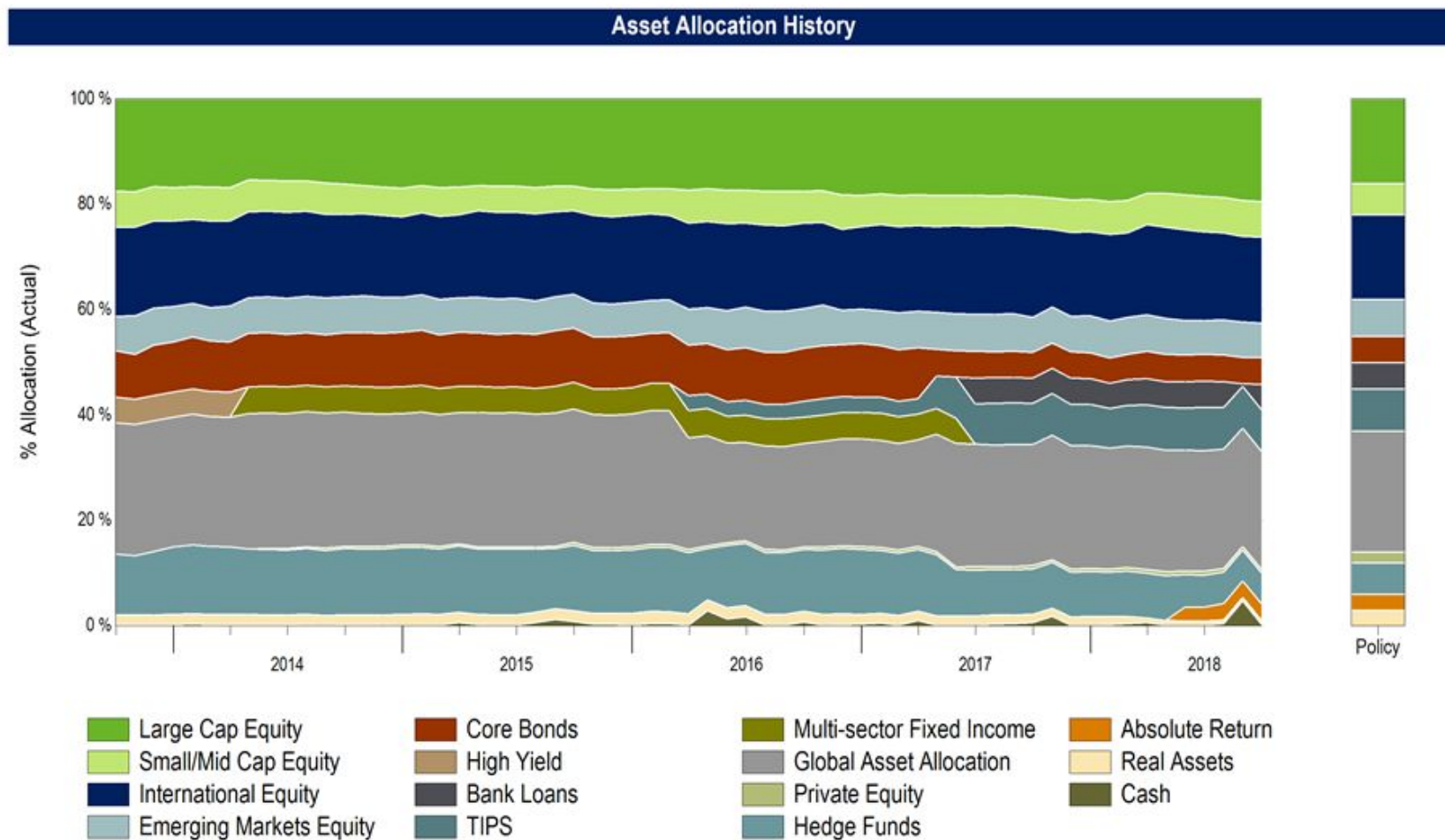


ASSET CLASS ALLOCATIONS



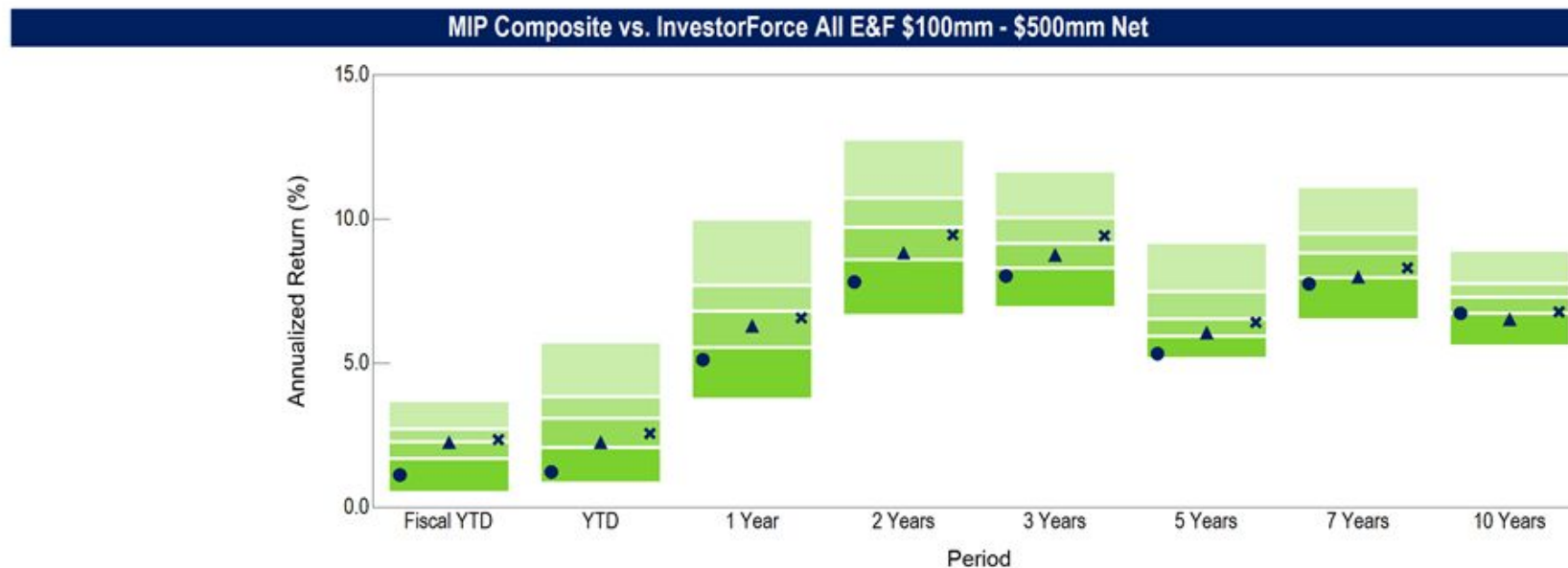
September 30, 2018

ASSET ALLOCATION HISTORY



September 30, 2018

RETURNS VS. PEER UNIVERSE

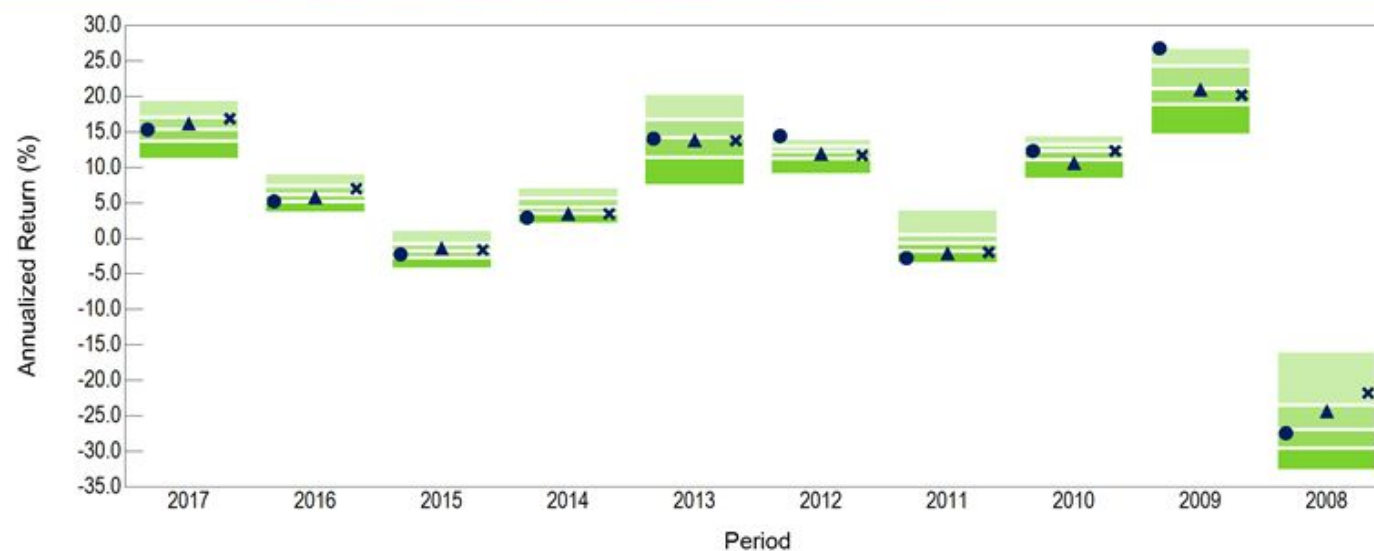


	Return (Rank)							
5th Percentile	3.7	5.7	10.0	12.8	11.7	9.2	11.1	8.9
25th Percentile	2.7	3.9	7.7	10.7	10.1	7.5	9.5	7.8
Median	2.3	3.1	6.8	9.7	9.2	6.6	8.8	7.3
75th Percentile	1.7	2.1	5.6	8.6	8.3	6.0	8.0	6.7
95th Percentile	0.5	0.9	3.8	6.7	6.9	5.2	6.5	5.6
# of Portfolios	190	188	188	179	175	162	150	141
• MIP Composite	1.1 (88)	1.2 (94)	5.1 (80)	7.8 (87)	8.0 (80)	5.3 (91)	7.8 (81)	6.7 (76)
▲ Allocation Index	2.3 (52)	2.3 (71)	6.3 (64)	8.8 (71)	8.8 (61)	6.1 (71)	8.0 (75)	6.5 (84)
× Policy Index	2.4 (46)	2.6 (65)	6.6 (57)	9.5 (56)	9.4 (43)	6.4 (58)	8.3 (68)	6.8 (74)



RETURNS VS. PEER UNIVERSE

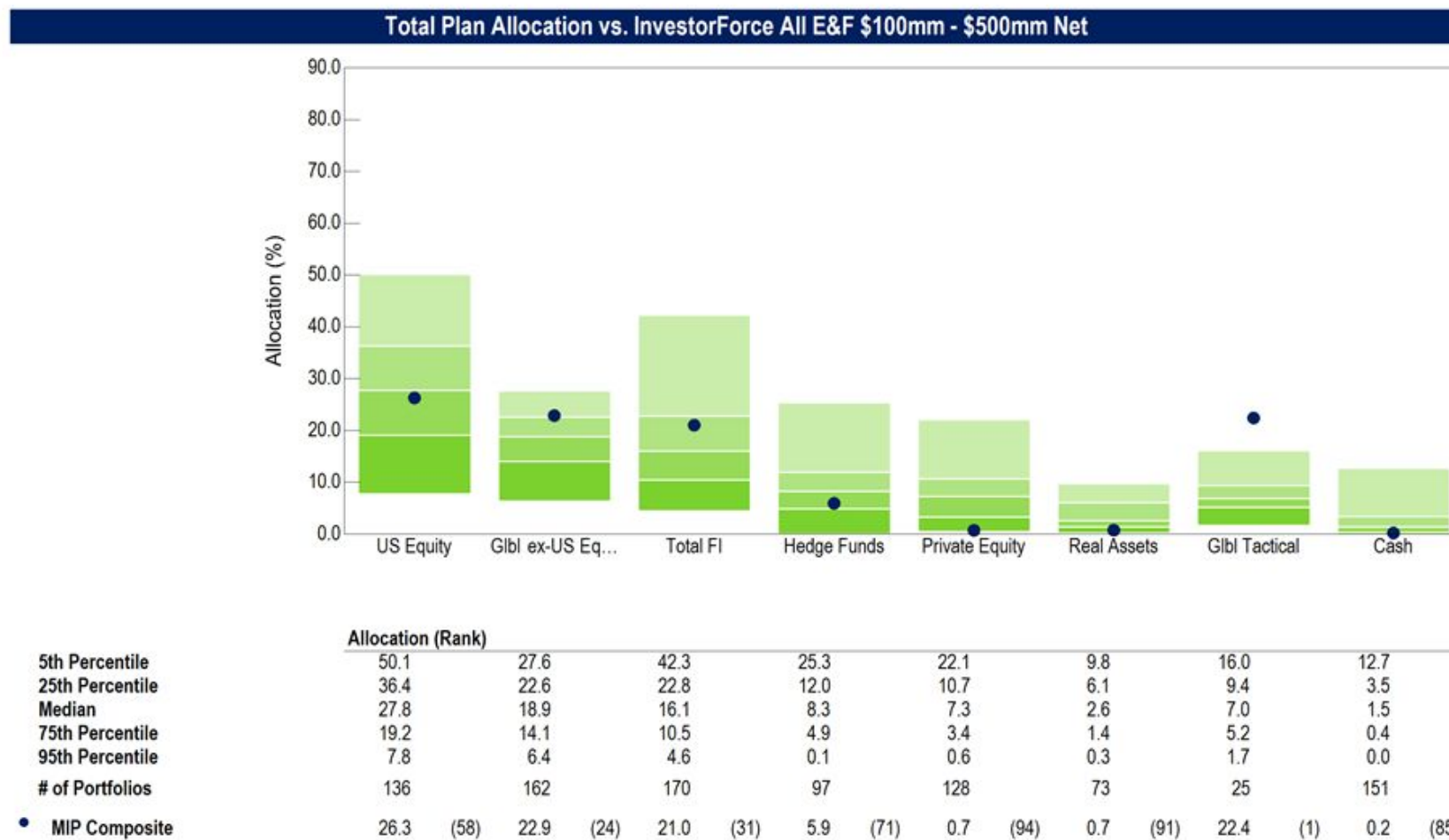
MIP Composite vs. InvestorForce All E&F \$100mm - \$500mm Net



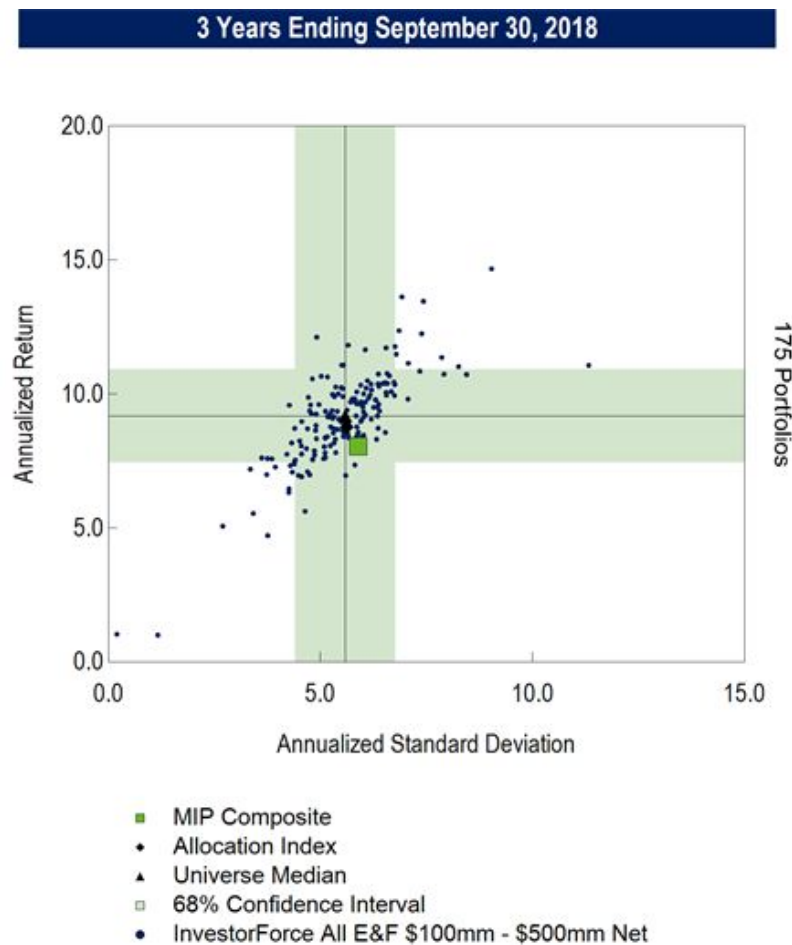
	Return (Rank)									
5th Percentile	19.6	9.2	1.3	7.3	20.5	14.1	4.2	14.6	26.9	-15.9
25th Percentile	17.2	7.4	-0.7	5.7	16.8	13.0	0.5	13.3	24.3	-23.4
Median	15.4	6.2	-1.7	4.4	14.2	12.3	-0.6	12.4	21.1	-26.9
75th Percentile	13.8	5.2	-2.7	3.6	11.5	11.3	-1.8	11.1	18.9	-29.5
95th Percentile	11.1	3.6	-4.3	2.0	7.4	9.0	-3.6	8.3	14.6	-32.7
# of Portfolios	177	186	142	98	75	78	75	70	69	67
• MIP Composite	15.3 (53)	5.2 (75)	-2.2 (64)	2.9 (86)	14.1 (54)	14.4 (3)	-2.8 (90)	12.3 (53)	26.8 (9)	-27.4 (57)
▲ Allocation Index	16.2 (37)	5.8 (58)	-1.4 (44)	3.5 (77)	13.9 (57)	11.9 (58)	-2.1 (79)	10.7 (83)	21.0 (52)	-24.3 (30)
× Policy Index	16.9 (29)	7.0 (36)	-1.6 (48)	3.5 (78)	13.8 (57)	11.7 (64)	-2.0 (78)	12.3 (51)	20.2 (66)	-21.8 (16)



ALLOCATIONS VS. PEER UNIVERSE



TOTAL PLAN RISK/RETURN - 3 YEAR



3 Years Ending September 30, 2018				
	Anlzd Ret	Rank	Anlzd Std Dev	Rank
MIP Composite	8.0%	80	5.9%	64
Allocation Index	8.8%	61	5.6%	52
Policy Index	9.4%	43	5.7%	57
InvestorForce All E&F \$100mm - \$500mm Net Median	9.2%	--	5.6%	--

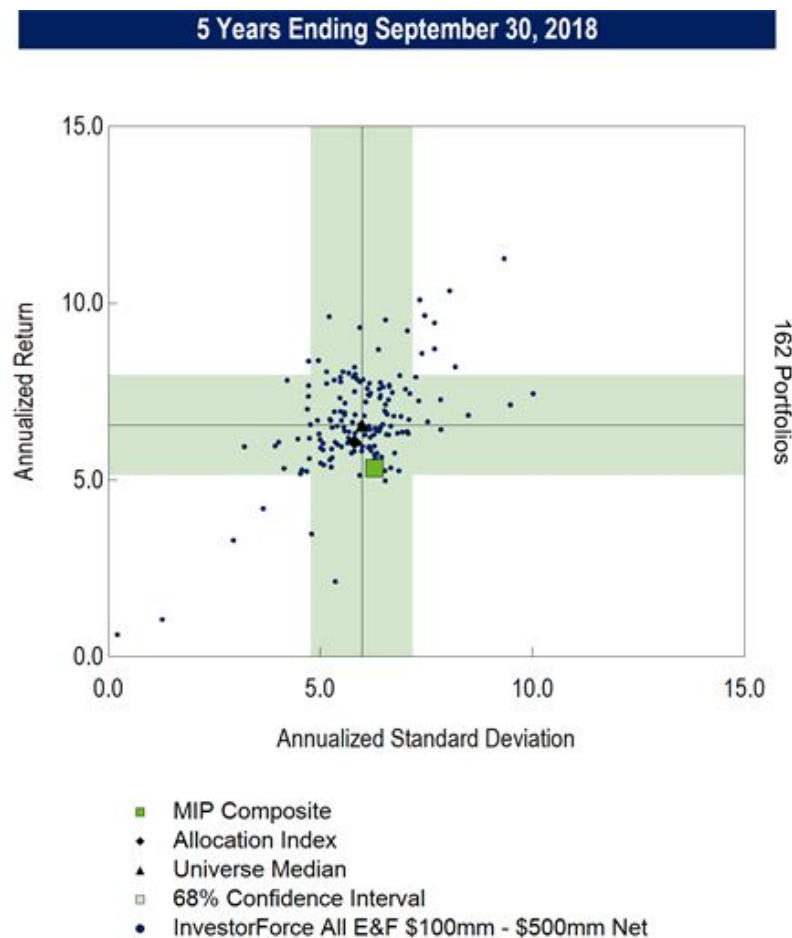
3 Years Ending September 30, 2018				
	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
MIP Composite	1.2	95	1.8	76
Allocation Index	1.4	66	2.1	35
Policy Index	1.5	45	2.2	21
InvestorForce All E&F \$100mm - \$500mm Net Median	1.5	--	1.9	--

*Returns are net of fees.



September 30, 2018

TOTAL PLAN RISK/RETURN - 5 YEAR



5 Years Ending September 30, 2018				
	Anlzd Ret	Rank	Anlzd Std Dev	Rank
MIP Composite	5.3%	91	6.3%	65
Allocation Index	6.1%	71	5.8%	42
Policy Index	6.4%	58	5.8%	45
InvestorForce All E&F \$100mm - \$500mm Net Median	6.6%	--	6.0%	--

5 Years Ending September 30, 2018				
	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
MIP Composite	0.8	93	1.2	91
Allocation Index	1.0	67	1.4	59
Policy Index	1.0	54	1.5	42
InvestorForce All E&F \$100mm - \$500mm Net Median	1.0	--	1.5	--

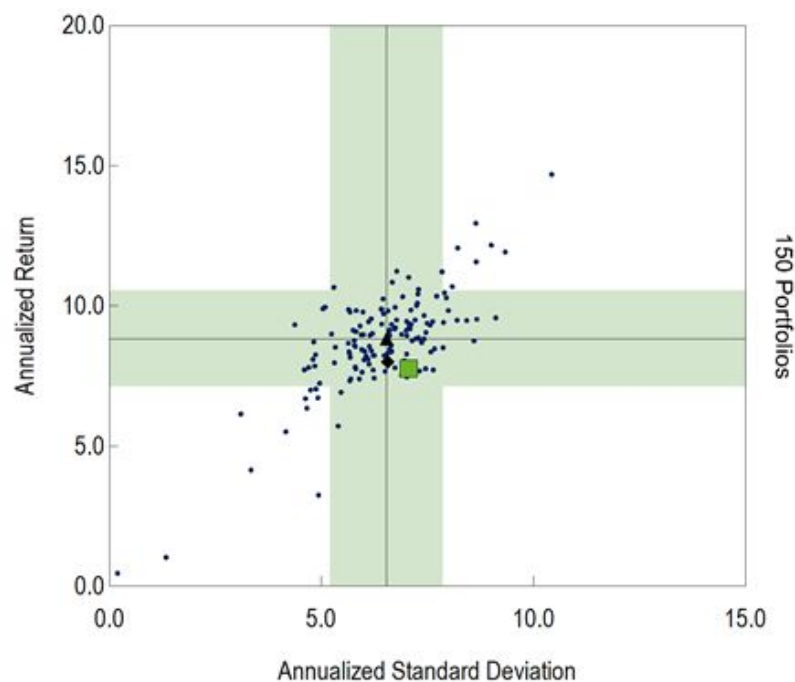
*Returns are net of fees.



September 30, 2018

TOTAL PLAN RISK/RETURN - 7 YEAR

7 Years Ending September 30, 2018



- MIP Composite
- ◆ Allocation Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce All E&F \$100mm - \$500mm Net

7 Years Ending September 30, 2018

	Annzd Ret	Rank	Annzd Std Dev	Rank
MIP Composite	7.8%	81	7.1%	70
Allocation Index	8.0%	75	6.6%	51
Policy Index	8.3%	68	6.6%	52
InvestorForce All E&F \$100mm - \$500mm Net Median	8.8%	--	6.5%	--

7 Years Ending September 30, 2018

	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
MIP Composite	1.0	92	1.6	94
Allocation Index	1.2	81	1.8	74
Policy Index	1.2	71	1.9	57
InvestorForce All E&F \$100mm - \$500mm Net Median	1.3	--	1.9	--

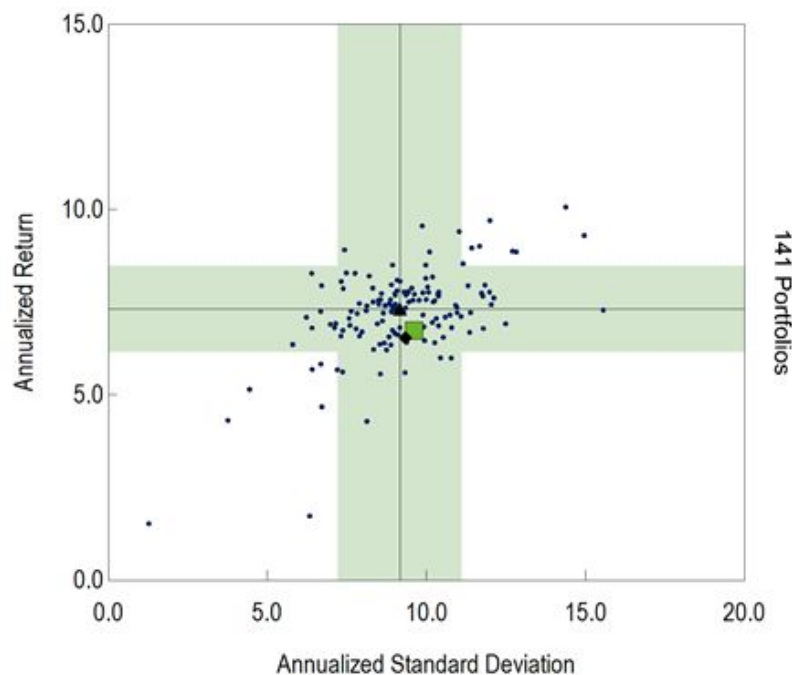
*Returns are net of fees.



September 30, 2018

TOTAL PLAN RISK/RETURN - 10 YEAR

10 Years Ending September 30, 2018



- MIP Composite
- Allocation Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce All E&F \$100mm - \$500mm Net

10 Years Ending September 30, 2018

	Anlzd Ret	Rank	Anlzd Std Dev	Rank
MIP Composite	6.7%	76	9.6%	62
Allocation Index	6.5%	84	9.3%	55
Policy Index	6.8%	74	9.1%	48
InvestorForce All E&F \$100mm - \$500mm Net Median	7.3%	--	9.2%	--

10 Years Ending September 30, 2018

	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
MIP Composite	0.7	75	0.8	62
Allocation Index	0.7	75	0.8	68
Policy Index	0.7	62	0.9	43
InvestorForce All E&F \$100mm - \$500mm Net Median	0.8	--	0.9	--

*Returns are net of fees.

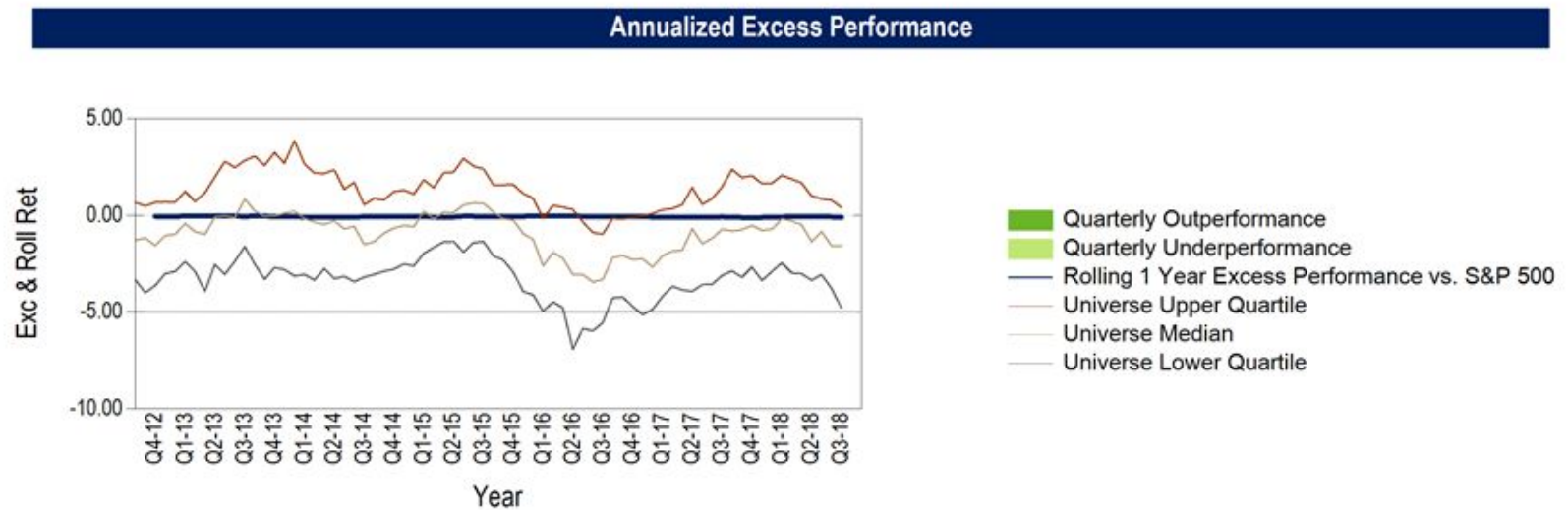


September 30, 2018

MANAGER ANALYSIS

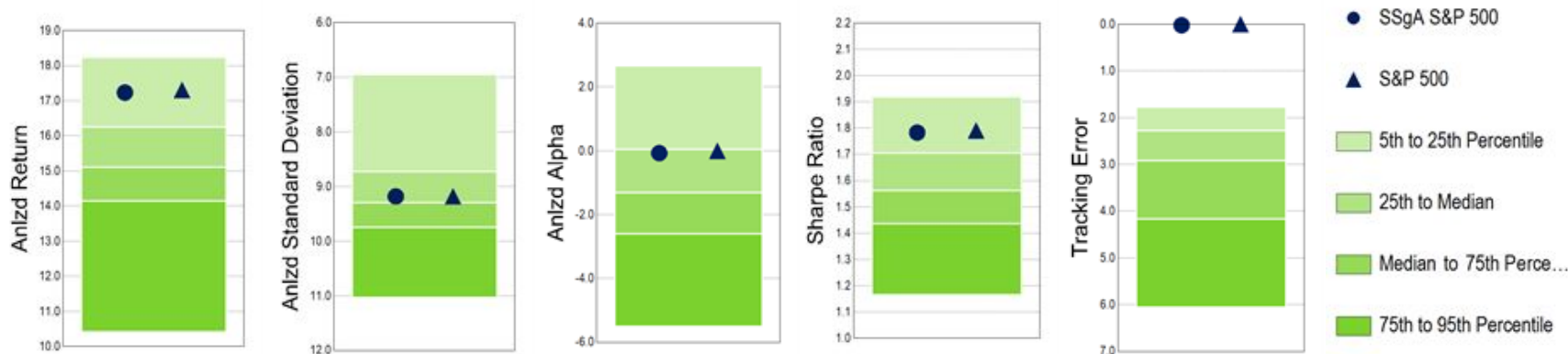
NEPC, LLC

SSgA S&P 500



September 30, 2018

SSgA S&P 500



*Returns are net of fees.

SSgA S&P 500

Characteristics		
	Portfolio	S&P 500
Number of Holdings	506	505
Weighted Avg. Market Cap. (\$B)	228.1	228.1
Median Market Cap. (\$B)	21.5	21.5
Price To Earnings	32.5	24.5
Price To Book	6.8	5.3
Price To Sales	4.3	4.1
Return on Equity (%)	24.6	22.8
Yield (%)	1.9	1.9
Beta		1.0
R-Squared		1.0

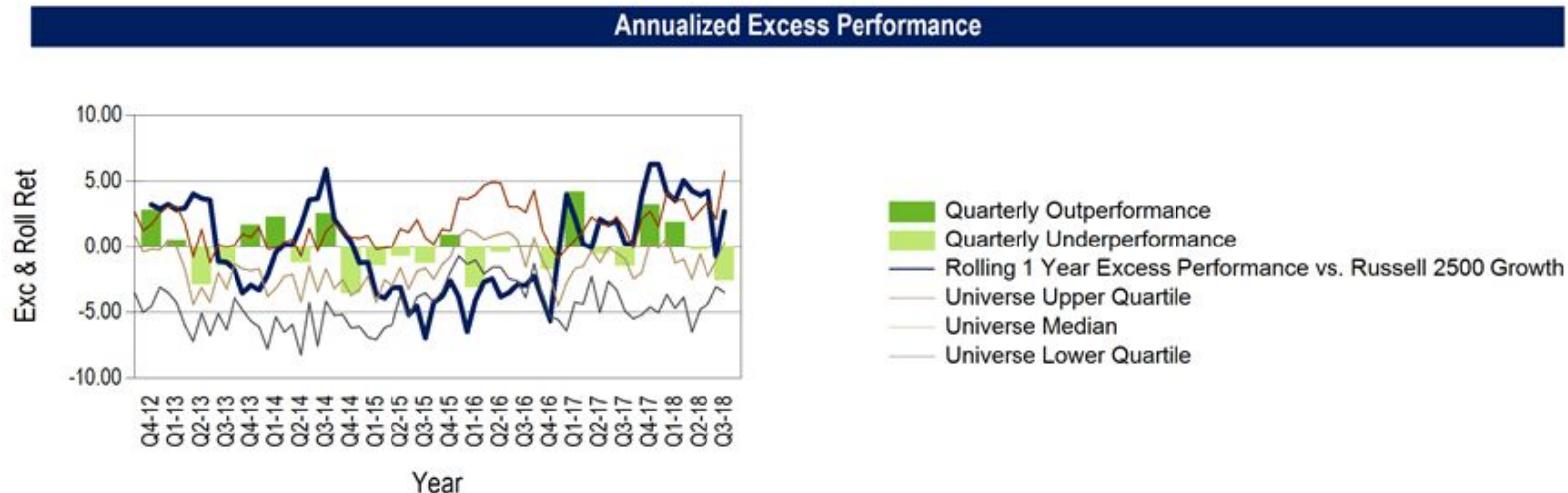
Equity Sector Attribution									
	Attribution Effects				Returns		Ending Sector Weights		
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark	
Energy	0.0%	0.0%	0.0%	0.0%	0.5%	0.5%	6.0%	6.0%	
Materials	0.0%	0.0%	0.0%	0.0%	0.4%	0.3%	2.4%	2.4%	
Industrials	0.0%	0.0%	0.0%	0.0%	10.1%	10.1%	9.7%	9.7%	
Consumer Discretionary	0.0%	0.0%	0.0%	0.0%	8.2%	8.3%	10.3%	10.3%	
Consumer Staples	0.0%	0.0%	0.0%	0.0%	5.9%	5.9%	6.7%	6.7%	
Health Care	0.0%	0.0%	0.0%	0.0%	14.5%	14.5%	15.0%	15.0%	
Financials	0.0%	0.0%	0.0%	0.0%	4.4%	4.4%	13.3%	13.3%	
Information Technology	0.0%	0.0%	0.0%	0.0%	9.1%	9.1%	21.0%	21.0%	
Communication Services	0.0%	0.0%	0.0%	0.0%	7.1%	7.1%	10.0%	10.0%	
Utilities	0.0%	0.0%	0.0%	0.0%	2.4%	2.4%	2.8%	2.8%	
Real Estate	0.0%	0.0%	0.0%	0.0%	0.7%	0.7%	2.6%	2.7%	
Cash	0.0%	--	--	--	--	--	0.1%	0.0%	
Unclassified	0.0%	--	--	--	--	--	--	--	
Portfolio	0.0%	=	0.0%	+	0.0%	+	0.0%	+	0.0%
					7.7%	7.7%	100.0%	100.0%	

*Attribution on manager pages is holdings based, using buy-and-hold assumptions from the beginning of period portfolio. Results may differ from actual performance. Returns are net of fees.



September 30, 2018

WESTFIELD CAPITAL

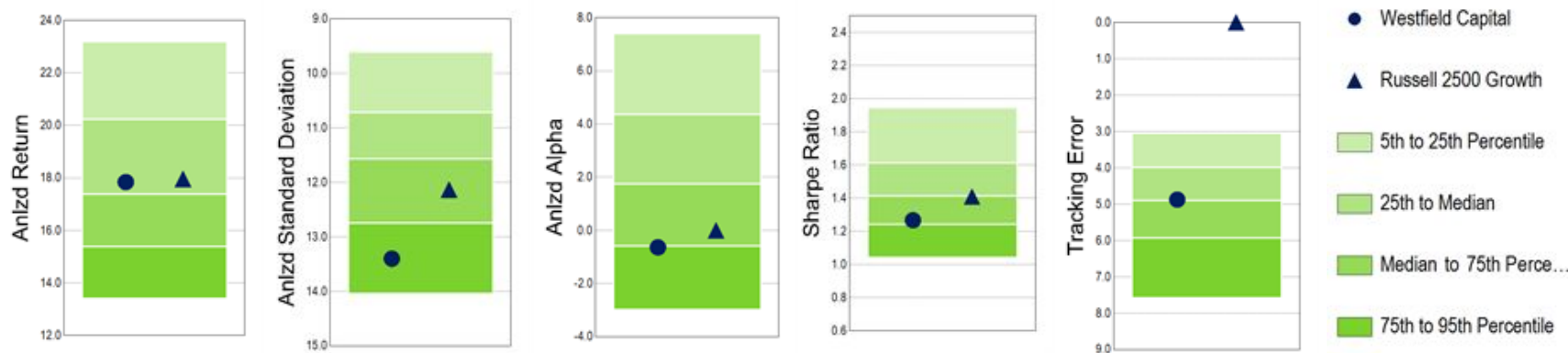


*Returns are net of fees.



September 30, 2018

WESTFIELD CAPITAL



*Returns are net of fees.



September 30, 2018

WESTFIELD CAPITAL

Characteristics			Top Positive Contributors			Top Negative Contributors		
	Portfolio	Russell 2500 Growth		Relative Contribution %	Return %		Relative Contribution %	Return %
Number of Holdings	70	1,501	FORTINET	0.7%	47.8%	SCIENTIFIC GAMES	-0.4%	-48.3%
Weighted Avg. Market Cap. (\$B)	8.9	5.7	FLOWERVE	0.5%	35.8%	SUMMIT MATERIALS 'A'	-0.4%	-30.7%
Median Market Cap. (\$B)	7.9	1.3	TOTAL SYSTEM SERVICES	0.4%	17.0%	DELPHI TECHNOLOGIES	-0.4%	-30.8%
Price To Earnings	41.1	23.8	TELEDYNE TECHS.	0.4%	23.9%	FLOOR & DECOR HOLDINGS 'A'	-0.4%	-38.8%
Price To Book	7.4	6.9	CRANE	0.4%	23.2%	BUILDERS FIRSTSOURCE	-0.3%	-19.7%
Price To Sales	3.9	4.0	REALPAGE	0.3%	19.6%	MEDICINES COMPANY	-0.3%	-18.5%
Return on Equity (%)	16.6	13.3	ARTHUR J GALLAGHER	0.3%	14.7%	MASTEC	-0.2%	-12.0%
Yield (%)	0.8	0.6	GARTNER 'A'	0.3%	19.3%	CLOVIS ONCOLOGY	-0.2%	-35.4%
Beta		1.0	ESSENT GROUP	0.3%	23.5%	ON SEMICONDUCTOR	-0.2%	-17.1%
R-Squared		1.0	FLIR SYSTEMS	0.3%	18.6%	SAREPTA THERAPEUTICS	-0.1%	22.2%

Equity Sector Attribution											
	Attribution Effects				Returns		Ending Sector Weights				
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.2%	0.2%	-0.2%	0.2%	6.4%	-6.3%	4.4%	1.6%			
Materials	-0.5%	-0.2%	-0.2%	-0.1%	-4.4%	-0.6%	5.9%	4.6%			
Industrials	-0.1%	0.0%	0.0%	0.0%	6.2%	6.4%	16.8%	16.9%			
Consumer Discretionary	-1.2%	-1.5%	0.1%	0.2%	-6.8%	2.4%	8.8%	15.3%			
Consumer Staples	-0.1%	-0.1%	0.0%	0.0%	0.1%	4.6%	1.6%	2.0%			
Health Care	-1.6%	-1.9%	-0.2%	0.5%	1.8%	10.3%	16.7%	22.9%			
Financials	0.5%	0.5%	0.0%	0.0%	7.6%	1.1%	9.9%	6.9%			
Information Technology	-0.3%	-0.3%	0.0%	0.0%	11.9%	13.4%	27.4%	23.8%			
Communication Services	0.0%	--	0.0%	--	--	5.9%	3.8%	3.3%			
Utilities	0.0%	--	0.0%	--	--	4.5%	0.0%	0.2%			
Real Estate	0.1%	0.1%	0.0%	0.0%	6.4%	3.2%	2.6%	2.5%			
Cash	-0.1%	0.0%	-0.1%	0.0%	0.5%	--	2.0%	0.0%			
Portfolio	-3.0%	=	-3.3%	+	-0.5%	+	0.8%	4.2%	7.2%	100.0%	100.0%

*Attribution on manager pages is holdings based, using buy-and-hold assumptions from the beginning of period portfolio. Results may differ from actual performance. Returns are net of fees.

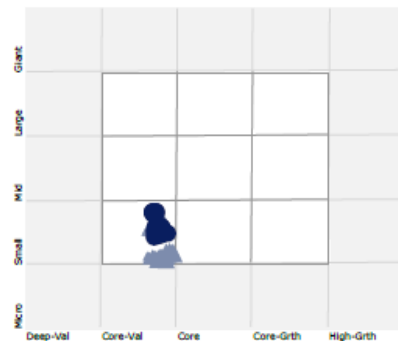


September 30, 2018

DFA US TARGETED VALUE I

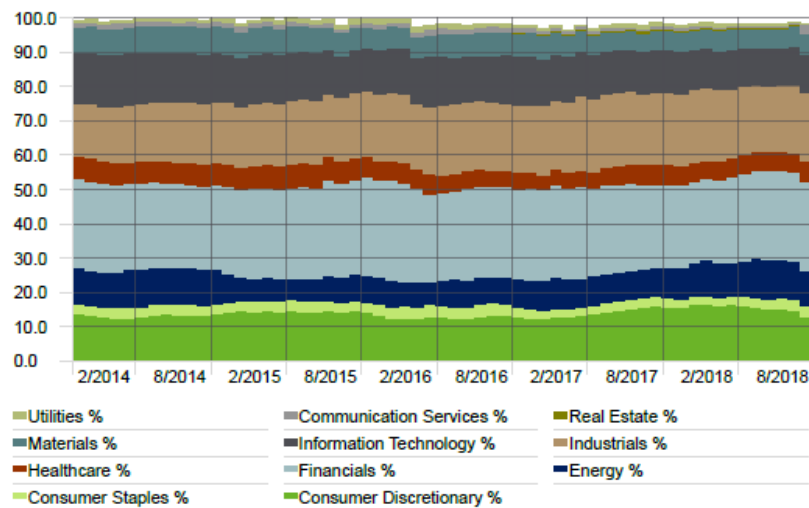
Holdings Based Style Trail (5 Years)

Time Period: 10/31/2013 to 9/30/2018



• DFA US Targeted Value I • Russell 2000 Value TR USD

Historical Sector Allocations (5 Years)



Portfolio Statistics

	Fund	Index
# of Holdings	1,502	1,386
% Asset in Top 10 Holdings	5.7	4.1
Turnover Ratio %	23.0	
P/E Ratio	14.6	14.6
P/B Ratio	1.5	1.5
LT Earn Growth	13.0	11.8
Hist Earn Growth	5.7	1.4
12 Mo Yield	1.0	

Market Capitalization Breakdown

	Fund	Index
Market Cap Giant %	0.0	0.0
Market Cap Large %	0.4	0.0
Market Cap Mid %	38.5	16.6
Market Cap Small %	52.4	70.5
Market Cap Micro %	8.6	12.8
Average Market Cap (mil)	2,475.4	1,786.7

Top 10 Holdings

	Portf Weight %	3 Month Ret %
S+p500 Emini Fut Sep18 Xome 20180921	0.75	
Arrow Electronics Inc	0.65	-2.07
Avnet Inc	0.62	4.85
People's United Financial Inc	0.58	-4.39
Reliance Steel & Aluminum Co	0.56	-2.00
PBF Energy Inc Class A	0.54	19.75
Toll Brothers Inc	0.53	-10.41
Assurant Inc	0.51	4.85
Post Holdings Inc	0.49	13.97
PacWest Bancorp	0.48	-2.37

Attribution (Quarter)

	Portfolio Weights	Benchmark Weights	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Active Return
Communication Services	2.49	2.75	5.84	10.26	-0.02	-0.11	-0.13
Consumer Discretionary	13.26	9.42	0.09	1.84	0.00	-0.23	-0.22
Consumer Staples	3.22	2.65	-3.54	-6.79	-0.05	0.11	0.06
Energy	10.72	7.39	-0.93	-1.80	-0.13	0.09	-0.03
Financials	26.03	28.48	0.25	0.70	0.02	-0.12	-0.10
Health Care	5.63	4.83	11.62	7.60	0.05	0.22	0.27
Industrials	19.69	11.82	5.00	5.05	0.28	-0.01	0.27
Information Technology	10.59	10.43	1.34	1.55	-0.01	-0.02	-0.04
Materials	5.86	4.39	-3.66	1.19	0.00	-0.30	-0.30
Real Estate	0.50	11.75	-7.31	-0.95	0.29	-0.03	0.26
Utilities	0.12	5.82	0.57	3.71	-0.12	-0.01	-0.13
Attribution Total	98.12	99.74	1.49	1.60	0.30	-0.41	-0.11
Cash	0.88	0.00					
Other	0.80	0.00					
Total	100.14	100.00					
Expense Ratio			0.09	0.00			
Residual(Reported - Attribution + Expense)			0.11	0.00			



Source: Morningstar

September 30, 2018

DFA US TARGETED VALUE I

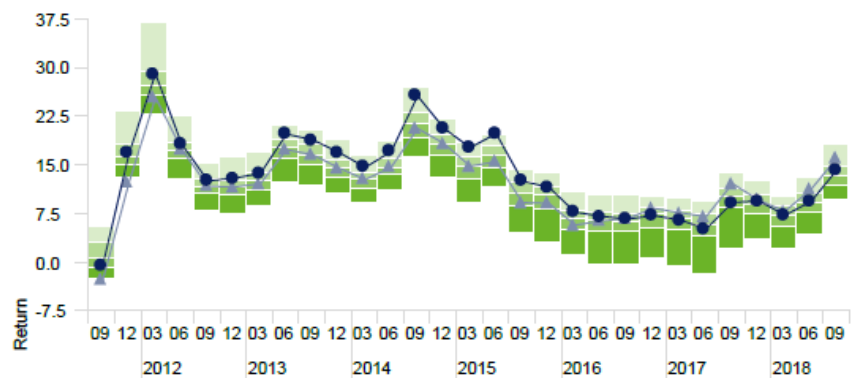
Risk & Return Characteristics (5 Years)

Time Period: 10/1/2013 to 9/30/2018

	Fund	Index
R2	88.7	100.0
Alpha	1.0	0.0
Beta	0.9	1.0
Std Dev	10.9	11.8
Up Capture Ratio	92.3	100.0
Down Capture Ratio	82.4	100.0
Sharpe Ratio (geo)	0.8	0.8
Information Ratio (geo)	-0.1	
Tracking Error	4.0	0.0
Correlation	0.9	1.0

Rolling Return (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



—DFA US Targeted Value I

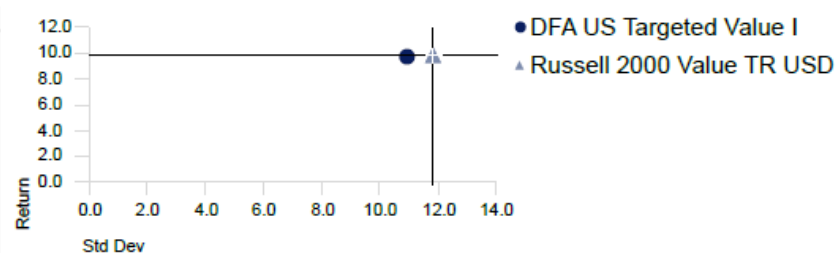
—Russell 2000 Value TR USD

Calendar Year Returns

	2008	Rank	2009	Rank	2010	Rank	2011	Rank	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	2017	Rank
DFA US Targeted Value I	-33.8	68	31.9	37	29.0	24	-6.3	72	19.2	23	43.0	10	2.9	65	-5.7	46	26.9	40	9.6	40
Russell 2000 Value TR USD	-28.9		20.6		24.5		-5.5		18.1		34.5		4.2		-7.5		31.7		7.8	

Risk & Return Illustration (5 Years)

Time Period: 10/1/2013 to 9/30/2018

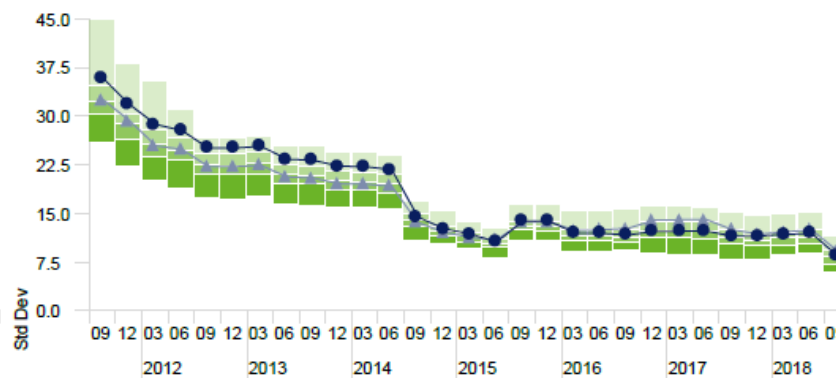


● DFA US Targeted Value I

▲ Russell 2000 Value TR USD

Rolling Risk (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



—DFA US Targeted Value I

—Russell 2000 Value TR USD



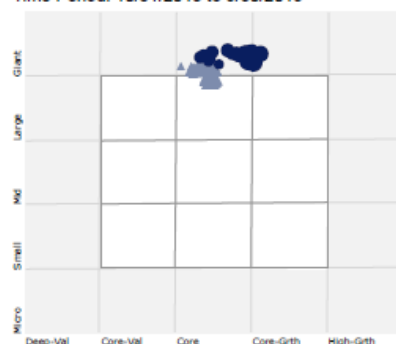
Source: Morningstar

September 30, 2018

MORGAN STANLEY INTERNATIONAL EQUITY I

Holdings Based Style Trail (5 Years)

Time Period: 10/31/2013 to 9/30/2018



• Morgan Stanley Int'l International Eq I • MSCI EAFE NR USD

Portfolio Statistics

	Fund	Index
# of Holdings	63	924
% Asset in Top 10 Holdings	37.8	11.5
Turnover Ratio %	18.0	
P/E Ratio	14.3	14.5
P/B Ratio	2.3	1.6
LT Earn Growth	9.6	9.3
Hist Earn Growth	27.3	2.1
12 Mo Yield	1.5	

Market Capitalization Breakdown

	Fund	Index
Market Cap Giant %	65.7	51.4
Market Cap Large %	29.5	36.3
Market Cap Mid %	3.8	12.1
Market Cap Small %	1.0	0.0
Market Cap Micro %	0.0	0.1
Average Market Cap	53,063.9	35,513.3
Equity Region Developed %	95.9	99.6
Equity Region Emerging %	4.1	0.4

Top Ten Holdings

	Port Weight %	3 Month Return
Reckitt Benckiser Group PLC	4.79	12.19
Unilever NV DR	4.63	0.66
L'Oreal SA	4.26	-2.31
GlaxoSmithKline PLC	4.25	0.45
British American Tobacco PLC	3.70	-7.56
Pernod Ricard SA	3.60	1.19
Shiseido Co Ltd	3.32	-2.47
SAP SE	3.20	6.57
Sanofi SA	3.15	10.94
Novartis AG	2.92	13.97

Sector Attribution (Quarter)

	Portfolio Weights	Benchmark Weights	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Active Return
Communication Services	4.18	5.43	-1.83	3.28	-0.02	-0.22	-0.24
Consumer Discretionary	3.08	11.13	-6.32	-0.51	0.15	-0.19	-0.04
Consumer Staples	34.34	11.29	-0.68	-0.12	-0.36	-0.20	-0.56
Energy	3.78	5.99	9.68	3.48	-0.03	0.21	0.18
Financials	15.00	19.75	0.62	0.92	0.02	-0.05	-0.03
Health Care	14.85	10.93	2.69	5.61	0.18	-0.44	-0.26
Industrials	12.45	14.35	8.13	2.55	-0.02	0.67	0.65
Information Technology	5.28	6.23	3.59	0.26	0.00	0.19	0.19
Materials	5.06	8.08	-9.23	0.44	0.03	-0.53	-0.51
Real Estate	0.00	3.50		-3.03	0.16	0.00	0.16
Utilities	0.00	3.29		-0.56	0.06	0.00	0.06
Attribution Total	98.02	99.97	1.00	1.39	0.17	-0.56	-0.39
Cash	1.98	0.00					
Other	0.00	0.03					
Total	100.00	100.00					

Region Attribution (Quarter)

	Portfolio Weights	Benchmark Weights	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Active Return
Asia - Developed	4.65	5.24	2.11	-0.68	0.01	0.14	0.15
Asia - Emerging	3.94	0.53	-4.43	-12.00	-0.49	0.33	-0.17
Australasia	0.00	7.03		-0.75	0.15	0.00	0.15
Canada	2.46	0.00	-11.58		-0.36	0.00	-0.36
Europe - ex Euro	6.68	13.30	5.66	6.08	-0.30	-0.03	-0.33
Eurozone	39.38	31.17	0.51	0.42	-0.08	0.03	-0.04
Japan	13.68	23.90	0.55	3.67	-0.23	-0.42	-0.66
Latin America	0.00	0.02		-28.47	0.01	0.00	0.01
Middle East	0.00	0.48		1.44	0.00	0.00	0.00
United Kingdom	22.92	16.77	2.74	-1.80	-0.20	1.06	0.86
United States	4.30	1.53	1.98	3.30	0.05	-0.05	0.00
Attribution Total	98.02	99.97	1.00	1.39	-1.44	1.05	-0.39
Cash	1.98	0.00					
Other	0.00	0.03					
Total	100.00	100.00					



Source: Morningstar

September 30, 2018

MORGAN STANLEY INTERNATIONAL EQUITY I

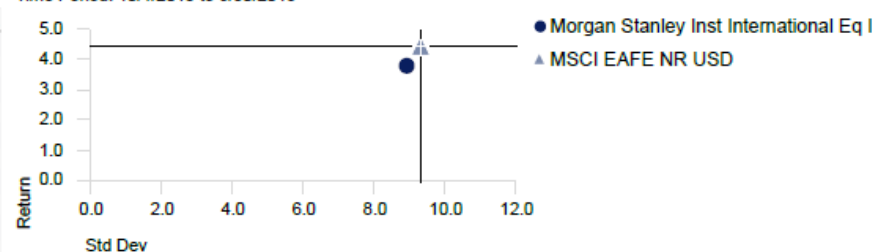
Risk & Return Characteristics (5 Years)

Time Period: 10/1/2013 to 9/30/2018

	Fund	Index
R2	89.8	100.0
Alpha	-0.2	0.0
Beta	0.9	1.0
Std Dev	8.9	9.4
Up Capture Ratio	89.6	100.0
Down Capture Ratio	92.6	100.0
Sharpe Ratio (geo)	0.4	0.4
Information Ratio (geo)	-0.2	
Tracking Error	3.0	0.0
Correlation	0.9	1.0

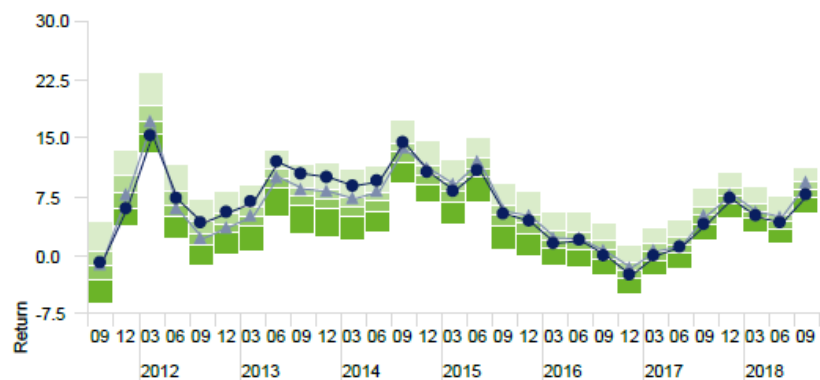
Risk & Return Illustration (5 Years)

Time Period: 10/1/2013 to 9/30/2018



Rolling Returns (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile

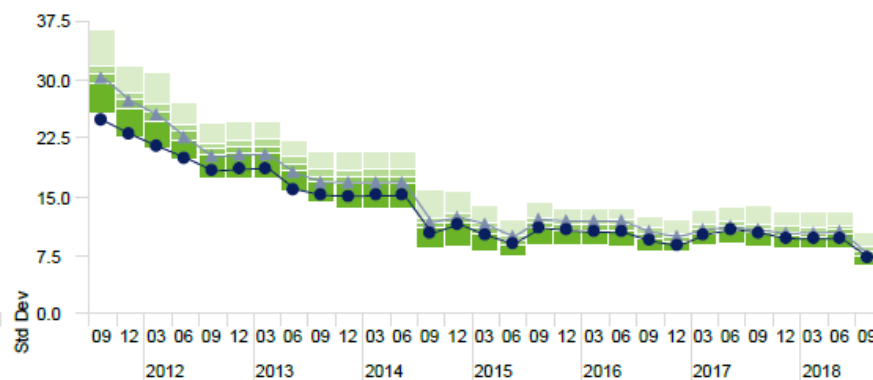


—Morgan Stanley Inst International Eq I

—MSCI EAFE NR USD

Rolling Risk (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



—Morgan Stanley Inst International Eq I

—MSCI EAFE NR USD

Calendar Year Returns

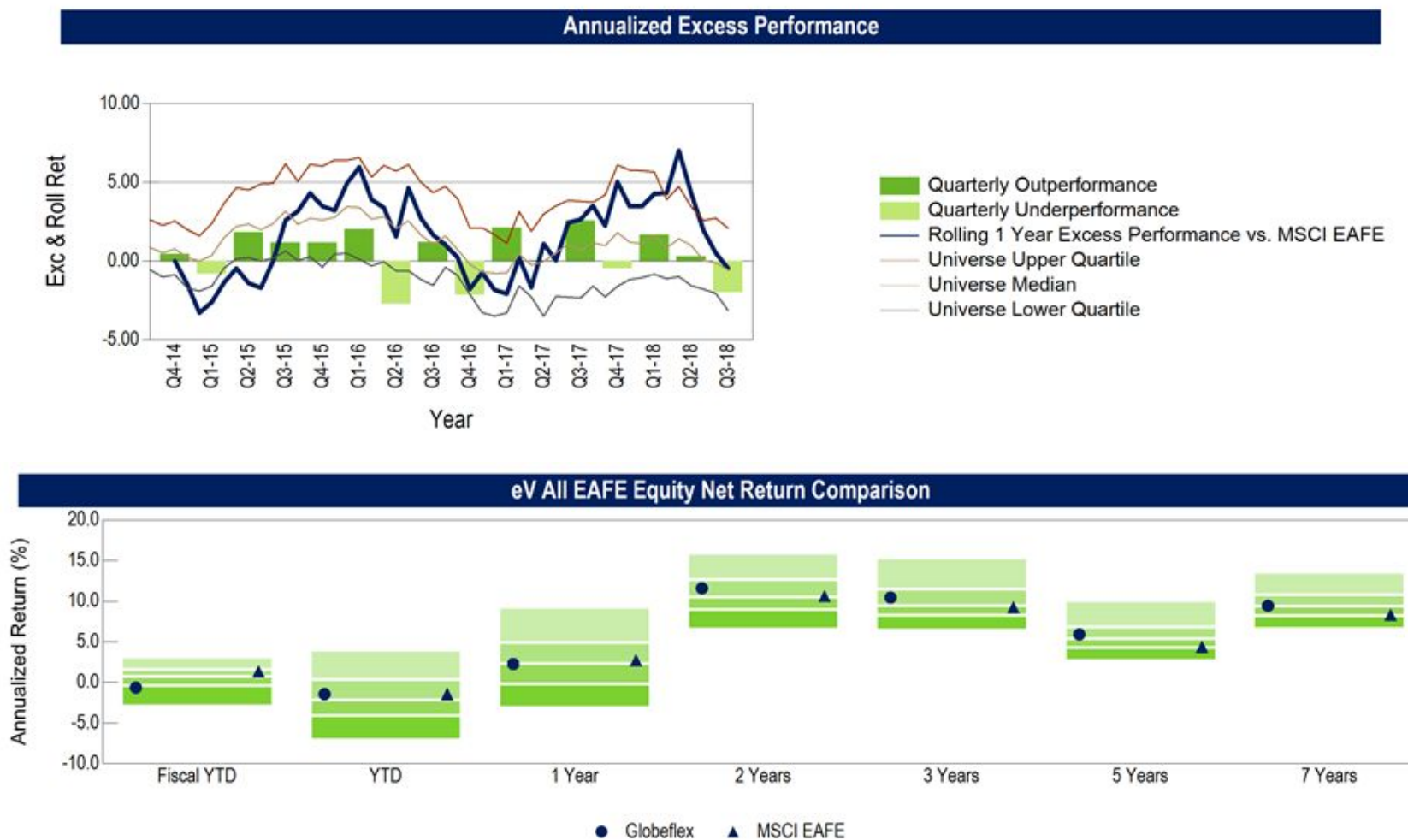
	2008	Rank	2009	Rank	2010	Rank	2011	Rank	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	2017	Rank
Morgan Stanley Inst International Eq I	-33.1	8	21.6	85	6.1	87	-7.6	5	19.6	26	20.4	43	-6.1	64	0.4	30	-2.0	82	25.2	53
MSCI EAFE NR USD	-43.4		31.8		7.8		-12.1		17.3		22.8		-4.9		-0.8		1.0		25.0	



Source: Morningstar

September 30, 2018

GLOBEFLEX

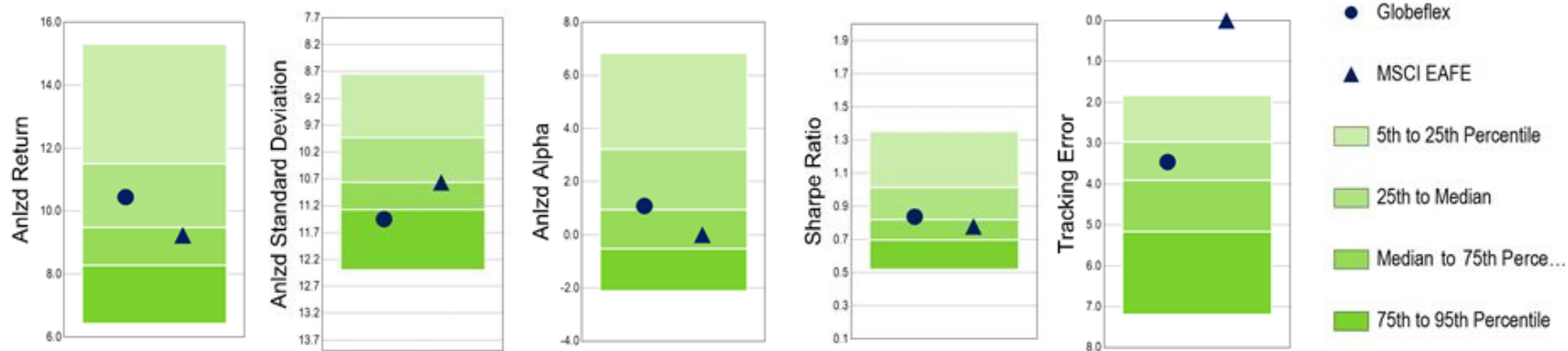


*Returns are net of fees.



September 30, 2018

GLOBEFLEX



*Returns are net of fees.



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GLOBEFLEX

Characteristics	Portfolio	MSCI EAFE
Number of Holdings	126	924
Weighted Avg. Market Cap. (\$B)	26.8	57.8
Median Market Cap. (\$B)	11.9	10.8
Price To Earnings	18.4	19.0
Price To Book	2.6	2.6
Price To Sales	1.8	2.3
Return on Equity (%)	21.4	14.7
Yield (%)	3.2	3.1
Beta		1.0
R-Squared		1.0

Top Positive Contributors	Relative Contribution %	Return %
IDEMITSU KOSAN	0.5%	49.6%
EISAI	0.3%	39.1%
LONZA GROUP	0.3%	29.2%
EVRAZ	0.2%	17.6%
AKER BP	0.2%	16.0%
ESURE GROUP	0.2%	26.1%
ASR NEDERLAND	0.2%	18.6%
SOMPO HOLDINGS	0.1%	6.7%
PEUGEOT	0.1%	18.1%
DB INSURANCE	0.1%	24.0%

Top Negative Contributors	Relative Contribution %	Return %
STMICROELECTRONICS (MIL)	-0.3%	-18.3%
VALEO	-0.2%	-20.5%
LOTTE CHEMICAL	-0.2%	-19.7%
SCREEN HOLDINGS	-0.1%	-17.0%
TNSC.'A' SBVTG.	-0.1%	-23.0%
PLUS500	-0.1%	-12.7%
COVESTRO	-0.1%	-9.0%
SK HYNIX	-0.1%	-14.3%
CANFOR	-0.1%	-22.5%
TOKYO ELECTRON	-0.1%	-18.0%

Equity Sector Attribution									
	Attribution Effects				Returns		Ending Sector Weights		
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark	
Energy	0.4%	0.1%	0.2%	0.1%	5.7%	3.5%	13.5%	6.2%	
Materials	-0.8%	-0.4%	0.0%	-0.3%	-4.4%	0.5%	13.5%	8.1%	
Industrials	-0.6%	-0.6%	0.0%	0.0%	-0.8%	2.5%	18.4%	14.5%	
Consumer Discretionary	-0.1%	-0.3%	0.0%	0.1%	-2.3%	-0.3%	5.3%	11.0%	
Consumer Staples	0.1%	-0.2%	0.1%	0.2%	-1.9%	-0.1%	3.2%	11.1%	
Health Care	0.5%	0.6%	0.0%	-0.1%	10.4%	5.6%	14.6%	11.1%	
Financials	0.4%	0.3%	0.0%	0.0%	2.9%	0.8%	15.8%	19.8%	
Information Technology	-0.8%	-0.8%	0.0%	0.0%	-10.2%	0.4%	5.5%	6.1%	
Communication Services	-0.1%	-0.1%	0.0%	0.0%	2.0%	4.2%	4.7%	5.5%	
Utilities	-0.1%	-0.1%	0.0%	0.0%	-4.5%	-0.6%	3.1%	3.2%	
Real Estate	0.1%	0.0%	0.0%	0.0%	-2.1%	-3.0%	1.8%	3.4%	
Cash	0.0%	--	--	--	--	--	0.0%	0.0%	
Portfolio	-1.0%	=	-1.4%	+	0.4%	+	0.0%		
					0.4%	1.4%	99.4%	100.0%	

*Attribution on manager pages is holdings based, using buy-and-hold assumptions from the beginning of period portfolio. Results may differ from actual performance. Returns are net of fees.



September 30, 2018

GLOBEFLEX

Country Allocation				
	Manager Ending Allocation (USD)	Index Ending Allocation (USD)	Manager Return (USD)	Index Return (USD)
Americas				
Canada	9.1%	0.0%	-4.5%	0.8%
United States	0.5%	0.0%	-12.3%	7.4%
Total-Americas	9.7%	0.0%	-4.9%	--
Europe				
Austria	2.6%	0.2%	-0.9%	0.4%
Denmark	0.8%	1.7%	-12.1%	2.4%
France	7.7%	11.3%	-4.4%	2.9%
Germany	5.3%	9.5%	-0.6%	-0.6%
Italy	5.0%	2.4%	-2.3%	-4.2%
Netherlands	3.5%	3.4%	5.2%	-1.6%
Norway	1.9%	0.8%	12.6%	6.9%
Portugal	0.6%	0.2%	5.8%	-0.4%
Spain	5.2%	3.0%	-1.1%	-2.4%
Sweden	0.6%	2.8%	-9.9%	6.5%
Switzerland	3.3%	8.2%	16.9%	7.3%
United Kingdom	18.7%	17.6%	-0.1%	-1.6%
Total-Europe	55.5%	63.6%	-0.1%	0.8%

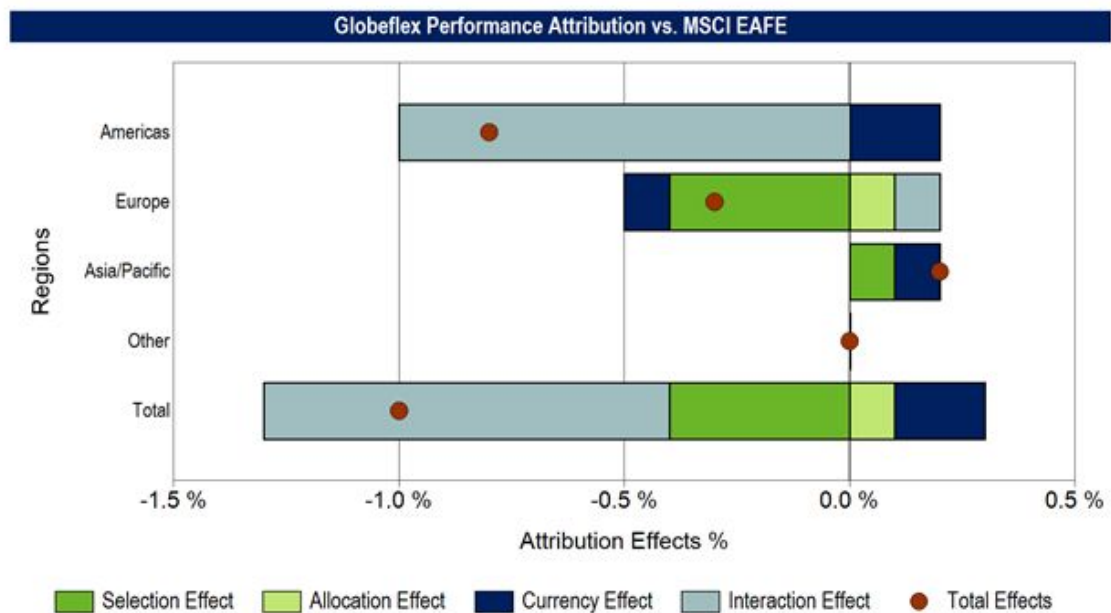
Country Allocation				
	Manager Ending Allocation (USD)	Index Ending Allocation (USD)	Manager Return (USD)	Index Return (USD)
AsiaPacific				
Australia	8.3%	6.7%	0.2%	-0.9%
Hong Kong	2.2%	3.5%	-5.7%	-0.9%
Japan	19.4%	24.2%	5.6%	3.7%
Korea*	4.9%	0.0%	-1.6%	0.7%
Total-AsiaPacific	34.9%	35.9%	2.7%	2.3%
Totals				
Developed	95.1%	100.0%	0.5%	1.4%
Emerging*	4.9%	0.0%	-1.6%	--

*Returns are net of fees.



September 30, 2018

GLOBEFLEX



	Returns and Ending Weights				Attribution Effects				
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	Total Effects
Totals									
Americas	-4.9%	--	9.7%	0.0%	0.0%	0.0%	0.2%	-1.0%	-0.8%
Europe	-0.1%	0.8%	55.5%	63.6%	-0.4%	0.1%	-0.1%	0.1%	-0.3%
Asia/Pacific	2.7%	2.3%	34.9%	35.9%	0.1%	0.0%	0.1%	0.0%	0.2%
Other	--	5.0%	0.0%	0.5%	--	0.0%	0.0%	--	0.0%
Total	0.4%	1.4%	100.0%	100.0%	-0.4%	0.1%	0.2%	-0.9%	-1.0%
Totals									
Developed	0.5%	1.4%	95.1%	100.0%	-0.9%	0.0%	0.2%	0.1%	-0.7%
Emerging*	-1.6%	--	4.9%	0.0%	0.0%	0.0%	0.0%	-0.3%	-0.3%

*Returns are net of fees.



September 30, 2018

KABOUTER INT'L OPPS OFFSHORE FUND II

SECTOR ATTRIBUTION W/CURRENCY															
			Avg % Wgt			CTR			Tot Rtn			Alloc	Selec	Curr	Tot Attr
			Port	Bench	+/-	Port	Bench	+/-	Port	Bench	+/-				
INTL SMALL CAP COMPOSITE - REPORTING			100.00	100.00	0.00	-4.37	-0.82	-3.55	-4.37	-0.82	-3.55	0.47	-4.06	0.04	-3.55
Communication Services			0.00	4.74	-4.74		-0.06	0.06		-1.34	1.34	0.03	0.00	0.05	0.08
Consumer Discretionary			4.64	13.21	-8.58	0.26	-0.53	0.79	5.89	-3.95	9.84	0.25	0.44	0.11	0.80
Consumer Staples			3.78	6.59	-2.82	-0.27	-0.15	-0.12	-7.04	-2.22	-4.82	0.03	-0.17	0.03	-0.11
Energy			0.00	2.87	-2.87		0.18	-0.18		6.42	-6.42	-0.19	0.00	0.03	-0.17
Financials			11.29	11.82	-0.53	-1.06	-0.05	-1.01	-9.31	-0.45	-8.85	0.00	-1.10	0.08	-1.03
Funds			0.38	0.00	0.38	-0.01		-0.01	-0.64		-0.64	0.00	0.00	0.00	0.00
Health Care			21.77	7.54	14.23	-1.15	0.15	-1.30	-5.30	2.05	-7.35	0.39	-1.55	-0.20	-1.35
Industrials			28.02	21.71	6.32	-0.39	0.09	-0.48	-1.35	0.43	-1.78	0.08	-0.60	0.01	-0.50
Information Technology			7.17	9.68	-2.50	-0.79	-0.07	-0.72	-10.17	-0.65	-9.52	-0.01	-0.69	0.01	-0.69
Materials			11.28	8.83	2.44	0.07	-0.26	0.34	0.79	-2.80	3.59	-0.03	0.44	-0.09	0.32
Real Estate			3.20	10.93	-7.72	0.21	-0.07	0.29	7.70	-0.73	8.43	0.00	0.21	0.10	0.31
Utilities			8.47	2.09	6.38	-1.24	-0.04	-1.20	-13.75	-2.16	-11.59	-0.08	-1.04	-0.09	-1.21

*Returns are gross of fees



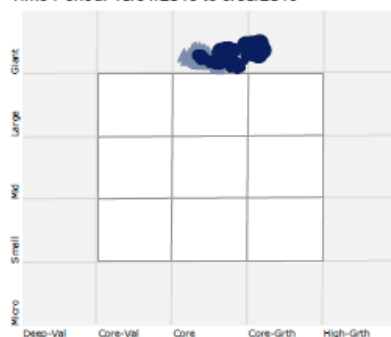
Source: Kabouter

September 30, 2018

ABERDEEN EMERGING MARKET EQUITY

Holdings Based Style Trail (5 Years)

Time Period: 10/31/2013 to 9/30/2018



Aberdeen Emerging Markets Instl MSCI EM NR USD

Portfolio Statistics

	Fund	Index
# of Holdings	66	1,151
% Asset in Top 10 Holdings	35.9	24.0
Turnover Ratio %	16.6	
P/E Ratio	16.2	12.6
P/B Ratio	2.4	1.6
LT Eam Growth	14.6	
Hist Eam Growth	15.5	5.5
12 Mo Yield	1.5	

Market Capitalization Breakdown

	Fund	Index
Market Cap Giant %	65.5	54.5
Market Cap Large %	26.2	33.9
Market Cap Mid %	6.4	10.3
Market Cap Small %	1.8	1.3
Market Cap Micro %	0.0	0.0
Average Market Cap	38,950.2	31,081.5
Equity Region Developed %	21.4	30.4
Equity Region Emerging %	78.6	69.6

Top Ten Holdings

	Port Weight %	3 Month Return
Tencent Holdings Ltd	6.56	-17.71
Samsung Electronics Co Ltd Participating Preferred	6.36	1.01
Taiwan Semiconductor Manufacturing Co Ltd	5.17	21.07
Housing Development Finance Corp Ltd	3.38	-12.27
Ping An Insurance (Group) Co. of China Ltd H	2.74	11.38
Bank Bradesco SA ADR	2.50	4.14
AIA Group Ltd	2.49	2.59
Vale SA ADR	2.44	18.86
PJSC Lukoil ADR	2.12	15.18
PT Astra International Tbk	2.10	7.09

Sector Attribution (Quarter)

	Portfolio Weights	Benchmark Weights	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Active Return
Communication Services	12.31	14.65	-12.59	-9.45	0.24	-0.42	-0.17
Consumer Discretionary	11.44	11.16	-5.95	-9.86	-0.02	0.46	0.44
Consumer Staples	13.40	6.63	-2.15	-2.90	-0.12	0.12	0.00
Energy	2.98	6.27	1.80	14.79	-0.51	-0.36	-0.87
Financials	25.79	23.04	0.80	1.55	0.09	-0.18	-0.09
Health Care	1.26	3.09	-1.45	-7.18	0.11	0.07	0.19
Industrials	2.96	5.21	14.83	2.55	-0.08	0.35	0.27
Information Technology	14.52	15.65	4.97	2.20	-0.04	0.39	0.36
Materials	9.13	7.74	12.71	4.50	0.07	0.71	0.78
Real Estate	5.17	2.86	0.73	-5.59	-0.10	0.34	0.24
Utilities	0.00	2.46		-1.90	0.02	0.00	0.02
Attribution Total	98.97	98.77	-0.01	-1.17	-0.33	1.49	1.16
Cash	1.03	0.00					
Other	0.00	0.07					
Missing Performance	0.00	1.17					
Total	100.00	100.00					

Region Attribution (Quarter)

	Portfolio Weights	Benchmark Weights	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Active Return
Africa	3.46	6.27	-8.11	-8.46	0.19	0.02	0.20
Asia - Developed	19.86	27.42	4.39	2.16	-0.26	0.43	0.17
Asia - Emerging	50.63	47.15	-3.30	-3.92	-0.10	0.32	0.22
Europe - Emerging	5.84	4.55	-0.50	1.83	0.05	-0.17	-0.11
Eurozone	0.06	0.36	3.13	-13.33	0.04	0.00	0.05
Latin America	17.98	10.98	7.37	5.01	0.42	0.42	0.84
Middle East	0.00	1.54		8.24	-0.14	0.00	-0.14
United Kingdom	0.63	0.26	-8.63	4.49	0.02	-0.09	-0.07
United States	0.50	0.23	-9.15	-15.85	-0.04	0.04	0.00
Attribution Total	98.97	98.77	-0.01	-1.17	0.18	0.97	1.16
Cash	1.03	0.00					
Other	0.00	0.07					
Missing Performance	0.00	1.17					
Total	100.00	100.00					



Source: Morningstar

September 30, 2018

ABERDEEN EMERGING MARKET EQUITY

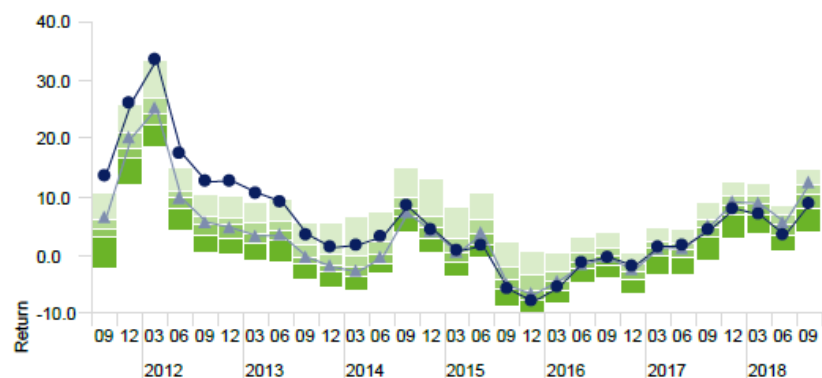
Risk & Return Characteristics (5 Years)

Time Period: 10/1/2013 to 9/30/2018

	Fund	Index
R2	89.5	100.0
Alpha	-1.9	0.0
Beta	0.9	1.0
Std Dev	13.0	13.5
Up Capture Ratio	83.3	100.0
Down Capture Ratio	101.9	100.0
Sharpe Ratio (geo)	0.1	0.2
Information Ratio (geo)	-0.5	
Tracking Error	4.4	0.0
Correlation	0.9	1.0

Rolling Returns (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



—Aberdeen Emerging Markets Instl

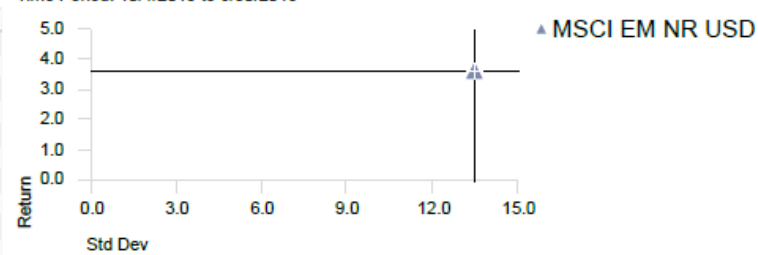
—MSCI EM NR USD

Calendar Year Returns

	2008	Rank	2009	Rank	2010	Rank	2011	Rank	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	2017	Rank
Aberdeen Emerging Markets Instl	-40.4	1	76.6	32	27.6	6	-11.0	4	26.2	8	-7.5	93	-2.5	43	-13.7	45	12.0	24	30.2	70
MSCI EM NR USD	-53.3		78.5		18.9		-18.4		18.2		-2.6		-2.2		-14.9		11.2		37.3	

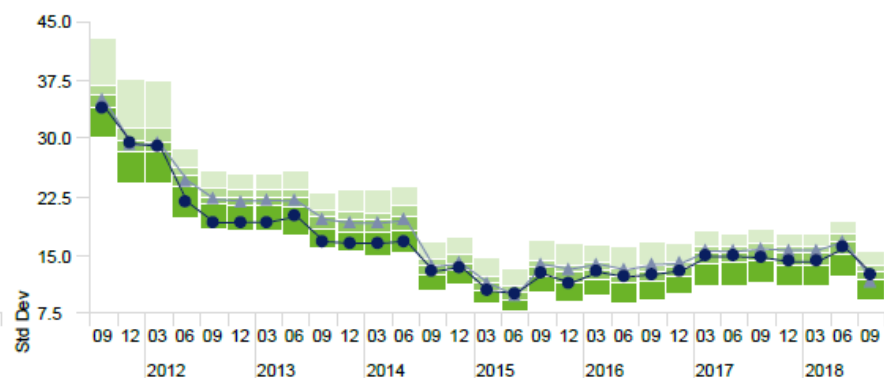
Risk & Return Illustration (5 Years)

Time Period: 10/1/2013 to 9/30/2018



Rolling Risk (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



—Aberdeen Emerging Markets Instl

—MSCI EM NR USD



Source: Morningstar

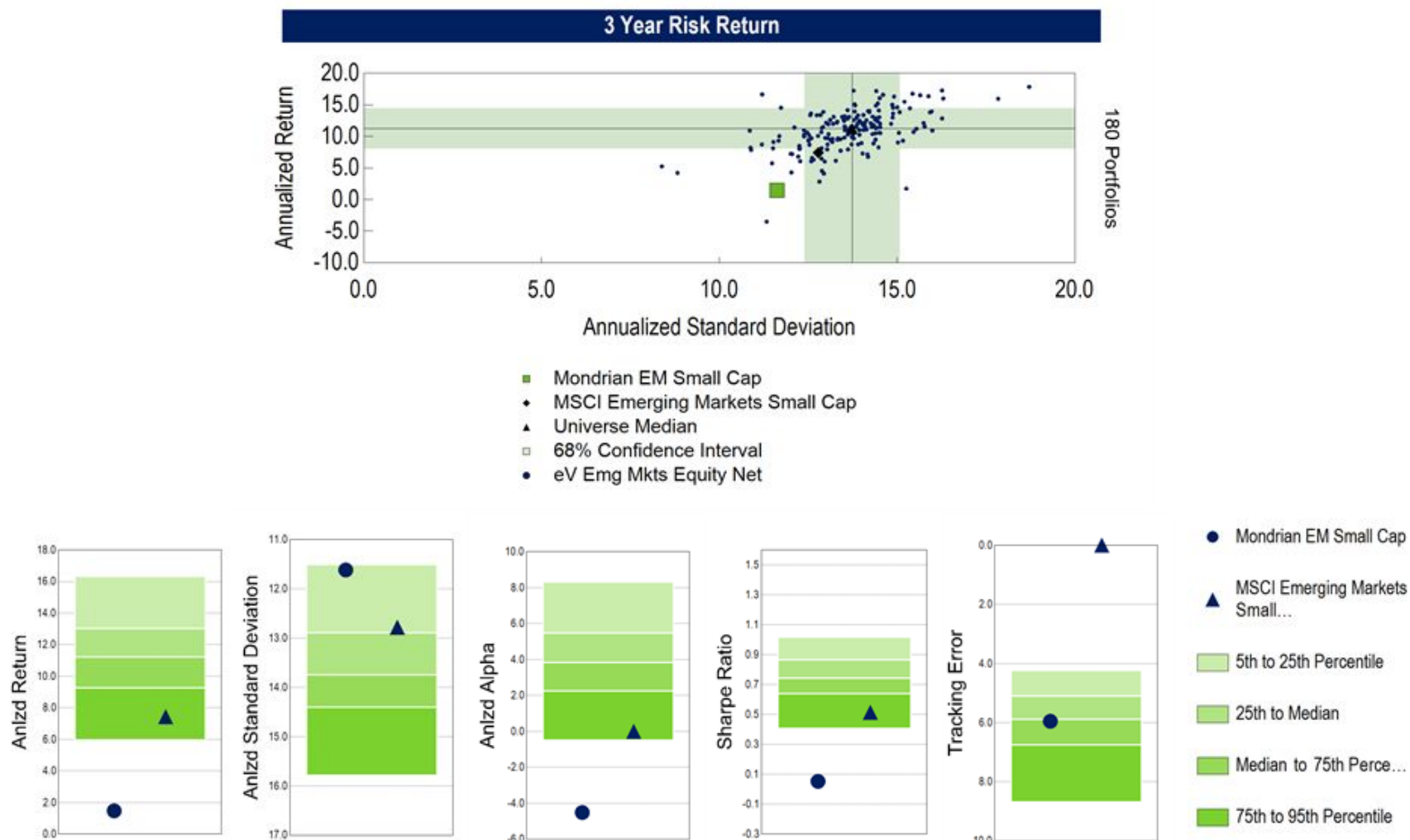
September 30, 2018

MONDRIAN EM SMALL CAP



*Returns are net of fees.

MONDRIAN EM SMALL CAP



*Returns are net of fees.

MONDRIAN EM SMALL CAP

Characteristics		MSCI Emerging Markets Small Cap
	Portfolio	
Number of Holdings	110	1,731
Weighted Avg. Market Cap. (\$B)	1.5	1.1
Median Market Cap. (\$B)	0.9	0.6
Price To Earnings	29.9	16.0
Price To Book	4.5	2.4
Price To Sales	4.0	2.3
Return on Equity (%)	19.1	13.1
Yield (%)	2.4	2.6
Beta		1.0
R-Squared		1.0

Top Positive Contributors		
	Relative Contribution %	Return %
QL RESOURCES	0.2%	11.9%
CORPORACION INMOBILIARIA VESTA	0.2%	17.0%
BOLSA MEXICANA DE VALORES	0.2%	20.7%
PAGE INDUSTRIES	0.2%	11.9%
DIALOG GROUP	0.2%	10.2%
MICROPORT SCIENTIFIC	0.2%	9.6%
FIBRA HOTEL REIT	0.1%	15.1%
HARTALEGA HOLDINGS	0.1%	8.2%
NIPPON INDOSARI CORPINDO	0.1%	12.5%
MERRY ELECTRONICS	0.1%	14.4%

Top Negative Contributors		
	Relative Contribution %	Return %
CPMC HOLDINGS	-0.5%	-37.4%
CONCEPCION INDUSTRIAL	-0.5%	-36.6%
FU SHOU YUAN INTL.GP.	-0.5%	-30.3%
HAND ENTERPRISE SLTN.'A'	-0.4%	-34.4%
AIRTAC INTERNATIONAL GP.	-0.4%	-29.5%
SILOAM INTL.HOSPS.	-0.4%	-46.3%
SITC INTERNATIONAL HDG.	-0.3%	-25.7%
SYMPHONY	-0.3%	-34.5%
SINOSOFT TECHNOLOGY GP.	-0.3%	-20.7%
PHOENIX MILLS	-0.3%	-21.9%

	Equity Sector Attribution										
	Attribution Effects					Returns		Ending Sector Weights			
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.1%	0.1%	0.0%	0.0%	6.7%	1.0%	2.6%	2.1%			
Materials	-1.3%	-1.4%	-0.2%	0.3%	-12.8%	0.6%	8.0%	12.7%			
Industrials	-1.2%	-1.3%	0.0%	0.2%	-13.2%	-4.3%	13.5%	14.2%			
Consumer Discretionary	-1.2%	-1.0%	0.0%	-0.3%	-11.2%	-4.5%	13.8%	14.4%			
Consumer Staples	0.1%	0.2%	-0.1%	0.0%	-3.4%	-5.3%	16.1%	7.0%			
Health Care	-0.9%	-0.5%	0.5%	-0.9%	-5.5%	1.7%	18.3%	9.3%			
Financials	0.4%	1.0%	-0.1%	-0.5%	10.7%	-3.0%	3.4%	9.8%			
Information Technology	0.7%	0.1%	0.6%	0.0%	-8.6%	-9.3%	7.4%	14.9%			
Communication Services	0.0%	--	0.0%	--	--	-3.4%	3.4%	4.2%			
Utilities	-0.2%	-0.4%	0.0%	0.2%	-12.7%	-4.4%	3.9%	3.9%			
Real Estate	0.6%	0.4%	0.0%	0.2%	3.8%	-3.6%	9.1%	7.6%			
Cash	0.0%	0.0%	0.0%	0.0%	0.5%	--	0.5%	0.0%			
Portfolio	-2.7%	=	-2.7%	+	0.9%	+	-0.9%	-6.6%	-3.9%	100.0%	100.0%

* Attribution on manager pages is holdings based, using buy-and-hold assumptions from the beginning of period portfolio. Results may differ from actual performance. Returns are gross of fees.

MONDRIAN EM SMALL CAP

Sector Allocation*

	Fund	MSCI EM SC
Consumer Discretionary	16.9	16.0
Consumer Staples	15.8	7.1
Energy	2.6	2.1
Financials	3.4	9.8
Health Care	19.9	9.3
Industrials	13.2	14.1
Information Technology	7.2	16.3
Materials	7.8	12.6
Real Estate	8.9	7.6
Telecommunication Services	—	1.2
Utilities	3.8	3.9
Cash	0.5	—
TOTAL	100.0	100.0

Country Allocation*

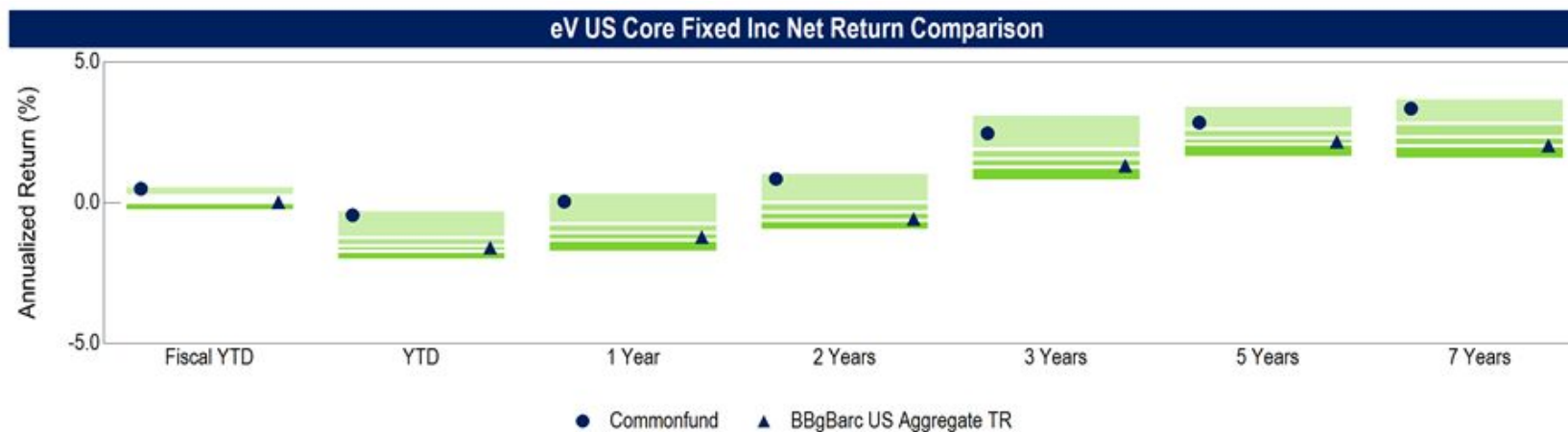
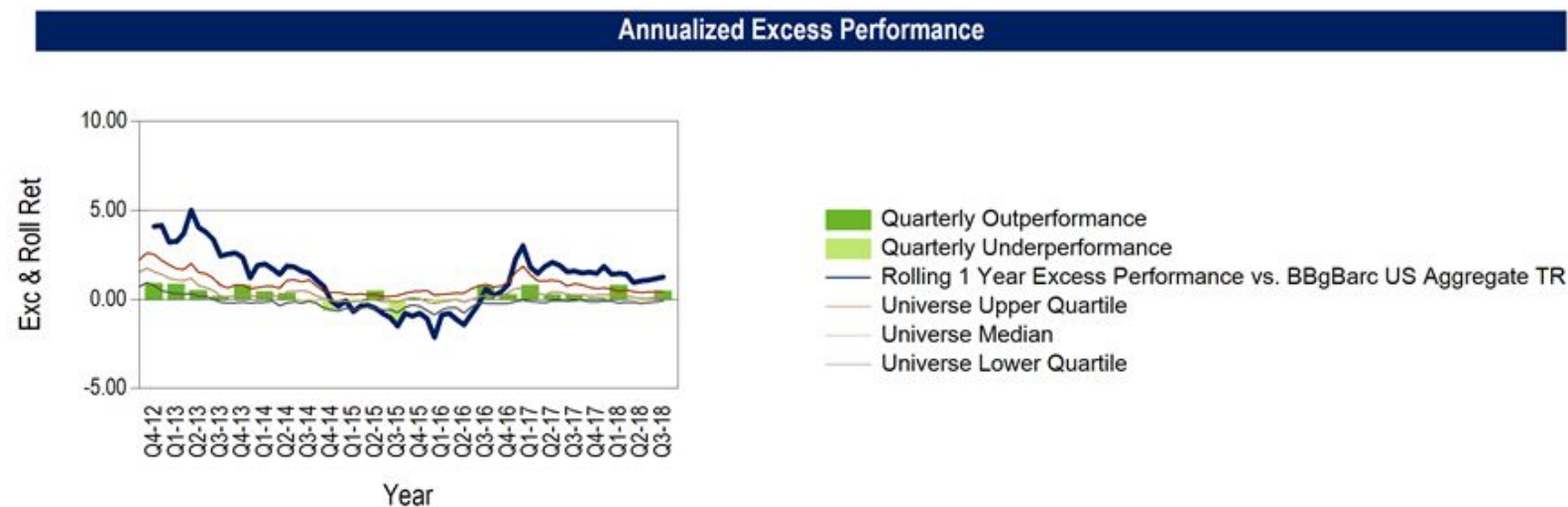
	Fund	MSCI EM SC
Latin America	11.0	10.4
Brazil	2.2	4.9
Mexico	6.5	3.5
Peru	2.3	0.1
Europe, Middle East & Africa	11.5	10.8
Czech Republic	1.5	0.0
Estonia	1.3	—
Kuwait	1.5	—
Poland	2.9	1.0
Saudi Arabia	1.9	—
South Africa	1.5	5.2
United Kingdom	1.0	—
Pacific-Asia	77.1	78.8
North Asia	31.5	53.3
China/Hong Kong	18.8	12.9
South Korea	6.2	20.5
Taiwan	6.9	19.9
South Asia	45.1	24.7
India	24.6	13.7
Indonesia	7.1	2.2
Malaysia	6.3	3.5
Philippines	4.0	0.9
Thailand	3.1	4.4
Cash	0.5	—
TOTAL	100.0	100.0



Source: Mondrian

September 30, 2018

COMMONFUND

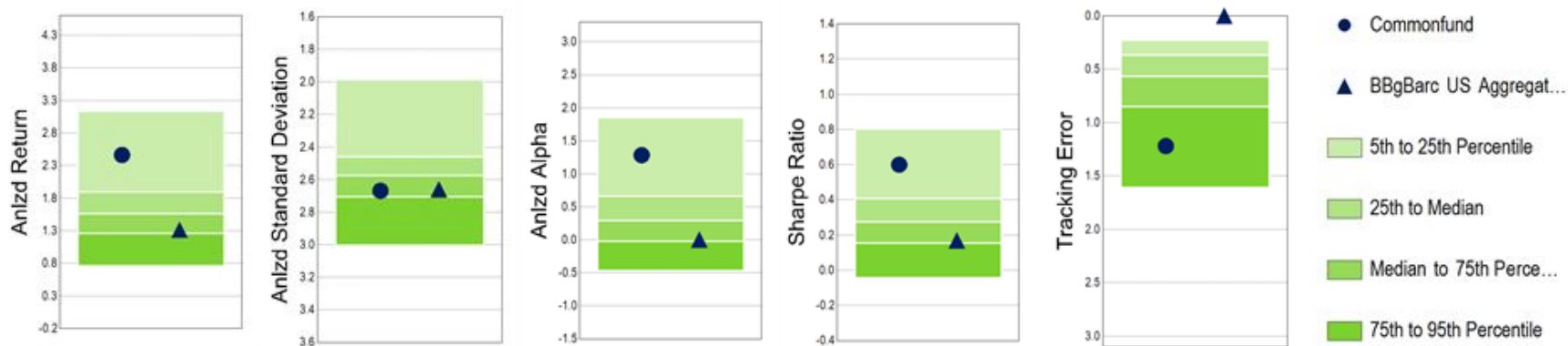
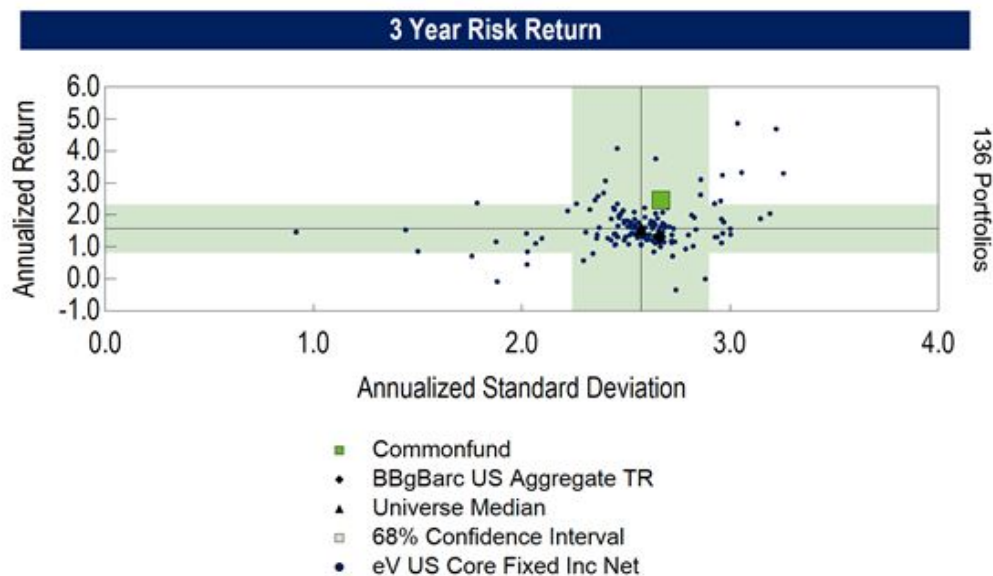


*Returns are net of fees.



September 30, 2018

COMMONFUND

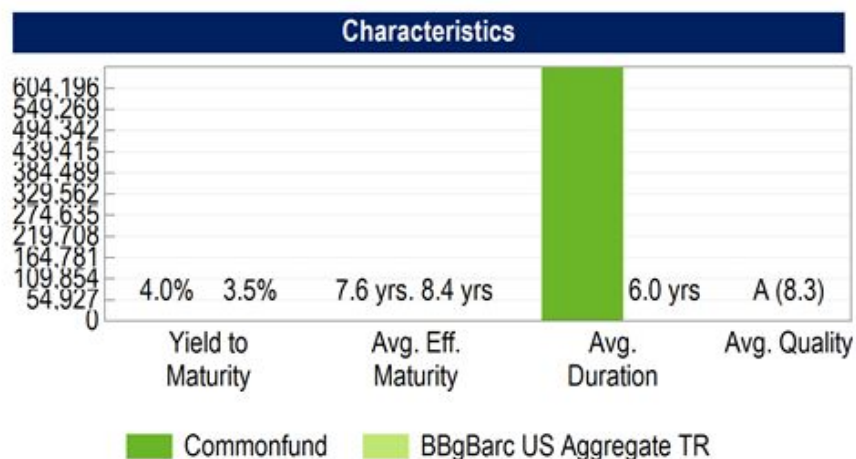


*Returns are net of fees.



September 30, 2018

COMMONFUND



COMMONFUND

Multi-Strategy Bond Fund: Investment Managers

Investment Managers	Core	Credit	Opportunistic
Bain Capital Specialty Fin.		X	
Brandywine Asset Management			X
Cerberus Capital Management		X	
Commonfund Private Credit Fund 2018		X	
Credit Partnerships		X	
Income Research & Management (IRM)	X		
PIMCO Income Fund (PIMIX)			X
Rimrock Capital Management	X		
Sit Investment Associates			X
Western Asset Mortgage Opportunities	X		X



Source: Commonfund

September 30, 2018

VANGUARD INFLATION PROTECTED SECURITIES

Asset Allocation

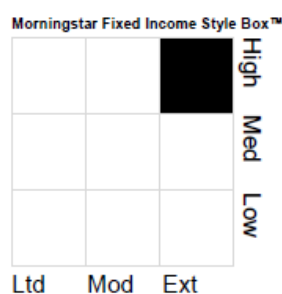
Portfolio Date: 8/31/2018



• Stock	0.0
• Bond	97.4
• Cash	2.6
• Other	0.0
Total	100.0

Fixed Income Statistics

Portfolio Date: 8/31/2018



Fixed-Income Stats

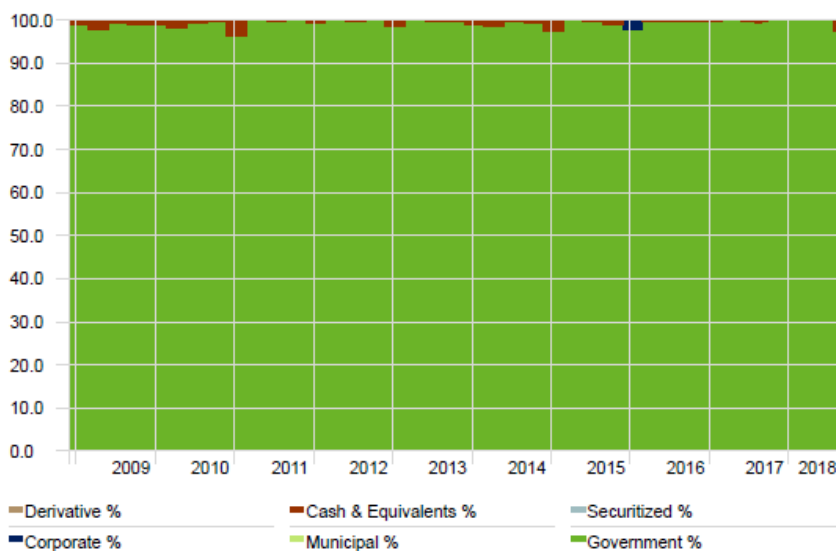
Average Eff Duration	7.7
Average Eff Maturity	8.4
Average Coupon	0.8
Average Price	101.7

Credit Quality Breakdown

Portfolio Date: 6/30/2018

	Fund	Index
AAA %	100.0	
AA %	0.00	
A %	0.00	
BBB %	0.00	
BB %	0.00	
B %	0.00	
Below B %	0.00	
Not Rated %	0.00	
Yield to Maturity		

Historical Sector Allocations (10 Years)



Top Holdings

	Detail Holding Type	Portfolio Weighting %
United States Treasury Notes 0.12%	BOND - GOV'T INFLATION PROTECTED	5.32
United States Treasury Notes 0.12%	BOND - GOV'T INFLATION PROTECTED	4.06
United States Treasury Notes 0.62%	BOND - GOV'T INFLATION PROTECTED	3.76
United States Treasury Notes 0.12%	BOND - GOV'T INFLATION PROTECTED	3.75
United States Treasury Notes 0.38%	BOND - GOV'T INFLATION PROTECTED	3.69
United States Treasury Notes 0.38%	BOND - GOV'T INFLATION PROTECTED	3.67
United States Treasury Notes 0.12%	BOND - GOV'T INFLATION PROTECTED	3.67
United States Treasury Notes 0.25%	BOND - GOV'T INFLATION PROTECTED	3.66
United States Treasury Notes 0.12%	BOND - GOV'T INFLATION PROTECTED	3.61
United States Treasury Notes 0.12%	BOND - GOV'T INFLATION PROTECTED	3.59



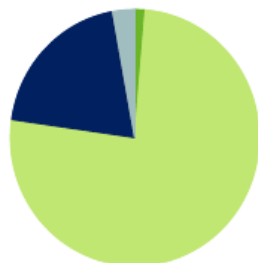
Source: Morningstar

September 30, 2018

BLACKROCK STRATEGIC INCOME

Asset Allocation

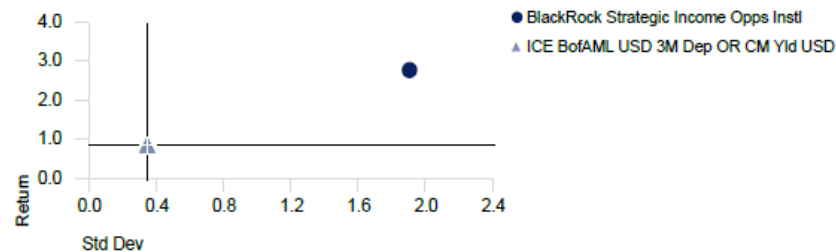
Portfolio Date: 6/30/2018



	%
Stock	1.3
Bond	75.9
Cash	19.9
Other	2.8
Total	100.0

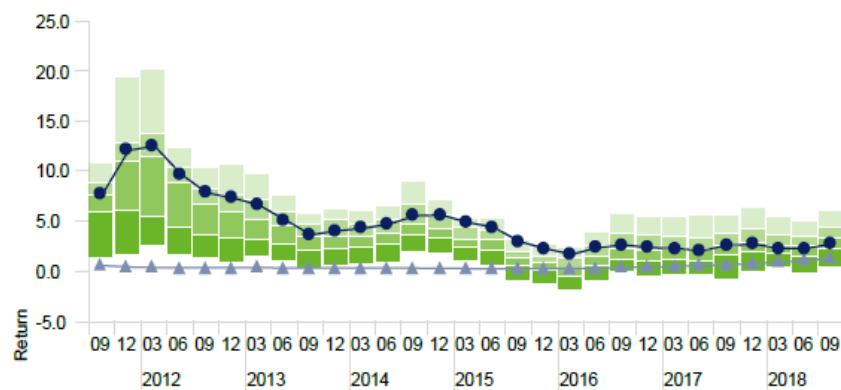
Risk & Return Illustration (5 Years)

Time Period: 10/1/2013 to 9/30/2018



Rolling Returns (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile

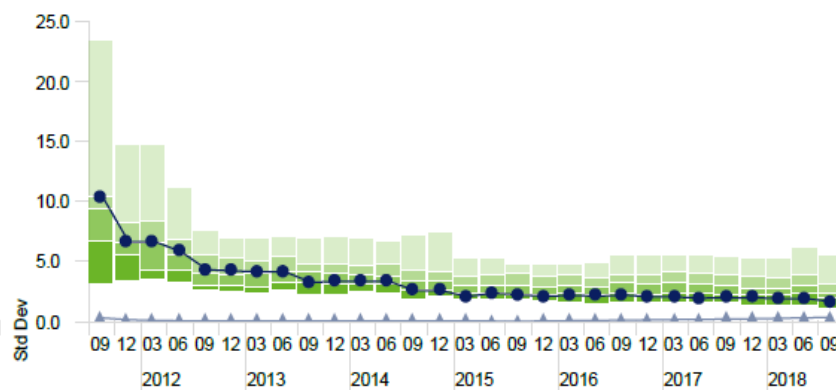


—BlackRock Strategic Income Opps Instl

—ICE BofAML USD 3M Dep OR CM Yld USD

Rolling Risk (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



—BlackRock Strategic Income Opps Instl

—ICE BofAML USD 3M Dep OR CM Yld USD

Calendar Year Returns

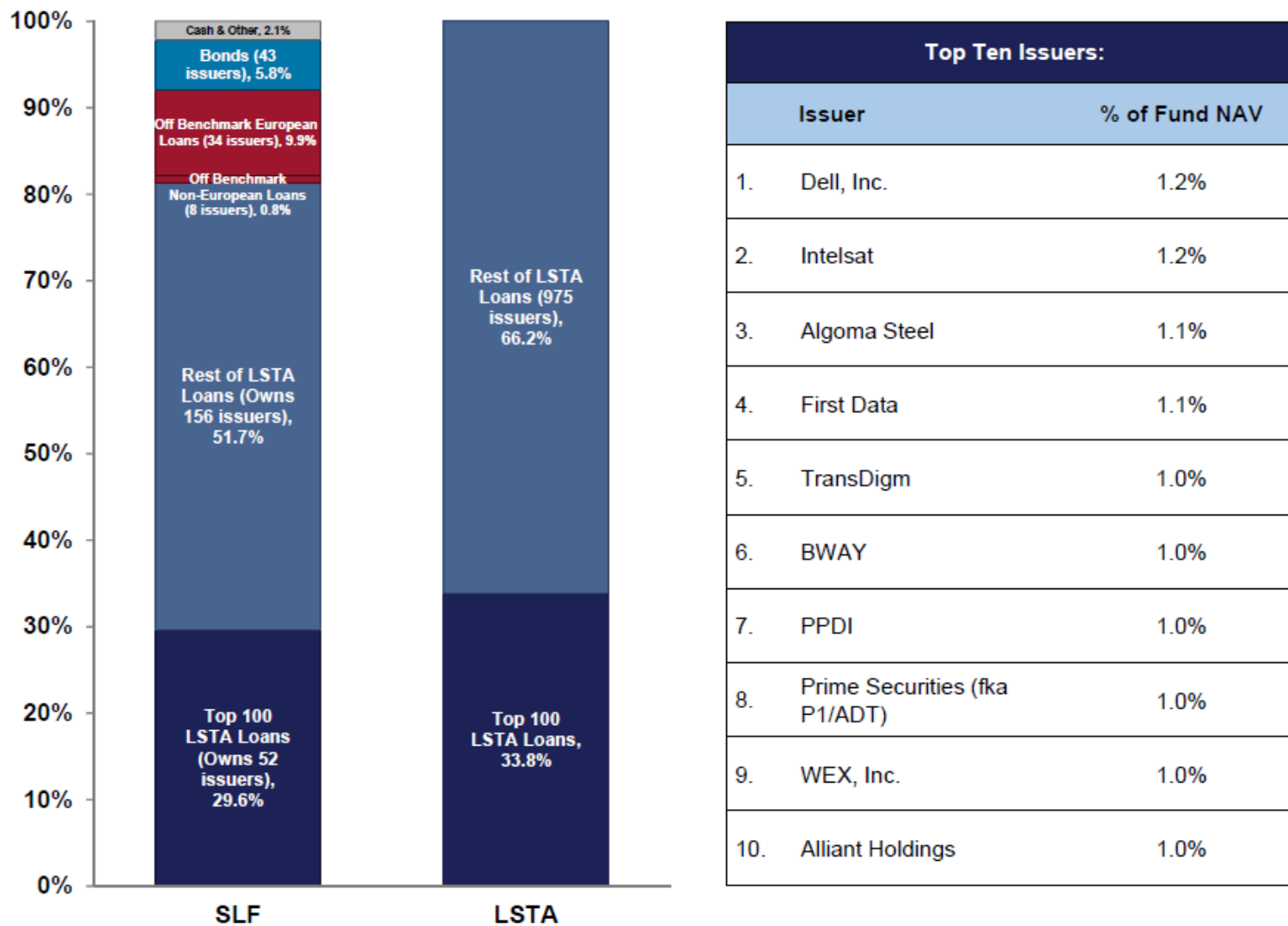
	2008	Rank	2009	Rank	2010	Rank	2011	Rank	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	2017	Rank
BlackRock Strategic Income Opps Instl			25.2	29	13.4	1	-0.7	50	9.9	25	3.3	19	3.9	16	-0.3	32	3.6	66	4.9	39
ICE BofAML USD 3M Dep OR CM Yld USD	2.8		0.7		0.3		0.3		0.4		0.3		0.2		0.3		0.8		1.3	



Source: Morningstar

September 30, 2018

BAIN CAPITAL SENIOR LOAN FUND



Source: Bain Capital

September 30, 2018

GMO GLOBAL ABSOLUTE RETURN



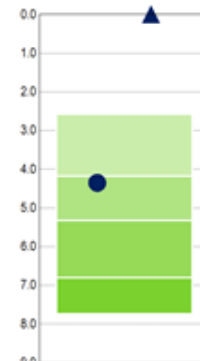
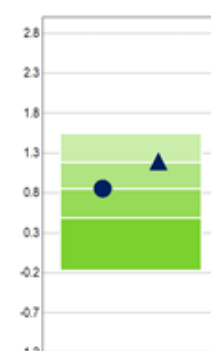
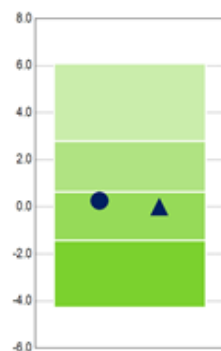
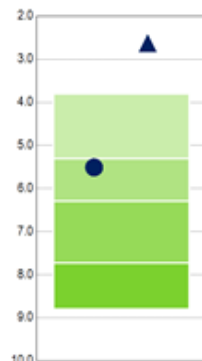
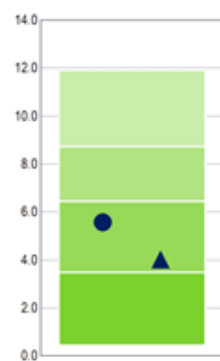
*Returns are net of fees.

*Blended Index: 40% BC Aggregate, 30% BC U.S. TIPS 1-10YR, 10% S&P 500, 10% BC High Yield, 10% JPM EMBI+



September 30, 2018

GMO GLOBAL ABSOLUTE RETURN



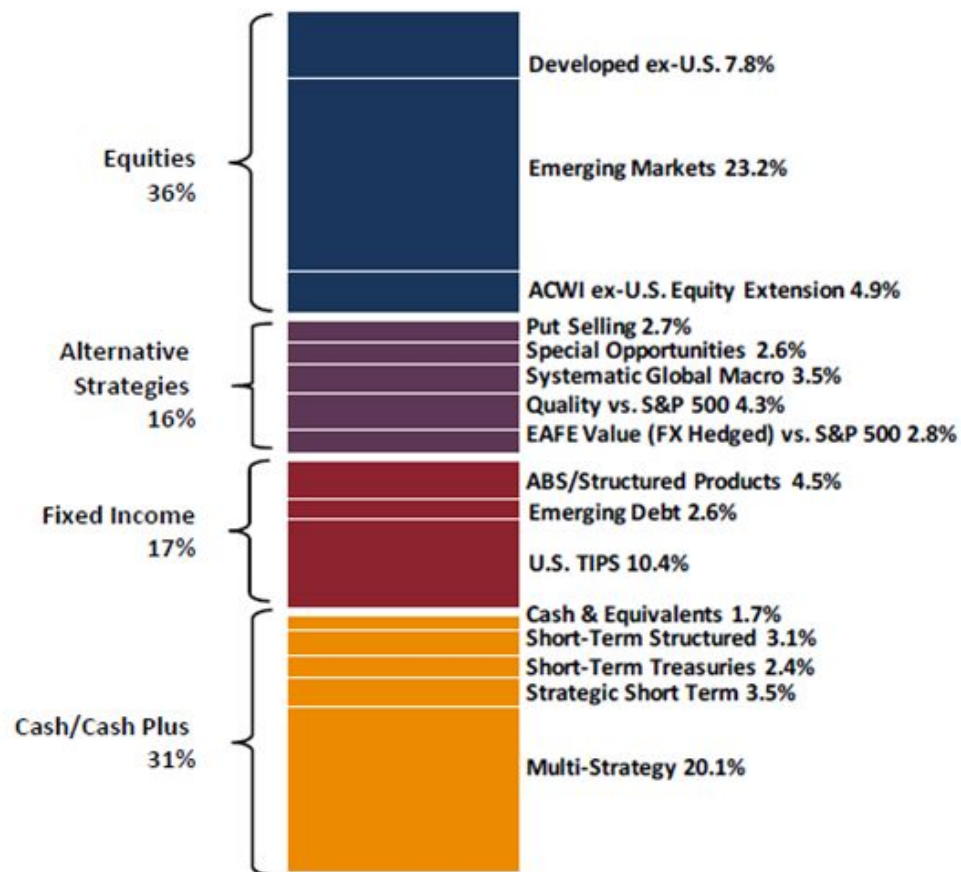
*Returns are net of fees.

*Blended Index: 40% BC Aggregate, 30% BC U.S. TIPS 1-10YR, 10% S&P 500, 10% BC High Yield, 10% JPM EMBI+

September 30, 2018

GMO GLOBAL ABSOLUTE RETURN

Strategy Composition



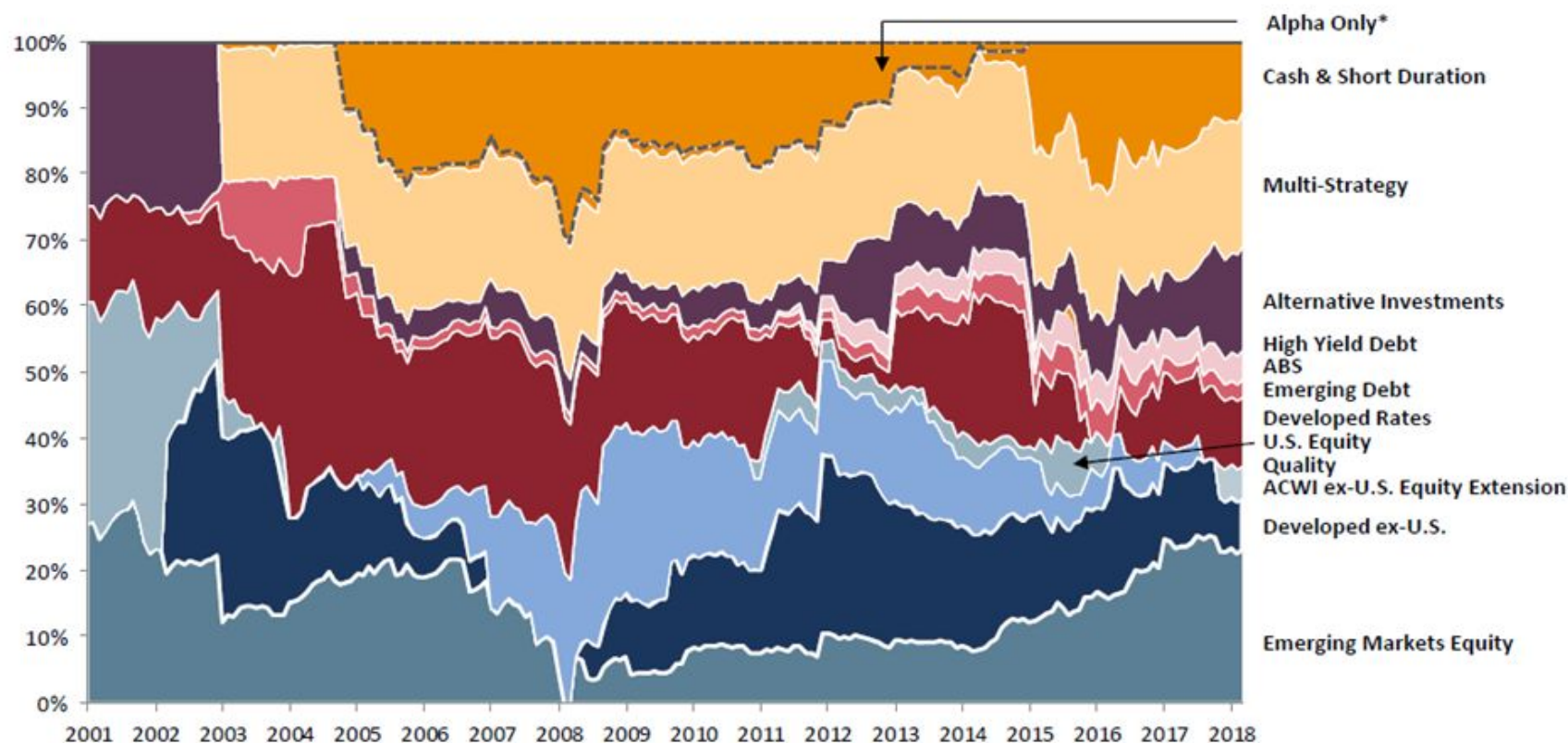
Source: GMO



September 30, 2018

GMO GLOBAL ABSOLUTE RETURN

Allocation History

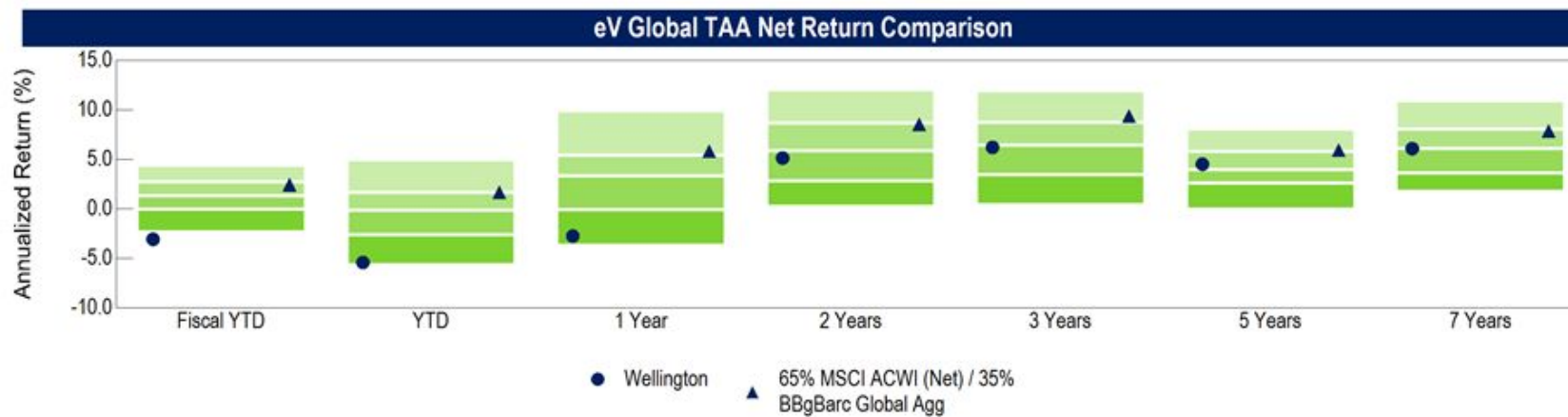
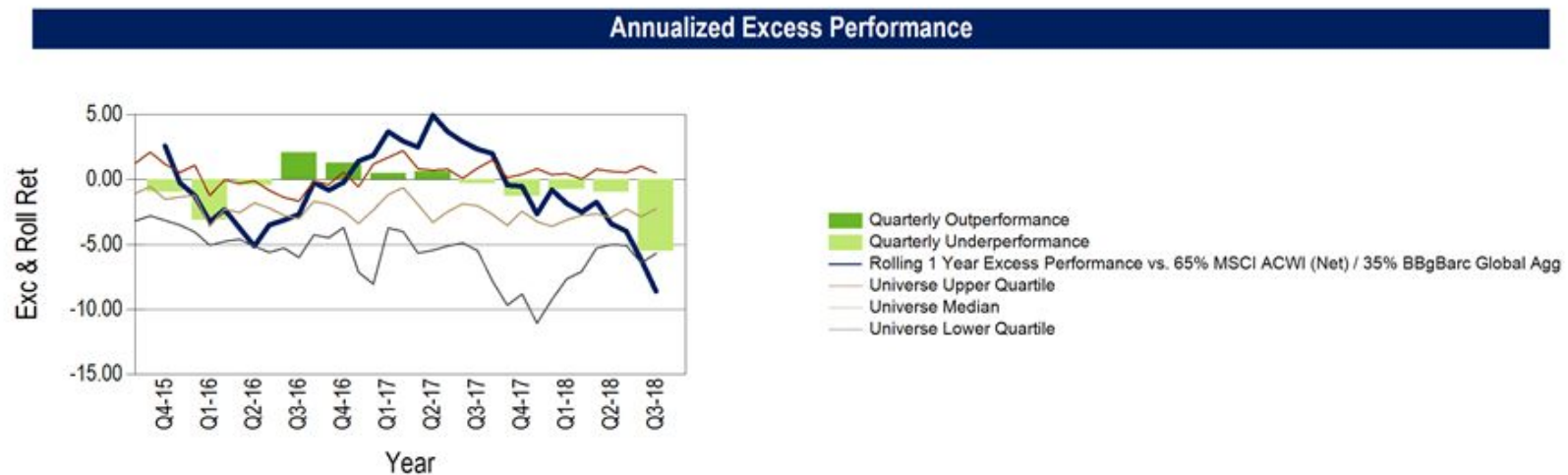


Source: GMO



September 30, 2018

WELLINGTON OPPORTUNISTIC

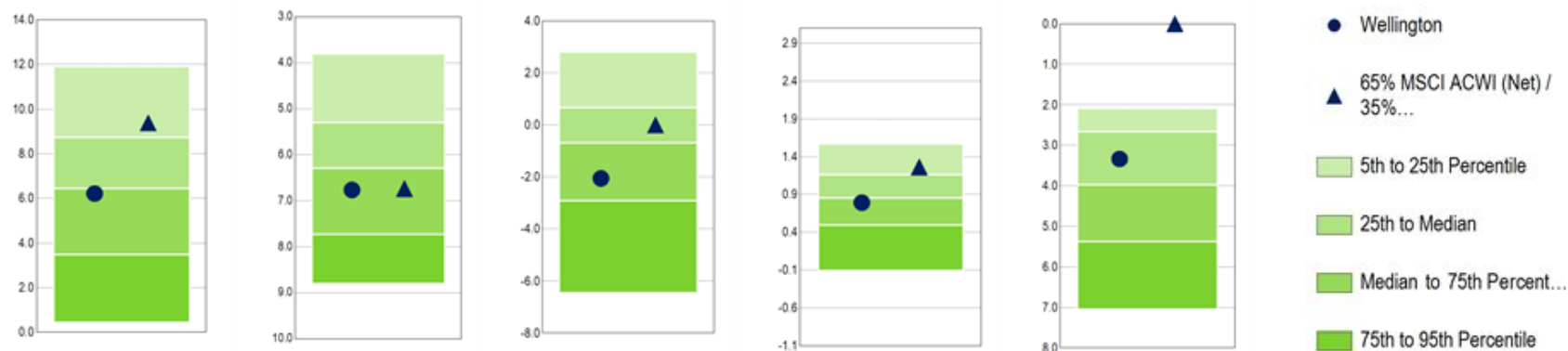


*Returns are net of fees.



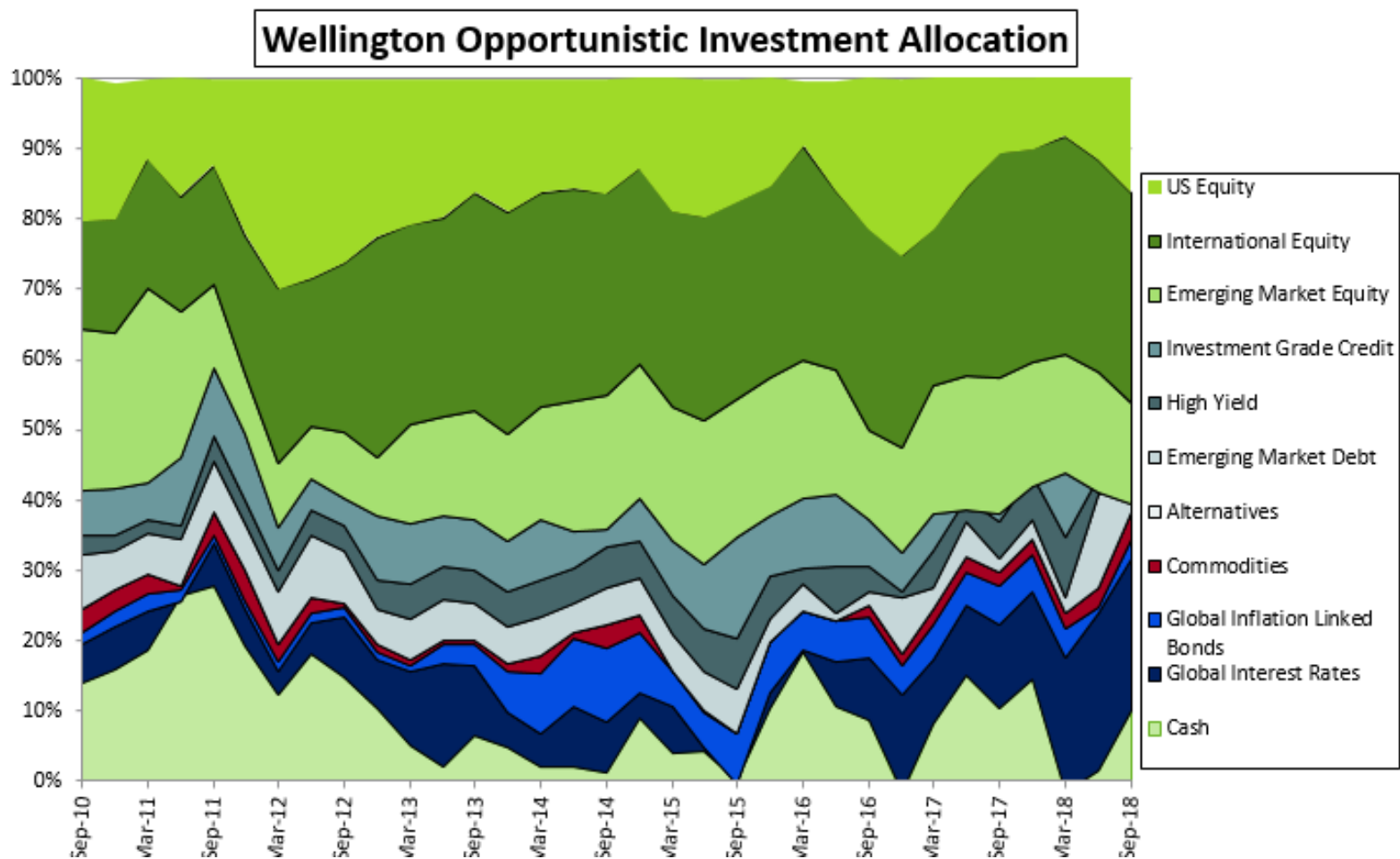
September 30, 2018

WELLINGTON OPPORTUNISTIC



*Returns are net of fees.

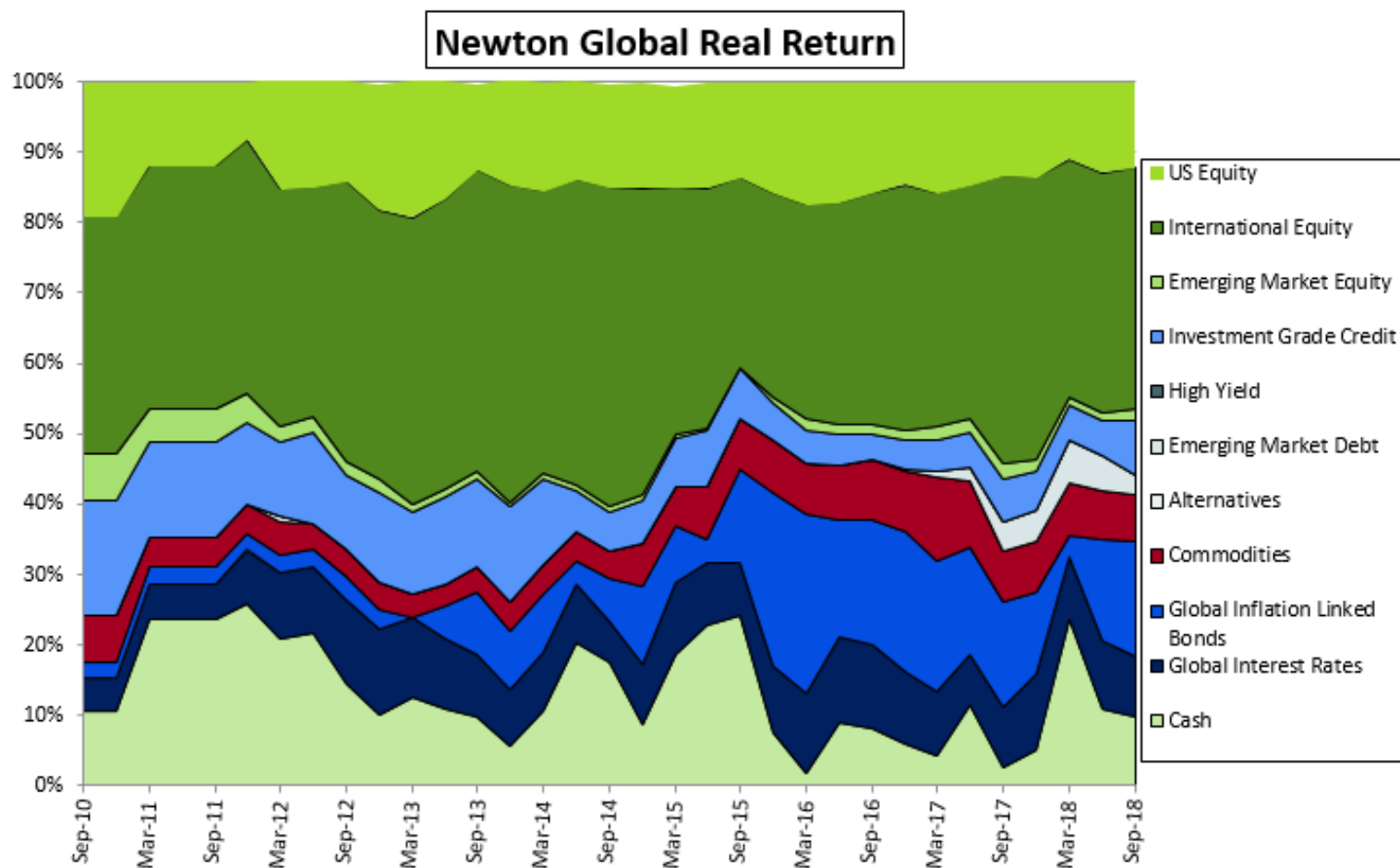
WELLINGTON OPPORTUNISTIC



Source: Wellington

September 30, 2018

NEWTON GLOBAL REAL RETURN



Source: Newton

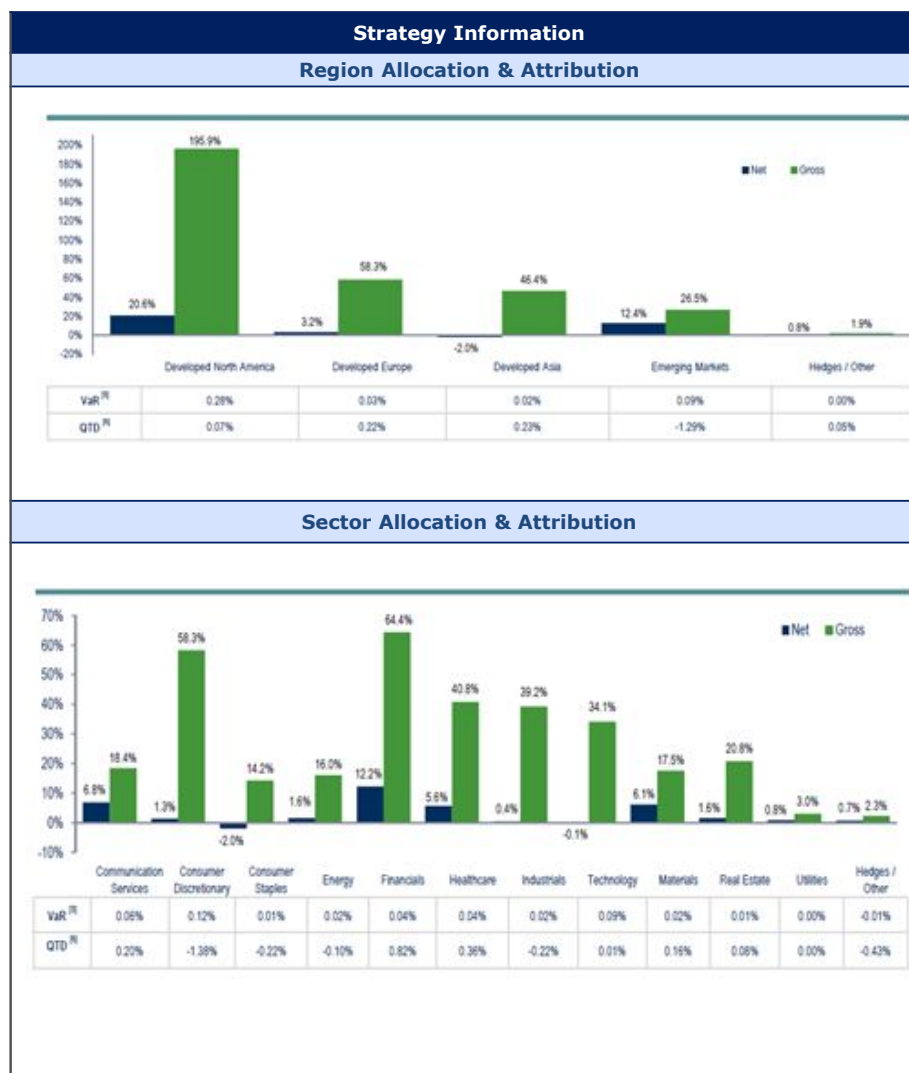
September 30, 2018

LIGHTHOUSE GLOBAL LONG/SHORT

General Fund Information			
Fund Name	Lighthouse Global Long/Short Fund		
Management Company	Lighthouse Investment Partners, LLC		
Location	Palm Beach, FL		
Firm AUM	\$16.6 billion	Strategy	Fund of Fund
Strategy AUM	\$1.9 billion	Sub-Strategy	Long/Short Equity
Portfolio Managers	Ethan Baron	Direct or FOF	FOF

Terms	
Share Class	--
Minimum Investment	\$1 million
Management Fee	1.15%
Incentive Fee	--
Hurdle Rate	None
High Water Mark	Yes
Subscription	Monthly
Redemption	Quarterly (60 days notice) or Monthly (90 days notice)
Lock-Up	None

Investment Strategy
Lighthouse's Global Long/Short Fund is a global portfolio of 20-30 separately managed accounts with industry sector and country specialist managers. The geographical allocations are similar to the MSCI World Index (30%-75% Americas, 10%-35% Europe, 5%-35% Asia).
The Fund targets returns greater than 10% over market cycles with 6%-8% volatility and an equity beta of 0.2-0.4 to the MSCI World Index.



For more information please see NEPC's Investment Due Diligence Report and Operational Due Diligence Report

September 30, 2018

LIGHTHOUSE GLOBAL LONG/SHORT



JOHN HANCOCK TIMBER

INVESTMENTS									
Investments									
<u>Property</u>	<u>Location</u>	<u>Acquisition date</u>	<u>Acres</u>	<u>Independent appraisals</u>		<u>Book value</u>	<u>Fair market value</u>	<u>Unrealized appreciation (depreciation)</u>	
				<u>Last</u>	<u>Next</u>				
Tyler	TX	10/31/05	86,612	Dec-17	Dec-18	\$ 76,035,013	\$ 165,110,147	\$	89,075,134
Total equity real estate			86,612			\$ 76,035,013	\$ 165,110,147	\$	89,075,134
Other investments									
		<u>Acquisition date</u>							
Red River Timberlands Company *	LA, TX	4/1/08	119,067	Dec-17	Dec-18	\$ 110,406,154	\$ 127,837,086	\$	17,430,932
Total other investments			119,067			\$ 110,406,154	\$ 127,837,086	\$	17,430,932

INVESTMENT REGIONS						
As of September 30, 2018						
<u>Property Count</u>	<u>NCREIF Region</u>	<u>Real Estate Market Value</u>	<u>Market Value (%)</u>	<u>Acres</u>	<u>Acres (%)</u>	
1	Northeast	\$ 132,088,674	1.2%	42,950	0.7%	
3	Lake States	263,140,235	2.4%	440,977	7.4%	
35	Pacific Northwest	2,729,570,987	24.6%	1,231,743	20.7%	
33	Southeast	1,919,751,217	17.3%	1,077,110	18.1%	
20	Southwest	1,708,362,820	15.4%	921,399	15.5%	
9	Non - U.S.A	4,351,616,860	39.2%	2,235,973	37.6%	
101		\$ 11,104,530,793	100.0%	5,950,152	100.0%	



Source: Hancock

September 30, 2018

LANDMARK EQUITY PARTNERS XV

General Fund Information			
Fund Name	Landmark Equity Partners XV		
General Partner	Landmark Partners		
Main Address	10 Mill Pond Lane, Simsbury, CT 06070		
Target Fund Size	\$2.5B	Expected Final Close	Up to 15 months after Initial Closing
Capital Raised	\$3.25B	Closes to Date	Yes
Investment Period	3-4 years	Minimum Investment	\$10M (negotiable)
Term of Entity	10 years from initial close, subject to 2 one-year extensions at GP's discretion	Investment Structure	Delaware L.P.
Key Persons	There are 6 members of the Key Person clause	Fund Auditor	PWC
Size of Fund Team	78 professionals (includes investment and administrative)	Number of Past Funds	28 (across all strategies)

GP Fees, Promote and Commitment	
Preferred Return	<ul style="list-style-type: none"> 8% per annum
GP Fees	Years 1 - 4: 1.00% of LP's capital commitments Years 5 - 8: 1.00% of the aggregate amount of LP's capital contributions plus amounts subject to call for Fund obligations Years 8 - remaining life of fund: 1.00% of LP's investment percentage of the reported value of Fund XV's portfolio investments
GP Commitment	<ul style="list-style-type: none"> 1% of aggregate commitments
Carried Interest	<ul style="list-style-type: none"> 10% on secondary investments only

Fund Strategy			
Investment Strategy	<ul style="list-style-type: none"> Landmark XV's primary objective is to acquire interests in private equity investments through secondary transactions. Landmark will build a diversified portfolio of private equity partnership interests diversified by strategy, geography and vintage year. Landmark strives to execute transactions on a negotiated basis and acquire portfolios of interests in private equity funds and direct investments through secondary market transactions that are unique, may require structuring, and where the opportunity for value creation exists. 		
Target Net Returns	Landmark aims to return a 1.6x-1.8x net multiple and a 15%-20% net IRR	Direct or fund of funds	Fund of funds (secondary interests)
Investment Style	Secondary	Target Fund Leverage	May use up to 10% leverage on aggregate commitment amount
Target Asset Types	Secondary investments in limited partnership interests	Target Geographies	Global (primary focus North America and Europe)
		Target Deal Size	No stated minimums or maximums

Fund Sourcing and Asset Management Capabilities	
Sourcing Capabilities	<ul style="list-style-type: none"> Reactive deal flow is attributed to inbound leads from limited partners, general partners and intermediaries - generally in the form of an auction. Firm will only consider participating in a competitive process if it believes it has an edge on its competitors with regard to familiarity of a portfolio and/or believes the assets are mispriced. Utilizes its proprietary database, quantitative research, and portfolio management tools to proactively engage with potential sellers with the ultimate goal of sourcing investments on an exclusive basis. Believes that deal exclusivity hinges on talking to LPs who do not yet realize that they are potential sellers. Two-thirds of their non-auctioned deal flow is due to their research tool projects undertaken with potential sellers.
Value Add	<ul style="list-style-type: none"> Focus on sourcing exclusive transactions should on average produce pricing that is lower than the prices available in the auction channel. Strives to arrange preferred structures to protect downside while preserving commensurate upside participation. Proactive sourcing model allows the investment team more time and better access to data to conduct due diligence.



APPENDIX

NEPC, LLC

GLOSSARY OF TERMS

Alpha - Measures the relationship between the fund performance and the performance of another fund or benchmark index and equals the excess return while the other fund or benchmark index is zero.

Alpha Jensen - The average return on a portfolio over and above that predicted by the capital asset pricing model (CAPM), given the portfolio's beta and the average market return. Also known as the abnormal return or the risk adjusted excess return.

Annualized Excess Return over Benchmark - Annualized fund return minus the annualized benchmark return for the calculated return.

Annualized Return - A statistical technique whereby returns covering periods greater than one year are converted to cover a 12 month time span.

Beta - Measures the volatility or systematic risk and is equal to the change in the fund's performance in relation to the change in the assigned index's performance.

Information Ratio - A measure of the risk adjusted return of a financial security, asset, or portfolio.

Formula:

(Annualized Return of Portfolio - Annualized Return of Benchmark)/Annualized Standard Deviation(Period Portfolio Return - Period Benchmark Return). To annualize standard deviation, multiply the deviation by the square root of the number of periods per year where monthly returns per year equals 12 and quarterly returns is four periods per year.

R-Squared - Represents the percentage of a fund's movements that can be explained by movements in an index. R-Squared values range from 0 to 100. An R-Squared of 100 denotes that all movements of a fund are completely explained by movements in the index.

Sharpe Ratio - A measure of the excess return or risk premium per unit of risk in an investment asset or trading strategy.

Sortino Ratio - A method to differentiate between good and bad volatility in the Sharpe Ratio. The differentiation of up and down volatility allows the calculation to provide a risk adjusted measure of a security or fund's performance without upward price change penalties.

Formula:

*Calculation Average (X-Y)/Downside Deviation (X-Y) * 2
Where X=Return Series X Y = Return Series Y which is the risk free return (91 day T-bills)*

Standard Deviation - The standard deviation is a statistical term that describes the distribution of results. It is a commonly used measure of volatility of returns of a portfolio, asset class, or security. The higher the standard deviation the more volatile the returns are.

Formula:

(Annualized Return of Portfolio - Annualized Return of Risk Free) / Annualized Standard Deviation (Portfolio Returns)

Tracking Error - Tracking error, also known as residual risk, is a measure of the degree to which a portfolio tracks its benchmark. It is also a measure of consistency of excess returns. Tracking error is computed as the annualized standard deviation of the difference between a portfolio's return and that of its benchmark.

Formula:

*Tracking Error = Standard Deviation (X-Y) * $\sqrt{(\# \text{ of periods per year})}$*

Where X = periods portfolio return and Y = the period's benchmark return

For monthly returns, the periods per year = 12

For quarterly returns, the periods per year = 4

Treynor Ratio - A risk-adjusted measure of return based on systematic risk. Similar to the Sharpe ratio with the difference being the Treynor ratio uses beta as the measurement of volatility.

Formula:

(Portfolio Average Return - Average Return of Risk-Free Rate)/Portfolio Beta

Up/Down Capture Ratio - A measure of what percentage of a market's returns is "captured" by a portfolio. For example, if the market declines 10% over some period, and the manager declines only 9%, then his or her capture ratio is 90%. In down markets, it is advantageous for a manager to have as low a capture ratio as possible. For up markets, the higher the capture ratio the better. Looking at capture ratios can provide insight into how a manager achieves excess returns. A value manager might typically have a lower capture ratio in both up and down markets, achieving excess returns by protecting on the downside, whereas a growth manager might fall more than the overall market in down markets, but achieve above-market returns in a rising market.

UpsideCapture = TotalReturn(FundReturns)/TotalReturns(BMReturn) when Period Benchmark Return is > = 0

DownsideCapture = TotalReturn(FundReturns)/TotalReturns(BMReturn) when Benchmark < 0

Data Source: InvestorForce



INFORMATION DISCLAIMER AND REPORTING METHODOLOGY

Information Disclaimer

- Past performance is no guarantee of future results.
- All investments carry some level of risk. Diversification and other asset allocation techniques are not guaranteed to ensure profit or protect against losses.
- Some index returns displayed in this report or used in calculation of a policy, allocation or custom benchmark may not be available from the source or may be preliminary and subject to change.
- NEPC's source for portfolio pricing, calculation of accruals, and transaction information is the plan's custodial bank. Information on market indices and security characteristics is received from other sources external to NEPC. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.
- This report is provided as a management aid for the client's internal use only. Performance contained in this report does not constitute a recommendation by NEPC.
- This report may contain confidential or proprietary information and may not be copied or redistributed to any party not legally entitled to receive it.

Reporting Methodology

- The client's custodian bank is NEPC's preferred data source unless otherwise directed. NEPC reconciles custodian data to manager data. If the custodian cannot provide accurate data, manager data may be used.
- Trailing time period returns are determined by geometrically linking the holding period returns, from the first full month after inception to the report date. Rates of Return are annualized when the time period is longer than a year. Performance is presented gross and/or net of manager fees as indicated on each page.
- For managers funded in the middle of a month, the "since inception" return will start with the first full month, although actual inception dates and cash flows are taken into account in all Composite calculations.
- This report may contain forward-looking statements that are based on NEPC's estimates, opinions and beliefs, but NEPC cannot guarantee that any plan will achieve its targeted return or meet other goals.





AGENDA ITEM SUMMARY

1. **NAME OF ITEM:** Performance Review – Defined Benefit Pension Fund

2. **INITIATED BY:** Kelly A. Martin, Chair

3. **BOARD INFORMATION:** X

BOARD ACTION:

4. **OUTCOME:**

Primary Outcomes:
Enhance fiscal positioning

BOARD POLICY:

Section 709 - Investments

5. **BACKGROUND:**

Enclosed for your information is the Pension Fund performance report for the quarter ended September 30, 2018.

Kelly Regan and Jay Roney of NEPC will provide a brief review at the December 20, 2018 Investment Committee meeting.

12/7/2018

THIRD QUARTER 2018 INVESTMENT REVIEW

UNIVERSITY OF MAINE SYSTEM PENSION PLAN

December 20, 2018

Jay E. Roney, Partner

Kelly Regan, Senior Consultant



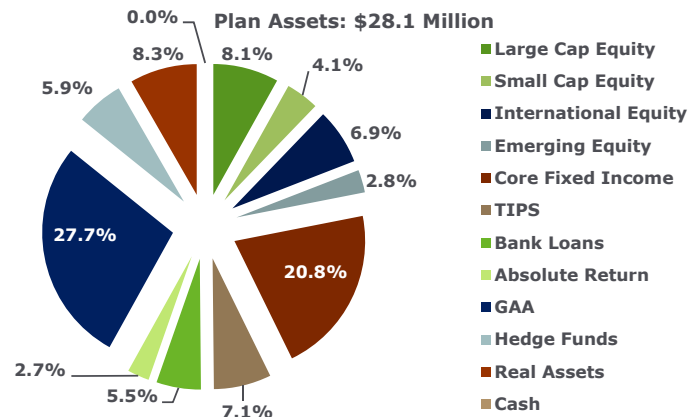
BOSTON | ATLANTA | CHARLOTTE | CHICAGO | DETROIT | LAS VEGAS | PORTLAND | SAN FRANCISCO

EXECUTIVE SUMMARY

NEPC, LLC

EXECUTIVE SUMMARY

ASSET ALLOCATION



PLAN COMMENTS

Asset Allocation

The Plan's assets were \$28.1 million as of September 30, 2018 a \$850 thousand decrease during the third quarter. Investment gains were \$245 thousand and benefit payments amounted to \$1.1 million. All asset classes are within policy ranges.

Performance (Net of Fees)

The Fund returned 0.7% in the 3rd quarter and 1.1% year-to-date.

US Equity managers were the top contributors to overall performance during the quarter. Emerging market equity, Int'l equity and select global asset allocation managers detracted from overall performance during the quarter.

PLAN PERFORMANCE: NET OF FEES

	QTR (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
COMPOSITE	0.7	1.0	3.3	5.7	4.3	5.5
ALLOC. INDEX	1.6	1.8	4.8	7.0	5.5	6.1
POLICY INDEX	1.6	1.6	4.5	7.1	5.7	6.4

RECENT ACTIONS/RECOMMENDATIONS

Recent Actions

Rebalancing was provided over the quarter to cover benefit payments and expenses.

Recommendations

There are no recommendations at this time.

Investment Manager Updates

There were no new manager announcements during the third quarter.



DUE DILIGENCE MONITOR

The items below summarize the recent quarter's performance and any changes or announcements from your Plan managers/funds. A "-" indicates there were no material announcements. A "Yes" indicates there was an announcement and a summary is provided separately. NEPC's Due Diligence Committee meets every two weeks to review events as they relate to investment managers and determines if any action should be taken by NEPC and/or by our clients. They rate events: No Action, Watch, Hold, Client Review or Terminate. With respect to Performance, a "-" indicates the manager/fund performed in line with the majority of managers/funds in the category; only outliers (placement in the Top or Bottom Quartile) are highlighted. Your Consultant's Recommendation is refreshed quarterly in view of the recent quarter's developments (performance, manager events, and any of the longer-term trending data). NEPC considers ourselves to be a fiduciary, as ERISA defines the term in Section 3(21).

Fund	Manager Changes/ Announcements (Recent Quarter)	NEPC Due Diligence Committee Recommendations
Lighthouse	No	Maintain Watch

NEPC Due Diligence Committee Recommendation Key	
No Action	Informational items have surfaced; no action is recommended.
Watch	Issues have surfaced to be concerned over; manager can participate in future searches, but current and prospective clients must be made aware of the issues.
Hold	Serious issues have surfaced to be concerned over; manager cannot be in future searches unless a client specifically requests, but current and prospective clients must be made aware of the issues.
Client Review	Very serious issues have surfaced with a manager; manager cannot be in future searches unless a client specifically requests. Current clients must be advised to review the manager.
Terminate	We have lost all confidence in the product; manager would not be recommended for searches and clients would be discouraged from using. The manager cannot be in future searches unless a client specifically requests. Current clients must be advised to replace the manager.



TOTAL PLAN PERFORMANCE DETAIL

	Market Value (\$)	% of Portfolio	Policy %	Fiscal YTD (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Pension Composite	28,081,876	100.0	100.0	0.7	1.0	3.3	4.9	5.7	4.3	6.8	5.5
Allocation Index				1.6	1.8	4.8	6.4	7.0	5.5	7.5	6.1
Policy Index				1.6	1.6	4.5	6.4	7.1	5.7	7.7	6.4
Total Domestic Large Cap	2,282,204	8.1	8.0	7.7	10.6	17.9	18.2	17.3	13.2	16.7	10.8
S&P 500				7.7	10.6	17.9	18.3	17.3	13.9	16.9	12.0
Vanguard S&P 500 Index	2,282,204	8.1	8.0	7.7	10.6	17.9	18.2	17.3	--	--	--
S&P 500				7.7	10.6	17.9	18.3	17.3	13.9	16.9	12.0
Total Small Cap Composite	1,147,437	4.1	4.0	3.6	11.5	15.2	17.9	17.2	10.9	16.2	--
Russell 2000				3.6	11.5	15.2	18.0	17.1	11.1	16.4	11.1
SSgA R2000 Index Fund Non Lending	1,147,437	4.1	4.0	3.6	11.5	15.2	17.9	17.2	10.9	16.2	--
Russell 2000				3.6	11.5	15.2	18.0	17.1	11.1	16.4	11.1
Total International Equity (including emerging markets)	2,723,566	9.7	10.0	-1.9	-4.8	0.9	5.9	5.8	2.2	6.1	3.9
MSCI EAFE				1.4	-1.4	2.7	10.6	9.2	4.4	8.3	5.4
Morgan Stanley Int'l	1,933,960	6.9	7.0	0.3	-1.4	2.3	9.8	7.8	3.9	8.2	5.3
MSCI EAFE				1.4	-1.4	2.7	10.6	9.2	4.4	8.3	5.4
Emerging Markets Equity	789,606	2.8	3.0	-7.1	-12.8	-3.0	-2.4	1.5	-1.6	--	--
MSCI Emerging Markets				-1.1	-7.7	-0.8	10.2	12.4	3.6	5.0	5.4
Mondrian EM Small Cap	789,606	2.8	3.0	-7.1	-12.8	-3.0	-2.4	1.5	--	--	--
MSCI Emerging Markets Small Cap				-4.2	-12.3	-4.2	4.9	7.4	2.7	4.8	7.4
Total Fixed Income	10,142,153	36.1	35.0	0.1	-0.6	0.0	0.3	2.1	2.4	3.1	5.0
BBgBarc US Aggregate TR				0.0	-1.6	-1.2	-0.6	1.3	2.2	2.0	3.8
Vanguard Total Bond Market Index	5,833,115	20.8	20.0	0.0	-1.6	-1.2	-0.7	1.3	--	--	--
BBgBarc US Aggregate TR				0.0	-1.6	-1.2	-0.6	1.3	2.2	2.0	3.8
Vanguard Inflation-Protected Securities	2,002,664	7.1	7.0	-0.9	-0.9	0.3	--	--	--	--	--
BBgBarc US TIPS TR				-0.8	-0.8	0.4	-0.2	2.0	1.4	1.3	3.3
Guggenheim US Bank Loans	155,315	0.6									
BlackRock Strategic Income Opportunities	752,881	2.7	3.0	0.5	--	--	--	--	--	--	--
3-Month Libor Total Return USD				0.6	1.7	2.1	1.6	1.3	0.9	0.7	0.7
Bain Capital Senior Loan Fund	1,398,178	5.0	5.0	--	--	--	--	--	--	--	--
Credit Suisse Leveraged Loans				1.9	4.4	5.6	5.5	5.4	4.4	5.5	5.8



September 30, 2018

TOTAL PLAN PERFORMANCE DETAIL

	Market Value (\$)	% of Portfolio	Policy %	Fiscal YTD (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Total GAA	7,787,470	27.7	27.5	-0.4	-1.3	0.4	3.3	5.0	2.7	4.6	--
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				2.4	1.7	5.8	8.5	9.4	5.9	7.9	6.5
Wellington	3,734,077	13.3	13.8	-3.0	-5.3	-2.7	5.2	6.3	4.6	6.2	5.7
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				2.4	1.7	5.8	8.5	9.4	5.9	7.9	6.5
Newton Global Real Return	4,053,393	14.4	13.8	2.1	2.6	3.4	1.2	--	--	--	--
60% MSCI ACWI (Net) / 40% FTSE WGBI				1.9	1.3	5.2	7.4	8.7	5.3	7.0	6.0
Total Alternative Investments	1,643,851	5.9	4.5	0.1	3.1	5.3	5.3	4.1	3.2	3.4	--
HFRI Fund of Funds Composite Index				0.2	0.9	3.0	4.7	3.3	3.2	3.6	2.5
Lighthouse	1,643,851	5.9	4.5	0.1	5.2	8.2	6.6	5.6	--	--	--
Credit Suisse Long Shrt Eqt USD				1.5	2.2	5.5	7.6	4.4	5.4	6.8	5.7
Total Real Assets	2,342,830	8.3	8.0								
Principal	2,342,830	8.3	8.0	2.5	6.7	8.6	8.7	8.8	10.6	11.0	5.2
NCREIF ODCE				2.1	6.5	8.7	8.2	8.8	10.7	11.2	5.6
Total Cash	12,365	0.0	3.0								
Distribution Account	12,365	0.0	3.0	0.5	1.2	1.4	0.9	0.6	0.4	0.3	0.3
91 Day T-Bills				0.5	1.3	1.6	1.2	0.9	0.5	0.4	0.3

Notes:

Fiscal YTD begins 7/1

Blended Index: 40% BC Aggregate, 30% BC U.S. TIPS 1-10YR, 10% S&P 500, 10% BC High Yield, 10% JPM EMBI+

Returns are net of manager fees

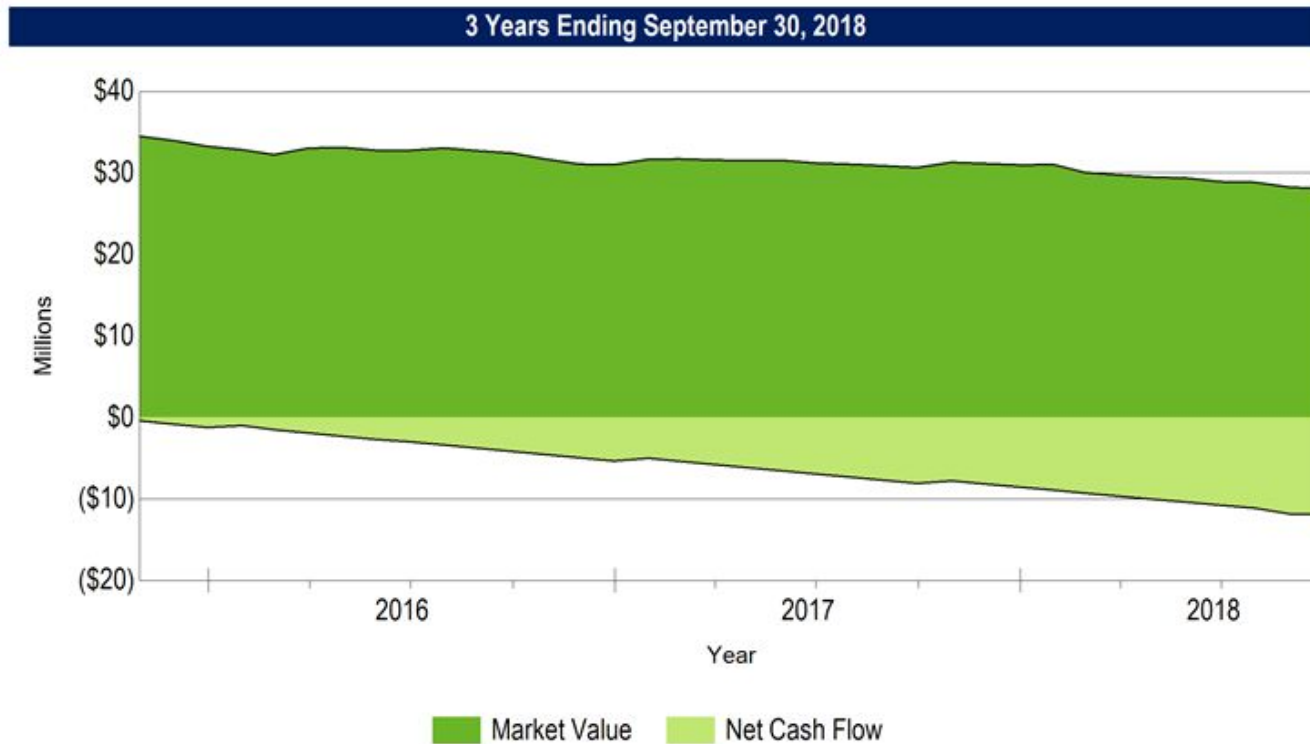


September 30, 2018

PLAN SUMMARY AND STATISTICS

NEPC, LLC

ASSET GROWTH SUMMARY



	Fiscal Year-To-Date	Year-To-Date	One Year	Three Years
Beginning Market Value	\$28,930,221	\$30,986,608	\$30,662,812	\$34,000,347
Net Cash Flow	-\$1,094,135	-\$3,323,129	-\$3,771,104	-\$11,862,628
Net Investment Change	\$245,790	\$418,398	\$1,190,168	\$5,944,157
Ending Market Value	\$28,081,876	\$28,081,876	\$28,081,876	\$28,081,876



September 30, 2018

CASH FLOW SUMMARY

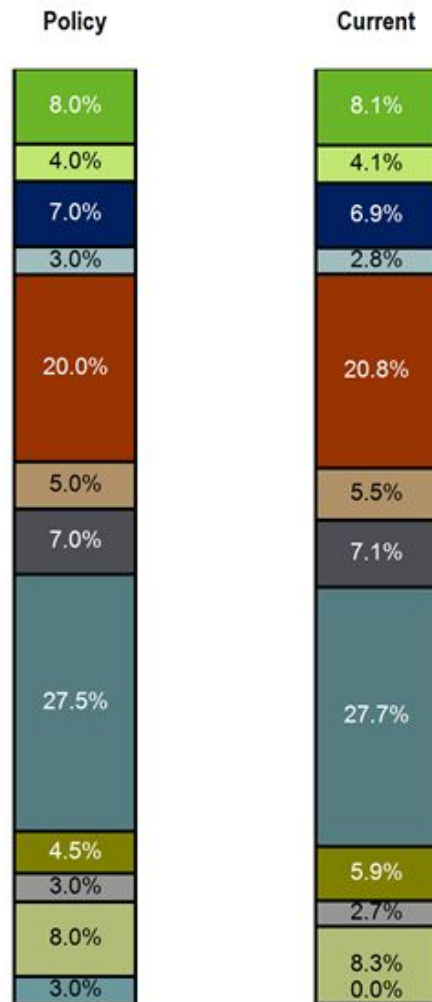
	Beginning Market Value	Quarter Ending September 30, 2018				Ending Market Value
		Contributions	Withdrawals	Net Cash Flow	Net Investment Change	
Bain Capital Senior Loan Fund	--	\$1,390,000	-\$571	\$1,389,429	\$8,749	\$1,398,178
BlackRock Strategic Income Opportunities	\$749,182	\$0	-\$997	-\$997	\$4,696	\$752,881
Distribution Account	\$353,840	\$2,817,712	-\$3,160,356	-\$342,643	\$1,168	\$12,365
Guggenheim US Bank Loans	\$1,542,736	\$0	-\$1,401,973	-\$1,401,973	\$14,553	\$155,315
Lighthouse	\$1,642,216	\$0	\$0	\$0	\$1,635	\$1,643,851
Mondrian EM Small Cap	\$849,682	\$0	-\$5,720	-\$5,720	-\$54,356	\$789,606
Morgan Stanley Int'l	\$2,126,173	\$0	-\$204,751	-\$204,751	\$12,538	\$1,933,960
Newton Global Real Return	\$3,971,007	\$0	-\$8,098	-\$8,098	\$90,484	\$4,053,393
Principal	\$2,286,633	\$0	\$0	\$0	\$56,196	\$2,342,830
SSgA R2000 Index Fund Non Lending	\$1,206,362	\$0	-\$100,472	-\$100,472	\$41,547	\$1,147,437
Vanguard Inflation-Protected Securities	\$2,019,927	\$0	-\$352	-\$352	-\$16,911	\$2,002,664
Vanguard S&P 500 Index	\$2,356,236	\$0	-\$250,230	-\$250,230	\$176,198	\$2,282,204
Vanguard Total Bond Market Index	\$5,831,101	\$0	-\$1,023	-\$1,023	\$3,037	\$5,833,115
Wellington	\$3,995,125	\$0	-\$167,306	-\$167,306	-\$93,743	\$3,734,077
Total	\$28,930,221	\$4,207,712	-\$5,301,848	-\$1,094,135	\$245,790	\$28,081,876



September 30, 2018

ASSET ALLOCATION

3.1



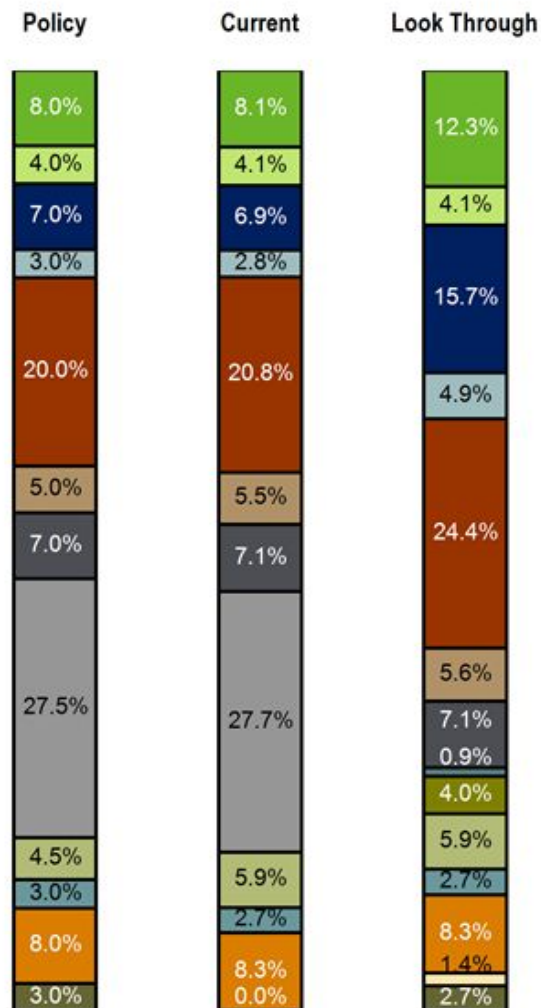
Asset Allocation vs. Target							
	Current	Policy	Current	Difference	Policy Range	Within Range	
Large Cap Equity	\$2,282,204	8.0%	8.1%	0.1%	3.0% - 13.0%	Yes	
Small Cap Equity	\$1,147,437	4.0%	4.1%	0.1%	0.0% - 6.0%	Yes	
International Equity	\$1,933,960	7.0%	6.9%	-0.1%	2.0% - 12.0%	Yes	
Emerging Markets Equity	\$789,606	3.0%	2.8%	-0.2%	0.0% - 5.0%	Yes	
Core Bonds	\$5,833,115	20.0%	20.8%	0.8%	10.0% - 30.0%	Yes	
Bank Loans	\$1,553,493	5.0%	5.5%	0.5%	0.0% - 10.0%	Yes	
TIPS	\$2,002,664	7.0%	7.1%	0.1%	0.0% - 14.0%	Yes	
Global Asset Allocation	\$7,787,470	27.5%	27.7%	0.2%	25.0% - 30.0%	Yes	
Hedge Funds	\$1,643,851	4.5%	5.9%	1.4%	0.0% - 10.0%	Yes	
Absolute Return	\$752,881	3.0%	2.7%	-0.3%	0.0% - 5.0%	Yes	
Real Estate	\$2,342,830	8.0%	8.3%	0.3%	0.0% - 10.0%	Yes	
Cash	\$12,365	3.0%	0.0%	-3.0%	0.0% - 10.0%	Yes	
Total	\$28,081,876	100.0%	100.0%				



September 30, 2018

ASSET ALLOCATION

3.1



Asset Allocation			
	Policy	Current	Look Through
Large Cap Equity	8.0%	8.1%	12.3%
Small Cap Equity	4.0%	4.1%	4.1%
International Equity	7.0%	6.9%	15.7%
Emerging Markets Equity	3.0%	2.8%	4.9%
Core Bonds	20.0%	20.8%	24.4%
Bank Loans	5.0%	5.5%	5.6%
TIPS	7.0%	7.1%	7.1%
Fixed Income - Emerging	--	--	0.9%
Global Bonds	--	--	4.0%
Global Asset Allocation	27.5%	27.7%	--
Hedge Funds	4.5%	5.9%	5.9%
Absolute Return	3.0%	2.7%	2.7%
Real Estate	8.0%	8.3%	8.3%
Real Assets	--	--	1.4%
Cash	3.0%	0.0%	2.7%
Total	100.0%	100.0%	100.0%

Net Asset Allocation breaks out the exposure of GAA managers.

Asset class weights may not add up to 100% due to rounding.

The 60% MSCI ACWI/40% CITI WGBI Index is broken down into the following categories: 33.1% Domestic Equities, 20.3% Int'l Equities, 6.6% Emerging Equities, 14.8% US Treasury Bonds, 12.7% European Government Bonds, 7.7% Japanese Debt, 2.2% United Kingdom Bonds and 2.6% Developing Market Bonds.

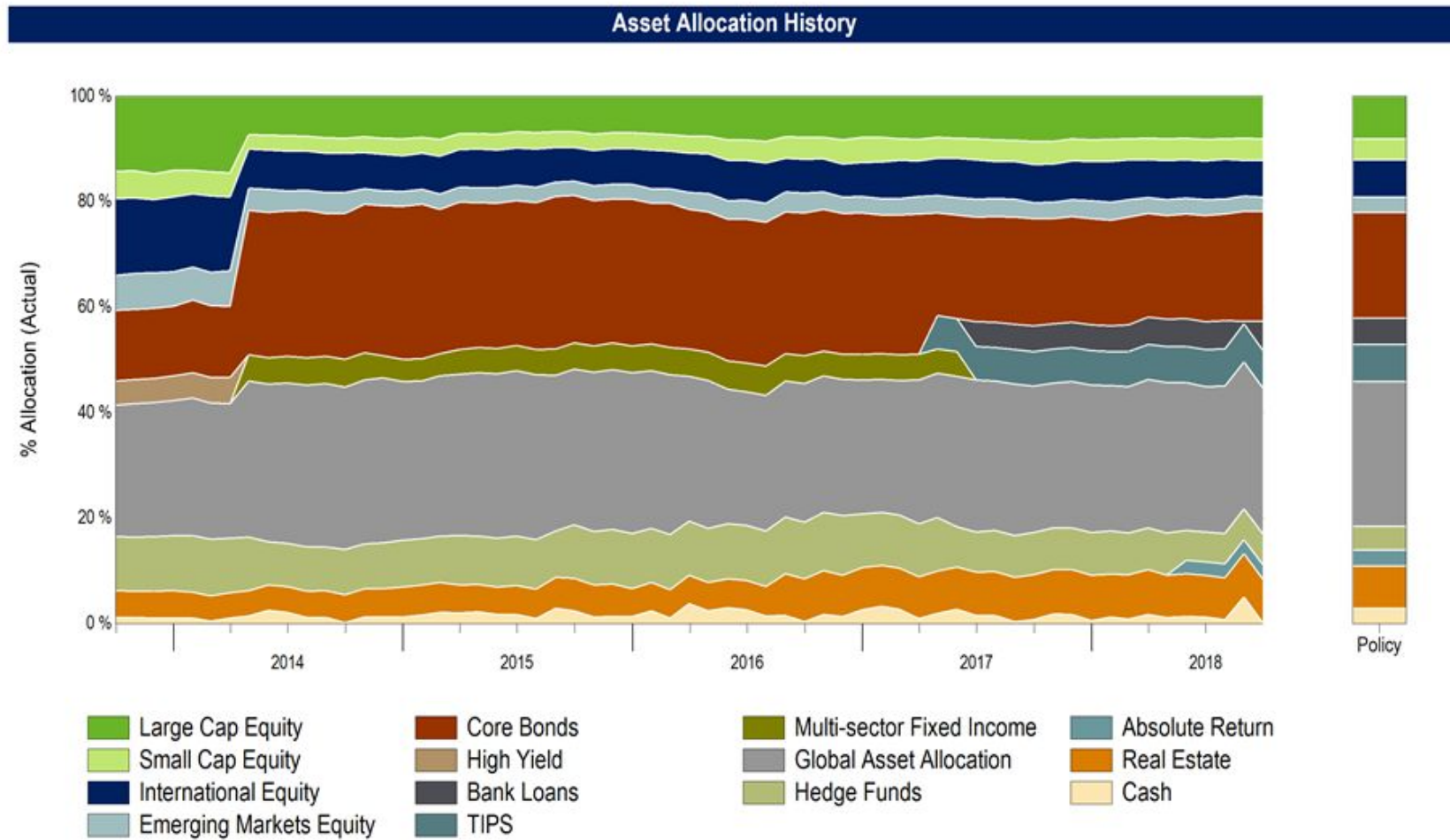
Diversified Fixed Income bucket includes: multi-sector fixed income., non-U.S. fixed income, and emerging fixed income .



September 30, 2018

ASSET ALLOCATION HISTORY

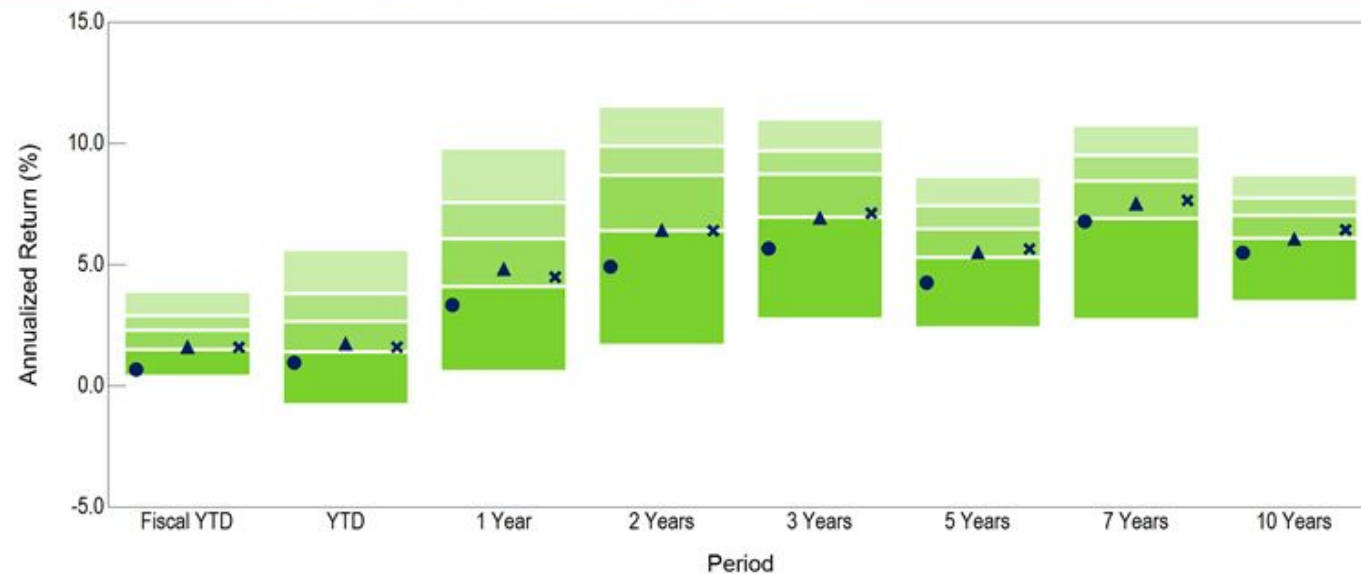
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September 30, 2018

RETURNS VS. PEER UNIVERSE

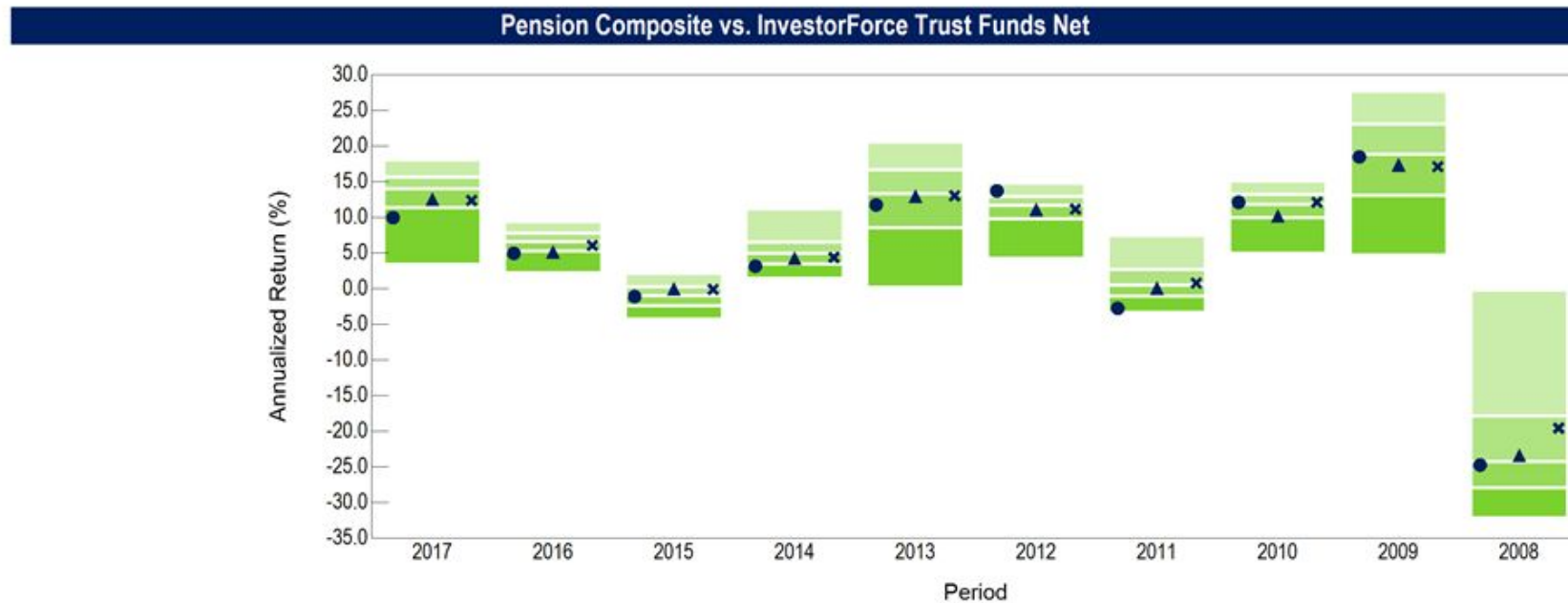
Pension Composite vs. InvestorForce Trust Funds Net



	Return (Rank)							
5th Percentile	3.9	5.6	9.8	11.5	11.0	8.6	10.8	8.7
25th Percentile	2.9	3.8	7.6	9.9	9.7	7.5	9.5	7.8
Median	2.3	2.7	6.1	8.7	8.7	6.5	8.5	7.0
75th Percentile	1.5	1.4	4.1	6.4	7.0	5.3	6.9	6.1
95th Percentile	0.4	-0.8	0.6	1.7	2.8	2.4	2.7	3.5
# of Portfolios	2,630	2,596	2,557	2,438	2,334	2,104	1,919	1,601
● Pension Composite	0.7 (91)	1.0 (82)	3.3 (81)	4.9 (83)	5.7 (84)	4.3 (87)	6.8 (77)	5.5 (84)
▲ Allocation Index	1.6 (73)	1.8 (69)	4.8 (68)	6.4 (75)	7.0 (76)	5.5 (72)	7.5 (68)	6.1 (76)
× Policy Index	1.6 (73)	1.6 (73)	4.5 (72)	6.4 (76)	7.1 (74)	5.7 (70)	7.7 (66)	6.4 (69)



RETURNS VS. PEER UNIVERSE

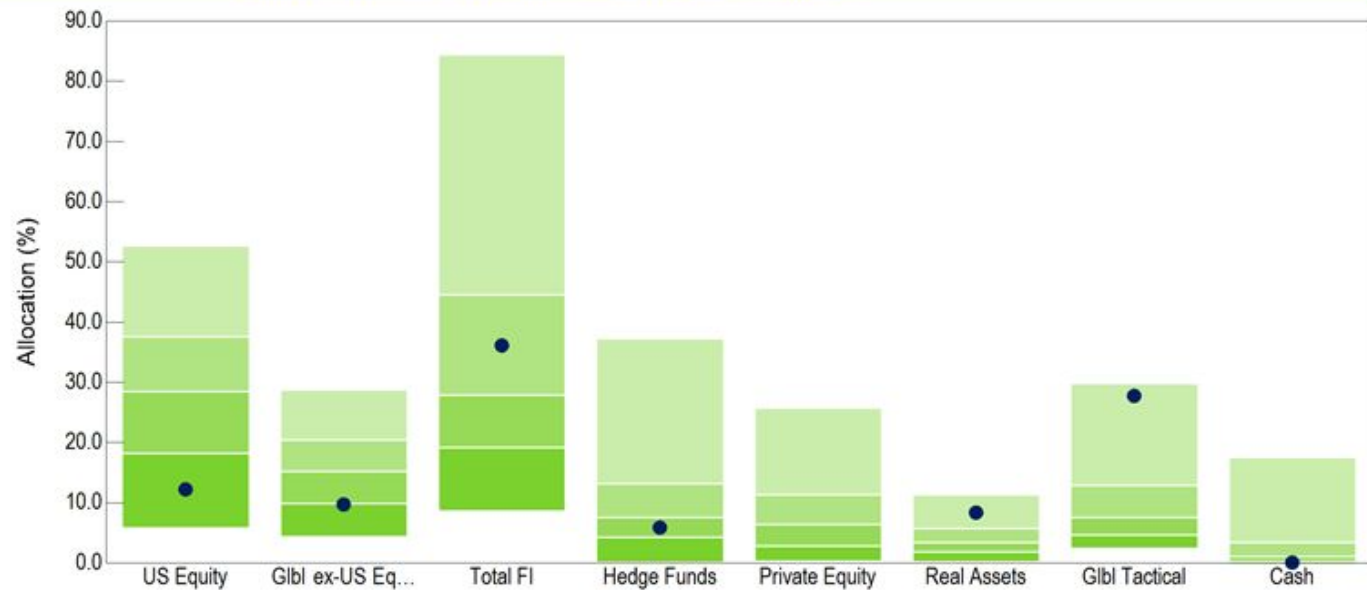


	Return (Rank)									
5th Percentile	18.0	9.4	2.1	11.2	20.6	14.8	7.4	15.1	27.7	-0.2
25th Percentile	15.7	7.9	0.3	6.6	16.7	13.0	2.8	13.3	23.1	-17.8
Median	14.1	6.7	-0.9	5.0	13.4	11.7	0.6	11.9	18.9	-24.2
75th Percentile	11.4	5.3	-2.3	3.6	8.7	9.8	-1.0	10.0	13.2	-27.9
95th Percentile	3.5	2.3	-4.2	1.5	0.3	4.3	-3.2	5.0	4.8	-32.1
# of Portfolios	2,518	2,446	2,339	2,007	1,709	1,539	1,403	1,326	1,233	1,161
● Pension Composite	10.0 (80)	5.0 (80)	-1.1 (54)	3.2 (82)	11.8 (60)	13.7 (14)	-2.7 (92)	12.1 (47)	18.5 (52)	-24.7 (54)
▲ Allocation Index	12.6 (67)	5.2 (77)	0.0 (32)	4.3 (64)	13.0 (53)	11.2 (60)	0.1 (57)	10.2 (73)	17.4 (58)	-23.3 (46)
× Policy Index	12.4 (69)	6.1 (64)	-0.1 (34)	4.4 (62)	13.1 (52)	11.2 (60)	0.8 (47)	12.2 (47)	17.1 (59)	-19.5 (29)



ALLOCATIONS VS. PEER UNIVERSE

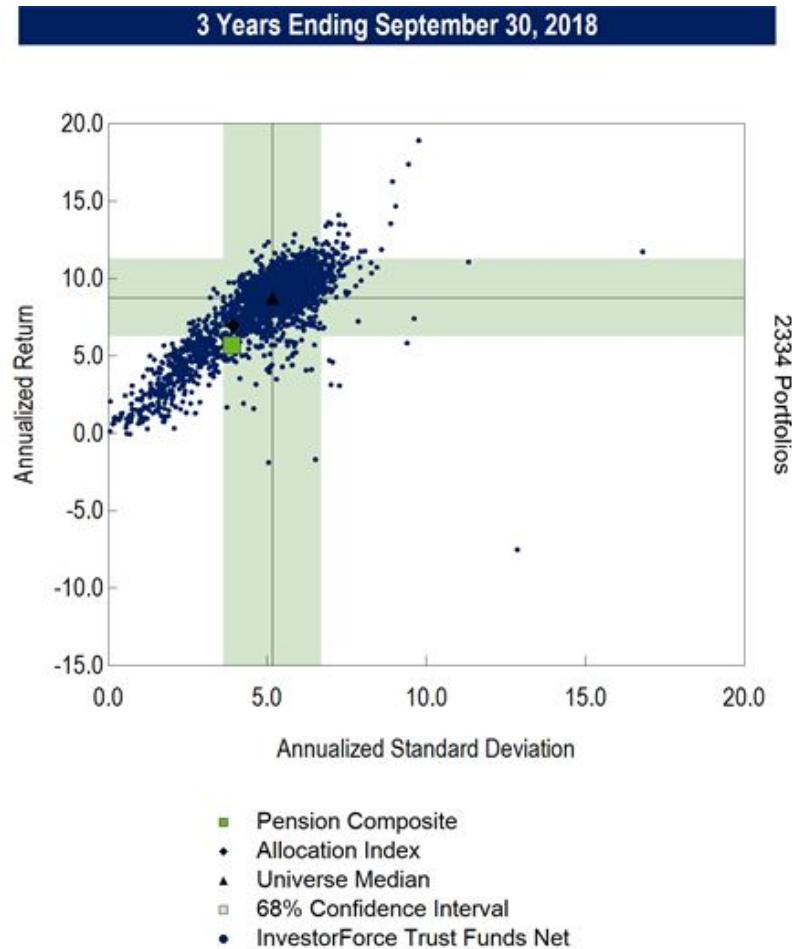
Total Plan Allocation vs. InvestorForce Trust Funds Net



	Allocation (Rank)															
5th Percentile	52.7	28.8	84.4	37.3	25.7	11.4	29.8	17.5								
25th Percentile	37.6	20.5	44.6	13.2	11.4	5.8	13.0	3.4								
Median	28.5	15.3	27.9	7.6	6.5	3.4	7.6	1.2								
75th Percentile	18.3	9.9	19.2	4.3	2.9	1.9	4.8	0.3								
95th Percentile	5.9	4.5	8.7	0.1	0.4	0.3	2.5	0.0								
# of Portfolios	1,737	1,852	2,451	868	898	477	409	2,118								
• Pension Composite	12.2	(86)	9.7	(77)	36.1	(33)	5.9	(61)	--	--	8.3	(15)	27.7	(6)	0.0	(89)



TOTAL PLAN RISK/RETURN - 3 YEAR



3 Years Ending September 30, 2018				
	Annzd Ret	Rank	Annzd Std Dev	Rank
Pension Composite	5.7%	84	3.9%	21
Allocation Index	7.0%	76	3.9%	22
Policy Index	7.1%	74	4.0%	22
InvestorForce Trust Funds Net Median	8.7%	--	5.2%	--

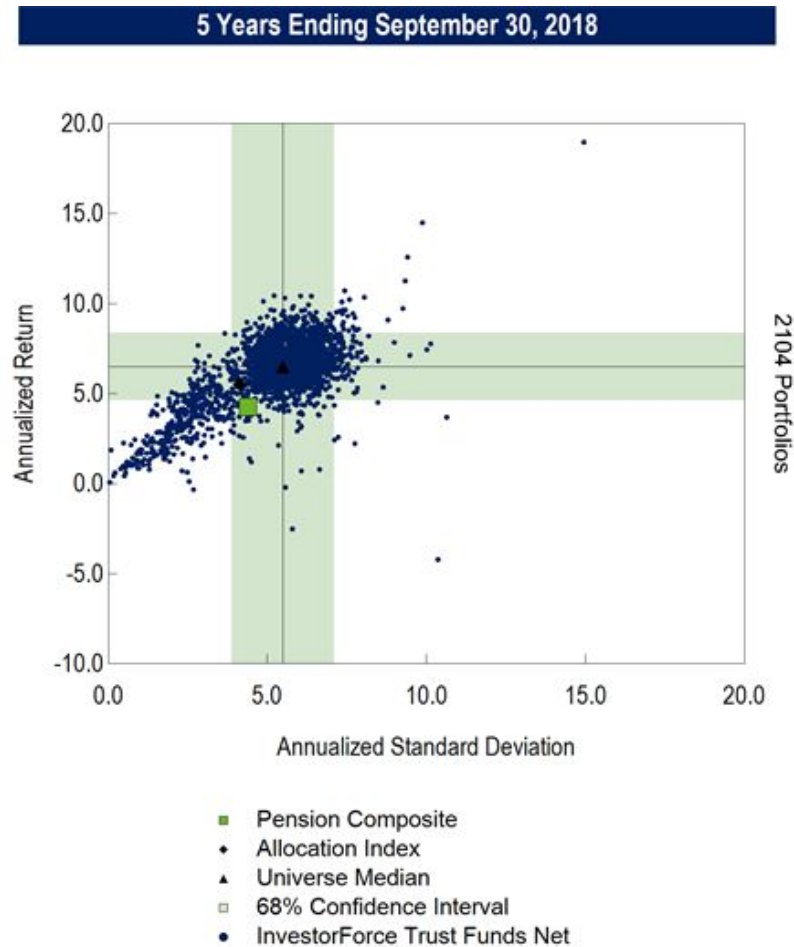
3 Years Ending September 30, 2018				
	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Pension Composite	1.2	85	2.1	45
Allocation Index	1.6	41	2.4	20
Policy Index	1.6	39	2.5	14
InvestorForce Trust Funds Net Median	1.5	--	2.0	--

*Returns are net of fees.



September 30, 2018

TOTAL PLAN RISK/RETURN - 5 YEAR



5 Years Ending September 30, 2018				
	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Pension Composite	4.3%	87	4.4%	23
Allocation Index	5.5%	72	4.1%	21
Policy Index	5.7%	70	4.2%	21
InvestorForce Trust Funds Net Median	6.5%	--	5.5%	--

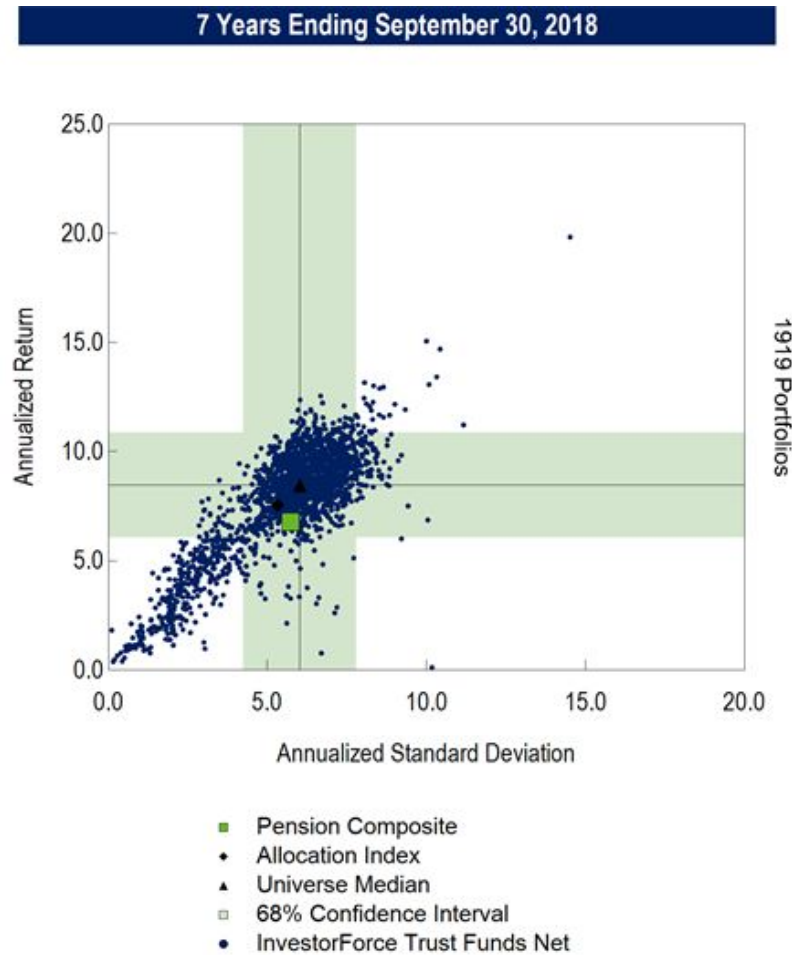
5 Years Ending September 30, 2018				
	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Pension Composite	0.9	86	1.5	66
Allocation Index	1.2	36	1.9	29
Policy Index	1.2	33	2.0	23
InvestorForce Trust Funds Net Median	1.1	--	1.6	--

*Returns are net of fees.



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TOTAL PLAN RISK/RETURN - 7 YEAR



7 Years Ending September 30, 2018				
	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Pension Composite	6.8%	77	5.7%	41
Allocation Index	7.5%	68	5.3%	31
Policy Index	7.7%	66	5.3%	30
InvestorForce Trust Funds Net Median	8.5%	--	6.0%	--

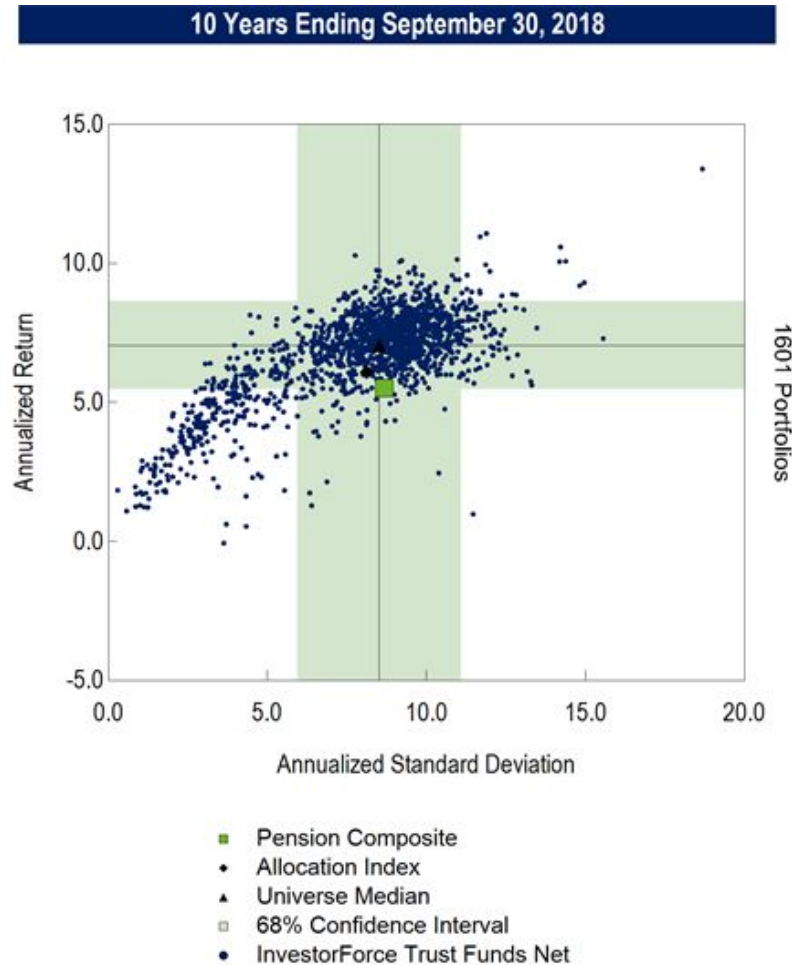
7 Years Ending September 30, 2018				
	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Pension Composite	1.1	83	1.8	77
Allocation Index	1.3	50	2.1	48
Policy Index	1.4	44	2.2	34
InvestorForce Trust Funds Net Median	1.3	--	2.0	--

*Returns are net of fees.



September 30, 2018

TOTAL PLAN RISK/RETURN - 10 YEAR



10 Years Ending September 30, 2018				
	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Pension Composite	5.5%	84	8.7%	55
Allocation Index	6.1%	76	8.1%	42
Policy Index	6.4%	69	7.8%	37
InvestorForce Trust Funds Net Median	7.0%	--	8.5%	--

10 Years Ending September 30, 2018				
	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Pension Composite	0.6	94	0.7	92
Allocation Index	0.7	76	0.8	72
Policy Index	0.8	58	1.0	52
InvestorForce Trust Funds Net Median	0.8	--	1.0	--

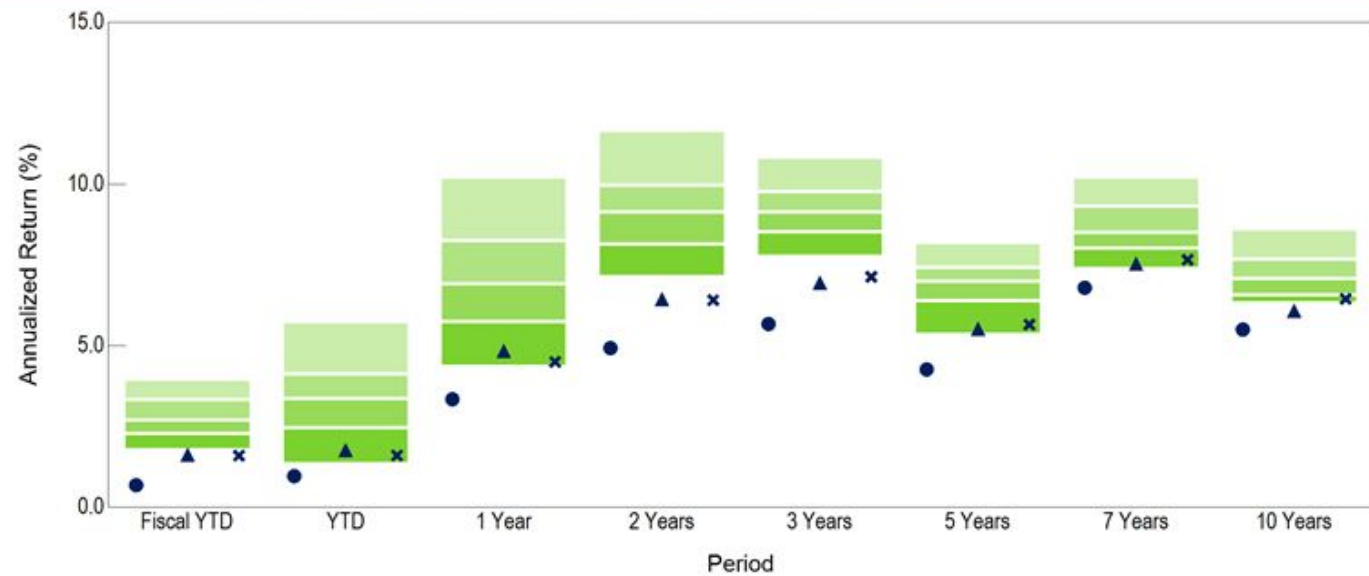
*Returns are net of fees.



September 30, 2018

RETURNS VS. PEER UNIVERSE

Pension Composite vs. InvestorForce Public DB \$50mm-\$250mm Net

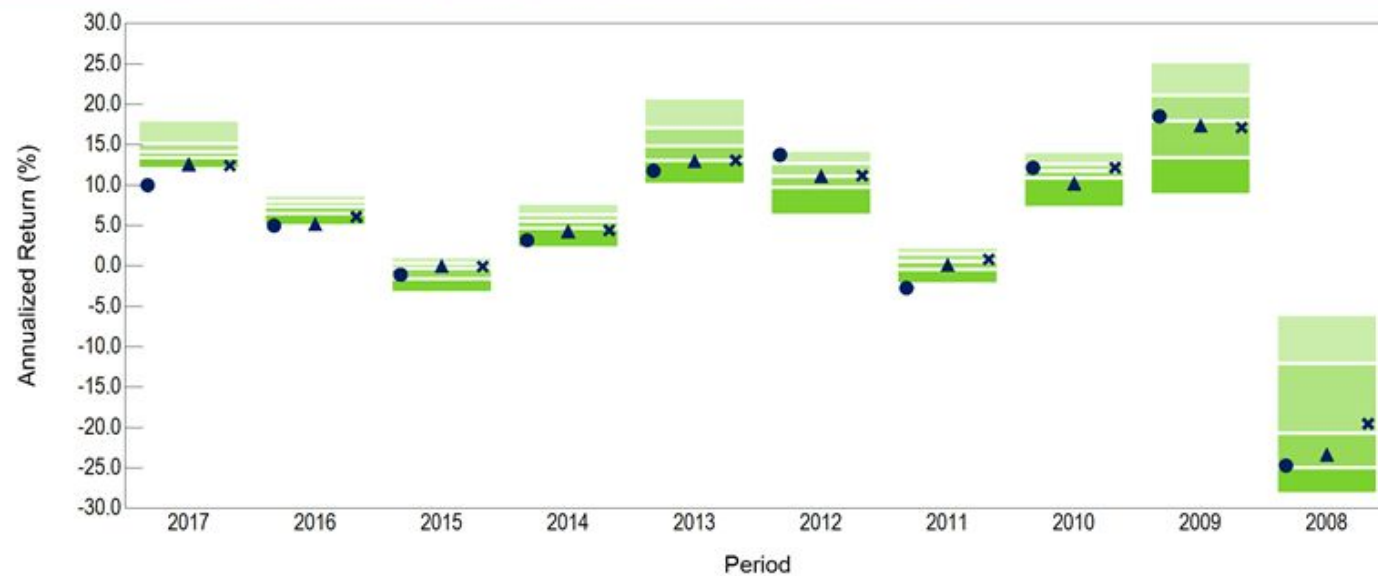


	Return (Rank)							
5th Percentile	4.0	5.7	10.2	11.7	10.8	8.2	10.2	8.6
25th Percentile	3.3	4.1	8.3	10.0	9.8	7.4	9.3	7.7
Median	2.7	3.4	6.9	9.1	9.1	7.0	8.5	7.1
75th Percentile	2.3	2.5	5.8	8.2	8.5	6.4	8.0	6.6
95th Percentile	1.8	1.4	4.4	7.1	7.8	5.4	7.4	6.3
# of Portfolios	73	73	73	69	68	63	56	48
● Pension Composite	0.7 (99)	1.0 (97)	3.3 (99)	4.9 (99)	5.7 (99)	4.3 (99)	6.8 (99)	5.5 (99)
▲ Allocation Index	1.6 (98)	1.8 (90)	4.8 (92)	6.4 (99)	7.0 (99)	5.5 (93)	7.5 (90)	6.1 (99)
× Policy Index	1.6 (98)	1.6 (92)	4.5 (95)	6.4 (99)	7.1 (99)	5.7 (93)	7.7 (86)	6.4 (93)



RETURNS VS. PEER UNIVERSE

Pension Composite vs. InvestorForce Public DB \$50mm-\$250mm Net

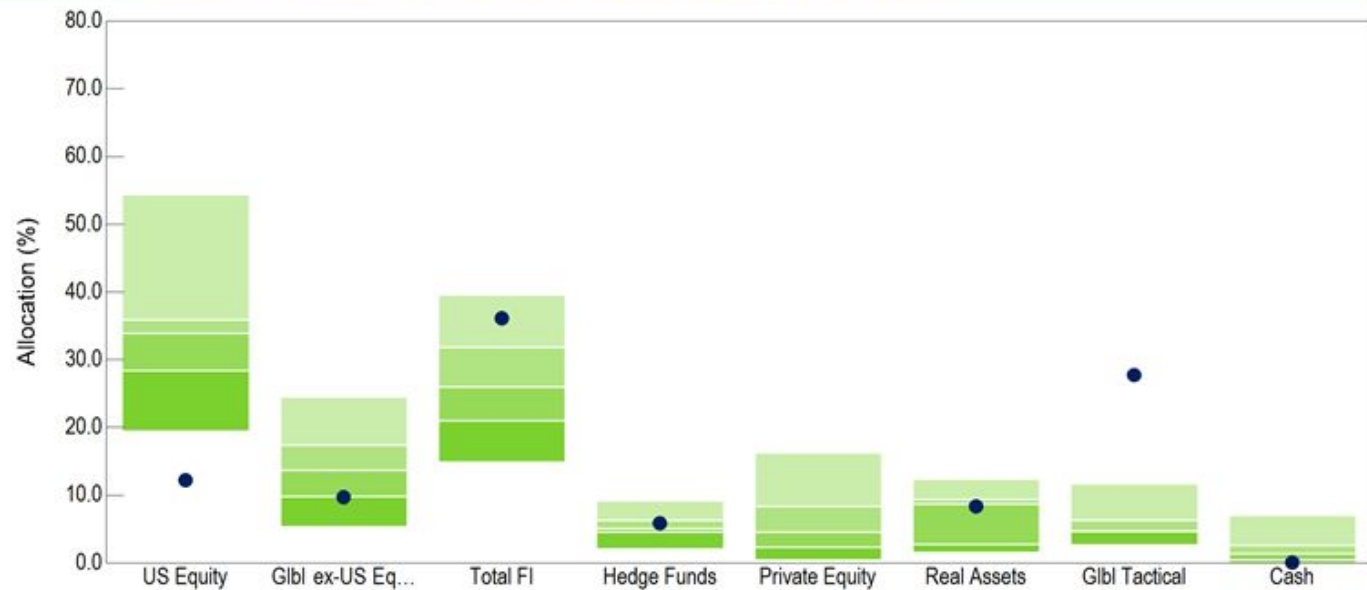


	Return (Rank)									
5th Percentile	18.1	8.7	1.1	7.7	20.8	14.3	2.3	14.2	25.3	-6.0
25th Percentile	15.2	8.0	0.4	6.3	17.1	12.7	1.5	12.6	21.1	-12.0
Median	14.2	7.4	-0.3	5.6	14.9	11.1	0.6	11.7	18.0	-20.7
75th Percentile	13.5	6.5	-1.6	4.7	13.1	9.7	-0.4	10.9	13.4	-25.0
95th Percentile	12.1	5.0	-3.3	2.3	10.1	6.3	-2.2	7.2	8.9	-28.2
# of Portfolios	74	74	75	66	58	54	46	44	43	42
● Pension Composite	10.0 (99)	5.0 (96)	-1.1 (70)	3.2 (92)	11.8 (87)	13.7 (10)	-2.7 (98)	12.1 (38)	18.5 (48)	-24.7 (73)
▲ Allocation Index	12.6 (87)	5.2 (95)	0.0 (39)	4.3 (84)	13.0 (76)	11.2 (50)	0.1 (64)	10.2 (83)	17.4 (52)	-23.3 (64)
× Policy Index	12.4 (91)	6.1 (86)	-0.1 (43)	4.4 (82)	13.1 (76)	11.2 (50)	0.8 (44)	12.2 (38)	17.1 (52)	-19.5 (47)



ALLOCATIONS VS. PEER UNIVERSE

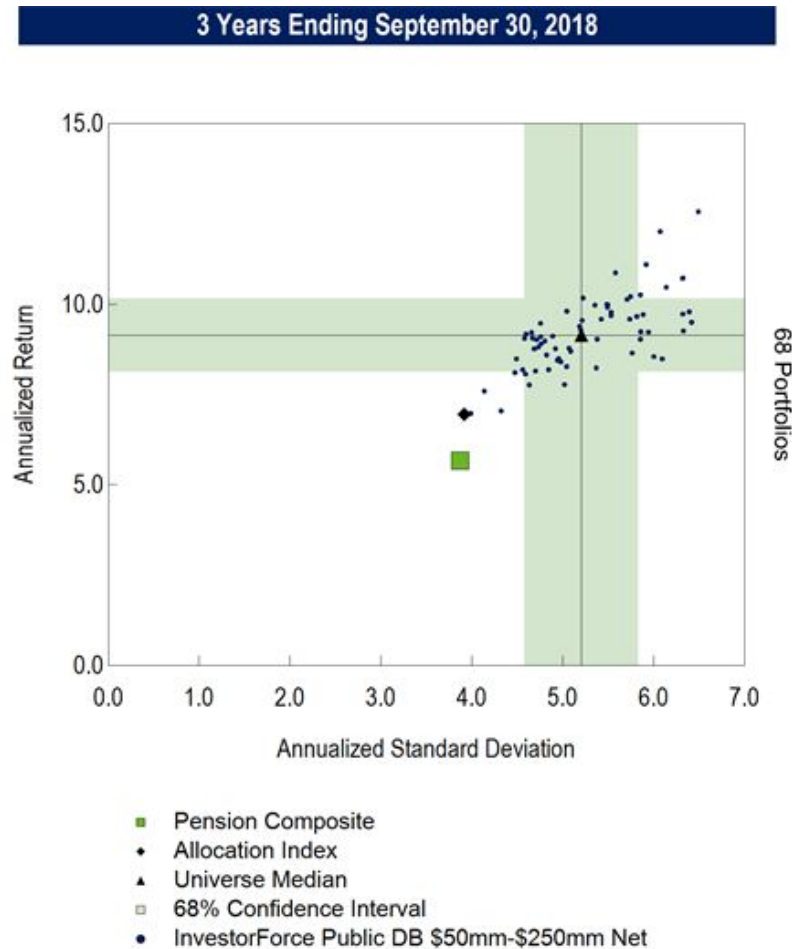
Total Plan Allocation vs. InvestorForce Public DB \$50mm-\$250mm Net



	Allocation (Rank)														
5th Percentile	54.4		24.5		39.6		9.2		16.2		12.4		11.7		7.0
25th Percentile	35.9		17.4		31.9		6.4		8.4		9.4		6.4		2.7
Median	33.9		13.7		26.0		5.2		4.6		8.8		4.8		1.5
75th Percentile	28.5		9.9		21.0		4.7		2.4		2.8		4.8		0.5
95th Percentile	19.5		5.4		15.0		2.1		0.5		1.6		2.7		0.1
# of Portfolios	49		67		72		13		30		12		16		69
• Pension Composite	12.2	(99)	9.7	(77)	36.1	(7)	5.9	(35)	--	--	8.3	(60)	27.7	(1)	0.0 (97)



TOTAL PLAN RISK/RETURN - 3 YEAR

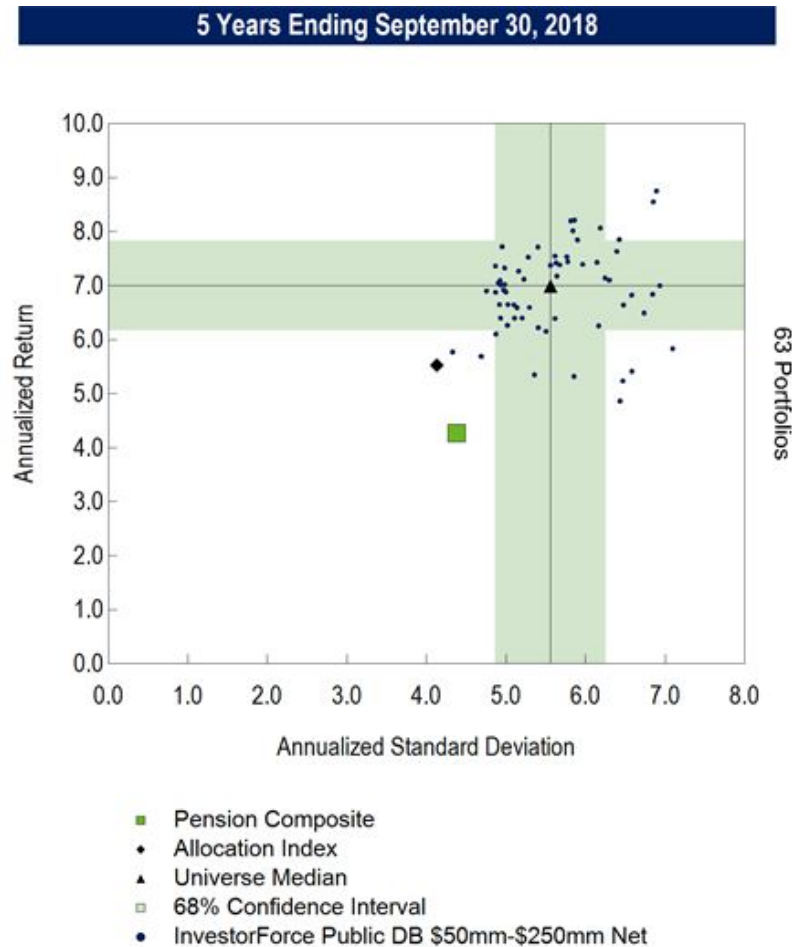


3 Years Ending September 30, 2018				
	Annzd Ret	Rank	Annzd Std Dev	Rank
Pension Composite	5.7%	99	3.9%	1
Allocation Index	7.0%	99	3.9%	1
Policy Index	7.1%	99	4.0%	1
InvestorForce Public DB \$50mm-\$250mm Net Median	9.1%	--	5.2%	--

3 Years Ending September 30, 2018				
	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Pension Composite	1.2	99	2.1	56
Allocation Index	1.6	62	2.4	14
Policy Index	1.6	56	2.5	3
InvestorForce Public DB \$50mm-\$250mm Net Median	1.6	--	2.2	--

*Returns are net of fees.

TOTAL PLAN RISK/RETURN - 5 YEAR



5 Years Ending September 30, 2018				
	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Pension Composite	4.3%	99	4.4%	1
Allocation Index	5.5%	93	4.1%	1
Policy Index	5.7%	93	4.2%	1
InvestorForce Public DB \$50mm-\$250mm Net Median	7.0%	--	5.6%	--

5 Years Ending September 30, 2018				
	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Pension Composite	0.9	93	1.5	80
Allocation Index	1.2	43	1.9	31
Policy Index	1.2	34	2.0	17
InvestorForce Public DB \$50mm-\$250mm Net Median	1.2	--	1.7	--

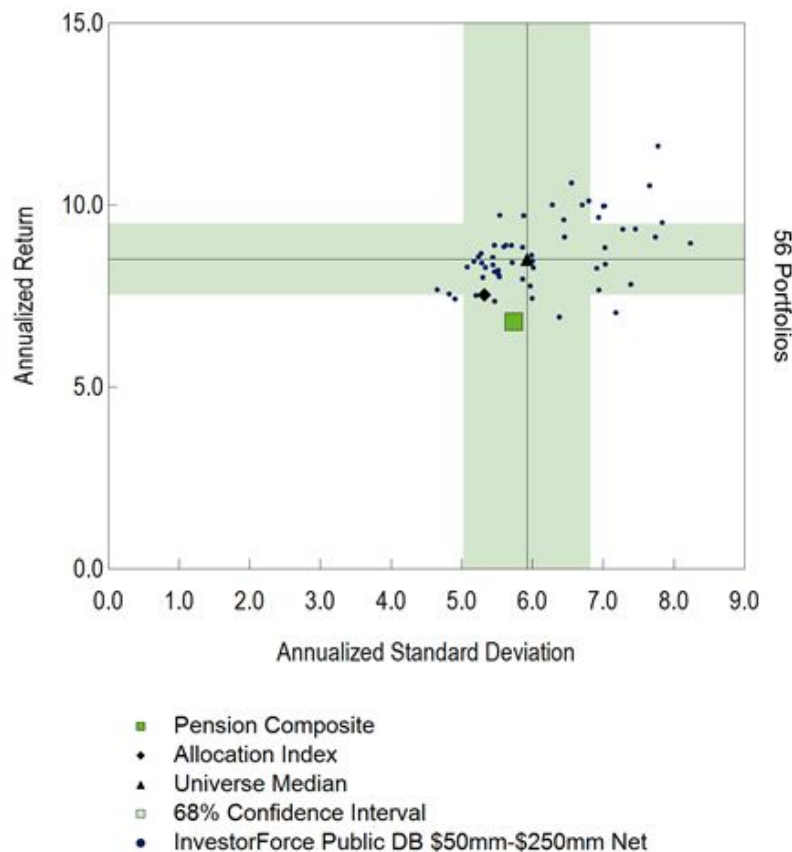
*Returns are net of fees.



September 30, 2018

TOTAL PLAN RISK/RETURN - 7 YEAR

7 Years Ending September 30, 2018



7 Years Ending September 30, 2018

	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Pension Composite	6.8%	99	5.7%	44
Allocation Index	7.5%	90	5.3%	20
Policy Index	7.7%	86	5.3%	14
InvestorForce Public DB \$50mm-\$250mm Net Median	8.5%	--	5.9%	--

7 Years Ending September 30, 2018

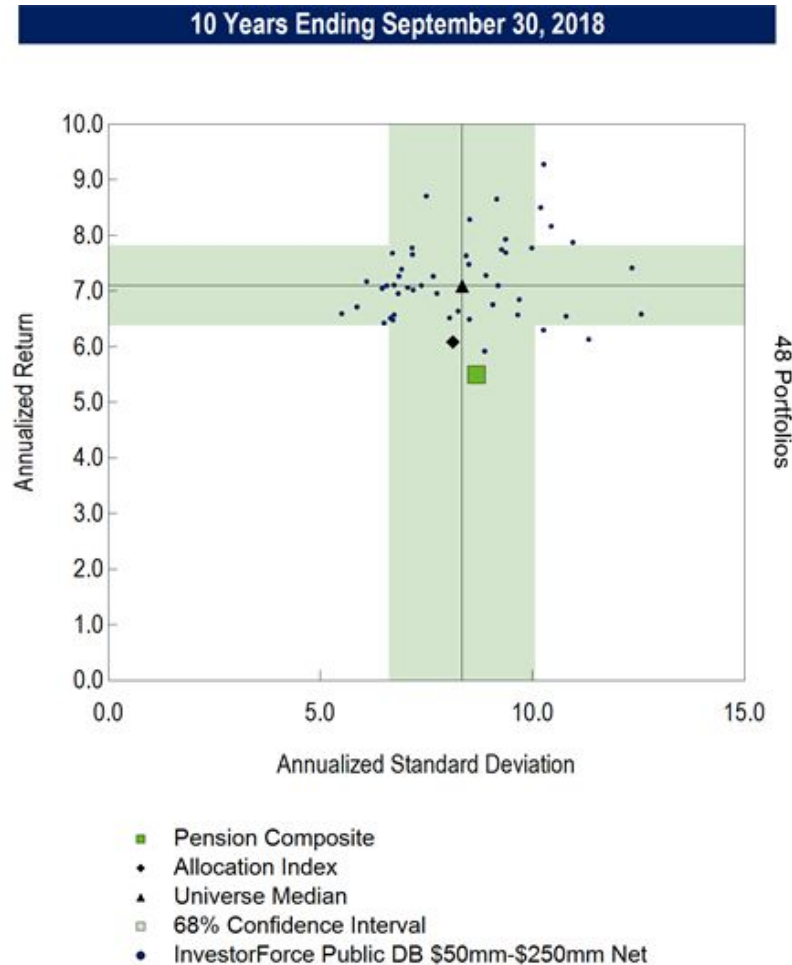
	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Pension Composite	1.1	92	1.8	83
Allocation Index	1.3	66	2.1	59
Policy Index	1.4	54	2.2	34
InvestorForce Public DB \$50mm-\$250mm Net Median	1.4	--	2.1	--

*Returns are net of fees.



September 30, 2018

TOTAL PLAN RISK/RETURN - 10 YEAR



10 Years Ending September 30, 2018				
	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Pension Composite	5.5%	99	8.7%	59
Allocation Index	6.1%	99	8.1%	48
Policy Index	6.4%	93	7.8%	46
InvestorForce Public DB \$50mm-\$250mm Net Median	7.1%	--	8.3%	--

10 Years Ending September 30, 2018				
	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Pension Composite	0.6	91	0.7	92
Allocation Index	0.7	81	0.8	81
Policy Index	0.8	64	1.0	66
InvestorForce Public DB \$50mm-\$250mm Net Median	0.9	--	1.1	--

*Returns are net of fees.



September 30, 2018

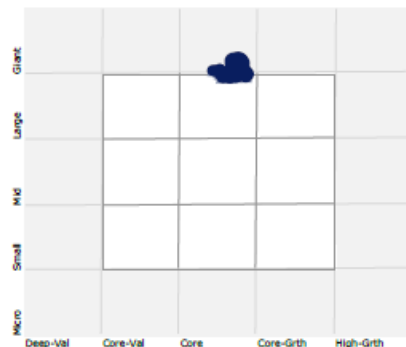
MANAGER ANALYSIS

NEPC, LLC

VANGUARD INSTITUTIONAL INDEX I

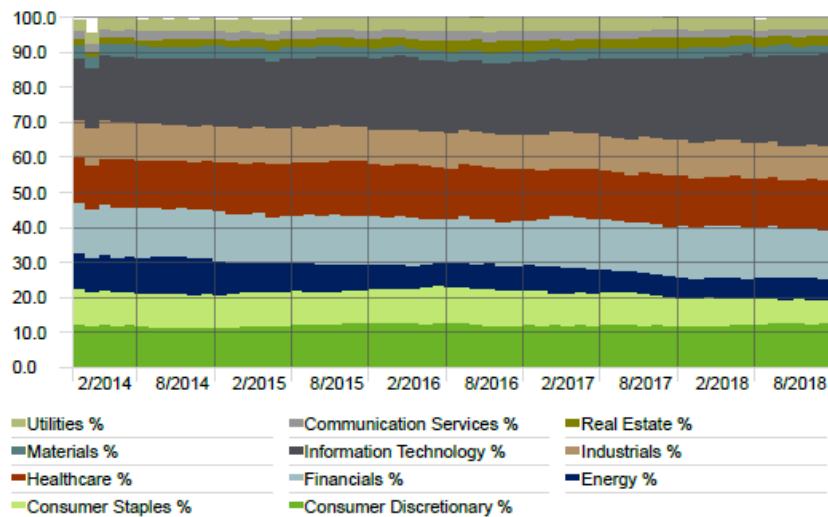
Holdings Based Style Trail (5 Years)

Time Period: 10/31/2013 to 9/30/2018



*Vanguard Institutional Index I - S&P 500 TR USD

Historical Sector Allocations (5 Years)



Portfolio Statistics

	Fund	Index
# of Holdings	511	505
% Asset in Top 10 Holdings	22.0	21.9
Turnover Ratio %	5.0	
P/E Ratio	20.7	21.0
P/B Ratio	3.3	3.3
LT Earn Growth	12.3	
Hist Earn Growth	8.4	7.9
12 Mo Yield	1.8	

Market Capitalization Breakdown

	Fund	Index
Market Cap Giant %	56.7	56.7
Market Cap Large %	34.3	34.3
Market Cap Mid %	9.0	9.0
Market Cap Small %	0.0	0.0
Market Cap Micro %	0.0	0.0
Average Market Cap (mil)	109,480.4	109,485.2

Top 10 Holdings

	Portf Weight %	3 Month Ret %
Apple Inc	4.54	22.34
Microsoft Corp	3.50	16.41
Amazon.com Inc	3.29	17.84
Facebook Inc A	1.71	-15.37
JPMorgan Chase & Co	1.58	8.83
Berkshire Hathaway Inc B	1.58	14.71
Alphabet Inc Class C	1.50	6.98
Alphabet Inc A	1.49	6.90
Johnson & Johnson	1.47	14.61
Exxon Mobil Corp	1.38	3.76

Attribution (Quarter)

	Portfolio Weights	Benchmark Weights	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Active Return
Communication Services	10.26	10.28	1.07	1.07	0.00	0.00	0.00
Consumer Discretionary	10.02	10.05	9.32	9.32	0.00	0.00	0.00
Consumer Staples	6.80	6.85	5.71	5.81	0.00	-0.01	-0.01
Energy	6.13	6.14	0.68	0.68	0.00	0.00	0.00
Financials	13.81	13.85	4.42	4.42	0.00	0.00	0.00
Health Care	14.35	14.39	14.51	14.51	0.00	0.00	0.00
Industrials	9.66	9.67	10.00	10.03	0.00	0.00	0.00
Information Technology	20.42	20.48	12.46	12.46	0.00	0.00	0.00
Materials	2.56	2.56	0.35	0.35	0.00	0.00	0.00
Real Estate	2.78	2.79	0.62	0.61	0.00	0.00	0.00
Utilities	2.88	2.89	2.39	2.39	0.00	0.00	0.00
Attribution Total	99.67	99.95	7.72	7.73	0.00	-0.01	-0.01
Cash	0.26	0.00					
Bond	0.02	0.00					
Total	100.00	100.00					
Expense Ratio			0.01	0.00			
Residual(Reported - Attribution + Expense)			0.00	-0.01			



Source: Morningstar

September 30, 2018

VANGUARD INSTITUTIONAL INDEX I

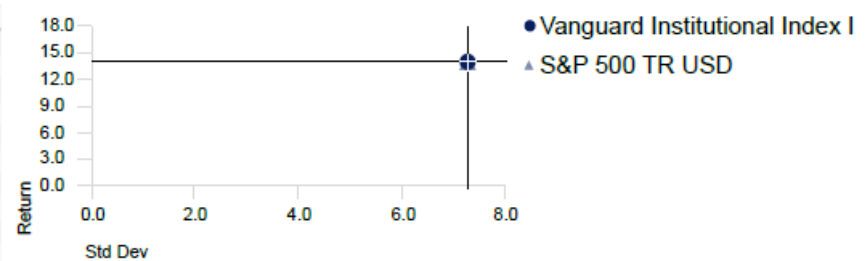
Risk & Return Characteristics (5 Years)

Time Period: 10/1/2013 to 9/30/2018

	Fund	Index
R2	100.0	100.0
Alpha	0.0	0.0
Beta	1.0	1.0
Std Dev	7.3	7.3
Up Capture Ratio	99.8	100.0
Down Capture Ratio	100.2	100.0
Sharpe Ratio (geo)	1.8	1.8
Information Ratio (geo)	-3.3	
Tracking Error	0.0	0.0
Correlation	1.0	1.0

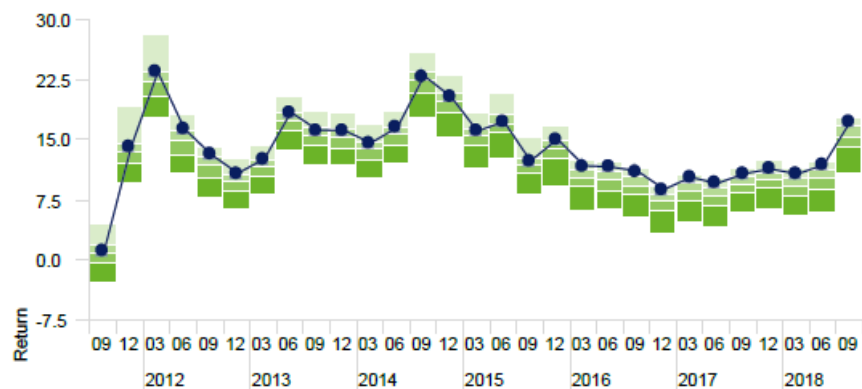
Risk & Return Illustration (5 Years)

Time Period: 10/1/2013 to 9/30/2018



Rolling Return (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile

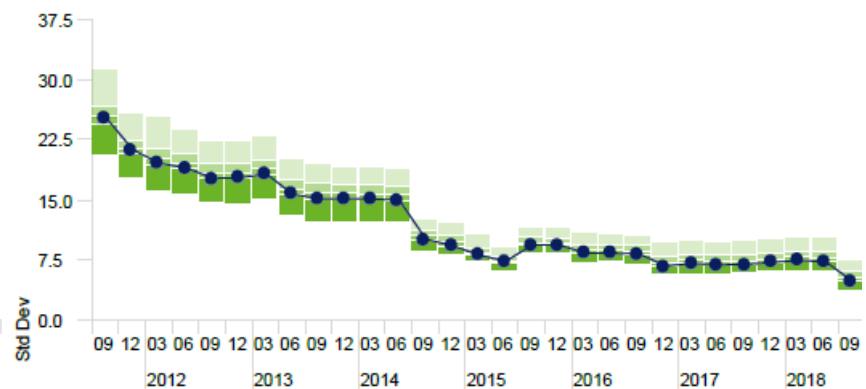


—Vanguard Institutional Index I

—S&P 500 TR USD

Rolling Risk (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



—Vanguard Institutional Index I

—S&P 500 TR USD

Calendar Year Returns

	2008	Rank	2009	Rank	2010	Rank	2011	Rank	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	2017	Rank
Vanguard Institutional Index I	-37.0	37	26.6	52	15.0	29	2.1	17	16.0	35	32.3	42	13.7	18	1.4	20	11.9	27	21.8	29
S&P 500 TR USD	-37.0		26.5		15.1		2.1		16.0		32.4		13.7		1.4		12.0		21.8	

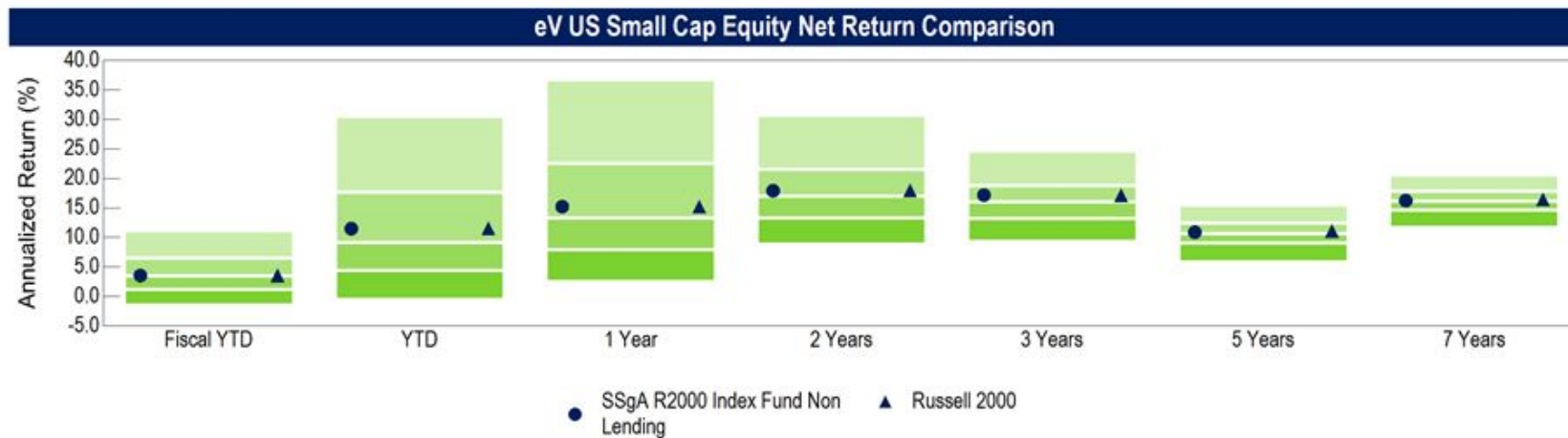
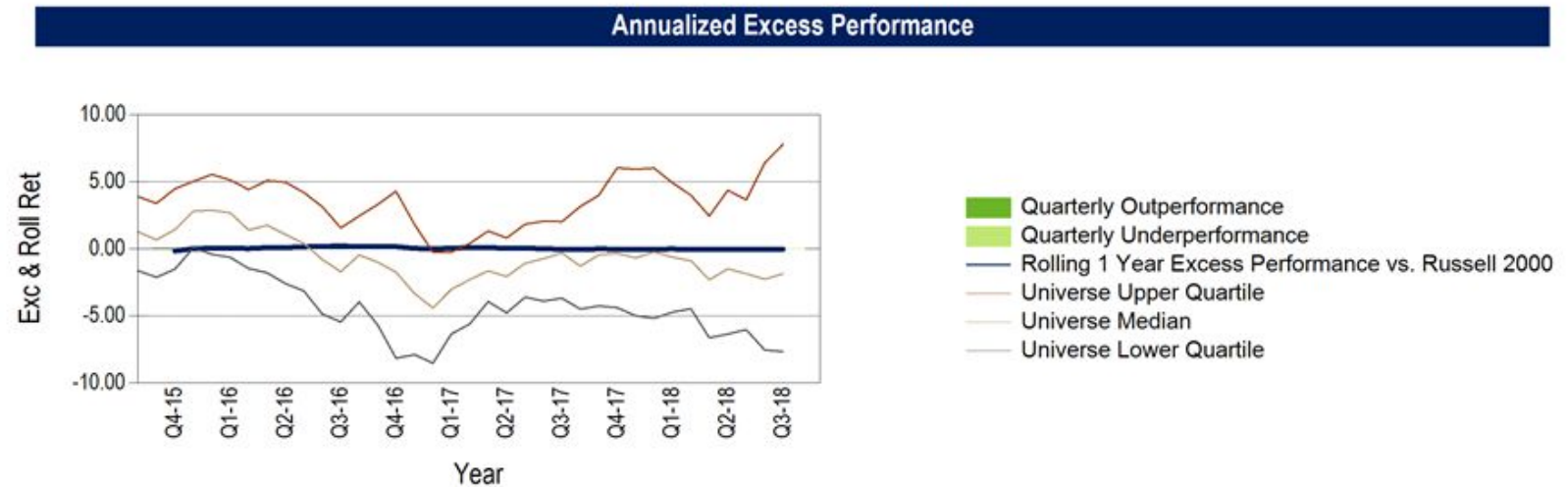
Source: Morningstar



September 30, 2018

SSgA R2000 NON LENDING

3.1



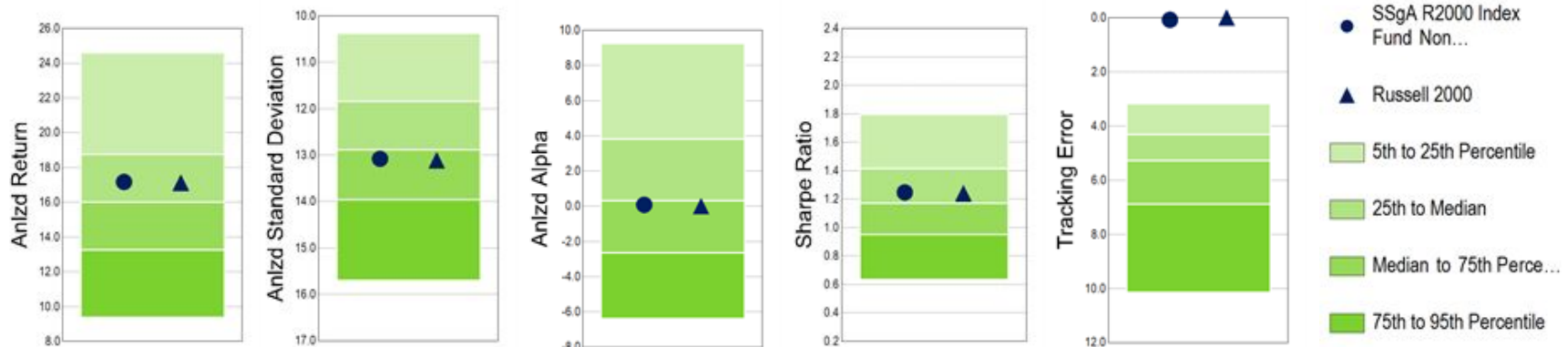
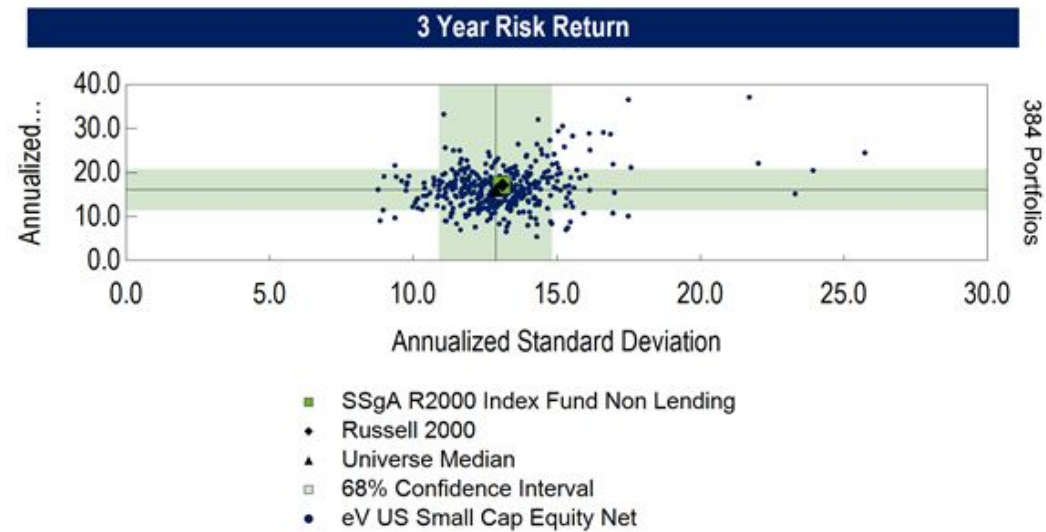
*Returns are net of fees.



September 30, 2018

SSgA R2000 NON LENDING

3.1



*Returns are net of fees.



September 30, 2018

SSgA R2000 NON LENDING

3.1

Characteristics		
	Portfolio	Russell 2000
Number of Holdings	2,022	2,040
Weighted Avg. Market Cap. (\$B)	2.4	2.4
Median Market Cap. (\$B)	0.9	0.9
Price To Earnings	17.9	15.8
Price To Book	4.3	3.2
Price To Sales	3.4	3.1
Return on Equity (%)	6.0	8.8
Yield (%)	1.3	1.0
Beta		1.0
R-Squared		1.0

Equity Sector Attribution								
	Attribution Effects				Returns		Ending Sector Weights	
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark
Energy	0.0%	0.0%	0.0%	0.0%	-2.0%	-2.1%	4.9%	4.7%
Materials	0.0%	0.0%	0.0%	0.0%	1.1%	1.1%	4.2%	4.2%
Industrials	0.0%	0.0%	0.0%	0.0%	4.4%	4.4%	15.1%	15.1%
Consumer Discretionary	0.0%	0.0%	0.0%	0.0%	3.9%	3.9%	12.3%	12.3%
Consumer Staples	0.0%	0.0%	0.0%	0.0%	-1.8%	-1.7%	2.6%	2.7%
Health Care	0.0%	0.0%	0.0%	0.0%	7.8%	7.7%	16.3%	16.5%
Financials	0.0%	0.0%	0.0%	0.0%	0.9%	1.0%	17.5%	17.5%
Information Technology	0.0%	0.0%	0.0%	0.0%	6.5%	6.5%	14.0%	13.9%
Communication Services	0.0%	0.0%	0.0%	0.0%	21.2%	21.2%	3.3%	3.3%
Utilities	0.0%	0.0%	0.0%	0.0%	3.7%	3.7%	3.1%	3.1%
Real Estate	0.0%	0.0%	0.0%	0.0%	-0.4%	-0.4%	6.8%	6.9%
Cash	0.0%	--	--	--	--	--	0.0%	0.0%
Unclassified	0.0%	--	--	--	--	--	0.0%	0.0%
Portfolio	0.0%	=	0.0%	+	0.0%	+	0.0%	+
					3.7%	3.7%	100.0%	100.0%

*Attribution on manager pages is holdings based, using buy-and-hold assumptions from the beginning of period portfolio. Results may differ from actual performance. Returns are net of fees.

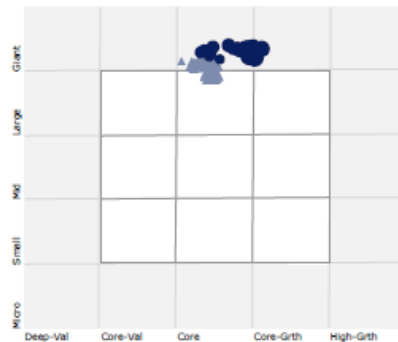


September 30, 2018

MORGAN STANLEY INTERNATIONAL EQUITY I

Holdings Based Style Trail (5 Years)

Time Period: 10/31/2013 to 9/30/2018



Morgan Stanley Int'l International Eq I MSCI EAFE NR USD

Portfolio Statistics

	Fund	Index
# of Holdings	63	924
% Asset in Top 10 Holdings	37.8	11.5
Turnover Ratio %	18.0	
P/E Ratio	14.3	14.5
P/B Ratio	2.3	1.6
LT Earn Growth	9.6	9.3
Hist Earn Growth	27.3	2.1
12 Mo Yield	1.5	

Market Capitalization Breakdown

	Fund	Index
Market Cap Giant %	65.7	51.4
Market Cap Large %	29.5	36.3
Market Cap Mid %	3.8	12.1
Market Cap Small %	1.0	0.0
Market Cap Micro %	0.0	0.1
Average Market Cap	53,063.9	35,513.3
Equity Region Developed %	95.9	99.6
Equity Region Emerging %	4.1	0.4

Top Ten Holdings

	Port Weight %	3 Month Return
Reckitt Benckiser Group PLC	4.79	12.19
Unilever NV DR	4.63	0.66
L'Oreal SA	4.26	-2.31
GlaxoSmithKline PLC	4.25	0.45
British American Tobacco PLC	3.70	-7.56
Pernod Ricard SA	3.60	1.19
Shiseido Co Ltd	3.32	-2.47
SAP SE	3.20	6.57
Sanofi SA	3.15	10.94
Novartis AG	2.92	13.97

Sector Attribution (Quarter)

	Portfolio Weights	Benchmark Weights	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Active Return
Communication Services	4.18	5.43	-1.83	3.28	-0.02	-0.22	-0.24
Consumer Discretionary	3.08	11.13	-6.32	-0.51	0.15	-0.19	-0.04
Consumer Staples	34.34	11.29	-0.68	-0.12	-0.36	-0.20	-0.56
Energy	3.78	5.99	9.68	3.48	-0.03	0.21	0.18
Financials	15.00	19.75	0.62	0.92	0.02	-0.05	-0.03
Health Care	14.85	10.93	2.69	5.61	0.18	-0.44	-0.26
Industrials	12.45	14.35	8.13	2.55	-0.02	0.67	0.65
Information Technology	5.28	6.23	3.59	0.26	0.00	0.19	0.19
Materials	5.06	8.08	-9.23	0.44	0.03	-0.53	-0.51
Real Estate	0.00	3.50		-3.03	0.16	0.00	0.16
Utilities	0.00	3.29		-0.56	0.06	0.00	0.06
Attribution Total	98.02	99.97	1.00	1.39	0.17	-0.56	-0.39
Cash	1.98	0.00					
Other	0.00	0.03					
Total	100.00	100.00					

Region Attribution (Quarter)

	Portfolio Weights	Benchmark Weights	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Active Return
Asia - Developed	4.65	5.24	2.11	-0.68	0.01	0.14	0.15
Asia - Emerging	3.94	0.53	-4.43	-12.00	-0.49	0.33	-0.17
Australasia	0.00	7.03		-0.75	0.15	0.00	0.15
Canada	2.46	0.00	-11.58		-0.36	0.00	-0.36
Europe - ex Euro	6.68	13.30	5.66	6.08	-0.30	-0.03	-0.33
Eurozone	39.38	31.17	0.51	0.42	-0.08	0.03	-0.04
Japan	13.68	23.90	0.55	3.67	-0.23	-0.42	-0.66
Latin America	0.00	0.02		-28.47	0.01	0.00	0.01
Middle East	0.00	0.48		1.44	0.00	0.00	0.00
United Kingdom	22.92	16.77	2.74	-1.80	-0.20	1.06	0.86
United States	4.30	1.53	1.98	3.30	0.05	-0.05	0.00
Attribution Total	98.02	99.97	1.00	1.39	-1.44	1.05	-0.39
Cash	1.98	0.00					
Other	0.00	0.03					
Total	100.00	100.00					



Source: Morningstar

September 30, 2018

MORGAN STANLEY INTERNATIONAL EQUITY I

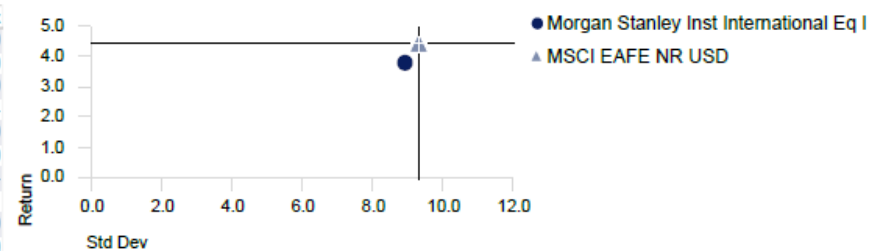
Risk & Return Characteristics (5 Years)

Time Period: 10/1/2013 to 9/30/2018

	Fund	Index
R2	89.8	100.0
Alpha	-0.2	0.0
Beta	0.9	1.0
Std Dev	8.9	9.4
Up Capture Ratio	89.6	100.0
Down Capture Ratio	92.6	100.0
Sharpe Ratio (geo)	0.4	0.4
Information Ratio (geo)	-0.2	
Tracking Error	3.0	0.0
Correlation	0.9	1.0

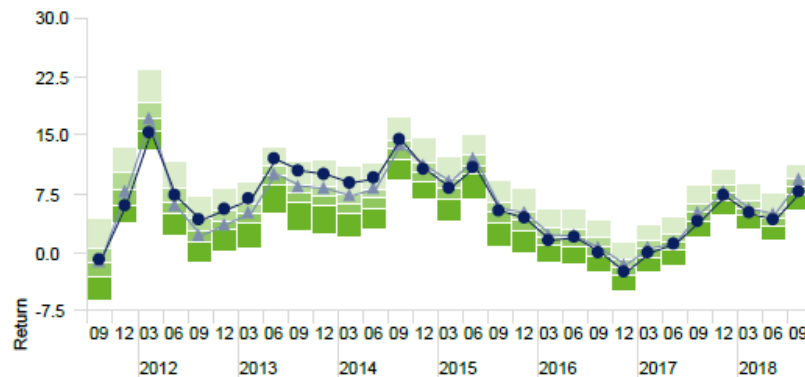
Risk & Return Illustration (5 Years)

Time Period: 10/1/2013 to 9/30/2018



Rolling Returns (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile

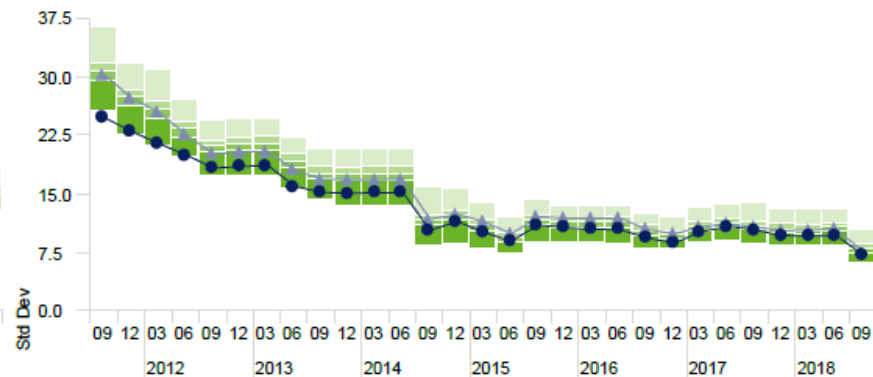


—Morgan Stanley Inst International Eq I

—MSCI EAFE NR USD

Rolling Risk (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



—Morgan Stanley Inst International Eq I

—MSCI EAFE NR USD

Calendar Year Returns

	2008	Rank	2009	Rank	2010	Rank	2011	Rank	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	2017	Rank
Morgan Stanley Inst International Eq I	-33.1	8	21.6	85	6.1	87	-7.6	5	19.6	26	20.4	43	-6.1	64	0.4	30	-2.0	82	25.2	53
MSCI EAFE NR USD	-43.4		31.8		7.8		-12.1		17.3		22.8		-4.9		-0.8		1.0		25.0	

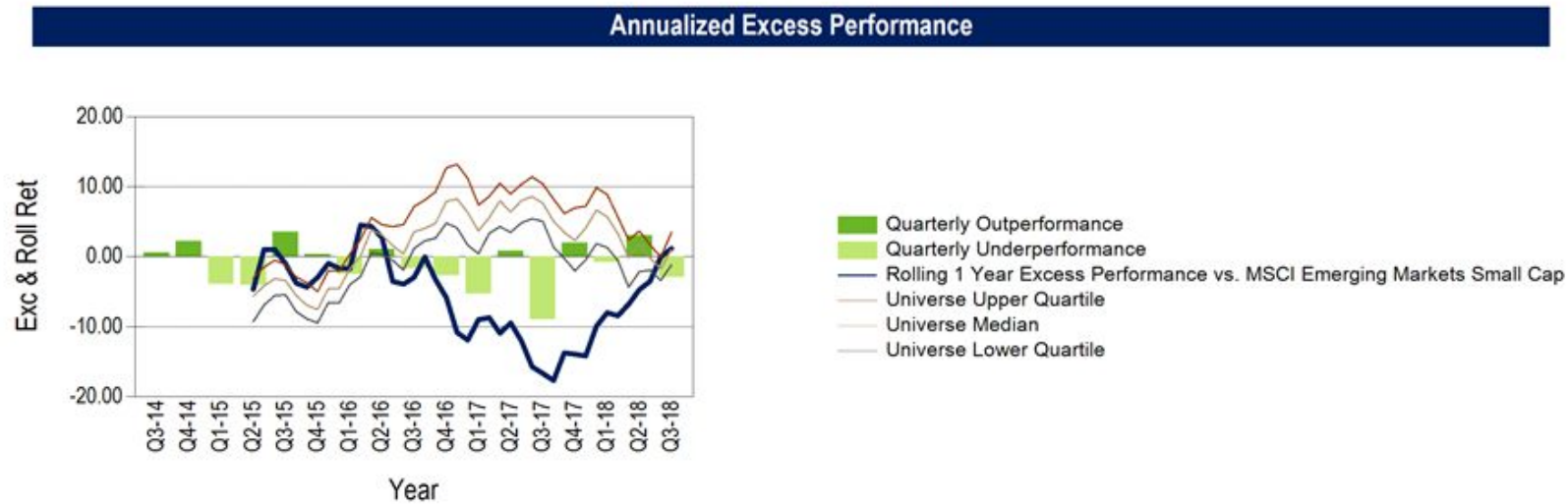


Source: Morningstar

September 30, 2018

MONDRIAN EM SMALL CAP

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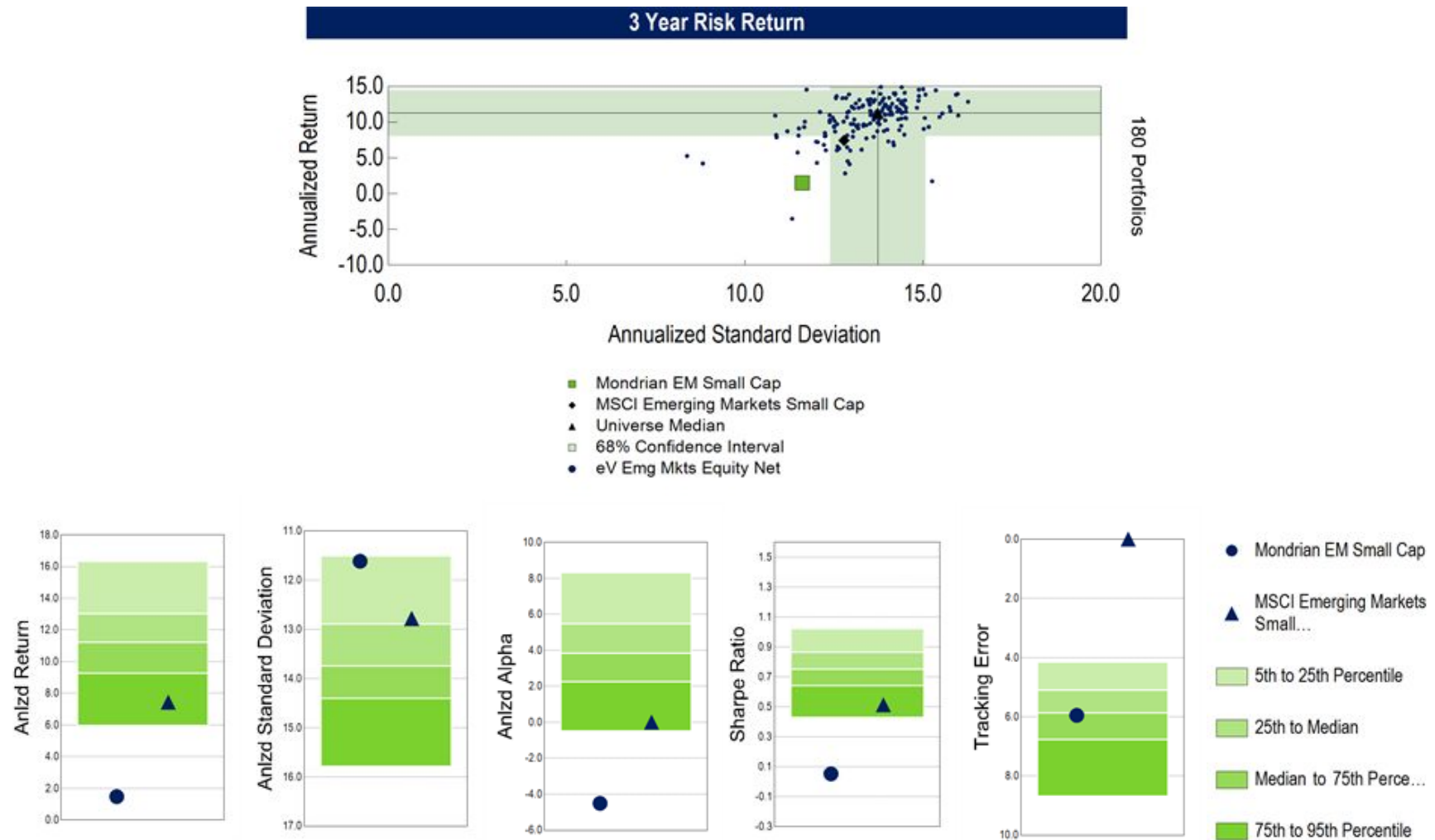
*Returns are net of fees.



September 30, 2018

MONDRIAN EM SMALL CAP

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September 30, 2018

MONDRIAN EM SMALL CAP

Characteristics	Portfolio	MSCI Emerging Markets Small Cap
Number of Holdings	110	1,731
Weighted Avg. Market Cap. (\$B)	1.5	1.1
Median Market Cap. (\$B)	0.9	0.6
Price To Earnings	29.9	16.0
Price To Book	4.5	2.4
Price To Sales	4.0	2.3
Return on Equity (%)	19.1	13.1
Yield (%)	2.4	2.6
Beta		1.0
R-Squared		1.0

Top Positive Contributors	Relative Contribution %	Return %
QL RESOURCES	0.2%	11.9%
CORPORACION INMOBILIARIA VESTA	0.2%	17.0%
BOLSA MEXICANA DE VALORES	0.2%	20.7%
PAGE INDUSTRIES	0.2%	11.9%
DIALOG GROUP	0.2%	10.2%
MICROPORT SCIENTIFIC	0.2%	9.6%
FIBRA HOTEL REIT	0.1%	15.1%
HARTEALEGA HOLDINGS	0.1%	8.2%
NIPPON INDOSARI CORPINDO	0.1%	12.5%
MERRY ELECTRONICS	0.1%	14.4%

Top Negative Contributors	Relative Contribution %	Return %
CPMC HOLDINGS	-0.5%	-37.4%
CONCEPCION INDUSTRIAL	-0.5%	-36.6%
FU SHOU YUAN INTL.GP.	-0.5%	-30.3%
HAND ENTERPRISE SLTN.'A'	-0.4%	-34.4%
AIRTAC INTERNATIONAL GP.	-0.4%	-29.5%
SILOAM INTL.HOSPS.	-0.4%	-46.3%
SITC INTERNATIONAL HDG.	-0.3%	-25.7%
SYMPHONY	-0.3%	-34.5%
SINOSOFT TECHNOLOGY GP.	-0.3%	-20.7%
PHOENIX MILLS	-0.3%	-21.9%

Equity Sector Attribution									
	Attribution Effects				Returns		Ending Sector Weights		
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark	
Energy	0.1%	0.1%	0.0%	0.0%	6.7%	1.0%	2.6%	2.1%	
Materials	-1.3%	-1.4%	-0.2%	0.3%	-12.8%	0.6%	8.0%	12.7%	
Industrials	-1.2%	-1.3%	0.0%	0.2%	-13.2%	-4.3%	13.5%	14.2%	
Consumer Discretionary	-1.2%	-1.0%	0.0%	-0.3%	-11.2%	-4.5%	13.8%	14.4%	
Consumer Staples	0.1%	0.2%	-0.1%	0.0%	-3.4%	-5.3%	16.1%	7.0%	
Health Care	-0.9%	-0.5%	0.5%	-0.9%	-5.5%	1.7%	18.3%	9.3%	
Financials	0.4%	1.0%	-0.1%	-0.5%	10.7%	-3.0%	3.4%	9.8%	
Information Technology	0.7%	0.1%	0.6%	0.0%	-8.6%	-9.3%	7.4%	14.9%	
Communication Services	0.0%	--	0.0%	--	--	-3.4%	3.4%	4.2%	
Utilities	-0.2%	-0.4%	0.0%	0.2%	-12.7%	-4.4%	3.9%	3.9%	
Real Estate	0.6%	0.4%	0.0%	0.2%	3.8%	-3.6%	9.1%	7.6%	
Cash	0.0%	0.0%	0.0%	0.0%	0.5%	--	0.5%	0.0%	
Unclassified	0.1%	0.0%	0.1%	0.0%	7.0%	--	--	--	
Portfolio	-2.7%	=	-2.7%	+	-0.9%	-3.9%	100.0%	100.0%	



MONDRIAN EM SMALL CAP

Sector Allocation*

	Fund	MSCI EM SC
Consumer Discretionary	16.9	16.0
Consumer Staples	15.8	7.1
Energy	2.6	2.1
Financials	3.4	9.8
Health Care	19.9	9.3
Industrials	13.2	14.1
Information Technology	7.2	16.3
Materials	7.8	12.6
Real Estate	8.9	7.6
Telecommunication Services	—	1.2
Utilities	3.8	3.9
Cash	0.5	—
TOTAL	100.0	100.0

Country Allocation*

	Fund	MSCI EM SC
Latin America	11.0	10.4
Brazil	2.2	4.9
Mexico	6.5	3.5
Peru	2.3	0.1
Europe, Middle East & Africa	11.5	10.8
Czech Republic	1.5	0.0
Estonia	1.3	—
Kuwait	1.5	—
Poland	2.9	1.0
Saudi Arabia	1.9	—
South Africa	1.5	5.2
United Kingdom	1.0	—
Pacific-Asia	77.1	78.8
North Asia	31.5	53.3
China/Hong Kong	18.8	12.9
South Korea	6.2	20.5
Taiwan	6.9	19.9
South Asia	45.1	24.7
India	24.6	13.7
Indonesia	7.1	2.2
Malaysia	6.3	3.5
Philippines	4.0	0.9
Thailand	3.1	4.4
Cash	0.5	—
TOTAL	100.0	100.0



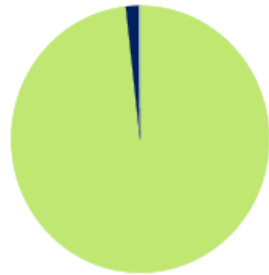
Source: Mondrian

September 30, 2018

VANGUARD TOTAL BOND MARKET I

Asset Allocation

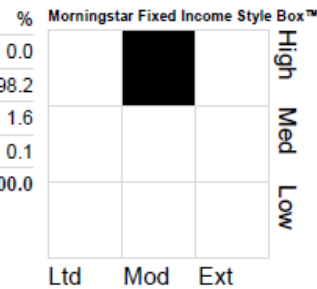
Portfolio Date: 8/31/2018



Stock	0.0
Bond	98.2
Cash	1.6
Other	0.1
Total	100.0

Fixed Income Statistics

Portfolio Date: 8/31/2018



Fixed-Income Stats

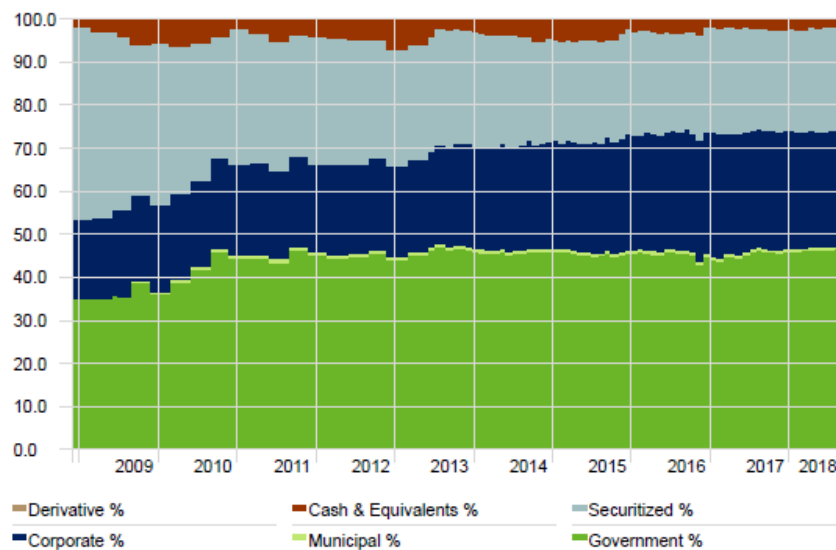
Average Eff Duration	6.1
Average Eff Maturity	8.4
Average Coupon	3.2
Average Price	100.3

Credit Quality Breakdown

Portfolio Date: 6/30/2018

	Fund	Index
AAA %	70.1	
AA %	3.52	
A %	11.92	
BBB %	14.48	
BB %	0.00	
B %	0.00	
Below B %	0.00	
Not Rated %	0.00	
Yield to Maturity	3.29	

Historical Sector Allocations (10 Years)



Top Holdings

	Detail Holding Type	Portfolio Weighting %
Cmt Market Liquidity Rate	MUTUAL FUND - MONEY MARKET	1.61
United States Treasury Notes 2.12%	BOND - GOV'T/TREASURY	0.46
United States Treasury Notes 2.62%	BOND - GOV'T/TREASURY	0.42
United States Treasury Notes 2.12%	BOND - GOV'T/TREASURY	0.42
United States Treasury Notes 1.38%	BOND - GOV'T/TREASURY	0.42
United States Treasury Notes 1.75%	BOND - GOV'T/TREASURY	0.40
United States Treasury Notes 2.75%	BOND - GOV'T/TREASURY	0.40
United States Treasury Notes 1.62%	BOND - GOV'T/TREASURY	0.39
United States Treasury Notes 2.25%	BOND - GOV'T/TREASURY	0.38
United States Treasury Notes 1.75%	BOND - GOV'T/TREASURY	0.38



Source: Morningstar

September 30, 2018

VANGUARD TOTAL BOND MARKET I

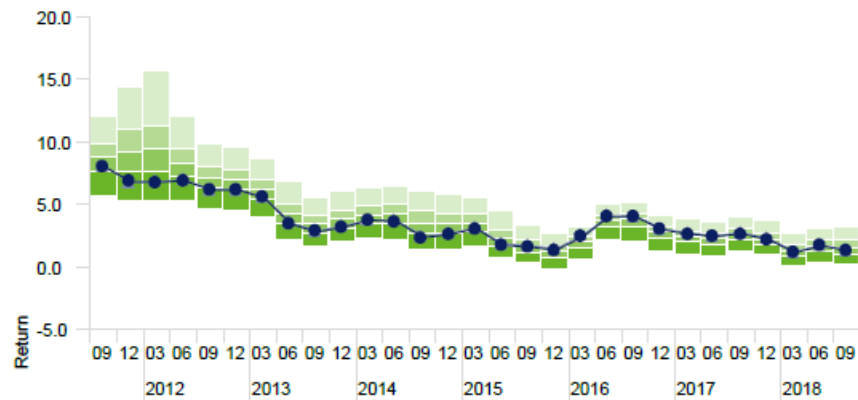
Risk & Return Characteristics (5 Years)

Time Period: 10/1/2013 to 9/30/2018

	Fund	Index
R2	99.8	100.0
Alpha	-0.1	0.0
Beta	1.0	1.0
Std Dev	3.0	2.9
Up Capture Ratio	100.8	100.0
Down Capture Ratio	105.7	100.0
Sharpe Ratio (geo)	0.5	0.5
Information Ratio (geo)	-0.3	
Tracking Error	0.2	0.0
Correlation	1.0	1.0

Rolling Returns (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



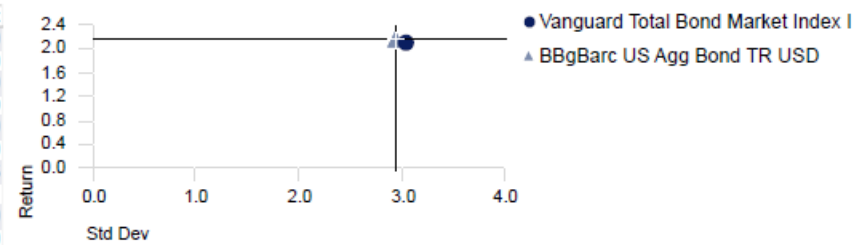
—Vanguard Total Bond Market Index I —BBgBarc US Agg Bond TR USD

Calendar Year Returns

	2008	Rank	2009	Rank	2010	Rank	2011	Rank	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	2017	Rank
Vanguard Total Bond Market Index I	5.2	9	6.1	89	6.6	70	7.7	11	4.2	83	-2.1	67	5.9	30	0.4	28	2.6	62	3.6	55
BBgBarc US Agg Bond TR USD	5.2		5.9		6.5		7.8		4.2		-2.0		6.0		0.5		2.6		3.5	

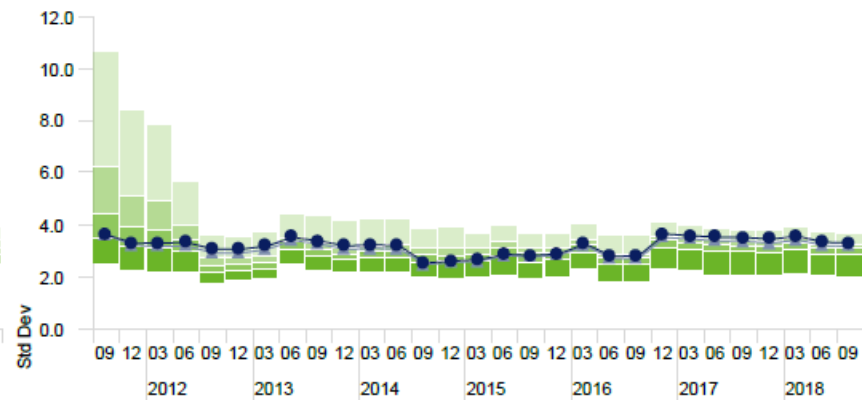
Risk & Return Illustration (5 Years)

Time Period: 10/1/2013 to 9/30/2018



Rolling Risk (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



—Vanguard Total Bond Market Index I —BBgBarc US Agg Bond TR USD



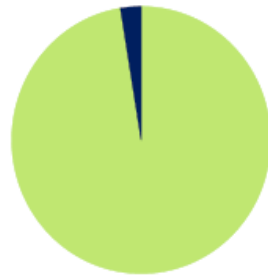
Source: Morningstar

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VANGUARD INFLATION PROTECTED SECURITIES

Asset Allocation

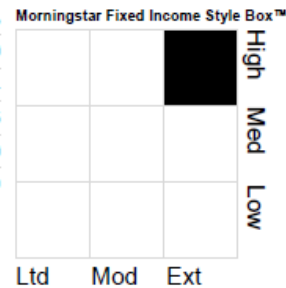
Portfolio Date: 8/31/2018



• Stock	0.0
• Bond	97.4
• Cash	2.6
• Other	0.0
Total	100.0

Fixed Income Statistics

Portfolio Date: 8/31/2018



Fixed-Income Stats

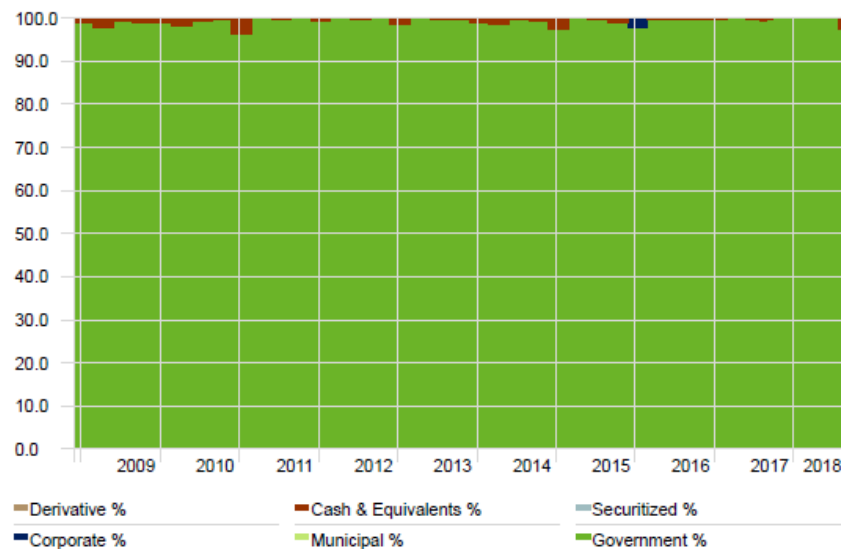
Average Eff Duration	7.7
Average Eff Maturity	8.4
Average Coupon	0.8
Average Price	101.7

Credit Quality Breakdown

Portfolio Date: 6/30/2018

	Fund	Index
AAA %	100.0	
AA %	0.00	
A %	0.00	
BBB %	0.00	
BB %	0.00	
B %	0.00	
Below B %	0.00	
Not Rated %	0.00	
Yield to Maturity		

Historical Sector Allocations (10 Years)



Top Holdings

	Detail Holding Type	Portfolio Weighting %
United States Treasury Notes 0.12%	BOND - GOV'T INFLATION PROTECTED	5.32
United States Treasury Notes 0.12%	BOND - GOV'T INFLATION PROTECTED	4.06
United States Treasury Notes 0.62%	BOND - GOV'T INFLATION PROTECTED	3.76
United States Treasury Notes 0.12%	BOND - GOV'T INFLATION PROTECTED	3.75
United States Treasury Notes 0.38%	BOND - GOV'T INFLATION PROTECTED	3.69
United States Treasury Notes 0.38%	BOND - GOV'T INFLATION PROTECTED	3.67
United States Treasury Notes 0.12%	BOND - GOV'T INFLATION PROTECTED	3.67
United States Treasury Notes 0.25%	BOND - GOV'T INFLATION PROTECTED	3.66
United States Treasury Notes 0.12%	BOND - GOV'T INFLATION PROTECTED	3.61
United States Treasury Notes 0.12%	BOND - GOV'T INFLATION PROTECTED	3.59



Source: Morningstar

September 30, 2018

VANGUARD INFLATION PROTECTED SECURITIES

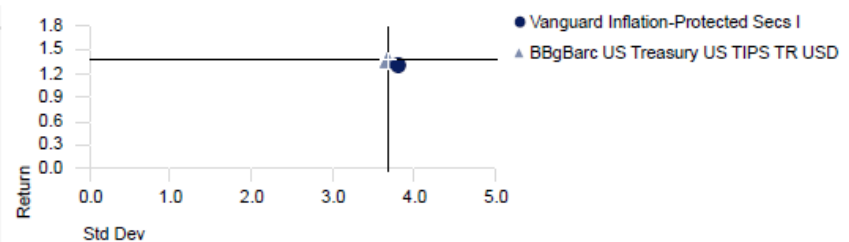
Risk & Return Characteristics (5 Years)

Time Period: 10/1/2013 to 9/30/2018

	Fund	Index
R2	99.4	100.0
Alpha	-0.1	0.0
Beta	1.0	1.0
Std Dev	3.8	3.7
Up Capture Ratio	101.2	100.0
Down Capture Ratio	104.1	100.0
Sharpe Ratio (geo)	0.2	0.2
Information Ratio (geo)	-0.2	0.0
Tracking Error	0.3	0.0
Correlation	1.0	1.0

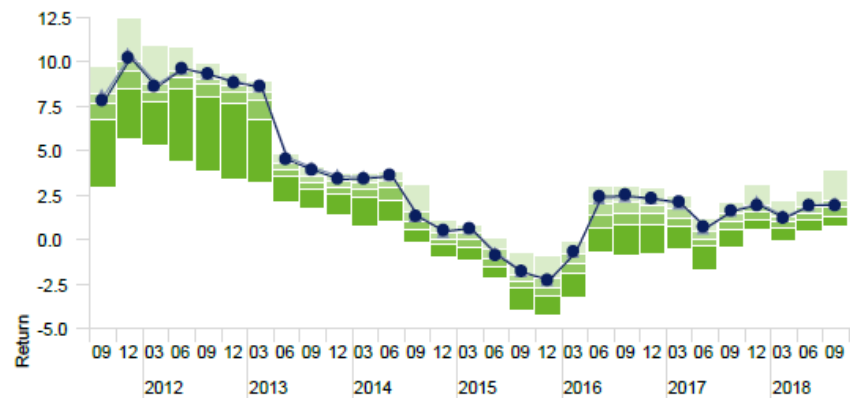
Risk & Return Illustration (5 Years)

Time Period: 10/1/2013 to 9/30/2018



Rolling Returns (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile

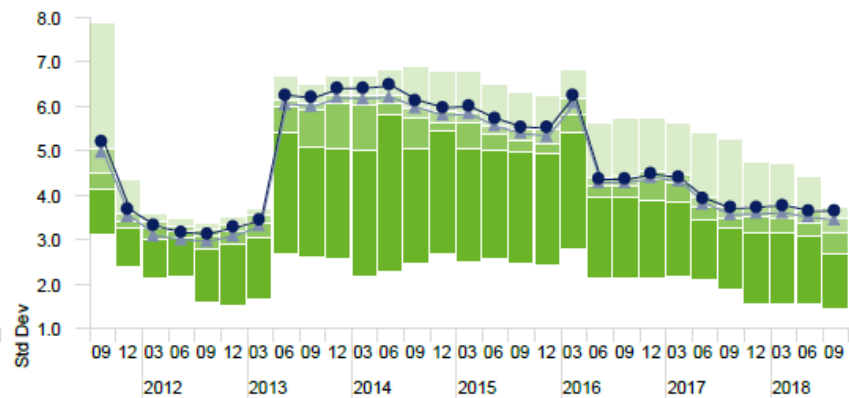


—Vanguard Inflation-Protected Secs I

—BBgBarc US Treasury US TIPS TR USD

Rolling Risk (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



—Vanguard Inflation-Protected Secs I

—BBgBarc US Treasury US TIPS TR USD

Calendar Year Returns

	2008	Rank	2009	Rank	2010	Rank	2011	Rank	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	2017	Rank
Vanguard Inflation-Protected Secs I	-2.8	56	11.0	29	6.3	28	13.4	6	6.9	24	-8.8	52	4.1	5	-1.7	31	4.6	39	3.0	34
BBgBarc US Treasury US TIPS TR USD	-2.4		11.4		6.3		13.6		7.0		-8.6		3.6		-1.4		4.7		3.0	



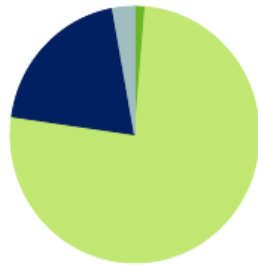
Source: Morningstar

September 30, 2018

BLACKROCK STRATEGIC INCOME

Asset Allocation

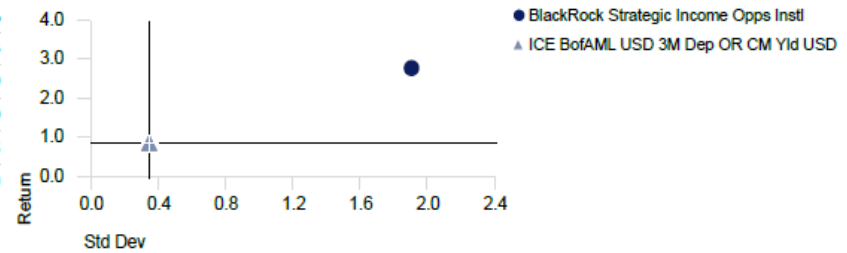
Portfolio Date: 6/30/2018



	%
Stock	1.3
Bond	75.9
Cash	19.9
Other	2.8
Total	100.0

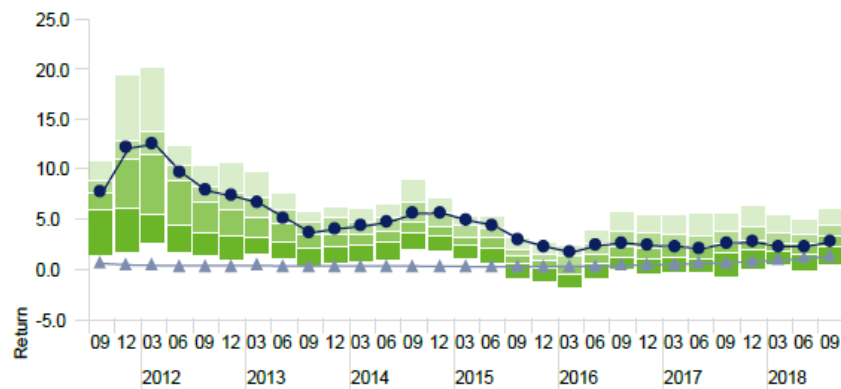
Risk & Return Illustration (5 Years)

Time Period: 10/1/2013 to 9/30/2018



Rolling Returns (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile

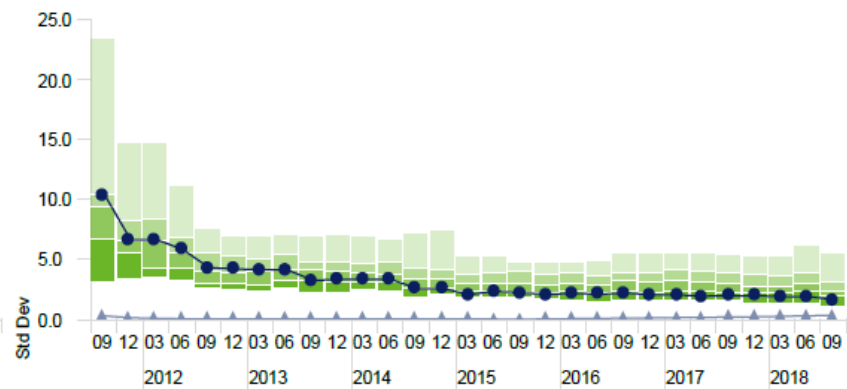


—BlackRock Strategic Income Opps Instl

—ICE BofAML USD 3M Dep OR CM Yld USD

Rolling Risk (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



—BlackRock Strategic Income Opps Instl

—ICE BofAML USD 3M Dep OR CM Yld USD

Calendar Year Returns

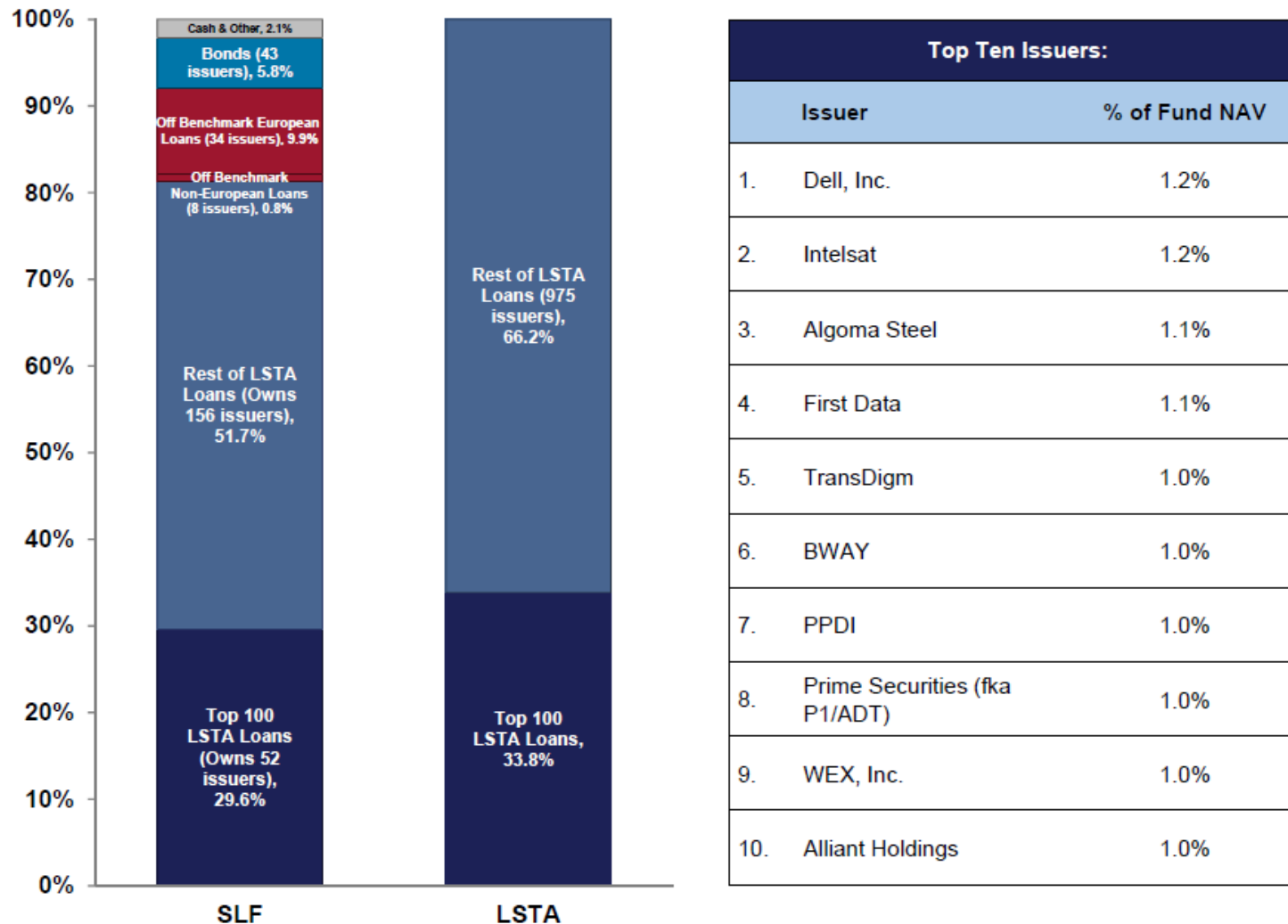
	2008	Rank	2009	Rank	2010	Rank	2011	Rank	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	2017	Rank
BlackRock Strategic Income Opps Instl			25.2	29	13.4	1	-0.7	50	9.9	25	3.3	19	3.9	16	-0.3	32	3.6	66	4.9	39
ICE BofAML USD 3M Dep OR CM Yld USD	2.8		0.7		0.3		0.3		0.4		0.3		0.2		0.3		0.8		1.3	



Source: Morningstar

September 30, 2018

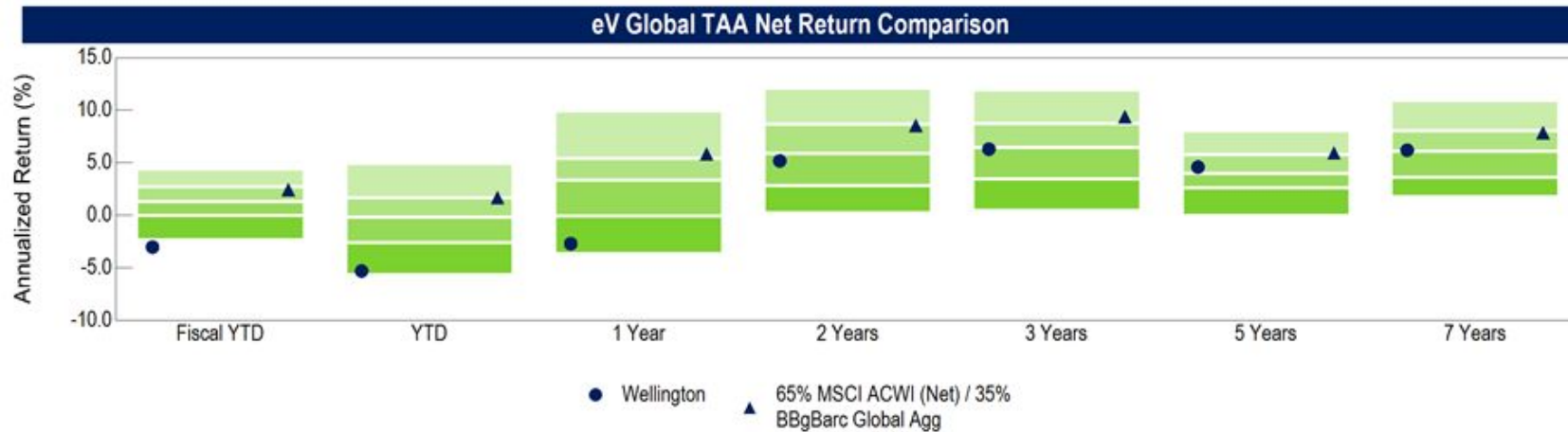
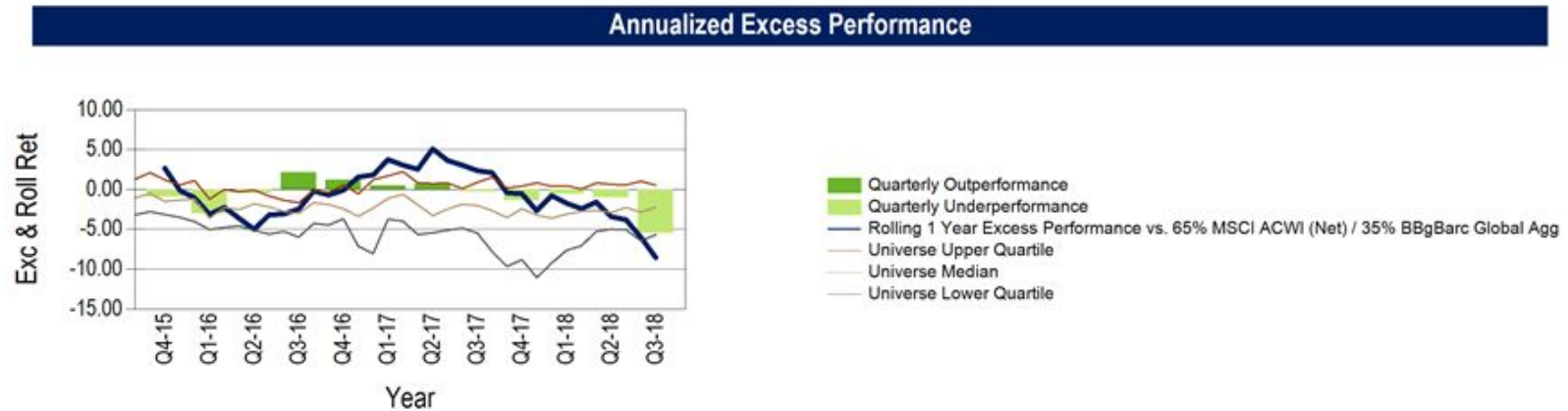
BAIN CAPITAL SENIOR LOAN FUND



Source: Bain Capital

September 30, 2018

WELLINGTON OPPORTUNISTIC

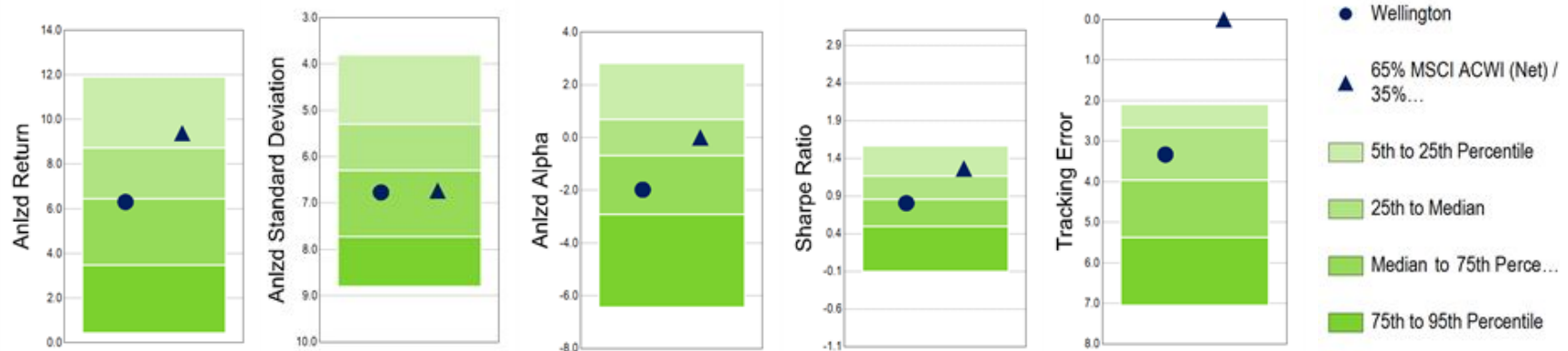
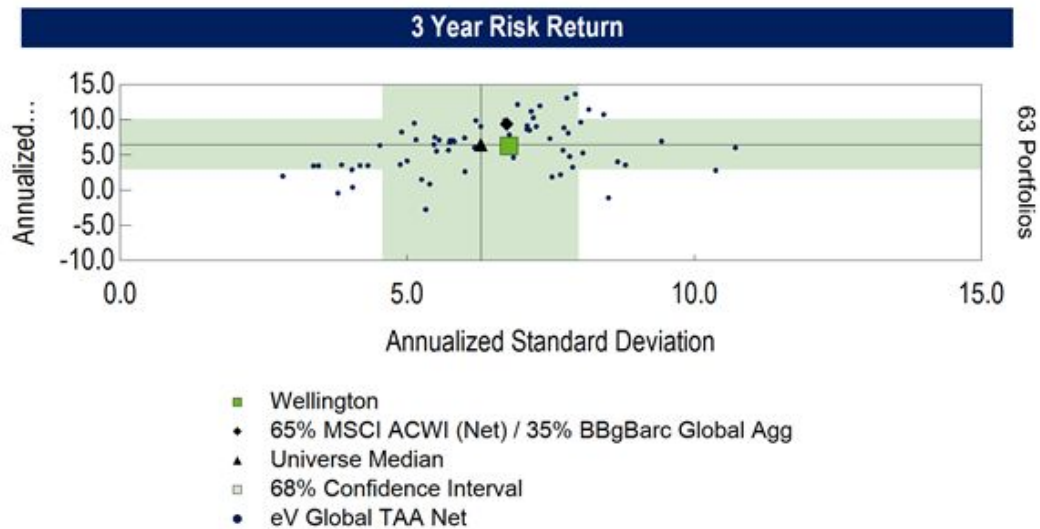


*Returns are net of fees.



September 30, 2018

WELLINGTON OPPORTUNISTIC

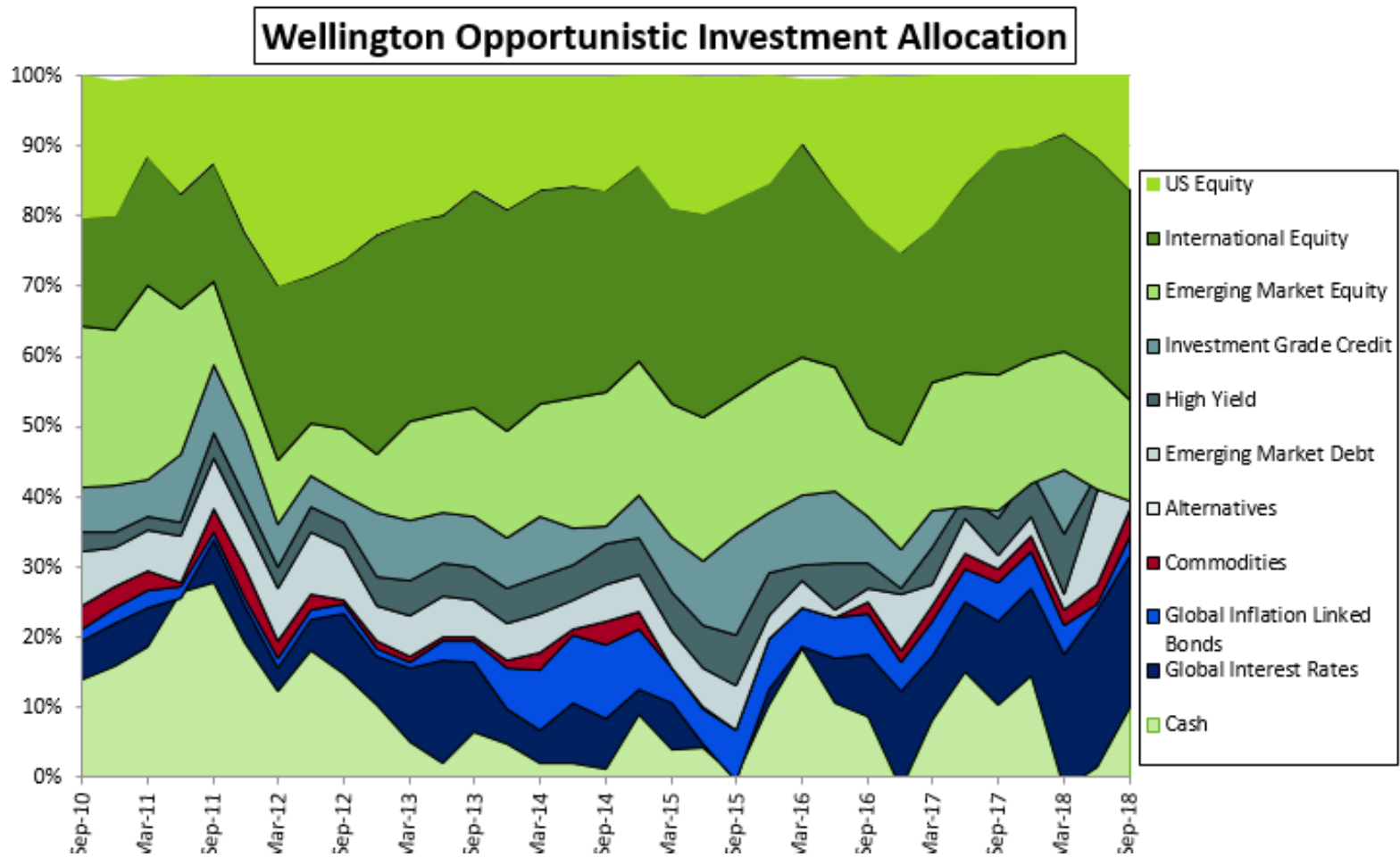


*Returns are net of fees.



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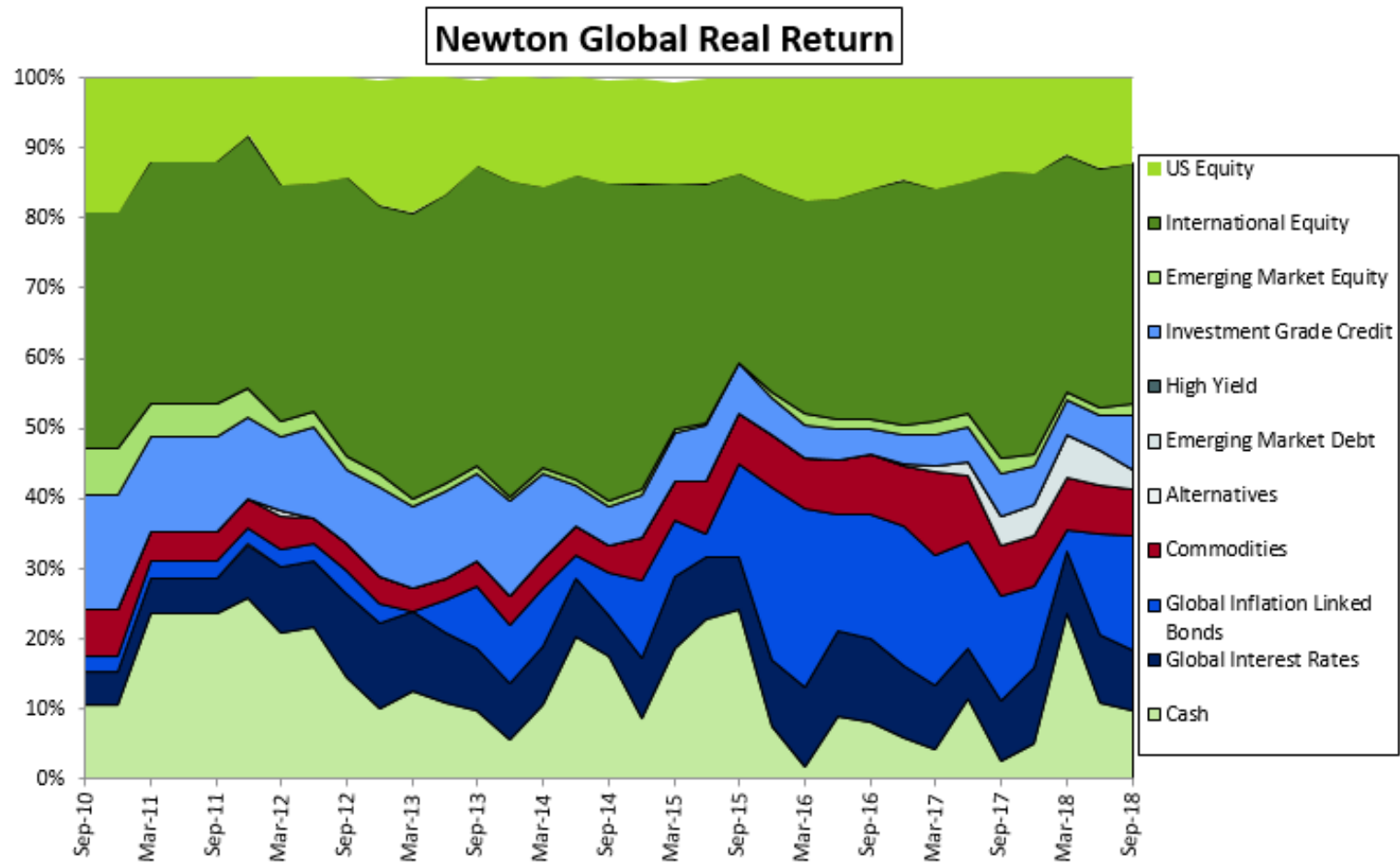
WELLINGTON OPPORTUNISTIC



Source: Wellington

September 30, 2018

NEWTON GLOBAL REAL RETURN



Source: Newton

September 30, 2018

LIGHTHOUSE GLOBAL LONG/SHORT



LIGHTHOUSE GLOBAL LONG/SHORT

General Fund Information			
Fund Name	Lighthouse Global Long/Short Fund		
Management Company	Lighthouse Investment Partners, LLC		
Location	Palm Beach, FL		
Firm AUM	\$16.6 billion	Strategy	Fund of Fund
Strategy AUM	\$1.9 billion	Sub-Strategy	Long/Short Equity
Portfolio Managers	Ethan Baron	Direct or FOF	FOF

Terms	
Share Class	--
Minimum Investment	\$1 million
Management Fee	1.15%
Incentive Fee	--
Hurdle Rate	None
High Water Mark	Yes
Subscription	Monthly
Redemption	Quarterly (60 days notice) or Monthly (90 days notice)
Lock-Up	None

Investment Strategy
Lighthouse's Global Long/Short Fund is a global portfolio of 20-30 separately managed accounts with industry sector and country specialist managers. The geographical allocations are similar to the MSCI World Index (30%-75% Americas, 10%-35% Europe, 5%-35% Asia).
The Fund targets returns greater than 10% over market cycles with 6%-8% volatility and an equity beta of 0.2-0.4 to the MSCI World Index.

Strategy Information

Region Allocation & Attribution

Region	Net	Gross
Developed North America	20.6%	195.9%
Developed Europe	3.2%	58.3%
Developed Asia	-2.0%	46.4%
Emerging Markets	12.4%	26.5%
Hedges / Other	0.8%	1.9%

Var [®]	0.28%	0.03%	0.02%	0.09%	0.00%
QTD [®]	0.07%	0.22%	0.23%	-1.29%	0.05%

Sector Allocation & Attribution

Sector	Net	Gross
Communication Services	6.8%	18.4%
Consumer Discretionary	1.3%	58.3%
Consumer Staples	1.6%	14.2%
Energy	12.2%	16.0%
Financials	5.6%	64.4%
Healthcare	0.4%	40.8%
Industrials	-0.1%	39.2%
Technology	6.1%	34.1%
Materials	1.6%	17.5%
Real Estate	0.8%	20.8%
Utilities	0.7%	3.0%
Hedges / Other	2.3%	0.7%

Var [®]	0.06%	0.12%	0.01%	0.02%	0.04%	0.04%	0.02%	0.09%	0.02%	0.01%	0.00%	-0.01%
QTD [®]	0.20%	-1.38%	-0.22%	-0.10%	0.82%	0.36%	-0.22%	0.01%	0.16%	0.08%	0.00%	-0.43%



For more information please see NEPC's Investment Due Diligence Report and Operational Due Diligence Report

September 30, 2018

PRINCIPAL U.S. PROPERTY

Key Statistics

(as of September 30, 2018)

Inception Date
January 1982

Gross Asset Value
\$10,058 million

Net Asset Value
\$7,939 million

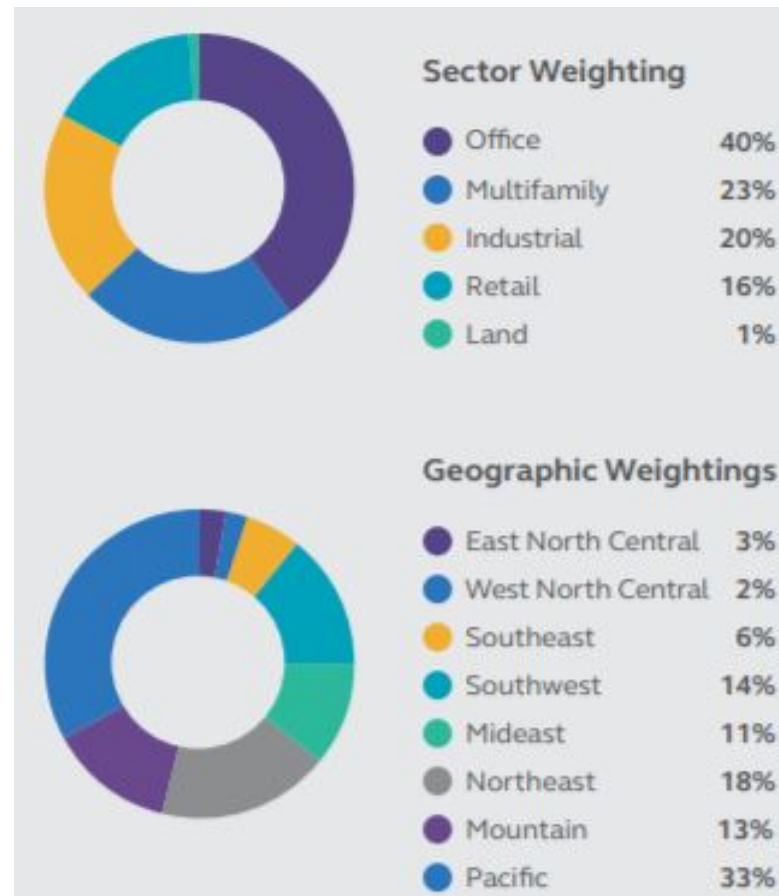
Number of
Investments
136

Number of
Markets
43

Size
37.9 million sf

Cash to Gross Assets
2.4%

Leverage Ratio²
18.4%



Source: Principal

September 30, 2018

APPENDIX

NEPC, LLC

GLOSSARY OF TERMS

Alpha - Measures the relationship between the fund performance and the performance of another fund or benchmark index and equals the excess return while the other fund or benchmark index is zero.

Alpha Jensen - The average return on a portfolio over and above that predicted by the capital asset pricing model (CAPM), given the portfolio's beta and the average market return. Also known as the abnormal return or the risk adjusted excess return.

Annualized Excess Return over Benchmark - Annualized fund return minus the annualized benchmark return for the calculated return.

Annualized Return - A statistical technique whereby returns covering periods greater than one year are converted to cover a 12 month time span.

Beta - Measures the volatility or systematic risk and is equal to the change in the fund's performance in relation to the change in the assigned index's performance.

Information Ratio - A measure of the risk adjusted return of a financial security, asset, or portfolio.

Formula:

$$\frac{(\text{Annualized Return of Portfolio} - \text{Annualized Return of Benchmark}) / \text{Annualized Standard Deviation}(\text{Period Portfolio Return} - \text{Period Benchmark Return})}{\text{To annualize standard deviation, multiply the deviation by the square root of the number of periods per year where monthly returns per year equals 12 and quarterly returns is four periods per year.}}$$

R-Squared - Represents the percentage of a fund's movements that can be explained by movements in an index. R-Squared values range from 0 to 100. An R-Squared of 100 denotes that all movements of a fund are completely explained by movements in the index.

Sharpe Ratio - A measure of the excess return or risk premium per unit of risk in an investment asset or trading strategy.

Sortino Ratio - A method to differentiate between good and bad volatility in the Sharpe Ratio. The differentiation of up and down volatility allows the calculation to provide a risk adjusted measure of a security or fund's performance without upward price change penalties.

Formula:

$$\text{Calculation Average } (X-Y) / \text{Downside Deviation } (X-Y) * 2$$
 Where X = Return Series X Y = Return Series Y which is the risk free return (91 day T-bills)

Standard Deviation - The standard deviation is a statistical term that describes the distribution of results. It is a commonly used measure of volatility of returns of a portfolio, asset class, or security. The higher the standard deviation the more volatile the returns are.

Formula:

$$(\text{Annualized Return of Portfolio} - \text{Annualized Return of Risk Free}) / \text{Annualized Standard Deviation (Portfolio Returns)}$$

Tracking Error - Tracking error, also known as residual risk, is a measure of the degree to which a portfolio tracks its benchmark. It is also a measure of consistency of excess returns. Tracking error is computed as the annualized standard deviation of the difference between a portfolio's return and that of its benchmark.

Formula:

$$\text{Tracking Error} = \text{Standard Deviation } (X-Y) * \sqrt{\text{\# of periods per year}}$$
 Where X = periods portfolio return and Y = the period's benchmark return
 For monthly returns, the periods per year = 12
 For quarterly returns, the periods per year = 4

Treynor Ratio - A risk-adjusted measure of return based on systematic risk. Similar to the Sharpe ratio with the difference being the Treynor ratio uses beta as the measurement of volatility.

Formula:

$$(\text{Portfolio Average Return} - \text{Average Return of Risk-Free Rate}) / \text{Portfolio Beta}$$

Up/Down Capture Ratio - A measure of what percentage of a market's returns is "captured" by a portfolio. For example, if the market declines 10% over some period, and the manager declines only 9%, then his or her capture ratio is 90%. In down markets, it is advantageous for a manager to have as low a capture ratio as possible. For up markets, the higher the capture ratio the better. Looking at capture ratios can provide insight into how a manager achieves excess returns. A value manager might typically have a lower capture ratio in both up and down markets, achieving excess returns by protecting on the downside, whereas a growth manager might fall more than the overall market in down markets, but achieve above-market returns in a rising market.

$$\text{UpsideCapture} = \text{TotalReturn}(\text{FundReturns}) / \text{TotalReturns}(\text{BMReturn}) \text{ when Period Benchmark Return is } > = 0$$

$$\text{DownsideCapture} = \text{TotalReturn}(\text{FundReturns}) / \text{TotalReturns}(\text{BMReturn}) \text{ when Benchmark } < 0$$

Data Source: InvestorForce



INFORMATION DISCLAIMER AND REPORTING METHODOLOGY

Information Disclaimer

- Past performance is no guarantee of future results.
- All investments carry some level of risk. Diversification and other asset allocation techniques are not guaranteed to ensure profit or protect against losses.
- Some index returns displayed in this report or used in calculation of a policy, allocation or custom benchmark may not be available from the source or may be preliminary and subject to change.
- NEPC's source for portfolio pricing, calculation of accruals, and transaction information is the plan's custodial bank. Information on market indices and security characteristics is received from other sources external to NEPC. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.
- This report is provided as a management aid for the client's internal use only. Performance contained in this report does not constitute a recommendation by NEPC.
- This report may contain confidential or proprietary information and may not be copied or redistributed to any party not legally entitled to receive it.

Reporting Methodology

- The client's custodian bank is NEPC's preferred data source unless otherwise directed. NEPC reconciles custodian data to manager data. If the custodian cannot provide accurate data, manager data may be used.
- Trailing time period returns are determined by geometrically linking the holding period returns, from the first full month after inception to the report date. Rates of Return are annualized when the time period is longer than a year. Performance is presented gross and/or net of manager fees as indicated on each page.
- For managers funded in the middle of a month, the "since inception" return will start with the first full month, although actual inception dates and cash flows are taken into account in all Composite calculations.
- This report may contain forward-looking statements that are based on NEPC's estimates, opinions and beliefs, but NEPC cannot guarantee that any plan will achieve its targeted return or meet other goals.





AGENDA ITEM SUMMARY

1. **NAME OF ITEM:** Performance Review – Operating Fund

2. **INITIATED BY:** Kelly A. Martin, Chair

3. **BOARD INFORMATION:** X

BOARD ACTION:

4. **OUTCOME:**

Primary Outcomes:

Enhance fiscal positioning

BOARD POLICY:

Section 709 - Investments

5. **BACKGROUND:**

Enclosed for your information is the Operating Cash Fund performance report for the quarter ended September 30, 2018.

Kelly Regan and Jay Roney of NEPC will provide a brief review at the December 20, 2018 Investment Committee meeting.

12/7/2018

THIRD QUARTER 2018 INVESTMENT REVIEW

UNIVERSITY OF MAINE SYSTEM OPERATING FUND

December 20, 2018

Jay E. Roney, Partner

Kelly Regan, Senior Consultant



BOSTON | ATLANTA | CHARLOTTE | CHICAGO | DETROIT | LAS VEGAS | PORTLAND | SAN FRANCISCO

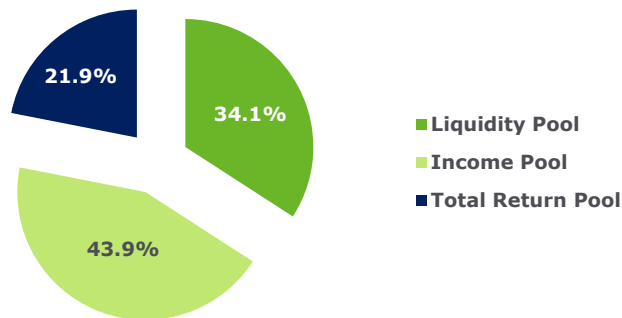
EXECUTIVE SUMMARY

NEPC, LLC

EXECUTIVE SUMMARY

ASSET ALLOCATION

Plan Assets: \$310.2 Million



PLAN COMMENTS

Asset Allocation

The Fund's assets as of September 30, 2018 were \$310.2 million. This represents a \$53.9 million increase from the previous quarter.

The Liquidity Pool (34.1% v 25.0%), Income Pool (43.9% v 50.0%) and Total Return Pool (21.9% v 25.0%) are all within allowable ranges. Throughout the year, asset allocation will change based on cash inflows and outflows. NEPC reviews this on a monthly basis.

Performance (Net of Fees)

The Fund returned 0.8% during the 3rd quarter and 1.1% year-to-date.

FUND PERFORMANCE: NET OF FEES

	QTR (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
--	---------	---------	----------	----------	----------	-----------

COMPOSITE	0.8	1.1	2.2	3.1	2.1	2.8
ALLOCATION INDEX	0.9	1.3	2.5	3.0	2.4	--

RECENT ACTIONS/RECOMMENDATIONS

Recent Actions

The System implemented a portfolio rebalance during the quarter to bring asset allocation closer to policy targets.

Recommendations

There are no recommendations at this time.

Investment Manager Updates

There were two new manager announcements during the second quarter. No Action is recommended on Loomis Sayles or PIMCO.



September 30, 2018

DUE DILIGENCE MONITOR

The items below summarize the recent quarter's performance and any changes or announcements from your Plan managers/funds. A "-" indicates there were no material announcements. A "Yes" indicates there was an announcement and a summary is provided separately. NEPC's Due Diligence Committee meets every two weeks to review events as they relate to investment managers and determines if any action should be taken by NEPC and/or by our clients. They rate events: No Action, Watch, Hold, Client Review or Terminate. With respect to Performance, a "-" indicates the manager/fund performed in line with the majority of managers/funds in the category; only outliers (placement in the Top or Bottom Quartile) are highlighted. Your Consultant's Recommendation is refreshed quarterly in view of the recent quarter's developments (performance, manager events, and any of the longer-term trending data). NEPC considers ourselves to be a fiduciary, as ERISA defines the term in Section 3(21).

Fund	Manager Changes/ Announcements (Recent Quarter)	NEPC Due Diligence Committee Recommendations
PIMCO	Yes	Maintain Watch
Lighthouse	No	Maintain Watch
Loomis Sayles	Yes	No Action

NEPC Due Diligence Committee Recommendation Key	
No Action	Informational items have surfaced; no action is recommended.
Watch	Issues have surfaced to be concerned over; manager can participate in future searches, but current and prospective clients must be made aware of the issues.
Hold	Serious issues have surfaced to be concerned over; manager cannot be in future searches unless a client specifically requests, but current and prospective clients must be made aware of the issues.
Client Review	Very serious issues have surfaced with a manager; manager cannot be in future searches unless a client specifically requests. Current clients must be advised to review the manager.
Terminate	We have lost all confidence in the product; manager would not be recommended for searches and clients would be discouraged from using. The manager cannot be in future searches unless a client specifically requests. Current clients must be advised to replace the manager.



TOTAL PLAN PERFORMANCE DETAIL

	Market Value (\$)	% of Portfolio	Policy %	Fiscal YTD (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Operating Funds Composite	310,263,456	100.0	100.0	0.8	1.1	2.2	2.7	3.1	2.1	2.9	2.8
<i>Allocation Index</i>				0.9	1.3	2.5	2.9	3.0	2.4	2.8	--
Liquidity Pool Composite	105,819,606	34.1	25.0	0.4	1.1	1.3	1.0	0.8	0.5	0.5	0.5
State Pool	65,573,725	21.1		0.4	1.1	1.4	1.1	0.9	0.6	0.5	0.5
BOA General Fund	5,720,199	1.8		0.1	0.3	0.3	0.2	0.1	0.1	0.1	--
Federated Gov't Obligations	15,441,090	5.0		0.5	1.2	1.4	1.0	--	--	--	--
JP Morgan US Gov't Money Market Fund	19,084,592	6.2		0.5	1.2	1.3	1.0	--	--	--	--
<i>FTSE T-Bill 3 Months TR</i>				0.5	1.3	1.6	1.1	0.8	0.5	0.4	0.3
Income Pool Composite	136,344,337	43.9	50.0	0.4	0.4	0.7	1.1	1.9	1.7	2.7	3.6
Income Research + Management	74,636,111	24.1	26.7	0.4	0.4	0.2	0.5	0.9	1.0	--	--
<i>BBgBarc US Govt/Credit 1-3 Yr. TR</i>				0.3	0.4	0.2	0.4	0.7	0.8	0.9	1.7
BlackRock Strategic Income Opportunities	17,402,196	5.6	6.7	0.5	0.0	0.8	3.0	2.8	--	--	--
<i>3-Month Libor Total Return USD</i>				0.6	1.7	2.1	1.6	1.3	0.9	0.7	0.7
Loomis Sayles Bank Loans	18,985,056	6.1	6.7	1.5	3.0	3.9	3.8	4.0	3.4	4.4	4.8
<i>Loomis Bank Loans Custom Index</i>				1.5	3.2	4.3	4.0	4.3	4.1	5.2	6.1
Vanguard Total Bond Market Instl' Fund	12,727,593	4.1	5.0	0.0	-1.6	-1.2	-0.6	1.3	2.1	2.0	--
<i>BBgBarc US Aggregate TR</i>				0.0	-1.6	-1.2	-0.6	1.3	2.2	2.0	3.8
Vanguard Inflation-Protected Securities	12,593,381	4.1	5.0	-0.9	-0.9	0.3	--	--	--	--	--
<i>BBgBarc US TIPS TR</i>				-0.8	-0.8	0.4	-0.2	2.0	1.4	1.3	3.3
Total Return Pool Composite	68,099,513	21.9	25.0	1.8	2.2	5.5	7.4	7.9	4.6	6.1	5.8
Lighthouse	14,831,236	4.8	5.0	0.1	5.2	8.2	6.6	5.6	--	--	--
<i>Credit Suisse Long Shrt Eqt USD</i>				1.5	2.2	5.5	7.6	4.4	5.4	6.8	5.7
Newton Global Real Return	17,554,296	5.7	6.3	2.1	2.6	3.4	--	--	--	--	--
<i>60% MSC/ ACWI (Net)/ 40% BBgBarc Global Agg</i>				2.2	1.4	5.3	7.8	8.8	5.5	7.3	6.3
PIMCO All Asset	17,153,866	5.5	6.3	0.4	-1.8	1.3	5.6	8.2	3.4	5.1	6.0
<i>Blended Index</i>				1.0	0.1	1.1	2.0	4.0	3.5	4.0	5.2
Vanguard Total World Stock Index	18,560,115	6.0	7.5	4.0	3.9	9.8	14.3	13.6	9.0	--	--
<i>FTSE Global All Cap Index</i>				4.1	4.0	10.2	14.0	12.6	7.4	10.1	6.7

Returns are net of manager fees.

The inception date for the allocation index is 07/01/2009

Fiscal YTD begins 7/1

Blended Index: 40% BC Aggregate / 30% BC U.S. TIPS 1-10YR / 10% S&P 500 / 10% BC High Yield / 10% JPM EMBI+

Loomis Bank Loans Custom Index blends performance of "S&P/LSTA Leveraged Loan Index" before 9/1/2014 and "S&P/LSTA Leveraged BB Loan Index" after 9/1/2014.

Composite excludes external loans.

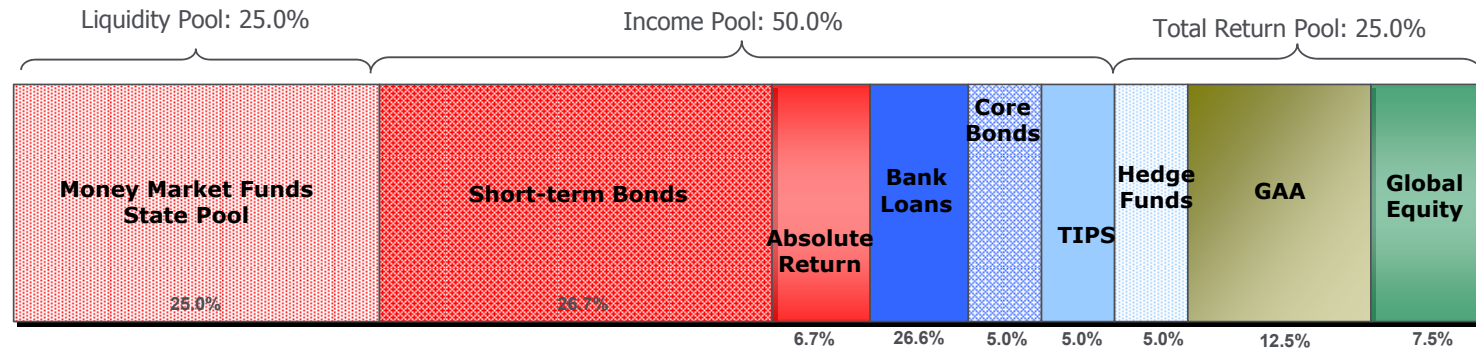
September 30, 2018

PLAN SUMMARY AND STATISTICS

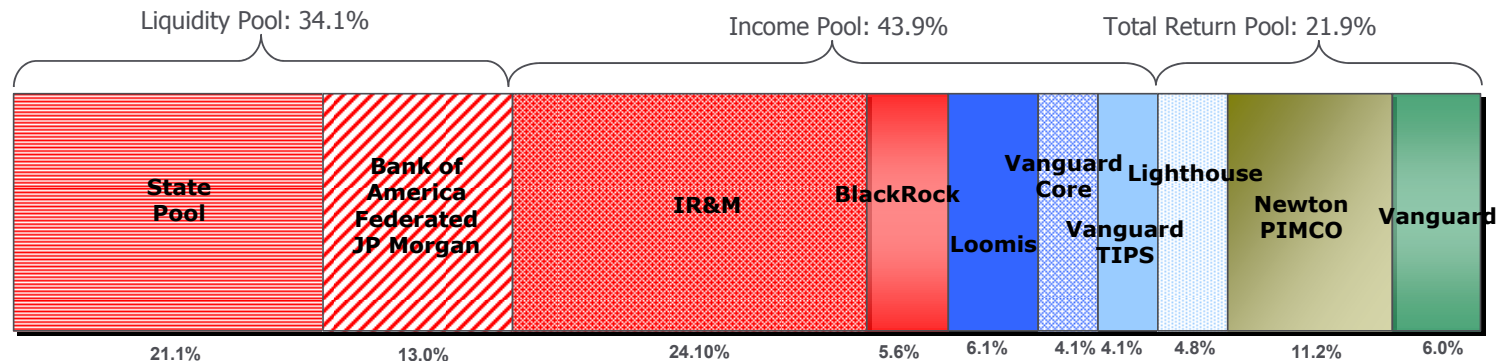
NEPC, LLC

TOTAL FUND ASSET ALLOCATION

Target Asset Allocation



Actual Asset Allocation

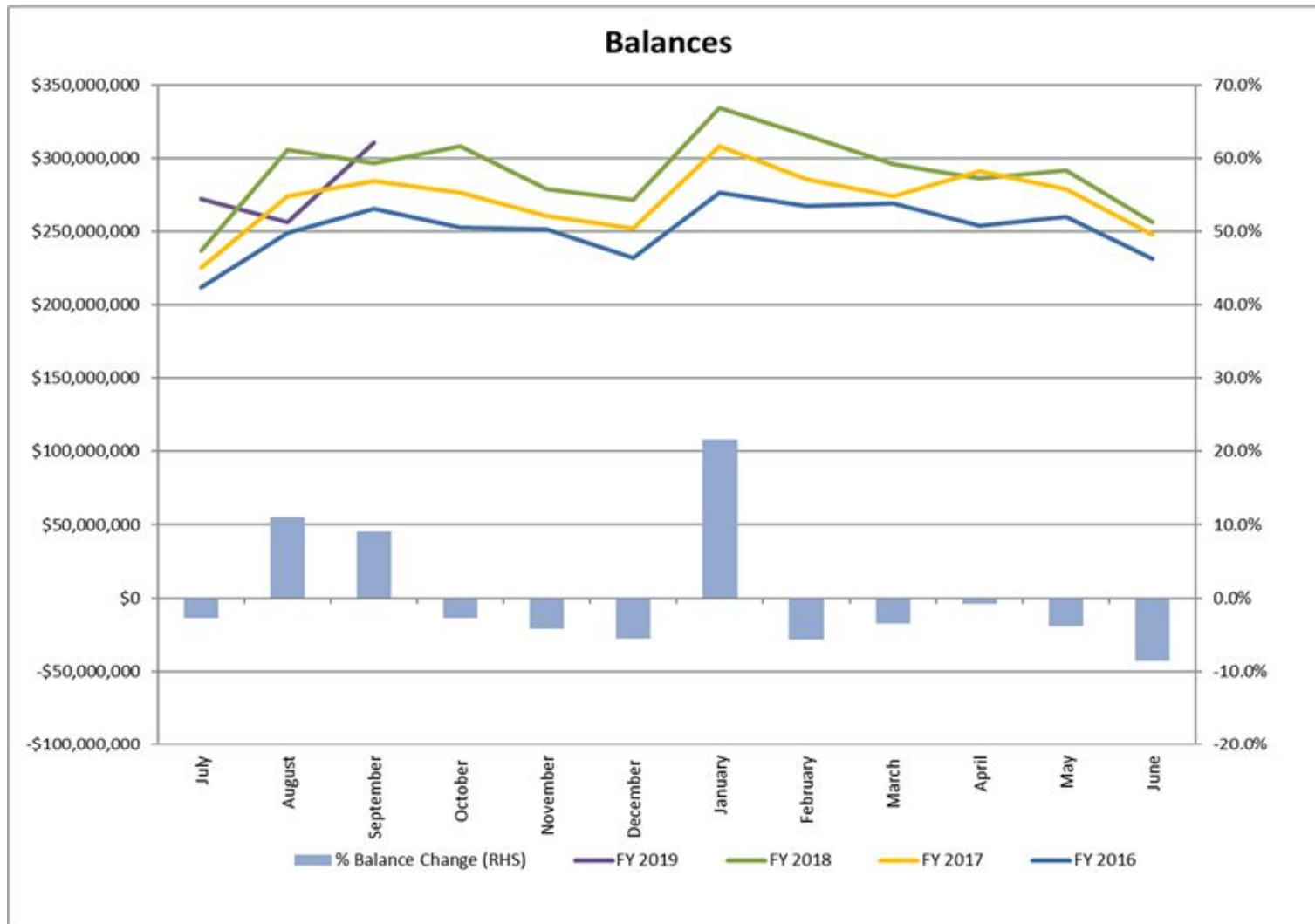


*May not add up to 100% due to rounding



September 30, 2018

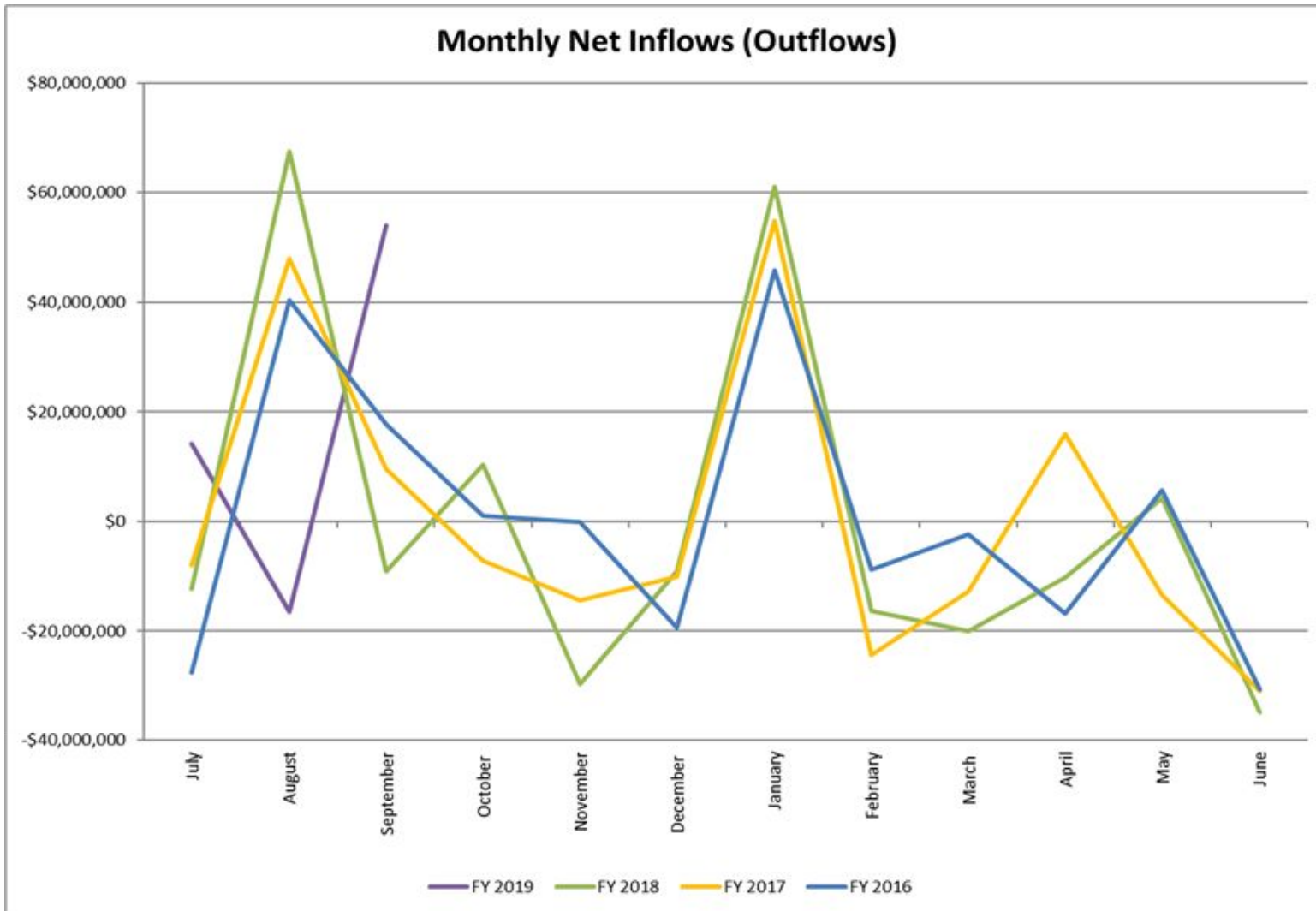
BALANCES AND MONTHLY CHANGES



September 30, 2018

MONTHLY NET INFLOWS (OUTFLOWS)

4.1

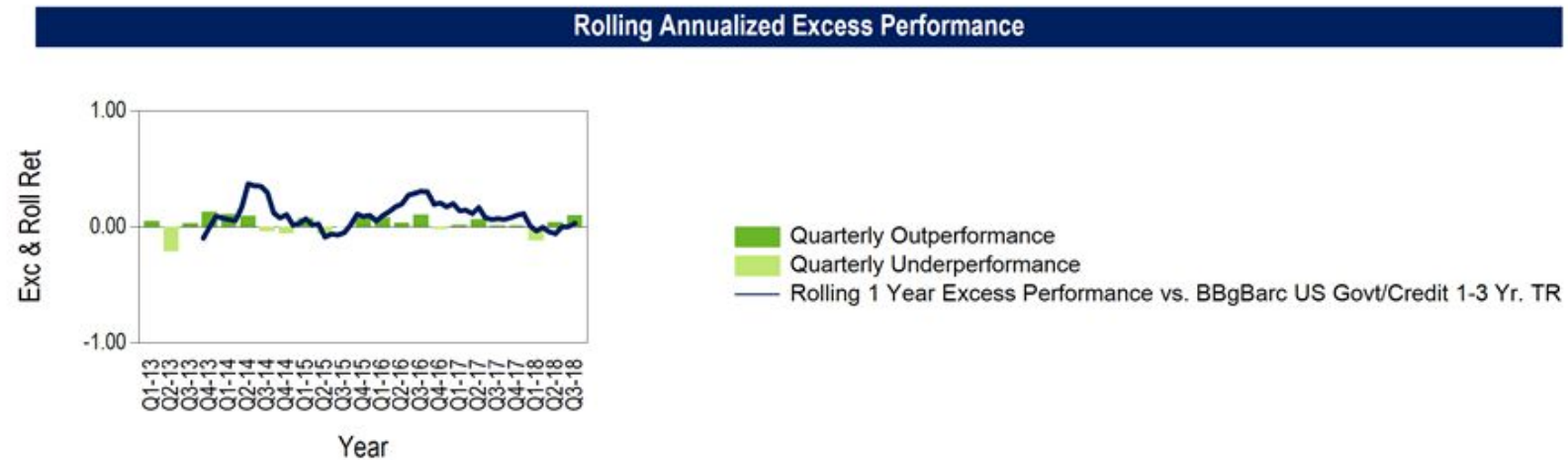


September 30, 2018

MANAGER ANALYSIS

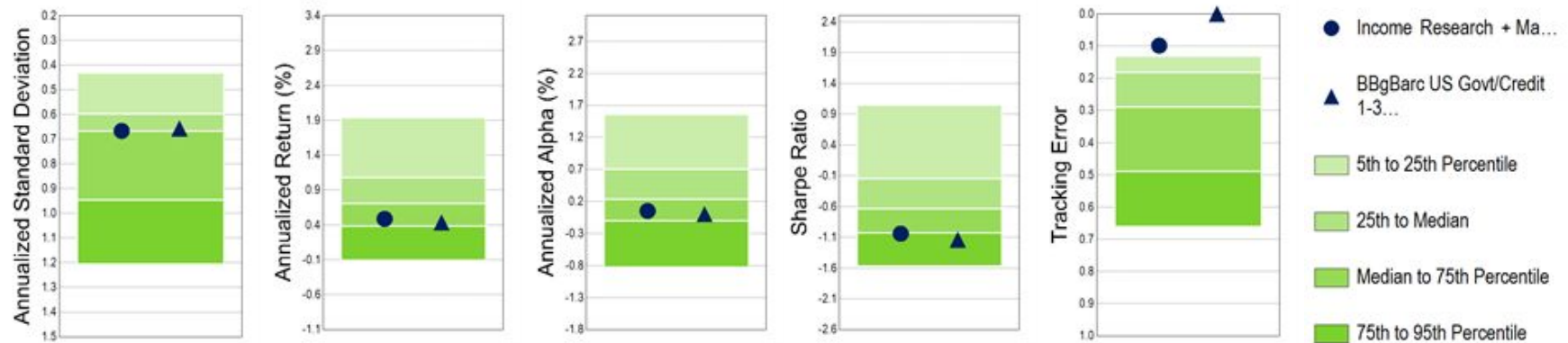
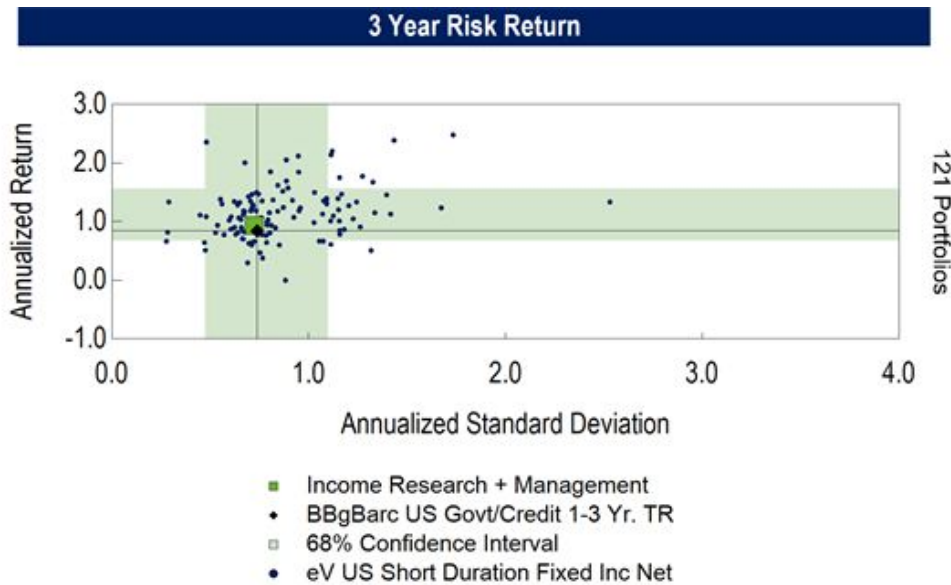
NEPC, LLC

INCOME RESEARCH + MANAGEMENT



INCOME RESEARCH + MANAGEMENT

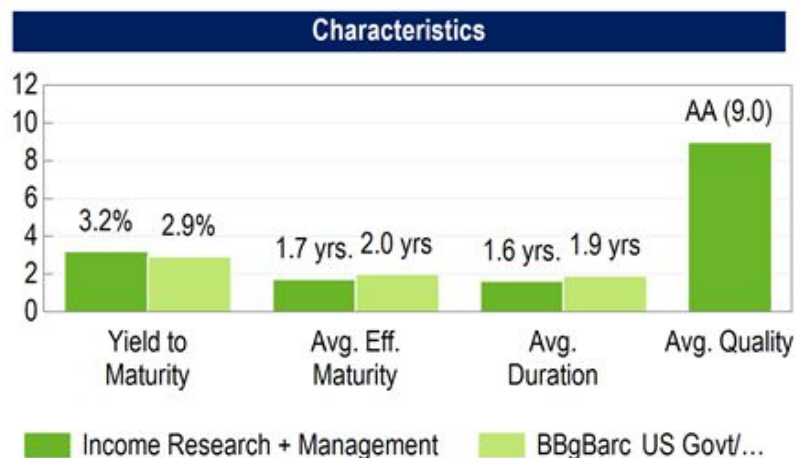
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September 30, 2018

INCOME RESEARCH + MANAGEMENT

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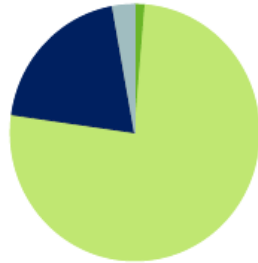


September 30, 2018

BLACKROCK STRATEGIC INCOME

Asset Allocation

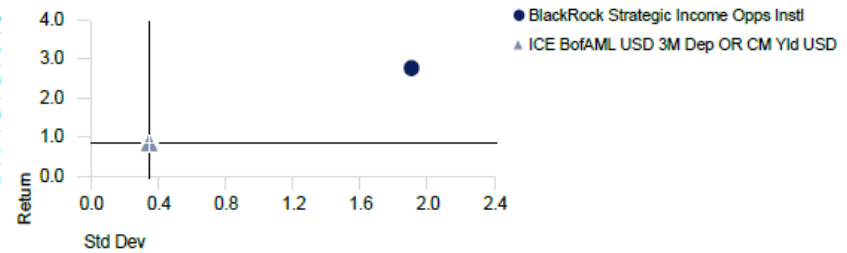
Portfolio Date: 6/30/2018



	%
Stock	1.3
Bond	75.9
Cash	19.9
Other	2.8
Total	100.0

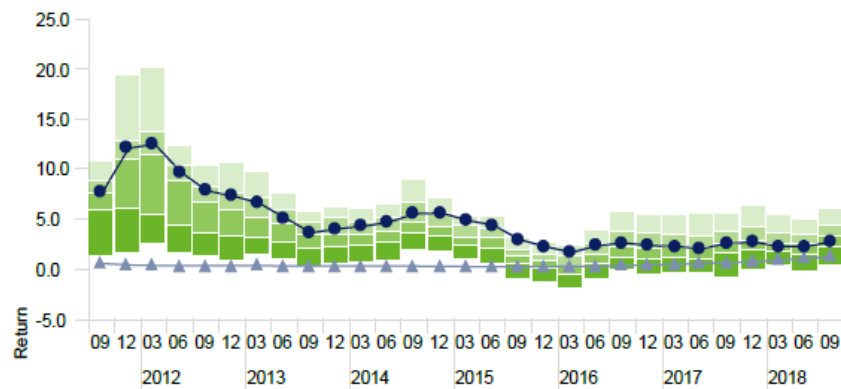
Risk & Return Illustration (5 Years)

Time Period: 10/1/2013 to 9/30/2018



Rolling Returns (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile

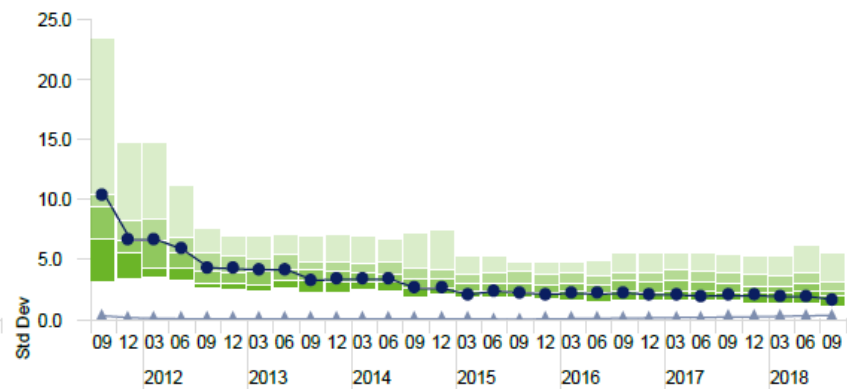


— BlackRock Strategic Income Opps Instl

— ICE BofAML USD 3M Dep OR CM Yld USD

Rolling Risk (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



— BlackRock Strategic Income Opps Instl

— ICE BofAML USD 3M Dep OR CM Yld USD

Calendar Year Returns

	2008	Rank	2009	Rank	2010	Rank	2011	Rank	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	2017	Rank
BlackRock Strategic Income Opps Instl			25.2	29	13.4	1	-0.7	50	9.9	25	3.3	19	3.9	16	-0.3	32	3.6	66	4.9	39
ICE BofAML USD 3M Dep OR CM Yld USD	2.8		0.7		0.3		0.3		0.4		0.3		0.2		0.3		0.8		1.3	



Source: Morningstar

September 30, 2018

LOOMIS SAYLES BANK LOANS

HOLDINGS BY INDUSTRY (%)

Technology	10.4	Environmental	2.0	Oil Field Services	0.6
Healthcare	9.5	Leisure	1.9	Supermarkets	0.5
Consumer Cyclical Services	8.5	Gaming	1.8	Entertainment	0.4
Building Materials	5.6	Consumer Products	1.7	Construction Machinery	0.3
Media Entertainment	5.1	Packaging	1.7	Energy - Refining	0.3
Retailers	4.9	Transportation Services	1.4	Brokerage	0.3
Financial Other	3.7	Wireless	1.4	Conglomerates	0.3
Industrials - Other	3.7	Wirelines	1.3	Independent	0.2
Chemicals	3.4	Internet & Data	1.0	Banking	0.1
Cable Satellite	3.4	Metals and mining	1.0	Cash & Equivalents	1.5
P&C	3.3	Lodging	1.0		
Electric	3.2	Midstream	0.9		
Pharmaceuticals	3.2	Health Insurance	0.8		
Food & Beverage	2.8	Home Construction	0.6		
Automotive	2.6	Aerospace/Defense	0.6		
Restaurants	2.2	Diversified Manufacturing	0.6		

CREDIT QUALITY (%)

	Portfolio	S&P/LSTA Leveraged Loan Index
AA	0.0	0.0
A	0.0	0.0
BBB	5.6	11.4
BB	49.4	31.4
B	42.4	48.5
CCC & Lower	0.7	6.7
Not Rated	0.4	2.1
Cash & Equivalents	1.5	0.0
Second Lien	0.0	3.5
Avg. Credit Quality	BB-	B+

Reflects the credit ratings assigned by Standard & Poors. If shown, the S&P/LSTA US BB Ratings Loan Index would be rated 100% BB.

SECTOR DISTRIBUTION (%)

	Portfolio
Industrial	87.0
Financial	8.2
Utility	3.2
Cash & Equivalents	1.5

COUNTRY DISTRIBUTION (%)

	Portfolio
United States	93.2
Canada	3.7
Other	3.0

TOP FIVE HOLDINGS (%)

	Portfolio
Energy Transfer Equity, L.P.	0.9
Virgin Media Bristol LLC	0.8
Sedgwick Claims Management Services, Inc.	0.8
Crown Finance US, Inc.	0.7
Michaels Stores, Inc.	0.7



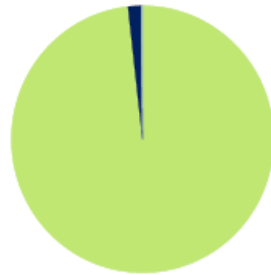
Source: Loomis Sayles

September 30, 2018

VANGUARD TOTAL BOND MARKET I

Asset Allocation

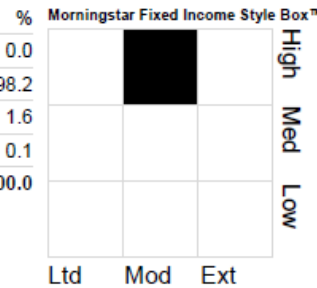
Portfolio Date: 8/31/2018



Stock	0.0
Bond	98.2
Cash	1.6
Other	0.1
Total	100.0

Fixed Income Statistics

Portfolio Date: 8/31/2018



Fixed-Income Stats

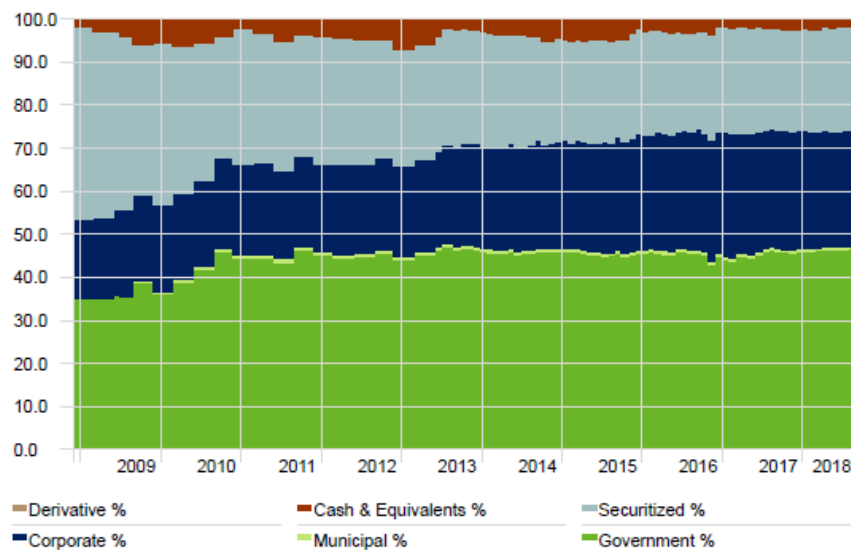
Average Eff Duration	6.1
Average Eff Maturity	8.4
Average Coupon	3.2
Average Price	100.3

Credit Quality Breakdown

Portfolio Date: 6/30/2018

	Fund	Index
AAA %	70.1	
AA %	3.52	
A %	11.92	
BBB %	14.48	
BB %	0.00	
B %	0.00	
Below B %	0.00	
Not Rated %	0.00	
Yield to Maturity	3.29	

Historical Sector Allocations (10 Years)



Top Holdings

	Detail Holding Type	Portfolio Weighting %
Cmt Market Liquidity Rate	MUTUAL FUND - MONEY MARKET	1.61
United States Treasury Notes 2.12%	BOND - GOV'T/TREASURY	0.46
United States Treasury Notes 2.62%	BOND - GOV'T/TREASURY	0.42
United States Treasury Notes 2.12%	BOND - GOV'T/TREASURY	0.42
United States Treasury Notes 1.38%	BOND - GOV'T/TREASURY	0.42
United States Treasury Notes 1.75%	BOND - GOV'T/TREASURY	0.40
United States Treasury Notes 2.75%	BOND - GOV'T/TREASURY	0.40
United States Treasury Notes 1.62%	BOND - GOV'T/TREASURY	0.39
United States Treasury Notes 2.25%	BOND - GOV'T/TREASURY	0.38
United States Treasury Notes 1.75%	BOND - GOV'T/TREASURY	0.38



Source: Morningstar

September 30, 2018

VANGUARD TOTAL BOND MARKET I

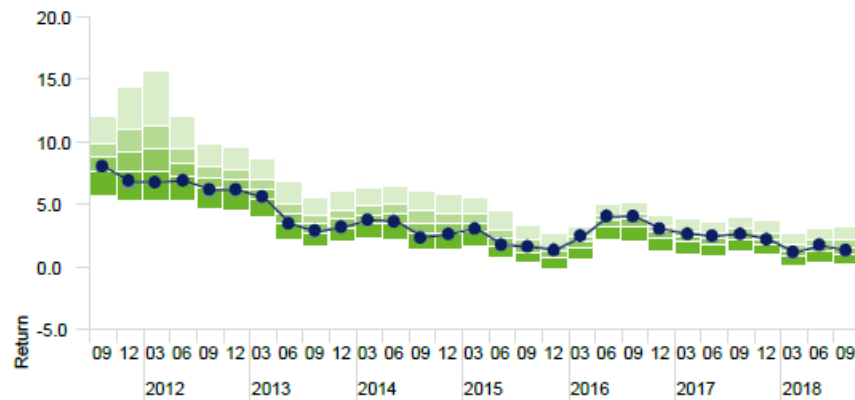
Risk & Return Characteristics (5 Years)

Time Period: 10/1/2013 to 9/30/2018

	Fund	Index
R2	99.8	100.0
Alpha	-0.1	0.0
Beta	1.0	1.0
Std Dev	3.0	2.9
Up Capture Ratio	100.8	100.0
Down Capture Ratio	105.7	100.0
Sharpe Ratio (geo)	0.5	0.5
Information Ratio (geo)	-0.3	
Tracking Error	0.2	0.0
Correlation	1.0	1.0

Rolling Returns (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



—Vanguard Total Bond Market Index I

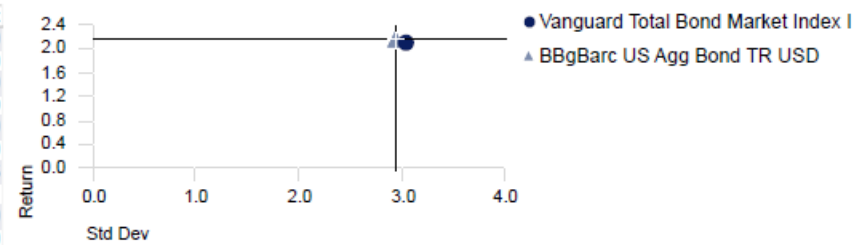
—BBgBarc US Agg Bond TR USD

Calendar Year Returns

	2008	Rank	2009	Rank	2010	Rank	2011	Rank	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	2017	Rank
Vanguard Total Bond Market Index I	5.2	9	6.1	89	6.6	70	7.7	11	4.2	83	-2.1	67	5.9	30	0.4	28	2.6	62	3.6	55
BBgBarc US Agg Bond TR USD	5.2		5.9		6.5		7.8		4.2		-2.0		6.0		0.5		2.6		3.5	

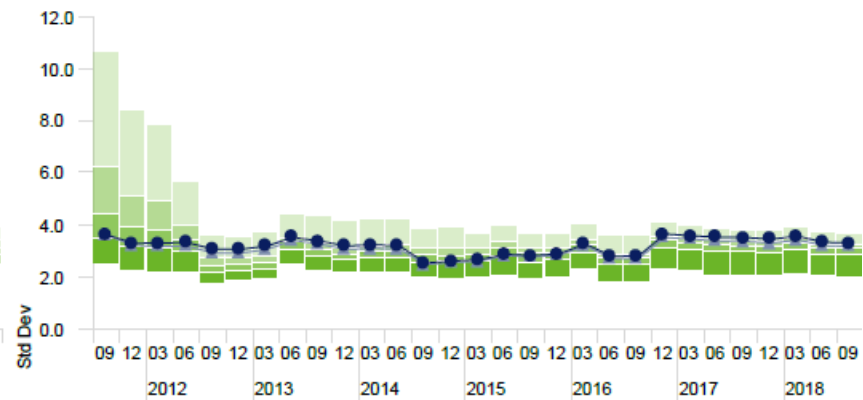
Risk & Return Illustration (5 Years)

Time Period: 10/1/2013 to 9/30/2018



Rolling Risk (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



—Vanguard Total Bond Market Index I

—BBgBarc US Agg Bond TR USD



Source: Morningstar

September 30, 2018

VANGUARD INFLATION PROTECTED SECURITIES

Asset Allocation

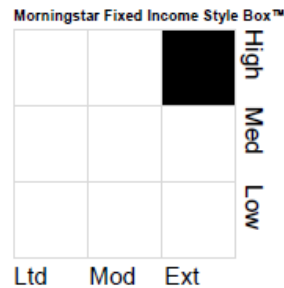
Portfolio Date: 8/31/2018



• Stock	0.0
• Bond	97.4
• Cash	2.6
• Other	0.0
Total	100.0

Fixed Income Statistics

Portfolio Date: 8/31/2018



Fixed-Income Stats

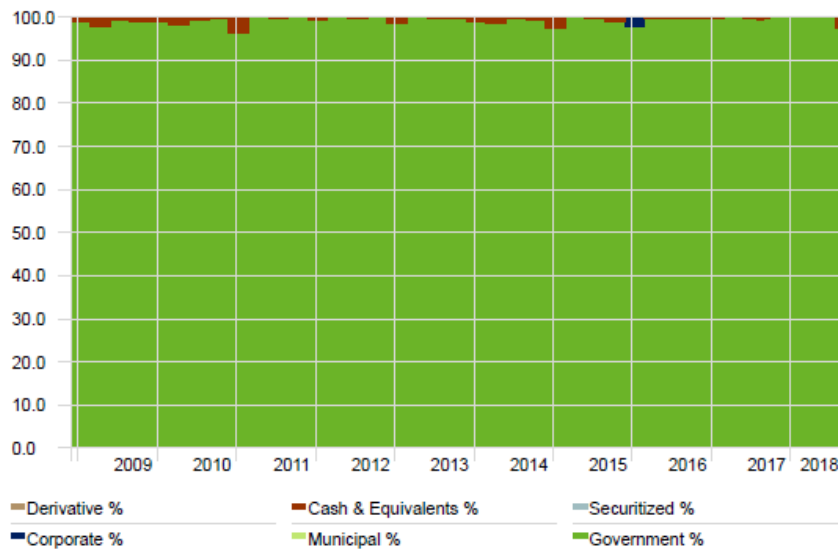
Average Eff Duration	7.7
Average Eff Maturity	8.4
Average Coupon	0.8
Average Price	101.7

Credit Quality Breakdown

Portfolio Date: 6/30/2018

	Fund	Index
AAA %	100.0	
AA %	0.00	
A %	0.00	
BBB %	0.00	
BB %	0.00	
B %	0.00	
Below B %	0.00	
Not Rated %	0.00	
Yield to Maturity		

Historical Sector Allocations (10 Years)



Top Holdings

	Detail Holding Type	Portfolio Weighting %
United States Treasury Notes 0.12%	BOND - GOV'T INFLATION PROTECTED	5.32
United States Treasury Notes 0.12%	BOND - GOV'T INFLATION PROTECTED	4.06
United States Treasury Notes 0.62%	BOND - GOV'T INFLATION PROTECTED	3.76
United States Treasury Notes 0.12%	BOND - GOV'T INFLATION PROTECTED	3.75
United States Treasury Notes 0.38%	BOND - GOV'T INFLATION PROTECTED	3.69
United States Treasury Notes 0.38%	BOND - GOV'T INFLATION PROTECTED	3.67
United States Treasury Notes 0.12%	BOND - GOV'T INFLATION PROTECTED	3.67
United States Treasury Notes 0.25%	BOND - GOV'T INFLATION PROTECTED	3.66
United States Treasury Notes 0.12%	BOND - GOV'T INFLATION PROTECTED	3.61
United States Treasury Notes 0.12%	BOND - GOV'T INFLATION PROTECTED	3.59



Source: Morningstar

September 30, 2018

VANGUARD INFLATION PROTECTED SECURITIES

4.1

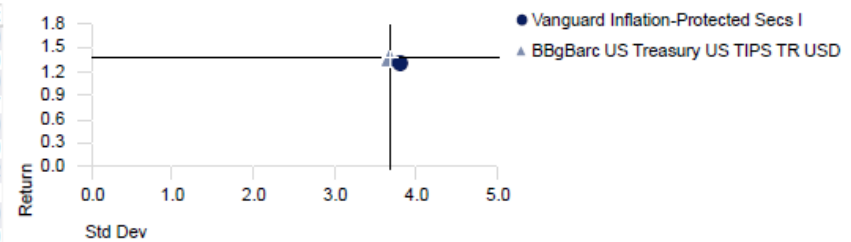
Risk & Return Characteristics (5 Years)

Time Period: 10/1/2013 to 9/30/2018

	Fund	Index
R2	99.4	100.0
Alpha	-0.1	0.0
Beta	1.0	1.0
Std Dev	3.8	3.7
Up Capture Ratio	101.2	100.0
Down Capture Ratio	104.1	100.0
Sharpe Ratio (geo)	0.2	0.2
Information Ratio (geo)	-0.2	0.0
Tracking Error	0.3	0.0
Correlation	1.0	1.0

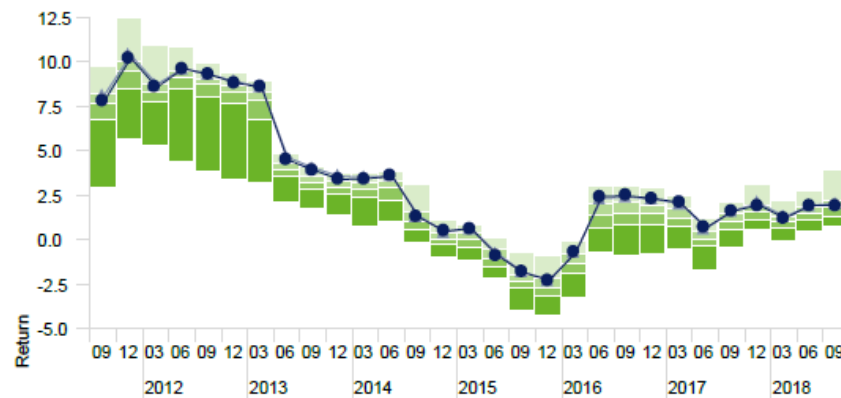
Risk & Return Illustration (5 Years)

Time Period: 10/1/2013 to 9/30/2018



Rolling Returns (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile

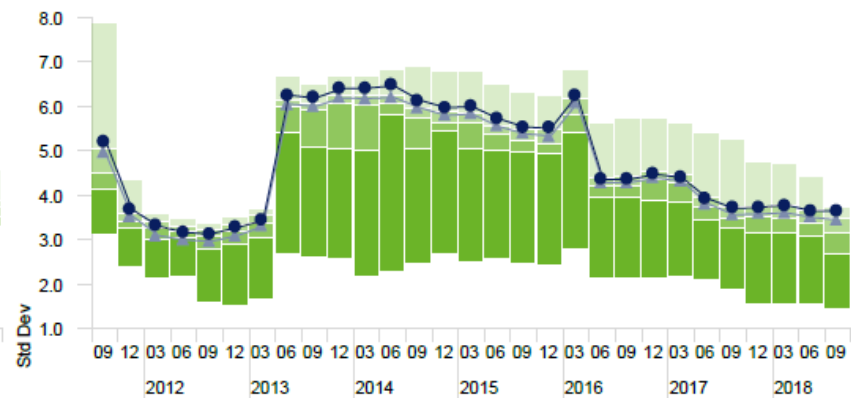


—Vanguard Inflation-Protected Secs I

—BBgBarc US Treasury US TIPS TR USD

Rolling Risk (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



—Vanguard Inflation-Protected Secs I

—BBgBarc US Treasury US TIPS TR USD

Calendar Year Returns

	2008	Rank	2009	Rank	2010	Rank	2011	Rank	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	2017	Rank
Vanguard Inflation-Protected Secs I	-2.8	56	11.0	29	6.3	28	13.4	6	6.9	24	-8.8	52	4.1	5	-1.7	31	4.6	39	3.0	34
BBgBarc US Treasury US TIPS TR USD	-2.4		11.4		6.3		13.6		7.0		-8.6		3.6		-1.4		4.7		3.0	



Source: Morningstar

September 30, 2018

LIGHTHOUSE GLOBAL LONG/SHORT

4.1



September 30, 2018

LIGHTHOUSE GLOBAL LONG/SHORT

4.1

General Fund Information			
Fund Name	Lighthouse Global Long/Short Fund		
Management Company	Lighthouse Investment Partners, LLC		
Location	Palm Beach, FL		
Firm AUM	\$16.6 billion	Strategy	Fund of Fund
Strategy AUM	\$1.9 billion	Sub-Strategy	Long/Short Equity
Portfolio Managers	Ethan Baron	Direct or FOF	FOF

Terms	
Share Class	--
Minimum Investment	\$1 million
Management Fee	1.15%
Incentive Fee	--
Hurdle Rate	None
High Water Mark	Yes
Subscription	Monthly
Redemption	Quarterly (60 days notice) or Monthly (90 days notice)
Lock-Up	None

Investment Strategy
Lighthouse's Global Long/Short Fund is a global portfolio of 20-30 separately managed accounts with industry sector and country specialist managers. The geographical allocations are similar to the MSCI World Index (30%-75% Americas, 10%-35% Europe, 5%-35% Asia).
The Fund targets returns greater than 10% over market cycles with 6%-8% volatility and an equity beta of 0.2-0.4 to the MSCI World Index.

Strategy Information

Region Allocation & Attribution

Region	Net	Gross
Developed North America	20.6%	195.9%
Developed Europe	3.2%	58.3%
Developed Asia	-2.0%	46.4%
Emerging Markets	12.4%	26.5%
Hedges / Other	0.8%	1.9%

	Developed North America	Developed Europe	Developed Asia	Emerging Markets	Hedges / Other
Var [®]	0.28%	0.03%	0.02%	0.09%	0.00%
QTD [®]	0.07%	0.22%	0.23%	-1.29%	0.05%

Sector Allocation & Attribution

Sector	Net	Gross
Communication Services	6.8%	18.4%
Consumer Discretionary	1.3%	58.3%
Consumer Staples	1.6%	14.2%
Energy	16.0%	12.2%
Financials	5.6%	64.4%
Healthcare	0.4%	40.8%
Industrials	-0.1%	39.2%
Technology	6.1%	34.1%
Materials	1.6%	17.5%
Real Estate	0.8%	20.8%
Utilities	3.0%	0.8%
Hedges / Other	0.7%	2.3%

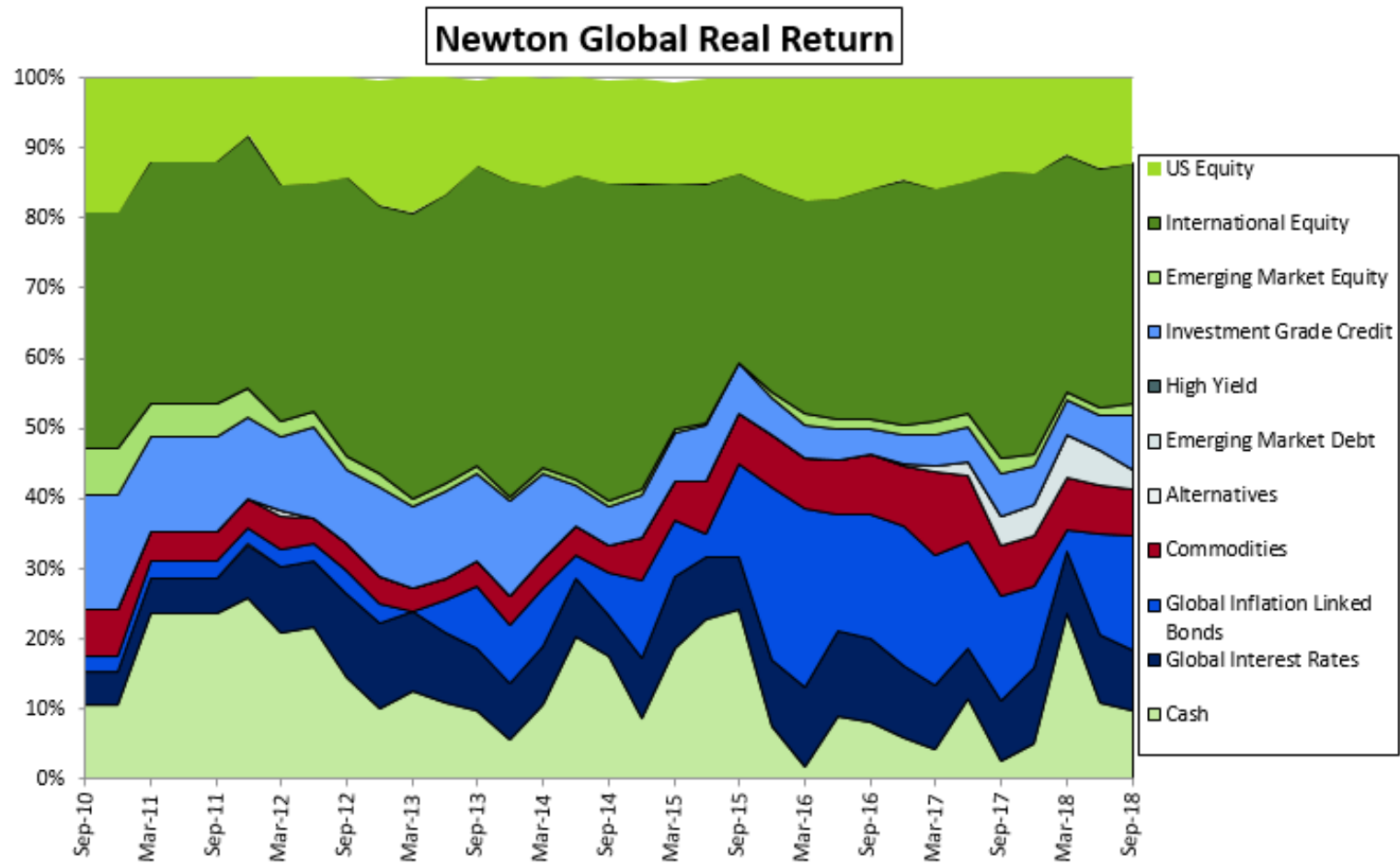
	Communication Services	Consumer Discretionary	Consumer Staples	Energy	Financials	Healthcare	Industrials	Technology	Materials	Real Estate	Utilities	Hedges / Other
Var [®]	0.06%	0.12%	0.01%	0.02%	0.04%	0.04%	0.02%	0.09%	0.02%	0.01%	0.00%	-0.01%
QTD [®]	0.20%	-1.38%	-0.22%	-0.10%	0.82%	0.36%	-0.22%	0.01%	0.16%	0.08%	0.00%	-0.43%



For more information please see NEPC's Investment Due Diligence Report and Operational Due Diligence Report

September 30, 2018

NEWTON GLOBAL REAL RETURN



Source: Newton

September 30, 2018

PIMCO ALL ASSET

Asset Allocation

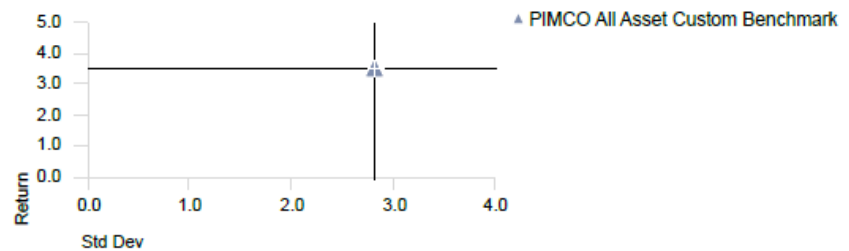
Portfolio Date: 9/30/2018



	%
Stock	10.0
Bond	0.0
Cash	0.0
Other	90.0
Total	100.0

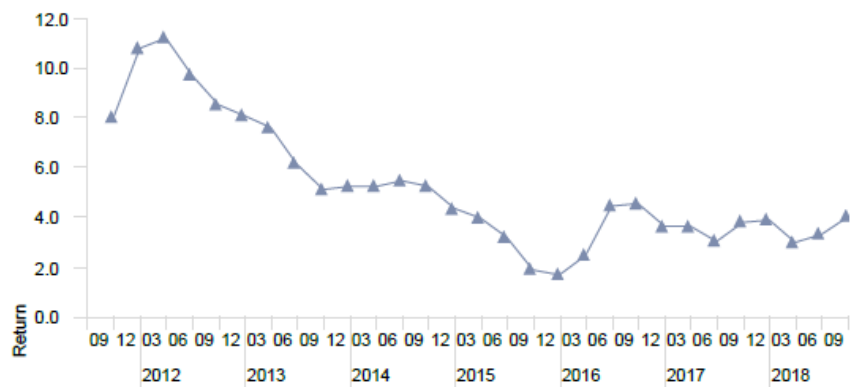
Risk & Return Illustration (5 Years)

Time Period: 10/1/2013 to 9/30/2018



Rolling Returns (3 Years)

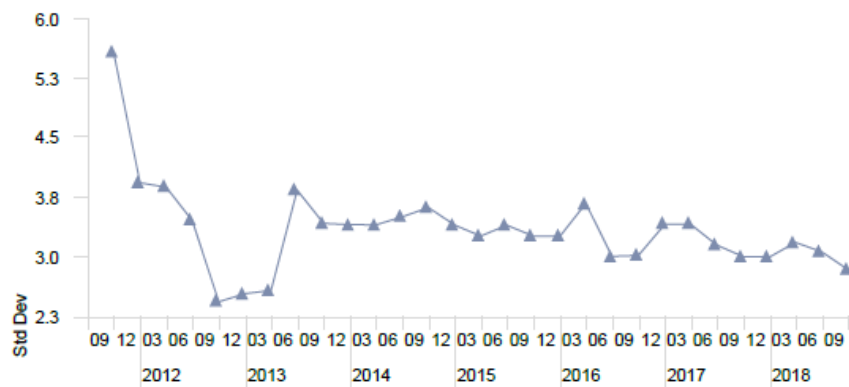
Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



—PIMCO All Asset Custom Benchmark

Rolling Risk (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



—PIMCO All Asset Custom Benchmark

Calendar Year Returns

	2008	Rank	2009	Rank	2010	Rank	2011	Rank	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	2017	Rank
PIMCO All Asset Custom Benchmark	-6.7		16.5		8.5		7.6		8.1		0.2		4.9		0.0		6.1		5.6	
PIMCO All Asset Custom Benchmark	-6.7		16.5		8.5		7.6		8.1		0.2		4.9		0.0		6.1		5.6	



Source: Morningstar

September 30, 2018

PIMCO ALL ASSET

Fund Name	All Asset Fund																	
Total Fund Net Assets (\$US MM)	18,956.9																	
	6/30/2014	9/30/2014	12/31/2014	3/31/2015	6/30/2015	9/30/2015	12/31/2015	3/31/2016	6/30/2016	9/30/2016	12/31/2016	3/31/2017	6/30/2017	9/30/2017	12/31/2017	3/31/2018	6/30/2018	9/30/2018
Third Pillar	78.71%	71.02%	74.17%	85.29%	85.76%	85.46%	81.91%	85.26%	81.04%	78.51%	74.27%	72.48%	70.05%	69.73%	70.82%	73.64%	74.15%	72.61%
Emerging Markets Equities	12.81%	13.05%	11.83%	13.66%	13.67%	13.09%	14.11%	20.24%	22.17%	20.70%	18.77%	18.42%	17.80%	17.59%	17.76%	18.21%	18.38%	19.64%
RAE Emerging Markets Fund	-	-	-	-	-	-	-	2.98%	4.22%	4.71%	4.63%	3.99%	4.47%	5.11%	5.33%	5.45%	5.31%	-
RAE PLUS EMG Fund	5.99%	4.69%	4.12%	4.75%	4.73%	4.41%	4.65%	5.96%	6.11%	5.07%	3.39%	3.19%	3.70%	4.73%	6.41%	7.92%	9.14%	-
RAE Low Volatility PLUS EMG Fund	6.80%	8.34%	7.70%	8.92%	8.94%	8.68%	9.46%	11.29%	11.83%	10.91%	10.74%	11.24%	9.33%	7.25%	5.76%	3.86%	2.97%	-
Eqs Emerging Markets Fund	0.02%	0.02%	0.02%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RAFI Dynamic Multi-Factor EM Equity ETF	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.26%	0.98%	0.92%	-
Commodities and REITs	8.76%	8.19%	8.89%	8.88%	8.36%	8.10%	6.62%	7.31%	6.53%	8.49%	5.26%	6.51%	6.29%	10.82%	10.66%	10.68%	10.41%	8.93%
CommoditiesPLUS™ Strategy Fund	3.03%	3.58%	3.06%	2.88%	2.19%	1.93%	1.68%	4.14%	3.12%	3.33%	3.47%	3.22%	4.05%	4.99%	5.38%	5.28%	4.72%	-
CommodityRealReturn Strategy Fund®	1.66%	3.00%	3.97%	3.90%	2.18%	1.88%	1.62%	1.52%	0.89%	0.77%	0.53%	0.56%	1.05%	1.04%	1.06%	1.07%	1.10%	-
RealEstateRealReturn Strategy Fund	4.06%	1.60%	2.86%	2.31%	1.99%	2.29%	2.23%	1.54%	1.53%	1.39%	1.26%	1.73%	3.19%	3.99%	4.20%	4.33%	4.59%	-
Emerging Markets Bonds	19.86%	20.32%	18.83%	20.83%	22.45%	22.15%	20.83%	22.27%	17.67%	18.30%	19.97%	20.92%	20.55%	20.38%	20.11%	20.55%	18.62%	17.93%
Emerging Local Bond Fund	7.42%	9.50%	9.10%	9.00%	9.79%	9.42%	8.49%	9.50%	8.94%	7.33%	6.80%	7.09%	6.76%	6.55%	6.44%	6.69%	5.70%	-
Emerging Markets Currency and Short-Term Investments Fund	7.10%	8.33%	9.05%	11.50%	12.29%	12.33%	11.94%	12.77%	10.73%	10.97%	12.99%	13.83%	13.80%	13.65%	13.66%	13.86%	12.92%	-
Emerging Markets Bond Fund	3.90%	1.92%	0.47%	0.24%	0.29%	0.32%	0.32%	-	-	-	-	-	-	-	-	-	-	-
Emerging Markets Corporate Bond Fund	1.43%	0.57%	0.20%	0.07%	0.07%	0.08%	0.09%	-	-	-	-	-	-	-	-	-	-	-
Credit	21.84%	11.55%	14.21%	14.98%	18.23%	18.08%	19.32%	16.83%	17.72%	18.22%	17.46%	19.49%	14.08%	12.74%	12.40%	11.69%	12.17%	9.66%
High Yield Fund	1.11%	0.43%	2.64%	2.85%	2.88%	3.11%	2.53%	3.72%	2.90%	2.56%	2.35%	1.87%	1.01%	0.60%	0.59%	0.58%	0.58%	-
High Yield Spectrum Fund	3.69%	2.66%	2.90%	3.07%	3.20%	3.84%	4.25%	4.87%	4.68%	4.64%	4.06%	2.50%	1.57%	1.55%	1.53%	1.59%	1.59%	-
Income Fund	10.28%	6.51%	6.21%	5.90%	6.01%	6.47%	6.34%	6.93%	7.51%	8.19%	7.63%	6.44%	6.62%	6.55%	6.27%	6.56%	7.00%	-
Diversified Income Fund	3.21%	0.09%	0.10%	0.03%	0.21%	0.24%	0.24%	0.25%	0.57%	0.51%	0.49%	0.54%	0.15%	0.00%	0.00%	0.00%	0.00%	-
Low Duration Income Fund	1.75%	0.28%	0.06%	0.29%	0.33%	0.37%	0.29%	-	-	-	-	-	-	-	-	-	-	-
Senior Floating Rate Fund	1.79%	1.60%	2.30%	2.82%	2.61%	2.28%	2.07%	1.50%	2.06%	2.28%	2.34%	2.49%	3.81%	4.02%	3.99%	3.15%	2.99%	-
Convertible Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
European Convertible Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Global Bonds	1.21%	0.54%	0.38%	0.83%	1.87%	1.34%	1.17%	0.69%	0.69%	0.69%	0.69%	0.69%	0.69%	0.69%	0.69%	0.69%	0.69%	0.69%
International Bond Fund (Unhedged)	0.26%	0.29%	0.30%	0.30%	0.30%	0.31%	0.29%	-	-	-	-	-	-	-	-	-	-	-
Global Advantage Strategy Fund	0.95%	0.04%	0.05%	0.23%	0.76%	0.93%	0.88%	-	-	-	-	-	-	-	-	-	-	-
Global Bond Opportunities Fund (Unhedged)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inflation Linked Bonds	8.90%	2.67%	2.73%	7.87%	7.88%	7.68%	7.99%	6.73%	3.21%	3.45%	3.85%	3.80%	3.97%	3.66%	3.75%	3.01%	2.81%	2.17%
Real Return Fund	0.29%	1.24%	1.38%	1.31%	1.29%	1.19%	0.81%	0.00%	0.18%	2.77%	3.19%	3.25%	3.53%	3.44%	3.32%	2.59%	2.16%	-
Long-Term Real Return Fund	0.53%	1.34%	1.27%	6.49%	6.50%	6.40%	6.99%	5.61%	2.91%	0.59%	0.54%	0.43%	0.44%	0.42%	0.43%	0.42%	0.44%	-
Global Advantage® Inflation-Linked Bond ETF	0.08%	0.08%	0.08%	0.08%	0.08%	0.09%	0.10%	0.12%	0.12%	0.12%	0.12%	0.12%	-	-	-	-	-	-
Alternative Strategies	13.34%	14.87%	16.33%	18.36%	19.09%	19.12%	17.65%	13.15%	14.74%	12.12%	8.88%	8.43%	5.65%	5.62%	6.15%	9.39%	12.80%	13.31%
Dynamic Bond Fund	2.53%	2.16%	1.79%	2.75%	2.44%	2.32%	2.08%	1.80%	1.96%	-	-	-	-	-	-	-	-	-
Credit Opportunities Bond Fund	2.78%	1.10%	0.76%	0.52%	0.44%	0.39%	0.23%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-
Mortgage Opportunities and Bond Fund	0.55%	0.57%	0.61%	0.65%	0.66%	0.75%	0.74%	0.79%	0.78%	0.73%	0.74%	0.72%	0.72%	0.71%	0.69%	0.68%	0.71%	-
TRENDS Managed Futures Strategy Fund	0.16%	0.16%	0.19%	0.20%	0.20%	0.24%	0.26%	0.30%	0.29%	0.29%	0.30%	0.28%	0.28%	0.28%	0.28%	0.28%	0.29%	-
Eqs Long/Short Fund	0.47%	0.47%	0.49%	0.36%	0.25%	0.18%	-	-	-	-	-	-	-	-	-	-	-	-
RAE Worldwide Long/Short PLUS Fund	-	-	3.08%	6.53%	7.49%	7.93%	7.96%	6.42%	7.28%	6.90%	5.73%	5.03%	3.08%	2.96%	3.03%	3.40%	5.15%	-
RAE Fundamental Advantage PLUS Fund	2.62%	4.90%	4.84%	3.93%	3.75%	3.25%	2.62%	1.69%	2.20%	2.02%	1.06%	1.29%	1.59%	1.87%	2.14%	5.03%	5.85%	-
RAE Worldwide Fundamental Adv PLUS Fund	4.24%	5.47%	4.57%	3.42%	3.86%	4.07%	3.16%	2.16%	2.23%	2.18%	1.15%	1.10%	-	-	-	-	-	-

Source: PIMCO



September 30, 2018

PIMCO ALL ASSET

	6/30/2014	9/30/2014	12/31/2014	3/31/2015	6/30/2015	9/30/2015	12/31/2015	3/31/2016	6/30/2016	9/30/2016	12/31/2016	3/31/2017	6/30/2017	9/30/2017	12/31/2017	3/31/2018	6/30/2018	9/30/2018	
Second Pillar	9.06%	15.66%	13.80%	4.96%	6.15%	6.81%	10.78%	4.87%	10.63%	12.82%	14.67%	16.12%	20.07%	21.63%	19.68%	19.60%	19.91%	21.39%	21.33%
US Core Bonds	5.10%	4.39%	4.58%	2.91%	3.17%	3.78%	3.68%	3.95%	6.28%	7.31%	4.68%	5.99%	7.71%	8.35%	7.21%	6.33%	6.46%	7.53%	7.70%
Total Return Fund	3.07%	2.37%	2.25%	1.04%	1.39%	1.65%	1.65%	1.22%	3.41%	4.47%	1.92%	2.58%	4.44%	5.70%	4.90%	4.16%	4.25%		
Investment Grade Credit Bond Fund	0.02%	2.02%	2.34%	1.87%	1.78%	2.12%	2.01%	2.66%	2.87%	2.85%	2.76%	3.24%	3.26%	2.66%	2.30%	2.16%	2.21%		
Mortgage-Backed Securities Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
GNMA and Government Securities Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
US Long Maturity Bonds	4.82%	10.94%	7.70%	1.28%	1.82%	1.94%	2.31%	0.28%	2.58%	2.10%	5.36%	7.68%	8.63%	8.62%	8.70%	7.98%	8.22%	8.04%	7.72%
Extended Duration Fund	-	-	-	-	-	-	-	-	0.42%	0.25%	1.51%	2.25%	2.91%	3.05%	3.13%	2.95%	3.52%		
Long-Term US Government Fund	0.27%	5.79%	3.91%	0.00%	0.00%	0.00%	0.00%	0.00%	1.18%	1.06%	2.41%	4.18%	4.42%	4.28%	4.29%	3.80%	3.45%		
Long-Term Credit Bond Fund	4.20%	3.35%	1.93%	0.50%	0.57%	0.77%	0.88%	0.27%	0.27%	0.17%	0.17%	0.12%	-	-	-	-	-		
Long Duration Total Return Fund	0.35%	1.80%	1.66%	0.77%	0.95%	1.16%	1.42%	0.00%	0.68%	0.62%	1.20%	1.14%	1.30%	1.29%	1.28%	1.24%	1.26%		
Short-Term Bonds	1.12%	0.32%	1.52%	0.77%	1.46%	1.09%	4.61%	0.71%	1.60%	3.49%	4.69%	2.63%	3.73%	4.06%	3.97%	4.69%	5.23%	5.62%	5.92%
Low Duration Fund	0.84%	0.26%	0.53%	0.24%	0.87%	0.41%	1.54%	0.19%	1.26%	2.38%	2.44%	2.26%	3.37%	3.72%	3.34%	4.15%	4.89%		
Low Duration Exchange Traded Fund	0.20%	0.21%	0.22%	0.23%	0.24%	0.29%	0.19%	-	-	-	-	-	-	-	-	-	-		
Short Term Fund	0.00%	0.00%	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Government Money Market Fund	-	-	0.80%	0.33%	0.35%	0.42%	-	0.54%	0.54%	1.02%	2.26%	0.38%	0.37%	0.33%	0.63%	0.32%	0.34%		
Money Market Fund	-	-	-	-	-	-	3.13%	-	-	-	-	-	-	-	-	-	-		
Net Short Duration Instruments	-0.01%	-0.16%	-0.02%	-0.03%	-0.01%	-0.02%	-0.04%	-0.01%	0.00%	0.00%	-0.01%	0.00%	-0.01%	0.00%	0.00%	0.22%	0.00%		
First Pillar	12.24%	13.34%	12.03%	9.76%	8.10%	7.73%	7.32%	9.87%	8.33%	8.87%	11.06%	11.40%	9.88%	9.24%	9.30%	7.36%	5.95%	6.00%	6.09%
US Equities	1.12%	2.41%	4.03%	2.78%	2.38%	2.17%	1.53%	0.61%	0.65%	0.23%	0.28%	0.25%	0.25%	0.26%	0.27%	0.26%	0.26%	0.29%	0.28%
RAE PLUS Fund	0.03%	0.03%	0.55%	0.20%	0.21%	0.22%	-	-	-	-	-	-	-	-	-	-	-		
RAE Low Volatility PLUS Fund	0.41%	1.72%	2.70%	1.93%	1.74%	1.65%	1.21%	0.51%	0.55%	0.23%	0.25%	0.25%	0.25%	0.26%	0.27%	0.26%	0.28%		
RAE PLUS Small Fund	0.65%	0.63%	0.74%	0.64%	0.43%	0.30%	0.32%	-	-	-	-	-	-	-	-	-	-		
StocksPLUS® Small Fund	0.02%	0.02%	0.02%	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Fundamental IndexPLUS™	-	-	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
StocksPLUS® Fund	0.00%	0.00%	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
StocksPLUS® Absolute Return Fund	0.01%	0.01%	0.01%	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Developed ex-US Equities	11.12%	10.93%	8.90%	6.97%	5.73%	5.56%	6.79%	5.38%	7.78%	6.65%	10.81%	11.19%	9.62%	8.96%	9.03%	7.19%	5.67%	5.71%	5.81%
RAE PLUS International Fund	3.16%	3.07%	3.01%	1.71%	1.60%	1.47%	1.51%	1.61%	1.56%	1.89%	2.51%	2.88%	3.45%	3.52%	3.43%	1.72%	0.50%		
RAE Low Volatility PLUS Intl Fund	5.73%	5.65%	3.79%	4.22%	4.13%	4.08%	4.24%	4.72%	3.35%	3.97%	5.31%	4.95%	2.50%	1.73%	1.80%	1.75%	1.83%		
StocksPLUS® International Fund (USD-Hedged)	0.01%	0.01%	0.01%	-	-	-	0.05%	2.76%	2.59%	2.64%	2.63%	2.93%	2.94%	2.95%	3.02%	2.87%	3.06%		
StocksPLUS® International Fund (Unhedged)	0.02%	0.02%	0.02%	-	-	-	-	0.27%	0.29%	0.16%	0.16%	0.40%	0.73%	0.76%	0.77%	0.76%	0.26%		
EqS Global Dividend Fund	0.01%	0.01%	0.01%	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
EqS Pathfinder Fund	2.19%	2.18%	1.16%	1.04%	-	-	-	-	-	-	-	-	-	-	-	-	-		

Source: PIMCO

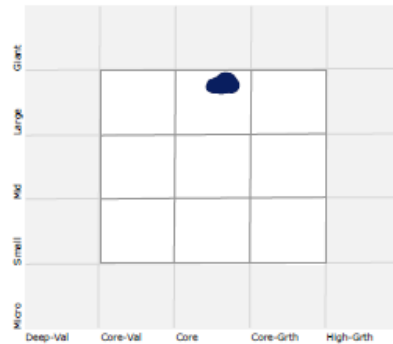


September 30, 2018

VANGUARD TOTAL WORLD STOCK INDEX I

Holdings Based Style Trail (5 Years)

Time Period: 10/31/2013 to 8/31/2018



• Vanguard Total World Stock Index I • FTSE Global All Cap TR USD

Portfolio Statistics

	Fund	Index
# of Holdings	8,055	7,900
% Asset in Top 10 Holdings	9.9	9.9
Turnover Ratio %	10.0	
P/E Ratio	17.0	16.9
P/B Ratio	2.2	2.2
LT Earn Growth	12.4	10.9
Hist Earn Growth	9.3	5.7
12 Mo Yield	2.2	

Market Capitalization Breakdown

	Fund	Index
Market Cap Giant %	45.5	
Market Cap Large %	30.5	
Market Cap Mid %	18.5	
Market Cap Small %	5.0	
Market Cap Micro %	0.5	
Average Market Cap	40,904.4	
Equity Region Developed %	92.6	
Equity Region Emerging %	7.4	

Top Ten Holdings

	Port Weight %	3 Month Return
Apple Inc	2.08	22.34
Microsoft Corp	1.59	16.41
Amazon.com Inc	1.52	17.84
Facebook Inc A	0.78	-15.37
Alphabet Inc Class C	0.74	6.98
JPMorgan Chase & Co	0.73	8.83
Cmt Market Liquidity Rate	0.68	
Johnson & Johnson	0.67	14.61
Exxon Mobil Corp	0.64	3.76
Alphabet Inc A	0.63	6.90

Sector Attribution (Quarter)

	Portfolio Weights	Benchmark Weights	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Active Return
Communication Services	8.29		-0.46				
Consumer Discretionary	10.54		2.37				
Consumer Staples	7.41		1.78				
Energy	6.27		2.43				
Financials	16.13		2.56				
Health Care	11.09		10.71				
Industrials	11.19		5.43				
Information Technology	14.64		8.85				
Materials	5.41		-0.04				
Real Estate	3.69		-1.04				
Utilities	2.87		0.93				
Unclassified	0.01		0.03				
Attribution Total	97.54		4.04				
Cash	0.60						
Bond	0.11						
Other	0.09						
Missing Performance	1.66						
Total	100.00						

Region Attribution (Quarter)

	Portfolio Weights	Benchmark Weights	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Active Return
Africa	0.69		-7.64				
Asia - Developed	4.28		-0.06				
Asia - Emerging	5.02		-4.86				
Australasia	2.20		-0.64				
Canada	3.06		1.11				
Europe - Emerging	0.49		0.69				
Europe - ex Euro	4.22		5.45				
Eurozone	9.28		-0.08				
Japan	7.99		3.15				
Latin America	1.23		5.47				
Middle East	0.36		7.09				
United Kingdom	5.36		-2.07				
United States	53.36		7.15				
Unclassified	0.00		-9.47				
Attribution Total	97.54		4.04				
Cash	0.60						
Bond	0.11						
Other	0.09						
Missing Performance	1.66						
Total	100.00						



Source: Morningstar

September 30, 2018

VANGUARD TOTAL WORLD STOCK INDEX I

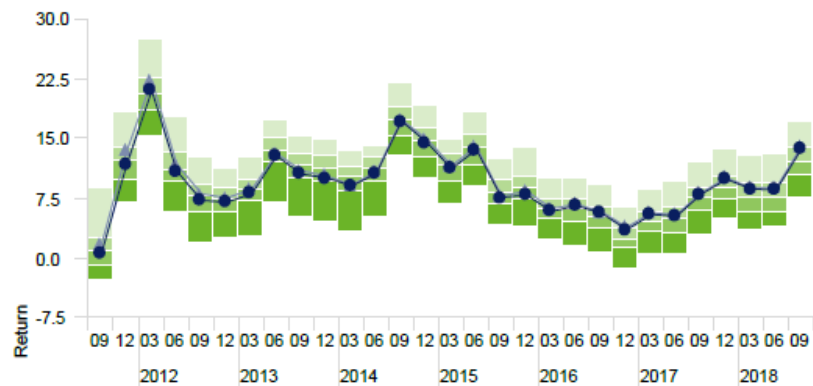
Risk & Return Characteristics (5 Years)

Time Period: 10/1/2013 to 9/30/2018

	Fund	Index
R2	99.7	100.0
Alpha	-0.1	0.0
Beta	1.0	1.0
Std Dev	7.7	7.8
Up Capture Ratio	97.4	100.0
Down Capture Ratio	97.5	100.0
Sharpe Ratio (geo)	1.1	1.1
Information Ratio (geo)	-0.5	
Tracking Error	0.4	0.0
Correlation	1.0	1.0

Rolling Returns (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile

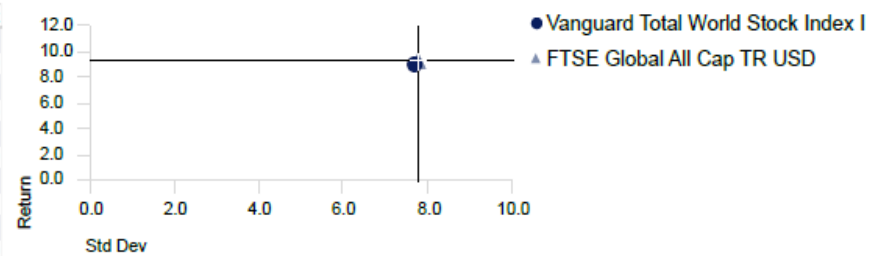


—Vanguard Total World Stock Index I

—FTSE Global All Cap TR USD

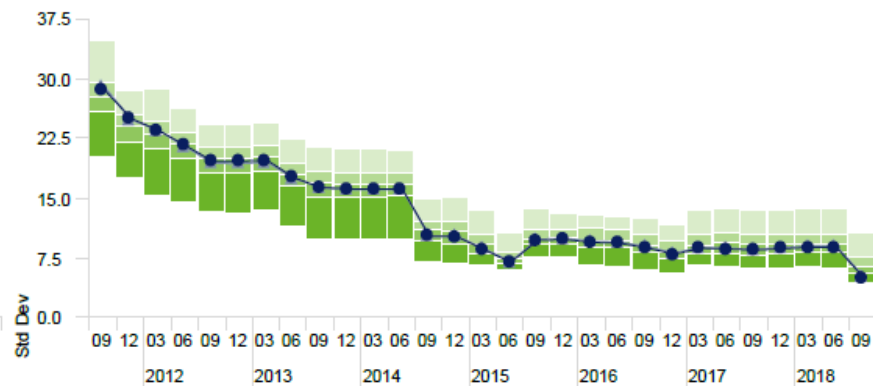
Risk & Return Illustration (5 Years)

Time Period: 10/1/2013 to 9/30/2018



Rolling Risk (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



—Vanguard Total World Stock Index I

—FTSE Global All Cap TR USD

Calendar Year Returns

	2008	Rank	2009	Rank	2010	Rank	2011	Rank	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	2017	Rank
Vanguard Total World Stock Index I			33.7	44	13.1	46	-7.7	48	17.4	40	23.0	63	4.0	34	-1.9	54	8.8	18	24.2	40
FTSE Global All Cap TR USD	-42.2		37.5		14.8		-7.6		17.2		23.9		4.5		-1.7		9.0		24.4	



Source: Morningstar

September 30, 2018

APPENDIX

NEPC, LLC

GLOSSARY OF TERMS

Alpha - Measures the relationship between the fund performance and the performance of another fund or benchmark index and equals the excess return while the other fund or benchmark index is zero.

Alpha Jensen - The average return on a portfolio over and above that predicted by the capital asset pricing model (CAPM), given the portfolio's beta and the average market return. Also known as the abnormal return or the risk adjusted excess return.

Annualized Excess Return over Benchmark - Annualized fund return minus the annualized benchmark return for the calculated return.

Annualized Return - A statistical technique whereby returns covering periods greater than one year are converted to cover a 12 month time span.

Beta - Measures the volatility or systematic risk and is equal to the change in the fund's performance in relation to the change in the assigned index's performance.

Information Ratio - A measure of the risk adjusted return of a financial security, asset, or portfolio.

Formula:

$$\frac{(\text{Annualized Return of Portfolio} - \text{Annualized Return of Benchmark}) / \text{Annualized Standard Deviation}(\text{Period Portfolio Return} - \text{Period Benchmark Return})}{\text{To annualize standard deviation, multiply the deviation by the square root of the number of periods per year where monthly returns per year equals 12 and quarterly returns is four periods per year.}}$$

R-Squared - Represents the percentage of a fund's movements that can be explained by movements in an index. R-Squared values range from 0 to 100. An R-Squared of 100 denotes that all movements of a fund are completely explained by movements in the index.

Sharpe Ratio - A measure of the excess return or risk premium per unit of risk in an investment asset or trading strategy.

Sortino Ratio - A method to differentiate between good and bad volatility in the Sharpe Ratio. The differentiation of up and down volatility allows the calculation to provide a risk adjusted measure of a security or fund's performance without upward price change penalties.

Formula:

$$\text{Calculation Average } (X-Y) / \text{Downside Deviation } (X-Y) * 2$$
Where X=Return Series X Y = Return Series Y which is the risk free return (91 day T-bills)

Standard Deviation - The standard deviation is a statistical term that describes the distribution of results. It is a commonly used measure of volatility of returns of a portfolio, asset class, or security. The higher the standard deviation the more volatile the returns are.

Formula:

$$(\text{Annualized Return of Portfolio} - \text{Annualized Return of Risk Free}) / \text{Annualized Standard Deviation (Portfolio Returns)}$$

Tracking Error - Tracking error, also known as residual risk, is a measure of the degree to which a portfolio tracks its benchmark. It is also a measure of consistency of excess returns. Tracking error is computed as the annualized standard deviation of the difference between a portfolio's return and that of its benchmark.

Formula:

$$\text{Tracking Error} = \text{Standard Deviation } (X-Y) * \sqrt{(\# \text{ of periods per year})}$$
Where X = periods portfolio return and Y = the period's benchmark return
For monthly returns, the periods per year = 12
For quarterly returns, the periods per year = 4

Treynor Ratio - A risk-adjusted measure of return based on systematic risk. Similar to the Sharpe ratio with the difference being the Treynor ratio uses beta as the measurement of volatility.

Formula:

$$(\text{Portfolio Average Return} - \text{Average Return of Risk-Free Rate}) / \text{Portfolio Beta}$$

Up/Down Capture Ratio - A measure of what percentage of a market's returns is "captured" by a portfolio. For example, if the market declines 10% over some period, and the manager declines only 9%, then his or her capture ratio is 90%. In down markets, it is advantageous for a manager to have as low a capture ratio as possible. For up markets, the higher the capture ratio the better. Looking at capture ratios can provide insight into how a manager achieves excess returns. A value manager might typically have a lower capture ratio in both up and down markets, achieving excess returns by protecting on the downside, whereas a growth manager might fall more than the overall market in down markets, but achieve above-market returns in a rising market.

$$\text{UpsideCapture} = \text{TotalReturn}(\text{FundReturns}) / \text{TotalReturns}(\text{BMReturn}) \text{ when Period Benchmark Return is } > = 0$$

$$\text{DownsideCapture} = \text{TotalReturn}(\text{FundReturns}) / \text{TotalReturns}(\text{BMReturn}) \text{ when Benchmark } < 0$$

Data Source: InvestorForce



INFORMATION DISCLAIMER AND REPORTING METHODOLOGY

Information Disclaimer

- Past performance is no guarantee of future results.
- All investments carry some level of risk. Diversification and other asset allocation techniques are not guaranteed to ensure profit or protect against losses.
- Some index returns displayed in this report or used in calculation of a policy, allocation or custom benchmark may not be available from the source or may be preliminary and subject to change.
- NEPC's source for portfolio pricing, calculation of accruals, and transaction information is the plan's custodial bank. Information on market indices and security characteristics is received from other sources external to NEPC. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.
- This report is provided as a management aid for the client's internal use only. Performance contained in this report does not constitute a recommendation by NEPC.
- This report may contain confidential or proprietary information and may not be copied or redistributed to any party not legally entitled to receive it.

Reporting Methodology

- The client's custodian bank is NEPC's preferred data source unless otherwise directed. NEPC reconciles custodian data to manager data. If the custodian cannot provide accurate data, manager data may be used.
- Trailing time period returns are determined by geometrically linking the holding period returns, from the first full month after inception to the report date. Rates of Return are annualized when the time period is longer than a year. Performance is presented gross and/or net of manager fees as indicated on each page.
- For managers funded in the middle of a month, the "since inception" return will start with the first full month, although actual inception dates and cash flows are taken into account in all Composite calculations.
- This report may contain forward-looking statements that are based on NEPC's estimates, opinions and beliefs, but NEPC cannot guarantee that any plan will achieve its targeted return or meet other goals.





AGENDA ITEM SUMMARY

1. **NAME OF ITEM:** Emerging Market Small Cap Equity Manager – Presentation

2. **INITIATED BY:** Kelly A. Martin, Chair

3. **BOARD INFORMATION:** X **BOARD ACTION:**

4. **OUTCOME:** **BOARD POLICY:**
 Primary Outcomes: Section 709 - Investments
 Enhance fiscal positioning

5. **BACKGROUND:**

The Investment Committee will listen to Mondrian Investment Partners present their Emerging Market Small Cap strategy by polycom at the December 20, 2018 Committee meeting. They will present on their firm investment process, philosophy, and performance as well as the broader Global Equity markets. The attendees include:

 - Mondrian Investment Partners
 - Ormala Krishnan, PhD, Chief Investment Officer Small Cap Equities
 - Jessica Hsia, Senior Client Services Executive

December 20, 2018



5.1

Representing Mondrian:

Frances M. Cuthbert
Senior Portfolio Manager
Mondrian Investment Partners Limited

Benjamin Hall
Assistant Portfolio Manager
Mondrian Investment Partners Limited

Jessica Hsia
Senior Client Services Executive
Mondrian Investment Partners Limited

Presentation to:

University of Maine System

Mondrian Emerging Markets
Small Cap Equity Fund, L.P.

A g e n d a

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5	Organization
13	Investment Philosophy
19	Implementation
25	Global Equity Markets
33	Performance
41	Portfolio
49	Performance History
55	Why Mondrian?
59	Appendix

Mondrian Investment Partners Limited Fifth Floor 10 Gresham Street London EC2V 7JD Telephone 020 7477 7000	Mondrian Investment Partners (U.S.), Inc. Two Commerce Square 2001 Market Street, Suite 3810 Philadelphia, PA 19103 Telephone (215) 825-4500	Mondrian Investment Group (U.S.), Inc. 1105 N. Market Street, Suite 1118 Wilmington, DE 19801 Telephone (302) 428-3839
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Mondrian Investment Partners Limited is authorised and regulated by the Financial Conduct Authority

www.mondrian.com

Authorized only for use with Qualified Purchasers

Biographies

MONDRIAN INVESTMENT PARTNERS

Frances M. Cuthbert, CFA

Senior Portfolio Manager
Mondrian Investment Partners Limited

London

Ms. Cuthbert is a graduate of the University of Edinburgh where she completed a MA (Hons) degree in Economics. She commenced her career at Deutsche Bank before joining Mondrian in 1999 with responsibilities in the International Small Capitalisation Team. Ms. Cuthbert is a CFA Charterholder and a member of the CFA Institute and the CFA Society of the UK.

Benjamin Hall, CFA

Assistant Portfolio Manager
Mondrian Investment Partners Limited

London

Mr. Hall is a graduate of Cardiff University where he achieved a First Class Honours degree in Economics. He started his career at Mondrian as an Investment Administrator in 2010, subsequently joining the Emerging Markets Small Capitalisation Team in 2012. Mr. Hall is a CFA Charterholder and a member of the CFA Institute and the CFA Society of the UK.

Jessica Hsia

Senior Client Services Executive
Mondrian Investment Partners Limited

London

Ms. Hsia holds a Bachelor of Science in Economics degree from The Wharton School of the University of Pennsylvania. She began her career in 2003 with the US domestic value client service team at Delaware Investments, and joined Mondrian in 2004, where she held various positions within the Philadelphia Client Service team focusing on North American clients and consultants. In 2016 Ms. Hsia joined the London Client Service team, focusing on clients, consultants, and marketing outside of North America. Ms. Hsia is a member of the CFA Institute and the CFA Society of Philadelphia.

Fund Disclosure Summary

Mondrian Emerging Markets Small Cap Equity Fund, L.P.

5.1

The Fund involves a variety of risks, including, but not limited to, the following.

An investment in the Fund is not suitable for all investors and involves the risk of loss. There can be no assurance that the Fund will be able to achieve its investment objectives. The investment return and value of interests in the Fund will fluctuate. When a withdrawal is made, the interests may be worth more or less than when originally purchased.

Registration - The Fund is not, and does not intend to become, registered as an investment company under the 1940 Act, as amended. Consequently, the Fund as a whole is subject to less federal or state regulation and supervision than registered investment companies.

Other Activities - The investment manager manages the investment activities of the Fund and other investment funds and accounts and expects to manage other funds and accounts in the future, including other funds and accounts with objectives similar to those of the Fund.

International Investing - Prospective investors should understand and consider carefully the greater risks involved in investing internationally. Investing in securities of non-U.S. issuers, positions in which generally are denominated in foreign currencies, and utilization of forward foreign currency contracts, involve both opportunities and risks not typically associated with investing in U.S. securities. The Fund may invest in emerging markets. The securities markets of emerging countries are substantially smaller, less developed, less liquid and more volatile than the securities markets of the U.S. and other more developed countries. The cost of investing in securities of non-U.S. issuers can be higher than the cost of investing in U.S. securities.

Small Capitalization Securities - During some periods, the securities of small cap companies, as a class, have performed better than the securities of larger companies, and in some periods they have performed worse. Stocks of small cap companies tend to be more volatile and less liquid than stocks of larger companies.

Strategy Risks - Other strategy risks include investing in equity securities, foreign custody arrangements, market risks, currency risks, forward contracts on foreign currencies and foreign exchange risks.

Portfolio Illiquidity - The Fund may invest in securities that later become illiquid or otherwise restricted.

Limitations on Transfer - There are restrictions on transferring interests in the Fund.

Limitations on Withdrawals - There are limitations on withdrawals from the Fund with respect to notification, timing and amount that should be understood, prior to investing.

No Secondary Market - There is no secondary market for the Interests, and none is expected to develop.

Valuation of Assets - Uncertainties as to the valuation of portfolio positions could have an adverse effect on the Fund's Net Asset Value if the valuation used should prove incorrect.

The foregoing list does not purport to be a complete explanation of risks. Potential investors should read the entire Confidential Information Memorandum for the Fund and consult with their own financial and tax advisers before determining whether to invest in the Fund. In particular, the Confidential Information Memorandum includes additional information on strategy risks, risks related to the Fund's structure and tax, regulatory and other risks. Potential investors also should be aware that, if they decide to purchase an interest, they will have no role in the management of the Fund and will be required to rely on the expertise of the general partner and the investment manager in dealing with the foregoing (and other) risks on a day-to-day basis.

MONDRIAN INVESTMENT PARTNERS

Organization



Our Organization

September 30, 2018

MONDRIAN INVESTMENT PARTNERS

A Successful, Well-Managed Company

- Founded in 1990
- Over 25 years of stable, consistent leadership
- Approximately USD 55 billion under management

An Independent, Employee-Owned Company

- Equity ownership plan designed to attract, retain and motivate highly skilled people
- Mondrian is employee owned
- Approximately 80 employees are partners today, up from 60 in 2004

A Time-Tested Investment Philosophy and Process

- All products utilize an income-oriented value discipline
- Consistently applied since the company's founding in 1990
- In-depth global fundamental research

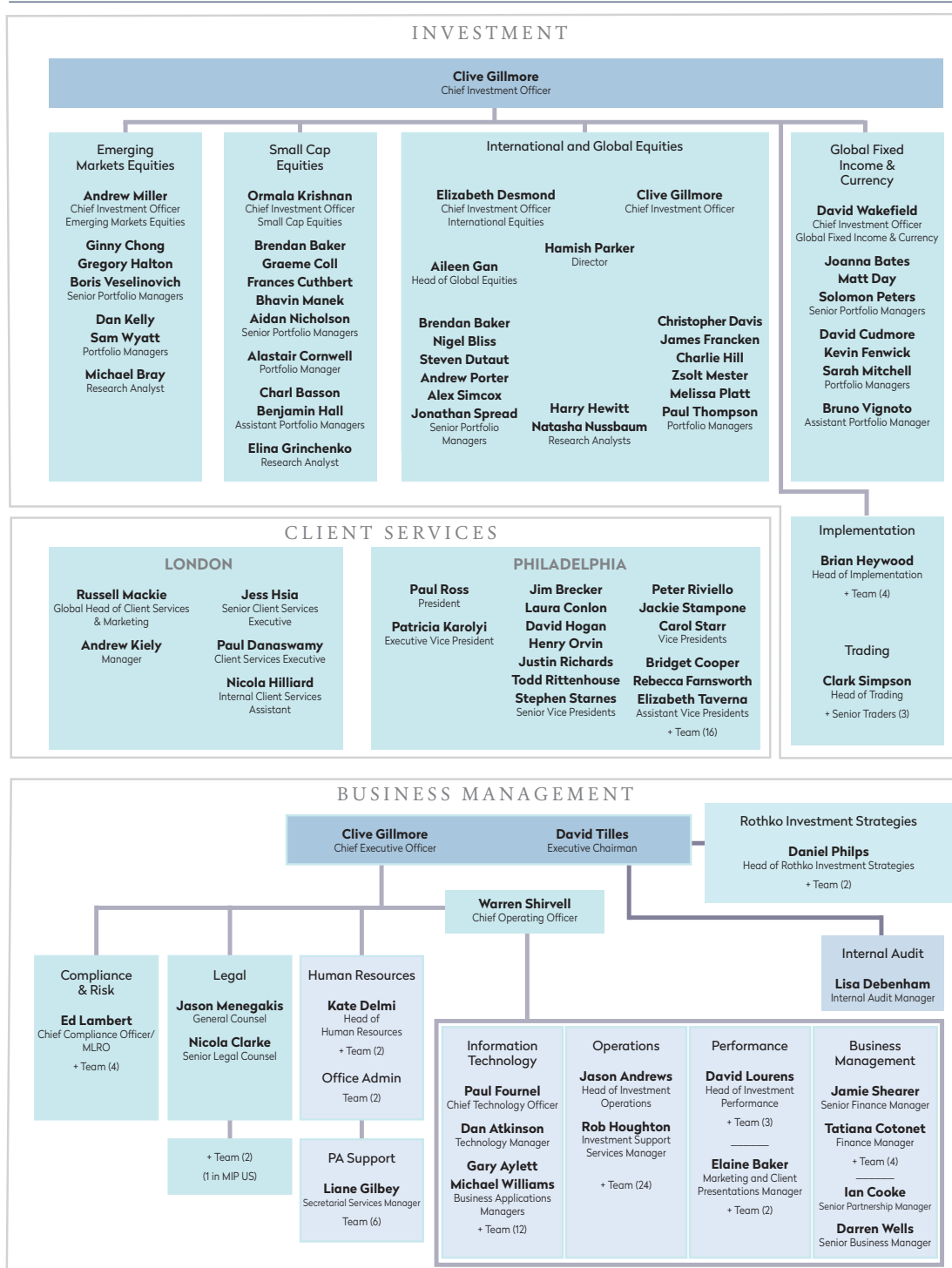
A Well-Resourced Team

- Highly experienced team of 55 investment professionals in London
- Low turnover of professional staff
- Strong culture of client service and support

Organization

October 12, 2018

MONDRIAN INVESTMENT PARTNERS



This chart is designed to indicate the staffing resources and management structure at Mondrian Investment Partners Limited and Mondrian Investment Partners (U.S.), Inc. The chart does not attempt to show all functions nor reporting and delegation lines, details of which are maintained in separate records. Please note some people may appear on this chart more than once, reflecting various responsibilities.

Representative Client List

North America

MONDRIAN INVESTMENT PARTNERS

5.1

Government and Labor

Alameda County Employees' Retirement Association
 Alaska Permanent Fund Corporation
 Baltimore County Employees' Retirement System
 California State Teachers' Retirement System (CalSTRS)
 Carpenters Trusts of Western Washington
 City of Baltimore Employees' Retirement System
 City of Hartford Municipal Employees' Retirement Fund
 City of Phoenix Employees' Retirement System
 Colorado Public Employees' Retirement Association
 Cook County Annuity & Benefit Fund
 El Paso Firemen & Policemen's Pension Fund
 ERFC (Fairfax County)
 Florida State Board of Administration
 Fresno County Employees' Retirement Association
 Georgia Division of Investment Services
 Howard County Government
 IATSE National Pension Fund
 Idaho Public Employee Retirement System
 Illinois Municipal Retirement Fund
 International Union of Painters and Allied Trades
 Iron Workers District Council of New England Pension Fund
 Kent County Employees Retirement System
 Los Angeles County Metropolitan Transportation Authority
 Louisiana State Employees' Retirement System
 Maryland Prepaid College Trust
 Massachusetts Pension Reserves Investment Management Board
 Mendocino County Employees Retirement Association
 Municipal Fire and Police Retirement System of Iowa
 National Grid Investment Management
 New York City Deferred Compensation Plan
 New York State Common Retirement Fund
 Oklahoma Law Enforcement Retirement System
 Oklahoma Police Pension & Retirement System
 Oklahoma Public Employees Retirement System
 Oklahoma State Regents for Higher Education
 Orange County Retirement System
 Parkland Health & Hospital System
 Parochial Employees' Retirement System of Louisiana
 Prince George's County Pension System
 Public Employees' Retirement System of Mississippi
 Sacramento County Employees' Retirement System
 San Bernardino County Employees' Retirement Association
 San Mateo County E.R.A.
 South Carolina Retirement Systems
 Southern California UFCW
 St. Louis County, Missouri
 State Universities Retirement System (SURS)
 Teachers' Retirement System of the State of Illinois
 Tennessee Consolidated Retirement System
 The North Central States Regional Council of Carpenters Pension Fund
 Vermont State Treasurer's Office
 Washington State Investment Board

Corporations

A.O. Smith Corporation
 American Hospital Association
 Amphenol Corporation
 Aon Hewitt Group Trust
 Archdiocese of Los Angeles
 Ascension Investment Management
 Ash Grove Cement Company
 Axel Johnson, Inc.
 Bank of America Corporation
 Blue Cross & Blue Shield of Massachusetts, Inc.
 Care New England
 Central Michigan University
 Children's Hospital of Los Angeles
 ConAgra Brands, Inc.
 Cooperative Banks Employees Retirement Association
 CSX Corporation, Inc.
 Dartmouth-Hitchcock Medical Center
 Edgewell Personal Care Company
 Eversource Energy
 Farmers Group, Inc.
 Henry Ford Health Systems
 Huntington Ingalls Industries, Inc.
 International Paper Company
 Kaiser Foundation Health Plan of Washington (KFHPW)
 Martin's Point Health Care, Inc.
 Merck & Co., Inc.
 Mercy Health
 Ministers and Missionaries Benefit Board
 National Grid Investment Management
 OhioHealth
 Orlando Health, Inc.
 Pfizer Inc.
 Renown Health
 Sappi Fine Paper North America
 Savings Banks Employees Retirement Association (SBERA)
 SECURA Insurance Companies
 Sisters of Mercy Health System
 Southern California Edison
 Southern Company
 Springpoint Senior Living, Inc.
 The Dow Chemical Company
 The Green-Wood Cemetery
 TI Group Automotive Systems
 Tufts Associated Health Maintenance Organization, Inc.
 University of Maine System
 University of Ottawa
 Valley Children's Hospital
 Verity Health System
 Verizon Investment Management Corp.
 Wal-Mart Stores, Inc.
 Wells Fargo & Company Cash Balance Plan
 Wespath Investment Management

This representative client list includes all separately managed accounts and investors in Mondrian's commingled vehicles not subject to confidentiality limitations, where the clients are based in the United States and Canada. It is therefore not a complete list of all Mondrian's clients. It is not known whether the listed clients approve or disapprove of Mondrian or the services provided.

Updated: September 2018

Representative Client List North America

MONDRIAN INVESTMENT PARTNERS

Endowments and Foundations

Archdiocese of Los Angeles
Augustana College
Baylor Oral Health Foundation
Boys Town
Central Michigan University
Community Foundation of Greater Des Moines
Donald B. & Dorothy L. Stabler Foundation
Furman University
General Conference Corporation of Seventh-day Adventists
George I. Alden Trust
Gonzaga University
Goucher College
Greater Worcester Community Foundation, Inc.
Henry Ford Health Systems
Indianapolis Symphony Orchestra
InFaith Community Foundation
Kemper & Ethel Marley Foundation
Lenoir-Rhyne University
Marin Community Foundation
Missouri Botanical Garden
Northwest Area Foundation
Richard King Mellon Foundation
Riverside Healthcare Foundation
Roswell Park Alliance Foundation
Rotary International
Savannah College of Art & Design, Inc.
Simpson College
Sunnyside Foundation, Inc.
Texas Tech University System
The Batchelor Foundation, Inc.
The Boston Foundation
The Butler Family Foundation
The Carle Foundation
The Community Foundation for Greater New Haven
The Samuel Roberts Noble Foundation, Inc.
University of Maine System
University of Ottawa
University of Vermont
UNLV Foundation
VNA Foundation
Washington State University Foundation
Wesleyan College
Western Illinois University
William Caspar Graustein Memorial Fund

Insurance

ALAS Investment Services Limited
Ascension Investment Management
CIT Group Inc.
Highmark Health
Nuclear Electric Insurance Limited

Sub-advisory

Lincoln Financial Group
Macquarie Investment Management
MD Financial Management Inc.
Mercer Global Investments Canada Limited
Mercer Investment Management, Inc.
Olive Street Investment Advisers, LLC
(an affiliate of Edward Jones)
Pavilion Advisory Group Ltd.
UBS Global Asset Management (Americas) Inc.

High Net Worth

Meristem, LLP
New Brookdale Partners, L.P.
Richard King Mellon Foundation
Sentinel Trust Company
Shapiro Family
SMT Investors, LLC

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Updated: September 2018

Business Profile

September 30, 2018

MONDRIAN INVESTMENT PARTNERS

5.1

Diverse Investment Products

Developed Markets Equity

- International Equity ex-US
- International Equity ESG ex-US
- Focused International Equity ex-US
- Global Equity

All Country World Equity

- All Country World Equity ex-US
- Focused All Country World Equity ex-US
- Global All Country World Equity

Emerging Markets Equity

- Emerging Markets Equity
- Focused Emerging Markets Equity
- Emerging Markets Wealth

Small Cap Equity

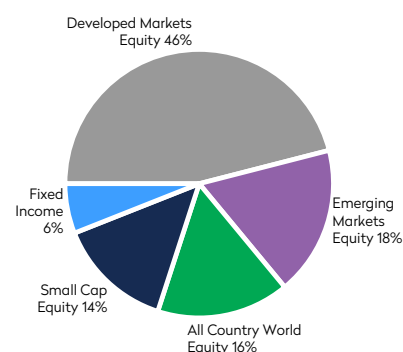
- International Small Cap Equity ex-US
- Emerging Markets Small Cap Equity
- US Small Cap Equity

Fixed Income

- Global Fixed Income (Sovereign and Aggregate)
- International Fixed Income ex-US
- Emerging Markets Debt (Local, Hard and Blended currency)
- Global Debt Opportunities
- Regional Fixed Income
- Global Inflation-Linked

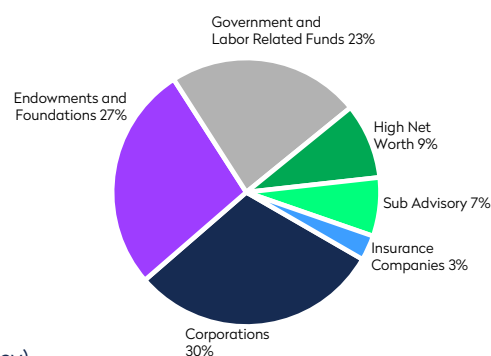
Type of Assets Managed

(Assets Under Management)



Type of Clients Served

(Number of Client Relationships)



A number of vehicles are available in each of the above product areas, including separate accounts, limited partnerships, registered mutual funds and UCITS. Please refer to additional information at the end of the book regarding available vehicles and minimum account sizes.

Emerging Markets Small Cap Team

October 12, 2018

MONDRIAN INVESTMENT PARTNERS



MONDRIAN INVESTMENT PARTNERS

5.1

Investment Philosophy

Investment Philosophy



Equity Investment Philosophy

MONDRIAN INVESTMENT PARTNERS

5.1

Investment Philosophy

Mondrian Investment Partners is a value-oriented defensive manager

We invest in stocks where rigorous dividend discount analysis isolates value in terms of the long-term flow of dividends. Dividend yield and future real growth play a central role in our decision making process and over time the dividend component is expected to be a meaningful portion of expected total return.

Potential Benefits

- An approach that focuses on providing a **rate of return** meaningfully **greater than** the client's domestic rate of **inflation**
- Client portfolios that seek to **preserve capital** during protracted global market declines
- Portfolio performance that has been **less volatile*** than the MSCI EM Small Cap Index and the performance of most other emerging small cap managers

Defensive Characteristics

Mondrian Emerging Markets Small Cap Equity Composite

Mondrian International Small Cap Equity Composite

September 30, 2018

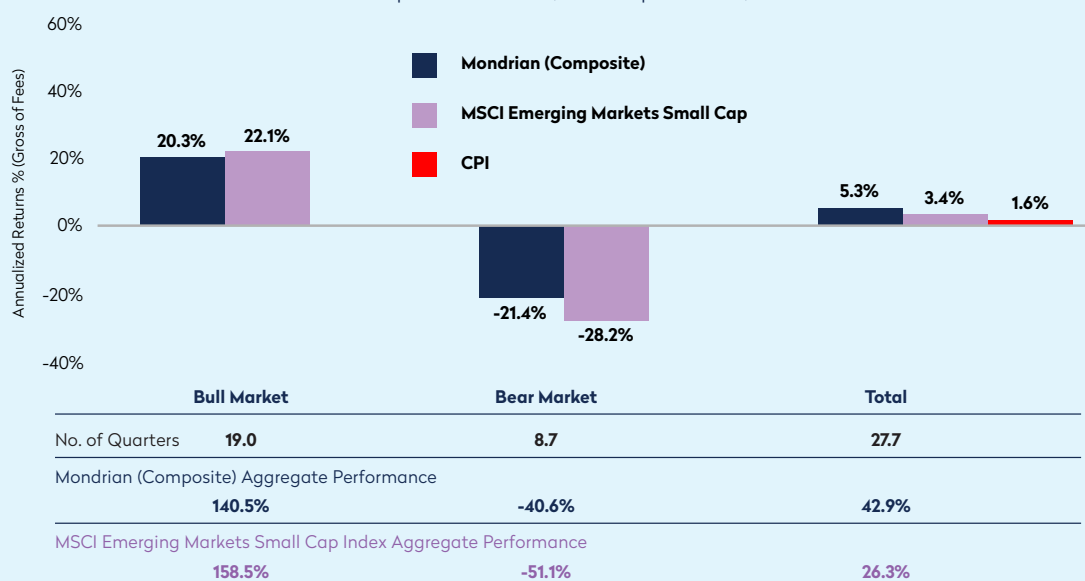
MONDRIAN INVESTMENT PARTNERS

5.1

Investment Philosophy

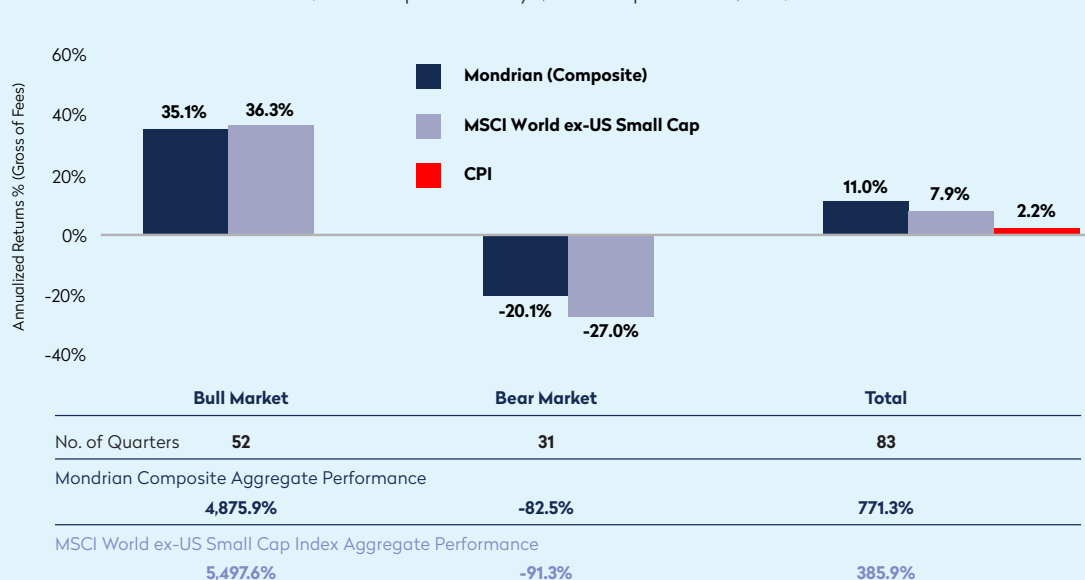
Emerging Markets Small Cap

(Since inception November 1, 2011 – September 30, 2018)



International Small Cap

(Since inception January 1, 1998 – September 30, 2018)



Source: Mondrian Investment Partners and MSCI

A Bull Market quarter is defined as one in which the benchmark showed a positive return, and a Bear Market quarter when the benchmark showed a negative return. Please review this Bull Bear in conjunction with the composite disclosure, which includes performance, in the appendix. The composite definition is provided on the composite disclosure page. A composite includes all discretionary accounts managed by Mondrian to the same investment strategy.

The returns presented on this page are gross of advisory fees and other expenses associated with managing an investment advisory account. Actual returns will be reduced by such fees and expenses. Please carefully review the disclosures and notes concerning performance calculation and GIPS compliance in the appendix. These provide more information concerning gross performance results including an illustration of the negative effect of advisory fees on performance. Past performance is not a guarantee of future results.

Standard Deviation

Mondrian Emerging Markets Small Cap Equity Composite

Mondrian International Small Cap Equity Composite

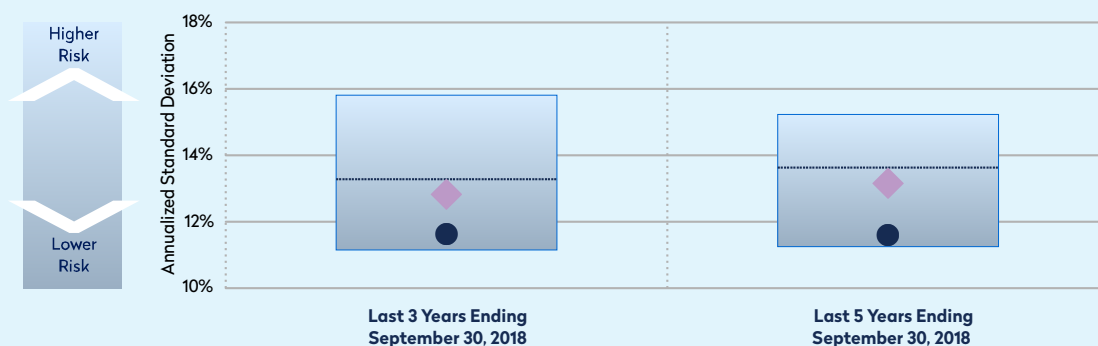
September 30, 2018

MONDRIAN INVESTMENT PARTNERS

5.1

Investment Philosophy

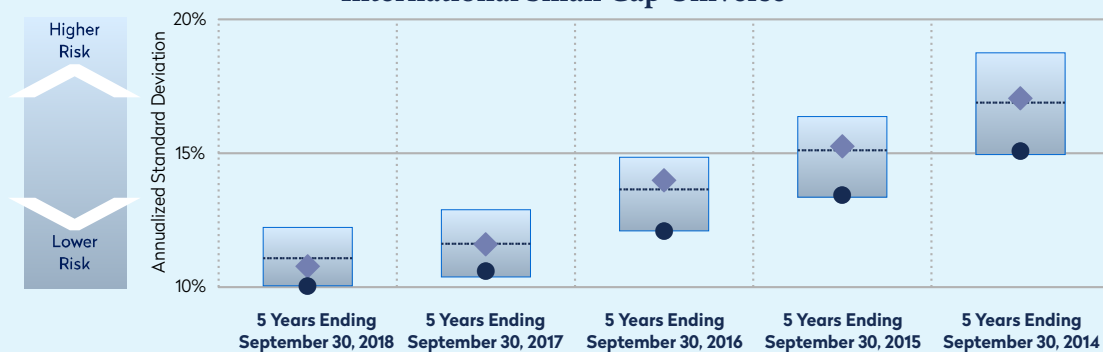
Emerging Markets Small Cap Universe



Annualized Standard Deviation:

	Last 3 Years Ending September 30, 2018	Last 5 Years Ending September 30, 2018
5th Percentile	11.2	11.3
Median	13.3	13.6
95th Percentile	15.8	15.2
Mondrian Composite ●	11.6	11.6
MSCI Emerging Markets Small Cap ◆	12.8	13.1
Member Count	28	22

International Small Cap Universe



Annualized Standard Deviation:

	5 Years Ending September 30, 2018	5 Years Ending September 30, 2017	5 Years Ending September 30, 2016	5 Years Ending September 30, 2015	5 Years Ending September 30, 2014
5th Percentile	10.1	10.4	12.1	13.4	15.0
Median	11.1	11.6	13.7	15.1	16.9
95th Percentile	12.2	12.9	14.9	16.4	18.8
Member Count	53	58	54	50	46
Mondrian Composite ●	10.0	10.6	12.1	13.4	15.1
MSCI World ex-US Small Cap ◆	10.8	11.6	14.0	15.2	17.1

Source: Mondrian Investment Partners and Recognized Financial and Statistical Reporting Service.

The standard deviation of returns is computed based on returns gross advisory fees and other expenses associated with managing an investment advisory account. Actual returns will be reduced by such fees and expenses. Please carefully review the disclosure in the appendix for more information concerning these gross performance results including an illustration of the negative effect of advisory fees on performance. Past performance is not a guarantee of future results. Supplemental information complements the Mondrian Emerging Markets Small Cap Composite and Mondrian International Small Cap Composite disclosures in the appendix.

Investment Process

MONDRIAN INVESTMENT PARTNERS

5.1

Investment Philosophy

Stocks, Markets and Currencies

- A **value-oriented dividend discount analysis** at both the individual security and market level isolates value across geographic and industrial borders in a unified manner
- A long-term oriented **purchasing power parity approach**, supplemented by shorter-term probability assessment is the cornerstone of on-going currency analysis
- Extensive **world-wide fundamental research** with the **emphasis on company visits** where material risk factors, including environmental, social and governance issues, are incorporated into **long-term qualitative and quantitative analysis**

MONDRIAN INVESTMENT PARTNERS

5.1

Implementation

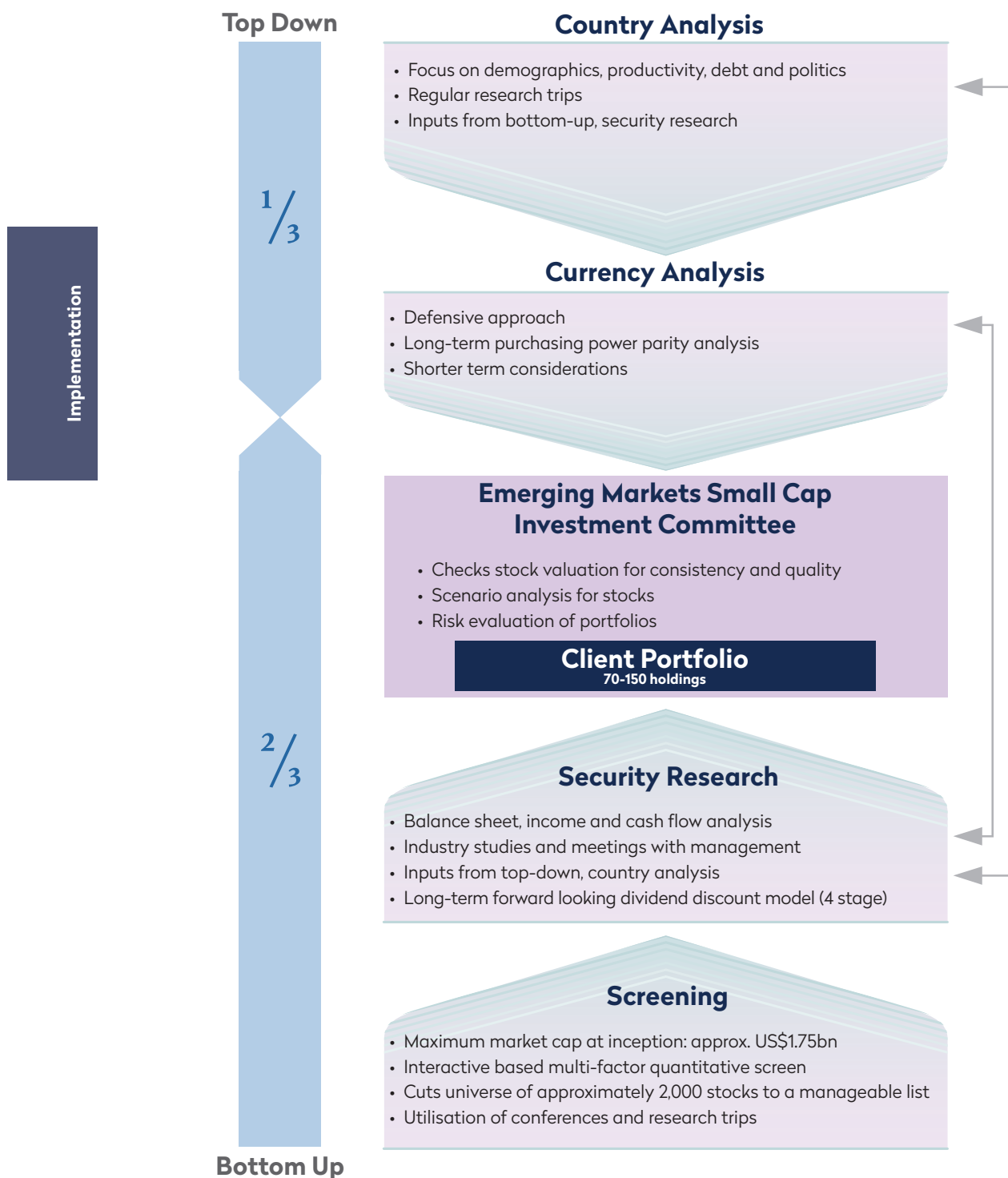
Implementation



Emerging Markets Small Cap Equity Framework for Decision Making

MONDRIAN INVESTMENT PARTNERS

5.1



Currency Analysis

A Purchasing Power Parity Approach

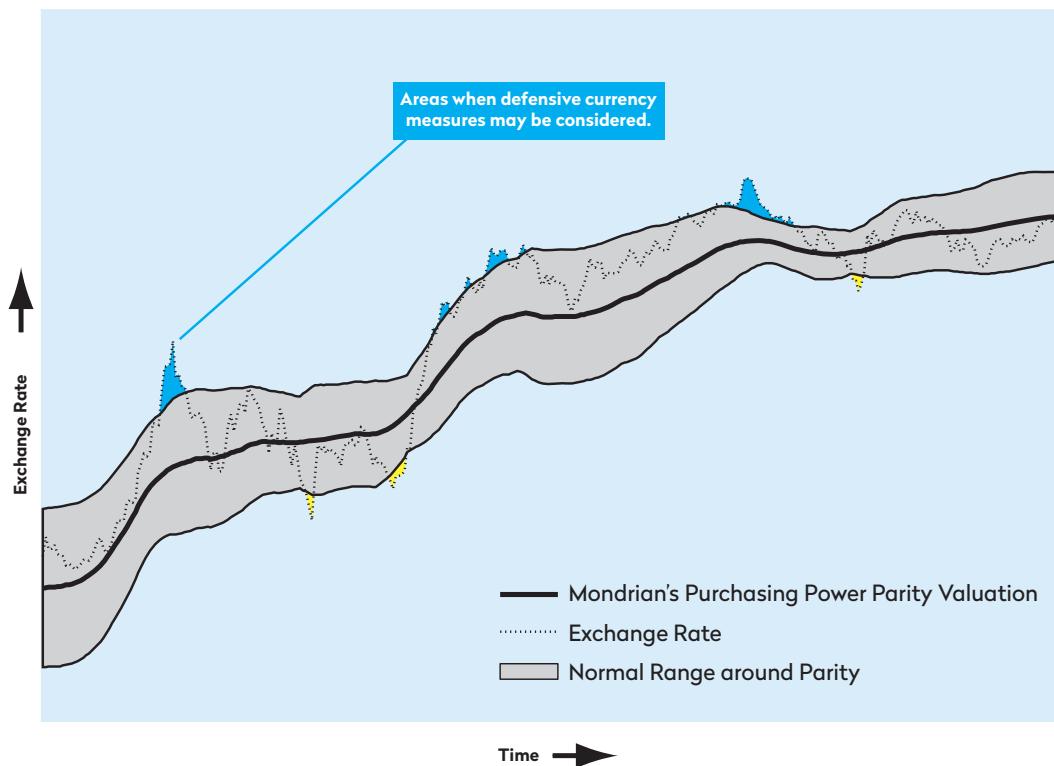
MONDRIAN INVESTMENT PARTNERS

5.1

- A long-term oriented purchasing power parity approach supplemented by shorter term probability assessment is the cornerstone of on-going currency analysis.

Mondrian's Currency Approach

A Defensive Strategy



Implementation

Source: Mondrian Investment Partners

Purchasing power parity (PPP) is a theory which states that exchange rates between currencies are in equilibrium when their purchasing power is the same in each of the two countries. In the chart above, the black solid line represents our calculation of the fair value of an exchange rate.

The dotted line is the actual exchange rate and the gray area represents our calculation of the normal trading range.

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The Importance of Currency

MONDRIAN INVESTMENT PARTNERS

5.1

Implementation

Hedging is for defensive purposes only



However...

- Costs can be prohibitive
- Weaknesses with the data

Therefore...

- Assess and monitor economic imbalances and political uncertainty
- Top down – **avoid market**
- Bottom up – **buy natural hedges**



Currency matters

helps to enhance defensive characteristics

Sell Discipline

MONDRIAN INVESTMENT PARTNERS

5.1

Positive Triggers	Negative Triggers
<ul style="list-style-type: none"> ● Price appreciation leading to overvaluation against a predetermined value level. 	<ul style="list-style-type: none"> ● A change in the financial/ business fundamentals which adversely affects ongoing appraisal of value.
<ul style="list-style-type: none"> ● More attractive alternatives. 	<ul style="list-style-type: none"> ● A change in the political/ regulatory environment which has implications for the investment's future prospects.
<ul style="list-style-type: none"> ● Market capitalization and size of holding significantly in excess of targeted ceiling. 	<ul style="list-style-type: none"> ● A change in corporate governance.

Implementation

MONDRIAN INVESTMENT PARTNERS

5.1

Global Equity Markets



Mondrian Equity Investment Backdrop

MONDRIAN INVESTMENT PARTNERS

5.1

Recent investment backdrop challenging for defensive value managers:

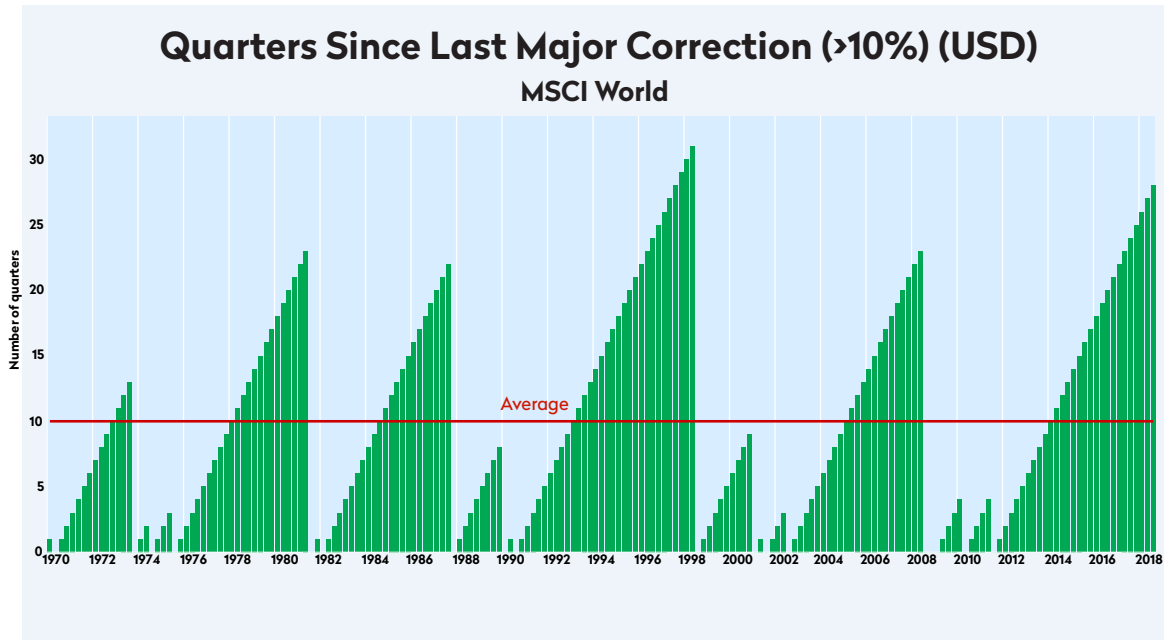
- **Quantitative Easing (QE)** artificially boosted equity markets
- **Growth** has **outperformed Value** significantly
- **Volatility** at **record low** levels

A Long Bull Market with No Major Corrections

September 30, 2018

MONDRIAN INVESTMENT PARTNERS

5.1



- Mondrian portfolios have typically shown significant **positive relative returns** in periods of **market correction** (when the index declines over 10% in a quarter)
- Last **major correction** was the period Q3 2011, when **Mondrian** portfolios showed **outperformance**
- **Lower risk approach** to investing has not shown its benefits yet

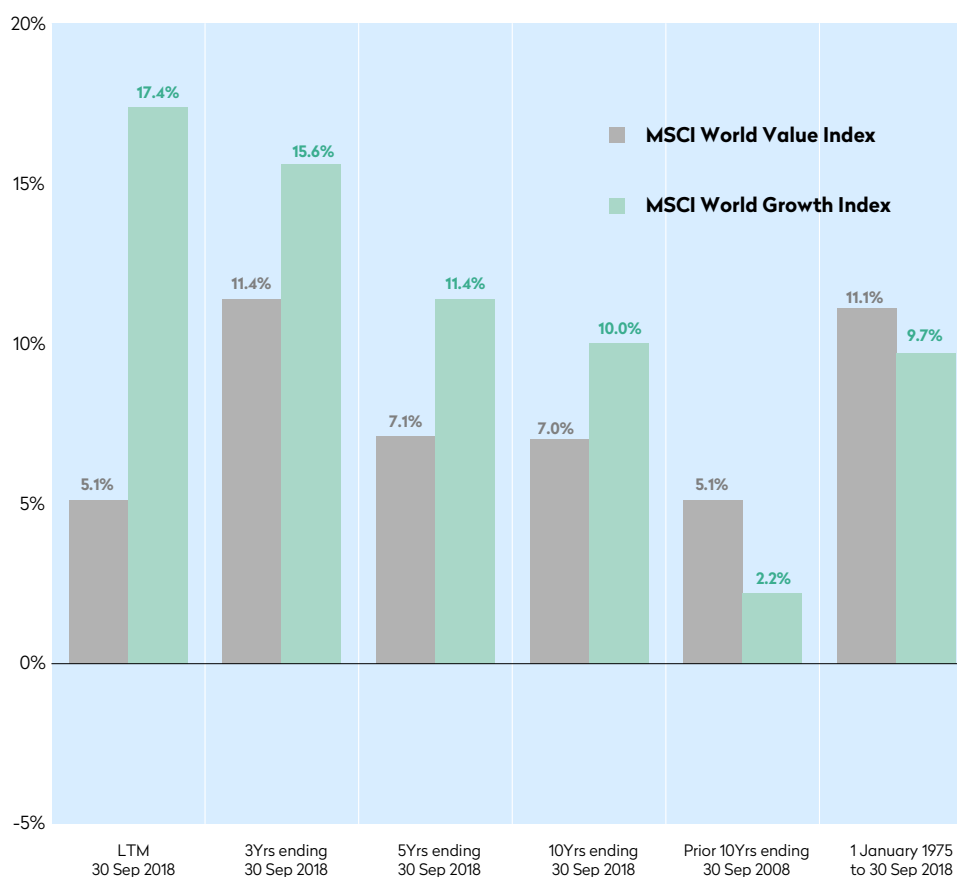
Global Equity Markets

QE Driving Divergence in Return between Growth and Value Investing

MONDRIAN INVESTMENT PARTNERS

5.1

Annualized Returns for MSCI World Value versus MSCI World Growth over Time to 30 September 2018 (USD)



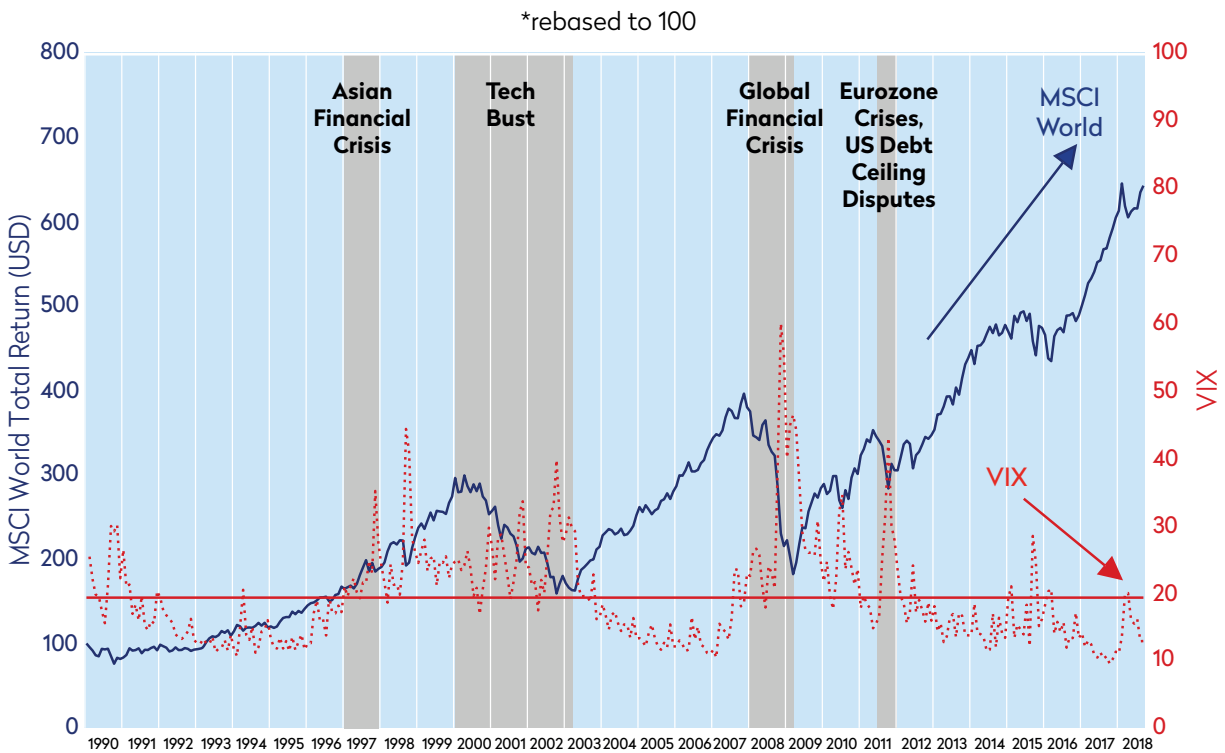
- Quantitative easing and low interest rates have led to many investors lowering their discount rate, and this has generally favoured growth stocks
- Over the **long-term** (1975-2017) and the 10 years prior to QE (1997-2007), **value investing outperforms growth** (in a more normalised monetary policy environment)
- Mondrian has **outperformed** the **value benchmark** over time

Global Equity Markets at Record High Whilst Market Volatility at Record Low

MONDRIAN INVESTMENT PARTNERS

5.1

CBOE Market Volatility Index (VIX) and MSCI World Total Return*
to September 30, 2018



Global Equity Markets

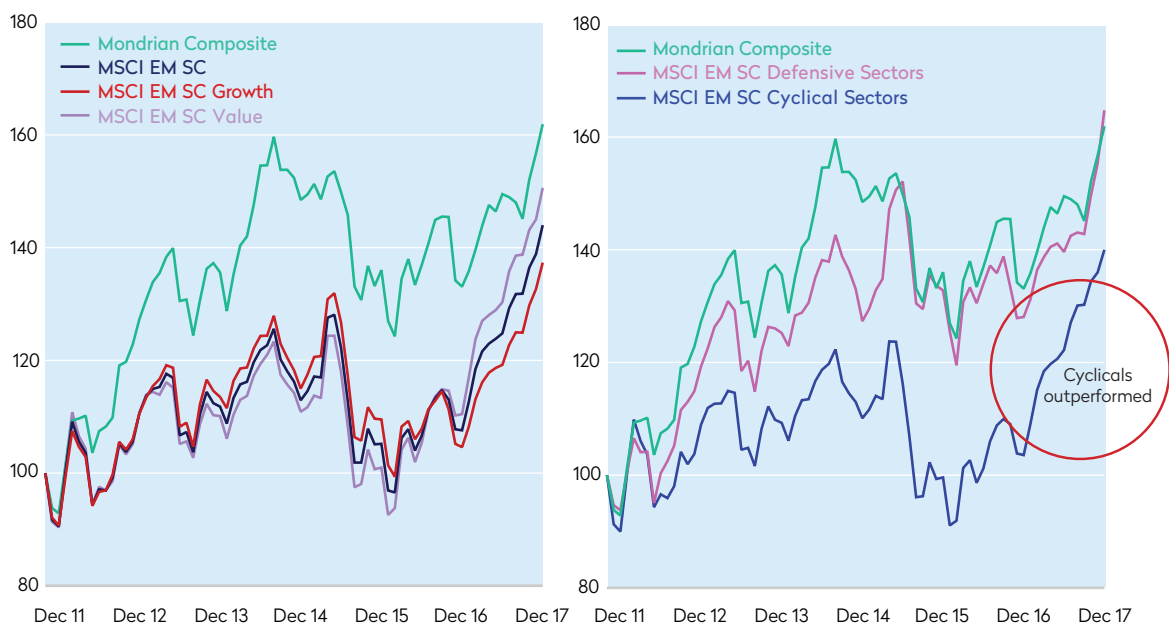
- Mondrian's portfolios exhibit strong **outperformance during** periods of **heightened equity market volatility**

Emerging Markets Small Cap

MONDRIAN INVESTMENT PARTNERS

5.1

Cumulative Returns (US\$) – Since Inception: November 2011 = 100



- Within the EM Small Cap opportunity set, there has not been a significant dispersion between the style benchmarks.
- However, **optimism on reflation since 4Q 2016**, coupled with retracement of the USD and bond yields, has **led to robust performance in Cyclical Value** stocks.
- This has led to an anomaly with Value outperforming Growth. However, there has been dichotomy in performance within Value led by Cyclical Value (financials and materials), whilst Defensive Value (healthcare and consumer staples) has lagged.
- Our style and strategy have been out of favour and not able to keep up with the strong markets driven by Cyclical Value stocks since 4Q 2016.

Source: Mondrian Investment Partners and MSCI

Defensive Sectors include: Consumer Staples, Energy, Health Care, Telecommunications Services, Utilities

Cyclical Sectors include: Consumer Discretionary, Financials, Industrials, Information Technology, Materials, Real Estate

Sector returns are derived by using beginning months weights and sector monthly performance. Real Estate has been carved out from the Financials sector for all periods.

The composite returns presented on this page are presented gross of advisory fees and other expenses associated with managing an investment advisory account. Actual returns will be reduced by such fees and expenses. Please carefully review the disclosure and notes concerning performance calculation and GIPS compliance in the appendix. These provide more information concerning gross performance results including an illustration of the negative effect of advisory fees on performance. Past performance is not a guarantee of future results. Supplemental information complements the Mondrian Emerging Small Cap Composite disclosure in the appendix.

Emerging Markets Small Cap

Recent Challenges and Actions

MONDRIAN INVESTMENT PARTNERS

5.1

Challenges:

Distortions in Equity Markets

- Accommodative monetary policy (low policy rates and QE)
- Expectations of a strong recovery in developed markets
- Abundant liquidity

Style out of Favor

- Anomaly in style:

Cyclical Value > Defensive Value
 (Financials/Materials) (Healthcare/Consumer staples)

- Portfolio defensively positioned with significant active exposure to Consumer Staples and Healthcare
- Lack of exposure to Commodity linked Cyclical, Technology Hardware and Financials sectors

Strategies Penalized by Short-term Factors

- Exposure in Brazil, Taiwan, Korea, Indonesia, Mexico, China and India led by consumer and healthcare stocks

Actions:

- Continue to remain defensively positioned to withstand gradual normalization in monetary policy by major central banks
- Disciplined value oriented approach focusing on target real rate of returns with downside protection
- Continue to focus on long-term fundamentals: well capitalized companies that enjoy structural growth with stable and strong cash-flows to support growth and dividends

Global Equity Markets

Outlook

MONDRIAN INVESTMENT PARTNERS

5.1

- Debt overhang, slow progress in deleveraging and a lack of structural reforms in developed markets leading to lower trend growth, modest inflation and lower policy rates relative to history.
- Emerging markets have been recipients of global liquidity flows in the search for yield but have also seen severe downward market swings during periods of heightened risk aversion.
- With total indebtedness lower than that of developed economies, and emerging market governments/policymakers apparent focus on pursuing domestic sources of growth with the adoption of structural and fiscal reforms, relative macroeconomic growth in emerging markets look favorable.
- The shift towards a gradual tightening stance by major central banks will likely alter risk appetite bringing a normalization to markets.
- Markets are unlikely to observe a significant derating but periods of uncertainty will continue.
- Whilst the magnitude of volatility has been kept subdued due to abundant liquidity, market fluctuations are likely with uncertainty and the presence of economic and social tail risks.
- In an environment of likely slow rising markets with limited upside, investing in inefficient asset classes such as international developed small cap and emerging small cap offer alpha opportunities.
- These present opportunities for a manager like Mondrian which adopts a disciplined investment approach focused on targeting both real rate of returns and downside protection.

MONDRIAN INVESTMENT PARTNERS

5.1

Performance



Performance

Performance

University of Maine System
October 31, 2018

MONDRIAN EMERGING MARKETS SMALL CAP EQUITY FUND, L.P.

	Fund	MSCI EM Small Cap	Relative	US CPI
Jul. 1 - Sep. 30, 2014	-0.4%	-1.4%	1.0%	-0.1%
Quarter 4, 2014	-3.4%	-6.0%	2.7%	-1.4%
Jul. 1 - Dec. 31, 2014	-3.8%	-7.3%	3.8%	-1.5%
Quarter 1, 2015	0.1%	3.6%	-3.4%	0.6%
Quarter 2, 2015	0.8%	4.5%	-3.5%	1.0%
Quarter 3, 2015	-12.8%	-16.7%	4.6%	-0.3%
Quarter 4, 2015	4.0%	3.3%	0.7%	-0.5%
Year 2015	-8.4%	-6.8%	-1.7%	0.7%
Quarter 1, 2016	-1.2%	1.0%	-2.1%	0.6%
Quarter 2, 2016	1.9%	0.4%	1.5%	1.1%
Quarter 3, 2016	6.3%	7.6%	-1.2%	0.3%
Quarter 4, 2016	-8.6%	-6.2%	-2.5%	0.0%
Year 2016	-2.1%	2.3%	-4.3%	2.0%
January	2.0%	4.7%	-2.5%	0.6%
February	2.8%	5.2%	-2.3%	0.3%
March	3.1%	2.6%	0.4%	0.1%
Quarter 1, 2017	8.1%	13.0%	-4.3%	1.0%
April	2.6%	1.1%	1.4%	0.3%
May	-0.8%	0.7%	-1.5%	0.1%
June	2.1%	0.8%	1.3%	0.1%
Quarter 2, 2017	3.9%	2.6%	1.3%	0.4%
July	-0.4%	3.6%	-3.8%	0.0%
August	-0.6%	2.0%	-2.5%	0.3%
September	-2.0%	0.0%	-2.0%	0.5%
Quarter 3, 2017	-3.0%	5.6%	-8.1%	0.8%
October	4.8%	3.5%	1.3%	-0.1%
November	3.1%	1.8%	1.3%	0.0%
December	3.3%	3.7%	-0.4%	-0.1%
Quarter 4, 2017	11.6%	9.2%	2.2%	-0.1%
Year 2017	21.7%	33.8%	-9.0%	2.1%
January	3.0%	5.8%	-2.6%	0.5%
February	-3.7%	-4.1%	0.4%	0.5%
March	0.6%	-1.3%	1.9%	0.2%
Quarter 1, 2018	-0.2%	0.2%	-0.4%	1.2%
April	0.8%	-0.1%	0.9%	0.4%
May	-2.2%	-2.1%	-0.2%	0.4%
June	-3.8%	-6.6%	2.9%	0.2%
Quarter 2, 2018	-5.2%	-8.6%	3.7%	1.0%
July	-1.6%	1.2%	-2.7%	0.0%
August	-1.3%	-2.1%	0.9%	0.1%
September	-4.1%	-3.3%	-0.8%	N/A
Quarter 3, 2018	-6.8%	-4.2%	-2.7%	N/A
October	-7.8%	-10.5%	3.0%	N/A
Year to Date	-18.8%	-21.5%	3.6%	2.3%
Since Inception July 1, 2014 (cumulative)	-14.7%	-7.3%	-8.0%	5.8%
Since Inception July 1, 2014 (annualized)	-3.6%	-1.7%	-1.9%	1.3%

Market Value

University of Maine System - Managed Investment Pool: USD 9,513,129

University of Maine - Pension: USD 727,703

Source: Mondrian Investment Partners and MSCI

Performance is net of Transaction Expenses and Administrative Expenses but gross of Contribution Charges, Withdrawal Charges and Management Fees (each as described in the Confidential Information Memorandum). Contribution Charges and Withdrawal Charges are automatically deducted from subscription payments and redemption proceeds. Management Fees are paid directly by the participants. Participant returns will be reduced by Contribution Charges, Withdrawal Charges and Management Fees paid. Please carefully review the disclosure at the back of this book for more information concerning these gross performance results including an illustration of the negative effect of fees on performance. Past performance is not a guarantee of future results.

Emerging Markets Small Cap Equity Composite Performance

October 31, 2018

MONDRIAN INVESTMENT PARTNERS

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	Composite	MSCI EM Small Cap	Relative	US CPI
Nov. 1 - Dec. 31, 2011	-7.2%	-9.5%	2.6%	-0.3%
Quarter 1, 2012	18.1%	16.6%	1.3%	1.6%
Quarter 2, 2012	-2.0%	-8.0%	6.5%	0.0%
Quarter 3, 2012	10.8%	8.4%	2.2%	0.8%
Quarter 4, 2012	6.9%	5.1%	1.7%	-0.8%
Year 2012	37.1%	22.2%	12.2%	1.7%
Quarter 1, 2013	6.4%	4.2%	2.1%	1.4%
Quarter 2, 2013	-3.7%	-7.5%	4.1%	0.3%
Quarter 3, 2013	0.0%	3.5%	-3.3%	0.3%
Quarter 4, 2013	3.8%	1.3%	2.5%	-0.5%
Year 2013	6.5%	1.0%	5.4%	1.5%
Quarter 1, 2014	3.5%	3.5%	0.0%	1.4%
Quarter 2, 2014	10.1%	5.3%	4.6%	0.8%
Quarter 3, 2014	-0.5%	-1.4%	0.9%	-0.1%
Quarter 4, 2014	-3.5%	-6.0%	2.7%	-1.4%
Year 2014	9.5%	1.0%	8.4%	0.7%
Quarter 1, 2015	0.1%	3.6%	-3.4%	0.6%
Quarter 2, 2015	0.8%	4.5%	-3.5%	1.0%
Quarter 3, 2015	-12.8%	-16.7%	4.7%	-0.3%
Quarter 4, 2015	4.1%	3.3%	0.8%	-0.5%
Year 2015	-8.4%	-6.8%	-1.7%	0.7%
Quarter 1, 2016	-1.1%	1.0%	-2.1%	0.6%
Quarter 2, 2016	1.8%	0.4%	1.4%	1.1%
Quarter 3, 2016	6.3%	7.6%	-1.2%	0.3%
Quarter 4, 2016	-8.5%	-6.2%	-2.5%	0.0%
Year 2016	-2.2%	2.3%	-4.3%	2.0%
January	2.0%	4.7%	-2.5%	0.6%
February	2.8%	5.2%	-2.3%	0.3%
March	3.1%	2.6%	0.4%	0.1%
Quarter 1, 2017	8.1%	13.0%	-4.3%	1.0%
April	2.5%	1.1%	1.4%	0.3%
May	-0.8%	0.7%	-1.5%	0.1%
June	2.1%	0.8%	1.3%	0.1%
Quarter 2, 2017	3.9%	2.6%	1.2%	0.4%
July	-0.4%	3.6%	-3.8%	0.0%
August	-0.6%	2.0%	-2.5%	0.3%
September	-2.0%	0.0%	-2.0%	0.5%
Quarter 3, 2017	-2.9%	5.6%	-8.1%	0.8%
October	4.8%	3.5%	1.2%	-0.1%
November	3.1%	1.8%	1.3%	0.0%
December	3.3%	3.7%	-0.4%	-0.1%
Quarter 4, 2017	11.6%	9.2%	2.1%	-0.1%
Year 2017	21.7%	33.8%	-9.1%	2.1%
January	3.1%	5.8%	-2.6%	0.5%
February	-3.7%	-4.1%	0.4%	0.5%
March	0.6%	-1.3%	1.9%	0.2%
Quarter 1, 2018	-0.2%	0.2%	-0.4%	1.2%
April	0.8%	-0.1%	0.9%	0.4%
May	-2.2%	-2.1%	-0.2%	0.4%
June	-3.8%	-6.6%	3.0%	0.2%
Quarter 2, 2018	-5.2%	-8.6%	3.7%	1.0%
July	-1.5%	1.2%	-2.7%	0.0%
August	-1.2%	-2.1%	0.9%	0.1%
September	-4.1%	-3.3%	-0.8%	N/A
Quarter 3, 2018	-6.7%	-4.2%	-2.6%	N/A
October	-7.8%	-10.5%	3.0%	N/A
Year to Date	-18.7%	-21.5%	3.7%	2.3%
1 Year	-13.4%	-17.2%	4.6%	2.2%
3 Years (annualized)	-1.3%	1.5%	-2.8%	2.0%
5 Years (annualized)	-0.7%	-0.3%	-0.4%	1.5%
7 Years (annualized)	4.0%	1.8%	2.2%	1.5%
Composite Inception Nov. 1, 2011 (cumulative)	31.7%	13.0%	16.6%	11.4%
Composite Inception Nov. 1, 2011 (annualized)	4.0%	1.8%	2.2%	1.5%

Source: Mondrian Investment Partners and MSCI

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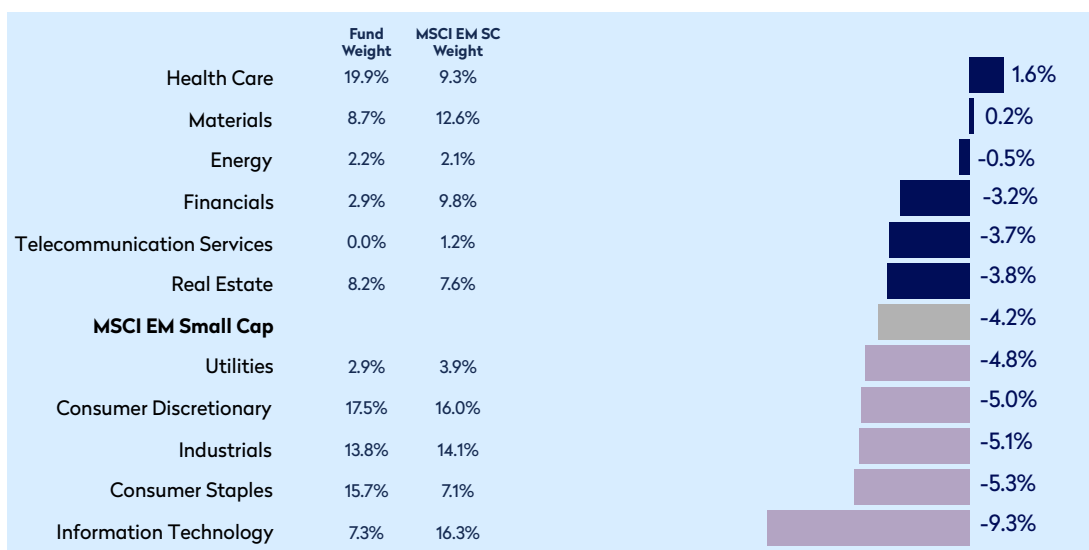
Benchmark Sector Returns

MSCI Emerging Markets Small Cap

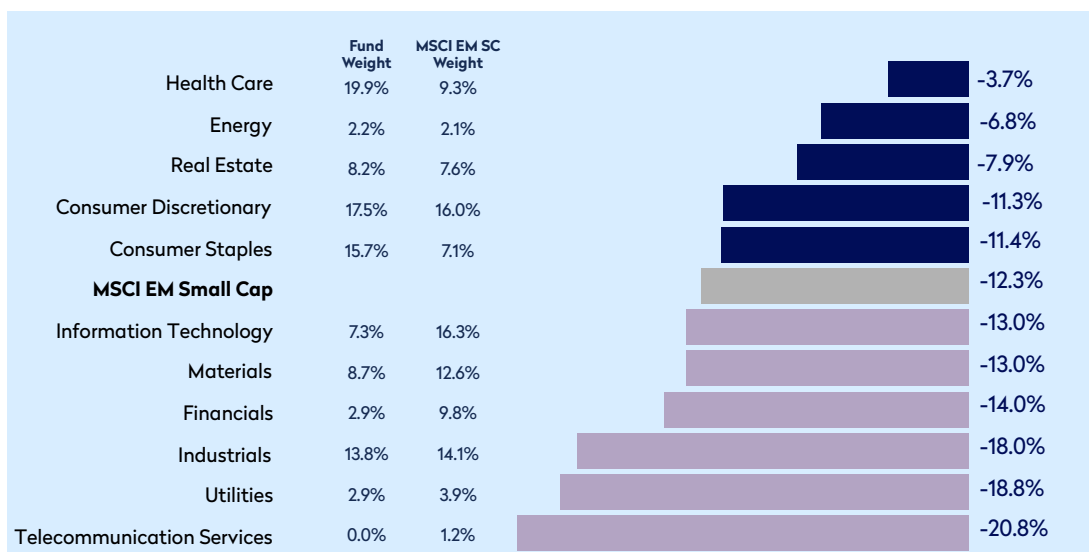
MONDRIAN INVESTMENT PARTNERS

5.1

Quarter 3, 2018



Year to Date to September 30, 2018



Performance

Equity Market Returns

September 30, 2018

MONDRIAN INVESTMENT PARTNERS

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	Quarter 3, 2018			Year to Date to September 30, 2018		
	Local Market Return %	Currency Change vs. USD %	USD Return %	Local Market Return %	Currency Change vs. USD %	USD Return %
EM Asia SC	-3.6	-1.1	-4.7	-7.2	-4.3	-11.2
China	-10.4	0.2	-10.2	-9.3	-0.1	-9.4
Korea	0.9	0.5	1.4	-2.1	-3.5	-5.5
Taiwan	-4.8	-0.1	-4.9	-3.4	-2.5	-5.9
India	-8.2	-5.5	-13.2	-21.0	-11.9	-30.4
Indonesia	-5.4	-3.8	-9.0	-7.7	-9.0	-15.9
Malaysia	2.5	-2.4	0.0	-6.1	-2.2	-8.2
Philippines	-5.3	-1.2	-6.5	-19.0	-7.6	-25.1
Thailand	18.1	2.4	20.9	-3.5	0.8	-2.7
EM EMEA SC	-1.6	-4.0	-5.6	-9.3	-11.6	-19.8
Czech Republic	-11.4	0.4	-11.1	-16.1	-4.2	-19.6
Egypt	-16.8	-0.2	-16.9	-8.6	-0.8	-9.3
Greece	0.7	-0.5	0.2	-1.4	-3.3	-4.7
Hungary	-6.1	1.2	-4.9	-13.0	-7.2	-19.2
Poland	-4.1	1.6	-2.6	-21.4	-5.7	-25.9
Qatar	2.2	0.0	2.2	5.3	0.0	5.3
Russia	-6.3	-3.1	-9.3	-10.9	-8.5	-18.5
South Africa	0.8	-3.1	-2.3	-9.0	-12.5	-20.4
Turkey	1.5	-23.7	-22.6	-3.1	-36.9	-38.9
United Arab Emirates	-3.5	0.0	-3.5	-13.9	0.0	-14.0
EM Latin America SC	1.6	-0.4	1.1	-4.9	-8.8	-13.3
Brazil	-0.3	-3.7	-3.9	-8.0	-16.9	-23.6
Chile	2.0	-1.3	0.7	-9.4	-6.8	-15.5
Colombia	-15.7	-1.1	-16.6	-25.9	0.5	-25.5
Mexico	6.4	5.1	11.9	7.1	4.6	12.1
Emerging Markets SC	-2.9	-1.4	-4.2	-7.1	-5.6	-12.3

Performance

Performance Summary

Quarter 3, 2018

MONDRIAN EMERGING MARKETS SMALL CAP EQUITY FUND, L.P.

Performance Attribution %			
Currency Contribution	Market Contribution	Stock Contribution	Return Relative to Benchmark*
-0.3	-1.7	-0.7	-2.7

*Benchmark: MSCI Emerging Markets Small Cap

POSITIVE

NEGATIVE

Stock Contribution

- **China/Hong Kong**
Microport
- **Czech Republic**
Moneta Bank
- **Malaysia**
QL Resources
- **Mexico**
Vesta
- **Thailand**
Bangkok Chain Hospital

- **China/Hong Kong**
CPMC
Fu Shou Yuan
- **Indonesia**
Siloam Hospitals
- **Philippines**
Concepcion
- **Taiwan**
Airtac

Currency Contribution

- Underweight Turkish lira
- Overweight Mexican peso
- Overweight Indian rupee
- Underweight Korean won

Market Contribution

- Underweight Taiwan
- Overweight Mexico
- Overweight India
- Underweight Korea

Source: Mondrian Investment Partners and MSCI

Because attribution information is calculated using Mondrian's accounting system data and not official Net Asset Value data of the Fund, timing of the accounting of Administrative Expenses and pricing for securities may differ from official Net Asset Value data. Performance provided is net of Transaction Expenses and Administrative Expenses but gross of Contribution Charges, Withdrawal Charges and Management Fees (each as described in the Confidential Information Memorandum). Contribution and Withdrawal Charges are automatically deducted from subscription payments and redemption proceeds. Management Fees are paid directly by the participants. Participant returns will be reduced by Contribution Charges, Withdrawal Charges and Management Fees paid. Please carefully review the disclosure for more information concerning these gross performance results including an illustration of the negative effect of fees on performance. Past performance is not a guarantee of future results.

Performance Summary

Year to Date to September 30, 2018

MONDRIAN EMERGING MARKETS SMALL CAP EQUITY FUND, L.P.

Performance Attribution %			
Currency Contribution	Market Contribution	Stock Contribution	Return Relative to Benchmark*
+0.1	-4.2	+4.9	+0.5

*Benchmark: MSCI Emerging Markets Small Cap

POSITIVE

NEGATIVE

Stock Contribution

- | | |
|--|--|
| <ul style="list-style-type: none"> ● Korea
Douzone Bizon ● Mexico
Vesta ● Malaysia
Dialog Group
QL Resources ● Saudi Arabia
Mouwasat | <ul style="list-style-type: none"> ● China/Hong Kong
CPMC ● India
Symphony ● Indonesia
Siloam Hospitals ● Philippines
Concepcion ● Taiwan
Airtac |
|--|--|

Currency Contribution

- | | |
|--|---|
| <ul style="list-style-type: none"> ● Underweight Turkish lira ● Underweight Brazilian real | <ul style="list-style-type: none"> ● Overweight Indian rupee ● Underweight Taiwanese dollar |
|--|---|

Market Contribution

- | | |
|---|--|
| <ul style="list-style-type: none"> ● Overweight Mexico ● Exposure to Saudi Arabia | <ul style="list-style-type: none"> ● Overweight India ● Overweight China/Hong Kong |
|---|--|

Source: Mondrian Investment Partners and MSCI

Because attribution information is calculated using Mondrian's accounting system data and not official Net Asset Value data of the Fund, timing of the accounting of Administrative Expenses and pricing for securities may differ from official Net Asset Value data. Performance provided is net of Transaction Expenses and Administrative Expenses but gross of Contribution Charges, Withdrawal Charges and Management Fees (each as described in the Confidential Information Memorandum). Contribution and Withdrawal Charges are automatically deducted from subscription payments and redemption proceeds. Management Fees are paid directly by the participants. Participant returns will be reduced by Contribution Charges, Withdrawal Charges and Management Fees paid. Please carefully review the disclosure for more information concerning these gross performance results including an illustration of the negative effect of fees on performance. Past performance is not a guarantee of future results.

Performance Summary

12 Months to September 30, 2018

MONDRIAN EMERGING MARKETS SMALL CAP EQUITY FUND, L.P.

Performance Attribution %			
Currency Contribution	Market Contribution	Stock Contribution	Return Relative to Benchmark*
-0.6	-5.2	+9.1	+2.7

*Benchmark: MSCI Emerging Markets Small Cap

POSITIVE

NEGATIVE

Stock Contribution

- **China/Hong Kong**
SSY Group
- **India**
Page Industries
- **Korea**
Douzone Bizon
- **Malaysia**
Hartalega
QL Resources
- **Brazil**
Biotoscana
- **Philippines**
Concepcion
- **Indonesia**
AKR Corporindo
Siloam Hospitals
- **Taiwan**
Airtac

Currency Contribution

- Underweight Turkish lira
- Underweight Brazilian real
- Underweight Korean won
- Overweight Indian rupee

Market Contribution

- Exposure to Saudi Arabia
- Underweight Russia
- Underweight Korea
- Overweight Peru

Source: Mondrian Investment Partners and MSCI

Because attribution information is calculated using Mondrian's accounting system data and not official Net Asset Value data of the Fund, timing of the accounting of Administrative Expenses and pricing for securities may differ from official Net Asset Value data. Performance provided is net of Transaction Expenses and Administrative Expenses but gross of Contribution Charges, Withdrawal Charges and Management Fees (each as described in the Confidential Information Memorandum). Contribution and Withdrawal Charges are automatically deducted from subscription payments and redemption proceeds. Management Fees are paid directly by the participants. Participant returns will be reduced by Contribution Charges, Withdrawal Charges and Management Fees paid. Please carefully review the disclosure for more information concerning these gross performance results including an illustration of the negative effect of fees on performance. Past performance is not a guarantee of future results.

MONDRIAN INVESTMENT PARTNERS

5.1

Portfolio



Portfolio

Country Allocation

September 30, 2018

MONDRIAN EMERGING MARKETS SMALL CAP EQUITY FUND, L.P.

5.1

	1	2	3	4
	Min/Max Allocation %	Portfolio Allocation %	MSCI EM Small Cap %	Over/Under Weight %
Asia		77.1	78.7	-1.7
North Asia		32.0	53.3	-21.3
China/Hong Kong	0 – 40	18.8	12.9	6.0
Korea	0 – 30	6.2	20.5	-14.3
Taiwan	0 – 40	6.9	19.9	-12.9
South Asia		45.1	25.5	19.6
India	0 – 40	24.6	13.7	10.9
Indonesia	0 – 20	7.1	2.2	4.9
Malaysia	0 – 20	6.3	3.5	2.8
Philippines	0 – 20	4.0	0.9	3.1
Thailand	0 – 20	3.1	4.4	-1.3
Others	0 – 20	–	0.7	-0.7
Europe, Middle East & Africa		11.5	10.8	0.7
Poland	0 – 20	2.9	1.0	1.9
Russia	0 – 20	–	0.9	-0.9
South Africa	0 – 30	1.5	5.2	-3.6
Turkey	0 – 20	–	1.0	-1.0
Others	0 – 20	7.1	2.8	4.3
Latin America		11.0	10.4	0.6
Brazil	0 – 30	2.2	4.9	-2.7
Mexico	0 – 20	6.5	3.5	3.0
Peru	0 – 20	2.3	0.1	2.2
Others	0 – 20	–	1.9	-1.9

- A minimum/maximum country allocation policy seeks to allow broad flexibility while guarding against over or under-concentration relative to the MSCI EM Small Cap Index. These minimums and maximums represent Mondrian's current internal policy and can be changed at any time. The governing documents for the Fund do not contain minimum or maximum allocations.
- Frontier markets are included in Mondrian's opportunity set.

Portfolio

September 30, 2018

MONDRIAN EMERGING MARKETS SMALL CAP EQUITY FUND, L.P.

5.1

	Industry	Fund	Holdings	Index
ASIA		77.1		78.7
CHINA/HONG KONG		18.8		12.9
Best Pacific	Textiles Apparel & Luxury Goods	0.6		
China Everbright Water	Water Utilities	1.2		
CPMC	Containers & Packaging	0.9		
CT Environmental	Water Utilities	0.8		
Dynagreen Environmental	Commercial Services & Supplies	0.8		
Fu Shou Yuan	Diversified Consumer Services	1.8		
GreentownService	Commercial Services & Supplies	1.4		
Hand Enterprise Solutions	IT Services	0.9		
Microport	Health Care Equipment & Supplies	1.8		
Nexteer Automotive	Auto Components	0.7		
Sinopec Kantons	Oil Gas & Consumable Fuels	1.2		
Sinsoft Tech	Software	1.5		
SITC	Marine	1.1		
SSY Group	Pharmaceuticals	1.3		
Tong Ren Tang	Pharmaceuticals	1.3		
Travelsky	IT Services	0.8		
Yestar Healthcare	Health Care Equipment & Supplies	1.1		
INDIA		24.6		13.7
Aarti Industries	Chemicals	0.7		
Ajanta Pharma	Pharmaceuticals	0.9		
Amara Raja Batteries	Electrical Equipment	0.4		
Apollo Hospital	Health Care Providers & Services	1.3		
Ascendas India Trust	Real Estate Management & Development	1.1		
Berger Paints	Chemicals	1.3		
Century Plyboards	Paper & Forest Products	0.5		
Emami	Personal Products	1.3		
Fortis Healthcare	Health Care Providers & Services	0.8		
Granules India	Pharmaceuticals	0.8		
ICRA	Capital Markets	0.6		
Kansai Nerolac Paints	Chemicals	0.8		
Lemon Tree Hotels	Hotels Restaurants & Leisure	1.1		
Minda	Auto Components	0.7		
Page Industries	Textiles Apparel & Luxury Goods	1.5		
Phoenix Mills	Real Estate Management & Development	1.1		
PI Industries	Chemicals	1.3		
Prabhat Dairy	Food Products	0.6		
PVR	Media	1.1		
SH Kellkar	Chemicals	0.7		
Shankara Building Products	Specialty Retail	0.9		
Solara Active Pharma	Pharmaceuticals	0.1		
Strides Pharma Science	Pharmaceuticals	0.5		
Suprajit Engineering	Auto Components	0.8		
Symphony	Household Durables	0.7		
Syngene	Life Sciences Tools & Services	1.3		
Varun Beverages	Beverages	1.7		
INDONESIA		7.1		2.2
AKR Corporindo	Trading Companies & Distributors	0.7		
Arwana	Building Products	1.0		
Mayora Indah	Food Products	1.0		
Nippon Indosari	Food Products	1.2		
Sarana Meditama	Health Care Providers & Services	0.9		
Sawit Sumbermas	Food Products	0.6		
Selamat Sempurna	Auto Components	1.0		
Siloam Hospitals	Health Care Providers & Services	0.6		
MALAYSIA		6.3		3.5
Dialog	Energy Equipment & Services	1.4		
Hartalega	Health Care Equipment & Supplies	1.6		
QL Resources	Food Products	2.3		
Wellcall	Machinery	1.0		

Continued overleaf

Source: Mondrian Investment Partners and MSCI

Please note that the Portfolio, Country Allocation, and Portfolio Characteristics are based upon a Portfolio as of October 1, 2018. In order to accommodate several transactions, the September 30, 2018 portfolio reflected a higher than normal cash position. We believe the portfolio as of October 1, 2018 better reflects the holdings of the Portfolio as of the end of September. The Index information shown is as of September 30, 2018.

Portfolio

September 30, 2018

MONDRIAN EMERGING MARKETS SMALL CAP EQUITY FUND, L.P.

5.1

	Industry	Fund	Holdings	Index
PHILIPPINES		4.0		0.9
Concepcion Ind	Building Products	0.9		
D&L Industries	Chemicals	1.6		
GMA	Media	0.6		
Manila Water	Water Utilities	0.9		
SOUTH KOREA		6.2		20.5
Douzone Bizon	Software	1.5		
Huvtz	Health Care Equipment & Supplies	0.5		
Koh Young Technology	Semiconductor & Semiconductor Equipment	1.1		
Korea Kolmar	Personal Products	1.7		
LVMC	Specialty Retail	0.3		
Nutribiotech	Personal Products	0.7		
Seegene	Biotechnology	0.3		
TAIWAN		6.9		19.9
Airtac	Machinery	1.1		
Ginko	Health Care Equipment & Supplies	0.7		
KMC Kuei Meng	Leisure Products	1.3		
Merry Electronics	Electronic Equipment Instruments & Comp	1.0		
Pacific Hospital	Health Care Equipment & Supplies	0.9		
Voltronic Power Technology	Electrical Equipment	1.9		
THAILAND		3.1		4.4
Bangkok Chain Hospital	Health Care Providers & Services	1.4		
Major Cineplex	Media	1.7		
EUROPE, MIDDLE EAST & AFRICA		11.5		10.8
CZECH REPUBLIC		1.5		0.0
Moneta Money Bank	Banks	1.5		
ESTONIA		1.3		0.0
Tallinna Sadam	Transportation Infrastructure	1.3		
KUWAIT		1.5		0.0
Human Soft	Diversified Consumer Services	1.5		
POLAND		2.9		1.0
Atrium	Real Estate Management & Development	1.5		
Dino Polska	Food & Staples Retailing	1.3		
SAUDI ARABIA		1.9		0.0
Mouwasat Med ML PN 9/17	Health Care Providers & Services	1.9		
SOUTH AFRICA		1.5		5.2
Clicks	Food & Staples Retailing	0.5		
Oceana	Food Products	0.6		
Rhodes Food	Food Products	0.5		
UNITED KINGDOM		1.0		0.0
ContourGlobal	Independent Power and Renewable Elec	1.0		
LATIN AMERICA		11.0		10.4
BRAZIL		2.2		4.9
Linx	Software	0.5		
Mahle-Metal	Auto Components	0.7		
Wilson Sons	Transportation Infrastructure	1.0		
MEXICO		6.5		3.5
Bolsa Mexicana	Capital Markets	1.3		
Fibra Hotel Mex	Equity Real Estate Invest Trusts	1.2		
Fibra Inn	Equity Real Estate Invest Trusts	1.2		
Fibra Shop	Equity Real Estate Invest Trusts	0.6		
Macquarie Mexican REIT	Equity Real Estate Invest Trusts	0.5		
Vesta	Real Estate Management & Development	1.7		
PERU		2.3		0.1
Alicorp	Food Products	1.7		
Ferreycorp	Trading Companies & Distributors	0.5		
CASH		0.5		0.0
TOTAL		100.0		100.0

Source: Mondrian Investment Partners and MSCI

Please note that the Portfolio, Country Allocation, and Portfolio Characteristics are based upon a Portfolio as of October 1, 2018. In order to accommodate several transactions, the September 30, 2018 portfolio reflected a higher than normal cash position. We believe the portfolio as of October 1, 2018 better reflects the holdings of the Portfolio as of the end of September. The Index information shown is as of September 30, 2018.

Transaction Summary

2018

MONDRIAN EMERGING MARKETS SMALL CAP EQUITY FUND, L.P.

5.1

Buy

Country	Stock	Date
India	Aarti Industries	Q1
Kuwait	Human Soft	Q1
Taiwan	Merry Electronics	Q1
China	Hand Enterprise Solutions	Q2
China	Sinopec Kantons	Q2
Czech Republic	Moneta Money Bank	Q2
Estonia	Tallinna Sadam	Q2
India	Lemon Tree	Q2
India	Minda	Q2
India	Shankara Building Products	Q2
UK	Contour Global	Q3

Sell

Country	Stock	Date
China	China Singyes	Q1
Malaysia	KPJ Healthcare	Q1
South Korea	Medy-Tox	Q1
Taiwan	Tung Thih Electronic	Q1
Thailand	Ticon Industrial Connection	Q1
Brazil	Ouro Fino Saude	Q2
India	Blue Dart	Q2
India	CRISIL	Q2
India	NRB Bearings	Q2
India	Pidilite Ind	Q2
Thailand	Eastern Water F	Q2
Brazil	Biotoscana	Q3
China	Boer Power	Q3
China	Skyworth	Q3
India	Torrent Pharma	Q3
Taiwan	King Slide Work	Q3

Portfolio Market Capitalization Characteristics

Representative Accounts
September 30, 2018

MONDRIAN INVESTMENT PARTNERS

5.1

	Weighted Average Market Cap (USD bn)	Median Market Cap (USD bn)
Mondrian Emerging Markets Small Cap	1.5	0.9
MSCI EM Small Cap Index	1.1	0.6

Mondrian Emerging Markets Large Cap	57.7	13.3
MSCI EM Index	78.5	3.8

	Turnover
12 Months to Sept. 30, 2018	18.9%
12 Months to Sept. 30, 2017	15.0%

Sector Allocation

September 30, 2018

MONDRIAN EMERGING MARKETS SMALL CAP EQUITY FUND, L.P.

5.1

	Fund %	MSCI EM SC %	Relative %	MSCI EM Weight %
Consumer Discretionary	16.9	16.0	0.9	9.8
Automobiles & Components	4.0	3.0	1.0	2.7
Consumer Durables & Apparel	4.0	5.0	-1.0	1.1
Consumer Services	4.4	3.4	0.9	1.3
Media	3.4	1.7	1.7	2.5
Retailing	1.3	2.8	-1.6	2.1
Consumer Staples	15.8	7.1	8.8	6.7
Food & Staples Retailing	1.9	1.0	0.8	1.8
Food Beverage & Tobacco	10.2	4.7	5.5	3.5
Household & Personal Products	3.8	1.3	2.4	1.3
Energy	2.6	2.1	0.5	7.2
Financials	3.4	9.8	-6.4	22.8
Banks	1.5	3.2	-1.7	16.6
Diversified Financials	1.9	5.6	-3.7	2.6
Insurance	—	1.1	-1.1	3.6
Health Care	19.9	9.3	10.6	3.2
Health Care Equipment & Services	13.5	2.8	10.7	0.6
Pharmaceuticals Biotechnology & Life Sciences	6.3	6.5	-0.1	2.6
Industrials	13.2	14.1	-0.8	5.2
Capital Goods	7.7	10.0	-2.3	3.5
Commercial & Professional Services	2.2	0.7	1.5	0.1
Transportation	3.4	3.4	0.0	1.6
Information Technology	7.2	16.3	-9.1	27.9
Software & Services	5.1	4.1	1.0	14.4
Technology Hardware & Equipment	1.1	7.3	-6.3	8.2
Semiconductors & Semiconductor Equipment	1.1	5.0	-3.8	5.3
Materials	7.8	12.6	-4.8	7.6
Real Estate	8.9	7.6	1.2	3.0
Telecommunication Services	—	1.2	-1.2	4.3
Utilities	3.9	3.9	-0.1	2.4
Cash	0.5	—	—	—
Total	100.0	100.0	—	100.0

Portfolio

MONDRIAN INVESTMENT PARTNERS

Why has Performance been Challenged?

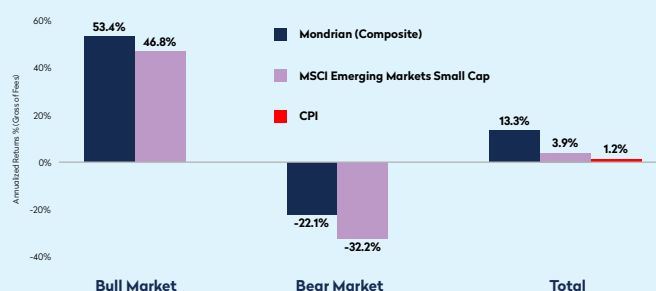


Defensive Performance Characteristics

Mondrian Emerging Markets Small Cap Equity Composite

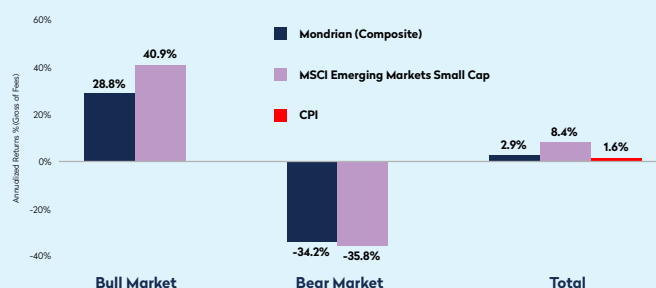
MONDRIAN INVESTMENT PARTNERS

Early Performance – Since Inception: 2011 to 2014



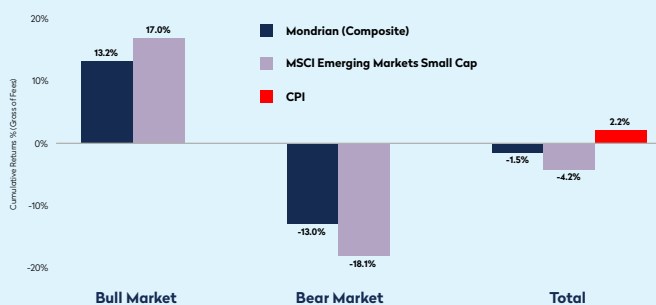
- Defensive, value performance characteristics showing downside protection and significant upside capture
- Long-term outperformance with capital preservation

Performance Challenged – Start of 2015 to 2017



- Unable to provide as much downside protection and upside capture relative to history

Recent Performance – October 1, 2017 to September 30, 2018



Source: Mondrian Investment Partners and MSCI

A Bull Market quarter/month is defined as one in which the benchmark showed a positive US dollar return, and a Bear Market quarter/month when the benchmark showed a negative US dollar return.

The returns presented on this page are presented gross of advisory fees and other expenses associated with managing an investment advisory account. Actual returns will be reduced by such fees and expenses. Please carefully review the disclosure and notes concerning performance calculation and GIPS compliance in the appendix. These provide more information concerning gross performance results, including an illustration of the negative effect of advisory fees on performance. Past performance is not a guarantee of future results.










Emerging Markets Small Cap Equity Composite Performance

October 31, 2018

MONDRIAN INVESTMENT PARTNERS

Key for Bear markets:

 = Outperformed
  = Underperformed

		Composite	MSCI EM Small Cap	Relative	US CPI
Nov. 1 - Dec. 31, 2011		-7.2%	-9.5%	2.6%	-0.3%
Quarter 1, 2012		18.1%	16.6%	1.3%	1.6%
Quarter 2, 2012		-2.0%	-8.0%	6.5%	0.0%
Quarter 3, 2012		10.8%	8.4%	2.2%	0.8%
Quarter 4, 2012		6.9%	5.1%	1.7%	-0.8%
Year 2012		37.1%	22.2%	12.2%	1.7%
Quarter 1, 2013		6.4%	4.2%	2.1%	1.4%
Quarter 2, 2013		-3.7%	-7.5%	4.1%	0.3%
Quarter 3, 2013		0.0%	3.5%	-3.3%	0.3%
Quarter 4, 2013		3.8%	1.3%	2.5%	-0.5%
Year 2013		6.5%	1.0%	5.4%	1.5%
Quarter 1, 2014		3.5%	3.5%	0.0%	1.4%
Quarter 2, 2014		10.1%	5.3%	4.6%	0.8%
Quarter 3, 2014		-0.5%	-1.4%	0.9%	-0.1%
Quarter 4, 2014		-3.5%	-6.0%	2.7%	-1.4%
Year 2014		9.5%	1.0%	8.4%	0.7%
Quarter 1, 2015		0.1%	3.6%	-3.4%	0.6%
Quarter 2, 2015		0.8%	4.5%	-3.5%	1.0%
Quarter 3, 2015		-12.8%	-16.7%	4.7%	-0.3%
Quarter 4, 2015		4.1%	3.3%	0.8%	-0.5%
Year 2015		-8.4%	-6.8%	-1.7%	0.7%
Quarter 1, 2016		-1.1%	1.0%	-2.1%	0.6%
Quarter 2, 2016		1.8%	0.4%	1.4%	1.1%
Quarter 3, 2016		6.3%	7.6%	-1.2%	0.3%
Quarter 4, 2016		-8.5%	-6.2%	-2.5%	0.0%
Year 2016		-2.2%	2.3%	-4.3%	2.0%
January		2.0%	4.7%	-2.5%	0.6%
February		2.8%	5.2%	-2.3%	0.3%
March		3.1%	2.6%	0.4%	0.1%
Quarter 1, 2017		8.1%	13.0%	-4.3%	1.0%
April		2.5%	1.1%	1.4%	0.3%
May		-0.8%	0.7%	-1.5%	0.1%
June		2.1%	0.8%	1.3%	0.1%
Quarter 2, 2017		3.9%	2.6%	1.2%	0.4%
July		-0.4%	3.6%	-3.8%	0.0%
August		-0.6%	2.0%	-2.5%	0.3%
September		-2.0%	0.0%	-2.0%	0.5%
Quarter 3, 2017		-2.9%	5.6%	-8.1%	0.8%
October		4.8%	3.5%	1.2%	-0.1%
November		3.1%	1.8%	1.3%	0.0%
December		3.3%	3.7%	-0.4%	-0.1%
Quarter 4, 2017		11.6%	9.2%	2.1%	-0.1%
Year 2017		21.7%	33.8%	-9.1%	2.1%
January		3.1%	5.8%	-2.6%	0.5%
February		-3.7%	-4.1%	0.4%	0.5%
March		0.6%	-1.3%	1.9%	0.2%
Quarter 1, 2018		-0.2%	0.2%	-0.4%	1.2%
April		0.8%	-0.1%	0.9%	0.4%
May		-2.2%	-2.1%	-0.2%	0.4%
June		-3.8%	-6.6%	3.0%	0.2%
Quarter 2, 2018		-5.2%	-8.6%	3.7%	1.0%
July		-1.5%	1.2%	-2.7%	0.0%
August		-1.2%	-2.1%	0.9%	0.1%
September		-4.1%	-3.3%	-0.8%	N/A
Quarter 3, 2018		-6.7%	-4.2%	-2.6%	N/A
October		-7.8%	-10.5%	3.0%	N/A
Year to Date		-18.7%	-21.5%	3.7%	2.3%
1 Year		-13.4%	-17.2%	4.6%	2.2%
3 Years (annualized)		-1.3%	1.5%	-2.8%	2.0%
5 Years (annualized)		-0.7%	-0.3%	-0.4%	1.5%
7 Years (annualized)		4.0%	1.8%	2.2%	1.5%
Composite Inception Nov. 1, 2011 (cumulative)		31.7%	13.0%	16.6%	11.4%
Composite Inception Nov. 1, 2011 (annualized)		4.0%	1.8%	2.2%	1.5%

Source: Mondrian Investment Partners and MSCI

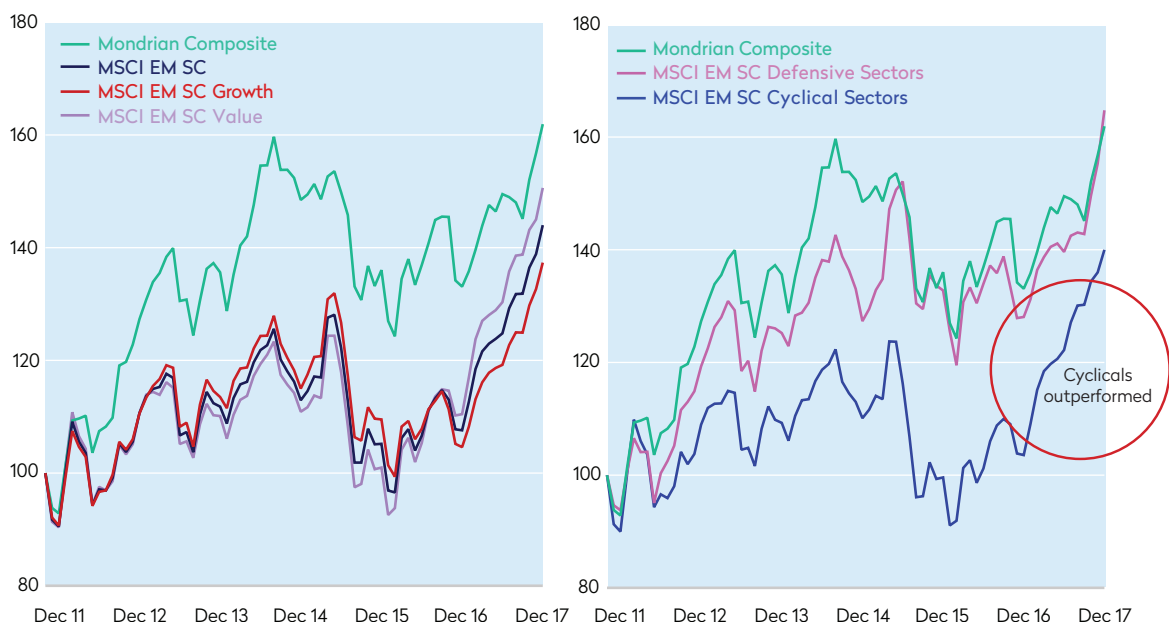
The returns presented on this page are presented gross of advisory fees and other expenses associated with managing an investment advisory account. Actual returns will be reduced by such fees and expenses. Please carefully review the disclosure in the appendix for more information concerning these gross performance results including an illustration of the negative effect of advisory fees on performance. Past performance is not a guarantee of future results.

Style Out of Favour

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Cumulative Returns (US\$) – Since Inception: November 2011 = 100



- Within the EM Small Cap opportunity set, there has not been a significant dispersion between the style benchmarks.
- However, optimism on reflation since 4Q 2016, coupled with retracement of the USD and bond yields, has led to robust performance in Cyclical Value stocks.
- This has led to an anomaly with Value outperforming Growth. However, there has been dichotomy in performance within Value led by Cyclical Value (financials and materials), whilst Defensive Value (healthcare and consumer staples) has lagged.
- Our style and strategy have been out of favour and not able to keep up with the strong markets driven by Cyclical Value stocks since 4Q 2016.

Source: Mondrian Investment Partners and MSCI

Defensive Sectors include: Consumer Staples, Energy, Health Care, Telecommunications Services, Utilities

Cyclical Sectors include: Consumer Discretionary, Financials, Industrials, Information Technology, Materials, Real Estate

Sector returns are derived by using beginning months weights and sector monthly performance. Real Estate has been carved out from the Financials sector for all periods.

The composite returns presented on this page are presented gross of advisory fees and other expenses associated with managing an investment advisory account. Actual returns will be reduced by such fees and expenses. Please carefully review the disclosure and notes concerning performance calculation and GIPS compliance in the appendix. These provide more information concerning gross performance results including an illustration of the negative effect of advisory fees on performance.

Past performance is not a guarantee of future results. Supplemental information complements the Mondrian Emerging Small Cap Composite disclosure in the appendix.

Recent Challenges and Actions

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Challenges:

Distortions in Equity Markets

- Accommodative monetary policy (low policy rates and QE)
- Expectations of a strong recovery in developed markets
- Abundant liquidity

Style out of Favor

- Anomaly in style:

Cyclical Value > Defensive Value
(Financials/Materials) (Healthcare/Consumer staples)

- Portfolio defensively positioned with significant active exposure to Consumer Staples and Healthcare
- Lack of exposure to Commodity linked Cyclical, Technology Hardware and Financials sectors

Strategies Penalized by Short-term Factors

- Exposure in Brazil, Taiwan, Korea, Indonesia, Mexico, China and India led by consumer and healthcare stocks

Actions:

- Continue to remain defensively positioned to withstand gradual normalization in monetary policy by major central banks
- Disciplined value oriented approach focusing on target real rate of returns with downside protection
- Continue to focus on long-term fundamentals: well capitalized companies that enjoy structural growth with stable and strong cash-flows to support growth and dividends

MONDRIAN INVESTMENT PARTNERS

5.1

Why Mondrian

Why Mondrian?



Why Mondrian Investment Partners? Our Competitive Advantages

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Why Mondrian

Employee Owned

- Long-term stability and continuity
- Broad equity ownership amongst employees
- Attracts, retains and motivates highly skilled personnel

Well Resourced Team

- Dedicated and focused team
- Draws on the breadth and depth of research and investment experience from across the firm
- Team consensus decision making

Disciplined Process

- Consistent long-term investment philosophy and process across all Mondrian investment products
- Structured analytical inflation-adjusted dividend discount methodology
- Combination of quantitative and qualitative analysis
- Detailed fundamental value stock analysis incorporating long-term risks, including environmental, social and governance factors

Value Approach

Focus on:

- Long-term real returns
- Low volatility of returns
- Downside protection
- Attractive value characteristics

Appendix



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74	Key Features of Emerging Markets Small Cap Equity Fund, L.P.
75	Important Information

Emerging Markets Small Cap

Emerging Market Small Cap as an Asset Class

Emerging Market Small Cap (EM SC) is an inefficient asset class consisting of a large universe of stocks (approximately 2,000) which we believe is under-researched. This creates mispricing which allows alpha generation through stock selection. Moreover, the asset class offers a more focused exposure to structural/economic developments in the domestic emerging market economies as smaller companies are influenced by underlying domestic fundamentals supported by demographics, rising middle class, pent-up domestic demand, deregulation and economic trends. In addition, it offers diversification benefits. We believe this makes it an appealing asset class with potential for upside return.

What is Small Cap?

MSCI Emerging Markets Small Cap Index (MSCI EM SC Index) is the dominant benchmark in this asset class.

The MSCI EM SC Index includes stocks which are ranked at approximately the bottom 15th percentile by available market capitalisation in each local market index. The MSCI incorporates requirements such as liquidity, minimum size range and free-float adjusted market capitalisation coverage target in its construction methodology. This helps limit the dispersion of extreme market capitalisations within the aggregate small cap universe.

The Mondrian EM SC product defines its universe of small cap stocks based on market capitalisation limits. Our 'buy' universe includes stocks with a total market capitalisation of approximately US\$ 1.75 billion at initial purchase across all markets. This level is both small enough to be classified as small cap and yet have 'broadly' similar market-cap characteristics as the MSCI EM SC Index. The market capitalisation limit may need to be reviewed in periods of significant and protracted market fluctuations.

Differences between Emerging Market Small Cap and Traditional Emerging Market

The MSCI EM Standard and MSCI EM SC Indices are a good reflection of the available opportunity set of large/mid and small capitalisation companies respectively.

We believe the MSCI EM SC Index serves as a complement to the MSCI EM Standard Index in several ways.

While the MSCI EM Standard Index is able to capture much of the economic developments in the emerging markets as it is defined by diversified sectors such as energy, materials, financials, information technology, telecommunication services and utilities, it does seem to have a bias towards natural resources and global exporters. On the other hand, the MSCI EM SC Index has noticeably less exposure to commodities complex and export driven companies. The MSCI EM SC Index is skewed towards demand-driven sectors such as industrials, consumer discretionary and financials (mainly real estate related companies) which are dependant on underlying domestic economic fundamentals, politics and regulations.

The country composition is different with MSCI EM SC providing additional exposure to the Asia/Pacific region which is driven by positive fundamentals supporting higher potential GDP growth trends and return potential. We note that this emphasis may vary as index composition is subject to change.

The MSCI EM SC universe which is composed of approximately 2,000 companies is far greater than the MSCI EM universe which consists of approximately 800 companies. However, it is to be noted that for a typical standard

Emerging Markets Small Cap

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EM mandate the realistic opportunity set is approximately 500 companies. We believe that many large cap bellwethers that populate the MSCI EM Standard Index are more efficiently priced than the companies in the EM SC universe which are largely under-researched providing alpha generation potential.

Emerging markets continue to develop with growth in breadth and depth of investment opportunities. An allocation to emerging market small cap alongside traditional emerging market exposure broadens the opportunity set providing potential for improved portfolio diversification and higher alpha generation.

Characteristics of the Emerging Markets Small Cap Asset Class

Inefficient Asset Class

Broker research coverage on smaller companies is typically low. Moreover, public information about smaller companies is often less well disseminated and not well analysed. This creates inefficient pricing and potential for alpha generation for disciplined active specialist managers with dedicated research resources. Mondrian believes it can benefit from its detailed fundamental research on these companies by carefully evaluating a significant amount of public information that might not have been fully discounted by the market.

Moreover, given the nature of their small size and limited liquidity, the small cap prices can fluctuate significantly on the basis of liquidity flows. This means simple market flows may create pricing anomalies which can be exploited by a disciplined investor such as Mondrian, who focuses on target real return potential based on a company's long term fundamentals.

Correlation

In an increasingly integrated global equity market where return correlations between asset classes in the equity markets have increased, EM SC offers diversification benefits. The long term correlation between MSCI US and the MSCI EM SC is at a relatively low level of 66%.*

Volatility

Stock specific risk is inherently higher in this asset class. Companies tend to observe high return volatility; extreme price movements due to events, liquidity and loss risk. We believe the most prudent method of investing in this asset class is utilising a diversified portfolio of stocks.

The standard deviation of long term returns for MSCI EM and MSCI EM SC is 23.3% and 23.4% respectively.*

Mondrian believes that the EM SC asset class provides 'pure EM exposure' without significant increase in risk level relative to the large/mid-cap EM opportunity set.

Liquidity

Liquidity and investment restrictions generally improve over time. Broker initiation coverage, M&A activity as well as market efficiency are all contributors to improvement in liquidity over time.

There is less liquidity within the EM SC space relative to the large/mid-cap EM space and in particular compared to the developed markets space. As a result, it may take a longer period of time to efficiently deploy cash into the asset class and also to remove cash from the asset class, and the transactions may have higher costs. Due to these constraints, Mondrian may need to limit the flows of cash into or out of the asset class to protect all clients/investors.

*Correlation and risk measured in standard deviation are calculated using price return data from calendar years 1995 to 2015.
Source: Mondrian Investment Partners/MSCI

Emerging Markets Small Cap

MONDRIAN INVESTMENT PARTNERS

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Risk Factors

Any investment involves the risk of loss. There can be no assurance that an Emerging Markets Small Cap portfolio will be able to achieve its investment objectives. The investment strategy involves a variety of material risks, including, but not limited to, the following:

International Investing

Prospective investors should understand and consider carefully the greater risks involved in investing internationally. Investing in securities of non-U.S. issuers, positions in which generally are denominated in foreign currencies, and utilization of forward foreign currency contracts, involve both opportunities and risks not typically associated with investing in U.S. securities. These include: fluctuations in exchange rates of foreign currencies; possible imposition of exchange control regulation or currency restrictions that would prevent cash from being brought back to the United States; less public information with respect to issuers of securities; less governmental supervision of exchanges, securities brokers and issuers of securities; difficulties in obtaining and enforcing a judgment against a foreign issuer; different accounting, auditing and financial reporting standards; different settlement periods and trading practices; less liquidity and frequently greater price volatility in foreign markets than in the United States; imposition of foreign withholding and other taxes; and sometimes less advantageous legal, operational and financial protections applicable to foreign subcustodial arrangements.

The strategy will invest in emerging markets and may invest in frontier markets. The securities markets of emerging and frontier countries are substantially smaller, less developed, less liquid and more volatile than the securities markets of the U.S. and other more developed countries. Disclosure and regulatory standards in many respects are less stringent than in the U.S. and other major markets. There also may be a lower level of monitoring and regulation of the markets and the activities of investors in certain less developed countries, and enforcement of existing regulations can be extremely limited.

The cost of investing in securities of non-U.S. issuers can be higher than the cost of investing in U.S. securities. Investments in securities denominated in foreign currencies also involve the additional cost of converting currencies upon the purchase and sale of securities.

Foreign Custody Arrangements

In addition to the general risks associated with international investing described above, maintaining assets in foreign countries involves generally higher costs and greater risks than those associated with similar U.S. investments, particularly in the case of assets maintained in less developed countries. The scope and range of custodial services offered in many foreign countries may be more limited than in the U.S. and, as a result, a portfolio's assets may be maintained with banks, brokers, depositories (such as Euroclear) and other financial institutions or organizations offering more limited custody services, and possessing less experience, less developed procedures for safekeeping of assets, poorer capitalization, and greater risks of bankruptcy, insolvency and fraud, than would typically be the case in the U.S.

Emerging Markets Small Cap

MONDRIAN INVESTMENT PARTNERS

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Assets maintained in certain emerging foreign countries also may be subject to other types of risks that either are not present or less pronounced in the U.S. and other more established markets, including political and economic risks (including nationalization of foreign bank deposits or other assets, and poor political and economic infrastructure and stability), commercial and credit risks (including poorly developed and regulated banks and financial systems), liquidity risks (including restrictions on repatriation and convertibility of currencies), legal and regulatory risks (including risks relating to evolving and/or undeveloped legal systems and regulatory frameworks) and operational risks (including risks relating to maintenance of shareholder title, clearing and settlement procedures and market transparency).

Small Capitalization Securities

During some periods, the securities of small cap companies, as a class, have performed better than the securities of larger companies, and in some periods they have performed worse. Stocks of small cap companies tend to be more volatile and less liquid than stocks of larger companies. Small cap companies, as compared to larger companies, may have a shorter history of operations, may not have as great an ability to raise additional capital, may have a less diversified product line making them susceptible to market pressure and may have a smaller public market for their shares.

Currency Risks

An emerging markets small cap portfolio will invest a substantial amount of its assets in equity securities denominated in currencies other than the U.S. dollar and in other financial instruments, the price of which is determined with reference to currencies other than the U.S. dollar. However, the portfolio's securities and other assets are valued in U.S. dollars. To the extent unhedged, the value of the portfolio's assets will fluctuate with U.S. dollar exchange rates as well as with price changes of the portfolio's investments in the various local markets and currencies. Thus, a change in the value of the U.S. dollar compared to the other currencies in which the portfolio makes its investments will affect the prices of the portfolio's securities in their local markets.

Illiquidity in Certain Markets and Investment in Thinly-Traded Securities

The portfolio may invest in securities that later become illiquid or otherwise restricted. The portfolio might only be able to liquidate these positions at disadvantageous prices, should Mondrian determine, or it becomes necessary, to do so. For example, substantial withdrawals from the portfolio could require the portfolio to liquidate its positions more rapidly than otherwise desired in order to obtain the cash necessary to fund the withdrawals. Illiquidity in certain markets could make it difficult for the portfolio to liquidate positions on favorable terms.

Appendix

Emerging Markets Small Cap Sector Returns

September 30, 2018

MONDRIAN INVESTMENT PARTNERS

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Appendix

	Quarter 3, 2018			Year to Date to September 30, 2018		
	Local Market Return %	Currency Change vs. USD %	USD Return %	Local Market Return %	Currency Change vs. USD %	USD Return %
EM Small Cap	-2.9	-1.4	-4.2	-7.1	-5.6	-12.3
Energy	1.1	-1.6	-0.5	-1.9	-5.0	-6.8
Energy	1.1	-1.6	-0.5	-1.9	-5.0	-6.8
Materials	2.2	-2.0	0.2	-6.2	-7.3	-13.0
Materials	2.2	-2.0	0.2	-6.2	-7.3	-13.0
Industrials	-3.3	-1.8	-5.1	-12.6	-6.2	-18.0
Capital Goods	-3.1	-2.3	-5.4	-14.1	-7.3	-20.3
Commercial & Professional Services	-12.8	-1.2	-13.9	-6.0	-4.1	-9.9
Transportation	-1.4	-0.4	-1.8	-10.3	-3.7	-13.6
Consumer Discretionary	-3.4	-1.7	-5.0	-5.0	-6.7	-11.3
Automobiles & Components	-7.1	-1.9	-8.9	-7.8	-6.0	-13.3
Consumer Durables & Apparel	2.1	-2.0	0.1	6.5	-6.7	-0.6
Consumer Services	-8.5	-1.7	-10.1	-11.4	-7.3	-17.8
Media	-3.9	-0.8	-4.7	-17.4	-5.7	-22.1
Retailing	-2.5	-1.4	-3.9	-5.4	-7.2	-12.1
Consumer Staples	-4.1	-1.3	-5.3	-5.8	-6.0	-11.4
Food & Staples Retailing	-3.5	-0.8	-4.3	-5.5	-5.5	-10.7
Food Beverage & Tobacco	-4.1	-1.5	-5.5	-8.3	-6.3	-14.1
Household & Personal Products	-4.4	-1.1	-5.4	5.2	-5.2	-0.3
Health Care	2.6	-1.0	1.6	1.2	-4.8	-3.7
Health Care Equipment & Services	-4.4	-1.6	-5.9	-8.8	-5.4	-13.7
Pharmaceuticals, Biotechnology & Life Sciences	6.0	-0.6	5.3	5.6	-4.5	0.8
Financials	-1.5	-1.8	-3.2	-8.3	-6.1	-14.0
Banks	-4.5	-1.9	-6.3	-12.2	-6.9	-18.3
Diversified Financials	0.5	-1.7	-1.2	-6.4	-5.7	-11.7
Insurance	-2.1	-1.7	-3.8	-6.7	-6.5	-12.8
Information Technology	-8.8	-0.6	-9.3	-10.0	-3.3	-13.0
Software & Services	-5.1	-1.9	-7.0	-2.0	-5.3	-7.2
Technology Hardware & Equipment	-8.0	-0.2	-8.2	-10.0	-2.6	-12.4
Semiconductors & Semiconductor Equipment	-12.5	-0.1	-12.6	-16.5	-2.5	-18.6
Telecommunication Services	-3.8	0.2	-3.7	-18.3	-3.1	-20.8
Telecommunication Services	-3.8	0.2	-3.7	-18.3	-3.1	-20.8
Utilities	-2.6	-2.3	-4.8	-11.4	-8.4	-18.8
Utilities	-2.6	-2.3	-4.8	-11.4	-8.4	-18.8
Real Estate	-3.4	-0.4	-3.8	-4.9	-3.1	-7.9
Real Estate	-3.4	-0.4	-3.8	-4.9	-3.1	-7.9

University of Maine System – Managed Investment Pool

October 31, 2018

MONDRIAN EMERGING MARKETS SMALL CAP EQUITY FUND, L.P.

5.1

Statement of Changes in Net Asset Value For the Month Ended October 31, 2018

Market Value Summary [1]	Current Period	Year to Date
Beginning Net Asset Value	\$10,322,373	\$11,170,148
Gross Contributions [2]	0	600,000
Transaction Charge (Contribution and Withdrawal)	0	0
Ordinary Income/(Loss)	5,194	191,021
Unrealized Gains/(Losses)	(604,531)	(2,395,836)
Realized Gains/(Losses)	(209,907)	50,216
Gross Withdrawals [2]	0	(102,419)
Ending Net Asset Value	<u>\$9,513,129</u>	<u>\$9,513,129</u>

Unit Value Summary [3]	
Beginning Units	671,492.8955
Current Period Unit Purchases	0.0000
Current Period Unit Sales	0.0000
Ending Units	<u>671,492.8955</u>
Current Period Beginning Unit Value	<u>\$15.3723</u>
Current Period Ending Unit Value	<u>\$14.1671</u>

Performance Summary [4] [5] [6] [7]	Current Month	Current Quarter	Year To Date	One Year	Three Years	Five Years	Since Initial Contribution 07/01/2014
Participant	(7.84%)	(7.84%)	(18.75%)	(13.46%)	(1.26%)	N/A	(3.61%)
MSCI EM SC Index	(10.55%)	(10.55%)	(21.55%)	(17.21%)	1.55%	N/A	(1.72%)
Relative Performance	3.03%	3.03%	3.57%	4.53%	(2.77%)	N/A	(1.91%)

[1] The above unaudited amounts represent your allocable share of economic income and do not reflect adjustments required under the Internal Revenue Code to calculate taxable income.

[2] Gross contributions and gross withdrawals of cash are shown prior to the application of the contribution and withdrawal charges described in the Confidential Information Memorandum.

[3] Each investor's allocation of the Funds' economic income and the determination of each investor's capital account and percentage interest are calculated in accordance with the Limited Partnership Agreement of the Fund. Units shown above are merely for recordkeeping purposes and are determined based on each investor's capital account and percentage interest.

[4] All performance provided is net of Transaction Expenses and Administrative Expenses but gross of Contribution Charges, Withdrawal Charges and Management Fees (each as described in the Confidential Information Memorandum). Contribution Charges and Withdrawal Charges are automatically deducted from subscription payments and redemption proceeds. Management Fees are paid directly by the participants. Participant returns will be reduced by Contribution Charges, Withdrawal Charges and Management Fees paid.

[5] Performance returns for periods of one year or less are shown as cumulative (including when the period Since Initial Contribution is less than one year). Performance returns for periods of over one year are shown as annualized. Relative performance is calculated on a geometric basis.

[6] Past performance is not indicative of future results. An investment in the Fund involves the risk of loss. The investment return and value of interests in the Fund will fluctuate. When a withdrawal is made, the interest may be worth more or less than when originally purchased.

[7] There can be no assurance that the investment objectives of the Fund will be achieved.

Appendix

University of Maine – Pension

October 31, 2018

MONDRIAN EMERGING MARKETS SMALL CAP EQUITY FUND, L.P.

5.1

Statement of Changes in Net Asset Value For the Month Ended October 31, 2018

Market Value Summary [1]	Current Period	Year to Date
Beginning Net Asset Value	\$789,606	\$1,031,879
Gross Contributions [2]	0	0
Transaction Charge (Contribution and Withdrawal)	0	(945)
Ordinary Income/(Loss)	397	15,290
Unrealized Gains/(Losses)	(46,243)	(190,784)
Realized Gains/(Losses)	(16,057)	6,210
Gross Withdrawals [2]	0	(133,947)
Ending Net Asset Value	<u>\$727,703</u>	<u>\$727,703</u>

Unit Value Summary [3]	
Beginning Units	51,365.5705
Current Period Unit Purchases	0.0000
Current Period Unit Sales	0.0000
Ending Units	<u>51,365.5705</u>
Current Period Beginning Unit Value	<u>\$15.3723</u>
Current Period Ending Unit Value	<u>\$14.1671</u>

Performance Summary [4] [5] [6] [7]							
	Current Month	Current Quarter	Year To Date	One Year	Three Years	Five Years	Since Initial Contribution 07/01/2014
Participant	(7.84%)	(7.84%)	(18.75%)	(13.46%)	(1.26%)	N/A	(3.61%)
MSCI EM SC Index	(10.55%)	(10.55%)	(21.55%)	(17.21%)	1.55%	N/A	(1.72%)
Relative Performance	3.03%	3.03%	3.57%	4.53%	(2.77%)	N/A	(1.91%)

[1] The above unaudited amounts represent your allocable share of economic income and do not reflect adjustments required under the Internal Revenue Code to calculate taxable income.

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[7] There can be no assurance that the investment objectives of the Fund will be achieved.

Disclosure - Emerging Markets Small Cap Equity Composite

MONDRIAN INVESTMENT PARTNERS

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Annual Performance

Year	Total Gross USD Return	Total Net of Fees USD Return	Benchmark USD Return	Composite Standard Deviation	Benchmark Standard Deviation	Number of Portfolios	Composite Dispersion	Composite Assets (USD millions)	% of Firm Assets	Total Firm Assets (USD millions)
2011	-7.16%	-7.33%	-9.48%	N/A	N/A	2	N/A	102.0	0.15	65,891
2012	37.14%	35.70%	22.22%	N/A	N/A	1	N/A	189.6	0.28	68,248
2013	6.53%	5.41%	1.04%	N/A	N/A	2	N/A	862.3	1.23	70,356
2014	9.47%	8.33%	1.01%	12.81%	14.04%	2	N/A	1,232.7	1.92	64,102
2015	-8.39%	-9.35%	-6.85%	11.64%	13.48%	2	N/A	1,125.4	1.98	56,857
2016	-2.16%	-3.18%	2.28%	12.82%	14.33%	2	N/A	1,187.7	2.01	59,033
2017	21.66%	20.39%	33.84%	12.02%	14.36%	1	N/A	887.3	1.41	62,751
2018 (to Sep 30)	-11.75%	-12.44%	-12.30%	11.44%	12.60%	1	N/A	680.0	1.26	54,148

Accompanying Notes Concerning Performance Calculation and GIPS® Compliance

- This composite was created in November 2011.
- Past performance is not a guarantee of future results.
- A complete list and description of all firm composites is available on request.

Mondrian Investment Partners Limited ("Mondrian") claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the Global Investment Performance Standards (GIPS®). Mondrian has been independently verified for the periods 1 January 1993 to 31 December 2017.

Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. Additional third party Performance Examination under GIPS of this composite's results has also been undertaken from 1 November 2011 to 31 December 2017. The verification and performance examination reports are available upon request.

The Firm is defined as all discretionary portfolios managed by Mondrian.

Mondrian is a value-oriented defensive manager seeking to achieve high real returns for its clients. Mondrian invests mainly in securities where rigorous dividend discount analysis identifies value in terms of the long-term flows of income. Mondrian's methodology is applied consistently to markets and individual securities, both bonds and equities.

The Emerging Markets Small Cap Equity Composite includes US dollar based discretionary fee paying portfolios, measured against the Morgan Stanley Capital International Emerging Markets Small Cap Index, net of withholding taxes. The portfolios are invested primarily in small capitalisation, publicly traded companies based in an emerging market, or deriving a majority of revenue within emerging market economies.

For the month of inception, November 2011, the composite consisted only of a Mondrian seed capital portfolio which is non-fee paying and had no external investors. The portfolio was managed and operated identically to external portfolios, and portfolio accounting was performed in conjunction with independent third parties.

Portfolios are valued on a trade date basis using accrual accounting. Returns are calculated using the modified Dietz method and then weighted by using beginning-of-period market values to calculate the monthly composite returns. Portfolio returns are calculated net of irrecoverable withholding tax on dividend income. New portfolios are included in the first full month of investment in the composite's strategy. Terminated portfolios remain in the composite through the last full month of investment. Additional information regarding the valuing of portfolios, calculating performance, and preparing compliant presentations are available upon request.

Composite and benchmark standard deviation are measured as the rolling 3 year annualised standard deviation of monthly returns. The dispersion of annual returns of portfolios within the composite (Composite Dispersion), is measured by the standard deviation of the equal-weighted returns of portfolios represented within the composite for the full year.

Performance results marked "Gross" do not reflect deduction of investment advisory fees. Investment returns will be reduced accordingly. For example, if a 1.00% advisory fee were deducted quarterly (0.25% each quarter) and the three year gross annual returns were 10.00%, 3.00% and -2.00% giving an annualized return of 3.55% before deduction of advisory fees, then the deduction of advisory fees would result in three year net annual returns of 8.91%, 1.98% and -2.97% giving an annualized net return of 2.52%.

Performance returns marked "Net" reflect deduction of investment advisory fees and are calculated by deducting a quarterly indicative fee from the quarterly composite return. The indicative fee is defined as being the effective fee rate (or average weighted fee) at the composite's minimum account size as set out below. Actual net composite performance would be higher than the indicative performance shown because some accounts have sliding fee scales and accordingly lower effective fee rates.

Mondrian's investment advisory fees are described in Part II of its Form ADV. A representative United States fee schedule for institutional accounts is provided below, although it is expected that from time to time the fee charged will differ from the below schedule depending on the country in which the client is located and the nature, circumstances requirements of individual clients. The fees will be charged as follows: the first US\$25m at 1.25%; the next US\$25m at 1.10%; and amounts over US\$50m at 1.00%. Minimum segregated portfolio size is currently US\$150 million (or fees equivalent thereto).

Appendix

Disclosure - International Small Cap Equity Composite

MONDRIAN INVESTMENT PARTNERS

5.1

Annual Performance

Year	Total Gross USD Return	Total Net of Fees USD Return	Benchmark USD Return	Composite Standard Deviation	Benchmark Standard Deviation	Number of Portfolios	Composite Dispersion	Composite Assets (USD millions)	% of Firm Assets	Total Firm Assets (USD millions)
2008	-43.31%	-43.75%	-48.03%	22.05%	22.79%	9	0.38%	666.0	1.38	48,233
2009	57.77%	56.56%	50.82%	25.09%	26.94%	9	0.70%	1,718.8	2.67	64,395
2010	31.04%	30.03%	24.51%	27.06%	29.18%	17	0.79%	4,241.1	6.20	68,386
2011	-8.04%	-8.74%	-15.81%	20.26%	23.08%	23	0.27%	4,958.9	7.53	65,891
2012	25.67%	24.71%	17.48%	17.49%	19.83%	24	0.19%	6,523.7	9.56	68,248
2013	18.21%	17.30%	25.55%	13.85%	16.27%	22	0.22%	7,585.0	10.78	70,356
2014	-4.19%	-4.93%	-5.35%	11.08%	13.34%	22	0.12%	6,953.8	10.85	64,102
2015	3.58%	2.78%	5.46%	10.17%	11.49%	21	0.20%	6,269.7	11.03	56,857
2016	0.98%	0.20%	4.32%	11.36%	12.31%	20	0.15%	5,728.5	9.70	59,033
2017	33.31%	32.28%	31.04%	10.89%	11.52%	20	0.15%	6,950.7	11.08	62,751
2018 (to Sep 30)	1.12%	0.54%	-2.28%	9.65%	10.70%	16	0.11%	5,391.6	9.96	54,148

Accompanying Notes Concerning Performance Calculation and GIPS® Compliance

- This composite was created in January 1998.
- Past performance is not a guarantee of future results.
- A complete list and description of all firm composites is available on request.

Mondrian Investment Partners Limited ("Mondrian") claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the Global Investment Performance Standards (GIPS®). Mondrian has been independently verified for the periods 1 January 1993 to 31 December 2017.

Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. Additional third party Performance Examination under GIPS of this composite's results has also been undertaken from 1 January 1998 to 31 December 2017. The verification and performance examination reports are available upon request.

The Firm is defined as all discretionary portfolios managed by Mondrian.

Mondrian is a value-oriented defensive manager seeking to achieve high real returns for its clients. Mondrian invests mainly in securities where rigorous dividend discount analysis identifies value in terms of the long-term flows of income. Mondrian's methodology is applied consistently to markets and individual securities, both bonds and equities.

The International Small Cap Equity Composite includes US dollar based discretionary fee paying portfolios, measured against the Morgan Stanley Capital International World ex US Small Cap Index, or an equivalent Index net of US withholding taxes. The portfolios are invested in non-US based small capitalisation equities with the allowance for hedging.

Portfolios are valued on a trade date basis using accrual accounting. Returns are calculated using the modified Dietz method and then weighted by using beginning-of-period market values to calculate the monthly composite returns. Portfolio returns are calculated net of irrecoverable withholding tax on dividend income. New portfolios are included in the first full month of investment in the composite's strategy. Terminated portfolios remain in the composite through the last full month of investment. Additional information regarding the valuing of portfolios, calculating performance, and preparing compliant presentations are available upon request.

Composite and benchmark standard deviation are measured as the rolling 3 year annualised standard deviation of monthly returns. The dispersion of annual returns of portfolios within the composite (Composite Dispersion), is measured by the standard deviation of the equal-weighted returns of portfolios represented within the composite for the full year.

Performance results marked "Gross" do not reflect deduction of investment advisory fees. Investment returns will be reduced accordingly. For example, if a 1.00% advisory fee were deducted quarterly (0.25% each quarter) and the three year gross annual returns were 10.00%, 3.00% and -2.00%, giving an annualized return of 3.55% before deduction of advisory fees, then the deduction of advisory fees would result in three year net annual returns of 8.91%, 1.98% and -2.97% giving an annualized net return of 2.52%.

Performance returns marked "Net" reflect deduction of investment advisory fees and are calculated by deducting a quarterly indicative fee from the quarterly composite return. The indicative fee is defined as being the effective fee rate (or average weighted fee) at the composite's minimum account size as set out below. Actual net composite performance will be higher than the indicative performance shown because some accounts have sliding fee scales and accordingly lower effective fee rates.

Mondrian's investment advisory fees are described in Part II of its Form ADV. A representative United States fee schedule for institutional accounts is provided below, although it is expected that from time to time the fee charged will differ from the below schedule depending on the country in which the client is located and the nature, circumstances requirements of individual clients. The fees will be charged as follows: the first US\$50m at 0.85%; the next US\$50m at 0.70%; and amounts over US\$100m at 0.65%. Minimum segregated portfolio size is currently US\$100 million (or fees equivalent thereto).

Summary Biographies

October 12, 2018

MONDRIAN INVESTMENT PARTNERS

5.1

Investment Professionals	Name	Position/Title	Discipline	Former Employer	Years with MIP	Industry Experience
	David Tilles	Executive Chairman	Strategy	Hill Samuel	27	44
	Clive Gillmore	CEO and Group CIO	Strategy and Global Equities	Hill Samuel	27	35
	Elizabeth Desmond	Deputy CEO, CIO International Equities	Equities/International	Hill Samuel	27	31
	Hamish Parker	Director	Equities/International	Hill Samuel	27	37
	Ormla Krishnan	CIO Small Cap Equities	Equities/Small Cap	Koenenman Capital Management	18	25
	Andrew Miller	CIO Emerging Markets Equities	Equities/Emerging Markets	PricewaterhouseCoopers	18	20
	David Wakefield	CIO GFI & Currency	Fixed Income & Currency	Bank of England	17	26
	Daniel Philips	Head of Rothko Investment Strategies	Equities	Dresdner Bank	20	23
	Aileen Gan	Head of Global Equities	Equities/Global	Accenture	13	18
	Brendan Baker	Senior Portfolio Manager	Equities/Global/Small Cap	Lombard Street Research	17	28
	Joanna Bates	Senior Portfolio Manager	Fixed Income & Currency	Hill Samuel	21	35
	Nigel Bliss	Senior Portfolio Manager	Equities/International	Cazenove & Co.	23	25
	Ginny Chong	Senior Portfolio Manager	Equities/Emerging Markets	PriceWaterhouseCoopers	18	23
	Graeme Coll	Senior Portfolio Manager	Equities/Small Cap	Ernst & Young	13	20
	Frances Cuthbert	Senior Portfolio Manager	Equities/Small Cap	Deutsche Bank	19	20
	Matt Day	Senior Portfolio Manager	Fixed Income	Buck Consultants	11	16
	Steven Dutaut	Senior Portfolio Manager	Equities/International	Baillie Gifford	11	14
	Gregory Halton	Senior Portfolio Manager	Equities/Emerging Markets	Deutsche Asset Management Ltd	14	18
	Bhavin Manek	Senior Portfolio Manager	Equities/Small Cap	Mercer Investment Consulting	12	15
	Aidan Nicholson	Senior Portfolio Manager	Equities/Small Cap	Cazenove & Co	15	17
	Solomon Peters	Senior Portfolio Manager	Fixed Income & Currency	CEBR	18	22
	Andrew Porter	Senior Portfolio Manager	Equities/International	Frank Russell	15	19
	Alex Simcox	Senior Portfolio Manager	Equities/International	Ernst & Young LLP	11	15
	Jonathan Spread	Senior Portfolio Manager	Equities/Global	Morley Fund Management	13	19
	Boris Veselinovich	Senior Portfolio Manager	Equities/Emerging Markets	Challenger International	17	20
	Alastair Cornwell	Portfolio Manager	Equities/Small Cap	PricewaterhouseCoopers	10	11
	David Cudmore	Portfolio Manager	Fixed Income & Currency	Credit Suisse	5	8
	Christopher Davis	Portfolio Manager	Equities/International	PricewaterhouseCoopers	4	7
	Kevin Fenwick	Portfolio Manager	Fixed Income & Currency	Wilshire Associates	10	14
	James Francken	Portfolio Manager	Equities/Global	Investec	9	11
	Charlie Hill	Portfolio Manager	Equities/Global	Neptune Investment Management	2	5
	Daniel Kelly	Portfolio Manager	Equities/Emerging Markets	Deloitte LLP	9	12
	Zsolt Mester	Portfolio Manager	Equities/International	Sanford C. Bernstein	4	7
	Sarah Mitchell	Portfolio Manager	Fixed Income & Currency	Royal Bank of Scotland	7	14
	Melissa Platt	Portfolio Manager	Equities/International	FundSource Research	14	20
	Paul Thompson	Portfolio Manager	Equities/Global	Deloitte LLP	9	12
	Sam Wyatt	Portfolio Manager	Equities/Emerging Markets	Deloitte LLP	5	10
	Charl Basson	Assistant Portfolio Manager	Equities/Small Cap	PricewaterhouseCoopers	2	6
	Benjamin Hall	Assistant Portfolio Manager	Equities/Small Cap	None	8	8
	David Miller	Assistant Portfolio Manager	Equities	None	6	6
	Bruno Vignoto	Assistant Portfolio Manager	Fixed Income & Currency	Moody's Analytics	3	8
	Michael Bray	Research Analyst	Equities/Emerging Markets	None	6	6
	Richard Fairbairn	Research Analyst	Equities	Informer Global Markets	5	6
	Elina Grinchenko	Research Analyst	Equities/Small Cap	None	6	6
	Harry Hewitt	Research Analyst	Equities/Global	None	4	4
	Natasha Nussbaum	Research Analyst	Equities/International	None	2	2

Appendix

Summary Biographies

October 12, 2018

MONDRIAN INVESTMENT PARTNERS

5.1

Appendix

Investment Professionals	Name	Position/Title	Discipline	Former Employer	Years with MIP	Industry Experience
	Brian Heywood	Head of Implementation	Implementation	Mercury Asset Management	22	23
	Alan Fedarb	Portfolio Managers' Assistant	Implementation	Gartmore Fund Managers	21	28
	Magnus Paterson	Portfolio Managers' Assistant	Implementation	M&G	5	14
	Vinit Shah	Portfolio Managers' Assistant	Implementation	State Street Bank	13	21
	Stuart Thomas	Portfolio Managers' Assistant	Implementation	ABN AMRO Asset Management	10	18
	Clark Simpson	Head of Trading	Trading Desk	None	17	17
	Martin Shaw	Senior Trader	Trading Desk	HSBC	4	32
	Ian Taylor	Senior Trader	Trading Desk	Invesco Asset Management Ltd	8	25
	Arthur van Hoogstraten	Senior Trader	Trading Desk	Banque Paribas	20	30

Client Service Professionals	Name	Position/Title	Former Employer	Years with MIP	Industry Experience
	London				
	Russell Mackie	Global Head of Client Services & Marketing	Hodgson Martin Ltd.	21	23
	Andrew Kiely	Manager, Client Services, London	Bank of Ireland Asset Management	12	21
	Jessica Hsia	Senior Client Service Executive	Delaware Investments	14	15
	Paul Danaswamy	Client Services Executive	BNY Mellon Asset Servicing	7	12
	Philadelphia				
	Paul Ross	President, MIP (U.S.), Inc., Philadelphia	The Travelers Corporation	*25	37
	Patricia Karolyi	Executive Vice President	Blank, Rome, Comisky & McCauley	*29	29
	James Brecker III	Senior Vice President, Client Services	None	*18	18
	Laura Conlon	Senior Vice President, Client Services	Morgan Lewis & Bockius, LLP	*21	21
	David Hogan	Senior Vice President, Client Services	Charles Schwab	3	31
	Henry Orvin	Senior Vice President, Client Services	Amundi Pioneer	<1	32
	Justin Richards	Senior Vice President, Client Services	Delaware Investments	18	18
	Todd Rittenhouse	Senior Vice President, Client Services	Chartwell Investment Partners	*18	27
	Stephen Starnes	Senior Vice President, Client Services	1838 Investment Advisers	*16	37
	Peter Riviello	Vice President, Client Services	None	*15	15
	Jackie Stampone	Vice President, Client Services	None	*21	21
	Carol Starr	Vice President, Client Services	None	*36	36
	Bridget Cooper	Assistant Vice President, Client Services	Rorer Asset Management	13	20
	Rebecca Farnsworth	Assistant Vice President, Client Services	None	14	14
	Elizabeth Taverna	Assistant Vice President, Client Services	None	10	10

* Prior to joining Mondrian Investment Partners (U.S.), Inc. in September 2004, these individuals worked with Delaware Investments. Delaware Investments was an affiliate of Mondrian Investment Partners Limited prior to the management buy-out and name change of September 2004. The listing for "Former Employer" denotes the individual's employer prior to joining Delaware Investments. The listing for "Years with MIP" includes both years with Delaware Investments and MIP (U.S.), Inc. Todd Rittenhouse rejoined in 2007 after having worked with Delaware Investments from 1992 – 1999.

Mondrian Equity Products

U.S. Investors
September 30, 2018

MONDRIAN INVESTMENT PARTNERS

5.1

Mondrian Product and Typical Benchmark	Vehicle			
	Separate Account	Limited Partnership	Collective Investment Trust	Registered Mutual Fund
Non-US Equity • MSCI EAFE	Soft close Open to existing investors	Open Minimum: \$5 million	Open Minimum: \$3 million	Open Mondrian Int. Equity Fund: DPIX Minimum: \$1 million
Non-US Equity ESG • MSCI EAFE		Open Minimum: \$2 million		
Focused Non-US Equity • MSCI EAFE	Open Minimum: \$100 million			
Global Equity • MSCI World	Open Minimum: \$50 million	Open Minimum: \$2 million		
Global All Countries World Equity • MSCI ACW	Open Minimum: \$100 million	Open Minimum: \$3 million		
All Countries World ex-US Equity • MSCI ACW ex-US	Soft close Open to existing investors	Open Minimum: \$5 million	Open Minimum: \$5 million	
Focused All Countries World ex-US Equity • MSCI ACW ex-US	Open Minimum: \$300 million ¹ Minimum: \$100 million ²			
Emerging Markets Equity • MSCI EM	Soft close Open to existing investors	Soft close Open to existing investors		
Focused Emerging Markets Equity • MSCI EM	Soft close Open to existing investors	Soft close Open to existing investors		Open Mondrian EM Equity Fund: LEMNX Minimum: \$1 million
Emerging Markets Wealth • MSCI EM	Open Minimum: \$100 million	Open Minimum: \$1 million	Open Minimum: \$3 million	
Non-US Small Cap Equity • MSCI World ex-US Small Cap	Soft close Open to existing investors	Soft close Open to existing investors		
Emerging Markets Small Cap Equity • MSCI EM Small Cap	Open Minimum: \$150 million Maximum: \$300 million	Open Minimum: \$5 million		
US Small Cap Equity • Russell 2000 Index	Open	Open Minimum: \$1 million		

1. Utilizing separate account only

2. Utilizing commingled fund for emerging markets exposure

Mondrian may, from time to time, reduce and/or increase the minimum amounts listed above. The above is for information purposes only and intended solely for the person to whom it has been delivered. It is not an offer or solicitation with respect to the purchase of any securities. Any investment decision in connection with any investment vehicle should be based on the information contained in its written offering materials.

Appendix

Mondrian Fixed Income Products

U.S. Investors
September 30, 2018

MONDRIAN INVESTMENT PARTNERS

5.1

Appendix

Mondrian Product and Typical Benchmark	Vehicle			
	Separate Account	Limited Partnership	Collective Investment Trust	Registered Mutual Fund
Global Fixed Income <ul style="list-style-type: none"> • FTSE WGBI • Bloomberg Barclays Global Agg. Bond Index • JPMorgan Global Gov. Bond Index 	Open Minimum: \$50 million	Open Minimum: \$1 million		
International Fixed Income <ul style="list-style-type: none"> • FTSE WGBI ex-US • Bloomberg Barclays Global Agg. ex-USD Bond Index • JPMorgan Global Gov. Bond ex-US Index 	Open Minimum: \$50 million	Open Minimum: \$1 million		Open Mondrian Intl. Govt. FI Fund: LIFNX Minimum: \$1 million
Global Inflation-Linked Bonds <ul style="list-style-type: none"> • Bloomberg Barclays World Government Inflation-Linked Bond Index 	Open Minimum: \$50 million	Open Minimum: \$1 million		
US Aggregate Fixed Income <ul style="list-style-type: none"> • Bloomberg Barclays US Agg. Bond Index 	Open Minimum: \$50 million	Open Minimum: \$1 million		
Global Debt Opportunities <ul style="list-style-type: none"> • 80% FTSE WGBI/ 20% JPMorgan GBI-EM Global Diversified 	Open Minimum: \$50 million	Open Minimum: \$1 million		
Local Currency Emerging Markets Debt <ul style="list-style-type: none"> • JPMorgan GBI-EM Global Diversified 	Open Minimum: \$50 million	Open Minimum: \$1 million		
Hard Currency Emerging Markets Debt <ul style="list-style-type: none"> • JPMorgan EMBI Global Diversified 	Open Minimum: \$50 million	Open Minimum: \$5 million		
Blended Currency Emerging Markets Debt <ul style="list-style-type: none"> • 50% JPMorgan GBI-EM Global Diversified/ 50% JPMorgan EMBI Global Diversified 	Open Minimum: \$50 million	Open Minimum: \$10 million		

FTSE World Government Bond Index was formerly known as Citigroup World Government Bond Index.

Mondrian may, from time to time, reduce and/or increase the minimum amounts listed above. The above is for information purposes only and intended solely for the person to whom it has been delivered. It is not an offer or solicitation with respect to the purchase of any securities. Any investment decision in connection with any investment vehicle should be based on the information contained in its written offering materials.

Emerging Markets Small Cap Product Terms

MONDRIAN INVESTMENT PARTNERS

5.1

	Mondrian Policy	Rationale
Management Fee:	<p>Separate Account: First \$25m: 1.25% Next \$25m: 1.10% Thereafter: 1.00%</p> <p>Limited Partnership: First \$25m: 1.25% Next \$25m: 1.10% Thereafter: 0.95%</p>	Limited capacity product (approximately US\$3 billion)
Minimum Account Size:	<p>Separate Account: \$150 million</p> <p>Limited Partnership: \$5 million</p>	Finite management resources best dedicated to research
Maximum Account Size:	US\$300 million per client or client group	Maximum of 10% of capacity ensuring stability of product
Liquidity:	Limit on flows	<p>To protect investors and assure sufficient liquidity to invest/divest asset flows</p> <p>This may result in delays to investment and a managed withdrawal schedule</p>

Appendix

Key Features of Mondrian Emerging Markets Small Cap Equity Fund, L.P.

The information contained in this document does not constitute an offer or a solicitation of an offer to purchase an interest in Mondrian Emerging Markets Small Cap Equity Fund, L.P. Any such offer, if made, will be made pursuant to a written private placement memorandum. Limited partnership interests in Mondrian Emerging Markets Small Cap Equity Fund, L.P. have not been registered with or approved or disapproved by the Securities and Exchange Commission or any state securities commission. Limited partnership interests are available only to certain eligible purchasers in accordance with applicable federal and state securities laws. The specific facts and circumstances of any potential investor must be considered to determine whether the eligibility criteria are satisfied. Mondrian Emerging Markets Small Cap Equity Fund, L.P. is designed primarily for institutional investors.

Appendix

General Partner	Mondrian Investment Group (U.S.), Inc.	
Investment Manager	Mondrian Investment Partners Limited	
Custodian	The Northern Trust Company	
Tax Preparer and Capital Account Calculator	Deloitte Tax LLP	
Auditor	Deloitte & Touche, LLP	
Objective	Long-Term Total Return	
Minimum Initial Investment	\$5 million	
Minimum Additional Contribution	\$500,000	
Maximum Investment	\$300 million per investor or group of related investors	
Liquidity	Monthly (Limits on flows will be utilized to protect investors and assure sufficient liquidity to invest/divest asset flows. This may result in delays to investment and a managed withdrawal schedule.)	
Notice Required	15th day of month prior to cash activity; 30 days for securities	
Annual Management Fees, Billed Quarterly	Management Fee	
	First \$25 million	1.25%
	Next \$25 million	1.10%
	Thereafter	0.95%
Reporting	Monthly	
Fiscal Year End	December 31	
Other Expenses	Custody and administration expenses up to 0.25% (actual for 2017 was 0.13%) and brokerage costs are paid out of the partnership	
Contribution and Withdrawal Charges	Cash Deposits	0.75% of the amount invested
	Cash Withdrawals	0.75% of the amount redeemed

Important Information

5.1

MONDRIAN INVESTMENT PARTNERS

Term/Issue	Description/Disclosure
Benchmark:	<p>The portfolio's benchmark is the MSCI Emerging Small Cap Index. The MSCI Emerging Small Cap Net Index assumes the reinvestment of dividends after the deduction of withholding tax and approximates the minimum possible dividend re-investment. One cannot invest in an index.</p> <p>Neither MSCI nor any other party involved in or related to compiling, computing or creating the MSCI data makes any express or implied warranties or representations with respect to such data (or the results to be obtained by the use thereof), and all such parties hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability or fitness for a particular purpose with respect to any of such data. Without limiting any of the foregoing, in no event shall MSCI, any of its affiliates or any third party involved in or related to compiling, computing or creating the data have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages. No further distribution or dissemination of the MSCI data is permitted without MSCI's express written consent.</p>
Confidentiality:	This document is confidential and only for the use of the party named on its cover and their advisers. It may not be redistributed or reproduced, in whole or in part.
Current Views:	Views expressed were current as of the date indicated, are subject to change, and may not reflect current views. Views should not be considered a recommendation to buy, hold or sell any security and should not be relied on as research or investment advice.
Forecast "Real" Annualized Market Returns:	These forecast "real" annualized market returns are used solely as a basis for making judgments about country allocation weightings and are not intended to be indications of expected returns.
Forward-Looking Statements:	This document may include forward-looking statements. All statements other than statements of historical facts are forward-looking statements (including words such as "believe," "estimate," "anticipate," "may," "will," "should," "expect"). Although we believe that the expectations reflected in such forward-looking statements are reasonable, we can give no assurance that such expectations will prove to be correct. Various factors could cause actual results or performance to differ materially from those reflected in such forward-looking statements.
Performance Results:	<p>Performance provided for the Mondrian Emerging Markets Small Cap Equity Fund, L.P. and is net of Transaction Expenses and Administrative Expenses but gross of Contribution Charges, Withdrawal Charges and Management Fees (each as described in the Confidential Information Memorandum). Contribution Charges and Withdrawal Charges are automatically deducted from subscription payments and redemption proceeds. Management Fees are paid directly by the participants. Participant returns will be reduced by Contribution Charges, Withdrawal Charges and Management Fees paid.</p> <p>All other performance shown is that of the Mondrian Emerging Markets Small Cap Equity Composite and the Mondrian International Small Cap Equity Composite. These performance results do not reflect deduction of investment advisory and other fees and are net of transaction costs and withholding tax. Investment returns will be reduced accordingly. For example, if a 1.00% advisory fee were deducted quarterly (0.25% each quarter) and your annual return was 10% (approximately 2.411% each quarter) before the deduction of advisory fees would result in an annualized return of approximately 8.904%. Mondrian's investment advisory fees are described in Part II of its Form ADV. A representative US dollar fee schedule for institutional accounts is provided below, although it is expected that from time to time the fee charged will differ from the below schedule depending on the country in which the client is located and the nature, circumstances and requirements of individual clients: (effective April 1, 2017) first US\$25m at 1.25%; the next US\$25m at 1.10%; thereafter at 1.00%.</p> <p>Unless otherwise noted, all returns are in US dollar.</p>
Portfolio Characteristics:	Portfolio Turnover, Market Capitalization, Price to Book Value Ratio, Price to Cash Flow Ratio, Price to Earnings Ratio and Dividend Yield are each based on generally accepted industry standards. All portfolio characteristics are derived by first calculating the characteristics for each security, and then calculating the weighted-average of these values for the portfolio. The details of exact calculations can be provided on request.
Purchasing Power Parity Valuations:	Using proprietary Mondrian models. Further information on these models can be provided on request.
Universe Information:	The information provided in quartile charts are from Callan Associates Inc. and InterSec Research Corp.
US Consumer Price Index:	Data provided through OECD; this data may be up to two months in arrears, depending on the reporting date.

Appendix





AGENDA ITEM SUMMARY

1. **NAME OF ITEM:** Private Equity Review
2. **INITIATED BY:** Kelly A. Martin, Chair
3. **BOARD INFORMATION:** **BOARD ACTION:** X
4. **OUTCOME:** **BOARD POLICY:**
 Primary Outcome: Section 709 - Investments
 Enhance fiscal positioning

5. **BACKGROUND:**

As a follow up to the March and September 2018 asset allocation and private equity discussions, NEPC will provide additional education on private equity investing. In the presentation, NEPC will discuss two alternative asset allocation mixes for the Managed Investment Pool (MIP) as well as benefits and considerations for Fund-of-Fund (FOF) versus Direct Private Equity investing. Additionally, NEPC will present two private equity manager strategies, 1 FOF and 1 Direct, to showcase the types of strategies the System could consider investing in.

Kelly Regan, Jay Roney, and Sean Gill of NEPC will provide a brief review at the December 20, 2018 Investment Committee meeting.

6. **TEXT OF PROPOSED RESOLUTION:**

That the Board of Trustees, acting through the Investment Committee, approves one of two allocation options proposed for the Managed Investment Pool (MIP):

- Option 1 with Private Equity or
- Option 2 without Private Equity.

12/7/2018

PRIVATE EQUITY EDUCATION



UNIVERSITY OF MAINE SYSTEM MANAGED INVESTMENT POOL

December 20, 2018

Jay E. Roney, Partner

Kelly Regan, Senior Consultant



BOSTON | ATLANTA | CHARLOTTE | CHICAGO | DETROIT | LAS VEGAS | PORTLAND | SAN FRANCISCO

PRIVATE EQUITY PROGRAM OVERVIEW

- **The MIP has a 5% target allocation to Private Markets**
 - Includes a 2% target to Private Equity and a 3% target to Private Real Assets
 - Allocation as of October 31, 2018 is 1.4% and includes a commitment to two managers (Landmark and John Hancock)
- **NEPC provided an alternative asset allocation to bring the private markets target to 15%**
 - An initial Pacing Plan suggests an initial ~\$12 million in annual commitments in order to build out the program to the 15% target over ~7 years

The purpose of this review is to address two core questions:

1. Should the MIP have a private equity program?

- Will a 15% allocation to Private Equity be impactful?
- Does the System have the resources (i.e. too small?) to effectively implement a PE program?

2. How should the System implement a Private Equity Program?

- Direct Fund Investments
 - Fund of Fund Investments
 - Blended approach
- **The System's implementation approach should be influenced by the following factors**
 - Willingness of the Committee to dedicate additional time to source/vet ideas
 - Bandwidth of Staff to manage the back office components
 - Staff will need to complete documentation for any new investments and handle ongoing capital calls
 - Willingness to take on more complexity and illiquidity



THE CASE FOR PRIVATE EQUITY

NEPC, LLC

BENEFITS AND CONSIDERATIONS

Investing in private equity has many benefits and considerations as part of a larger investment portfolio

6.1

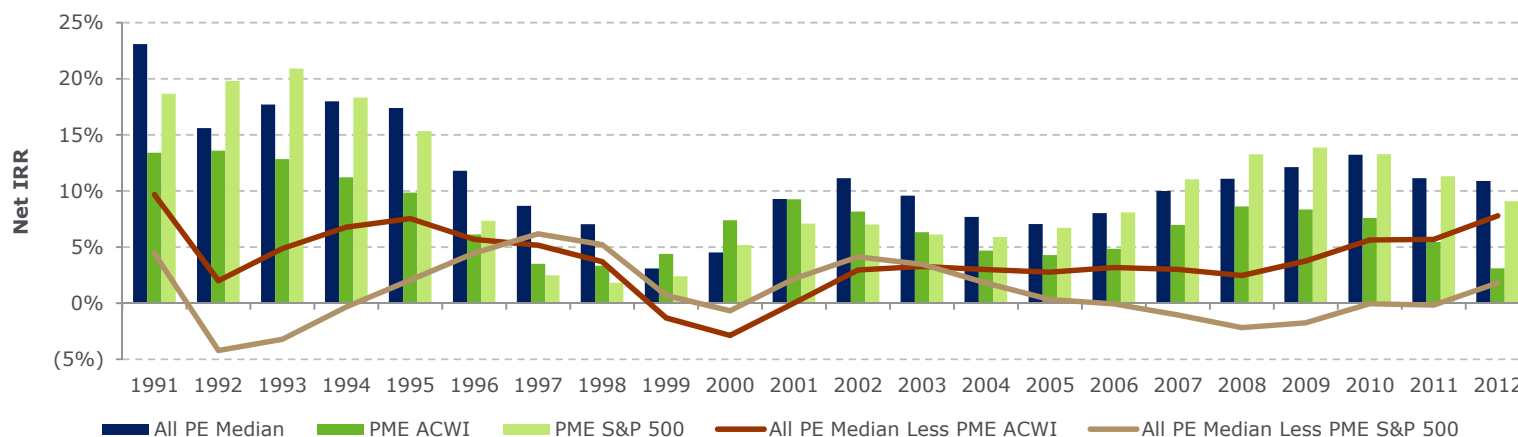
Private Equity Benefits	Private Equity Considerations
<ul style="list-style-type: none"> • Historically low correlation to stocks and bonds and can provide correlation benefits to the overall portfolio • Offers a spectrum of investment strategies (providing different return and risk expectations) that can be customized to meet different objectives • Potential to enhance overall portfolio returns • Broader universe of impact or mission aligned investments 	<ul style="list-style-type: none"> • Investments are generally illiquid • Limited and imperfect benchmarks exist to gauge investment performance • Valuations are fundamentally based on underlying transaction markets which have limited transparency and valuations can lag real-time market valuations • Investments outside of the base currency are affected by currency movements



OUTPERFORMANCE OF PRIVATE EQUITY

As of December 31, 2016	1 Year	3 Years	5 Years	10 Years
US Private Equity Index ¹	3.2%	11.6%	12.0%	10.7%
S&P 500	1.8%	11.8%	11.6%	7.0%
MSCI ACWI ex US	-9.2%	0.0%	0.3%	1.9%
MSCI EAFE	-8.3%	2.2%	2.3%	1.8%

6.1



- **Over most vintage years, the median private equity fund outperformed the PME (ACWI)**
 - Reminder: PME is calculated by stating any time cash is drawn down and put in a private equity investment, had you instead invested that cash in the public market equivalent (here, ACWI), what would have been the result
- **Post GFC vintages seem anomalous – strong PME (ACWI) performance, but seem not to be keeping up with S&P 500**
 - Wide spread between US large cap and global equities

¹ The Cambridge Associates US Private Equity Index is a horizon calculation based on data from 1,270 US private equity funds formed between 1986 and 2015



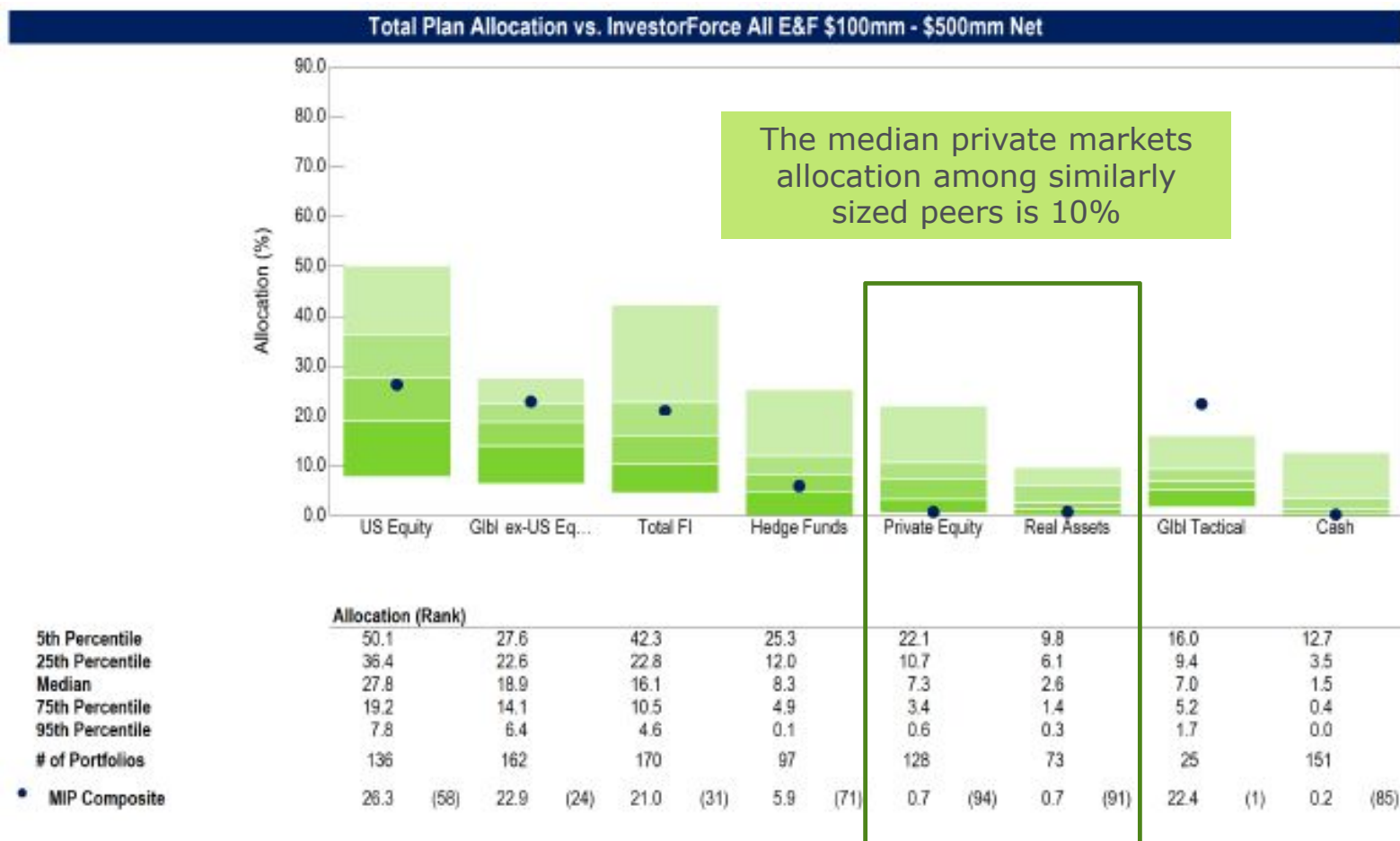
SHOULD THE SYSTEM HAVE A PRIVATE EQUITY PROGRAM?

6.1

- **If the System is going to pursue a private equity program, it has to assume that the program will be able to exceed public market returns by 3%-5% over the long term**
 - Historical analysis supports the potential for outperformance
 - Outperformance will be driven by strategy and manager selection
 - **If the private equity program can add 3% over public markets, the impact on the top line would be 45 bps**
 - $3\% \times 15\% = 0.45\%$
 - $0.45\% = \text{Additional } \1.4M per year
 - **If the private equity program can add 5% over public markets, the impact on the top line would be 75 bps**
 - $5\% \times 15\% = 0.75\%$
 - $0.75\% = \text{Additional } \2.4M per year
-
- **Is the extra Committee and Staff time worth ~\$2M to the portfolio on an annual basis?**
 - While small % wise, the impact over time could be significant
 - **Is the extra complexity worth ~\$2m to the portfolio on an annual basis**
 - Complexity may be mitigated through a FOF approach and/or additional help in managing capital calls
 - **Is the illiquidity worth ~\$2m to the portfolio on an annual basis**
 - Over 93% of the MIP has monthly or better liquidity
 - Ability to take on illiquidity is an advantage versus some other market participants



PEER ALLOCATIONS TO PRIVATE EQUITY



6.1



As of September 30, 2018

MIP ASSET ALLOCATION ANALYSIS

	Policy Targets	Current Allocation (7/31/18)	Option 1 w/ PE	Option 2 w/o PE	Endowment Peers
Cash	0%	0%	0%	0%	0%
Large Cap Equities	16%	19%	16%	18%	16%
Small/Mid Cap Equities	6%	7%	6%	7%	6%
Int'l Equities (Unhedged)	13%	13%	13%	13%	16%
Int'l Sm Cap Equities (Unhedged)	4%	4%	4%	4%	0%
Emerging Int'l Equities	4%	4%	4%	4%	4%
Emerging Int'l Sm Cap Equities	4%	3%	4%	4%	4%
Private Equity	2%	1%	10%	0%	11%
Total Equity	47%	49%	55%	49%	57%
Core Bonds	5%	5%	5%	6%	6%
TIPS	8%	8%	8%	8%	5%
Bank Loans	5%	5%	5%	5%	0%
Absolute Return Fixed Income	3%	3%	3%	3%	5%
Total Fixed Income	21%	21%	21%	22%	16%
Private Real Assets	3%	1%	5%	0%	4%
Total Real Assets	3%	1%	5%	0%	4%
Global Asset Allocation	23%	23%	13%	23%	10%
Hedge Funds - Long/Short	6%	6%	6%	6%	7%
Hedge Funds - Credit	0%	0%	0%	0%	7%
Total Multi Asset	29%	29%	19%	29%	23%
Expected Return 5-7 yrs	6.2%	6.1%	6.5%	6.2%	6.5%
Expected Return 30 yrs	7.3%	7.2%	7.6%	7.3%	7.6%
Standard Dev	12.2%	12.4%	12.8%	12.5%	13.1%
Sharpe Ratio (5-7 years)	0.35	0.33	0.35	0.34	0.35

Median allocation of Greenwich Associates peer group is 15%

Option 1 with Private Equity

The mix with PE proposes a total 15% allocation to private markets (PE and RE).

The resulting portfolio improves portfolio return and is more in line with the allocation and risk/return of peers.

Option 1 without Private Equity

If the Committee does not move forward with private equity, NEPC recommends bringing the private market targets to 0% and will review new asset allocation targets with 2019 capital market assumptions.

The resulting portfolio w/o private equity may be similar in terms of return and risk to the current allocation.



Note: Endowment Peer allocation sourced from Greenwich Associates 2017 U.S. Institutional Investors Study, some assumptions made by NEPC in terms of US, International and Fixed Income allocations

DOES THE SYSTEM HAVE THE RESOURCES?

- **The System is staffed similarly compared to peers of the same size**
 - No dedicated investment professionals
 - VP of Finance typically allocates time to investments
 - Larger endowments have 2-10 dedicated investment professionals
- **Committee is well versed in private equity**
 - System Committee has non-voting members in the finance industry
- **NEPC has 14 dedicated private market professionals**
 - Team underwrites ~50 funds per year
 - Majority of NEPC's clients have active Private Equity programs
- **Peer programs allocate roughly 10-15% to Private Equity**
 - Some use a blended approach (e.g. Fund of Funds and Directs) and others lean towards Direct funds
- **Is the System reasonably equipped to pursue a Private Equity program?**
 - VP of Finance would need to fill out paperwork; Likely 2-3 direct funds or 1-2 fund of funds per year
 - VP of Finance would need to handle capital calls
 - Committee would have to convene occasional conference calls to vet funds with shorter timelines; Likely 1-2 times per year outside of normal meetings
 - System would need to commit to the discipline of Private Equity investing (i.e. invest in each vintage year; It's hard to turn around once you start a PE program!)

6.1



IMPLEMENTATION OPTIONS

NEPC, LLC

IMPLEMENTATION OPTIONS

- **Fund of Funds**

- Use one or a small number of fund of funds (fund managers who create a portfolio of PE fund managers)
- Provides for easy implementation of a widely diversified portfolio
 - Investments across strategies and geographies
 - Investments across multiple investment managers
 - Low level of internal administration
 - Keeps number of investment manager relationships that need to be monitored to just a few
- Performance can be muted by an additional layer of fees (both management and performance fees) and by a potentially over diversified portfolio

- **Direct Funds**

- Invest in 2-3 direct private equity funds per year, over time creating a portfolio of 20-30 funds that are actively investing on your behalf
- To manage risk, commitments should be spread across several strategies and not concentrated with any one investment manager
- Provides opportunity to create a diversified but more concentrated portfolio with the goal of capturing PE beta and generating alpha
- Creates a larger administrative responsibility for staff

- **Blend of all of the above**

- A combination of the above can be used to balance return objectives and administrative burden
- To manage risk, commitments should be spread across several strategies and not concentrated with any one investment manager
- Provides opportunity to create a diversified portfolio with the goal of capturing PE beta and generating alpha
- Creates a modest administrative responsibility for staff



DIRECT INVESTMENT VS. OPPORTUNISTIC VS. FUND-OF-FUNDS TIMELINES

Timeline in Years												
1	2	3	4	5	6	7	8	9	10	11	12	13

6.1

Direct Investment:



Fund-of-Funds Investment:



Fund-of-Funds Invest into Multiple Direct Funds over a 3 year period



Timeline is subject to extension in the liquidating phase

PRIVATE EQUITY INVESTMENT ALTERNATIVES

6.1

Fund-of-Funds

Typical Investment Life

- 13 years, subject to extensions

Typical Fee Structure

- Double layer of fees
- Fund-of-Funds Management Fee: ~0.75% of commitments per year
- FOF Carried Interest Ranges:
 - Primaries – 0%-9%
 - Secondaries – 10%-15%
 - Co-invests – 15%-20%
- Direct Fund Management Fees (same as below)
- Direct Fund Carried Interest (same as below)

Estimated Fees

- FOF management fees paid over the term would total ~4% of committed capital for the fund-of-funds layer, or ~\$5 million dollars over the next 10 years (on ~\$138 million of commitments over that time period)
- In addition, each underlying direct fund investment would be subject to fees (see below)
- Carried interest would be paid based on performance

Return Expectations

- Generalist FOF
- 12%-16% net IRR
 - 1.5-1.7x net TVPI
- Specialized FOF
- 15%-20% net IRR
 - 1.7-2.0x net TVPI

Direct Investing

- 10 years, subject to extensions

- Direct Fund Management Fees:
 - 1.5%-2.5% of commitments per year during investment period (usually 5-6 years)
 - 1.5%-2.5% of invested capital thereafter
- Direct Fund Carried Interest: 20% over hurdle return

- Direct fund management fees paid over the term would total ~9% of committed capital, or ~\$12 million dollars over the next 10 years (on ~\$138 million of commitments over that time period)
- Carried interest would be paid based on performance

- Buyouts, Growth Equity & Venture Capital
- 15%-20% net IRR
 - 1.7-2.0x net TVPI

- Distressed & Secondaries
- 14%-18% net IRR
 - 1.5-1.7x net TVPI

- Mezzanine & Direct Lending
- 10%-13% net IRR
 - 1.3-1.4x net TVPI



POTENTIAL OPTIONS

	Fund of Funds	Direct	Blend
Number of Investments in 10 years	7-12	20-30	10-20
Number of Manager Relationships	1-3	15-20	5-15
Time To Reach Target	7-9 years	6-7 years	7-9 years
Transactions Per Year At Target	50	110	70

6.1

- **The ranges under each scenario can vary depending upon the sizing of individual investments (e.g., few transactions at larger sizes) and the level of diversification deemed appropriate**
 - Under each scenario you could be more concentrated if desired based on the ability to handle individual manager risk
- **Pacing plans are also reviewed every one to two years so adjustments can be related to:**
 - Market opportunities, the rate of change in the asset portfolio, the rate of distributions and calls
- **The number of transaction per year is an rough estimate of the number of capital calls and distributions to be processed per year**



ESTIMATED FEE SUMMARY

Estimated Fees over a 10-year time horizon*	Fund of Funds Approach	Direct Fund Approach
Fees to FOF Manager(s)**	\$5m	-
Fees to Direct Managers***	\$12m	\$12m
NEPC Advisory Fees ¹	Covered in existing agreement	\$500k in addition to existing fee
NEPC Discretionary Fees ²	n/a	\$1m in addition to existing fee

¹This fee includes an annual pacing plan analysis for the private equity portfolio, strategy construction and manager **recommendation** of NEPC preferred private equity funds. Also includes providing quarterly reporting on the Private Markets Program. Final decisions and implementation are the System's responsibility.

²This fee includes an annual pacing plan analysis for the private equity portfolio, strategy construction, and manager **selection** of NEPC preferred private equity funds for the portfolio by NEPC's Discretionary Committee. May not include all services generally provided by FOF Managers but includes all steps NEPC deems reasonably necessary for investment, including: completion of Partnership Agreements and other required documents; fund legal reviews conducted by NEPC on behalf of the System; managing capital calls and distributions for the System; providing quarterly reporting on the entire Private Markets Program; and travel, postage and related expenses related to discretionary services.

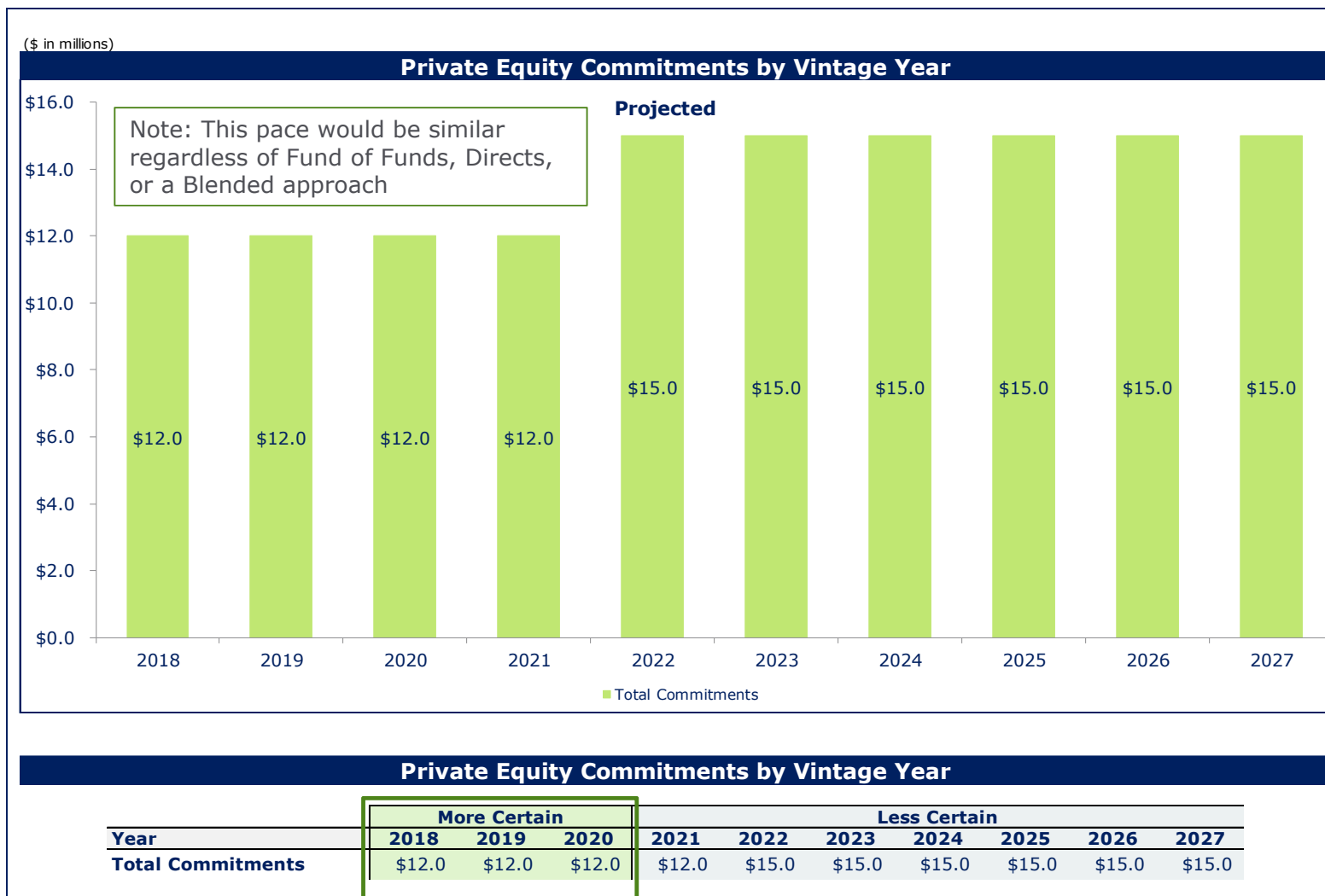
*Assumes the number of funds/managers listed on page 14, the annual commitments on page 16. Does not include an estimate for performance based fees.

** Assumes a 0.75% annual management fee.

*** Assumes a 2.00% annual management fee for the investment period (6 years).



COMMITMENT PACE GOING FORWARD



6.1



CONSIDERATION

NEPC, LLC

SUMMARY THOUGHTS

- **The process of building a private equity program is time consuming and will take a number of years to build**
 - There needs to be a commitment to stay the course and be disciplined over the long term
- **Private equity portfolios behave differently based on how long they have been in place**
 - The J-curve impact is real and can be mitigated to some extent; however, a more seasoned portfolio will likely outperform a less seasoned portfolio
- **The pace of building a program will be impacted by the options chosen**
 - Fund of funds draw capital more slowly, often over five years
 - Direct strategies will draw capital a bit faster, over three to four years
- **Private Equity can add value to the top line, but depends on the allocation**
- **The System should consider if the potential value of a private markets portfolio outweighs the additional operational burden and time commitment**
 - Fund of Fund approach will mitigate the level of complexity and administrative burden at higher fees and potentially lower returns
 - Direct approach has the potential for higher returns but with more complexity and time commitment, but with lower fees
 - A blended approach may alleviate some of the points above

6.1



NEXT STEPS

- **If the System decides to move forward with a private equity allocation, defining a sourcing/vetting process will be important**
 - All Stakeholders should feel compelled to highlight opportunities
 - NEPC can provide a summary analysis and opinion of each opportunity
 - NEPC will share its private equity pipeline report with the Committee on a regular basis
- **The Committee or a Sub-Committee should act as an initial vetting ground for ideas that are surfaced**
 - Sub-Committee, in partnership with NEPC, would likely be more effective and nimble in screening opportunities with short decision making timelines
- **Current Fund of Fund opportunities:**
 - Harbourvest – Diversified US or International focused fund
 - Mesirow – Diversified North American fund
 - Private Advisors - Small buyout fund with select growth equity and special situations exposure
 - LGT Capital Partners – European venture capital and growth equity fund
- **Current Direct opportunities:**
 - Glendower – North American secondaries fund
 - AEA – North American buyout fund
 - Brookfield – Global special situations fund with Real Asset focus
 - Baring – Asian buyout fund

6.1



NEPC PRIVATE MARKET VIEWS

NEPC, LLC

NEPC MARKET VIEWS

Private Equity

US Large & Mega Buyout	US Mid & Small Buyout	Special Situations	European Buyout	US Early Stage Venture	US Mid & Late Stage Venture
US Growth Equity	European Venture	European Growth Equity	Secondaries	Co-Investment	Asia

Private Credit

Distressed Debt	Opportunistic Credit	US Direct Lending	European Direct Lending	Asia Direct Lending	Niche Lending	Mezzanine
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Positive

Neutral

Negative

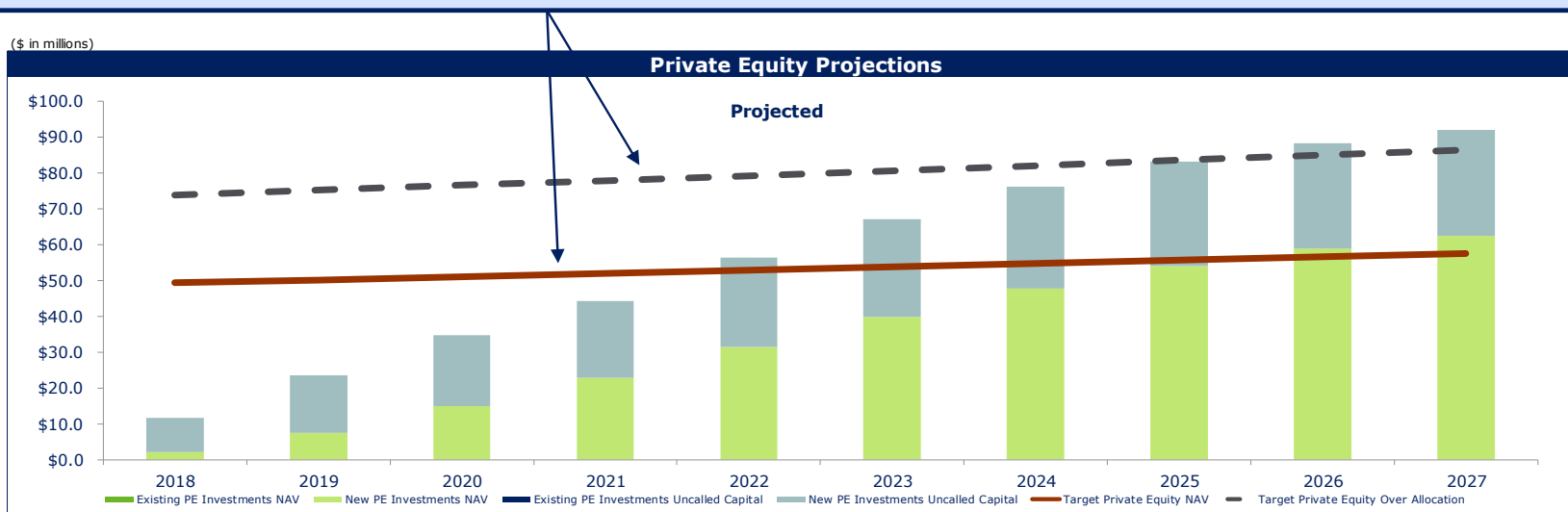


APPENDIX

NEPC, LLC

FUND PROJECTIONS

- **Red line** is the 10% target Private Markets allocation based on projected plan total NAV; **Black dashed line** is the 1.5x over-commitment.
- Goal is to keep private markets NAV (**green bar**) plus uncalled capital commitments (**blue bar**), between red line and black dashed line.



Year	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Private Equity NAV	\$2.2	\$7.5	\$15.0	\$22.8	\$31.6	\$39.8	\$47.7	\$54.0	\$58.8	\$62.4
Uncalled Capital Commitments	\$9.6	\$16.1	\$19.8	\$21.5	\$24.9	\$27.2	\$28.4	\$29.0	\$29.3	\$29.5
Private Equity NAV + Uncalled Capital Commitments	\$11.8	\$23.6	\$34.8	\$44.2	\$56.4	\$67.0	\$76.2	\$83.0	\$88.1	\$91.9
Target Private Equity NAV	\$49.3	\$50.1	\$51.0	\$51.9	\$52.8	\$53.7	\$54.7	\$55.6	\$56.6	\$57.6
Over-Commitment Pace	1.5x	1.5x	1.5x	1.5x	1.5x	1.5x	1.5x	1.5x	1.5x	1.5x
Target Private Equity Over Allocation	\$73.9	\$75.2	\$76.5	\$77.8	\$79.2	\$80.6	\$82.0	\$83.4	\$84.9	\$86.4
Beginning Program NAV	\$326.0	\$328.4	\$334.1	\$340.0	\$345.9	\$352.0	\$358.1	\$364.4	\$370.8	\$377.3
Yearly Return	\$2.4	\$5.7	\$5.8	\$5.9	\$6.1	\$6.2	\$6.3	\$6.4	\$6.5	\$6.6
Ending Program NAV	\$328.4	\$334.1	\$340.0	\$345.9	\$352.0	\$358.1	\$364.4	\$370.8	\$377.3	\$383.9
Private Equity Percent of Total Program Assets										
Private Equity NAV	0.7%	2.3%	4.4%	6.6%	9.0%	11.1%	13.1%	14.6%	15.6%	16.3%
Private Equity Uncalled Capital Commitments	2.9%	4.8%	5.8%	6.2%	7.1%	7.6%	7.8%	7.8%	7.8%	7.7%
NAV + Uncalled Capital Commitments	3.6%	7.1%	10.2%	12.8%	16.0%	18.7%	20.9%	22.4%	23.4%	24.0%
Target Private Equity Allocation	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%



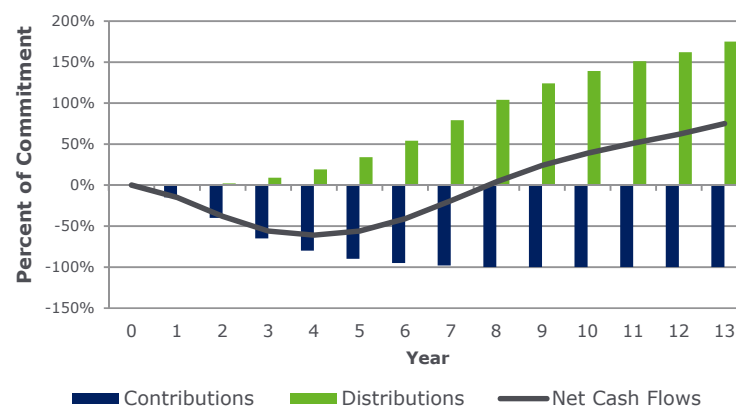
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THE “J-CURVE” OF PRIVATE EQUITY CASH FLOWS AND RETURNS

- **Cash flow pattern of investing in private equity**

- **Years 1-3 returns are negative**, little income is generated, management fees are collected on committed (not invested) base, business plans established but improvements not yet impacting valuations
- **Years 3-5 returns flatten out and gradually turn positive** as notable improvement in company financials justify valuation increases, debt refinancing may generate distributions and some income is received
- **Years 5-10 returns spike** as many assets are sold and accumulated increases in value are reflected, and income is received
- **Years 11-13 flatten out** as residual assets are liquidated
- **All years combined** leads to what has been termed the “J-Curve.”

Example of Cumulative Cash Flows from One PE Fund



Example of Market Value Exposure and Net IRR from One PE Fund



MANAGER RESEARCH

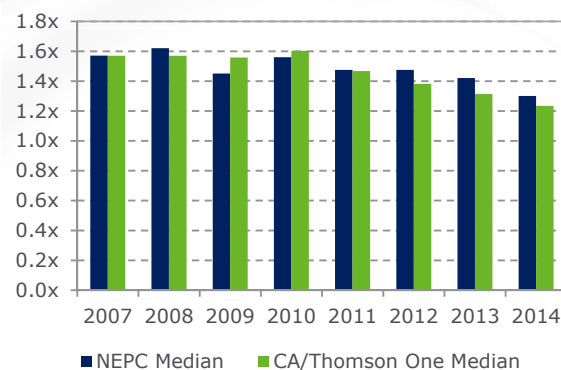
PRIVATE EQUITY RESULTS

Our private equity FPL funds have performed well when compared to industry benchmark median returns

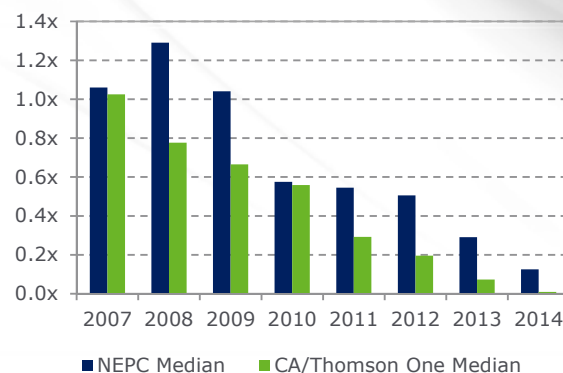
TVPI: Outperformed median in 5 of 8 years

DPI: Outperformed median in 8 of 8 years

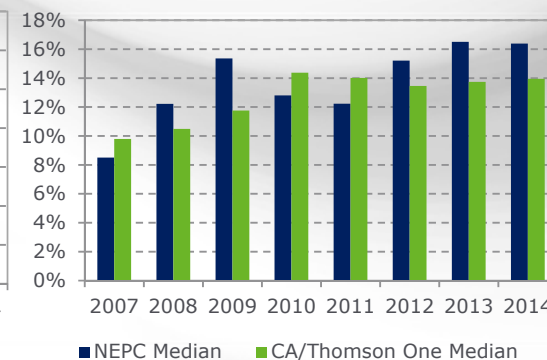
IRR: Outperformed median in 5 of 8 years



**NET TOTAL VALUE TO PAID-IN
COMPARISON**



**NET DISTRIBUTED TO PAID-IN
COMPARISON**



**NET INTERNAL RATE OF RETURN
COMPARISON**

Note: NEPC FPL preferred fund returns were compared against the global private equity data sets from Thomson One/Cambridge Associates. Performance is as of December 31, 2017. Amounts are net of fees and expenses. See Benchmarking Methodology and Additional Disclosures for additional information. Past performance is no guarantee of future results.

PACING PLAN DISCLAIMERS

- **NEPC's private markets pacing analysis projects a potential level of future assets and cash flows for a single scenario based on a series of assumptions. This analysis is intended to help estimate future exposure levels. It is not a guarantee of future cash flows, appreciation or returns.**
- **The timing and amounts of projected future cash flows and market values of investments could vary significantly from the amounts projected in this pacing analysis due to manager-specific and industry-wide macroeconomic factors.**
- **Estimates of projected cash flows and market values for existing private markets commitments were made at the Fund level and do not incorporate any underlying portfolio company projections or analysis.**
- **The opinions presented herein represent the good faith views of NEPC as of the date of this report and are subject to change at any time.**
- **Data used to prepare this report was obtained directly from the investment managers and other third parties. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.**
- **This report may contain confidential or proprietary information and is intended only for the designated recipient(s). If you are not a designated recipient, you may not copy or distribute this document.**

6.1



ALTERNATIVE INVESTMENT DISCLOSURES

It is important that investors understand the following characteristics of non-traditional investment strategies including hedge funds and private equity:

1. Performance can be volatile and investors could lose all or a substantial portion of their investment
2. Leverage and other speculative practices may increase the risk of loss
3. Past performance may be revised due to the revaluation of investments
4. These investments can be illiquid, and investors may be subject to lock-ups or lengthy redemption terms
5. A secondary market may not be available for all funds, and any sales that occur may take place at a discount to value
6. These funds are not subject to the same regulatory requirements as registered investment vehicles
7. Managers may not be required to provide periodic pricing or valuation information to investors
8. These funds may have complex tax structures and delays in distributing important tax information
9. These funds often charge high fees
10. Investment agreements often give the manager authority to trade in securities, markets or currencies that are not within the manager's realm of expertise or contemplated investment strategy

6.1





AGENDA ITEM SUMMARY

1. **NAME OF ITEM:** FY2020 Endowment Spending Rate
2. **INITIATED BY:** Kelly A. Martin, Chair
3. **BOARD INFORMATION:** **BOARD ACTION:** X
4. **OUTCOME:** **BOARD POLICY:**
 Primary Outcome: Section 709 - Investments
 Enhance fiscal positioning
5. **BACKGROUND:**

The endowment spending rate has been 4.5% since FY2013, being adjusted down from 4.75% in FY2012 and 5% in FY2011. These adjustments were made to ensure the sustainability of the long-term spending ability of the endowment funds.

The current FY2019 **spending rate** of **4.5%** (which includes an internal management fee, where charged) is currently estimated to generate a distribution of \$5.4 million for the year, including \$4.3 million for endowed spending and \$1.1 million for internal management fees. The FY2019 **effective spending rate** for UMS is **3.4%**.

Effective Spending Rate Defined: The distribution for spending divided by the beginning market value (endowment value on or around the beginning of the fiscal year), net of any fees or expenses for managing and administering the endowment. The distribution for spending is the dollar amount withdrawn from the endowment to support the institution's mission.

NACUBO Commonfund Study of Endowments: Annually, the National Association of College and University Business Officers (NACUBO) and Commonfund Institute report on endowment performance and management practices in higher education. Their most recent 2017 report (see enclosed pages 47 and 48 from that report), shows the average effective spending rate for their 809 participants to be 4.4% up from 4.3% in the prior

year. For the category based on assets of \$101-500 million, the effective spending rate is 4.5% up from 4.3% in the prior year. For the year of this study (2017), the UMS effective spending rate was 3.8% down from 4.2% in the prior year.

NACUBO and TIAA announced in February 2018 that they were joining forces to create the next evolution of the annual study of college and university endowments with the first report expected to be issued in early 2019. The study's previous sponsor, Commonfund, will support NACUBO and TIAA with complementary research.

NEPC Rate of Return Assumption: NEPC reviewed return expectations for the UMS Managed Investment Pool in June 2018. Their analysis, based on market returns, suggests a return expectation in the range of 6.2% to 7.3% (down from 6.5% to 7.5%). This range does not include investment management fees or assumptions for active manager out-performance. As such, they can substantiate a return assumption of **7.5%** as an expected return, noting significant volatility around this each year. Their enclosed letter provides further detail of their analysis.

FY2020 Endowment Distribution Rate per Share and Estimated Budget: Using the endowment spending rate for FY2020 that the Investment Committee approves at this December 20th meeting, Management will provide updated estimated distribution amounts and distribution rates per share to the Committee at its next meeting.

Distribution Rate Calculation: The distribution formula uses a 3-year rolling endowment pool market value average to which a percentage spending rate is applied. The resulting distribution amount is then divided by the total number of shares in the endowment pool to arrive at the distribution rate per share. The UMS Accounting Department uses the approved rate per share in the monthly allocation process whereby each endowment receives a distribution based on the respective number of shares held. UMS does not distribute funds for underwater endowments during the following fiscal year.

6. TEXT OF PROPOSED RESOLUTION:

That the Board of Trustees, acting through the Investment Committee, approve an endowment spending rate of 4.5% for FY2020.

Chapter 5

Fund Flows

SPENDING

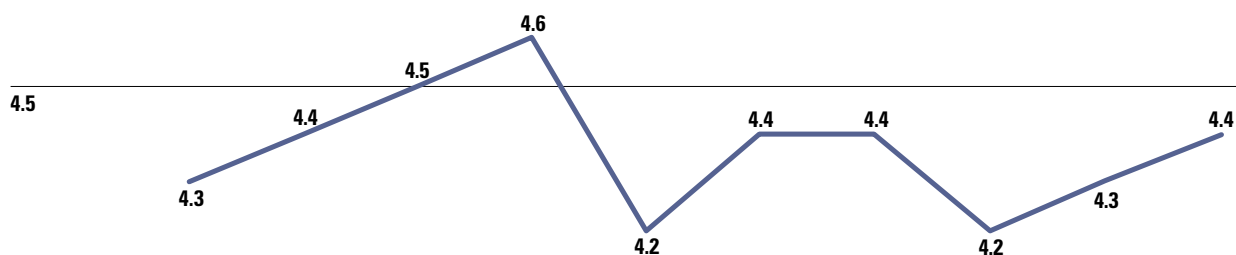
Study participants' average annual effective spending rate this year was 4.4 percent, an increase from last year's 4.3 percent and 4.2 percent reported for FY2015. Since

there is a lag effect on the moving average method used by the great majority of colleges and universities in calculating their spending, the increase in the effective spending rate may be attributable to lower returns in fiscal years 2015 and 2016.

Figure 5.1 Average Annual Effective Spending Rates* for Total Institutions for Fiscal Years 2008-2017

numbers in percent (%)

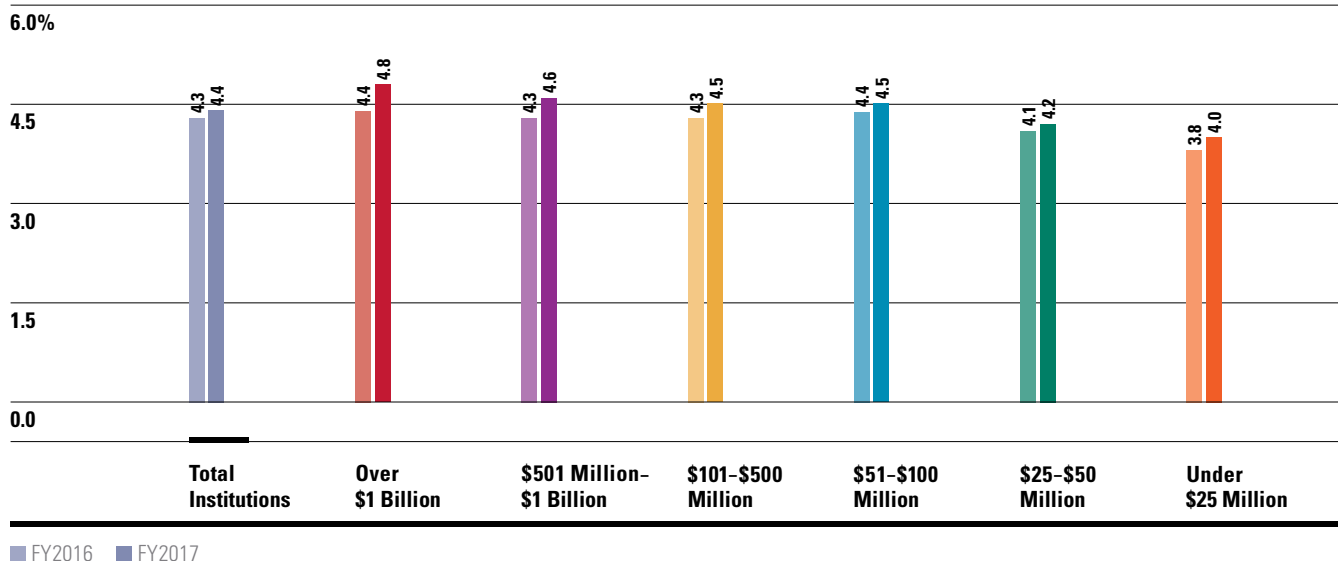
5.0%



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total Institutions	772	842	850	823	831	835	832	812	805	809

*equal-weighted

Source: Fiscal Year 2008, NACUBO Endowment Study

Figure 5.2 Average Annual Effective Spending Rates for Fiscal Years 2016 and 2017*numbers in percent (%)*

When data are viewed by size of institution, the highest effective spending rate, at 4.8 percent, was found among institutions with assets over \$1 billion, which also shared the highest spending rate in FY2016, at 4.4 percent. Institutions with assets between \$501 million and \$1 billion followed, at an effective spending rate of 4.6 percent, up from last year's 4.3 percent. Institutions with assets between \$101 and \$500 million and those with assets between \$51 and \$100 million both reported a 4.5 percent rate. The spending rate was lower among the smaller institutions—at 4.2 percent for institutions with assets between \$25 and \$50 million and 4.0 percent for those with assets under \$25 million.

When the data are viewed by type of institution, private institutions again reported the highest average effective spending rate, at 4.6 percent, up from 4.4 percent in FY2016. "All publics," public institutions and IRFs all reported a 4.1 percent annual effective spending rate. Combined endowment/foundations reported a rate of 4.2 percent.

7.1



To: Tracy Elliott, Director of Finance and Controller

From: Jay E. Roney, CTP, Partner and Kelly Regan, Senior Consultant

Date: June 20, 2018

Subject: Rate of Return Assumption – FY 2018

7.2

NEPC would like to update our return expectations for the **University of Maine System Managed Investment Pool**. NEPC's analysis suggests that a return expectation in the range of 6.20% to 7.30% is reasonable. Based upon data highlighted below, we can substantiate a return assumption of 7.50%. This memo provides background and support for this recommendation.

NEPC Assumptions

The NEPC Asset Allocation Committee is responsible for the development of our capital market assumptions. The Committee is drawn from a cross section of NEPC's senior personnel representing both the research and consulting functions of the firm, with expertise covering both public and private markets. Prior to publication, the assumptions are reviewed and approved by the Partner's Research Committee, a separate group composed of NEPC Partners responsible for oversight of the firm's research efforts.

The Asset Allocation Committee publishes two sets of capital market return expectations, a longer-term (30 year) and a shorter-term (5-to-7 year) set. While the long-term time horizon for the Fund would argue for using the 30 year assumptions, the Fund's current asset allocation policy is not likely to persist beyond the shorter-term time frame. We therefore believe that both assumptions should be considered when setting a long-term return assumption.

Many asset class returns are fairly consistent over a long time horizon, thus, the historical record provides the basis for our longer term expectations. Asset class performance can be much more volatile on a shorter-term basis. In order to develop our 5-7 year forward-looking assumptions, we complement our historical analysis with an in-depth look at the current market environment. This forward-looking analysis is based on current market pricing and a building blocks approach. The focus here is on key economic observations (inflation, real growth, valuation measures) and structural themes that can have meaningful effects on asset class performance.

Below please find the 2018 5-7 year and 30 year expected market returns for the University of Maine System's Managed Investment Pool. Please note that there will be significant volatility around these expected returns each year:

255 State Street | Boston, MA 02109 | TEL: 617.374.1300 | www.nepc.com

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Asset Class	Policy Weight	NEPC 5-7 Year 2018	NEPC 30 Year 2018
Large Cap Equities	16.0%	5.25%	7.50%
Small/Mid Cap Equities	6.0%	5.75%	7.75%
International Equities	12.5%	7.50%	7.75%
International Small Cap Equities	3.5%	7.75%	8.00%
Emerging Market Equities	3.5%	9.00%	9.25%
Emerging Small Cap Market Equities	3.5%	9.25%	9.50%
Domestic Core Bonds	5.0%	2.75%	3.75%
TIPS	8.0%	3.25%	3.75%
Bank Loans	5.0%	4.50%	5.50%
Absolute Return Fixed Income	3.0%	3.50%	4.39%
Global Asset Allocation	23.0%	5.80%	6.60%
Real Assets (Timber)	3.0%	6.00%	6.25%
Private Equity (Core)	2.0%	8.00%	9.50%
Hedge Funds	6.0%	6.25%	7.25%
TOTAL	100.0%	6.20%	7.30%

(Note: Consistent with past years, the total fund return is not the weighted average of the asset class returns above. Returns above are all geometric average returns. The total fund return is calculated using the arithmetic average return, volatility and correlation of each asset class)

As you can see, our return expectations range from 6.20% to 7.30%. Our assumptions are based on market returns. On that basis, they do not include investment management fees or assumptions for active manager out-performance, or alpha. Each manager structure is different, but NEPC believes in active management and our clients have beaten index returns for most years in most asset classes. Although the long term results of the Managed Investment Pool do not indicate alpha generation, we do not expect this to persist. The last 10 years since the financial crisis has supported risk assets and not investments focused on value, growth at a reasonable price, or diversification as in the Managed Investment Pool.

As a result of these inputs, we can substantiate a return assumption of 7.50% as an expected return, noting that there will be significant volatility around this expected return each year.

Please call us at (617) 374-1300 with any questions.



AGENDA ITEM SUMMARY

1. **NAME OF ITEM:** Defined Contribution Plan – Quarterly Review
2. **INITIATED BY:** Kelly A. Martin, Chair
3. **BOARD INFORMATION:** X **BOARD ACTION:**
4. **OUTCOME:** **BOARD POLICY:**
Primary Outcome: Section 709 - Investments
Enhance fiscal positioning
5. **BACKGROUND:**

Michael Pratico, Senior Vice President and Barry Schmitt, Senior Vice President, with CAPTRUST Financial Advisors, will provide a quarterly update regarding the Defined Contribution Plan at the December 20, 2018 Investment Committee meeting.

12/7/2018

UNIVERSITY OF MAINE SYSTEM
3RD QUARTER, 2018

8.1

**DEFINED CONTRIBUTION
QUARTERLY REVIEW**

CAPTRUST
4208 Six Forks Road, Suite 1700
Raleigh, NC 27609

Our mission is to enrich the lives of our clients, colleagues and communities through sound financial advice, integrity, and a commitment to service beyond expectation.

IN THIS REVIEW

Period Ending 9.30.18 | **Q3 18**

University of Maine System

University of Maine System Defined Contribution Plans

3rd Quarter, 2018 Quarterly Review

prepared by:

Michael S. Pratico

Senior Vice President | Financial Advisor

Barron V. Schmitt

Senior Vice President | Financial Advisor

Section 1

RETIREMENT INDUSTRY UPDATES

Section 2

MARKET COMMENTARY AND REVIEW

Section 3

PLAN INVESTMENT REVIEW

Section 4

FUND FACT SHEETS

Appendix

8.1

SECTION 1: RETIREMENT INDUSTRY UPDATES

Period Ending 9.30.18 | Q3 18

University of Maine System

SECTION 1: RETIREMENT INDUSTRY UPDATES

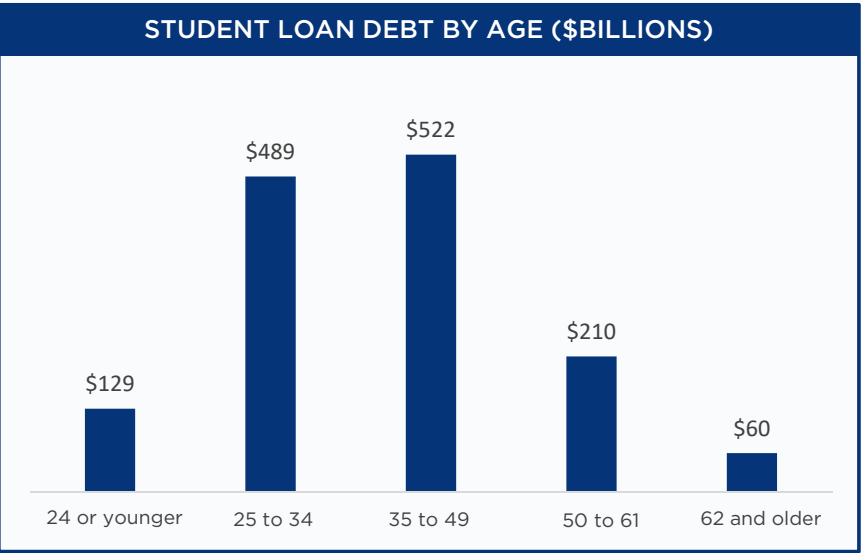
Industry Updates.....

8.1

RETIREMENT ACCOUNTS AND STUDENT LOAN DEBT—EASING THE BURDEN

With more than \$1.5 trillion of outstanding student debt spread across 44 million borrowers, student loan debt is a significant drain on many employees' finances. This is not just an issue for the young; more than 7 million borrowers are age 50 or older. Given that these debt measures continue to grow, many employers are exploring ways to assist their employees with managing their debt.

Current solutions include tuition reimbursement programs, student loan services, and even employer payments to student loans. However, a recent IRS private letter ruling (PLR) has pushed a unique approach to student loan assistance to the forefront of retirement plan discussions.



Source: U.S. Department of Education

WHAT'S NEW?

The PLR created a path that would allow employers to tie their retirement plan contributions to loan repayments made by employees. The IRS indicated that, under the construct in the PLR, requiring student loan repayments to receive an employer contribution would not be considered a contingent benefit.

WHAT'S IMPORTANT?

Although this would not accelerate paying off a loan, it allows employers to make retirement contributions for employees who may not be able to save due to student loan debt. These contributions allow employees who would otherwise be delayed to begin accumulating retirement assets.

CONSIDERATIONS

- The latest ruling is an initial step. Service providers will need time to research and adapt in this area, as this PLR was specific to one company.
- Plan documents would need to be amended and may lead to individually designed documents that must be maintained by legal counsel.
- Various tests would apply to this plan type, so it may not work for all employee populations.
- Increased administrative work is required to track loan repayments with a variety of loan servicers.

EBSA ENFORCEMENT ACTIVITIES ON THE RISE

Employee Benefits Security Administration (EBSA) enforcement activities are ramping up. Plan sponsors should take the time to ensure their plans' 5500s are completed and filed correctly. Here's what you need to know.

EBSA ACTIONS BY THE NUMBERS				
\$1.1B	1,707	\$418.7M	131	\$27.9M
The amount EBSA restored to retirement plans in 2017, an 83% increase from 2014.	Successfully closed civil investigations with a 65.3% close rate—up from 64.7% in 2014.	Recovered through informal tip line complaints—a 45% increase from 2014.	People indicted, a 32% increase from 2014.	Recovered from the Abandoned Plan Program, up 51% since 2014.
WHAT PLAN SPONSORS NEED TO KNOW				
Audit missing participants: <ul style="list-style-type: none">Make sure you have a policy and a process in place for finding terminated participants. Relying on the recordkeeper is not enough. Refer to FAB 2014-01 for guidance.				
Errors on a 5500 can lead to an EBSA inquiry, specifically: <ul style="list-style-type: none">A missing auditor report,Discrepancies or missing information on 5500 and Schedule A,Incorrect benefit types or codes on schedule A,Responding “no” to the Fidelity Bond question (Schedule H 4(e)), andFailure to remit contributions in a timely manner without corresponding Voluntary Fiduciary Correction Program (VFCP)—although you can self-correct in certain circumstances.				

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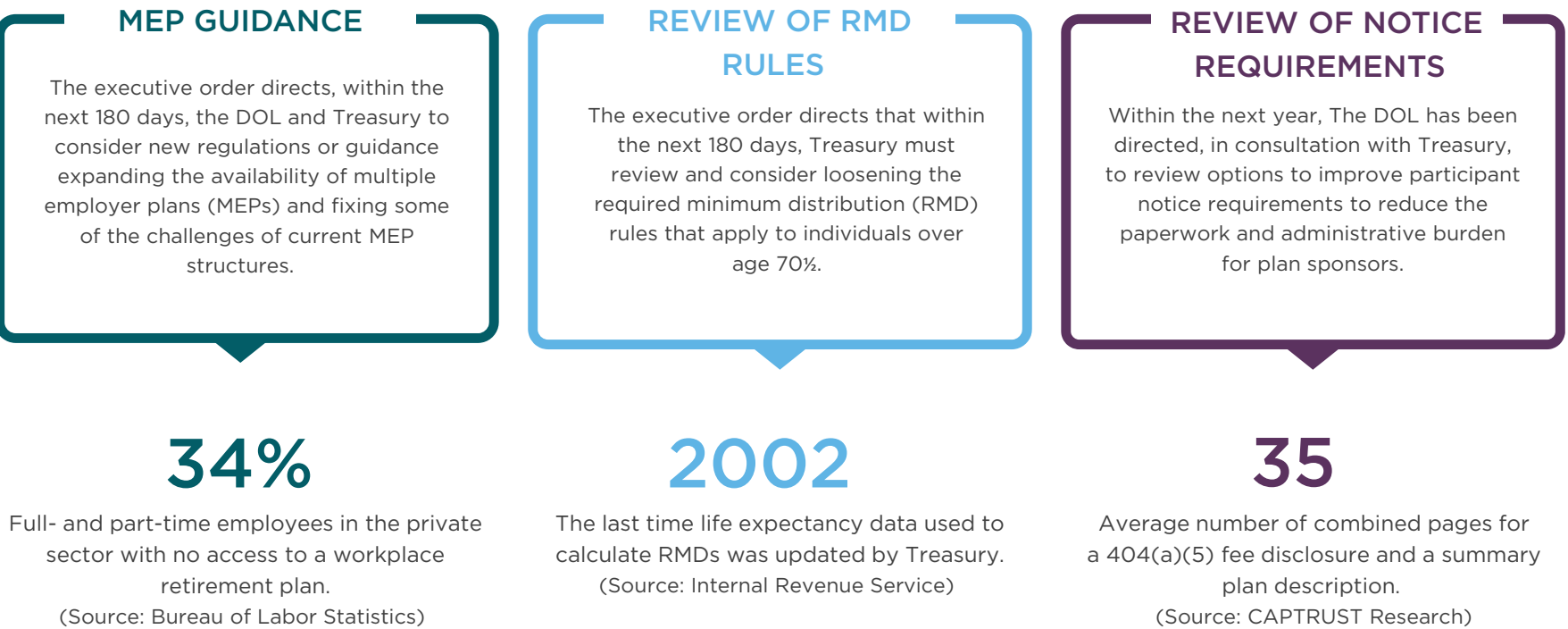
U.S. Department of Labor, "DOL EBSA 2017 Enforcement Activities Fact Sheet", 2017; U.S. Department of Labor, "DOL EBSA 2014 Enforcement Activities Fact Sheet", 2014; U.S. Department of Labor, "ARA DOL EBSA Enforcement Memo", 2018

DEFINED CONTRIBUTION MARKETPLACE — INDUSTRY UPDATE

Period Ending 9.30.18 | Q3 18

PRESIDENT SIGNS EXECUTIVE ORDER ON RETIREMENT

On August 31, President Trump signed an executive order related to retirement policy. The Executive Order on Strengthening Retirement Security in America directs the Department of Labor (DOL) and the Treasury Department to consider regulations or guidance affecting three specific areas of retirement policy.



8.1

SECTION 2: MARKET COMMENTARY AND REVIEW

Period Ending 9.30.18 | Q3 18

University of Maine System

SECTION 2: MARKET COMMENTARY AND REVIEW	
Market Commentary.....	
Market Review.....	
Asset Class Returns.....	
Index Performance.....	

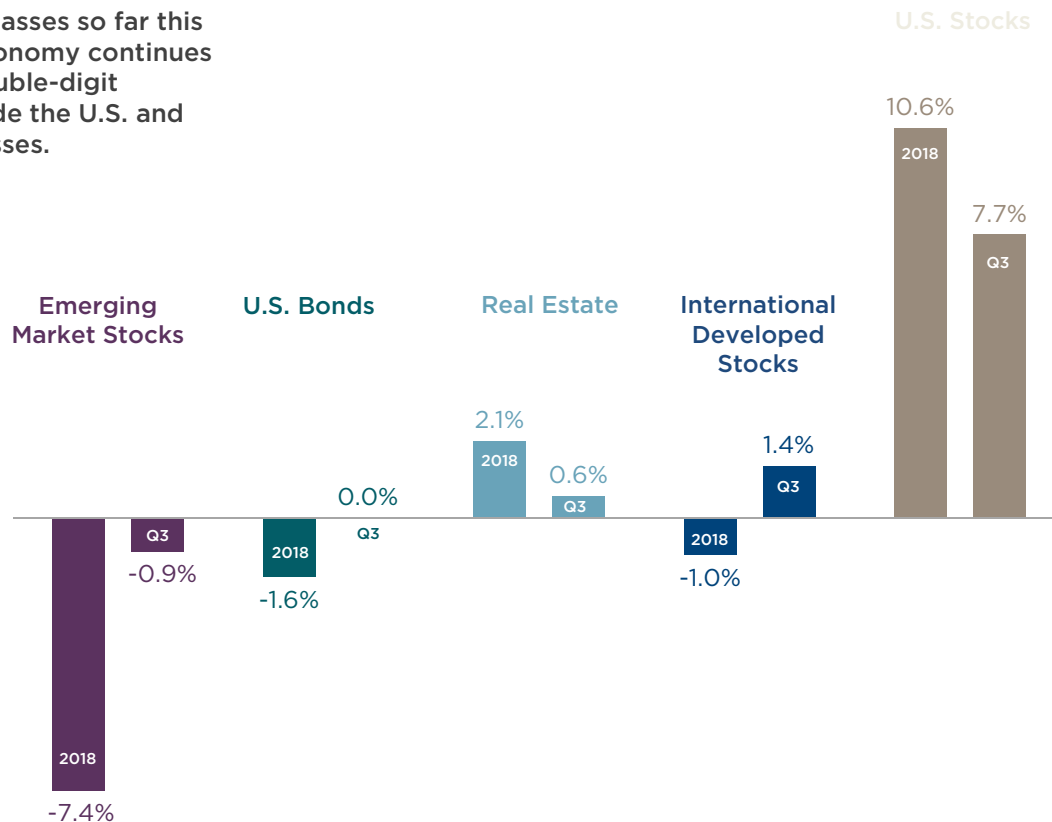
MARKET COMMENTARY

Period Ending 9.30.18 | Q3 18

U.S. STOCKS LEAD THE WAY

U.S. stocks are a standout among the major asset classes so far this year. Although it has cooled somewhat, the U.S. economy continues to grow at an elevated pace, boosting stocks to double-digit returns this year. Meanwhile, sluggish growth outside the U.S. and rising interest rates have hampered other asset classes.

- U.S. stocks added to their gains for the year, as solid corporate earnings and strong economic growth offset concerns about escalating trade tensions. In the third quarter, large-cap stocks posted their best quarterly performance in nearly five years.
- International developed stocks are slightly negative due to sluggish economic growth and trade tensions.
- Emerging market stocks continue to face pressure from a stronger U.S. dollar and economic turmoil in several countries, including Turkey and Argentina.
- Bonds treaded water in the third quarter. They have logged a small loss for the year as interest rates reached their highest levels in five years.
- Public real estate rose slightly in Q3 and remains modestly positive for the year despite pressure from higher rates.



Asset class returns are represented by the following indexes: S&P 500 Index (U.S. large-cap stocks), MSCI EAFE Index (international developed stocks), MSCI Emerging Markets Index (emerging market stocks), Bloomberg Barclays U.S. Aggregate Bond Index (U.S. bonds), and Dow Jones U.S. Real Estate Index (real estate).

8.1

MARKET COMMENTARY

Period Ending 9.30.18 | Q3 18

DIGGING DEEPER: STOCKS AND BONDS

Equities

	Q3 2018	YTD 2018	Last 12 Months
U.S. Stocks	7.7%	10.6%	17.9%
- Best Sector: Health Care	14.5%	16.6%	18.3%
- Worst Sector: Materials	0.4%	-2.7%	4.0%
International Stocks	1.4%	-1.0%	3.2%
Emerging Market Stocks	-0.9%	-7.4%	-0.4%

Fixed Income

	9.30.18	6.30.18	9.30.17
1-Year U.S. Treasury Yield	2.59%	2.33%	1.31%
10-Year U.S. Treasury Yield	3.05%	2.85%	2.33%
	QTD 2018	YTD 2018	Last 12 Months
10-Year U.S. Treasury Total Return	-1.09%	-3.73%	-3.75%

Equities - Relative Performance by Market Capitalization and Style

Q3 2018				YTD 2018				2017			
	Value	Blend	Growth		Value	Blend	Growth		Value	Blend	Growth
Large	5.7%	7.7%	9.2%	Large	3.9%	10.6%	17.1%	Large	13.7%	21.8%	30.2%
Mid	3.3%	5.0%	7.6%	Mid	3.1%	7.5%	13.4%	Mid	13.3%	18.5%	25.3%
Small	1.6%	3.6%	5.5%	Small	7.1%	11.5%	15.8%	Small	7.8%	14.6%	22.2%

Asset class returns are represented by the following indexes: S&P 500 Index (U.S. stocks), MSCI EAFE Index (international stocks), and MSCI Emerging Markets Index (emerging market stocks). Relative performance by market capitalization and style is based upon the Russell Pure Style Indexes except for large-cap blend, which is based upon the S&P 500 Index. Source: Bloomberg, U.S. Treasury, Barclays Live.

8.1

MARKET COMMENTARY

Period Ending 9.30.18 | Q3 18

DIGGING DEEPER: FIXED INCOME MARKET

Interest Rates	3 Month	2 Year	5 Year	10 Year	30 Year	Mortgage Rate
June 2018	1.93%	2.52%	2.73%	2.85%	2.98%	4.40%
September 2018	2.19%	2.81%	2.94%	3.05%	3.19%	4.57%
Change	0.26%	0.29%	0.21%	0.20%	0.21%	0.17%

Interest rates rose relatively evenly across the yield curve in the third quarter, buoyed by the Federal Reserve on the front and solid growth and inflation on the longer end. Mortgage rates rose roughly in line with Treasury rates for the quarter.

Bloomberg Barclays U.S. Aggregate Bond Index	Yield to Worst	Duration	Total Return	Spread	Treasury Rate	AA Spread	BBB Spread
June 2018	3.29%	6.01		0.44%	2.85%	0.62%	1.57%
September 2018	3.46%	6.03		0.39%	3.07%	0.53%	1.36%
Change	0.17%	0.02	0.02%	-0.05%	0.22%	-0.09%	-0.21%

The Bloomberg Barclays U.S. Aggregate Bond Index was flat for the quarter. The index's yield and modest spread tightening offset the negative impact from rising rates.

Bloomberg Barclays U.S. Long Credit Index	Yield to Worst	Duration	Total Return	Spread	Treasury Rate	AA Spread	BBB Spread
June 2018	4.69%	13.41		1.74%	2.95%	1.08%	2.17%
September 2018	4.68%	13.39		1.53%	3.15%	0.96%	1.89%
Change	-0.01%	-0.02	1.26%	-0.21%	0.20%	-0.12%	-0.28%

Following a weak second quarter, long credit performed well with a 1.26% return for Q3. The negative impact of rising rates was more than offset by yield and spread tightening, particularly from BBB credits.

Source: Bloomberg, Barclays Live, CAPTRUST, U.S Treasury. 10

MARKET COMMENTARY

Period Ending 9.30.18 | Q3 18

ECONOMIC OUTLOOK

The global economic picture typically consists of favorable attributes (tailwinds) and challenges (headwinds). Here, we provide our perspective on both and offer our view on which side has the upper hand.

TAILWINDS

The U.S. Economy Remains Strong

- The U.S. economy continues to grow at an elevated pace—although not quite as fast as the last two quarters.
- Jobs continue to be plentiful, and wage growth remains contained with few signs of overheating.

**Business Confidence Bodes Well**

- The NFIB Index of Small Business Optimism has reached a 45-year high. Small business owners are ebullient about business expectations, driven by changes in the tax and regulatory landscape.
- Corporate reinvestment (CapEx) and stock buybacks both continue to increase.

Rising Rates: Good for Savers

- Interest rates on savings have gone from near zero to 2% between December 2015 and September 2018.
- Savers should start to feel the benefits of rising interest rates as short-term savings rates turn into more income.

Expansionary Policies in China

- China has increased policy measures to encourage lending and expand economic growth.

HEADWINDS

Trade Talks and Tariff Tensions

- While trade tensions with Mexico and Canada are subsiding, tension with China persists.
- Tariffs on Chinese goods grab the headlines, but the estimated impact of tariffs pales in comparison to the current level of stimulus.

**Midterm Maelstrom**

- Uncertainty remains about the potential market impact of midterm elections, and policy making may slow down as Congress focuses on reelection.
- Polls suggest the Democrats will take control of the House and Republicans will retain the Senate. A Democratic sweep could result in drug price legislation and greater infrastructure spending, goals shared by President Trump.

Global Economic Growth Slows Down

- Major economies continue expanding, but at a slower pace.

Rising Rates: Trouble on the Horizon?

- Higher interest rates mean higher mortgage rates for many, which may dampen household income and housing demand.
- Yield curve inversion is not a reliable signal of a near-term recession or stock market selloff.

8.1

Overall, the global economic backdrop continues to be strong. At current valuations, U.S. stocks are close to their 25-year median valuations.

MARKET COMMENTARY

Period Ending 9.30.18 | Q3 18

DOLLARS FOR BOTH BUYBACK AND CAPEX

The Tax Cuts and Jobs Act enacted late last year led many to wonder how companies would invest their windfalls from lower tax rates and repatriated cash. Would they continue their high levels of stock buybacks or would they reinvest in plant and equipment to fuel future growth? Early data suggests that companies have been able to do both.

Growth of CapEx and Share Repurchases (\$Billion)

	CASH SPENDING	H1 2017	H1 2018	Y-O-Y GROWTH
S&P 500	Repurchases	\$253.3	\$379.7	50%
	CAPEX	\$288.6	\$344.1	19%
Apple	Repurchases	\$18.0	\$33.6	87%
	CAPEX	\$5.4	\$7.3	35%
Google	Repurchases	\$5.3	\$12.8	142%
	CAPEX	\$2.7	\$4.2	56%

Source: S&P Dow Jones, Apple, Google, Cornerstone Macro

OBSERVATIONS

- S&P 1500 companies have reported a sharp acceleration in capital expenditures in the second quarter, a year-over-year increase of more than 22%.
- The S&P 1500 is a broad index of domestic stocks, representing 90% of U.S. market capitalization.
- This level of growth is the fastest pace of business investment since 2011.
- Higher capital expenditures could lead to higher wages, corporate profits, and GDP growth. Meanwhile, share repurchases support stock prices and earnings growth.

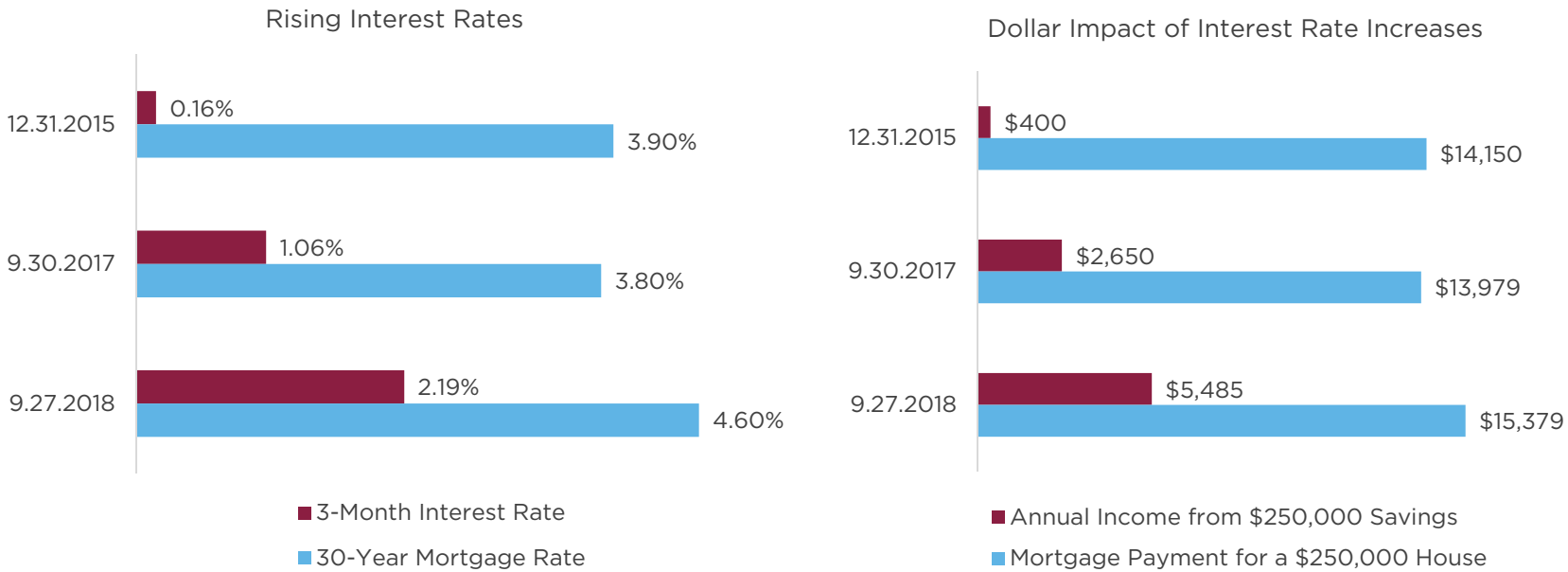
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MARKET COMMENTARY

Period Ending 9.30.18 | Q3 18

HIGHER INTEREST RATES—A MIXED BLESSING

The Federal Reserve has raised short-term rates eight times since December 2015, with an increase each time of 0.25%. Higher rates can have positive and negative effects—benefiting savers seeking income while causing mortgage and other debt payments to rise.



OBSERVATIONS

- While the interest rates on savings and borrowing have increased, mortgage rates have ticked up only slightly, while savings rates have risen more dramatically.
- A saver with \$250,000 would earn \$5,085 more in interest income each year, while a homeowner with a \$250,000 mortgage would see his or her annual payment rise by \$1,229.

Source: Bloomberg, Treasury.gov

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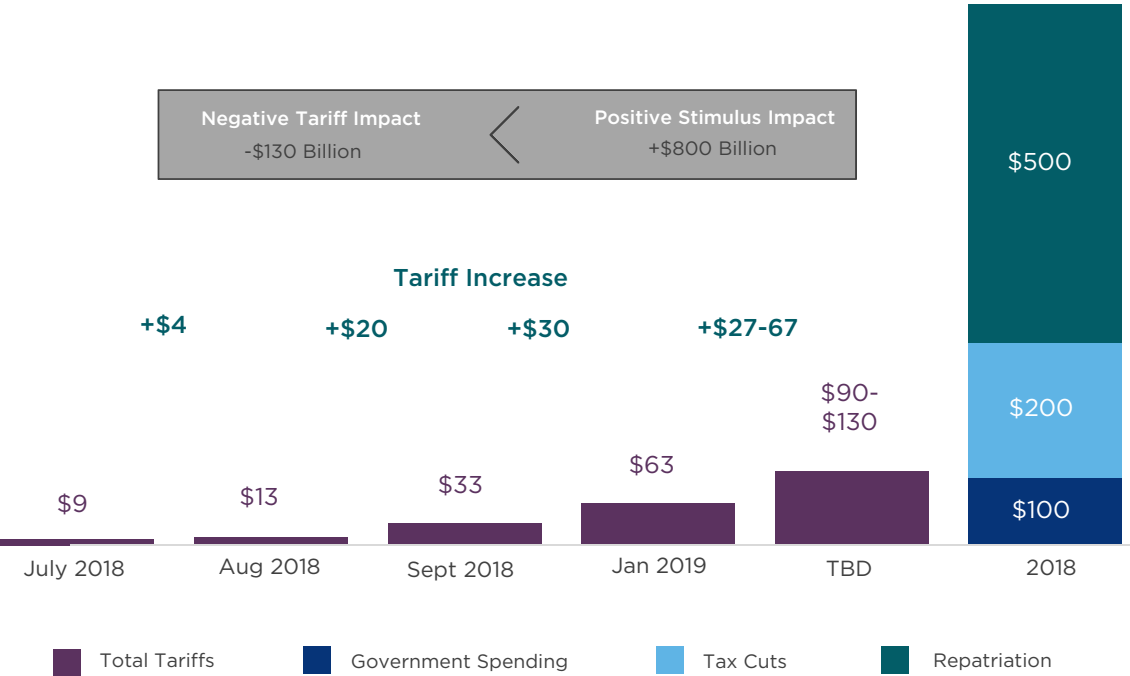
MARKET COMMENTARY

Period Ending 9.30.18 | Q3 18

FISCAL STIMULUS TRUMPS TARIFF TALK

The estimated impact of tariffs enacted so far is \$33 billion, and this amount could reach \$63 billion by the start of 2019 (based upon tariffs announced but not yet enacted). The total number could grow further, depending upon the actions (and reactions) of the U.S. and China. While these seem like big numbers that could potentially hamper the U.S. economy, the total tariff number is dwarfed by the total amount of stimulus generated by tax cuts, increased spending, and repatriations.

Timeline for Tariffs Announced
by U.S. Government on Chinese Goods (\$Billion)



OBSERVATIONS

- An estimated tariff impact of \$90-\$130 billion would represent approximately 0.6% of U.S. gross domestic product. This amount is lamentable but manageable, and we still expect economic growth.
- The previous estimate of \$500 billion of stimulus from repatriation could prove to be conservative. Preliminary data shows a potential for as much as \$700 billion in repatriations.
- This could bring the combined stimulus from tax cuts, increased spending, and repatriations to a total of approximately \$1 trillion.

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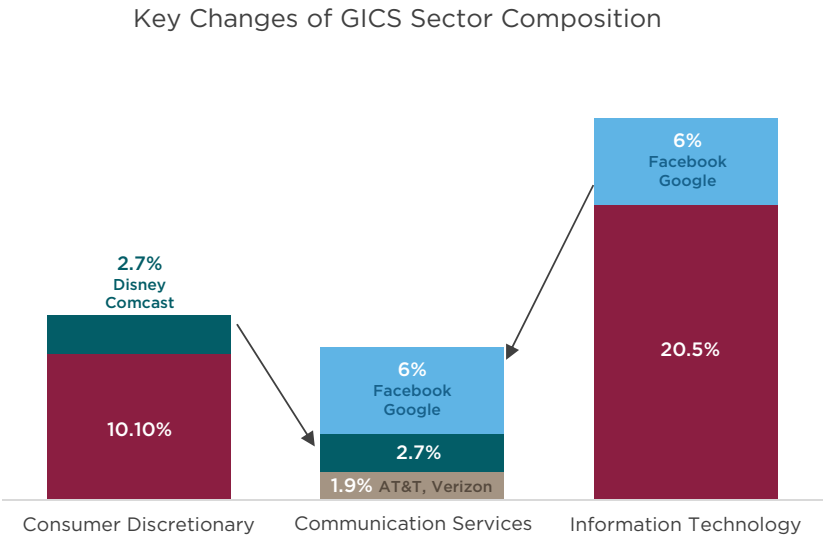
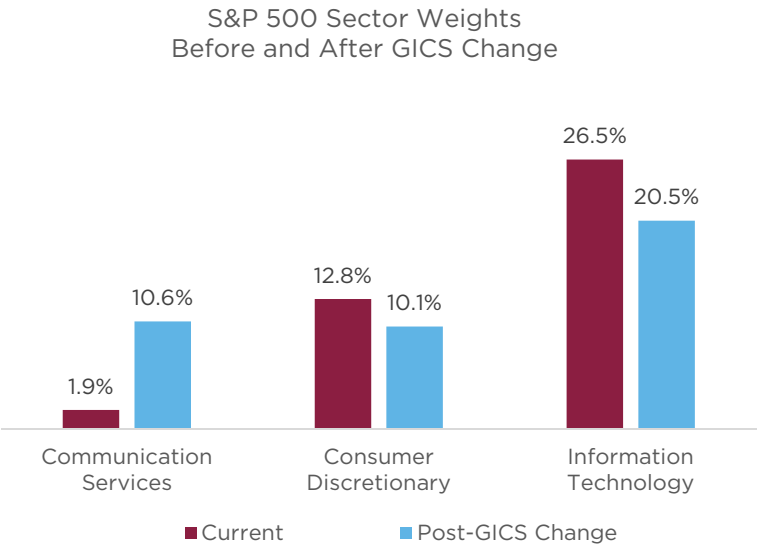
Source: whitehouse.gov, Cornerstone Macro, Strategas

MARKET COMMENTARY

Period Ending 9.30.18 | Q3 18

MSCI GICS SECTORS CHANGES

On September 28, the widely used MSCI Global Industry Classification Standard (GICS) system made several significant changes to its sector composition, causing impacts to prominent stock market indexes and funds that track them. The telecommunications services sector was renamed the communication services sector. This sector will include some companies previously assigned to the consumer discretionary and information technology sectors.



OBSERVATIONS

- The September GICS changes increase the weight of the communication services sector within the S&P 500 and reduce the weight of the technology and consumer discretionary sectors.
- The expanded communication services sector will include more growth-oriented companies, including several of the so-called FANG stocks, in addition to more value-leaning companies previously included.

Source: Strategas, S&P Dow Jones

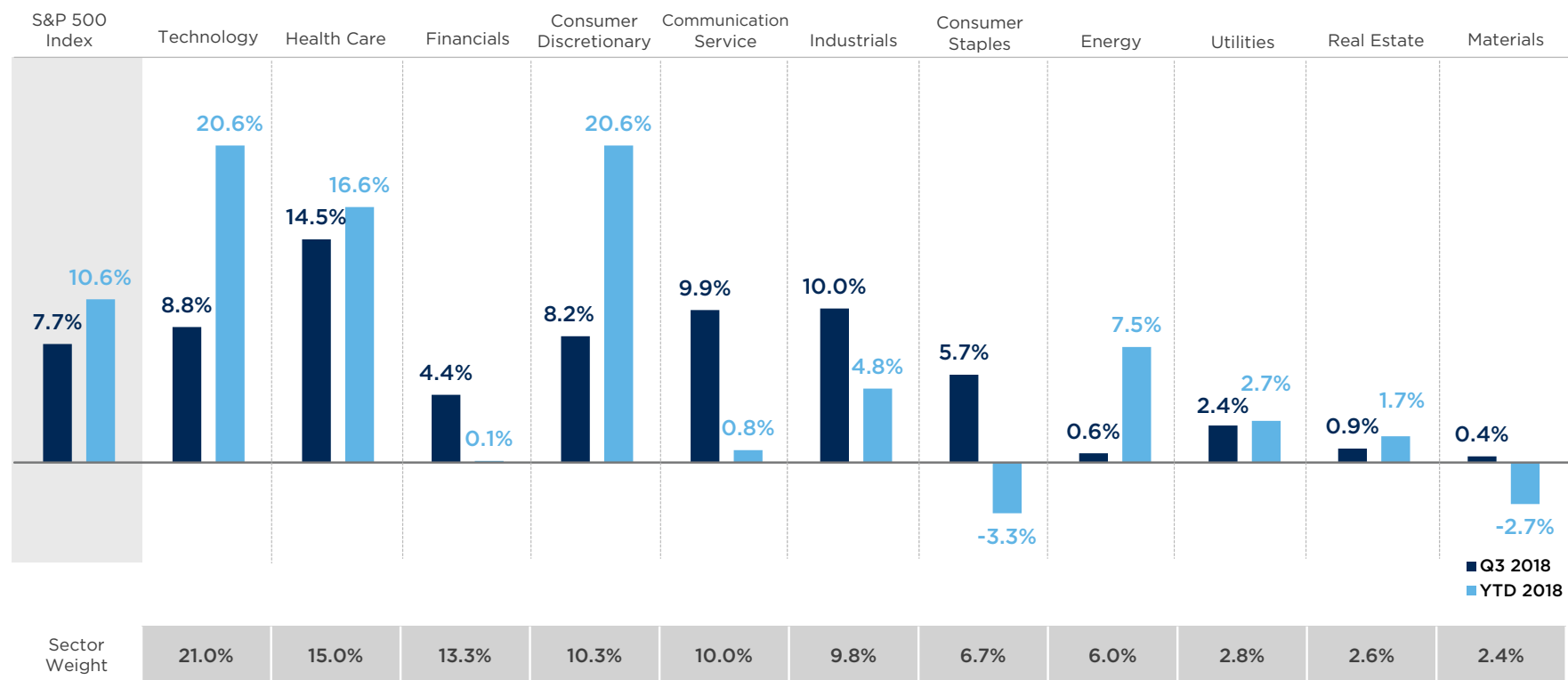
MARKET COMMENTARY

Period Ending 9.30.18 | Q3 18

DIGGING DEEPER: U.S. EQUITY MARKETS

The S&P 500 Index is a market capitalization weighted index of U.S. large-cap stocks across a diversity of industry sectors. The stocks represented in those 11 sectors generated a range of returns in 2018.

Returns by S&P 500 Sector



Source: Bloomberg. Data as of 9.30.2018. All calculations are cumulative total return, not annualized, including dividends for the stated period. Past performance is not indicative of future returns.

8.1

ASSET CLASS RETURNS

Period Ending 9.30.18 | Q3 18

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	YTD 2018
International Equities 14.02%	International Equities 26.86%	Large-Cap Growth 11.81%	Fixed Income 5.08%	Mid-Cap Growth 46.29%	Small-Cap Growth 29.09%	Fixed Income 7.84%	Mid-Cap Value 18.51%	Small-Cap Growth 43.30%	Mid-Cap Value 14.75%	Large-Cap Growth 5.67%	Small-Cap Value 31.74%	Large-Cap Growth 30.21%	Large-Cap Growth 17.09%
Mid-Cap Value 12.65%	Small-Cap Value 23.48%	International Equities 11.63%	Cash 1.51%	Large-Cap Growth 37.21%	Mid-Cap Growth 26.38%	Large-Cap Growth 2.64%	Small-Cap Value 18.05%	Mid-Cap Growth 35.74%	Large-Cap Value 13.45%	Fixed Income 0.55%	Mid-Cap Value 20.00%	International Equities 25.62%	Small-Cap Growth 15.76%
Mid-Cap Growth 12.10%	Large-Cap Value 22.25%	Mid-Cap Growth 11.43%	Small-Cap Value -28.92%	Small-Cap Growth 34.47%	Mid-Cap Value 24.75%	Large-Cap Value 0.39%	International Equities 17.90%	Small-Cap Value 34.52%	Large-Cap Growth 13.05%	Cash 0.05%	Large-Cap Value 17.34%	Mid-Cap Growth 25.27%	Mid-Cap Growth 13.38%
Large-Cap Value 7.05%	Mid-Cap Value 20.22%	Fixed Income 7.39%	Large-Cap Value -36.85%	Mid-Cap Value 34.21%	Small-Cap Value 24.50%	Cash 0.10%	Large-Cap Value 17.51%	Large-Cap Growth 33.48%	Mid-Cap Growth 11.90%	Mid-Cap Growth -0.20%	Small-Cap Growth 11.32%	Small-Cap Growth 22.17%	Small-Cap Value 7.14%
Large-Cap Growth 5.26%	Small-Cap Growth 13.35%	Small-Cap Growth 7.05%	Mid-Cap Value -38.44%	International Equities 32.46%	Large-Cap Growth 16.71%	Mid-Cap Value -1.38%	Mid-Cap Growth 15.81%	Mid-Cap Value 33.46%	Fixed Income 5.97%	International Equities -0.39%	Mid-Cap Growth 7.33%	Large-Cap Value 13.66%	Large-Cap Value 3.92%
Small-Cap Value 4.71%	Mid-Cap Growth 10.66%	Cash 4.71%	Large-Cap Growth -38.44%	Small-Cap Value 20.58%	Large-Cap Value 15.51%	Mid-Cap Growth -1.65%	Large-Cap Growth 15.26%	Large-Cap Value 32.53%	Small-Cap Growth 5.60%	Small-Cap Growth -1.38%	Large-Cap Growth 7.08%	Mid-Cap Value 13.34%	Mid-Cap Value 3.13%
Small-Cap Growth 4.15%	Large-Cap Growth 9.07%	Large-Cap Value -0.17%	Small-Cap Growth -38.54%	Large-Cap Value 19.69%	International Equities 8.21%	Small-Cap Growth -2.91%	Small-Cap Growth 14.59%	International Equities 23.29%	Small-Cap Value 4.22%	Large-Cap Value -3.83%	Fixed Income 2.65%	Small-Cap Value 7.84%	Cash 1.30%
Cash 3.35%	Cash 5.08%	Mid-Cap Value -1.42%	International Equities -43.06%	Fixed Income 5.24%	Fixed Income 5.89%	Small-Cap Value -5.50%	Fixed Income 4.22%	Cash 0.07%	Cash 0.03%	Mid-Cap Value -4.78%	International Equities 1.51%	Fixed Income 3.54%	International Equities -0.98%
Fixed Income 1.58%	Fixed Income 4.08%	Small-Cap Value -9.78%	Mid-Cap Growth -44.32%	Cash 0.21%	Cash 0.13%	International Equities -11.73%	Cash 0.11%	Fixed Income -2.02%	International Equities -4.48%	Small-Cap Value -7.47%	Cash 0.33%	Cash 0.86%	Fixed Income -1.60%

Small-Cap Value Stocks (Russell 2000 Value)	Large-Cap Value Stocks (Russell 1000 Value)	International Equities (MSCI EAFE)
Small-Cap Growth Stocks (Russell 2000 Growth)	Mid-Cap Growth Stocks (Russell Mid-Cap Growth Index)	Fixed Income (Bloomberg Barclays U.S. Aggregate Bond Index)
Large-Cap Growth Stocks (Russell 1000 Growth)	Mid-Cap Value Stocks (Russell Mid-Cap Value Index)	Cash (Merrill Lynch 3-Month Treasury Bill)

Source: Markov Processes, Inc., Bloomberg, Mobius

The information contained in this report is from sources believed to be reliable but not warranted by CAPTRUST Financial Advisors to be accurate or complete.

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INDEX PERFORMANCE

Period Ending 9.30.18 | Q3 18

INDEXES	Q3 2018	YTD 2018	2017	2016	2015	2014	2013	1 YEAR	3 YEAR	5 YEAR	10 YEAR
90-Day U.S. Treasury	0.49%	1.30%	0.86%	0.33%	0.05%	0.03%	0.07%	1.59%	0.84%	0.52%	0.34%
Bloomberg Barclays Government 1-3 Year	0.20%	0.26%	0.45%	0.87%	0.57%	0.64%	0.37%	-0.01%	0.38%	0.57%	1.20%
Bloomberg Barclays Intermediate Govt	-0.11%	-0.78%	1.14%	1.05%	1.18%	2.52%	-1.25%	-1.18%	0.19%	0.93%	2.22%
Bloomberg Barclays Muni Bond	-0.15%	-0.40%	5.45%	0.25%	3.30%	9.05%	-2.55%	0.35%	2.24%	3.54%	4.75%
Bloomberg Barclays Intermediate Govt/Credit	0.21%	-0.76%	2.14%	2.08%	1.07%	3.13%	-0.86%	-0.96%	0.91%	1.52%	3.22%
Bloomberg Barclays Intermediate Credit	0.73%	-0.73%	3.67%	3.68%	0.90%	4.16%	-0.17%	-0.62%	2.03%	2.46%	5.05%
Bloomberg Barclays Aggregate Bond	0.02%	-1.60%	3.54%	2.65%	0.55%	5.97%	-2.02%	-1.22%	1.31%	2.16%	3.77%
Bloomberg Barclays Corporate IG Bond	0.97%	-2.33%	6.42%	6.11%	-0.68%	7.46%	-1.53%	-1.19%	3.12%	3.54%	6.35%
Bloomberg Barclays High Yield	2.40%	2.57%	7.50%	17.13%	-4.47%	2.45%	7.44%	3.05%	8.15%	5.54%	9.46%
Bloomberg Barclays U.S. Long Corporate	1.32%	-5.54%	12.09%	10.97%	-4.61%	15.73%	-5.68%	-2.38%	5.18%	5.74%	8.69%
S&P 500	7.71%	10.56%	21.83%	11.96%	1.38%	13.69%	32.39%	17.91%	17.31%	13.95%	11.97%
Dow Jones Industrial Average	9.63%	8.83%	28.11%	16.50%	0.21%	10.04%	29.65%	20.76%	20.49%	14.57%	12.22%
NASDAQ Composite	7.14%	16.56%	28.24%	7.50%	5.73%	13.40%	38.32%	23.87%	20.31%	16.36%	14.42%
Russell 1000 Value	5.70%	3.92%	13.66%	17.34%	-3.83%	13.45%	32.53%	9.45%	13.55%	10.72%	9.79%
Russell 1000	7.42%	10.49%	21.69%	12.05%	0.92%	13.24%	33.11%	17.76%	17.07%	13.67%	12.09%
Russell 1000 Growth	9.17%	17.09%	30.21%	7.08%	5.67%	13.05%	33.48%	26.30%	20.55%	16.58%	14.31%
Russell Mid-Cap Value Index	3.30%	3.13%	13.34%	20.00%	-4.78%	14.75%	33.46%	8.81%	13.09%	10.72%	11.29%
Russell Mid-Cap Index	5.00%	7.46%	18.52%	13.80%	-2.44%	13.22%	34.76%	13.98%	14.52%	11.65%	12.31%
Russell Mid-Cap Growth Index	7.57%	13.38%	25.27%	7.33%	-0.20%	11.90%	35.74%	21.10%	16.65%	13.00%	13.46%
MSCI EAFE	1.42%	-0.98%	25.62%	1.51%	-0.39%	-4.48%	23.29%	3.25%	9.77%	4.90%	5.87%
MSCI ACWI ex U.S.	0.80%	-2.67%	27.77%	5.01%	-5.25%	-3.44%	15.78%	2.25%	10.49%	4.60%	5.67%
Russell 2000 Value	1.60%	7.14%	7.84%	31.74%	-7.47%	4.22%	34.52%	9.33%	16.12%	9.91%	9.52%
Russell 2000	3.58%	11.51%	14.65%	21.31%	-4.41%	4.89%	38.82%	15.24%	17.12%	11.07%	11.11%
Russell 2000 Growth	5.52%	15.76%	22.17%	11.32%	-1.38%	5.60%	43.30%	21.06%	17.98%	12.14%	12.65%
MSCI Emerging Markets	-0.95%	-7.39%	37.75%	11.60%	-14.60%	-1.82%	-2.27%	-0.44%	12.77%	3.99%	5.76%
Dow Jones U.S. Real Estate Index	0.65%	2.07%	9.84%	7.56%	2.14%	27.24%	1.77%	4.69%	8.94%	9.39%	7.46%
HFRX Absolute Return Index	-0.04%	1.00%	3.39%	0.31%	2.86%	0.79%	3.58%	2.59%	2.88%	2.94%	3.05%
Consumer Price Index (Inflation)	0.06%	2.22%	2.11%	2.07%	0.73%	0.76%	1.50%	2.70%	1.95%	1.49%	1.43%
BLENDED BENCHMARKS	Q3 2018	YTD 2018	2017	2016	2015	2014	2013	1 YEAR	3 YEAR	5 YEAR	10 YEAR
25% S&P 500/5% MSCI EAFE/70% BB Agg	1.98%	1.44%	8.93%	5.00%	0.92%	7.37%	7.01%	3.60%	5.64%	5.26%	6.14%
30% S&P 500/10% MSCI EAFE/60% BB Agg	2.44%	2.08%	10.90%	5.43%	0.95%	7.21%	9.92%	4.77%	6.87%	6.00%	6.70%
35% S&P 500/15% MSCI EAFE/50% BB Agg	2.89%	2.72%	12.90%	5.85%	0.97%	7.04%	12.89%	5.95%	8.11%	6.73%	7.24%
40% S&P 500/20% MSCI EAFE/40% BB Agg	3.35%	3.36%	14.93%	6.26%	0.96%	6.87%	15.93%	7.13%	9.34%	7.46%	7.76%
45% S&P 500/25% MSCI EAFE/30% BB Agg	3.81%	3.99%	16.99%	6.65%	0.93%	6.69%	19.04%	8.31%	10.58%	8.18%	8.25%
60% S&P 500/40% Bloomberg Barclays Agg	4.59%	5.74%	14.25%	8.41%	1.40%	10.75%	17.57%	10.08%	10.85%	9.32%	9.17%

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SECTION 3: PLAN INVESTMENT REVIEW

Period Ending 9.30.18 | Q3 18

University of Maine System

SECTION 3: PLAN INVESTMENT REVIEW	
Plan Investment Menu Review.....	
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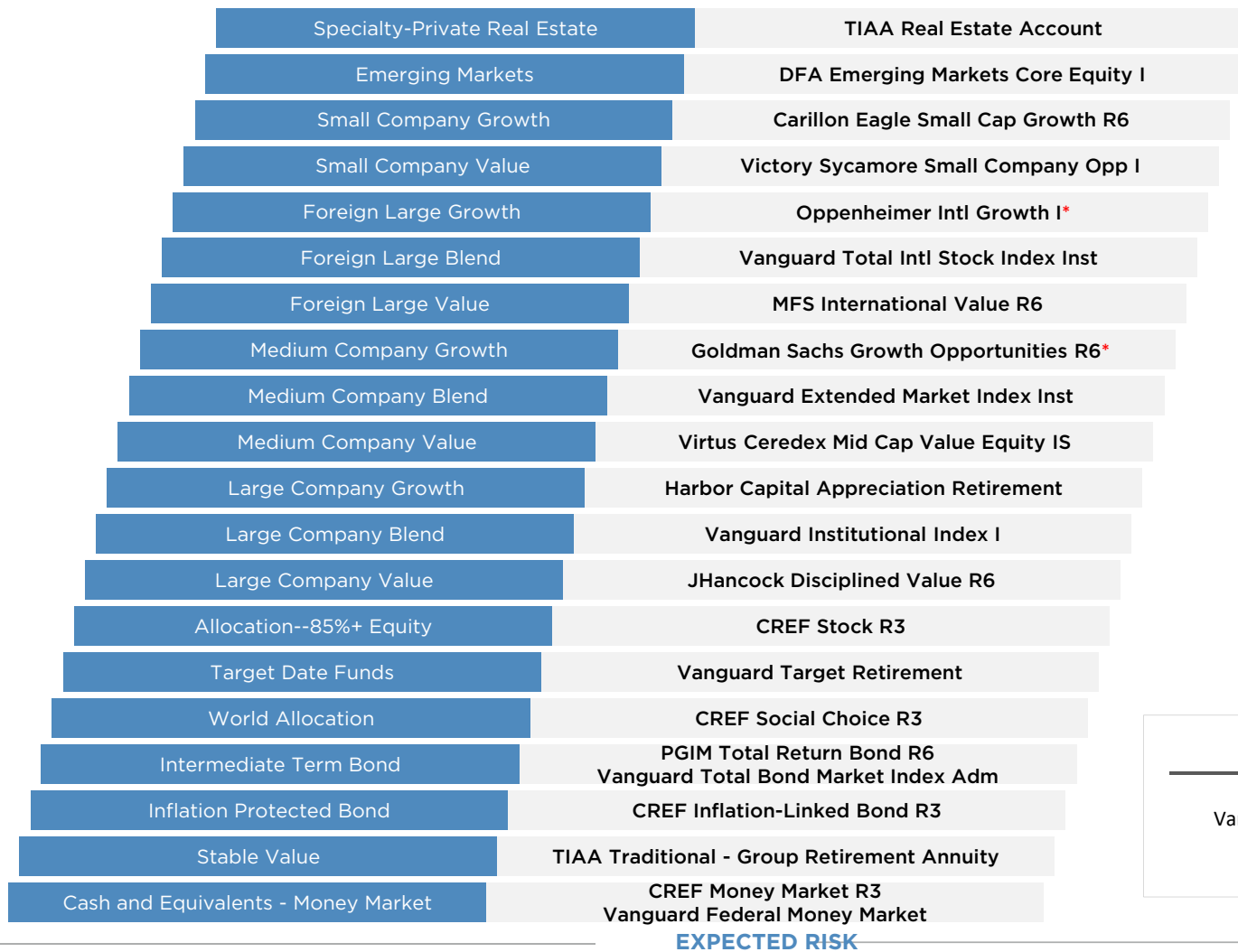
PLAN INVESTMENT REVIEW | PLAN MENU

Period Ending 9.30.18 | Q3 18

University of Maine System

↑
EXPECTED RETURN

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**QDIA OPTION:**

Vanguard Target Retirement

*Effective 01/14/2019: Goldman Sachs Mid Cap Growth (GGOUX) will be removed and replaced with MFS Mid Cap Growth Fund (OTCKX). Oppenheimer International Growth Fund (OIGIX) will be removed and replaced with American Funds Europacific Growth Fund (RERGX). Assets will map accordingly.

PLAN INVESTMENT REVIEW | EXECUTIVE ASSET SUMMARY

Period Ending 9.30.18 | Q3 18

University of Maine System

Plan Name	Plan/Contract Number	Plan Assets
University of Maine System Retirement Plan for Faculty and Professionals 403(b) DC	102965	\$1,274,679,108
University of Maine System Retirement Tax Deferred Annuity Plan 403(b) TDA	102966	\$167,204,289
University of Maine System Optional Retirement Savings 403(b)	102967	\$1,569,472
University of Maine System Optional Retirement Savings 401(a)	102968	\$1,209,976
University of Maine System Basic Retirement Plan for Classified Employees 403(b)	102969	\$38,202,222
University of Maine System Basic Retirement Plan for Classified Employees 401(a)	102970	\$72,578,324
University of Maine System Deferred Compensation Plan 457(b)	102971	\$31,904,330
TOTALS		\$1,587,347,721



University of Maine System *
 Alternate Carrier Transfers In
 Date Range July 1, 2018 - September 30, 2018

Alternate Carrier	Amount
VALIC	\$ 175,144.66
VOYA	\$ 249,180.46
FIDELITY	\$ 8,426.48
METLIFE	\$ 91,394.51
Total	\$ 524,146.11

* 7 plans : 102965, 102966, 102967, 102968, 102969, 102970 & 102971



Disclosures

The data provided is for informational purposes only. It is not intended as an offer or solicitation or any similar communication being made for the purchase or sale of any financial instrument / product or as an official confirmation or as an official statement on any transaction.

Pursuant to your request for information, enclosed you will find data related to the Plan(s) and/or Investments specified. You have solicited this information for fiduciary due diligence and review purposes related to the referenced Plan. This report should not be used for regulatory filings or for benefit statements.

Please be advised that neither TIAA, CREF, nor their affiliates, in their satisfaction of your information request, make any representations or warranties, express or implied, as to the accuracy, completeness, or fitness for any purpose or use of this or other data for the Plan(s) that you may request. Teachers Advisors Inc. or its affiliates will not be liable for any direct, indirect, or consequential loss arising from any use of or reliance on the information supplied.

These numbers include non-approved assets held at TIAA-CREF that are no longer available for additional investments.

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PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 9.30.18 | Q3 18

University of Maine System Retirement Plan for Faculty and Professionals 403(b) DC - 102965

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2017	(%)	CURRENT	(%)
Cash and Equivalents - Money Market	CREF Money Market R3	\$8,746,690	0.70%	\$17,390,633	1.36%
Cash and Equivalents - Money Market	Vanguard Federal Money Market	\$990,060	0.08%	\$3,085,257	0.24%
Stable Value	TIAA Traditional - Group Retirement Annuity	\$434,258,268	34.92%	\$435,055,138	34.13%
Inflation Protected Bond	CREF Inflation-Linked Bond R3	\$13,593,255	1.09%	\$14,128,784	1.11%
Intermediate Term Bond	PGIM Total Return Bond R6	\$16,352,164	1.32%	\$19,887,962	1.56%
Intermediate Term Bond	Vanguard Total Bond Market Index Adm	\$7,174,322	0.58%	\$6,243,994	0.49%
World Allocation	CREF Social Choice R3	\$35,791,845	2.88%	\$34,737,002	2.73%
Target Date Ret Income Moderate	Vanguard Target Retirement Income Inv	\$7,058,640	0.57%	\$6,308,280	0.49%
Target Date 2015 Moderate	Vanguard Target Retirement 2015 Inv	\$4,705,291	0.38%	\$4,619,784	0.36%
Target Date 2020 Moderate	Vanguard Target Retirement 2020 Inv	\$11,281,830	0.91%	\$11,687,676	0.92%
Target Date 2025 Moderate	Vanguard Target Retirement 2025 Inv	\$10,262,935	0.83%	\$12,419,708	0.97%
Target Date 2030 Moderate	Vanguard Target Retirement 2030 Inv	\$9,821,585	0.79%	\$10,723,286	0.84%
Target Date 2035 Moderate	Vanguard Target Retirement 2035 Inv	\$9,633,940	0.77%	\$11,095,813	0.87%
Target Date 2040 Moderate	Vanguard Target Retirement 2040 Inv	\$9,440,954	0.76%	\$11,338,209	0.89%
Target Date 2045 Moderate	Vanguard Target Retirement 2045 Inv	\$7,820,688	0.63%	\$9,452,325	0.74%
Target Date 2050 Moderate	Vanguard Target Retirement 2050 Inv	\$4,582,436	0.37%	\$6,141,619	0.48%
Target Date 2055 Moderate	Vanguard Target Retirement 2055 Inv	\$1,668,316	0.13%	\$2,102,822	0.16%
Target Date 2060+ Moderate	Vanguard Target Retirement 2060 Inv	\$72,722	0.01%	\$222,035	0.02%

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PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 9.30.18 | Q3 18

University of Maine System Retirement Plan for Faculty and Professionals 403(b) DC - 102965

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2017	(%)	CURRENT	(%)
Target Date 2060+ Moderate	Vanguard Target Retirement 2065 Inv	\$0	0.00%	\$0	0.00%
Allocation--85%+ Equity	CREF Stock R3	\$214,743,505	17.27%	\$213,352,838	16.74%
Large Company Value	JHancock Disciplined Value R6	\$22,058,927	1.77%	\$22,967,444	1.80%
Large Company Blend	Vanguard Institutional Index I	\$34,031,139	2.74%	\$40,069,064	3.14%
Large Company Growth	Harbor Capital Appreciation Retirement	\$12,028,018	0.97%	\$14,464,074	1.13%
Medium Company Value	Virtus Ceredex Mid Cap Value Equity IS	\$15,548,636	1.25%	\$15,439,883	1.21%
Medium Company Blend	Vanguard Extended Market Index Inst	\$15,548,329	1.25%	\$16,724,991	1.31%
Medium Company Growth	Goldman Sachs Growth Opportunities R6	\$4,930,354	0.40%	\$5,964,263	0.47%
Foreign Large Value	MFS International Value R6	\$21,124,769	1.70%	\$21,467,502	1.68%
Foreign Large Blend	Vanguard Total Intl Stock Index Inst	\$11,073,927	0.89%	\$13,568,101	1.06%
Foreign Large Growth	Oppenheimer Intl Growth I	\$4,866,072	0.39%	\$4,082,169	0.32%
Small Company Value	Victory Sycamore Small Company Opp I	\$11,471,306	0.92%	\$13,570,918	1.06%
Small Company Growth	Carillon Eagle Small Cap Growth R6	\$3,712,424	0.30%	\$4,156,669	0.33%
Emerging Markets	DFA Emerging Markets Core Equity I	\$19,843,594	1.60%	\$13,473,067	1.06%
Specialty-Private Real Estate	TIAA Real Estate Account	\$51,256,299	4.12%	\$51,797,087	4.06%
Other Assets	Non Approved Funds	\$157,443,150	12.66%	\$152,760,603	11.98%
Self-Directed Brokerage	Self Directed Accounts	\$50,540,429	4.06%	\$54,180,107	4.25%
TOTALS		\$1,243,476,821	100%	\$1,274,679,108	100%

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PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 9.30.18 | Q3 18

University of Maine System Retirement Tax Deferred Annuity Plan 403(b) TDA- 102966

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2017	(%)	CURRENT	(%)
Cash and Equivalents - Money Market	CREF Money Market R3	\$826,248	0.51%	\$1,637,884	0.98%
Cash and Equivalents - Money Market	Vanguard Federal Money Market	\$32,998	0.02%	\$33,404	0.02%
Stable Value	TIAA Traditional - Group Retirement Annuity	\$54,259,359	33.55%	\$54,916,357	32.84%
Inflation Protected Bond	CREF Inflation-Linked Bond R3	\$2,436,960	1.51%	\$2,354,355	1.41%
Intermediate Term Bond	PGIM Total Return Bond R6	\$3,904,319	2.41%	\$4,512,418	2.70%
Intermediate Term Bond	Vanguard Total Bond Market Index Adm	\$1,628,320	1.01%	\$1,457,139	0.87%
World Allocation	CREF Social Choice R3	\$5,850,210	3.62%	\$5,663,080	3.39%
Target Date Ret Income Moderate	Vanguard Target Retirement Income Inv	\$1,815,210	1.12%	\$1,753,602	1.05%
Target Date 2015 Moderate	Vanguard Target Retirement 2015 Inv	\$957,555	0.59%	\$883,890	0.53%
Target Date 2020 Moderate	Vanguard Target Retirement 2020 Inv	\$2,655,509	1.64%	\$3,381,011	2.02%
Target Date 2025 Moderate	Vanguard Target Retirement 2025 Inv	\$2,449,593	1.51%	\$3,107,234	1.86%
Target Date 2030 Moderate	Vanguard Target Retirement 2030 Inv	\$1,668,874	1.03%	\$1,829,072	1.09%
Target Date 2035 Moderate	Vanguard Target Retirement 2035 Inv	\$1,050,291	0.65%	\$1,227,363	0.73%
Target Date 2040 Moderate	Vanguard Target Retirement 2040 Inv	\$807,796	0.50%	\$931,732	0.56%
Target Date 2045 Moderate	Vanguard Target Retirement 2045 Inv	\$266,425	0.16%	\$311,090	0.19%
Target Date 2050 Moderate	Vanguard Target Retirement 2050 Inv	\$179,787	0.11%	\$207,788	0.12%
Target Date 2055 Moderate	Vanguard Target Retirement 2055 Inv	\$74,520	0.05%	\$80,346	0.05%
Target Date 2060+ Moderate	Vanguard Target Retirement 2060 Inv	\$4,082	0.00%	\$4,813	0.00%

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PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 9.30.18 | Q3 18

University of Maine System Retirement Tax Deferred Annuity Plan 403(b) TDA- 102966

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2017	(%)	CURRENT	(%)
Target Date 2060+ Moderate	Vanguard Target Retirement 2065 Inv	\$0	0.00%	\$0	0.00%
Allocation--85%+ Equity	CREF Stock R3	\$19,887,105	12.30%	\$19,748,091	11.81%
Large Company Value	JHancock Disciplined Value R6	\$2,253,669	1.39%	\$2,430,435	1.45%
Large Company Blend	Vanguard Institutional Index I	\$9,515,741	5.88%	\$10,273,170	6.14%
Large Company Growth	Harbor Capital Appreciation Retirement	\$1,952,121	1.21%	\$2,700,037	1.61%
Medium Company Value	Virtus Ceredex Mid Cap Value Equity IS	\$1,414,278	0.87%	\$1,462,077	0.87%
Medium Company Blend	Vanguard Extended Market Index Inst	\$2,580,396	1.60%	\$3,152,955	1.89%
Medium Company Growth	Goldman Sachs Growth Opportunities R6	\$392,521	0.24%	\$485,592	0.29%
Foreign Large Value	MFS International Value R6	\$3,471,616	2.15%	\$3,484,449	2.08%
Foreign Large Blend	Vanguard Total Intl Stock Index Inst	\$1,501,184	0.93%	\$1,906,850	1.14%
Foreign Large Growth	Oppenheimer Intl Growth I	\$544,502	0.34%	\$459,120	0.27%
Small Company Value	Victory Sycamore Small Company Opp I	\$1,518,633	0.94%	\$1,737,197	1.04%
Small Company Growth	Carillon Eagle Small Cap Growth R6	\$239,191	0.15%	\$305,746	0.18%
Emerging Markets	DFA Emerging Markets Core Equity I	\$2,072,874	1.28%	\$1,579,129	0.94%
Specialty-Private Real Estate	TIAA Real Estate Account	\$11,065,712	6.84%	\$10,833,445	6.48%
Other Assets	Non Approved Funds	\$20,305,370	12.55%	\$19,856,985	11.88%
Self-Directed Brokerage	Self Directed Accounts	\$2,155,163	1.33%	\$2,496,433	1.49%
TOTALS		\$161,738,129	100%	\$167,204,289	100%

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PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 9.30.18 | Q3 18

University of Maine System Optional Retirement Savings 403(b) - 102967

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2017	(%)	CURRENT	(%)
Cash and Equivalents - Money Market	CREF Money Market R3	\$12,370	0.84%	\$9,782	0.62%
Cash and Equivalents - Money Market	Vanguard Federal Money Market	\$0	0.00%	\$0	0.00%
Stable Value	TIAA Traditional - Group Retirement Annuity	\$615,697	41.88%	\$712,814	45.42%
Inflation Protected Bond	CREF Inflation-Linked Bond R3	\$17,389	1.18%	\$16,629	1.06%
Intermediate Term Bond	PGIM Total Return Bond R6	\$10,084	0.69%	\$10,763	0.69%
Intermediate Term Bond	Vanguard Total Bond Market Index Adm	\$339	0.02%	\$334	0.02%
World Allocation	CREF Social Choice R3	\$37,626	2.56%	\$38,069	2.43%
Target Date Ret Income Moderate	Vanguard Target Retirement Income Inv	\$1,373	0.09%	\$1,390	0.09%
Target Date 2015 Moderate	Vanguard Target Retirement 2015 Inv	\$160	0.01%	\$162	0.01%
Target Date 2020 Moderate	Vanguard Target Retirement 2020 Inv	\$53,140	3.61%	\$53,487	3.41%
Target Date 2025 Moderate	Vanguard Target Retirement 2025 Inv	\$2,339	0.16%	\$2,405	0.15%
Target Date 2030 Moderate	Vanguard Target Retirement 2030 Inv	\$0	0.00%	\$0	0.00%
Target Date 2035 Moderate	Vanguard Target Retirement 2035 Inv	\$0	0.00%	\$0	0.00%
Target Date 2040 Moderate	Vanguard Target Retirement 2040 Inv	\$0	0.00%	\$0	0.00%
Target Date 2045 Moderate	Vanguard Target Retirement 2045 Inv	\$0	0.00%	\$0	0.00%
Target Date 2050 Moderate	Vanguard Target Retirement 2050 Inv	\$0	0.00%	\$0	0.00%
Target Date 2055 Moderate	Vanguard Target Retirement 2055 Inv	\$0	0.00%	\$0	0.00%
Target Date 2060+ Moderate	Vanguard Target Retirement 2060 Inv	\$0	0.00%	\$0	0.00%

CONTINUED...

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8.1

PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 9.30.18 | Q3 18

University of Maine System Optional Retirement Savings 403(b) - 102967

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2017	(%)	CURRENT	(%)
Target Date 2060+ Moderate	Vanguard Target Retirement 2065 Inv	\$0	0.00%	\$0	0.00%
Allocation--85%+ Equity	CREF Stock R3	\$241,018	16.40%	\$243,589	15.52%
Large Company Value	JHancock Disciplined Value R6	\$1,618	0.11%	\$1,753	0.11%
Large Company Blend	Vanguard Institutional Index I	\$14,114	0.96%	\$14,364	0.92%
Large Company Growth	Harbor Capital Appreciation Retirement	\$1,179	0.08%	\$1,551	0.10%
Medium Company Value	Virtus Ceredex Mid Cap Value Equity IS	\$1,631	0.11%	\$1,489	0.09%
Medium Company Blend	Vanguard Extended Market Index Inst	\$2,439	0.17%	\$2,788	0.18%
Medium Company Growth	Goldman Sachs Growth Opportunities R6	\$48	0.00%	\$1,503	0.10%
Foreign Large Value	MFS International Value R6	\$3,328	0.23%	\$3,845	0.24%
Foreign Large Blend	Vanguard Total Intl Stock Index Inst	\$1,952	0.13%	\$2,311	0.15%
Foreign Large Growth	Oppenheimer Intl Growth I	\$865	0.06%	\$624	0.04%
Small Company Value	Victory Sycamore Small Company Opp I	\$1,405	0.10%	\$1,664	0.11%
Small Company Growth	Carillon Eagle Small Cap Growth R6	\$261	0.02%	\$300	0.02%
Emerging Markets	DFA Emerging Markets Core Equity I	\$1,782	0.12%	\$1,440	0.09%
Specialty-Private Real Estate	TIAA Real Estate Account	\$45,204	3.08%	\$46,275	2.95%
Other Assets	Non Approved Funds	\$402,667	27.39%	\$400,141	25.50%
Self-Directed Brokerage	Self Directed Accounts	\$0	0.00%	\$0	0.00%
TOTALS		\$1,470,030	100%	\$1,569,472	100%

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8.1

PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 9.30.18 | Q3 18

University of Maine System Optional Retirement Savings 401(a) - 102968

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2017	(%)	CURRENT	(%)
Cash and Equivalents - Money Market	CREF Money Market R3	\$8,054	0.66%	\$6,530	0.54%
Cash and Equivalents - Money Market	Vanguard Federal Money Market	\$0	0.00%	\$0	0.00%
Stable Value	TIAA Traditional - Group Retirement Annuity	\$379,021	31.10%	\$356,719	29.48%
Inflation Protected Bond	CREF Inflation-Linked Bond R3	\$17,721	1.45%	\$17,363	1.43%
Intermediate Term Bond	PGIM Total Return Bond R6	\$17,554	1.44%	\$24,149	2.00%
Intermediate Term Bond	Vanguard Total Bond Market Index Adm	\$11,383	0.93%	\$12,633	1.04%
World Allocation	CREF Social Choice R3	\$26,384	2.17%	\$26,749	2.21%
Target Date Ret Income Moderate	Vanguard Target Retirement Income Inv	\$911	0.07%	\$922	0.08%
Target Date 2015 Moderate	Vanguard Target Retirement 2015 Inv	\$0	0.00%	\$0	0.00%
Target Date 2020 Moderate	Vanguard Target Retirement 2020 Inv	\$43,013	3.53%	\$43,346	3.58%
Target Date 2025 Moderate	Vanguard Target Retirement 2025 Inv	\$487	0.04%	\$1,476	0.12%
Target Date 2030 Moderate	Vanguard Target Retirement 2030 Inv	\$947	0.08%	\$0	0.00%
Target Date 2035 Moderate	Vanguard Target Retirement 2035 Inv	\$0	0.00%	\$0	0.00%
Target Date 2040 Moderate	Vanguard Target Retirement 2040 Inv	\$0	0.00%	\$0	0.00%
Target Date 2045 Moderate	Vanguard Target Retirement 2045 Inv	\$0	0.00%	\$0	0.00%
Target Date 2050 Moderate	Vanguard Target Retirement 2050 Inv	\$0	0.00%	\$0	0.00%
Target Date 2055 Moderate	Vanguard Target Retirement 2055 Inv	\$0	0.00%	\$0	0.00%
Target Date 2060+ Moderate	Vanguard Target Retirement 2060 Inv	\$0	0.00%	\$0	0.00%

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PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 9.30.18 | Q3 18

University of Maine System Optional Retirement Savings 401(a) - 102968

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2017	(%)	CURRENT	(%)
Target Date 2060+ Moderate	Vanguard Target Retirement 2065 Inv	\$0	0.00%	\$0	0.00%
Allocation--85%+ Equity	CREF Stock R3	\$149,370	12.26%	\$143,079	11.82%
Large Company Value	JHancock Disciplined Value R6	\$10,951	0.90%	\$8,817	0.73%
Large Company Blend	Vanguard Institutional Index I	\$6,948	0.57%	\$7,889	0.65%
Large Company Growth	Harbor Capital Appreciation Retirement	\$1,118	0.09%	\$1,478	0.12%
Medium Company Value	Virtus Ceredex Mid Cap Value Equity IS	\$722	0.06%	\$700	0.06%
Medium Company Blend	Vanguard Extended Market Index Inst	\$607	0.05%	\$692	0.06%
Medium Company Growth	Goldman Sachs Growth Opportunities R6	\$21,918	1.80%	\$21,679	1.79%
Foreign Large Value	MFS International Value R6	\$19,488	1.60%	\$18,854	1.56%
Foreign Large Blend	Vanguard Total Intl Stock Index Inst	\$584	0.05%	\$681	0.06%
Foreign Large Growth	Oppenheimer Intl Growth I	\$323	0.03%	\$249	0.02%
Small Company Value	Victory Sycamore Small Company Opp I	\$333	0.03%	\$400	0.03%
Small Company Growth	Carillon Eagle Small Cap Growth R6	\$473	0.04%	\$543	0.04%
Emerging Markets	DFA Emerging Markets Core Equity I	\$21,241	1.74%	\$16,836	1.39%
Specialty-Private Real Estate	TIAA Real Estate Account	\$56,858	4.67%	\$57,697	4.77%
Other Assets	Non Approved Funds	\$283,149	23.23%	\$287,031	23.72%
Self-Directed Brokerage	Self Directed Accounts	\$139,084	11.41%	\$153,463	12.68%
TOTALS		\$1,218,640	100%	\$1,209,976	100%

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8.1

PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 9.30.18 | Q3 18

University of Maine System Basic Retirement Plan for Classified Employees 403(b) - 102969

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2017	(%)	CURRENT	(%)
Cash and Equivalents - Money Market	CREF Money Market R3	\$431,803	1.18%	\$759,316	1.99%
Cash and Equivalents - Money Market	Vanguard Federal Money Market	\$47,383	0.13%	\$12,037	0.03%
Stable Value	TIAA Traditional - Group Retirement Annuity	\$6,314,386	17.23%	\$6,498,094	17.01%
Inflation Protected Bond	CREF Inflation-Linked Bond R3	\$484,117	1.32%	\$535,867	1.40%
Intermediate Term Bond	PGIM Total Return Bond R6	\$619,270	1.69%	\$809,950	2.12%
Intermediate Term Bond	Vanguard Total Bond Market Index Adm	\$127,295	0.35%	\$110,842	0.29%
World Allocation	CREF Social Choice R3	\$1,064,178	2.90%	\$998,671	2.61%
Target Date Ret Income Moderate	Vanguard Target Retirement Income Inv	\$522,092	1.42%	\$420,812	1.10%
Target Date 2015 Moderate	Vanguard Target Retirement 2015 Inv	\$553,650	1.51%	\$383,538	1.00%
Target Date 2020 Moderate	Vanguard Target Retirement 2020 Inv	\$1,202,160	3.28%	\$1,540,349	4.03%
Target Date 2025 Moderate	Vanguard Target Retirement 2025 Inv	\$1,460,601	3.99%	\$1,727,486	4.52%
Target Date 2030 Moderate	Vanguard Target Retirement 2030 Inv	\$599,958	1.64%	\$678,446	1.78%
Target Date 2035 Moderate	Vanguard Target Retirement 2035 Inv	\$533,790	1.46%	\$493,449	1.29%
Target Date 2040 Moderate	Vanguard Target Retirement 2040 Inv	\$492,684	1.34%	\$576,407	1.51%
Target Date 2045 Moderate	Vanguard Target Retirement 2045 Inv	\$344,417	0.94%	\$411,076	1.08%
Target Date 2050 Moderate	Vanguard Target Retirement 2050 Inv	\$146,145	0.40%	\$179,501	0.47%
Target Date 2055 Moderate	Vanguard Target Retirement 2055 Inv	\$156,473	0.43%	\$198,973	0.52%
Target Date 2060+ Moderate	Vanguard Target Retirement 2060 Inv	\$29,069	0.08%	\$47,630	0.12%

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PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 9.30.18 | Q3 18

University of Maine System Basic Retirement Plan for Classified Employees 403(b) - 102969

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2017	(%)	CURRENT	(%)
Target Date 2060+ Moderate	Vanguard Target Retirement 2065 Inv	\$0	0.00%	\$1,173	0.00%
Allocation--85%+ Equity	CREF Stock R3	\$3,607,550	9.84%	\$3,617,613	9.47%
Large Company Value	JHancock Disciplined Value R6	\$830,159	2.27%	\$854,722	2.24%
Large Company Blend	Vanguard Institutional Index I	\$986,139	2.69%	\$1,127,228	2.95%
Large Company Growth	Harbor Capital Appreciation Retirement	\$643,998	1.76%	\$740,767	1.94%
Medium Company Value	Virtus Ceredex Mid Cap Value Equity IS	\$514,046	1.40%	\$565,743	1.48%
Medium Company Blend	Vanguard Extended Market Index Inst	\$473,869	1.29%	\$519,608	1.36%
Medium Company Growth	Goldman Sachs Growth Opportunities R6	\$306,344	0.84%	\$305,258	0.80%
Foreign Large Value	MFS International Value R6	\$962,912	2.63%	\$946,776	2.48%
Foreign Large Blend	Vanguard Total Intl Stock Index Inst	\$430,086	1.17%	\$496,684	1.30%
Foreign Large Growth	Oppenheimer Intl Growth I	\$105,558	0.29%	\$90,738	0.24%
Small Company Value	Victory Sycamore Small Company Opp I	\$406,457	1.11%	\$445,112	1.17%
Small Company Growth	Carillon Eagle Small Cap Growth R6	\$189,283	0.52%	\$210,703	0.55%
Emerging Markets	DFA Emerging Markets Core Equity I	\$902,556	2.46%	\$639,300	1.67%
Specialty-Private Real Estate	TIAA Real Estate Account	\$2,020,549	5.51%	\$2,042,153	5.35%
Other Assets	Non Approved Funds	\$6,413,795	17.50%	\$6,301,200	16.49%
Self-Directed Brokerage	Self Directed Accounts	\$2,726,671	7.44%	\$2,915,000	7.63%
TOTALS		\$36,649,444	100%	\$38,202,222	100%

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8.1

PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 9.30.18 | Q3 18

University of Maine System Basic Retirement Plan for Classified Employees 401(a) - 102970

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2017	(%)	CURRENT	(%)
Cash and Equivalents - Money Market	CREF Money Market R3	\$1,131,460	1.63%	\$1,349,738	1.86%
Cash and Equivalents - Money Market	Vanguard Federal Money Market	\$95,429	0.14%	\$79,095	0.11%
Stable Value	TIAA Traditional - Group Retirement Annuity	\$14,288,311	20.64%	\$14,448,856	19.91%
Inflation Protected Bond	CREF Inflation-Linked Bond R3	\$968,323	1.40%	\$1,079,411	1.49%
Intermediate Term Bond	PGIM Total Return Bond R6	\$1,078,551	1.56%	\$1,384,136	1.91%
Intermediate Term Bond	Vanguard Total Bond Market Index Adm	\$238,818	0.34%	\$234,302	0.32%
World Allocation	CREF Social Choice R3	\$2,850,961	4.12%	\$2,826,126	3.89%
Target Date Ret Income Moderate	Vanguard Target Retirement Income Inv	\$894,108	1.29%	\$804,451	1.11%
Target Date 2015 Moderate	Vanguard Target Retirement 2015 Inv	\$946,725	1.37%	\$829,687	1.14%
Target Date 2020 Moderate	Vanguard Target Retirement 2020 Inv	\$1,915,567	2.77%	\$2,210,252	3.05%
Target Date 2025 Moderate	Vanguard Target Retirement 2025 Inv	\$1,961,821	2.83%	\$2,316,900	3.19%
Target Date 2030 Moderate	Vanguard Target Retirement 2030 Inv	\$1,045,411	1.51%	\$1,152,568	1.59%
Target Date 2035 Moderate	Vanguard Target Retirement 2035 Inv	\$879,719	1.27%	\$996,224	1.37%
Target Date 2040 Moderate	Vanguard Target Retirement 2040 Inv	\$745,198	1.08%	\$865,757	1.19%
Target Date 2045 Moderate	Vanguard Target Retirement 2045 Inv	\$524,036	0.76%	\$662,528	0.91%
Target Date 2050 Moderate	Vanguard Target Retirement 2050 Inv	\$259,364	0.37%	\$316,716	0.44%
Target Date 2055 Moderate	Vanguard Target Retirement 2055 Inv	\$143,155	0.21%	\$179,641	0.25%
Target Date 2060+ Moderate	Vanguard Target Retirement 2060 Inv	\$28,998	0.04%	\$43,466	0.06%

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8.1

PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 9.30.18 | Q3 18

University of Maine System Basic Retirement Plan for Classified Employees 401(a) - 102970

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2017	(%)	CURRENT	(%)
Target Date 2060+ Moderate	Vanguard Target Retirement 2065 Inv	\$0	0.00%	\$1,173	0.00%
Allocation--85%+ Equity	CREF Stock R3	\$9,179,601	13.26%	\$9,387,070	12.93%
Large Company Value	JHancock Disciplined Value R6	\$1,198,822	1.73%	\$1,357,143	1.87%
Large Company Blend	Vanguard Institutional Index I	\$1,624,846	2.35%	\$1,953,203	2.69%
Large Company Growth	Harbor Capital Appreciation Retirement	\$1,093,668	1.58%	\$1,353,685	1.87%
Medium Company Value	Virtus Ceredex Mid Cap Value Equity IS	\$683,696	0.99%	\$754,698	1.04%
Medium Company Blend	Vanguard Extended Market Index Inst	\$724,862	1.05%	\$871,981	1.20%
Medium Company Growth	Goldman Sachs Growth Opportunities R6	\$428,766	0.62%	\$508,523	0.70%
Foreign Large Value	MFS International Value R6	\$1,555,197	2.25%	\$1,685,720	2.32%
Foreign Large Blend	Vanguard Total Intl Stock Index Inst	\$542,316	0.78%	\$742,521	1.02%
Foreign Large Growth	Oppenheimer Intl Growth I	\$160,570	0.23%	\$130,427	0.18%
Small Company Value	Victory Sycamore Small Company Opp I	\$546,281	0.79%	\$607,565	0.84%
Small Company Growth	Carillon Eagle Small Cap Growth R6	\$194,206	0.28%	\$254,773	0.35%
Emerging Markets	DFA Emerging Markets Core Equity I	\$1,169,774	1.69%	\$959,918	1.32%
Specialty-Private Real Estate	TIAA Real Estate Account	\$3,553,456	5.13%	\$3,586,594	4.94%
Other Assets	Non Approved Funds	\$14,368,429	20.75%	\$14,293,528	19.69%
Self-Directed Brokerage	Self Directed Accounts	\$2,219,020	3.20%	\$2,349,948	3.24%
TOTALS		\$69,239,464	100%	\$72,578,324	100%

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8.1

PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 9.30.18 | Q3 18

University of Maine System Deferred Compensation Plan 457(b) - 102971

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2017	(%)	CURRENT	(%)
Cash and Equivalents - Money Market	CREF Money Market R3	\$568,491	1.91%	\$866,107	2.71%
Cash and Equivalents - Money Market	Vanguard Federal Money Market	\$35,912	0.12%	\$44,052	0.14%
Stable Value	TIAA Traditional - Group Retirement Annuity	\$7,133,436	23.96%	\$7,674,087	24.05%
Inflation Protected Bond	CREF Inflation-Linked Bond R3	\$528,055	1.77%	\$563,198	1.77%
Intermediate Term Bond	PGIM Total Return Bond R6	\$919,646	3.09%	\$1,066,251	3.34%
Intermediate Term Bond	Vanguard Total Bond Market Index Adm	\$183,568	0.62%	\$234,358	0.73%
World Allocation	CREF Social Choice R3	\$1,389,989	4.67%	\$1,462,039	4.58%
Target Date Ret Income Moderate	Vanguard Target Retirement Income Inv	\$483,934	1.63%	\$469,486	1.47%
Target Date 2015 Moderate	Vanguard Target Retirement 2015 Inv	\$511,514	1.72%	\$507,103	1.59%
Target Date 2020 Moderate	Vanguard Target Retirement 2020 Inv	\$866,151	2.91%	\$961,429	3.01%
Target Date 2025 Moderate	Vanguard Target Retirement 2025 Inv	\$968,607	3.25%	\$1,080,769	3.39%
Target Date 2030 Moderate	Vanguard Target Retirement 2030 Inv	\$588,562	1.98%	\$581,331	1.82%
Target Date 2035 Moderate	Vanguard Target Retirement 2035 Inv	\$242,119	0.81%	\$375,741	1.18%
Target Date 2040 Moderate	Vanguard Target Retirement 2040 Inv	\$256,932	0.86%	\$330,700	1.04%
Target Date 2045 Moderate	Vanguard Target Retirement 2045 Inv	\$137,767	0.46%	\$150,298	0.47%
Target Date 2050 Moderate	Vanguard Target Retirement 2050 Inv	\$36,617	0.12%	\$40,970	0.13%
Target Date 2055 Moderate	Vanguard Target Retirement 2055 Inv	\$0	0.00%	\$0	0.00%
Target Date 2060+ Moderate	Vanguard Target Retirement 2060 Inv	\$0	0.00%	\$0	0.00%

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PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 9.30.18 | Q3 18

University of Maine System Deferred Compensation Plan 457(b) - 102971

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2017	(%)	CURRENT	(%)
Target Date 2060+ Moderate	Vanguard Target Retirement 2065 Inv	\$0	0.00%	\$0	0.00%
Allocation--85%+ Equity	CREF Stock R3	\$1,975,792	6.64%	\$2,102,526	6.59%
Large Company Value	JHancock Disciplined Value R6	\$737,600	2.48%	\$759,285	2.38%
Large Company Blend	Vanguard Institutional Index I	\$1,322,232	4.44%	\$1,602,411	5.02%
Large Company Growth	Harbor Capital Appreciation Retirement	\$619,078	2.08%	\$549,583	1.72%
Medium Company Value	Virtus Ceredex Mid Cap Value Equity IS	\$389,160	1.31%	\$427,996	1.34%
Medium Company Blend	Vanguard Extended Market Index Inst	\$715,468	2.40%	\$785,677	2.46%
Medium Company Growth	Goldman Sachs Growth Opportunities R6	\$158,848	0.53%	\$172,886	0.54%
Foreign Large Value	MFS International Value R6	\$704,999	2.37%	\$683,528	2.14%
Foreign Large Blend	Vanguard Total Intl Stock Index Inst	\$448,106	1.50%	\$488,508	1.53%
Foreign Large Growth	Oppenheimer Intl Growth I	\$145,454	0.49%	\$125,347	0.39%
Small Company Value	Victory Sycamore Small Company Opp I	\$348,544	1.17%	\$395,336	1.24%
Small Company Growth	Carillon Eagle Small Cap Growth R6	\$154,110	0.52%	\$157,528	0.49%
Emerging Markets	DFA Emerging Markets Core Equity I	\$720,796	2.42%	\$524,603	1.64%
Specialty-Private Real Estate	TIAA Real Estate Account	\$1,940,793	6.52%	\$2,147,752	6.73%
Other Assets	Non Approved Funds	\$3,557,299	11.95%	\$3,518,744	11.03%
Self-Directed Brokerage	Self Directed Accounts	\$988,434	3.32%	\$1,054,701	3.31%
TOTALS		\$29,778,011	100%	\$31,904,330	100%

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8.1

INVESTMENT REVIEW | INVESTMENT POLICY MONITOR

Period Ending 9.30.18 | Q3 18

University of Maine System

INVESTMENT	QUANTITATIVE								QUALITATIVE		TOTALS	
	Risk-Adjusted Performance		vs. Peers Performance		Style		Confidence		Fund Management	Fund Firm	Overall	Total Score
	3 Yr	5 Yr	3 Yr	5 Yr	3 Yr	5 Yr	3 Yr	5 Yr				
Inflation Protected Bond CREF Inflation-Linked Bond R3	●	●	●	●	●	●	●	●	●	●	●	91
Intermediate Term Bond PGIM Total Return Bond R6	●	●	●	●	●	●	●	●	●	●	●	100
World Allocation CREF Social Choice R3	●	●	●	●	●	●	●	●	●	●	●	100
Large Company Value JHancock Disciplined Value R6	●	▼	●	●	●	●	●	●	●	●	●	88
Large Company Growth Harbor Capital Appreciation Retirement	▼	●	●	●	●	●	●	●	●	●	●	95
Medium Company Value Virtus Ceredex Mid Cap Value Equity IS	●	●	●	●	●	●	●	●	●	●	●	98
Medium Company Growth Goldman Sachs Growth Opportunities R6	▼	▼	▼	▼	●	●	▼	▼	●	●	●	69
Foreign Large Value MFS International Value R6	●	●	●	●	▼	▼	●	●	●	▼	●	95

LEGEND

●	IN GOOD STANDING	▼	MARKED FOR REVIEW	●	CONSIDER FOR TERMINATION
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The CAPTRUST Investment Policy Monitor ("Scorecard") is an illustration of our monitoring system and is designed to assist our clients in their efforts to provide fiduciary oversight to investment assets. It is not intended as a solicitation to buy any security. The scoring system measures quantitative areas as well as qualitative (or subjective) fields for actively managed investment options. Quantitative scoring areas include Risk Adjusted Performance (3 & 5 yr.); Performance vs. Relevant Peer Group; Style Attribution; and Confidence. Qualitative Scoring Areas measure the quality of the Management Team while also considering the stewardship of the investment option's parent company under Investment Family Items. Qualitative areas of analysis are subjective in nature. CAPTRUST typically requires at least 3 months of monitoring before including an investment in this report. Investments that have been added to our system less than 3 months prior to a report being generated may have a Fund Management assessment of '25' as a default, but will be updated, if necessary, after the first quarter of monitoring to more accurately reflect our system. Investments that are not mutual funds or have less than 3 years of performance history may not be scored. This material is for institutional investor use only and is not intended to be shared with individual investors.

8.1

INVESTMENT REVIEW | INVESTMENT POLICY MONITOR

Period Ending 9.30.18 | Q3 18

University of Maine System

INVESTMENT	QUANTITATIVE								QUALITATIVE		TOTALS	
	Risk-Adjusted Performance		vs. Peers Performance		Style		Confidence		Fund Management	Fund Firm	Overall	Total Score
	3 Yr	5 Yr	3 Yr	5 Yr	3 Yr	5 Yr	3 Yr	5 Yr				
Foreign Large Growth Oppenheimer Intl Growth I	▼	▼	▼	▼	●	●	▼	▼	●	●	●	59
Small Company Value Victory Sycamore Small Company Opp I	●	●	●	●	●	●	●	●	●	▼	●	99
Small Company Growth Carillon Eagle Small Cap Growth R6	●	●	▼	●	●	●	▼	●	●	●	●	88
Emerging Markets DFA Emerging Markets Core Equity I	●	●	●	●	●	●	●	●	●	●	●	91

8.1

LEGEND

●	IN GOOD STANDING	▼	MARKED FOR REVIEW	●	CONSIDER FOR TERMINATION
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The CAPTRUST Investment Policy Monitor ("Scorecard") is an illustration of our monitoring system and is designed to assist our clients in their efforts to provide fiduciary oversight to investment assets. It is not intended as a solicitation to buy any security. The scoring system measures quantitative areas as well as qualitative (or subjective) fields for actively managed investment options. Quantitative scoring areas include Risk Adjusted Performance (3 & 5 yr.); Performance vs. Relevant Peer Group; Style Attribution; and Confidence. Qualitative Scoring Areas measure the quality of the Management Team while also considering the stewardship of the investment option's parent company under Investment Family Items. Qualitative areas of analysis are subjective in nature. CAPTRUST typically requires at least 3 months of monitoring before including an investment in this report. Investments that have been added to our system less than 3 months prior to a report being generated may have a Fund Management assessment of '25' as a default, but will be updated, if necessary, after the first quarter of monitoring to more accurately reflect our system. Investments that are not mutual funds or have less than 3 years of performance history may not be scored. This material is for institutional investor use only and is not intended to be shared with individual investors.

INVESTMENT REVIEW | INVESTMENT POLICY MONITOR

Period Ending 9.30.18 | Q3 18

University of Maine System

TARGET DATE INVESTMENTS

INVESTMENT	QUANTITATIVE						QUALITATIVE				TOTALS	
	Risk-Adjusted Performance		vs. Peers Performance		Glidepath		Portfolio Construct.	Underlying Inv. Vehicles	Fund Mgmt	Fund Firm	Overall	Total Score
	3 Yr	5 Yr	3 Yr	5 Yr	% of Equities	Beta to Equities						
Vanguard Target Retirement	●	●	●	●	●	●	●	●	●	▲	●	96

CAPITAL PRESERVATION INVESTMENTS

INVESTMENT	Overall	Commentary
CREF Money Market R3	●	According to CAPTRUST Financial Advisors, this Capital Preservation option is in good standing per the guidelines as established by the Investment Policy Statement.
Vanguard Federal Money Market	●	According to CAPTRUST Financial Advisors, this Capital Preservation option is in good standing per the guidelines as established by the Investment Policy Statement.
TIAA Traditional - Group Retirement Annuity	●	According to CAPTRUST Financial Advisors, this Capital Preservation option is in good standing per the guidelines as established by the Investment Policy Statement.

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INVESTMENT REVIEW | INVESTMENT POLICY MONITOR

Period Ending 9.30.18 | Q3 18

University of Maine System

PASSIVE INVESTMENTS

INVESTMENT	Overall	Commentary
Vanguard Total Bond Market Index Adm	●	This fund currently meets the guidelines set forth by CAPTRUST for passively managed investments. This assessment is based on both quantitative and qualitative data. Examples of quantitative and qualitative items considered include, but are not limited to, quality of management, tracking error, and cost.
Vanguard Institutional Index I	●	This fund currently meets the guidelines set forth by CAPTRUST for passively managed investments. This assessment is based on both quantitative and qualitative data. Examples of quantitative and qualitative items considered include, but are not limited to, quality of management, tracking error, and cost.
Vanguard Extended Market Index Inst	●	This fund currently meets the guidelines set forth by CAPTRUST for passively managed investments. This assessment is based on both quantitative and qualitative data. Examples of quantitative and qualitative items considered include, but are not limited to, quality of management, tracking error, and cost.
Vanguard Total Intl Stock Index Inst	●	This fund currently meets the guidelines set forth by CAPTRUST for passively managed investments. This assessment is based on both quantitative and qualitative data. Examples of quantitative and qualitative items considered include, but are not limited to, quality of management, tracking error, and cost.

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INVESTMENT REVIEW | INVESTMENT POLICY MONITOR

Period Ending 9.30.18 | Q3 18

University of Maine System

INVESTMENTS IN DISTINCT ASSET CLASSES

INVESTMENT	Overall	Commentary
CREF Stock R3		This fund currently meets the guidelines set forth by CAPTRUST for distinct investments in the Investment Policy Statement. This assessment is based on both quantitative and qualitative data. Examples of quantitative and qualitative items considered include, but are not limited to, quality of management, excess return, and risk-adjusted performance.
TIAA Real Estate Account		This fund currently meets the guidelines set forth by CAPTRUST for distinct investments in the Investment Policy Statement. This assessment is based on both quantitative and qualitative data. Examples of quantitative and qualitative items considered include, but are not limited to, quality of management, excess return, and risk-adjusted performance.

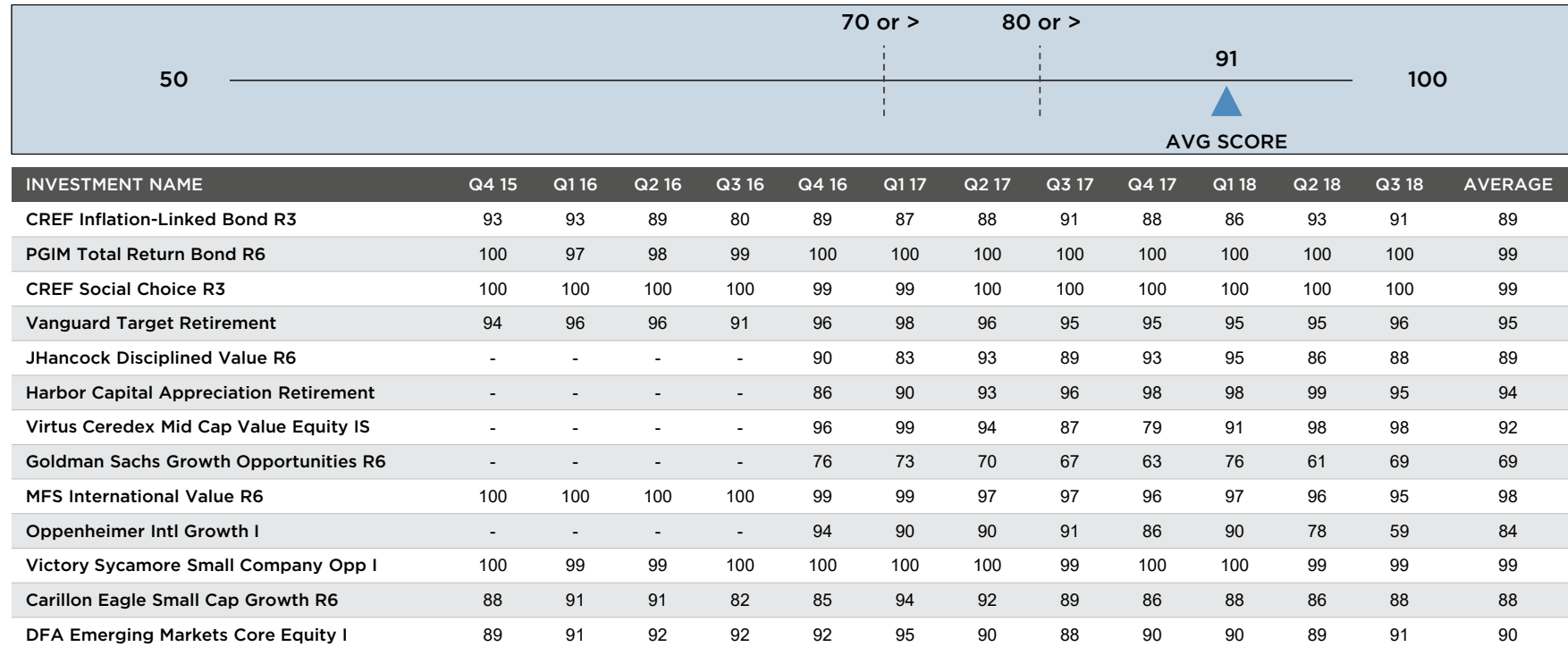
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PLAN INVESTMENT REVIEW | PLAN PERFORMANCE MEASUREMENT

Period Ending 9.30.18 | Q3 18

University of Maine System

Plan Performance Success Rate: Average score of plan investments illustrated below

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CONTINUED...

SUMMARY: Over the previous quarters the plan investment options have averaged a score of 91.

Scores are calculated quarterly using the CAPTRUST Investment Policy Monitoring System ("Scorecard"). In the 4Q2013, our methodology changed utilizing different quantitative statistics than the prior system resulting in a re-categorization of some specific funds as either "passive" (funds designed to track a given benchmark) or "distinct" funds with a limited number of comparable funds, or funds with distinct strategies that do not have an appropriate benchmark. These funds (passive and/or distinct) will no longer be included in the Plan Performance Measurement Report but will continue to be included on the Investment Policy Monitor and be scored by CAPTRUST for their ability to achieve stated goals.

INVESTMENT REVIEW | SELECT COMMENTARY

Period Ending 9.30.18 | Q3 18

University of Maine System

FUND MANAGEMENT ITEMS	COMMENTARY
Goldman Sachs Growth Opp	<p>After 18 years of service, Sean Gallagher, co-chief investment officer of the US Equity team, has retired. Steven Barry will continue to serve as chief investment officer of the US Equity team and also remains the chief investment officer of the US Equity team.</p> <p>Following a disappointing performance in 2015, the strategy again lagged its peers and the benchmark in 2016 due to a rally in lower quality stocks at the end of the year. The team also had some missteps in individual positions where their thesis did not work as expected. The strategy has recently faced stylistic headwinds and has not navigated the backdrop as well as some of its peers. Execution in the consumer sectors has also been a cause for concern. Although 2017 results showed improvement, they have again fallen behind both the benchmark and peers year to date through the third quarter. Longer-term results remain a concern and we have less confidence in this team's ability to outperform going forward. As such, we believe that this strategy merits further consideration.</p>
John Hancock Disciplined Value	<p>Analysts Stephanie McGirr and David Cohen have been promoted to portfolio managers of the John Hancock Disciplined Value strategy. Ms. McGirr and Mr. Cohen have 16 and 14 years of investment experience, respectively. These promotions do not affect the roles of current Portfolio Managers Mark Donovan and David Pyle, but reflect Boston Partners' long-term succession planning.</p>
MFS International Value	<p>Benjamin Stone and Pablo de la Mata relinquished their portfolio management responsibilities on the MFS Global Value strategy and the equity portion of the Global Total Return and Global Tactical Allocation strategies. However, they continue to manage the International Value and European Value strategies. Upon their departure, the Global Value management team will be comprised of Vipin Narula, Steve Gorham and Nevin Chitkara.</p>

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INVESTMENT REVIEW | SELECT COMMENTARY

Period Ending 9.30.18 | Q3 18

University of Maine System

FUND MANAGEMENT ITEMS	COMMENTARY
Oppenheimer Intl Growth	<p>Lead portfolio manager George Evans has managed the strategy since its 1996 inception. Rob Dunphy joined the team in 2002 and became a co-PM in 2012. The investment process focuses on long-term structural themes called MANTRA (Mass Affluence, New Technology, Restructuring, Aging), which can provide tailwinds for earnings and cash flow. Due to its focus on high-quality firms and beta of less than 1, the strategy has typically outperformed its foreign large growth peers and benchmark in declining markets. The strategy has a conservative approach to portfolio construction, which has helped in periods of market stress. However, in this year's sell-off the strategy is significantly behind the benchmark and in the bottom quartile of the peer group. Stocks with near-term earnings momentum have outperformed this year, as the market is willing to pay high valuations for growth. This has been a headwind for the strategy as it is more valuation conscious than some of its peers and thus has less exposure to these stocks. While the strategy's focus on secular growth themes has paid off over the long-term, it can cause the portfolio to be out of step with the market at times. Despite near-term underperformance, the strategy remains in the top quartile of the peer group and well ahead of the benchmark over 10 years.</p>
FUND FIRM ITEMS	COMMENTARY
MFS Family of Funds	<p>Effective 1/1/2019, MFS has appointed Edward Maloney as their next chief investment officer (CIO). As part of succession planning, Mr. Maloney will take on CIO responsibilities from Michael Roberge, who currently serves as CEO and CIO. Mr. Maloney, who has been with MFS since 2005, will report to Mr. Roberge going forward.</p> <p>Carol Geremia recently became president of MFS Investment Management and head of Global Distribution. Jim Jessee, who served as co-head of Global Distribution alongside Carol since 2011, continues to assist the global retail business.</p> <p>In addition, James Swanson, MFS chief investment strategist and portfolio manager, plans to retire from MFS on December 31, 2018. Effective January 1, 2019, Robert Almeida, currently an institutional portfolio manager, will become the firm's global investment strategist.</p>
TIAA-CREF	<p>Stephen Gruppo, chief risk officer of TIAA, has retired. Chris Van Buren, deputy chief risk officer, replaced Mr. Gruppo. Michelle Beck, chief risk officer of Nuveen, reports directly to Mr. Van Buren.</p>

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INVESTMENT REVIEW | SELECT COMMENTARY

Period Ending 9.30.18 | Q3 18

University of Maine System

FUND FIRM ITEMS	COMMENTARY
Vanguard Group, Inc.	Joseph Brennan has been appointed to a newly created position of global chief risk officer, reporting to CEO Tim Buckley. He will be succeeded by Rodney Comegys as head of Vanguard's Equity Index Group.
OppenheimerFunds	Ahmad Deek has joined as Chief Risk Officer. He reports to chairman and CEO Art Steinmetz. Ahmad succeeds Geoffrey Craddock, who left to become CRO at parent MassMutual. Bob Agan, director of enterprise risk, and Jerry Chubbin, and director of fixed income risk management, who had served as interim co-heads of risk management, following Geoffrey's departure have returned to their existing roles and will report to Ahmad.
Dimensional Fund Advisors	Dimensional has added 3 new members to their investment committee: Dave Butler co-CEO and head of Global Financial Advisor Services, Ryan Wiley co-head of Global Equity Trading, and Savina Rizova head of Strategy Research. In addition, Savina Rizova and Marlena Lee were named co-heads of Research.
Victory Capital Management, Inc.	Victory Capital Holdings, the parent of Victory Capital, filed an IPO on 2/8/2018. The current ownership structure is: Victory employees 29%; Crestview Partners 45%; Reverence Capital Partners 12%; and public 14%.

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PLAN INVESTMENT REVIEW | TARGET DATE REVIEW

Period Ending 9.30.18 | Q3 18

University of Maine System

VANGUARD TARGET RETIREMENT

MEETING DATE: OCTOBER 17, 2018

FOCUS AREA

Organizational

COMMENTARY

There were no material changes to the target date team during the quarter.

Investments

COMMENTARY

There were no changes made to the underlying investments of the Target Retirement series during the quarter.

Performance and Positioning

COMMENTARY

Vanguard Target Retirement Performance Update

Vanguard Target Retirement rebounded from its disappointing performance in the second quarter as the series mostly outperformed peers and its benchmark in the third quarter.

- This rebound has helped improve the series's results year-to-date and now each vintage is leading peers for the year
- After being strongly impacted by the sell-off in foreign developed and emerging markets equities in the second quarter, the series's larger allocations to these assets had less influence in the third quarter as the markets were more muted
- In addition, Target Retirement was aided by its use of passive strategies as active managers struggled to keep pace with market benchmarks, especially in international equity markets
- The series also benefitted from its underlying manager's slight bias towards large-cap growth stocks within U.S. equities as that sector outperformed mid- and small-cap stocks during the quarter

There were no changes made to the series's strategic asset allocation during the quarter.

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PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY

Period Ending 9.30.18 | Q3 18

University of Maine System

INVESTMENT NAME	Q3 '18	YTD '18	2017	2016	2015	2014	2013	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
CASH AND EQUIVALENTS - MONEY MARKET											
CREF Money Market R3	0.43%	0.93%	0.50%	0.13%	0.00%	0.00%	0.00%	1.11%	0.52%	0.31%	0.23%
Vanguard Federal Money Market	0.48%	1.23%	0.81%	0.30%	0.04%	0.01%	0.02%	1.50%	0.79%	0.48%	0.34%
ICE BofA ML US Treasury Bill 3 Mon USD	0.49%	1.30%	0.86%	0.33%	0.05%	0.03%	0.07%	1.59%	0.84%	0.52%	0.34%
STABLE VALUE											
TIAA Traditional	Current Rate is 4.00%										
ICE BofA ML US Treasury Bill 3 Mon USD	0.49%	1.30%	0.86%	0.33%	0.05%	0.03%	0.07%	1.59%	0.84%	0.52%	0.34%
Hueler Stable Value Index (gross)	0.57%	1.65%	1.95%	1.79%	1.77%	1.69%	1.83%	2.17%	1.95%	1.86%	2.29%
INFLATION PROTECTED BOND											
CREF Inflation-Linked Bond R3	-0.43%	-0.37%	1.85%	4.23%	-1.68%	3.34%	-9.01%	0.22%	1.58%	1.02%	2.88%
BBgBarc US Treasury US TIPS TR USD	-0.82%	-0.84%	3.01%	4.68%	-1.44%	3.64%	-8.61%	0.41%	2.04%	1.37%	3.32%
Inflation Protected Bond Universe	-0.58%	-0.64%	2.55%	4.58%	-2.22%	1.96%	-7.58%	0.39%	1.93%	0.85%	2.68%
INTERMEDIATE TERM BOND											
PGIM Total Return Bond R6	-0.09%	-1.97%	6.71%	4.83%	0.09%	7.25%	-0.91%	-0.88%	2.86%	3.46%	5.98%
Vanguard Total Bond Market Index Adm	0.03%	-1.61%	3.56%	2.60%	0.40%	5.89%	-2.15%	-1.21%	1.28%	2.09%	3.70%
BBgBarc Aggregate Bond Index	0.02%	-1.60%	3.54%	2.65%	0.55%	5.97%	-2.02%	-1.22%	1.31%	2.16%	3.77%
Intermediate Term Bond Universe	0.14%	-1.44%	3.80%	3.26%	-0.27%	5.20%	-1.39%	-1.14%	1.63%	2.17%	4.26%
WORLD ALLOCATION											
CREF Social Choice R3	3.28%	3.36%	14.27%	7.40%	-0.87%	6.83%	16.68%	6.92%	9.32%	7.12%	7.71%
60% MSCI World 40% BBgBarc Agg Index	3.05%	2.92%	14.90%	6.09%	0.26%	5.77%	14.83%	6.53%	8.98%	6.87%	7.30%
World Allocation Universe	1.38%	0.13%	14.23%	6.03%	-4.33%	1.75%	11.38%	3.41%	7.28%	4.43%	6.11%

*ANNUALIZED

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PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY

Period Ending 9.30.18 | Q3 18

University of Maine System

INVESTMENT NAME	Q3 '18	YTD '18	2017	2016	2015	2014	2013	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
TARGET DATE RET INCOME MODERATE											
Vanguard Target Retirement Income Inv	1.33%	1.26%	8.47%	5.25%	-0.17%	5.54%	5.87%	3.31%	5.36%	4.52%	5.67%
Morningstar Lifetime Moderate Income Index	1.60%	2.00%	8.55%	5.98%	-1.30%	4.09%	6.45%	4.39%	5.77%	4.28%	-
Retirement Income Moderate	1.52%	0.81%	9.75%	5.04%	-1.38%	4.58%	6.61%	3.14%	5.54%	4.38%	5.41%
TARGET DATE 2015 MODERATE											
Vanguard Target Retirement 2015 Inv	1.76%	1.76%	11.50%	6.16%	-0.46%	6.56%	13.00%	4.54%	7.15%	5.92%	6.91%
Morningstar Lifetime Moderate 2015 Index	1.77%	1.75%	11.39%	7.10%	-1.73%	5.55%	10.50%	4.96%	7.16%	5.45%	-
2015 Moderate	1.89%	1.50%	11.31%	5.29%	-1.40%	4.69%	11.76%	3.97%	6.95%	5.24%	6.32%
TARGET DATE 2020 MODERATE											
Vanguard Target Retirement 2020 Inv	2.36%	2.42%	14.08%	6.95%	-0.68%	7.11%	15.85%	5.87%	8.68%	6.92%	7.56%
Morningstar Lifetime Moderate 2020 Index	1.97%	1.90%	12.79%	7.66%	-1.88%	5.87%	12.98%	5.50%	7.97%	6.03%	-
2020 Moderate	2.10%	1.80%	13.46%	6.14%	-1.41%	5.02%	15.43%	4.80%	7.86%	5.96%	6.98%
TARGET DATE 2025 MODERATE											
Vanguard Target Retirement 2025 Inv	2.76%	2.81%	15.94%	7.48%	-0.85%	7.17%	18.14%	6.79%	9.71%	7.56%	7.98%
Morningstar Lifetime Moderate 2025 Index	2.28%	2.27%	14.54%	8.39%	-2.06%	6.04%	16.28%	6.34%	9.08%	6.76%	-
2025 Moderate	2.50%	2.40%	15.26%	6.84%	-1.42%	5.11%	17.80%	5.91%	9.04%	6.60%	7.61%
TARGET DATE 2030 MODERATE											
Vanguard Target Retirement 2030 Inv	3.09%	3.30%	17.52%	7.85%	-1.03%	7.17%	20.49%	7.65%	10.66%	8.13%	8.36%
Morningstar Lifetime Moderate 2030 Index	2.70%	2.86%	16.59%	9.26%	-2.30%	6.01%	19.64%	7.49%	10.44%	7.56%	-
2030 Moderate	2.84%	3.16%	17.38%	7.54%	-1.42%	5.23%	20.81%	7.25%	10.43%	7.54%	8.31%

*ANNUALIZED

CONTINUED...

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PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY

Period Ending 9.30.18 | Q3 18

University of Maine System

INVESTMENT NAME	Q3 '18	YTD '18	2017	2016	2015	2014	2013	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
TARGET DATE 2035 MODERATE											
Vanguard Target Retirement 2035 Inv	3.47%	3.72%	19.12%	8.26%	-1.26%	7.24%	22.82%	8.51%	11.61%	8.69%	8.78%
Morningstar Lifetime Moderate 2035 Index	3.14%	3.48%	18.52%	10.07%	-2.58%	5.80%	22.04%	8.65%	11.72%	8.22%	-
2035 Moderate	3.18%	3.49%	19.10%	7.72%	-1.45%	5.58%	21.03%	8.09%	11.25%	8.00%	8.52%
TARGET DATE 2040 MODERATE											
Vanguard Target Retirement 2040 Inv	3.79%	4.17%	20.71%	8.73%	-1.59%	7.15%	24.37%	9.37%	12.54%	9.17%	9.14%
Morningstar Lifetime Moderate 2040 Index	3.43%	3.87%	19.87%	10.61%	-2.83%	5.51%	23.05%	9.42%	12.57%	8.60%	-
2040 Moderate	3.43%	3.95%	20.12%	7.48%	-1.42%	5.53%	23.38%	8.80%	11.74%	8.34%	8.62%
TARGET DATE 2045 MODERATE											
Vanguard Target Retirement 2045 Inv	4.03%	4.40%	21.42%	8.87%	-1.57%	7.16%	24.37%	9.85%	12.91%	9.39%	9.24%
Morningstar Lifetime Moderate 2045 Index	3.53%	3.97%	20.53%	10.84%	-3.03%	5.25%	23.07%	9.69%	12.92%	8.69%	-
2045 Moderate	3.59%	3.98%	20.49%	7.99%	-1.99%	5.03%	22.00%	9.00%	12.02%	8.26%	8.53%
TARGET DATE 2050 MODERATE											
Vanguard Target Retirement 2050 Inv	4.02%	4.42%	21.39%	8.85%	-1.58%	7.18%	24.34%	9.84%	12.90%	9.38%	9.24%
Morningstar Lifetime Moderate 2050 Index	3.49%	3.86%	20.78%	10.89%	-3.19%	5.00%	22.83%	9.62%	12.97%	8.62%	-
2050 Moderate	3.59%	4.13%	20.59%	7.99%	-1.79%	5.23%	23.68%	9.23%	12.16%	8.42%	8.62%
TARGET DATE 2055 MODERATE											
Vanguard Target Retirement 2055 Inv	3.99%	4.38%	21.38%	8.88%	-1.72%	7.19%	24.33%	9.79%	12.89%	9.34%	-
Morningstar Lifetime Moderate 2055 Index	3.41%	3.71%	20.95%	10.90%	-3.34%	4.74%	22.49%	9.48%	12.95%	8.51%	-
2055 Moderate	3.64%	3.78%	20.73%	8.36%	-1.65%	5.99%	23.53%	9.00%	12.29%	8.76%	-

*ANNUALIZED

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PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY

Period Ending 9.30.18 | Q3 18

University of Maine System

INVESTMENT NAME	Q3 '18	YTD '18	2017	2016	2015	2014	2013	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
TARGET DATE 2060+ MODERATE											
Vanguard Target Retirement 2060 Inv	4.00%	4.42%	21.36%	8.84%	-1.68%	7.16%	24.35%	9.81%	12.89%	9.35%	-
Vanguard Target Retirement 2065 Inv	3.95%	4.33%	-	-	-	-	-	9.75%	-	-	-
Morningstar Lifetime Moderate 2060 Index	3.32%	3.54%	21.06%	10.88%	-3.48%	4.53%	-	9.30%	12.89%	-	-
2060+ Moderate	3.72%	4.46%	20.72%	8.79%	-1.07%	7.24%	24.34%	9.53%	12.56%	9.21%	-
ALLOCATION--85%+ EQUITY											
CREF Stock R3	4.76%	5.74%	23.45%	9.17%	-0.84%	6.41%	27.83%	11.80%	14.38%	10.35%	9.70%
85% S&P 500, 15% BBgBarc Agg	7.31%	9.90%	20.67%	11.32%	1.33%	13.12%	29.03%	16.81%	16.27%	13.16%	11.36%
Allocation--85%+ Equity Universe	3.81%	4.77%	19.02%	9.07%	-2.46%	5.62%	27.62%	9.81%	12.31%	8.66%	8.80%
LARGE COMPANY VALUE											
JHancock Disciplined Value R6	7.53%	5.17%	19.33%	14.07%	-4.81%	11.04%	35.97%	12.50%	14.41%	10.84%	10.90%
Russell 1000 Value	5.70%	3.92%	13.66%	17.34%	-3.83%	13.45%	32.53%	9.45%	13.55%	10.72%	9.79%
Large Value Universe	5.53%	4.29%	15.86%	14.54%	-3.91%	10.56%	31.59%	10.37%	13.26%	10.08%	9.65%
LARGE COMPANY BLEND											
Vanguard Institutional Index I	7.70%	10.53%	21.79%	11.93%	1.37%	13.65%	32.35%	17.86%	17.27%	13.92%	11.96%
S&P 500 Index	7.71%	10.56%	21.83%	11.96%	1.38%	13.69%	32.39%	17.91%	17.31%	13.95%	11.97%
Large Blend Universe	6.63%	8.24%	20.39%	10.43%	-0.74%	11.32%	31.96%	15.08%	15.13%	11.92%	10.85%
LARGE COMPANY GROWTH											
Harbor Capital Appreciation Retirement	6.72%	18.46%	36.68%	-1.04%	10.99%	9.93%	37.66%	27.03%	20.09%	16.96%	14.67%
Russell 1000 Growth	9.17%	17.09%	30.21%	7.08%	5.67%	13.05%	33.48%	26.30%	20.55%	16.58%	14.31%
Large Growth Universe	7.44%	15.99%	28.11%	3.13%	3.72%	10.03%	34.26%	23.47%	17.81%	14.10%	12.66%

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CONTINUED...

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8.1

PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY

Period Ending 9.30.18 | Q3 18

University of Maine System

INVESTMENT NAME	Q3 '18	YTD '18	2017	2016	2015	2014	2013	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
MEDIUM COMPANY VALUE											
Virtus Ceredex Mid Cap Value Equity IS	3.35%	6.49%	11.98%	20.53%	-5.63%	11.05%	31.21%	11.75%	15.12%	10.28%	12.36%
Russell Mid Cap Value	3.30%	3.13%	13.34%	20.00%	-4.78%	14.75%	33.46%	8.81%	13.09%	10.72%	11.29%
Mid Value Universe	3.16%	3.04%	13.13%	17.86%	-5.55%	9.57%	34.92%	8.32%	12.19%	9.16%	10.38%
MEDIUM COMPANY BLEND											
Vanguard Extended Market Index Inst	4.37%	10.79%	18.12%	16.15%	-3.24%	7.56%	38.42%	16.12%	16.18%	11.43%	12.44%
Russell Mid Cap	5.00%	7.46%	18.52%	13.80%	-2.44%	13.22%	34.76%	13.98%	14.52%	11.65%	12.31%
Mid Blend Universe	4.02%	5.78%	15.56%	14.09%	-4.30%	8.41%	34.39%	11.20%	12.53%	9.53%	10.70%
MEDIUM COMPANY GROWTH											
Goldman Sachs Growth Opportunities R6	7.82%	12.05%	27.24%	1.49%	-5.24%	11.44%	32.38%	18.47%	14.15%	10.47%	12.10%
Russell Mid Cap Growth	7.57%	13.38%	25.27%	7.33%	-0.20%	11.90%	35.74%	21.10%	16.65%	13.00%	13.46%
Mid Growth Universe	6.63%	14.02%	25.04%	5.95%	-0.75%	7.26%	35.20%	20.98%	16.13%	11.94%	12.17%
FOREIGN LARGE VALUE											
MFS International Value R6	2.43%	2.15%	27.25%	4.31%	6.85%	1.61%	27.80%	8.22%	12.68%	9.11%	9.85%
MSCI EAFE	1.42%	-0.98%	25.62%	1.51%	-0.39%	-4.48%	23.29%	3.25%	9.77%	4.90%	5.87%
Foreign Large Value Universe	0.69%	-4.13%	22.73%	3.20%	-3.28%	-6.24%	20.71%	-0.95%	7.64%	3.01%	4.30%
FOREIGN LARGE BLEND											
Vanguard Total Intl Stock Index Inst	0.54%	-3.09%	27.55%	4.70%	-4.24%	-4.15%	15.15%	1.63%	9.97%	4.49%	5.19%
MSCI EAFE	1.42%	-0.98%	25.62%	1.51%	-0.39%	-4.48%	23.29%	3.25%	9.77%	4.90%	5.87%
Foreign Large Blend Universe	0.59%	-2.85%	25.30%	0.97%	-1.49%	-5.02%	19.61%	0.89%	8.40%	4.00%	5.06%

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CONTINUED...

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PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY

Period Ending 9.30.18 | Q3 18

University of Maine System

INVESTMENT NAME	Q3 '18	YTD '18	2017	2016	2015	2014	2013	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
FOREIGN LARGE GROWTH											
Oppenheimer Intl Growth I	-2.62%	-5.39%	27.15%	-1.88%	3.63%	-6.80%	25.71%	-1.86%	7.56%	3.89%	7.48%
MSCI EAFE	1.42%	-0.98%	25.62%	1.51%	-0.39%	-4.48%	23.29%	3.25%	9.77%	4.90%	5.87%
Foreign Large Growth Universe	-0.10%	-0.40%	31.70%	-2.10%	0.94%	-3.78%	19.92%	4.01%	10.32%	5.78%	6.41%
SMALL COMPANY VALUE											
Victory Sycamore Small Company Opp I	3.89%	7.72%	11.88%	30.04%	-0.39%	6.80%	33.39%	11.16%	17.20%	13.00%	12.11%
Russell 2000 Value	1.60%	7.14%	7.84%	31.74%	-7.47%	4.22%	34.52%	9.33%	16.12%	9.91%	9.52%
Small Value Universe	1.09%	4.35%	9.29%	25.72%	-6.71%	3.49%	35.70%	8.12%	13.50%	8.63%	10.09%
SMALL COMPANY GROWTH											
Carillon Eagle Small Cap Growth R6	6.95%	14.91%	23.40%	10.45%	-0.39%	5.59%	34.70%	21.87%	17.86%	11.95%	12.72%
Russell 2000 Growth	5.52%	15.76%	22.17%	11.32%	-1.38%	5.60%	43.30%	21.06%	17.98%	12.14%	12.65%
Small Growth Universe	7.00%	18.98%	22.07%	11.47%	-2.42%	2.70%	41.25%	24.89%	18.42%	11.87%	12.73%
EMERGING MARKETS											
DFA Emerging Markets Core Equity I	-1.21%	-9.46%	36.55%	12.35%	-14.86%	-0.91%	-2.64%	-2.48%	11.50%	3.57%	6.17%
MSCI Emerging Markets	-0.95%	-7.39%	37.75%	11.60%	-14.60%	-1.82%	-2.27%	-0.44%	12.77%	3.99%	5.76%
Emerging Markets Universe	-2.85%	-9.79%	35.28%	8.22%	-13.56%	-2.74%	0.31%	-4.16%	10.03%	2.78%	5.02%
SPECIALTY-PRIVATE REAL ESTATE											
TIAA Real Estate Account	1.17%	3.80%	4.37%	5.20%	8.16%	12.22%	9.65%	5.14%	5.02%	7.05%	2.99%
NCREIF Property Index	1.67%	5.27%	6.98%	7.97%	13.33%	11.81%	10.99%	7.16%	7.76%	9.57%	6.42%
Specialty-Real Estate Universe	0.53%	0.83%	5.70%	6.63%	2.47%	28.45%	1.66%	3.30%	6.66%	8.45%	7.12%

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8.1

SECTION 4: FUND FACT SHEETS

Period Ending 9.30.18 | Q3 18

University of Maine System

SECTION 4: FUND FACT SHEETS

Fund Fact Sheets.....

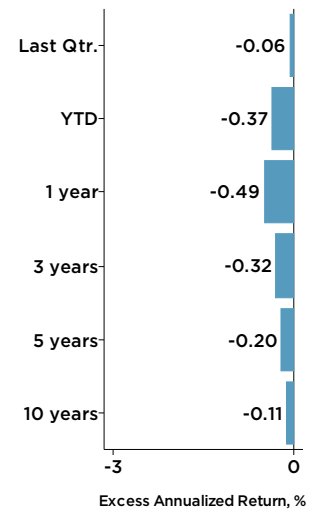
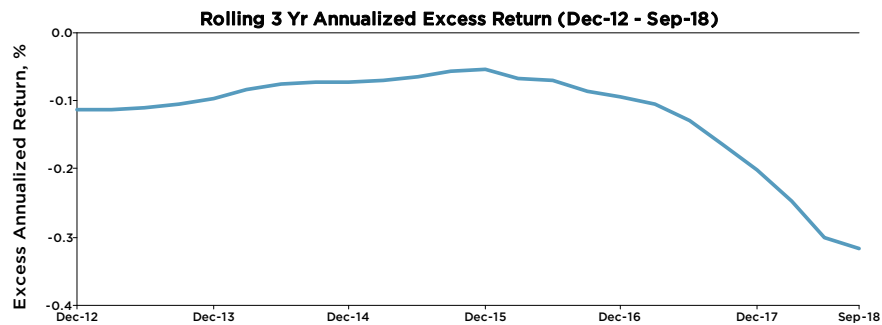
CREF MONEY MARKET R3

Period Ending 9.30.18 | Q3 18

INDUSTRY ANALYSIS

Money market reform passed in 2010 imposed new mandates on 2a-7 managers including shorter average maturities, tighter restrictions on allowable securities, increased liquidity mandates and mandatory stress testing by fund managers. In July 2014, the SEC passed further 2a-7 regulations that mandated a floating rate NAV for some products and allowed managers, under certain circumstances, to limit redemptions or charge a fee for withdrawals. The July regulations will have a multi-year phase-in period.

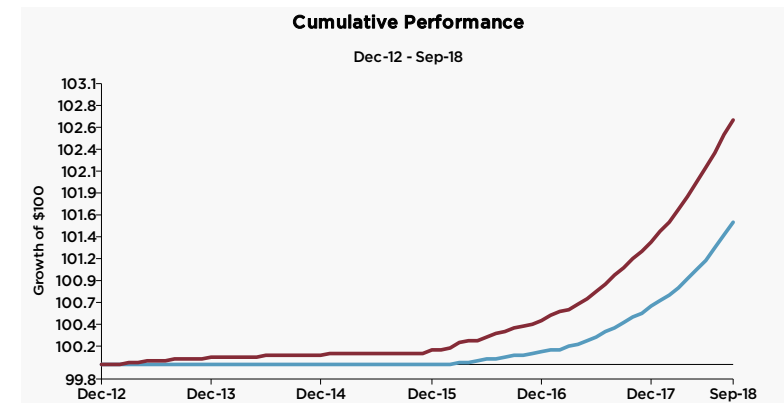
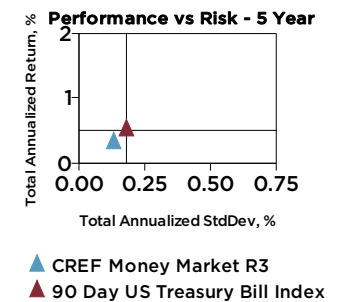
	CREF Money Market R3	90 Day US Treasury Bill Index
TRAILING RETURNS		
Last Qtr.	0.43	0.49
YTD	0.93	1.30
1 Year	1.11	1.59
3 Years	0.52	0.84
5 Years	0.31	0.52
10 Years	0.23	0.34
CALENDAR RETURNS		
2017	0.50	0.86
2016	0.13	0.33
2015	0.00	0.05
2014	0.00	0.03
2013	0.00	0.07
KEY MEASURES / 5 YEAR		
5 Year	0.13	0.18



CREF Money Market R3
■ Excess

INVESTMENT PROFILE

Ticker	-
Strategy Incept Date	-
Prospectus Exp Ratio	-
12 Mo Yield	-



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8.1

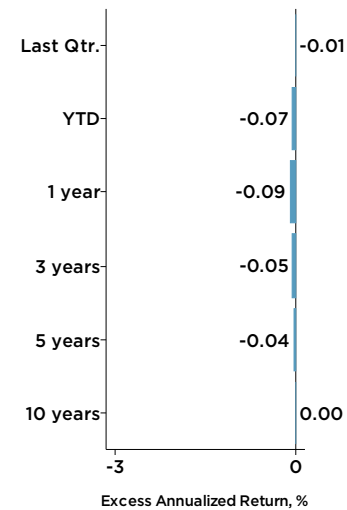
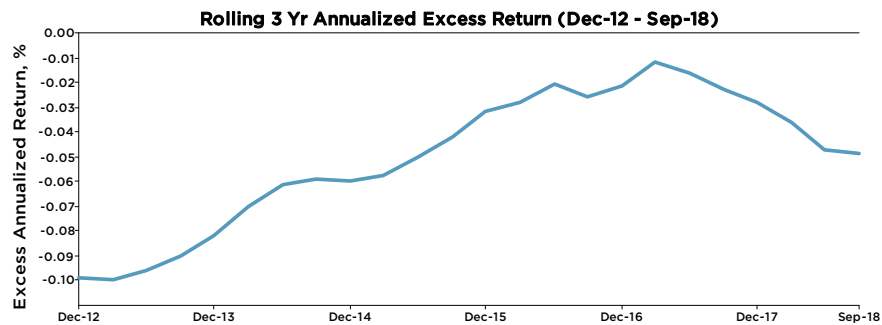
VANGUARD FEDERAL MONEY MARKET

Period Ending 9.30.18 | Q3 18

INDUSTRY ANALYSIS

Money market reform passed in 2010 imposed new mandates on 2a-7 managers including shorter average maturities, tighter restrictions on allowable securities, increased liquidity mandates and mandatory stress testing by fund managers. In July 2014, the SEC passed further 2a-7 regulations that mandated a floating rate NAV for some products and allowed managers, under certain circumstances, to limit redemptions or charge a fee for withdrawals. The July regulations will have a multi-year phase-in period.

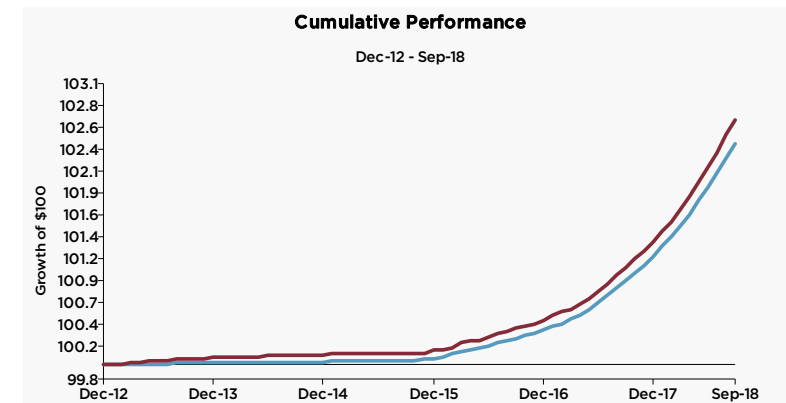
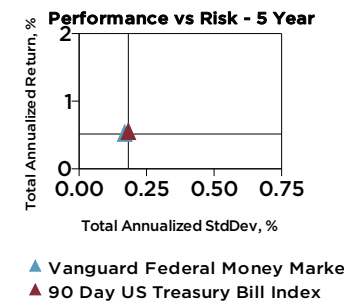
	Vanguard Federal Money Market	90 Day US Treasury Bill Index
TRAILING RETURNS		
Last Qtr.	0.48	0.49
YTD	1.23	1.30
1 Year	1.50	1.59
3 Years	0.79	0.84
5 Years	0.48	0.52
10 Years	0.34	0.34
CALENDAR RETURNS		
2017	0.81	0.86
2016	0.30	0.33
2015	0.04	0.05
2014	0.01	0.03
2013	0.02	0.07
KEY MEASURES / 5 YEAR		
5 Year	0.17	0.18



Vanguard Federal Money Market
■ Excess

INVESTMENT PROFILE

Ticker	VMFXX
Strategy Incept Date	07/13/1981
Prospectus Exp Ratio	0.11%
12 Mo Yield	1.49%



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8.1

TIAA TRADITIONAL – GROUP RETIREMENT ANNUITY (GRA)

Period Ending 9.30.18 | Q3 18

8.1

INDUSTRY ANALYSIS

The insurance providers and industry as a whole have historically exhibited a high degree of sensitivity to broad financial markets. The economic and market downturn of 2008 and 2009 proved to be no exception as many of these providers watched as the assets on their balance sheets – public and private – were marked meaningfully lower. The shrinking assets resulted in deterioration of capital ratios and reserve amounts across the industry, leading to system-wide downgrades from the ratings agencies. However, the drive in equity markets since the nadir in March of 2009 have presented a formidable rally across every major fixed income sector. As this rally strengthened the balance sheets of insurers, attention shifted away from the industry, which has now been able to breathe a collective sigh of relief. While the insurance industry has staged an impressive recovery, investors should use this episode as a reminder of the risks inherent with single-insurer backed products.

CAPTRUST ANALYSIS

Jennifer Dunbar – Senior Manager| Investment Research

The TIAA Traditional Annuity is a guaranteed annuity account (group annuity contract) that is backed by the financial strength and claims-paying ability of TIAA. The product offers participants guaranteed principal and a contractually specified interest rate. The contractually agreed upon minimum annual interest rate is 3%. The TIAA Board of Trustees also reserves the right each year to declare a higher crediting rate to participants which remains effective for a twelve month period that begins each March 1.

The product has a payout structure at the participant level that varies the length of time it takes for a participant to fully redeem. This payout structure is individual contract-specific.

GROSS CREDITING RATES - For Contributions Applied:

7/1/17 - 9/30/17	10/1/17 - 12/31/17	1/1/18 - 3/31/18	4/1/18 - 6/30/18	7/1/18 - 9/30/18
4.00%	4.00%	4.00%	4.00%	4.00%

INVESTMENT DETAILS

Crediting Rate Details:	Current contributions are invested at the new money rate, which can change monthly but is guaranteed until the last day of February. Old Money is grouped by time period into vintages, rate on all vintages are reviewed for reset every March 1 st .
Competing Options:	Allowed.
Minimum Rate:	3.00% during accumulation stage and 2.50% during annuity payout stage, reset annually.

LIQUIDITY PROVISIONS

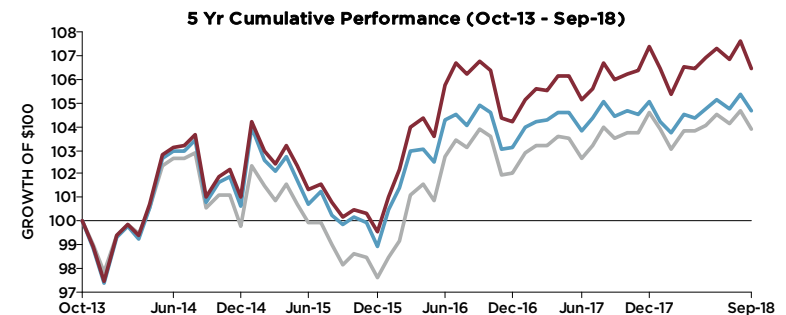
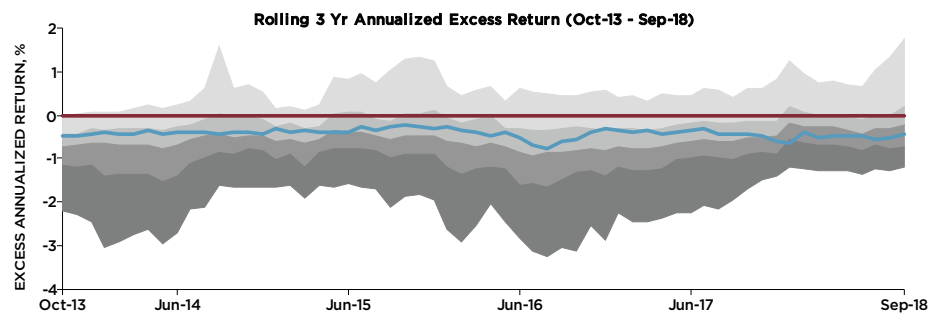
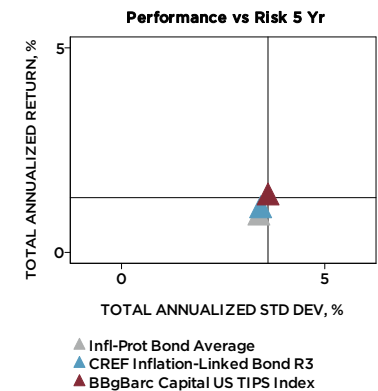
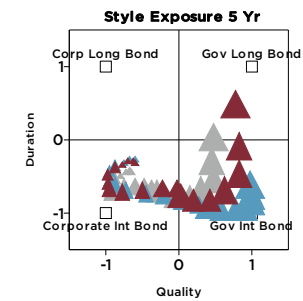
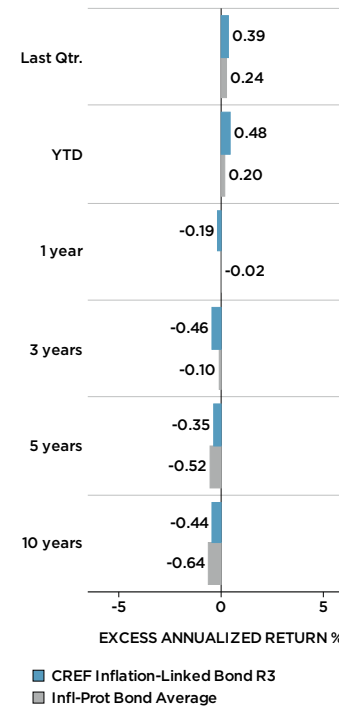
Plan Sponsor	Participant
Not applicable. Contracts are individually owned by the participant.	Lump Sum withdrawals are available within 120 days of termination of employment with a 2.5% surrender charge. Transfers and withdrawals can be made in 10 annual installments (paid over 9 years and 1 day).

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CREF INFLATION-LINKED BOND R3

Period Ending 9.30.18 | Q3 18

	CREF Inflation-Linked Bond R3	Peer Group Rank	BBgBarc Capital US TIPS Index	Infl-Prot Bond	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	3.41	31%	3.61	3.38	212
Sharpe Ratio	0.15	35%	0.24	0.09	212
Alpha	-0.29	42%	0.00	-0.38	212
Beta	0.93	63%	1.00	0.84	212
R-Squared	96.10	43%	100.00	83.49	212
Up Mkt Capture	87.41	55%	100.00	81.53	212
Down Mkt Capture	92.18	36%	100.00	87.90	212
Information Ratio	-0.48	52%	NA	-0.79	212
TRAILING RETURNS					
Last Qtr.	-0.43	31%	-0.82	-0.58	236
YTD	-0.37	30%	-0.84	-0.64	230
1 Year	0.22	53%	0.41	0.39	230
3 Years	1.58	62%	2.04	1.93	224
5 Years	1.02	37%	1.37	0.85	212
10 Years	2.88	45%	3.32	2.68	152
CALENDAR RETURNS					
2017	1.85	73%	3.01	2.55	242
2016	4.23	53%	4.68	4.58	249
2015	-1.68	36%	-1.44	-2.22	258
2014	3.34	22%	3.64	1.96	257
2013	-9.01	67%	-8.60	-7.58	257

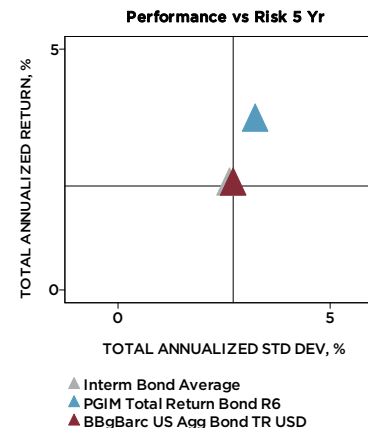
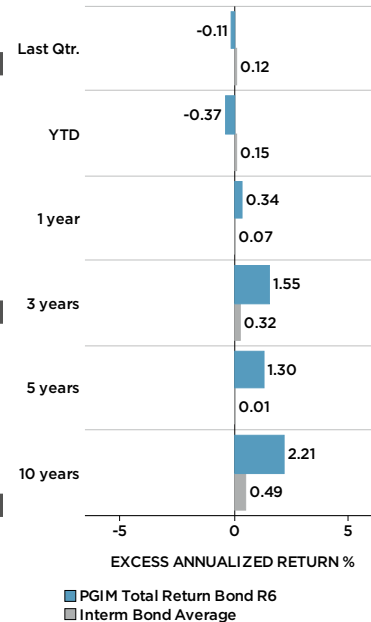
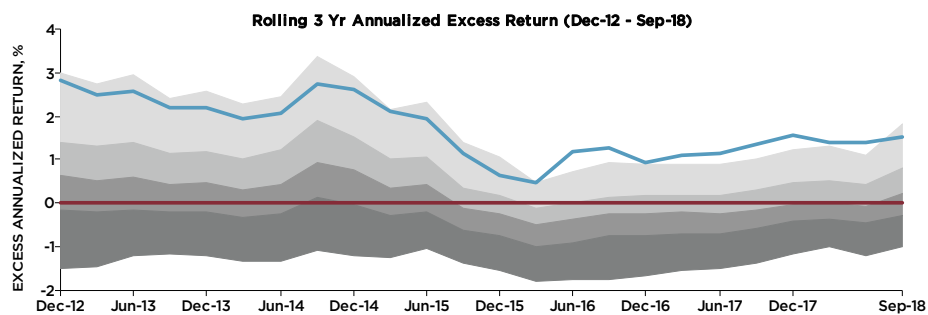


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PGIM TOTAL RETURN BOND R6

Period Ending 9.30.18 | Q3 18

KEY MEASURES / 5 YEAR	PGIM Total Return Bond R6	Peer Group Rank	BBgBarc US Agg Bond TR USD	Interm Bond	# of Funds
Standard Deviation	3.23	96%	2.70	2.61	933
Sharpe Ratio	0.91	14%	0.61	0.64	933
Alpha	1.08	11%	0.00	0.21	933
Beta	1.14	1%	1.00	0.88	933
R-Squared	90.44	49%	100.00	84.26	933
Up Mkt Capture	129.71	1%	100.00	92.59	933
Down Mkt Capture	103.94	81%	100.00	86.70	933
Information Ratio	1.19	3%	NA	-0.16	933
TRAILING RETURNS					
Last Qtr.	-0.09	77%	0.02	0.14	1082
YTD	-1.97	79%	-1.60	-1.44	1055
1 Year	-0.88	31%	-1.22	-1.14	1047
3 Years	2.86	9%	1.31	1.63	974
5 Years	3.46	4%	2.16	2.17	933
10 Years	5.98	4%	3.77	4.26	821
CALENDAR RETURNS					
2017	6.71	2%	3.54	3.80	1060
2016	4.83	13%	2.65	3.26	1063
2015	0.09	45%	0.55	-0.27	1068
2014	7.25	5%	5.97	5.20	1111
2013	-0.91	29%	-2.02	-1.39	1126



INVESTMENT PROFILE

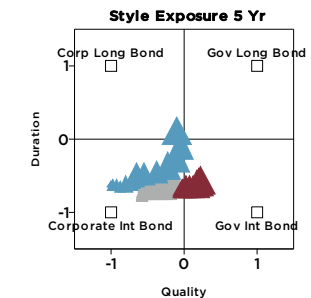
Ticker	PTRQX
CUSIP	74440B884
Net Assets \$MM	\$35,730.00
Manager Names	Team Managed
Manager Tenure	15.9 Years
Prospectus Exp Ratio	0.41%
Cat Median Exp Ratio	0.78%
Current 12b-1	N/A
Annlzd Ret Since Incept	4.35%
Inception Date	12/27/2010
Phone Number	800-225-1852
Sub Advisor	PGIM Fixed Income

HOLDINGS OVERVIEW

Total Number of Holdings	2655
% Assets in Top 10 Holdings	100.48%
Avg Mkt Cap \$MM	\$1,428.90
Turnover Ratio	95.00%

TOP HOLDINGS

US 5 Year Note (CBT) De	21.79%
US 10 Year Note (CBT) D	13.85%
Payb Fra 2.857 9/10/201	9.21%
Recv Fra 4.047 9/10/201	9.21%
Payb Fra 4.047 9/10/201	9.21%

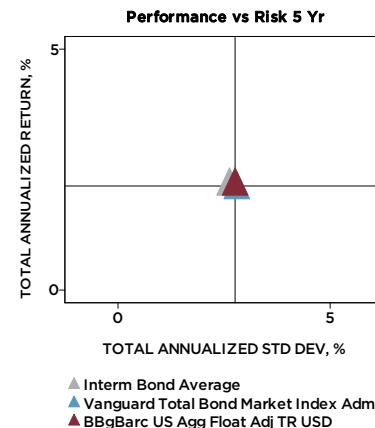
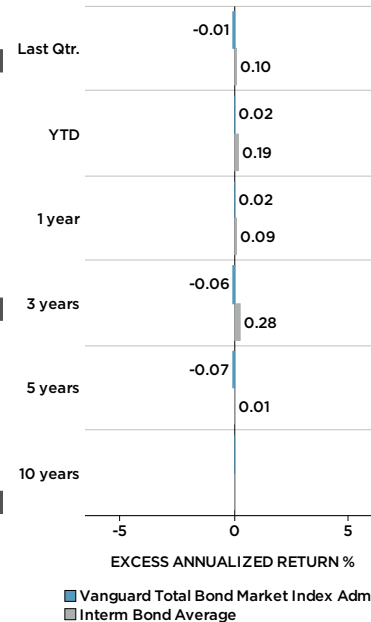
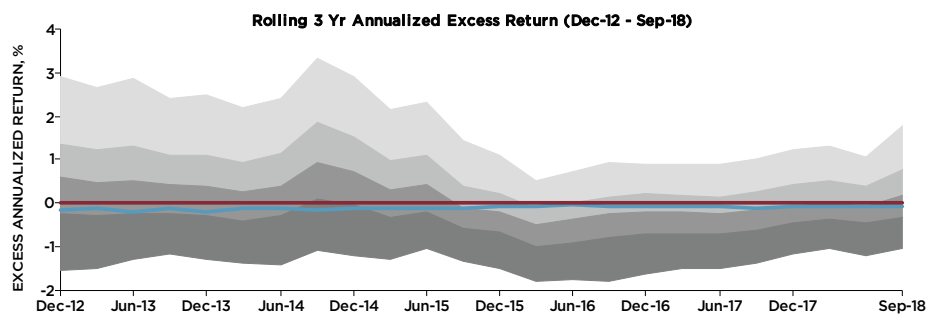


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VANGUARD TOTAL BOND MARKET INDEX ADM

Period Ending 9.30.18 | Q3 18

	Vanguard Total Bond Market Index Adm	Peer Group Rank	BBgBarc US Agg Float Adj TR USD	Interm Bond	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	2.82	82%	2.75	2.61	933
Sharpe Ratio	0.56	60%	0.60	0.64	933
Alpha	-0.10	67%	0.00	0.24	933
Beta	1.02	4%	1.00	0.86	933
R-Squared	99.19	4%	100.00	84.39	933
Up Mkt Capture	100.24	25%	100.00	91.37	933
Down Mkt Capture	102.82	84%	100.00	84.75	933
Information Ratio	-0.25	63%	NA	-0.15	933
TRAILING RETURNS					
Last Qtr.	0.03	62%	0.04	0.14	1082
YTD	-1.61	54%	-1.64	-1.44	1055
1 Year	-1.21	48%	-1.23	-1.14	1047
3 Years	1.28	62%	1.35	1.63	974
5 Years	2.09	53%	2.16	2.17	933
10 Years	3.70	75%	NA	4.26	821
CALENDAR RETURNS					
2017	3.56	57%	3.63	3.80	1060
2016	2.60	64%	2.75	3.26	1063
2015	0.40	28%	0.44	-0.27	1068
2014	5.89	31%	5.85	5.20	1111
2013	-2.15	68%	-1.97	-1.39	1126



INVESTMENT PROFILE

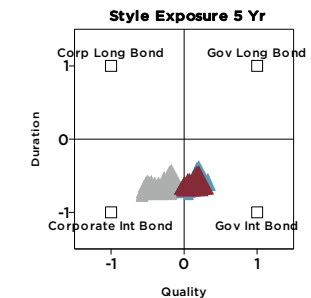
Ticker	VBTLX
CUSIP	921937603
Net Assets \$MM	\$199,725.00
Manager Names	Team Managed
Manager Tenure	5.6 Years
Prospectus Exp Ratio	0.05%
Cat Median Exp Ratio	0.78%
Current 12b-1	N/A
Annld Ret Since Incept	3.91%
Inception Date	11/12/2001
Phone Number	800-662-7447
Sub Advisor	N/A

HOLDINGS OVERVIEW

Total Number of Holdings	17403
% Assets in Top 10 Holdings	4.05%
Avg Mkt Cap \$MM	N/A
Turnover Ratio	55.00%

TOP HOLDINGS

United States Treasury NoI	0.46%
United States Treasury NoI	0.42%
United States Treasury NoI	0.42%
United States Treasury NoI	0.42%
United States Treasury NoI	0.40%

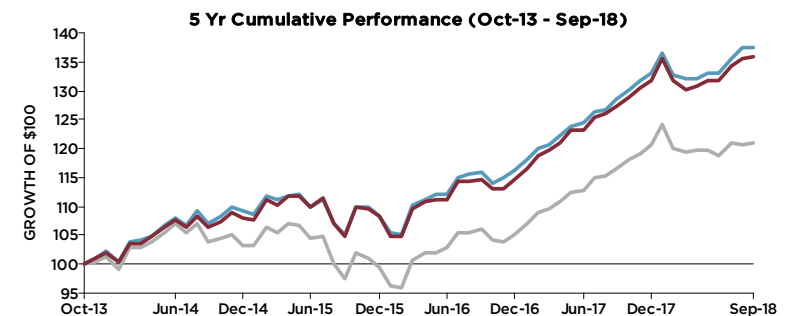
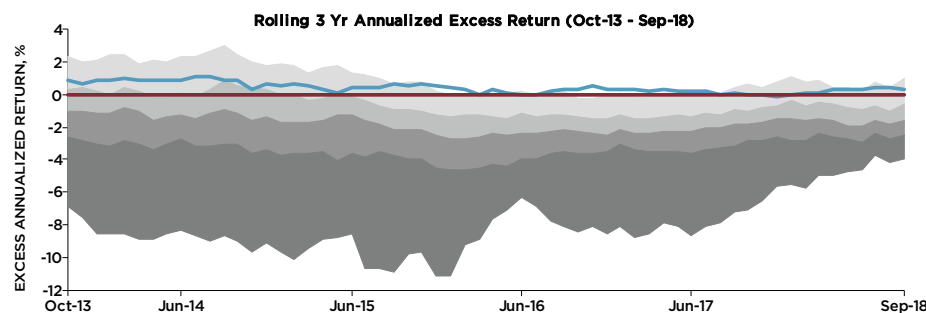
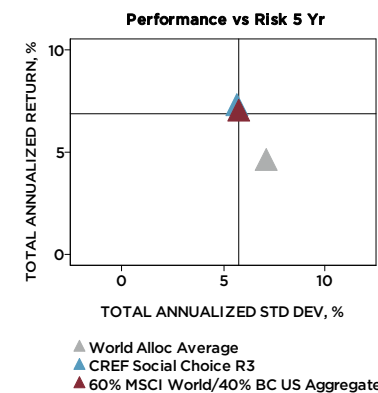
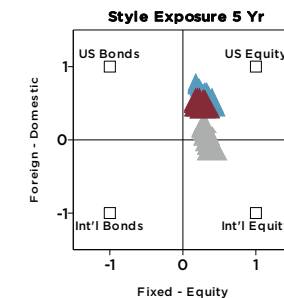


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CREF SOCIAL CHOICE R3

Period Ending 9.30.18 | Q3 18

KEY MEASURES / 5 YEAR	CREF Social Choice R3	Peer Group Rank	60% MSCI World/40% BC US Aggregate	World Alloc	# of Funds
Standard Deviation	5.67	11%	5.80	7.14	410
Sharpe Ratio	1.16	1%	1.10	0.58	410
Alpha	0.48	1%	0.00	-3.03	410
Beta	0.96	83%	1.00	1.09	410
R-Squared	97.29	1%	100.00	81.23	410
Up Mkt Capture	98.65	37%	100.00	93.20	410
Down Mkt Capture	92.36	8%	100.00	130.76	410
Information Ratio	0.25	1%	NA	-0.76	410
TRAILING RETURNS					
Last Qtr.	3.28	10%	3.05	1.38	493
YTD	3.36	6%	2.92	0.13	481
1 Year	6.92	7%	6.53	3.41	469
3 Years	9.32	12%	8.98	7.28	443
5 Years	7.12	3%	6.87	4.43	410
10 Years	7.71	9%	7.30	6.11	260
CALENDAR RETURNS					
2017	14.27	51%	14.90	14.23	503
2016	7.40	27%	6.09	6.03	527
2015	-0.87	19%	0.26	-4.33	539
2014	6.83	4%	5.77	1.75	533
2013	16.68	26%	14.83	11.38	529



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8.1

VANGUARD TARGET RETIREMENT

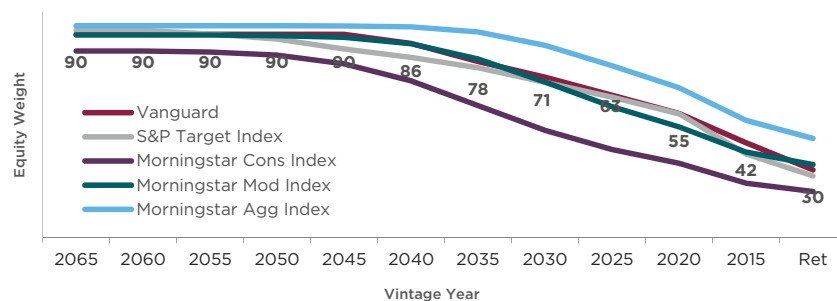
Period Ending 9.30.18 | Q3 18

Investor Assumptions/Glidepath Methodology

Glidepath Management	• Through retirement (assumed at age 65) ending 7 years after retirement
Assumed Investor Savings Rate:	• Contributions start at 5% at age 25 and increase to 10% at age 65. Also includes a 50% employer match up to 3% of salary.
Assumed Investor Income Growth Rate	• 1.1% annual salary growth
Income Replacement	• The portfolios are designed to provide withdrawals in retirement based on multiples of an investor's age 65 salary.
Assumed Accumulated Savings at Retirement	• N/A
Life Expectancy	• Through age 95
Asset Allocation Flexibility	• Strict targets with narrow ranges.
Other Assumptions	• Glidepath was tested against 10,000 potential lifetime return outcomes

Vanguard uses a proprietary capital markets modeling tool to statistically analyze historical data, including interest rates, inflation, and other risk factors for global equities, fixed income, and commodity markets. This tool is used to generate forward-looking distributions of expected returns. Then, by combining these figures with their investor assumptions, Vanguard constructs target portfolios with asset allocations that seek to provide the highest probability of a successful outcome (not outliving retirement savings).

Target Asset Allocation Glidepath per Vintage Year



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Investment Profile

% Open Architecture:	0%	Active/Passive:	Passive
Inception Date:	10-27-2003	% Active:	0%
Net Assets \$MM:	\$257,462	Manager Tenure:	5.67 years (longest)
Manager Name:	Team	Expense Range:	0.13% - 0.15%
Avg # of Holdings:	5	Investment Structure:	Mutual Fund

Dedicated Asset Class Granularity/Diversification

Emerging Market Equities	Through Intl Index Fund
International/Global Debt	Yes
Inflation-Protected Securities	Yes
High Yield Fixed Income	No
Real Estate	No
Commodities	No

The Vanguard Target Retirement funds allocate to five broad index funds that provide comprehensive exposure to U.S. and non-U.S. equity and bond markets. Using index funds allows Vanguard to provide investment diversification at a low cost while also producing returns in line with equity and fixed income markets. Through its five index funds, the strategies gain exposure to over 25 sub-asset classes, capturing over 90% of the world's investable market.

8.1

VANGUARD TARGET RETIREMENT

Period Ending 9.30.18 | Q3 18

Material Changes to the Series

2006:

- Increased minimum equity allocation from 20% to 30%
- Added Emerging Markets Equity

Rationale:

- Participant behavior showed lower savings rate
- Decreased costs within the EM space led to increased liquidity

2010:

- Collapsed three international equity index funds (Europe, Pacific, and Emerging Markets) with Vanguard Total International Stock Index

Rationale:

- More cost-effective way to gain international exposure

2013:

- Replaced the broad TIPs fund with a short-term TIPs allocation
- Eliminated the Prime Money Market fund
- Added a 20% International Bond Index Allocation

Rationale:

- Short-Term TIPs provide better inflation exposure with lower interest rate risk
- Deemed to be an unnecessary asset class
- Dedicated exposure to move more in line with the Global fixed income Market Cap; better FI diversification

2015:

- Increased international stock allocation from 30% to 40%
- Increased International bond allocation from 20% to 30%

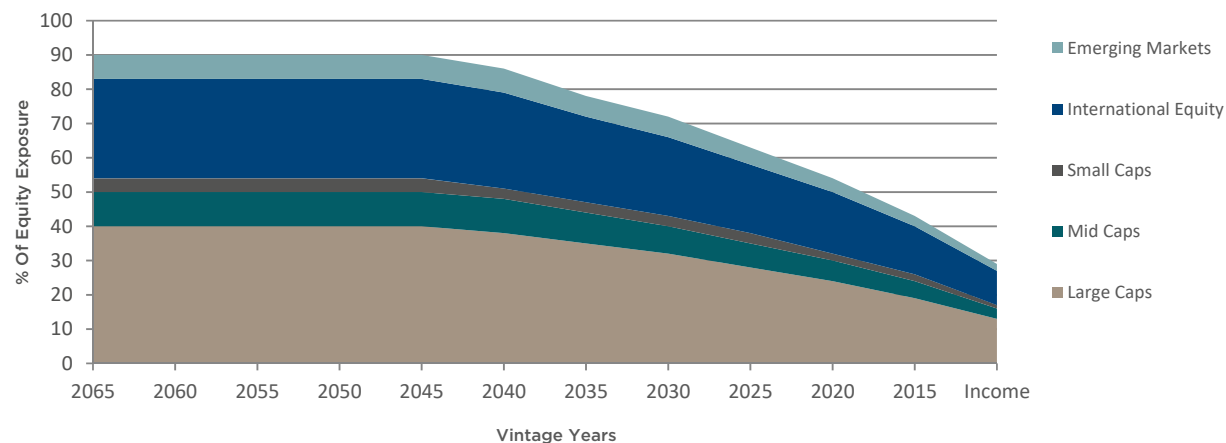
Rationale:

- Move to be more in line with the Global Market Cap

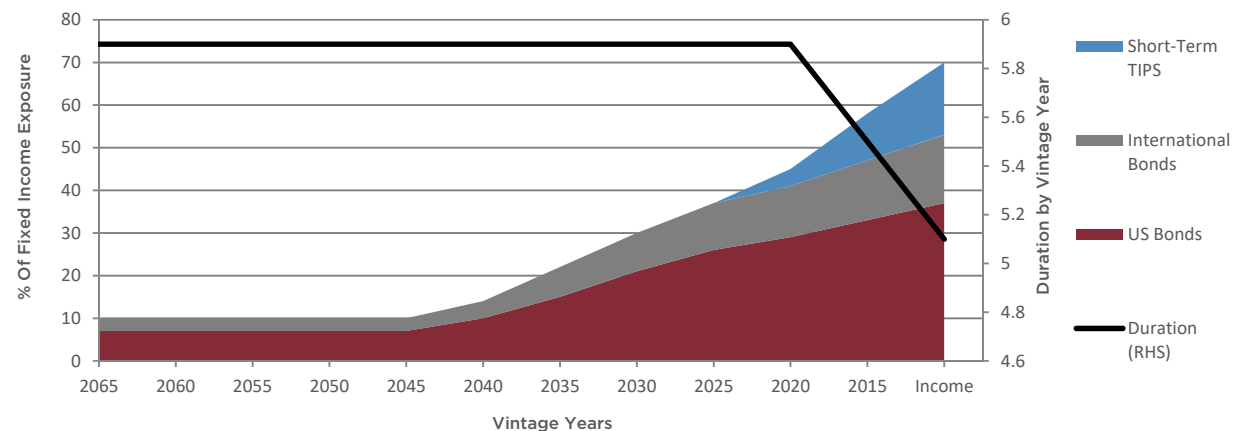
*All information provided by the asset manager, as of 12/31/17. Asset allocations shown are static in nature and do not incorporate any tactical views implemented by the manager.

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Equity Exposure



Fixed Income Exposure



8.1

TARGET DATE ANALYSIS

Period Ending 9.30.18 | Q3 18

	3 Year				5 Year			
	Beta	Sharpe	Up Capture	Down Capture	Beta	Sharpe	Up Capture	Down Capture
Vanguard Target Retirement 2015 Inv	0.97	1.49	95.51	93.52	0.99	1.16	98.96	95.87
Morningstar Target Date 2015	0.98	1.40	94.46	101.33	0.97	0.99	92.34	101.35
S&P Target Date 2015 TR	1.00	1.51	100.00	100.00	1.00	1.14	100.00	100.00

	3 Year				5 Year			
	Beta	Sharpe	Up Capture	Down Capture	Beta	Sharpe	Up Capture	Down Capture
Vanguard Target Retirement 2025 Inv	1.03	1.51	103.15	103.58	1.03	1.12	104.24	101.55
Morningstar Target Date 2025	1.00	1.38	95.61	105.46	1.00	0.95	95.05	103.35
S&P Target Date 2025 TR	1.00	1.52	100.00	100.00	1.00	1.09	100.00	100.00

	3 Year				5 Year			
	Beta	Sharpe	Up Capture	Down Capture	Beta	Sharpe	Up Capture	Down Capture
Vanguard Target Retirement 2045 Inv	1.06	1.50	103.92	105.46	1.05	1.04	104.33	104.29
Morningstar Target Date 2045	1.05	1.40	99.58	107.47	1.04	0.94	98.57	105.34
S&P Target Date 2045 TR	1.00	1.54	100.00	100.00	1.00	1.06	100.00	100.00

*Lowest cost share class shown

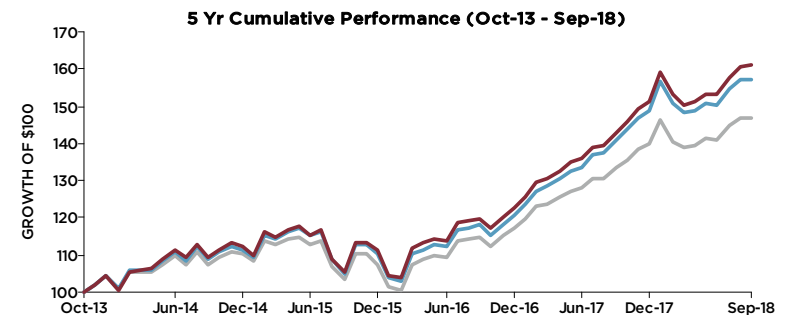
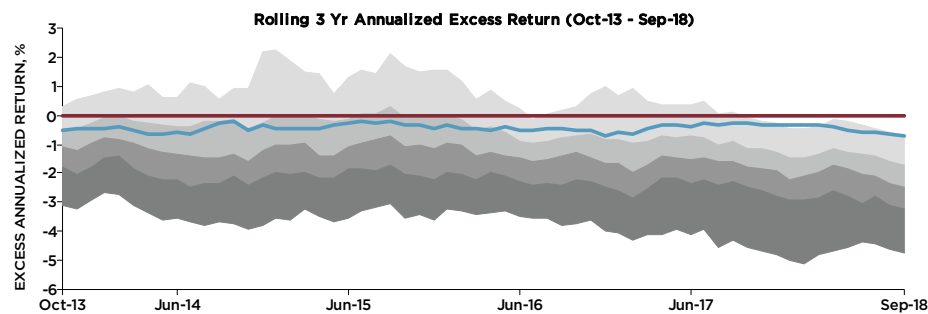
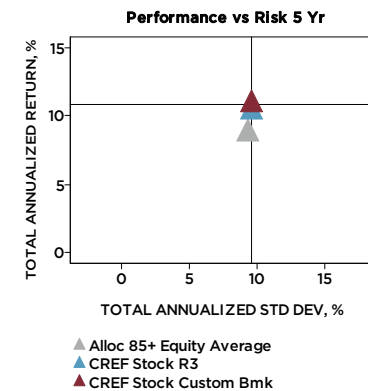
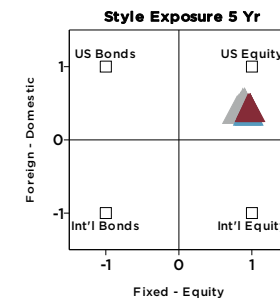
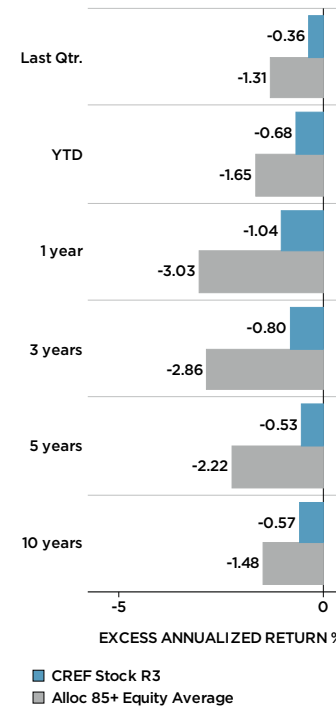
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8.1

CREF STOCK R3

Period Ending 9.30.18 | Q3 18

KEY MEASURES / 5 YEAR	CREF Stock R3	Peer Group Rank	CREF Stock Custom Bmk	Alloc 85+ Equity	# of Funds
Standard Deviation	9.57	72%	9.54	9.27	183
Sharpe Ratio	1.03	13%	1.09	0.88	183
Alpha	-0.54	22%	0.00	-1.46	183
Beta	1.00	11%	1.00	0.93	183
R-Squared	99.53	1%	100.00	91.84	183
Up Mkt Capture	98.72	8%	100.00	87.20	183
Down Mkt Capture	102.97	77%	100.00	97.88	183
Information Ratio	-0.73	36%	NA	-0.99	183
TRAILING RETURNS					
Last Qtr.	4.76	18%	5.12	3.81	203
YTD	5.74	26%	6.42	4.77	199
1 Year	11.80	22%	12.84	9.81	198
3 Years	14.38	6%	15.18	12.31	197
5 Years	10.35	10%	10.87	8.66	183
10 Years	9.70	11%	10.27	8.80	143
CALENDAR RETURNS					
2017	23.45	7%	23.30	19.02	211
2016	9.17	25%	10.41	9.07	221
2015	-0.84	25%	-0.89	-2.46	223
2014	6.41	33%	7.55	5.62	216
2013	27.83	37%	28.23	27.62	196



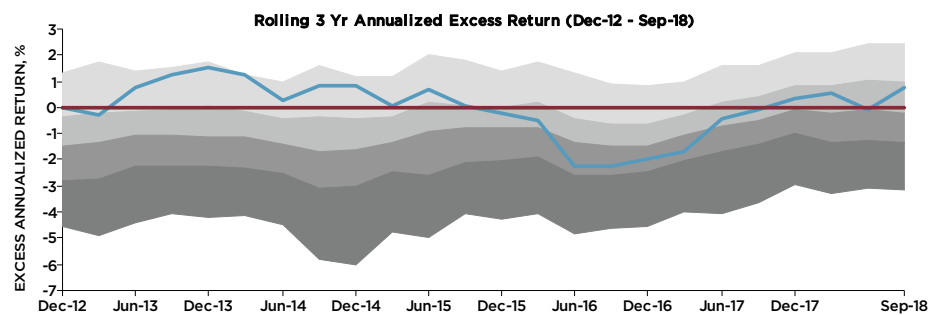
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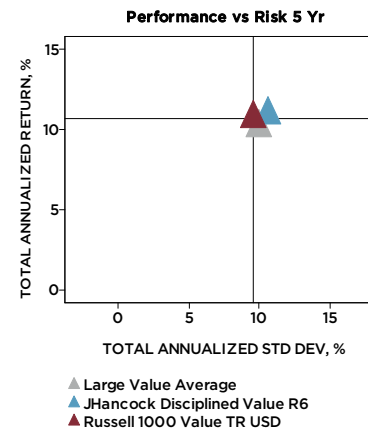
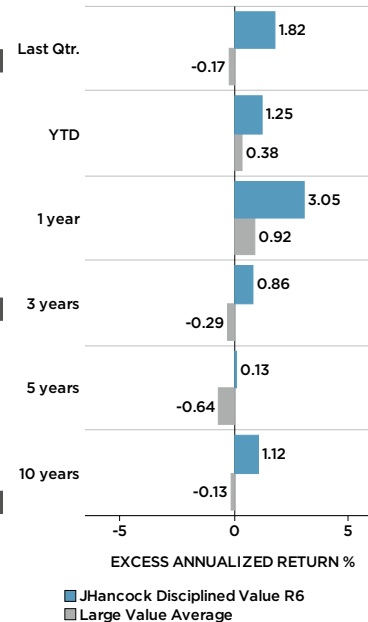
JHancock Disciplined Value R6

Period Ending 9.30.18 | Q3 18

KEY MEASURES / 5 YEAR	JHancock Disciplined Value R6	Peer Group Rank	Russell 1000 Value TR USD	Large Value	# of Funds
Standard Deviation	10.62	76%	9.61	9.99	1077
Sharpe Ratio	0.97	50%	1.06	0.97	1077
Alpha	-0.49	51%	0.00	-0.50	1077
Beta	1.06	25%	1.00	0.99	1077
R-Squared	92.17	56%	100.00	90.18	1077
Up Mkt Capture	101.79	24%	100.00	95.68	1077
Down Mkt Capture	102.11	60%	100.00	98.03	1077
Information Ratio	0.04	31%	NA	-0.21	1077
TRAILING RETURNS					
Last Qtr.	7.53	9%	5.70	5.53	1224
YTD	5.17	34%	3.92	4.29	1222
1 Year	12.50	26%	9.45	10.37	1219
3 Years	14.41	29%	13.55	13.26	1166
5 Years	10.84	31%	10.72	10.08	1077
10 Years	10.90	15%	9.79	9.65	942
CALENDAR RETURNS					
2017	19.33	14%	13.66	15.86	1262
2016	14.07	53%	17.34	14.54	1322
2015	-4.81	68%	-3.83	-3.91	1328
2014	11.04	48%	13.45	10.56	1332
2013	35.97	13%	32.53	31.59	1310



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INVESTMENT PROFILE

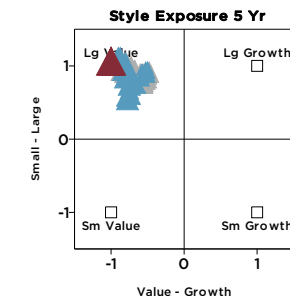
Ticker	JDVWX
CUSIP	47803U418
Net Assets \$MM	\$16,374.00
Manager Names	Team Managed
Manager Tenure	21.8 Years
Prospectus Exp Ratio	0.70%
Cat Median Exp Ratio	1.08%
Current 12b-1	0.00%
Annld Ret Since Incept	14.53%
Inception Date	09/01/2011
Phone Number	888-972-8696
Sub Advisor	Boston Partners Global Investors, Inc

HOLDINGS OVERVIEW

Total Number of Holdings	79
% Assets in Top 10 Holdings	33.69%
Avg Mkt Cap \$MM	\$84,798.65
Turnover Ratio	45.00%

TOP HOLDINGS

Bank of America Corporal	4.40%
Johnson & Johnson	4.08%
JPMorgan Chase & Co	3.99%
Berkshire Hathaway Inc B	3.93%
Citigroup Inc	3.68%

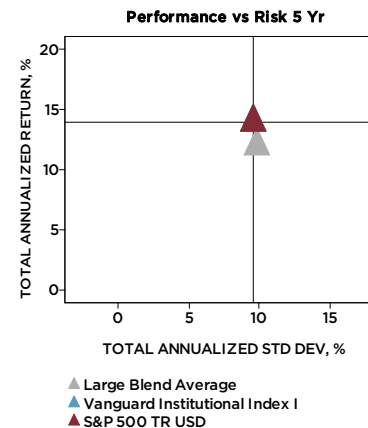
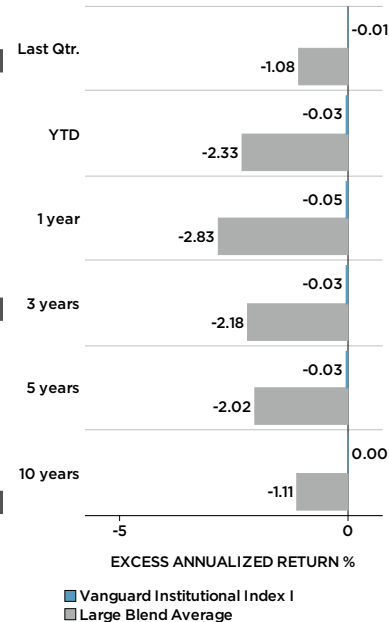
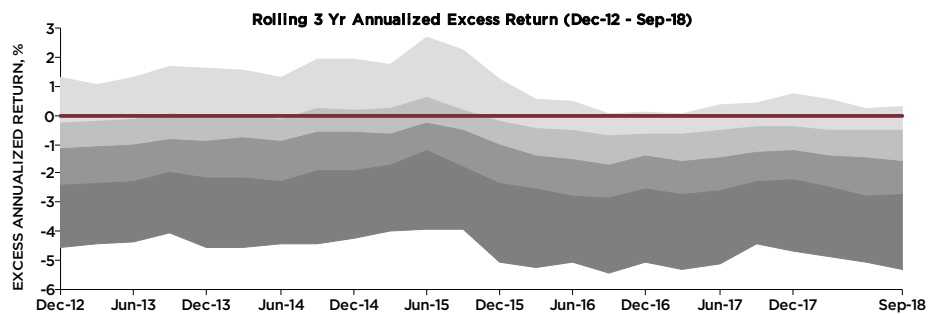


8.1

VANGUARD INSTITUTIONAL INDEX I

Period Ending 9.30.18 | Q3 18

	Vanguard Institutional Index I	Peer Group Rank	S&P 500 TR USD	Large Blend	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	9.55	33%	9.55	9.88	1162
Sharpe Ratio	1.40	5%	1.41	1.16	1162
Alpha	-0.03	8%	0.00	-1.89	1162
Beta	1.00	48%	1.00	0.99	1162
R-Squared	100.00	1%	100.00	92.01	1162
Up Mkt Capture	99.88	13%	100.00	92.65	1162
Down Mkt Capture	100.08	22%	100.00	105.48	1162
Information Ratio	-2.63	92%	NA	-1.40	1162
TRAILING RETURNS					
Last Qtr.	7.70	21%	7.71	6.63	1338
YTD	10.53	18%	10.56	8.24	1326
1 Year	17.86	17%	17.91	15.08	1312
3 Years	17.27	9%	17.31	15.13	1232
5 Years	13.92	8%	13.95	11.92	1162
10 Years	11.96	17%	11.97	10.85	1031
CALENDAR RETURNS					
2017	21.79	29%	21.83	20.39	1338
2016	11.93	27%	11.96	10.43	1411
2015	1.37	21%	1.38	-0.74	1467
2014	13.65	18%	13.69	11.32	1503
2013	32.35	44%	32.39	31.96	1508



INVESTMENT PROFILE

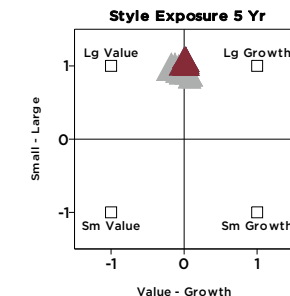
Ticker	VINIX
CUSIP	922040100
Net Assets \$MM	\$235,208.00
Manager Names	Team Managed
Manager Tenure	17.8 Years
Prospectus Exp Ratio	0.04%
Cat Median Exp Ratio	1.10%
Current 12b-1	N/A
Annlzd Ret Since Incept	10.04%
Inception Date	07/31/1990
Phone Number	888-809-8102
Sub Advisor	N/A

HOLDINGS OVERVIEW

Total Number of Holdings	511
% Assets in Top 10 Holdings	22.05%
Avg Mkt Cap \$MM	\$109,480.43
Turnover Ratio	5.00%

TOP HOLDINGS

Apple Inc	4.54%
Microsoft Corp	3.50%
Amazon.com Inc	3.29%
Facebook Inc A	1.71%
JPMorgan Chase & Co	1.58%

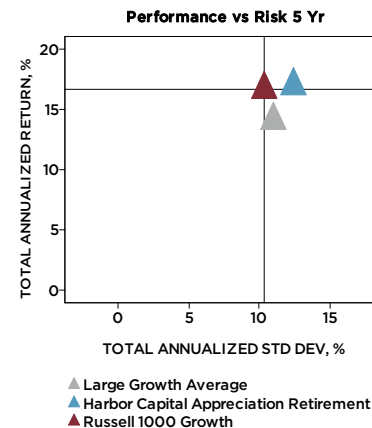
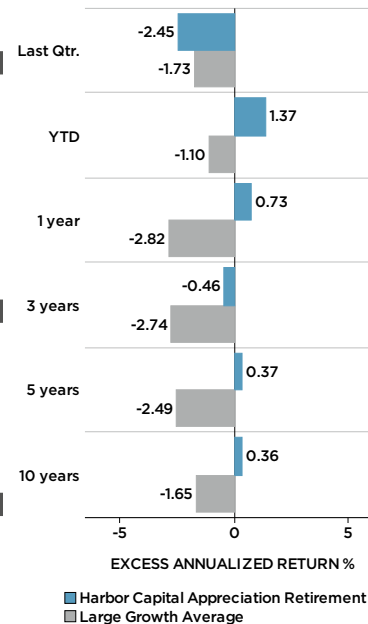
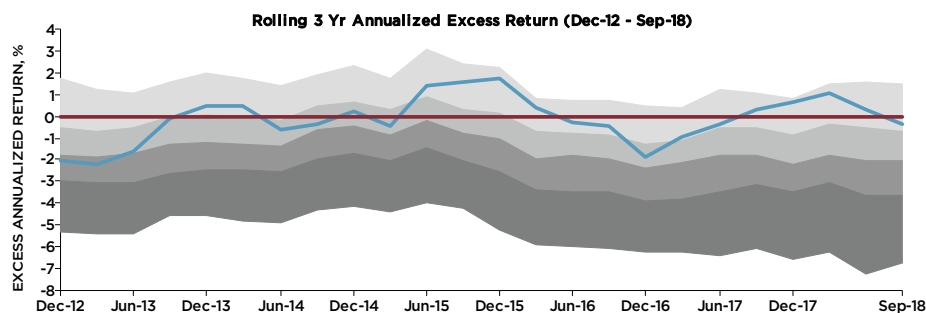


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HARBOR CAPITAL APPRECIATION RETIREMENT

Period Ending 9.30.18 | Q3 18

KEY MEASURES / 5 YEAR					
	Harbor Capital Appreciation Retirement	Peer Group Rank	Russell 1000 Growth	Large Growth	# of Funds
Standard Deviation	12.35	91%	10.33	11.01	1330
Sharpe Ratio	1.33	40%	1.55	1.24	1330
Alpha	-1.46	37%	0.00	-2.34	1330
Beta	1.11	8%	1.00	0.99	1330
R-Squared	86.75	63%	100.00	87.12	1330
Up Mkt Capture	110.07	5%	100.00	92.77	1330
Down Mkt Capture	121.52	86%	100.00	108.13	1330
Information Ratio	0.07	10%	NA	-0.59	1330
TRAILING RETURNS					
Last Qtr.	6.72	71%	9.17	7.44	1440
YTD	18.46	31%	17.09	15.99	1438
1 Year	27.03	25%	26.30	23.47	1433
3 Years	20.09	20%	20.55	17.81	1377
5 Years	16.96	8%	16.58	14.10	1330
10 Years	14.67	13%	14.31	12.66	1150
CALENDAR RETURNS					
2017	36.68	5%	30.21	28.11	1444
2016	-1.04	85%	7.08	3.13	1558
2015	10.99	4%	5.67	3.72	1650
2014	9.93	54%	13.05	10.03	1700
2013	37.66	20%	33.48	34.26	1763



INVESTMENT PROFILE

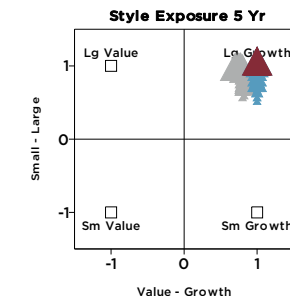
Ticker	HNACX
CUSIP	411512528
Net Assets \$MM	\$32,964.00
Manager Names	Team Managed
Manager Tenure	28.4 Years
Prospectus Exp Ratio	0.58%
Cat Median Exp Ratio	1.16%
Current 12b-1	N/A
Annld Ret Since Incept	24.11%
Inception Date	03/01/2016
Phone Number	800-422-1050
Sub Advisor	Multiple

HOLDINGS OVERVIEW

Total Number of Holdings	54
% Assets in Top 10 Holdings	38.93%
Avg Mkt Cap \$MM	\$156,981.98
Turnover Ratio	52.00%

TOP HOLDINGS

Amazon.com Inc	5.89%
Microsoft Corp	4.11%
Apple Inc	3.97%
Netflix Inc	3.96%
Alibaba Group Holding Lt	3.79%

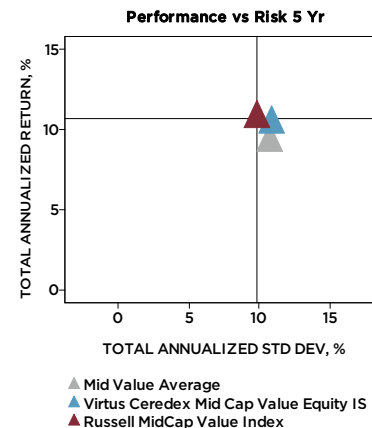
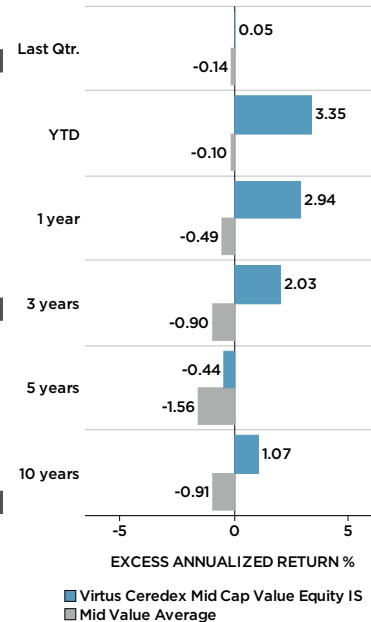
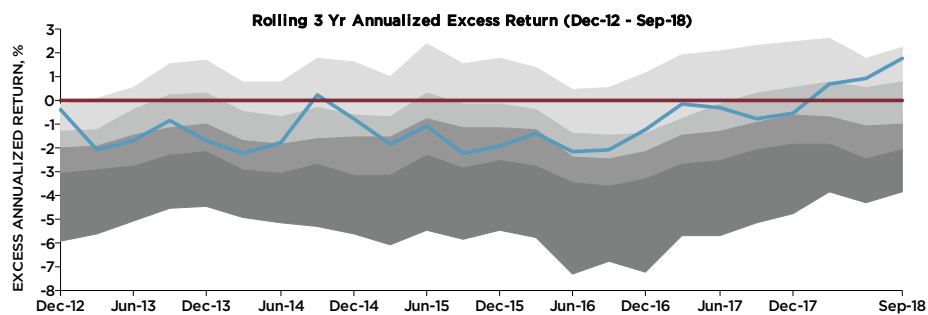


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VIRTUS CEREDEX MID CAP VALUE EQUITY IS

Period Ending 9.30.18 | Q3 18

KEY MEASURES / 5 YEAR	Virtus Ceredex Mid Cap Value Equity IS	Peer Group Rank	Russell MidCap Value Index	Mid Value	# of Funds
Standard Deviation	10.85	64%	9.78	10.76	355
Sharpe Ratio	0.90	30%	1.04	0.82	355
Alpha	-1.06	33%	0.00	-1.86	355
Beta	1.06	34%	1.00	1.03	355
R-Squared	91.37	47%	100.00	88.11	355
Up Mkt Capture	102.11	22%	100.00	95.76	355
Down Mkt Capture	108.53	54%	100.00	107.69	355
Information Ratio	-0.12	22%	NA	-0.39	355
TRAILING RETURNS					
Last Qtr.	3.35	41%	3.30	3.16	416
YTD	6.49	13%	3.13	3.04	415
1 Year	11.75	18%	8.81	8.32	409
3 Years	15.12	11%	13.09	12.19	388
5 Years	10.28	22%	10.72	9.16	355
10 Years	12.36	5%	11.29	10.38	311
CALENDAR RETURNS					
2017	11.98	62%	13.34	13.13	408
2016	20.53	30%	20.00	17.86	417
2015	-5.63	57%	-4.78	-5.55	431
2014	11.05	38%	14.75	9.57	416
2013	31.21	82%	33.46	34.92	415



INVESTMENT PROFILE

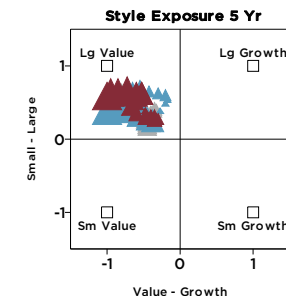
Ticker	SMVZX
CUSIP	92837F441
Net Assets \$MM	\$2,925.00
Manager Names	Don Wordell
Manager Tenure	16.8 Years
Prospectus Exp Ratio	0.80%
Cat Median Exp Ratio	1.17%
Current 12b-1	N/A
Annld Ret Since Incept	9.10%
Inception Date	08/01/2014
Phone Number	888-784-3863
Sub Advisor	Ceredex Value Advisors LLC

HOLDINGS OVERVIEW

Total Number of Holdings	57
% Assets in Top 10 Holdings	29.74%
Avg Mkt Cap \$MM	\$14,264.41
Turnover Ratio	82.00%

TOP HOLDINGS

Humana Inc	3.74%
AmerisourceBergen Corp	3.62%
Zimmer Biomet Holdings I	3.46%
Motorola Solutions Inc	3.40%
Perrigo Co PLC	3.37%

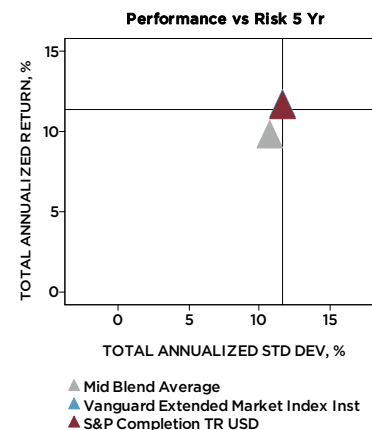
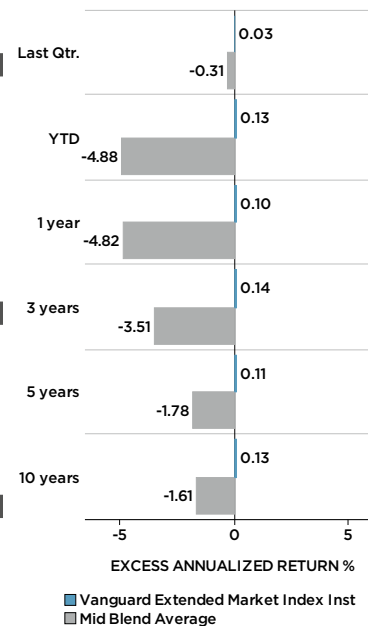
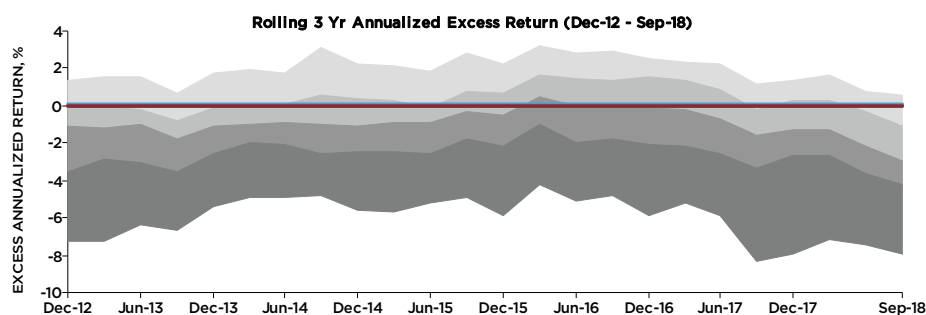


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VANGUARD EXTENDED MARKET INDEX INST

Period Ending 9.30.18 | Q3 18

KEY MEASURES / 5 YEAR	Vanguard Extended Market Index Inst	Peer Group Rank	S&P Completion TR USD	Mid Blend	# of Funds
Standard Deviation	11.60	84%	11.58	10.76	368
Sharpe Ratio	0.94	44%	0.93	0.85	368
Alpha	0.10	51%	0.00	-0.11	368
Beta	1.00	4%	1.00	0.84	368
R-Squared	100.00	1%	100.00	83.32	368
Up Mkt Capture	100.44	4%	100.00	83.36	368
Down Mkt Capture	99.86	87%	100.00	85.14	368
Information Ratio	1.37	1%	NA	-0.29	368
TRAILING RETURNS					
Last Qtr.	4.37	41%	4.33	4.02	436
YTD	10.79	9%	10.66	5.78	435
1 Year	16.12	11%	16.02	11.20	434
3 Years	16.18	8%	16.04	12.53	390
5 Years	11.43	22%	11.31	9.53	368
10 Years	12.44	9%	12.31	10.70	311
CALENDAR RETURNS					
2017	18.12	25%	18.11	15.56	448
2016	16.15	39%	15.95	14.09	435
2015	-3.24	54%	-3.35	-4.30	452
2014	7.56	63%	7.50	8.41	449
2013	38.42	18%	38.24	34.39	450



INVESTMENT PROFILE

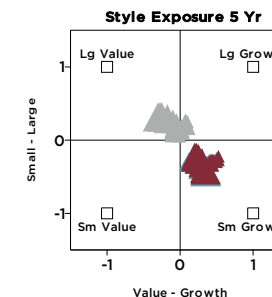
Ticker	VIEIX
CUSIP	922908884
Net Assets \$MM	\$70,381.00
Manager Names	Team Managed
Manager Tenure	20.8 Years
Prospectus Exp Ratio	0.06%
Cat Median Exp Ratio	1.15%
Current 12b-1	N/A
Annld Ret Since Incept	9.11%
Inception Date	07/07/1997
Phone Number	888-809-8102
Sub Advisor	N/A

HOLDINGS OVERVIEW

Total Number of Holdings	3288
% Assets in Top 10 Holdings	4.69%
Avg Mkt Cap \$MM	\$4,522.72
Turnover Ratio	11.00%

TOP HOLDINGS

Tesla Inc	0.74%
ServiceNow Inc	0.64%
Worldpay Inc Class A	0.53%
Square Inc A	0.47%
Las Vegas Sands Corp	0.44%



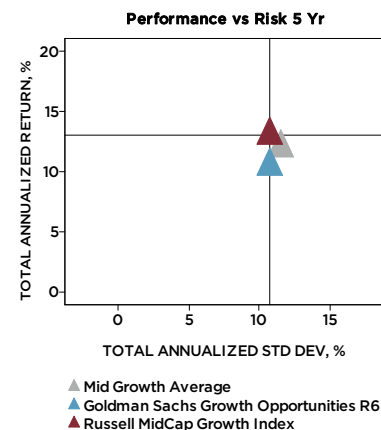
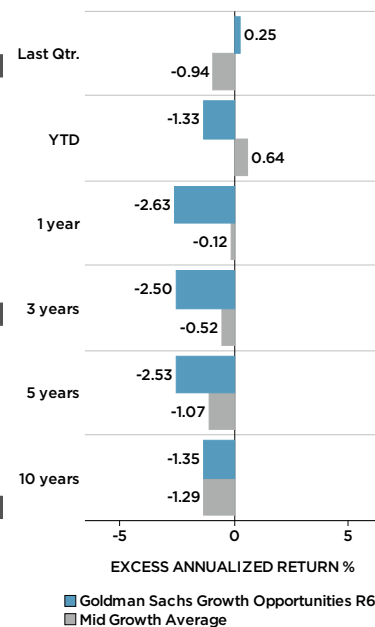
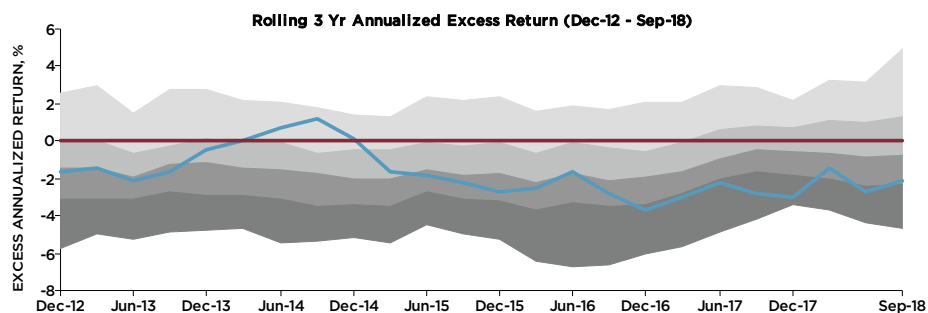
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GOLDMAN SACHS GROWTH OPPORTUNITIES R6

Period Ending 9.30.18 | Q3 18

KEY MEASURES / 5 YEAR	Goldman Sachs Growth Opportunities R6	Peer Group Rank	Russell MidCap Growth Index	Mid Growth	# of Funds
Standard Deviation	10.70	33%	10.70	11.54	543
Sharpe Ratio	0.93	68%	1.17	1.00	543
Alpha	-1.98	68%	0.00	-0.98	543
Beta	0.96	62%	1.00	0.99	543
R-Squared	91.28	37%	100.00	85.87	543
Up Mkt Capture	88.21	86%	100.00	97.27	543
Down Mkt Capture	99.79	36%	100.00	104.39	543
Information Ratio	-0.72	82%	NA	-0.31	543
TRAILING RETURNS					
Last Qtr.	7.82	30%	7.57	6.63	596
YTD	12.05	67%	13.38	14.02	596
1 Year	18.47	68%	21.10	20.98	590
3 Years	14.15	73%	16.65	16.13	570
5 Years	10.47	80%	13.00	11.94	543
10 Years	12.10	51%	13.46	12.17	490
CALENDAR RETURNS					
2017	27.24	28%	25.27	25.04	613
2016	1.49	82%	7.33	5.95	649
2015	-5.24	86%	-0.20	-0.75	670
2014	11.44	15%	11.90	7.26	691
2013	32.38	68%	35.74	35.20	676



INVESTMENT PROFILE

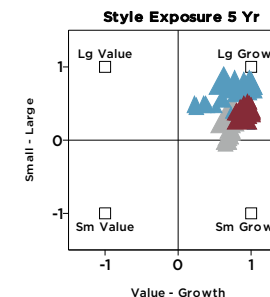
Ticker	GGOUX
CUSIP	38148U601
Net Assets \$MM	\$2,106.00
Manager Names	Team Managed
Manager Tenure	19.3 Years
Prospectus Exp Ratio	0.94%
Cat Median Exp Ratio	1.26%
Current 12b-1	N/A
Annld Ret Since Incept	9.57%
Inception Date	07/31/2015
Phone Number	800-526-7384
Sub Advisor	N/A

HOLDINGS OVERVIEW

Total Number of Holdings	87
% Assets in Top 10 Holdings	24.34%
Avg Mkt Cap \$MM	\$15,080.29
Turnover Ratio	61.00%

TOP HOLDINGS

Dunkin' Brands Group Inc	2.81%
Black Knight Inc A	2.69%
Amphenol Corp Class A	2.63%
Global Payments Inc	2.60%
Illumina Inc	2.47%



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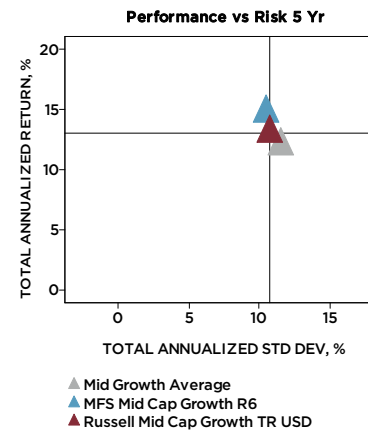
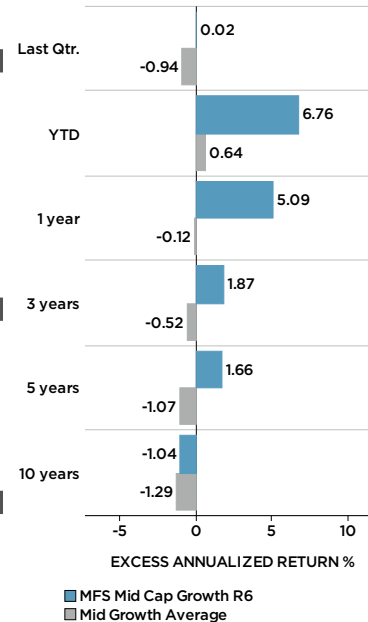
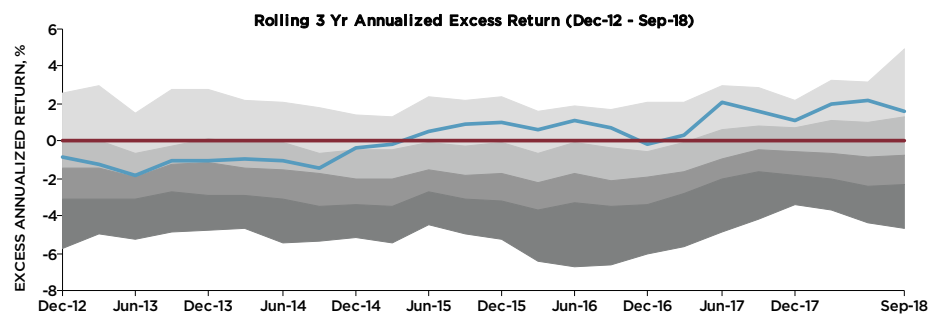
8.1

MFS MID CAP GROWTH R6

Effective: 01/14/2019

Period Ending 9.30.18 | Q3 18

KEY MEASURES / 5 YEAR	MFS Mid Cap Growth R6	Peer Group Rank	Russell Mid Cap Growth TR USD	Mid Growth	# of Funds
Standard Deviation	10.41	22%	10.70	11.54	543
Sharpe Ratio	1.36	4%	1.17	1.00	543
Alpha	2.62	8%	0.00	-0.98	543
Beta	0.92	77%	1.00	0.99	543
R-Squared	90.13	46%	100.00	85.87	543
Up Mkt Capture	101.07	24%	100.00	97.27	543
Down Mkt Capture	86.63	9%	100.00	104.39	543
Information Ratio	0.44	5%	NA	-0.31	543
TRAILING RETURNS					
Last Qtr.	7.59	35%	7.57	6.63	596
YTD	20.14	15%	13.38	14.02	596
1 Year	26.19	18%	21.10	20.98	590
3 Years	18.52	22%	16.65	16.13	570
5 Years	14.67	9%	13.00	11.94	543
10 Years	12.42	41%	13.46	12.17	490
CALENDAR RETURNS					
2017	26.39	35%	25.27	25.04	613
2016	4.75	55%	7.33	5.95	649
2015	4.60	9%	-0.20	-0.75	670
2014	8.95	33%	11.90	7.26	691
2013	37.27	30%	35.74	35.20	676



INVESTMENT PROFILE

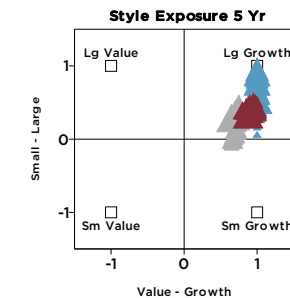
Ticker	OTCKX
CUSIP	552987554
Net Assets \$MM	\$3,700.00
Manager Names	Team Managed
Manager Tenure	9.9 Years
Prospectus Exp Ratio	0.85%
Cat Median Exp Ratio	1.26%
Current 12b-1	N/A
Annlzd Ret Since Incept	16.68%
Inception Date	01/02/2013
Phone Number	800-225-2606
Sub Advisor	N/A

HOLDINGS OVERVIEW

Total Number of Holdings	105
% Assets in Top 10 Holdings	20.97%
Avg Mkt Cap \$MM	\$13,792.09
Turnover Ratio	30.00%

TOP HOLDINGS

Bright Horizons Family Sol	3.15%
PerkinElmer Inc	2.60%
Take-Two Interactive Soft	2.11%
Global Payments Inc	2.11%
AMETEK Inc	1.99%

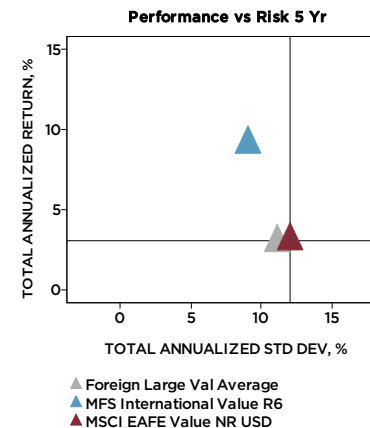
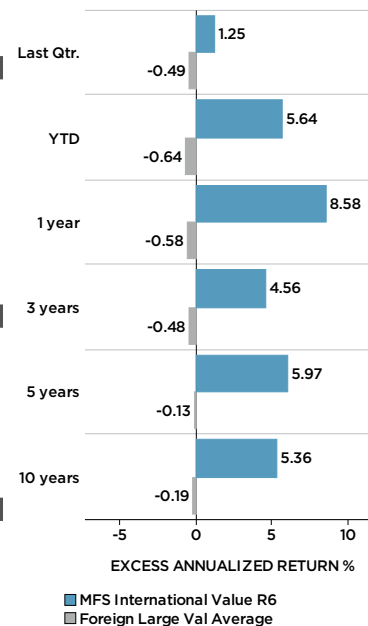
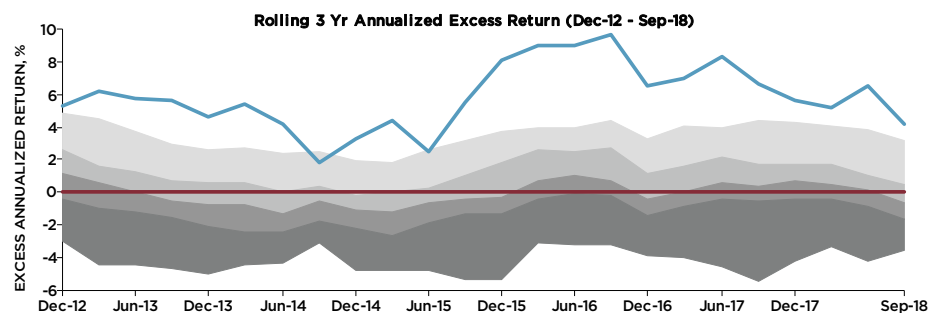


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MFS INTERNATIONAL VALUE R6

Period Ending 9.30.18 | Q3 18

KEY MEASURES / 5 YEAR	MFS International Value R6	Peer Group Rank	MSCI EAFE Value NR USD	Foreign Large Val	# of Funds
Standard Deviation	9.10	4%	12.01	11.08	258
Sharpe Ratio	0.94	1%	0.22	0.23	258
Alpha	7.08	1%	0.00	0.23	258
Beta	0.58	100%	1.00	0.86	258
R-Squared	58.08	99%	100.00	87.45	258
Up Mkt Capture	74.96	85%	100.00	85.61	258
Down Mkt Capture	36.82	1%	100.00	85.74	258
Information Ratio	0.73	4%	NA	0.00	258
TRAILING RETURNS					
Last Qtr.	2.43	3%	1.18	0.69	294
YTD	2.15	1%	-3.49	-4.13	294
1 Year	8.22	1%	-0.36	-0.95	294
3 Years	12.68	2%	8.12	7.64	288
5 Years	9.11	1%	3.14	3.01	258
10 Years	9.85	1%	4.49	4.30	216
CALENDAR RETURNS					
2017	27.25	12%	21.44	22.73	305
2016	4.31	29%	5.02	3.20	330
2015	6.85	1%	-5.68	-3.28	353
2014	1.61	1%	-5.39	-6.24	346
2013	27.80	2%	22.95	20.71	339



INVESTMENT PROFILE

Ticker	MINJX
CUSIP	552746349
Net Assets \$MM	\$29,540.00
Manager Names	Team Managed
Manager Tenure	9.9 Years
Prospectus Exp Ratio	0.63%
Cat Median Exp Ratio	1.20%
Current 12b-1	N/A
Annlzd Ret Since Incept	7.11%
Inception Date	05/01/2006
Phone Number	800-225-2606
Sub Advisor	N/A

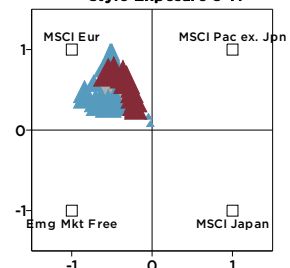
HOLDINGS OVERVIEW

Total Number of Holdings	111
% Assets in Top 10 Holdings	26.24%
Avg Mkt Cap \$MM	\$25,489.60
Turnover Ratio	14.00%

TOP HOLDINGS

Nestle SA	4.09%
Givaudan SA	2.88%
Henkel AG & Co KGaA Part	2.80%
Amadeus IT Group SA A	2.73%
Taiwan Semiconductor Mar	2.52%

Style Exposure 5 Yr

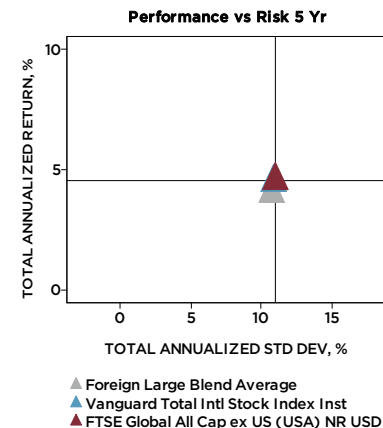
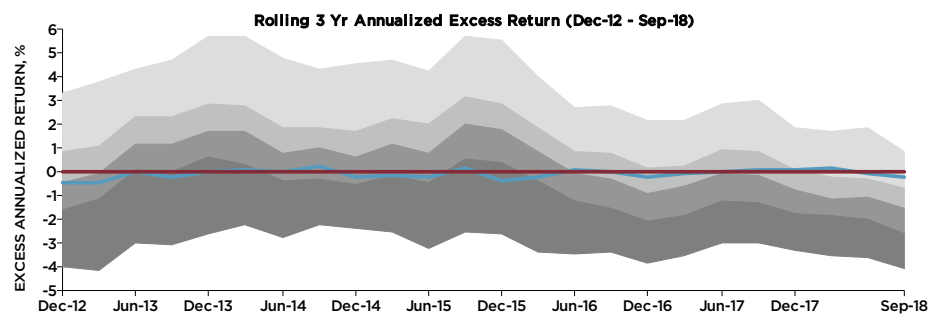


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VANGUARD TOTAL INTL STOCK INDEX INST

Period Ending 9.30.18 | Q3 18

	Vanguard Total Intl Stock Index Inst	Peer Group Rank	FTSE Global All Cap ex US (USA) NR USD	Foreign Large Blend	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	10.80	64%	11.03	10.79	640
Sharpe Ratio	0.37	35%	0.37	0.33	640
Alpha	0.04	40%	0.00	-0.26	640
Beta	0.97	22%	1.00	0.92	640
R-Squared	97.96	1%	100.00	88.49	640
Up Mkt Capture	97.13	18%	100.00	91.03	640
Down Mkt Capture	97.30	66%	100.00	93.43	640
Information Ratio	-0.06	35%	NA	-0.16	640
TRAILING RETURNS					
Last Qtr.	0.54	51%	0.51	0.59	777
YTD	-3.09	56%	-3.20	-2.85	762
1 Year	1.63	41%	1.99	0.89	760
3 Years	9.97	16%	10.20	8.40	705
5 Years	4.49	33%	4.58	4.00	640
10 Years	5.19	42%	5.81	5.06	528
CALENDAR RETURNS					
2017	27.55	24%	27.41	25.30	771
2016	4.70	12%	4.72	0.97	791
2015	-4.24	81%	-4.29	-1.49	770
2014	-4.15	30%	-3.39	-5.02	781
2013	15.15	83%	15.59	19.61	803



INVESTMENT PROFILE

Ticker	VTSNX
CUSIP	921909784
Net Assets \$MM	\$359,568.00
Manager Names	Team Managed
Manager Tenure	10.2 Years
Prospectus Exp Ratio	0.09%
Cat Median Exp Ratio	1.15%
Current 12b-1	N/A
Annld Ret Since Incept	5.15%
Inception Date	11/29/2010
Phone Number	800-662-7447
Sub Advisor	N/A

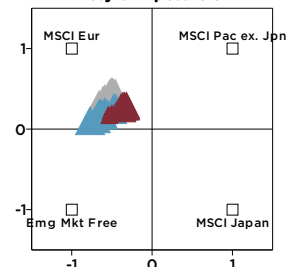
HOLDINGS OVERVIEW

Total Number of Holdings	6283
% Assets in Top 10 Holdings	7.81%
Avg Mkt Cap \$MM	\$22,935.11
Turnover Ratio	11.57%

TOP HOLDINGS

Nestle SA	1.03%
Tencent Holdings Ltd	0.99%
Samsung Electronics Co Lt	0.83%
Taiwan Semiconductor Mar	0.80%
Alibaba Group Holding Ltd	0.76%

Style Exposure 5 Yr

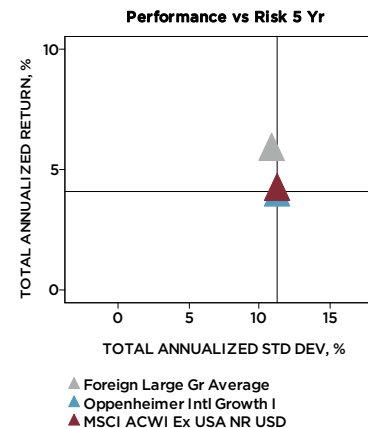
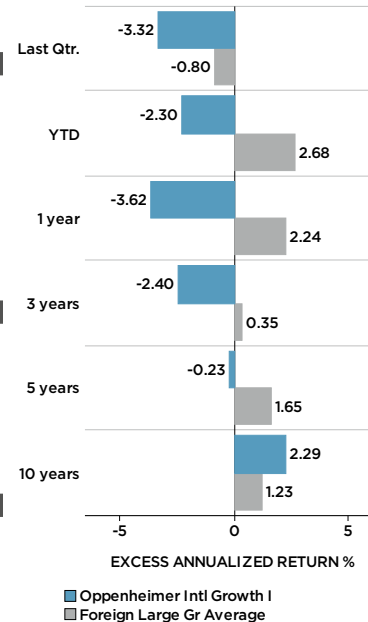
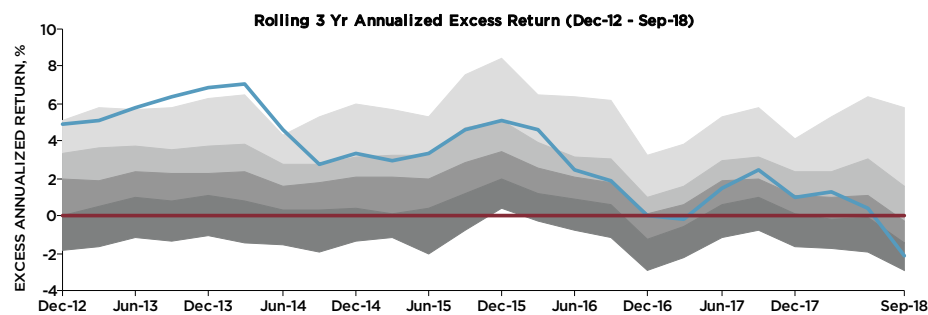


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OPPENHEIMER INTL GROWTH I

Period Ending 9.30.18 | Q3 18

KEY MEASURES / 5 YEAR	Oppenheimer Intl Growth I	Peer Group Rank	MSCI ACWI Ex USA NR USD	Foreign Large Gr	# of Funds
Standard Deviation	11.29	73%	11.20	10.91	375
Sharpe Ratio	0.30	86%	0.32	0.48	375
Alpha	0.09	86%	0.00	2.11	375
Beta	0.91	26%	1.00	0.87	375
R-Squared	81.65	50%	100.00	80.77	375
Up Mkt Capture	88.53	62%	100.00	91.20	375
Down Mkt Capture	88.50	83%	100.00	78.69	375
Information Ratio	-0.04	83%	NA	0.30	375
TRAILING RETURNS					
Last Qtr.	-2.62	89%	0.71	-0.10	432
YTD	-5.39	94%	-3.09	-0.40	432
1 Year	-1.86	94%	1.76	4.01	430
3 Years	7.56	87%	9.97	10.32	387
5 Years	3.89	84%	4.12	5.78	375
10 Years	7.48	23%	5.18	6.41	316
CALENDAR RETURNS					
2017	27.15	82%	27.19	31.70	439
2016	-1.88	50%	4.50	-2.10	439
2015	3.63	19%	-5.66	0.94	439
2014	-6.80	84%	-3.87	-3.78	434
2013	25.71	14%	15.29	19.92	430



INVESTMENT PROFILE

Ticker	OIGIX
CUSIP	68380L605
Net Assets \$MM	\$24,425.00
Manager Names	Team Managed
Manager Tenure	22.5 Years
Prospectus Exp Ratio	0.69%
Cat Median Exp Ratio	1.20%
Current 12b-1	N/A
Annld Ret Since Incept	7.04%
Inception Date	03/29/2012
Phone Number	800-225-5677
Sub Advisor	OppenheimerFunds Inc

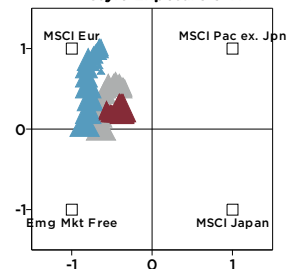
HOLDINGS OVERVIEW

Total Number of Holdings	90
% Assets in Top 10 Holdings	19.36%
Avg Mkt Cap \$MM	\$21,668.54
Turnover Ratio	22.00%

TOP HOLDINGS

Temenos AG	2.67%
Infineon Technologies AG	2.53%
SAP SE	2.34%
CSL Ltd	1.88%
ICICI Bank Ltd ADR	1.75%

Style Exposure 5 Yr



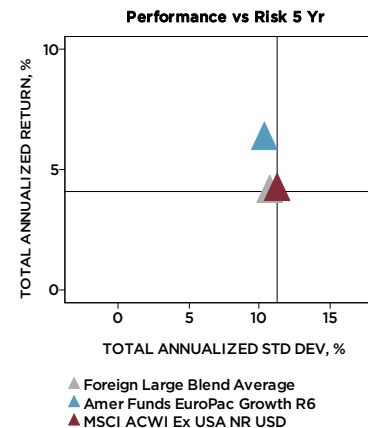
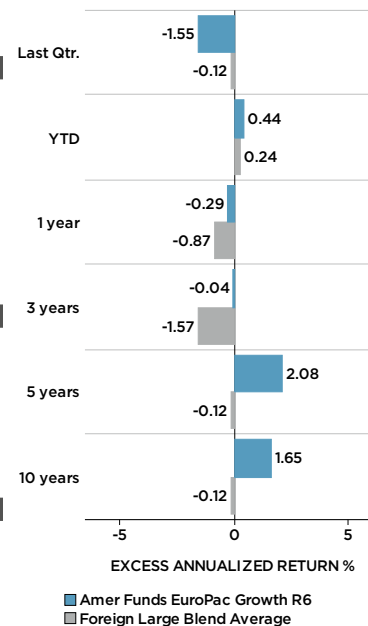
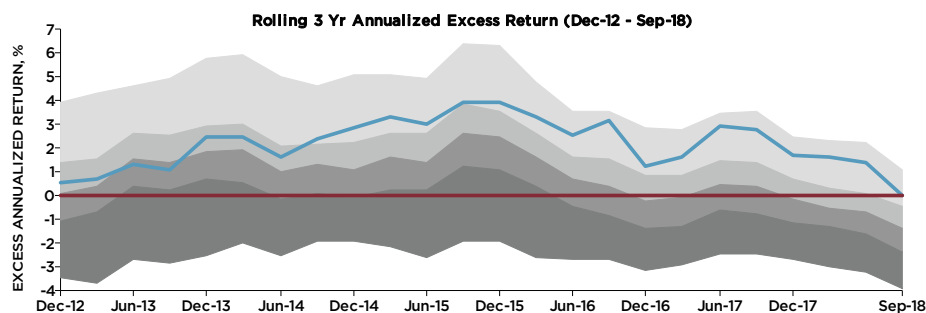
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AMER FUNDS EUROPAC GROWTH R6

Effective: 01/14/2019

Period Ending 9.30.18 | Q3 18

	Amer Funds EuroPac Growth R6	Peer Group Rank	MSCI ACWI Ex USA NR USD	Foreign Large Blend	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	10.36	30%	11.20	10.79	640
Sharpe Ratio	0.55	6%	0.32	0.33	640
Alpha	2.54	6%	0.00	0.22	640
Beta	0.87	71%	1.00	0.91	640
R-Squared	88.64	64%	100.00	88.59	640
Up Mkt Capture	94.41	30%	100.00	90.91	640
Down Mkt Capture	79.55	16%	100.00	90.37	640
Information Ratio	0.53	5%	NA	-0.03	640
TRAILING RETURNS					
Last Qtr.	-0.84	92%	0.71	0.59	777
YTD	-2.65	47%	-3.09	-2.85	762
1 Year	1.47	45%	1.76	0.89	760
3 Years	9.93	17%	9.97	8.40	705
5 Years	6.20	6%	4.12	4.00	640
10 Years	6.83	11%	5.18	5.06	528
CALENDAR RETURNS					
2017	31.17	3%	27.19	25.30	771
2016	1.01	47%	4.50	0.97	791
2015	-0.48	38%	-5.66	-1.49	770
2014	-2.29	17%	-3.87	-5.02	781
2013	20.58	44%	15.29	19.61	803

**INVESTMENT PROFILE**

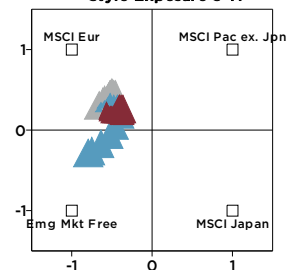
Ticker	RERGX
CUSIP	298706821
Net Assets \$MM	\$162,581.00
Manager Names	Team Managed
Manager Tenure	26.8 Years
Prospectus Exp Ratio	0.49%
Cat Median Exp Ratio	1.15%
Current 12b-1	N/A
Annlzd Ret Since Incept	9.49%
Inception Date	05/01/2009
Phone Number	800-421-4225
Sub Advisor	N/A

HOLDINGS OVERVIEW

Total Number of Holdings	424
% Assets in Top 10 Holdings	20.44%
Avg Mkt Cap \$MM	\$44,620.29
Turnover Ratio	29.00%

TOP HOLDINGS

AIA Group Ltd	2.64%
Airbus SE	2.45%
Samsung Electronics Co L	2.31%
HDFC Bank Ltd	2.17%
Nintendo Co Ltd	2.07%

Style Exposure 5 Yr

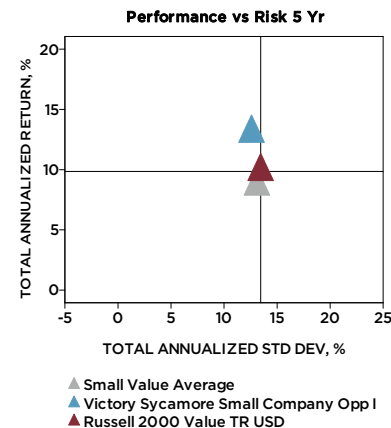
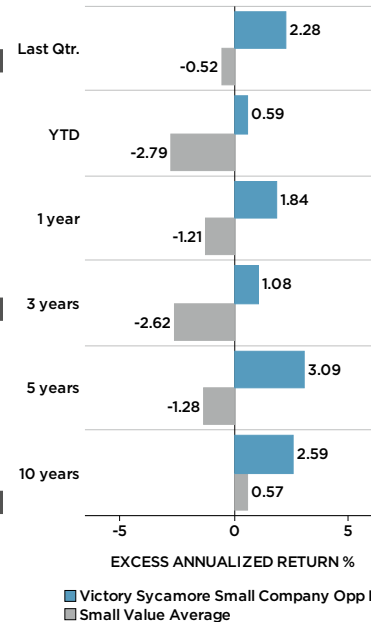
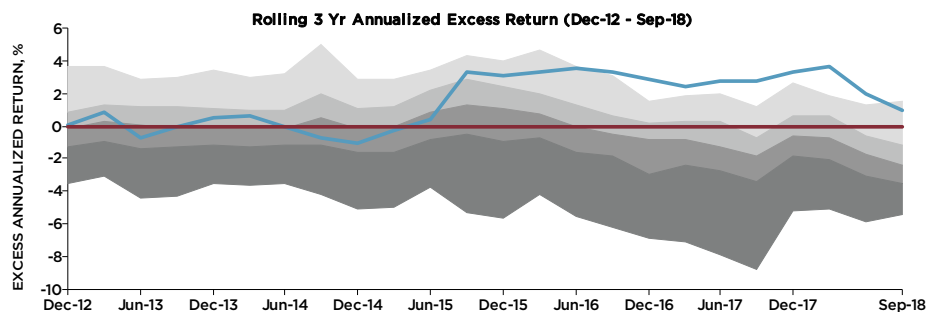
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8.1

VICTORY SYCAMORE SMALL COMPANY OPP I

Period Ending 9.30.18 | Q3 18

KEY MEASURES / 5 YEAR	Victory Sycamore Small Company Opp I	Peer Group Rank	Russell 2000 Value TR USD	Small Value	# of Funds
Standard Deviation	12.57	38%	13.51	13.13	348
Sharpe Ratio	0.99	3%	0.70	0.63	348
Alpha	4.00	2%	0.00	-0.49	348
Beta	0.90	56%	1.00	0.92	348
R-Squared	94.15	37%	100.00	89.50	348
Up Mkt Capture	101.61	8%	100.00	88.60	348
Down Mkt Capture	83.48	23%	100.00	91.48	348
Information Ratio	0.85	1%	NA	-0.23	348
TRAILING RETURNS					
Last Qtr.	3.89	4%	1.60	1.09	409
YTD	7.72	12%	7.14	4.35	403
1 Year	11.16	19%	9.33	8.12	401
3 Years	17.20	7%	16.12	13.50	373
5 Years	13.00	1%	9.91	8.63	348
10 Years	12.11	5%	9.52	10.09	306
CALENDAR RETURNS					
2017	11.88	27%	7.84	9.29	403
2016	30.04	18%	31.74	25.72	410
2015	-0.39	4%	-7.47	-6.71	418
2014	6.80	14%	4.22	3.49	416
2013	33.39	72%	34.52	35.70	417



INVESTMENT PROFILE

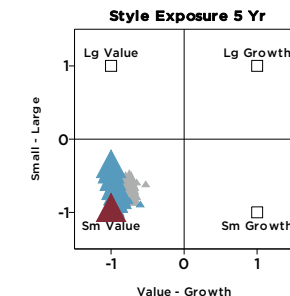
Ticker	VSOIX
CUSIP	92646A815
Net Assets \$MM	\$5,535.00
Manager Names	Team Managed
Manager Tenure	20.4 Years
Prospectus Exp Ratio	0.90%
Cat Median Exp Ratio	1.29%
Current 12b-1	0.00%
Annld Ret Since Incept	9.89%
Inception Date	08/31/2007
Phone Number	800-539-3863
Sub Advisor	N/A

HOLDINGS OVERVIEW

Total Number of Holdings	104
% Assets in Top 10 Holdings	15.57%
Avg Mkt Cap \$MM	\$2,638.35
Turnover Ratio	36.00%

TOP HOLDINGS

Validus Holdings Ltd	1.75%
UniFirst Corp	1.59%
The Hanover Insurance Gr	1.58%
Performance Food Group	1.57%
EMCOR Group Inc	1.56%

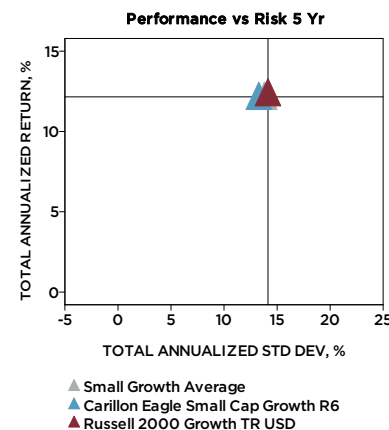
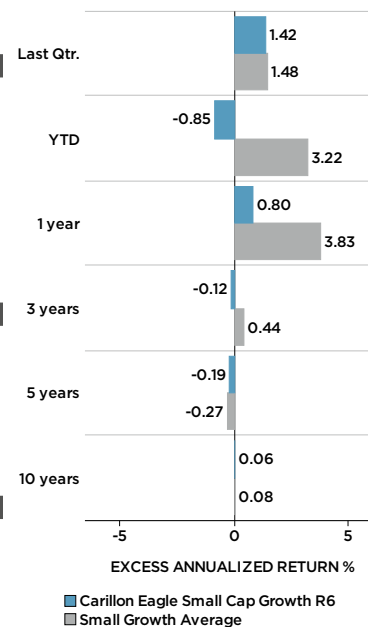
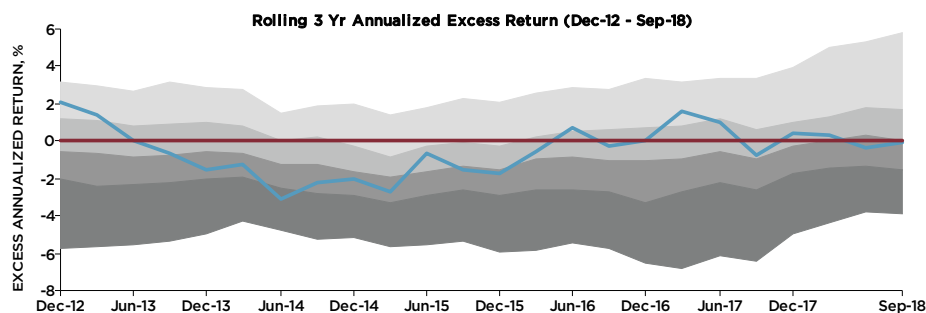


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CARILLON EAGLE SMALL CAP GROWTH R6

Period Ending 9.30.18 | Q3 18

	Carillon Eagle Small Cap Growth R6	Peer Group Rank	Russell 2000 Growth TR USD	Small Growth	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	13.28	39%	14.14	13.74	649
Sharpe Ratio	0.86	43%	0.82	0.84	649
Alpha	0.92	48%	0.00	0.82	649
Beta	0.90	56%	1.00	0.91	649
R-Squared	92.79	28%	100.00	87.43	649
Up Mkt Capture	93.28	46%	100.00	91.85	649
Down Mkt Capture	91.01	51%	100.00	89.15	649
Information Ratio	-0.04	49%	NA	-0.05	649
TRAILING RETURNS					
Last Qtr.	6.95	52%	5.52	7.00	721
YTD	14.91	70%	15.76	18.98	719
1 Year	21.87	62%	21.06	24.89	714
3 Years	17.86	53%	17.98	18.42	694
5 Years	11.95	48%	12.14	11.87	649
10 Years	12.72	48%	12.65	12.73	585
CALENDAR RETURNS					
2017	23.40	43%	22.17	22.07	745
2016	10.45	53%	11.32	11.47	769
2015	-0.39	27%	-1.38	-2.42	782
2014	5.59	26%	5.60	2.70	796
2013	34.70	86%	43.30	41.25	796



INVESTMENT PROFILE

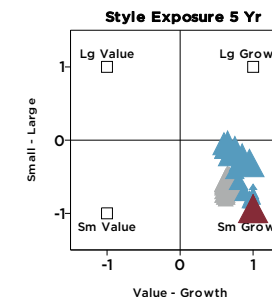
Ticker	HSRUX
CUSIP	14214L452
Net Assets \$MM	\$5,441.00
Manager Names	Team Managed
Manager Tenure	22.8 Years
Prospectus Exp Ratio	0.66%
Cat Median Exp Ratio	1.32%
Current 12b-1	0.00%
Annlzd Ret Since Incept	14.20%
Inception Date	08/15/2011
Phone Number	800-421-4184
Sub Advisor	Eagle Asset Management, Inc.

HOLDINGS OVERVIEW

Total Number of Holdings	115
% Assets in Top 10 Holdings	17.08%
Avg Mkt Cap \$MM	\$3,605.09
Turnover Ratio	40.00%

TOP HOLDINGS

RSP Permian Inc	1.99%
Quaker Chemical Corp	1.95%
Planet Fitness Inc A	1.90%
PTC Inc	1.80%
Synovus Financial Corp	1.75%



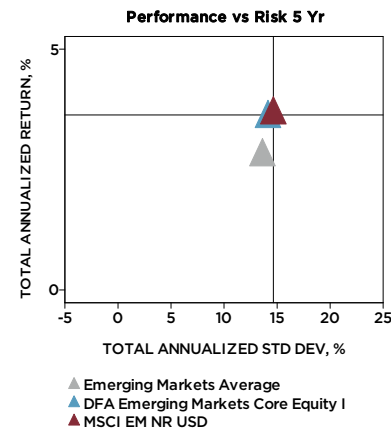
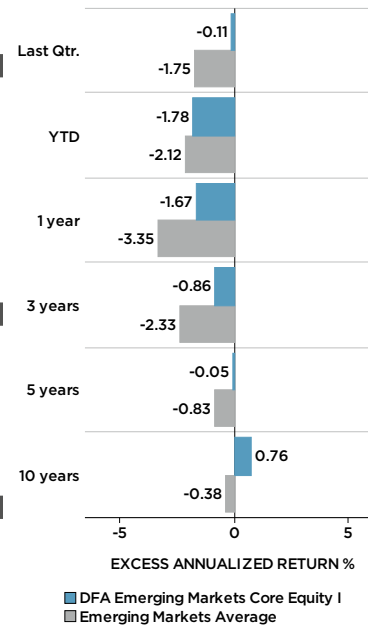
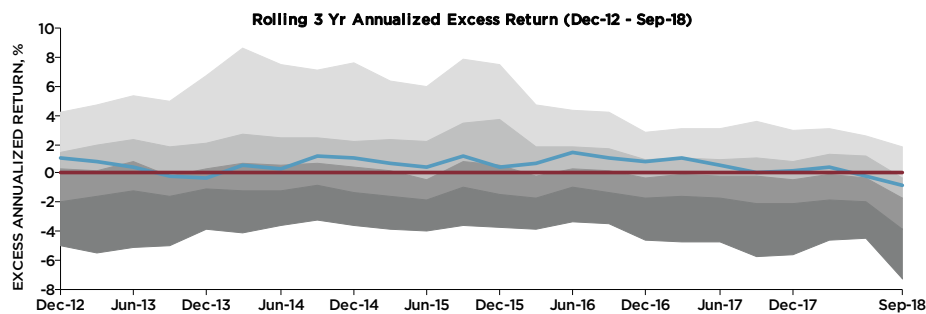
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8.1

DFA EMERGING MARKETS CORE EQUITY I

Period Ending 9.30.18 | Q3 18

KEY MEASURES / 5 YEAR	DFA Emerging Markets Core Equity I	Peer Group Rank	MSCI EM NR USD	Emerging Markets	# of Funds
Standard Deviation	14.22	62%	14.66	13.55	583
Sharpe Ratio	0.21	37%	0.21	0.17	583
Alpha	0.09	40%	0.00	-0.41	583
Beta	0.96	29%	1.00	0.86	583
R-Squared	97.15	8%	100.00	86.58	583
Up Mkt Capture	98.10	21%	100.00	86.11	583
Down Mkt Capture	98.35	72%	100.00	89.80	583
Information Ratio	-0.02	36%	NA	-0.16	583
TRAILING RETURNS					
Last Qtr.	-1.21	25%	-1.09	-2.85	820
YTD	-9.46	45%	-7.68	-9.79	803
1 Year	-2.48	34%	-0.81	-4.16	794
3 Years	11.50	37%	12.36	10.03	746
5 Years	3.57	35%	3.61	2.78	583
10 Years	6.17	18%	5.40	5.02	318
CALENDAR RETURNS					
2017	36.55	48%	37.28	35.28	812
2016	12.35	19%	11.19	8.22	854
2015	-14.86	59%	-14.92	-13.56	841
2014	-0.91	30%	-2.19	-2.74	788
2013	-2.64	61%	-2.60	0.31	695



INVESTMENT PROFILE

Ticker	DFCEX
CUSIP	233203421
Net Assets \$MM	\$27,753.00
Manager Names	Team Managed
Manager Tenure	8.6 Years
Prospectus Exp Ratio	0.53%
Cat Median Exp Ratio	1.40%
Current 12b-1	N/A
Annlzd Ret Since Incept	7.65%
Inception Date	04/05/2005
Phone Number	888-576-1167
Sub Advisor	DFA Australia Limited/ Dimensional Fund Advisors Ltd

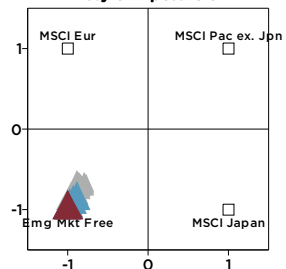
HOLDINGS OVERVIEW

Total Number of Holdings	5139
% Assets in Top 10 Holdings	12.76%
Avg Mkt Cap \$MM	\$8,302.81
Turnover Ratio	4.00%

TOP HOLDINGS

Samsung Electronics Co Ltd	3.92%
Taiwan Semiconductor Mar	1.67%
Tencent Holdings Ltd	1.63%
Taiwan Semiconductor Mar	1.22%
Alibaba Group Holding Ltd	0.85%

Style Exposure 5 Yr

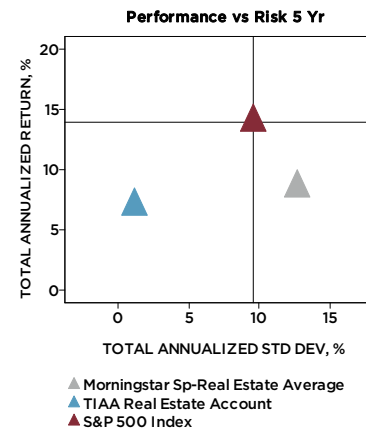
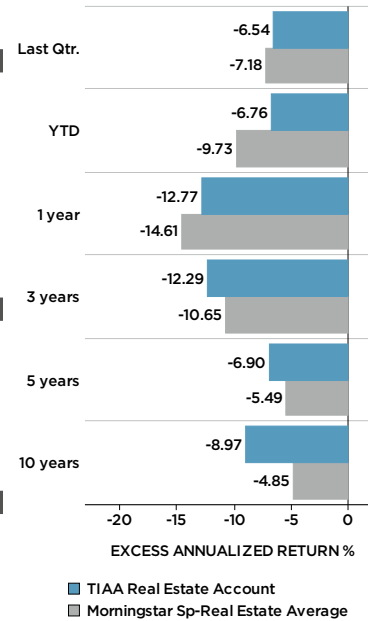
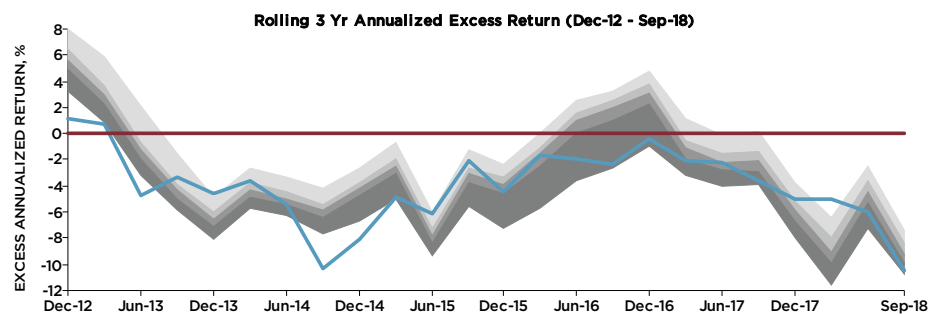


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TIAA REAL ESTATE ACCOUNT

Period Ending 9.30.18 | Q3 18

KEY MEASURES / 5 YEAR	TIAA Real Estate Account	Peer Group Rank	S&P 500 Index	Morningstar Sp-Real Estate	# of Funds
Standard Deviation	1.21	1%	9.55	12.71	213
Sharpe Ratio	5.39	1%	1.41	0.64	213
Alpha	6.21	1%	0.00	0.91	213
Beta	0.02	100%	1.00	0.52	213
R-Squared	3.26	100%	100.00	16.08	213
Up Mkt Capture	22.83	100%	100.00	50.70	213
Down Mkt Capture	-25.08	1%	100.00	38.23	213
Information Ratio	-0.65	95%	NA	-0.40	213
TRAILING RETURNS					
Last Qtr.	1.17	19%	7.71	0.53	244
YTD	3.80	1%	10.56	0.83	244
1 Year	5.14	16%	17.91	3.30	238
3 Years	5.02	92%	17.31	6.66	231
5 Years	7.05	92%	13.95	8.45	213
10 Years	2.99	100%	11.97	7.12	189
CALENDAR RETURNS					
2017	4.37	63%	21.83	5.70	254
2016	5.20	73%	11.96	6.63	273
2015	8.16	1%	1.38	2.47	278
2014	12.22	99%	13.69	28.45	276
2013	9.65	2%	32.39	1.66	271



INVESTMENT PROFILE

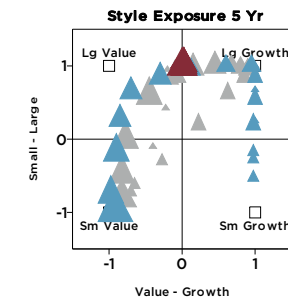
ID	VAUSA059TL
Cusip	878094200
Net Assets \$	\$25,630,199,351.26
Manager Name	Team Managed
Manager Start Date	2016-05-01
Expense Ratio	0.83%
Cat Median Exp Ratio	1.26%
Annld Ret Since Incept	6.31%
Inception Date	10-02-1995
Share Class Incep Date	10/02/1995
Phone Number	877-518-9161
Sub Advisor	

HOLDINGS OVERVIEW

% Assets in Top 10 Holdings	21.00%
Avg Mkt Cap \$MM	\$12,525.10
Turnover Ratio	2.70%

TOP HOLDINGS

Fashion Show	2.98%
1001 Pennsylvania Avenue	2.71%
The Florida Mall	2.70%
Ddr Joint Venture	2.19%
Fourth And Madison	2.02%



Performance Disclosure: For use with CAPTRUST clients only. Mutual fund investing involves risk. Please visit captrustadvisors.com/risk-disclosures/ for a detailed description of the risks associated with investing by asset class. Statistics and data have been derived from Morningstar and are not guaranteed to be accurate or complete. Performance data included here represents past performance and does not guarantee future results. This is not a solicitation to invest. Each mutual fund has a prospectus with a complete description of the risks associated with investing in the specific fund. To request a prospectus on this fund, please call CAPTRUST at (800)216-0645.

APPENDIX

Period Ending 9.30.18 | Q3 18

University of Maine System

APPENDIX

Your CAPTRUST Service Team.....

Glossary of Terms.....

Evaluation Methodology.....

YOUR CAPTRUST SERVICE TEAM MEMBERS

Period Ending 9.30.18 | Q3 18

University of Maine System

TEAM MEMBERS	RESPONSIBILITIES
Michael S. Pratico Senior Vice President Financial Advisor Michael.Pratico@CAPTRUSTAdvisors.com	Account Role: Lead Consultant Our Lead Consultants serve as the primary relationship manager for the fiduciaries of corporate retirement plans. They oversee and ensure quality delivery of comprehensive investment advisory services. They are available to assist with any aspect of clients' accounts, or put them in contact with the appropriate resources here at CAPTRUST.
Barron V. Schmitt Senior Vice President Financial Advisor barry.schmitt@CapTrustAdvisors.com	Account Role: Consultant Our Consultants have responsibility for client project management, client meetings, report preparation, and presentation. Projects involve the establishment of investment policies and objectives, asset allocation modeling, investment manager analyses and searches, fee analysis, performance evaluation, and other specialized projects. In addition, they will provide comprehensive written investment option and plan reviews, as well as monitor overall results and service delivery to ensure complete satisfaction.
Scott T. Matheson, CFA, CPA Senior Director Defined Contribution Practice Leader Scott.Matheson@CAPTRUSTAdvisors.com	Account Role: Research Analyst Our Investment Analysts conduct investment manager research, asset allocation studies, portfolio monitoring and performance measurement. Some of their specific duties include: evaluating fund lineups and investment options, reporting due diligence findings to clients, and researching the various universes for viable investment options. Our team monitors and evaluates mutual funds, separate account managers and alternative investments for use with current and prospective clients.
Che-Che S. McCrimmon Senior Client Management Consultant Che-Che.McCrimmon@captrustadvisors.com	Account Role: Client Management Consultant The Client Management Consultants are focused on overall client management from initial conversion of new plans to CAPTRUST throughout their 'life' at CAPTRUST. As the primary contact for day-to-day client service needs, the main goal of the Client Management Consultant is to deliver exceptional proactive client service. On a daily basis, the Client Management Consultants are available to assist employees with questions related to plan enrollment and education, available investment options, and other areas.

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GLOSSARY

Period Ending 9.30.18 | Q3 18

ALPHA

Alpha measures a manager's rate of return in excess of that which can be explained by its systematic risk, or Beta. It is a result of regressing a manager's returns against those of a benchmark index. A positive alpha implies that a manager has added value relative to its benchmark on a risk-adjusted basis.

BATTING AVERAGE

Batting Average, an indicator of consistency, measures the percentage of time an active manager outperformed the benchmark.

BETA

Beta measures a manager's sensitivity to systematic, or market risk. Beta is a result of the analysis regressing a manager's returns against those of a benchmark Index. A manager with a Beta of 1 should move perfectly with a benchmark. A Beta of less than 1 implies that a manager's returns are less volatile than the market's (i.e., selected benchmarks). A Beta of greater than 1 implies that a manager exhibits greater volatility than the market (i.e., selected benchmark).

CAPTURE RATIO

Up Market Capture is the average return of a manager relative to a benchmark index using only periods where the benchmark return was positive. Down Market Capture is the average return of a manager relative to a benchmark index using only periods where the benchmark return was negative. An Up Market Capture of greater than 100% and a Down Market Capture of less than 100% is considered desirable.

INFORMATION RATIO

The Information Ratio measures a manager's excess return over the passive index divided by the volatility of that excess return, or Tracking Error. To obtain a higher Information Ratio, which is preferable, a manager must demonstrate the ability to generate returns above its benchmark while avoiding large performance swings relative to that same benchmark.

PERCENTILE RANK

Percentile Rankings are based on a manager's performance relative to all other available funds in its universe. Percentiles range from 1, being the best, to 100 being the worst. A ranking in the 50th percentile or above demonstrates that the manager has performed better on a relative basis than at least 50% of its peers.

RISK-ADJUSTED PERFORMANCE

Risk-adjusted Performance, or RAP, measures the level of return that an investment option would generate given a level of risk equivalent to the benchmark index.

R-SQUARED

R-squared measures the portion of a manager's movements that are explained by movements in a benchmark index. R-squared values range from 0 to 100. An R-squared of 100 means that all movements of a manager are completely explained by movements in the index. This measurement is identified as the coefficient of determination from a regression equation. A high R-squared value supports the validity of the Alpha and Beta measures, and it can be used as a measure of style consistency.

SHARPE RATIO

Sharpe ratio measures a manager's return per unit of risk, or standard deviation. It is the ratio of a manager's excess return above the risk-free rate divided by a manager's standard deviation. A higher Sharpe ratio implies greater manager efficiency.

STANDARD DEVIATION

Standard Deviation is a measure of the extent to which observations in a series vary from the arithmetic mean of the series. This measure of volatility or risk allows the estimation of a range of values for a manager's returns. The wider the range, the more uncertainty, and, therefore, the riskier a manager is assumed to be.

TRACKING ERROR

Tracking Error is the standard deviation of the portfolio's residual (i.e. excess) returns. The lower the tracking error, the closer the portfolio returns have been to its risk index. Aggressively managed portfolios would be expected to have higher tracking errors than portfolios with a more conservative investment style.


TREYNOR RATIO

The Treynor Ratio is a measure of reward per unit of risk. With Treynor, the numerator (i.e. reward) is defined as the annualized excess return of the portfolio versus the risk-free rate. The denominator (i.e. risk) is defined as the portfolio beta. The result is a measure of excess return per unit of portfolio systematic risk. As with Sharpe and Sortino, the Treynor Ratio only has value when it is used as the basis of comparison between portfolios. The higher the Treynor Ratio, the better.

INVESTMENT REVIEW | EVALUATION METHODOLOGY

Period Ending 9.30.18 | Q3 18

University of Maine System

	QUANTITATIVE EVALUATION ITEMS	QUALITATIVE EVALUATION ITEMS
 MARKED FOR REVIEW The following categories of the Investment Policy Monitor appear “Marked For Review” when:	3/5 Year Risk- adjusted Performance The investment option's 3 or 5 Year Annualized Risk Adjusted Performance falls below the 50th percentile of the peer group.	Fund Management A significant disruption to the investment option's management team has been discovered.
	3/5 Year Performance vs. Peers The investment option's 3 or 5 Year Annualized Peer Relative Performance falls below the 50th percentile of the peer group.	Fund Family A significant disruption to the investment option's parent company has been discovered.
CAPTRUST's Investment Policy Monitoring Methodology The Investment Policy Monitoring Methodology document describes the systems and procedures CAPTRUST uses to monitor and evaluate the investment vehicles in your plan/account on a quarterly basis. Our current Investment Policy Monitoring Methodology document can be accessed through the following link: captrustadvisors.com/investmentmonitoring	3/5 Year Style The investment option's 3 or 5 Year R-Squared measure falls below the absolute threshold set per asset class.	Portfolio Construction The investment option's combined Portfolio Construction score is 6 or below out of a possible 15 points.
	3/5 Year Confidence The investment option's 3 or 5 Year Confidence Rating falls below the 50th percentile of the peer group.	Underlying Investment Vehicles The investment option's combined Underlying Investment Vehicles score is 6 or below out of a possible 15 points.
	Glidepath Assessment % of Equity Exposure: The combined percentage of an investment option's equity exposure ranks in the top 20th percentile or bottom 20th percentile of the peer group. Regression to the Benchmark: The investment option's sensitivity to market risk - as measured by beta relative to a Global Equity Index - is above 0.89.	

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