



Board of Trustees
15 Estabrooke Drive
Orono, ME 04469

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May 17, 2019

TO: Members of the Investment Committee

FR: Ellen N. Doughty, Clerk of the Board

RE: **May 28, 2019 - 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 **9:30 am to 12:30 pm on May 28, 2019**. 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:

UMA – RM 125, Robinson Hall

UMF – Executive Conference RM 103, Merrill

UMFK – Alumni Conference RM, Nadeau Hall

USM – RM 424, Glickman Library

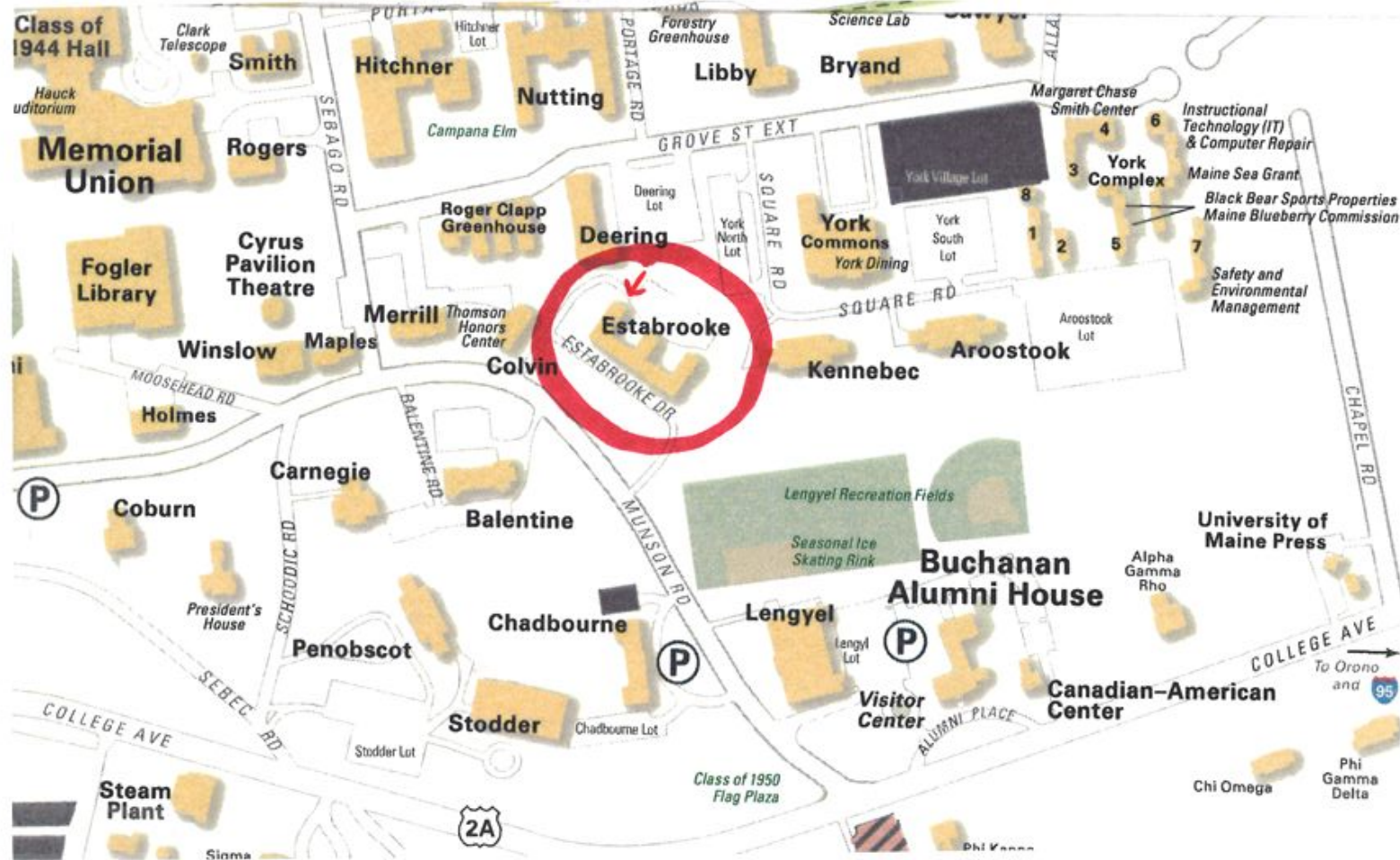
PHONE: 1-800-605-5167 code – 743544#

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

15 Estabrooke Drive, Orono



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

May 28, 2019, 9:30 am to 12:30 pm
Rudman Conference Room, 253 Estabrooke Hall, Orono

AGENDA

9:30 – 9:45 a.m.

TAB 1 **Defined Contribution Plans - Asset Mapping**

9:45 – 11:00 a.m.

TAB 2 **Pension Fund Global Equity Manager Search**

11:00 – 11:15 a.m.

TAB 3 **Investment Policy Statement Updates**

- Managed Investment Pool
- Defined Benefit Pension Fund
- Operating Fund

11:15 – 11:30 a.m.

TAB 4 **Performance Reviews:**

Executive Summary
Managed Investment Pool (MIP)
Defined Benefit Pension Fund
Operating Cash Fund

11:30 – 11:45 a.m.

TAB 5 **MSCI Environmental, Social and Governance (ESG) Report Update**

11:45 – 12:30 p.m.

TAB 6 **Vendor Fee Benchmark**

TAB 7 **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:** Defined Contribution Plans - Mapping of Assets from “frozen” TIAA funds to current funds

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:**

Michael Pratico and Barry Schmitt, Senior Vice Presidents with CAPTRUST Financial Advisors, will provide a comparison of funds held in the frozen TIAA contracts to comparable funds held in the active contract.

To consolidate plan investments to higher quality funds utilized in the updated TIAA contracts, CAPTRUST recommends that assets in the frozen funds be “mapped” to the current fund line-up wherever administratively feasible. Fund comparisons support the recommendation based on a comparison of performance, risk adjusted returns, volatility and several qualitative factors.

6. **TEXT OF PROPOSED RESOLUTION:**

That the Investment Committee approves “mapping” the assets from the frozen funds to the current fund lineup as follows:

From:

- TIAA CREF Lifecycle Target Date Series
- TIAA CREF Large Cap Value fund
- TIAA CREF Mid Cap Value fund
- TIAA CREF Mid Cap Growth fund
- TIAA CREF International Equities fund
- TIAA CREF Quant Small Cap Equity fund

To:

- Vanguard Target Retirement Series
- J Hancock Disciplined Value fund
- Virtus Ceredex Mid Cap Value fund
- MFS Mid Cap Growth fund
- American Funds Europacific Growth fund
- Carillon Eagle Small Cap Growth fund

May 17, 2019

FUND COMPARISON

University of Maine System

May 2019

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.

SELECT MANAGER GLIDEPATH W/ PERCENTILES

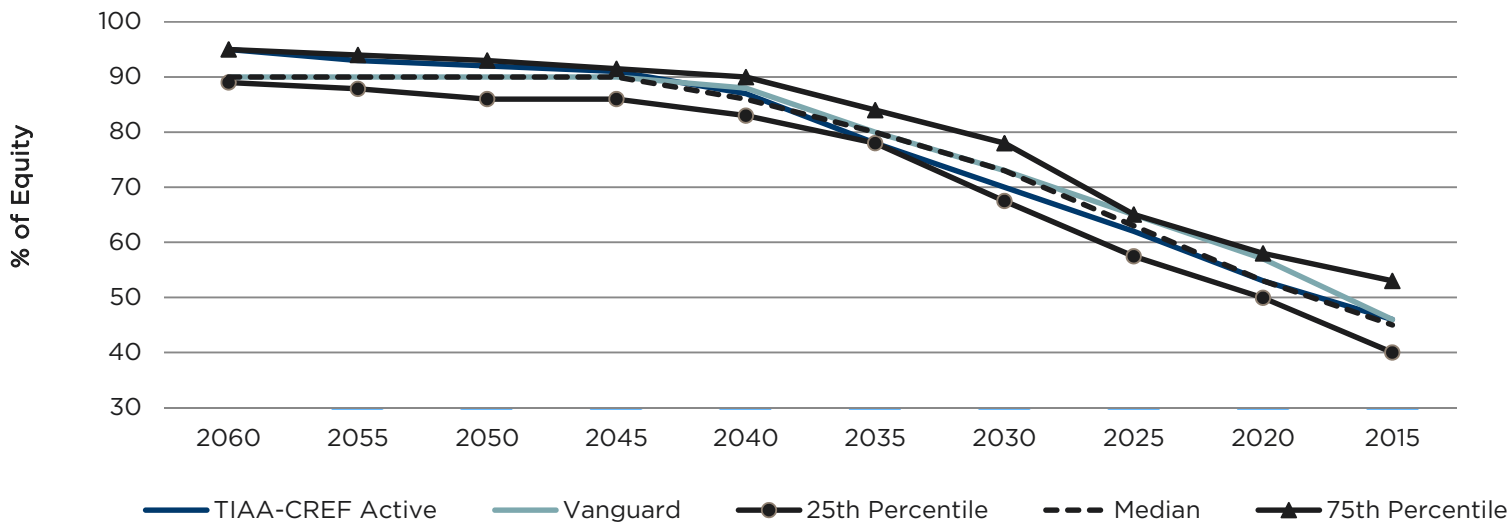
Fund	TIAA-CREF Active	Vanguard	25th Percentile	Median	75th Percentile
2060	95	90	89	90	95
2055	93	90	88	90	94
2050	92	90	86	90	93
2045	91	90	86	90	92
2040	87	88	83	86	90
2035	78	80	78	80	84
2030	70	73	68	73	78
2025	62	65	57	63	65
2020	53	57	50	53	58
2015	46	46	40	45	53

What is the general risk-tolerance of plan participants?

Conservative
Moderate
Aggressive

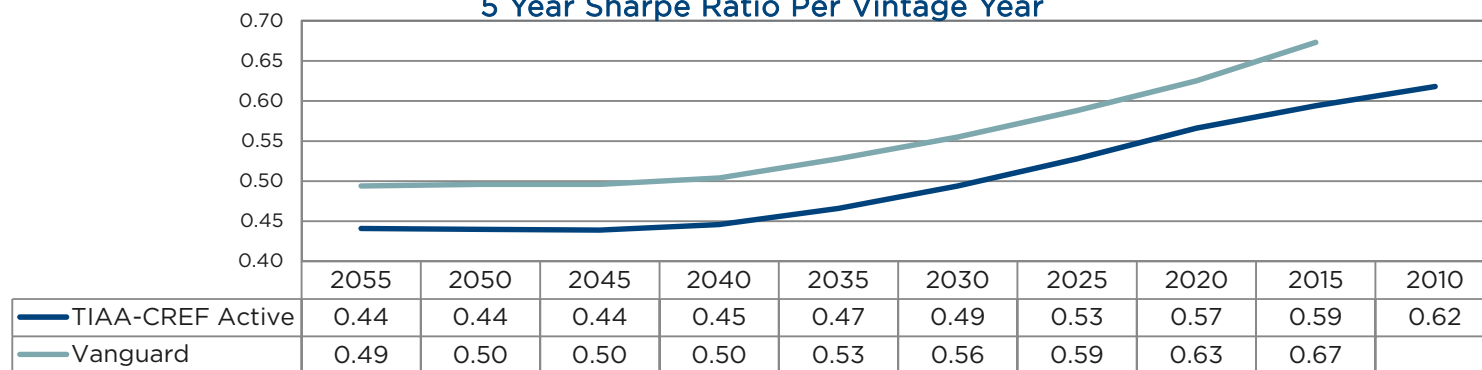
*The different shades of blue indicate how aggressive the glide-path is compared to the other TDF series in the chart. The darker the blue, the more aggressive the series is and vice versa. These are strategic allocations as of 12.31.18, not actual allocations.

Manager Glidepath with Median Manager and Percentiles

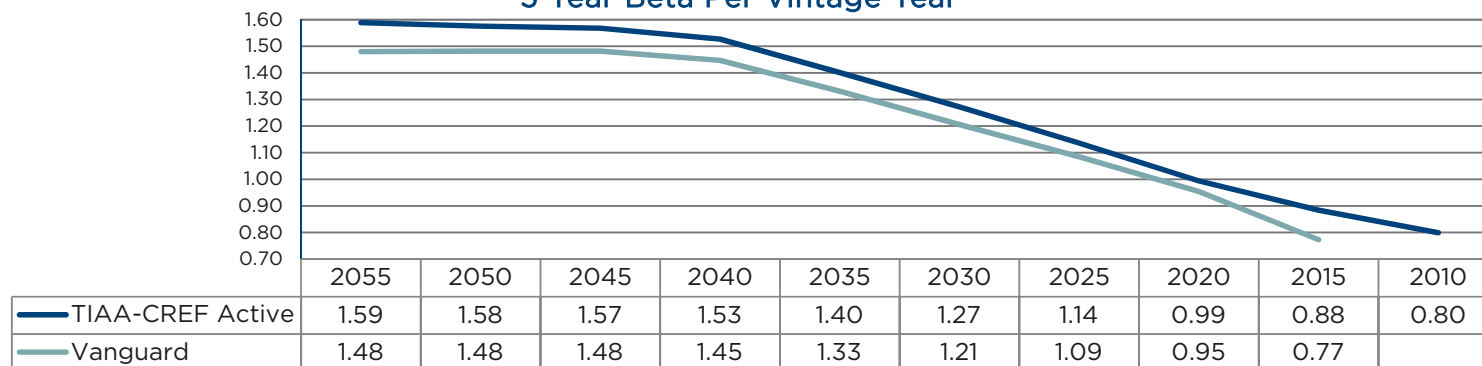


SELECT MANAGER RISK/RETURN PER VINTAGE YEAR

5 Year Sharpe Ratio Per Vintage Year



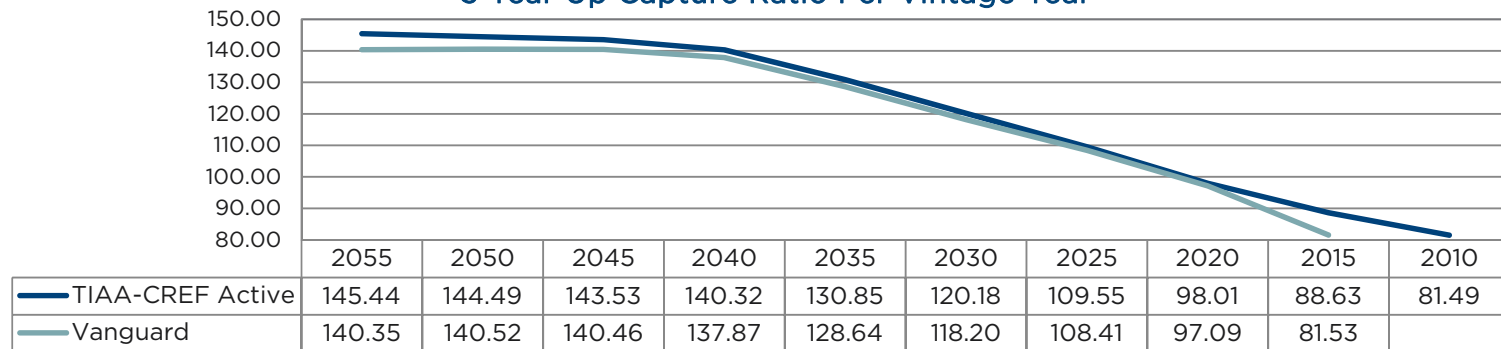
5 Year Beta Per Vintage Year



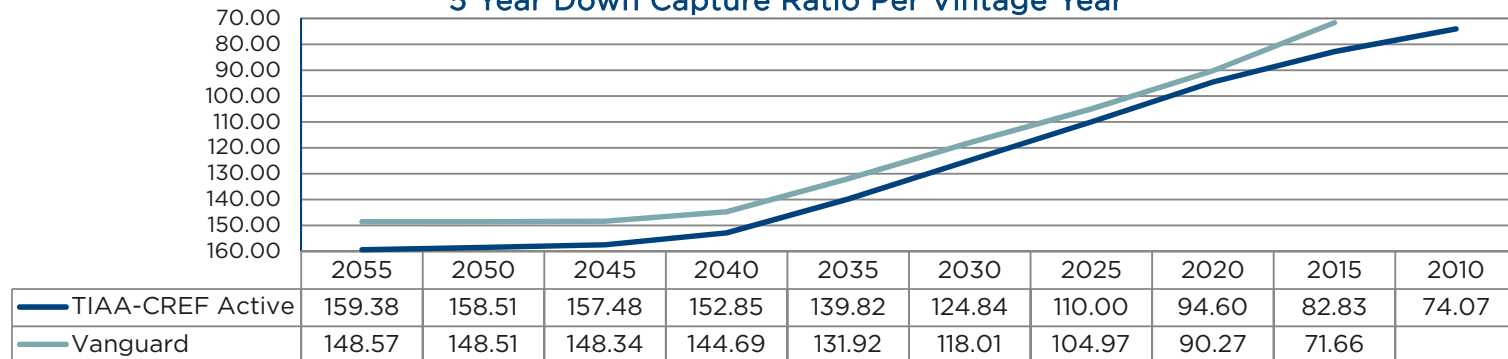
Beta calculations are derived using the Morningstar Moderate Target Risk Index. Source: Morningstar Direct. All metrics are calculated using the lowest cost mutual fund share class for each series.

SELECT MANAGER UP & DOWN MARKET CAPTURE

5 Year Up Capture Ratio Per Vintage Year



5 Year Down Capture Ratio Per Vintage Year



Capture ratios are derived using the Morningstar Moderate Target Risk Index. Source: Morningstar Direct. All metrics are calculated using the lowest cost mutual fund share class for each series.

PERFORMANCE – NET OF FEES

INVESTMENT SUMMARY

	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
TIAA-CREF Lifecycle Retire Income Instl	6.83%	6.83%	3.19%	6.35%	4.75%	8.00%
Vanguard Instl Trgt Retire Inc Instl	5.58%	5.58%	4.03%	4.96%	N/A	N/A
Morningstar Target-Date Retirement	5.77%	5.77%	3.42%	4.80%	3.39%	6.69%
S&P Target Date Retirement Income TR	5.57%	5.57%	3.72%	4.70%	3.89%	6.38%

	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
TIAA-CREF Lifecycle 2010 Institutional	6.90%	6.90%	3.15%	6.68%	4.97%	8.87%
Morningstar Target-Date 2000-2010	6.08%	6.08%	3.35%	5.54%	3.91%	7.59%
S&P Target Date 2010 TR	6.20%	6.20%	3.81%	5.48%	4.35%	7.50%

	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
TIAA-CREF Lifecycle 2015 Institutional	7.47%	7.47%	3.04%	7.18%	5.26%	9.56%
Vanguard Instl Trgt Retire 2015 Instl	6.49%	6.49%	3.92%	6.33%	N/A	N/A
Morningstar Target-Date 2015	6.90%	6.90%	3.45%	6.07%	4.22%	8.30%
S&P Target Date 2015 TR	6.89%	6.89%	3.90%	6.25%	4.85%	8.57%

	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
TIAA-CREF Lifecycle 2020 Institutional	8.29%	8.29%	3.07%	7.87%	5.64%	10.35%
Vanguard Instl Trgt Retire 2020 Instl	7.85%	7.85%	3.91%	7.44%	N/A	N/A
Morningstar Target-Date 2020	7.43%	7.43%	3.34%	6.40%	4.40%	8.84%
S&P Target Date 2020 TR	7.45%	7.45%	3.94%	6.97%	5.27%	9.50%

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PERFORMANCE – NET OF FEES

INVESTMENT SUMMARY

	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
TIAA-CREF Lifecycle 2025 Institutional	9.06%	9.06%	2.75%	8.59%	6.00%	11.12%
Vanguard Instl Trgt Retire 2025 Instl	8.79%	8.79%	3.91%	8.25%	N/A	N/A
Morningstar Target-Date 2025	8.44%	8.44%	3.36%	7.44%	5.02%	10.14%
S&P Target Date 2025 TR	8.37%	8.37%	3.90%	7.74%	5.66%	10.32%

	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
TIAA-CREF Lifecycle 2030 Institutional	10.11%	10.11%	2.50%	9.32%	6.37%	11.84%
Vanguard Instl Trgt Retire 2030 Instl	9.56%	9.56%	3.77%	8.92%	N/A	N/A
Morningstar Target-Date 2030	9.44%	9.44%	3.29%	8.26%	5.42%	10.51%
S&P Target Date 2030 TR	9.39%	9.39%	3.82%	8.44%	6.05%	11.04%

	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
TIAA-CREF Lifecycle 2035 Institutional	11.04%	11.04%	2.30%	10.00%	6.69%	12.48%
Vanguard Instl Trgt Retire 2035 Instl	10.28%	10.28%	3.62%	9.58%	N/A	N/A
Morningstar Target-Date 2035	10.37%	10.37%	3.21%	9.12%	5.90%	11.43%
S&P Target Date 2035 TR	10.27%	10.27%	3.66%	9.09%	6.41%	11.65%

	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
TIAA-CREF Lifecycle 2040 Institutional	11.80%	11.80%	1.83%	10.65%	6.98%	12.76%
Vanguard Instl Trgt Retire 2040 Instl	11.00%	11.00%	3.45%	10.25%	N/A	N/A
Morningstar Target-Date 2040	11.01%	11.01%	3.05%	9.47%	6.06%	11.49%
S&P Target Date 2040 TR	10.82%	10.82%	3.59%	9.56%	6.66%	12.05%

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PERFORMANCE – NET OF FEES

INVESTMENT SUMMARY

	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
TIAA-CREF Lifecycle 2045 Institutional	12.52%	12.52%	1.73%	10.95%	7.14%	12.81%
Vanguard Instl Trgt Retire 2045 Instl	11.54%	11.54%	3.33%	10.49%	N/A	N/A
Morningstar Target-Date 2045	11.52%	11.52%	3.00%	9.90%	6.32%	12.00%
S&P Target Date 2045 TR	11.10%	11.10%	3.46%	9.85%	6.81%	12.34%

	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
TIAA-CREF Lifecycle 2050 Institutional	12.66%	12.66%	1.59%	11.04%	7.20%	12.85%
Vanguard Instl Trgt Retire 2050 Instl	11.52%	11.52%	3.31%	10.47%	N/A	N/A
Morningstar Target-Date 2050	11.67%	11.67%	2.89%	9.90%	6.32%	11.86%
S&P Target Date 2050+ TR	11.28%	11.28%	3.41%	10.12%	6.96%	N/A

	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
TIAA-CREF Lifecycle 2055 Institutional	12.72%	12.72%	1.53%	11.10%	7.25%	N/A
Vanguard Instl Trgt Retire 2055 Instl	11.53%	11.53%	3.36%	10.49%	N/A	N/A
Morningstar Target-Date 2055	11.81%	11.81%	2.91%	10.09%	6.49%	12.19%
S&P Target Date 2055+ TR	11.31%	11.31%	3.37%	10.29%	7.02%	N/A

	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
TIAA-CREF Lifecycle 2060 Institutional	12.92%	12.92%	1.47%	11.17%	N/A	N/A
Vanguard Instl Trgt Retire 2060 Instl	11.53%	11.53%	3.31%	10.47%	N/A	N/A
Morningstar Target-Date 2060+	11.91%	11.91%	3.01%	10.17%	6.66%	N/A
S&P Target Date 2055+ TR	11.31%	11.31%	3.37%	10.29%	7.02%	N/A

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INVESTMENT ANALYSIS –TARGET DATE FUNDS

INVESTMENT SUMMARY

	Max Drawdown Period	Max Drawdown Return, %	Max Drawdown Duration (months)	Recovery Percent, %	Recovery Duration (months)
TIAA-CREF Lifecycle 2015 Institutional	Sep-18 - Dec-18	-6.65	4.00	100.00	3.00
Vanguard Instl Trgt Retire 2015 Instl	Sep-18 - Dec-18	-4.81	4.00	100.00	3.00
Morningstar Target-Date 2015	Feb-18 - Dec-18	-5.71	11.00	100.00	3.00
S&P Target Date 2015 TR	Sep-18 - Dec-18	-5.89	4.00	100.00	3.00
	Max Drawdown Period	Max Drawdown Return, %	Max Drawdown Duration (months)	Recovery Percent, %	Recovery Duration (months)
TIAA-CREF Lifecycle 2025 Institutional	Sep-18 - Dec-18	-9.06	4.00	90.99	3.00
Vanguard Instl Trgt Retire 2025 Instl	Feb-18 - Dec-18	-7.85	11.00	100.00	3.00
Morningstar Target-Date 2025	Feb-18 - Dec-18	-7.93	11.00	98.07	3.00
S&P Target Date 2025 TR	Sep-18 - Dec-18	-7.91	4.00	97.44	3.00
	Max Drawdown Period	Max Drawdown Return, %	Max Drawdown Duration (months)	Recovery Percent, %	Recovery Duration (months)
TIAA-CREF Lifecycle 2045 Institutional	Sep-18 - Dec-18	-14.14	4.00	76.04	3.00
Vanguard Instl Trgt Retire 2045 Instl	Feb-18 - Dec-18	-12.04	11.00	84.26	3.00
Morningstar Target-Date 2045	Feb-18 - Dec-18	-12.13	11.00	83.48	3.00
S&P Target Date 2045 TR	Oct-18 - Dec-18	-11.75	3.00	83.31	3.00

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TDF COMPARISON- EXECUTIVE SUMMARY/EXPENSES

Series	Expense Ratio	Revenue Share
TIAA-CREF Lifecycle Instl	0.37-0.45%	0.00%
Vanguard Target Retirement Instl	0.09%	0.00%
Active TDF Category Average*	0.47%-0.64%	-
Passive TDF Category Average*	0.29%-0.34%	-
Allocation	TIAA-CREF Lifecycle Instl	Vanguard Target Retirement Instl
Emerging Markets	Yes	Through Intl Index Fund
Intl/Global Debt	Yes	Yes
Inflation-Protected Secs	Yes	Yes
High Yield Fixed Income	Yes	No
Real Estate	Yes	No
Commodities	No	No
Glidepath (To vs. Through)		
TIAA-CREF Lifecycle Instl	Through Retirement (7-10 Years)	
Vanguard Target Retirement Instl	Through Retirement (7 Years)	

* The TDF Category Average are only taking institutional shareclasses into account. This data is based on recent prospectus net expense ratios as of 3.31.19

Active Option

Passive Option

Hybrid Option

INVESTMENT ANALYSIS - LARGE COMPANY VALUE

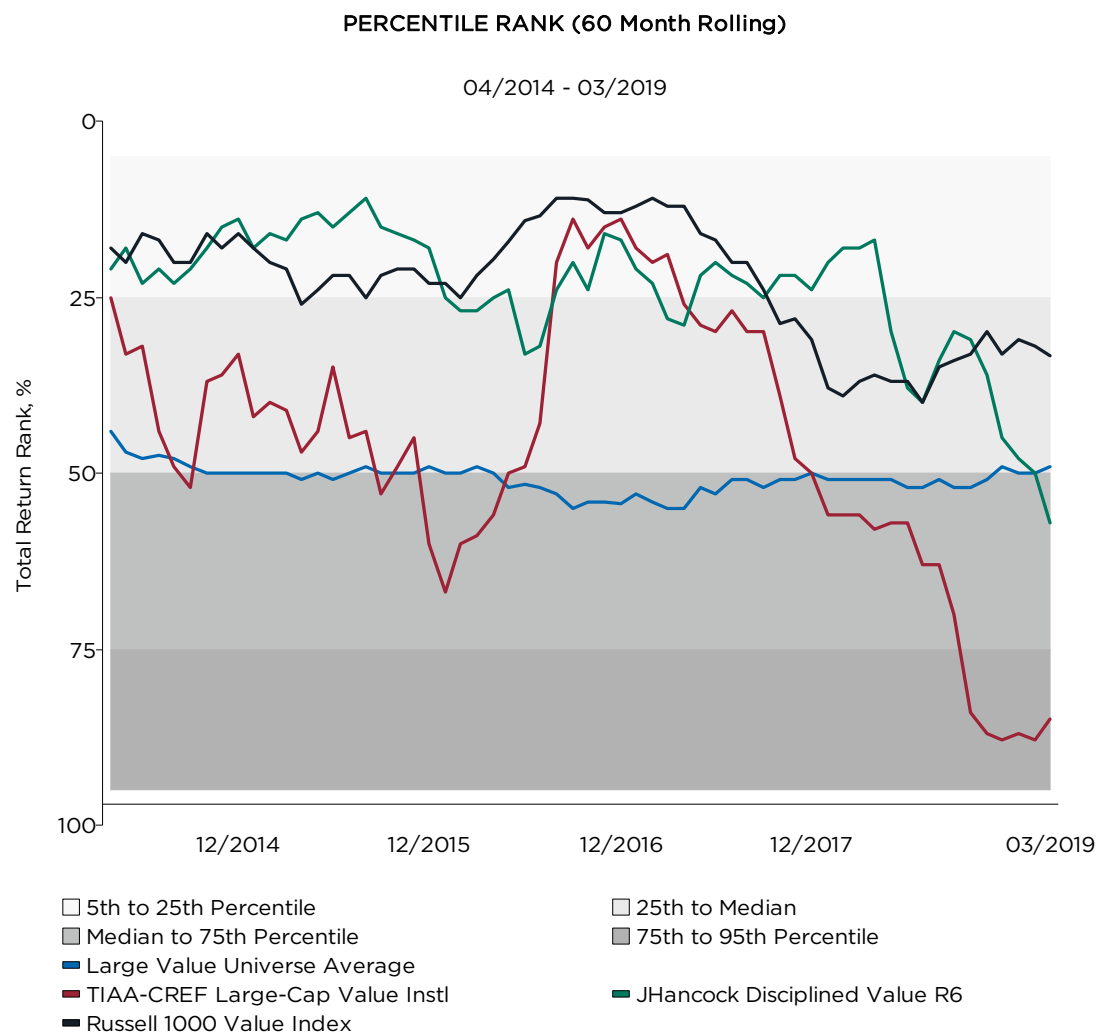
INVESTMENT SUMMARY
March 29, 2019

	TIAA-CREF Large-Cap Value Instl	JHancock Disciplined Value R6	Russell 1000 Value Index	Large Value Universe Average
Morningstar Category	Large Value	Large Value	-	-
Ticker	TRLIX	JDVWX	-	-
Manager Name	Richard Cutler	Mark E. Donovan	-	-
Manager Tenure	16.3 years	22.3 years	-	7.5 years
Net Assets (\$MM)	\$6,062.00	\$14,908.00	-	\$2,519.97
Expense Ratio	0.40%	0.70%	-	1.18%
Current 12b-1	-	-	-	-
PERFORMANCE				
Quarter	11.93%	9.31%	11.93%	11.29%
YTD	11.93%	9.31%	11.93%	11.29%
1 Year	-1.26%	0.76%	5.67%	4.08%
3 Year	8.37%	10.59%	10.45%	9.93%
5 Year	5.64%	6.77%	7.72%	7.03%
10 Year	13.65%	14.27%	14.52%	13.51%
CALENDAR PERFORMANCE				
2018	-14.10%	-9.47%	-8.27%	-8.87%
2017	12.52%	19.33%	13.66%	15.84%
2016	18.60%	14.07%	17.34%	14.55%
2015	-4.69%	-4.81%	-3.83%	-3.94%
2014	9.16%	11.04%	13.45%	10.59%
2013	34.43%	35.97%	32.53%	31.63%
2012	19.68%	20.08%	17.51%	14.79%
MPT STATISTICS (5 YR)				
Standard Deviation	12.35	12.29	11.08	11.46
Sharpe Ratio	0.40	0.49	0.63	0.56
Alpha	-2.74	-1.49	-	-0.62
Beta	1.09	1.08	1.00	0.99
R Squared	96.11	94.22	100.00	91.68
PORTFOLIO STATISTICS				
Avg Market Cap	\$96,617.04	\$87,370.56	-	\$52,311.00
Total Holdings	83	87	-	113
% Assets in Top 10	30.08%	32.20%	-	32.71%
% Turnover	53.00%	45.00%	-	66.26%

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INVESTMENT ANALYSIS - LARGE COMPANY VALUE

INVESTMENT SUMMARY



ABOUT THIS ANALYSIS

PERCENTILE RANK

Percentile Rankings are based on an individual fund's performance relative to all other available funds in its universe. Percentiles range from 1, being the best, to 100 being the worst.

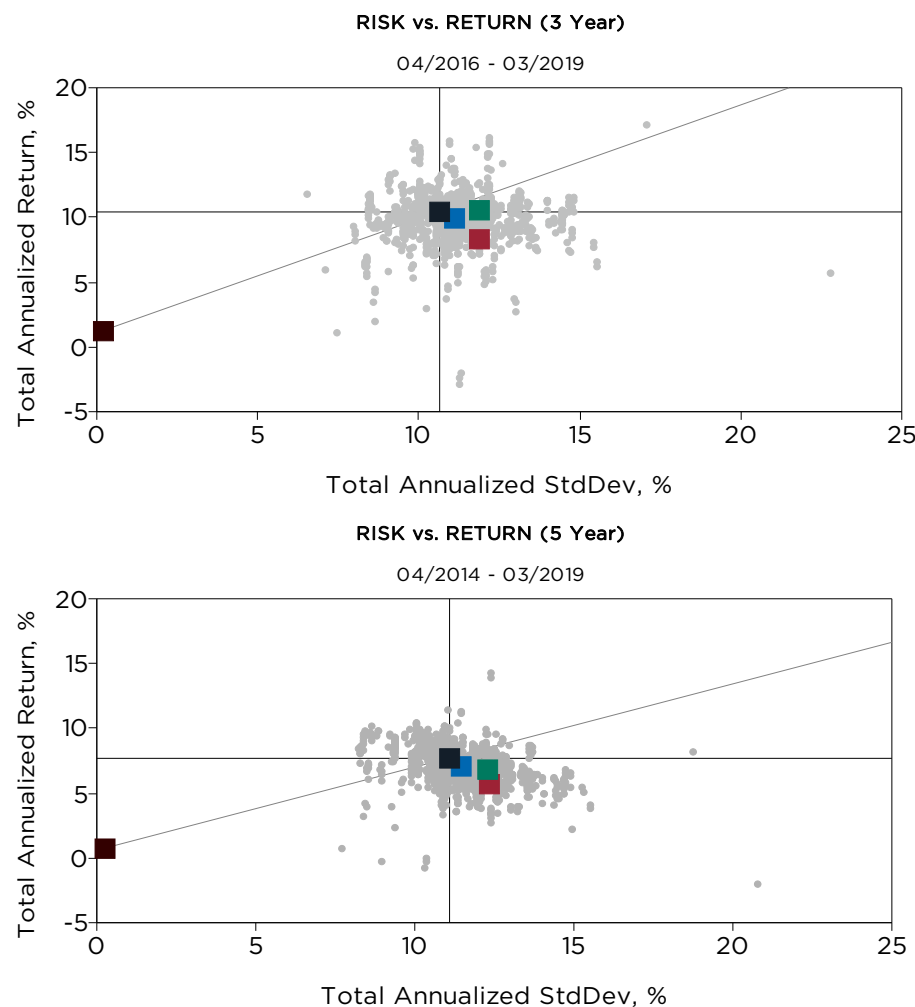
MEASUREMENT GUIDE

Ideally, managers prefer to be in the 50th percentile or above which demonstrates that they have done better on a relative basis than at least 50% of their peers.

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INVESTMENT ANALYSIS - LARGE COMPANY VALUE

INVESTMENT SUMMARY



ABOUT THIS ANALYSIS

RISK/RETURN

The Risk/Return Graph is highlighted by a straight line connecting the riskless asset, in this case cash, to the risk/return plot of a relevant benchmark index. From Modern Portfolio Theory we know that the slope of this line represents the Sharpe Ratio of the index.

MEASUREMENT GUIDE

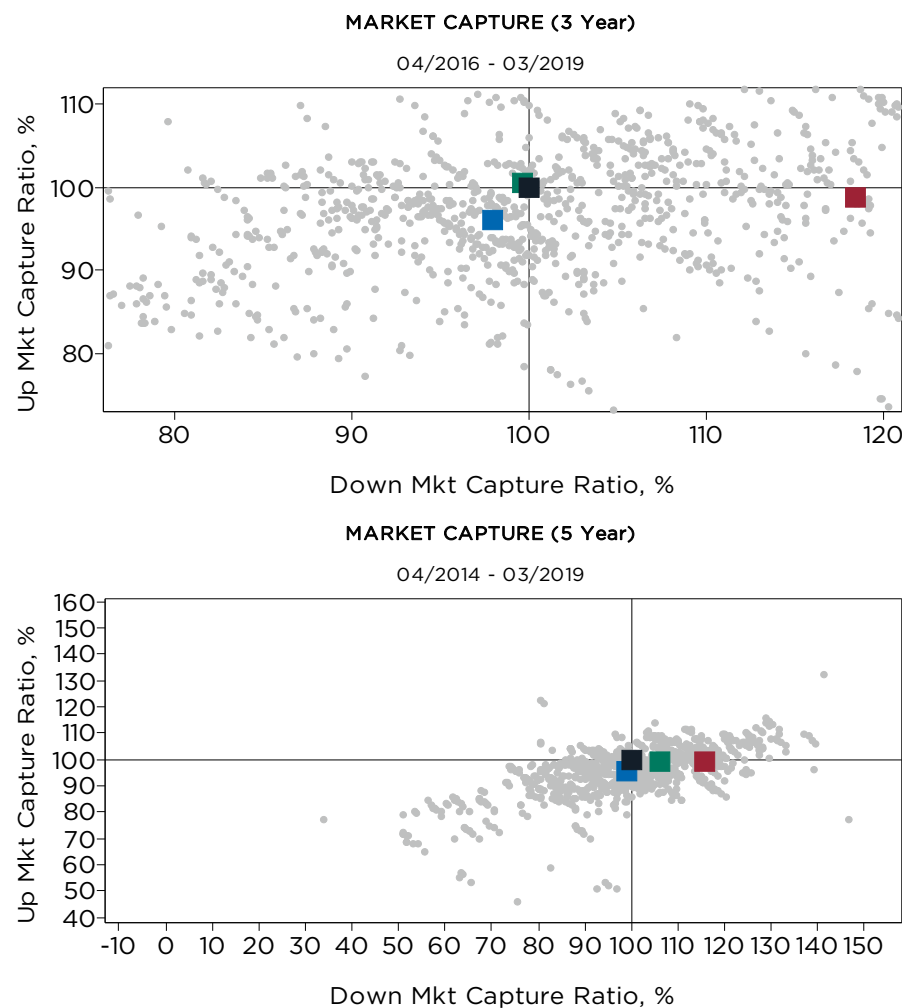
Given the formula for Sharpe Ratio we can conclude that all points above the line offer a more attractive risk/return trade off than the index over the relevant time period. Consequently, all points below the line offer a less attractive risk/return trade off.

- Large Value Universe
- Large Value Universe Average
- TIAA-CREF Large-Cap Value Instl
- JHancock Disciplined Value R6
- Russell 1000 Value Index

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INVESTMENT ANALYSIS - LARGE COMPANY VALUE

INVESTMENT SUMMARY



ABOUT THIS ANALYSIS

CAPTURE RATIO

Up Market Capture is the average return of the Manager relative to a benchmark index using only periods where the benchmark return was positive. Down Market Capture is the average return of the Manager relative to a benchmark index using only periods where the benchmark return was negative.

MEASUREMENT GUIDE

An Up Market Capture of greater than 100% and a Down Market Capture of less than 100% is considered desirable.

- Large Value Universe
- Large Value Universe Average
- TIAA-CREF Large-Cap Value Instl
- JHancock Disciplined Value R6
- Russell 1000 Value Index

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INVESTMENT ANALYSIS - MEDIUM COMPANY VALUE

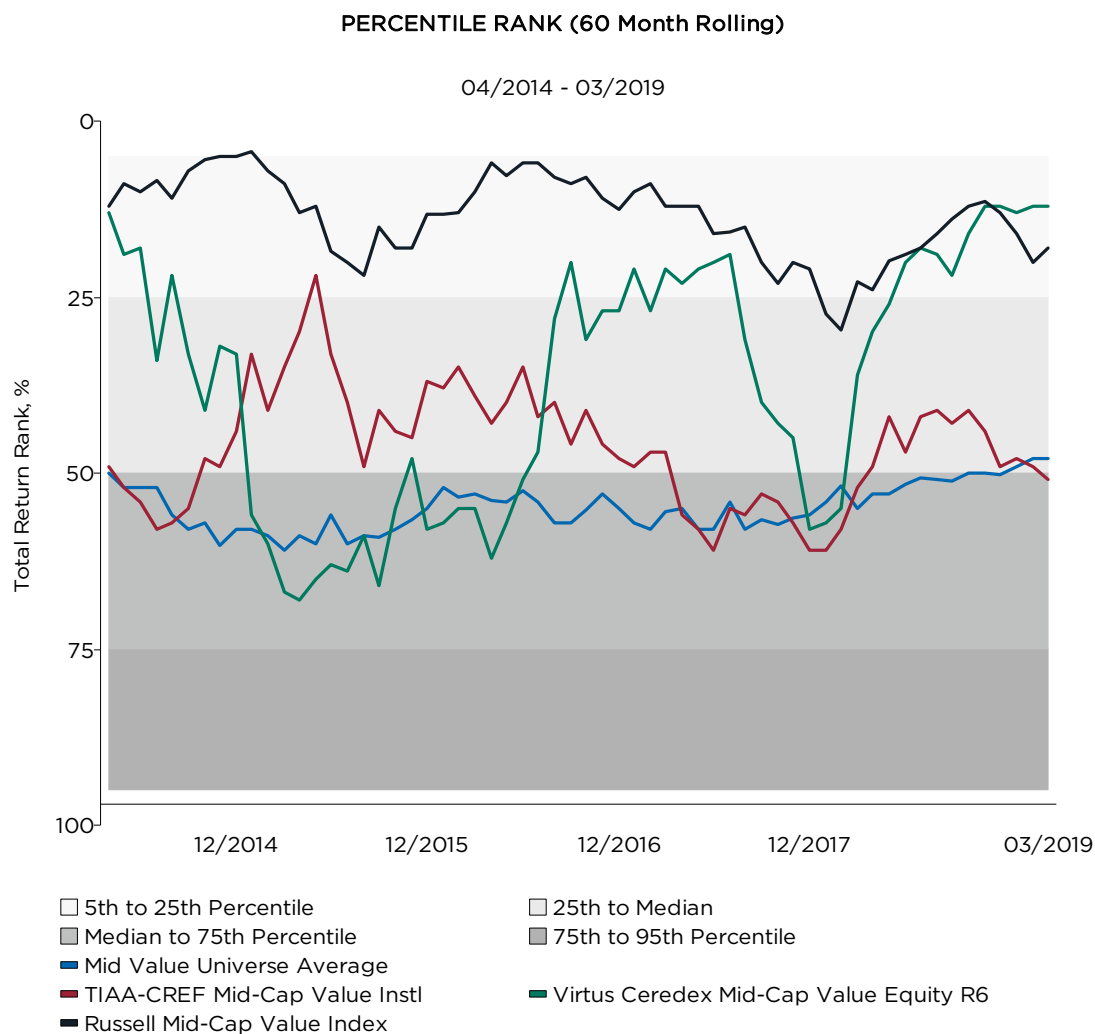
INVESTMENT SUMMARY
March 29, 2019

	TIAA-CREF Mid-Cap Value Instl	Virtus Ceredex Mid-Cap Value Equity R6	Russell Mid-Cap Value Index	Mid Value Universe Average
Morningstar Category	Mid-Cap Value	Mid-Cap Value	-	-
Ticker	TIMVX	SMVZX	-	-
Manager Name	Richard Cutler	Don Wordell	-	-
Manager Tenure	16.5 years	17.3 years	-	7.1 years
Net Assets (\$MM)	\$3,242.00	\$2,898.00	-	\$1,345.17
Expense Ratio	0.42%	0.80%	-	1.26%
Current 12b-1	-	-	-	-
PERFORMANCE				
Quarter	14.69%	14.31%	14.37%	13.50%
YTD	14.69%	14.31%	14.37%	13.50%
1 Year	-0.40%	6.49%	2.89%	0.41%
3 Year	7.89%	11.51%	9.50%	8.41%
5 Year	5.67%	7.65%	7.22%	5.67%
10 Year	14.28%	15.99%	16.39%	14.27%
CALENDAR PERFORMANCE				
2018	-14.15%	-7.58%	-12.29%	-13.50%
2017	11.13%	11.98%	13.34%	13.15%
2016	17.40%	20.53%	20.00%	17.77%
2015	-5.35%	-5.63%	-4.78%	-5.38%
2014	12.85%	11.05%	14.75%	9.45%
2013	32.55%	31.21%	33.46%	34.95%
2012	16.60%	21.79%	18.51%	16.11%
MPT STATISTICS (5 YR)				
Standard Deviation	12.63	12.83	12.04	13.17
Sharpe Ratio	0.39	0.54	0.54	0.38
Alpha	-1.78	0.24	-	-1.84
Beta	1.04	1.03	1.00	1.04
R Squared	97.48	93.52	100.00	91.55
PORTFOLIO STATISTICS				
Avg Market Cap	\$10,490.59	\$14,289.38	-	\$9,117.54
Total Holdings	201	59	-	134
% Assets in Top 10	13.01%	28.41%	-	24.68%
% Turnover	25.00%	-	-	67.01%

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INVESTMENT ANALYSIS - MEDIUM COMPANY VALUE

INVESTMENT SUMMARY



ABOUT THIS ANALYSIS

PERCENTILE RANK

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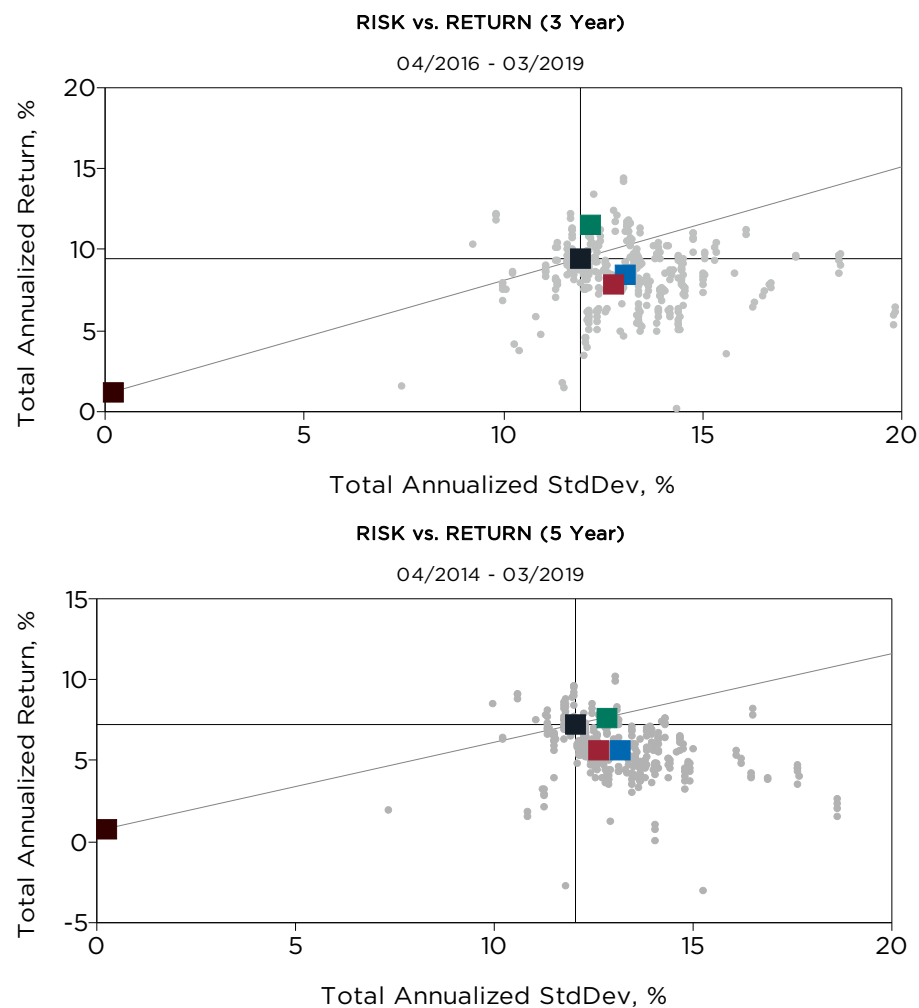
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MEASUREMENT GUIDE

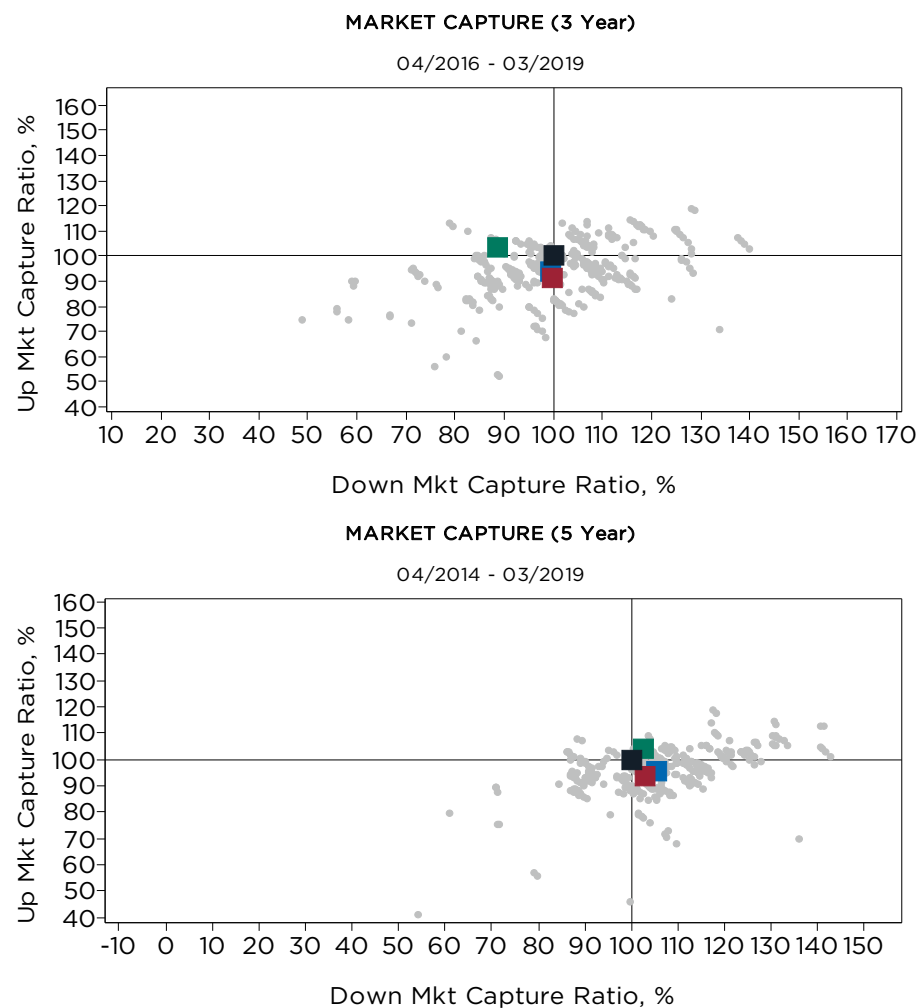
Given the formula for Sharpe Ratio we can conclude that all points above the line offer a more attractive risk/return trade off than the index over the relevant time period. Consequently, all points below the line offer a less attractive risk/return trade off.

- Mid Value Universe
- Mid Value Universe Average
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- Virtus Ceredex Mid-Cap Value Equity R6
- Russell Mid-Cap Value Index

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INVESTMENT ANALYSIS - MEDIUM COMPANY GROWTH

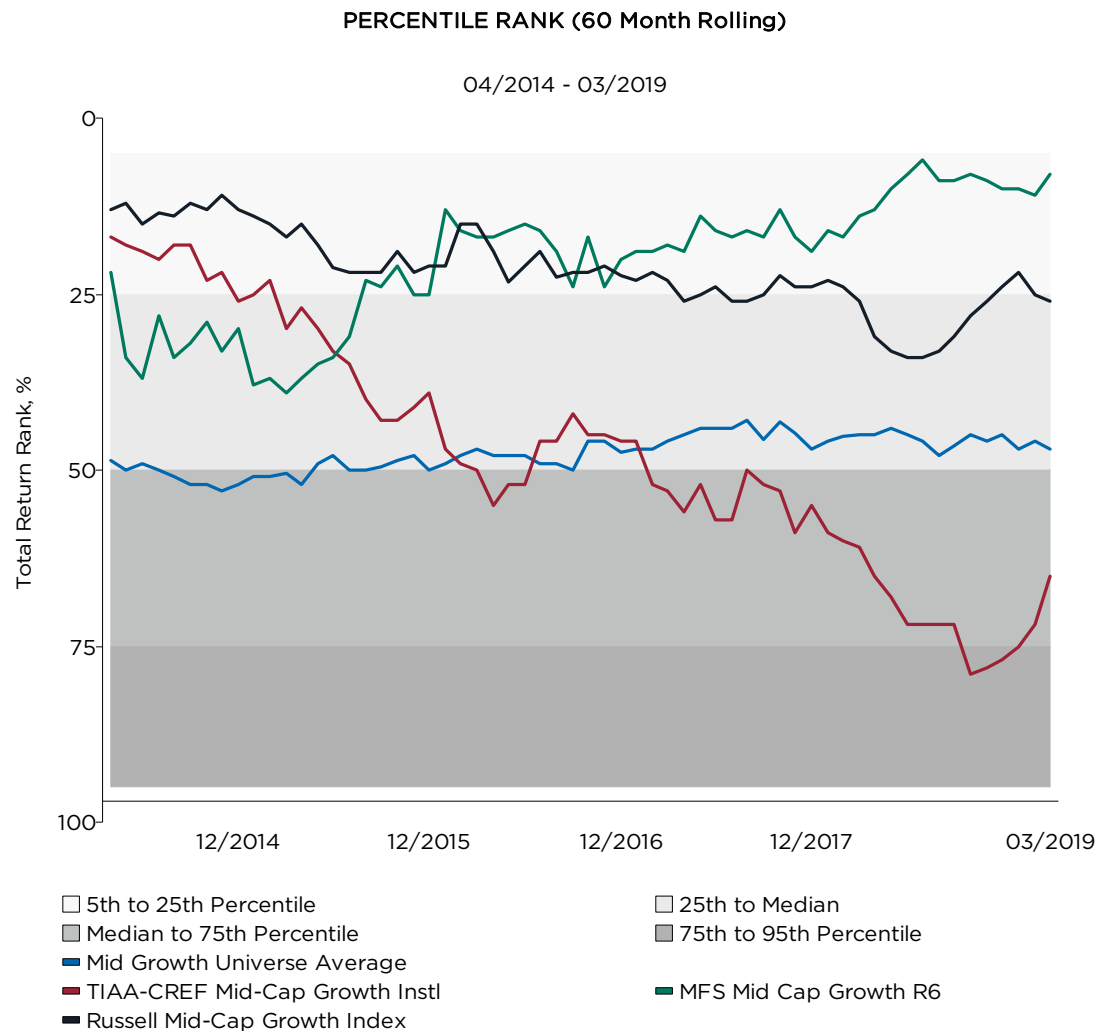
INVESTMENT SUMMARY
March 29, 2019

	TIAA-CREF Mid-Cap Growth Instl	MFS Mid Cap Growth R6	Russell Mid-Cap Growth Index	Mid Growth Universe Average
Morningstar Category	Mid-Cap Growth	Mid-Cap Growth	-	-
Ticker	TRPWX	OTCKX	-	-
Manager Name	George (Ted) E. Scalise	Eric B. Fischman	-	-
Manager Tenure	12.8 years	10.4 years	-	7.3 years
Net Assets (\$MM)	\$1,476.00	\$4,609.00	-	\$1,363.90
Expense Ratio	0.47%	0.77%	-	1.41%
Current 12b-1	-	-	-	-
PERFORMANCE				
Quarter	21.92%	18.86%	19.62%	18.67%
YTD	21.92%	18.86%	19.62%	18.67%
1 Year	9.96%	14.12%	11.51%	8.95%
3 Year	14.42%	17.05%	15.06%	14.72%
5 Year	8.75%	12.52%	10.89%	9.40%
10 Year	16.46%	17.83%	17.60%	15.92%
CALENDAR PERFORMANCE				
2018	-8.17%	1.21%	-4.75%	-5.87%
2017	26.21%	26.39%	25.27%	24.88%
2016	1.95%	4.75%	7.33%	6.04%
2015	-0.63%	4.60%	-0.20%	-0.72%
2014	7.74%	8.95%	11.90%	7.20%
2013	36.78%	37.27%	35.74%	35.24%
2012	17.96%	16.18%	15.81%	14.44%
MPT STATISTICS (5 YR)				
Standard Deviation	14.37	12.57	13.26	14.08
Sharpe Ratio	0.56	0.94	0.76	0.62
Alpha	-2.82	2.50	-	-1.52
Beta	1.07	0.91	1.00	1.00
R Squared	96.95	93.04	100.00	89.77
PORTFOLIO STATISTICS				
Avg Market Cap	\$13,474.70	\$14,570.31	-	\$8,561.50
Total Holdings	129	102	-	102
% Assets in Top 10	18.82%	22.64%	-	27.63%
% Turnover	70.00%	33.00%	-	91.90%

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INVESTMENT ANALYSIS - MEDIUM COMPANY GROWTH

INVESTMENT SUMMARY



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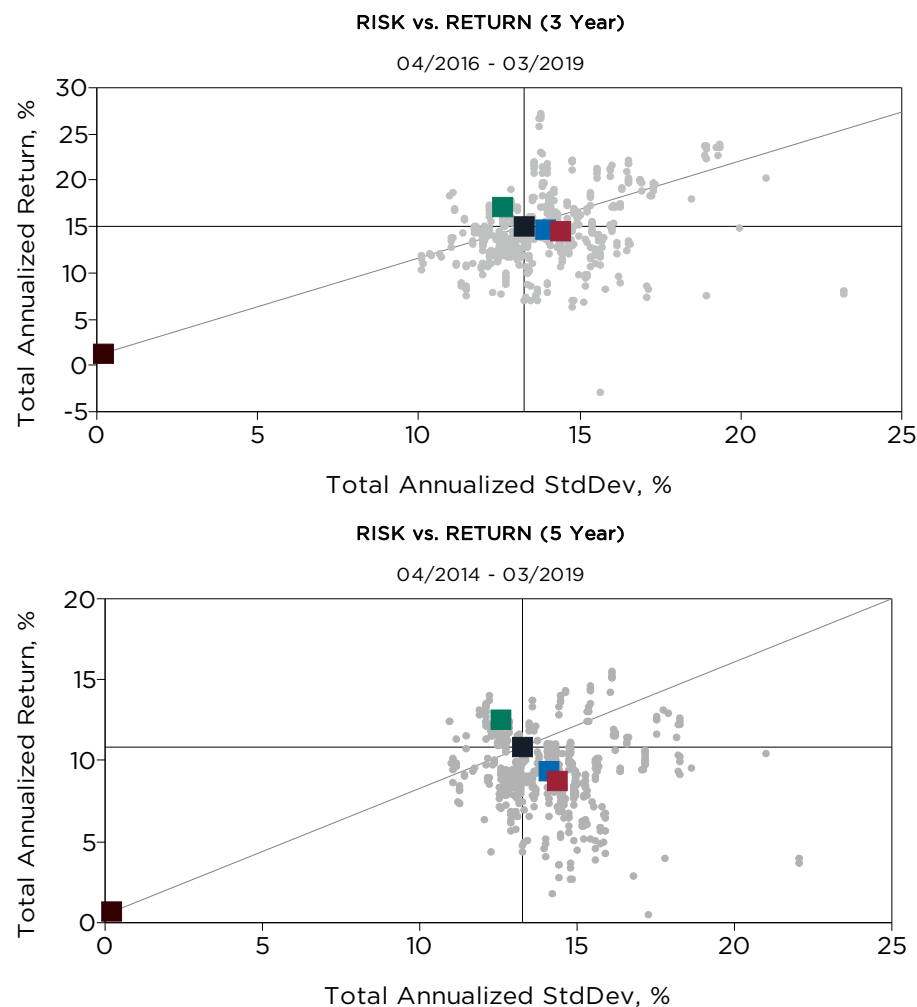
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INVESTMENT SUMMARY



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RISK/RETURN

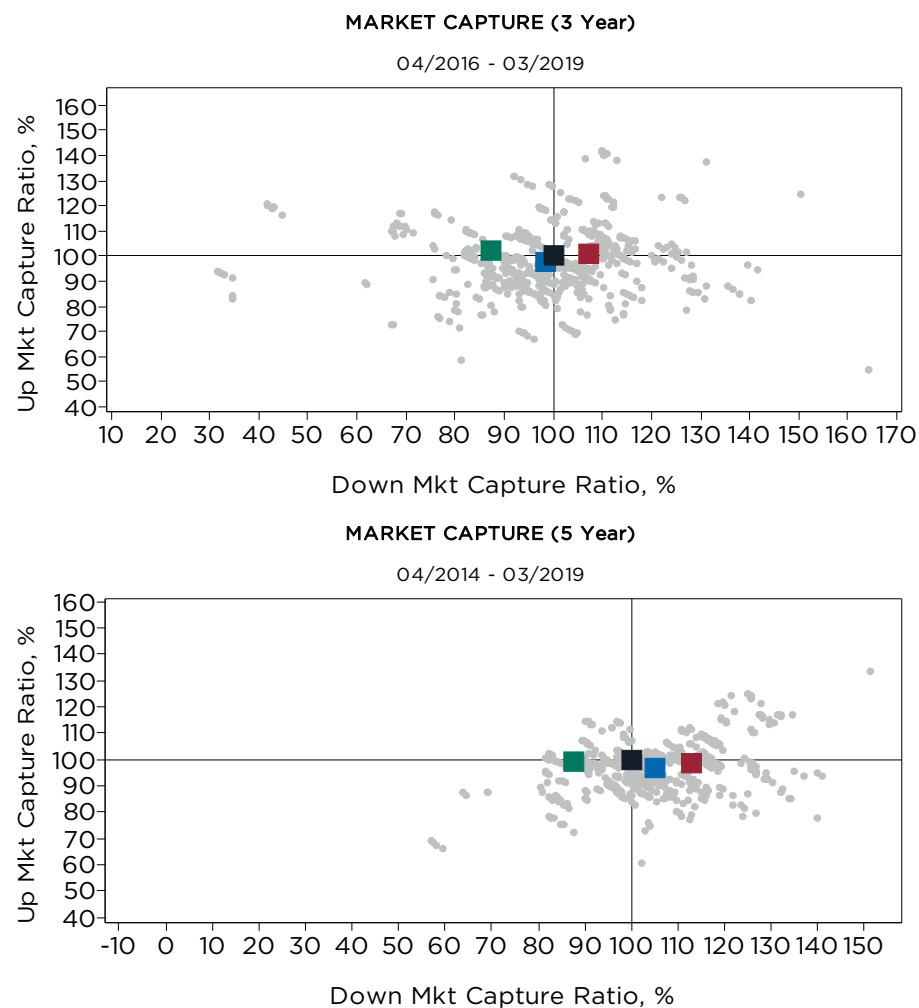
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MEASUREMENT GUIDE

Given the formula for Sharpe Ratio we can conclude that all points above the line offer a more attractive risk/return trade off than the index over the relevant time period. Consequently, all points below the line offer a less attractive risk/return trade off.

INVESTMENT ANALYSIS - MEDIUM COMPANY GROWTH

INVESTMENT SUMMARY



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INVESTMENT ANALYSIS - FOREIGN LARGE GROWTH

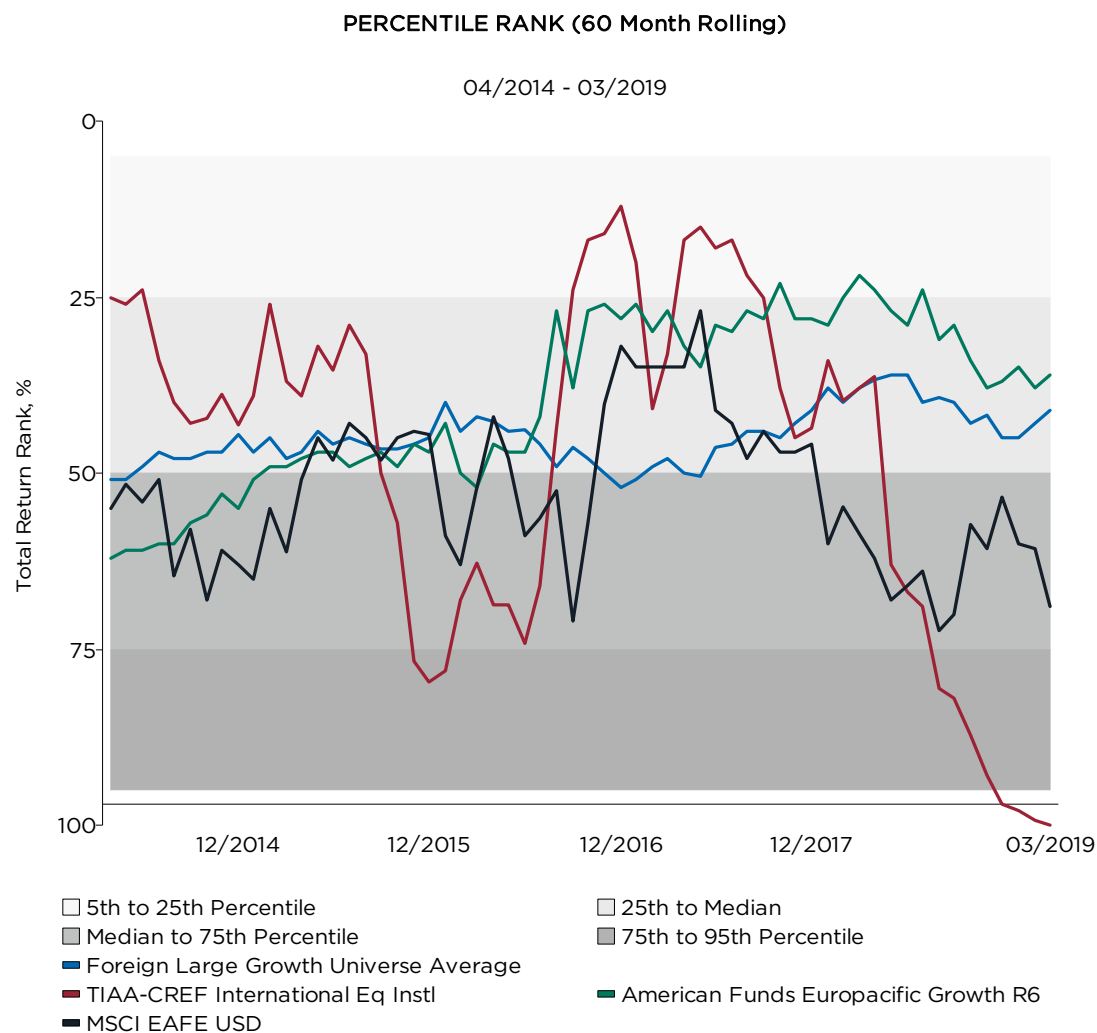
INVESTMENT SUMMARY
March 29, 2019

	TIAA-CREF International Eq Instl	American Funds Europacific Growth R6	MSCI EAFE USD	Foreign Large Growth Universe Average
Morningstar Category	Foreign Large Blend	Foreign Large Growth	-	-
Ticker	TIEEX	RERGX	-	-
Manager Name	Christopher F. Semenuk	Mark E. Denning	-	-
Manager Tenure	19.8 years	27.3 years	-	7.6 years
Net Assets (\$MM)	\$4,170.00	\$156,745.00	-	\$5,644.05
Expense Ratio	0.48%	0.49%	-	1.30%
Current 12b-1	-	-	-	-
PERFORMANCE				
Quarter	9.82%	13.20%	10.13%	13.18%
YTD	9.82%	13.20%	10.13%	13.18%
1 Year	-14.89%	-4.66%	-3.22%	-3.68%
3 Year	4.23%	9.33%	7.80%	8.23%
5 Year	-0.17%	4.27%	2.81%	3.92%
10 Year	9.06%	9.94%	9.47%	9.96%
CALENDAR PERFORMANCE				
2017	32.94%	31.17%	25.62%	31.83%
2016	0.41%	1.01%	1.51%	-2.10%
2015	-1.18%	-0.48%	-0.39%	1.01%
2014	-7.99%	-2.29%	-4.48%	-3.95%
2013	24.04%	20.58%	23.29%	20.28%
2012	31.29%	19.64%	17.90%	18.73%
2011	-23.54%	-13.31%	-11.73%	-12.31%
MPT STATISTICS (5 YR)				
Standard Deviation	13.82	11.54	11.79	12.13
Sharpe Ratio	-0.07	0.31	0.18	0.26
Alpha	-3.19	1.62	-	1.24
Beta	1.10	0.92	1.00	0.93
R Squared	88.41	88.22	100.00	82.94
PORTFOLIO STATISTICS				
Avg Market Cap	\$27,489.82	\$37,460.49	-	\$28,036.94
Total Holdings	70	426	-	112
% Assets in Top 10	38.41%	19.52%	-	28.49%
% Turnover	73.00%	29.00%	-	63.99%

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INVESTMENT ANALYSIS - FOREIGN LARGE GROWTH

INVESTMENT SUMMARY



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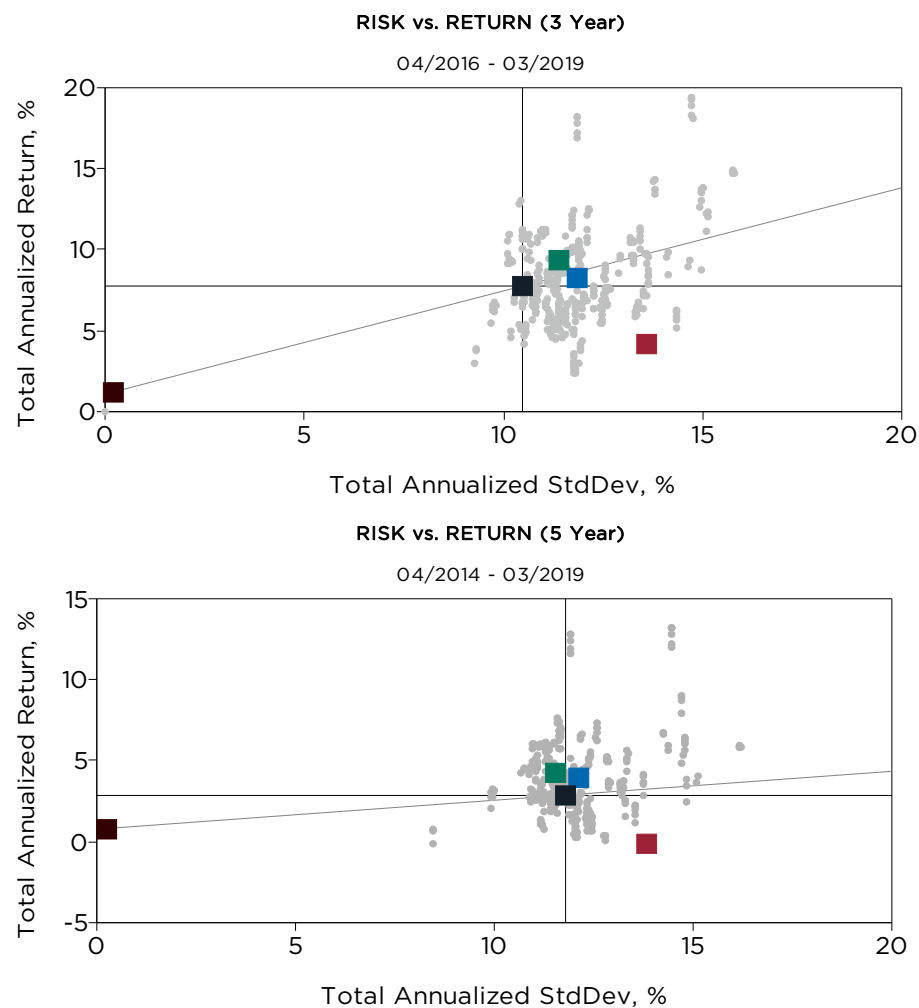
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INVESTMENT ANALYSIS - FOREIGN LARGE GROWTH

INVESTMENT SUMMARY



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RISK/RETURN

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MEASUREMENT GUIDE

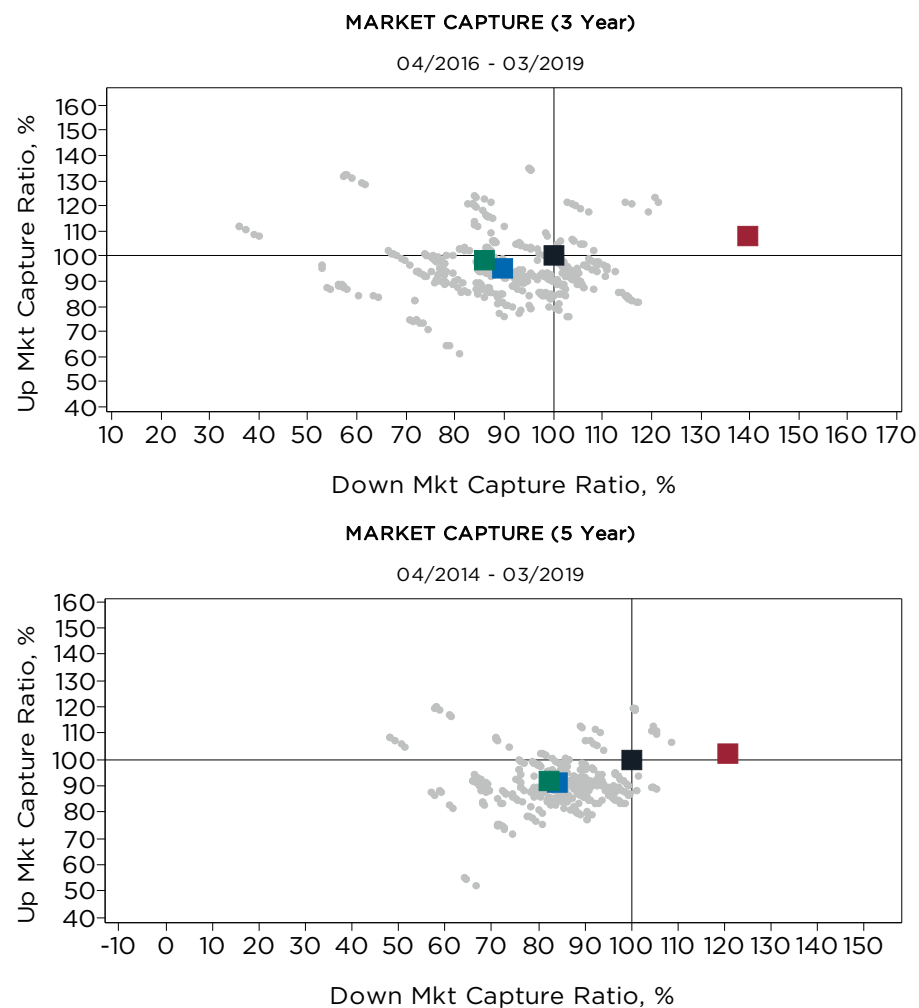
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- Foreign Large Growth Universe
- Foreign Large Growth Universe Average
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INVESTMENT ANALYSIS - SMALL COMPANY GROWTH

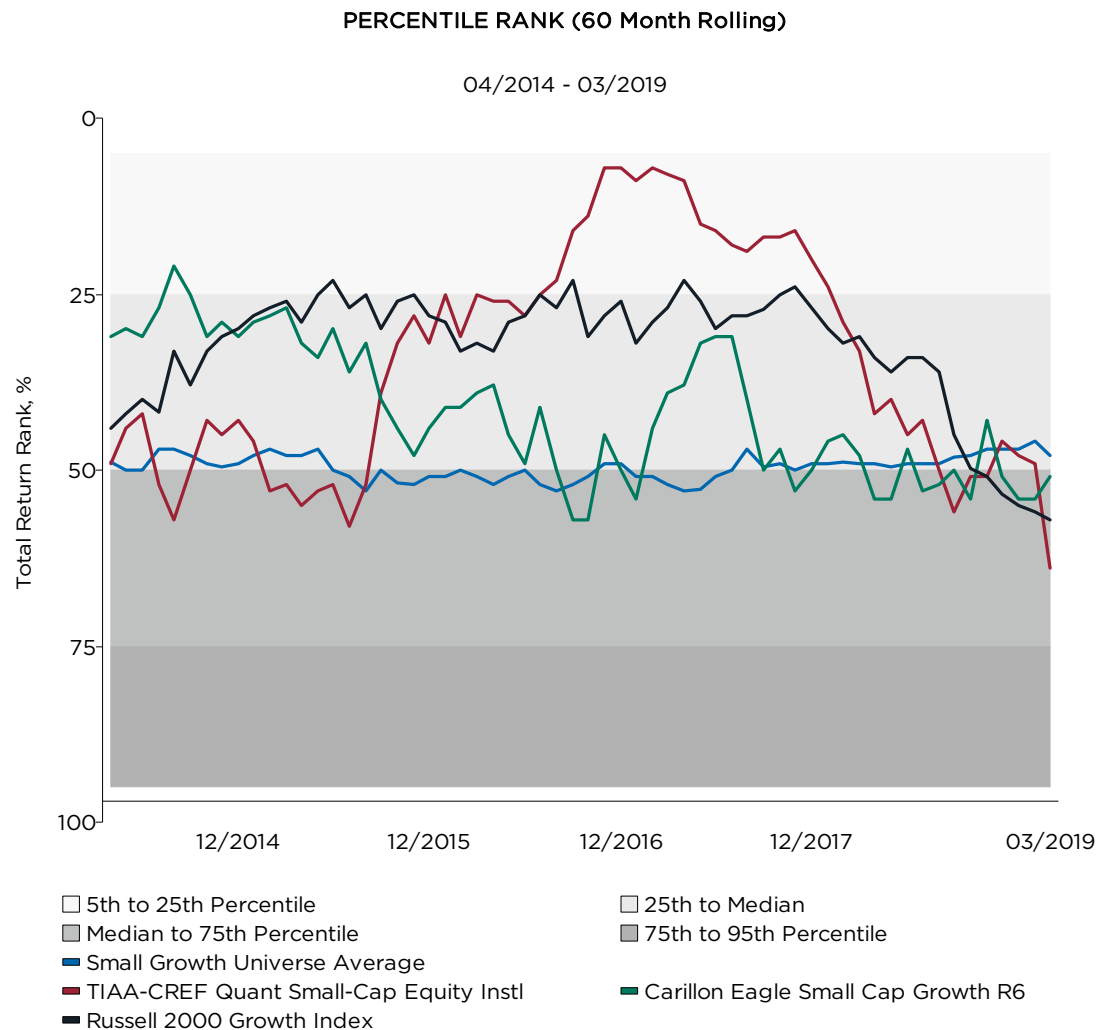
INVESTMENT SUMMARY
March 29, 2019

	TIAA-CREF Quant Small-Cap Equity Instl	Carillon Eagle Small Cap Growth R6	Russell 2000 Growth Index	Small Growth Universe Average
Morningstar Category	Small Growth	Small Growth	-	-
Ticker	TISEX	HSRUX	-	-
Manager Name	Adam Cao	Bert L. Boksen	-	-
Manager Tenure	12.3 years	23.3 years	-	7.2 years
Net Assets (\$MM)	\$3,243.00	\$4,594.00	-	\$769.01
Expense Ratio	0.41%	0.65%	-	1.45%
Current 12b-1	-	-	-	-
PERFORMANCE				
Quarter	15.25%	17.69%	17.14%	17.72%
YTD	15.25%	17.69%	17.14%	17.72%
1 Year	2.15%	4.15%	3.85%	8.22%
3 Year	12.82%	14.41%	14.87%	16.29%
5 Year	8.08%	8.62%	8.41%	8.69%
10 Year	15.91%	16.68%	16.52%	16.45%
CALENDAR PERFORMANCE				
2018	-11.97%	-10.06%	-9.31%	-5.65%
2017	15.01%	23.40%	22.17%	22.24%
2016	19.97%	10.45%	11.32%	11.23%
2015	0.14%	-0.39%	-1.38%	-2.39%
2014	6.92%	5.59%	5.60%	2.67%
2013	39.99%	34.70%	43.30%	41.37%
2012	14.07%	14.71%	14.59%	13.54%
MPT STATISTICS (5 YR)				
Standard Deviation	15.76	16.62	17.05	16.57
Sharpe Ratio	0.47	0.47	0.45	0.48
Alpha	0.41	0.58	-	0.85
Beta	0.90	0.95	1.00	0.93
R Squared	95.40	95.24	100.00	91.32
PORTFOLIO STATISTICS				
Avg Market Cap	\$2,136.28	\$2,893.71	-	\$2,133.39
Total Holdings	335	109	-	152
% Assets in Top 10	7.55%	19.79%	-	22.92%
% Turnover	87.00%	35.00%	-	104.63%

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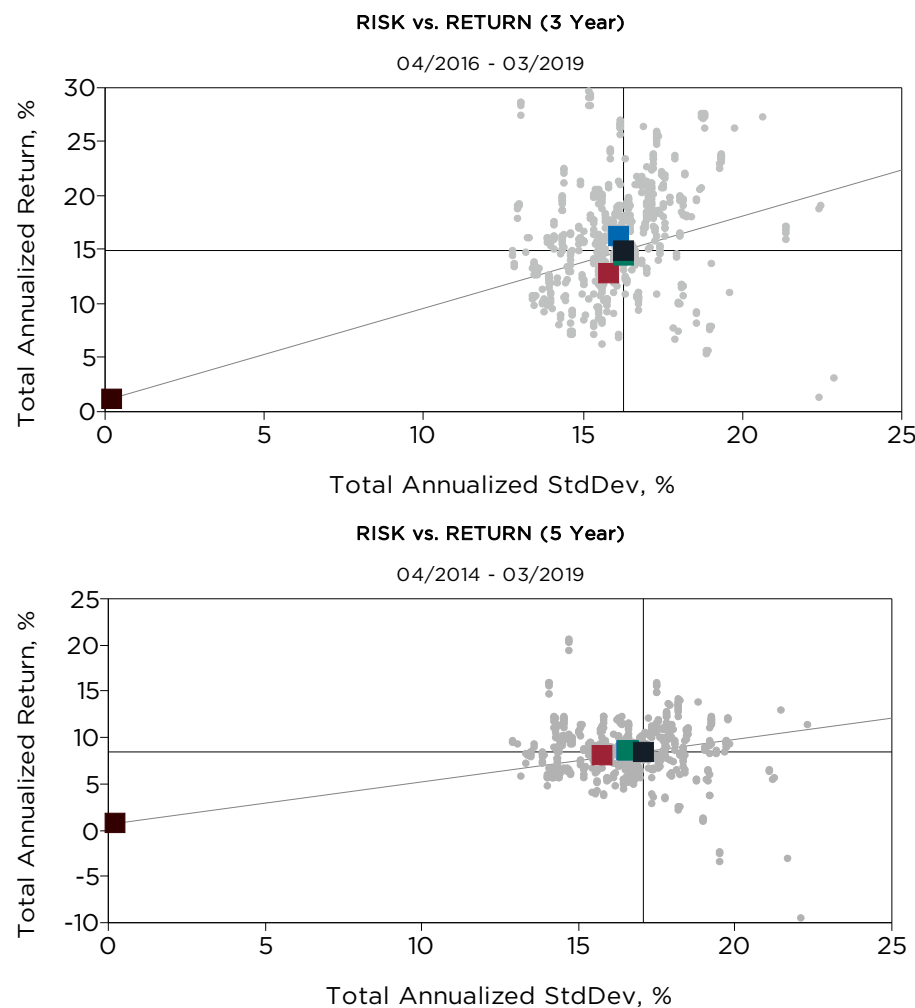
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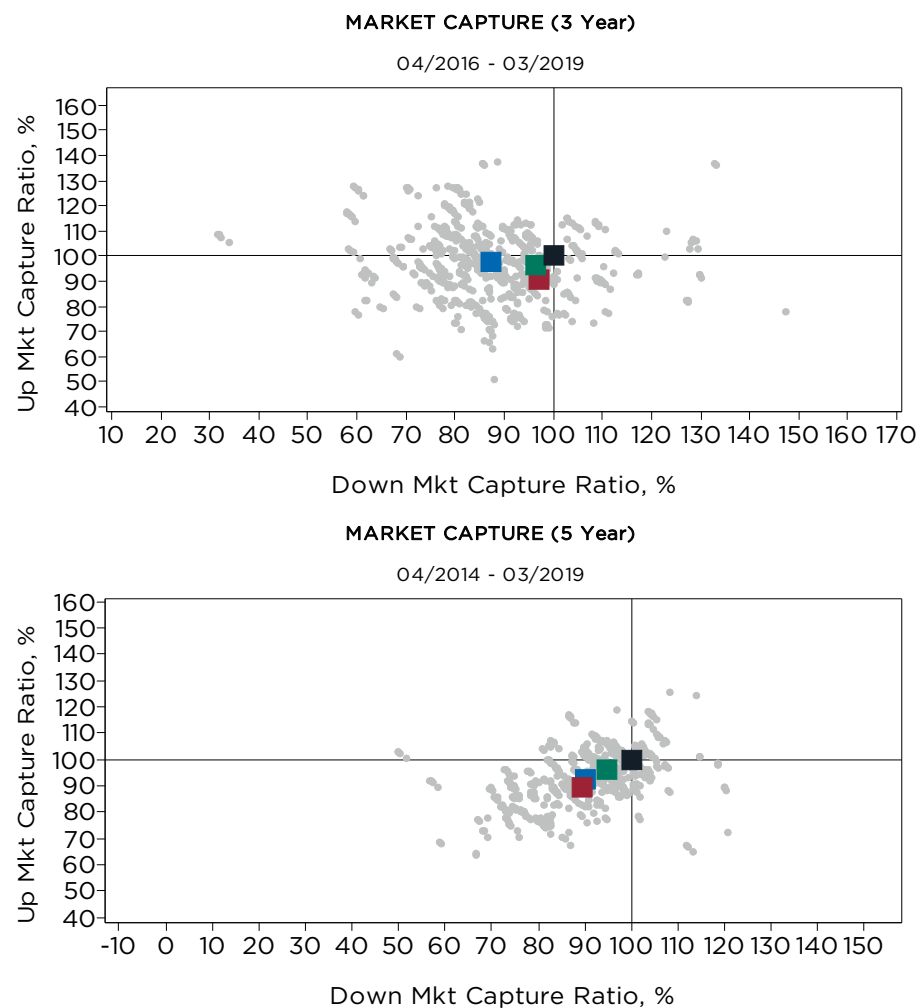
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INVESTMENT ANALYSIS

GLOSSARY OF TERMS

ALPHA

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 the analysis 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.

BETA

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 the benchmark. A Beta of less than 1 implies that a manager's returns are less volatile than the market's. A Beta of greater than 1 similarly implies that a manager exhibits greater volatility than the market.

CAPTURE RATIO

A measure of a manager's performance relative to its benchmark under different market conditions. It is the ratio of the average manager return to the average benchmark return. Up market capture refers to relative performance in periods where the benchmark return is greater than 0. Down market capture is calculated over those periods where the benchmark return is less than 0.

INFORMATION RATIO

An efficiency measure which estimates a manager's excess return over a benchmark, divided by the volatility of the excess return, or Tracking Error.

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R-SQUARED

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. Also identified as the coefficient of determination from a regression equation, a high R-squared value supports the validity of the Alpha and Beta measures.

SHARPE RATIO

A measure of a manager's return per unit of risk. It is the ratio of a manager's excess return above the risk free rate over the standard deviation. A higher Sharpe Ratio implies greater manager efficiency.

STANDARD DEVIATION

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.



AGENDA ITEM SUMMARY

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

At its March 11, 2019 meeting, the Investment Committee approved a new dedicated allocation (30%) to global equities in the Pension Fund.

NEPC subsequently provided a global equity search book to the University of Maine System. NEPC, Chair Martin and Tracy Elliott, VP of Finance and Controller, reviewed the book and determined that Fiera Capital Corporation or Walter Scott & Partners Limited (both actively managed strategies) could be a good fit for the allocation. Additionally, State Street Global Advisors (SSgA) MSCI ACWI index is an option for the Committee to consider if passive management of the allocation is the direction chosen.

The Investment Committee will interview the two active Global Equity managers by polycom at the May 28, 2019 Committee meeting. The managers will present for 30 minutes each on their firm, investment process and philosophy and performance. The managers and attendees include:

- Fiera Capital Corporation
 - Laura Cohen, Sr. Product Specialist, Global Equity
 - Nick Mavro, Sr. VP, Head of US Institutional
- Walter Scott & Partners Limited
 - Roy Leckie, Investment Director
 - Tom Duff, Head of Consultants and Distributions Partners

6. **TEXT OF PROPOSED RESOLUTION:**

That the Board of Trustees, acting through the Investment Committee, approves the selection of one of the three investment managers (Fiera Capital Corporation, Walter Scott & Partners Limited or SSgA) for the following allocation:

- A 30% manager allocation in the Pension Fund with funds coming from Vanguard (S&P 500 index), SSgA (Russell 2000 index) and Morgan Stanley (International Equity Active) currently estimated at \$8,000,000 in total.

May 17, 2019

GLOBAL EQUITY MANAGER SEARCH SUMMARY



UNIVERSITY OF MAINE SYSTEM

May 28, 2019

Jay E. Roney, CTP, Partner

Kelly Regan, Senior Consultant



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

FIRM AND PRODUCT SUMMARY & NEPC INVESTMENT THESIS

Firm/Product	Firm/Team Comments	Investment Style/Strategy	Performance Expectations	Portfolio Positioning	Other Comments
Global Equity - Active					
Fiera - Global Equity	Fiera Asset Management is the US based asset management business and a wholly owned subsidiary of Fiera Capital. Fiera Capital is a Canadian based asset management firm and is publicly traded on the Canadian Stock Exchange.	The strategy is a high quality growth strategy that focuses on high free cash flows, low debt, and high levels of ROIC. Valuation is not the primary driver of stocks entering and exiting the portfolio, but it is fair to characterize this portfolio as Quality at a Reasonable Price.	The strategy will tend to protect capital in down markets and outperform the benchmark. In markets where cyclical stocks are rewarded, the strategy will tend to struggle on a relative basis.	The portfolio does not tend to hold cyclical companies and tends to be overweight the staples and industrials space. They have never invested in utilities. The final portfolio is roughly 50 stocks.	
Walter Scott - Global	Investment boutique wholly owned by BNY/Mellon. The team is located in Edinburgh.	Bottom up stock selection with low turnover.	Being a quality growth manager, with a low downside market capture, expect to outperform in weak and volatile markets.	Extremely benchmark agnostic. At times the portfolio may be positioned more like a value portfolio.	

Firm/Product	NEPC Investment Thesis
Global Equity - Active	
Fiera - Global Equity	Fiera's investment style is Quality Growth at a Reasonable Price. They look to invest in growth companies that are market leaders and have a consistent record of outperforming their peers. Quality is an important element of their investment philosophy. The most important qualities Fiera looks for when buying stocks are: strong consistent cash flow, clean balance sheets, quality of management, high return on invested capital, and a dominant market position.
Walter Scott - Global	Walter Scott's fundamental, bottom-up investment approach combines detailed financial research with business and industry analysis. The primary focus is upon stock selection, finding companies capable of generating wealth internally at 20% per annum, and compounding at this rate into the future. Meetings with company management are central to the process. They do interesting, intensive research projects that help them identify long term trends and investment ideas.
SSgA - ACWI Index	State Street offers a wide range of products across equity and fixed income. Notably, in the fixed income space, it has broken core bonds into 10 core segments with fund offerings that have been in existence long enough to be "seasoned" and are now fully replicated. State Street favors full replication as an approach to indexing, but it will utilize sampling or optimized portfolio where it makes sense.



FIRM & PRODUCT COMPARISON SUMMARY

Firm Name	Location	Year Firm Founded	Total Assets Under Mgmt (\$MM)	% Employee Owned	% Parent Owned	Parent Company Name	% Publicly Held	% Other Ownership
Global Equity - Active								
Fiera Capital Corporation	Montreal, Quebec	2003	136,675	14	0	NA	59	27
Walter Scott & Partners Limited	Edinburgh, Scotland	1983	58,952	0	100	The Bank of New York Mellon Corporation	0	0
Global Equity - Passive								
State Street Global Advisors Limited	Boston, MA	1978	2,511,297	0	100	State Street Corporation	0	0

Firm/Product	Inception Date	AUM (\$MM)	# of Portfolio Managers	# of Research Analysts	# of Traders
Global Equity - Active					
Fiera - Global Equity	2009	17,229	2	7	4
Walter Scott - Global	1985	31,936	20	0	4
Global Equity - Passive					
SSgA - ACWI Index	2006	29,105	60	12	0

Firm/Product	Vehicle Proposed	Liquidity In	Liquidity Out	Reported Fee for \$8.00 mm	Reported Fee in (bps)
Global Equity - Active					
Fiera - Global Equity	Commingled Fund	Daily	Daily	60,000.00	75
Walter Scott - Global	Commingled Fund	Daily	Daily	60,000.00	75
Global Equity - Passive					
SSgA - ACWI Index	Commingled Fund	Daily	Daily	5,600.00	7*

* State Street is offering a reduced fee for their index product. The State Street Global Advisors MSCI ACWI Index has 0.02% in associated administrative expenses.



Characteristics as of December 31, 2018

EQUITY PRODUCT COMPARISON

Firm/Product	Primary Equity Capitalization	Current Number of Holdings	Typical Holdings	Wgtd. Avg. Mkt. Cap (\$MM)	Median Mkt. Cap (\$MM)	Annual Turnover (%)	Max Cash Position (%)	Typical Cash (%)
Global Equity - Active								
Fiera - Global Equity	Large Cap	39	40	107,754	68,673	4	10	0
Walter Scott - Global	All Cap	52	50	113,555	58,025	7	5	2
Global Equity - Passive								
SSgA - ACWI Index	All Cap	2795	2700	113,104	5,493	39	5	2

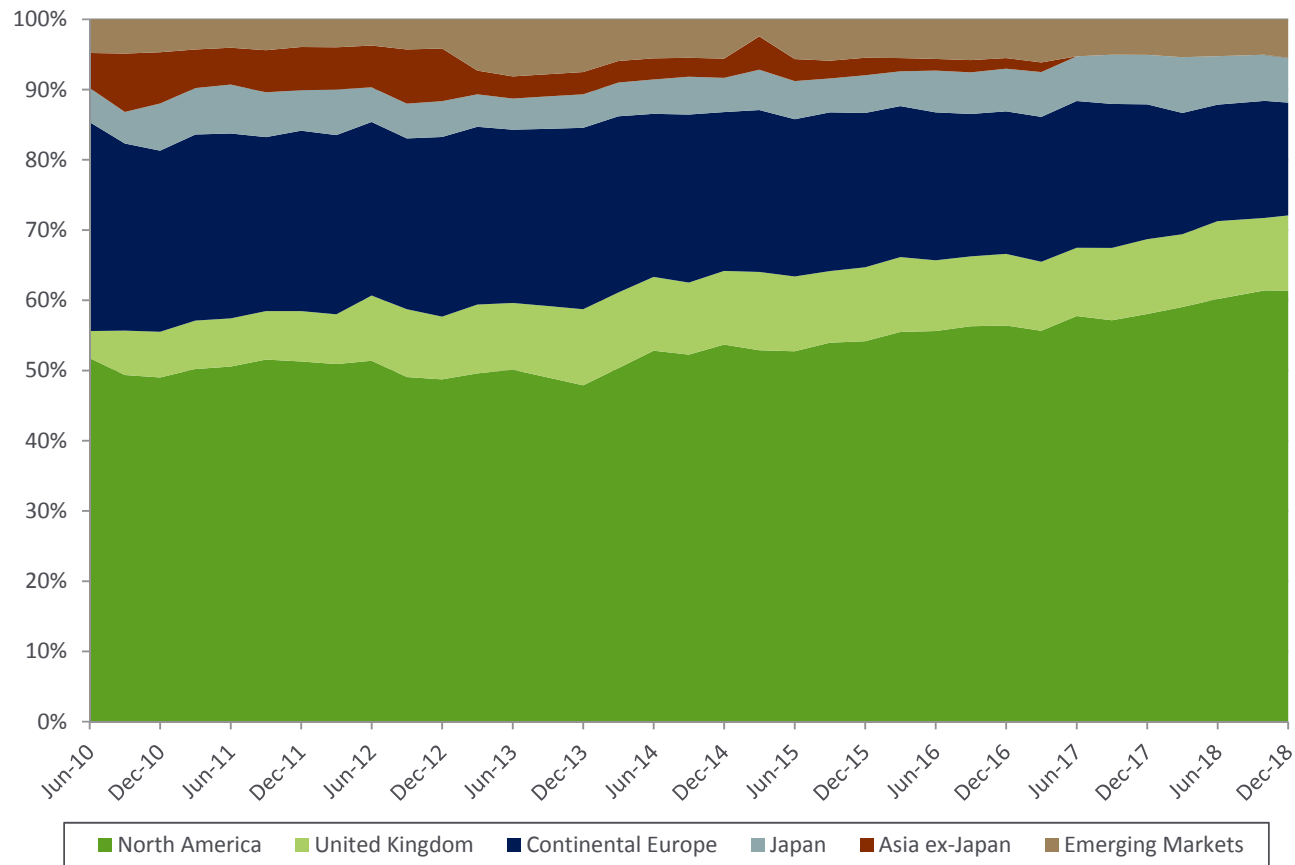
Firm/Product	Consumer Discretionary (%)	Consumer Staples (%)	Energy (%)	Financials (%)	Health Care (%)	Industrials (%)	Info. Tech. (%)	Materials (%)	Real Estate (%)	Comm. Serv. (%)	Utilities (%)	Other (%)
Global Equity - Active												
Fiera - Global Equity	12.2	14.8	0.0	17.3	15.3	19.1	15.3	3.3	0.0	2.7	0.0	0.0
Walter Scott - Global	16.5	9.0	5.4	3.1	21.9	5.8	24.3	3.9	0.0	4.7	3.2	2.2
Global Equity - Passive												
SSgA - ACWI Index	10.5	8.4	6.2	17.2	12.2	10.3	14.9	5.0	3.2	9.0	3.4	0.0



Characteristics as of December 31, 2018

REGIONAL ALLOCATION

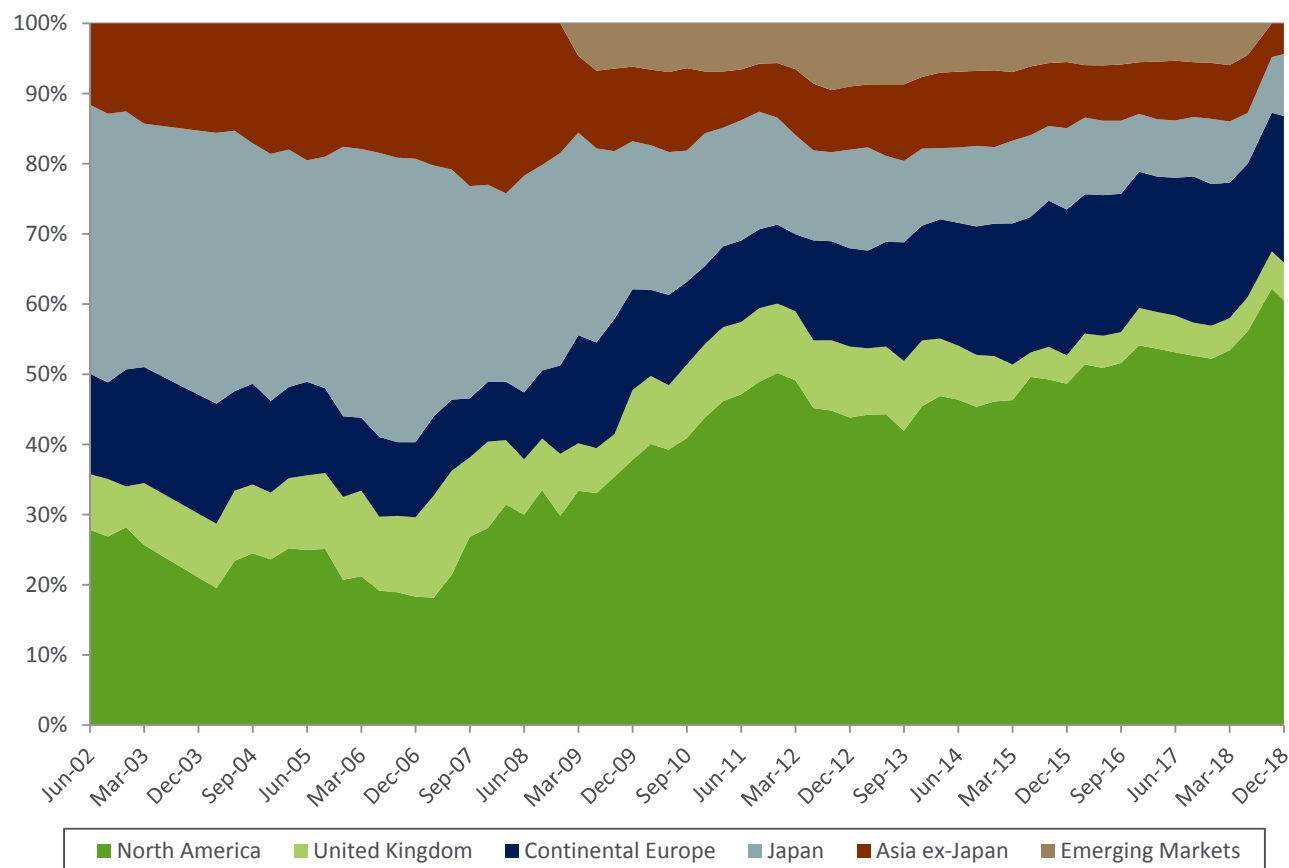
Fiera Capital Corporation
Fiera Capital Global Equity



Allocations as of 12/31/18

REGIONAL ALLOCATION

Walter Scott & Partners Limited
Global Strategy



Allocations as of 12/31/18

PERFORMANCE

NEPC, LLC

TRAILING AND CALENDAR YEAR RETURNS - (NET OF FEES)

	Benchmark	Qtr	YTD	1 Year	3 Year	5 Year	7 Year	10 Year
Global Equity - Active								
Fiera - Global Equity	1	-10.5%	-3.7%	-3.7%	9.8%	7.4%	11.8%	NA
Walter Scott - Global	1	-12.0%	-1.4%	-1.4%	9.5%	6.4%	10.0%	10.9%
Global Equity - Passive								
SSgA - ACWI Index	2	-12.7%	-9.2%	-9.2%	6.8%	4.5%	8.6%	9.7%
Actual Return								
1 MSCI World-ND		-13.4%	-8.7%	-8.7%	6.3%	4.6%	9.0%	9.7%
2 MSCI ACWI-ND		-12.8%	-9.4%	-9.4%	6.6%	4.3%	8.4%	9.5%

	Bench mark	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Global Equity - Active											
Fiera - Global Equity	1	-3.7%	31.0%	5.1%	1.5%	6.1%	28.2%	19.6%	2.3%	18.8%	NA
Walter Scott - Global	1	-1.4%	25.5%	6.1%	0.8%	3.2%	20.3%	18.2%	-2.9%	11.7%	33.5%
Global Equity - Passive											
SSgA - ACWI Index	2	-9.2%	24.1%	8.1%	-2.1%	4.5%	23.2%	16.4%	-7.1%	12.8%	34.8%
Actual Index Return											
1 MSCI World-ND		-8.7%	22.4%	7.5%	-0.9%	4.9%	26.7%	15.8%	-5.5%	11.8%	30.0%
2 MSCI ACWI-ND		-9.4%	24.0%	7.9%	-2.4%	4.2%	22.8%	16.1%	-7.3%	12.7%	34.6%



Past performance is no guarantee of future results

Performance as of December 31, 2018

CALENDAR YEAR EXCESS RETURNS - (NET OF FEES)

	Bench mark	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Global Equity - Active											
Fiera - Global Equity	1	5.0%	8.6%	-2.4%	2.4%	1.2%	1.5%	3.8%	7.8%	7.0%	NA
Walter Scott - Global	1	7.3%	3.1%	-1.4%	1.7%	-1.8%	-6.4%	2.4%	2.6%	-0.1%	3.5%
Global Equity - Passive											
SSgA - ACWI Index	2	0.2%	0.1%	0.2%	0.3%	0.3%	0.4%	0.3%	0.2%	0.2%	0.2%
Actual Index Return											
1 MSCI World-ND		-8.7%	22.4%	7.5%	-0.9%	4.9%	26.7%	15.8%	-5.5%	11.8%	30.0%
2 MSCI ACWI-ND		-9.4%	24.0%	7.9%	-2.4%	4.2%	22.8%	16.1%	-7.3%	12.7%	34.6%

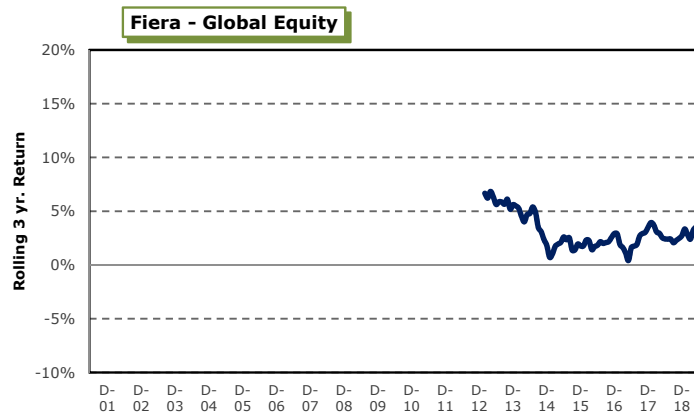
Manager Excess Return: > 3%, between 0% and 3%, between -0% and -3%, < -3%



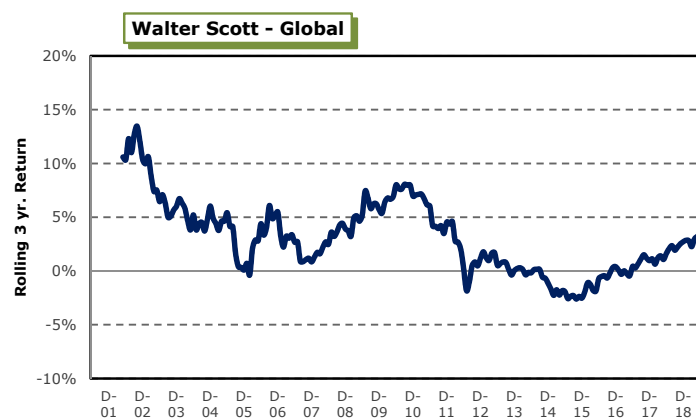
Past performance is no guarantee of future results

Performance as of December 31, 2018

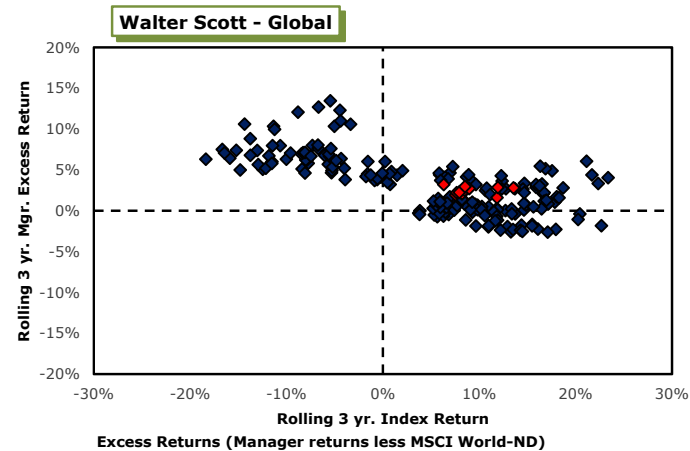
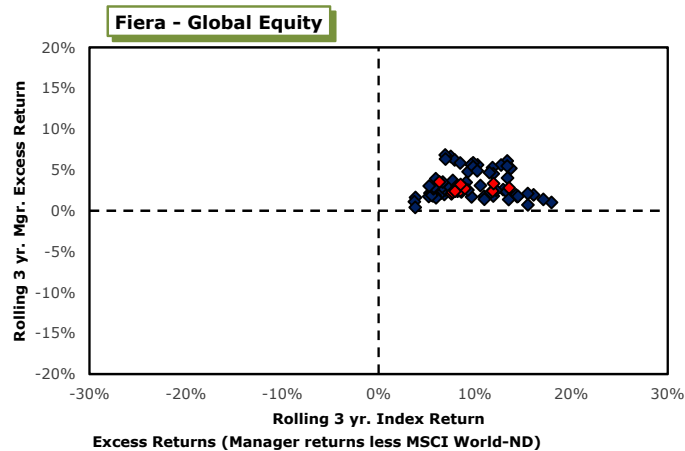
ROLLING 3 YEAR EXCESS RETURNS - (NET OF FEES)



Excess Returns (Manager returns less MSCI World-ND)



Excess Returns (Manager returns less MSCI World-ND)

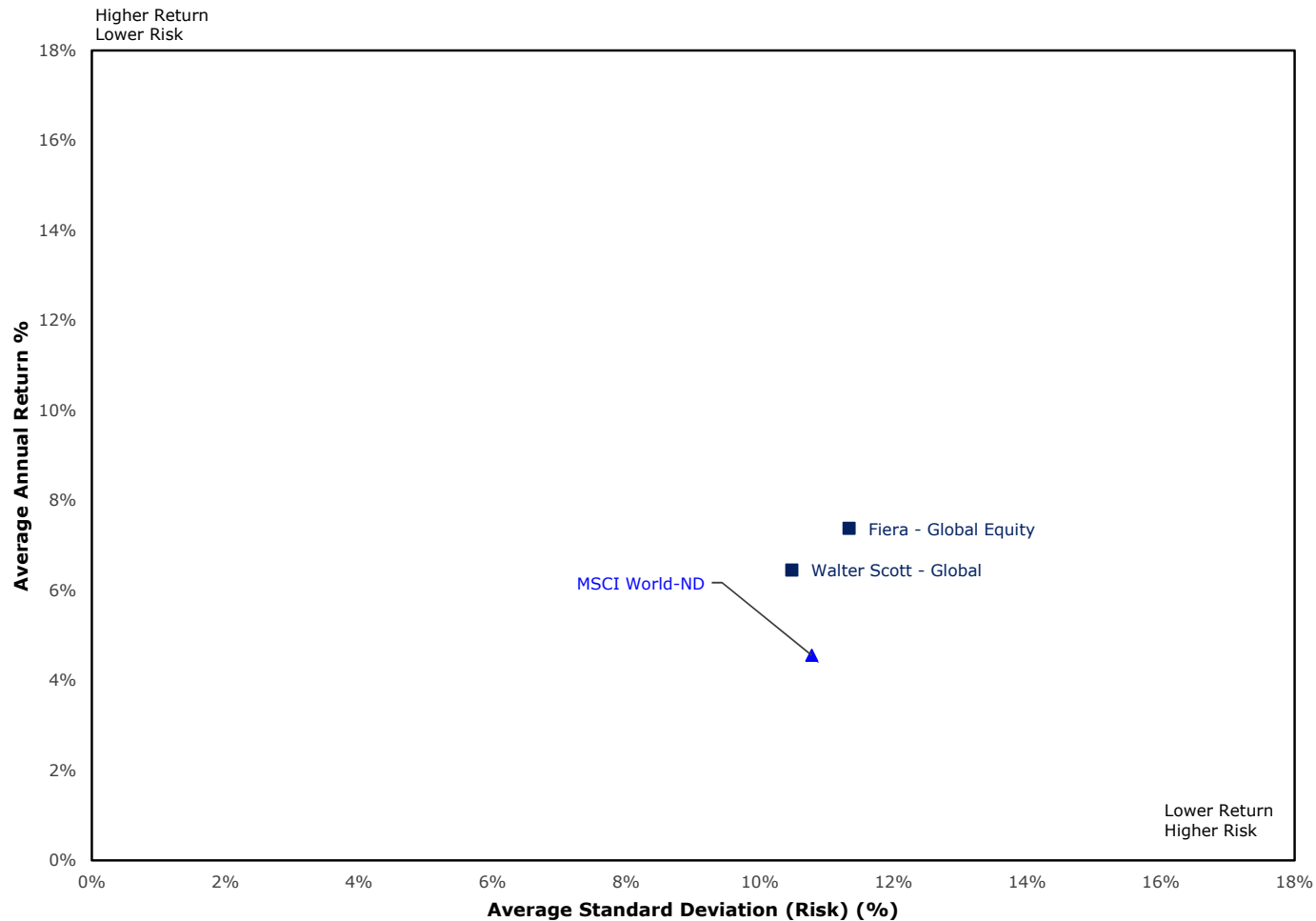


Global Equity - Active

Past performance is no guarantee of future results

Performance as of December 31, 2018

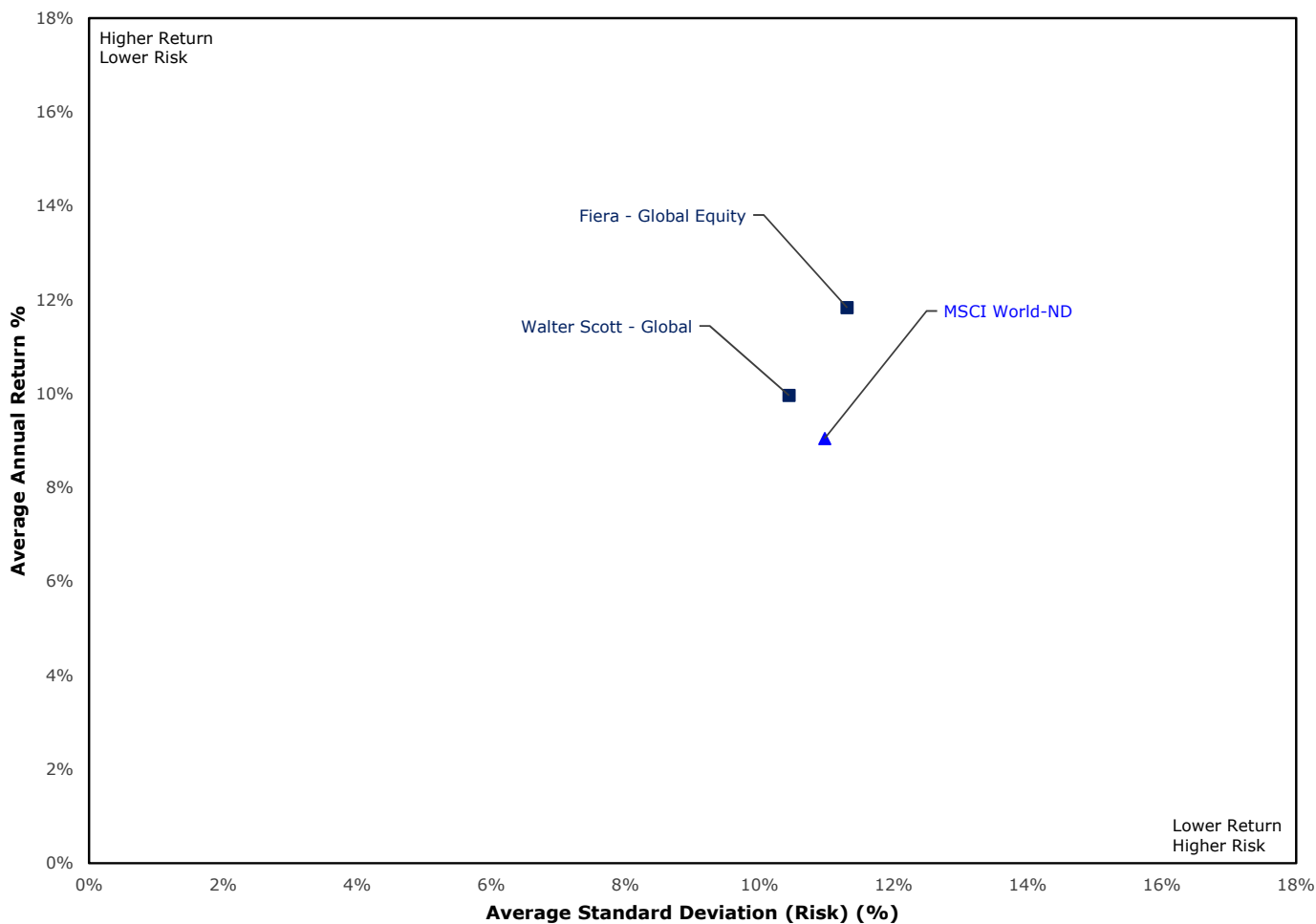
5 YEAR TOTAL RISK/RETURNS COMPARISON - (NET OF FEES) - ACTIVE



Past performance is no guarantee of future results

Performance as of December 31, 2018

7 YEAR TOTAL RISK/RETURNS COMPARISON - (NET OF FEES) - ACTIVE



Past performance is no guarantee of future results

Performance as of December 31, 2018

GLOSSARY OF TERMS

- **Beta:** A measure of volatility, or systematic risk, of a security or a portfolio in comparison to the market as a whole. Beta can be thought of as the tendency of a security's returns to respond to swings in the market. A beta of 1 indicates that the security's price will move with the market.
- **Correlation:** A statistical measure of how two securities move in relation to each other. Correlation is computed into a correlation coefficient which ranges between -1 to +1. A perfect positive correlations (+1) implies that as one security moves either up or down, the other security will move in the same direction. Alternatively, a perfect negative correlation (-1) means that if one security moves in either direction, the security that is perfectly negatively correlated will move by an equal amount in the opposite direction.
- **Information Ratio:** A measure of portfolio management's performance against risk and return relative to a benchmark or alternative measure.
- **Kurtosis:** A statistical measure used to describe the distribution of observed data around the mean. Kurtosis describes trends in charts. A high kurtosis portrays a chart with fat tails and a low, even distribution, whereas a low kurtosis portrays a chart with skinny tails and a distribution concentrated toward the mean.
- **Skewness:** A statistical term used to describe a situation's asymmetry in relation to a normal distribution. A positive skew describes a distribution favoring the right tail, whereas a negative skew describes a distribution favoring the left tail.
- **Tracking Error:** A divergence between the price behavior of a position or a portfolio and the price behavior of a benchmark. Tracking errors are reported as a "standard deviation percentage" difference. It represents the difference between the return of a fund and that of the benchmark the fund was trying to copy.



DISCLAIMER

- **This report contains summary information regarding the investment management approaches described herein but is not a complete description of the investment objectives, policies or portfolio management and research that supports these approaches. This analysis does not constitute a recommendation to implement any of the aforementioned approaches.**
- **Past performance is no guarantee of future results.**
- **Information on market indices was provided by sources external to NEPC, and other data used to prepare this report was obtained directly from the investment manager(s). 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 may not be copied or redistributed to any party not legally entitled to receive it.**





Global Equity

1Q 2019

University of Maine System

This presentation is for informational purposes and should not be considered a solicitation to buy, or an offer to sell, a security. Please refer to Important Disclosures at the end of this presentation.

Agenda



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Firm Overview

Overview and Mission



Fiera Capital Inc. is the U.S. division of Fiera Capital Corporation, a leading investment management firm offering thoughtful investment solutions for institutions and high net worth individuals.*

- ▶ Our mission is to provide clients with the highest quality of customized service and performance through a culture of integrity, teamwork, excellence, and innovation.
- ▶ We offer a spectrum of traditional, non-traditional, and bespoke investment strategies to suit a variety of investor needs. We seek to act as a resource and partner to advisors, family offices, and institutions.

Built on a legacy of boutique investment management and entrepreneurship

- ▶ Specialized investment teams operate independently while benefiting from scale advantages in risk management, research, shared expertise and a common service platform.

*Fiera Capital Inc. (FCI) is indirectly wholly-owned by Fiera Capital Corporation (FCC), which is listed on the Toronto Stock Exchange. Fiera Capital Corporation does not provide investment advisory services, or offer investment funds, in the United States or to U.S. persons. Investment advisory services for U.S. persons are provided by FCC's U.S. affiliate, FCI. Please refer to Important Disclosures for additional information regarding Fiera Capital Corporation and advisory services in the U.S. Fiera Capital Inc. is registered with the Securities and Exchange Commission ("SEC") as an investment adviser under the Investment Advisers Act of 1940, as amended. Registration with the SEC does not imply a certain level of skill or training.

Fiera Capital At a Glance



Fiera Capital Corporation and the US Division as of March 31, 2019

Founded in 2003, US Division designated in 2015

Publicly-traded (FSZ.TO) since 2010, controlled by management



More than 750 employees and over 175 investment professionals worldwide

◆ Over 140 employees and more than 45 investment professionals in the U.S.

- Fiera Capital Inc. Office
- Fiera Capital Corporation Office

Fiera Capital Assets Overview

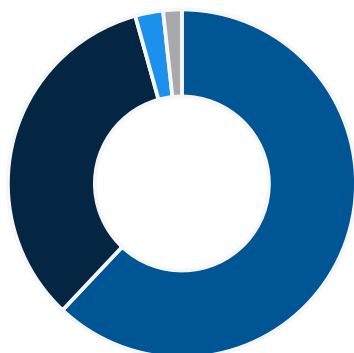
As of March 31, 2019



US DIVISION, FIERA CAPITAL INC.

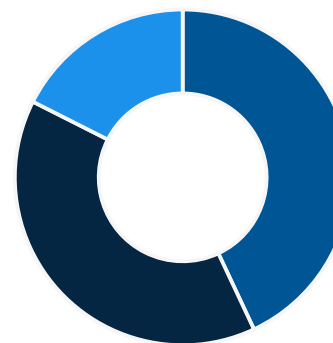
\$24.7 BILLION*

AUM By Asset Class



Equity	62%
Fixed Income	34%
Balanced	3%
Alternatives	2%
Total	100%

AUM By Market Segment

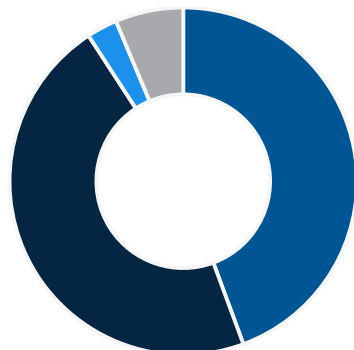


Institutional	43%
High Net Worth	39%
Retail	18%
Total	100%

FIERA CAPITAL CORPORATION

\$108 BILLION**

AUM By Asset Class



Equity	44%
Fixed Income	46%
Asset Allocation	3%
Alternatives	6%
Total	100%

AUM By Market Segment



Institutional	53%
Retail and HNW	25%
Private Wealth	22%
Total	100%

*Includes net assets under management and advisement. Please see our ADV Part 1 for information on our regulatory assets under management.

** Total assets under management include assets managed by FCC and its affiliates. Approximately \$8,365 million of the FCI assets under management are managed by FCI with the use of certain investment personnel of FCC who serve as dual employees of FCI for this purpose.

Fiera Capital's Boutique Investment Team Structure



Our entrepreneurial culture fosters a belief in building partnerships with our clients by empowering our investment teams to focus on their core competencies while providing access to Fiera Capital's deep resources. Our compensation plan is structured with a focus on long term performance to align with client interests and as a retention tool for talent.



*All members of the Global Equity Team are employees of FCC who are treated as persons "associated with" FCI (as such term is defined in the Advisers Act) in connection with the provision of any investment advisory services provided by such team members to U.S. clients pursuant to a participating affiliate arrangement between FCC and FCI. Please see Important Disclosures at the end of this presentation regarding the participating affiliate arrangement.



Global Equity Team

Global Equity Team




NADIM RIZK, MBA, CFA
Lead Portfolio Manager

Team Lead

Firm: 10 years, Industry: 22 years



ANDREW CHAN, CIM, M.Sc.
Portfolio Manager

Industrials Information Tech

Firm: 10 years, Industry: 18 years



NICK CILELI, CFA
Senior Analyst

Financials

Firm: 10 years, Industry: 22 years



THOMAS HORVATH, MBA, CFA, CAIA - Lead Analyst

Consumers Health Care

Firm: 10 years, Industry: 11 years



JUHUA SHI, MBA, CFA
Senior Analyst

IT, Telecom, Util Consumers

Firm: 6 years, Industry: 16 years



DOMINIC TREMBLAY, M.Sc., CFA - Senior Analyst

Health Care Financials

Firm: 10 years, Industry: 15 years



IVANA MILADINOVIC, CFA - Analyst

Industrials Energy, Materials

Firm: 5 years, Industry: 9 years



WEN QING XU
Junior Analyst

Consumers

Firm: 3 years, Industry: 5 years



AYSSAR FERNANDEZ
Junior Analyst

Information Technology

Firm: 2 years, Industry: 4 years

Primary Analyst Coverage

Secondary Analyst Coverage

Global Equity Team

As of March 31, 2019



STRATEGY PROFILE			
LEAD PORTFOLIO MANAGER	Nadim Rizk, MBA, CFA*		
INVESTMENT STYLE	Quality Growth		
INVESTMENT APPROACH	Fundamental, Bottom-Up		
TEAM ASSETS ¹	\$26,070M		
EQUITY STRATEGIES	GLOBAL	U. S.	INTERNATIONAL
STRATEGY ASSETS	\$14,510 ²	\$5,623M ³	\$5,937M ⁴
INCEPTION	Oct 1, 2009	April 1, 2009	Jan 1, 2010
TARGET NO. OF HOLDINGS**	30-40	25-30	25-35

*In connection with the provision of investment advisory services to U.S. clients of FCI, Mr. Rizk acts as a person "associated with" FCI (as such term is defined in the Advisers Act) under a participating affiliate arrangement between FCC and FCI. Please see Important Disclosures at the end of this presentation regarding this participating affiliate arrangement.

Assets are managed by FCI with the use of FCC's resources acting in its capacity as a "participating affiliate" of FCI as follows:

1. Team Assets: Approximately \$8,366 million
2. Global Equity Strategy assets: Approximately \$3,614 million
3. U.S. Equity Strategy assets: Approximately \$1,653 million
4. International Equity Strategy assets: Approximately \$3,099 million

**Strategy parameters are general guidelines only and may vary over time.



Investment Philosophy

Investment Philosophy



We believe one can achieve superior and sustainable returns by investing in a concentrated portfolio of high quality companies and holding them for the long run.

We seek to identify companies that:

- ▶ Generate strong return on invested capital (ROIC)
- ▶ Provide ample long-term growth potential at incrementally high ROIC
- ▶ Generate strong and predictable free cash flow
- ▶ Consistently compound shareholder wealth over the long term
- ▶ Preserve capital

There is no guarantee that any of these results will be achieved. Inherent in any investment is the potential for loss. Please see Important Disclosures at the end of this presentation.

Investment Philosophy



We seek to buy high quality companies which we believe have sustainable competitive advantages that:

- ▶ In our view, create more economic value over time with less odds of permanent value destruction.
- ▶ We believe the market will misprice, enabling us to buy them at attractive valuations.

We have high conviction strategies and strive to own only the best of the best.

High conviction + Low turnover



More time to know our companies

More time to make decisions

We have a strong process and alignment that enables us to identify and select what we believe to be best-of-breed companies.

- ▶ Our team-based compensation structure aligns our incentives with our clients'.
- ▶ Each member of the team has a vested interest in participating in the selection and construction of the portfolio.



Investment Process



Sources of Ideas



Sources of Ideas

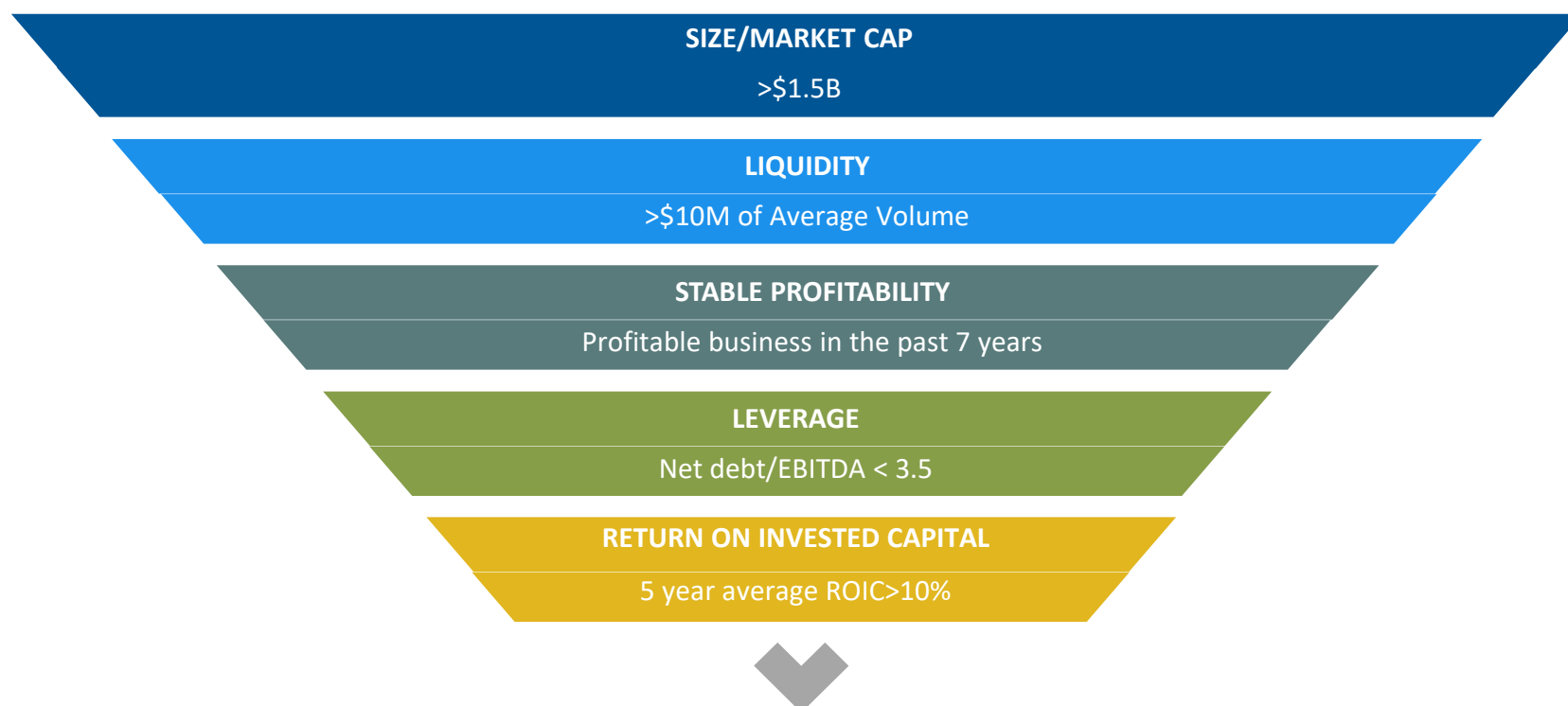
- ▶ Internal proprietary screens
- ▶ Company meetings
- ▶ Existing portfolio holdings
- ▶ External research and publications
- ▶ Internal idea sharing and discussions

Investment Philosophy



ELIMINATION PROCESS

INVESTABLE UNIVERSE OF APPROXIMATELY 3,000 STOCKS



Addressable universe of approximately **600 stocks**

Proprietary Ranking Process



PROPRIETARY RANKING PROCESS		
UNIVERSE	COUNTRY	SECTOR
QUALITY FACTORS: 50%		
VALUATION METRICS: 30%		
GROWTH PARAMETERS: 20%		

Seek Top 25 % **“Best Of Breed”** Companies (300-400) with Quality Growth Attributes at **Attractive Valuations**

Evaluation of Candidates



Long-list Candidates (approximately 60-80 companies)

- ◆ Initial view formulation

Short-list Candidates (approximately 30-40 companies)

- ◆ Comprehensive modeling and rigorous fundamental analysis:
 - Industry dynamics and attractiveness
 - Close scrutiny of management's culture, business strategy and ESG considerations
 - Full proprietary financial models and long-term projections
 - Assess fair value and expected target return range
 - Grade companies based on assessment of quality – proprietary T.I.M.E. Score

Company Attributes We Look For



IDEA GENERATION

FUNDAMENTAL RESEARCH

PORTFOLIO CONSTRUCTION

RISK MANAGEMENT

HIGH QUALITY COMPANY ATTRIBUTES

Sustainable Competitive Advantages

- High barriers to entry
- Market leaders with dominant competitive position

Attractive Industry

- Growing industry with low capital requirement
- Strong pricing power (gross margin)

Demonstrated track record

- Consistent and high ROIC
- Superior operating excellence and capital allocation discipline

Management Quality

- Strong management team and sound corporate governance
- Commitment to shareholder value

Balance Sheet Strength

- Low debt
- High cash flow generation

Attractive Valuation

- Stock price at or below intrinsic valuation

There is no guarantee that any of these results will be achieved. Inherent in any investment is the potential for loss. Please see Important Disclosures at the end of this presentation.

Proprietary Test of T.I.M.E.



IDEA GENERATION

FUNDAMENTAL RESEARCH

PORTFOLIO CONSTRUCTION

RISK MANAGEMENT

The Test of **T.I.M.E.** enables the team to score and compare a company's business practices and characteristics within different industries and countries in accordance with the investment team's philosophy

Track Record **I**ndustry Attractiveness **M**anagement Quality **E**conomic Moat



Grade Portfolio Holdings & Wishlist

Standardized



Repeatable

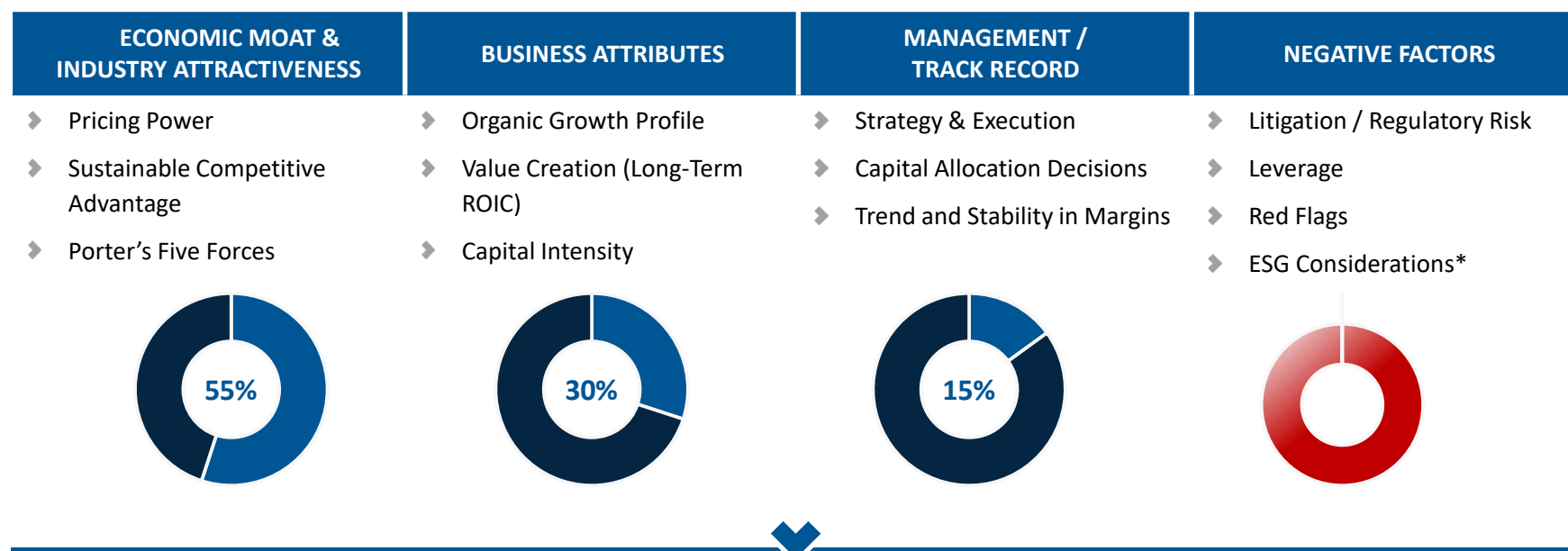


Consistent with
Investment Philosophy

Proprietary Test of T.I.M.E.



T.I.M.E Score



Average T.I.M.E. Score	
Broad Universe	Portfolio
50%	>80%

*Please see slide 28 for ESG considerations. Please see Important Disclosures at the end of this presentation for a definition of Porter's Five Forces and other important information.

Fundamental Research – Example*



Moody's

IDEA GENERATION

FUNDAMENTAL RESEARCH

PORTFOLIO CONSTRUCTION

RISK MANAGEMENT

Investment Thesis:

- ▶ Description
 - Leading credit rating agency and provider of financial analytics software and services
- ▶ High Barriers to Entry
 - An industry dominated by two large players with strong pricing power
- ▶ Attractive Financials
 - Excellent financial metrics with high margins, consistent return on invested capital and significant cash flow generation
- ▶ Strong Management
 - Operationally and financially very well managed business reflected through a robust capital allocation strategy

General Information

Ticker	MCO-US
Stock Price (USD)	181.09
Market Cap (USD, M)	34,192
Sector	Financials
P/E NTM	22.2x

Moody's

Financials

	Dec-16	Dec-17	Dec-18
Revenue (USD, M)	3 604	4 204	4 443
EBIT Margin	42.0%	43.8%	43.3%
ROIC	548.4%	53.8%	36.7%
Net Debt/EBITDA (TTM)	0.7x	2.2x	1.8x

Source: FactSet, 03/29/2019



Source: Global Equity Team - proprietary model.

Past performance is not a guarantee of future results. Inherent in any investment is the potential for loss.

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Fundamental Research – Example*



Moody's



Moody's	MCO-US
Criteria	Score
Economic Moat & Industry Attractiveness	97.5%
Business Attributes	85.7%
Management / Track Record	95.8%
Positive Score	93.7%
Negative Factors	-2.5%
T.I.M.E. Score	91.2%

Economic Moat & Industry Attractiveness (55%)	98%	Business Attributes (30%)	86%
Pricing power	4	Expected organic growth attractiveness	3
Sustainable competitive advantage	4	Value creation (7-Year AVG ROIC)	4
Rate of Change (fast/high probability = low score)	4	Predictability of revenues/earnings	3
Cyclical	2	Capital Intensity	4
Bargaining power of suppliers	4	Product diversification	2
Bargaining power of customers	4	Expected rate of change of the company	3
Threat of substitutes	4	High margins	4
Threat of new entrants / barriers-to-entry	4	Negative Factors (0, -2.5, -5)	-2.5%
Competitive rivalry	4	Potential litigation/regulatory risk	-2.5
Management/Track Record (15%)	96%	Probability of value destroying acquisitions	0
Proper cash deployment (SBB / Div / VA Projects)	4	Leverage	0
Strategy & execution	4	Complexity of financials / thesis / structure	0
Trend of margins (10 years)	3	Management issues / Key Person Risk	0
Stability of margins (7 years)	4	Creative accounting	0
Deal-Breaker Clause (0 or -50)	0%	Environment	0
Specify red flag(s) or negative factor(s):	0	Social	0
		Governance (3 flags = -2.5, 5 flags = -5)	0
		Other: (Specify)	0

Governance Red Flags (Y or N) Count	0
Megalomaniac CEO	N
Overly promotional executive team	N
Nepotism	N
Excessive indulgence by mgmt. & Board	N
Weak investor relations and communications	N
Issues with executive compensation	N
Excessive stock-based comp. dilution	N
Extensive GAAP to Non-GAAP reconciliation	N
Tax matters	N
Short public company track record	N
Board independence	N
Aud/Nom/Comp Chair - Non-Independent	N
High non-audit to audit fees ratio	N
Accounting auditor issues	N
Non-independent chairman	N
Multi-voting stock structure	N
Potential conflicts of interests between management or controlling shareholder and the primary shareholders	N
Other red flags: (Specify)	N

Source: Global Equity Team - proprietary model.

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Fundamental Research – Example*



Keyence

IDEA GENERATION

FUNDAMENTAL RESEARCH

PORTFOLIO CONSTRUCTION

RISK MANAGEMENT

Investment Thesis:

Description

- Global factory automation manufacturer specializing in sensors, serving more than 200,000 customers in over 70 countries

Pricing Power

- Keyence's key strengths are in its innovation and direct distribution strategy as it allows them to customize solutions to customers and achieve strong pricing power

Best-in-Class Financials

- Due to Keyence's sustainable competitive advantages, the company is able to achieve a high sustainable ROIC and operating margins in excess of 50%

Strong Growth Drivers

- As the requirements for quality and efficiency continue to increase, the demand for factory automation and Keyence's solutions also increases

General Information

Ticker	6861-JP
Stock Price (JPY)	65,860.00
Market Cap (USD, M)	72,018
Sector	Information Technology
P/E NTM	31.3x



Financials

	Mar-16	Mar-17	Mar-18
Revenue (JPY, M)	379,282	412,699	526,847
EBIT Margin	53.1%	53.0%	55.6%
ROIC	166.4%	148.0%	183.9%
Net Debt/EBITDA (TTM)	0.0x	0.0x	0.0x

Source: FactSet, 02/28/2019



Source: Global Equity Team - proprietary model.

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Fundamental Research – Example*



Keyence

IDEA GENERATION

FUNDAMENTAL RESEARCH

PORTFOLIO CONSTRUCTION

RISK MANAGEMENT

Keyence Corporation	6861-JP
Criteria	Score
Economic Moat & Industry Attractiveness	90.0%
Business Attributes	82.1%
Management / Track Record	75.0%
Positive Score	85.4%
Negative Factors	-2.5%
T.I.M.E. Score	82.9%

Economic Moat & Industry Attractiveness (55%)	90%	Business Attributes (30%)	82%
Pricing power	4	Expected organic growth attractiveness	4
Sustainable competitive advantage	4	Value creation (7-Year AVG ROIC)	4
Rate of Change (fast/high probability = low score)	4	Predictability of revenues/earnings	2
Cyclical	2	Capital Intensity	2
Bargaining power of suppliers	4	Product diversification	4
Bargaining power of customers	4	Expected rate of change of the company	4
Threat of substitutes	4	High margins	4
Threat of new entrants / barriers-to-entry	3		
Competitive rivalry	3	Negative Factors (0, -2.5, -5)	-2.5%
		Potential litigation/regulatory risk	0
Management/Track Record (15%)	75%	Probability of value destroying acquisitions	0
Proper cash deployment (SBB / Div / VA Projects)	1	Leverage	0
Strategy & execution	4	Complexity of financials / thesis / structure	0
Trend of margins (10 years)	4	Management issues / Key Person Risk	0
Stability of margins (7 years)	4	Creative accounting	0
		Environment	0
Deal-Breaker Clause (0 or -50)	0%	Social	0
Specify red flag(s) or negative factor(s):	0	Governance (3 flags = -2.5, 5 flags = -5)	-2.5
		Other: (Specify)	0

Governance Red Flags (Y or N) Count	3
Megalomaniac CEO	N
Overly promotional executive team	N
Nepotism	N
Excessive indulgence by mgmt. & Board	N
Weak investor relations and communications	N
Issues with executive compensation	N
Excessive stock-based comp. dilution	N
Extensive GAAP to Non-GAAP reconciliation	N
Tax matters	N
Short public company track record	N
Board independence	Y
Aud/Nom/Comp Chair - Non-Independent	Y
High non-audit to audit fees ratio	N
Accounting auditor issues	N
Non-independent chairman	Y
Multi-voting stock structure	N
Potential conflicts of interests between management or controlling shareholder and the primary shareholders	N
Other red flags: (Specify)	N

Source: Global Equity Team - proprietary model.

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Fundamental Research – Example*



MasterCard Inc.



Investment Thesis:

- ▶ Description
 - MasterCard provides product and services enabling card transactions throughout the world
- ▶ Operates in an oligopolistic industry with strong barriers-to-entry and competitive advantages
 - MasterCard and Visa benefit from having very strong brand names and an unmatched acceptance channel of merchants and financial institutions
- ▶ Attractive business model
 - MasterCard generates a solid stream of recurring revenues and its cost structure is very flexible so that it can improve its profit margins despite the recession
- ▶ Attractive financial metrics
 - Thanks to its competitive advantages, MasterCard is able to generate operating margins above 50% and strong ROIC

General Information	
Ticker	MA-US
Stock Price (USD)	226.29
Market Cap (USD, M)	232 153
Sector	Information Technology
P/E NTM	29.1x

	Financials		
	Dec-16	Dec-17	Dec-18
Revenue (USD, M)	10 776	12 497	14 950
EBIT Margin	54.6%	55.0%	55.9%
ROIC	212.8%	182.6%	253.5%
Net Debt/EBITDA (TTM)	0.0x	0.0x	0.0x

Source: FactSet, 03/04/2019



Source: Global Equity Team - proprietary model.

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Fundamental Research – Example*



MasterCard Inc.

IDEA GENERATION

FUNDAMENTAL RESEARCH

PORTFOLIO CONSTRUCTION

RISK MANAGEMENT

Mastercard Incorporated Class	MA-US
Criteria	Score
Economic Moat & Industry Attractiveness	88.3%
Business Attributes	92.9%
Management / Track Record	100.0%
Positive Score	91.4%
Negative Factors	-2.5%
T.I.M.E. Score	88.9%

Economic Moat & Industry Attractiveness (55%)	88%	Business Attributes (30%)	93%
Pricing power	4	Expected organic growth attractiveness	4
Sustainable competitive advantage	4	Value creation (7-Year AVG ROIC)	4
Rate of Change (fast/high probability = low score)	3	Predictability of revenues/earnings	4
Cyclicalilty	3	Capital Intensity	4
Bargaining power of suppliers	4	Product diversification	0
Bargaining power of customers	2	Expected rate of change of the company	4
Threat of substitutes	4	High margins	4
Threat of new entrants / barriers-to-entry	3		
Competitive rivalry	4	Negative Factors (0, -2.5, -5)	-2.5%
		Potential litigation/regulatory risk	-2.5
Management/Track Record (15%)	100%	Probability of value destroying acquisitions	0
Proper cash deployment (SBB / Div / VA Projects)	4	Leverage	0
Strategy & execution	4	Complexity of financials / thesis / structure	0
Trend of margins (10 years)	4	Management issues / Key Person Risk	0
Stability of margins (7 years)	4	Creative accounting	0
		Environment	0
Deal-Breaker Clause (0 or -50)	0%	Social	0
Specify red flag(s) or negative factor(s):	0	Governance (3 flags = -2.5, 5 flags = -5)	0
		Other: (Specify)	0

Governance Red Flags (Y or N) Count	0
Megalomaniac CEO	N
Overly promotional executive team	N
Nepotism	N
Excessive indulgence by mgmt. & Board	N
Weak investor relations and communications	N
Issues with executive compensation	N
Excessive stock-based comp. dilution	N
Extensive GAAP to Non-GAAP reconciliation	N
Tax matters	N
Short public company track record	N
Board independence	N
Aud/Nom/Comp Chair - Non-Independent	N
High non-audit to audit fees ratio	N
Accounting auditor issues	N
Non-independent chairman	N
Multi-voting stock structure	N
Potential conflicts of interests between management or controlling shareholder and the primary shareholders	N
Other red flags: (Specify)	N

Source: Global Equity Team - proprietary model.

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Environmental, Social, and Governance (ESG) Approach



Environmental, Social and Governance (ESG) Approach

- ◆ ESG consideration embedded in fundamental research approach of the Global Equity Team:
 - Fiera is a signatory to the United Nations Principles of Responsible Investment since 2009.
 - Corporate governance has long been a key area of focus in identifying high quality companies
 - Environmental and social risk evaluation in context of industry, positioning and what we believe to be competitive advantage
 - Poor scores in any of the three ESG areas trigger further analysis
- ◆ Engagement with companies:
 - As long term shareholders we hold regular meetings with company management and key board members
 - By raising ESG awareness and conveying our strong conviction on ESG matters, we have historically been successful in positively influencing management at these companies
- ◆ Proxy Voting:
 - Lead PM seeks to vote in the best interest of public shareholder
 - Fiera Proxy Voting guidelines along with external expert service help guide the proxy decisions
 - We track all of our proxy votes in a documented proxy log

Decision Making – Collective Intelligence Approach



Rationale:

- ▶ Diversified views and perspectives from across the team to reach an intelligent decision
 - Seek to build a portfolio of higher quality to create greater upside potential
- ▶ Input from the team on all portfolio holdings
- ▶ Seek to ensure the continuity of the investment approach

Key Features:

- ▶ Presentation of investment thesis and recommendations; discussion of existing holdings and investment research at weekly team meeting
- ▶ Constructive critique and debate by entire team
- ▶ Concentrated portfolio forces a discipline to own only what we believe to be the best ideas
- ▶ Final approval by lead portfolio manager

Portfolio Construction and Sell Discipline



Target approximately 30-40 securities*

- ◆ Positions typically initiated at 1%; max at 8%
- ◆ Position size is based on confidence in quality, risk assessment and return expectations
- ◆ Sector: +/- 20% with minimum 6 of 11 GICS sectors
- ◆ Expected turnover rate below 20% per year
- ◆ Maximum exposure to emerging markets
 - 15%

Sell Discipline:

- ◆ Investment thesis no longer valid
- ◆ Better opportunities

*Target parameters are general guidelines only and may vary over time.

How We Manage Risk



We define Portfolio Risk based on the potential of Permanent Loss of Capital

Risk is managed at 2 levels:

◆ **Security**

- Focus on what we consider high quality and stable businesses which generally have a greater ability to preserve capital
- Rigorous fundamental research process
- Progressive position building; small initial position ($\approx 1\%$) until conviction solidified

◆ **Portfolio**

- Companies with different growth drivers and investment theses
- Diversification and assessment of risk from both an industry and country perspective
- Long-term focus: No IPOs or companies with short track records
- Frequent and disciplined review of holdings

Investment Process



The Four Pillars of our Investment Philosophy

- ▶ We pick what we believe to be best of breed companies at attractive valuations
- ▶ We develop a deep understanding of the companies in our portfolio and hold them for the long run*
- ▶ We appropriately reallocate capital to companies based on the team's conviction and the company's risk/return potential
- ▶ We consistently apply our investment philosophy

*The long run" is defined as 5-10+ years.



Global Equity Strategy

Performance and Portfolio Characteristics

Global Equity Strategy



Performance as of March 31, 2019*

RETURNS (%)	QTD	YTD	2018	2017	2016	2015	2014	2013	2012	2011	2010
Merged Composite, gross	15.52	15.52	-3.00	31.96	5.86	2.29	6.88	29.09	20.47	3.07	19.65
Merged Composite, net	15.28	15.28	-3.84	30.86	4.97	1.42	5.97	28.01	19.46	2.20	18.64
MSCI World (US\$)	12.48	12.48	-8.71	22.40	7.51	-0.87	4.94	26.68	15.83	-5.54	11.76
Added Value, gross	3.04	3.04	5.71	9.56	-1.65	3.17	1.94	2.42	4.64	8.61	7.89
Added Value, net	2.80	2.80	4.88	8.46	-2.55	2.29	1.04	1.34	3.63	7.74	6.88

ANNUALIZED RETURNS (%)	1 YEAR	2 YEARS	3 YEARS	4 YEARS	5 YEARS	6 YEARS	7 YEARS	8 YEARS	9 YEARS	SINCE INCEPTION ¹
Merged Composite, gross	11.43	15.55	15.53	11.26	11.10	12.55	13.08	12.90	13.41	14.22
Merged Composite, net	10.48	14.57	14.56	10.32	10.16	11.60	12.13	11.95	12.46	13.26
MSCI World (US\$)	4.02	8.70	10.68	6.97	6.78	8.73	9.17	8.06	8.64	8.99
Added Value, gross	7.41	6.85	4.85	4.29	4.32	3.81	3.91	4.84	4.77	5.23
Added Value, net	6.47	5.88	3.87	3.35	3.38	2.86	2.95	3.89	3.81	4.27

¹ Inception date: October 1, 2009

Source: Eagle Performance Measurement system

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Global Equity Strategy



Performance as of March 31, 2019*

RETURNS (%)	QTD	YTD	2018	2017	2016	2015	2014	2013	2012	2011	2010
Merged Composite, gross	15.52	15.52	-3.00	31.96	5.86	2.29	6.88	29.09	20.47	3.07	19.65
Merged Composite, net	15.28	15.28	-3.84	30.86	4.97	1.42	5.97	28.01	19.46	2.20	18.64
MSCI ACWI (US\$)	12.17	12.17	-9.42	23.97	7.86	-2.36	4.16	22.80	16.13	-7.35	12.67
Added Value, gross	3.35	3.35	6.41	7.99	-2.00	4.66	2.72	6.29	4.34	10.42	6.98
Added Value, net	3.11	3.11	5.58	6.89	-2.90	3.79	1.81	5.21	3.33	9.54	5.97

ANNUALIZED RETURNS (%)	1 YEAR	2 YEARS	3 YEARS	4 YEARS	5 YEARS	6 YEARS	7 YEARS	8 YEARS	9 YEARS	SINCE INCEPTION ¹
Merged Composite, gross	11.43	15.55	15.53	11.26	11.10	12.55	13.08	12.90	13.41	14.22
Merged Composite, net	10.48	14.57	14.56	10.32	10.16	11.60	12.13	11.95	12.46	13.26
MSCI ACWI (US\$)	2.59	8.55	10.67	6.71	6.45	8.07	8.42	7.23	7.97	8.40
Added Value, gross	8.83	7.00	4.86	4.55	4.65	4.47	4.66	5.67	5.44	5.82
Added Value, net	7.89	6.03	3.88	3.60	3.71	3.52	3.70	4.71	4.48	4.86

¹ Inception date: October 1, 2009

Source: Eagle Performance Measurement system

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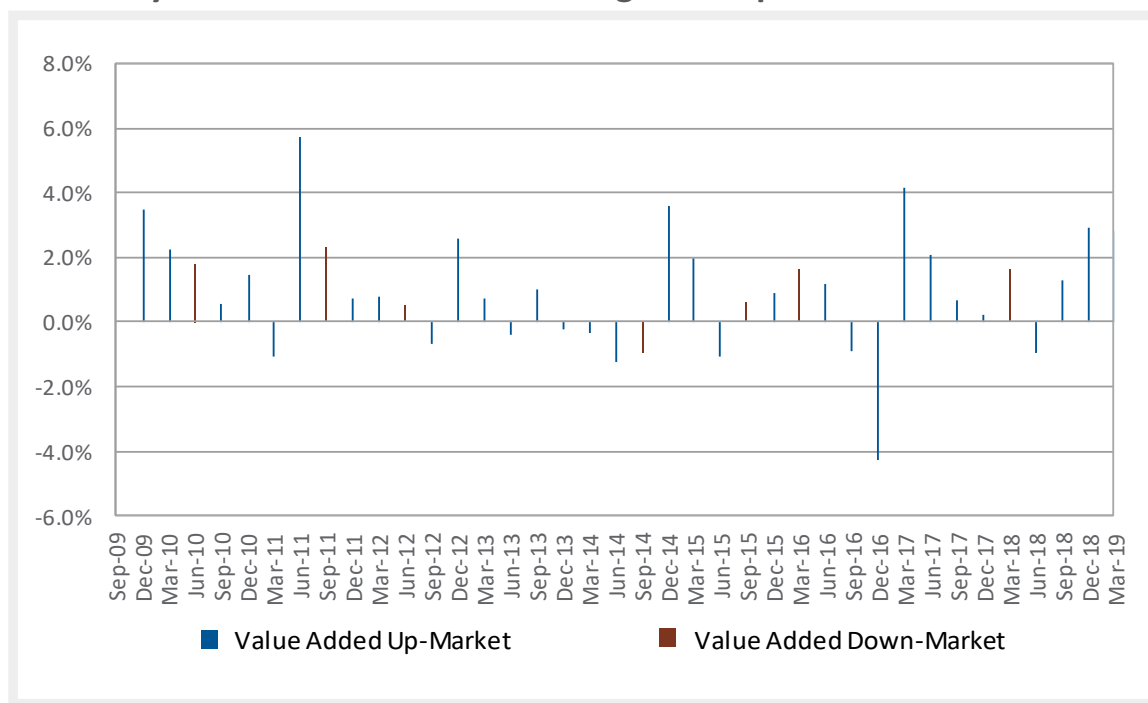
Global Equity Strategy



Quarterly excess net returns as of March 31, 2019*

Positive excess net returns for 27 out of 38 quarters since inception*

Quarterly Excess Net Returns For Merged Composite



PERFORMANCE STATISTICS SINCE INCEPTION	(%)
Market Capture Ratio**	
Up-Market	111%
Down-Market	83%
Batting average**	
Up-Market	59%
Down-Market	82%
Information Ratio	1.37

*Source: Eagle Performance Measurement system versus MSCI World Index, since inception, October 2009. Net performance results are calculated using the highest total fees and expenses currently charged to any US investor account, fund, or other investment vehicle using this strategy (collectively, the "accounts"), including management fees and all other expenses but excluding custody fees. The actual management fee and expenses paid by an account may be higher or lower.

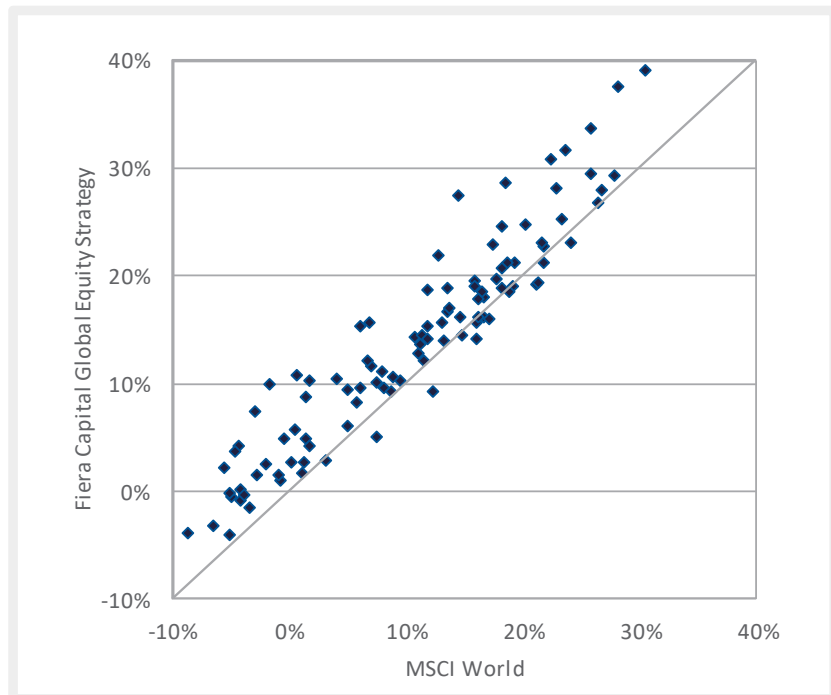
Calculation is performed on a monthly basis from eVestment. Performance from eVestment is gross of fees and do not reflect the deduction of investment advisory fees and expenses. A client's return will be reduced by such fees and expenses in the management of its investment advisory account. Advisory fees and expenses are described in Part 2A of Fiera's Form ADV. **Past performance is not a guarantee of future results. Inherent in any investment is the potential for loss. Please see Important Disclosures at the end of this presentation regarding Index Comparisons and calculation for Performance Statistics.

Global Equity Strategy

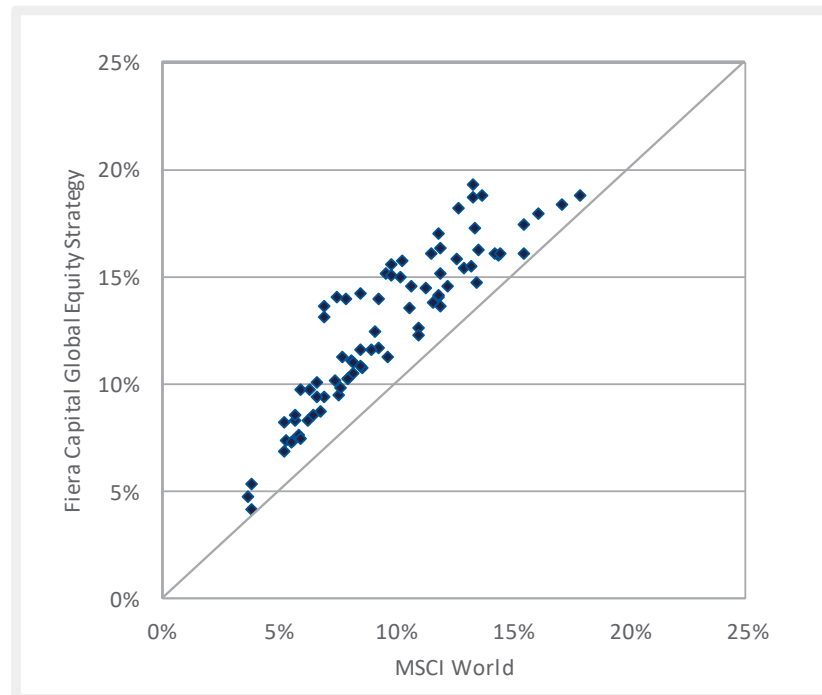


Composite rolling net returns as of March 31, 2019*

1 Year Rolling Returns



3 Year Rolling Returns



GLOBAL EQUITY STRATEGY VS. MSCI WORLD INDEX	1 YEAR	3 YEARS
Percentage of times outperformed	87.4%	100.0%
Avg. excess return	3.4%	3.0%
Max. excess return	12.9%	6.7%
Min. excess return	-3.0%	0.3%

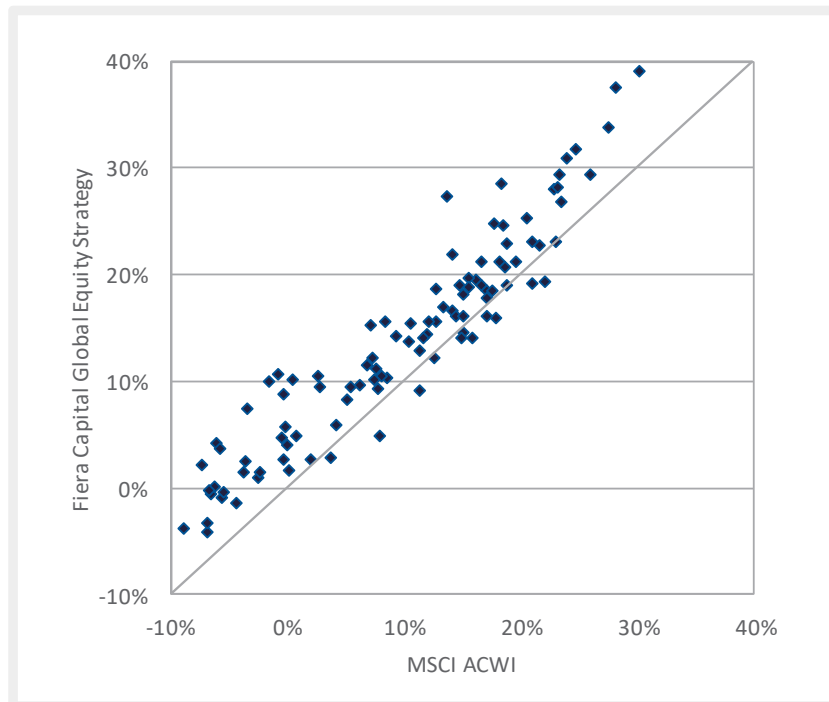
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Global Equity Strategy

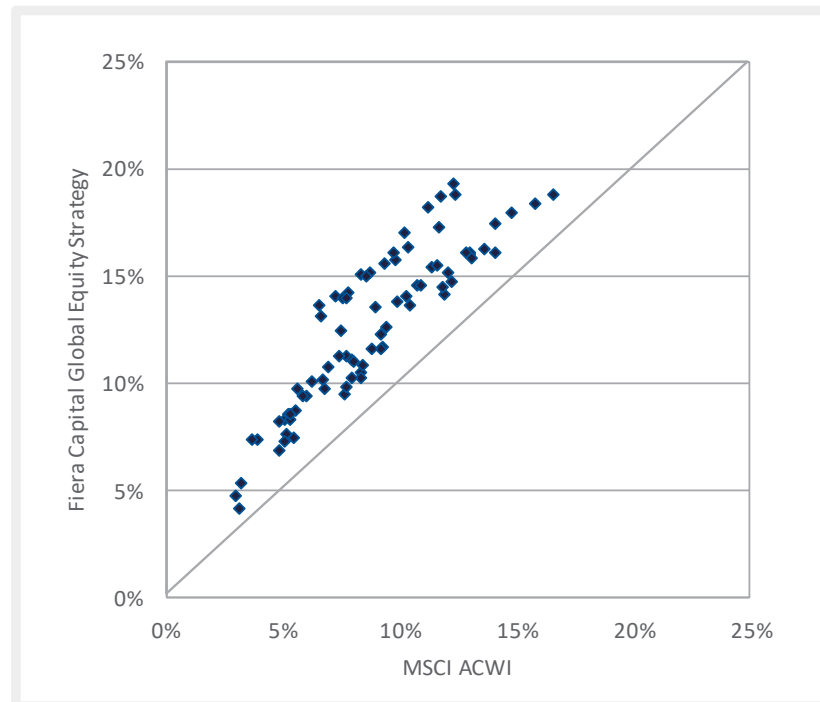


Composite rolling net returns as of March 31, 2019*

1 Year Rolling Returns



3 Year Rolling Returns



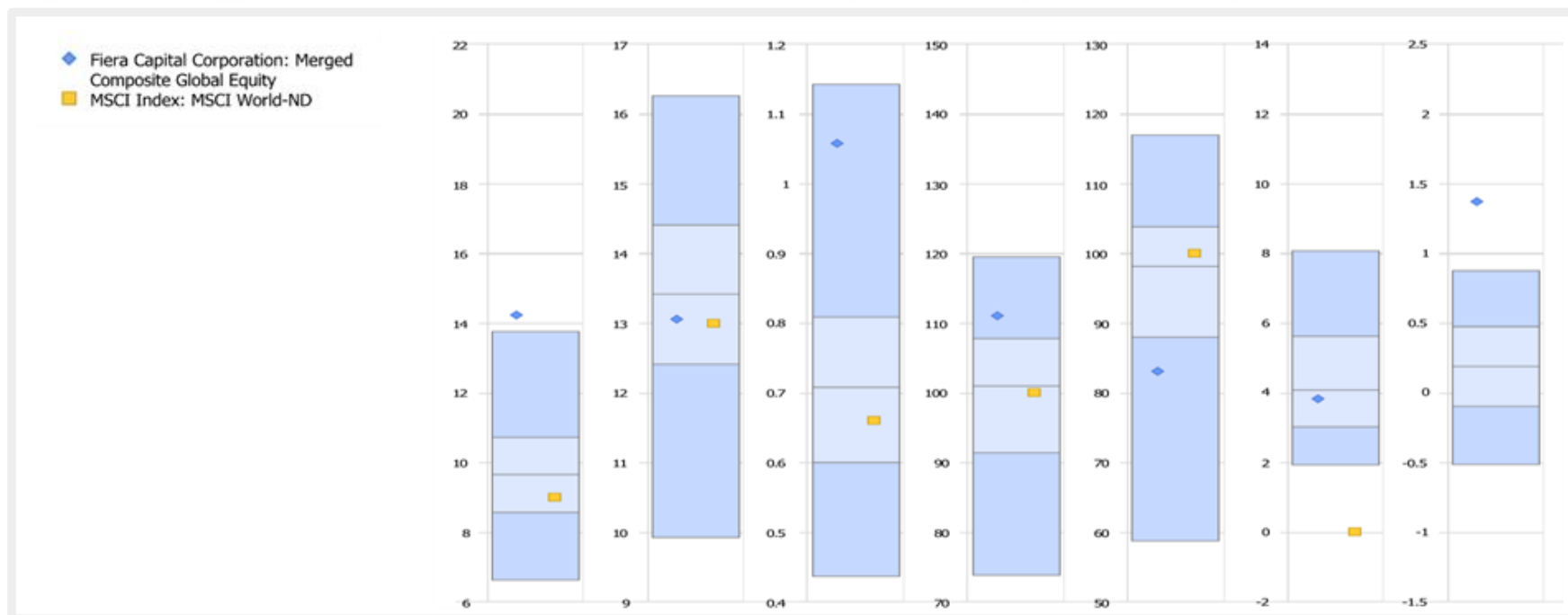
GLOBAL EQUITY STRATEGY VS. MSCI ACWI INDEX	1 YEAR	3 YEARS
Percentage of times outperformed	89.3%	100.0%
Avg. excess return	4.0%	3.9%
Max. excess return	13.7%	7.1%
Min. excess return	-2.9%	1.0%

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Global Equity Strategy



Composite performance characteristics as of March 31, 2019*



Universe: eVestment Global
Large Cap Equity

	VT	RM	Returns		Standard Deviation		Sharpe Ratio ¹		Upside Market Capture ²		Downside Market Capture ²		Tracking Error ²		Information Ratio ²	
			Value	Rank	Value	Rank	Value	Rank	Value	Rank	Value	Rank	Value	Rank	Value	Rank
5th Percentile			13.75		9.92		1.14		119.46		58.68		1.92		0.87	
25th Percentile			10.71		12.40		0.81		107.73		87.94		3.01		0.47	
Median			9.64		13.41		0.71		100.93		98.11		4.07		0.19	
75th Percentile			8.56		14.40		0.60		91.34		103.78		5.61		-0.10	
95th Percentile			6.61		16.26		0.44		73.75		116.96		8.07		-0.52	
# of Observations			235		235		235		235		235		235		235	
◆ Fiera Capital Corporation	SA	GF	14.22	4	13.05	37	1.06	8	111.01	17	83.04	20	3.82	42	1.37	1
■ MSCI World Index	IX	IX	8.99	68	12.99	35	0.66	60	100.00	53	100.00	60	0.00	1	---	---

Results displayed in USD

¹FTSE 3-Month T-bill

²MSCI World-ND

*Source: eVestment. Measured since inception, October 2009. Performance from eVestment is Gross of fees and do not reflect the deduction of investment advisory fees and expenses. A client's return will be reduced by such fees and expenses in the management of its investment advisory account. Advisory fees and expenses are described in Part 2A of Fiera's Form ADV. **Past performance is not a guarantee of future results. Inherent in any investment is the potential for loss.** Please refer to Important Disclosures at the end of this presentation regarding the participating affiliate arrangement, Composite Definitions, Universe Definition, Index Comparisons and other important information.

Global Equity Strategy



Portfolio positioning as of March 31, 2019*

Top 10 Holdings

SECURITY	SECTOR	PORTFOLIO WEIGHT (%)
Moody's	Financials	6.2
Keyence	Information Technology	5.2
Mastercard	Information Technology	5.1
Johnson & Johnson	Health Care	3.8
Becton Dickinson	Health Care	3.7
MSCI	Financials	3.7
Diageo	Consumer Staples	3.5
Unilever	Consumer Staples	3.4
TJX Companies	Consumer Discretionary	3.2
Nestle	Consumer Staples	3.2
Total		41.1

Regional Allocation

REGION	PORTFOLIO WEIGHT (%)	MSCI WORLD WEIGHT (%)
United States	62.2	62.4
Europe ex-UK	15.1	15.8
United Kingdom	10.5	5.8
Japan	6.7	8.2
Emerging Markets	5.3	0.0
Pacific ex-Japan	0.0	4.3
Canada	0.0	3.5
Cash	0.2	0.0
Total	100.0	100.0

Sector Allocation

SECTOR	PORTFOLIO WEIGHT (%)	MSCI WORLD WEIGHT (%)
Communication Services	2.8	8.3
Consumer Discretionary	12.2	10.4
Consumer Staples	14.9	8.6
Energy	0.0	6.0
Financials	16.9	15.6
Health Care	15.0	12.9
Industrials	19.3	11.1
Information Technology	15.8	15.9
Materials	3.1	4.6
Real Estate	0.0	3.3
Utilities	0.0	3.4
Total	100.0	100.0

Market Capitalization

	PORTFOLIO WEIGHT (%)	MSCI WORLD WEIGHT (%)
More than \$ 50B	60.5	54.9
\$ 15B to \$ 50B	24.6	29.8
\$ 7,5B to \$ 15B	11.2	10.7
\$ 1,5B to \$ 7,5B	3.7	4.5
Less than \$ 1,5B	0.0	0.1
Total	100.0	100.0

Source: Eagle Data Management.

*Account holdings and allocations are as of the date noted herein and subject to change. Please refer to Important Disclosures regarding Allocations and Top-10 holdings. Due to rounding, percentages may not total 100%. It is not possible to invest directly in an index. Investors pursuing a strategy similar to an index may experience higher or lower returns and will bear the cost of fees and expenses that will reduce returns.

Global Equity Strategy



Portfolio Characteristics as of March 31, 2019*

	PORTFOLIO	MSCI WORLD INDEX	DIFFERENCE				
			-50%	0%	50%	100%	150%
Liquidity¹							
Average Capitalization (\$M)	122,571	159,718	-23.3%				
Risk¹							
Debt / Equity	1.74	1.42				22.8%	
Net Debt / EBITDA	1.26	2.04	-38.2%				
Valuation							
Price / Earnings (next twelve months) ³	21.14	15.57				38.5%	
Enterprise Value / EBIT (trailing twelve months) ³	18.42	14.66				25.6%	
Dividend Yield (%) ¹	1.59	2.44	-34.9%				
Profitability and Growth²							
Next year estimated EPS growth	9.52	9.05				5.1%	
Estimated Revenue Growth	4.95	4.33				14.1%	
Return on Equity (%)	25.51	12.13				110.3%	
Return on Invested Capital (%; ROIC or ROI)	28.02	11.86				136.1%	
Operating Margin (%)	22.97	14.05				63.5%	
Number of Securities	36	1,635					

¹Weighted average

²Median

³Harmonic weighted average

Source: Factset

*Portfolio Characteristics and comparisons are generated by Factset using current data of both the composite and the index. There is no guarantee that any of the profitability or growth estimates generated by Factset will be achieved. The portfolio could lose value.

Past performance is not a guarantee of future results. Inherent in any investment is the potential for loss. It is not possible to invest directly in an index. Investors pursuing a strategy similar to an index may experience higher or lower returns and will bear the cost of fees and expenses that will reduce returns. Please see Important Disclosures at the end of this presentation regarding composite definition, Index Comparisons, and other important information.

Global Equity Strategy



Historical Active Share

DATE	ACTIVE SHARE
Dec-18	92.7
Dec-17	93.1
Dec-16	93.5
Dec-15	92.7
Dec-14	93.0
Dec-13	93.4
Dec-12	92.9
Dec-11	92.3
Dec-10	94.1
Dec-09	92.0

Active Share is defined as the percentage amount that the composite differs from its benchmark as defined by the following formula: $0.5 \times \sum |weight_{fund,i} - weight_{index,i}|$



Appendix

Environmental, Social, and Governance (ESG) Approach



Company engagement example:

▶ Solera (formerly owned in the US & Global Equity Portfolios)



- Solera's Long-Term Incentive Plan was based on Adjusted EBITDA and Relative Total Shareholder Return. Our key concern was that the Long-Term Incentive Plan lacked an ROIC component, particularly relevant for companies heavily reliant on acquisitions as part of their growth strategy.
- We engaged Solera by conducting a conference call with the SVP and General Counsel of the company, enabling us to express our concerns regarding the company's compensation structure.
- By voicing our concerns and actively engaging in discussion, as long-term shareholders, we were able to influence the company to change their compensation structure and add an ROIC component to their Long-Term Incentive Plan, thereby better aligning the interests of the company with that of its shareholders

Active Proxy voting example:

▶ Wells Fargo (US Portfolio)



- Consistently voted for an independent chairman, in line with our policy.
- Voted against 3 board members which we deemed had a long tenure (>17 years)
- Given the large size of Wells Fargo and our relatively small ownership (<0.25%), while we were unable to influence the company, we were among only a very small minority of shareholders to actively vote against these issues.

The securities discussed are included solely to illustrate the application of our ESG approach. It is not an endorsement or recommendation of any particular holding in our respective portfolios or a representation of the performance of the particular holding listed in our respective portfolios.

Global Equity Strategy Fee Schedule



Pooled Funds

	VALUE OF ASSETS (\$)	ANNUAL MANAGEMENT FEE
First	75,000,000	0.75%
Next	150,000,000	0.65%
Next	250,000,000	0.55%
Thereafter		0.50%

Separately Managed Accounts

	VALUE OF ASSETS (\$)	ANNUAL MANAGEMENT FEE
First	75,000,000	0.85%
Next	150,000,000	0.65%
Next	250,000,000	0.55%
Thereafter		0.50%



Biographies*

***All members of the Global Equity Team are employees of FCC who are treated as persons "associated with" FCI (as such term is defined in the Advisers Act) in connection with the provision of any investment advisory services provided by such team members to U.S. clients under a participating affiliate arrangement between FCC and FCI. Please see Important Disclosures at the end of this presentation regarding the participating affiliate arrangement.**

Biographies



Nadim Rizk, MBA, CFA
**Senior Vice President and Lead
 Portfolio Manager, Global
 Equities**

Nadim is a member of the Global Equity team and is the lead Portfolio Manager of the U.S., International and Global equity strategies.

Educational Background

- ▶ Chartered Financial Analyst (CFA) – 2001
- ▶ Master of Business Administration (MBA), McGill University – 1998
- ▶ Bachelor of Business Administration (BBA), Major in Finance, American University of Beirut – 1995

Professional Experience

- ▶ 2004 – 2009: Head of Global Equities & Manager of the US and Global equity funds at Montrustco Bolton
- ▶ 2000 – 2004: Senior Global Research Analyst at Montrustco Bolton
- ▶ 1998 – 2000: Financial Analyst at CN Investments



Andrew Chan, CIM
**Vice President and Portfolio
 Manager, Global Equities**

Andrew is a member of the Global Equity team and is a Portfolio Manager for the U.S., International and Global Equity strategies.

Educational Background

- ▶ Master in Finance (MSc), HEC Montreal – 2005
- ▶ Bachelor of Commerce (BComm), Major in finance, McGill University – 2000

Professional Experience

- ▶ 2007 – 2009: Senior Analyst, US Small Cap equities at Van Berkom and Associates
- ▶ 2005 – 2007: Research Analyst, Global Equities at Montrustco Bolton
- ▶ 2001 – 2003: Research Analyst at Van Berkom and Associates

Biographies



Nick Cileli, CFA
Senior Analyst, Global Equities

Nick is a member of the Global Equity team and is a Senior Analyst for the U.S., International and Global Equity strategies.

Educational Background

- ▶ Chartered Financial Analyst (CFA) – 2000
- ▶ Bachelor of Commerce (BComm), Major in finance, Concordia University – 1993

Professional Experience

- ▶ 2000 – 2009: Investment Analyst and Senior Research Analyst, Canadian Equities at Bimcor
- ▶ 1997 – 2000: Treasury Operations Manager for St-Laurent Paperboard
- ▶ 1994 – 1997: Senior Auditor at KPMG in Toronto



Juhua Shi, MBA, CFA
Senior Analyst, Global Equities

Juhua is a member of the Global Equity team and is a Senior Analyst for the U.S., International and Global Equity strategies.

Educational Background

- ▶ Chartered Financial Analyst (CFA) – 2008
- ▶ Master of Business Administration (MBA), McGill University – 2007
- ▶ Bachelor in Computer Engineering (B.Eng.), Shanghai Jiao Tong University – 1993

Professional Experience

- ▶ 2007 – 2013: Co-Portfolio Manager, Global equity at Montrustco Bolton

Biographies



Thomas Horvath, CFA, CAIA
Lead Analyst, Global Equities

Thomas is a member of the Global Equity team and is a Senior Analyst for the U.S., International and Global Equity strategies.

Educational Background

- ▶ Master of Business Administration (MBA), Queens University - 2016
- ▶ Chartered Financial Analyst (CFA) – 2013
- ▶ Chartered Alternative Investment Analyst (CAIA) – 2011
- ▶ Bachelor of Commerce (BComm), Major in Finance, Concordia University – 2008

Professional Experience

- ▶ 2008: Institutional Investment Analyst at Industrielle Alliance
- ▶ 2007: Junior Analyst (Oil & Gas) at Standard Life



Dominic Tremblay, CFA
Senior Analyst, Global Equities

Dominic is a member of the Global Equity team and is a Senior Analyst for the U.S., International and Global Equity strategies.

Educational Background

- ▶ Chartered Financial Analyst (CFA) – 2009
- ▶ Master in Finance (M.Sc.), Université de Sherbrooke – 2006
- ▶ Bachelor of Business Administration (BBA), Major in finance, Université de Sherbrooke – 2003

Professional Experience

- ▶ 2007 – 2009: Investment Analyst, US Equities at Fleming Vanar Asset Management
- ▶ 2005 – 2007: Financial Analyst, Venture Capital at Multiple Capital Inc.
- ▶ 2004 : Financial Analyst, Venture capital, at Innovatech

Biographies



Ivana Miladinovic, CFA
Analyst, Global Equities

Ivana is a member of the Global Equity team and is an Analyst for the U.S., International and Global Equity strategies.

Educational Background

- ▶ Bachelor of Commerce (B.Comm.) in Finance, Concordia University – 2010

Professional Experience

- ▶ 2011 – 2015: Analyst, Canadian and Global Equities at Montrusco Bolton Investments
- ▶ 2010 – 2011: Analyst, Investment Banking at Bank of America Merrill Lynch



Wen Qing Xu,
Junior Analyst, Global Equities

Wen Qing Xu is a member of the Global Equity team and is a Junior Analyst for the U.S., International and Global Equity strategies.

Educational Background

- ▶ Bachelor of Commerce (B.Comm.) in Finance, McGill University – 2015

Professional Experience

- ▶ 2014 – 2015: Credit Analyst Intern, Crystalline Management
- ▶ 2013: Assistant to the Director of Operations, Bank of China

Biographies



Ayssar Fernandez **Junior Analyst, Global Equities**

Ayssar is a member of the Global Equity team and is a Junior Analyst for the U.S., International and Global Equity strategies.

Educational Background

- ▶ Bachelor of Commerce (B.Comm.) in Finance, Concordia University – 2017

Professional Experience

- ▶ 2015 – 2017: Fund Manager & Class Valedictorian in the Montreal Kenneth Woods Portfolio Management Program
- ▶ 2016: Intern Research Analyst, Global Equities at Fiera Capital
- ▶ 2015: Intern Analyst, Private Equity at Novacap
- ▶ 2015: Intern, Investment Banking at Scotiabank

Biographies



Laura Cohen, CFA
Global Equity Specialist

Laura serves as a liaison between the Global Equity investment team and other business teams. This position is intended to ensure the investment team is exclusively focused on investment management. In addition, she serves as the dedicated ESG specialist.

Educational Background

- ▶ Chartered Financial Analyst (CFA) – 2014
- ▶ Bachelor of Science (B.Sc.), Actuarial Mathematics and Finance, Concordia University – 2009

Professional Experience

- ▶ 2015-2016: Senior Analyst, Institutional Markets at Fiera Capital
- ▶ 2012 – 2015 : Senior Analyst, Investment Consulting at Aon Hewitt
- ▶ 2011 – 2012 :Analyst, Pension Administration at Aon Hewitt
- ▶ 2009 – 2011 :Analyst, Pension Administration at Morneau Shepell



Important Disclosures

Important Disclosures



Performance and Fees

Past performance is no guarantee of future results. Inherent in any investment is the potential for loss.

Charts and graphs herein are provided as illustrations only and are not meant to be guarantees of any return.

Allocations

Strategy details, holdings and allocations, and characteristics are as of the date noted and subject to change. Portfolio composition percentages relating to equities are subject to change. While the manager may adjust or reallocate the strategy's assets among securities, add or eliminate securities, such decisions are based on the manager's subjective view of various market factors, and may not produce the intended investment performance. It should not be assumed that the holdings identified were or will be profitable. The information provided in this presentation should not be considered a recommendation to purchase or sell any particular security. There is no assurance that any securities discussed herein will remain in an account's portfolio at the time the report is received, or that securities sold have not been repurchased. The securities discussed do not represent an account's entire portfolio. The information presented should not be viewed as a current or past recommendation or a solicitation of an offer to buy or sell any securities or investment products or to adopt any investment strategy. Nothing contained herein should be construed as legal, tax, accounting or investment advice.

Top 10 Holdings

Top 10 holdings are based on size of the position in the portfolio. The specific holdings identified are not representative of all holdings and it should not be assumed that the holdings identified were or will be profitable.

Research Examples

Fundamental research examples are the three largest holdings for the strategy as of year end. Position size is reviewed and updated at the end of each fiscal year.

Participating Affiliate Arrangement

Fiera Capital Inc. ("FCI") is a wholly-owned affiliate of Fiera Capital Corporation ("FCC"). FCC is a Canadian investment management firm whose stock trades on the Toronto Stock Exchange under the symbol FSZ. In connection with providing services to U.S. clients, FCI will use the resources of FCC acting in its capacity as our "participating affiliate," in accordance with applicable guidance of the staff of the U.S. Securities and Exchange Commission (the "SEC"). These resources will specifically include, without limitation, the use of the investment personnel of the FCC Global Equity Team set forth on this presentation.

All discussions in this presentation concerning investment advice, performance and process are with respect to the activities of the FCC Global Equity Team, unless indicated otherwise. All such personnel of FCC will be treated as persons "associated with" FCI as that term is defined by the Investment Advisers Act of 1940, as amended) in connection with the provision of any investment advisory services provided by such team members to U.S. clients.

FCC does not provide investment advisory services, or offer investment funds, in the United States or to U.S. persons. Investment advisory services for U.S. persons are provided by FCC's U.S. affiliate, FCI. FCI is an SEC-registered investment adviser. Registration with the SEC does not imply a certain level of skill or training.

Fiera Group Of Companies

Each member of the Fiera Group of companies only provides investment advisory services or offers investment funds in the jurisdictions where such member and/or the relevant product is registered or authorized to provide such services pursuant to an exemption from such registration. These include the entities listed below. Where an entity operates under an exemption from registration (the "Exempt Entities"), only its jurisdiction of incorporation is listed. Details on the particular registration and offering exemptions for the Exempt Entities' activities are available upon request.

Fiera Capital Corporation – Canada, registered: (i) in the categories of exempt market dealer and portfolio manager in all Provinces and Territories of Canada (ii) in the category of investment fund manager in the Provinces of Ontario, Québec, Newfoundland and Labrador; (iii) as a commodity trading manager pursuant to the Commodity Futures Act (Ontario), (iv) as an adviser under the Commodity Futures Act (Manitoba) and, (v) in Québec, as derivatives portfolio manager pursuant to the Derivatives Act (Québec);

Fiera Capital Inc. – United States, registered as (i) an investment adviser with the U.S. Securities and Exchange Commission (the "SEC") and (ii) a commodity pool operator with the U.S. Commodity Futures Trading Commission. Registration with the SEC does not imply a certain level of skill or training.

Forward-Looking Statements

This presentation contains statements which constitute forward-looking statements. These statements may include statements regarding the intent, belief or current expectations of FCI and/or FCC with respect to, among other things: (i) the diversification of the portfolio; (ii) the ability to identify investment opportunities; and (iii) the performance of various investments. Prospective investors are cautioned that any such forward-looking statements are not guarantees of future performance and involve risks and uncertainties, and that actual results may differ materially from those in the forward-looking statements as a result of various factors.

Important Disclosures



Performance Statistics

Beta, standard deviation, information ratio, Sharpe ratio, up-market capture ratio, down-market capture ratio and other measures presented herein are used for measurement or comparison purposes and only as a reference for prospective investors to evaluate the investment strategy and the accompanying risk/reward ratios. Other metrics are available and should be considered prior to investment as those provided herein are the subjective choice of the manager and not guaranteed to accurately predict investment results. The weighting of such subjective factors in a different manner would likely lead to different conclusions.

Market Capture Ratio represents the manager's performance relative to the broad market benchmark. The Up/Down Market Capture Ratio is calculated by dividing the return of the manager during the up/down market periods by the return of the market during the same periods. A market is considered an Up/Down market if the return for the benchmark is greater/less than zero. Batting average represents the frequency of outperformance relative to the broad market benchmark. This ratio is calculated by dividing the number of periods where the manager equals or outperforms the broad market benchmark by the total number of periods. It is not possible to invest directly in an index. Investors pursuing a strategy similar to an index may experience higher or lower returns and will bear the cost of fees and expenses that will reduce returns.

General Disclosures

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Any opinions expressed in this presentation may be subject to change without notice. Although statements of fact and data contained in this presentation have been obtained from, and are based upon, sources that FCI believes to be reliable, FCI does not guarantee their accuracy, and any such information may be incomplete or condensed. No representation is made that the information contained herein is accurate or complete, and it may not be relied upon as such.

Indices and Definitions

Porter's Five Forces – Porter's Five Forces model, named after Michael E. Porter, identifies and analyzes five competitive forces that shape every industry, and helps determine an industry's weaknesses and strengths. These forces are: competition in the industry, potential of new entrants into the industry, power of suppliers, power of customers, and threat of substitute products.

Benchmark indices are provided so that a strategy's performance can be compared with the performance of well-known and widely recognized indices. A strategy's holdings may differ significantly from the securities that comprise the index. It is not possible to invest directly in an index. Investors pursuing a strategy similar to an index may experience higher or lower returns and will bear the cost of fees and expenses that will reduce returns.

MSCI World Index – The MSCI World Index is a stock market index made up of approximately 1,600 global stocks. It is often used as a common benchmark for 'world' or 'global' stock funds. The index comprises a collection of stocks of all the developed markets in the world, as defined by MSCI. The index includes stocks from 23 countries but excludes stocks from emerging and frontier economies. Index results assume the re-investment of all dividends and capital gains.

MSCI ACWI – The MSCI ACWI Index is a stock market index made up of approximately 2,500 global stocks. It is often used as a common benchmark for 'world' or 'global' stock funds. The index includes stocks from 23 developed market and 23 emerging market countries and covers approximately 85% of the global investable equity opportunity set, as defined by MSCI. Index results assume the re-investment of all dividends and capital gains.

Composite Description

Global Equity is a growth at reasonable price (GARP) equity strategy managed by Fiera for long-term appreciation through investment in quality global companies with a solid business model and potential for dividend growth. The strategy seeks to provide consistent outperformance versus the benchmark by buying the best companies at attractive valuations, knowing them well, monitoring them closely, and holding them over the long term. The composite, created in October 2009, is composed of all discretionary accounts (including pooled funds) with assets of \$5 million or greater. The accounts included in the composite reflect all accounts managed by the Global Equity Team in the Global Equity strategy and benchmarked against MSCI World, which includes accounts managed by the team for FCC itself and for FCI through its participating affiliate arrangement with FCC. None of the accounts in the composite use leverage.

eVestment Universe Definition

Global Large Cap Equity - Actively-managed Global, ACWI, or Global ex-Japan Equity products that primarily invest in large capitalization stocks regardless of the style (growth, value, or core) focus.

WALTER SCOTT

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EQUITY INVESTING: University of Maine System, 28 May 2019

WALTER SCOTT

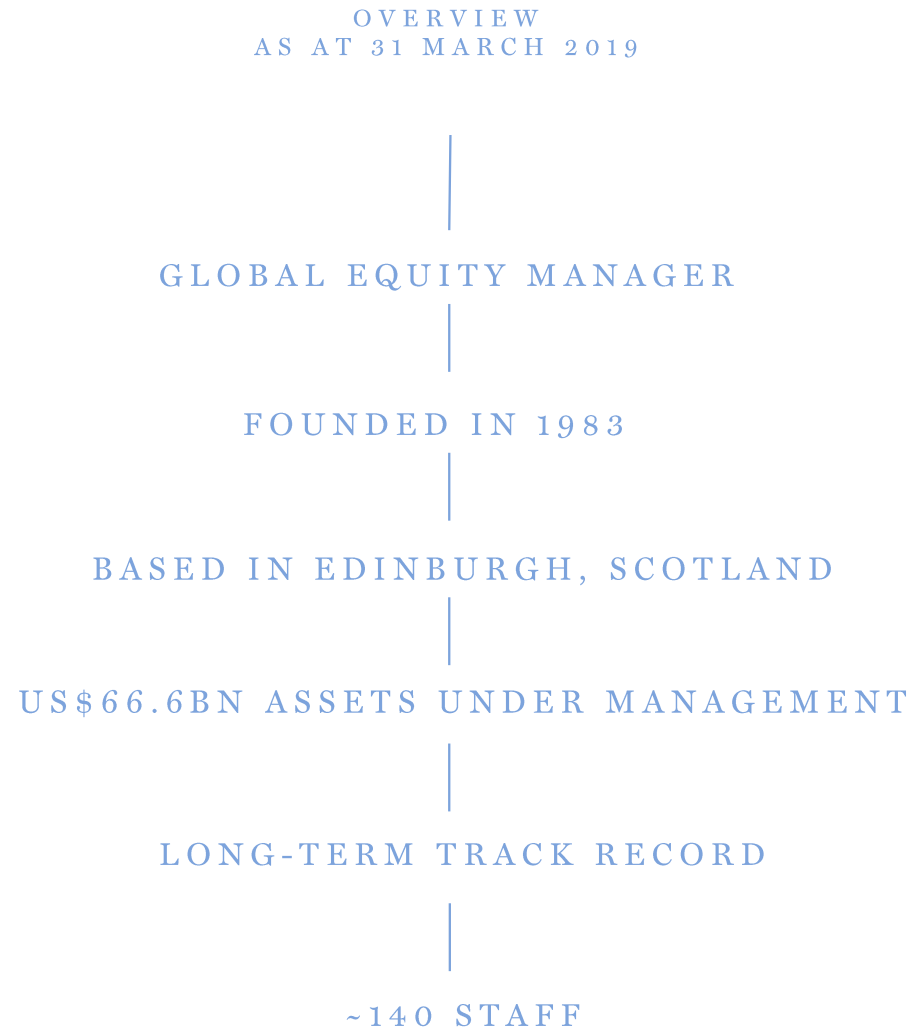
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Walter Scott has a simple objective –
to preserve and grow our clients' assets over the long term.

We analyse companies from all over the world to find businesses
which meet our rigorous investment criteria and standards.

We have followed this research-driven approach for over 35 years
and believe it is as applicable today as ever.



Source: Walter Scott

INVESTMENT STAFF
AS AT 31 MARCH 2019

STAFF	Investment team of 44 located in Edinburgh
STRUCTURE	19 members of research team, structured in three regional groups
TRAINING	Home-grown bias, two-year research apprenticeship
TENURE	Low staff turnover. Investment Management Committee membership average 16 years with firm, 20 years in industry
OUTCOME	Breadth and depth of knowledge and expertise

Bound together by the firm's consistent philosophy, process and culture

INVESTMENT TEAM
AS AT 31 MARCH 2019

Jane Henderson
Managing Director

Roy Leckie
Investment Director

Charles Macquaker
Investment Director

Investment Executive

Alex Torrens & Alan Edington*
Co-Heads of Research

EMEA
Fiona MacRae
Tom Miedema
Paul Loudon
Gareth Evans
Laura Clark

Americas
Lindsay Scott
Fraser Fox
Yuanli Chen
Jamie Zegleman
Matthew Gerlach
Joseph Friedland

Asia
Des Armstrong
Alan Lander
Maxim Skorniakov
Ashley-Jane Kitchen

Research Team

The wider investment team includes Investment Operations, a Desk Assistant, Dealing, Portfolio Implementation, Cash Management and Client Service not listed here.

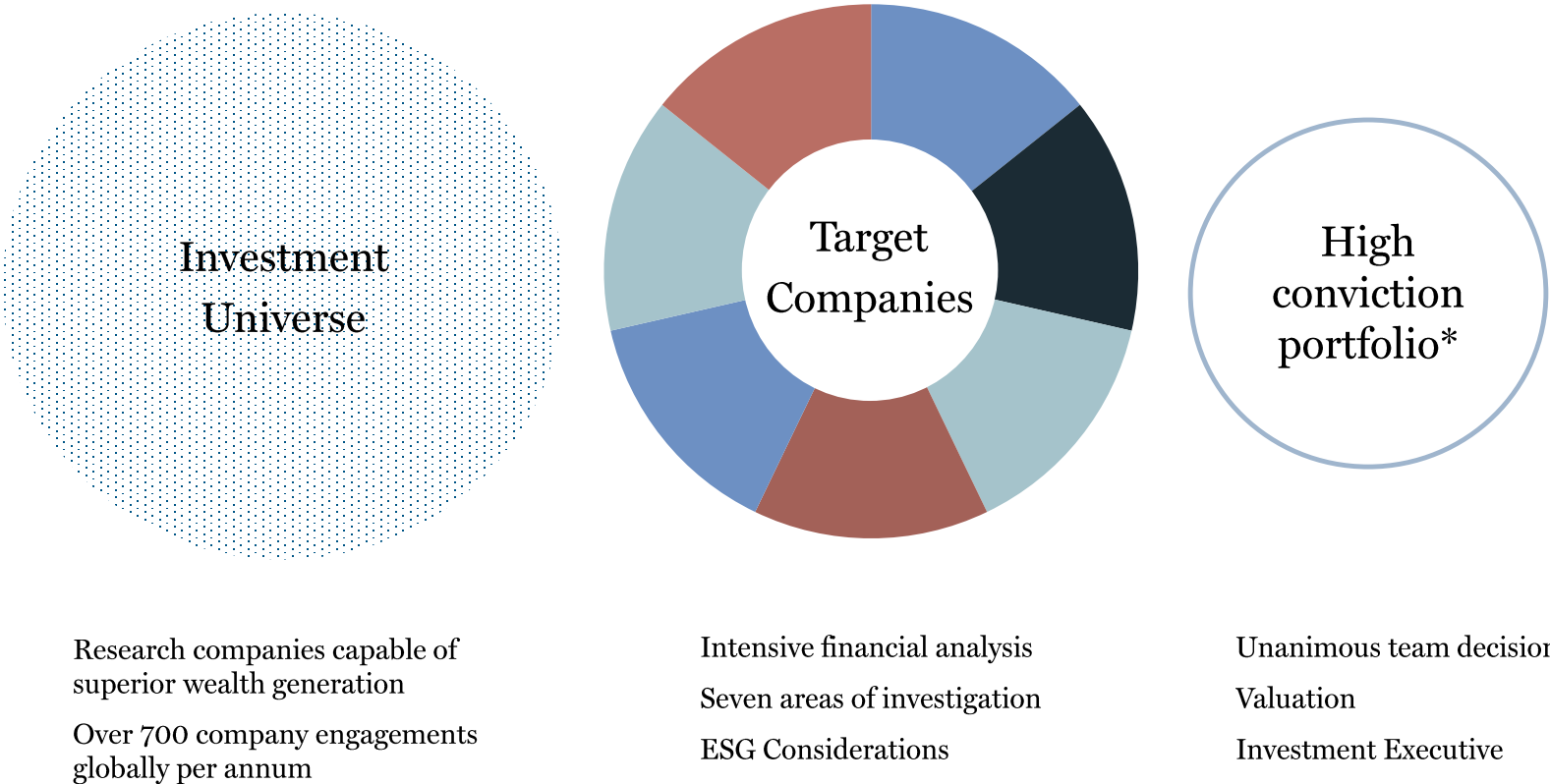
*Alex Torrens is in the EMEA team, Alan Edington is in the Asia team.

INVESTMENT PHILOSOPHY

OBJECTIVE	Real returns over the long term
STATEMENT	Company wealth generation drives investor return
APPROACH	Bottom-up, fundamental, collective, research driven
TARGET	Companies capable of sustainable wealth generation

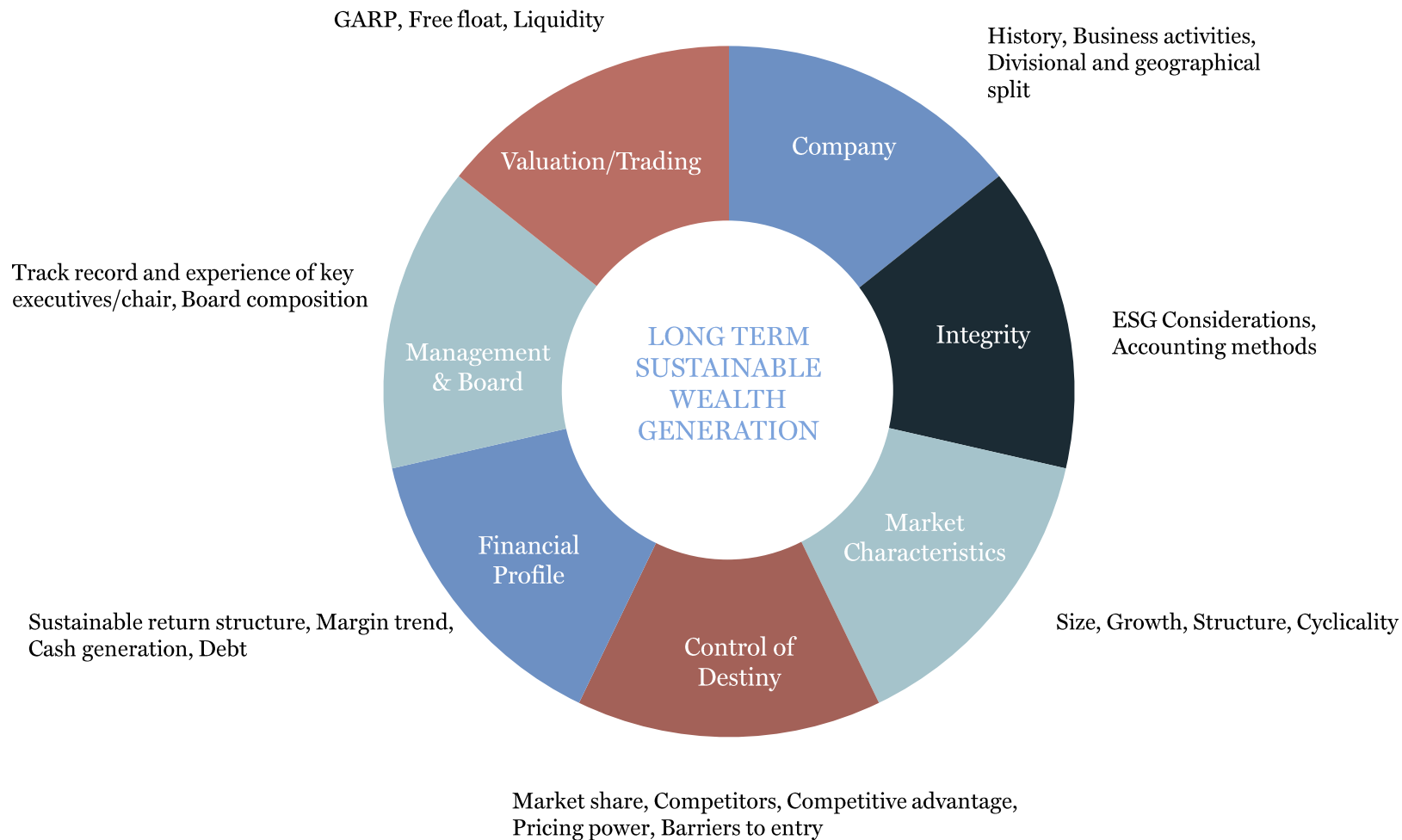
‘Buy and hold’ strategy requires patience and time

RESEARCH PROCESS



*Portfolios will typically include 40-60 stocks.
A small number of strategies designed to meet particular client requests have greater or fewer stocks.

SEVEN AREAS OF INVESTIGATION



INVESTMENT DECISION

All decisions subject to the scrutiny of the investment team

Unanimous team decision

BUY

SELL

FUNDAMENTAL

Single dissenter

Breakdown of purchase rationale

RISK MANAGEMENT

5% single stock exposure

Performance

Valuation



Investment Executive

Team-based discussion and debate

DISTRIBUTION: BY SECTOR AND REGION
AS AT 31 MARCH 2019

Sector	Portfolio %	MSCI World %	Difference %
Information technology	25.2	15.9	9.3
Healthcare	22.0	12.9	9.1
Consumer discretionary	14.7	10.4	4.3
Consumer staples	9.3	8.6	0.7
Energy	5.9	6.0	-0.1
Utilities	3.0	3.4	-0.4
Materials	3.5	4.6	-1.1
Real estate	0.0	3.3	-3.3
Communication services	4.4	8.3	-3.9
Industrials	6.8	11.1	-4.3
Financials	3.2	15.6	-12.4
Liquidity	2.0		2.0

Region	Portfolio %	MSCI World %	Difference %
Emerging Markets	3.9	0.0	3.9
Asia Pacific ex Japan	8.1	4.3	3.8
Europe ex UK	18.2	15.6	2.6
Rest of World	0.0	0.2	-0.2
Japan	7.7	8.2	-0.5
UK	5.3	5.8	-0.5
Canada	1.7	3.5	-1.8
United States	53.1	62.4	-9.3
Liquidity	2.0		2.0

Source: Walter Scott, MSCI. A representative global USD portfolio was used to illustrate this strategy. Sector and regional distribution are subject to change and may not be representative of future portfolio composition. Please refer to the appendix for important information and related portfolio holding and allocations in section 17.2.

TOP TEN HOLDINGS
AS AT 31 MARCH 2019

COMPANY	WEIGHT %
AIA Group	3.2
Keyence	2.9
Stryker Corporation	2.8
Mastercard	2.7
Microsoft Corporation	2.6
TJX Companies	2.4
Adobe	2.4
Edwards Lifesciences	2.4
Waters Corporation	2.4
NIKE	2.4
TOTAL	26.2

Source: Walter Scott. A representative global USD portfolio was used to illustrate this strategy. The information provided should not be considered a recommendation to purchase or sell any particular security. There is no assurance that any securities discussed herein will remain in a portfolio at the time this report is received or that securities sold have not been repurchased. Please refer to the appendix for important information and related portfolio holding and allocations in section 17.2.

INVESTMENT EXAMPLES

INTUITIVE SURGICAL



COMPASS GROUP



AIA GROUP



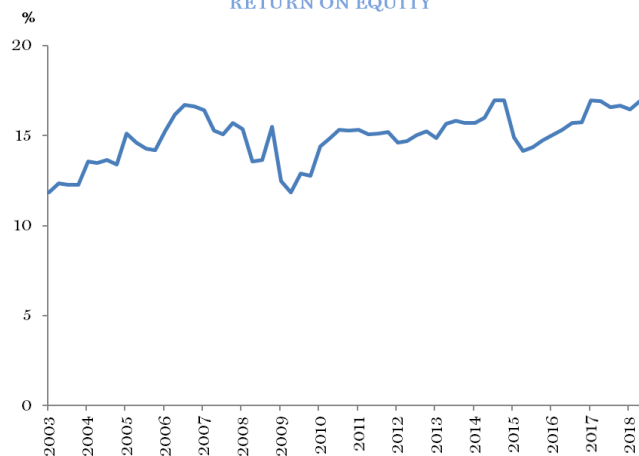
CISCO SYSTEMS



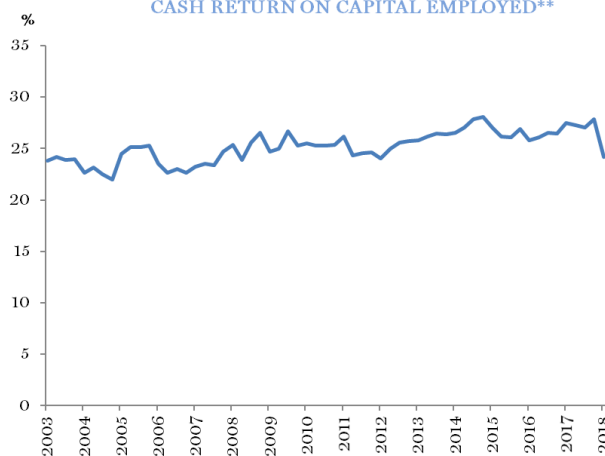
Source: Walter Scott, Google Images, Shutterstock. The investment examples have been selected to discuss relevant and topical aspects that demonstrate the firm's approach to stock selection, with financial metrics secondary and performance largely irrelevant. The information provided should not be considered a recommendation to purchase or sell any particular security. There is no assurance that any securities discussed herein will remain in a portfolio at the time this report is received or that securities sold have not been repurchased. Please refer to the appendix for important information and related portfolio holding and allocations in section 17.2.

GLOBAL PORTFOLIO CHARACTERISTICS AS AT 31 MARCH 2019

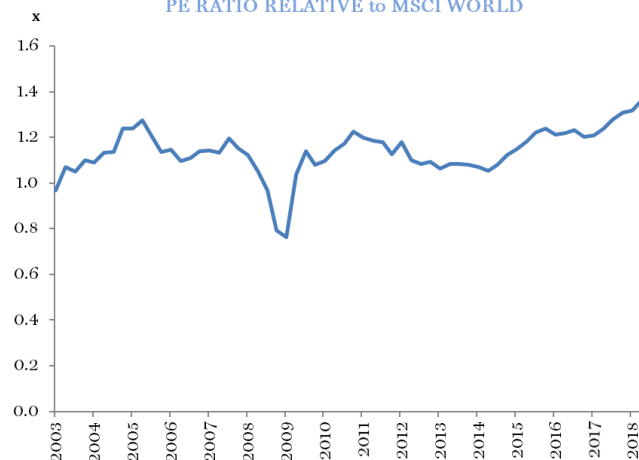
RETURN ON EQUITY



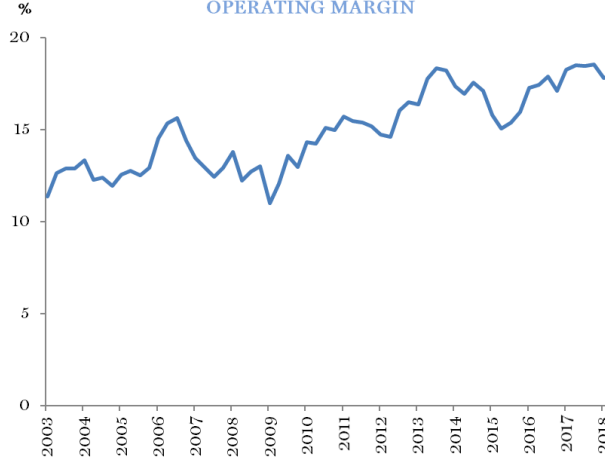
CASH RETURN ON CAPITAL EMPLOYED**



PE RATIO RELATIVE to MSCI WORLD



OPERATING MARGIN



	Representative Portfolio	MSCI World
ROE*	16.9%	12.9%
CROCE**	24.6%	16.1%
Operating Margin	18.0%	11.4%
Net Debt to Equity***	20%	92%
P/E	24.3x	17.8x
Dividend Yield	1.7%	2.5%
Number of securities	54	1,635
Turnover (12 mths)	6%	-
Active Share	87%	-

	Representative Portfolio	MSCI World
ROE*	16.9%	12.9%
CROCE**	24.6%	16.1%
Operating Margin	18.0%	11.4%
Net Debt to Equity***	20%	92%
P/E	24.3x	17.8x
Dividend Yield	1.7%	2.5%
Number of securities	54	1,635
Turnover (12 mths)	6%	-
Active Share	87%	-

Source: Walter Scott, FactSet. A representative global portfolio was used to illustrate this strategy. *Walter Scott defined methodology which may vary from MSCI index figures. **Cash Return on Capital Employed calculation excludes Financials and Real Estate holdings. ***Net Debt to Equity ex Financials. Past performance is not a guide to future performance and returns may also increase or decrease as a result of currency fluctuations. Full details of characteristics calculation methodology available upon request. Please refer to the appendix for Active Share definition in section 17.2.

WALTER SCOTT USD COMPOSITE PERFORMANCE SCHEDULE
AS AT 31 MARCH 2019

PERCENTAGE RETURNS IN USD, ANNUALISED FROM TWO YEARS ONWARDS

Period	Quarter	One Year	Three Years	Five Years	Ten Years	Fifteen Years	Twenty Years	Twenty-Five Years	Thirty Years
Walter Scott Global Equities	15.6	13.2	15.0	10.5	13.8	10.2	9.8	10.5	10.9
MSCI World (ndr)	12.5	4.0	10.7	6.8	12.4	6.8	4.8	7.0	6.8
Walter Scott International Equities [#]	11.5	4.9	11.8	7.2	10.9	8.1	7.7	7.9	8.8
MSCI EAFE (ndr)	10.0	-3.7	7.3	2.3	9.0	5.1	3.9	4.9	4.5
Walter Scott Europe Equities [*]	12.2	4.9	9.8	5.3	12.4	9.0	-	-	-
MSCI Europe	10.8	-3.7	6.6	1.0	8.9	5.2	-	-	-
Walter Scott USA Equities	15.2	14.8	16.4	11.6	15.7	-	-	-	-
MSCI USA (ndr)	13.7	8.8	12.9	10.1	15.2	-	-	-	-
Walter Scott Emerging Markets Equities	11.0	-5.6	7.6	3.0	9.5	10.1	10.3	-	-
MSCI Emerging Markets (ndr) ^{**}	9.9	-7.4	10.7	3.7	8.9	7.9	8.4	-	-
Walter Scott USA Dividend Growth Equities	13.3	11.3	9.3	8.8	14.5	-	-	-	-
MSCI USA (ndr)	13.7	8.8	12.9	10.1	15.2	-	-	-	-
Walter Scott International Dividend Growth Equities ^{##}	11.1	4.3	8.0	5.3	10.6	-	-	-	-
MSCI EAFE (ndr)	10.0	-3.7	7.3	2.3	9.0	-	-	-	-
Walter Scott Pacific Equities	10.5	-3.3	12.2	-	-	-	-	-	-
MSCI Pacific (ndr)	8.5	-3.9	8.8	-	-	-	-	-	-

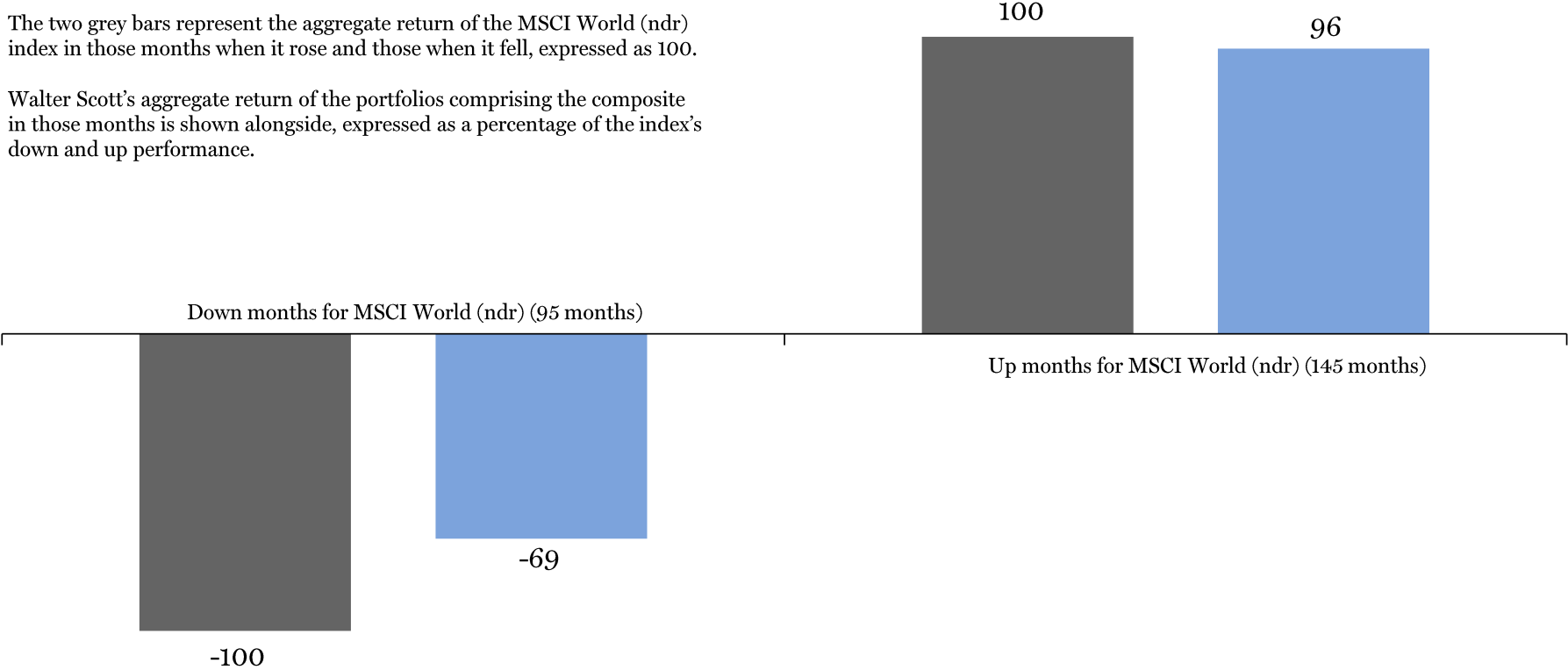
Walter Scott claims compliance with the Global Investment Performance Standards (GIPS®). Performance is shown gross of investment management fees.

Source: Walter Scott, MSCI. [#]Walter Scott International USD Equities is also known as the Walter Scott EAFE USD Equities Composite. ^{##}Walter Scott International Dividend Growth Equities USD Composite is also known as the Walter Scott EAFE Dividend Growth Equities USD Composite. As of 29 October 2018, the Walter Scott EAFE Income Growth Equities Composite has been renamed the Walter Scott EAFE Dividend Growth Equities Composite and the Walter Scott USA Income Growth Equities Composite has been renamed the Walter Scott USA Dividend Growth Equities Composite. ^{*}Walter Scott Europe Equities EUR Composite currency converted from euros to US dollars. ^{**}Prior to 1st January 2001, data for MSCI Emerging (gdr) is used, as MSCI Emerging (ndr) was not yet in existence. Past performance is not a guide to future performance and returns may also increase or decrease as a result of currency fluctuations. Please refer to the appendix for important information and related performance disclosure in section 17.4.

WALTER SCOTT GLOBAL EQUITIES USD COMPOSITE CAPTURE RATIOS
TWENTY YEARS TO 31 MARCH 2019

The two grey bars represent the aggregate return of the MSCI World (ndr) index in those months when it rose and those when it fell, expressed as 100.

Walter Scott’s aggregate return of the portfolios comprising the composite in those months is shown alongside, expressed as a percentage of the index’s down and up performance.



Source: Walter Scott, MSCI. Returns are shown in USD. Past performance is not a guide to future performance and returns may also increase or decrease as a result of currency fluctuations. Please refer to the appendix for important information and related performance disclosure in section 17.4.

WALTER SCOTT GLOBAL EQUITIES USD COMPOSITE
AS AT 31 MARCH 2019

Reporting Currency: US dollars
Gross of Management Fees
Creation Date: 1 January 1986

Period	Composite Return (%)	MSCI World Return (ndr) (%)	Composite 3 Yr Standard Deviation (%)	Benchmark 3 Yr Standard Deviation (%)	Composite Internal Dispersion (%)*	No. of Portfolios in Composite at Period End	Composite Assets (Millions)	% of Total Firm Assets
Q1 2019	15.6	12.5	10.0	9.9	0.2	48	15,167	22.8
2018	-0.6	-8.7	10.0	10.4	0.4	48	13,282	22.6
2017	26.4	22.4	9.6	10.2	0.8	51	14,715	22.1
2016	6.9	7.5	10.1	10.9	0.5	52	12,985	22.2
2015	1.6	-0.9	10.1	10.8	0.8	51	12,728	21.6
2014	4.0	4.9	9.6	10.2	0.5	53	15,033	22.0
2013	21.2	26.7	11.6	13.5	1.1	58	15,361	21.8
2012	19.1	15.8	14.5	16.7	0.6	52	10,676	18.6
2011	-2.2	-5.5	15.7	20.2	0.6	45	7,241	15.4
2010	12.5	11.8	19.6	23.7	0.7	38	5,943	13.2
2009	34.5	30.0	17.3	21.4	1.5	32	4,016	12.5
2008	-29.7	-40.7	15.4	17.0	0.9	29	2,459	11.8
2007	12.5	9.0	9.1	8.1	1.1	28	4,225	12.3
2006	16.4	20.1	9.3	7.6	0.8	26	3,596	11.6
2005	20.1	9.5	10.1	9.7	1.4	23	2,308	9.6
2004	20.2	14.7	12.3	14.7	0.8	15	1,426	9.6

Walter Scott claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Walter Scott has been independently verified for the periods 1 January 1994 through 31 December 2018. The verification report is available upon request. 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. Verification does not ensure the accuracy of any specific composite presentation. Past performance is not a guide to future performance and returns may also increase or decrease as a result of currency fluctuations. Please refer to the appendix for important information and related performance disclosure in section 15.

Source: Walter Scott, MSCI. *Internal dispersion is not appropriate for less than five portfolios.

WALTER SCOTT EAFE EQUITIES USD COMPOSITE
AS AT 31 MARCH 2019

Reporting Currency: US dollars
Gross of Management Fees
Creation Date: 1 July 1985

Period	Composite Return (%)	MSCI EAFE Return (ndr) (%)	Composite 3 Yr Standard Deviation (%)	Benchmark 3 Yr Standard Deviation (%)	Composite Internal Dispersion (%)*	No. of Portfolios in Composite at Period End	Composite Assets (Millions)	% of Total Firm Assets
Q1 2019	11.5	10.0	9.6	10.3	0.3	33	13,028	19.6
2018	-6.8	-13.8	10.3	11.2	0.6	33	11,646	19.8
2017	28.2	25.0	11.2	11.8	0.6	35	13,563	20.4
2016	5.6	1.0	11.7	12.5	0.6	41	11,226	19.2
2015	1.2	-0.8	11.5	12.5	0.6	42	11,808	20.1
2014	-3.0	-4.9	11.1	13.0	0.5	45	13,686	20.1
2013	13.7	22.8	13.2	16.3	0.9	46	13,968	19.8
2012	21.8	17.3	15.3	19.4	0.7	46	13,034	22.7
2011	-8.8	-12.1	16.8	22.4	0.8	48	10,932	23.2
2010	14.2	7.8	20.4	26.2	1.2	47	11,587	25.7
2009	32.6	31.8	18.5	23.6	1.9	43	8,655	27.0
2008	-31.2	-43.4	16.3	19.2	0.9	41	5,545	26.5
2007	12.8	11.2	9.7	9.4	1.0	42	8,734	25.5
2006	20.8	26.3	10.2	9.3	1.3	53	10,484	33.9
2005	18.2	13.5	10.7	11.4	0.9	55	8,846	36.8
2004	19.7	20.2	12.6	15.4	1.4	44	4,633	31.2

Walter Scott claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Walter Scott has been independently verified for the periods 1 January 1994 through 31 December 2018. The verification report is available upon request.

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. Verification does not ensure the accuracy of any specific composite presentation. Past performance is not a guide to future performance and returns may also increase or decrease as a result of currency fluctuations. Please refer to the appendix for important information and related performance disclosure in section 15.

Source: Walter Scott, MSCI. Walter Scott International Equities is also known as the Walter Scott EAFE Equities Composite. *Internal dispersion is not appropriate for less than five portfolios.

WALTER SCOTT EUROPE EQUITIES EUR COMPOSITE
AS AT 31 MARCH 2019

Reporting Currency: Euro
Gross of Management Fees
Creation Date: 1 January 2003

Period	Composite Return (%)	MSCI Europe Return (ndr) (%)	Composite 3 Yr Standard Deviation (%)	Benchmark 3 Yr Standard Deviation (%)	Composite Internal Dispersion (%)*	No. of Portfolios in Composite at Period End	Composite Assets (Millions)	% of Total Firm Assets
Q1 2019	14.2	12.8	10.2	9.9	-	2	187	0.3
2018	-0.4	-10.6	9.7	9.9	-	2	186	0.4
2017	10.1	10.2	11.9	12.9	-	1	40	0.1
2016	4.4	2.6	11.6	13.0	-	1	46	0.1
2015	16.6	8.2	10.9	12.5	-	1	44	0.1
2014	5.5	6.8	6.7	9.0	-	1	39	0.1
2013	14.7	19.8	9.0	12.2	-	1	36	0.1
2012	19.9	17.3	9.4	13.1	-	1	24	0.1
2011	-1.9	-8.1	11.9	16.9	-	1	20	0.1
2010	24.6	11.1	17.0	20.8	-	2	120	0.4
2009	36.3	31.6	16.6	20.1	-	2	133	0.6
2008	-32.8	-43.6	14.5	16.2	-	2	90	0.6
2007	2.6	2.7	8.5	8.7	-	2	124	0.5
2006	18.9	19.6	8.2	7.4	-	3	258	1.1
2005	24.9	26.1	10.5	11.3	-	3	241	1.2
2004	15.1	12.2	-	-	-	2	152	1.4

Walter Scott claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Walter Scott has been independently verified for the periods 1 January 1994 through 31 December 2018. The verification report is available upon request.

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. Verification does not ensure the accuracy of any specific composite presentation. Past performance is not a guide to future performance and returns may also increase or decrease as a result of currency fluctuations. Please refer to the appendix for important information and related performance disclosure in section 15.

Source: Walter Scott, MSCI. *Internal dispersion is not appropriate for less than five portfolios.

WALTER SCOTT USA EQUITIES USD COMPOSITE
AS AT 31 MARCH 2019

Reporting Currency: US dollars
Gross of Management Fees
Creation Date: 1 March 2000

Period	Composite Return (%)	MSCI USA Return (ndr) (%)	Composite 3 Yr Standard Deviation (%)	Benchmark 3 Yr Standard Deviation (%)	Composite Internal Dispersion (%)*	No. of Portfolios in Composite at Period End	Composite Assets (Millions)	% of Total Firm Assets
Q1 2019	15.2	13.7	11.2	10.6	-	3	254	0.4
2018	0.1	-5.0	10.9	10.9	-	3	220	0.4
2017	27.4	21.2	8.9	10.0	-	3	267	0.4
2016	11.5	10.9	9.6	10.6	-	3	214	0.4
2015	-0.5	0.7	9.8	10.5	-	4	313	0.5
2014	5.9	12.7	8.7	9.1	-	5	397	0.6
2013	31.4	31.8	11.3	12.0	-	3	262	0.4
2012	11.7	15.3	14.6	15.2	-	3	227	0.4
2011	6.2	1.4	16.5	18.6	-	3	224	0.5
2010	13.7	14.8	19.0	21.9	-	4	245	0.5
2009	32.4	26.3	16.4	19.6	-	2	62	0.2
2008	-24.1	-37.6	-	-	-	2	52	0.3
2007	13.3	5.4	-	-	-	3	94	0.3
1 Jan 2003 to 30 Nov 2003	15.1	22.1	8.4	17.9	-	1	16	0.2
2002	-5.9	-23.1	-	-	-	1	17	0.7

The Walter Scott USA composite consisted of a single USA equity portfolio from 1 March 2000 until 30 November 2003 and from 1 January 2007 has consisted of one or more USA equity portfolios.

Walter Scott claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Walter Scott has been independently verified for the periods 1 January 1994 through 31 December 2018. The verification report is available upon request.

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. Verification does not ensure the accuracy of any specific composite presentation. Past performance is not a guide to future performance and returns may also increase or decrease as a result of currency fluctuations. Please refer to the appendix for important information and related performance disclosure in section 15.

Source: Walter Scott, MSCI. *Internal dispersion is not appropriate for less than five portfolios.

WALTER SCOTT EMERGING MARKETS EQUITIES USD COMPOSITE
AS AT 31 MARCH 2019

Reporting Currency: US dollars

Gross of Management Fees

Creation Date: 1 December 1997

Period	Composite Return (%)	MSCI Emerging Markets Return (ndr) (%)	Composite 3 Yr Standard Deviation (%)	Benchmark 3 Yr Standard Deviation (%)	Composite Internal Dispersion (%)*	No. of Portfolios in Composite at Period End	Composite Assets (Millions)	% of Total Firm Assets
Q1 2019	11.0	9.9	11.4	12.8	-	3	121	0.2
2018	-14.7	-14.6	12.2	14.6	-	2	48	0.1
2017	28.4	37.3	12.4	15.4	-	4	199	0.3
2016	9.2	11.2	13.7	16.1	0.3	6	204	0.3
2015	-9.0	-14.9	12.5	14.1	0.8	6	180	0.3
2014	-4.4	-2.2	13.3	15.0	0.4	6	286	0.4
2013	-0.6	-2.6	16.1	19.0	-	5	246	0.3
2012	21.1	18.2	18.4	21.5	-	4	164	0.3
2011	-13.6	-18.4	22.0	25.8	-	3	103	0.2
2010	18.9	18.9	26.8	32.6	-	3	80	0.2
2009	72.5	78.5	25.9	32.3	-	2	35	0.1
2008	-38.3	-53.3	22.8	28.7	-	2	20	0.1
2007	37.4	39.4	14.2	18.1	-	2	33	0.1
2006	36.4	32.1	13.6	17.3	-	2	25	0.1
2005	28.4	34.0	12.4	16.4	-	2	21	0.1
2004	26.9	25.6	12.8	17.6	-	1	14	0.1

Walter Scott claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Walter Scott has been independently verified for the periods 1 January 1994 through 31 December 2018. The verification report is available upon request.

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. Verification does not ensure the accuracy of any specific composite presentation. Past performance is not a guide to future performance and returns may also increase or decrease as a result of currency fluctuations. Please refer to the appendix for important information and related performance disclosure in section 15.

Source: Walter Scott, MSCI. *Internal dispersion is not appropriate for less than five portfolios.

WALTER SCOTT USA DIVIDEND GROWTH EQUITIES USD COMPOSITE
AS AT 31 MARCH 2019

Reporting Currency: US dollars

Gross of Management Fees

Creation Date: 1 August 2006

Period	Composite Return (%)	MSCI USA Return (ndr) (%)	Composite 3 Yr Standard Deviation (%)	Benchmark 3 Yr Standard Deviation (%)	Composite Internal Dispersion (%)*	No. of Portfolios in Composite at Period End	Composite Assets (Millions)	% of Total Firm Assets
Q1 2019	13.3	13.7	10.1	10.6	-	2	551	0.8
2018	-4.5	-5.0	9.9	10.9	-	2	477	0.8
2017	15.4	21.2	8.8	10.0	-	2	479	0.7
2016	11.6	10.9	9.5	10.6	-	2	365	0.6
2015	0.9	0.7	9.7	10.5	-	2	356	0.6
2014	8.8	12.7	8.1	9.1	-	3	448	0.7
2013	32.5	31.8	9.6	12.0	-	3	438	0.6
2012	11.8	15.3	12.5	15.2	-	3	343	0.6
2011	7.8	1.4	15.3	18.6	-	3	333	0.7
2010	15.0	14.8	17.9	21.9	-	3	397	0.9
2009	27.3	26.3	15.7	19.6	-	2	159	0.5
2008	-25.8	-37.6	-	-	-	2	78	0.4
2007	12.4	5.4	-	-	-	2	47	0.1
2006**	8.3	11.8	-	-	-	1	30	0.1

Walter Scott claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Walter Scott has been independently verified for the periods 1 January 1994 through 31 December 2018. The verification report is available upon request.

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. Verification does not ensure the accuracy of any specific composite presentation. Past performance is not a guide to future performance and returns may also increase or decrease as a result of currency fluctuations. Please refer to the appendix for important information and related performance disclosure in section 15.

Source: Walter Scott, MSCI. As of 29 October 2018, the Walter Scott USA Income Growth Equities Composite has been renamed the Walter Scott USA Dividend Growth Equities Composite. *Internal dispersion is not appropriate for less than five portfolios. **Returns are for the period 1 August 2006 through 31 December 2006.

WALTER SCOTT EAFE DIVIDEND GROWTH EQUITIES USD COMPOSITE
AS AT 31 MARCH 2019

Reporting Currency: US dollars

Gross of Management Fees

Creation Date: 1 February 2006

Period	Composite Return (%)	MSCI EAFE Return (ndr) (%)	Composite 3 Yr Standard Deviation (%)	Benchmark 3 Yr Standard Deviation (%)	Composite Internal Dispersion (%)*	No. of Portfolios in Composite at Period End	Composite Assets (Millions)	% of Total Firm Assets
Q1 2019	11.1	10.0	8.9	10.3	-	1	16	0.0
2018	-8.4	-13.8	9.3	11.2	-	1	14	0.0
2017	23.4	25.0	9.8	11.8	-	1	15	0.0
2016	4.3	1.0	10.5	12.5	-	1	12	0.0
2015	-2.4	-0.8	10.5	12.5	-	1	17	0.0
2014	2.4	-4.9	10.3	13.0	-	1	23	0.0
2013	10.3	22.8	12.0	16.3	-	1	23	0.0
2012	21.1	17.3	14.2	19.4	-	1	22	0.0
2011	-6.0	-12.1	15.5	22.4	-	1	19	0.0
2010	17.7	7.8	20.2	26.2	-	1	23	0.1
2009	31.6	31.8	18.5	23.6	-	1	20	0.1
2008	-34.9	-43.4	-	-	-	1	16	0.1
2007	12.3	11.2	-	-	-	1	26	0.1
2006**	27.5	19.0	-	-	-	1	23	0.1

Walter Scott claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Walter Scott has been independently verified for the periods 1 January 1994 through 31 December 2018. The verification report is available upon request.

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. Verification does not ensure the accuracy of any specific composite presentation. Past performance is not a guide to future performance and returns may also increase or decrease as a result of currency fluctuations. Please refer to the appendix for important information and related performance disclosure in section 15.

Source: Walter Scott, MSCI. As of 29 October 2018, the Walter Scott EAFE Income Growth Equities Composite has been renamed the Walter Scott EAFE Dividend Growth Equities Composite. Walter Scott International Dividend Growth Equities USD Composite is also known as the Walter Scott EAFE Dividend Growth Equities USD Composite.

*Internal dispersion is not appropriate for less than five portfolios. **Returns are for the period 1 February 2006 through 31 December 2006.

WALTER SCOTT PACIFIC EQUITIES USD COMPOSITE
AS AT 31 MARCH 2019

Reporting Currency: US dollars
Gross of Management Fees
Creation Date: 1 May 2015

Period	Composite Return (%)	MSCI Pacific Return (ndr) (%)	Composite 3 Yr Standard Deviation (%)	Benchmark 3 Yr Standard Deviation (%)	Composite Internal Dispersion (%)*	No. of Portfolios in Composite at Period End	Composite Assets (Millions)	% of Total Firm Assets
Q1 2019	10.5	8.5	10.6	9.9	-	1	72	0.1
2018	-9.2	-12.0	11.8	11.4	-	1	65	0.1
2017	27.6	24.6	-	-	-	1	73	0.1
2016	11.6	4.2	-	-	-	1	61	0.1
2015**	-9.0	-7.7	-	-	-	1	55	0.1

Walter Scott claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Walter Scott has been independently verified for the periods 1 January 1994 through 31 December 2018. The verification report is available upon request.

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. Verification does not ensure the accuracy of any specific composite presentation. Past performance is not a guide to future performance and returns may also increase or decrease as a result of currency fluctuations. Please refer to the appendix for important information and related performance disclosure in section 15.

Source: Walter Scott, MSCI. *Internal dispersion is not appropriate for less than five portfolios. **Returns are for the period 1 May 2015 through 31 December 2015.

WALTER SCOTT

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On behalf of us all,
thank you.

APPENDIX

1. DEFINITION OF FIRM

Walter Scott & Partners Limited (“Walter Scott”) is an investment management firm authorised and regulated in the United Kingdom by the Financial Conduct Authority in the conduct of investment business. Walter Scott is a non-bank subsidiary of The Bank of New York Mellon Corporation. Walter Scott is responsible for portfolios managed on behalf of pension plans, endowments and similar institutional investors. Total assets under management were US\$66.6 billion as at 31 March 2019.

2. PRIVACY NOTICE

Personal information may be collected by Walter Scott following attendance at, or registration to attend, a Walter Scott, affiliate or partner event and will be used solely for the purpose of facilitating the provision of investment management services and managing business relationships. For more information about how Walter Scott collects, uses and shares personal information and an individual's legal rights (including opt-out rights), please see the full privacy notice which is available on the website: www.walterscott.com/privacy-policy.

3. FIRM COMPOSITES

Walter Scott constructs composites of portfolios invested in equities. They include US dollar composites for EAFE, Global, European and Emerging Markets mandates, Canadian dollar composites for EAFE and Global mandates, and a number of others.

Composites include all portfolios managed by Walter Scott where the company has full discretionary authority. No non-fee paying portfolios are included in the composites presented in this report. Portfolios where Walter Scott acts in an advisory only role are excluded from composites.

Composite figures in this presentation are extracted from one or more of the composites reports prepared by Walter Scott in compliance with the Global Investment Performance Standards (GIPS). The effective date of compliance of the Firm with GIPS standards is 1 January 1994.

4. CALCULATION METHODOLOGY

Performance results are calculated on a total return time weighted basis and include all portfolio income, unrealised and realised capital gains, contributions and withdrawals and are geometrically linked. Cash and cash equivalents are included in total portfolio assets and in the return calculations. Trade date accounting is used for valuations. For periods less than one year, rates of return are not annualised.

The composite shown is an aggregation of portfolios representing a similar investment strategy. Composites are size-weighted using beginning of period values to weight portfolio returns. Portfolios are included in a composite beginning with the first full month of performance and until the month immediately prior to termination of an account.

Annualised return represents the level annual rate which, if earned each year in a multiple-year period, would produce the actual cumulative rate of return over the whole period.

5. FEES AND TRADING EXPENSES

Composites are net of trading expenses, administrative fees and non-reclaimable withholding taxes on dividends and interest. Withholding taxes vary depending upon the country of investment, which typically range between 0% and 30%. Benchmark returns are net of withholding taxes on dividends unless otherwise stated. Performance results net of fees are available on request.

6. INTERNAL DISPERSION

The internal dispersion measure presented is the equal-weighted standard deviation of the annual returns of all the portfolios that were included in the composite for the entire period, but is not appropriate for less than five portfolios.

7. COMPOSITE CREATION DATE

The composite creation date is the date on which Walter Scott first grouped portfolios to create the composite.

8. MINIMUM PORTFOLIO VALUE

From 1 October 2014, a minimum asset level for inclusion in all composites has been set at US\$2m or composite currency equivalent. Portfolios that have previously been below this level must maintain a market value greater than US\$2m for three consecutive month-ends prior to being included in the composite (from the following month). Similarly, if a portfolio's market value has dropped below this threshold, the month-end market value must remain below this level for three consecutive month-ends before being excluded from the next month.

9. STANDARD DEVIATION

The three-year annualised standard deviation measures the variability of the composite and the benchmark returns over the preceding 36-month period. The standard deviation is not presented when monthly returns were not available throughout the full 36-month period.

10. EXCHANGE RATES

WM/Reuters Closing Spot rates (taken at 4pm London time) are used in portfolio and composite level return calculations. Prior to 1 October 2014, composite return calculations were based on custodian exchange rates at the individual portfolio level. This created additional transient dispersion between the returns of portfolios which make up the composite. Benchmark data also uses the WM/Reuters Closing Spot rates.

11. LEVERAGE, DERIVATIVES AND SHORT POSITIONS

Walter Scott does not generally use derivatives, but American style currency options have been used occasionally for hedging purposes (most recently held in 2007). Walter Scott does not use leverage or short positions.

APPENDIX

12. FIRM POLICIES

Policies for valuing portfolios, calculating performance, and preparing compliant presentations are available upon request.

13. BENCHMARK DEFINITIONS

Walter Scott compares its composites against the published MSCI indices as shown in this presentation. Further information on these indices can be found at: www.msci.com

14. COMPOSITE DESCRIPTIONS

Walter Scott applies the same investment philosophy and process across all portfolios, regardless of size, mandate type or base currency.

Walter Scott uses broad inclusion criteria for its composites. Some composites may contain portfolios that have ethical or other investment restrictions, and portfolios that are subject to different tax regimes. Although these mandate differences can lead to some performance dispersion within composites, Walter Scott believes that its composite methodology accurately reflects the firm's investment record. The returns for each composite are shown alongside the relevant benchmark.

Walter Scott has been independently verified from 1 January 1994. Performance data for the full history of some composites has not been shown. This information is available on request.

A description of each composite included in this report follows. A full list of the firm's composite descriptions is available on request.

Walter Scott Global Equities USD

This composite includes all global equity portfolios with a US dollar base currency that have broadly similar mandates and guidelines.

Walter Scott EAFE Equities USD

This composite includes all global ex USA equity portfolios with a US dollar base currency that have broadly similar mandates and guidelines.

Walter Scott Europe Equities EUR

This composite includes all European equity portfolios with a euro base currency that have broadly similar mandates and guidelines.

Walter Scott USA Equities USD

This composite includes all USA equity portfolios with a US dollar base currency that have broadly similar mandates and guidelines.

Walter Scott Emerging Markets Equities USD

This composite includes all emerging market equity portfolios with a US dollar base currency that have broadly similar mandates and guidelines.

Walter Scott USA Dividend Growth Equities USD

This composite includes all US dollar based USA equity portfolios that are managed with an emphasis on dividend growth that have broadly similar mandates and guidelines.

Walter Scott EAFE Dividend Growth Equities USD

This composite includes all US dollar based global ex USA equity portfolios that are managed with an emphasis on dividend growth that have broadly similar mandates and guidelines.

Walter Scott Pacific Equities USD

This composite includes all Pacific equity portfolios with a US dollar base currency that have broadly similar mandates and guidelines.

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15. FEE SCHEDULE

Unless otherwise stated, returns are calculated gross of advisory fees, and include the reinvestment of dividends. The effect of advisory fees could be material. If the advisory fees were reflected, the performance shown would be lower. As an example of the effect of investment advisory fees on the total value of an account, a three year compound return before the deduction of investment advisory fees of 14.75% would be 13.61% after investment advisory fees of 1.00% per annum.

Investment advisory fees are described in more detail in Part II of Form ADV for Walter Scott. An example of the current US\$ fees charged to a portfolio included in the composite are set forth below.

Segregated Accounts:	%	Commingled Accounts:	%
Initial funding in excess of US\$100m		NCS LLC – Global/Intl ^{2,3}	
On the first US\$100m	0.75	Flat fee	0.75
Thereafter	0.50		
		NCS LLC – EM ^{2,3}	
Initial funding in excess of US\$250m		Flat fee	0.95
On the first US\$250m	0.55		
Next US\$250m	0.50	NCS Group Trust – Global/Intl ^{2,4}	
Next US\$250m	0.45	On the first US\$100m	0.75
Next US\$250m	0.40	Thereafter	0.50
Thereafter	0.35		
		Assets in excess of US\$175m ^{2,5}	
Initial funding in excess of US\$500m		On the first US\$100m	0.70
On the first US\$500m	0.50	Thereafter	0.50
Next US\$250m	0.45		
Next US\$250m	0.40	NCS Group Trust – EM ²	
Thereafter	0.35	Assets less than US\$100m	
		On the first US\$50m	0.95
Initial funding less than US\$100m ¹		Next US\$25m	0.85
On the first US\$50m	0.95	Thereafter	0.60
Next US\$25m	0.85		
Thereafter	0.60	NCS Group Trust – USA ²	
		On the first US\$100m	0.70
		Thereafter	0.50
Segregated Dividend Growth Accounts:			
Capital fee rate: 30bps of AUM and;			
Income fee rate: 10% of dividend yield			

Notes:

1. Applicable for strategies other than Global and International
2. Fund pays custody and other expenses
3. No other fees are applicable in these funds
4. Emerging Markets if assets in excess of US\$100m
5. Emerging Markets if assets in excess of US\$175m

16. COMPLIANCE STATEMENT

Communication of performance figures reflected in this document must be on a one-on-one basis, private and of a confidential nature. They may not be disseminated to the public in any print, electronic or other medium, including a web-site or any database of general circulation. The following disclosures must be provided in writing when onwardly communicating these performance figures.

- Unless otherwise stated performance figures do not reflect the deduction of investment advisory fees.
- Returns will be reduced by investment advisory fees and any other expenses that may be incurred in the management of an account.

17. IMPORTANT INFORMATION

17.1 Walter Scott's Investment Approach

This presentation contains certain statements based on Walter Scott's experience and expectations about the markets in which it invests its portfolios and about the methods by which it causes its portfolios to be invested in those markets. Those statements are not guaranties of future performance and are subject to many risks, uncertainties and assumptions that are difficult to predict. The information in this presentation is subject to change and Walter Scott has no obligation to revise or update any statement herein for any reason. The opinions expressed in this presentation are those of Walter Scott and should not be construed as investment advice.

17.2 Portfolio Holdings and Allocations

To derive ten largest holdings, characteristics, economic sector weightings, country weightings and portfolio holdings for presentation purposes, Walter Scott has identified a representative institutional account to be used as a proxy for this strategy.

Portfolio data should not be relied upon as a complete listing of the portfolio's holdings (or top holdings) as information on particular holdings may be withheld. Portfolio holdings are subject to change without notice and may not represent current or future portfolio composition. The portfolio date is 'as of' the date indicated.

The information provided in this document should not be considered a recommendation to purchase or sell any particular security. There is no assurance that any securities discussed herein will remain in a portfolio at the time this report is received or that securities sold have not been repurchased. The securities discussed do not represent an entire portfolio and in the aggregate may represent only a small percentage of a portfolio holdings.

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It should not be assumed that any of the securities transactions or holdings discussed were or will prove to be profitable, or that the investment recommendations or decisions Walter Scott make in the future will be profitable or will equal the investment performance of the securities discussed herein.

The allocation distribution and actual percentages may vary from time to time. The types of investments presented in the allocation chart will not always have the same comparable risks and returns. The actual performance of the portfolio will depend on Walter Scott's ability to identify and access appropriate investments, and balance assets to maximise return while minimising its risk. The actual investments in the portfolio may or may not be the same or in the same proportion as those shown above.

Active Share: measures the percentage of a fund that is invested in securities, or is weighted, differently from the benchmark index, in an attempt to outperform, and can range from 0% (tracks index exactly) to 100% (completely active versus benchmark). Depending on the index and asset class, it indicates the degree to which a portfolio's weightings vary from its stated Primary benchmark. Active Share may be a useful metric for investors to consider, along with other information, to evaluate whether to invest in a particular fund, but it does not serve as a predictor of excess return or manager skill.

17.3 Third Party Sources

Some information contained herein has been obtained from third party sources that are believed to be reliable, but the information has not been independently verified by Walter Scott. Walter Scott makes no representations as to the accuracy or the completeness of such information and has no obligation to revise or update any statement herein for any reason.

17.4 Performance Statement

Past performance is not a guide to future returns and returns may increase or decrease as a result of currency fluctuations. The objective mentioned may therefore not be reached. Many factors affect investment performance including changes in market conditions, interest rates, currency fluctuations, exchange rates and in response to other economic, political, or financial developments. Investment return and principal value of an investment will fluctuate, so that when an investment is sold, the amount returned may be less than that originally invested. This presentation does not represent and must not be construed as an offer or a solicitation of an offer to buy or sell securities, commodities and/or any other financial instruments or products. This presentation may not be used for the purpose of an offer or solicitation in any jurisdiction or in any circumstances in which such offer or solicitation is unlawful or not authorised.

Some of the data included reflects performance and characteristics of the assets of other accounts managed by Walter Scott, (collectively, the "Other Accounts"). Such assets are managed with a similar investment philosophy and process to the Global Equity strategy. Performance information of the Other Accounts is presented gross of management fees and expenses that would be applicable to fund investors. There may be material differences between the Global Equity strategy and the Other Accounts and their respective investment strategies. Therefore, information from the Other Accounts is included for illustrative purposes only and should not be relied upon when making an investment decision.

17.5 Performance Indices

Comparisons to the indices have limitations because the volatility and material characteristics of the indices represented in this presentation may be materially different from that of the portfolio managed by Walter Scott. Because of these differences, investors should carefully consider these limitations when evaluating the performance in comparison to benchmark data as provided herein. Where referencing MSCI or any other index performance figures:

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The term 'sector' in this document is a contraction of 'GICS Sector' unless explicitly noted otherwise.

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17.6 Benchmark Definitions

MSCI World

The MSCI World Index is a broad global equity benchmark that represents large and mid-cap equity performance across 23 developed markets countries. It covers approximately 85% of the free float-adjusted market capitalisation in each country and MSCI World benchmark does not offer exposure to emerging markets. Further information can be found at www.msci.com

MSCI EAFE (Europe, Australasia, Far East)

The MSCI EAFE Index is designed to represent the performance of large and mid-cap securities across 21 developed markets, including countries in Europe, Australasia and the Far East, excluding the US and Canada. The Index is available for a number of regions, market segments/sizes and covers approximately 85% of the free float-adjusted market capitalisation in each of the 21 countries. Further information can be found at www.msci.com

MSCI Europe

The MSCI Europe Index represents the performance of large and mid-cap equities across 15 developed countries in Europe. The Index has a number of sub-indexes which cover various sub-regions market segments/sizes, sectors and covers approximately 85% of the free float-adjusted market capitalisation in each country. Further information can be found at www.msci.com

MSCI USA

The MSCI USA Index is designed to measure the performance of the large and mid cap segments of the US market. With 631 constituents, the index covers approximately 85% of the free float-adjusted market capitalisation in the US. Further information can be found at www.msci.com

MSCI Emerging Markets

The MSCI Emerging Markets Index consists of 24 countries representing 10% of world market capitalisation. The Index is available for a number of regions, market segments/sizes and covers approximately 85% of the free float-adjusted market capitalisation in each of the 24 countries. Further information can be found at www.msci.com

MSCI Pacific

The MSCI Pacific Index captures large and mid cap representation across 5 Developed Markets (DM) countries in the Pacific region. With 470 constituents, the index covers approximately 85% of the free float-adjusted market capitalisation in each country. Further information can be found at www.msci.com

17.7 Private Fund Information and Risks

The interests in a private fund (the "Fund" or "Interests") have not been approved or disapproved by the U.S. Securities and Exchange Commission (the "SEC") or by the securities regulatory authority of any state or of any other jurisdiction. The Interests have not been registered under the Securities Act of 1933, as amended (the "Securities Act"), the securities laws of any other state or the securities laws of any other jurisdiction, nor is such registration contemplated. The Fund will not be registered as an investment company under the Investment Company Act of 1940, as amended (the "1940 Act"). Consequently, limited partners of the Fund are not afforded the protections of the 1940 Act.

This material is for use with qualified investors only, and not for use with the general public. Accordingly, this document must not be acted on or relied on by persons who are not qualified persons. The Interests are offered only to qualified investors who do not require immediate liquidity of the investment. An investment in the Fund does not constitute a complete investment program. Investors must fully understand and be willing to assume the risks involved in the Fund's investment program.

This presentation shall not constitute an offer to sell or the solicitation of any offer to buy Interests, which may only be made at the time a qualified offeree receives a confidential offering memorandum describing the offering and related subscription agreement. These securities shall not be offered or sold in any jurisdiction in which such offer, solicitation or sale would be unlawful until the requirements of the laws of such jurisdiction have been satisfied.

This material is confidential and not to be reproduced or redistributed in whole or in part without the prior written consent of the manager. The information in this presentation is only as current as the date indicated, and may be superseded by subsequent market events or for other reasons. Nothing contained herein constitutes investment, legal, tax or other advice nor is it to be relied on in making an investment or other decision.

BNY Mellon Investment Management Cayman Ltd., (the "Manager") a Cayman Islands exempted company, serves as Manager to the Fund and is responsible for the overall management of the Fund. The Manager has delegated day-to-day portfolio management responsibility of the Fund to Walter Scott (the "Investment Manager").

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Investments in private funds are speculative and involve special risks. Investments in private funds may be suitable only for certain investors. The following is not an inclusive list of all risk factors applicable to hedge funds and private funds: Funds often engage in investment practices that may increase the risk of investment loss. An investor could lose all or a substantial portion of his or her investment. Private funds are generally not subject to the same regulatory oversight and/or regulatory requirements as mutual funds. Due to the fund's tax structure, it may take longer to distribute important tax information. Funds may not be required to provide daily valuation information to investors. Performance may be volatile. There can be no assurance that a fund's objectives will be met. Fees and expenses may offset an investor's profits. The investment adviser has total discretion over strategy selection and allocation decisions. A lack of manager and/or strategy diversification may result in higher risk. There is generally no secondary market for an investor's interest in a privately-offered fund. Any potential risk factors discussed in connection with this presentation are not intended to be a complete list of risks associated with an investment in any fund. A more comprehensive description of the private fund's investment philosophy and the potential risk factors are outlined in the offering memorandum of each private fund.

17.8 Placement Agent

Securities offered through MBSC Securities Corporation, a registered broker dealer. MBSC Securities Corporation, BNY Mellon Investment Management Cayman Ltd. and Walter Scott are wholly owned subsidiaries of The Bank of New York Mellon Corporation. BNY Mellon Investment Management is one of the world's leading investment management organisations and one of the top U.S. wealth managers, encompassing BNY Mellon's affiliated investment management firms, wealth management services and global distribution companies. BNY Mellon is the corporate brand of The Bank of New York Mellon Corporation and may also be used as a generic term to reference the Corporation as a whole or its various subsidiaries generally. Products and services may be provided under various brand names and in various countries by subsidiaries, affiliates, and joint ventures of The Bank of New York Mellon Corporation where authorised and regulated as required within each jurisdiction.

Personnel of certain of our BNY Mellon affiliates may act as: (i) registered representatives of MBSC Securities Corporation (in its capacity as a registered broker-dealer) to offer securities, (ii) officers of the Bank of New York Mellon (a New York chartered bank) to offer bank-maintained collective investment funds and (iii) associated persons of MBSC Securities Corporation (in its capacity as a registered investment adviser) to offer separately managed accounts managed by BNY Mellon Investment Management firms.

17.9 Important notice to Municipal Entities or Obligated Persons regarding advice on the investment of municipal securities proceeds.

MBSC Securities Corporation ("MBSC") is dually registered as an investment adviser and broker-dealer under the federal securities laws, and provides investment advisory services or brokerage services, respectively, in those capacities. Despite certain similarities of these services, there are important differences in the contractual relationship and legal duties to clients when acting in those different capacities. Thus, MBSC or Walter Scott will only provide advice on the investment of municipal proceeds in its capacity as registered investment adviser and not as a broker-dealer; such advice ends before any securities transaction is effected by MBSC as a broker-dealer. MBSC's or Walter Scott's Form ADV Part 2 is available upon request or at www.adviserinfo.sec.gov

17.10 Collective Investment Funds

The Bank of New York Mellon (the "Bank"), a New York state chartered banking institution, is the discretionary trustee for its bank-maintained collective investment funds including the BNY Mellon Walter Scott Global Equity Fund (the "Fund"). The Bank is responsible for the management of the Fund, including the custody of Fund assets. The Bank is a wholly owned subsidiary of The Bank of New York Mellon Corporation. The Bank serves as a fiduciary to the Fund under the Employee Retirement Income Security Act of 1974, as amended ("ERISA"). The Fund is maintained by the Bank as a collective trust fund for the purposes of Section 3(c)(11) of the Investment Company Act of 1940. The Bank has appointed Walter Scott to act as the discretionary sub-advisor to the Fund. As a bank-maintained collective investment fund, the Fund and its units are not registered under federal and state securities laws in reliance upon applicable exemptions. Because the Fund is not a mutual fund, it is governed by different regulations, restrictions and disclosure requirements. For example, the Fund is subject to banking and tax regulations which, among other things, limit participation to certain eligible qualified retirement plans (stock bonus, retirement, pension and profit sharing accounts) and government plans where BNY Mellon or an affiliate is a trustee, investment manager, custodian or directed agent.

Walter Scott claims compliance with the Global Investment Performance Standards (GIPS®). The Bank does not claim compliance with GIPS®.

WALTER SCOTT

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AGENDA ITEM SUMMARY

1. **NAME OF ITEM:** Updated Investment Policy Statements
2. **INITIATED BY:** Kelly A. Martin, Chair
3. **BOARD INFORMATION:** **BOARD ACTION:** X
4. **OUTCOME:** **BOARD POLICY:**
 Primary Outcomes: Section 709 - Investments
 Enhance fiscal positioning

5. **BACKGROUND:**

NEPC and University of Maine System staff have reviewed and updated the Investment Policy Statements (IPS) for the Managed Investment Pool, Pension Fund and Operating Fund. The policies, with tracking changes and with changes accepted, are included for your review and approval. Updates include changes related to asset allocations and to recognize the approved endowment distribution rate for FY20.

6. **TEXT OF PROPOSED RESOLUTION:**

That the Board of Trustees, acting through the Investment Committee, approves the updated Investment Policy Statements for the Managed Investment Pool, Pension Fund and Operating Fund.

May 17, 2019

University of Maine System
Executive Summary - Investment Guidelines and Objectives
Managed Investment Pool (Including Endowments)
Approved by Investment Committee ~~June 14~~ May 28, 2019⁸

Minimum Long Term Return Assumption: 7.50%

Risk Tolerance: Moderate

FY1~~8~~7 and FY1⁹8 Spending Policy 4.50%¹

Asset Allocation:

<u>ASSET CLASS</u>	<u>TARGET %</u>	<u>PERMISSIBLE RANGE %</u>	<u>TARGET BENCHMARK</u>
Equity	4555%	3545 - 5565%	
Domestic Large Cap	46 22	17 9 - 20 2 7	S&P 500
Domestic Small/Mid Cap	6 8	0 3 - 40 1 3	Russell 2500
International	42-5 13	6-8 - 46 1 8	MSCI EAFE
International Small Cap	3-5 5	0 - 7 1 0	MSCI EAFE SC
Emerging	7 3 .5	0 - 40 7	MSCI EM
<u>Emerging Small Cap</u>	3.5	0 - 7	<u>MSCI EM SC</u>
Fixed Income	2424%	1315 - 2935%	
Domestic Core	5 7	20 - 40 1 2	<u>BBGBarc US AggregateBarclays Capital Aggregate</u>
Bank Loans	5	0 - 10	Credit Suisse Leveraged Loan
TIPS	8 3 .5	3 0 - 43 7	<u>BBGBarc US TIPSBarclays-US TIPS</u>
<u>Short Term TIPS</u>	3.5	0 - 7	
Absolute Return Fixed Income	3 5	0 - 6 1 0	<u>BBGBarc US 0-5 Year TIPS</u> 3 Month Libor
Other	3421%	2410 - 4430%	
Global Asset Allocation	23 1 5	16 1 0 - 30 2 0	65% MSCI ACWI (Net) / 35% <u>BBGBarc Global Agg65% MSCI-All Country-World (net)/</u> 35% <u>Barclays Capital Global Aggregate</u>
Real Assets	3 0	0 - 6	NCREIF Timberland
Hedge Funds	6	0 - 10	<u>HFRI Fund of Funds Composite IndexCredit Suisse Long Short</u>
Private Equity	2 0	0 - 5	<u>Equity</u> Cambridge Private Equity 1 Quarter Lag
Cash	0%	0 - 10%	

Evaluation Benchmarks:

Total return for the Pool shall be regularly compared to the Allocation Index* and the Policy Index**. While it is anticipated that there will be fluctuations in the Pool's value, the Pool assets should at a minimum produce a nominal long-term rate of return of 7.50%.

¹ 4.5% spending rate for fiscal year 20~~19~~19 was approved by the Board of Trustees at their December January 29~~20~~20, 2019-2018 meeting. Of this rate, 125 basis points is charged (unless expressly prohibited by the donor) for management and administration by the University of Maine and the University of Southern Maine while UMS Governance and University Services charges 25 basis points. Such fees are charged on each entity's respective endowments only. The resulting endowment distribution rate for FY20~~19~~19 is \$14.95~~78~~765570. The FY1⁹8 spending rate was also 4.5% equating to a rate per share of \$14.95~~78~~74513366.

The investment performance of money managers shall be measured against the investment performance of other managers with similar investment styles (e.g., Large cap growth equity manager against other large cap growth managers). Furthermore, investment performance will also be measured against an appropriate index benchmark (e.g., small cap equity managers will be measured against the Russell 2000 Index).

*Allocation Index: Calculated by taking the actual asset class weights, at the previous month end, multiplied by the return of the respective passive benchmark over the current month. Measures the effectiveness of deviating from target weights.

**Policy Index: Calculated by taking the target asset class weights times the return of the respective passive benchmark (calculated monthly). Measures the effectiveness of Pool Structure.

University of Maine System
Investment Guidelines and Objectives
Managed Investment Pool (Including Endowments)
Approved by Investment Committee ~~June 14~~ May 28, 2019⁸

INTRODUCTION

This statement of Investment Guidelines and Objectives was developed to assist the University of Maine System (UMS) in carrying out its fiduciary responsibilities related to funds held for others and for the conservation and use of the assets of the Endowment Fund.

The System uses a pooled investment approach. The Managed Investment Pool (The "Pool") includes the following four components:

- Endowments of the University of Maine System (except where the donor requires the funds to be separately invested) and endowments for:
 - University of Maine at Fort Kent Foundation,
 - University of Southern Maine Foundation,
 - John L. Martin Scholarship Fund, Inc.,
- The University of Maine School of Law Foundation,
- The UMS Other Post Employment Benefit (OPEB) Trust, and
- Maine Maritime Academy endowments.

These guidelines are issued for the guidance of fiduciaries and other interested parties, including the Investment Committee of the Board of Trustees (the Committee), investment managers, internal management, third party investors, and consultants in the course of investing the assets of the Pool. The guidelines may be amended by the Committee both upon their own initiative and upon consideration of the advice and recommendations of the investment managers and fund professionals. Proposed modifications should be documented in writing to the Committee.

To this end, the investment guidelines will:

- Establish formal but flexible investment parameters that incorporate prudent asset allocation and achievable total return goals.
- Outline the investment responsibilities of the Committee, the investment managers, the custodian, and the investment consultant.
- Provide a mechanism for regular communication between UMS and all parties with responsibility for fund investments.

The investment goals and objectives for the Managed Investment Pool and hence investment decisions, are determined for the benefit of the UMS. The Pool is operated under the guidelines set forth herein and applicable laws.

It is expected that these guidelines will be reviewed at least annually to ensure that it continues to provide effective guidelines for the management of the Pool.

ENDOWMENT FUNDS

The UMS Endowment Fund has been established in order to support the operations of the institution.

[Spending Policy \(Approved by BOT Investment Committee effective for distributions beginning in FY2010\)](#)

For budget purposes, the annual spending amount is calculated using a 3-year market value average with a % spending rate applied. The Committee will annually approve the endowment spending rate and resulting distribution amount per share.

THIRD PARTY INVESTORS

The University may allow affiliated or non-affiliated organizations to invest in the Pool if in its judgment the acceptance of assets of a particular entity by the Pool can be said to further public higher education in Maine and to serve the educational needs of citizens of Maine. Such criteria is consistent with the purpose of UMS as broadly stated in its charter "to maintain and support a cohesive structure of public higher education in the State of Maine..." and with the Board's duty to "[p]lan strategies for programs and allocation of resources that most effectively serve the educational needs of the citizens of this State."

Any entity permitted to invest in the Pool must agree to the terms and conditions specified in the University of Maine System Managed Investment Pool Custodial and Investment Agreement. Assets accepted for investment by the Pool from outside the UMS typically will be assets of the general endowment fund or other funds of a charitable organization but may also be other funds as described in the sub-paragraphs of section 3(c)(10)(B) of the Investment Company Act of 1940.

Notwithstanding investment by third parties in the Pool, the investment goals and objectives of the Pool are determined for the benefit of the UMS and, as a result, the investment interests and decisions of the Pool on behalf of UMS may not always coincide with those of third party investors.

STATEMENT OF GOALS AND OBJECTIVES

The statement of Investment Guidelines and Objectives is set forth to provide an appropriate set of goals and objectives for the Pool's assets and to define guidelines within which the investment managers may formulate and execute their investment decisions.

Within the specific guidelines presented below, the investment managers shall exercise full investment discretion. However, assets must be managed with the care, skill, prudence and diligence that a prudent investment professional in similar circumstances would exercise. Investment practices must comply with the applicable laws and regulations.

By agreeing to manage assets on behalf of the Pool, an investment manager accepts the provisions of this Statement applicable to such investment manager and assets being managed by such investment manager.

The Pool's primary investment goals are outlined below:

1. Maximum total return, consistent with prudent investment management, is the primary goal of the Pool. Return, as used herein, includes income plus realized and unrealized gains and losses on Pool assets. In addition, assets of the Pool shall be invested to ensure that principal is preserved and enhanced over time, both in real and nominal terms.

2. Total return for the Pool shall be regularly compared to the Allocation Index and the Policy Index. While it is anticipated that there will be fluctuations in the Pool's value, the Pool assets should at a minimum produce a nominal long-term rate of return of 7.5%, net of all expenses.
3. Total portfolio risk exposure and risk-adjusted returns will be regularly evaluated and compared with other Endowments, the Allocation Index, and the Policy Index. Risk-adjusted returns for the Pool and for individual managers are expected to consistently rank in the top third of comparable funds or managers, respectively.
4. Performance of this Pool will be evaluated on a regular basis. Consideration will be given to the degree to which performance results meet the goals and objectives as herewith set forth. Normally, results are evaluated over a full market cycle, but shorter-term results will be regularly reviewed and earlier action taken if in the best interest of the Pool.
5. Companies that include environmental, social and governance (ESG) factors into their decision making process may benefit from improved long term value creation. As a result, the Committee will consider ESG principles and incorporate ESG analysis into investment decisions such as asset allocation and manager selection.

INVESTMENT GUIDELINES

Asset Allocation

The Pool will be diversified both by asset class (e.g. equities, bonds, cash equivalents, foreign securities) and within asset classes (e.g., by country, economic sector, industry, quality, and size). The purpose of diversification is to minimize unsystematic risk, and to provide reasonable assurance that no single security or class of securities will have a disproportionate impact on the total Pool.

In order to have a reasonable probability of consistently achieving the Pool's return objectives, the Committee has adopted the asset allocation policy outlined below.

If any asset class weighting is outside its respective permissible range at the end of any calendar quarter, the Investment Consultant will advise the Committee at the next Committee meeting. In addition, University of Maine System Staff will bring the portfolio into compliance with these guidelines as promptly and prudently as possible.

<u>ASSET CLASS</u>	<u>TARGET %</u>	<u>PERMISSIBLE RANGE %</u>	<u>TARGET BENCHMARK</u>
<u>Equity</u>	<u>55%</u>	<u>45 - 65%</u>	
<u>Domestic Large Cap</u>	<u>22</u>	<u>17 - 27</u>	<u>S&P 500</u>
<u>Domestic Small/Mid Cap</u>	<u>8</u>	<u>3 - 13</u>	<u>Russell 2500</u>
<u>International</u>	<u>13</u>	<u>8 - 18</u>	<u>MSCI EAFE</u>
<u>International Small Cap</u>	<u>5</u>	<u>0 - 10</u>	<u>MSCI EAFE SC</u>
<u>Emerging</u>	<u>3.5</u>	<u>0 - 7</u>	<u>MSCI EM</u>
<u>Emerging Small Cap</u>	<u>3.5</u>	<u>0 - 7</u>	<u>MSCI EM SC</u>
<u>Fixed Income</u>	<u>24%</u>	<u>15 - 35%</u>	
<u>Domestic Core</u>	<u>7</u>	<u>2 - 12</u>	<u>BBgBarc US Aggregate</u>
<u>Bank Loans</u>	<u>5</u>	<u>0 - 10</u>	<u>Credit Suisse Leveraged Loan</u>
<u>TIPS</u>	<u>3.5</u>	<u>0 - 7</u>	<u>BBgBarc US TIPS</u>
<u>Short Term TIPS</u>	<u>3.5</u>	<u>0 - 7</u>	<u>BBgBarc US 0-5 Year TIPS</u>
<u>Absolute Return Fixed Income</u>	<u>5</u>	<u>0 - 10</u>	<u>3 Month Libor</u>
<u>Other</u>	<u>21%</u>	<u>10 - 30%</u>	

<u>Global Asset Allocation</u>	<u>15</u>	<u>10 - 20</u>	<u>65% MSCI ACWI (Net) / 35% BBqBarc Global Agg</u>
<u>Real Assets</u>	<u>0</u>	<u>0 - 6</u>	<u>NCREIF Timberland</u>
<u>Hedge Funds</u>	<u>6</u>	<u>0 - 10</u>	<u>Credit Suisse Long Short Equity Cambridge Private Equity 1 Quarter Lag</u>
<u>Private Equity</u>	<u>0</u>	<u>0 - 5</u>	
<u>Cash</u>	<u>0%</u>	<u>0 - 10%</u>	

<u>ASSET CLASS</u>	<u>TARGET %</u>	<u>PERMISSIBLE RANGE %</u>	<u>TARGET BENCHMARK</u>
Equity	45%	35 - 55%	
Domestic Large Cap	16	10 - 20	S&P 500
Domestic Small/Mid Cap	6	0 - 10	Russell 2500
International	12.5	6 - 16	MSCI EAFE
International Small Cap	3.5	0 - 7	MSCI EAFE-SC
Emerging	7	0 - 10	MSCI EM
Fixed Income	21%	13 - 29%	
Domestic Core	5	0 - 10	Barclays Capital Aggregate
Bank Loans	5	0 - 10	Credit Suisse Leveraged Loan
TIPS	8	3 - 13	Barclays US TIPS
Absolute Return Fixed Income	3	0 - 6	3-Month Libor
Other	34%	24 - 44%	
Global Asset Allocation	23	16 - 30	65% MSCI All Country World (net)/ 35% Barclays Capital Global Aggregate
Real Assets	3	0 - 6	NCREIF Timberland
Hedge Funds	6	0 - 10	HFRI Fund of Funds Composite Index
Private Equity	2	0 - 5	Cambridge Private Equity 1 Quarter Lag
Cash	0%	0 - 10%	

Equities

Risk: Return objectives should be achieved without assuming undue risk. The risk (as measured by the standard deviation of returns) and the risk-adjusted return of this portfolio will be compared to the same measures for an appropriate universe of Equity managers and that of the appropriate index.

Diversification: No more than 6% at cost and 8% of the equity portfolio's market value may be invested in one company. Deviations from this policy are allowed upon specific approval from the Committee. Care and consideration should be taken to ensure that the entire equity portfolio is adequately diversified by individual holdings and sector weights.

Use of Cash: The manager is expected to be fully invested in equities. This notwithstanding, the Committee understands that some liquidity in the portfolio is necessary to facilitate trading, and does not place an explicit restriction on the holding of cash equivalents. The custodian bank's short term investment fund (STIF) is an allowed investment, as are other cash equivalents, provided they carry a Standard and Poor's rating of at least A-1 or an equivalent rating.

Fixed Income

Risk: Return objectives should be achieved without assuming undue risk. The risk (as measured by the standard deviation of returns) and the risk-adjusted return of this portfolio will be compared to the same measures for an appropriate universe of Fixed Income managers and that of the appropriate index.

Diversification: The securities of any issuer, excepting the U.S. government and U.S. government agencies, shall not constitute more than 5% of the portfolio at any time. Up to 10% of the Pool may be invested in international bonds and currency exposure may be hedged or unhedged at the manager's discretion.

Duration: The average effective duration of the fixed income portfolio may not differ by more than one year from the duration of the applicable benchmark. For example, a core bond fund will be evaluated against the Barclays Capital Aggregate index.

Quality: The overall quality rating of fixed income portfolio will be at least one full quality rating within the applicable benchmarks quality rating as rated by Standard and Poor's (or equivalent). For example, if the Barclays Capital Aggregate has a credit rating of AA, a core bond fund should fall in the range of A to AAA.

Use of Cash: The manager is expected to be fully invested in fixed income securities. The custodian bank STIF is an allowed investment, as are other cash equivalents, provided they carry a Standard and Poor's rating of at least A-1 or an equivalent rating.

Other Asset Classes, Strategies, and Investment Managers

From time to time the Committee may make additional diversifying investments in other asset classes or securities such as, Real Estate, Timber, Commodities, Private Equity and Hedge Funds. The Committee shall approve any such investment prior to implementation and shall restrict these investments to specific investment managers.

Hedge Funds

Investments in hedge funds are permitted. Hedge funds represent a broad set of mandates and strategies that focus primarily on the liquid equity, fixed income and derivatives markets, but they may also include allocations, to a smaller extent, to investments that are less liquid. These mandates may employ long strategies, short selling and derivatives to protect against market downturns and/or profits from anticipated market movements.

The primary objective of these strategies is to provide positive absolute return throughout a market cycle (cash return + incremental spread), as well as provide increased diversification to the portfolio.

Each investment should fall within the expected risk and return characteristics historically displayed by domestic fixed income and public domestic equity investments. Leverage may be employed provided the risk of the portfolio remains within the target guidelines.

Hedge Fund Guidelines

- *Diversification* – investments should be made through diversified hedge fund programs.
- *Liquidity* – initial lock-up periods should not exceed one year; subsequent allowable redemption periods should not be less frequent than annual.
- *Transparency* – investments should be made only in funds that provide adequate transparency to the underlying securities/funds held by the fund.
- *Leverage* – funds may employ reasonable amounts of leverage (except for at the fund level as described in the excluded investments section) to the extent they adhere to targeted risk/return objectives.
- *Correlation* – funds added to the Pool in this asset class should exhibit low correlation with traditional stock and bond indices
- *Reporting* – investments may only be made in funds that adhere to strict reporting guidelines that fall within that required by the Pool.

Excluded Investments

Certain investments are ineligible for inclusion within this Pool:

- *UBTI* – investments in transactions that would generate unrelated business taxable income (“UBTI”) to the Pool.
- *Prohibited transactions* – investments or transactions that would be non-exempt prohibited transactions under Section 406 of ERISA or Section 4975 of the Internal Revenue Code.
- *Self-dealing* – securities of the investment manager, their parent or subsidiary companies (excluding money market funds) or any other security that could be considered a self-dealing transaction.
- *Leverage* – when investing in fund of hedge funds (FOHF), the manager may not employ leverage at the master fund level
- *Unrelated Speculation* – derivatives shall not be used to create exposures to securities, currencies, indices, or any other financial vehicle unless such exposures would be allowed by a portfolio’s investment guidelines if created with non-derivative securities.
- *Coal Companies* – separate account managers shall not invest in coal companies.

Derivatives

Where appropriate, investment managers may use derivative securities for the following reasons:

1. *Hedging.* To the extent that the portfolio is exposed to clearly defined risks and there are derivative contracts that can be used to reduce those risks, the investment managers are permitted to use such derivatives for hedging purposes, including cross-hedging of currency exposures.
2. *Creation of Market Exposures.* Investment managers are permitted to use derivatives to replicate the risk/return profile of an asset or asset class provided that the guidelines for the investment manager allow for such exposures to be created with the underlying assets themselves.
3. *Management of Country and Asset Allocation Exposure.* Managers charged with tactically changing the exposure of their portfolio to different countries and/or asset classes are permitted to use derivative contracts for this purpose.

By way of amplification, it is noted that the following two uses of derivatives are prohibited unless approved by the Committee:

1. *Leverage.* Derivatives shall not be used to magnify overall portfolio exposure to an asset, asset class, interest rate, or any other financial vehicle beyond that which would be allowed by a portfolio's investment guidelines if derivatives were not used.
2. *Unrelated Speculation.* Derivatives shall not be used to create exposures to securities, currencies, indices, or any other financial vehicle unless such exposures would be allowed by a portfolio's investment guidelines if created with non-derivative securities.

Commingled Funds

The Committee may elect to invest assets of the Pool in commingled funds, in recognition of the benefits of commingled funds as investment vehicles (i.e., the ability to diversify more extensively than in a small, direct investment account and the lower costs which can be associated with these funds). The Committee recognizes that they may not be permitted to give specific policy directives to a fund whose policies are already established; therefore, the Committee is relying on the Investment Consultant to assess and monitor the investment policies of such funds to ascertain whether they are appropriate.

Distributions

Investment managers should assume that withdrawals may be made from the Pool from time to time by the University of Maine System. Appropriate liquidity should be maintained to fund these withdrawals without impairing the investment process. The Committee or the designated representatives shall alert investment managers to anticipate liquidity needs of the Pool.

PERFORMANCE STANDARDS AND EVALUATION

Investment managers are expected to achieve the performance objectives that have been agreed to prior to engagement, by investing in those assets they were engaged to invest in. Performance comparisons will be made on a net of fees and risk-adjusted basis. Manager performance will be periodically reviewed to ensure compliance with these standards.

The investment performance of money managers shall be measured (e.g., total return and risk adjusted return) against the investment performance of other managers with similar

investment styles (e.g., Large cap growth equity manager against other large cap growth managers). Furthermore, investment performance will also be measured (e.g., total return and risk adjusted return) against an appropriate index benchmark (e.g., small cap equity managers will be measured against the Russell 2000 Index).

Performance reports shall be compiled quarterly and communicated to the Committee for review. Consideration shall be given to the extent to which the investment results are consistent with the investment objectives, goals, risk and guidelines as set forth in this statement. The Committee intends to evaluate individual manager performance over a complete market cycle, but reserves the right to terminate a manager for any reason including the following:

1. Investment performance that is significantly less than anticipated given the discipline employed and the risk parameters established, or unacceptable justification of poor results.
2. Investing in asset classes other than the asset classes for which the manager was engaged.
3. Failure to adhere to any aspect of this statement of investment policy, including communication and reporting requirements.
4. Significant qualitative changes to the investment management organization.

Investment managers will be reviewed regularly regarding performance, personnel, strategy, research capabilities, organizational and business matters, and other qualitative factors that may impact their ability to achieve the desired investment results.

RESPONSIBILITIES

Investment Committee

The Committee acknowledges its fiduciary responsibility for the conservation and prudent management of the funds. More specifically, its responsibilities include:

Compliance: To comply with the provisions of all pertinent federal and state regulations and rulings.

Standards: To develop investment objectives, asset allocation targets, investment guidelines, and performance measurement standards which are consistent with the needs of the funds.

Appointments: To evaluate and appoint investment managers to invest and manage fund assets. In addition, to appoint custodians and investment consultants.

Communication: To communicate investment goals, objectives, and standards to investment managers, including any material changes that may subsequently occur.

Manager Funding: To deploy existing assets and new monies to investment managers.

Evaluation: To review and evaluate investment results in the context of established standards of performance and adherence to the investment guidelines.

Corrective Action: To take whatever action is deemed prudent and appropriate when the investment manager fails to meet mutually accepted performance standards or significantly violates the investment guidelines.

The University of Maine System staff will assist the Committee in carrying out their duties.

Investment Manager

In recognition of their role as fiduciaries of the funds, investment managers must assume the following responsibilities:

Investment Responsibility: To make all investment decisions with respect to the assets under its management. The investment managers pledge to invest only in those asset classes they were engaged to invest in. Investment managers are to make reasonable efforts to control risk, and will be evaluated regularly to ensure that the risk assumed is commensurate with the given investment style and objective.

Compliance: To comply with this statement and any other written instructions provided by the Committee. Furthermore, to comply with all federal and state regulations pertaining to the investment of such assets.

Trading: To comply with CFA Institute soft dollar standards. The investment manager recognizes that brokerage is the property of the client and that it has an ongoing duty to ensure the quality of transactions effected on behalf of its client. This includes, seeking to obtain best execution, minimizing transaction costs, and using client brokerage to benefit the client.

Voting of Proxies: Responsibility for the exercise of ownership rights through proxy voting shall rest solely with the investment managers, who shall exercise this responsibility strictly for the long-term economic benefit of the fund and beneficiaries. Additionally, investment managers shall maintain a written annual report of the proxy votes for all shares of stock in companies held in the fund's investment program. These reports shall specifically note and explain any instances where proxies were not voted in accordance with standing policy.

Notification of Changes: To inform the Committee of any material changes in the manager's outlook, policy, investment strategy and portfolio structure, or tactics or in the firm's structure including ownership, financial condition and changes in portfolio management personnel.

Reporting: To provide the Committee and to its investment consultant quarterly reports that provide the total return net of commissions and fees, additions and withdrawals from the account, current holdings at cost and market value, and purchases and sales for the quarter. All reports are to comply with Global Investment Performance Standard (GIPS) performance presentation standards.

Availability for Meetings: To meet at least annually or at other such times as the Committee may reasonably request to discuss investment outlook, performance, strategy and tactics, organizational and personnel changes, and other pertinent matters.

Bonding: The managers shall provide evidence of liability and fiduciary insurance and have its employees bonded unless otherwise exempted by law or governmental regulation.

ESG Consideration: Investment managers that incorporate ESG into their investment process should provide annual updates to the Committee regarding their process and impact. Investment managers that have a responsible investment policy and Principles for Responsible Investment (PRI) transparency report should provide the documents to the Committee. Additional ESG specific reports may also be required and requested by the Committee.

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Custodian

In fulfillment of its fiduciary responsibilities, the Committee has appointed a custodian to administer some of the Pools' assets. The custodian has the responsibility to:

Custody Securities: Receive, hold, and manage the Pool assets.

Distributions: Make payments to the University of Maine System and to collect all interest and dividends.

Accounting: Keep accurate and detailed accounts of all investments, receipts, disbursements and other transactions.

Reporting: Provide a written account of all holdings and transactions on a monthly basis.

Bonding: The custodian shall provide evidence of liability and fiduciary insurance and have its employees bonded unless otherwise exempted by law or governmental regulation.

Investment Consultant

The consultant will provide the Committee with objective advice. The responsibilities include:

Reporting: Providing performance evaluation reports to the Committee on a quarterly basis. Reports will include absolute and relative performance of each of the investment managers and the total Pool. The consultant will utilize meaningful market indices for comparisons. Also, the consultant will provide specialty reporting and analysis of the overall program for portfolio risk.

Consulting: Providing proactive advice to the Committee on investment guidelines, asset allocation and manager structure. The consultant will also assist in the selection of new investment managers and in the termination of managers, alert the Committee of any adverse developments concerning the Pool and the performance of the managers, report on market trends and external change (market intelligence), and provide research materials and educational seminars on different asset types, or topics, as requested.

Availability for Meetings: Meeting at least quarterly for a formal performance review or at other such times as the Committee may reasonably request.

ESG Consideration: The consultant must be a signatory to the Principles for Responsible Investment, and take ESG factors into consideration when advising on asset allocation and manager selection.

CONFLICT OF INTEREST

It is the policy of the Committee to avoid conflicts of interest in its operations and in the selection of investment managers or funds. Therefore, members of the Committee shall not have a pecuniary relationship in any manager or fund being considered. No independent investment consultant retained by the Committee, or any entity, in which such consultant may have an interest, shall be a party to any transaction with, or have a financial or other interest in, any investment manager providing services to the Committee.

IMPLEMENTATION

All new monies received by investment manager(s) after the adoption of this statement of Investment Guidelines and Objectives shall conform to the Statement. To the extent that Pool assets are not currently managed in accordance with this Statement, the investment manager shall conform in all respects to this Statement within 60 days of its receipt hereof.

AMENDMENTS

The Committee may amend this Statement, subject to the approval of the Committee. The Committee, through the University of Maine System, also reserves the right to direct the investment managers to take any appropriate actions, whether or not consistent with this Statement, if market conditions, liquidity needs or other circumstances so indicate.

University of Maine System
Executive Summary - Investment Guidelines and Objectives
Managed Investment Pool (Including Endowments)
Approved by Investment Committee May 28, 2019

Minimum Long Term Return Assumption: 7.50%

Risk Tolerance: Moderate

FY18 and FY19 Spending Policy 4.50%¹

Asset Allocation:

<u>ASSET CLASS</u>	<u>TARGET %</u>	<u>PERMISSIBLE RANGE %</u>	<u>TARGET BENCHMARK</u>
Equity	55%	45 - 65%	
Domestic Large Cap	22	17 - 27	S&P 500
Domestic Small/Mid Cap	8	3 - 13	Russell 2500
International	13	8 - 18	MSCI EAFE
International Small Cap	5	0 - 10	MSCI EAFE SC
Emerging	3.5	0 - 7	MSCI EM
Emerging Small Cap	3.5	0 - 7	MSCI EM SC
Fixed Income	24%	15 - 35%	
Domestic Core	7	2 - 12	BBgBarc US Aggregate
Bank Loans	5	0 - 10	Credit Suisse Leveraged Loan
TIPS	3.5	0 - 7	BBgBarc US TIPS
Short Term TIPS	3.5	0 - 7	BBgBarc US 0-5 Year TIPS
Absolute Return Fixed Income	5	0 - 10	3 Month Libor
Other	21%	10 - 30%	
Global Asset Allocation	15	10 - 20	65% MSCI ACWI (Net) / 35% BBgBarc Global Agg
Real Assets	0	0 - 6	NCREIF Timberland
Hedge Funds	6	0 - 10	Credit Suisse Long Short Equity Cambridge Private Equity 1
Private Equity	0	0 - 5	Quarter Lag
Cash	0%	0 - 10%	

Evaluation Benchmarks:

Total return for the Pool shall be regularly compared to the Allocation Index* and the Policy Index**. While it is anticipated that there will be fluctuations in the Pool's value, the Pool assets should at a minimum produce a nominal long-term rate of return of 7.50%.

The investment performance of money managers shall be measured against the investment performance of other managers with similar investment styles (e.g., Large cap growth equity manager against other large cap growth managers). Furthermore, investment performance will also be measured against an appropriate index benchmark (e.g., small cap equity managers will be measured against the Russell 2000 Index).

*Allocation Index: Calculated by taking the actual asset class weights, at the previous month end, multiplied by the return of the respective passive benchmark over the current month. Measures the effectiveness of deviating from target weights.

**Policy Index: Calculated by taking the target asset class weights times the return of the respective passive benchmark (calculated monthly). Measures the effectiveness of Pool Structure.

¹ 4.5% spending rate for fiscal year 2020 was approved by the Board of Trustees at their December 20, 2019 meeting. Of this rate, 125 basis points is charged (unless expressly prohibited by the donor) for management and administration by the University of Maine and the University of Southern Maine while UMS Governance and University Services charges 25 basis points. Such fees are charged on each entity's respective endowments only. The resulting endowment distribution rate for FY2020 is \$14.65570. The FY19 spending rate was also 4.5% equating to a rate per share of \$14.95787.

**University of Maine System
Investment Guidelines and Objectives
Managed Investment Pool (Including Endowments)
Approved by Investment Committee May 28, 2019`**

INTRODUCTION

This statement of Investment Guidelines and Objectives was developed to assist the University of Maine System (UMS) in carrying out its fiduciary responsibilities related to funds held for others and for the conservation and use of the assets of the Endowment Fund.

The System uses a pooled investment approach. The Managed Investment Pool (The “Pool”) includes the following four components:

- Endowments of the University of Maine System (except where the donor requires the funds to be separately invested) and endowments for:
 - University of Maine at Fort Kent Foundation,
 - University of Southern Maine Foundation,
 - John L. Martin Scholarship Fund, Inc.,
- The University of Maine School of Law Foundation,
- The UMS Other Post Employment Benefit (OPEB) Trust, and
- Maine Maritime Academy endowments.

These guidelines are issued for the guidance of fiduciaries and other interested parties, including the Investment Committee of the Board of Trustees (the Committee), investment managers, internal management, third party investors, and consultants in the course of investing the assets of the Pool. The guidelines may be amended by the Committee both upon their own initiative and upon consideration of the advice and recommendations of the investment managers and fund professionals. Proposed modifications should be documented in writing to the Committee.

To this end, the investment guidelines will:

- Establish formal but flexible investment parameters that incorporate prudent asset allocation and achievable total return goals.
- Outline the investment responsibilities of the Committee, the investment managers, the custodian, and the investment consultant.
- Provide a mechanism for regular communication between UMS and all parties with responsibility for fund investments.

The investment goals and objectives for the Managed Investment Pool and hence investment decisions, are determined for the benefit of the UMS. The Pool is operated under the guidelines set forth herein and applicable laws.

It is expected that these guidelines will be reviewed at least annually to ensure that it continues to provide effective guidelines for the management of the Pool.

ENDOWMENT FUNDS

The UMS Endowment Fund has been established in order to support the operations of the institution.

For budget purposes, the annual spending amount is calculated using a 3-year market value average with a % spending rate applied. The Committee will annually approve the endowment spending rate and resulting distribution amount per share.

THIRD PARTY INVESTORS

The University may allow affiliated or non-affiliated organizations to invest in the Pool if in its judgment the acceptance of assets of a particular entity by the Pool can be said to further public higher education in Maine and to serve the educational needs of citizens of Maine. Such criteria is consistent with the purpose of UMS as broadly stated in its charter “to maintain and support a cohesive structure of public higher education in the State of Maine...” and with the Board’s duty to “[p]lan strategies for programs and allocation of resources that most effectively serve the educational needs of the citizens of this State.”

Any entity permitted to invest in the Pool must agree to the terms and conditions specified in the University of Maine System Managed Investment Pool Custodial and Investment Agreement. Assets accepted for investment by the Pool from outside the UMS typically will be assets of the general endowment fund or other funds of a charitable organization but may also be other funds as described in the sub-paragraphs of section 3(c)(10)(B) of the Investment Company Act of 1940.

Notwithstanding investment by third parties in the Pool, the investment goals and objectives of the Pool are determined for the benefit of the UMS and, as a result, the investment interests and decisions of the Pool on behalf of UMS may not always coincide with those of third party investors.

STATEMENT OF GOALS AND OBJECTIVES

The statement of Investment Guidelines and Objectives is set forth to provide an appropriate set of goals and objectives for the Pool’s assets and to define guidelines within which the investment managers may formulate and execute their investment decisions.

Within the specific guidelines presented below, the investment managers shall exercise full investment discretion. However, assets must be managed with the care, skill, prudence and diligence that a prudent investment professional in similar circumstances would exercise. Investment practices must comply with the applicable laws and regulations.

By agreeing to manage assets on behalf of the Pool, an investment manager accepts the provisions of this Statement applicable to such investment manager and assets being managed by such investment manager.

The Pool’s primary investment goals are outlined below:

1. Maximum total return, consistent with prudent investment management, is the primary goal of the Pool. Return, as used herein, includes income plus realized and unrealized gains and losses on Pool assets. In addition, assets of the Pool shall be invested to ensure that principal is preserved and enhanced over time, both in real and nominal terms.
2. Total return for the Pool shall be regularly compared to the Allocation Index and the Policy Index. While it is anticipated that there will be fluctuations in the Pool’s value, the Pool assets should at a minimum produce a nominal long-term rate of return of 7.5%, net of all expenses.
3. Total portfolio risk exposure and risk-adjusted returns will be regularly evaluated and compared with other Endowments, the Allocation Index, and the Policy Index. Risk-adjusted returns for the Pool and for individual managers are expected to consistently rank in the top third of comparable funds or managers, respectively.

4. Performance of this Pool will be evaluated on a regular basis. Consideration will be given to the degree to which performance results meet the goals and objectives as herewith set forth. Normally, results are evaluated over a full market cycle, but shorter-term results will be regularly reviewed and earlier action taken if in the best interest of the Pool.
5. Companies that include environmental, social and governance (ESG) factors into their decision making process may benefit from improved long term value creation. As a result, the Committee will consider ESG principles and incorporate ESG analysis into investment decisions such as asset allocation and manager selection.

INVESTMENT GUIDELINES

Asset Allocation

The Pool will be diversified both by asset class (e.g. equities, bonds, cash equivalents, foreign securities) and within asset classes (e.g., by country, economic sector, industry, quality, and size). The purpose of diversification is to minimize unsystematic risk, and to provide reasonable assurance that no single security or class of securities will have a disproportionate impact on the total Pool.

In order to have a reasonable probability of consistently achieving the Pool's return objectives, the Committee has adopted the asset allocation policy outlined below.

If any asset class weighting is outside its respective permissible range at the end of any calendar quarter, the Investment Consultant will advise the Committee at the next Committee meeting. In addition, University of Maine System Staff will bring the portfolio into compliance with these guidelines as promptly and prudently as possible.

<u>ASSET CLASS</u>	<u>TARGET %</u>	<u>PERMISSIBLE RANGE %</u>	<u>TARGET BENCHMARK</u>
Equity	55%	45 - 65%	
Domestic Large Cap	22	17 - 27	S&P 500
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International Small Cap	5	0 - 10	MSCI EAFE SC
Emerging	3.5	0 - 7	MSCI EM
Emerging Small Cap	3.5	0 - 7	MSCI EM SC
Fixed Income	24%	15 - 35%	
Domestic Core	7	2 - 12	BBgBarc US Aggregate
Bank Loans	5	0 - 10	Credit Suisse Leveraged Loan
TIPS	3.5	0 - 7	BBgBarc US TIPS
Short Term TIPS	3.5	0 - 7	BBgBarc US 0-5 Year TIPS
Absolute Return Fixed Income	5	0 - 10	3 Month Libor
Other	21%	10 - 30%	
Global Asset Allocation	15	10 - 20	65% MSCI ACWI (Net) / 35% BBgBarc Global Agg
Real Assets	0	0 - 6	NCREIF Timberland
Hedge Funds	6	0 - 10	Credit Suisse Long Short Equity
Private Equity	0	0 - 5	Cambridge Private Equity 1 Quarter Lag
Cash	0%	0 - 10%	

Equities

Risk: Return objectives should be achieved without assuming undue risk. The risk (as measured by the standard deviation of returns) and the risk-adjusted return of this portfolio will be compared to the same measures for an appropriate universe of Equity managers and that of the appropriate index.

Diversification: No more than 6% at cost and 8% of the equity portfolio's market value may be invested in one company. Deviations from this policy are allowed upon specific approval from the Committee. Care and consideration should be taken to ensure that the entire equity portfolio is adequately diversified by individual holdings and sector weights.

Use of Cash: The manager is expected to be fully invested in equities. This notwithstanding, the Committee understands that some liquidity in the portfolio is necessary to facilitate trading, and does not place an explicit restriction on the holding of cash equivalents. The custodian bank's short term investment fund (STIF) is an allowed investment, as are other cash equivalents, provided they carry a Standard and Poor's rating of at least A-1 or an equivalent rating.

Fixed Income

Risk: Return objectives should be achieved without assuming undue risk. The risk (as measured by the standard deviation of returns) and the risk-adjusted return of this portfolio will be compared to the same measures for an appropriate universe of Fixed Income managers and that of the appropriate index.

Diversification: The securities of any issuer, excepting the U.S. government and U.S. government agencies, shall not constitute more than 5% of the portfolio at any time. Up to 10% of the Pool may be invested in international bonds and currency exposure may be hedged or unhedged at the manager's discretion.

Duration: The average effective duration of the fixed income portfolio may not differ by more than one year from the duration of the applicable benchmark. For example, a core bond fund will be evaluated against the Barclays Capital Aggregate index.

Quality: The overall quality rating of fixed income portfolio will be at least one full quality rating within the applicable benchmarks quality rating as rated by Standard and Poor's (or equivalent). For example, if the Barclays Capital Aggregate has a credit rating of AA, a core bond fund should fall in the range of A to AAA.

Use of Cash: The manager is expected to be fully invested in fixed income securities. The custodian bank STIF is an allowed investment, as are other cash equivalents, provided they carry a Standard and Poor's rating of at least A-1 or an equivalent rating.

Other Asset Classes, Strategies, and Investment Managers

From time to time the Committee may make additional diversifying investments in other asset classes or securities such as, Real Estate, Timber, Commodities, Private Equity and Hedge Funds. The Committee shall approve any such investment prior to implementation and shall restrict these investments to specific investment managers.

Hedge Funds

Investments in hedge funds are permitted. Hedge funds represent a broad set of mandates and strategies that focus primarily on the liquid equity, fixed income and derivatives markets, but they may also include allocations, to a smaller extent, to investments that are less liquid. These mandates may employ long strategies, short selling and derivatives to protect against market downturns and/or profits from anticipated market movements.

The primary objective of these strategies is to provide positive absolute return throughout a market cycle (cash return + incremental spread), as well as provide increased diversification to the portfolio.

Each investment should fall within the expected risk and return characteristics historically displayed by domestic fixed income and public domestic equity investments. Leverage may be employed provided the risk of the portfolio remains within the target guidelines.

Hedge Fund Guidelines

- *Diversification* – investments should be made through diversified hedge fund programs.
- *Liquidity* – initial lock-up periods should not exceed one year; subsequent allowable redemption periods should not be less frequent than annual.
- *Transparency* – investments should be made only in funds that provide adequate transparency to the underlying securities/funds held by the fund.
- *Leverage* – funds may employ reasonable amounts of leverage (except for at the fund level as described in the excluded investments section) to the extent they adhere to targeted risk/return objectives.
- *Correlation* – funds added to the Pool in this asset class should exhibit low correlation with traditional stock and bond indices
- *Reporting* – investments may only be made in funds that adhere to strict reporting guidelines that fall within that required by the Pool.

Excluded Investments

Certain investments are ineligible for inclusion within this Pool:

- *UBTI* – investments in transactions that would generate unrelated business taxable income (“UBTI”) to the Pool.
- *Prohibited transactions* – investments or transactions that would be non-exempt prohibited transactions under Section 406 of ERISA or Section 4975 of the Internal Revenue Code.
- *Self-dealing* – securities of the investment manager, their parent or subsidiary companies (excluding money market funds) or any other security that could be considered a self-dealing transaction.
- *Leverage* – when investing in fund of hedge funds (FOHF), the manager may not employ leverage at the master fund level
- *Unrelated Speculation* – derivatives shall not be used to create exposures to securities, currencies, indices, or any other financial vehicle unless such exposures would be allowed by a portfolio’s investment guidelines if created with non-derivative securities.
- *Coal Companies* – separate account managers shall not invest in coal companies.

Derivatives

Where appropriate, investment managers may use derivative securities for the following reasons:

1. *Hedging.* To the extent that the portfolio is exposed to clearly defined risks and there are derivative contracts that can be used to reduce those risks, the investment managers are permitted to use such derivatives for hedging purposes, including cross-hedging of currency exposures.
2. *Creation of Market Exposures.* Investment managers are permitted to use derivatives to replicate the risk/return profile of an asset or asset class provided that the guidelines for the investment manager allow for such exposures to be created with the underlying assets themselves.
3. *Management of Country and Asset Allocation Exposure.* Managers charged with tactically changing the exposure of their portfolio to different countries and/or asset classes are permitted to use derivative contracts for this purpose.

By way of amplification, it is noted that the following two uses of derivatives are prohibited unless approved by the Committee:

1. *Leverage.* Derivatives shall not be used to magnify overall portfolio exposure to an asset, asset class, interest rate, or any other financial vehicle beyond that which would be allowed by a portfolio's investment guidelines if derivatives were not used.
2. *Unrelated Speculation.* Derivatives shall not be used to create exposures to securities, currencies, indices, or any other financial vehicle unless such exposures would be allowed by a portfolio's investment guidelines if created with non-derivative securities.

Commingled Funds

The Committee may elect to invest assets of the Pool in commingled funds, in recognition of the benefits of commingled funds as investment vehicles (i.e., the ability to diversify more extensively than in a small, direct investment account and the lower costs which can be associated with these funds). The Committee recognizes that they may not be permitted to give specific policy directives to a fund whose policies are already established; therefore, the Committee is relying on the Investment Consultant to assess and monitor the investment policies of such funds to ascertain whether they are appropriate.

Distributions

Investment managers should assume that withdrawals may be made from the Pool from time to time by the University of Maine System. Appropriate liquidity should be maintained to fund these withdrawals without impairing the investment process. The Committee or the designated representatives shall alert investment managers to anticipate liquidity needs of the Pool.

PERFORMANCE STANDARDS AND EVALUATION

Investment managers are expected to achieve the performance objectives that have been agreed to prior to engagement, by investing in those assets they were engaged to invest in. Performance comparisons will be made on a net of fees and risk-adjusted basis. Manager performance will be periodically reviewed to ensure compliance with these standards.

The investment performance of money managers shall be measured (e.g., total return and risk adjusted return) against the investment performance of other managers with similar

investment styles (e.g., Large cap growth equity manager against other large cap growth managers). Furthermore, investment performance will also be measured (e.g., total return and risk adjusted return) against an appropriate index benchmark (e.g., small cap equity managers will be measured against the Russell 2000 Index).

Performance reports shall be compiled quarterly and communicated to the Committee for review. Consideration shall be given to the extent to which the investment results are consistent with the investment objectives, goals, risk and guidelines as set forth in this statement. The Committee intends to evaluate individual manager performance over a complete market cycle, but reserves the right to terminate a manager for any reason including the following:

1. Investment performance that is significantly less than anticipated given the discipline employed and the risk parameters established, or unacceptable justification of poor results.
2. Investing in asset classes other than the asset classes for which the manager was engaged.
3. Failure to adhere to any aspect of this statement of investment policy, including communication and reporting requirements.
4. Significant qualitative changes to the investment management organization.

Investment managers will be reviewed regularly regarding performance, personnel, strategy, research capabilities, organizational and business matters, and other qualitative factors that may impact their ability to achieve the desired investment results.

RESPONSIBILITIES

Investment Committee

The Committee acknowledges its fiduciary responsibility for the conservation and prudent management of the funds. More specifically, its responsibilities include:

Compliance: To comply with the provisions of all pertinent federal and state regulations and rulings.

Standards: To develop investment objectives, asset allocation targets, investment guidelines, and performance measurement standards which are consistent with the needs of the funds.

Appointments: To evaluate and appoint investment managers to invest and manage fund assets. In addition, to appoint custodians and investment consultants.

Communication: To communicate investment goals, objectives, and standards to investment managers, including any material changes that may subsequently occur.

Manager Funding: To deploy existing assets and new monies to investment managers.

Evaluation: To review and evaluate investment results in the context of established standards of performance and adherence to the investment guidelines.

Corrective Action: To take whatever action is deemed prudent and appropriate when the investment manager fails to meet mutually accepted performance standards or significantly violates the investment guidelines.

The University of Maine System staff will assist the Committee in carrying out their duties.

Investment Manager

In recognition of their role as fiduciaries of the funds, investment managers must assume the following responsibilities:

Investment Responsibility: To make all investment decisions with respect to the assets under its management. The investment managers pledge to invest only in those asset classes they were engaged to invest in. Investment managers are to make reasonable efforts to control risk, and will be evaluated regularly to ensure that the risk assumed is commensurate with the given investment style and objective.

Compliance: To comply with this statement and any other written instructions provided by the Committee. Furthermore, to comply with all federal and state regulations pertaining to the investment of such assets.

Trading: To comply with CFA Institute soft dollar standards. The investment manager recognizes that brokerage is the property of the client and that it has an ongoing duty to ensure the quality of transactions effected on behalf of its client. This includes, seeking to obtain best execution, minimizing transaction costs, and using client brokerage to benefit the client.

Voting of Proxies: Responsibility for the exercise of ownership rights through proxy voting shall rest solely with the investment managers, who shall exercise this responsibility strictly for the long-term economic benefit of the fund and beneficiaries. Additionally, investment managers shall maintain a written annual report of the proxy votes for all shares of stock in companies held in the fund's investment program. These reports shall specifically note and explain any instances where proxies were not voted in accordance with standing policy.

Notification of Changes: To inform the Committee of any material changes in the manager's outlook, policy, investment strategy and portfolio structure, or tactics or in the firm's structure including ownership, financial condition and changes in portfolio management personnel.

Reporting: To provide the Committee and to its investment consultant quarterly reports that provide the total return net of commissions and fees, additions and withdrawals from the account, current holdings at cost and market value, and purchases and sales for the quarter. All reports are to comply with Global Investment Performance Standard (GIPS) performance presentation standards.

Availability for Meetings: To meet at least annually or at other such times as the Committee may reasonably request to discuss investment outlook, performance, strategy and tactics, organizational and personnel changes, and other pertinent matters.

Bonding: The managers shall provide evidence of liability and fiduciary insurance and have its employees bonded unless otherwise exempted by law or governmental regulation.

ESG Consideration: Investment managers that incorporate ESG into their investment process should provide annual updates to the Committee regarding their process and impact. Investment managers that have a responsible investment policy and Principles for Responsible Investment (PRI) transparency report should provide the documents to the Committee. Additional ESG specific reports may also be required and requested by the Committee.

Custodian

In fulfillment of its fiduciary responsibilities, the Committee has appointed a custodian to administer some of the Pools' assets. The custodian has the responsibility to:

Custody Securities: Receive, hold, and manage the Pool assets.

Distributions: Make payments to the University of Maine System and to collect all interest and dividends.

Accounting: Keep accurate and detailed accounts of all investments, receipts, disbursements and other transactions.

Reporting: Provide a written account of all holdings and transactions on a monthly basis.

Bonding: The custodian shall provide evidence of liability and fiduciary insurance and have its employees bonded unless otherwise exempted by law or governmental regulation.

Investment Consultant

The consultant will provide the Committee with objective advice. The responsibilities include:

Reporting: Providing performance evaluation reports to the Committee on a quarterly basis. Reports will include absolute and relative performance of each of the investment managers and the total Pool. The consultant will utilize meaningful market indices for comparisons. Also, the consultant will provide specialty reporting and analysis of the overall program for portfolio risk.

Consulting: Providing proactive advice to the Committee on investment guidelines, asset allocation and manager structure. The consultant will also assist in the selection of new investment managers and in the termination of managers, alert the Committee of any adverse developments concerning the Pool and the performance of the managers, report on market trends and external change (market intelligence), and provide research materials and educational seminars on different asset types, or topics, as requested.

Availability for Meetings: Meeting at least quarterly for a formal performance review or at other such times as the Committee may reasonably request.

ESG Consideration: The consultant must be a signatory to the Principles for Responsible Investment, and take ESG factors into consideration when advising on asset allocation and manager selection.

CONFLICT OF INTEREST

It is the policy of the Committee to avoid conflicts of interest in its operations and in the selection of investment managers or funds. Therefore, members of the Committee shall not have a pecuniary relationship in any manager or fund being considered. No independent investment consultant retained by the Committee, or any entity, in which such consultant may have an interest, shall be a party to any transaction with, or have a financial or other interest in, any investment manager providing services to the Committee.

IMPLEMENTATION

All new monies received by investment manager(s) after the adoption of this statement of Investment Guidelines and Objectives shall conform to the Statement. To the extent that Pool assets are not currently managed in accordance with this Statement, the investment manager shall conform in all respects to this Statement within 60 days of its receipt hereof.

AMENDMENTS

The Committee may amend this Statement, subject to the approval of the Committee. The Committee, through the University of Maine System, also reserves the right to direct the investment managers to take any appropriate actions, whether or not consistent with this Statement, if market conditions, liquidity needs or other circumstances so indicate.

University of Maine System
Executive Summary - Investment Guidelines and Objectives
Operating Fund
Approved by Investment Committee ~~May 15~~ May 28, 2019

Type of Plan: Operating Plan

Minimum Long Term Return Assumption: 4.00%

Risk Tolerance: Low to Moderate

Asset Allocation:	PERMISSIBLE	TARGET
ASSET CLASS	TARGET %	RANGE % BENCHMARK
Liquidity Pool	25 30%	5 - 100% Citi-FTSE T-Bill 3 Months Month Treasury Bill
Income Pool	50 47.5%	0 - 60% Barclays-BBqBarc US 1-3 Yr. Govt/Credit 1-3Yr
Short-Term Bonds	26-6 26	15 - 35
Bank Loans	6-7 7	0 - 10 Loomis Bank Loans Custom Index*
Unconstrained-Absolute Return Fixed Income	6-7 7	0 - 10 BOA 3-Month M-LIBOR
Core Bonds	57.5 5	0 - 10 Barclays-BBqBarc US Aggregate
TIPS	5	0-10 Barclays US TIPS
Total Return Pool	25 22.5%	0 - 30% HFRI Fund of Funds Composite Index Credit Suisse Long Short Equity
Hedge Funds	5	0 - 10 GAA Custom Index**
Global Asset Allocation	12-58 7.53	7.53 - 17.513 FTSE Global All Cap Index
Global Equity	97.5 7.5	

*~~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.

**GAA Custom Index: 50% (40% BC Aggregate, 30% BC U.S. TIPS 1-10YR, 10% S&P 500, 10% BC High Yield, 10% JPM EMBI+) and 50% (60% MSCI ACWI/40% BC Global Aggregate)

Evaluation Benchmarks:

Total return for the Fund shall be regularly compared to the Allocation Index* and the Policy Index**. While it is anticipated that there will be fluctuations in the Fund's value, the Fund assets should at a minimum produce a nominal long-term rate of return of 4.00%.

The investment performance of money managers shall be measured against the investment performance of other managers with similar investment styles (e.g., Large cap growth equity manager against other large cap growth managers). Furthermore, investment performance will also be measured against an appropriate index benchmark (e.g., small cap equity managers will be measured against the Russell 2000 Index).

*Allocation Index: Calculated by taking the actual asset class weights, at the previous month end, multiplied by the return of the respective passive benchmark over the current month. Measures the effectiveness of deviating from target weights.

**Policy Index: Calculated by taking the target asset class weights times the return of the respective passive benchmark (calculated monthly). Measures the effectiveness of Fund Structure.

**University of Maine System
Operating Funds
Statement of Investment Guidelines
Approved by Investment Committee May ~~1528~~, 201~~97~~**

INTRODUCTION

The Statement of Investment Guidelines (the “Guidelines”) of the University of Maine System (the “UMS”) sets forth procedures and guidelines to assist in the day-to-day investment of the Operating Fund (the “Fund”). The purpose of these investment guidelines is to establish the objectives, responsibilities, permissible investments, risk tolerance, diversification requirements, and reporting requirements for the investment of the UMS Fund. This pool of funds excludes the assets of the managed investment pool (including endowments), planned giving funds and the defined benefit pension funds. The Board has delegated to the Treasurer responsibility for overseeing the Fund’s investment program in accordance with the provisions of these Guidelines.

STATEMENT OF GOALS AND OBJECTIVES

These Guidelines are set forth to provide an appropriate set of goals and objectives for the Fund’s assets and to define guidelines from which the investment managers may formulate and execute their investment decisions.

Within the specific guidelines presented below, the investment managers shall exercise full investment discretion. However, assets must be managed with the care, skill, prudence and diligence that a prudent investment professional in similar circumstances would exercise. Investment practices must comply with applicable laws and regulations.

By agreeing to manage assets on behalf of the Fund, an investment manager accepts the provisions of this Statement applicable to such investment manager and assets being managed by such investment manager.

The Fund’s primary investment goals are outlined below:

- To enable the UMS to meet its financial obligations
- Provide liquidity
- Preserve capital
- Produce an acceptable yield to meet budget goals
- Provide a total return opportunity set
- Build a Budget Stabilization Fund that enables UMS to smooth the financial impact of adverse markets, economic conditions, and address other financial challenges.

INVESTMENT GUIDELINES

Asset Allocation

The Fund will be diversified both by asset class (e.g. cash equivalents, diversified bonds, equities, global asset allocation and hedge funds of funds) and within asset classes (e.g., by industry, quality and size). The purpose of diversification is to minimize unsystematic risk, and to provide reasonable assurance that no single security or class of securities will have a disproportionate impact on the total Fund.

The Fund's assets will be invested primarily with external investment management firms, either via commingled funds, mutual funds or separately managed portfolios. These managers will be selected on the basis of many factors, including expertise with domestic and global fixed income and equity strategies, experience with the use of derivatives, scope of product offerings, asset allocation and consulting experience, performance, quality and experience of personnel, service, compliance procedures, references and fees.

In order to have a reasonable probability of consistently achieving the Fund's return objectives, the Committee has adopted the asset allocation policy outlined below.

If any asset class weighting is outside its respective permissible range at the end of any calendar quarter, the Investment Consultant will advise the Committee at the next Committee meeting. In addition, UMS Staff will bring the portfolio into compliance with these guidelines as promptly and prudently as possible.

The Fund will be stratified into a minimum of three separate pools. The pools reflect portfolios with different goals and objectives. The amounts invested in each pool will fluctuate based on liquidity needs and the seasonal fluctuations in the UMS cash balances.

1. Liquidity Pool: – The purpose of this pool is to meet the day-to-day obligations of the UMS, including payroll and accounts payable. It can consist of funds that are invested in a portfolio of highest quality short-term fixed-income securities (treasury obligations, agency securities, repurchase agreements, money market funds, commercial paper, short-term bond mutual funds) with adequate liquidity. The average quality of the pool will be rated at least "A-1" by Standard and Poor's (or equivalent).
2. Income Pool: – The purpose of this pool is to provide sufficient income (e.g., interest income) to meet budgetary goals and provide additional diversification to minimize downside risk. This pool can invest in a diversified portfolio, and may include items such as, but not limited to fixed income securities, FDIC insured or adequately collateralized CDs, or in unconstrained, short or intermediate term bond funds with a normal average duration of -2 to 7 years. The pool may invest in funds rated from BB to AAA quality. The overall average quality rating of this pool will be at least "A-" by Standard and Poor's (or equivalent).
3. Total Return Pool: – Expected to add diversification and growth to the Fund. Exists to provide a flow of financial support to the UMS' programs. The pool can invest in diversified assets made up of but not limited to equities, hedge funds, and global asset allocation mandates.

POOL ALLOCATION

	<u>Minimum</u>	<u>Target</u>	<u>Maximum</u>	<u>Risk Tolerance</u>
Liquidity Pool	5%	25 <u>30</u> %	-100%	Low
Income Pool Moderate	0%	50 <u>47.5</u> %	60%	Low-
Total Return Pool Moderate	0%	25 <u>22.5</u> %	30%	

BUDGET STABILIZATION FUND

When net investment income exceeds budget, management may allocate the excess earnings to the budget stabilization fund. This fund will enable management to address fiscal challenges and priorities of the UMS, including supplementing the budget when the net performance of the operating cash fund does not meet budget.

The investment income budget is net of expenses related to UMS financing and investing activities. Such expenses include, but are not limited to, banking, manager, custodial, and consulting fees and expenses.

Equities

Risk: Return objectives should be achieved without assuming undue risk. The risk - as measured by the standard deviation of returns - and the risk-adjusted return of this portfolio will be compared to the same measures for an appropriate universe of Equity managers and that of the appropriate index.

Diversification: No more than 6% at cost and 8% of the equity portfolio's market value may be invested in one company. Deviations from this policy are allowed upon specific approval from the Committee. Care and consideration should be taken to ensure that the entire equity portfolio is adequately diversified by individual holdings and sector weights.

Use of Cash: The manager is expected to be fully invested in equities. This notwithstanding, the Committee understands that some liquidity in the portfolio is necessary to facilitate trading, and does not place an explicit restriction on the holding of cash equivalents. The custodian bank's short term investment fund (STIF) is an allowed investment, as are other cash equivalents, provided they carry a Standard and Poor's rating of at least A-1 (or equivalent).

Fixed Income

Risk: Return objectives should be achieved without assuming undue risk. The risk - as measured by the standard deviation of returns - and the risk-adjusted return of this portfolio will be compared to the same measures for an appropriate universe of Fixed Income managers and that of the appropriate index.

Diversification: The securities of any issuer, excepting the U.S. government and U.S. government agencies, shall not constitute more than 5% of the portfolio at any time.

Up to 10% of the fund may be invested in international bonds and currency exposure may be hedged or unhedged at the manager's discretion.

Duration: The average effective duration of the fixed income portfolio may not differ by more than one year from the duration of the applicable benchmark. For example, a core bond fund will be evaluated against the Barclays Capital Aggregate index.

Quality: The overall quality rating of the fixed income portfolio will be at least one full quality rating within the applicable benchmarks quality rating as rated by Standard and Poor's (or equivalent). For example, if the Barclays Capital Aggregate has a credit rating of AA, a core bond fund should fall in the range of A to AAA.

Use of Cash: The manager is expected to be fully invested in fixed income securities. The custodian bank STIF is an allowed investment, as are other cash equivalents, provided they carry a Standard and Poor's rating of at least A-1 (or equivalent).

Hedge Funds

Investments in hedge funds are permitted. Hedge funds represent a broad set of mandates and strategies that focus primarily on the liquid equity, fixed income and derivatives markets, but they may also include allocations, to a smaller extent, to investments that are less liquid. These mandates may employ long strategies, short selling and derivatives to protect against market downturns and/or protect profits from anticipated market movements.

The primary objective of these strategies is to provide positive absolute return throughout a market cycle (cash return + incremental spread), as well as provide increased diversification to the portfolio.

Each investment should fall within the expected risk and return characteristics historically displayed by domestic fixed income and public domestic equity investments.

Hedge Fund Guidelines

- *Diversification* – investments should be made through diversified hedge fund programs.
- *Liquidity* – initial lock-up periods should not exceed one year; subsequent allowable redemption periods should not be less frequent than annual.
- *Transparency* – investments should be made only in funds that provide adequate transparency to the underlying securities/funds held by the fund.
- *Leverage* – funds may employ reasonable amounts of leverage (except for at the fund level as described in the excluded investments section) to the extent they adhere to targeted risk/return objectives.
- *Correlation* – funds added to the Fund in this asset class should exhibit low correlation with traditional stock and bond indices.
- *Reporting* – investments may only be made in funds that adhere to strict reporting guidelines that fall within that required by the Fund.

Excluded Investments

Certain investments are ineligible for inclusion within this Fund:

- *UBTI* – investments in transactions that would generate unrelated business taxable income (“UBTI”) to the Fund.
- *Self-dealing* – securities of the investment manager, their parent or subsidiary companies (excluding money market funds) or any other security that could be considered a self-dealing transaction.
- *Leverage* – when investing in fund of hedge funds (FOHF), the manager may not employ leverage at the master fund level
- *Unrelated Speculation* – Derivatives shall not be used to create exposures to securities, currencies, indices, or any other financial vehicle unless such exposures would be allowed by a portfolio’s investment guidelines if created with non-derivative securities.
- *Coal Companies* – separate account managers shall not invest in coal companies.

OTHER ASSET CLASSES, STRATEGIES, AND INVESTMENT MANAGERS

From time to time the Treasurer may make additional diversifying investments in other asset classes or securities. The Treasurer shall approve any such investment prior to implementation and shall restrict these investments to specific investment managers.

Derivatives

Where appropriate, investment managers may use derivative securities for the following reasons:

1. *Hedging*. To the extent that the portfolio is exposed to clearly defined risks and there are derivative contracts that can be used to reduce those risks, the investment managers are permitted to use such derivatives for hedging purposes, including cross-hedging of currency exposures.
2. *Creation of Market Exposures*. Investment managers are permitted to use derivatives to replicate the risk/return profile of an asset or asset class provided that the guidelines for the investment manager allow for such exposures to be created with the underlying assets themselves.
3. *Management of Country and Asset Allocation Exposure*. Managers charged with tactically changing the exposure of their portfolio to different countries and/or asset classes are permitted to use derivative contracts for this purpose.

By way of amplification, it is noted that the following two uses of derivatives are prohibited, unless otherwise approved:

1. *Leverage*: Derivatives shall not be used to magnify overall portfolio exposure to an asset, asset class, interest rate, or any other financial vehicle beyond that which would be allowed by a portfolio’s investment guidelines if derivatives were not used.

2. Unrelated Speculation: Derivatives shall not be used to create exposures to securities, currencies, indices, or any other financial vehicle unless such exposures would be allowed by a portfolio's investment guidelines if created with non-derivative securities.

Distributions

Investment managers should assume that withdrawals may be made from the Fund from time to time by the University of Maine System. Appropriate liquidity should be maintained to fund these withdrawals without impairing the investment process. UMS staff shall alert investment managers to anticipate liquidity needs of the Fund.

Commingled Funds

Assets of the Fund may be invested in commingled funds, in recognition of the benefits of commingled funds as investment vehicles (i.e., the ability to diversify more extensively than in a small, direct investment account and the lower costs which can be associated with these funds). The Committee and management recognize that they may not be permitted to give specific policy directives to a fund whose policies are already established; therefore, the Committee and management are relying on the Investment Consultant to assess and monitor the investment policies of such funds to ascertain whether they are appropriate.

BENCHMARKS

Managers should produce returns that are commensurate with the degree of risk taken. Each manager's return and risk will be measured against the respective measures of an appropriate benchmark. For example, a core bond investment is benchmarked against the Barclays Capital Aggregate Index.

The total Fund's returns will be benchmarked against both the Consumer Price Index, and against the State of Maine Investment Pool returns.

PERFORMANCE STANDARDS AND EVALUATION

Investment managers are expected to achieve the performance objectives that have been agreed to prior to engagement, in accordance with their investment guidelines. Performance comparisons will be made on a net of fees and risk-adjusted basis. Manager performance will be reviewed quarterly to ensure compliance with these standards.

Managers should match or exceed the return of their respective benchmarks over a complete market cycle, while assuming benchmark-like risk.

Individual manager performance will normally be evaluated over a full market cycle, but the UMS reserves the right to terminate a manager for any reason including the following:

1. Investment performance that is significantly less than anticipated given the discipline employed and the risk parameters established, or unacceptable justification of poor results.

2. Investment manager agreement/guideline violations.
3. Failure to adhere to any aspect of these Guidelines.
4. Significant qualitative changes to the investment management organization.

Investment managers will be reviewed regularly regarding performance, personnel, strategy, research capabilities, organizational and business matters, and other qualitative factors that may impact their ability to achieve the desired investment results.

RESPONSIBILITIES

Internal Staff: Staff duties include:

Budget: Produce periodic short-term and long-term cash flow forecasts.

Standards: Advise investment managers on income requirements over a long planning horizon and provide updates on unexpected cash flow changes. Work with investment managers on portfolio optimization/asset allocation. Establish and update written investment objectives and guidelines as appropriate.

Manager Funding: Negotiate investment manager and custodial agreements. Deploy existing assets and new monies to investment managers.

Rebalancing: Rebalance as deemed prudent.

Appointments: Evaluate, establish and terminate banking relationships, money market managers, and other relationships in the Liquidity Pool. Work with consultant to evaluate investment managers in the Income and Total Return Pools and bring recommendations to the Investment Committee.

Corrective Action: To take whatever action is deemed prudent and appropriate when the investment manager fails to meet mutually accepted performance standards or significantly violates the investment guidelines. When time permits, this action will be taken following consultation with the Investment Committee and approval of recommended action.

Investment Committee: The Trustees provide for the prudent investment of assets held in the UMS Operating Fund Portfolio. The Investment Committee routinely updates the Board of Trustees on investment policies and performance. The University of Maine System staff will assist the Committee in carrying out their duties.

The Investment Committee is responsible for:

Standards: Approve written investment objectives and guidelines.

Evaluation: Monitor performance of the Fund.

Appointments: Approve investment managers for the Income and Total Return Pools.

Compliance: To comply with the provisions of all pertinent federal and state regulations and rulings.

Communication: To communicate investment goals, objectives, and standards to investment managers, including any material changes that may subsequently occur.

Investment Manager: In recognition of their role as investment managers of UMS funds, investment managers must assume the following responsibilities:

Investment Responsibility: To make investment decisions with respect to the assets under its management in accordance with investment manager agreements and guidelines or prospectuses. Investment managers are to make reasonable efforts to control risk, and will be evaluated regularly to ensure that the risk assumed is commensurate with the given investment style and objective.

Compliance: To comply with this statement and any other written instructions provided by UMS, and with all federal and state regulations pertaining to the investment of such assets.

Notification of Changes: To inform UMS of any material changes in the manager's outlook, policy, investment strategy and portfolio structure, or tactics or in the firm's structure including ownership, financial condition and changes in portfolio management personnel.

Trading: To comply with CFA Institute soft dollar standards. The investment manager recognizes that brokerage is the property of the client and that it has an ongoing duty to ensure the quality of transactions effected on behalf of its client. This includes, seeking to obtain best execution, minimizing transaction costs, and using client brokerage to benefit the client.

Voting of Proxies: Responsibility for the exercise of ownership rights through proxy voting shall rest solely with the investment managers, who shall exercise this responsibility strictly for the long-term economic benefit of the Fund, its participants and beneficiaries. Additionally, investment managers shall maintain a written annual report of the proxy votes for all shares of stock in companies held in the Fund's investment program. These reports shall specifically note and explain any instances where proxies were not voted in accordance with standing policy.

Reporting: To provide to the Committee and to its investment consultant quarterly reports that provide the total return net of commissions and fees, additions and withdrawals from the account, current holdings at cost and market value, and purchases and sales for the quarter. All reports are to comply with Global Investment Performance Standard (GIPS) performance presentation standards.

Availability for Meetings: To meet at least annually or at other such times as UMS may reasonably request to discuss investment outlook, performance, strategy and tactics, organizational and personnel changes, and other pertinent matters.

Bonding: The managers shall provide evidence of liability and fiduciary insurance and have its employees bonded unless otherwise exempted by law or governmental regulation.

Investment Consultant: The consultant will provide the Committee with objective advice. The responsibilities include:

Reporting: To provide performance evaluation reports to the Committee on a quarterly basis. Reports will include absolute and relative performance of each of the investment managers and the total fund. The consultant will utilize meaningful market indices for comparisons. Also, provide specialty reporting, and analysis of the overall program for portfolio risk.

Consulting: To provide proactive advice to the Committee on investment guidelines, asset allocation and manager structure. To assist in the selection of new investment managers and in the termination of managers. To alert the Committee of any adverse developments concerning the Fund and the performance of the managers. To report on market trends and external change (market intelligence). To provide research materials and educational seminars on different asset types, or topics, as requested.

Availability for Meetings: To meet at last quarterly for a formal performance review or at other such times as the Committee may reasonably request.

CONFLICT OF INTEREST

It is the policy of the Trustees to avoid conflicts of interest in its operations and in the selection of investment managers or funds. Therefore, UMS administrative officers shall not have a significant financial relationship in any manager or fund being considered. No independent investment consultant that may be retained by UMS, or any entity in which such consultant may have an interest, shall have a significant financial or other interest in, any investment manager providing services to UMS or any fund in which UMS has an investment.

IMPLEMENTATION

All new monies received by investment manager(s) after the adoption of this statement of Guidelines and Objectives shall conform to the Statement. To the extent that Fund assets are not currently managed in accordance with this Statement, the investment manager shall conform in all respects to this Statement within 60 days of its receipt hereof.

AMENDMENTS

UMS reserves the right to amend this statement and/or to direct the investment managers to take any appropriate actions, whether or not consistent with this statement, if market conditions, liquidity needs or other circumstances so indicate.

University of Maine System
Executive Summary - Investment Guidelines and Objectives
Operating Fund
Approved by Investment Committee May 28, 2019

Type of Plan: Operating Plan

Minimum Long Term Return Assumption: 4.00%

Risk Tolerance: Low to Moderate

Asset Allocation:	PERMISSIBLE	TARGET
<u>ASSET CLASS</u>	<u>TARGET</u> <u>%</u>	<u>RANGE %</u> <u>BENCHMARK</u>
Liquidity Pool	30%	5 - 100% FTSE T-Bill 3 Months
Income Pool	47.5%	0 - 60%
Short-Term Bonds	26	15 - 35 BBgBarc US Govt/Credit 1-3Yr
Bank Loans	7	0 - 10 Custom Index*
Absolute Return Fixed Income	7	0 - 10 3-Month LIBOR
Core Bonds	7.5	0 - 10 BBgBarc US Aggregate
Total Return Pool	22.5%	0 - 30%
Hedge Funds	5	0 - 10 Credit Suisse Long Short Equity
Global Asset Allocation	8	3 – 13 GAA Custom Index**
Global Equity	9.5	5 - 15 FTSE Global All Cap Index

* 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.

**GAA Custom Index: 50% (40% BC Aggregate, 30% BC U.S. TIPS 1-10YR, 10% S&P 500, 10% BC High Yield, 10% JPM EMBI+) and 50% (60% MSCI ACWI/40% BC Global Aggregate)

Evaluation Benchmarks:

Total return for the Fund shall be regularly compared to the Allocation Index* and the Policy Index**. While it is anticipated that there will be fluctuations in the Fund's value, the Fund assets should at a minimum produce a nominal long-term rate of return of 4.00%.

The investment performance of money managers shall be measured against the investment performance of other managers with similar investment styles (e.g., Large cap growth equity manager against other large cap growth managers). Furthermore, investment performance will also be measured against an appropriate index benchmark (e.g., small cap equity managers will be measured against the Russell 2000 Index).

*Allocation Index: Calculated by taking the actual asset class weights, at the previous month end, multiplied by the return of the respective passive benchmark over the current month. Measures the effectiveness of deviating from target weights.

**Policy Index: Calculated by taking the target asset class weights times the return of the respective passive benchmark (calculated monthly). Measures the effectiveness of Fund Structure.

**University of Maine System
Operating Funds
Statement of Investment Guidelines
Approved by Investment Committee May 28, 2019**

INTRODUCTION

The Statement of Investment Guidelines (the “Guidelines”) of the University of Maine System (the “UMS”) sets forth procedures and guidelines to assist in the day-to-day investment of the Operating Fund (the “Fund”). The purpose of these investment guidelines is to establish the objectives, responsibilities, permissible investments, risk tolerance, diversification requirements, and reporting requirements for the investment of the UMS Fund. This pool of funds excludes the assets of the managed investment pool (including endowments), planned giving funds and the defined benefit pension funds. The Board has delegated to the Treasurer responsibility for overseeing the Fund’s investment program in accordance with the provisions of these Guidelines.

STATEMENT OF GOALS AND OBJECTIVES

These Guidelines are set forth to provide an appropriate set of goals and objectives for the Fund’s assets and to define guidelines from which the investment managers may formulate and execute their investment decisions.

Within the specific guidelines presented below, the investment managers shall exercise full investment discretion. However, assets must be managed with the care, skill, prudence and diligence that a prudent investment professional in similar circumstances would exercise. Investment practices must comply with applicable laws and regulations.

By agreeing to manage assets on behalf of the Fund, an investment manager accepts the provisions of this Statement applicable to such investment manager and assets being managed by such investment manager.

The Fund’s primary investment goals are outlined below:

- To enable the UMS to meet its financial obligations
- Provide liquidity
- Preserve capital
- Produce an acceptable yield to meet budget goals
- Provide a total return opportunity set
- Build a Budget Stabilization Fund that enables UMS to smooth the financial impact of adverse markets, economic conditions, and address other financial challenges.

INVESTMENT GUIDELINES

Asset Allocation

The Fund will be diversified both by asset class (e.g. cash equivalents, diversified bonds, equities, global asset allocation and hedge funds of funds) and within asset classes (e.g., by industry, quality and size). The purpose of diversification is to minimize unsystematic risk, and to provide reasonable assurance that no single security or class of securities will have a disproportionate impact on the total Fund.

The Fund's assets will be invested primarily with external investment management firms, either via commingled funds, mutual funds or separately managed portfolios. These managers will be selected on the basis of many factors, including expertise with domestic and global fixed income and equity strategies, experience with the use of derivatives, scope of product offerings, asset allocation and consulting experience, performance, quality and experience of personnel, service, compliance procedures, references and fees.

In order to have a reasonable probability of consistently achieving the Fund's return objectives, the Committee has adopted the asset allocation policy outlined below.

If any asset class weighting is outside its respective permissible range at the end of any calendar quarter, the Investment Consultant will advise the Committee at the next Committee meeting. In addition, UMS Staff will bring the portfolio into compliance with these guidelines as promptly and prudently as possible.

The Fund will be stratified into a minimum of three separate pools. The pools reflect portfolios with different goals and objectives. The amounts invested in each pool will fluctuate based on liquidity needs and the seasonal fluctuations in the UMS cash balances.

1. Liquidity Pool: – The purpose of this pool is to meet the day-to-day obligations of the UMS, including payroll and accounts payable. It can consist of funds that are invested in a portfolio of highest quality short-term fixed-income securities (treasury obligations, agency securities, repurchase agreements, money market funds, commercial paper, short-term bond mutual funds) with adequate liquidity. The average quality of the pool will be rated at least "A-1" by Standard and Poor's (or equivalent).
2. Income Pool: – The purpose of this pool is to provide sufficient income (e.g., interest income) to meet budgetary goals and provide additional diversification to minimize downside risk. This pool can invest in a diversified portfolio, and may include items such as, but not limited to fixed income securities, FDIC insured or adequately collateralized CDs, or in unconstrained, short or intermediate term bond funds with a normal average duration of -2 to 7 years. The pool may invest in funds rated from BB to AAA quality. The overall average quality rating of this pool will be at least "A-" by Standard and Poor's (or equivalent).
3. Total Return Pool: – Expected to add diversification and growth to the Fund. Exists to provide a flow of financial support to the UMS' programs. The pool can invest in diversified assets made up of but not limited to equities, hedge funds, and global asset allocation mandates.

POOL ALLOCATION

	<u>Minimum</u>	<u>Target</u>	<u>Maximum</u>	<u>Risk Tolerance</u>
Liquidity Pool	5%	30%	100%	Low
Income Pool Moderate	0%	47.5%	60%	Low-
Total Return Pool Moderate	0%	22.5%	30%	

BUDGET STABILIZATION FUND

When net investment income exceeds budget, management may allocate the excess earnings to the budget stabilization fund. This fund will enable management to address fiscal challenges and priorities of the UMS, including supplementing the budget when the net performance of the operating cash fund does not meet budget.

The investment income budget is net of expenses related to UMS financing and investing activities. Such expenses include, but are not limited to, banking, manager, custodial, and consulting fees and expenses.

Equities

Risk: Return objectives should be achieved without assuming undue risk. The risk - as measured by the standard deviation of returns - and the risk-adjusted return of this portfolio will be compared to the same measures for an appropriate universe of Equity managers and that of the appropriate index.

Diversification: No more than 6% at cost and 8% of the equity portfolio's market value may be invested in one company. Deviations from this policy are allowed upon specific approval from the Committee. Care and consideration should be taken to ensure that the entire equity portfolio is adequately diversified by individual holdings and sector weights.

Use of Cash: The manager is expected to be fully invested in equities. This notwithstanding, the Committee understands that some liquidity in the portfolio is necessary to facilitate trading, and does not place an explicit restriction on the holding of cash equivalents. The custodian bank's short term investment fund (STIF) is an allowed investment, as are other cash equivalents, provided they carry a Standard and Poor's rating of at least A-1 (or equivalent).

Fixed Income

Risk: Return objectives should be achieved without assuming undue risk. The risk - as measured by the standard deviation of returns - and the risk-adjusted return of this portfolio will be compared to the same measures for an appropriate universe of Fixed Income managers and that of the appropriate index.

Diversification: The securities of any issuer, excepting the U.S. government and U.S. government agencies, shall not constitute more than 5% of the portfolio at any time.

Up to 10% of the fund may be invested in international bonds and currency exposure may be hedged or unhedged at the manager's discretion.

Duration: The average effective duration of the fixed income portfolio may not differ by more than one year from the duration of the applicable benchmark. For example, a core bond fund will be evaluated against the Barclays Capital Aggregate index.

Quality: The overall quality rating of the fixed income portfolio will be at least one full quality rating within the applicable benchmarks quality rating as rated by Standard and Poor's (or equivalent). For example, if the Barclays Capital Aggregate has a credit rating of AA, a core bond fund should fall in the range of A to AAA.

Use of Cash: The manager is expected to be fully invested in fixed income securities. The custodian bank STIF is an allowed investment, as are other cash equivalents, provided they carry a Standard and Poor's rating of at least A-1 (or equivalent).

Hedge Funds

Investments in hedge funds are permitted. Hedge funds represent a broad set of mandates and strategies that focus primarily on the liquid equity, fixed income and derivatives markets, but they may also include allocations, to a smaller extent, to investments that are less liquid. These mandates may employ long strategies, short selling and derivatives to protect against market downturns and/or protect profits from anticipated market movements.

The primary objective of these strategies is to provide positive absolute return throughout a market cycle (cash return + incremental spread), as well as provide increased diversification to the portfolio.

Each investment should fall within the expected risk and return characteristics historically displayed by domestic fixed income and public domestic equity investments.

Hedge Fund Guidelines

- *Diversification* – investments should be made through diversified hedge fund programs.
- *Liquidity* – initial lock-up periods should not exceed one year; subsequent allowable redemption periods should not be less frequent than annual.
- *Transparency* – investments should be made only in funds that provide adequate transparency to the underlying securities/funds held by the fund.
- *Leverage* – funds may employ reasonable amounts of leverage (except for at the fund level as described in the excluded investments section) to the extent they adhere to targeted risk/return objectives.
- *Correlation* – funds added to the Fund in this asset class should exhibit low correlation with traditional stock and bond indices.
- *Reporting* – investments may only be made in funds that adhere to strict reporting guidelines that fall within that required by the Fund.

Excluded Investments

Certain investments are ineligible for inclusion within this Fund:

- *UBTI* – investments in transactions that would generate unrelated business taxable income (“UBTI”) to the Fund.
- *Self-dealing* – securities of the investment manager, their parent or subsidiary companies (excluding money market funds) or any other security that could be considered a self-dealing transaction.
- *Leverage* – when investing in fund of hedge funds (FOHF), the manager may not employ leverage at the master fund level
- *Unrelated Speculation* – Derivatives shall not be used to create exposures to securities, currencies, indices, or any other financial vehicle unless such exposures would be allowed by a portfolio’s investment guidelines if created with non-derivative securities.
- *Coal Companies* – separate account managers shall not invest in coal companies.

OTHER ASSET CLASSES, STRATEGIES, AND INVESTMENT MANAGERS

From time to time the Treasurer may make additional diversifying investments in other asset classes or securities. The Treasurer shall approve any such investment prior to implementation and shall restrict these investments to specific investment managers.

Derivatives

Where appropriate, investment managers may use derivative securities for the following reasons:

1. *Hedging*. To the extent that the portfolio is exposed to clearly defined risks and there are derivative contracts that can be used to reduce those risks, the investment managers are permitted to use such derivatives for hedging purposes, including cross-hedging of currency exposures.
2. *Creation of Market Exposures*. Investment managers are permitted to use derivatives to replicate the risk/return profile of an asset or asset class provided that the guidelines for the investment manager allow for such exposures to be created with the underlying assets themselves.
3. *Management of Country and Asset Allocation Exposure*. Managers charged with tactically changing the exposure of their portfolio to different countries and/or asset classes are permitted to use derivative contracts for this purpose.

By way of amplification, it is noted that the following two uses of derivatives are prohibited, unless otherwise approved:

1. *Leverage*: Derivatives shall not be used to magnify overall portfolio exposure to an asset, asset class, interest rate, or any other financial vehicle beyond that which would be allowed by a portfolio’s investment guidelines if derivatives were not used.

2. Unrelated Speculation: Derivatives shall not be used to create exposures to securities, currencies, indices, or any other financial vehicle unless such exposures would be allowed by a portfolio's investment guidelines if created with non-derivative securities.

Distributions

Investment managers should assume that withdrawals may be made from the Fund from time to time by the University of Maine System. Appropriate liquidity should be maintained to fund these withdrawals without impairing the investment process. UMS staff shall alert investment managers to anticipate liquidity needs of the Fund.

Commingled Funds

Assets of the Fund may be invested in commingled funds, in recognition of the benefits of commingled funds as investment vehicles (i.e., the ability to diversify more extensively than in a small, direct investment account and the lower costs which can be associated with these funds). The Committee and management recognize that they may not be permitted to give specific policy directives to a fund whose policies are already established; therefore, the Committee and management are relying on the Investment Consultant to assess and monitor the investment policies of such funds to ascertain whether they are appropriate.

BENCHMARKS

Managers should produce returns that are commensurate with the degree of risk taken. Each manager's return and risk will be measured against the respective measures of an appropriate benchmark. For example, a core bond investment is benchmarked against the Barclays Capital Aggregate Index.

The total Fund's returns will be benchmarked against both the Consumer Price Index, and against the State of Maine Investment Pool returns.

PERFORMANCE STANDARDS AND EVALUATION

Investment managers are expected to achieve the performance objectives that have been agreed to prior to engagement, in accordance with their investment guidelines. Performance comparisons will be made on a net of fees and risk-adjusted basis. Manager performance will be reviewed quarterly to ensure compliance with these standards.

Managers should match or exceed the return of their respective benchmarks over a complete market cycle, while assuming benchmark-like risk.

Individual manager performance will normally be evaluated over a full market cycle, but the UMS reserves the right to terminate a manager for any reason including the following:

1. Investment performance that is significantly less than anticipated given the discipline employed and the risk parameters established, or unacceptable justification of poor results.

2. Investment manager agreement/guideline violations.
3. Failure to adhere to any aspect of these Guidelines.
4. Significant qualitative changes to the investment management organization.

Investment managers will be reviewed regularly regarding performance, personnel, strategy, research capabilities, organizational and business matters, and other qualitative factors that may impact their ability to achieve the desired investment results.

RESPONSIBILITIES

Internal Staff: Staff duties include:

Budget: Produce periodic short-term and long-term cash flow forecasts.

Standards: Advise investment managers on income requirements over a long planning horizon and provide updates on unexpected cash flow changes. Work with investment managers on portfolio optimization/asset allocation. Establish and update written investment objectives and guidelines as appropriate.

Manager Funding: Negotiate investment manager and custodial agreements. Deploy existing assets and new monies to investment managers.

Rebalancing: Rebalance as deemed prudent.

Appointments: Evaluate, establish and terminate banking relationships, money market managers, and other relationships in the Liquidity Pool. Work with consultant to evaluate investment managers in the Income and Total Return Pools and bring recommendations to the Investment Committee.

Corrective Action: To take whatever action is deemed prudent and appropriate when the investment manager fails to meet mutually accepted performance standards or significantly violates the investment guidelines. When time permits, this action will be taken following consultation with the Investment Committee and approval of recommended action.

Investment Committee: The Trustees provide for the prudent investment of assets held in the UMS Operating Fund Portfolio. The Investment Committee routinely updates the Board of Trustees on investment policies and performance. The University of Maine System staff will assist the Committee in carrying out their duties.

The Investment Committee is responsible for:

Standards: Approve written investment objectives and guidelines.

Evaluation: Monitor performance of the Fund.

Appointments: Approve investment managers for the Income and Total Return Pools.

Compliance: To comply with the provisions of all pertinent federal and state regulations and rulings.

Communication: To communicate investment goals, objectives, and standards to investment managers, including any material changes that may subsequently occur.

Investment Manager: In recognition of their role as investment managers of UMS funds, investment managers must assume the following responsibilities:

Investment Responsibility: To make investment decisions with respect to the assets under its management in accordance with investment manager agreements and guidelines or prospectuses. Investment managers are to make reasonable efforts to control risk, and will be evaluated regularly to ensure that the risk assumed is commensurate with the given investment style and objective.

Compliance: To comply with this statement and any other written instructions provided by UMS, and with all federal and state regulations pertaining to the investment of such assets.

Notification of Changes: To inform UMS of any material changes in the manager's outlook, policy, investment strategy and portfolio structure, or tactics or in the firm's structure including ownership, financial condition and changes in portfolio management personnel.

Trading: To comply with CFA Institute soft dollar standards. The investment manager recognizes that brokerage is the property of the client and that it has an ongoing duty to ensure the quality of transactions effected on behalf of its client. This includes, seeking to obtain best execution, minimizing transaction costs, and using client brokerage to benefit the client.

Voting of Proxies: Responsibility for the exercise of ownership rights through proxy voting shall rest solely with the investment managers, who shall exercise this responsibility strictly for the long-term economic benefit of the Fund, its participants and beneficiaries. Additionally, investment managers shall maintain a written annual report of the proxy votes for all shares of stock in companies held in the Fund's investment program. These reports shall specifically note and explain any instances where proxies were not voted in accordance with standing policy.

Reporting: To provide to the Committee and to its investment consultant quarterly reports that provide the total return net of commissions and fees, additions and withdrawals from the account, current holdings at cost and market value, and purchases and sales for the quarter. All reports are to comply with Global Investment Performance Standard (GIPS) performance presentation standards.

Availability for Meetings: To meet at least annually or at other such times as UMS may reasonably request to discuss investment outlook, performance, strategy and tactics, organizational and personnel changes, and other pertinent matters.

Bonding: The managers shall provide evidence of liability and fiduciary insurance and have its employees bonded unless otherwise exempted by law or governmental regulation.

Investment Consultant: The consultant will provide the Committee with objective advice. The responsibilities include:

Reporting: To provide performance evaluation reports to the Committee on a quarterly basis. Reports will include absolute and relative performance of each of the investment managers and the total fund. The consultant will utilize meaningful market indices for comparisons. Also, provide specialty reporting, and analysis of the overall program for portfolio risk.

Consulting: To provide proactive advice to the Committee on investment guidelines, asset allocation and manager structure. To assist in the selection of new investment managers and in the termination of managers. To alert the Committee of any adverse developments concerning the Fund and the performance of the managers. To report on market trends and external change (market intelligence). To provide research materials and educational seminars on different asset types, or topics, as requested.

Availability for Meetings: To meet at last quarterly for a formal performance review or at other such times as the Committee may reasonably request.

CONFLICT OF INTEREST

It is the policy of the Trustees to avoid conflicts of interest in its operations and in the selection of investment managers or funds. Therefore, UMS administrative officers shall not have a significant financial relationship in any manager or fund being considered. No independent investment consultant that may be retained by UMS, or any entity in which such consultant may have an interest, shall have a significant financial or other interest in, any investment manager providing services to UMS or any fund in which UMS has an investment.

IMPLEMENTATION

All new monies received by investment manager(s) after the adoption of this statement of Guidelines and Objectives shall conform to the Statement. To the extent that Fund assets are not currently managed in accordance with this Statement, the investment manager shall conform in all respects to this Statement within 60 days of its receipt hereof.

AMENDMENTS

UMS reserves the right to amend this statement and/or to direct the investment managers to take any appropriate actions, whether or not consistent with this statement, if market conditions, liquidity needs or other circumstances so indicate.

University of Maine System
Executive Summary - Investment Guidelines and Objectives
Non-Contributory Retirement Fund
Approved by Investment Committee ~~June 14~~ May 28, 2019~~98~~

Type of Plan: Defined Benefit Pension Plan

Minimum Long Term Return Assumption: 6.25%

Risk Tolerance: Low to Moderate

Asset Allocation:

<u>ASSET CLASS</u>	<u>TARGET %</u>	<u>PERMISSIBLE RANGE %</u>	<u>TARGET BENCHMARK</u>
Equity	22 ³³ %	12-25 - 32 ⁴⁵ %	
Domestic Large Cap	8	3-13	S&P 500
Domestic Small/Mid Cap	4	0-6	Russell 2000
International	7	2-12	MSCI EAFE
Emerging	3	0-5	MSCI EM
Global Equity	30	25-35	MSCI ACWI
Emerging Small Cap	3	0-7	MSCI EM SC
Fixed Income	35 ⁴³ %	25-35 - 45 ⁵⁵ %	
Domestic Core	20 ²⁶	15-20 - 25 ³⁰	BBgBarc US Aggregate Barclays Capital Aggregate
Bank Loans	5	0 - 10	Credit Suisse Leveraged Loan
TIPS	7 ^{3.5}	2-0 - 4 ²⁷	BBgBarc US
<u>Short Term TIPS</u>	<u>3.5</u>	<u>0 - 7</u>	TIPS Barclays US TIPS
Absolute Return Fixed Income	<u>35</u>	0 - <u>6</u> ¹⁰	BBgBarc US 0-5 Year TIPS 3 Month Libor
Other	40 ²⁴ %	30-15 - 50 ³⁵ %	
Global Asset Allocation	27 ⁵⁸	20-5 - 35 ¹³	65% MSCI ACWI (Net) / 35% BBgBarc Global Agg 65% MSCI All Country World (net) / 35% Barclays Capital Global Aggregate
Real Estate	8	0 - 10	NCREIF ODCE
Hedge Funds	4 ⁵⁵	0 - <u>9</u> ¹⁰	HFRI Fund of Funds Composite Index Credit Suisse Long Short Equity
Cash	3%	0 - 10%	

Evaluation Benchmarks:

Total return for the Fund shall be regularly compared to the Allocation Index* and the Policy Index**. While it is anticipated that there will be fluctuations in the Fund's value, the Fund assets should at a minimum produce a nominal long-term rate of return of 6.25%.

The investment performance of money managers shall be measured against the investment performance of other managers with similar investment styles (e.g., Large cap growth equity manager against other large cap growth managers). Furthermore, investment performance will also be measured against an appropriate index benchmark (e.g., small cap equity managers will be measured against the Russell 2000 Index).

*Allocation Index: Calculated by taking the actual asset class weights, at the previous month end, multiplied by the return of the respective passive benchmark over the current month. Measures the effectiveness of deviating from target weights.

**Policy Index: Calculated by taking the target asset class weights times the return of the respective passive benchmark (calculated monthly). Measures the effectiveness of Fund Structure

**University of Maine System
Investment Guidelines and Objectives
Non-Contributory Retirement Fund**
Approved by Investment Committee ~~June 14~~May 28, 2019⁸

INTRODUCTION

This statement of Investment Guidelines and Objectives was developed to assist the University of Maine System in carrying out its fiduciary responsibilities for the conservation and use of the assets of the Non-Contributory Retirement Fund.

The University of Maine System Non-Contributory Retirement Fund, (the "Fund") is a defined benefit pension fund that is intended to provide retirement benefits to participants in accordance with the benefit structure established by the University of Maine System Board of Trustees. The Fund is governed by the terms of its governing plan document and other applicable laws. The investments of the Fund will be made for the exclusive benefit of Plan participants and beneficiaries.

These guidelines are issued for the guidance of fiduciaries and other interested parties, including the Investment Committee of the Board of Trustees (the Committee), investment managers, internal management, and consultants in the course of investing the assets of the Fund. The guidelines may be amended by the Committee both upon their own initiative and upon consideration of the advice and recommendations of the investment managers and fund professionals. Proposed modifications should be documented in writing to the Committee.

To this end, the investment guidelines will:

- Establish formal but flexible investment parameters that incorporate prudent asset allocation and achievable total return goals.
- Outline the investment responsibilities of the Committee, the investment managers, the custodian, and the investment consultant.
- Provide a mechanism for regular communication between UMS and all parties with responsibility for fund investments.

It is expected that these guidelines will be reviewed at least annually to ensure that it continues to provide effective guidelines for the management of the Fund.

STATEMENT OF GOALS AND OBJECTIVES

The statement of Investment Guidelines and Objectives is set forth to provide an appropriate set of goals and objectives for the Fund's assets and to define guidelines within which the investment managers may formulate and execute their investment decisions.

Within the specific guidelines presented below, the investment managers shall exercise full investment discretion. However, assets must be managed with the care, skill, prudence and diligence that a prudent investment professional in similar circumstances would exercise. Investment practices must comply with the applicable laws and regulations.

By agreeing to manage assets on behalf of the Fund, an investment manager accepts the provisions of this Statement applicable to such investment manager and assets being managed by such investment manager.

The Fund's primary investment goals are outlined below:

1. Maximum total return with a prudent level of risk, consistent with prudent investment management, is the primary goal of the Fund. Return, as used herein, includes income plus realized and unrealized gains and losses on Fund assets. In addition, assets of the Fund shall be invested to ensure that principal is preserved and enhanced over time, both in real and nominal terms.
2. Total return for the Fund shall be regularly compared to the Allocation Index and the Policy Index. While it is anticipated that there will be fluctuations in the Fund's value, the Fund assets should at a minimum produce a nominal long-term rate of return of 6.25%, net of all expenses, in line with the Fund's actuarial return assumption.
3. Total portfolio risk exposure and risk-adjusted returns will be regularly evaluated and compared with other Pension Plans, the Allocation Index, and the Policy Index. Risk-adjusted returns for the Fund and for individual managers are expected to consistently rank in the top third of comparable funds or managers, respectively.
4. Performance of this Fund will be evaluated on a regular basis. Consideration will be given to the degree to which performance results meet the goals and objectives as herewith set forth. Normally, results are evaluated over a full market cycle, but shorter-term results will be regularly reviewed and earlier action taken if in the best interest of the Fund.

INVESTMENT GUIDELINES

Asset Allocation

The fund will be diversified both by asset class (e.g. equities, bonds, cash equivalents, foreign securities) and within asset classes (e.g., by country, economic sector, industry, quality, and size). The purpose of diversification is to minimize unsystematic risk, and to provide reasonable assurance that no single security or class of securities will have a disproportionate impact on the total fund.

In order to have a reasonable probability of consistently achieving the Fund's return objectives, the Committee has adopted the asset allocation policy outlined below.

If any asset class weighting is outside its respective permissible range at the end of any calendar quarter, the Investment Consultant will advise the Committee at the next Committee meeting. In addition, University of Maine System Staff will bring the portfolio into compliance with these guidelines as promptly and prudently as possible.

Asset Allocation:

<u>ASSET CLASS</u>	<u>TARGET %</u>	<u>PERMISSIBLE RANGE %</u>	<u>TARGET BENCHMARK</u>
<u>Equity</u>	<u>33%</u>	<u>25 - 45%</u>	

<u>Global Equity</u>	<u>30</u>	<u>25 – 35</u>	<u>MSCI ACWI</u>
<u>Emerging Small Cap</u>	<u>3</u>	<u>0 - 7</u>	<u>MSCI EM SC</u>
<u>Fixed Income</u>	<u>43%</u>	<u>35 - 55%</u>	
<u>Domestic Core</u>	<u>26</u>	<u>20 - 30</u>	<u>BBqBarc US</u>
<u>Bank Loans</u>	<u>5</u>	<u>0 - 10</u>	<u>Aggregate</u>
<u>TIPS</u>	<u>3.5</u>	<u>0– 7</u>	<u>Credit Suisse</u>
<u>Short Term TIPS</u>	<u>3.5</u>	<u>0 - 7</u>	<u>Leveraged Loan</u>
<u>Absolute Return Fixed Income</u>	<u>5</u>	<u>0 - 10</u>	<u>BBqBarc US TIPS</u>
			<u>BBqBarc Short</u>
			<u>TermUS 0-5 Year</u>
			<u>TIPS</u>
			<u>3 Month Libor</u>
<u>Other</u>	<u>24%</u>	<u>15 - 35%</u>	
<u>Global Asset Allocation</u>	<u>8</u>	<u>5 - 13</u>	<u>65% MSCI ACWI</u>
			<u>(Net) / 35% BBqBarc</u>
<u>Real Estate</u>	<u>8</u>	<u>0 - 10</u>	<u>Global Agg</u>
<u>Hedge Funds</u>	<u>5</u>	<u>0 - 10</u>	<u>NCREIF ODCE</u>
			<u>Credit Suisse Long</u>
			<u>Short Equity</u>
<u>Cash</u>	<u>3%</u>	<u>0 - 10%</u>	

<u>ASSET CLASS</u>	<u>TARGET %</u>	<u>PERMISSIBLE RANGE %</u>	<u>TARGET BENCHMARK</u>
<u>Equity</u>	<u>22%</u>	<u>12 – 32%</u>	
<u>Domestic Large Cap</u>	<u>8</u>	<u>3 – 13</u>	<u>S&P 500</u>
<u>Domestic Small/Mid Cap</u>	<u>4</u>	<u>0 – 6</u>	<u>Russell 2000</u>
<u>International</u>	<u>7</u>	<u>2 – 12</u>	<u>MSCI EAFE</u>
<u>Emerging</u>	<u>3</u>	<u>0 – 5</u>	<u>MSCI EM</u>
<u>Fixed Income</u>	<u>35%</u>	<u>25 – 45%</u>	
<u>Domestic Core</u>	<u>20</u>	<u>15 – 25</u>	<u>Barclays Capital</u>
<u>Bank Loans</u>	<u>5</u>	<u>0 – 10</u>	<u>Aggregate</u>
<u>TIPS</u>	<u>7</u>	<u>2 – 12</u>	<u>Credit Suisse</u>
<u>Absolute Return Fixed Income</u>	<u>3</u>	<u>0 – 6</u>	<u>Leveraged Loan</u>
			<u>Barclays US TIPS</u>
			<u>3</u>
			<u>Month Libor</u>
<u>Other</u>	<u>40%</u>	<u>30 – 50%</u>	
<u>Global Asset Allocation</u>	<u>27.5</u>	<u>20 – 35</u>	<u>65% MSCI All</u>
			<u>Country World (net)/</u>
			<u>35% Barclays Capital</u>
			<u>Global Aggregate</u>
<u>Real Estate</u>	<u>8</u>	<u>0 – 10</u>	<u>NCREIF ODCE</u>
<u>Hedge Funds</u>	<u>4.5</u>	<u>0 – 9</u>	<u>HFRI Fund of Funds</u>
			<u>Composite Index</u>
<u>Cash</u>	<u>3%</u>	<u>0 – 10%</u>	

Equities

Risk: Return objectives should be achieved without assuming undue risk. The risk (as measured by the standard deviation of returns) and the risk-adjusted return of this portfolio will be compared to the same measures for an appropriate universe of Equity managers and that of the appropriate index.

Diversification: No more than 5% at cost and 10% of the equity portfolio's market value may be invested in one company. The equity portfolio should be invested in at least 30 different companies in different industries. No more than 30% of the equity portfolio's market value may be invested in one industry sector.

Use of Cash: The manager is expected to be fully invested in equities. This notwithstanding, the Committee understands that some liquidity in the portfolio is necessary to facilitate trading, and does not place an explicit restriction on the holding of cash equivalents. The custodian bank's short term investment fund (STIF) is an allowed investment, as are other cash equivalents, provided they carry a Standard and Poor's rating of at least A-1 or an equivalent rating.

Fixed Income

Risk: Return objectives should be achieved without assuming undue risk. The risk (as measured by the standard deviation of returns) and the risk-adjusted return of this portfolio will be compared to the same measures for an appropriate universe of Fixed Income managers and that of the appropriate index.

Diversification: The securities of any issuer, excepting the U.S. government and U.S. government agencies, shall not constitute more than 5% of the portfolio at any time. Up to 10% of the fund may be invested in international bonds and currency exposure may be hedged or unhedged at the manager's discretion.

Duration: The average effective duration of the fixed income portfolio may not differ by more than one year from the duration of the applicable benchmark. For example, a core bond fund will be evaluated against the Barclays Capital Aggregate index.

Quality: The overall quality rating of fixed income portfolio will be at least one full quality rating within the applicable benchmarks quality rating as rated by Standard and Poor's (or equivalent). For example, if the Barclays Capital Aggregate has a credit rating of AA, a core bond fund should fall in the range of A to AAA.

Use of Cash: The manager is expected to be fully invested in fixed income securities. The custodian bank STIF is an allowed investment, as are other cash equivalents, provided they carry a Standard and Poor's rating of at least A-1 or an equivalent rating.

Other Asset Classes, Strategies, and Investment Managers

From time to time the Committee may make additional diversifying investments in other asset classes or securities such as, Real Estate, Commodities, and Hedge Funds. The Committee shall approve any such investment prior to implementation and shall restrict these investments to specific investment managers.

Hedge Funds

Investments in hedge funds are permitted. Hedge funds represent a broad set of mandates and strategies that focus primarily on the liquid equity, fixed income and derivatives markets, but they may also include allocations, to a smaller extent, to investments that are less liquid. These mandates may employ long strategies, short selling and derivatives to protect against market downturns and/or profits from anticipated market movements.

The primary objective of these strategies is to provide positive absolute return throughout a market cycle (cash return + incremental spread), as well as provide increased diversification to the portfolio.

Each investment should fall within the expected risk and return characteristics historically displayed by domestic fixed income and public domestic equity investments. Leverage may be employed provided the risk of the portfolio remains within the target guidelines.

Hedge Fund Guidelines

- *Diversification* – investments should be made through diversified hedge fund programs.
- *Liquidity* – initial lock-up periods should not exceed one year; subsequent allowable redemption periods should not be less frequent than annual.
- *Transparency* – investments should be made only in funds that provide adequate transparency to the underlying securities/funds held by the fund.
- *Leverage* – funds may employ reasonable amounts of leverage (except for at the fund level as described in the excluded investments section) to the extent they adhere to targeted risk/return objectives.
- *Correlation* – funds added to the Fund in this asset class should exhibit low correlation with traditional stock and bond indices
- *Reporting* – investments may only be made in funds that adhere to strict reporting guidelines that fall within that required by the Fund.

Excluded Investments

Certain investments are ineligible for inclusion within this Fund:

- *UBTI* – investments in transactions that would generate unrelated business taxable income (“UBTI”) to the Fund.
- *Prohibited transactions* – investments or transactions that would be non-exempt prohibited transactions under Section 406 of ERISA or Section 4975 of the Internal Revenue Code.
- *Self-dealing* – securities of the investment manager, their parent or subsidiary companies (excluding money market funds) or any other security that could be considered a self-dealing transaction.
- *Leverage* – when investing in fund of hedge funds (FOHF), the manager may not employ leverage at the master fund level
- *Unrelated Speculation* – derivatives shall not be used to create exposures to securities, currencies, indices, or any other financial vehicle unless such exposures would be allowed by a portfolio’s investment guidelines if created with non-derivative securities.
- *Coal Companies* – separate account managers shall not invest in coal companies.

Derivatives

Where appropriate, investment managers may use derivative securities for the following reasons:

1. *Hedging*. To the extent that the portfolio is exposed to clearly defined risks and there are derivative contracts that can be used to reduce those risks, the investment managers are permitted to use such derivatives for hedging purposes, including cross-hedging of currency exposures.
2. *Creation of Market Exposures*. Investment managers are permitted to use derivatives to replicate the risk/return profile of an asset or asset class provided that the guidelines for

the investment manager allow for such exposures to be created with the underlying assets themselves.

3. *Management of Country and Asset Allocation Exposure.* Managers charged with tactically changing the exposure of their portfolio to different countries and/or asset classes are permitted to use derivative contracts for this purpose.

By way of amplification, it is noted that the following two uses of derivatives are prohibited unless approved by the Committee:

1. *Leverage.* Derivatives shall not be used to magnify overall portfolio exposure to an asset, asset class, interest rate, or any other financial vehicle beyond that which would be allowed by a portfolio's investment guidelines if derivatives were not used.
2. *Unrelated Speculation.* Derivatives shall not be used to create exposures to securities, currencies, indices, or any other financial vehicle unless such exposures would be allowed by a portfolio's investment guidelines if created with non-derivative securities.

Benefit Payments

Investment managers should assume that withdrawals may be made from the Fund from time to time to pay Plan benefits. Appropriate liquidity should be maintained to fund these withdrawals without impairing the investment process. The Committee or the designated representatives shall alert investment managers to anticipate liquidity needs of the Fund.

Commingled Funds

The Committee may elect to invest assets of the Fund in commingled funds, in recognition of the benefits of commingled funds as investment vehicles (i.e., the ability to diversify more extensively than in a small, direct investment account and the lower costs which can be associated with these funds). The Committee recognizes that they may not be permitted to give specific policy directives to a fund whose policies are already established; therefore, the Committee is relying on the Investment Consultant to assess and monitor the investment policies of such funds to ascertain whether they are appropriate.

PERFORMANCE STANDARDS AND EVALUATION

Investment managers are expected to achieve the performance objectives that have been agreed to prior to engagement, by investing in those assets they were engaged to invest in. Performance comparisons will be made on a net of fees and risk-adjusted basis. Manager performance will be periodically reviewed to ensure compliance with these standards.

The investment performance of money managers shall be measured (e.g., total return and risk adjusted return) against the investment performance of other managers with similar investment styles (e.g., Large cap growth equity manager against other large cap growth managers). Furthermore, investment performance will also be measured (e.g., total return and risk adjusted return) against an appropriate index benchmark (e.g., small cap equity managers will be measured against the Russell 2000 Index).

Performance reports shall be compiled quarterly and communicated to the Committee for review. Consideration shall be given to the extent to which the investment results are consistent with the investment objectives, goals, risk and guidelines as set forth in this statement. The Committee intends to evaluate individual manager performance over a complete market cycle, but reserves the right to terminate a manager for any reason including the following:

1. Investment performance that is significantly less than anticipated given the discipline employed and the risk parameters established, or unacceptable justification of poor results.
2. Investing in asset classes other than the asset classes for which the manager was engaged.
3. Failure to adhere to any aspect of this statement of investment policy, including communication and reporting requirements.
4. Significant qualitative changes to the investment management organization.

Investment managers will be reviewed regularly regarding performance, personnel, strategy, research capabilities, organizational and business matters, and other qualitative factors that may impact their ability to achieve the desired investment results.

RESPONSIBILITIES

Investment Committee

The Committee acknowledges its fiduciary responsibility for the conservation and prudent management of the Fund. More specifically, its responsibilities include:

Compliance: To comply with the provisions of all pertinent federal and state regulations and rulings.

Standards: To develop investment objectives, asset allocation targets, investment guidelines, and performance measurement standards which are consistent with the needs of the funds.

Appointments: To evaluate and appoint investment managers to invest and manage fund assets. In addition, to appoint custodians and investment consultants.

Communication: To communicate investment goals, objectives, and standards to investment managers, including any material changes that may subsequently occur.

Manager Funding: To deploy existing assets and new monies to investment managers.

Evaluation: To review and evaluate investment results in the context of established standards of performance and adherence to the investment guidelines.

Corrective Action: To take whatever action is deemed prudent and appropriate when the investment manager fails to meet mutually accepted performance standards or significantly violates the investment guidelines.

The University of Maine System staff will assist the Committee in carrying out their duties.

Investment Manager

In recognition of their role as fiduciaries of the Fund, investment managers must assume the following responsibilities:

Investment Responsibility: To make all investment decisions with respect to the assets under its management. The investment managers pledge to invest only in those asset classes they were engaged to invest in. Investment managers are to make reasonable efforts to control risk, and will be evaluated regularly to ensure that the risk assumed is commensurate with the given investment style and objective.

Compliance: To comply with this statement and any other written instructions provided by the Committee. Furthermore, to comply with all federal and state regulations pertaining to the investment of such assets.

Trading: To comply with CFA Institute soft dollar standards. The investment manager recognizes that brokerage is the property of the client and that it has an ongoing duty to ensure the quality of transactions effected on behalf of its client. This includes, seeking to obtain best execution, minimizing transaction costs, and using client brokerage to benefit the client.

Voting of Proxies: Responsibility for the exercise of ownership rights through proxy voting shall rest solely with the investment managers, who shall exercise this responsibility strictly for the long-term economic benefit of the Fund, its participants and beneficiaries. Additionally, investment managers shall maintain a written annual report of the proxy votes for all shares of stock in companies held in the Fund's investment program. These reports shall specifically note and explain any instances where proxies were not voted in accordance with standing policy.

Notification of Changes: To inform the Committee of any material changes in the manager's outlook, policy, investment strategy and portfolio structure, or tactics or in the firm's structure including ownership, financial condition and changes in portfolio management personnel.

Reporting: To provide the Committee and to its investment consultant quarterly reports that provide the total return net of commissions and fees, additions and withdrawals from the account, current holdings at cost and market value, and purchases and sales for the quarter. All reports are to comply with Global Investment Performance Standard (GIPS) performance presentation standards.

Availability for Meetings: To meet at least annually or at other such times as the Committee may reasonably request to discuss investment outlook, performance, strategy and tactics, organizational and personnel changes, and other pertinent matters.

Bonding: The managers shall provide evidence of liability and fiduciary insurance and have its employees bonded unless otherwise exempted by law or governmental regulation.

Custodian

In fulfillment of its fiduciary responsibilities, the Committee has appointed a custodian to administer the funds' assets. The custodian has the responsibility to:

Custody Securities: Receive, hold, and manage the fund assets.

Distributions: Make payments to the plan's beneficiaries and to collect all interest and dividends.

Accounting: Keep accurate and detailed accounts of all investments, receipts, disbursements and other transactions.

Reporting: Provide a written account of all holdings and transactions on a monthly basis.

Bonding: The custodian shall provide evidence of liability and fiduciary insurance and have its employees bonded unless otherwise exempted by law or governmental regulation.

Investment Consultant

The consultant will provide the Committee with objective advice. The responsibilities include:

Reporting: Providing performance evaluation reports to the Committee on a quarterly basis. Reports will include absolute and relative performance of each of the investment managers and the total Pool. The consultant will utilize meaningful market indices for comparisons. Also, the consultant will provide specialty reporting and analysis of the overall program for portfolio risk.

Consulting: Providing proactive advice to the Committee on investment guidelines, asset allocation and manager structure. The consultant will also assist in the selection of new investment managers and in the termination of managers, alert the Committee of any adverse developments concerning the Fund and the performance of the managers, report on market trends and external change (market intelligence), and provide research materials and educational seminars on different asset types, or topics, as requested.

Availability for Meetings: To meet at least quarterly for a formal performance review or at other such times as the Committee may reasonably request.

CONFLICT OF INTEREST

It is the policy of the Committee to avoid conflicts of interest in its operations and in the selection of investment managers or funds. Therefore, members of the Committee shall not have a pecuniary relationship in any manager or fund being considered. No independent investment consultant retained by the Committee, or any entity, in which such consultant may have an interest, shall be a party to any transaction with, or have a financial or other interest in, any investment manager providing services to the Committee.

IMPLEMENTATION

All new monies received by investment manager(s) after the adoption of this statement of Guidelines and Objectives shall conform to the Statement. To the extent that Fund assets are not currently managed in accordance with this Statement, the investment manager shall conform in all respects to this Statement within 60 days of its receipt hereof.

AMENDMENTS

The Committee may amend this Statement, subject to the approval of the Committee. The Committee, through the University of Maine System, also reserves the right to direct the investment managers to take any appropriate actions, whether or not consistent with this Statement, if market conditions, liquidity needs or other circumstances so indicate.

University of Maine System
Executive Summary - Investment Guidelines and Objectives
Non-Contributory Retirement Fund
Approved by Investment Committee May 28, 2019

Type of Plan: Defined Benefit Pension Plan

Minimum Long Term Return Assumption: 6.25%

Risk Tolerance: Low to Moderate

Asset Allocation:

<u>ASSET CLASS</u>	<u>TARGET %</u>	<u>PERMISSIBLE RANGE %</u>	<u>TARGET BENCHMARK</u>
Equity	33%	25 - 45%	
Global Equity	30	25 – 35	MSCI ACWI
Emerging Small Cap	3	0 - 7	MSCI EM SC
Fixed Income	43%	35 - 55%	
Domestic Core	26	20 - 30	BBgBarc US Aggregate
Bank Loans	5	0 - 10	Credit Suisse Leveraged Loan
TIPS	3.5	0– 7	BBgBarc US TIPS
Short Term TIPS	3.5	0 - 7	BBgBarc US 0-5 Year TIPS
Absolute Return Fixed Income	5	0 - 10	3 Month Libor
Other	24%	15 - 35%	
Global Asset Allocation	8	5 - 13	65% MSCI ACWI (Net) / 35% BBgBarc Global Agg
Real Estate	8	0 - 10	NCREIF ODCE
Hedge Funds	5	0 - 10	Credit Suisse Long Short Equity
Cash	3%	0 - 10%	

Evaluation Benchmarks:

Total return for the Fund shall be regularly compared to the Allocation Index* and the Policy Index**. While it is anticipated that there will be fluctuations in the Fund's value, the Fund assets should at a minimum produce a nominal long-term rate of return of 6.25%.

The investment performance of money managers shall be measured against the investment performance of other managers with similar investment styles (e.g., Large cap growth equity manager against other large cap growth managers). Furthermore, investment performance will also be measured against an appropriate index benchmark (e.g., small cap equity managers will be measured against the Russell 2000 Index).

*Allocation Index: Calculated by taking the actual asset class weights, at the previous month end, multiplied by the return of the respective passive benchmark over the current month. Measures the effectiveness of deviating from target weights.

**Policy Index: Calculated by taking the target asset class weights times the return of the respective passive benchmark (calculated monthly). Measures the effectiveness of Fund Structure

**University of Maine System
Investment Guidelines and Objectives
Non-Contributory Retirement Fund
Approved by Investment Committee May 28, 2019**

INTRODUCTION

This statement of Investment Guidelines and Objectives was developed to assist the University of Maine System in carrying out its fiduciary responsibilities for the conservation and use of the assets of the Non-Contributory Retirement Fund.

The University of Maine System Non-Contributory Retirement Fund, (the "Fund") is a defined benefit pension fund that is intended to provide retirement benefits to participants in accordance with the benefit structure established by the University of Maine System Board of Trustees. The Fund is governed by the terms of its governing plan document and other applicable laws. The investments of the Fund will be made for the exclusive benefit of Plan participants and beneficiaries.

These guidelines are issued for the guidance of fiduciaries and other interested parties, including the Investment Committee of the Board of Trustees (the Committee), investment managers, internal management, and consultants in the course of investing the assets of the Fund. The guidelines may be amended by the Committee both upon their own initiative and upon consideration of the advice and recommendations of the investment managers and fund professionals. Proposed modifications should be documented in writing to the Committee.

To this end, the investment guidelines will:

- Establish formal but flexible investment parameters that incorporate prudent asset allocation and achievable total return goals.
- Outline the investment responsibilities of the Committee, the investment managers, the custodian, and the investment consultant.
- Provide a mechanism for regular communication between UMS and all parties with responsibility for fund investments.

It is expected that these guidelines will be reviewed at least annually to ensure that it continues to provide effective guidelines for the management of the Fund.

STATEMENT OF GOALS AND OBJECTIVES

The statement of Investment Guidelines and Objectives is set forth to provide an appropriate set of goals and objectives for the Fund's assets and to define guidelines within which the investment managers may formulate and execute their investment decisions.

Within the specific guidelines presented below, the investment managers shall exercise full investment discretion. However, assets must be managed with the care, skill, prudence and diligence that a prudent investment professional in similar circumstances would exercise. Investment practices must comply with the applicable laws and regulations.

By agreeing to manage assets on behalf of the Fund, an investment manager accepts the provisions of this Statement applicable to such investment manager and assets being managed by such investment manager.

The Fund's primary investment goals are outlined below:

1. Maximum total return with a prudent level of risk, consistent with prudent investment management, is the primary goal of the Fund. Return, as used herein, includes income

plus realized and unrealized gains and losses on Fund assets. In addition, assets of the Fund shall be invested to ensure that principal is preserved and enhanced over time, both in real and nominal terms.

2. Total return for the Fund shall be regularly compared to the Allocation Index and the Policy Index. While it is anticipated that there will be fluctuations in the Fund's value, the Fund assets should at a minimum produce a nominal long-term rate of return of 6.25%, net of all expenses, in line with the Fund's actuarial return assumption.
3. Total portfolio risk exposure and risk-adjusted returns will be regularly evaluated and compared with other Pension Plans, the Allocation Index, and the Policy Index. Risk-adjusted returns for the Fund and for individual managers are expected to consistently rank in the top third of comparable funds or managers, respectively.
4. Performance of this Fund will be evaluated on a regular basis. Consideration will be given to the degree to which performance results meet the goals and objectives as herewith set forth. Normally, results are evaluated over a full market cycle, but shorter-term results will be regularly reviewed and earlier action taken if in the best interest of the Fund.

INVESTMENT GUIDELINES

Asset Allocation

The fund will be diversified both by asset class (e.g. equities, bonds, cash equivalents, foreign securities) and within asset classes (e.g., by country, economic sector, industry, quality, and size). The purpose of diversification is to minimize unsystematic risk, and to provide reasonable assurance that no single security or class of securities will have a disproportionate impact on the total fund.

In order to have a reasonable probability of consistently achieving the Fund's return objectives, the Committee has adopted the asset allocation policy outlined below.

If any asset class weighting is outside its respective permissible range at the end of any calendar quarter, the Investment Consultant will advise the Committee at the next Committee meeting. In addition, University of Maine System Staff will bring the portfolio into compliance with these guidelines as promptly and prudently as possible.

Asset Allocation:

<u>ASSET CLASS</u>	<u>TARGET %</u>	<u>PERMISSIBLE RANGE %</u>	<u>TARGET BENCHMARK</u>
Equity	33%	25 - 45%	
Global Equity	30	25 – 35	MSCI ACWI
Emerging Small Cap	3	0 - 7	MSCI EM SC
Fixed Income	43%	35 - 55%	
Domestic Core	26	20 - 30	BBgBarc US Aggregate
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Short Term TIPS	3.5	0 - 7	BBgBarc US 0-5 Year TIPS
Absolute Return Fixed Income	5	0 - 10	3 Month Libor

Other	24%	15 - 35%	
Global Asset Allocation	8	5 - 13	65% MSCI ACWI (Net) / 35% BBgBarc Global Agg
Real Estate	8	0 - 10	NCREIF ODCE
Hedge Funds	5	0 - 10	Credit Suisse Long Short Equity
Cash	3%	0 - 10%	
Equities			

Risk: Return objectives should be achieved without assuming undue risk. The risk (as measured by the standard deviation of returns) and the risk-adjusted return of this portfolio will be compared to the same measures for an appropriate universe of Equity managers and that of the appropriate index.

Diversification: No more than 5% at cost and 10% of the equity portfolio's market value may be invested in one company. The equity portfolio should be invested in at least 30 different companies in different industries. No more than 30% of the equity portfolio's market value may be invested in one industry sector.

Use of Cash: The manager is expected to be fully invested in equities. This notwithstanding, the Committee understands that some liquidity in the portfolio is necessary to facilitate trading, and does not place an explicit restriction on the holding of cash equivalents. The custodian bank's short term investment fund (STIF) is an allowed investment, as are other cash equivalents, provided they carry a Standard and Poor's rating of at least A-1 or an equivalent rating.

Fixed Income

Risk: Return objectives should be achieved without assuming undue risk. The risk (as measured by the standard deviation of returns) and the risk-adjusted return of this portfolio will be compared to the same measures for an appropriate universe of Fixed Income managers and that of the appropriate index.

Diversification: The securities of any issuer, excepting the U.S. government and U.S. government agencies, shall not constitute more than 5% of the portfolio at any time. Up to 10% of the fund may be invested in international bonds and currency exposure may be hedged or unhedged at the manager's discretion.

Duration: The average effective duration of the fixed income portfolio may not differ by more than one year from the duration of the applicable benchmark. For example, a core bond fund will be evaluated against the Barclays Capital Aggregate index.

Quality: The overall quality rating of fixed income portfolio will be at least one full quality rating within the applicable benchmarks quality rating as rated by Standard and Poor's (or equivalent). For example, if the Barclays Capital Aggregate has a credit rating of AA, a core bond fund should fall in the range of A to AAA.

Use of Cash: The manager is expected to be fully invested in fixed income securities. The custodian bank STIF is an allowed investment, as are other cash equivalents, provided they carry a Standard and Poor's rating of at least A-1 or an equivalent rating.

Other Asset Classes, Strategies, and Investment Managers

From time to time the Committee may make additional diversifying investments in other asset classes or securities such as, Real Estate, Commodities, and Hedge Funds. The Committee shall

approve any such investment prior to implementation and shall restrict these investments to specific investment managers.

Hedge Funds

Investments in hedge funds are permitted. Hedge funds represent a broad set of mandates and strategies that focus primarily on the liquid equity, fixed income and derivatives markets, but they may also include allocations, to a smaller extent, to investments that are less liquid. These mandates may employ long strategies, short selling and derivatives to protect against market downturns and/or profits from anticipated market movements.

The primary objective of these strategies is to provide positive absolute return throughout a market cycle (cash return + incremental spread), as well as provide increased diversification to the portfolio.

Each investment should fall within the expected risk and return characteristics historically displayed by domestic fixed income and public domestic equity investments. Leverage may be employed provided the risk of the portfolio remains within the target guidelines.

Hedge Fund Guidelines

- *Diversification* – investments should be made through diversified hedge fund programs.
- *Liquidity* – initial lock-up periods should not exceed one year; subsequent allowable redemption periods should not be less frequent than annual.
- *Transparency* – investments should be made only in funds that provide adequate transparency to the underlying securities/funds held by the fund.
- *Leverage* – funds may employ reasonable amounts of leverage (except for at the fund level as described in the excluded investments section) to the extent they adhere to targeted risk/return objectives.
- *Correlation* – funds added to the Fund in this asset class should exhibit low correlation with traditional stock and bond indices
- *Reporting* – investments may only be made in funds that adhere to strict reporting guidelines that fall within that required by the Fund.

Excluded Investments

Certain investments are ineligible for inclusion within this Fund:

- *UBTI* – investments in transactions that would generate unrelated business taxable income (“UBTI”) to the Fund.
- *Prohibited transactions* – investments or transactions that would be non-exempt prohibited transactions under Section 406 of ERISA or Section 4975 of the Internal Revenue Code.
- *Self-dealing* – securities of the investment manager, their parent or subsidiary companies (excluding money market funds) or any other security that could be considered a self-dealing transaction.
- *Leverage* – when investing in fund of hedge funds (FOHF), the manager may not employ leverage at the master fund level
- *Unrelated Speculation* – derivatives shall not be used to create exposures to securities, currencies, indices, or any other financial vehicle unless such exposures would be allowed by a portfolio’s investment guidelines if created with non-derivative securities.
- *Coal Companies* – separate account managers shall not invest in coal companies.

Derivatives

Where appropriate, investment managers may use derivative securities for the following reasons:

1. *Hedging.* To the extent that the portfolio is exposed to clearly defined risks and there are derivative contracts that can be used to reduce those risks, the investment managers are permitted to use such derivatives for hedging purposes, including cross-hedging of currency exposures.
2. *Creation of Market Exposures.* Investment managers are permitted to use derivatives to replicate the risk/return profile of an asset or asset class provided that the guidelines for the investment manager allow for such exposures to be created with the underlying assets themselves.
3. *Management of Country and Asset Allocation Exposure.* Managers charged with tactically changing the exposure of their portfolio to different countries and/or asset classes are permitted to use derivative contracts for this purpose.

By way of amplification, it is noted that the following two uses of derivatives are prohibited unless approved by the Committee:

1. *Leverage.* Derivatives shall not be used to magnify overall portfolio exposure to an asset, asset class, interest rate, or any other financial vehicle beyond that which would be allowed by a portfolio's investment guidelines if derivatives were not used.
2. *Unrelated Speculation.* Derivatives shall not be used to create exposures to securities, currencies, indices, or any other financial vehicle unless such exposures would be allowed by a portfolio's investment guidelines if created with non-derivative securities.

Benefit Payments

Investment managers should assume that withdrawals may be made from the Fund from time to time to pay Plan benefits. Appropriate liquidity should be maintained to fund these withdrawals without impairing the investment process. The Committee or the designated representatives shall alert investment managers to anticipate liquidity needs of the Fund.

Commingled Funds

The Committee may elect to invest assets of the Fund in commingled funds, in recognition of the benefits of commingled funds as investment vehicles (i.e., the ability to diversify more extensively than in a small, direct investment account and the lower costs which can be associated with these funds). The Committee recognizes that they may not be permitted to give specific policy directives to a fund whose policies are already established; therefore, the Committee is relying on the Investment Consultant to assess and monitor the investment policies of such funds to ascertain whether they are appropriate.

PERFORMANCE STANDARDS AND EVALUATION

Investment managers are expected to achieve the performance objectives that have been agreed to prior to engagement, by investing in those assets they were engaged to invest in. Performance comparisons will be made on a net of fees and risk-adjusted basis. Manager performance will be periodically reviewed to ensure compliance with these standards.

The investment performance of money managers shall be measured (e.g., total return and risk adjusted return) against the investment performance of other managers with similar investment styles (e.g., Large cap growth equity manager against other large cap growth

managers). Furthermore, investment performance will also be measured (e.g., total return and risk adjusted return) against an appropriate index benchmark (e.g., small cap equity managers will be measured against the Russell 2000 Index).

Performance reports shall be compiled quarterly and communicated to the Committee for review. Consideration shall be given to the extent to which the investment results are consistent with the investment objectives, goals, risk and guidelines as set forth in this statement. The Committee intends to evaluate individual manager performance over a complete market cycle, but reserves the right to terminate a manager for any reason including the following:

1. Investment performance that is significantly less than anticipated given the discipline employed and the risk parameters established, or unacceptable justification of poor results.
2. Investing in asset classes other than the asset classes for which the manager was engaged.
3. Failure to adhere to any aspect of this statement of investment policy, including communication and reporting requirements.
4. Significant qualitative changes to the investment management organization.

Investment managers will be reviewed regularly regarding performance, personnel, strategy, research capabilities, organizational and business matters, and other qualitative factors that may impact their ability to achieve the desired investment results.

RESPONSIBILITIES

Investment Committee

The Committee acknowledges its fiduciary responsibility for the conservation and prudent management of the Fund. More specifically, its responsibilities include:

Compliance: To comply with the provisions of all pertinent federal and state regulations and rulings.

Standards: To develop investment objectives, asset allocation targets, investment guidelines, and performance measurement standards which are consistent with the needs of the funds.

Appointments: To evaluate and appoint investment managers to invest and manage fund assets. In addition, to appoint custodians and investment consultants.

Communication: To communicate investment goals, objectives, and standards to investment managers, including any material changes that may subsequently occur.

Manager Funding: To deploy existing assets and new monies to investment managers.

Evaluation: To review and evaluate investment results in the context of established standards of performance and adherence to the investment guidelines.

Corrective Action: To take whatever action is deemed prudent and appropriate when the investment manager fails to meet mutually accepted performance standards or significantly violates the investment guidelines.

The University of Maine System staff will assist the Committee in carrying out their duties.

Investment Manager

In recognition of their role as fiduciaries of the Fund, investment managers must assume the following responsibilities:

Investment Responsibility: To make all investment decisions with respect to the assets under its management. The investment managers pledge to invest only in those asset classes they were engaged to invest in. Investment managers are to make reasonable efforts to control risk, and will be evaluated regularly to ensure that the risk assumed is commensurate with the given investment style and objective.

Compliance: To comply with this statement and any other written instructions provided by the Committee. Furthermore, to comply with all federal and state regulations pertaining to the investment of such assets.

Trading: To comply with CFA Institute soft dollar standards. The investment manager recognizes that brokerage is the property of the client and that it has an ongoing duty to ensure the quality of transactions effected on behalf of its client. This includes, seeking to obtain best execution, minimizing transaction costs, and using client brokerage to benefit the client.

Voting of Proxies: Responsibility for the exercise of ownership rights through proxy voting shall rest solely with the investment managers, who shall exercise this responsibility strictly for the long-term economic benefit of the Fund, its participants and beneficiaries. Additionally, investment managers shall maintain a written annual report of the proxy votes for all shares of stock in companies held in the Fund's investment program. These reports shall specifically note and explain any instances where proxies were not voted in accordance with standing policy.

Notification of Changes: To inform the Committee of any material changes in the manager's outlook, policy, investment strategy and portfolio structure, or tactics or in the firm's structure including ownership, financial condition and changes in portfolio management personnel.

Reporting: To provide the Committee and to its investment consultant quarterly reports that provide the total return net of commissions and fees, additions and withdrawals from the account, current holdings at cost and market value, and purchases and sales for the quarter. All reports are to comply with Global Investment Performance Standard (GIPS) performance presentation standards.

Availability for Meetings: To meet at least annually or at other such times as the Committee may reasonably request to discuss investment outlook, performance, strategy and tactics, organizational and personnel changes, and other pertinent matters.

Bonding: The managers shall provide evidence of liability and fiduciary insurance and have its employees bonded unless otherwise exempted by law or governmental regulation.

Custodian

In fulfillment of its fiduciary responsibilities, the Committee has appointed a custodian to administer the funds' assets. The custodian has the responsibility to:

Custody Securities: Receive, hold, and manage the fund assets.

Distributions: Make payments to the plan's beneficiaries and to collect all interest and dividends.

Accounting: Keep accurate and detailed accounts of all investments, receipts, disbursements and other transactions.

Reporting: Provide a written account of all holdings and transactions on a monthly basis.

Bonding: The custodian shall provide evidence of liability and fiduciary insurance and have its employees bonded unless otherwise exempted by law or governmental regulation.

Investment Consultant

The consultant will provide the Committee with objective advice. The responsibilities include:

Reporting: Providing performance evaluation reports to the Committee on a quarterly basis. Reports will include absolute and relative performance of each of the investment managers and the total Pool. The consultant will utilize meaningful market indices for comparisons. Also, the consultant will provide specialty reporting and analysis of the overall program for portfolio risk.

Consulting: Providing proactive advice to the Committee on investment guidelines, asset allocation and manager structure. The consultant will also assist in the selection of new investment managers and in the termination of managers, alert the Committee of any adverse developments concerning the Fund and the performance of the managers, report on market trends and external change (market intelligence), and provide research materials and educational seminars on different asset types, or topics, as requested.

Availability for Meetings: To meet at least quarterly for a formal performance review or at other such times as the Committee may reasonably request.

CONFLICT OF INTEREST

It is the policy of the Committee to avoid conflicts of interest in its operations and in the selection of investment managers or funds. Therefore, members of the Committee shall not have a pecuniary relationship in any manager or fund being considered. No independent investment consultant retained by the Committee, or any entity, in which such consultant may have an interest, shall be a party to any transaction with, or have a financial or other interest in, any investment manager providing services to the Committee.

IMPLEMENTATION

All new monies received by investment manager(s) after the adoption of this statement of Guidelines and Objectives shall conform to the Statement. To the extent that Fund assets are not currently managed in accordance with this Statement, the investment manager shall conform in all respects to this Statement within 60 days of its receipt hereof.

AMENDMENTS

The Committee may amend this Statement, subject to the approval of the Committee. The Committee, through the University of Maine System, also reserves the right to direct the investment managers to take any appropriate actions, whether or not consistent with this Statement, if market conditions, liquidity needs or other circumstances so indicate.



AGENDA ITEM SUMMARY

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

Kelly Regan and Jay Roney of NEPC will provide a brief overview of performance for all three portfolios for the quarter ended March 31, 2019.

NEPC will refer to the enclosed executive summary performance report during the May 28, 2019 Investment Committee meeting. The supplemental performance materials for the quarter ended March 31, 2019 are for reference purposes only and will not be reviewed during the meeting.

May 17, 2019

FIRST QUARTER 2019 INVESTMENT REVIEW

UNIVERSITY OF MAINE SYSTEM

May 28, 2019

Jay E. Roney, Partner

Kelly Regan, Senior Consultant



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

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FIRST QUARTER 2019 MARKET ENVIRONMENT

NEPC, LLC

March 31, 2019

PERFORMANCE OVERVIEW

Q1 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
											
1.2%	-11.7	-27 bps	13.6%	10.0%	9.9%	2.9%	7.3%	7.0%	33.3%	0.8%	16.7%

Global equities rallied during the quarter as sentiment improved from easing US-China trade tensions and a dovish pivot by the Fed

The spread between the 10-year Treasury Note and 3-month Treasury Bill temporarily inverted after the Fed held interest rates constant and announced adjustments to their balance sheet normalization process

Spot crude oil prices rose significantly due to geopolitical concerns in major oil-producing regions

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 EMBI Global Diversified Index), Crude Oil (WTI Crude Oil Spot), Gold (Gold Price Spot), and REITs (NAREIT Composite Index).



March 31, 2019

INDEX PERFORMANCE SUMMARY AS OF MARCH 31, 2019

Domestic Equity Benchmarks		Qtr.	1 Yr.	3 Yr.	5 Yr.	10 Yr.
Large Core	S&P 500	13.6%	9.5%	13.5%	10.9%	15.9%
Small Core	Russell 2000	14.6%	2.0%	12.9%	7.1%	15.4%
Small Growth	Russell 2000 Growth	17.1%	3.9%	14.9%	8.4%	16.5%
Small Value	Russell 2000 Value	11.9%	0.2%	10.9%	5.6%	14.1%
Large Core	Russell 1000	14.0%	9.3%	13.5%	10.6%	16.0%
Large Growth	Russell 1000 Growth	16.1%	12.7%	16.5%	13.5%	17.5%
Large Value	Russell 1000 Value	11.9%	5.7%	10.5%	7.7%	14.5%
Mid Core	S&P Mid Cap 400	14.5%	2.6%	11.2%	8.3%	16.3%
REIT	NAREIT Composite	16.7%	19.9%	8.2%	9.9%	18.2%
Int'l Equity Benchmarks		Qtr.	1 Yr.	3 Yr.	5 Yr.	10 Yr.
International Developed	MSCI EAFE	10.0%	-3.7%	7.3%	2.3%	9.0%
Emerging Equity	MSCI EM	9.9%	-7.4%	10.7%	3.7%	8.9%
Small Cap Int'l	S&P EPAC SmallCap	10.0%	-9.9%	7.2%	4.5%	12.6%
World ex-US	MSCI ACWI ex-US	10.3%	-4.2%	8.1%	2.6%	8.8%
Domestic FI Benchmarks		Qtr.	1 Yr.	3 Yr.	5 Yr.	10 Yr.
Core Bonds	Barclays Aggregate	2.9%	4.5%	2.0%	2.7%	3.8%
Municipal Bond	Barclays Municipal	2.9%	5.4%	2.7%	3.7%	4.7%
High Yield	Barclays US High Yield	7.3%	5.9%	8.6%	4.7%	11.3%
Intermediate Gov/Cred	Barclays Intern. Gov/Credit	2.3%	4.2%	1.7%	2.1%	3.1%
Long Gov/Credit	Barclays Long Gov/Credit	6.5%	5.2%	3.8%	5.3%	7.2%
Long Credit	Barclays Long Credit	7.9%	4.6%	5.2%	5.4%	9.0%
Long Treasuries	Barclays US 20+ Yr Treas	4.7%	6.2%	1.5%	5.7%	5.0%
Cash	BofA ML US 3-Month T-Bill	0.6%	2.1%	1.2%	0.7%	0.4%
Inflation	Barclays US TIPS 1-10 Yr	2.6%	2.7%	1.5%	1.5%	2.7%
STRIPS	Barclays 20+ Yr STRIPS	6.3%	6.8%	1.8%	8.0%	6.6%
Global FI Benchmarks		Qtr.	1 Yr.	3 Yr.	5 Yr.	10 Yr.
World Gov. Bonds	FTSE WGBI	1.7%	-1.6%	1.0%	0.6%	2.2%
Em. Mkt. Bonds (Local)	JPM GBI-EM Glob. Div.	2.9%	-7.6%	3.3%	-0.8%	4.4%
Global Inflation	Barclays Global ILB	3.9%	-1.9%	2.4%	1.5%	4.1%
Diversified Benchmark		Qtr.	1 Yr.	3 Yr.	5 Yr.	10 Yr.
Diversified	Diversified*	9.7%	5.2%	8.5%	6.3%	11.0%
Alternative Benchmarks		Qtr.	1 Yr.	3 Yr.	5 Yr.	10 Yr.
Commodities	Bloomberg Commodity Index	6.3%	-5.3%	2.2%	-8.9%	-2.6%
Real Estate	NCREIF Property Index**	1.4%	6.7%	7.2%	9.3%	7.5%

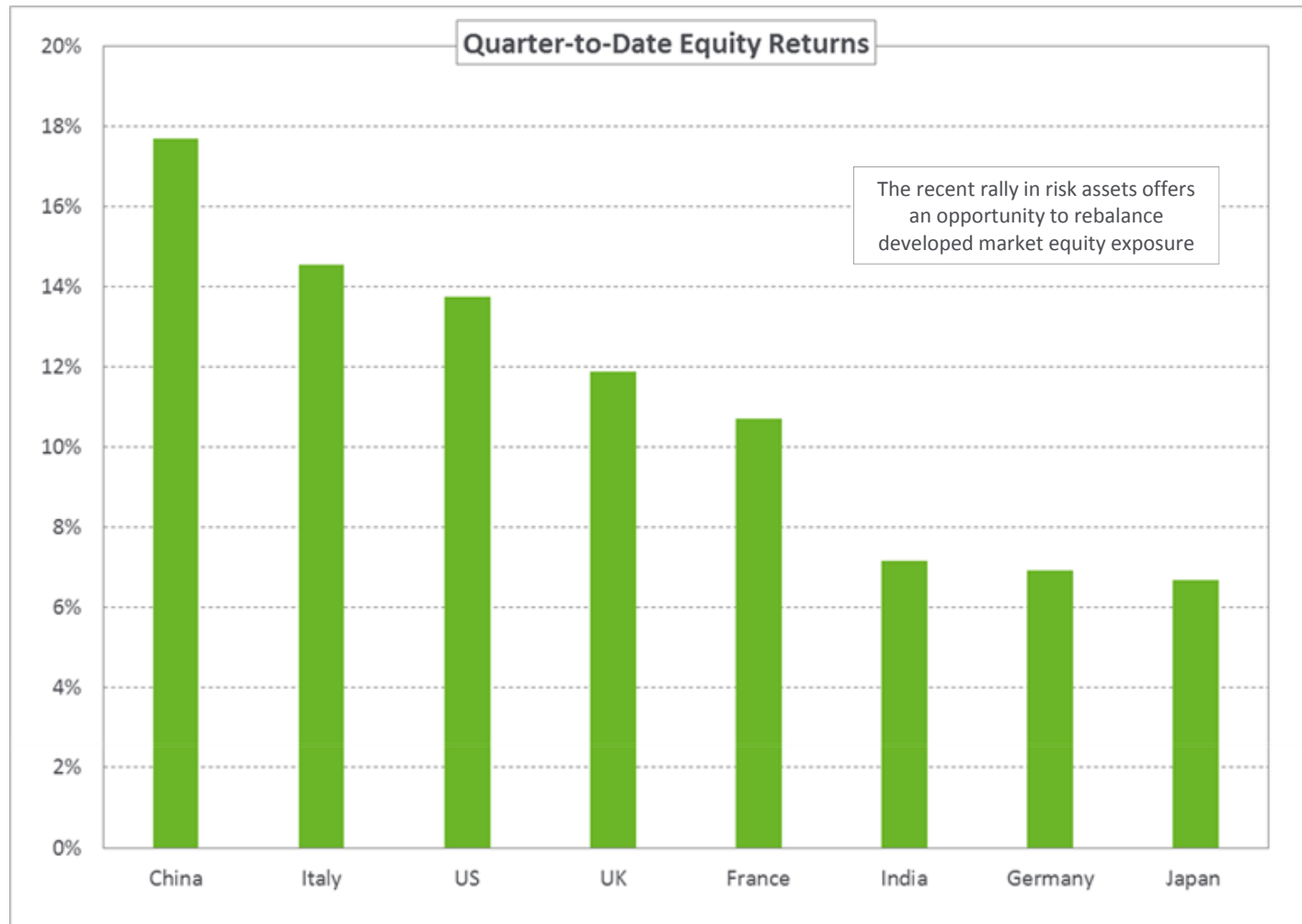
* 35% LC, 10% SC, 12% Int'l, 3% Emerging, 25% FI, 5% HY, 5% Global FI, 5% REITS

**As of 12/31/2018



March 31, 2019

GLOBAL EQUITIES INCREASED

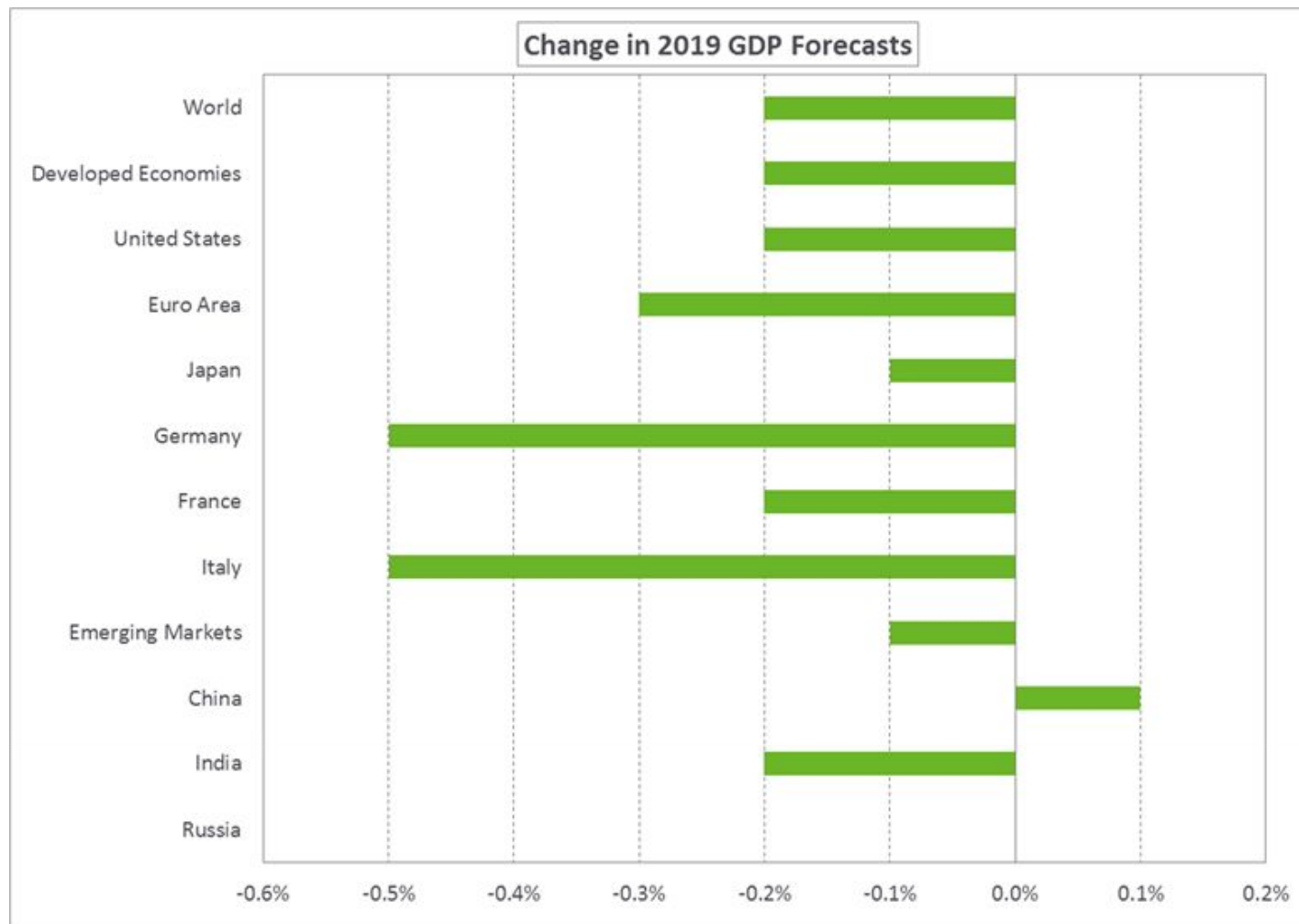


Source: MSCI, Bloomberg; total returns in USD



March 31, 2019

THE GLOBAL GROWTH OUTLOOK DETERIORATED

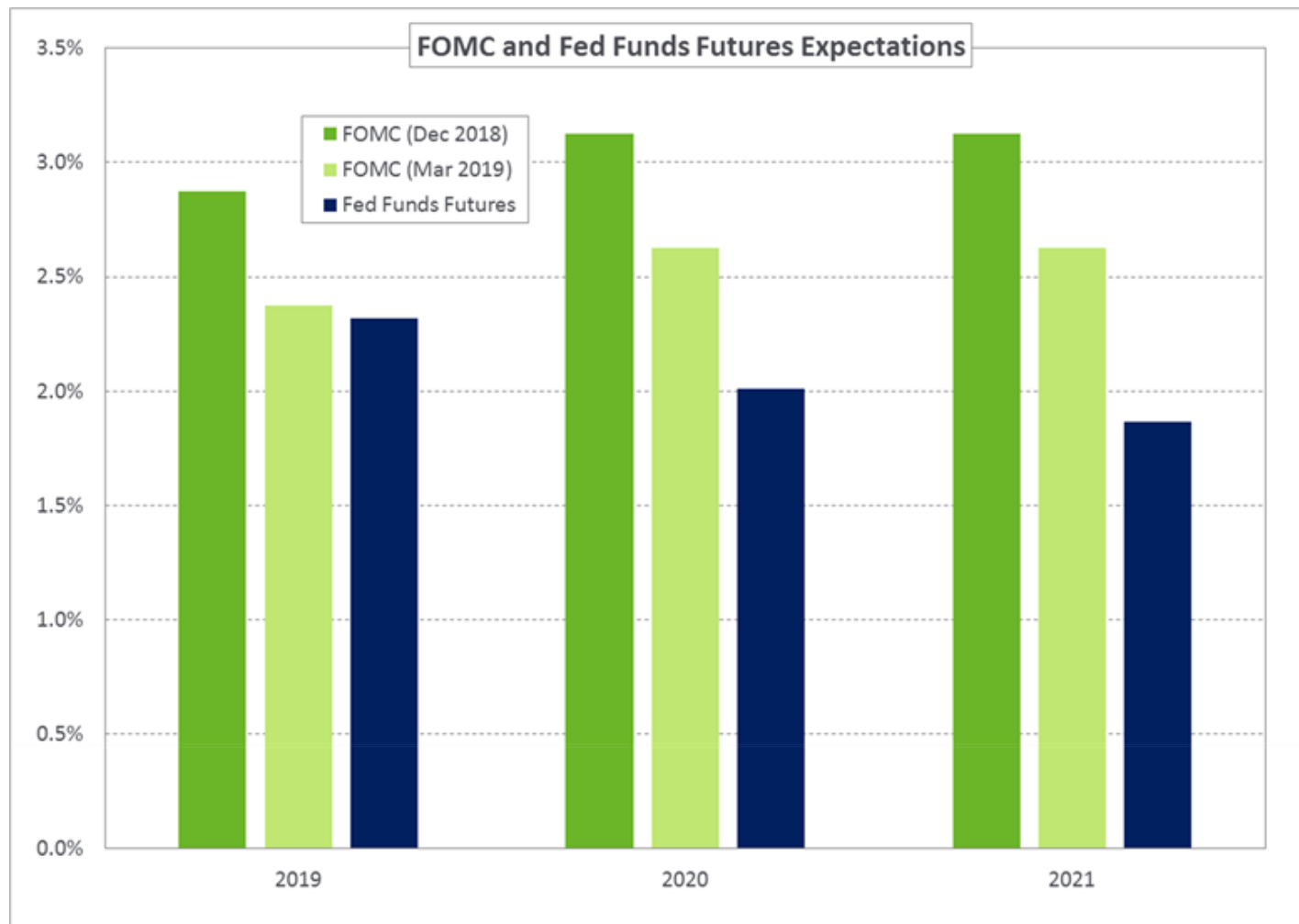


Source: IMF; change represents difference between the IMF April and January 2019 GDP forecasts



INTEREST RATE EXPECTATIONS DECLINED

4

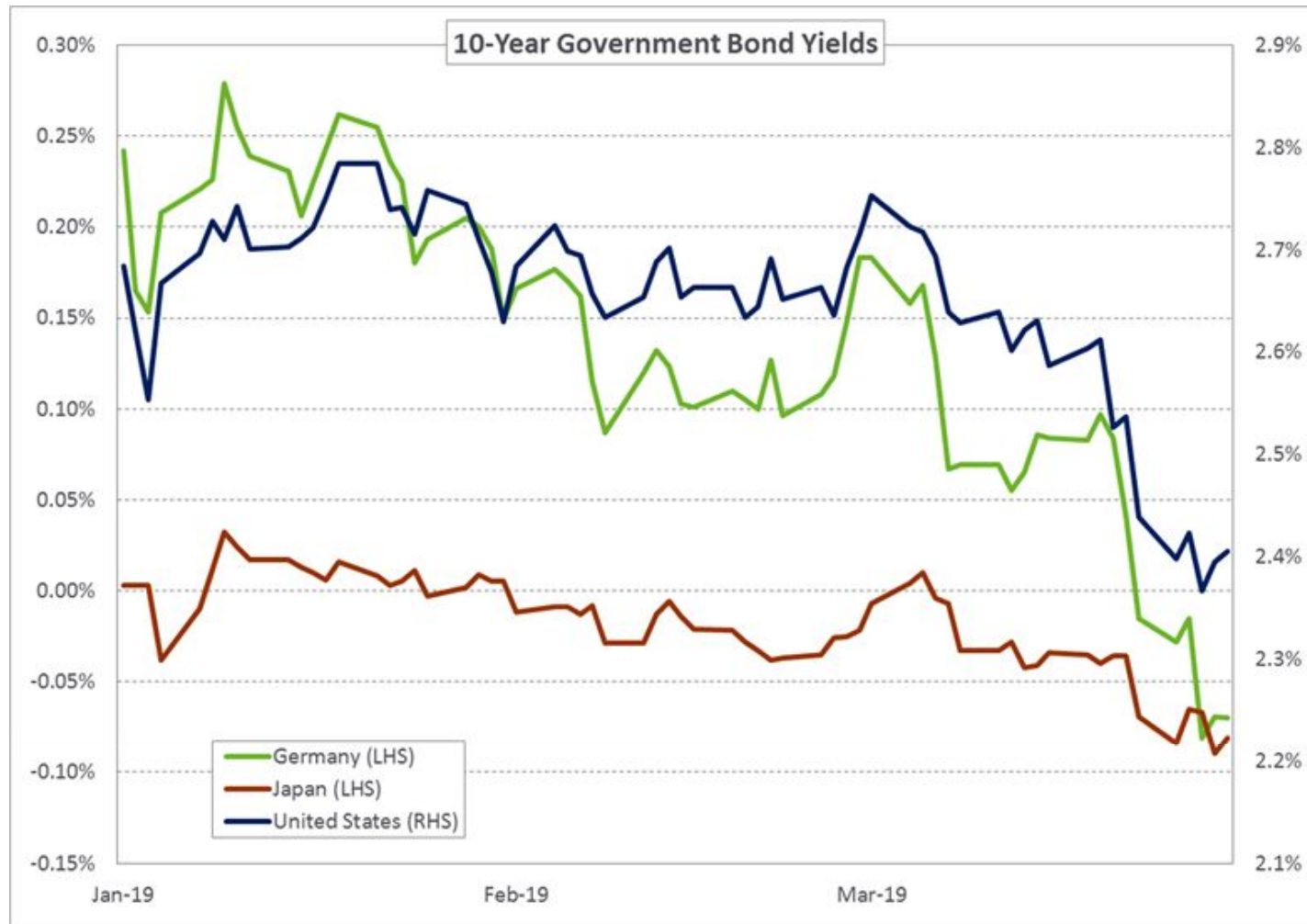


Source: FOMC, Bloomberg



March 31, 2019

GLOBAL BOND YIELDS DECLINED



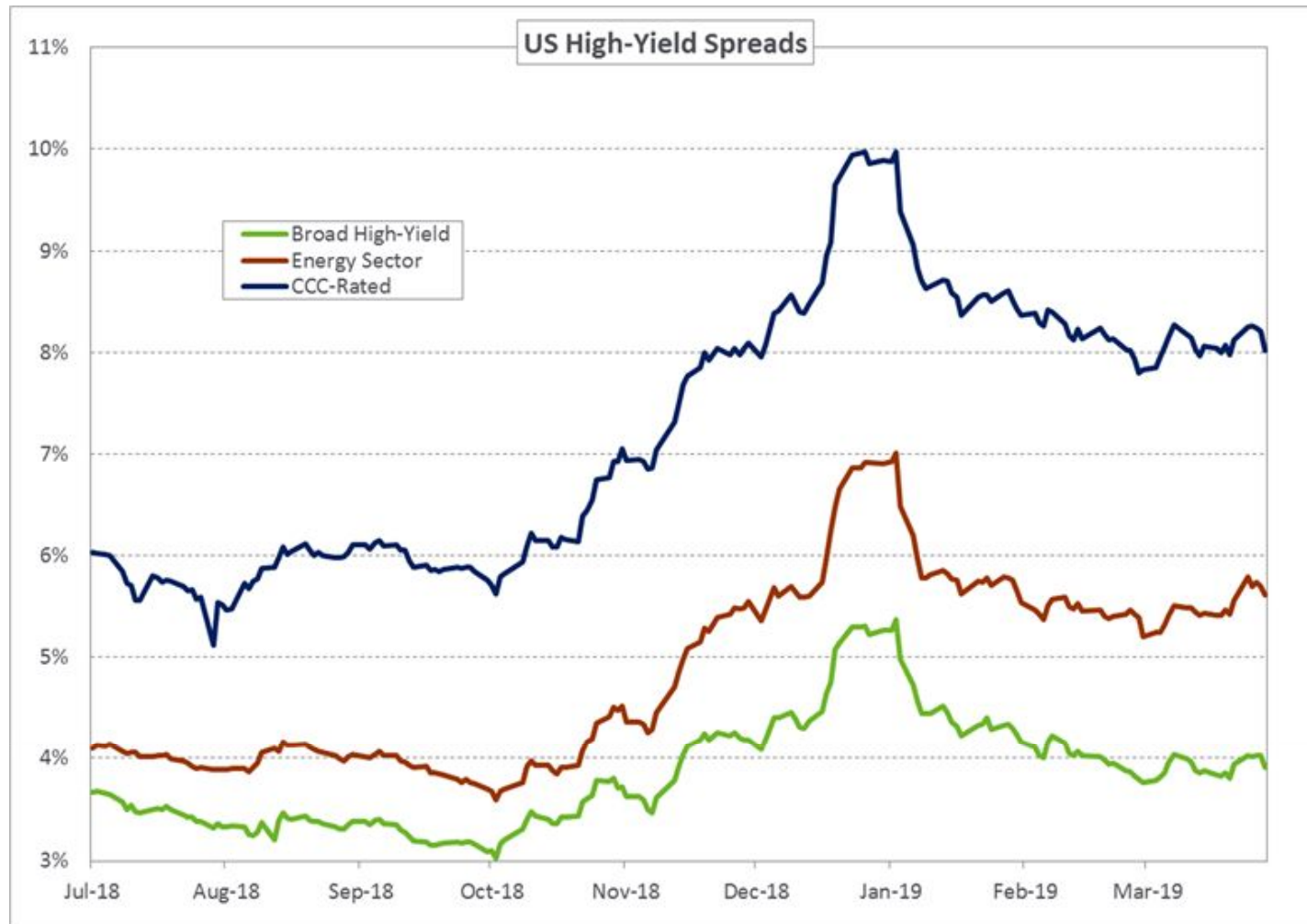
Source: Bloomberg



March 31, 2019

CREDIT SPREADS TIGHTENED FROM YEAR END

4

*Source: Bloomberg*

March 31, 2019

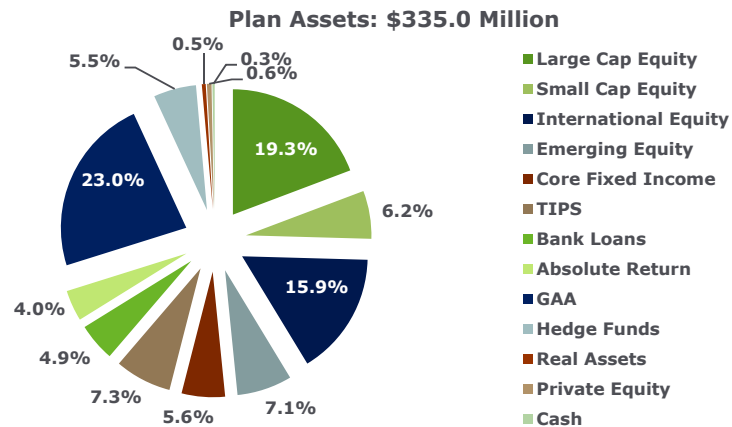
MANAGED INVESTMENT POOL PERFORMANCE REVIEW

NEPC, LLC

March 31, 2019

EXECUTIVE SUMMARY

ASSET ALLOCATION



PLAN COMMENTS

Asset Allocation

MIP assets were \$335 million as of March 31, 2019, a \$29.2 million increase over the quarter. During the 1st quarter there was a \$4.8 million net cash inflow and investment gains of \$24.4 million. All asset classes are within policy ranges.

Performance (Net of Fees)

The Plan returned 7.6% in the 1st quarter and 0.2% fiscal year-to-date, ranking in the 64th and 93rd percentiles, respectively.

All asset classes posted positive returns over the quarter with the exception of Real Assets.

Equity managers were the top contributors to Plan's performance.

MIP PERFORMANCE: NET OF FEES

	QTR (%)	FYTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
COMPOSITE	7.6	0.2	0.5	6.6	3.8	8.6
ALLOC. INDEX	8.2	1.5	1.8	7.3	4.7	8.6
POLICY INDEX	8.2	1.8	2.1	7.9	5.1	8.7
RANK (E&F \$100-500M)	64	93	94	90	94	76

RECENT ACTIONS/RECOMMENDATIONS

Recent Actions

Rebalancing was provided over the quarter to invest contributions and move towards the new asset allocation.

Vanguard Short Term TIPS was funded during the first quarter.

Recommendations

NEPC has provided an ESG update under separate cover.

NEPC recommends approval of the Investment Policy Statement.

Investment Manager Updates

Manager updates are detailed in the due diligence section of the report.



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 (9/30/18)
- **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 1.2%, net of fees (3/31/19)



MIP PERFORMANCE OVERVIEW

As of March 31, 2019

	Market Value(\$)	% of Portfolio	Policy %	Universe	Qtr (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
MIP Composite	334,967,532	100.0%	100.0%		7.6	64	0.2	93	0.5	94	6.6	90	3.8	94	8.6	76
Allocation Index					8.2	48	1.5	61	1.8	72	7.3	75	4.7	71	8.6	77
Policy Index					8.2	48	1.8	50	2.1	65	7.9	61	5.1	50	8.7	74
InvestorForce All E&F \$100mm - \$500mm					8.1		1.7		2.5		8.2		5.1		9.5	
Total Domestic Large Cap	64,527,551	19.3%	16.0%	eV US Large Cap Core Equity	13.6	35	5.8	34	9.4	27	13.4	23	10.8	17	15.8	18
S&P 500					13.6		5.9		9.5		13.5		10.9		15.9	
SSgA S&P 500	64,527,551	19.3%	16.0%	eV US Large Cap Core Equity	13.6	35	5.8	34	9.4	27	13.4	23	10.8	17	15.9	17
S&P 500					13.6		5.9		9.5		13.5		10.9		15.9	
Total Domestic Small/Mid Cap	20,864,939	6.2%	6.0%	eV US Small-Mid Cap Equity	14.2	63	-5.8	80	-0.5	72	12.5	41	6.6	59	15.4	54
Russell 2500					15.8		-1.2		4.5		12.6		7.8		16.2	
Westfield Capital	10,589,367	3.2%	3.0%	eV US Small-Mid Cap Growth Equity	16.3	71	-2.4	84	2.7	79	15.7	52	8.1	61	16.8	35
Russell 2500 Growth					19.0		1.9		7.5		15.6		9.7		17.5	
DFA	10,275,572	3.1%	3.0%	eV US Small Cap Value Equity	12.1	60	-8.9	65	-3.4	59	8.6	59	4.5	69		
Russell 2000 Value					11.9		-7.5		0.2		10.9		5.6		14.1	
Total International Equity (including emerg	76,959,788	23.0%	23.0%	eV All ACWI ex-US Equity	9.2	79	-5.0	65	-7.8	69	5.5	83	1.6	81	9.0	75
MSCI EAFE					10.0		-2.5		-3.7		7.3		2.3		9.0	
Morgan Stanley	21,455,575	6.4%	6.3%	eV All EAFE Equity	11.2	30	-2.5	33	-2.7	26	6.4	64	2.0	77	8.1	92
Globeflex	20,521,735	6.1%	6.3%	eV All EAFE Equity	9.5	68	-9.3	84	-10.1	78	5.5	78	2.0	76	9.2	68
MSCI EAFE					10.0		-2.5		-3.7		7.3		2.3		9.0	
Kabouter Int'l Opps Offshore Fund II	11,267,254	3.4%	3.5%	eV EAFE Small Cap Equity	5.9	97	-13.1	87	-14.5	84						
MSCI EAFE Small Cap					10.7		-7.9		-9.4		7.5		4.5		12.8	
Emerging Markets Equity	23,715,224	7.1%	7.0%	eV Emg Mkts Equity	8.8	73	1.1	32	-7.3	34	5.3	96	0.9	95		
MSCI Emerging Markets					9.9		0.6		-7.4		10.7		3.7		8.9	
Aberdeen Emerging Mkts	12,200,444	3.6%	3.5%	eV Emg Mkts Equity	10.8	42	6.4	2	-5.4	19	8.5	71	2.8	74	10.8	27
MSCI Emerging Markets					9.9		0.6		-7.4		10.7		3.7		8.9	
Mondrian EM Small Cap	11,514,780	3.4%	3.5%	eV Emg Mkts Equity	6.8	91	-3.9	82	-9.3	56	1.9	99				
MSCI Emerging Markets Small Cap					7.8		-4.2		-12.4		5.9		1.8		10.4	



March 31, 2019

MIP PERFORMANCE OVERVIEW

As of March 31, 2019

	Market Value(\$)	% of Portfolio	Policy %	Universe	Qtr (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Total Fixed Income	72,631,926	21.7%	21.0%	eV All US Fixed Inc	3.1	50	2.7	77	3.1	75	3.4	38	2.8	51	5.9	35
<i>BBgBarc US Aggregate TR</i>					2.9		4.6		4.5		2.0		2.7		3.8	
Commonfund	18,826,451	5.6%	5.0%	eV US Core Fixed Inc	3.1	56	4.3	84	4.0	85	3.0	11	3.0	28	5.6	14
<i>BBgBarc US Aggregate TR</i>					2.9		4.6		4.5		2.0		2.7		3.8	
Vanguard Inflation-Protected Securities	12,254,562	3.7%	8.0%	eV US TIPS / Inflation Fixed Inc	3.2	60	1.9	39	2.7	22	1.6	62				
<i>BBgBarc US TIPS TR</i>					3.2		1.9		2.7		1.7		1.9		3.4	
Vanguard Short-Term Inflation-Protected	12,000,000	3.6%														
Bain Capital Senior Loan Fund	14,613,902	4.4%	5.0%	eV US Bank Loan Fixed Inc	4.0	23										
<i>Credit Suisse Leveraged Loans</i>					3.8		2.5		3.3		5.9		3.8		8.0	
Guggenheim US Bank Loans	1,599,052	0.5%														
Blackrock Strategic Income Opportunities	13,337,958	4.0%	3.0%	eV US Enh Fixed Inc	2.5	85	2.4	99								
<i>3-Month Libor Total Return USD</i>					0.7		2.0		2.6		1.7		1.1		0.7	
Total GAA	76,944,400	23.0%	23.0%	eV Global TAA	5.6	69	0.8	48	-0.1	56	4.5	62	1.9	68	6.0	67
<i>65% MSCI ACWI (Net) / 35% BBgBarc Glol</i>					8.6		2.4		1.8		7.5		4.7		9.0	
GMO Global Absolute Return	25,553,905	7.6%	7.7%	eV Global TAA	5.2	73	0.8	49	-2.1	78	5.0	59	2.3	67	5.6	69
<i>Blended Index</i>					4.6		4.4		4.5		3.9		3.6		5.8	
Wellington	25,678,072	7.7%	7.6%	eV Global TAA	7.0	60	-3.5	89	-5.0	88	5.6	45	2.9	59	7.5	56
<i>65% MSCI ACWI (Net) / 35% BBgBarc Glol</i>					8.6		2.4		1.8		7.5		4.7		9.0	
Newton Global Real Return	25,712,422	7.7%	7.7%	eV Global TAA	4.6	79	5.2	6	7.1	4						
<i>60% MSCI ACWI (Net)/ 40% BBgBarc Glob</i>					8.1		2.5		1.6		7.0		4.4		8.5	
Total Hedge Funds	18,440,608	5.5%	6.0%		4.9	65	-3.8	62	-1.5	56	3.5	76	0.8	81	3.1	94
Lighthouse	18,440,608	5.5%	6.0%	eV Alt - Long/Short Equity	4.9	65	-3.8	62	-1.0	55	4.5	69				
<i>Credit Suisse Long Shrt Eqt USD</i>					5.3		-0.2		-0.5		4.6		3.4		6.3	
Total Real Assets	1,523,286	0.5%	3.0%		-1.0		-6.7		-7.0		-3.4		-0.4		0.0	
John Hancock Timber Fund	1,523,286	0.5%	3.0%		-1.0		-6.7		-7.0		-3.4		-0.4		0.0	
<i>NCREIF Timberland Index</i>					0.1		2.1		2.6		3.4		4.7		3.8	
Private Equity	1,955,484	0.6%	2.0%		0.0		5.8		10.5		14.6					
Landmark Equity Partners XV	1,955,484	0.6%	2.0%		0.0		5.8		10.5		14.6					
<i>CA US All PE (1 Qtr Lag)</i>					-2.1		7.1		10.0		13.5		11.4		13.7	
Total Cash	1,119,550	0.3%	0.0%													
Distribution Account	1,119,550	0.3%	0.0%		0.5		1.4		1.8		0.9		0.5		0.4	
<i>91 Day T-Bills</i>					0.6		1.7		2.1		1.2		0.8		0.4	



March 31, 2019

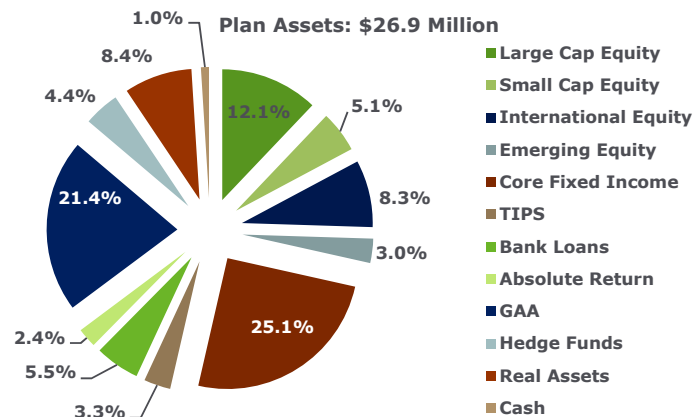
PENSION FUND PERFORMANCE REVIEW

NEPC, LLC

March 31, 2019

EXECUTIVE SUMMARY

ASSET ALLOCATION



PLAN COMMENTS

Asset Allocation

The Plan's assets were \$26.9 million as of March 31, 2019 a \$400 thousand increase during the first quarter. During the 1st quarter there was a net cash outflow of \$1 million and investment gains of \$1.4 million. All asset classes are within policy ranges with the exception of GAA as rebalancing occurred in March to work towards the newly approved policy targets.

Performance (Net of Fees)

The Fund returned 5.5% in the 1st quarter and 1.8% fiscal year-to-date.

Equity managers were the top contributors to Fund's performance.

PLAN PERFORMANCE: NET OF FEES

	QTR (%)	FYTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
COMPOSITE	5.5	1.8	2.7	5.2	3.4	7.8
ALLOC. INDEX	6.1	2.3	2.5	6.0	4.5	8.2
POLICY INDEX	6.3	2.7	2.9	6.2	4.7	8.4

RECENT ACTIONS/RECOMMENDATIONS

Recent Actions

Rebalancing was provided over the quarter to cover benefit payments, expenses and to move towards the new asset allocation.

Recommendations

NEPC provided a summary Global Equity search book under separate cover.

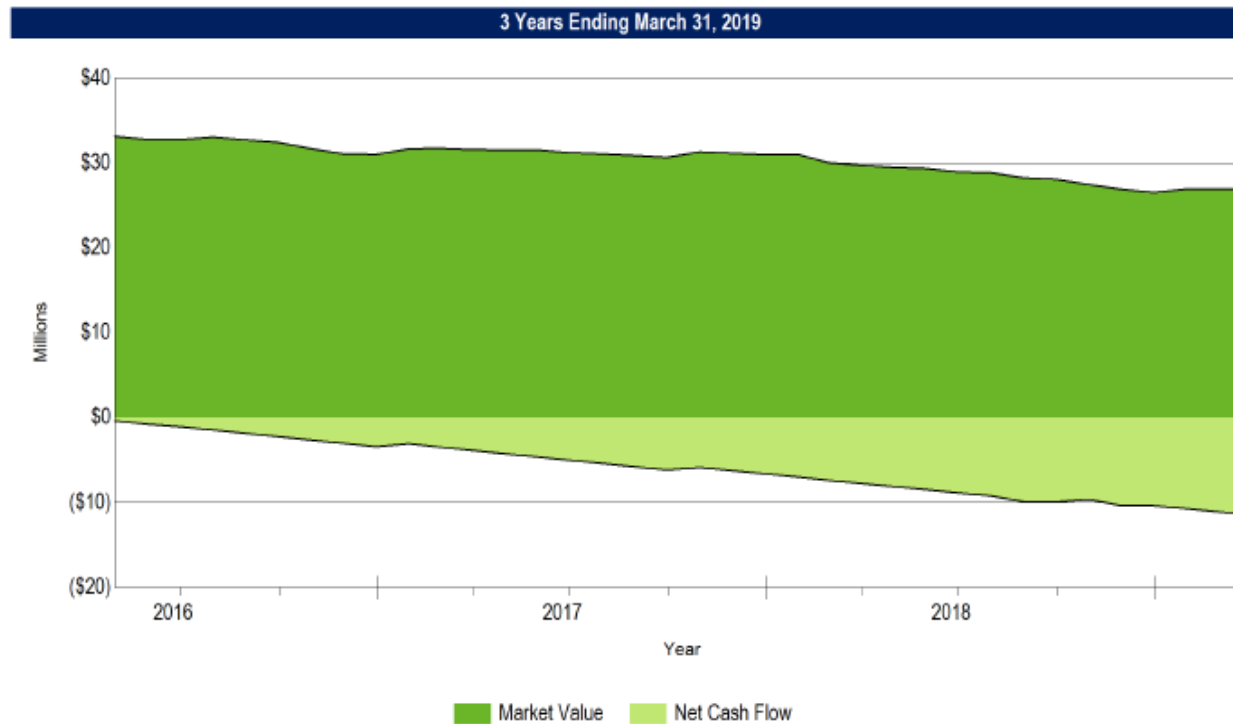
NEPC recommends approval of the Investment Policy Statement.

Investment Manager Updates

Manager updates are detailed in the due diligence section of the report.



ASSET GROWTH SUMMARY



	Quarter-To-Date	Fiscal Year-To-Date	One Year	Three Years
Beginning Market Value	\$26,520,627	\$28,930,221	\$29,739,883	\$33,045,455
Net Cash Flow	-\$1,075,710	-\$2,589,501	-\$3,687,915	-\$11,445,564
Net Investment Change	\$1,481,917	\$586,114	\$874,866	\$5,326,943
Ending Market Value	\$26,926,834	\$26,926,834	\$26,926,834	\$26,926,834



March 31, 2019

PENSION PERFORMANCE OVERVIEW

Ending March 31, 2019

	Market Value(\$)	% of Portfolio	Policy %	Universe	Qtr (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Pension Composite	26,926,834	100.0	100.0		5.5		1.8		2.7		5.2		3.4		7.8	
Allocation Index					6.1		2.3		2.5		6.0		4.5		8.2	
Policy Index					6.3		2.7		2.9		6.2		4.7		8.4	
Total Domestic Large Cap	3,253,444	12.1	8.0	eV US Large Cap Equity	13.6	41	5.8	33	9.5	33	13.5	32	10.9	28	14.9	50
S&P 500					13.6		5.9		9.5		13.5		10.9		15.9	
Vanguard S&P 500 Index	3,253,444	12.1	8.0	eV US Large Cap Core Equity	13.6	37	5.8	38	9.5	33	13.5	35	10.9	32		
S&P 500					13.6		5.9		9.5		13.5		10.9		15.9	
Total Small Cap Composite	1,380,684	5.1	4.0	eV US Small Cap Equity Net Median	14.6	42	-5.3	52	2.0	45	12.9	38	6.9	47		
Russell 2000					14.6		-5.3		2.0		12.9		7.1		15.4	
SSgA R2000 Index Fund Non Lending	1,380,684	5.1	4.0	eV US Small Cap Equity	14.6	42	-5.3	52	2.0	45	12.9	38	6.9	47		
Russell 2000					14.6		-5.3		2.0		12.9		7.1		15.4	
Total Int'l & EM Equity	3,045,720	11.3	10.0	eV All ACWI ex-US Equity Net Median	9.8	73	-2.9	43	-4.6	35	5.1	86	1.3	83	7.0	98
MSCI EAFE					10.0		-2.5		-3.7		7.3		2.3		9.0	
Morgan Stanley Int'l	2,229,118	8.3	7.0	eV All EAFE Equity	11.2	31	-2.5	33	-2.7	26	6.5	63	2.1	72	8.2	90
MSCI EAFE					10.0		-2.5		-3.7		7.3		2.3		9.0	
Emerging Markets Equity	816,602	3.0	3.0	eV Emg Mkts Equity Net Median	6.8	91	-3.9	82	-9.3	56	1.9	99	-1.0	98		
MSCI Emerging Markets					9.9		0.6		-7.4		10.7		3.7		8.9	
Mondrian EM Small Cap	816,602	3.0	3.0	eV Emg Mkts Equity	6.8	91	-3.9	82	-9.3	56	1.9	99				
MSCI Emerging Markets Small Cap					7.8		-4.2		-12.4		5.9		1.8		10.4	
Total Fixed Income	9,763,770	36.3	35.0	eV All US Fixed Inc Net Median	3.1	51	3.6	61	3.8	63	2.5	50	2.5	58	4.8	44
BBgBarc US Aggregate TR					2.9		4.6		4.5		2.0		2.7		3.8	
Vanguard Total Bond Market Index	6,755,101	25.1	20.0	eV US Core Fixed Inc	3.0	72	4.7	44	4.5	42	2.0	67				
BBgBarc US Aggregate TR					2.9		4.6		4.5		2.0		2.7		3.8	
Vanguard Inflation-Protected Securities	899,078	3.3	7.0	eV US TIPS / Inflation Fixed Inc	3.2	60	1.9	38	2.7	22						
BBgBarc US TIPS TR					3.2		1.9		2.7		1.7		1.9		3.4	
Bain Capital Senior Loan Fund	1,311,725	4.9	5.0		4.0	23										
Guggenheim US Bank Loans	155,315	0.6		eV US Bank Loan Fixed Inc												
Credit Suisse Leveraged Loans					3.8		2.5		3.3		5.9		3.8		8.0	
BlackRock Strategic Income Opportunities	642,551	2.4	3.0	eV US Enh Fixed Inc	2.5	84	2.5	99								
3-Month Libor Total Return USD					0.7		2.0		2.6		1.7		1.1		0.7	



March 31, 2019

PENSION PERFORMANCE OVERVIEW

Ending March 31, 2019

	Market Value(\$)	% of Portfolio	Policy %	Universe	Qtr (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Total GAA	5,763,472	21.4	27.5	eV Global TAA Net Median	5.7	68	1.0	46	1.1	47	4.4	63	1.8	68	6.8	58
65% MSCI ACWI (Net) / 35% BBgBarc Global					8.6		2.4		1.8		7.5		4.7		9.0	
Wellington	3,726,534	13.8	13.8	eV Global TAA	6.9	60	-3.4	89	-5.0	88	5.7	44	2.9	54	7.6	52
65% MSCI ACWI (Net) / 35% BBgBarc Global					8.6		2.4		1.8		7.5		4.7		9.0	
Newton Global Real Return	2,036,938	7.6	13.8	eV Global TAA	4.6	80	5.2	6	7.1	4						
60% MSCI ACWI (Net) / 40% FTSE WGBI					7.9		2.2		1.2		6.8		4.2		8.2	
Total Hedge Funds	1,191,922	4.4	4.5		4.9	65	-3.8	62	-1.6	57	3.5	76	1.4	77	3.3	93
HFRI Fund of Funds Composite Index					4.6		-0.4		0.1		3.9		2.2		3.5	
Lighthouse	1,191,922	4.4	4.5	eV Alt - Long/Short Equity	4.9	65	-3.8	62	-1.0	55	4.5	69				
Credit Suisse Long Shrt Eqt USD					5.3		-0.2		-0.5		4.6		3.4		6.3	
Total Real Assets	2,256,200	8.4	8.0													
Principal	2,256,200	8.4	8.0		1.6		5.4		7.7		8.2		10.1		8.1	
NCREIF ODCE					1.4		5.4		7.5		8.0		10.2		8.7	
Total Cash	271,622	1.0	3.0													
Distribution Account	271,622	1.0	3.0		0.5		1.5		1.8		0.9		0.5		0.3	
91 Day T-Bills					0.6		1.7		2.1		1.2		0.8		0.4	



March 31, 2019

OPERATING FUND PERFORMANCE REVIEW

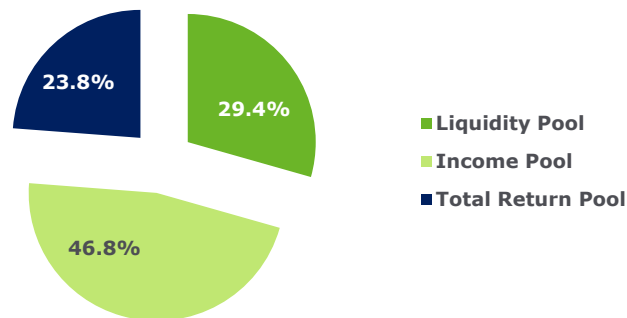
NEPC, LLC

March 31, 2019

EXECUTIVE SUMMARY

ASSET ALLOCATION

Plan Assets: \$293.8 Million



PLAN COMMENTS

Asset Allocation

The Fund's assets as of March 31, 2019 were \$293.8 million. This represents a \$34.9 million increase from the previous quarter.

The Liquidity Pool (29.4% vs. 25.0%), Income Pool (46.8% vs. 50.0%) and Total Return Pool (23.8% vs. 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 2.6% during the 1st quarter and 2.1% fiscal year-to-date.

FUND PERFORMANCE: NET OF FEES

	QTR (%)	FYTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
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COMPOSITE	2.6	2.1	2.4	3.2	2.0	3.3
ALLOCATION INDEX	2.8	2.5	2.7	3.1	2.3	--

RECENT ACTIONS/RECOMMENDATIONS

Recent Actions

Rebalancing was provided during the quarter to move towards the new asset allocation.

Vanguard TIPS was terminated during the first quarter.

Recommendations

NEPC recommends approval of the Investment Policy Statement.

Investment Manager Updates

Manager updates are detailed in the due diligence section of the report.



March 31, 2019

OPERATING FUND PERFORMANCE REVIEW

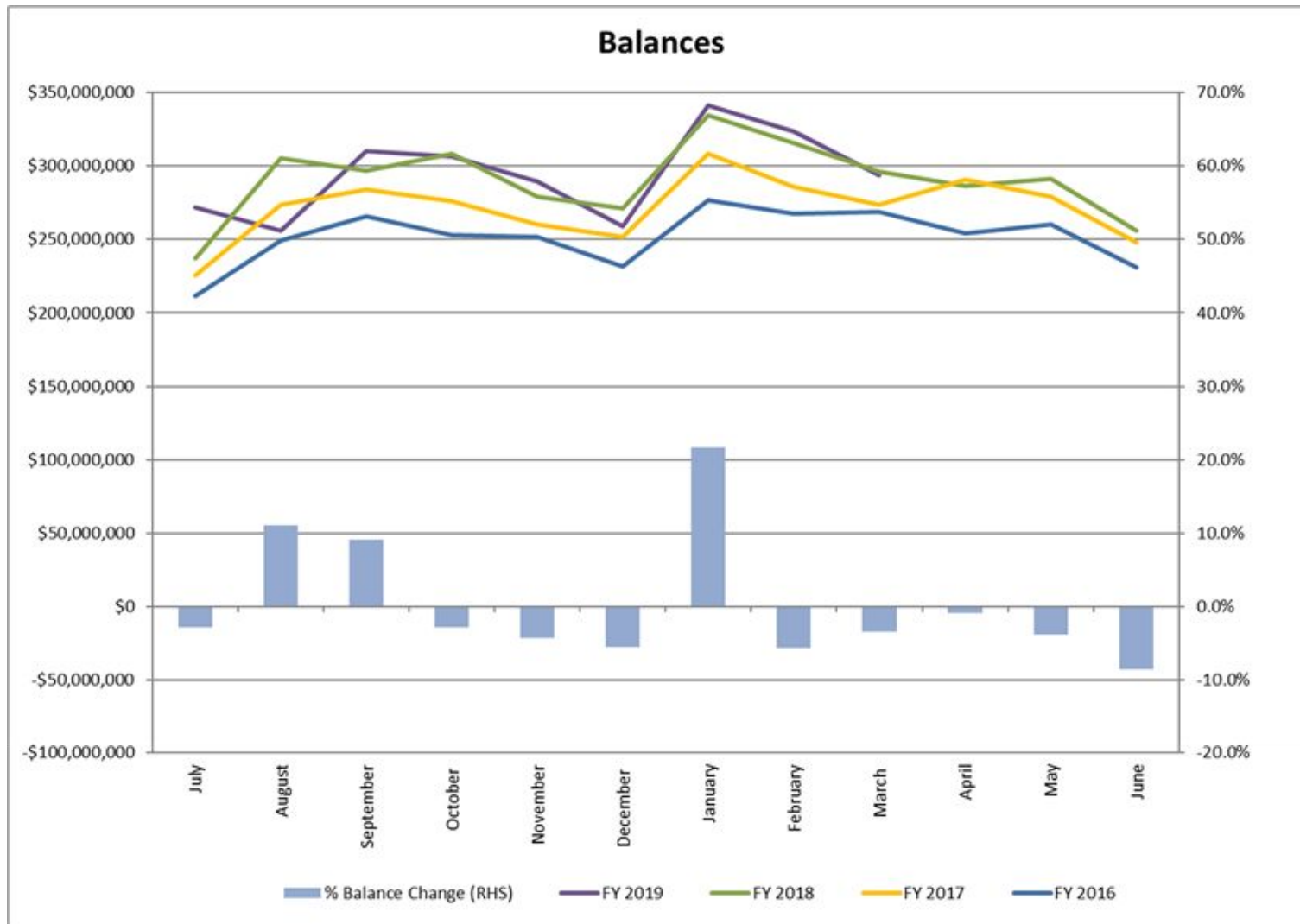
Ending March 31, 2019

	Market Value (\$)	% of Portfolio	Policy %	Universe	Qtr (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Operating Funds Composite	293,805,898	100.0	100.0		2.6		2.1		2.4		3.2		2.0		3.3	
<i>Allocation Index</i>					2.8		2.5		2.7		3.1		2.3			
Liquidity Pool Composite	86,325,610	29.4	25.0		0.6		1.5		1.9		1.1		0.7		0.5	
State Pool	58,250,790	19.8			0.6		1.5		1.9		1.2		0.8		0.6	
BOA General Fund	248,824	0.1			0.3		0.8		0.9		0.3		0.2			
Federated Gov't Obligations	3,535,390	1.2			0.6		1.6		2.0							
JP Morgan US Gov't Money Market Fund	24,290,606	8.3			0.6		1.6		2.0							
<i>FTSE T-Bill 3 Months TR</i>					0.6		1.7		2.1		1.2		0.7		0.4	
Income Pool Composite	137,610,596	46.8	50.0		2.1		2.7		2.9		2.4		1.9		4.5	
Income Research + Management	76,461,545	26.0	26.7	eV US Short Duration Fixed Inc	1.3	66	2.8	52	3.1	51	1.4	67	1.3	71		
<i>BBgBarc US Govt/Credit 1-3 Yr. TR</i>					1.2		2.7		3.0		1.3		1.2		1.6	
BlackRock Strategic Income Opportunities	17,742,619	6.0	6.7	eV US Enh Fixed Inc	2.5	85	2.5	99	1.7	95	3.7	1				
<i>3-Month Libor Total Return USD</i>					0.7		2.0		2.6		1.7		1.1		0.7	
Loomis Sayles Bank Loans	19,077,034	6.5	6.7	eV US Bank Loan Fixed Inc	3.8	45	2.0	54	2.4	66	4.2	96	3.0	89	6.0	93
<i>Loomis Bank Loans Custom Index</i>					4.3		2.2		2.7		4.2		3.6		8.0	
Vanguard Total Bond Market Instl' Fund	24,329,398	8.3	5.0	eV All US Fixed Inc	3.0	54	4.7	30	4.5	38	2.0	63	2.7	54		
<i>BBgBarc US Aggregate TR</i>					2.9		4.6		4.5		2.0		2.7		3.8	
Total Return Pool Composite	69,869,693	23.8	25.0		6.8		1.5		2.0		6.8		3.7		6.6	
Lighthouse	14,254,973	4.9	5.0	eV Alt - Long/Short Equity	4.9	65	-3.8	62	-1.0	55	4.5	69				
<i>Credit Suisse Long Shrt Eqt USD</i>					5.3		-0.2		-0.5		4.6		3.4		6.3	
Newton Global Real Return	18,092,572	6.2	6.3	eV Global TAA	4.6	80	5.2	6	7.1	4						
<i>60% MSCI ACWI / 40% Global Agg</i>					8.1		2.5		1.6		7.0		4.4		8.5	
PIMCO All Asset	17,485,160	6.0	6.3	eV Global TAA	5.4	71	2.3	29	-0.2	56	7.1	32	3.1	50	7.4	57
<i>Blended Index</i>					4.6		4.4		4.5		3.9		3.6		5.8	
Vanguard Total World Stock Index	20,036,988	6.8	7.5	eV Global All Cap Equity	12.4	46	1.6	37	2.0	48	10.9	32	6.7	34		
<i>FTSE Global All Cap Index</i>					12.4		1.6		2.4		10.1		5.3		10.6	



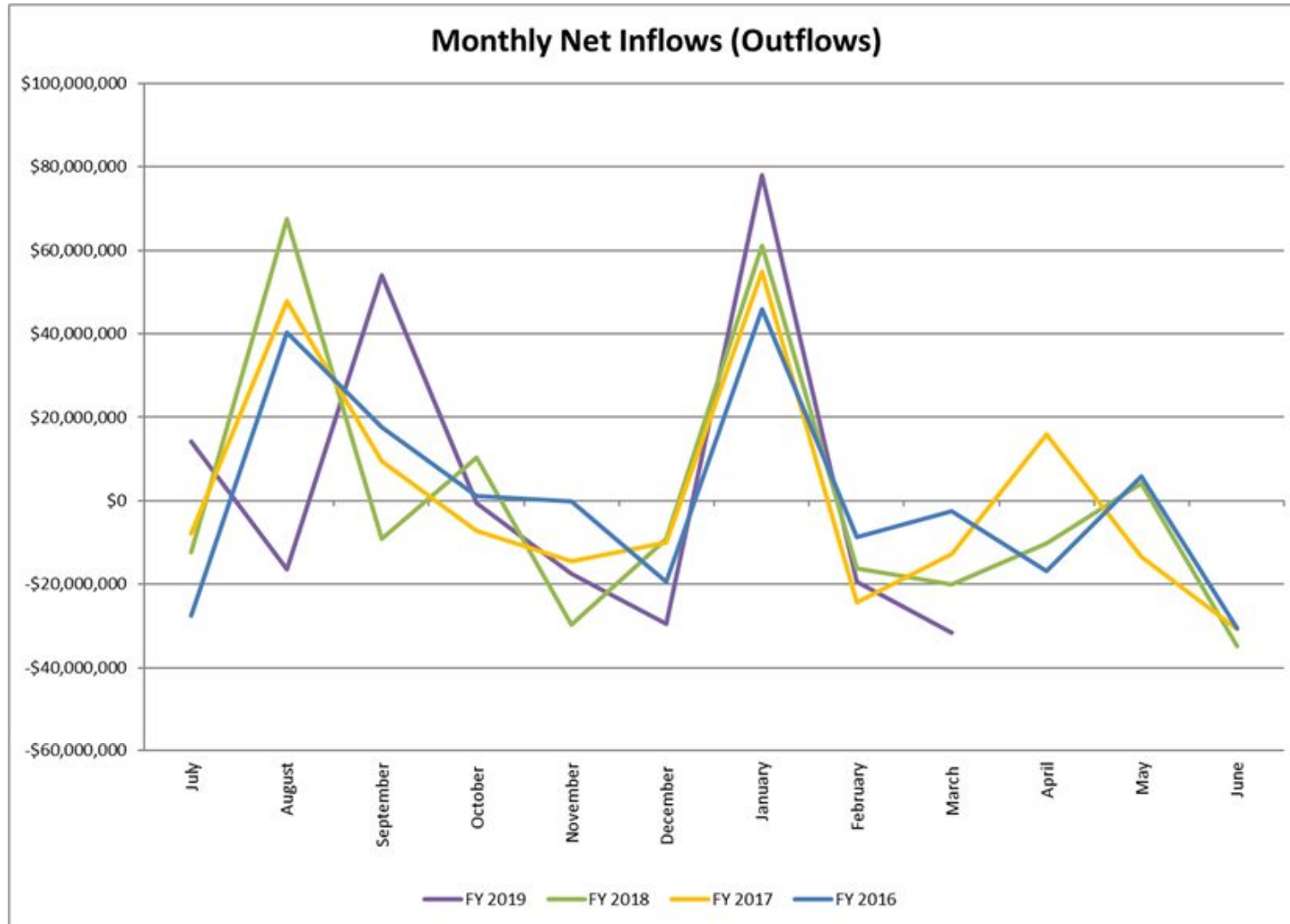
March 31, 2019

BALANCES AND MONTHLY CHANGES



March 31, 2019

MONTHLY NET INFLOWS (OUTFLOWS)



March 31, 2019

INVESTMENT MANAGER DUE DILIGENCE

NEPC, LLC

March 31, 2019

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	Portfolio	Manager Changes/ Announcements (Recent Quarter)	NEPC Due Diligence Committee Recommendations
Aberdeen	MIP & Pension	No	Maintain Hold
Lighthouse	MIP, Pension & Operating	No	Maintain Watch
Wellington	MIP & Pension	Yes	Client Review
Blackrock	MIP, Pension & Operating	Yes	Watch
Vanguard	Operating	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.



APPENDIX & DISCLAIMERS

NEPC, LLC

March 31, 2019

HIGHLIGHTS OF 2019 FIRST QUARTER HAPPENINGS AT NEPC

NEPC INSIGHTS

- Taking Stock: Munis Offer Sweet Spot and Flattening Yield Curve
- NEPC's 2019 Asset Allocation Letter: Winter is Coming, But When?
- Private Wealth Investment Policy Statements: A Roadmap for Uncertain Times
- 2018 Fourth Quarter Market Thoughts
- 2019 Investment Outlook: Q4 Market Thoughts, Webinar Replay & AA Letter
- Corporate Pension Plans: NEPC's Key Themes for 2019
- Taking Stock: The Importance of De-Risking Pension Plans and Q4 Liability Performance
- Taking Stock: Should Corporate Pensions Go on the Defense?
- Direct Investments (Part I): Trends and Motivations
- Taking Stock: A is for Access, MSCI Ups Local China Shares in Indexes
- Register Now: NEPC's 24th Annual Investment Conference
- Taking Stock: What is the Yield Curve Signaling?
- Taking Stock: Picking the Right Interest Credit Option for Your Cash Balance Plan

WEBINAR REPLAYS

- NEPC's 2019 Market Outlook Webinar

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



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.



FIRST QUARTER 2019 SUPPLEMENTAL PERFORMANCE

UNIVERSITY OF MAINE SYSTEM MANAGED INVESTMENT POOL

May 28, 2019

Jay E. Roney, Partner

Kelly Regan, Senior Consultant



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

ASSET GROWTH SUMMARY



	Last Three Months	Fiscal Year-To-Date	One Year	Three Years
Beginning Market Value	\$305,768,503	\$317,888,826	\$316,024,706	\$260,051,312
Net Cash Flow	\$4,768,432	\$12,894,403	\$13,079,627	\$11,885,102
Net Investment Change	\$24,430,596	\$4,184,303	\$5,863,199	\$63,031,118
Ending Market Value	\$334,967,532	\$334,967,532	\$334,967,532	\$334,967,532



March 31, 2019

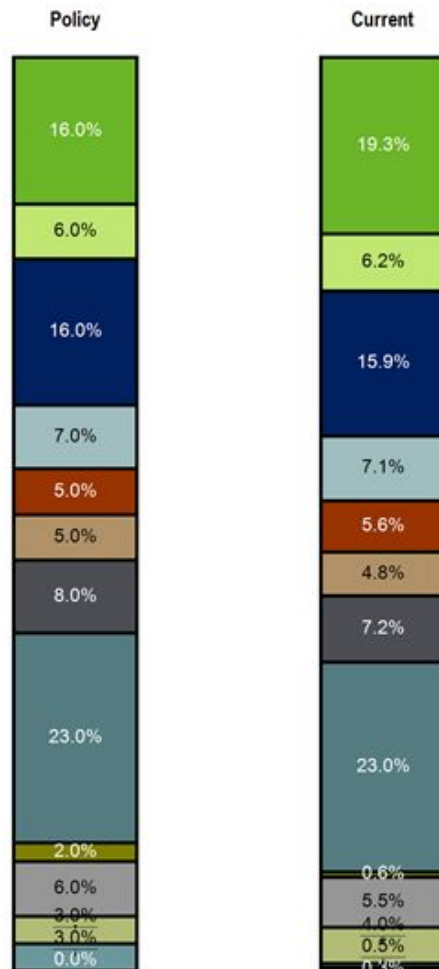
CASH FLOW SUMMARY

	3 Months Ending March 31, 2019					Ending Market Value
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Net Investment Change	
Aberdeen Emerging Mkts	\$11,007,187	\$0	-\$32,889	-\$32,889	\$1,226,146	\$12,200,444
Bain Capital Senior Loan Fund	\$14,047,819	\$0	-\$17,702	-\$17,702	\$583,786	\$14,613,902
Blackrock Strategic Income Opportunities	\$10,086,346	\$3,000,000	-\$14,929	\$2,985,071	\$266,540	\$13,337,958
Commonfund	\$18,255,618	\$0	-\$7,446	-\$7,446	\$578,280	\$18,826,451
DFA	\$9,163,226	\$0	-\$10,650	-\$10,650	\$1,122,996	\$10,275,572
Distribution Account	\$1,050,425	\$9,456,850	-\$9,400,976	\$55,874	\$13,251	\$1,119,550
Globeflex	\$17,814,210	\$1,000,000	-\$38,268	\$961,733	\$1,745,793	\$20,521,735
GMO Global Absolute Return	\$24,230,066	\$0	-\$63,754	-\$63,754	\$1,387,593	\$25,553,905
Guggenheim US Bank Loans	\$1,599,052	\$0	-\$1,999	-\$1,999	\$1,999	\$1,599,052
John Hancock Timber Fund	\$1,538,178	\$0	-\$2,293	-\$2,293	-\$12,598	\$1,523,286
Kabouter International Opportunities Offshore Fund II	\$10,136,408	\$500,000	-\$28,171	\$471,829	\$659,017	\$11,267,254
Landmark Equity Partners XV	\$2,092,968	\$43,591	-\$181,075	-\$137,484	\$0	\$1,955,484
Lighthouse	\$17,582,499	\$0	\$0	\$0	\$858,110	\$18,440,608
Mondrian EM Small Cap	\$10,790,729	\$0	-\$59,703	-\$59,703	\$783,754	\$11,514,780
Morgan Stanley	\$18,787,807	\$500,000	-\$49,700	\$450,300	\$2,217,468	\$21,455,575
Newton Global Real Return	\$24,590,681	\$0	-\$50,630	-\$50,630	\$1,172,371	\$25,712,422
SSgA S&P 500	\$55,152,258	\$1,650,000	-\$14,573	\$1,635,427	\$7,739,866	\$64,527,551
Vanguard Inflation-Protected Securities	\$26,449,492	\$0	-\$15,003,842	-\$15,003,842	\$808,913	\$12,254,562
Vanguard Short-Term Inflation-Protected Securities	--	\$12,000,000	\$0	\$12,000,000	\$0	\$12,000,000
Wellington	\$23,020,604	\$1,000,000	-\$104,848	\$895,152	\$1,762,316	\$25,678,072
Westfield Capital	\$8,372,931	\$740,945	-\$39,505	\$701,440	\$1,514,996	\$10,589,367
Total	\$305,768,503	\$29,891,386	-\$25,122,954	\$4,768,432	\$24,430,596	\$334,967,532



March 31, 2019

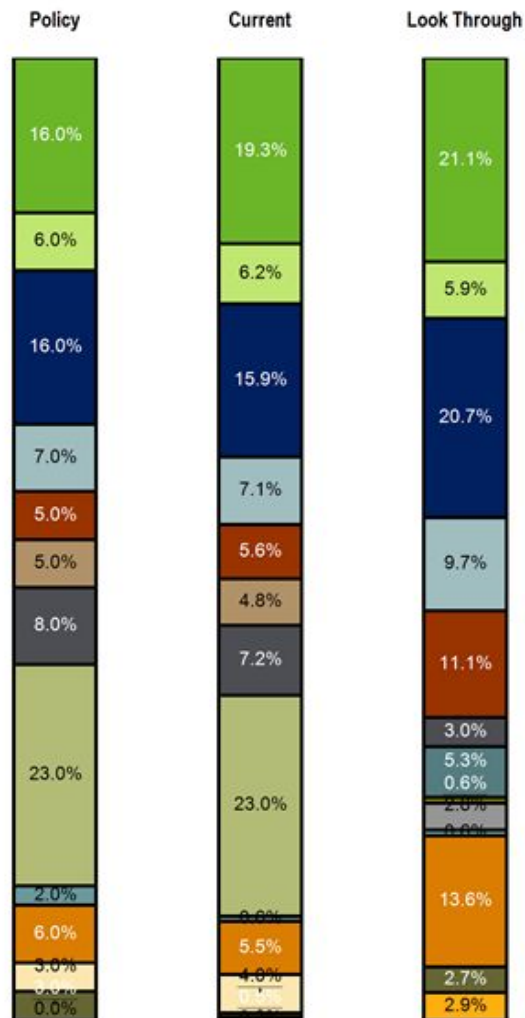
ASSET CLASS ALLOCATIONS



Asset Allocation vs. Target							
	Current	Policy	Current	Difference	Policy Range	Within Range	
Large Cap Equity	\$64,527,551	16.0%	19.3%	3.3%	11.0% - 21.0%	Yes	
Small/Mid Cap Equity	\$20,864,939	6.0%	6.2%	0.2%	0.0% - 9.0%	Yes	
International Equity	\$53,244,564	16.0%	15.9%	-0.1%	11.0% - 21.0%	Yes	
Emerging Markets Equity	\$23,715,224	7.0%	7.1%	0.1%	0.0% - 10.0%	Yes	
Core Bonds	\$18,826,451	5.0%	5.6%	0.6%	0.0% - 10.0%	Yes	
Bank Loans	\$16,212,954	5.0%	4.8%	-0.2%	0.0% - 8.0%	Yes	
TIPS	\$24,254,562	8.0%	7.2%	-0.8%	4.0% - 12.0%	Yes	
Global Asset Allocation	\$76,944,400	23.0%	23.0%	0.0%	18.0% - 28.0%	Yes	
Private Equity	\$1,955,484	2.0%	0.6%	-1.4%	0.0% - 5.0%	Yes	
Hedge Funds	\$18,440,608	6.0%	5.5%	-0.5%	0.0% - 15.0%	Yes	
Absolute Return	\$13,337,958	3.0%	4.0%	1.0%	0.0% - 100.0%	Yes	
Real Assets	\$1,523,286	3.0%	0.5%	-2.5%	0.0% - 6.0%	Yes	
Cash	\$1,119,550	0.0%	0.3%	0.3%	0.0% - 10.0%	Yes	
Total	\$334,967,532	100.0%	100.0%				



ASSET CLASS ALLOCATIONS



Asset Allocation			
	Policy	Current	Look Through
Large Cap Equity	16.0%	19.3%	21.1%
Small/Mid Cap Equity	6.0%	6.2%	5.9%
International Equity	16.0%	15.9%	20.7%
Emerging Markets Equity	7.0%	7.1%	9.7%
Core Bonds	5.0%	5.6%	11.1%
Bank Loans	5.0%	4.8%	--
TIPS	8.0%	7.2%	3.0%
Multi-Sector Fixed Income	--	--	5.3%
Fixed Income - Emerging	--	--	0.6%
Global Bonds	--	--	2.8%
Global Asset Allocation	23.0%	23.0%	--
Private Equity	2.0%	0.6%	0.6%
Hedge Funds	6.0%	5.5%	13.6%
Absolute Return	3.0%	4.0%	--
Real Assets	3.0%	0.5%	2.7%
Cash	0.0%	0.3%	2.9%
Total	100.0%	100.0%	100.0%

Net Asset Allocation breaks out the exposure of GAA managers.

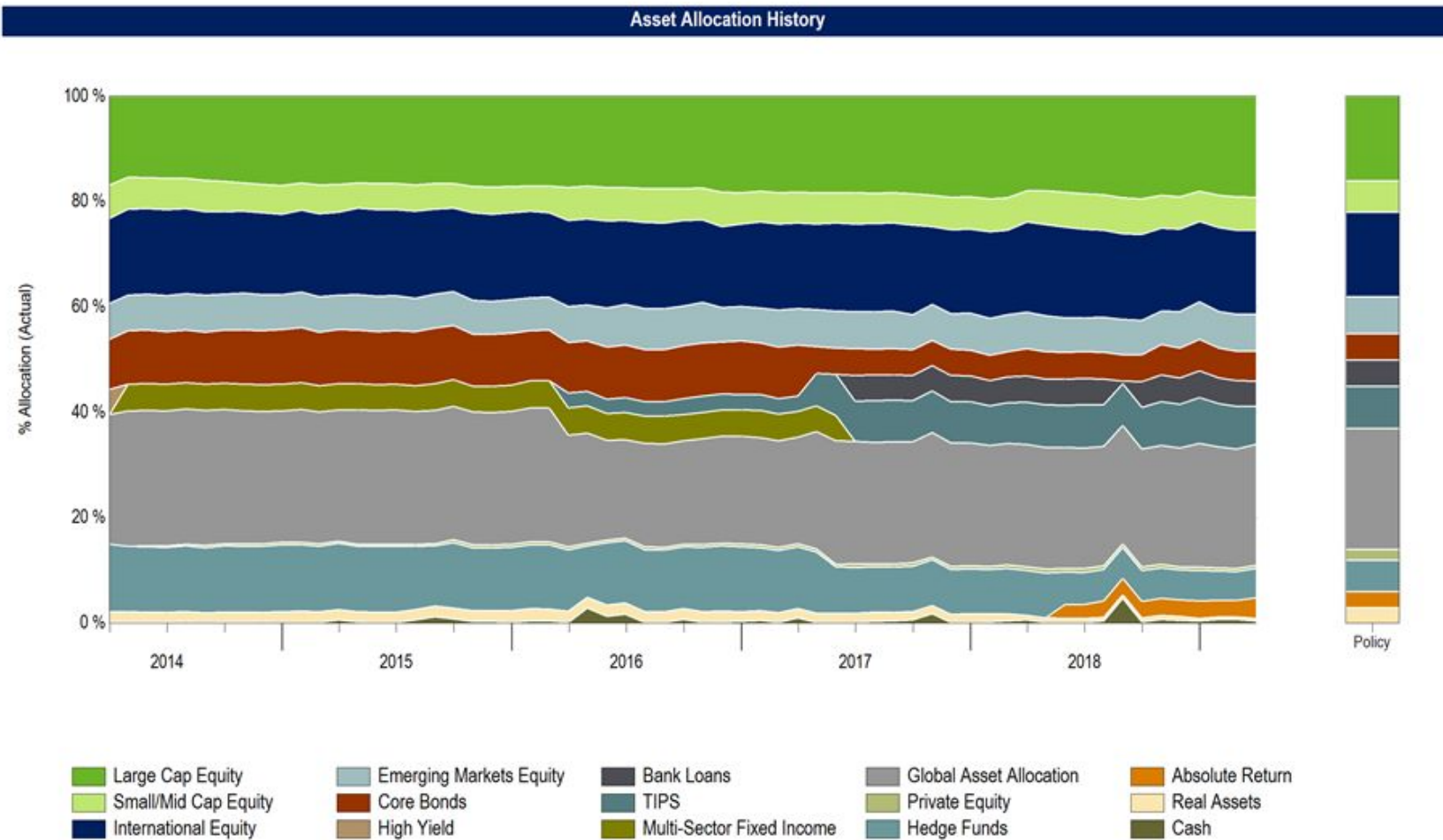
Asset class weights may not add up to 100%.

The 60% MSCI ACWI/40% CITI WGBI Index is broken down into the following categories: 33.0% Domestic Equities, 20.0% Int'l Equities, 7.0% Emerging Equities, 15.1% US Treasury Bonds, 12.5% European Government Bonds, 7.6% 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.

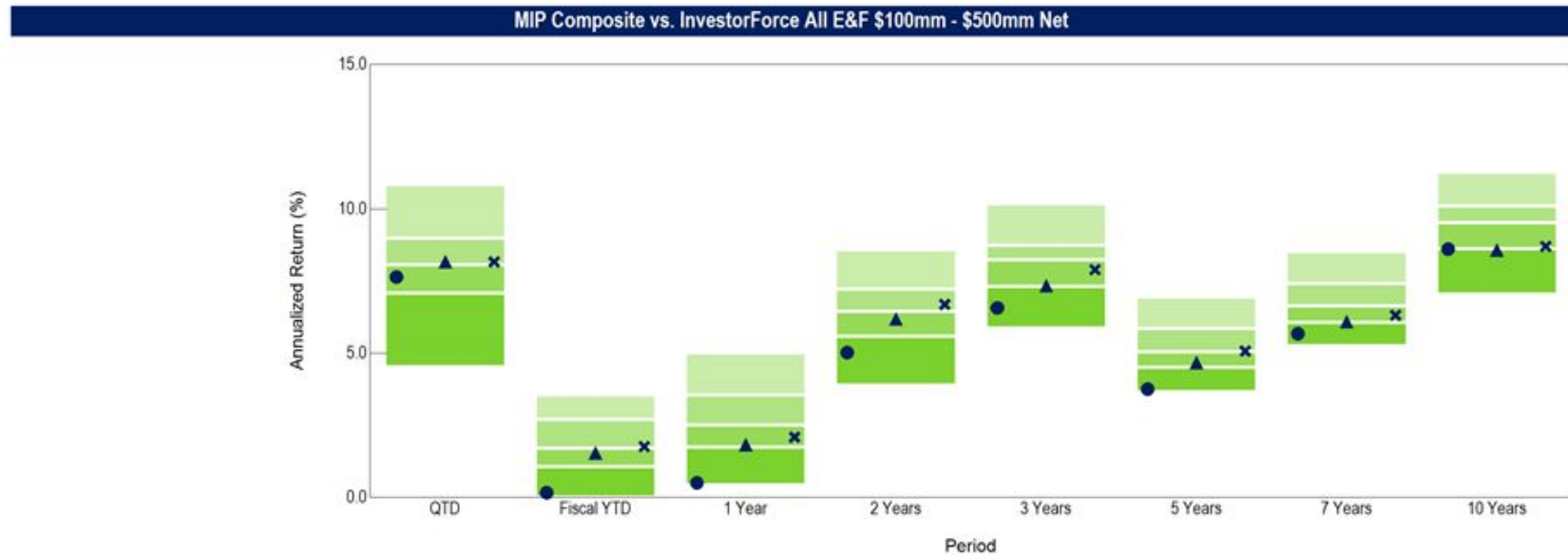


ASSET ALLOCATION HISTORY



March 31, 2019

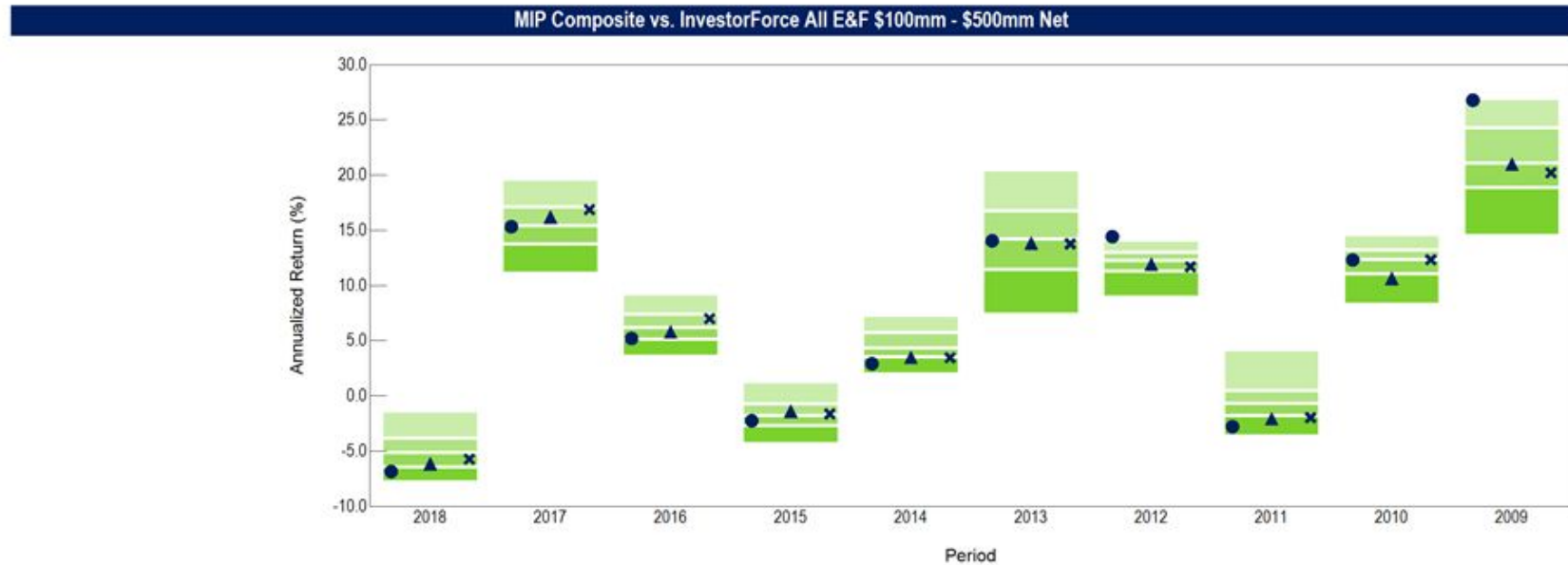
RETURNS VS. PEER UNIVERSE



	Return (Rank)							
5th Percentile	10.8	3.5	5.0	8.6	10.2	6.9	8.5	11.3
25th Percentile	9.0	2.7	3.6	7.2	8.7	5.9	7.4	10.1
Median	8.1	1.7	2.5	6.5	8.2	5.1	6.7	9.5
75th Percentile	7.1	1.1	1.8	5.6	7.3	4.5	6.1	8.6
95th Percentile	4.5	0.0	0.4	3.9	5.9	3.7	5.3	7.0
# of Portfolios	166	166	165	162	158	146	135	125
● MIP Composite	7.6 (64)	0.2 (93)	0.5 (94)	5.0 (87)	6.6 (90)	3.8 (94)	5.7 (90)	8.6 (76)
▲ Allocation Index	8.2 (48)	1.5 (61)	1.8 (72)	6.2 (58)	7.3 (75)	4.7 (71)	6.1 (75)	8.6 (77)
× Policy Index	8.2 (48)	1.8 (50)	2.1 (65)	6.7 (41)	7.9 (61)	5.1 (50)	6.3 (66)	8.7 (74)



RETURNS VS. PEER UNIVERSE

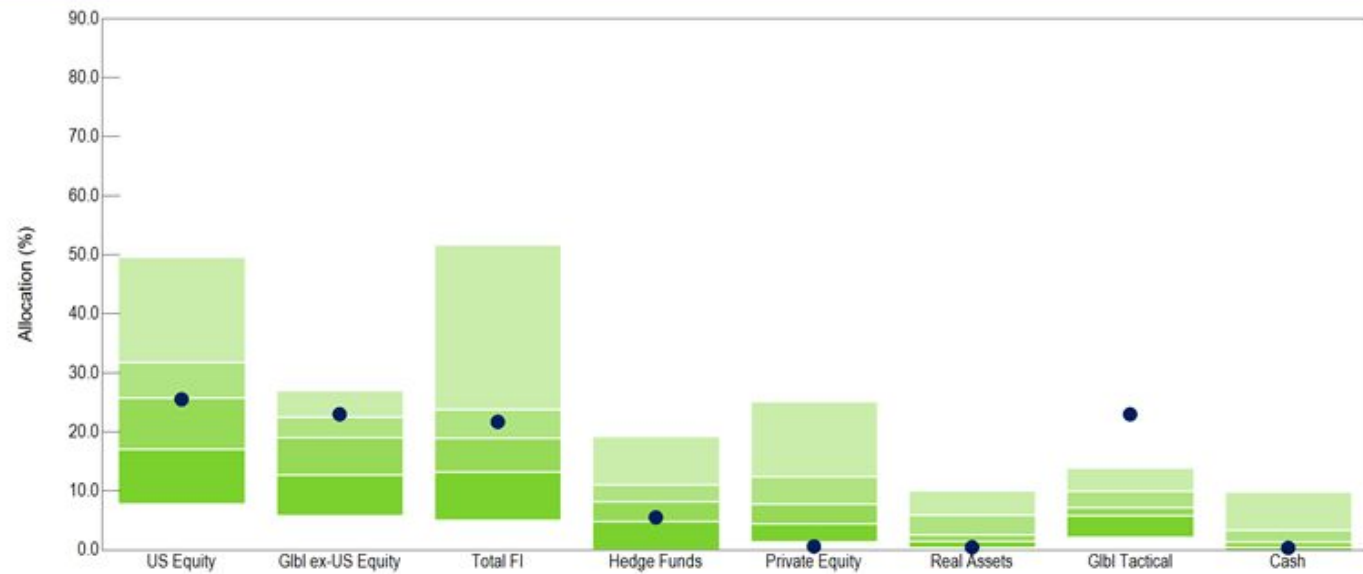


	Return (Rank)									
5th Percentile	-1.4	19.6	9.2	1.3	7.3	20.5	14.1	4.2	14.6	26.9
25th Percentile	-3.8	17.2	7.4	-0.7	5.7	16.8	13.0	0.5	13.3	24.3
Median	-5.1	15.4	6.2	-1.7	4.4	14.2	12.3	-0.6	12.4	21.1
75th Percentile	-6.4	13.8	5.2	-2.7	3.6	11.5	11.3	-1.8	11.1	18.9
95th Percentile	-7.8	11.1	3.6	-4.3	2.0	7.4	9.0	-3.6	8.3	14.6
# of Portfolios	231	177	186	142	98	75	78	75	70	69
• MIP Composite	-6.8 (85)	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)
▲ Allocation Index	-6.1 (71)	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)
× Policy Index	-5.7 (61)	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)



ALLOCATIONS VS. PEER UNIVERSE

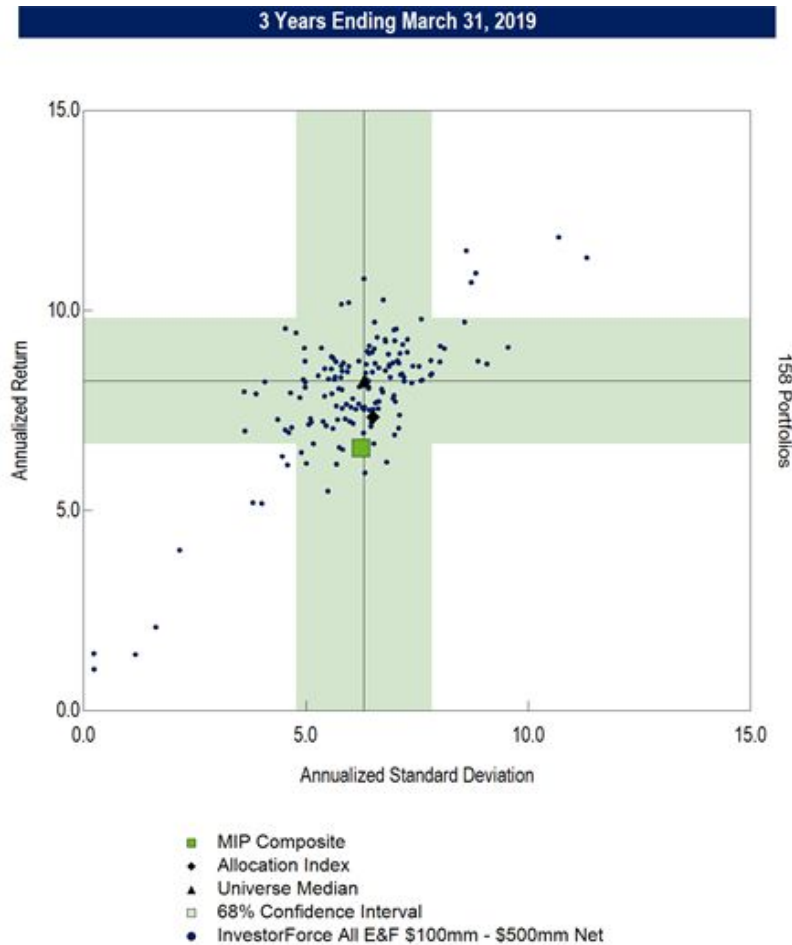
Total Plan Allocation vs. InvestorForce All E&F \$100mm - \$500mm Net



	US Equity		Gbl ex-US Equity		Total FI		Hedge Funds		Private Equity		Real Assets		Gbl Tactical		Cash	
Allocation (Rank)	49.6	(53)	27.0	(23)	51.6	(37)	19.2	(73)	25.1	(98)	10.0	(96)	13.9	(1)	9.8	(80)
5th Percentile	31.9		22.6		23.8		11.1		12.5		5.9		10.0		3.5	
25th Percentile	25.8		19.1		19.0		8.2		7.9		2.7		7.3		1.4	
Median	17.1		12.8		13.3		4.9		4.5		1.5		5.9		0.4	
75th Percentile	7.9		5.9		5.1		0.1		1.5		0.5		2.2		0.0	
95th Percentile	97		116		126		74		96		47		24		112	
# of Portfolios	25.5	(53)	23.0	(23)	21.7	(37)	5.5	(73)	0.6	(98)	0.5	(96)	23.0	(1)	0.3	(80)
MIP Composite																



TOTAL PLAN RISK/RETURN - 3 YEAR



3 Years Ending March 31, 2019				
	Anlzd Ret	Rank	Anlzd Std Dev	Rank
MIP Composite	6.6%	90	6.2%	48
Allocation Index	7.3%	75	6.5%	61
Policy Index	7.9%	61	6.5%	62
InvestorForce All E&F \$100mm - \$500mm Net Median	8.2%	--	6.3%	--

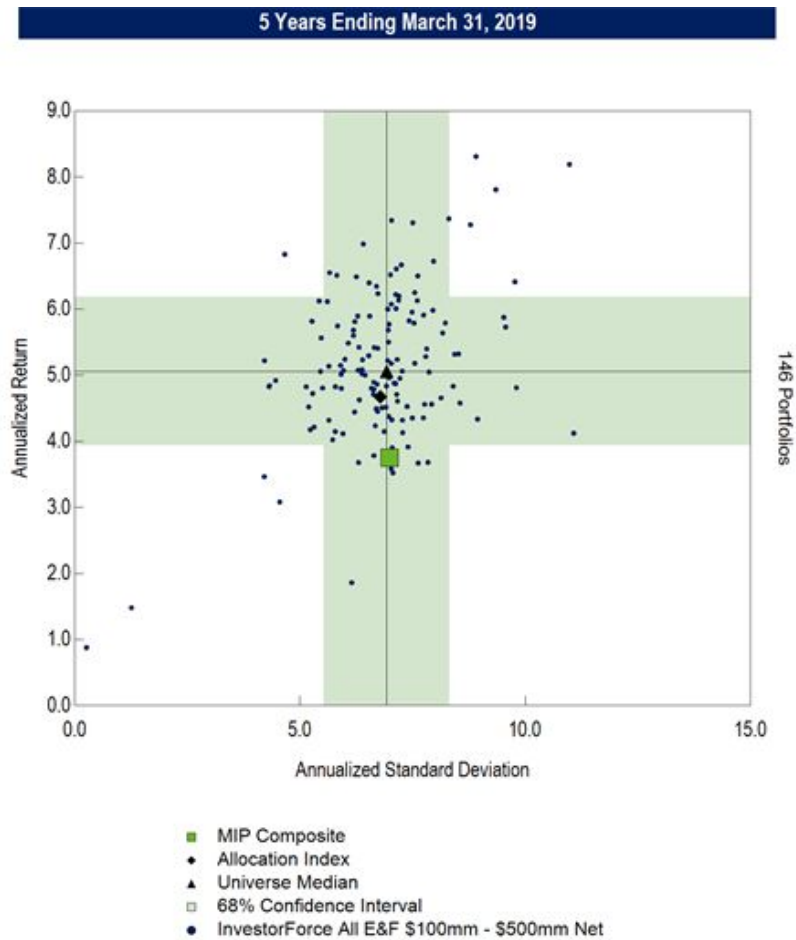
3 Years Ending March 31, 2019				
	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
MIP Composite	0.9	93	0.8	90
Allocation Index	0.9	83	0.9	74
Policy Index	1.0	65	1.0	60
InvestorForce All E&F \$100mm - \$500mm Net Median	1.1	--	1.0	--

*Returns are net of fees.



March 31, 2019

TOTAL PLAN RISK/RETURN - 5 YEAR



5 Years Ending March 31, 2019				
	Anlzd Ret	Rank	Anlzd Std Dev	Rank
MIP Composite	3.8%	94	7.0%	57
Allocation Index	4.7%	71	6.8%	47
Policy Index	5.1%	50	6.8%	47
InvestorForce All E&F \$100mm - \$500mm Net Median	5.1%	--	6.9%	--

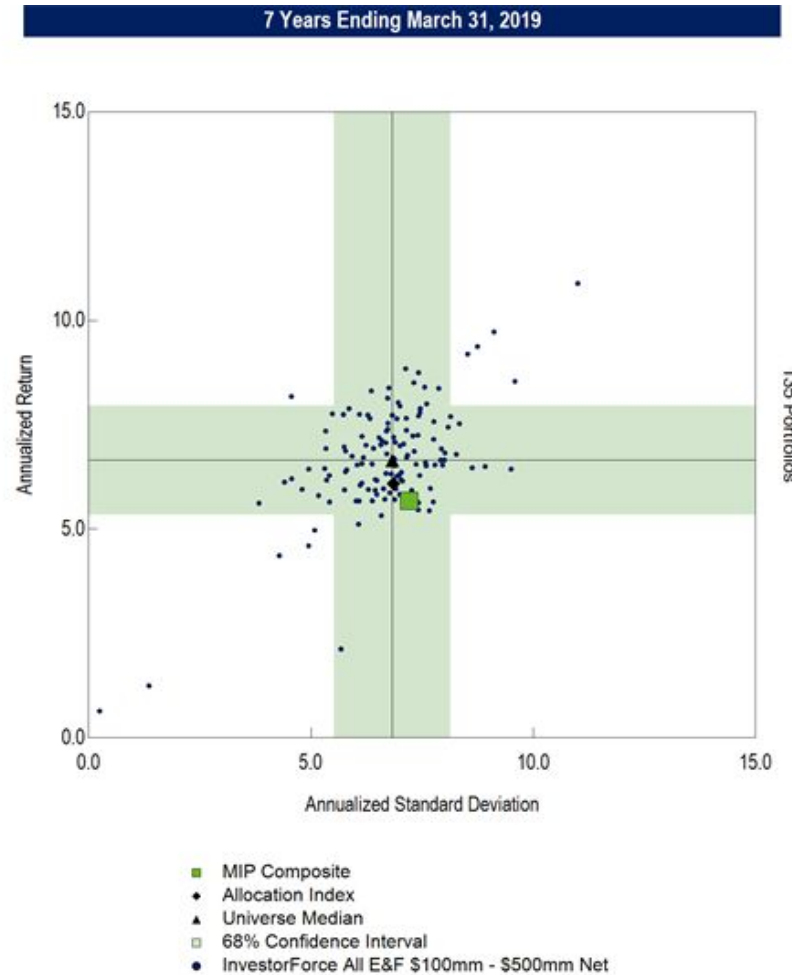
5 Years Ending March 31, 2019				
	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
MIP Composite	0.4	95	0.6	94
Allocation Index	0.6	70	0.7	69
Policy Index	0.6	53	0.8	50
InvestorForce All E&F \$100mm - \$500mm Net Median	0.7	--	0.8	--

*Returns are net of fees.



March 31, 2019

TOTAL PLAN RISK/RETURN - 7 YEAR



7 Years Ending March 31, 2019				
	Anlzd Ret	Rank	Anlzd Std Dev	Rank
MIP Composite	5.7%	90	7.2%	70
Allocation Index	6.1%	75	6.9%	52
Policy Index	6.3%	66	6.8%	50
InvestorForce All E&F \$100mm - \$500mm Net Median	6.7%	--	6.8%	--

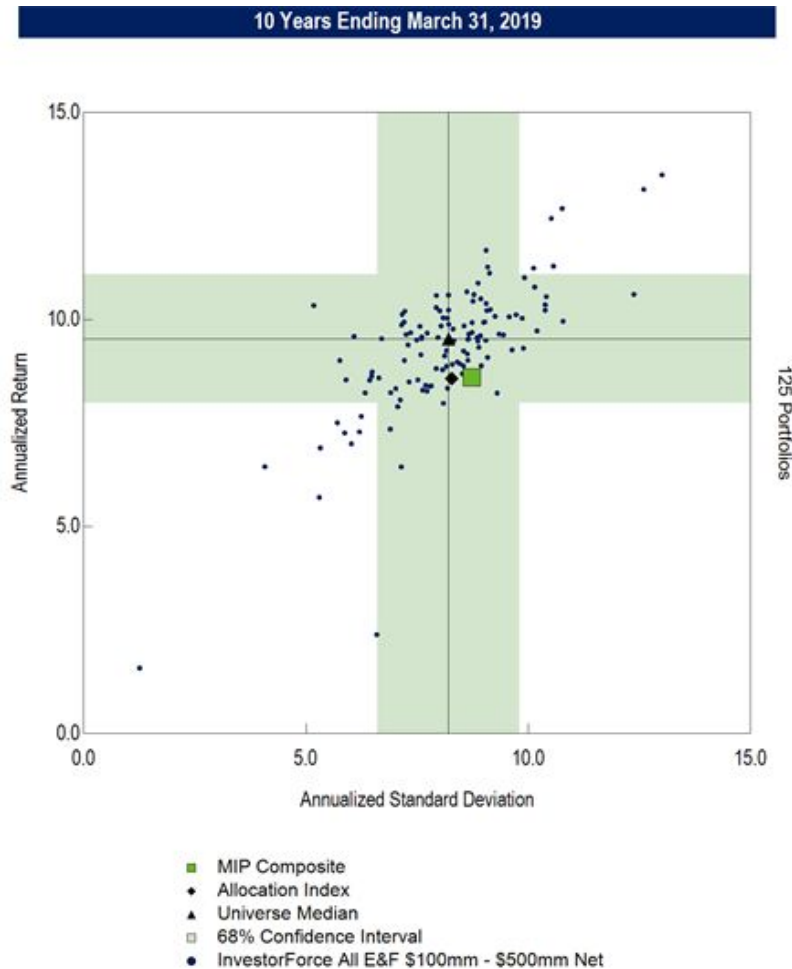
7 Years Ending March 31, 2019				
	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
MIP Composite	0.7	93	0.9	92
Allocation Index	0.8	75	1.1	73
Policy Index	0.8	66	1.1	61
InvestorForce All E&F \$100mm - \$500mm Net Median	0.9	--	1.2	--

*Returns are net of fees.



March 31, 2019

TOTAL PLAN RISK/RETURN - 10 YEAR



10 Years Ending March 31, 2019				
	Annzd Ret	Rank	Annzd Std Dev	Rank
MIP Composite	8.6%	76	8.7%	66
Allocation Index	8.6%	77	8.3%	52
Policy Index	8.7%	74	8.1%	46
InvestorForce All E&F \$100mm - \$500mm Net Median	9.5%	--	8.2%	--

10 Years Ending March 31, 2019				
	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
MIP Composite	0.9	93	1.4	89
Allocation Index	1.0	84	1.5	76
Policy Index	1.0	73	1.5	55
InvestorForce All E&F \$100mm - \$500mm Net Median	1.1	--	1.6	--

*Returns are net of fees.



March 31, 2019

TOTAL PLAN PERFORMANCE DETAIL

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
MIP Composite	334,967,532	100.0	100.0	7.6	0.2	0.5	5.0	6.6	3.8	5.7	8.6
Allocation Index				8.2	1.5	1.8	6.2	7.3	4.7	6.1	8.6
Policy Index				8.2	1.8	2.1	6.7	7.9	5.1	6.3	8.7
Total Domestic Large Cap	64,527,551	19.3	16.0	13.6	5.8	9.4	11.6	13.4	10.8	12.5	15.8
S&P 500				13.6	5.9	9.5	11.7	13.5	10.9	12.8	15.9
SSgA S&P 500	64,527,551	19.3	16.0	13.6	5.8	9.4	11.6	13.4	10.8	12.8	15.9
S&P 500				13.6	5.9	9.5	11.7	13.5	10.9	12.8	15.9
Total Domestic Small/Mid Cap	20,864,939	6.2	6.0	14.2	-5.8	-0.5	7.3	12.5	6.6	11.0	15.4
Russell 2500				15.8	-1.2	4.5	8.3	12.6	7.8	11.4	16.2
Westfield Capital	10,589,367	3.2	3.0	16.3	-2.4	2.7	12.6	15.7	8.1	11.7	16.8
Russell 2500 Growth				19.0	1.9	7.5	13.6	15.6	9.7	12.6	17.5
DFA	10,275,572	3.1	3.0	12.1	-8.9	-3.4	1.6	8.6	4.5	9.9	--
Russell 2000 Value				11.9	-7.5	0.2	2.6	10.9	5.6	9.6	14.1
Total International Equity (including emerging markets)	76,959,788	23.0	23.0	9.2	-5.0	-7.8	3.4	5.5	1.6	4.1	9.0
MSCI EAFE				10.0	-2.5	-3.7	5.1	7.3	2.3	5.6	9.0
Morgan Stanley	21,455,575	6.4	6.3	11.2	-2.5	-2.7	5.2	6.4	2.0	5.2	8.1
Globeflex	20,521,735	6.1	6.3	9.5	-9.3	-10.1	3.5	5.5	2.0	6.0	9.2
MSCI EAFE				10.0	-2.5	-3.7	5.1	7.3	2.3	5.6	9.0
Kabouter International Opportunities Offshore Fund II	11,267,254	3.4	3.5	5.9	-13.1	-14.5	--	--	--	--	--
MSCI EAFE Small Cap				10.7	-7.9	-9.4	5.8	7.5	4.5	8.2	12.8
Emerging Markets Equity	23,715,224	7.1	7.0	8.8	1.1	-7.3	2.6	5.3	0.9	1.0	--
MSCI Emerging Markets				9.9	0.6	-7.4	7.6	10.7	3.7	2.7	8.9
Aberdeen Emerging Mkts	12,200,444	3.6	3.5	10.8	6.4	-5.4	4.9	8.5	2.8	2.4	10.8
MSCI Emerging Markets				9.9	0.6	-7.4	7.6	10.7	3.7	2.7	8.9
Mondrian EM Small Cap	11,514,780	3.4	3.5	6.8	-3.9	-9.3	0.2	1.9	--	--	--
MSCI Emerging Markets Small Cap				7.8	-4.2	-12.4	1.9	5.9	1.8	2.6	10.4
Total Fixed Income	72,631,926	21.7	21.0	3.1	2.7	3.1	2.9	3.4	2.8	3.9	5.9
BBgBarc US Aggregate TR				2.9	4.6	4.5	2.8	2.0	2.7	2.5	3.8
Commonfund	18,826,451	5.6	5.0	3.1	4.3	4.0	3.3	3.0	3.0	3.4	5.6
BBgBarc US Aggregate TR				2.9	4.6	4.5	2.8	2.0	2.7	2.5	3.8
Vanguard Inflation-Protected Securities	12,254,562	3.7	8.0	3.2	1.9	2.7	1.7	1.6	--	--	--
BBgBarc US TIPS TR				3.2	1.9	2.7	1.8	1.7	1.9	1.2	3.4
Vanguard Short-Term Inflation-Protected Securities	12,000,000	3.6									
Blackrock Strategic Income Opportunities	13,337,958	4.0	3.0	2.5	2.4	--	--	--	--	--	--
3-Month Libor Total Return USD				0.7	2.0	2.6	2.0	1.7	1.1	0.9	0.7
Bain Capital Senior Loan Fund	14,613,902	4.4	5.0	4.0	--	--	--	--	--	--	--
Credit Suisse Leveraged Loans				3.8	2.5	3.3	4.0	5.9	3.8	4.6	8.0
Guggenheim US Bank Loans	1,599,052	0.5									



March 31, 2019

TOTAL PLAN PERFORMANCE DETAIL

	Market Value (\$)	% of Portfolio	Policy %	3 Mo	Fiscal YTD	1 Yr	2 Yrs	3 Yrs	5 Yrs	7 Yrs	10 Yrs
				(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Total GAA	76,944,400	23.0	23.0	5.6	0.8	-0.1	3.3	4.5	1.9	3.4	6.0
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				8.6	2.4	1.8	6.8	7.5	4.7	6.0	9.0
GMO Global Absolute Return	25,553,905	7.6	7.7	5.2	0.8	-2.1	3.4	5.0	2.3	3.9	5.6
Blended Index				4.6	4.4	4.5	3.6	3.9	3.6	3.6	5.8
Wellington	25,678,072	7.7	7.7	7.0	-3.5	-5.0	2.3	5.6	2.9	4.3	7.5
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				8.6	2.4	1.8	6.8	7.5	4.7	6.0	9.0
Newton Global Real Return	25,712,422	7.7	7.7	4.6	5.2	7.1	3.9	--	--	--	--
60% MSCI ACWI (Net) / 40% BBgBarc Global Agg				8.1	2.5	1.6	6.6	7.0	4.4	5.6	8.5
Total Hedge Funds	18,440,608	5.5	6.0	4.9	-3.8	-1.5	1.6	3.5	0.8	2.0	3.1
HFRI Fund of Funds Composite Index				4.6	-0.4	0.1	2.8	3.9	2.2	3.1	3.5
Lighthouse	18,440,608	5.5	6.0	4.9	-3.8	-1.0	2.7	4.5	--	--	--
Credit Suisse Long Shrt Eqt USD				5.3	-0.2	-0.5	5.0	4.6	3.4	5.2	6.3
Total Real Assets	1,523,286	0.5	3.0	-1.0	-6.7	-7.0	-2.7	-3.4	-0.4	3.6	--
NCREIF Timberland Index				0.1	2.1	2.6	3.2	3.4	4.7	6.0	3.8
John Hancock Timber Fund	1,523,286	0.5	3.0	-1.0	-6.7	-7.0	-2.7	-3.4	-0.4	3.6	0.0
NCREIF Timberland Index				0.1	2.1	2.6	3.2	3.4	4.7	6.0	3.8
Private Equity	1,955,484	0.6	2.0	0.0	5.8	10.5	16.0	14.6	--	--	--
Landmark Equity Partners XV	1,955,484	0.6	2.0	0.0	5.8	10.5	16.0	14.6	--	--	--
Cambridge Associates US All PE (1 Qtr Lag)				-2.1	7.1	10.0	13.7	13.5	11.4	13.2	13.7
Total Cash	1,119,550	0.3	0.0								
Distribution Account	1,119,550	0.3	0.0	0.5	1.4	1.8	1.3	0.9	0.5	0.4	0.4
91 Day T-Bills				0.6	1.7	2.1	1.7	1.2	0.8	0.6	0.4

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+

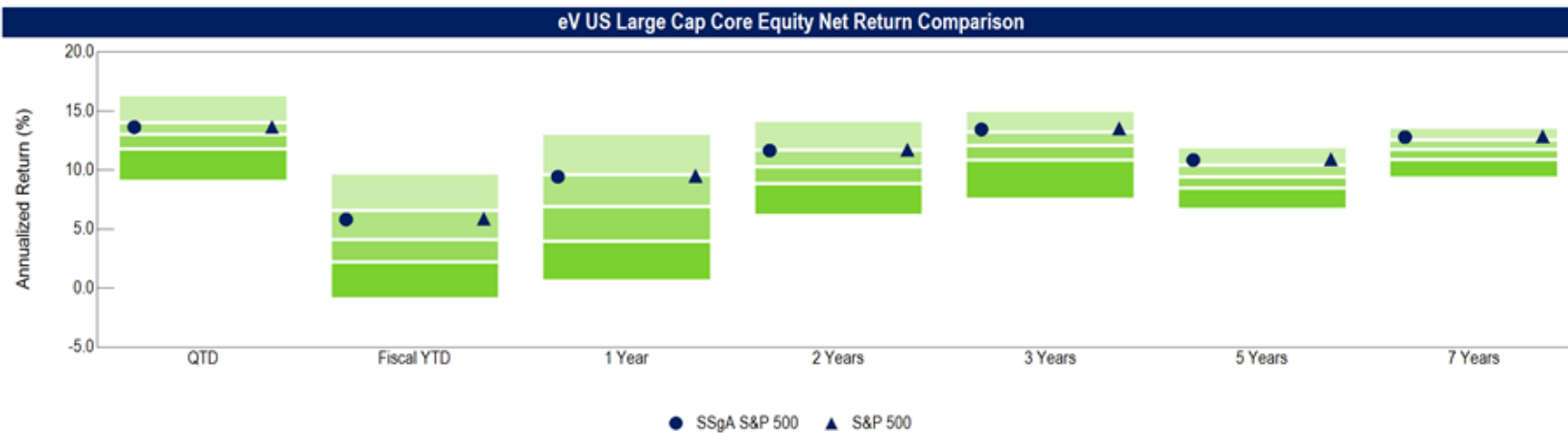
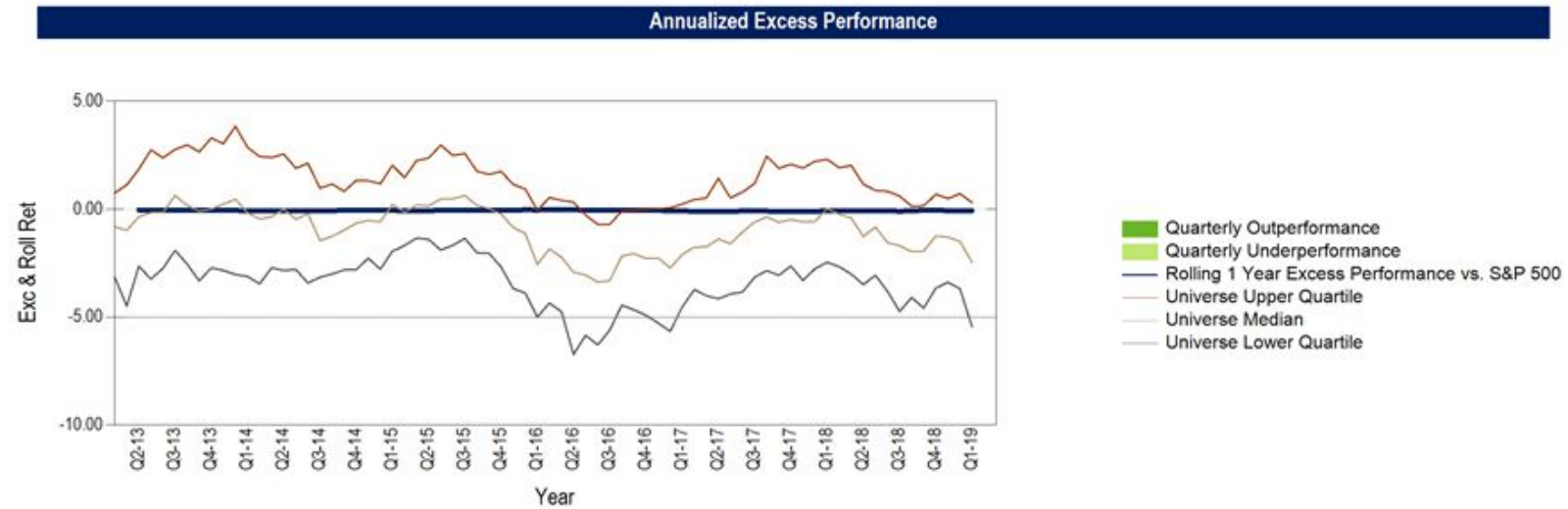
Returns are net of manager fees

John Hancock Timber market value as of 03/31/19

Landmark market value estimated as of 03/31/19

SSgA S&P 500

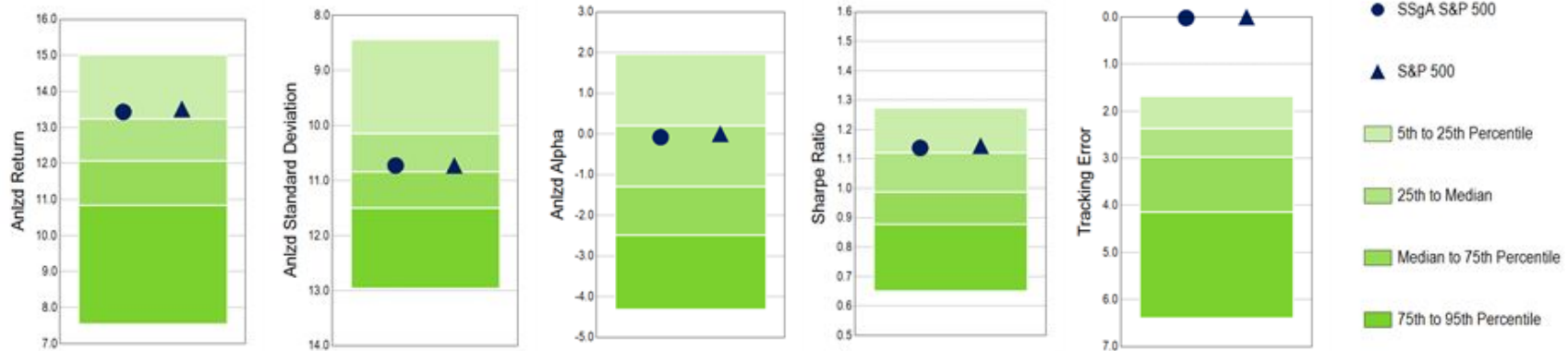
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SSgA S&P 500

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*Returns are net of fees.



March 31, 2019

SSgA S&P 500

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Characteristics		
	Portfolio	S&P 500
Number of Holdings	505	505
Weighted Avg. Market Cap. (\$B)	211.4	211.5
Median Market Cap. (\$B)	21.2	21.2
Price To Earnings	20.2	20.2
Price To Book	3.5	3.5
Price To Sales	2.1	2.1
Return on Equity (%)	26.3	26.3
Yield (%)	2.0	2.0
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%	16.4%	16.4%	5.4%	5.4%	
Materials	0.0%	0.0%	0.0%	0.0%	10.3%	9.7%	2.6%	2.6%	
Industrials	0.0%	0.0%	0.0%	0.0%	17.2%	17.2%	9.5%	9.5%	
Consumer Discretionary	0.0%	0.0%	0.0%	0.0%	15.7%	15.7%	10.1%	10.2%	
Consumer Staples	0.0%	0.0%	0.0%	0.0%	12.0%	12.0%	7.3%	7.3%	
Health Care	0.0%	0.0%	0.0%	0.0%	6.5%	6.5%	14.6%	14.6%	
Financials	0.0%	0.0%	0.0%	0.0%	8.5%	8.5%	12.7%	12.7%	
Information Technology	0.0%	0.0%	0.0%	0.0%	19.9%	19.9%	21.2%	21.2%	
Communication Services	0.0%	0.0%	0.0%	0.0%	14.4%	14.4%	10.1%	10.0%	
Utilities	0.0%	0.0%	0.0%	0.0%	11.6%	11.6%	3.3%	3.3%	
Real Estate	0.0%	0.0%	0.0%	0.0%	17.6%	17.6%	3.1%	3.1%	
Cash	0.0%	0.0%	0.0%	0.0%	0.6%	--	0.0%	0.0%	
Unclassified	0.0%	--	--	--	--	--	0.0%	0.0%	
Portfolio	0.0%	=	0.0%	+	0.0%	+	0.0%	+	0.0%
					13.7%	13.7%	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.



March 31, 2019

WESTFIELD CAPITAL



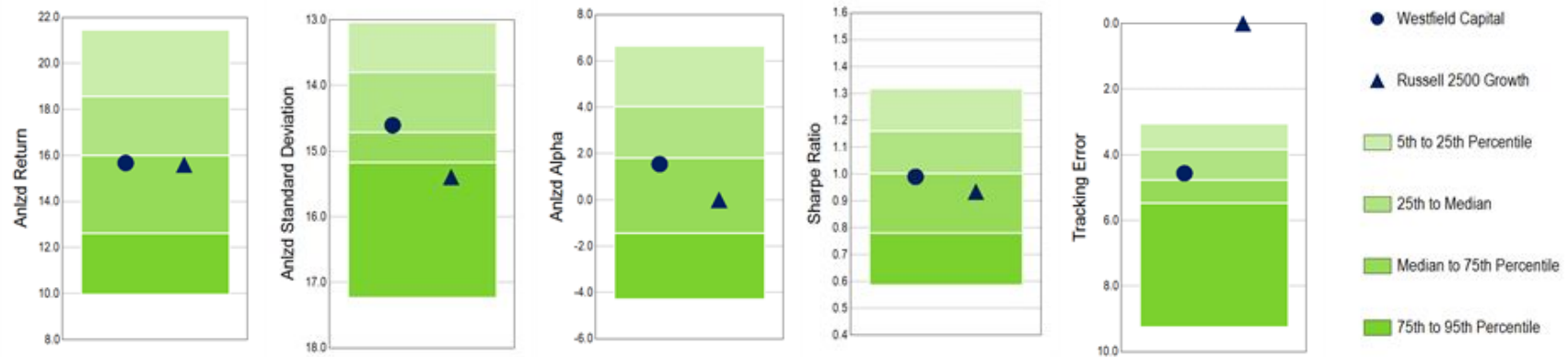
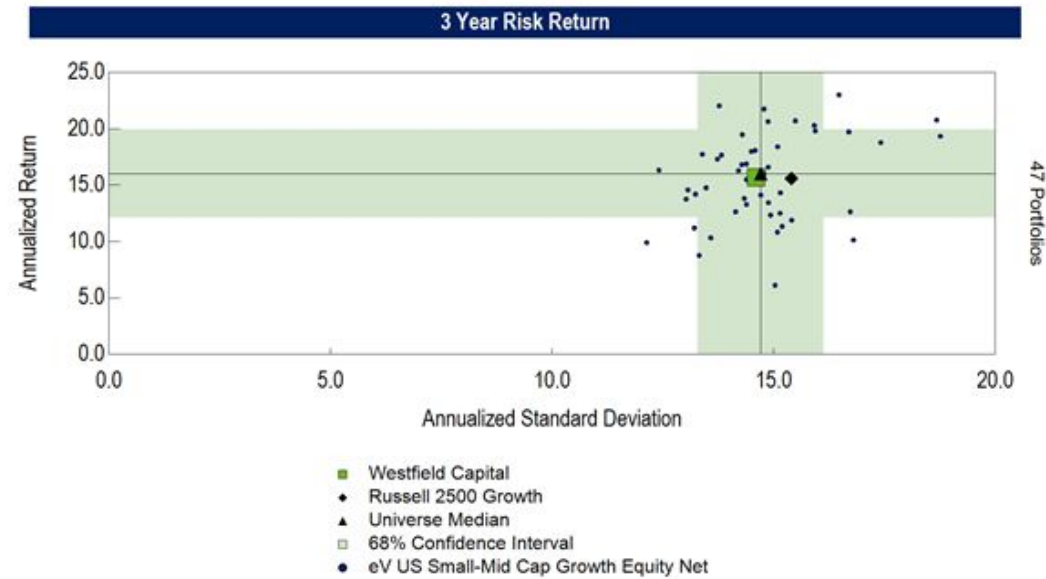
*Returns are net of fees.



March 31, 2019

WESTFIELD CAPITAL

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*Returns are net of fees.



March 31, 2019

WESTFIELD CAPITAL

4

Characteristics			Top Positive Contributors			Top Negative Contributors		
	Portfolio	Russell 2500 Growth		Relative Contribution %	Return %		Relative Contribution %	Return %
Number of Holdings	68	1,488	TRANSDIGM GROUP	0.6%	33.5%	ORION ENGINEERED CARBONS	-0.3%	-24.2%
Weighted Avg. Market Cap. (\$B)	8.9	5.7	METTLER TOLEDO INTL.	0.6%	27.8%	HAEMONETICS	-0.2%	-12.6%
Median Market Cap. (\$B)	7.0	1.1	COSTAR GP.	0.5%	38.3%	SIX FLAGS ENTM.	-0.1%	-10.0%
Price To Earnings	25.3	24.0	ESSENT GROUP	0.5%	27.1%	NUTANIX CL.A	-0.1%	-9.3%
Price To Book	4.0	4.8	BIO-RAD LABORATORIES 'A'	0.5%	31.6%	BURLINGTON STORES	-0.1%	-3.7%
Price To Sales	2.3	1.8	GLOBAL PAYMENTS	0.5%	32.4%	ENTEGRIS	-0.1%	28.2%
Return on Equity (%)	15.2	11.9	MEDICINES COMPANY	0.5%	46.0%	AGIOS PHARMACEUTICALS	-0.1%	46.3%
Yield (%)	0.8	0.8	TOTAL SYSTEM SERVICES	0.5%	17.0%	PURE STORAGE CL.A	-0.1%	35.5%
Beta		1.0	REALPAGE	0.5%	25.9%	PBF ENERGY CL.A	0.0%	-3.8%
R-Squared		1.0	BLACK KNIGHT	0.4%	20.9%	PERFORMANCE FOOD GROUP	0.0%	22.8%

Equity Sector Attribution											
	Attribution Effects				Returns		Ending Sector Weights				
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	-0.5%	-0.2%	0.1%	-0.4%	7.1%	21.3%	4.0%	1.2%			
Materials	-0.3%	-0.2%	0.0%	-0.1%	14.7%	20.2%	5.5%	4.5%			
Industrials	0.8%	0.8%	0.1%	-0.1%	20.6%	15.6%	15.9%	16.3%			
Consumer Discretionary	-0.7%	-1.6%	0.3%	0.7%	3.6%	14.2%	7.7%	14.5%			
Consumer Staples	0.3%	--	0.3%	--	--	6.1%	1.0%	2.0%			
Health Care	0.0%	0.0%	0.0%	0.0%	19.8%	19.8%	20.7%	22.1%			
Financials	-0.1%	0.0%	-0.1%	0.0%	13.2%	13.0%	8.7%	6.7%			
Information Technology	-1.1%	-1.3%	0.4%	-0.3%	21.8%	27.0%	29.1%	26.4%			
Communication Services	0.2%	0.2%	0.0%	0.0%	20.8%	16.0%	2.2%	3.3%			
Utilities	0.0%	--	0.0%	--	--	9.1%	0.0%	0.3%			
Real Estate	-0.1%	-0.1%	0.0%	0.0%	16.4%	18.9%	4.8%	2.9%			
Cash	0.0%	0.0%	0.0%	0.0%	0.6%	--	0.3%	0.0%			
Portfolio	-1.6%	=	-2.4%	+	1.0%	+	-0.2%	17.5%	19.1%	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.

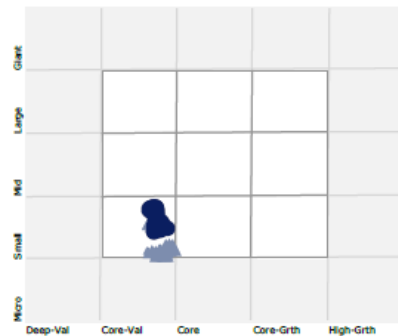


March 31, 2019

DFA US TARGETED VALUE I

Holdings Based Style Trail (5 Years)

Time Period: 4/30/2014 to 3/31/2019



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

Portfolio Statistics

	Fund	Index
# of Holdings	1,518	1,366
% Asset in Top 10 Holdings	6.0	4.9
Turnover Ratio %	23.0	
P/E Ratio	13.9	14.9
P/B Ratio	1.3	1.4
LT Eam Growth	11.0	9.7
Hist Eam Growth	5.1	8.9
12 Mo Yield	1.2	

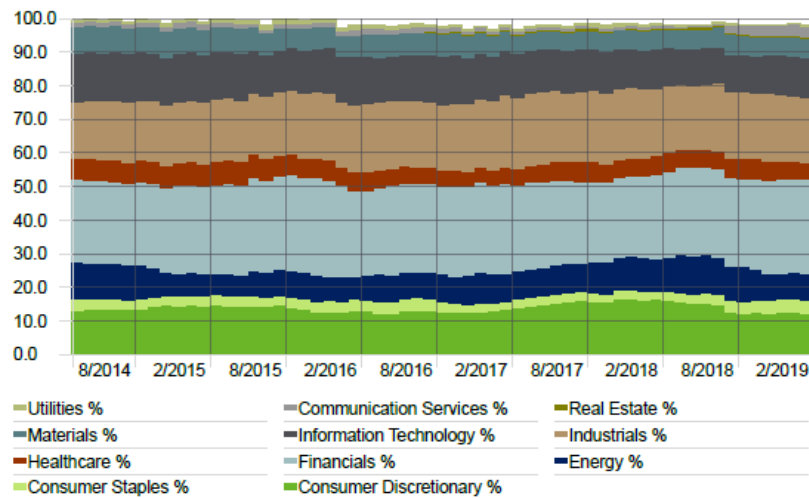
Market Capitalization Breakdown

	Fund	Index
Market Cap Giant %	0.0	0.0
Market Cap Large %	0.6	0.0
Market Cap Mid %	37.4	19.3
Market Cap Small %	52.7	67.3
Market Cap Micro %	9.4	13.3
Average Market Cap (mil)	2,277.9	1,673.0

Top 10 Holdings

	Portf Weight %	3 Month Ret %
Arrow Electronics Inc	0.73	11.78
S+p500 Emini Fut Mar19 Xome 20190315	0.70	
People's United Financial Inc	0.64	15.14
Reliance Steel & Aluminum Co	0.62	27.60
Avnet Inc	0.58	20.69
Toll Brothers Inc	0.57	10.28
Post Holdings Inc	0.56	22.74
Assurant Inc	0.55	6.79
Quanta Services Inc	0.54	25.38
Assured Guaranty Ltd	0.53	16.54

Historical Sector Allocations (5 Years)



Attribution (Quarter)

	Portfolio Weights	Benchmark Weights	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Active Return
Communication Services	3.20	3.12	12.57	14.41	0.00	-0.06	-0.06
Consumer Discretionary	12.47	9.26	8.79	8.63	-0.12	0.02	-0.09
Consumer Staples	3.98	2.58	15.67	7.59	-0.06	0.33	0.27
Energy	7.77	5.52	16.80	18.58	0.15	-0.13	0.02
Financials	27.93	29.26	9.33	7.93	0.02	0.42	0.44
Health Care	5.16	4.29	5.08	9.00	-0.02	-0.22	-0.24
Industrials	19.55	11.72	13.45	10.00	-0.16	0.69	0.53
Information Technology	11.88	11.07	18.25	19.46	0.09	-0.14	-0.06
Materials	5.59	4.21	17.33	16.89	0.07	0.02	0.09
Real Estate	0.34	11.88	7.06	16.90	-0.58	-0.03	-0.60
Utilities	0.12	6.98	9.06	10.58	0.09	0.00	0.09
Attribution Total	98.00	99.89	12.32	11.94	-0.52	0.90	0.38
Cash	1.08	0.00					
Other	0.72	0.00					
Total	100.00	100.00					
Expense Ratio			0.10	0.00			
Residual(Reported - Attribution + Expense)			-0.08	-0.01			



Source: Morningstar

March 31, 2019

DFA US TARGETED VALUE I

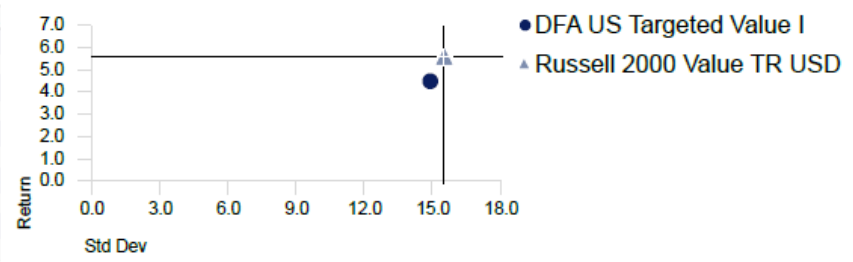
Risk & Return Characteristics (5 Years)

Time Period: 4/1/2014 to 3/31/2019

	Fund	Index
R2	94.0	100.0
Alpha	-0.7	0.0
Beta	0.9	1.0
Std Dev	14.9	15.5
Up Capture Ratio	88.9	100.0
Down Capture Ratio	94.2	100.0
Sharpe Ratio (geo)	0.2	0.3
Information Ratio (geo)	-0.3	
Tracking Error	3.8	0.0
Correlation	1.0	1.0

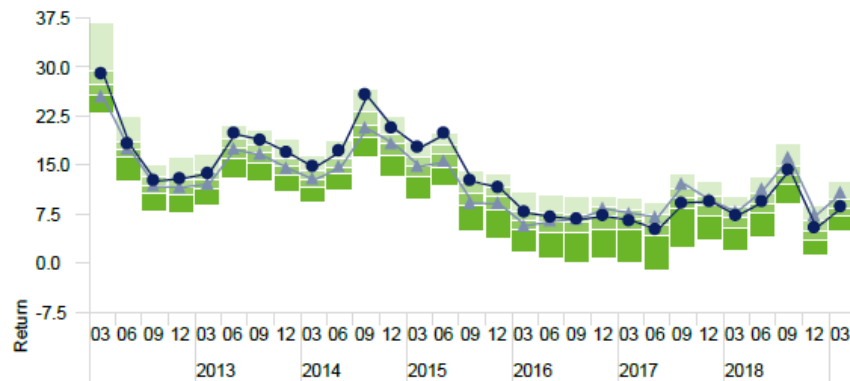
Risk & Return Illustration (5 Years)

Time Period: 4/1/2014 to 3/31/2019



Rolling Return (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile

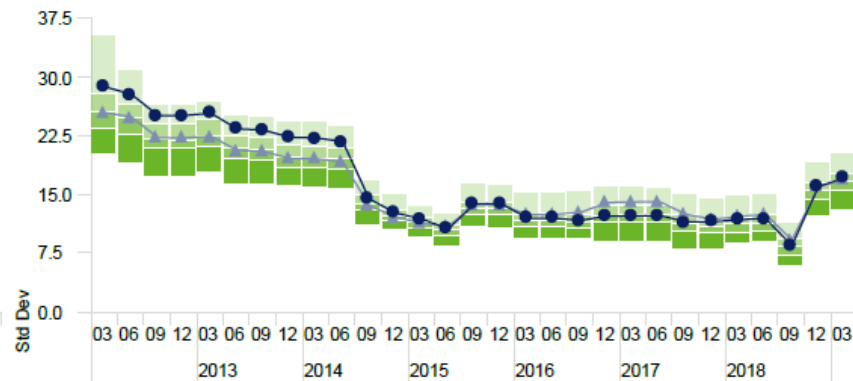


—DFA US Targeted Value I

—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

Calendar Year Returns

	2009	Rank	2010	Rank	2011	Rank	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	2017	Rank	2018	Rank
DFA US Targeted Value I	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	-15.8	55
Russell 2000 Value TR USD	20.6		24.5		-5.5		18.1		34.5		4.2		-7.5		31.7		7.8		-12.9	



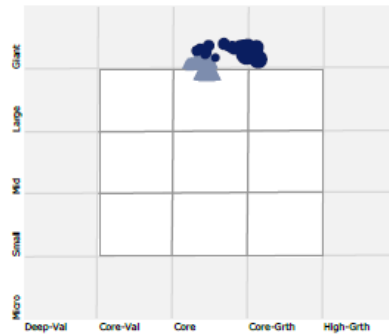
Source: Morningstar

March 31, 2019

MORGAN STANLEY INTERNATIONAL EQUITY I

Holdings Based Style Trail (5 Years)

Time Period: 4/30/2014 to 3/31/2019



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

Portfolio Statistics

	Fund	Index
# of Holdings	62	920
% Asset in Top 10 Holdings	35.2	12.1
Turnover Ratio %	34.0	
P/E Ratio	12.2	14.7
P/B Ratio	2.0	1.5
LT Eam Growth	9.2	8.2
Hist Eam Growth	28.1	8.3
12 Mo Yield	2.3	

Market Capitalization Breakdown

	Fund	Index
Market Cap Giant %	59.8	50.0
Market Cap Large %	34.8	36.7
Market Cap Mid %	4.7	13.2
Market Cap Small %	0.7	0.0
Market Cap Micro %	0.0	0.0
Average Market Cap	45,375.5	32,128.7
Equity Region Developed %	96.2	99.5
Equity Region Emerging %	3.8	0.5

Top Ten Holdings

	Port Weight %	3 Month Return
Reckitt Benckiser Group PLC	4.42	8.59
Unilever NV DR	4.30	8.06
Kirin Holdings Co Ltd	3.53	13.96
Novartis AG	3.53	16.24
GlaxoSmithKline PLC	3.37	11.14
RELX PLC	3.34	3.90
Sanofi SA	3.32	2.22
SAP SE	3.21	16.38
Pernod Ricard SA	3.11	9.67
Henkel AG & Co KGaA Participating Preferred	3.07	-6.31

Sector Attribution (Quarter)

	Portfolio Weights	Benchmark Weights	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Active Return
Communication Services	3.84	5.50	6.08	4.65	0.09	0.06	0.14
Consumer Discretionary	2.94	11.24	4.17	7.44	0.22	-0.09	0.12
Consumer Staples	30.92	11.35	12.70	12.45	0.45	0.10	0.55
Energy	5.07	5.87	14.93	10.55	-0.01	0.22	0.22
Financials	14.93	19.43	11.78	6.92	0.13	0.74	0.88
Health Care	16.80	11.12	8.97	11.60	0.09	-0.45	-0.36
Industrials	12.82	14.37	9.64	10.72	-0.01	-0.14	-0.15
Information Technology	6.69	6.06	23.99	15.46	0.04	0.56	0.60
Materials	4.75	7.40	8.62	13.40	-0.08	-0.23	-0.32
Real Estate	0.00	3.76		14.17	-0.15	0.00	-0.15
Utilities	0.00	3.74		9.12	0.04	0.00	0.04
Attribution Total	98.75	99.84	11.67	10.10	0.80	0.77	1.56
Cash	1.25	0.00					
Other	0.00	0.03					
Missing Performance	0.00	0.13					
Total	100.00	100.00					

Region Attribution (Quarter)

	Portfolio Weights	Benchmark Weights	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Active Return
Asia - Developed	5.08	5.13	20.42	13.18	0.00	0.36	0.36
Asia - Emerging	3.84	0.67	10.60	19.53	0.30	-0.34	-0.04
Australasia	0.00	6.93		11.12	-0.07	0.00	-0.07
Canada	4.80	0.00	17.56		0.36	0.00	0.36
Europe - ex Euro	5.67	13.99	13.73	12.28	-0.18	0.09	-0.09
Eurozone	40.05	30.49	10.21	9.78	-0.03	0.17	0.14
Japan	14.04	24.44	10.72	6.80	0.34	0.56	0.90
Latin America	0.00	0.05		-1.15	0.01	0.00	0.01
Middle East	0.00	0.47		6.34	0.02	0.00	0.02
United Kingdom	22.13	16.49	11.35	11.83	0.10	-0.11	-0.01
United States	3.14	1.16	11.89	15.57	0.11	-0.11	-0.01
Attribution Total	98.75	99.84	11.67	10.10	0.95	0.62	1.56
Cash	1.25	0.00					
Other	0.00	0.03					
Missing Performance	0.00	0.13					
Total	100.00	100.00					



Source: Morningstar

March 31, 2019

MORGAN STANLEY INTERNATIONAL EQUITY I

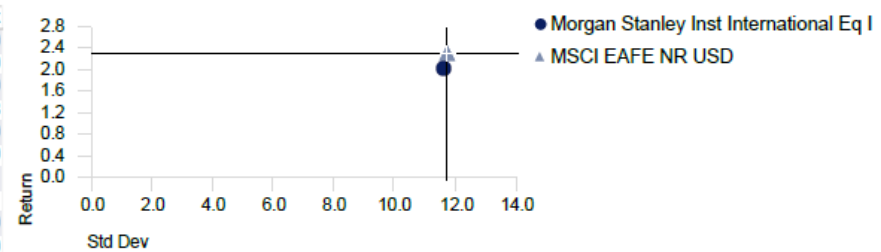
Risk & Return Characteristics (5 Years)

Time Period: 4/1/2014 to 3/31/2019

	Fund	Index
R2	93.4	100.0
Alpha	-0.2	0.0
Beta	1.0	1.0
Std Dev	11.6	11.8
Up Capture Ratio	93.2	100.0
Down Capture Ratio	95.2	100.0
Sharpe Ratio (geo)	0.1	0.1
Information Ratio (geo)	-0.1	0.0
Tracking Error	3.0	0.0
Correlation	1.0	1.0

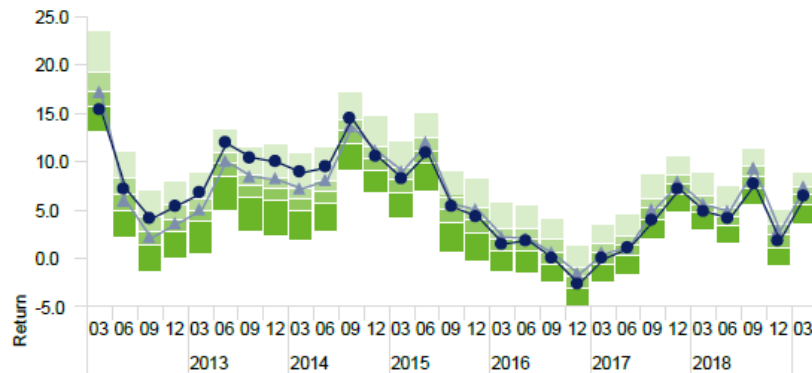
Risk & Return Illustration (5 Years)

Time Period: 4/1/2014 to 3/31/2019



Rolling Returns (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile

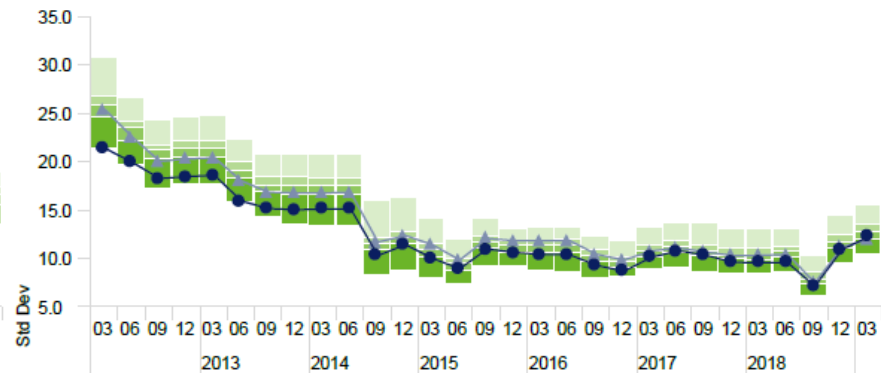


—Morgan Stanley Inst International Eq I

—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

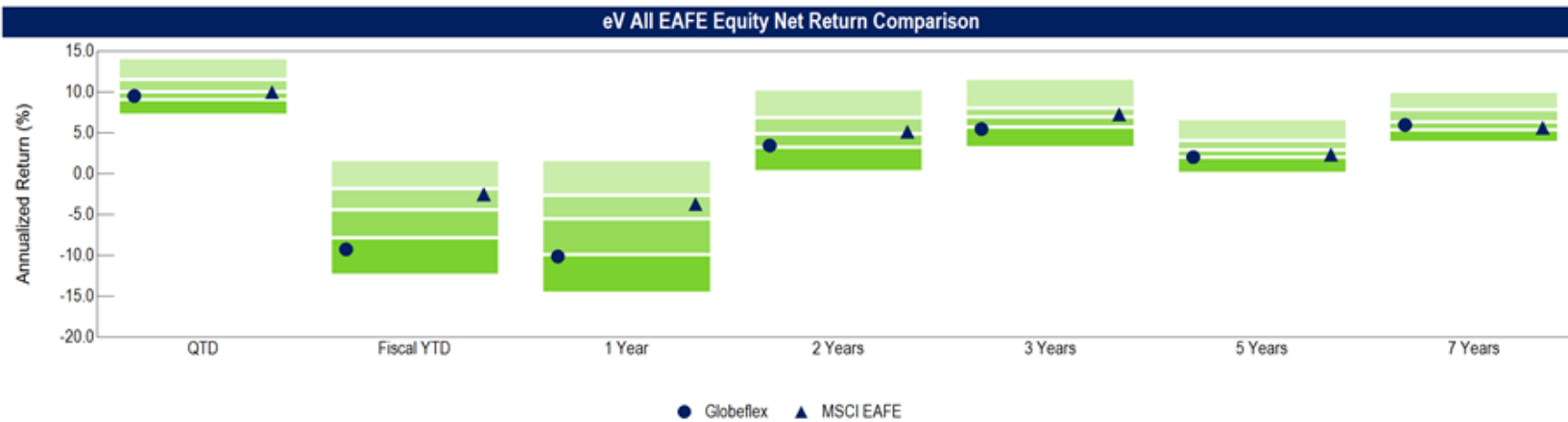
	2009	Rank	2010	Rank	2011	Rank	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	2017	Rank	2018	Rank
Morgan Stanley Inst International Eq I	21.6	85	6.1	87	-7.6	5	19.6	26	20.4	43	-6.1	64	0.4	30	-2.0	82	25.2	53	-13.8	37
MSCI EAFE NR USD	31.8		7.8		-12.1		17.3		22.8		-4.9		-0.8		1.0		25.0		-13.8	



Source: Morningstar

March 31, 2019

GLOBEFLEX



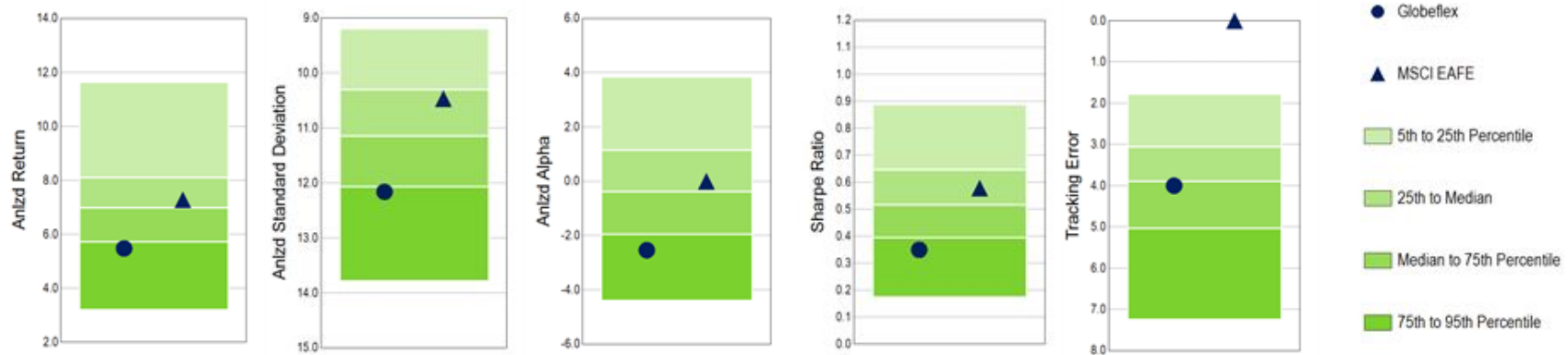
*Returns are net of fees.



March 31, 2019

GLOBEFLEX

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*Returns are net of fees.



March 31, 2019

GLOBEFLEX

4

Characteristics	Portfolio	MSCI EAFE
Number of Holdings	123	920
Weighted Avg. Market Cap. (\$B)	26.8	58.8
Median Market Cap. (\$B)	7.9	10.1
Price To Earnings	12.7	15.1
Price To Book	2.1	2.2
Price To Sales	0.8	1.1
Return on Equity (%)	19.3	14.5
Yield (%)	3.4	3.4
Beta		1.0
R-Squared		1.0

Top Positive Contributors	Relative Contribution %	Return %
EVRAZ	0.6%	39.0%
OMV	0.4%	24.2%
3I GROUP ADR 2:1	0.4%	23.8%
BLUESCOPE STEEL	0.4%	29.0%
CAE	0.4%	21.1%
EXOR ORD	0.4%	20.3%
AKER BP	0.4%	44.0%
CHARTER HALL GROUP STAPLED UNITS	0.3%	39.7%
ASTELLAS PHARMA	0.3%	18.6%
BHP GROUP	0.3%	23.1%

Top Negative Contributors	Relative Contribution %	Return %
PLUS500	-0.4%	-40.6%
EISAI	-0.3%	-26.6%
STAFFLINE GROUP	-0.2%	-28.2%
NOVO NORDISK 'B'	-0.1%	16.6%
INTL.CONS.AIRL.GP.	-0.1%	-15.2%
NICHI-IKO PHARM.	-0.1%	-8.8%
CENTRICA	-0.1%	-13.4%
KYORIN HOLDINGS	-0.1%	-9.0%
GLAXOSMITHKLINE	-0.1%	11.2%
BETSSON B	-0.1%	-7.6%

Equity Sector Attribution									
	Attribution Effects				Returns		Ending Sector Weights		
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark	
Energy	0.6%	0.3%	0.0%	0.3%	15.5%	10.6%	9.1%	5.8%	
Materials	0.7%	0.3%	0.1%	0.3%	18.7%	13.4%	11.5%	7.4%	
Industrials	-0.3%	-0.3%	0.0%	0.0%	9.1%	10.6%	19.0%	14.3%	
Consumer Discretionary	0.4%	0.6%	0.2%	-0.3%	12.7%	7.4%	4.2%	10.9%	
Consumer Staples	-0.1%	0.0%	-0.2%	0.1%	14.0%	12.4%	4.8%	11.9%	
Health Care	-0.8%	-0.5%	0.1%	-0.4%	6.4%	11.6%	16.2%	11.3%	
Financials	0.4%	0.2%	0.2%	-0.1%	8.1%	7.0%	13.7%	18.9%	
Information Technology	-0.1%	-0.1%	-0.1%	0.1%	13.8%	15.3%	3.1%	6.3%	
Communication Services	-0.3%	-0.1%	-0.1%	-0.1%	2.3%	4.8%	7.4%	5.4%	
Utilities	-0.3%	-0.3%	0.0%	0.0%	2.2%	9.2%	4.0%	3.8%	
Real Estate	0.3%	0.1%	0.0%	0.1%	19.2%	14.5%	6.4%	3.8%	
Cash	0.0%	--	--	--	--	--	0.0%	0.0%	
Portfolio	0.5%	=	0.3%	+	0.2%	+	-0.1%		
					10.6%	10.1%	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.



March 31, 2019

GLOBEFLEX

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Country Allocation				
	Manager Ending Allocation (USD)	Index Ending Allocation (USD)	Manager Return (USD)	Index Return (USD)
Americas				
Canada	9.4%	0.0%	15.8%	15.4%
United States	0.5%	0.0%	-4.5%	13.7%
Total-Americas	9.9%	0.0%	14.5%	--
Europe				
Austria	2.9%	0.2%	24.0%	8.6%
Denmark	0.7%	1.8%	--	13.2%
France	6.5%	11.2%	11.2%	10.8%
Germany	5.0%	8.5%	7.2%	7.1%
Italy	6.6%	2.4%	15.1%	14.7%
Netherlands	3.9%	3.6%	9.0%	13.6%
Norway	2.0%	0.7%	16.1%	7.2%
Portugal	0.5%	0.2%	1.7%	10.2%
Spain	3.4%	3.0%	3.1%	6.8%
Sweden	1.9%	2.7%	3.7%	7.9%
Switzerland	3.9%	8.9%	15.2%	13.6%
United Kingdom	14.9%	17.2%	11.1%	11.9%
Total-Europe	52.5%	62.8%	10.9%	11.0%

Country Allocation				
	Manager Ending Allocation (USD)	Index Ending Allocation (USD)	Manager Return (USD)	Index Return (USD)
AsiaPacific				
Australia	9.9%	7.0%	17.4%	11.5%
Hong Kong	2.9%	4.1%	16.8%	15.6%
Japan	19.3%	24.0%	6.1%	6.8%
Korea*	4.4%	0.0%	4.8%	4.9%
New Zealand	0.3%	0.2%	--	16.8%
Total-AsiaPacific	37.0%	36.6%	9.5%	8.7%
Other				
Israel	0.6%	0.5%	-1.2%	10.7%
Total-Other	0.6%	0.5%	-1.2%	10.7%
Totals				
Developed	95.6%	100.0%	10.9%	10.1%
Emerging*	4.4%	0.0%	4.8%	--

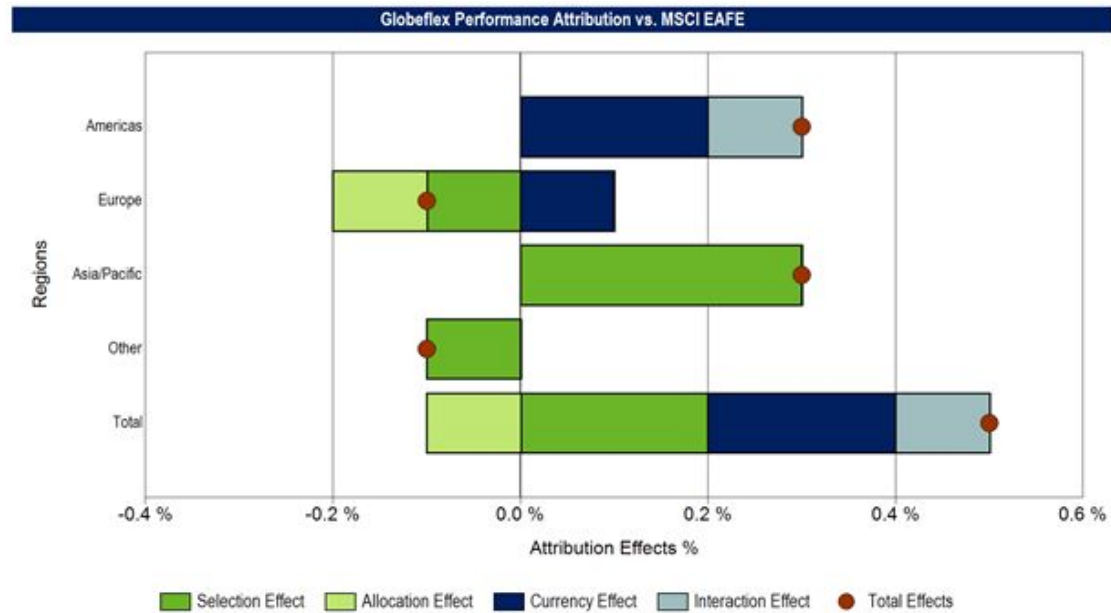
*Returns are net of fees.



March 31, 2019

GLOBEFLEX

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	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	14.5%	--	9.9%	0.0%	0.0%	0.0%	0.2%	0.1%	0.3%
Europe	10.9%	11.0%	52.5%	62.8%	-0.1%	-0.1%	0.1%	0.0%	-0.1%
Asia/Pacific	9.5%	8.7%	37.0%	36.6%	0.3%	0.0%	0.0%	0.0%	0.3%
Other	-1.2%	10.7%	0.6%	0.5%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Total	10.6%	10.1%	100.0%	100.0%	0.2%	-0.1%	0.2%	0.1%	0.5%
Totals									
Developed	10.9%	10.1%	95.6%	100.0%	0.5%	0.0%	0.3%	0.0%	0.7%
Emerging*	4.8%	--	4.4%	0.0%	0.0%	0.0%	-0.1%	-0.2%	-0.3%

*Returns are net of fees.



March 31, 2019

KABOUTER INT'L OPPS OFFSHORE FUND II

SECTOR ATTRIBUTION W/CURRENCY

	Average Weight			Contribution to Return			Total Return			Attribution Analysis			
	Port. Average Weight	Bench. Average Weight	Variation in Average Weight	Port. Contrib. To Return	Bench. Contrib. To Return	Variation in Contribution To Return	Port. Total Return	Bench. Total Return	Total Effect	Allocation Effect (Local)	Selection Effect (Local)	Total Currency Effect	
Total	100.00	100.00	--	6.65	10.74	-4.09	6.65	10.74	-4.09	-0.42	-3.62	-0.04	
Communication Services	--	4.64	-4.64	--	0.59	-0.59	--	12.97	-0.10	-0.11	--	0.00	
Consumer Discretionary	6.01	13.09	-7.08	-0.37	1.41	-1.78	-6.82	10.72	-1.04	0.01	-1.04	-0.00	
Consumer Staples	2.25	6.58	-4.33	-0.92	0.41	-1.33	-32.21	6.02	-0.92	0.16	-1.07	-0.01	
Energy	--	2.65	-2.65	--	0.49	-0.49	--	19.49	-0.22	-0.20	--	-0.02	
Etf	1.07	--	1.07	0.06	--	0.06	10.85	--	-0.01	-0.03	--	0.02	
Financials	9.10	11.48	-2.37	0.61	0.72	-0.12	6.13	5.94	0.10	0.09	0.01	-0.00	
Health Care	21.29	7.51	13.78	3.03	0.83	2.20	15.25	10.97	0.77	0.13	0.59	0.05	
Industrials	28.17	21.41	6.76	3.49	2.32	1.17	12.88	10.83	0.51	0.01	0.36	0.14	
Information Technology	8.03	9.51	-1.48	0.73	1.69	-0.97	9.82	19.13	-0.80	-0.13	-0.59	-0.08	
Materials	11.93	8.47	3.46	0.31	0.68	-0.37	2.38	7.64	-0.75	-0.11	-0.55	-0.09	
Real Estate	3.64	12.20	-8.56	0.37	1.38	-1.01	10.88	11.48	-0.10	-0.06	-0.08	0.05	
Utilities	8.52	2.38	6.14	-0.64	0.20	-0.84	-8.52	7.92	-1.52	-0.18	-1.25	-0.09	

*Returns are gross of fees



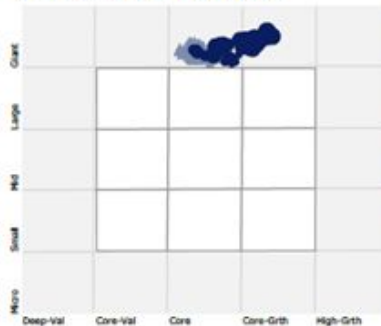
Source: Kabouter

March 31, 2019

ABERDEEN EMERGING MARKET EQUITY

Holdings Based Style Trail (5 Years)

Time Period: 4/30/2014 to 3/31/2019



Aberdeen Emerging Markets Instl - MSCI EM NR USD

Portfolio Statistics

	Fund	Index
# of Holdings	63	1,136
% Asset in Top 10 Holdings	37.3	24.4
Turnover Ratio %	20.4	
P/E Ratio	16.4	12.5
P/B Ratio	2.5	1.6
LT Eam Growth	13.9	11.9
Hist Eam Growth	16.4	11.6
12 Mo Yield	1.3	

Market Capitalization Breakdown

	Fund	Index
Market Cap Giant %	69.7	56.5
Market Cap Large %	22.7	31.9
Market Cap Mid %	6.5	10.7
Market Cap Small %	1.1	0.9
Market Cap Micro %	0.0	0.0
Average Market Cap	41,408.2	31,608.8
Equity Region Developed %	20.3	27.5
Equity Region Emerging %	79.7	72.5

Top Ten Holdings

	Port Weight %	3 Month Return
Tencent Holdings Ltd	6.18	14.67
Samsung Electronics Co Ltd Participating Preferred	5.19	12.23
Taiwan Semiconductor Manufacturing Co Ltd	5.12	8.57
Ping An Insurance (Group) Co. of China Ltd Class H	3.63	26.78
Housing Development Finance Corp Ltd	3.55	0.95
Bank Bradesco SAADR	3.36	10.47
Kweichow Moutai Co Ltd	2.83	47.88
AIA Group Ltd	2.72	19.92
PJSC Lukoil ADR	2.44	25.35
Vale SAADR	2.33	-0.99

Sector Attribution (Quarter)

	Portfolio Weights	Benchmark Weights	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Active Return
Communication Services	12.00	12.18	14.38	9.03	0.01	0.65	0.65
Consumer Discretionary	12.77	12.74	11.30	19.92	0.01	-1.07	-1.06
Consumer Staples	11.37	6.56	9.07	5.38	-0.22	0.43	0.21
Energy	4.07	6.62	18.09	11.74	-0.05	0.25	0.20
Financials	26.59	24.74	8.62	7.17	-0.05	0.38	0.33
Health Care	0.64	2.75	37.58	3.63	0.14	0.22	0.36
Industrials	2.70	5.47	17.29	4.77	0.15	0.34	0.49
Information Technology	14.08	14.37	13.24	12.61	-0.01	0.09	0.08
Materials	9.50	7.46	5.84	6.71	-0.08	-0.09	-0.17
Real Estate	5.15	2.97	13.02	15.79	0.14	-0.15	-0.01
Utilities	0.00	2.67		4.44	0.15	0.00	0.15
Attribution Total	98.87	98.52	11.11	9.88	0.18	1.05	1.23
Cash	1.11	0.00					
Other	0.02	0.06					
Missing Performance	0.00	1.42					
Total	100.00	100.00					

Region Attribution (Quarter)

	Portfolio Weights	Benchmark Weights	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Active Return
Africa	3.85	6.05	-1.04	5.26	0.11	-0.27	-0.17
Asia - Developed	18.65	25.63	12.67	6.91	0.22	1.10	1.32
Asia - Emerging	52.49	47.39	13.21	13.31	0.15	0.02	0.17
Europe - Emerging	4.30	4.70	8.69	5.43	0.03	0.13	0.16
Eurozone	0.83	0.26	32.50	12.93	0.02	0.15	0.17
Latin America	18.23	12.33	4.58	7.80	-0.11	-0.62	-0.74
Middle East	0.00	1.78		1.46	0.16	0.00	0.16
United Kingdom	0.00	0.22		0.59	0.02	0.00	0.02
United States	0.52	0.16	51.84	41.76	0.10	0.03	0.13
Attribution Total	98.87	98.52	11.11	9.88	0.71	0.52	1.23
Cash	1.11	0.00					
Other	0.02	0.06					
Missing Performance	0.00	1.42					
Total	100.00	100.00					



Source: Morningstar

March 31, 2019

ABERDEEN EMERGING MARKET EQUITY

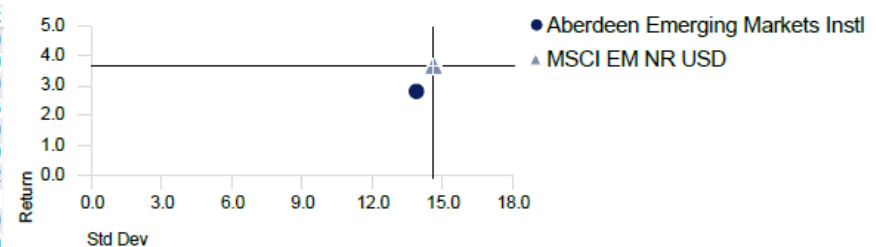
Risk & Return Characteristics (5 Years)

Time Period: 4/1/2014 to 3/31/2019

	Fund	Index
R2	89.9	100.0
Alpha	-0.6	0.0
Beta	0.9	1.0
Std Dev	13.9	14.6
Up Capture Ratio	90.7	100.0
Down Capture Ratio	96.2	100.0
Sharpe Ratio (geo)	0.1	0.2
Information Ratio (geo)	-0.2	
Tracking Error	4.6	0.0
Correlation	0.9	1.0

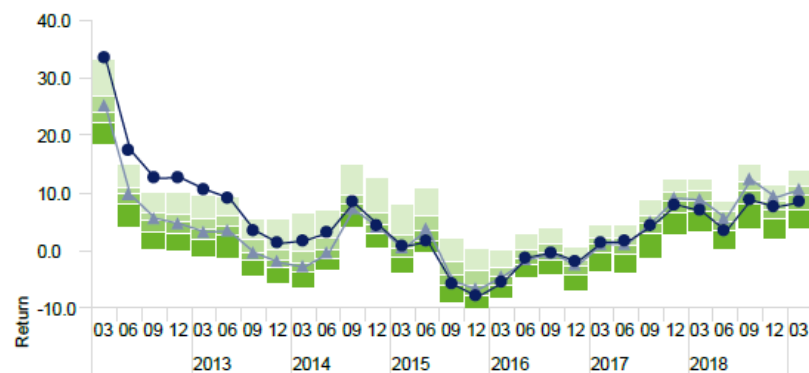
Risk & Return Illustration (5 Years)

Time Period: 4/1/2014 to 3/31/2019



Rolling Returns (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile

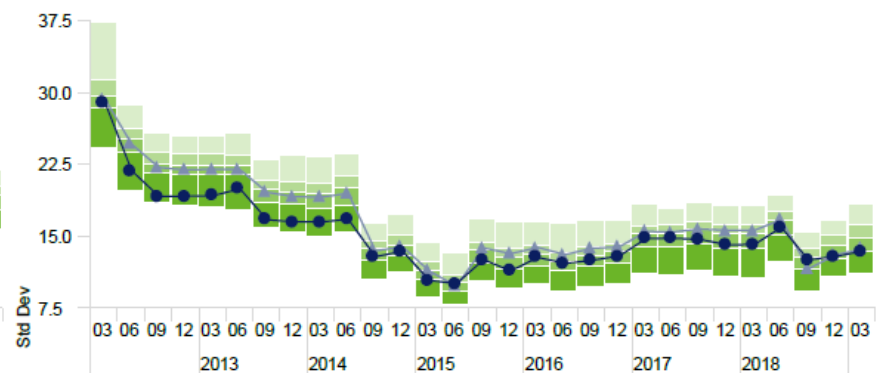


—Aberdeen Emerging Markets Instl

—MSCI EM NR USD

Rolling Risk (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



—Aberdeen Emerging Markets Instl

—MSCI EM NR USD

Calendar Year Returns

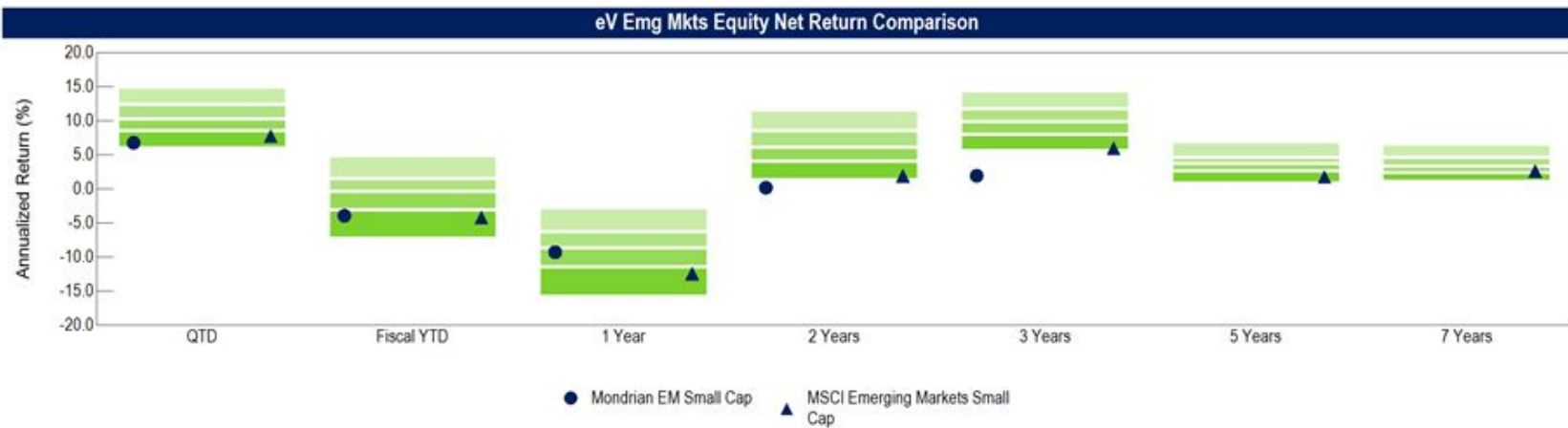
	2009	Rank	2010	Rank	2011	Rank	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	2017	Rank	2018	Rank
Aberdeen Emerging Markets Instl	76.6	32	27.6	6	-11.0	4	26.2	8	-7.5	93	-2.5	43	-13.7	45	12.0	24	30.2	70	-14.6	35
MSCI EM NR USD	78.5		18.9		-18.4		18.2		-2.6		-2.2		-14.9		11.2		37.3		-14.6	



Source: Morningstar

March 31, 2019

MONDRIAN EM SMALL CAP

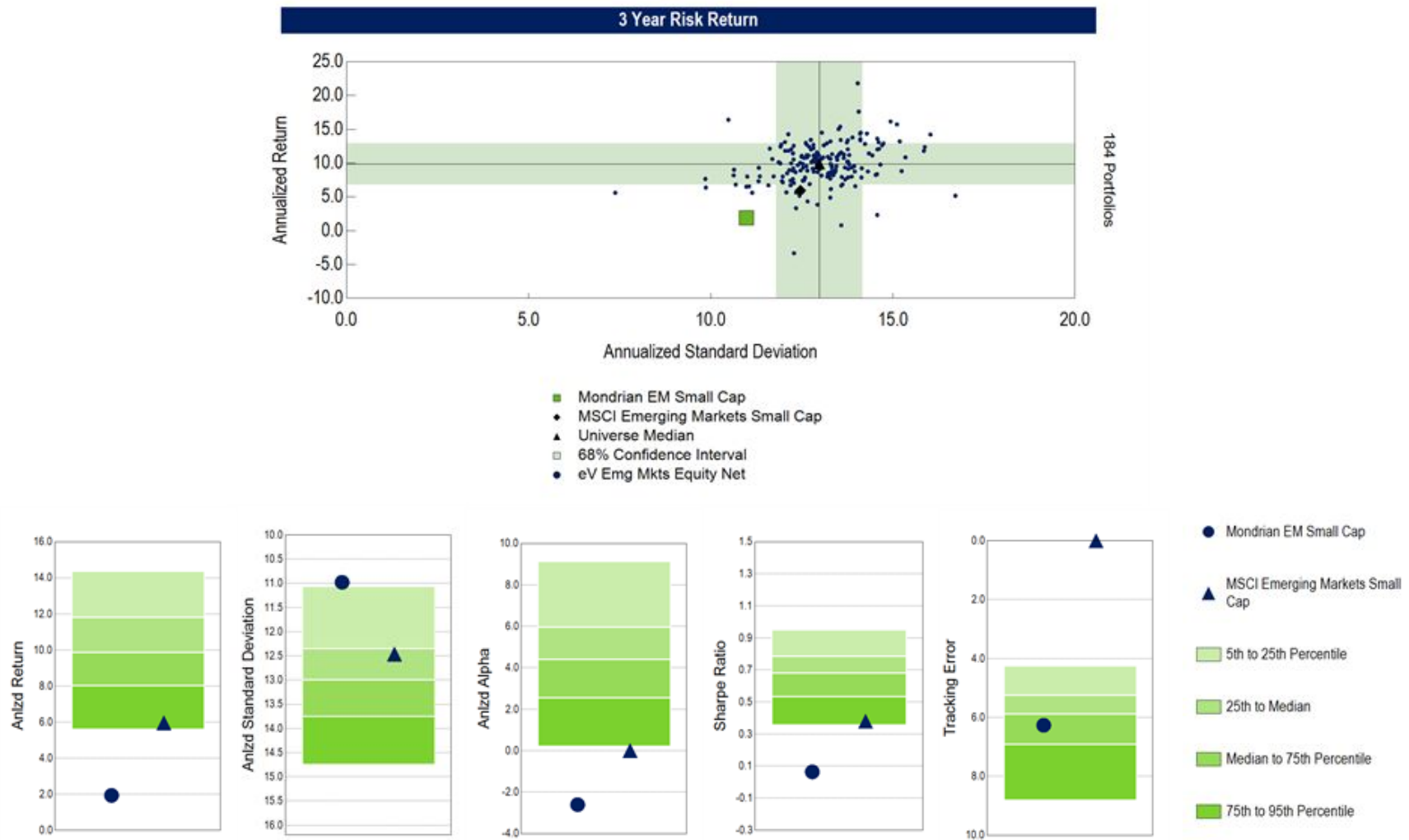


*Returns are net of fees.



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MONDRIAN EM SMALL CAP



*Returns are net of fees.



March 31, 2019

MONDRIAN EM SMALL CAP

Characteristics	Portfolio	MSCI Emerging Markets Small Cap
Number of Holdings	107	1,567
Weighted Avg. Market Cap. (\$B)	1.5	1.2
Median Market Cap. (\$B)	1.1	0.7
Price To Earnings	21.2	13.3
Price To Book	3.6	2.3
Price To Sales	2.3	0.9
Return on Equity (%)	18.2	13.0
Yield (%)	2.7	2.7
Beta		1.0
R-Squared		1.0

Top Positive Contributors	Relative Contribution %	Return %
HAND ENTERPRISE SLTN.'A'	0.7%	77.0%
AIRTAC INTERNATIONAL GP.	0.5%	32.4%
SINOSOFT TECHNOLOGY GP.	0.4%	30.5%
FU SHOU YUAN INTL.GP.	0.4%	21.7%
DINO POLSKA SA	0.4%	23.7%
PI INDUSTRIES	0.4%	20.6%
ARWANA CITRAMULIA	0.3%	25.5%
MERRY ELECTRONICS	0.3%	37.0%
BANGKOK CHAIN HOSP. FB	0.3%	22.0%
GREENTOWN SER.GP.	0.3%	15.7%

Top Negative Contributors	Relative Contribution %	Return %
HARTALEGA HOLDINGS	-0.3%	-23.3%
CPMC HOLDINGS	-0.2%	-16.4%
MANILA WATER	-0.2%	-16.9%
DUZONBIZON	-0.1%	-11.7%
FIBRA INN REIT	-0.1%	-12.6%
AJANTA PHARMA	-0.1%	-12.0%
NEXTEER AUTOMOTIVE GROUP	-0.1%	-13.3%
KANSAI NEROLAC PAINTS	-0.1%	-5.8%
WILSON SONS BDR (BSP)	-0.1%	-7.7%
SAWIT SUMBERMAS SARANA	-0.1%	-14.0%

	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%		0.0%		-0.1%	2.9%	11.7%	1.3%	1.9%	
Materials	-0.5%	-0.7%		0.0%		0.2%	3.0%	7.9%	12.0%	11.8%	
Industrials	1.1%	1.0%		0.0%		0.1%	12.1%	5.0%	15.6%	14.3%	
Consumer Discretionary	0.0%	0.0%		0.0%		0.1%	7.3%	7.1%	12.6%	14.2%	
Consumer Staples	-0.1%	0.1%		-0.4%		0.2%	5.6%	3.4%	16.1%	6.7%	
Health Care	-0.4%	-0.2%		-0.2%		0.0%	3.8%	4.5%	14.0%	8.4%	
Financials	0.2%	0.4%		0.1%		-0.4%	10.2%	6.8%	2.5%	11.2%	
Information Technology	-0.1%	0.9%		-0.5%		-0.4%	20.5%	14.2%	8.4%	14.9%	
Communication Services	0.0%	-0.1%		0.0%		0.1%	6.1%	7.3%	4.9%	4.1%	
Utilities	-0.1%	-0.3%		0.0%		0.1%	-0.5%	5.3%	3.8%	4.5%	
Real Estate	-0.6%	-0.6%		0.0%		0.0%	4.8%	13.5%	7.0%	7.8%	
Cash	-0.1%	0.0%		-0.1%		0.0%	0.6%	--	0.5%	0.0%	
Portfolio	-0.9%	=	0.3%	+	-1.0%	+	-0.2%	7.0%	7.9%	98.8%	99.9%

*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.



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MONDRIAN EM SMALL CAP

Sector Allocation

	Fund	MSCI EM SC
Communication Services	4.8	4.2
Consumer Discretionary	13.4	14.4
Consumer Staples	15.7	6.7
Energy	1.3	1.9
Financials	3.2	11.1
Health Care	15.4	8.4
Industrials	15.2	14.2
Information Technology	8.2	14.9
Materials	11.8	11.7
Real Estate	6.9	7.9
Utilities	3.8	4.6
Cash	0.5	—
TOTAL	100.0	100.0

Country Allocation

	Fund	MSCI EM SC
Latin America	9.2	11.5
Brazil	2.9	6.4
Mexico	4.0	3.0
Peru	2.2	0.1
Europe, Middle East & Africa	11.9	11.8
Czech Republic	1.3	0.0
Estonia	1.2	—
Kuwait	1.4	—
Poland	2.6	1.1
Saudi Arabia	1.7	—
Slovenia	0.7	—
South Africa	1.4	5.3
UAE	0.7	0.5
United Kingdom	0.8	—
Asia	78.4	76.8
North Asia	33.6	49.5
China/Hong Kong	21.0	12.5
South Korea	4.7	17.5
Taiwan	7.9	19.5
South Asia	44.8	26.6
India	27.6	16.1
Indonesia	6.7	2.4
Malaysia	3.3	3.3
Philippines	4.3	1.0
Thailand	2.9	3.8
Cash	0.5	—
TOTAL	100.0	100.0



Source: Mondrian

March 31, 2019

COMMONFUND

4

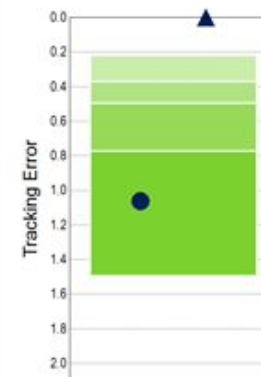
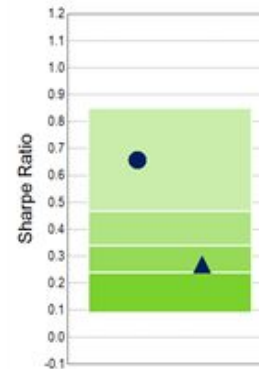
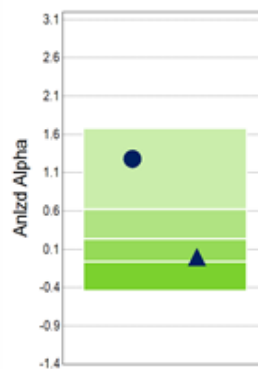
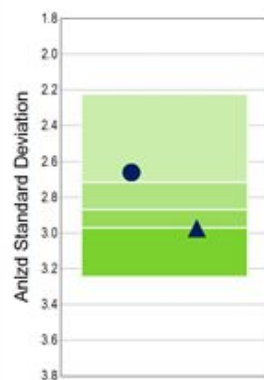
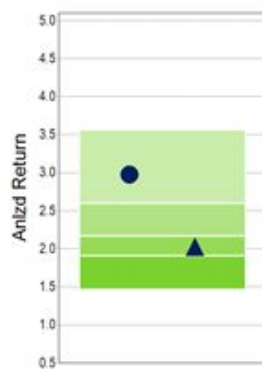


*Returns are net of fees.



March 31, 2019

COMMONFUND

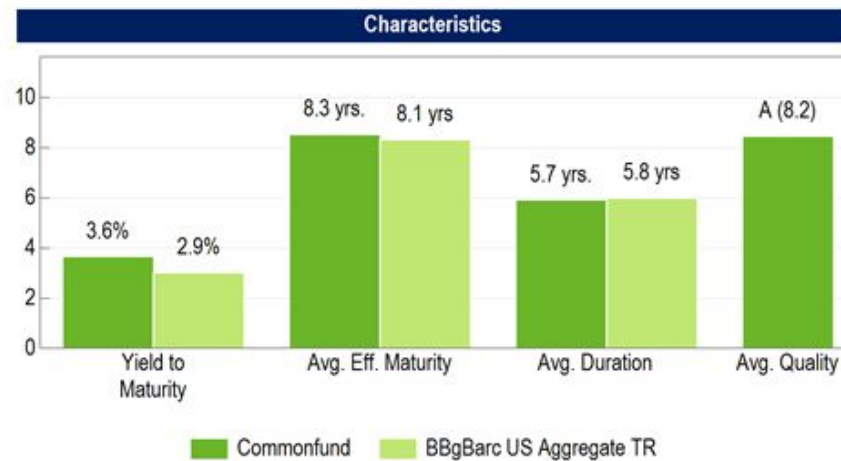


*Returns are net of fees.



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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	
Credit Partnerships CF 2018		X	
Direct Trading (Tsy Fut)			X
Distressed Debt Partnerships		X	
Income Research & Management (IRM)	X		
PIMCO Income Fund (PIMIX)			X
Rimrock Capital Management	X		
Sit Investment Associates			X
Western Asset	X		X



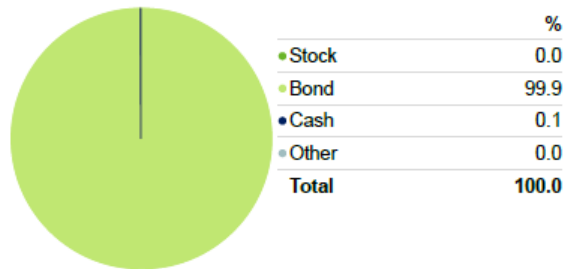
Source: Commonfund

March 31, 2019

VANGUARD INFLATION PROTECTED SECURITIES

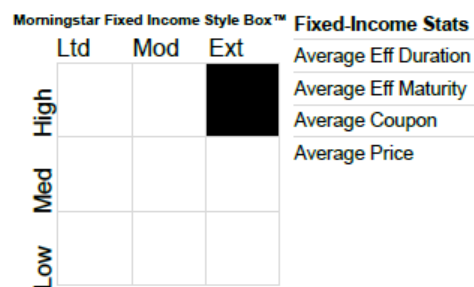
Asset Allocation

Portfolio Date: 3/31/2019



Fixed Income Statistics

Portfolio Date: 3/31/2019

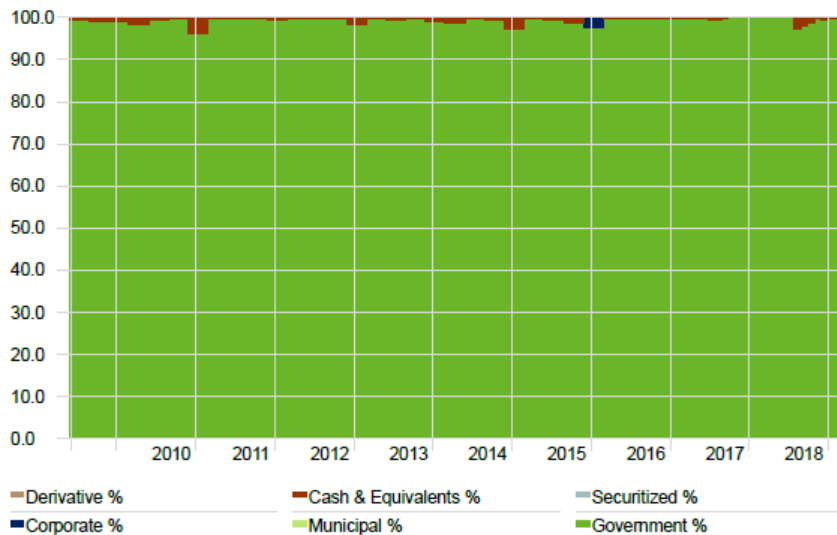


Credit Quality Breakdown

Portfolio Date: 1/31/2019

	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	5.21
United States Treasury Notes 0.12%	BOND - GOV'T INFLATION PROTECTED	3.85
United States Treasury Notes 0.62%	BOND - GOV'T INFLATION PROTECTED	3.81
United States Treasury Notes 0.12%	BOND - GOV'T INFLATION PROTECTED	3.78
United States Treasury Notes 0.62%	BOND - GOV'T INFLATION PROTECTED	3.67
United States Treasury Notes 0.38%	BOND - GOV'T INFLATION PROTECTED	3.64
United States Treasury Notes 0.12%	BOND - GOV'T INFLATION PROTECTED	3.61
United States Treasury Notes 0.38%	BOND - GOV'T INFLATION PROTECTED	3.59
United States Treasury Notes 0.12%	BOND - GOV'T INFLATION PROTECTED	3.57
United States Treasury Notes 0.12%	BOND - GOV'T INFLATION PROTECTED	3.48



Source: Morningstar

March 31, 2019

VANGUARD INFLATION PROTECTED SECURITIES

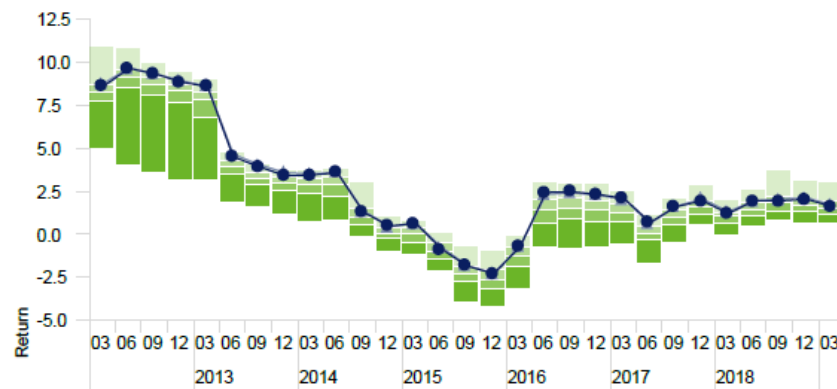
Risk & Return Characteristics (5 Years)

Time Period: 4/1/2014 to 3/31/2019

	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	100.5	100.0
Down Capture Ratio	102.7	100.0
Sharpe Ratio (geo)	0.3	0.3
Information Ratio (geo)	-0.1	0.0
Tracking Error	0.3	0.0
Correlation	1.0	1.0

Rolling Returns (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



—Vanguard Inflation-Protected Secs I

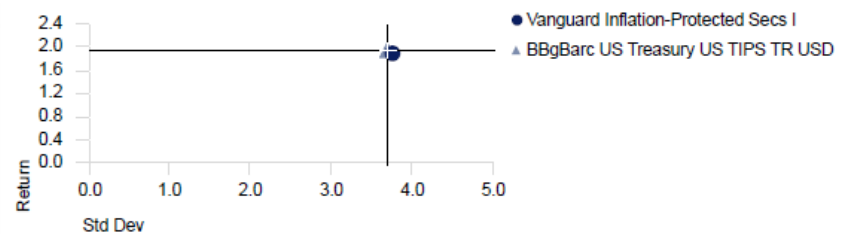
—BBgBarc US Treasury US TIPS TR USD

Calendar Year Returns

	2009	Rank	2010	Rank	2011	Rank	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	2017	Rank	2018	Rank
Vanguard Inflation-Protected Secs I	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	-1.4	48
BBgBarc US Treasury US TIPS TR USD	11.4		6.3		13.6		7.0		-8.6		3.6		-1.4		4.7		3.0		-1.3	

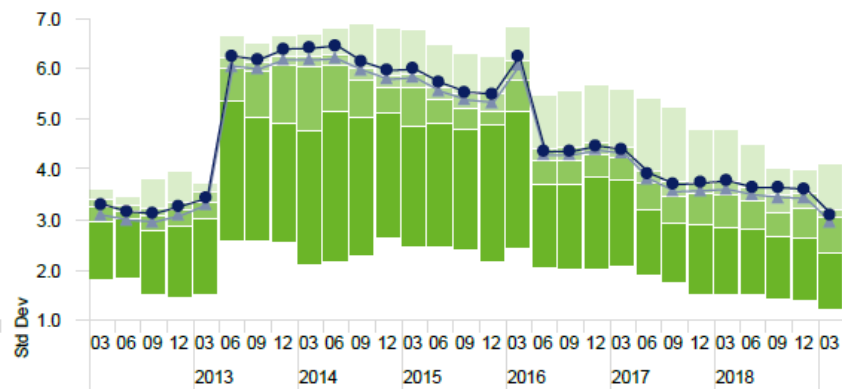
Risk & Return Illustration (5 Years)

Time Period: 4/1/2014 to 3/31/2019



Rolling Risk (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



—Vanguard Inflation-Protected Secs I

—BBgBarc US Treasury US TIPS TR USD



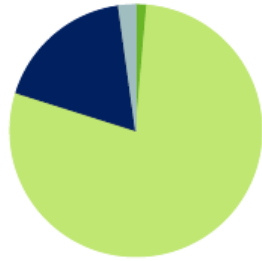
Source: Morningstar

March 31, 2019

BLACKROCK STRATEGIC INCOME

Asset Allocation

Portfolio Date: 6/30/2018

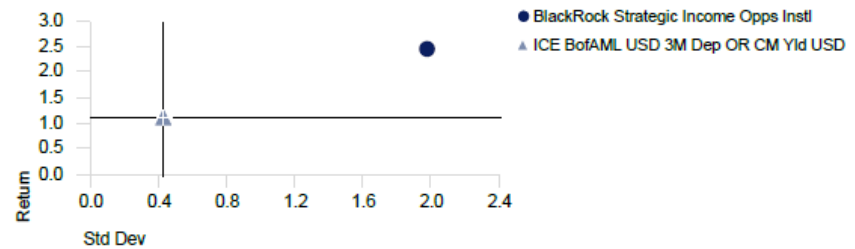


● Stock
● Bond
● Cash
● Other
Total

%
1.4
78.5
17.9
2.2
100.0

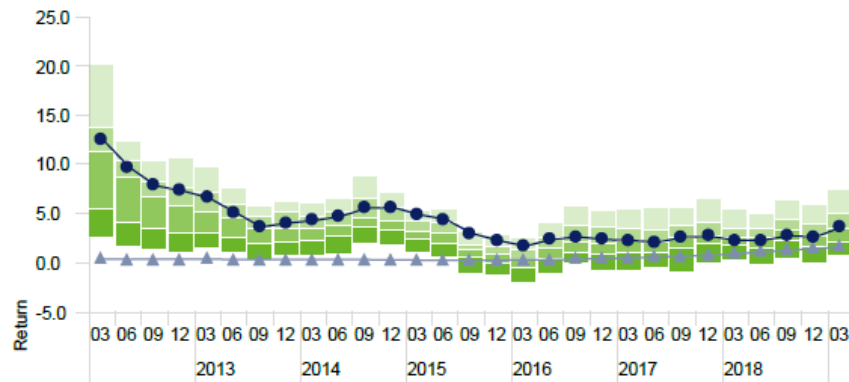
Risk & Return Illustration (5 Years)

Time Period: 4/1/2014 to 3/31/2019



Rolling Returns (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile

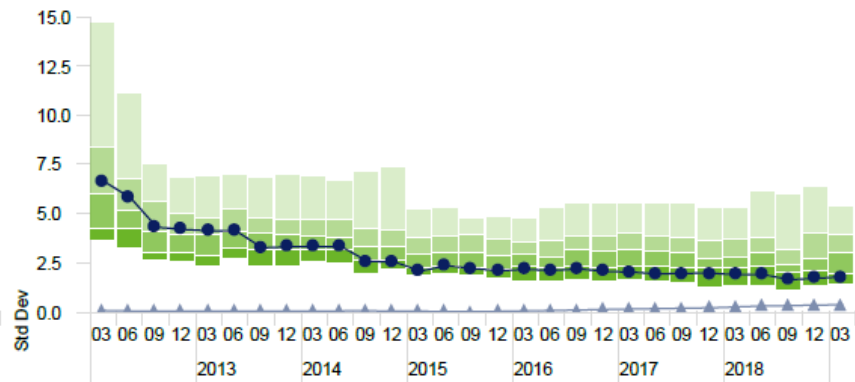


— BlackRock Strategic Income Opps Instl

— 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

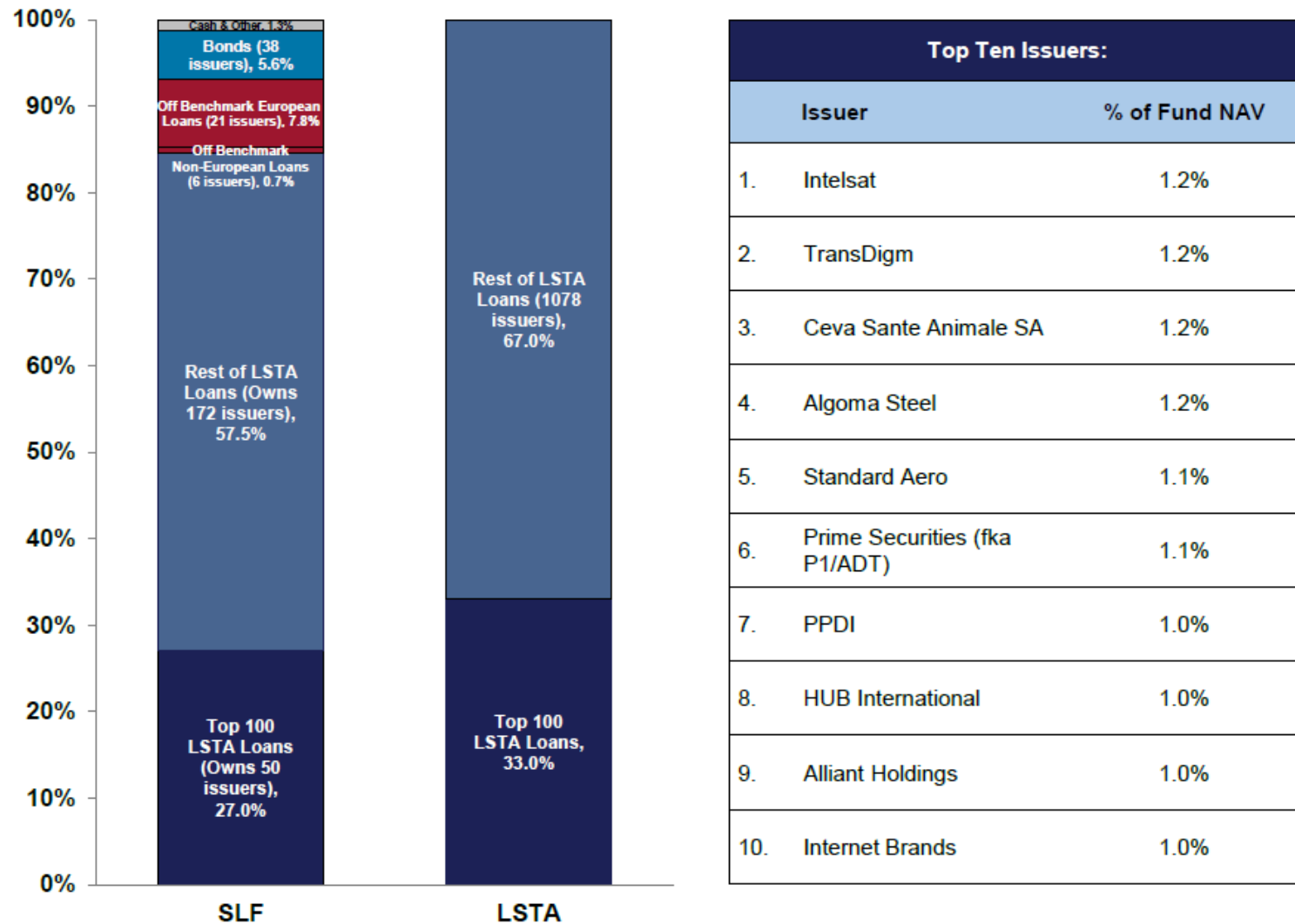
	2009	Rank	2010	Rank	2011	Rank	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	2017	Rank	2018	Rank
BlackRock Strategic Income Opps Instl	25.2	29	13.4	1	-0.7	50	9.9	25	3.3	19	3.9	16	-0.3	32	3.6	66	4.9	39	-0.5	46
ICE BofAML USD 3M Dep OR CM Yld USD	0.7		0.3		0.3		0.4		0.3		0.2		0.3		0.8		1.3		2.4	



Source: Morningstar

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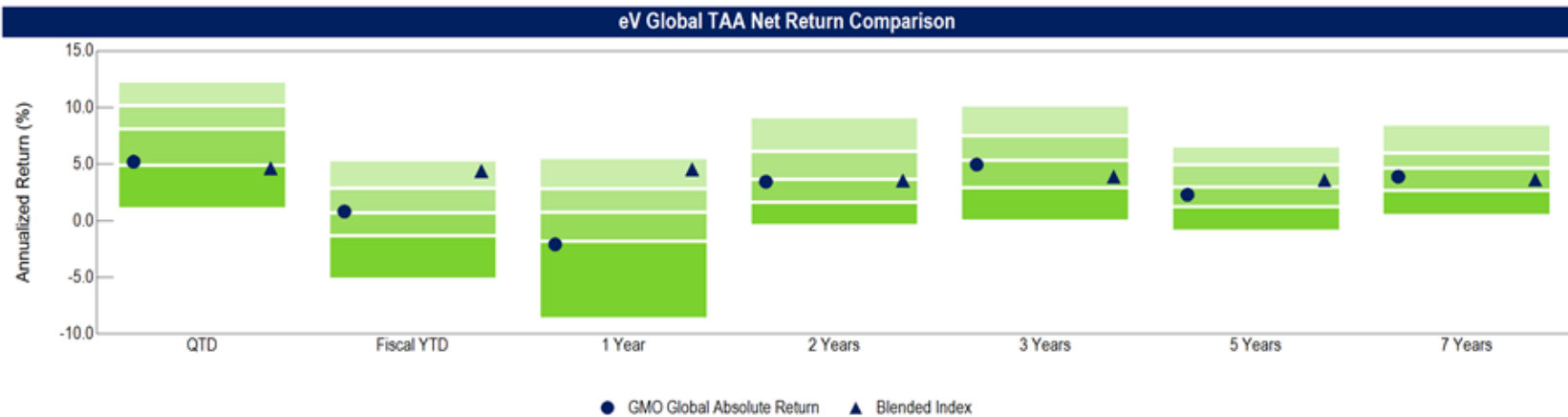
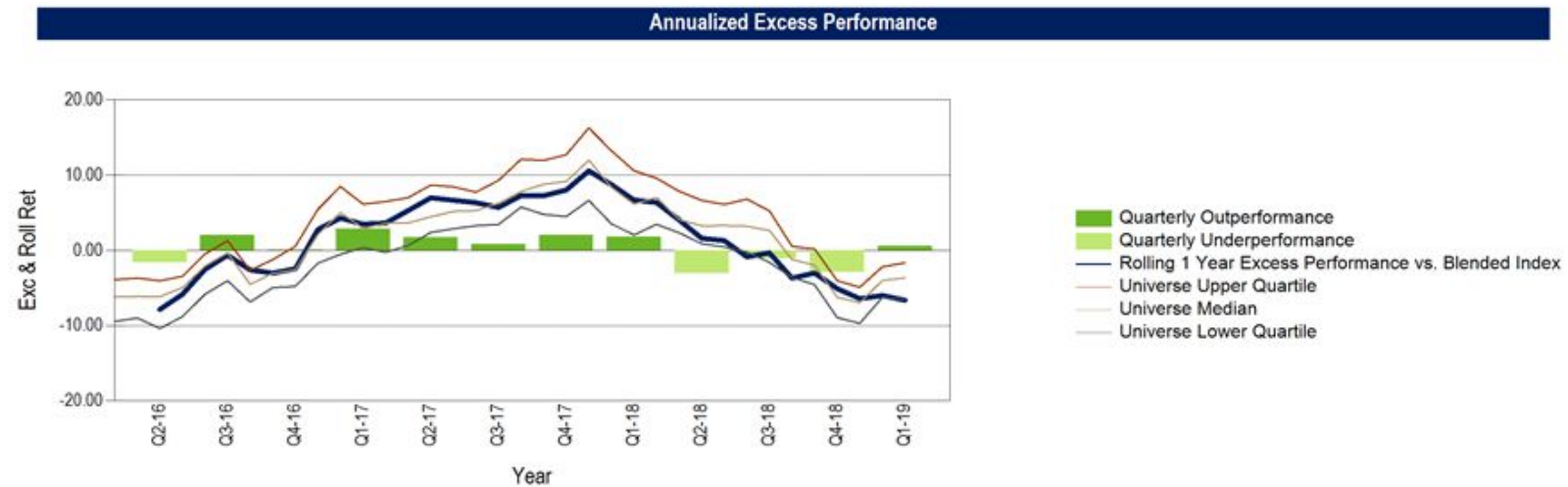
BAIN CAPITAL SENIOR LOAN FUND



Source: Bain Capital

March 31, 2019

GMO GLOBAL ABSOLUTE RETURN



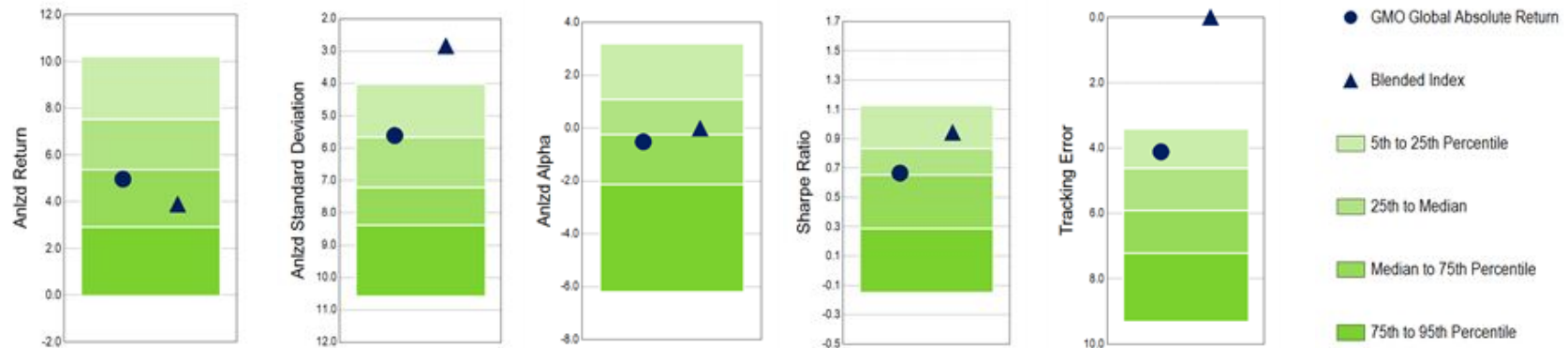
*Returns are net of fees.

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



March 31, 2019

GMO GLOBAL ABSOLUTE RETURN



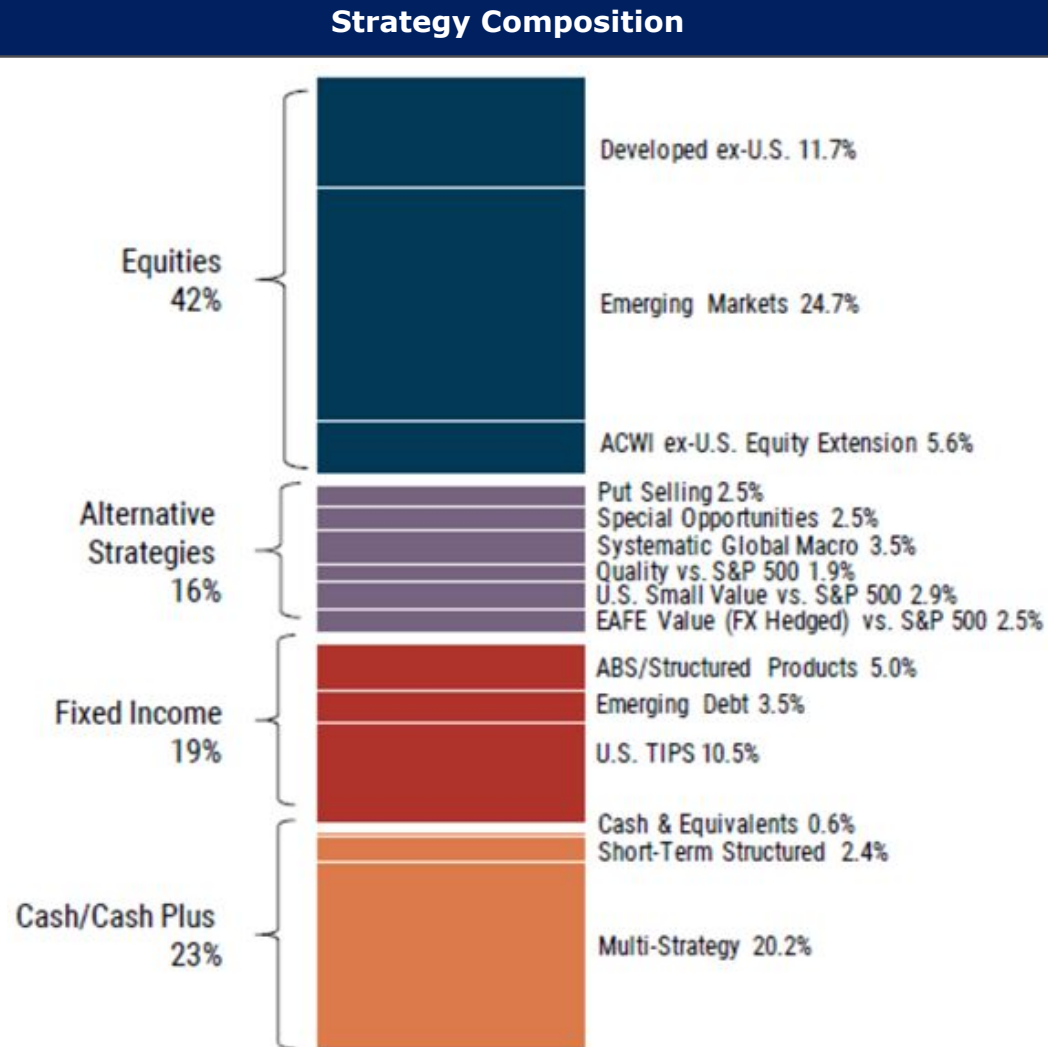
*Returns are net of fees.

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



March 31, 2019

GMO ALLOCATION ABSOLUTE RETURN STRATEGY



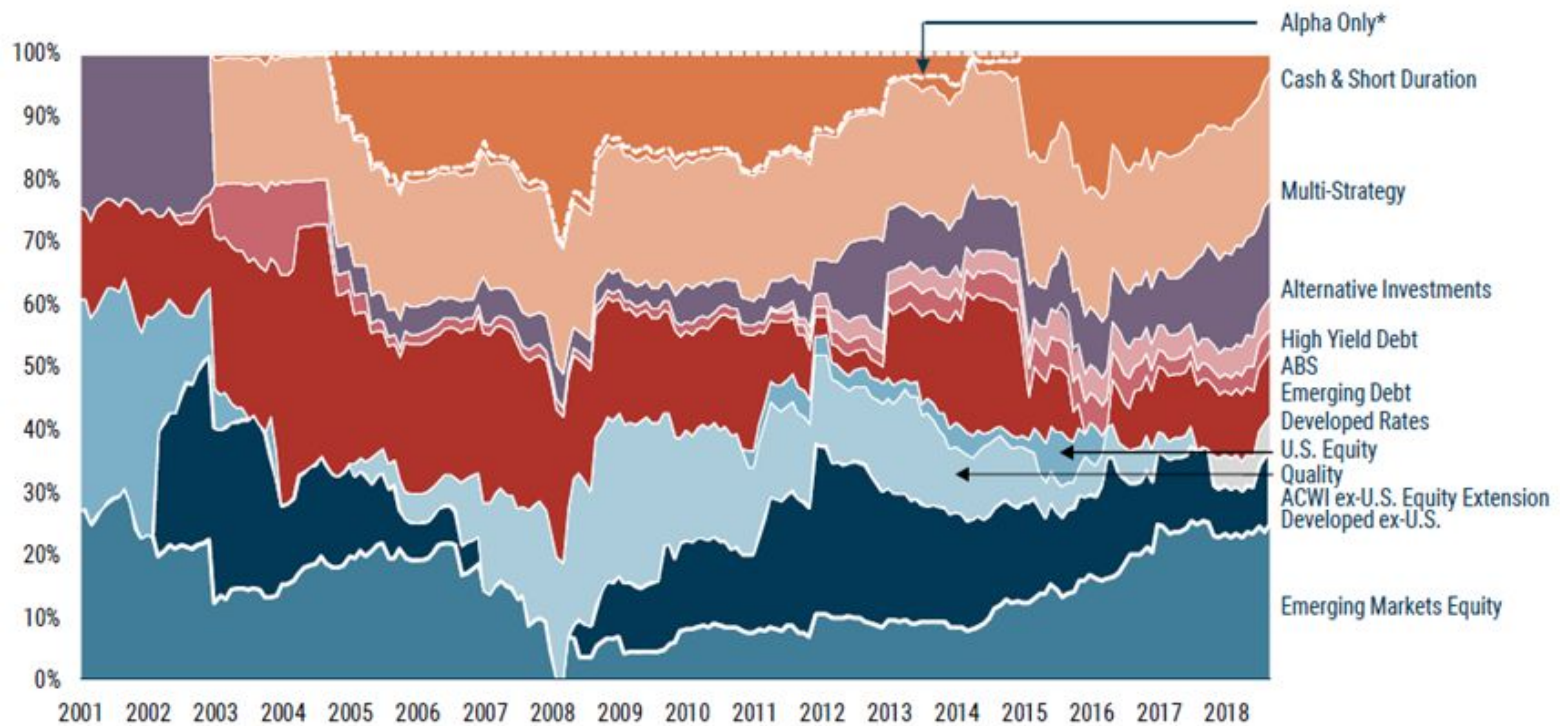
Source: GMO



March 31, 2019

GMO ALLOCATION ABSOLUTE RETURN STRATEGY

Allocation History

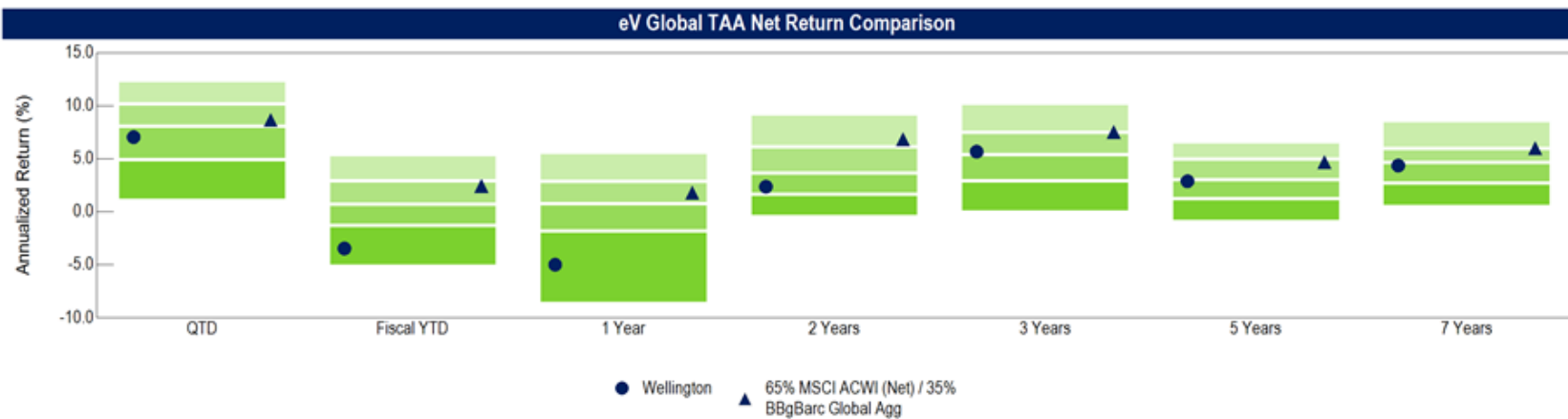
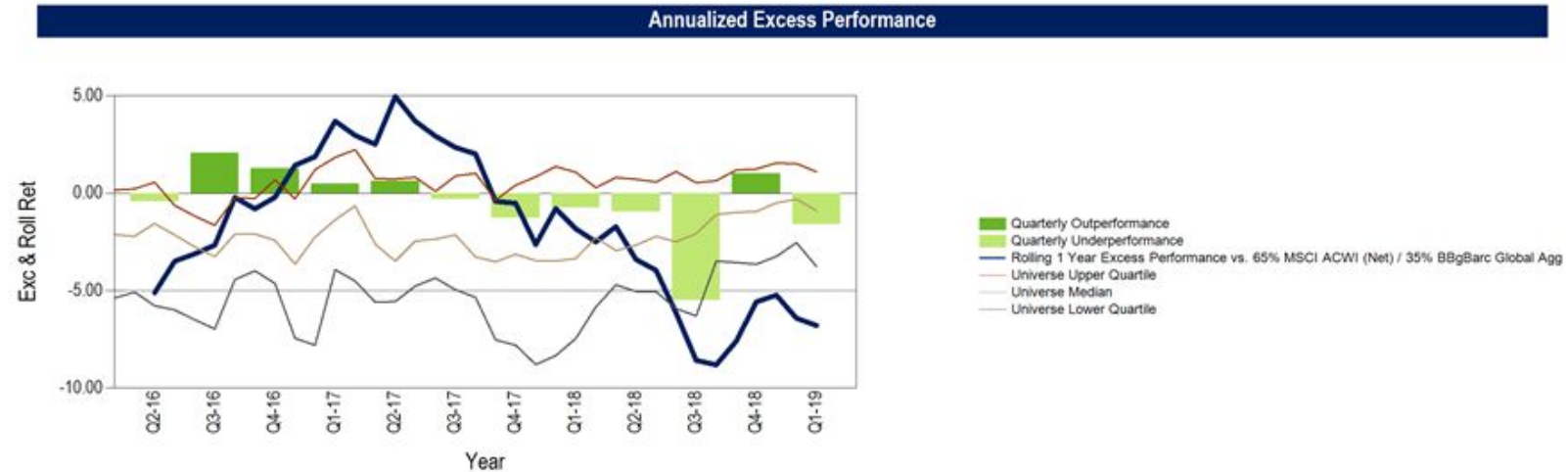


Source: GMO



March 31, 2019

WELLINGTON OPPORTUNISTIC

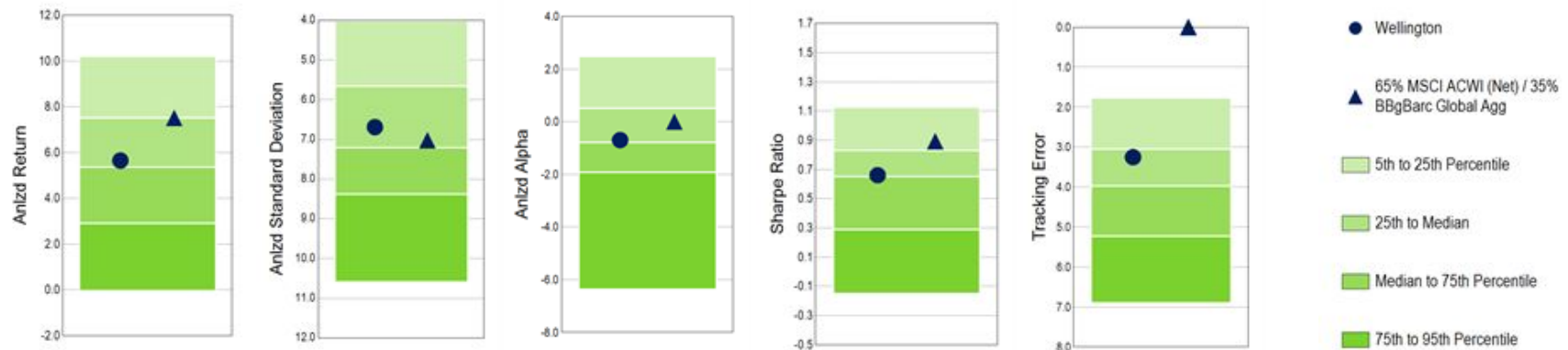


*Returns are net of fees.



March 31, 2019

WELLINGTON OPPORTUNISTIC

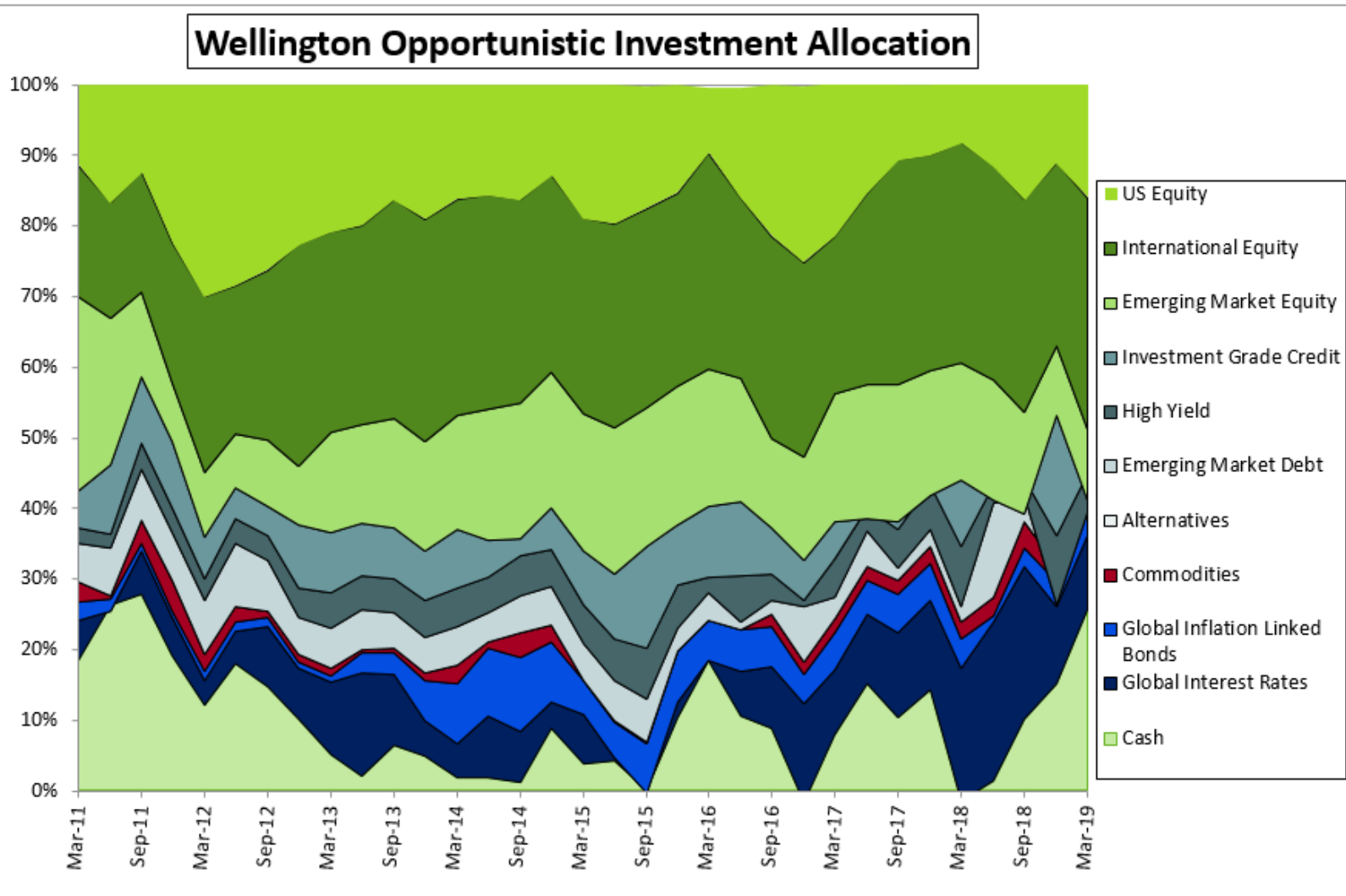


*Returns are net of fees.



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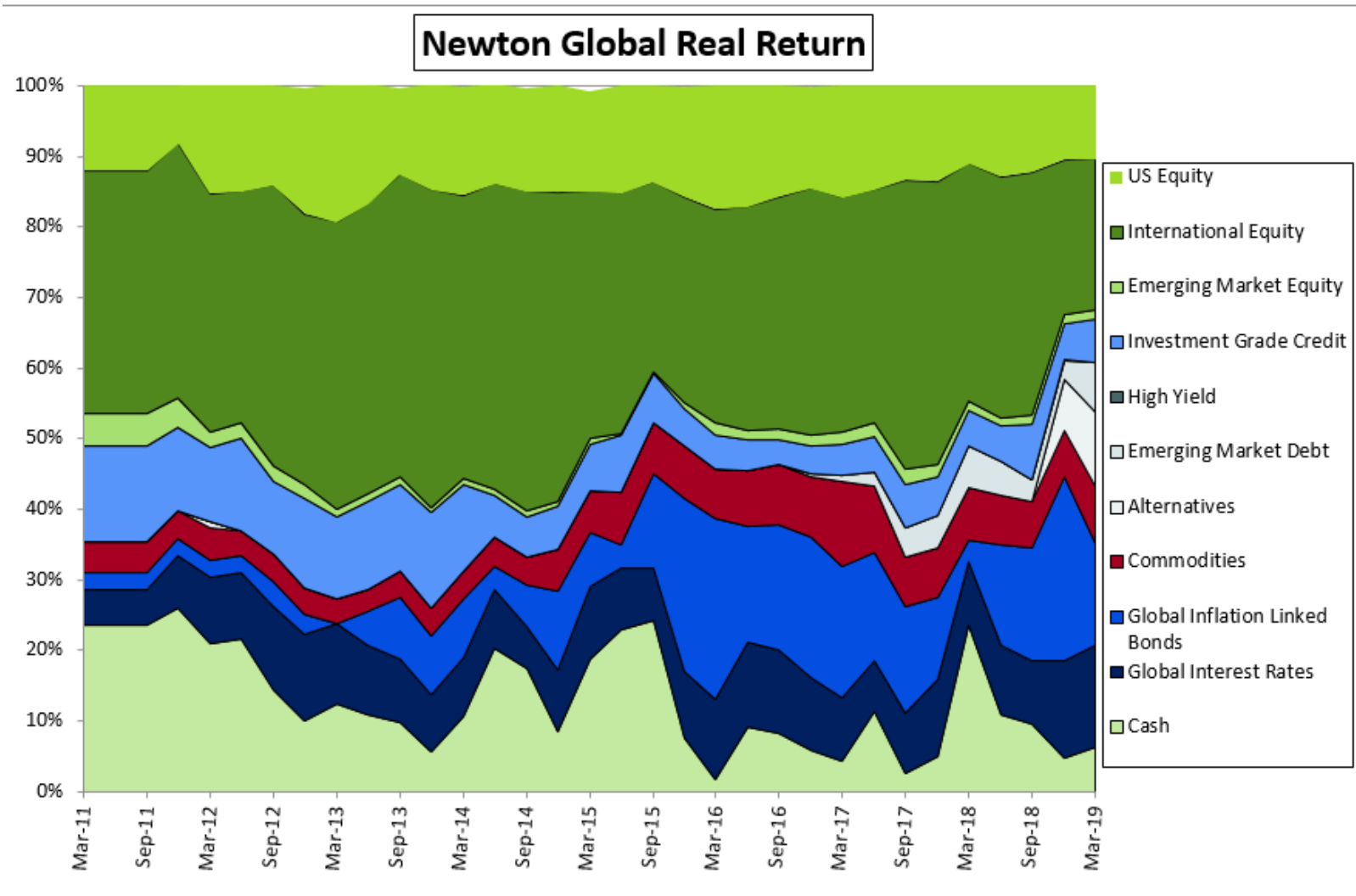
WELLINGTON OPPORTUNISTIC



Source: Wellington

March 31, 2019

NEWTON GLOBAL REAL RETURN



Source: Newton

March 31, 2019

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	\$14.9 billion	Strategy	Fund of Fund
Fund AUM	\$1.3 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

	Developed North America	Developed Europe	Developed Asia	Emerging Markets	Hedges / Other
VaR TM	0.20%	0.11%	0.00%	0.22%	0.01%
QTD TM	4.13%	-0.08%	-0.40%	1.23%	-0.23%

Sector Allocation & Attribution

	Communication Services	Consumer Discretionary	Consumer Staples	Energy	Financials	Healthcare	Industrials	Technology	Materials	Real Estate	Utilities	Hedges / Other
VaR TM	0.11%	0.13%	0.01%	0.02%	0.00%	0.10%	0.01%	0.06%	0.09%	0.03%	0.01%	-0.03%
QTD TM	0.58%	1.18%	0.30%	-0.08%	1.69%	0.89%	0.08%	-0.14%	0.60%	0.16%	-0.06%	-0.55%



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

March 31, 2019

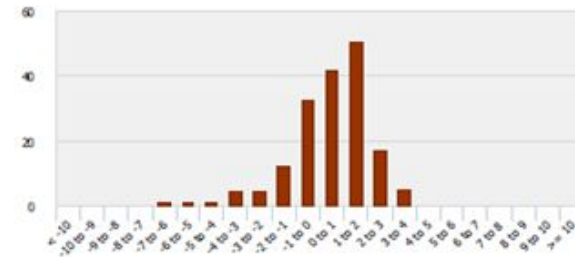
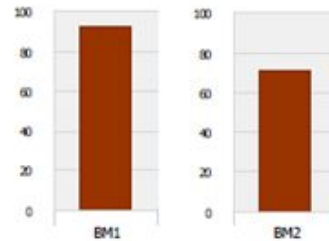
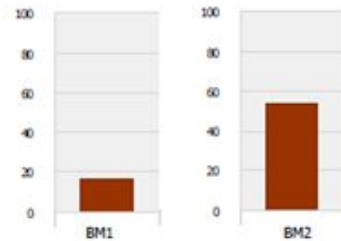
LIGHTHOUSE GLOBAL LONG/SHORT

Monthly Performance														Performance Analysis													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Lighthouse Global Long/Short Fund, L.P.	S&P 500	Barclays Aggregate Bond Index											
2019	3.5	0.8	0.3	---	---	---	---	---	---	---	---	---	4.6	Since Inception Return 1 Yr Return 3 Yr Return 5 Yr Return 7 Yr Return 10 Yr Return Best Month Worst Month Percent Profitable Periods Product Inception Date	5.4	8.4	4.0										
2018	2.4	-0.3	-0.5	0.8	3.1	-1.9	0.3	-0.6	-0.4	-5.1	-2.0	-1.8	-5.8		-3.1	9.5	4.5										
2017	1.6	0.3	1.1	-0.5	-0.3	0.0	0.7	1.0	0.1	2.2	-0.6	1.1	6.7		3.3	13.5	2.0										
2016	-3.6	-0.7	-0.4	0.6	1.0	0.3	1.7	-0.2	1.0	-0.9	1.2	0.3	0.0		3.3	10.9	2.7										
2015	1.0	1.0	1.6	-0.5	1.1	0.2	0.4	-0.8	-1.0	2.2	0.0	1.7	7.2		5.5	12.8	2.5										
2014	0.9	1.8	-1.7	-2.0	1.2	1.9	-0.5	1.7	-0.1	0.3	1.2	0.6	5.3		5.6	15.9	3.8										
2013	3.2	0.5	2.7	1.5	1.0	1.0	2.2	-0.3	2.2	1.2	1.1	2.4	20.5		3.5	10.9	3.7										
2012	1.7	1.7	1.6	1.2	-3.7	0.5	0.2	1.1	1.3	-0.1	0.8	0.4	6.7		-6.4	-16.8	-2.4										
2011	-0.2	1.2	0.7	2.1	-1.1	-1.5	0.6	-3.1	-0.6	1.7	-1.0	-0.6	-1.9		673	66.4	64.9										
2010	0.0	0.3	1.9	0.6	-2.4	-1.7	1.7	-0.6	1.3	1.8	0.2	2.1	5.1		01/01/2005	---	01/01/2018										
2009	0.3	-0.5	1.1	1.3	2.3	0.7	1.6	1.4	1.5	-0.9	0.3	0.9	10.2														
2008	-3.2	1.2	-4.7	1.5	2.8	-0.5	-1.4	-0.3	-6.4	-2.0	-0.6	0.0	-13.1														
2007	2.7	0.4	1.5	2.6	3.2	1.3	-0.2	-2.3	1.8	3.3	-2.4	0.2	12.6														
Outperform BM in Up Markets														Outperform BM in Down Markets													
														Distribution of Returns													

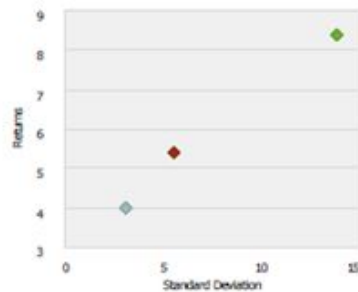
Outperform BM in Up Markets

Outperform BM in Down Markets

Distribution of Returns



Risk/Return Profile



◆ Lighthouse Global Long/Short Fund, L.P.
◆ S&P 500
◆ Barclays Aggregate Bond Index

Underwater Drawdown



— Lighthouse Global Long/Short Fund, L.P.
— S&P 500
— Barclays Aggregate Bond Index

Risk Analysis

Since Inception Standard Deviation	5.5	13.9	3.1
3 Yr Standard Deviation	5.3	10.7	3.0
5 Yr Standard Deviation	5.0	11.2	2.9
7 Yr Standard Deviation	5.0	10.8	2.8
10 Yr Standard Deviation	4.9	12.7	2.8
Sharpe Ratio	0.7	0.5	0.9
Sortino Ratio	1.1	0.7	1.5
Loss Deviation	3.9	9.7	1.8
Max Drawdown	15.2	50.9	3.8
Max Drawdown Length	16	16	7
Max Drawdown Recovery Length	25	37	2

Comparison to Benchmarks

Annualized Alpha	3.2	6.0
Beta	0.2	-0.1
Correlation Coefficient	0.6	-0.1
R-Squared	0.4	0.0



JOHN HANCOCK TIMBER

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	86,605	Dec-18	Dec-19	\$ 75,977,499	\$ 172,000,000	\$ 96,022,501
Total equity real estate			86,605			\$ 75,977,499	\$ 172,000,000	\$ 96,022,501
<u>Other investments</u>		<u>Acquisition date</u>						
Red River Timberlands Company *	LA, TX	4/1/08	269	Dec-17	NA	\$ 20,285,157	\$ 20,267,681	\$ (17,476)
Total other investments			269			\$ 20,285,157	\$ 20,267,681	\$ (17,476)

INVESTMENT REGIONS

As of December 31, 2018

NCREIF Region	Real Estate Market Value	Market Value (%)	Acres	Acres (%)
Northeast	\$ 113,925,000	1.4%	42,950	1.1%
Lake States	18,075,801	0.2%	30,712	0.8%
Pacific Northwest	1,957,461,328	24.2%	878,602	22.5%
Southeast	1,071,554,048	13.2%	561,405	14.4%
Southwest	1,012,292,371	12.5%	512,303	13.1%
Non - U.S.A	3,923,720,733	48.5%	1,883,715	48.2%
	\$ 8,097,029,281	100.0%	3,909,687	100.0%



Source: Hancock

March 31, 2019

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

March 31, 2019

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.



**FIRST QUARTER 2019
SUPPLEMENTAL PERFORMANCE
UNIVERSITY OF MAINE SYSTEM
OPERATING FUND**



May 28, 2019

Jay E. Roney, Partner

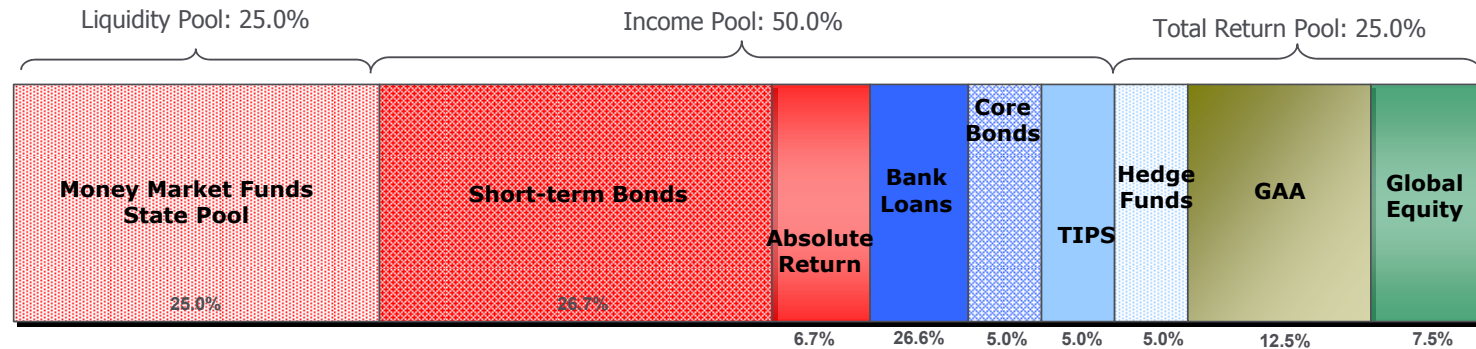
Kelly Regan, Senior Consultant



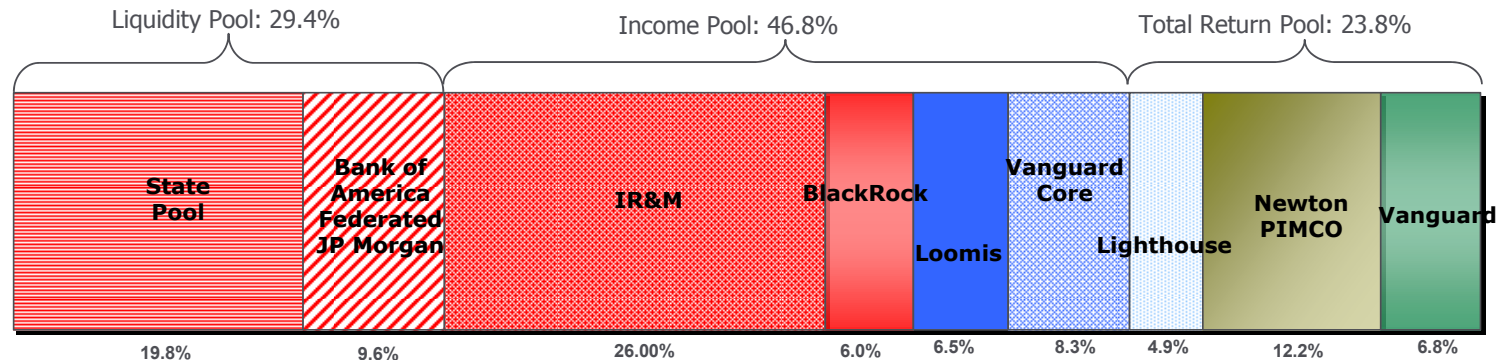
BOSTON | ATLANTA | CHARLOTTE | CHICAGO | DETROIT | LAS VEGAS | PORTLAND | SAN FRANCISCO

TOTAL FUND ASSET ALLOCATION

Target Asset Allocation



Actual Asset Allocation



*May not add up to 100% due to rounding



March 31, 2019

TOTAL PLAN PERFORMANCE DETAIL

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Operating Funds Composite	293,805,898	100.0	100.0	2.6	2.1	2.4	2.7	3.2	2.0	2.4	3.3
<i>Allocation Index</i>				2.8	2.5	2.7	3.1	3.1	2.3	2.5	--
Liquidity Pool Composite	86,325,610	29.4	25.0	0.6	1.5	1.9	1.4	1.1	0.7	0.6	0.5
State Pool	58,250,790	19.8		0.6	1.5	1.9	1.5	1.2	0.8	0.7	0.6
BOA General Fund	248,824	0.1		0.3	0.8	0.9	0.5	0.3	0.2	0.2	--
Federated Gov't Obligations	3,535,390	1.2		0.6	1.6	2.0	1.5	--	--	--	--
JP Morgan US Gov't Money Market Fund	24,290,606	8.3		0.6	1.6	2.0	1.4	--	--	--	--
<i>FTSE T-Bill 3 Months TR</i>				0.6	1.7	2.1	1.6	1.2	0.7	0.5	0.4
Income Pool Composite	137,610,596	46.8	50.0	2.1	2.7	2.9	2.0	2.4	1.9	2.3	4.5
Income Research + Management	76,461,545	26.0	26.7	1.3	2.8	3.1	1.6	1.4	1.3	--	--
<i>BBgBarc US Govt/Credit 1-3 Yr. TR</i>				1.2	2.7	3.0	1.6	1.3	1.2	1.1	1.6
BlackRock Strategic Income Opportunities	17,742,619	6.0	6.7	2.5	2.5	1.7	2.7	3.7	--	--	--
<i>3-Month Libor Total Return USD</i>				0.7	2.0	2.6	2.0	1.7	1.1	0.9	0.7
Loomis Sayles Bank Loans	19,077,034	6.5	6.7	3.8	2.0	2.4	3.0	4.2	3.0	3.6	6.0
<i>Loomis Bank Loans Custom Index</i>				4.3	2.2	2.7	3.3	4.2	3.6	4.3	8.0
Vanguard Total Bond Market Instl' Fund	24,329,398	8.3	5.0	3.0	4.7	4.5	2.8	2.0	2.7	2.4	--
<i>BBgBarc US Aggregate TR</i>				2.9	4.6	4.5	2.8	2.0	2.7	2.5	3.8
Total Return Pool Composite	69,869,693	23.8	25.0	6.8	1.5	2.0	5.1	6.8	3.7	4.6	6.6
Lighthouse	14,254,973	4.9	5.0	4.9	-3.8	-1.0	2.7	4.5	--	--	--
<i>Credit Suisse Long Shrt Eqt USD</i>				5.3	-0.2	-0.5	5.0	4.6	3.4	5.2	6.3
Newton Global Real Return	18,092,572	6.2	6.3	4.6	5.2	7.1	3.9	--	--	--	--
<i>60% MSCI ACWI (Net)/ 40% BBgBarc Global Agg</i>				8.1	2.5	1.6	6.6	7.0	4.4	5.6	8.5
PIMCO All Asset	17,485,160	6.0	6.3	5.4	2.3	-0.2	4.2	7.1	3.1	3.9	7.4
<i>Blended Index</i>				4.6	4.4	4.5	3.6	3.9	3.6	3.6	5.8
Vanguard Total World Stock Index	20,036,988	6.8	7.5	12.4	1.6	2.0	8.5	10.9	6.7	--	--
<i>FTSE Global All Cap Index</i>				12.4	1.6	2.4	8.7	10.1	5.3	7.1	10.6

Returns are net of manager fees.

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

Fiscal YTD begins 7/1

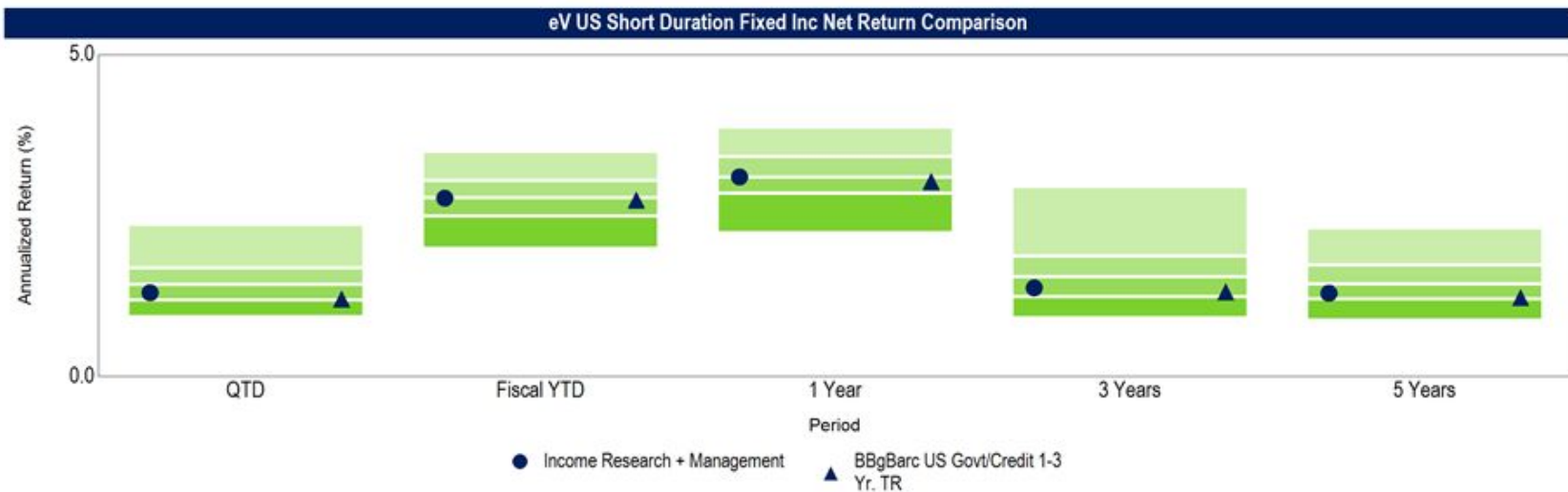
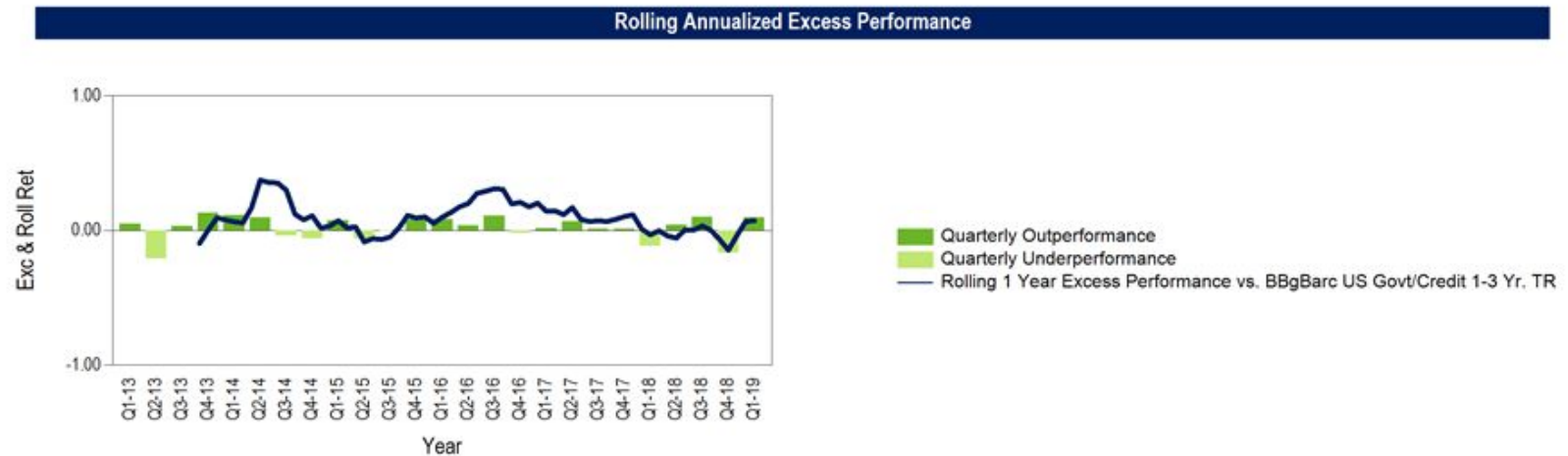
Blended Index: 40% BC Aggregate / 30% BC U.S. TIPS 1-10YR / 10% S&P 500 / 10% BC High Yield / 10% JPM EMBI+

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.

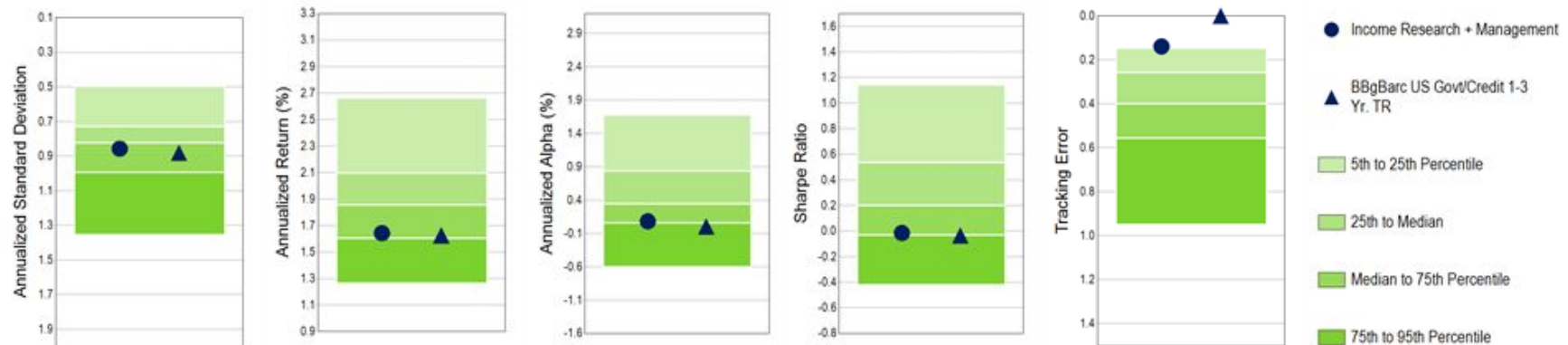
Composite excludes external loans.

March 31, 2019

INCOME RESEARCH + MANAGEMENT

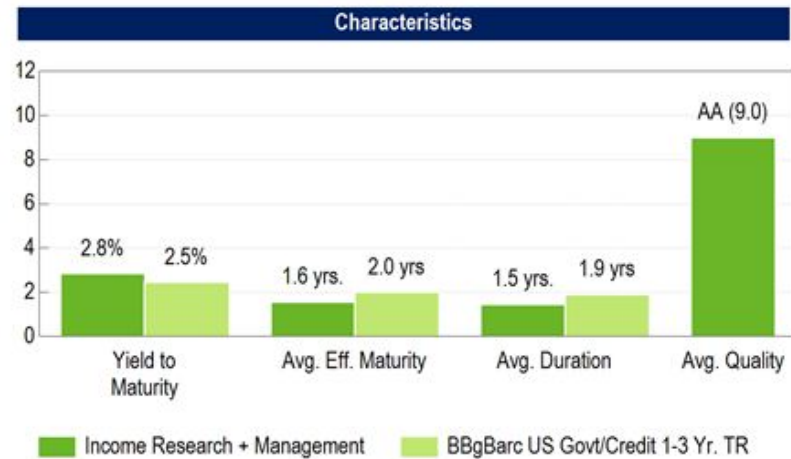


INCOME RESEARCH + MANAGEMENT



March 31, 2019

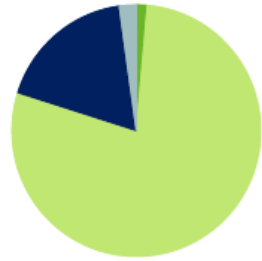
INCOME RESEARCH + MANAGEMENT



BLACKROCK STRATEGIC INCOME

Asset Allocation

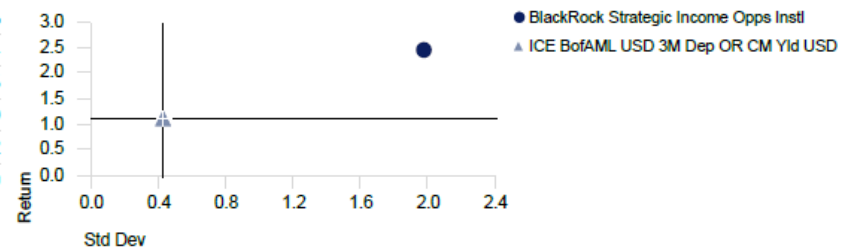
Portfolio Date: 6/30/2018



	%
Stock	1.4
Bond	78.5
Cash	17.9
Other	2.2
Total	100.0

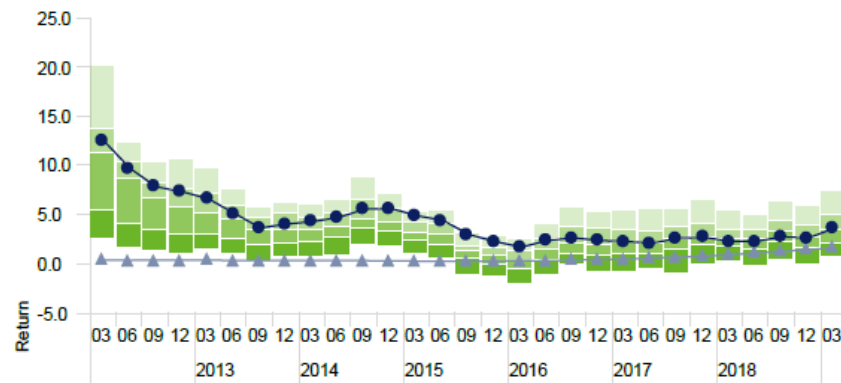
Risk & Return Illustration (5 Years)

Time Period: 4/1/2014 to 3/31/2019



Rolling Returns (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile

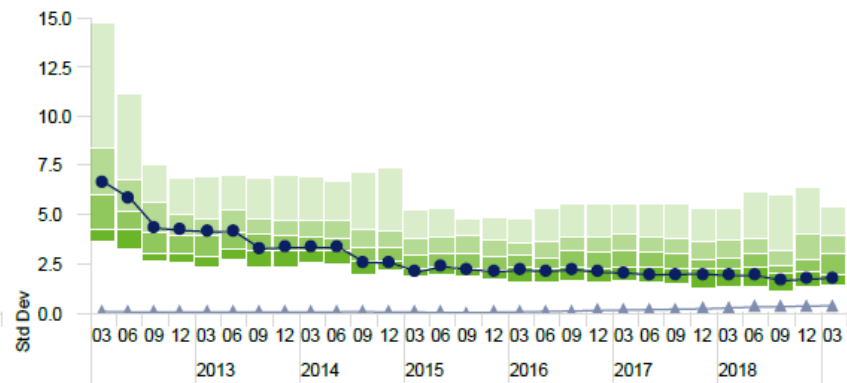


—BlackRock Strategic Income Opps Instl

—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

	2009	Rank	2010	Rank	2011	Rank	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	2017	Rank	2018	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	-0.5	46
ICE BofAML USD 3M Dep OR CM Yld USD	0.7		0.3		0.3		0.4		0.3		0.2		0.3		0.8		1.3		2.4	



Source: Morningstar

March 31, 2019

LOOMIS SAYLES BANK LOANS

HOLDINGS BY INDUSTRY (%)

Technology	9.2	Pharmaceuticals	2.3	Diversified Manufacturing	0.5
Consumer Cyclical Services	8.0	Leisure	2.2	Lodging	0.5
Healthcare	7.1	Environmental	2.2	REITS	0.5
Building Materials	6.6	P&C	2.1	Health Insurance	0.5
Media Entertainment	5.8	Electric	1.9	Wirelines	0.5
Chemicals	4.4	Packaging	1.5	Brokerage	0.5
Industrials - Other	4.1	Transportation Services	1.3	Midstream	0.4
Retailers	3.8	Wireless	1.0	Construction Machinery	0.4
Cable Satellite	3.1	Oil Field Services	0.9	Insurance	0.4
Consumer Products	3.1	Refining	0.8	Conglomerates	0.3
Financial Other	3.0	Aerospace/Defense	0.7	Cash & Equivalents	7.2
Automotive	2.7	Internet & Data	0.7		
Gaming	2.6	Entertainment	0.7		
Food & Beverage	2.6	Home Construction	0.6		
Restaurants	2.4	Metals and Mining	0.6		

CREDIT QUALITY (%)

	Portfolio	S&P/LSTA Leveraged Loan Index
AA	-	-
A	-	-
BBB	5.6	10.8
BB	50.7	26.9
B	35.3	54.0
CCC & Lower	0.2	6.6
Not Rated	1.0	1.7
Cash & Equivalents	7.2	-
Second Lien	-	3.7
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	83.9
Financial	7.0
Utility	1.9
Cash & Equivalents	7.2

COUNTRY DISTRIBUTION (%)

	Portfolio
United States	92.0
Canada	3.6
Other	4.4

TOP FIVE HOLDINGS (%)

	Portfolio
Burger King Corporation	1.0
Nielsen Finance LLC	0.7
Virgin Media Bristol LLC	0.7
Change Healthcare Holdings LLC	0.7
Michaels Stores, Inc.	0.7

Source: Loomis Sayles

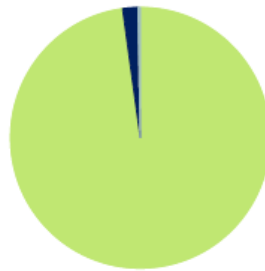


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VANGUARD TOTAL BOND MARKET I

Asset Allocation

Portfolio Date: 3/31/2019



• Stock	0.0
• Bond	97.8
• Cash	1.9
• Other	0.3
Total	100.0

Fixed Income Statistics

Portfolio Date: 3/31/2019

Morningstar Fixed Income Style Box™			
	Ltd	Mod	Ext
High			
Med			
Low			

Fixed-Income Stats

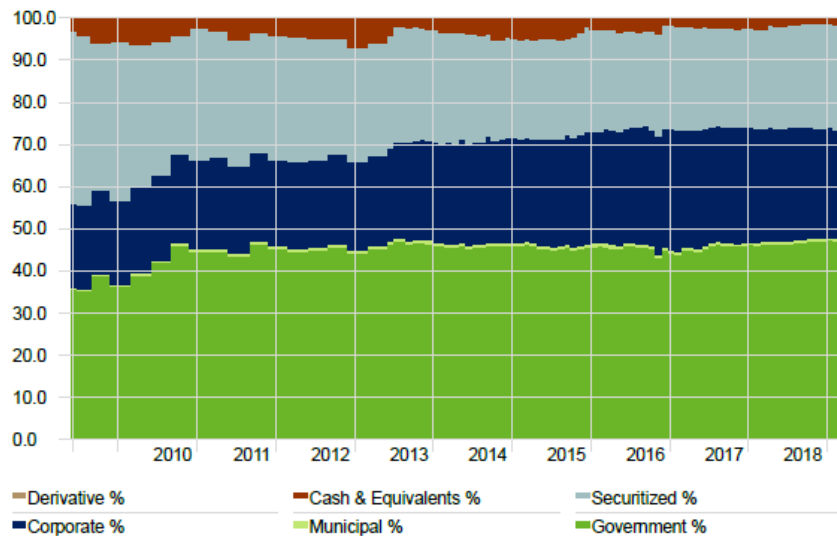
Average Eff Duration	6.0
Average Eff Maturity	8.3
Average Coupon	3.2
Average Price	102.2

Credit Quality Breakdown

Portfolio Date: 1/31/2019

	Fund	Index
AAA %	71.1	
AA %	3.34	
A %	10.67	
BBB %	14.87	
BB %	0.00	
B %	0.00	
Below B %	0.02	
Not Rated %	0.00	
Yield to Maturity	3.19	

Historical Sector Allocations (10 Years)



Top Holdings

	Detail Holding Type	Portfolio Weighting %
Cmt Market Liquidity Rate	MUTUAL FUND - MONEY MARKET	1.91
United States Treasury Notes 2.88%	BOND - GOVT/TREASURY	0.45
United States Treasury Notes 2.12%	BOND - GOVT/TREASURY	0.44
United States Treasury Notes 2.12%	BOND - GOVT/TREASURY	0.39
United States Treasury Notes 2.62%	BOND - GOVT/TREASURY	0.39
United States Treasury Notes 3.12%	BOND - GOVT/TREASURY	0.39
United States Treasury Notes 2.5%	BOND - GOVT/TREASURY	0.38
United States Treasury Notes 2.25%	BOND - GOVT/TREASURY	0.37
United States Treasury Notes 1.75%	BOND - GOVT/TREASURY	0.36
United States Treasury Notes 2.25%	BOND - GOVT/TREASURY	0.36



Source: Morningstar

March 31, 2019

VANGUARD TOTAL BOND MARKET I

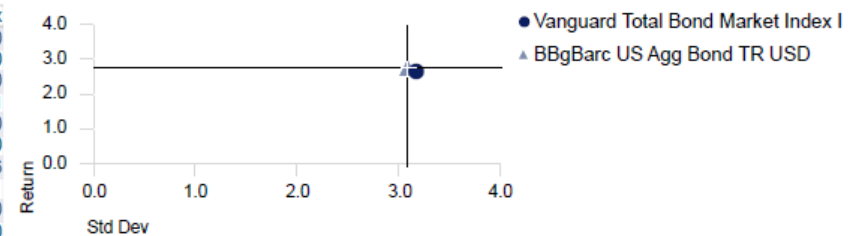
Risk & Return Characteristics (5 Years)

Time Period: 4/1/2014 to 3/31/2019

	Fund	Index
R2	99.8	100.0
Alpha	-0.1	0.0
Beta	1.0	1.0
Std Dev	3.2	3.1
Up Capture Ratio	100.3	100.0
Down Capture Ratio	105.0	100.0
Sharpe Ratio (geo)	0.6	0.6
Information Ratio (geo)	-0.4	0.0
Tracking Error	0.2	0.0
Correlation	1.0	1.0

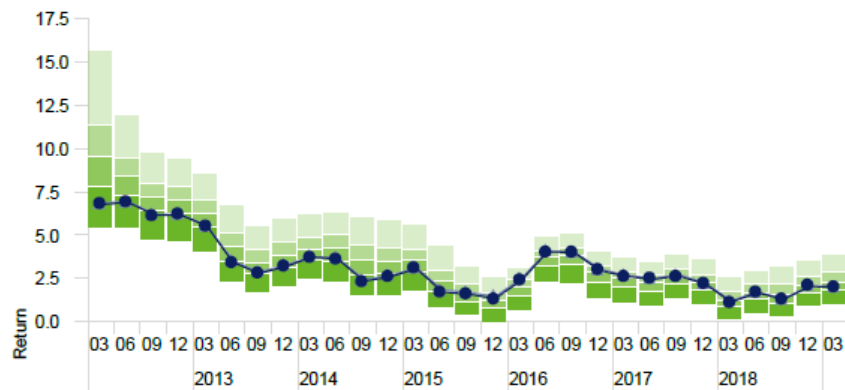
Risk & Return Illustration (5 Years)

Time Period: 4/1/2014 to 3/31/2019



Rolling Returns (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile

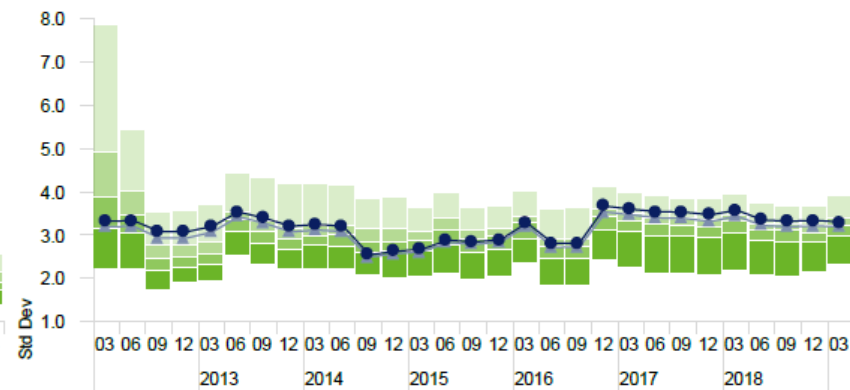


—Vanguard Total Bond Market Index I

—BBgBarc US Agg Bond TR USD

Rolling Risk (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

	2009	Rank	2010	Rank	2011	Rank	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	2017	Rank	2018	Rank
Vanguard Total Bond Market Index I	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	0.0	30
BBgBarc US Agg Bond TR USD	5.9		6.5		7.8		4.2		-2.0		6.0		0.5		2.6		3.5		0.0	



Source: Morningstar

March 31, 2019

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	\$14.9 billion	Strategy	Fund of Fund
Fund AUM	\$1.3 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

	Developed North America	Developed Europe	Developed Asia	Emerging Markets	Hedges / Other
Net	9.8%	6.4%	-0.5%	11.9%	0.5%
Gross	156.5%	53.8%	41.7%	23.4%	1.5%

	Developed North America	Developed Europe	Developed Asia	Emerging Markets	Hedges / Other
VaR TM	0.20%	0.11%	0.00%	0.22%	0.01%
QTD TM	4.13%	-0.08%	-0.40%	1.23%	-0.23%

Sector Allocation & Attribution

	Communication Services	Consumer Discretionary	Consumer Staples	Energy	Financials	Healthcare	Industrials	Technology	Materials	Real Estate	Utilities	Hedges / Other
Net	4.8%	3.7%	-1.2%	1.7%	9.0%	3.6%	-2.0%	1.2%	5.3%	1.0%	0.0%	0.8%
Gross	15.2%	43.5%	14.6%	14.1%	51.6%	34.6%	38.2%	23.8%	15.5%	19.2%	5.0%	1.6%

	Communication Services	Consumer Discretionary	Consumer Staples	Energy	Financials	Healthcare	Industrials	Technology	Materials	Real Estate	Utilities	Hedges / Other
VaR TM	0.11%	0.13%	0.01%	0.02%	0.00%	0.10%	0.01%	0.06%	0.09%	0.03%	0.01%	-0.03%
QTD TM	0.58%	1.18%	0.30%	-0.08%	1.69%	0.89%	0.08%	-0.14%	0.60%	0.16%	-0.06%	-0.55%



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

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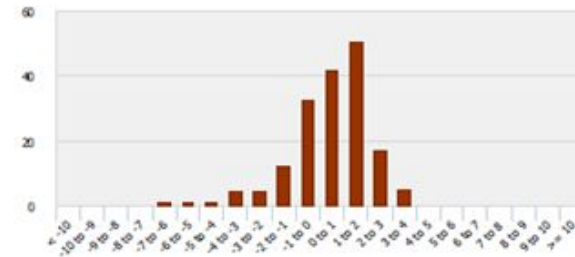
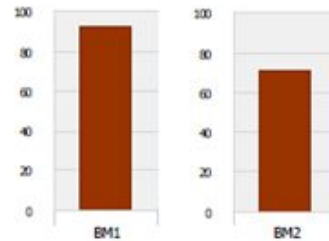
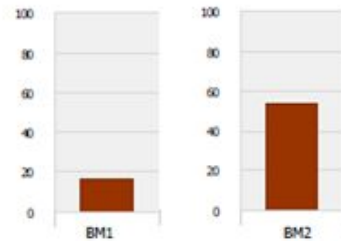
LIGHTHOUSE GLOBAL LONG/SHORT

Monthly Performance														Performance Analysis													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Lighthouse Global Long/Short Fund, L.P.	S&P 500	Barclays Aggregate Bond Index											
2019	3.5	0.8	0.3	---	---	---	---	---	---	---	---	---	4.6	Since Inception Return 1 Yr Return 3 Yr Return 5 Yr Return 7 Yr Return 10 Yr Return Best Month Worst Month Percent Profitable Periods Product Inception Date	5.4	8.4	4.0										
2018	2.4	-0.3	-0.5	0.8	3.1	-1.9	0.3	-0.6	-0.4	-5.1	-2.0	-1.8	-5.8		-3.1	9.5	4.5										
2017	1.6	0.3	1.1	-0.5	-0.3	0.0	0.7	1.0	0.1	2.2	-0.6	1.1	6.7		3.3	13.5	2.0										
2016	-3.6	-0.7	-0.4	0.6	1.0	0.3	1.7	-0.2	1.0	-0.9	1.2	0.3	0.0		3.3	10.9	2.7										
2015	1.0	1.0	1.6	-0.5	1.1	0.2	0.4	-0.8	-1.0	2.2	0.0	1.7	7.2		5.5	12.8	2.5										
2014	0.9	1.8	-1.7	-2.0	1.2	1.9	-0.5	1.7	-0.1	0.3	1.2	0.6	5.3		5.6	15.9	3.8										
2013	3.2	0.5	2.7	1.5	1.0	1.0	2.2	-0.3	2.2	1.2	1.1	2.4	20.5		3.5	10.9	3.7										
2012	1.7	1.7	1.6	1.2	-3.7	0.5	0.2	1.1	1.3	-0.1	0.8	0.4	6.7		-6.4	-16.8	-2.4										
2011	-0.2	1.2	0.7	2.1	-1.1	-1.5	0.6	-3.1	-0.6	1.7	-1.0	-0.6	-1.9		673	66.4	64.9										
2010	0.0	0.3	1.9	0.6	-2.4	-1.7	1.7	-0.6	1.3	1.8	0.2	2.1	5.1		01/01/2005	---	01/01/2018										
2009	0.3	-0.5	1.1	1.3	2.3	0.7	1.6	1.4	1.5	-0.9	0.3	0.9	10.2														
2008	-3.2	1.2	-4.7	1.5	2.8	-0.5	-1.4	-0.3	-6.4	-2.0	-0.6	0.0	-13.1														
2007	2.7	0.4	1.5	2.6	3.2	1.3	-0.2	-2.3	1.8	3.3	-2.4	0.2	12.6														
Outperform BM in Up Markets														Outperform BM in Down Markets													
														Distribution of Returns													

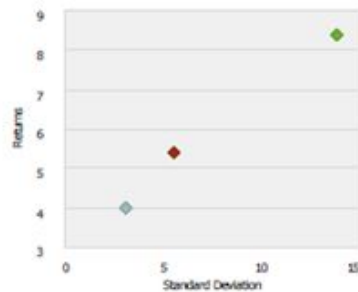
Outperform BM in Up Markets

Outperform BM in Down Markets

Distribution of Returns



Risk/Return Profile



◆ Lighthouse Global Long/Short Fund, L.P.
◆ S&P 500
◆ Barclays Aggregate Bond Index

Underwater Drawdown



— Lighthouse Global Long/Short Fund, L.P.
— S&P 500
— Barclays Aggregate Bond Index

Risk Analysis

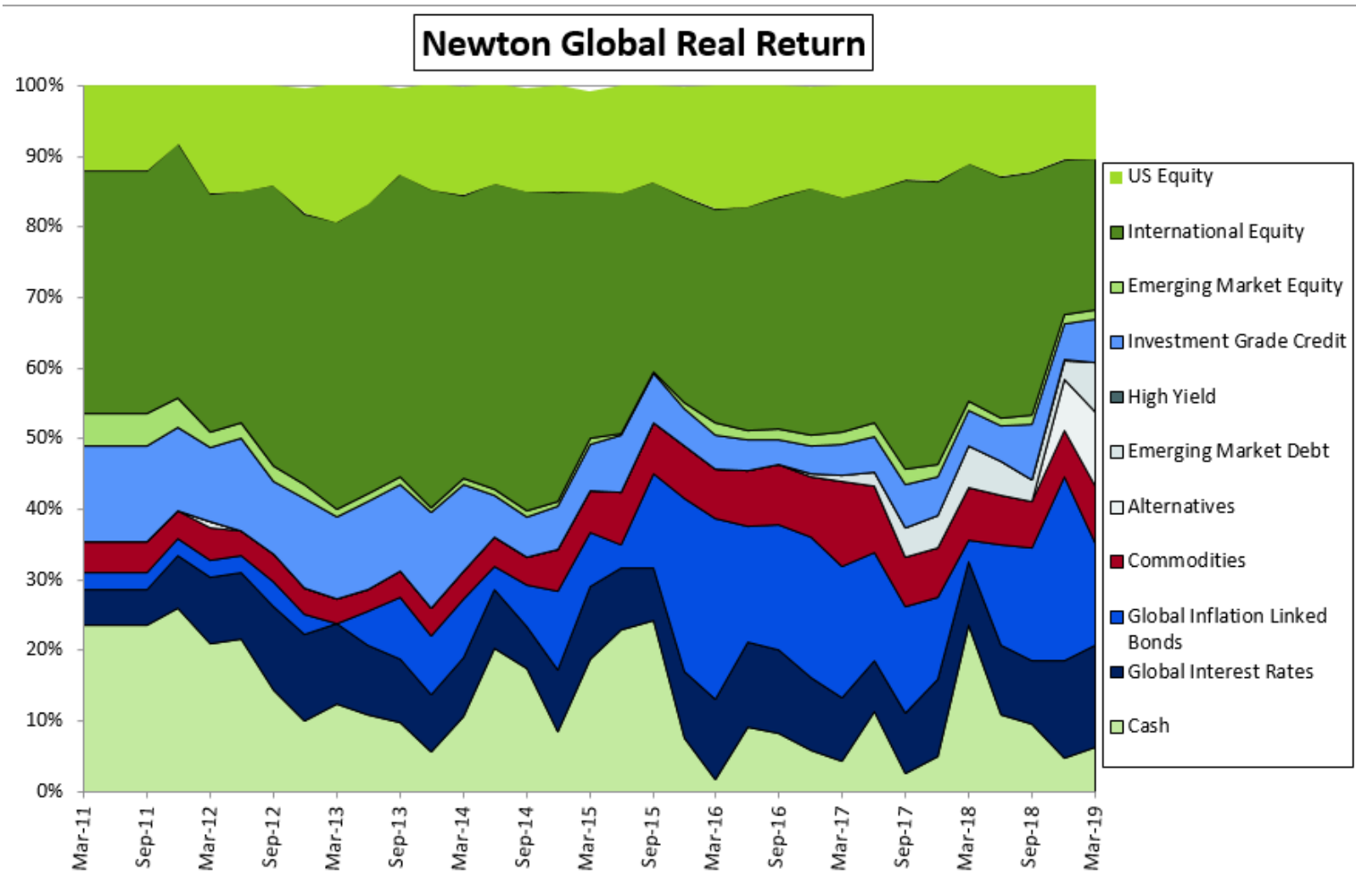
Since Inception Standard Deviation	5.5	13.9	3.1
3 Yr Standard Deviation	5.3	10.7	3.0
5 Yr Standard Deviation	5.0	11.2	2.9
7 Yr Standard Deviation	5.0	10.8	2.8
10 Yr Standard Deviation	4.9	12.7	2.8
Sharpe Ratio	0.7	0.5	0.9
Sortino Ratio	1.1	0.7	1.5
Loss Deviation	3.9	9.7	1.8
Max Drawdown	15.2	50.9	3.8
Max Drawdown Length	16	16	7
Max Drawdown Recovery Length	25	37	2

Comparison to Benchmarks

Annualized Alpha	3.2	6.0
Beta	0.2	-0.1
Correlation Coefficient	0.6	-0.1
R-Squared	0.4	0.0



NEWTON GLOBAL REAL RETURN



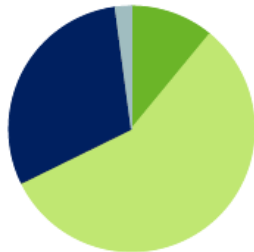
Source: Newton

March 31, 2019

PIMCO ALL ASSET

Asset Allocation

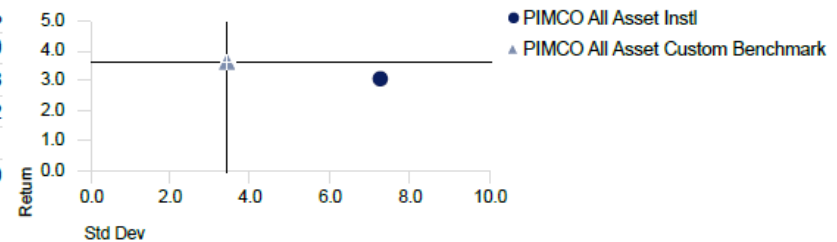
Portfolio Date: 12/31/2018



	%
Stock	11.0
Bond	56.8
Cash	30.2
Other	2.1
Total	100.0

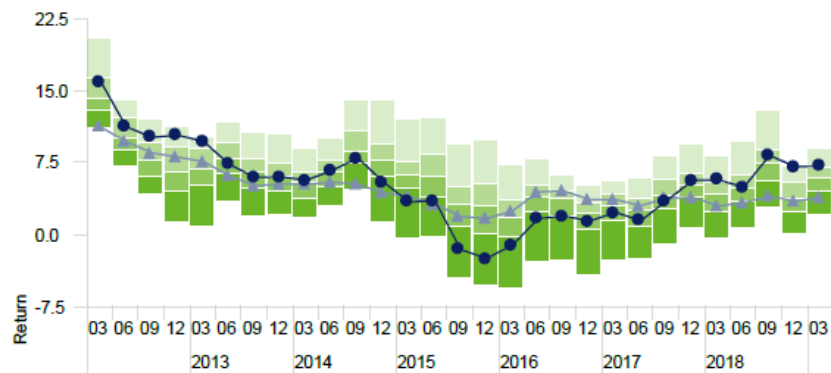
Risk & Return Illustration (5 Years)

Time Period: 4/1/2014 to 3/31/2019



Rolling Returns (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile

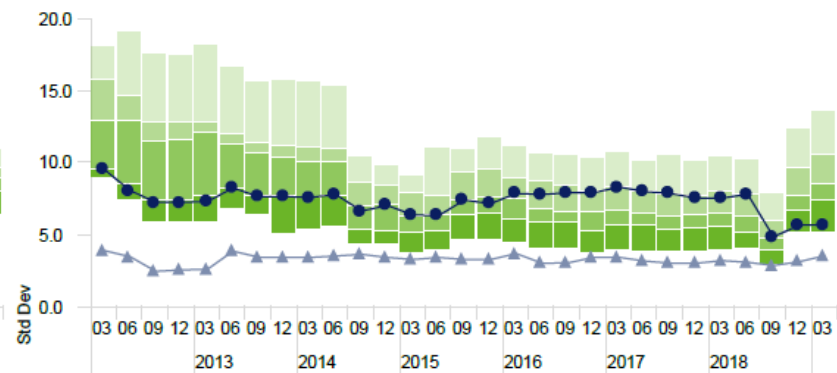


— PIMCO All Asset Instl

— PIMCO All Asset Custom Benchmark

Rolling Risk (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



— PIMCO All Asset Instl

— PIMCO All Asset Custom Benchmark

Calendar Year Returns

	2009	Rank	2010	Rank	2011	Rank	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	2017	Rank	2018	Rank
PIMCO All Asset Instl	23.0	58	13.7	18	2.4	13	15.4	11	0.8	82	0.8	71	-8.7	78	13.3	7	14.0	42	-5.0	22
PIMCO All Asset Custom Benchmark	16.5		8.5		7.6		8.1		0.2		4.9		0.0		6.1		5.6		-1.1	



Source: Morningstar

March 31, 2019

PIMCO ALL ASSET

Fund Name	All Asset Fund																				
Total Fund Net Assets (\$US MM)	17,763.0																				
		6/30/2016	3/31/2016	6/30/2015	9/30/2015	12/31/2015	3/31/2016	6/30/2016	9/30/2016	12/31/2016	3/21/2017	6/30/2017	9/30/2017	12/31/2017	3/31/2018	6/30/2018	9/30/2018	12/31/2018	1/31/2019	2/28/2019	3/31/2019
Third Pillar		78.71%	85.29%	85.78%	85.46%	81.81%	85.26%	81.04%	78.31%	74.27%	72.48%	70.66%	69.73%	70.82%	73.64%	74.16%	72.89%	74.69%	78.52%	79.99%	79.97%
Emerging Markets Equities		12.81%	13.88%	13.67%	13.99%	14.11%	20.24%	22.17%	20.79%	18.77%	18.42%	17.89%	17.69%	17.76%	18.21%	18.39%	20.19%	22.87%	24.23%	23.78%	22.89%
RAE Emerging Markets Fund		-	-	-	-	-	2.98%	4.22%	4.71%	4.63%	3.99%	4.47%	5.11%	5.33%	5.45%	5.31%	5.79%	6.68%			
RAE PLUS EMG Fund		5.99%	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%	10.08%	11.95%			
RAE Low Volatility PLUS EMG Fund		6.80%	8.92%	8.94%	8.68%	9.48%	11.29%	11.83%	10.91%	10.74%	11.24%	9.33%	7.25%	5.76%	3.86%	2.97%	3.29%	3.30%			
EqS Emerging Markets Fund		0.02%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
RAFI Dynamic Multi-Factor EM Equity ETF		-	-	-	-	-	-	-	-	-	-	-	-	0.26%	0.98%	0.92%	0.94%	0.94%			
Commodities and REITs		8.76%	9.08%	8.36%	6.19%	6.52%	7.21%	5.53%	5.49%	5.25%	5.51%	8.28%	10.92%	10.66%	10.68%	10.41%	8.92%	8.49%	9.45%	8.00%	8.42%
CommoditiesPLUS™ Strategy Fund		3.03%	2.88%	2.19%	1.93%	1.68%	4.14%	3.12%	3.33%	3.47%	3.22%	4.05%	4.99%	5.38%	6.28%	4.72%	3.66%	3.25%			
CommodityRealReturn Strategy FundB		1.66%	3.90%	2.18%	1.88%	1.62%	1.52%	0.89%	0.77%	0.53%	0.56%	1.05%	1.04%	1.08%	1.07%	1.10%	1.07%	1.21%			
RealEstateRealReturn Strategy Fund		4.06%	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%	4.19%	4.02%			
Emerging Markets Bonds		15.86%	20.32%	22.45%	22.16%	20.83%	22.27%	17.67%	13.36%	13.97%	20.92%	20.58%	20.29%	20.11%	20.58%	18.62%	13.12%	17.72%	16.51%	15.54%	15.43%
Emerging Local Bond Fund		7.42%	9.00%	9.79%	9.42%	8.45%	9.50%	6.94%	7.33%	6.98%	7.09%	6.76%	6.55%	6.44%	6.69%	5.70%	5.64%	5.73%			
Emerging Markets Currency and Short-Term Investments Fund		7.10%	11.50%	12.29%	12.33%	11.94%	12.77%	10.73%	10.97%	12.99%	13.83%	13.80%	13.65%	13.60%	12.92%	12.48%	11.99%				
Emerging Markets Bond Fund		3.90%	0.24%	0.29%	0.32%	0.32%	-	-	-	-	-	-	-	-	-	-	-	-			
Emerging Markets Corporate Bond Fund		1.43%	0.07%	0.07%	0.08%	0.09%	-	-	-	-	-	-	-	-	-	-	-	-			
Credit		21.64%	14.96%	18.23%	18.68%	18.32%	16.88%	17.72%	18.23%	17.48%	16.40%	14.69%	12.74%	12.40%	11.36%	12.17%	9.21%	8.18%	8.42%	8.42%	8.48%
High Yield Fund		1.11%	2.85%	2.88%	3.11%	2.53%	3.72%	2.90%	2.56%	1.87%	1.01%	0.60%	0.59%	0.56%	0.58%	0.60%	1.03%				
High Yield Spectrum Fund		3.69%	3.07%	3.20%	3.60%	3.84%	4.25%	4.67%	4.66%	4.64%	4.06%	2.50%	1.57%	1.55%	1.53%	1.59%	1.62%	1.59%			
Income Fund		10.28%	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%	6.64%	5.54%			
Diversified Income Fund		3.21%	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%	0.00%				
Low Duration Income Fund		1.75%	0.29%	0.30%	0.37%	0.29%	-	-	-	-	-	-	-	-	-	-	-	-			
Senior Floating Rate Fund		1.79%	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%	0.36%	0.00%			
Convertible Fund		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
European Convertible Fund		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Global Bonds		1.21%	0.53%	1.07%	1.24%	1.17%	0.60%	0.60%	0.60%	0.60%	0.60%	0.60%	0.60%	0.60%	0.60%	0.60%	0.60%	0.60%	0.00%	0.00%	0.00%
International Bond Fund (Unhedged)		0.26%	0.30%	0.30%	0.31%	0.29%	-	-	-	-	-	-	-	-	-	-	-	-			
Global Advantage Strategy Fund		0.95%	0.23%	0.76%	0.93%	0.88%	-	-	-	-	-	-	-	-	-	-	-	-			
Global Bond Opportunities Fund (Unhedged)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Inflation Linked Bonds		0.90%	7.87%	7.88%	7.88%	7.90%	6.73%	3.21%	3.48%	3.95%	3.80%	3.97%	3.88%	3.75%	3.81%	2.61%	1.98%	1.93%	4.52%	6.62%	7.33%
Real Return Fund		0.29%	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%	1.45%	1.49%			
Long-Term Real Return Fund		0.53%	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%	0.41%	0.44%			
Global Advantage® Inflation-Linked Bond ETF		0.08%	0.08%	0.08%	0.09%	0.10%	0.12%	0.12%	0.12%	0.12%	0.12%	-	-	-	-	-	-	-			
Alternative Strategies		12.34%	15.36%	19.69%	15.12%	17.05%	13.18%	14.74%	12.12%	8.96%	8.43%	8.65%	5.62%	6.16%	3.35%	12.06%	14.36%	15.54%	16.36%	16.06%	16.74%
Dynamic Bond Fund		2.53%	2.75%	2.44%	2.32%	2.08%	1.80%	1.96%	-	-	-	-	-	-	-	-	1.71%	1.58%			
Credit Opportunities Bond Fund		2.78%	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%	0.00%	0.00%			
Mortgage Opportunities and Bond Fund		0.55%	0.60%	0.66%	0.73%	0.74%	0.79%	0.78%	0.73%	0.74%	0.72%	0.72%	0.71%	0.69%	0.68%	0.71%	0.71%	0.74%			
TRENDS Managed Futures Strategy Fund		0.16%	0.20%	0.20%	0.24%	0.26%	0.30%	0.29%	0.29%	0.30%	0.29%	0.28%	0.28%	0.29%	0.28%	0.29%	0.97%	1.06%			
EqS Long/Short Fund		0.47%	0.36%	0.25%	0.18%	-	-	-	-	-	-	-	-	-	-	-	-	-			
RAE Worldwide Long/Short PLUS Fund		-	6.53%	7.49%	7.93%	7.96%	6.42%	7.28%	6.90%	5.73%	5.03%	3.06%	2.96%	3.03%	3.40%	5.15%	5.55%	6.25%			
RAE Fundamental Advantage PLUS Fund		2.62%	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%	5.43%	5.88%			
RAE Worldwide Fundamental Adv PLUS Fund		4.24%	3.42%	3.86%	4.07%	3.16%	2.16%	2.23%	2.18%	1.15%	1.10%	-	-	-	-	-	-	-			

Source: PIMCO



March 31, 2019

PIMCO ALL ASSET

	6/30/2014	3/31/2015	8/30/2015	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	12/31/2018	1/31/2019	2/28/2019	3/31/2019
Second Pillar	9.05%	4.95%	6.15%	6.81%	10.78%	4.87%	10.63%	12.62%	14.67%	16.12%	20.07%	21.03%	19.88%	19.00%	19.91%	21.33%	19.63%	16.73%	14.10%	13.93%
US Core Bonds	3.18%	2.91%	3.17%	3.78%	3.86%	3.89%	6.38%	7.31%	4.88%	8.80%	7.71%	8.38%	7.21%	8.33%	8.46%	7.79%	4.17%	4.68%	4.89%	4.38%
Total Return Fund	3.07%	1.04%	1.39%	1.65%	1.65%	1.22%	3.41%	4.47%	1.92%	2.56%	4.44%	5.70%	4.90%	4.16%	4.25%	5.68%	2.07%			
Investment Grade Credit Bond Fund	0.02%	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%	2.01%	2.09%			
Mortgage-Backed Securities Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
GNMA and Government Securities Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
US Long Maturity Bonds	4.82%	1.28%	1.52%	1.94%	2.31%	0.29%	2.55%	2.10%	5.30%	7.68%	8.63%	8.62%	8.75%	7.99%	8.22%	7.72%	9.56%	6.66%	4.58%	5.11%
Extended Duration Fund	-	-	-	-	-	-	0.42%	0.25%	1.51%	2.25%	2.91%	3.05%	3.13%	2.95%	3.52%	3.32%	4.61%			
Long-Term US Government Fund	0.27%	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%	3.14%	3.64%			
Long-Term Credit Bond Fund	4.20%	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%	0.77%	0.95%	1.16%	1.42%	0.00%	0.66%	0.62%	1.20%	1.14%	1.30%	1.29%	1.28%	1.24%	1.26%	1.26%	1.31%			
Short-Term Bonds	1.13%	0.77%	1.46%	1.09%	4.81%	0.71%	1.80%	3.40%	4.69%	2.63%	3.73%	4.06%	3.97%	4.69%	5.23%	5.92%	5.91%	6.39%	4.82%	4.27%
Low Duration Fund	0.94%	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%	5.58%	5.33%			
Low Duration Exchange Traded Fund	0.20%	0.23%	0.24%	0.29%	0.19%	-	-	-	-	-	-	-	-	-	-	-	-			
Short Term Fund	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Government Money Market Fund	-	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%	0.34%	0.56%			
Money Market Fund	-	-	-	-	3.13%	-	-	-	-	-	-	-	-	-	-	-	-			
Net Short Duration Instruments	-0.01%	-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%	0.00%	0.01%			
First Pillar	12.24%	9.78%	8.10%	7.73%	7.32%	8.87%	8.33%	8.87%	11.06%	11.40%	8.88%	9.24%	9.30%	7.36%	6.95%	6.09%	6.68%	6.78%	6.92%	6.18%
US Equities	1.12%	2.78%	2.38%	2.17%	1.83%	0.51%	0.55%	0.23%	0.29%	0.29%	0.25%	0.26%	0.27%	0.26%	0.26%	0.28%	0.80%	0.00%	0.00%	0.00%
RAE PLUS Fund	0.03%	0.20%	0.21%	0.22%	-	-	-	-	-	-	-	-	-	-	-	-	-			
RAE Low Volatility PLUS Fund	0.41%	1.90%	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%	0.28%	-			
RAE PLUS Small Fund	0.65%	0.64%	0.43%	0.30%	0.32%	-	-	-	-	-	-	-	-	-	-	-	-			
StocksPLUS® Small Fund	0.02%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Fundamental IndexPLUS™	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
StocksPLUS® Fund	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
StocksPLUS® Absolute Return Fund	0.01%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Developed ex-US Equities	11.12%	6.97%	5.73%	5.55%	5.79%	9.36%	7.78%	8.65%	10.81%	11.15%	9.62%	8.88%	9.03%	7.10%	5.67%	5.81%	5.68%	5.76%	5.92%	6.10%
RAE PLUS International Fund	3.16%	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%	0.51%	0.91%			
RAE Low Volatility PLUS Int Fund	5.73%	4.22%	4.13%	4.06%	4.24%	4.72%	3.35%	3.97%	5.31%	4.95%	2.50%	1.73%	1.60%	1.75%	1.83%	1.68%	1.73%			
StocksPLUS® International Fund (USD-Hedged)	0.01%	-	-	-	0.05%	2.76%	2.58%	2.64%	2.83%	2.93%	2.94%	2.98%	3.02%	2.87%	3.08%	3.15%	3.04%			
StocksPLUS® International Fund (Unhedged)	0.02%	-	-	-	-	0.27%	0.29%	0.16%	0.16%	0.40%	0.73%	0.76%	0.77%	0.76%	0.26%	0.27%	-			
EqS Global Dividend Fund	0.01%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
EqS Pathfinder Fund	2.19%	1.04%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			

Source: PIMCO

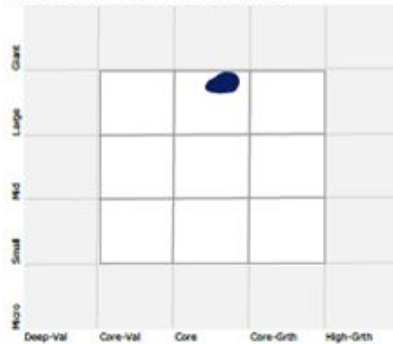


March 31, 2019

VANGUARD TOTAL WORLD STOCK INDEX I

Holdings Based Style Trail (5 Years)

Time Period: 4/30/2014 to 3/31/2019



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

Portfolio Statistics

	Fund	Index
# of Holdings	8,051	7,907
% Asset in Top 10 Holdings	9.6	9.7
Turnover Ratio %	9.0	
P/E Ratio	16.7	16.6
P/B Ratio	2.1	2.1
LT Eam Growth	10.4	10.3
Hist Eam Growth	9.0	8.7
12 Mo Yield	2.3	

Market Capitalization Breakdown

	Fund	Index
Market Cap Giant %	45.9	
Market Cap Large %	30.6	
Market Cap Mid %	18.0	
Market Cap Small %	5.0	
Market Cap Micro %	0.5	
Average Market Cap	40,623.0	
Equity Region Developed %	91.3	
Equity Region Emerging %	8.7	

Top Ten Holdings

	Port Weight %	3 Month Return
Apple Inc	1.74	20.88
Microsoft Corp	1.72	16.57
Amazon.com Inc	1.41	18.56
Cmt Market Liquidity Rate	0.79	
Facebook Inc A	0.76	27.16
Johnson & Johnson	0.72	9.02
Alphabet Inc Class C	0.71	13.30
Exxon Mobil Corp	0.66	19.69
Alphabet Inc A	0.66	12.63
JPMorgan Chase & Co	0.65	4.52

Sector Attribution (Quarter)

	Portfolio Weights	Benchmark Weights	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Active Return
Communication Services	7.96		11.47				
Consumer Discretionary	10.66		12.79				
Consumer Staples	7.67		11.15				
Energy	5.85		14.63				
Financials	16.25		8.29				
Health Care	11.40		8.91				
Industrials	11.11		13.41				
Information Technology	14.64		19.32				
Materials	5.23		10.96				
Real Estate	3.90		15.82				
Utilities	3.21		10.12				
Unclassified	0.00		-6.59				
Attribution Total	97.89		12.42				
Cash	0.72						
Bond	0.08						
Other	0.33						
Missing Performance	0.98						
Total	100.00						

Region Attribution (Quarter)

	Portfolio Weights	Benchmark Weights	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Active Return
Africa	0.71		4.98				
Asia - Developed	4.48		9.28				
Asia - Emerging	5.51		12.76				
Australasia	1.87		13.19				
Canada	3.06		15.70				
Europe - Emerging	0.70		7.97				
Europe - ex Euro	4.44		11.92				
Eurozone	8.91		9.79				
Japan	7.85		6.61				
Latin America	1.49		9.28				
Middle East	0.42		6.12				
United Kingdom	5.36		12.26				
United States	53.08		14.14				
Unclassified	0.00		-6.59				
Attribution Total	97.89		12.42				
Cash	0.72						
Bond	0.08						
Other	0.33						
Missing Performance	0.98						
Total	100.00						

Source: Morningstar



March 31, 2019

VANGUARD TOTAL WORLD STOCK INDEX I

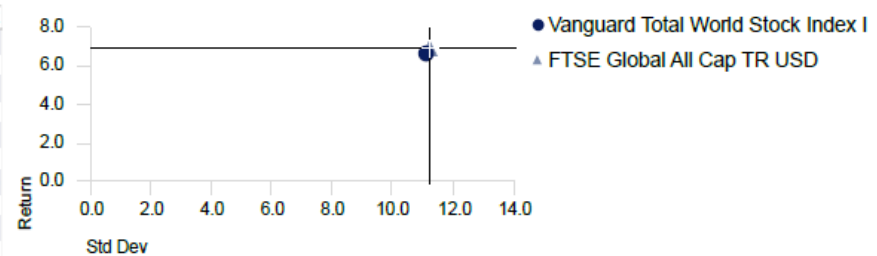
Risk & Return Characteristics (5 Years)

Time Period: 4/1/2014 to 3/31/2019

	Fund	Index
R2	99.9	100.0
Alpha	-0.2	0.0
Beta	1.0	1.0
Std Dev	11.1	11.2
Up Capture Ratio	97.7	100.0
Down Capture Ratio	98.7	100.0
Sharpe Ratio (geo)	0.5	0.5
Information Ratio (geo)	-0.5	0.0
Tracking Error	0.4	0.0
Correlation	1.0	1.0

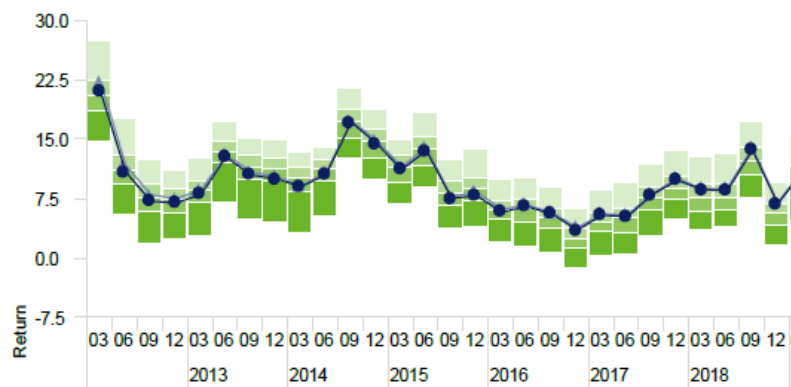
Risk & Return Illustration (5 Years)

Time Period: 4/1/2014 to 3/31/2019



Rolling Returns (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile

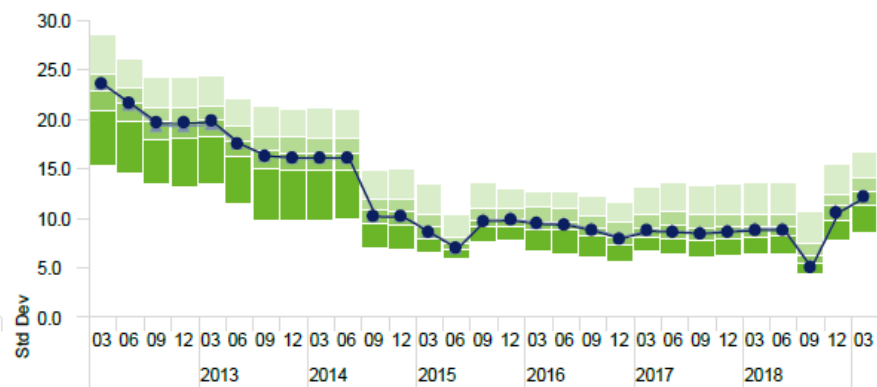


—Vanguard Total World Stock Index I

—FTSE Global All Cap TR USD

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

	2009	Rank	2010	Rank	2011	Rank	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	2017	Rank	2018	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	-9.7	52
FTSE Global All Cap TR USD	37.5		14.8		-7.6		17.2		23.9		4.5		-1.7		9.0		24.4		-9.6	



Source: Morningstar

March 31, 2019

APPENDIX

NEPC, LLC

March 31, 2019

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:

$$\frac{(\text{Annualized Return of Portfolio} - \text{Annualized Return of Benchmark})}{\text{Annualized Standard Deviation}(\text{Period Portfolio Return} - \text{Period Benchmark Return})}$$
 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:

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

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:

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

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.

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

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

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.



FIRST QUARTER 2019 SUPPLEMENTAL PERFORMANCE

UNIVERSITY OF MAINE SYSTEM PENSION PLAN

May 28, 2019

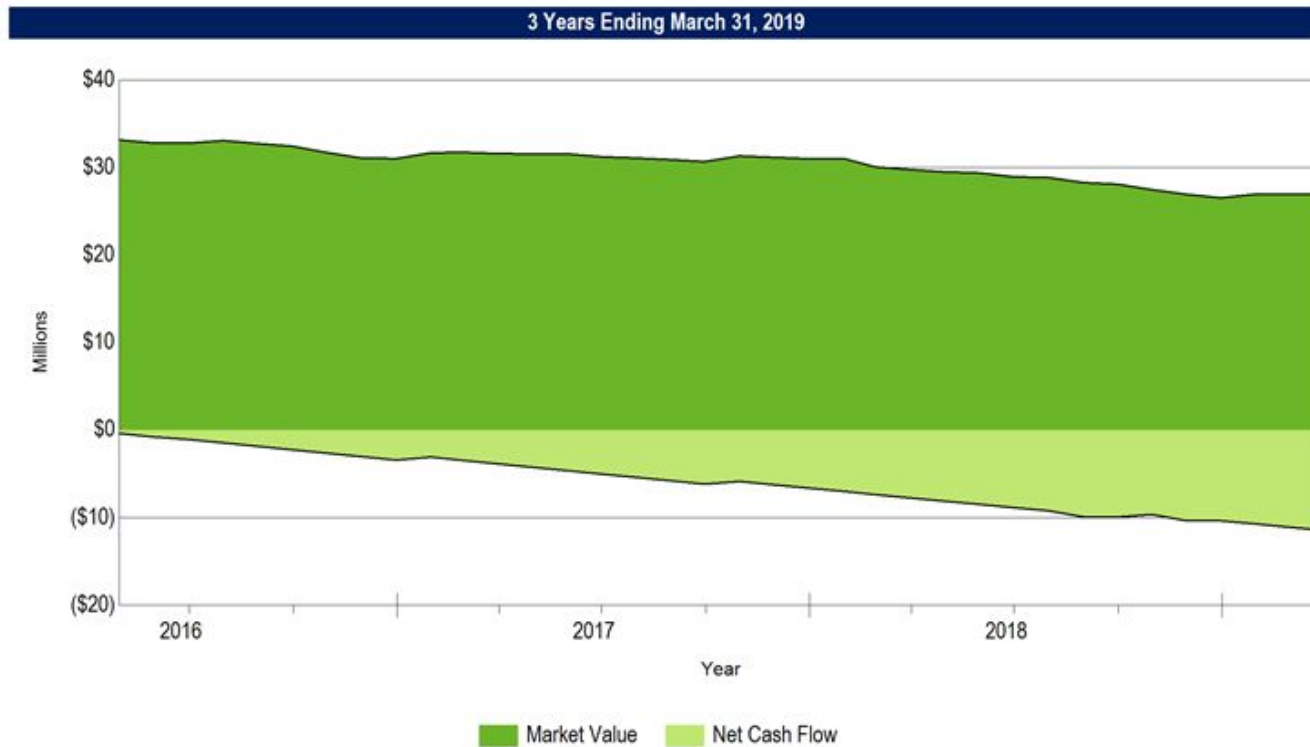
Jay E. Roney, Partner

Kelly Regan, Senior Consultant



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ASSET GROWTH SUMMARY



	Quarter-To-Date	Fiscal Year-To-Date	One Year	Three Years
Beginning Market Value	\$26,520,627	\$28,930,221	\$29,739,883	\$33,045,455
Net Cash Flow	-\$1,075,710	-\$2,589,501	-\$3,687,915	-\$11,445,564
Net Investment Change	\$1,481,917	\$586,114	\$874,866	\$5,326,943
Ending Market Value	\$26,926,834	\$26,926,834	\$26,926,834	\$26,926,834



March 31, 2019

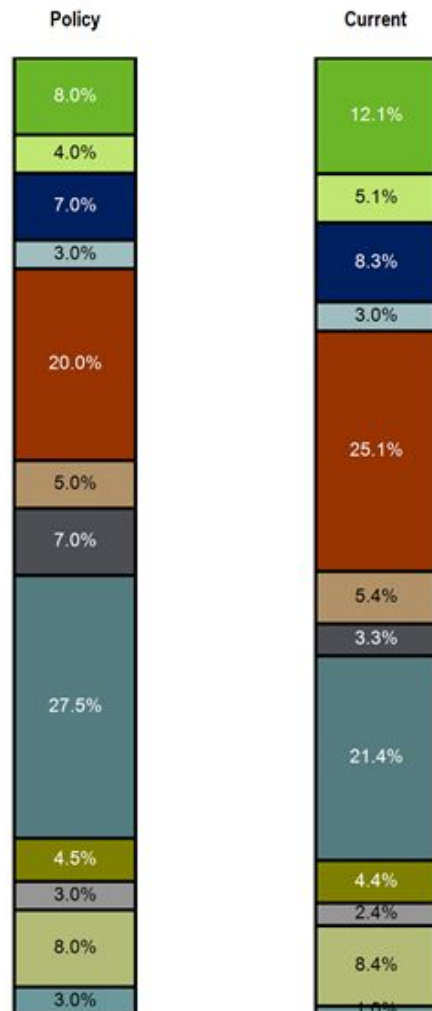
CASH FLOW SUMMARY

	Beginning Market Value	Quarter Ending March 31, 2019				Ending Market Value
		Contributions	Withdrawals	Net Cash Flow	Net Investment Change	
Bain Capital Senior Loan Fund	\$1,356,947	\$0	-\$101,667	-\$101,667	\$56,445	\$1,311,725
BlackRock Strategic Income Opportunities	\$748,926	\$0	-\$125,955	-\$125,955	\$19,580	\$642,551
Distribution Account	\$391,555	\$577,549	-\$699,410	-\$121,861	\$1,928	\$271,622
Guggenheim US Bank Loans	\$155,315	\$0	\$0	\$0	\$0	\$155,315
Lighthouse	\$1,136,458	\$0	-\$1,137	-\$1,137	\$56,602	\$1,191,922
Mondrian EM Small Cap	\$765,308	\$0	-\$4,291	-\$4,291	\$55,585	\$816,602
Morgan Stanley Int'l	\$1,689,953	\$350,000	-\$4,630	\$345,370	\$193,794	\$2,229,118
Newton Global Real Return	\$3,976,054	\$0	-\$2,106,296	-\$2,106,296	\$167,180	\$2,036,938
Principal	\$2,220,271	\$0	\$0	\$0	\$35,929	\$2,256,200
SSgA R2000 Index Fund Non Lending	\$854,845	\$400,000	-\$408	\$399,592	\$126,247	\$1,380,684
Vanguard Inflation-Protected Securities	\$1,842,853	\$0	-\$1,000,270	-\$1,000,270	\$56,495	\$899,078
Vanguard S&P 500 Index	\$1,973,417	\$1,000,000	-\$253	\$999,747	\$280,280	\$3,253,444
Vanguard Total Bond Market Index	\$5,927,484	\$1,000,000	-\$343,073	\$656,927	\$170,690	\$6,755,101
Wellington	\$3,481,241	\$0	-\$15,869	-\$15,869	\$261,162	\$3,726,534
Total	\$26,520,627	\$3,327,549	-\$4,403,259	-\$1,075,710	\$1,481,917	\$26,926,834



March 31, 2019

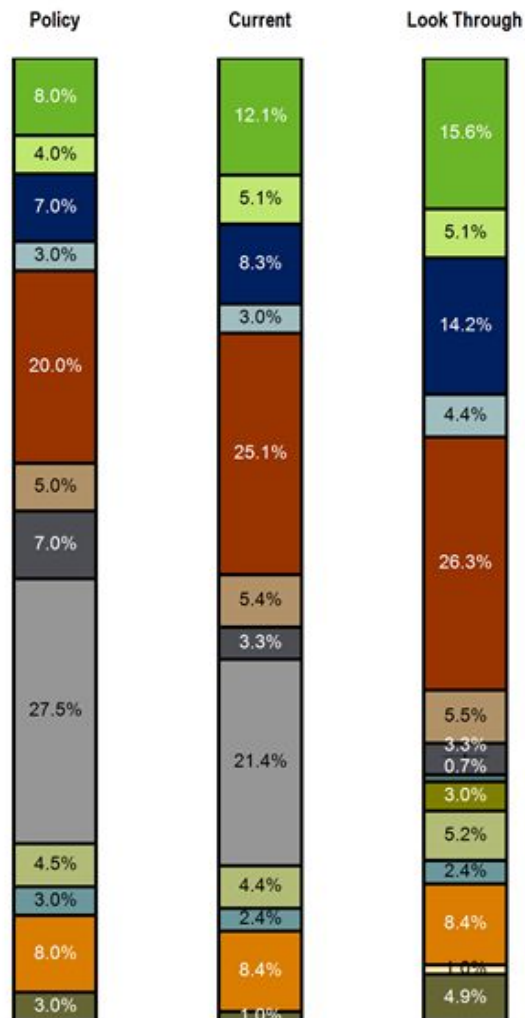
ASSET ALLOCATION



Asset Allocation vs. Target							
	Current	Policy	Current	Difference	Policy Range	Within Range	
Large Cap Equity	\$3,253,444	8.0%	12.1%	4.1%	3.0% - 13.0%	Yes	
Small Cap Equity	\$1,380,684	4.0%	5.1%	1.1%	0.0% - 6.0%	Yes	
International Equity	\$2,229,118	7.0%	8.3%	1.3%	2.0% - 12.0%	Yes	
Emerging Markets Equity	\$816,602	3.0%	3.0%	0.0%	0.0% - 5.0%	Yes	
Core Bonds	\$6,755,101	20.0%	25.1%	5.1%	10.0% - 30.0%	Yes	
Bank Loans	\$1,467,040	5.0%	5.4%	0.4%	0.0% - 10.0%	Yes	
TIPS	\$899,078	7.0%	3.3%	-3.7%	0.0% - 14.0%	Yes	
Global Asset Allocation	\$5,763,472	27.5%	21.4%	-6.1%	25.0% - 30.0%	No	
Hedge Funds	\$1,191,922	4.5%	4.4%	-0.1%	0.0% - 10.0%	Yes	
Absolute Return	\$642,551	3.0%	2.4%	-0.6%	0.0% - 5.0%	Yes	
Real Estate	\$2,256,200	8.0%	8.4%	0.4%	0.0% - 10.0%	Yes	
Cash	\$271,622	3.0%	1.0%	-2.0%	0.0% - 10.0%	Yes	
Total	\$26,926,834	100.0%	100.0%				



ASSET ALLOCATION



Asset Allocation			
	Policy	Current	Look Through
Large Cap Equity	8.0%	12.1%	15.6%
Small Cap Equity	4.0%	5.1%	5.1%
International Equity	7.0%	8.3%	14.2%
Emerging Markets Equity	3.0%	3.0%	4.4%
Core Bonds	20.0%	25.1%	26.3%
Bank Loans	5.0%	5.4%	5.5%
TIPS	7.0%	3.3%	3.3%
Multi-Sector	--	--	0.7%
Global Bonds	--	--	3.0%
Global Asset Allocation	27.5%	21.4%	--
Hedge Funds	4.5%	4.4%	5.2%
Absolute Return	3.0%	2.4%	2.4%
Real Estate	8.0%	8.4%	8.4%
Real Assets	--	--	1.0%
Cash	3.0%	1.0%	4.9%
Total	100.0%	100.0%	100.0%

Net Asset Allocation breaks out the exposure of GAA managers.

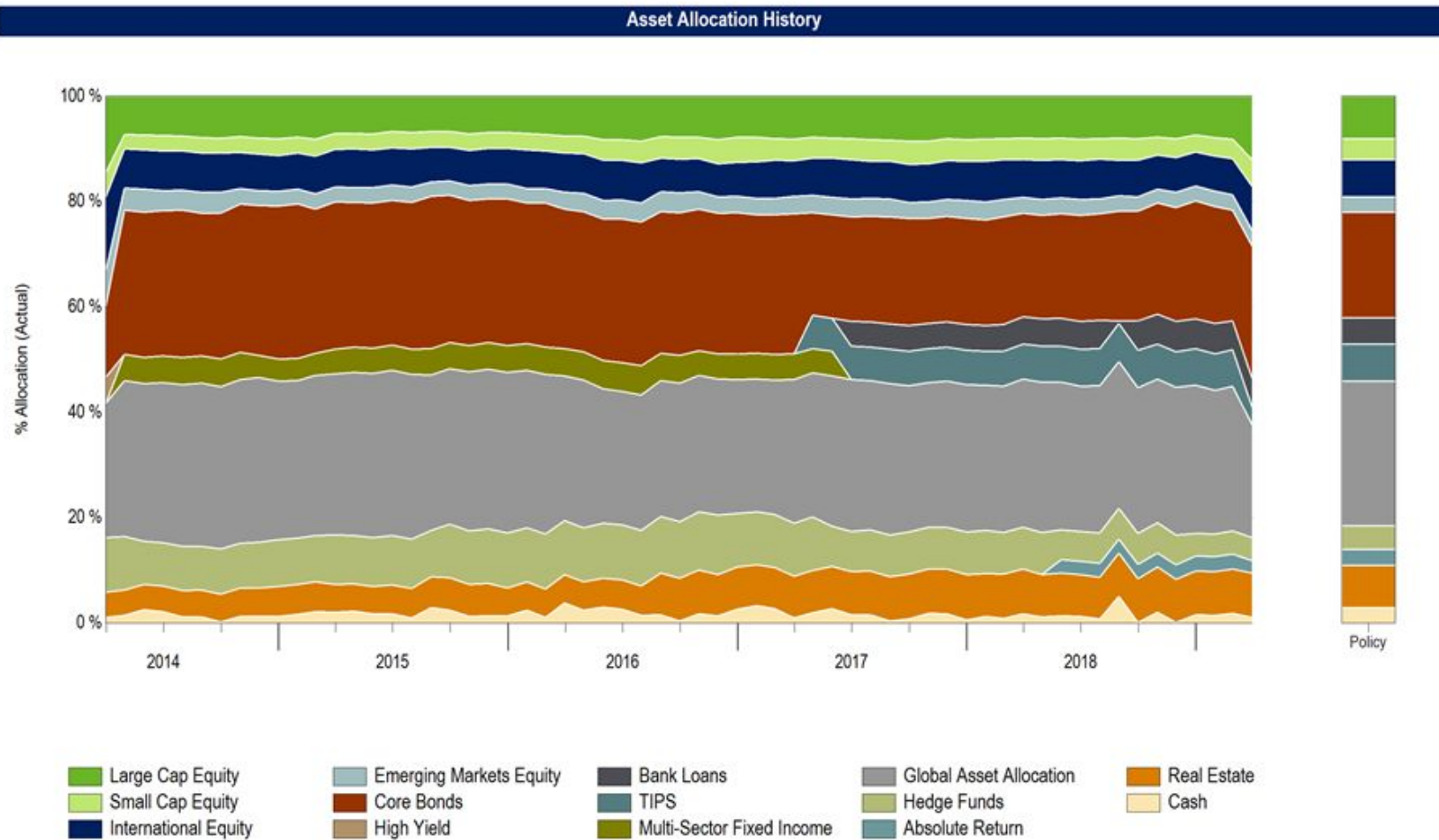
Asset class weights may not add up to 100% due to rounding.

The 60% MSCI ACWI/40% CITI WGBI Index is broken down into the following categories: 33.0% Domestic Equities, 20.0% Int'l Equities, 7.0% Emerging Equities, 15.1% US Treasury Bonds, 12.5% European Government Bonds, 7.6% Japanese Debt, 2.2% United Kingdom Bonds and 2.6% Developing Markets Bonds.

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

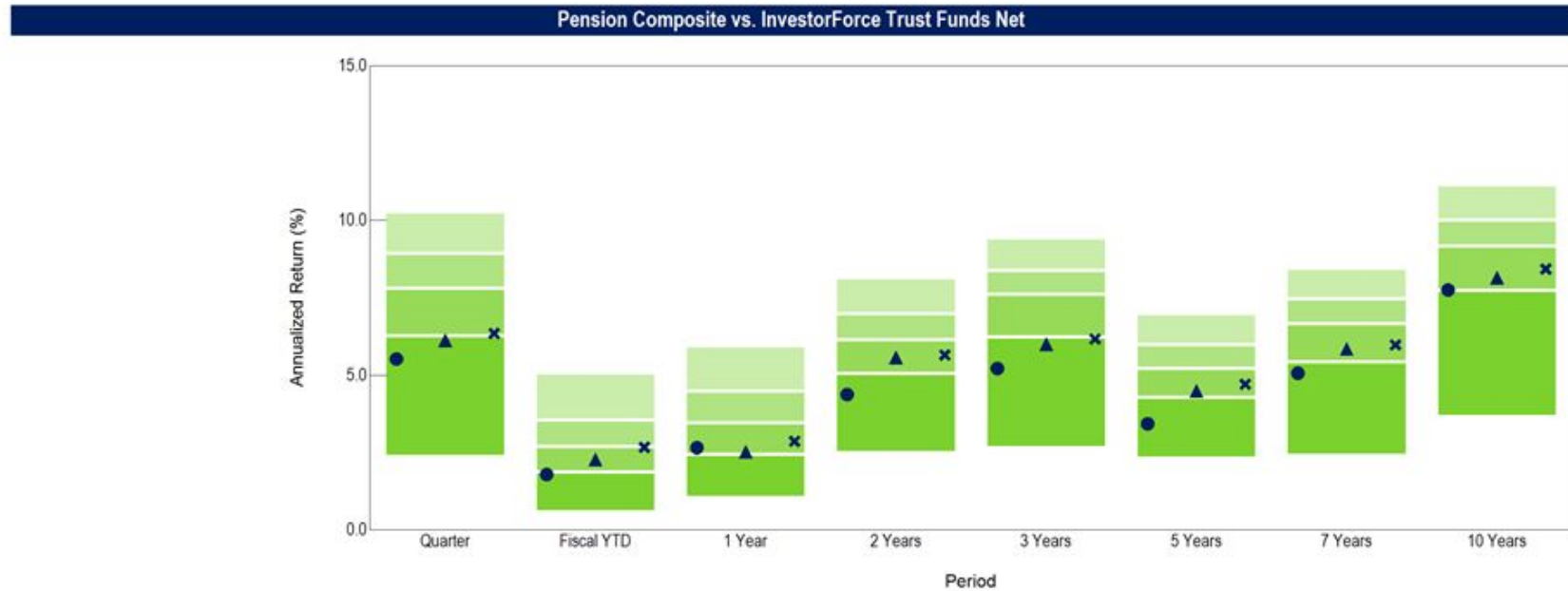


ASSET ALLOCATION HISTORY



March 31, 2019

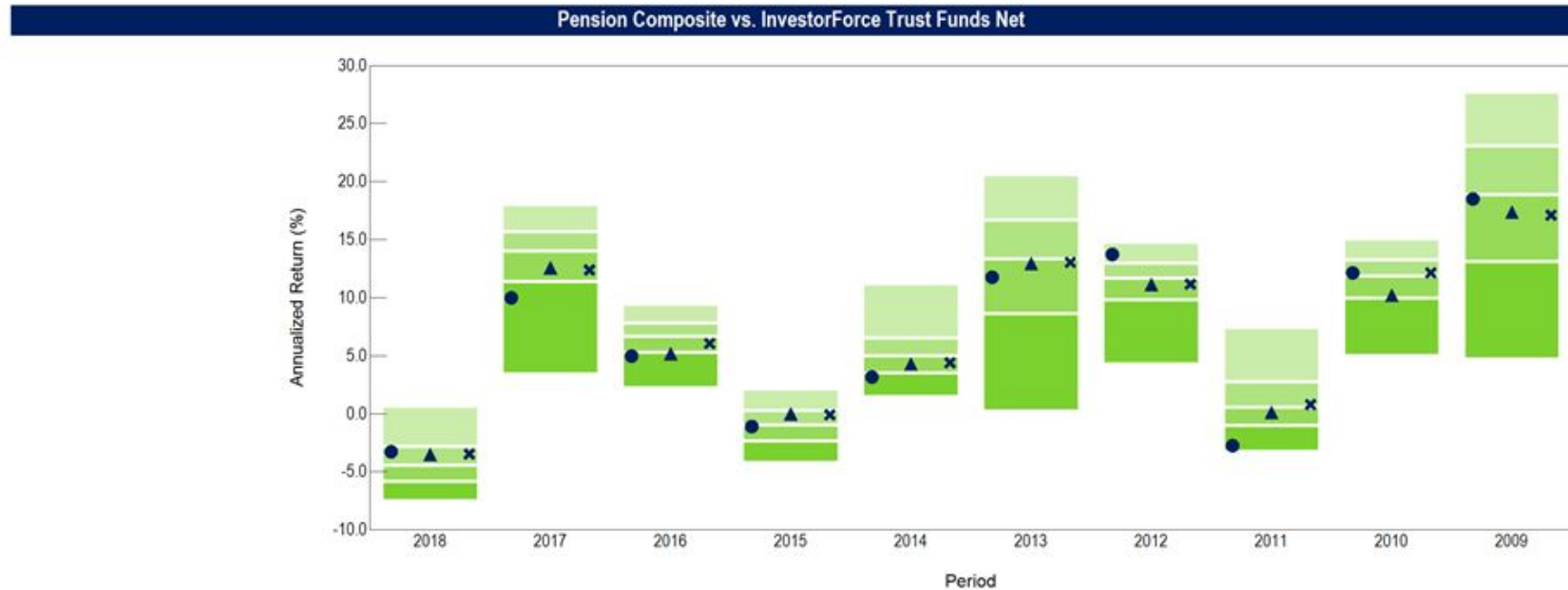
RETURNS VS. PEER UNIVERSE



	Return (Rank)							
5th Percentile	10.3	5.1	5.9	8.1	9.4	7.0	8.5	11.2
25th Percentile	8.9	3.6	4.5	7.0	8.4	6.0	7.5	10.0
Median	7.8	2.7	3.5	6.2	7.6	5.2	6.7	9.2
75th Percentile	6.3	1.9	2.5	5.1	6.2	4.3	5.5	7.8
95th Percentile	2.4	0.6	1.1	2.5	2.7	2.3	2.4	3.7
# of Portfolios	2,527	2,493	2,473	2,382	2,290	2,100	1,896	1,568
● Pension Composite	5.5 (81)	1.8 (78)	2.7 (71)	4.4 (85)	5.2 (83)	3.4 (88)	5.1 (80)	7.8 (76)
▲ Allocation Index	6.1 (77)	2.3 (64)	2.5 (74)	5.6 (65)	6.0 (78)	4.5 (70)	5.9 (69)	8.2 (70)
× Policy Index	6.3 (75)	2.7 (52)	2.9 (67)	5.7 (64)	6.2 (76)	4.7 (65)	6.0 (66)	8.4 (66)



RETURNS VS. PEER UNIVERSE

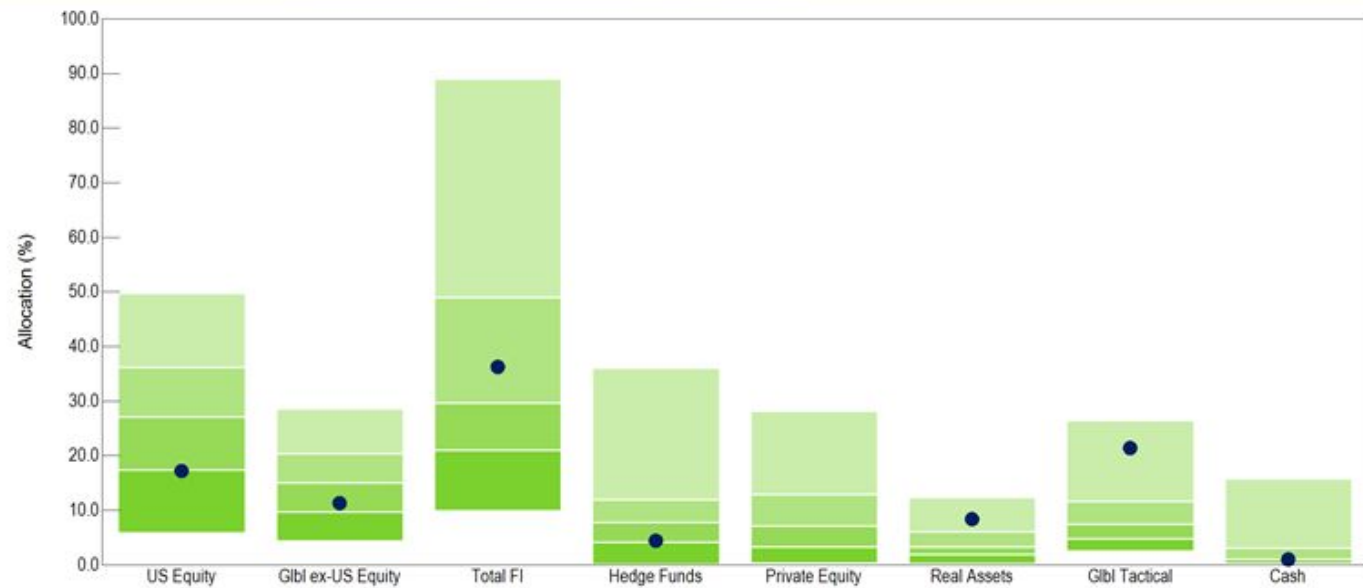


	Return (Rank)									
5th Percentile	0.7	18.0	9.4	2.1	11.2	20.6	14.8	7.4	15.1	27.7
25th Percentile	-2.8	15.7	7.9	0.3	6.6	16.7	13.0	2.8	13.3	23.1
Median	-4.4	14.1	6.7	-0.9	5.0	13.4	11.7	0.6	11.9	18.9
75th Percentile	-5.8	11.4	5.3	-2.3	3.6	8.7	9.8	-1.0	10.0	13.2
95th Percentile	-7.5	3.5	2.3	-4.2	1.5	0.3	4.3	-3.2	5.0	4.8
# of Portfolios	3,627	2,518	2,446	2,339	2,007	1,709	1,539	1,403	1,326	1,233
● Pension Composite	-3.3 (32)	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)
▲ Allocation Index	-3.5 (35)	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)
× Policy Index	-3.5 (34)	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)



ALLOCATIONS VS. PEER UNIVERSE

Total Plan Allocation vs. InvestorForce Trust Funds Net

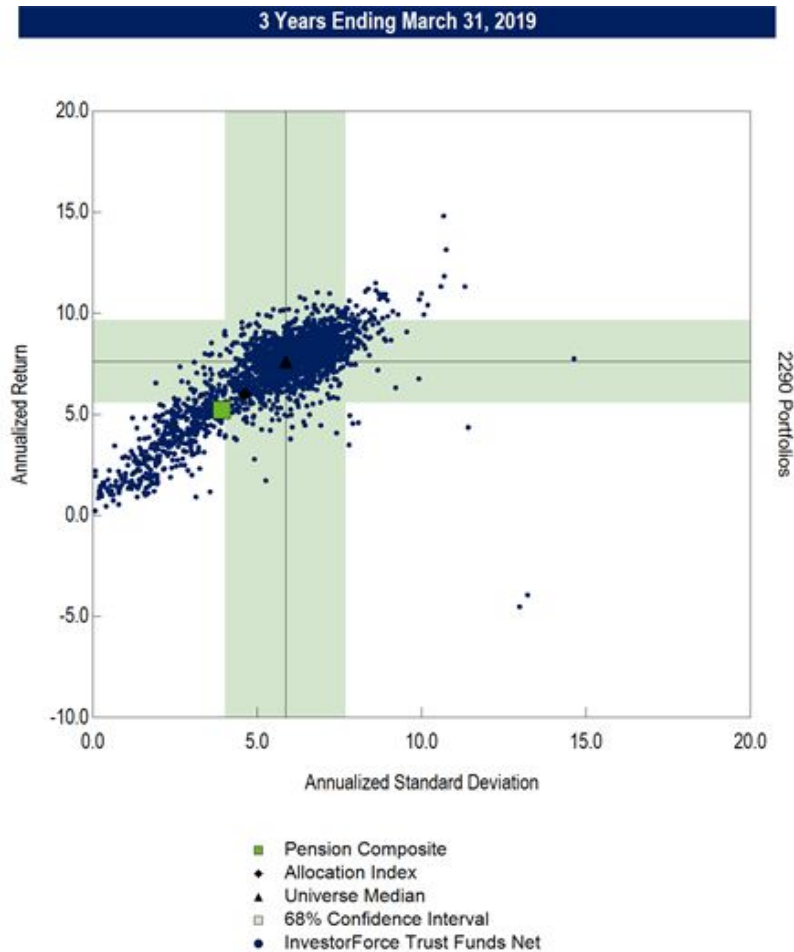


	Allocation (Rank)													
5th Percentile	49.7		28.6		89.0		36.0		28.2		12.3		26.4	
25th Percentile	36.3		20.4		49.1		12.0		13.0		6.2		11.7	
Median	27.2		15.1		29.8		7.8		7.2		3.4		7.6	
75th Percentile	17.5		9.8		21.1		4.3		3.4		2.0		4.9	
95th Percentile	5.9		4.5		10.0		0.2		0.4		0.3		2.7	
# of Portfolios	1,333		1,463		1,936		680		699		346		353	
• Pension Composite	17.2	(76)	11.3	(68)	36.3	(37)	4.4	(74)	--	--	8.4	(19)	21.4	(8)
													1.0	(55)



March 31, 2019

TOTAL PLAN RISK/RETURN - 3 YEAR



3 Years Ending March 31, 2019				
	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Pension Composite	5.2%	83	3.9%	20
Allocation Index	6.0%	78	4.6%	25
Policy Index	6.2%	76	4.6%	24
InvestorForce Trust Funds Net Median	7.6%	--	5.9%	--

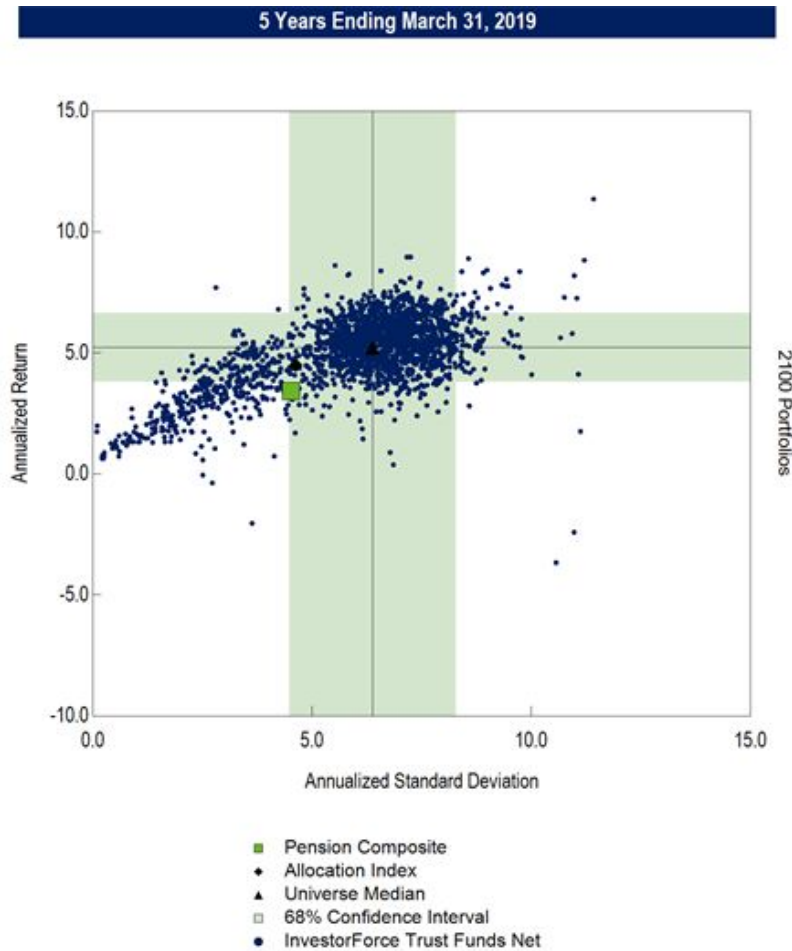
3 Years Ending March 31, 2019				
	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Pension Composite	1.0	62	1.1	35
Allocation Index	1.0	59	1.0	42
Policy Index	1.1	47	1.1	30
InvestorForce Trust Funds Net Median	1.1	--	1.0	--

*Returns are net of fees.



March 31, 2019

TOTAL PLAN RISK/RETURN - 5 YEAR



5 Years Ending March 31, 2019				
	Annzd Ret	Rank	Annzd Std Dev	Rank
Pension Composite	3.4%	88	4.5%	20
Allocation Index	4.5%	70	4.6%	21
Policy Index	4.7%	65	4.7%	21
InvestorForce Trust Funds Net Median	5.2%	--	6.4%	--

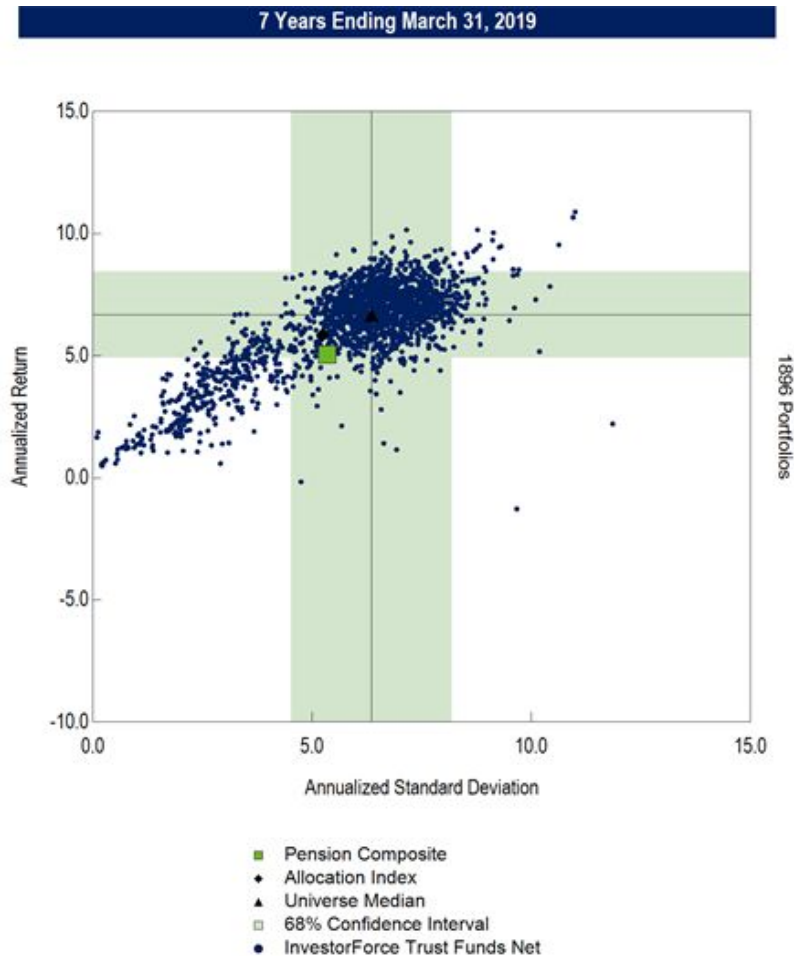
5 Years Ending March 31, 2019				
	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Pension Composite	0.6	78	0.9	61
Allocation Index	0.8	36	1.0	35
Policy Index	0.8	29	1.1	24
InvestorForce Trust Funds Net Median	0.7	--	0.9	--

*Returns are net of fees.



March 31, 2019

TOTAL PLAN RISK/RETURN - 7 YEAR



7 Years Ending March 31, 2019				
	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Pension Composite	5.1%	80	5.4%	26
Allocation Index	5.9%	69	5.2%	25
Policy Index	6.0%	66	5.2%	25
InvestorForce Trust Funds Net Median	6.7%	--	6.4%	--

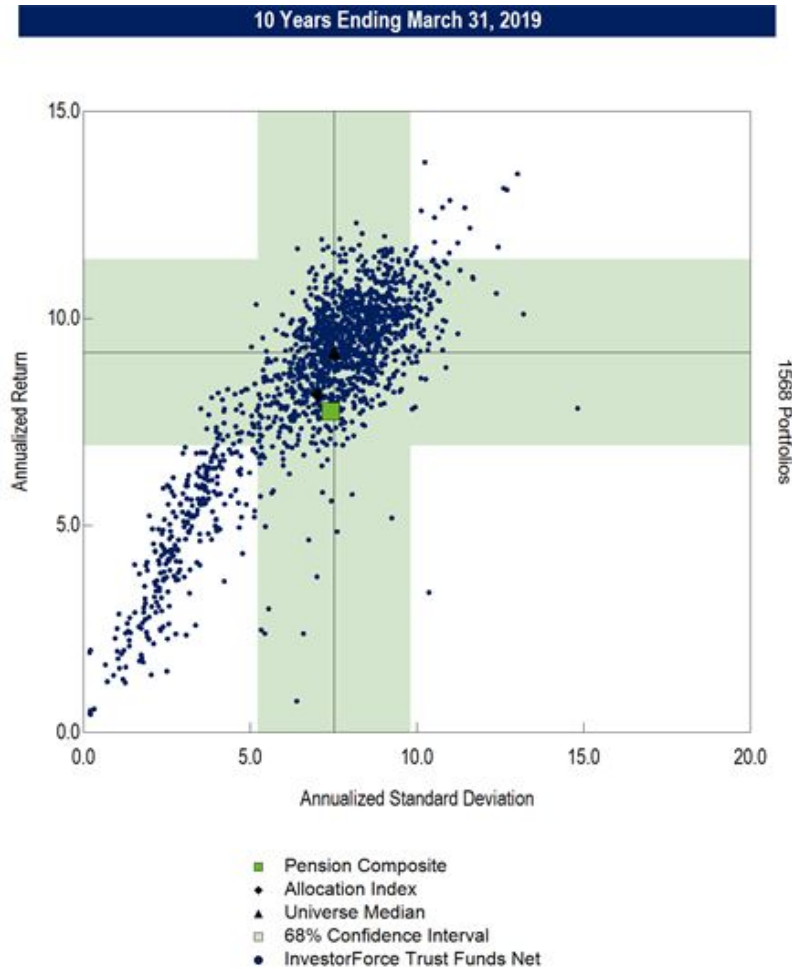
7 Years Ending March 31, 2019				
	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Pension Composite	0.8	76	1.2	65
Allocation Index	1.0	45	1.3	43
Policy Index	1.0	39	1.4	30
InvestorForce Trust Funds Net Median	1.0	--	1.3	--

*Returns are net of fees.



March 31, 2019

TOTAL PLAN RISK/RETURN - 10 YEAR



10 Years Ending March 31, 2019				
	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Pension Composite	7.8%	76	7.4%	48
Allocation Index	8.2%	70	7.0%	37
Policy Index	8.4%	66	6.7%	32
InvestorForce Trust Funds Net Median	9.2%	--	7.5%	--

10 Years Ending March 31, 2019				
	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Pension Composite	1.0	86	1.5	81
Allocation Index	1.1	66	1.7	58
Policy Index	1.2	46	1.9	31
InvestorForce Trust Funds Net Median	1.2	--	1.7	--

*Returns are net of fees.



March 31, 2019

TOTAL PLAN PERFORMANCE DETAIL

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Pension Composite	26,926,834	100.0	100.0	5.5	1.8	2.7	4.4	5.2	3.4	5.1	7.8
Allocation Index				6.1	2.3	2.5	5.6	6.0	4.5	5.9	8.2
Policy Index				6.3	2.7	2.9	5.7	6.2	4.7	6.0	8.4
Total Domestic Large Cap	3,253,444	12.1	8.0	13.6	5.8	9.5	11.7	13.5	10.9	12.7	14.9
S&P 500				13.6	5.9	9.5	11.7	13.5	10.9	12.8	15.9
Vanguard S&P 500 Index	3,253,444	12.1	8.0	13.6	5.8	9.5	11.7	13.5	10.9	--	--
S&P 500				13.6	5.9	9.5	11.7	13.5	10.9	12.8	15.9
Total Small Cap Composite	1,380,684	5.1	4.0	14.6	-5.3	2.0	6.8	12.9	6.9	10.5	--
Russell 2000				14.6	-5.3	2.0	6.8	12.9	7.1	10.7	15.4
SSgA R2000 Index Fund Non Lending	1,380,684	5.1	4.0	14.6	-5.3	2.0	6.8	12.9	6.9	10.6	--
Russell 2000				14.6	-5.3	2.0	6.8	12.9	7.1	10.7	15.4
Total International Equity (including emerging markets)	3,045,720	11.3	10.0	9.8	-2.9	-4.6	3.6	5.1	1.3	3.6	7.0
MSCI EAFE				10.0	-2.5	-3.7	5.1	7.3	2.3	5.6	9.0
Morgan Stanley Int'l	2,229,118	8.3	7.0	11.2	-2.5	-2.7	5.2	6.5	2.1	5.3	8.2
MSCI EAFE				10.0	-2.5	-3.7	5.1	7.3	2.3	5.6	9.0
Emerging Markets Equity	816,602	3.0	3.0	6.8	-3.9	-9.3	0.2	1.9	-1.0	-0.1	--
MSCI Emerging Markets				9.9	0.6	-7.4	7.6	10.7	3.7	2.7	8.9
Mondrian EM Small Cap	816,602	3.0	3.0	6.8	-3.9	-9.3	0.2	1.9	--	--	--
MSCI Emerging Markets Small Cap				7.8	-4.2	-12.4	1.9	5.9	1.8	2.6	10.4
Total Fixed Income	9,763,770	36.3	35.0	3.1	3.6	3.8	2.8	2.5	2.5	3.2	4.8
BBgBarc US Aggregate TR				2.9	4.6	4.5	2.8	2.0	2.7	2.5	3.8
Vanguard Total Bond Market Index	6,755,101	25.1	20.0	3.0	4.7	4.5	2.8	2.0	--	--	--
BBgBarc US Aggregate TR				2.9	4.6	4.5	2.8	2.0	2.7	2.5	3.8
Vanguard Inflation-Protected Securities	899,078	3.3	7.0	3.2	1.9	2.7	--	--	--	--	--
BBgBarc US TIPS TR				3.2	1.9	2.7	1.8	1.7	1.9	1.2	3.4
BlackRock Strategic Income Opportunities	642,551	2.4	3.0	2.5	2.5	--	--	--	--	--	--
3-Month Libor Total Return USD				0.7	2.0	2.6	2.0	1.7	1.1	0.9	0.7
Bain Capital Senior Loan Fund	1,311,725	4.9	5.0	4.0	--	--	--	--	--	--	--
Credit Suisse Leveraged Loans				3.8	2.5	3.3	4.0	5.9	3.8	4.6	8.0
Guggenheim US Bank Loans	155,315	0.6									



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TOTAL PLAN PERFORMANCE DETAIL

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Total GAA	5,763,472	21.4	27.5	5.7	1.0	1.1	3.3	4.4	1.8	3.2	6.8
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				8.6	2.4	1.8	6.8	7.5	4.7	6.0	9.0
Wellington	3,726,534	13.8	13.8	6.9	-3.4	-5.0	2.4	5.7	2.9	4.4	7.6
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				8.6	2.4	1.8	6.8	7.5	4.7	6.0	9.0
Newton Global Real Return	2,036,938	7.6	13.8	4.6	5.2	7.1	4.0	--	--	--	--
60% MSCI ACWI (Net) / 40% FTSE WGBI				7.9	2.2	1.2	6.6	6.8	4.2	5.4	8.2
Total Alternative Investments	1,191,922	4.4	4.5	4.9	-3.8	-1.6	1.6	3.5	1.4	2.4	3.3
HFRI Fund of Funds Composite Index				4.6	-0.4	0.1	2.8	3.9	2.2	3.1	3.5
Lighthouse	1,191,922	4.4	4.5	4.9	-3.8	-1.0	2.7	4.5	--	--	--
Credit Suisse Long Shrt Eqt USD				5.3	-0.2	-0.5	5.0	4.6	3.4	5.2	6.3
Total Real Assets	2,256,200	8.4	8.0								
Principal	2,256,200	8.4	8.0	1.6	5.4	7.7	7.8	8.2	10.1	10.7	8.1
NCREIF ODCE				1.4	5.4	7.5	7.8	8.0	10.2	10.8	8.7
Total Cash	271,622	1.0	3.0								
Distribution Account	271,622	1.0	3.0	0.5	1.5	1.8	1.3	0.9	0.5	0.4	0.3
91 Day T-Bills				0.6	1.7	2.1	1.7	1.2	0.8	0.6	0.4

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

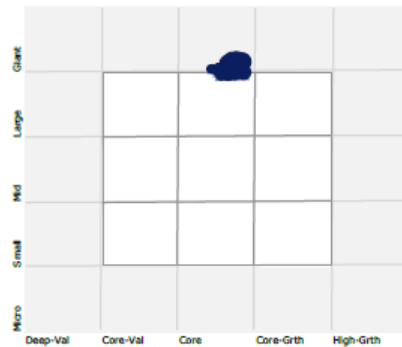
Morgan Stanley includes \$350k in transit from Distribution Account

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VANGUARD INSTITUTIONAL INDEX I

Holdings Based Style Trail (5 Years)

Time Period: 4/30/2014 to 3/31/2019



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

Portfolio Statistics

	Fund	Index
# of Holdings	511	505
% Asset in Top 10 Holdings	21.2	21.3
Turnover Ratio %	6.0	
P/E Ratio	19.8	19.8
P/B Ratio	3.2	3.2
LT Eam Growth	10.7	10.7
Hist Eam Growth	11.5	11.5
12 Mo Yield	2.1	

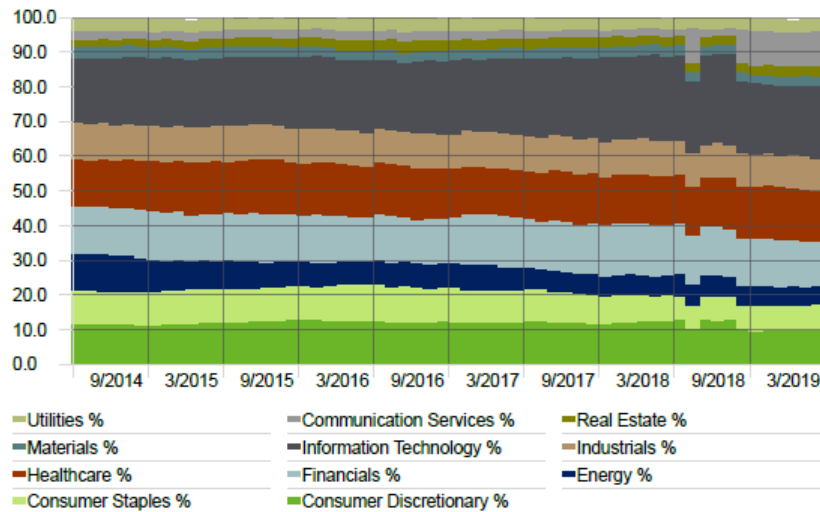
Market Capitalization Breakdown

	Fund	Index
Market Cap Giant %	56.2	56.2
Market Cap Large %	34.0	33.9
Market Cap Mid %	9.8	9.9
Market Cap Small %	0.0	0.0
Market Cap Micro %	0.0	0.0
Average Market Cap (mil)	105,156.8	105,010.0

Top 10 Holdings

	Portf Weight %	3 Month Ret %
Microsoft Corp	3.81	16.57
Apple Inc	3.58	20.88
Amazon.com Inc	3.09	18.56
Facebook Inc A	1.87	27.16
Berkshire Hathaway Inc B	1.64	-1.61
Johnson & Johnson	1.57	9.02
Alphabet Inc Class C	1.52	13.30
Alphabet Inc A	1.48	12.63
Exxon Mobil Corp	1.44	19.89
JPMorgan Chase & Co	1.40	4.52

Historical Sector Allocations (5 Years)



Attribution (Quarter)

	Portfolio Weights	Benchmark Weights	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Active Return
Communication Services	9.91	10.18	14.12	14.18	0.01	-0.01	0.00
Consumer Discretionary	9.93	9.99	15.71	15.71	0.00	0.00	0.00
Consumer Staples	7.22	7.25	12.01	12.01	0.00	0.00	0.00
Energy	5.36	5.39	16.43	16.43	0.00	0.00	0.00
Financials	13.29	13.36	8.52	8.53	0.00	0.00	0.00
Health Care	15.09	15.16	6.59	6.59	0.00	0.00	0.00
Industrials	9.38	9.50	17.08	17.09	0.00	0.00	-0.01
Information Technology	20.13	20.23	19.86	19.86	0.00	0.00	0.00
Materials	2.68	2.69	10.24	10.24	0.00	0.00	0.00
Real Estate	2.96	2.99	17.55	17.54	0.00	0.00	0.00
Utilities	3.23	3.25	11.40	11.40	0.00	0.00	0.00
Attribution Total	99.21	99.99	13.66	13.66	0.00	-0.01	-0.01
Cash	0.43	0.00					
Bond	0.02	0.00					
Other	0.00	0.00					
Total	100.00	100.00					
Expense Ratio			0.01	0.00			
Residual(Reported - Attribution + Expense)			0.01	-0.01			

Source: Morningstar



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VANGUARD INSTITUTIONAL INDEX I

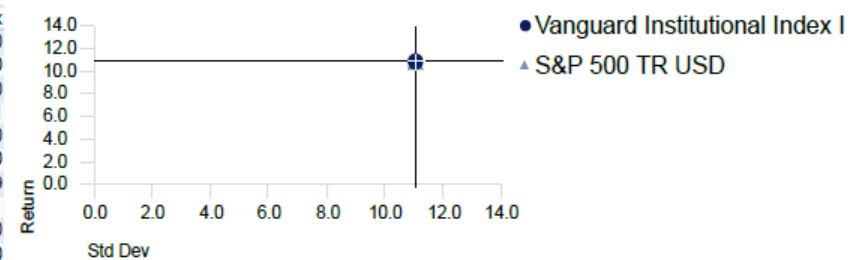
Risk & Return Characteristics (5 Years)

Time Period: 4/1/2014 to 3/31/2019

	Fund	Index
R2	100.0	100.0
Alpha	0.0	0.0
Beta	1.0	1.0
Std Dev	11.1	11.1
Up Capture Ratio	99.9	100.0
Down Capture Ratio	100.1	100.0
Sharpe Ratio (geo)	0.9	0.9
Information Ratio (geo)	-2.5	
Tracking Error	0.0	0.0
Correlation	1.0	1.0

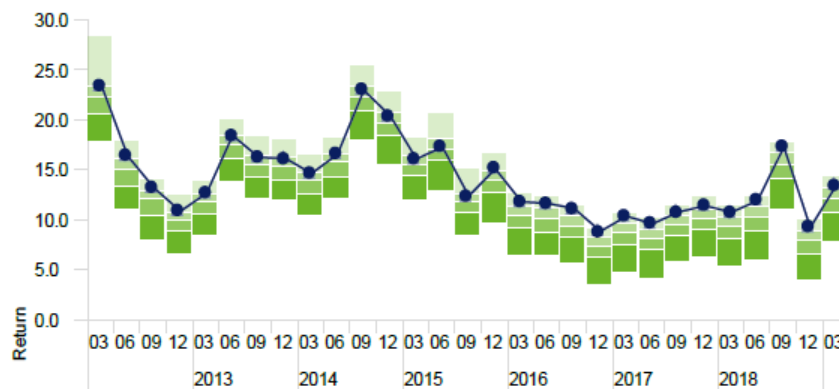
Risk & Return Illustration (5 Years)

Time Period: 4/1/2014 to 3/31/2019



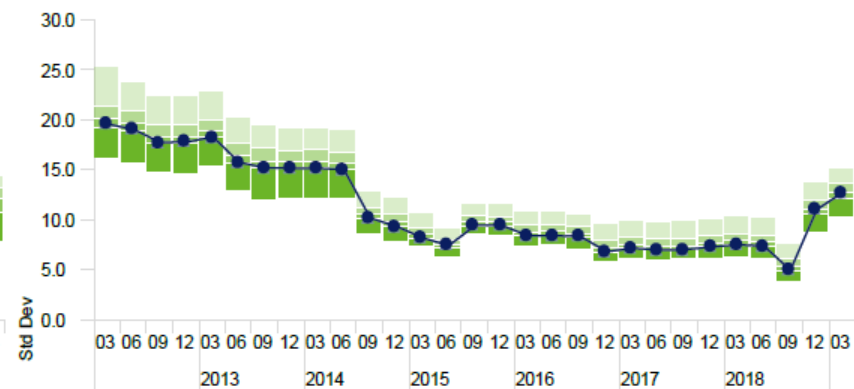
Rolling Return (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



Rolling Risk (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



Calendar Year Returns

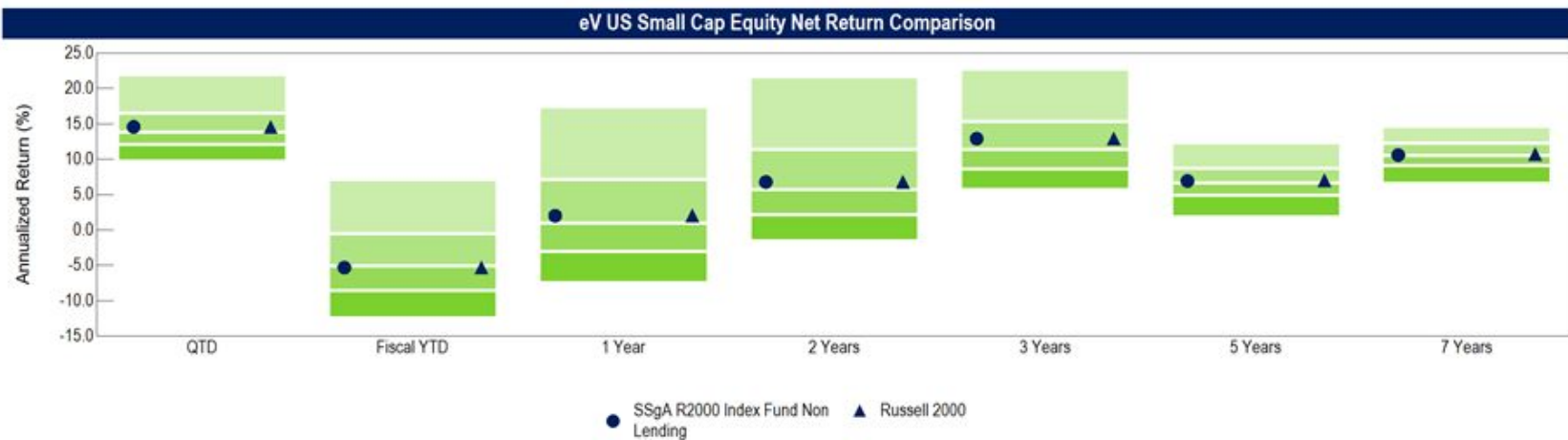
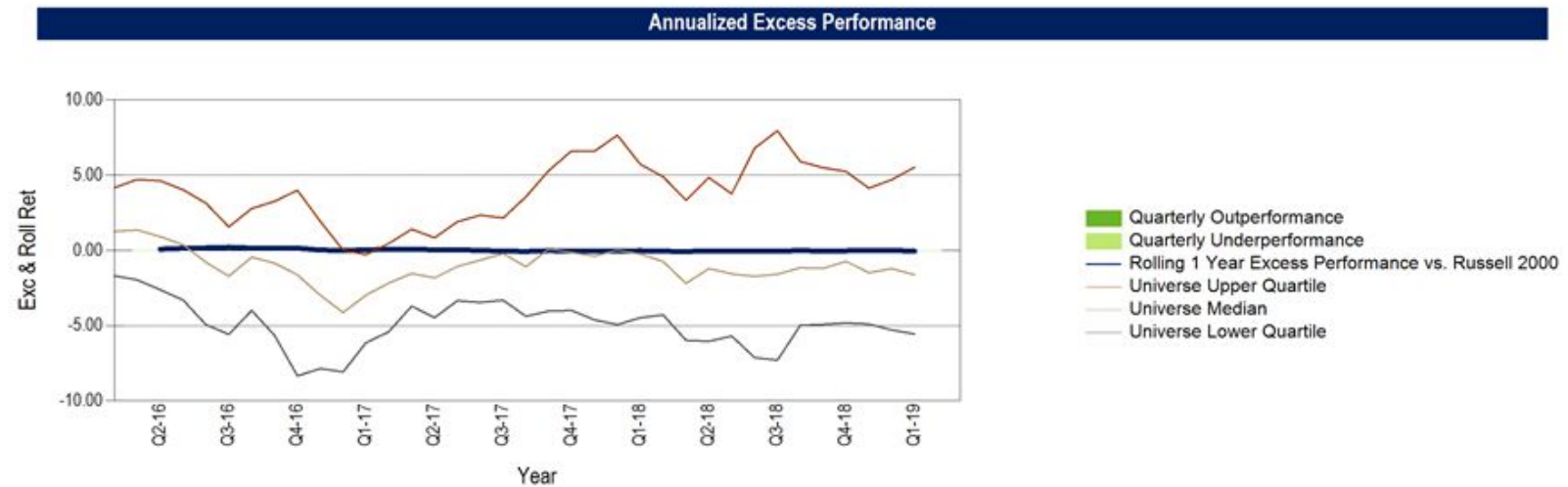
	2009	Rank	2010	Rank	2011	Rank	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	2017	Rank	2018	Rank
Vanguard Institutional Index I	26.6	52	15.0	29	2.1	17	16.0	35	32.3	42	13.7	18	1.4	20	11.9	27	21.8	29	-4.4	27
S&P 500 TR USD	26.5		15.1		2.1		16.0		32.4		13.7		1.4		12.0		21.8		-4.4	



Source: Morningstar

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SSgA R2000 NON LENDING

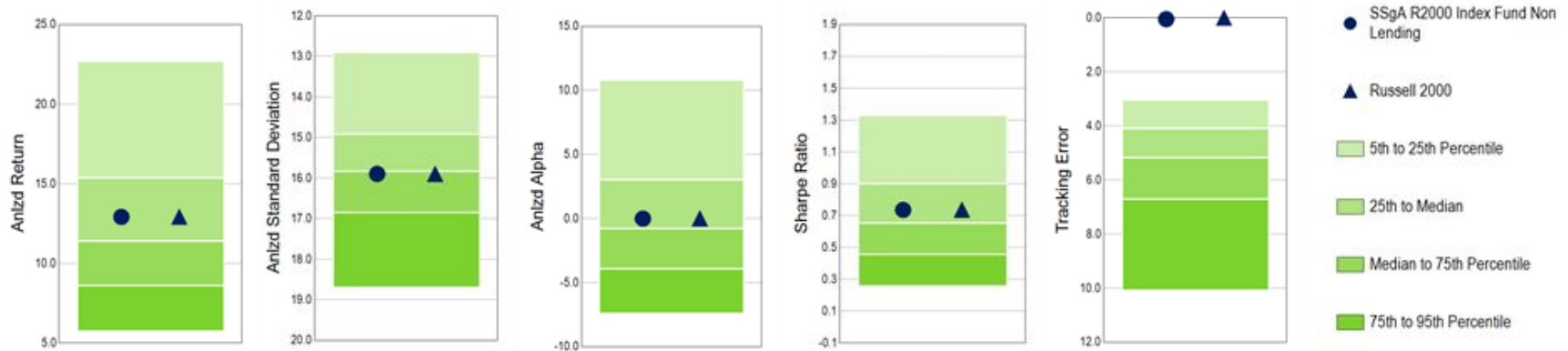
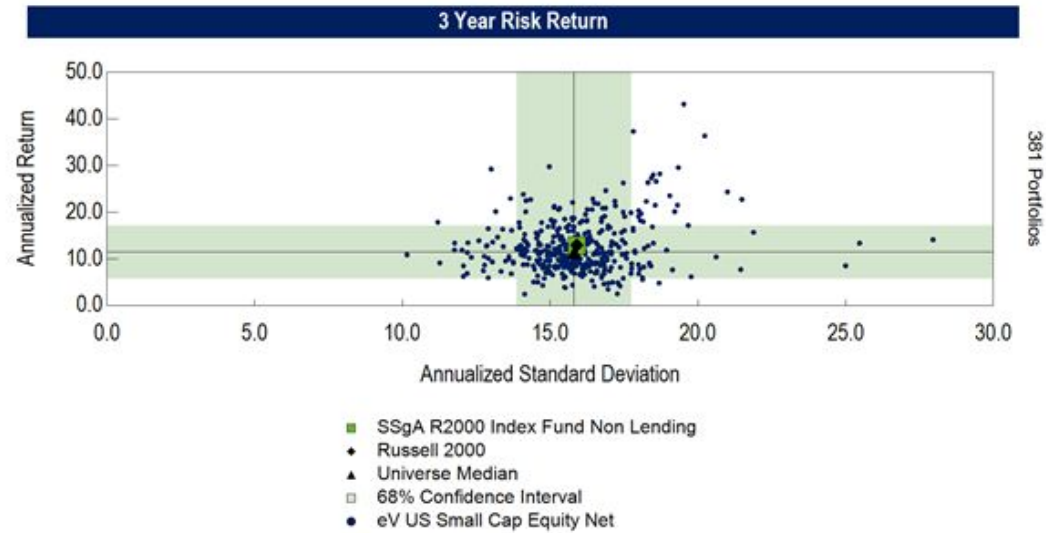


*Returns are net of fees.



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SSgA R2000 NON LENDING



*Returns are net of fees.



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SSgA R2000 NON LENDING

Characteristics		
	Portfolio	Russell 2000
Number of Holdings	1,993	1,999
Weighted Avg. Market Cap. (\$B)	2.4	2.4
Median Market Cap. (\$B)	0.8	0.8
Price To Earnings	18.4	18.4
Price To Book	2.4	2.4
Price To Sales	1.2	1.2
Return on Equity (%)	3.6	3.4
Yield (%)	1.4	1.4
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%	21.0%	20.8%	3.7%	3.6%	
Materials	0.0%	0.0%	0.0%	0.0%	16.8%	17.3%	3.9%	3.8%	
Industrials	0.1%	0.1%	0.0%	0.0%	12.8%	12.4%	14.5%	14.4%	
Consumer Discretionary	0.1%	0.1%	0.0%	0.0%	14.1%	13.3%	12.0%	12.0%	
Consumer Staples	0.0%	0.0%	0.0%	0.0%	7.1%	7.3%	2.8%	2.8%	
Health Care	0.0%	0.1%	0.0%	0.0%	16.4%	16.0%	15.8%	16.0%	
Financials	0.1%	0.0%	0.1%	0.0%	8.6%	8.6%	17.1%	17.1%	
Information Technology	-0.1%	0.0%	-0.1%	0.0%	23.4%	23.5%	15.6%	15.6%	
Communication Services	0.0%	0.0%	0.0%	0.0%	15.7%	15.4%	3.3%	3.3%	
Utilities	0.0%	0.0%	0.0%	0.0%	10.9%	10.5%	3.8%	3.8%	
Real Estate	0.0%	0.0%	0.0%	0.0%	17.8%	17.7%	7.6%	7.6%	
Cash	-1.3%	0.0%	-1.3%	0.0%	0.6%	--	0.0%	0.0%	
Unclassified	0.0%	--	--	--	--	--	0.0%	0.0%	
Portfolio	-1.0%	=	0.3%	+	-1.2%	+	-0.1%		
					13.7%	14.7%	100.0%	100.0%	

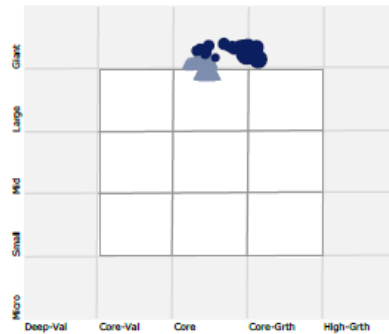
*Attribution on manager pages is holdings based, using buy-and-hold assumptions from the beginning of period portfolio. Results may differ from actual performance. Returns are net of fees.



MORGAN STANLEY INTERNATIONAL EQUITY I

Holdings Based Style Trail (5 Years)

Time Period: 4/30/2014 to 3/31/2019



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

Portfolio Statistics

	Fund	Index
# of Holdings	62	920
% Asset in Top 10 Holdings	35.2	12.1
Turnover Ratio %	34.0	
P/E Ratio	12.2	14.7
P/B Ratio	2.0	1.5
LT Eam Growth	9.2	8.2
Hist Eam Growth	28.1	8.3
12 Mo Yield	2.3	

Market Capitalization Breakdown

	Fund	Index
Market Cap Giant %	59.8	50.0
Market Cap Large %	34.8	36.7
Market Cap Mid %	4.7	13.2
Market Cap Small %	0.7	0.0
Market Cap Micro %	0.0	0.0
Average Market Cap	45,375.5	32,128.7
Equity Region Developed %	96.2	99.5
Equity Region Emerging %	3.8	0.5

Top Ten Holdings

	Port Weight %	3 Month Return
Reckitt Benckiser Group PLC	4.42	8.59
Unilever NV DR	4.30	8.06
Kirin Holdings Co Ltd	3.53	13.96
Novartis AG	3.53	16.24
GlaxoSmithKline PLC	3.37	11.14
RELX PLC	3.34	3.90
Sanofi SA	3.32	2.22
SAP SE	3.21	16.38
Pernod Ricard SA	3.11	9.67
Henkel AG & Co KGaA Participating Preferred	3.07	-6.31

Sector Attribution (Quarter)

	Portfolio Weights	Benchmark Weights	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Active Return
Communication Services	3.84	5.50	6.08	4.65	0.09	0.06	0.14
Consumer Discretionary	2.94	11.24	4.17	7.44	0.22	-0.09	0.12
Consumer Staples	30.92	11.35	12.70	12.45	0.45	0.10	0.55
Energy	5.07	5.87	14.93	10.55	-0.01	0.22	0.22
Financials	14.93	19.43	11.78	6.92	0.13	0.74	0.88
Health Care	16.80	11.12	8.97	11.60	0.09	-0.45	-0.36
Industrials	12.82	14.37	9.64	10.72	-0.01	-0.14	-0.15
Information Technology	6.69	6.06	23.99	15.46	0.04	0.56	0.60
Materials	4.75	7.40	8.62	13.40	-0.08	-0.23	-0.32
Real Estate	0.00	3.76		14.17	-0.15	0.00	-0.15
Utilities	0.00	3.74		9.12	0.04	0.00	0.04
Attribution Total	98.75	99.84	11.67	10.10	0.80	0.77	1.56
Cash	1.25	0.00					
Other	0.00	0.03					
Missing Performance	0.00	0.13					
Total	100.00	100.00					

Region Attribution (Quarter)

	Portfolio Weights	Benchmark Weights	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Active Return
Asia - Developed	5.08	5.13	20.42	13.18	0.00	0.36	0.36
Asia - Emerging	3.84	0.67	10.60	19.53	0.30	-0.34	-0.04
Australasia	0.00	6.93		11.12	-0.07	0.00	-0.07
Canada	4.80	0.00	17.56		0.36	0.00	0.36
Europe - ex Euro	5.67	13.99	13.73	12.28	-0.18	0.09	-0.09
Eurozone	40.05	30.49	10.21	9.78	-0.03	0.17	0.14
Japan	14.04	24.44	10.72	6.80	0.34	0.56	0.90
Latin America	0.00	0.05		-1.15	0.01	0.00	0.01
Middle East	0.00	0.47		6.34	0.02	0.00	0.02
United Kingdom	22.13	16.49	11.35	11.83	0.10	-0.11	-0.01
United States	3.14	1.16	11.89	15.57	0.11	-0.11	-0.01
Attribution Total	98.75	99.84	11.67	10.10	0.95	0.62	1.56
Cash	1.25	0.00					
Other	0.00	0.03					
Missing Performance	0.00	0.13					
Total	100.00	100.00					



Source: Morningstar

March 31, 2019

MORGAN STANLEY INTERNATIONAL EQUITY I

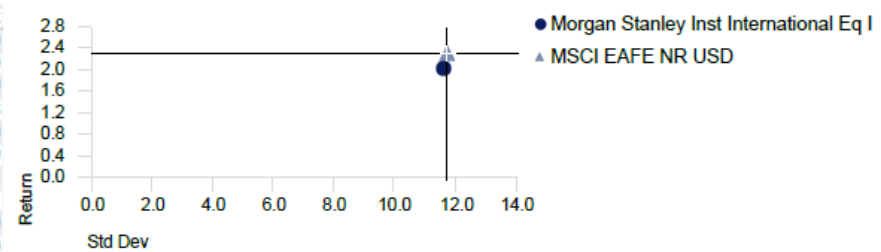
Risk & Return Characteristics (5 Years)

Time Period: 4/1/2014 to 3/31/2019

	Fund	Index
R2	93.4	100.0
Alpha	-0.2	0.0
Beta	1.0	1.0
Std Dev	11.6	11.8
Up Capture Ratio	93.2	100.0
Down Capture Ratio	95.2	100.0
Sharpe Ratio (geo)	0.1	0.1
Information Ratio (geo)	-0.1	0.0
Tracking Error	3.0	0.0
Correlation	1.0	1.0

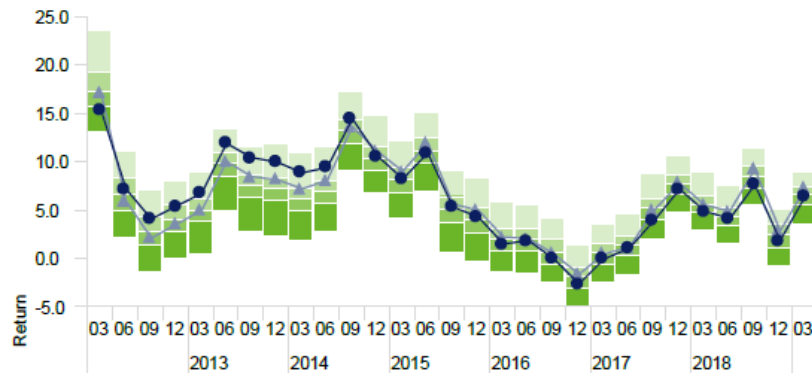
Risk & Return Illustration (5 Years)

Time Period: 4/1/2014 to 3/31/2019



Rolling Returns (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile

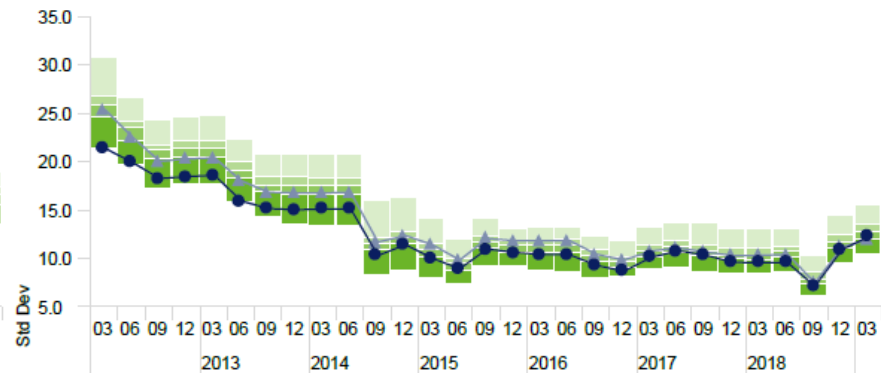


—Morgan Stanley Inst International Eq I

—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

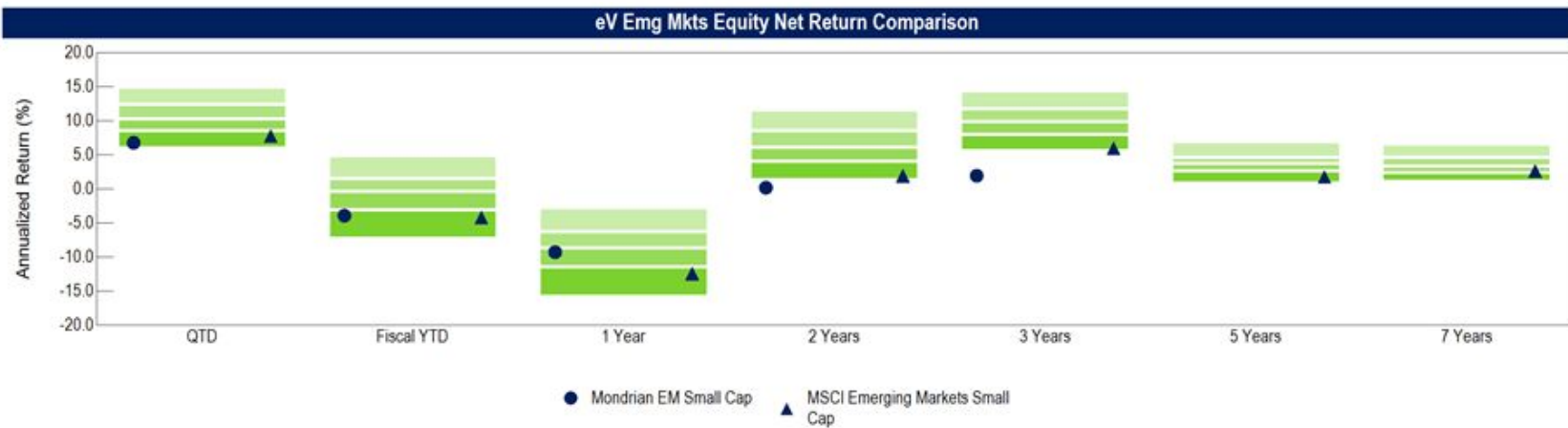
	2009	Rank	2010	Rank	2011	Rank	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	2017	Rank	2018	Rank
Morgan Stanley Inst International Eq I	21.6	85	6.1	87	-7.6	5	19.6	26	20.4	43	-6.1	64	0.4	30	-2.0	82	25.2	53	-13.8	37
MSCI EAFE NR USD	31.8		7.8		-12.1		17.3		22.8		-4.9		-0.8		1.0		25.0		-13.8	



Source: Morningstar

March 31, 2019

MONDRIAN EM SMALL CAP

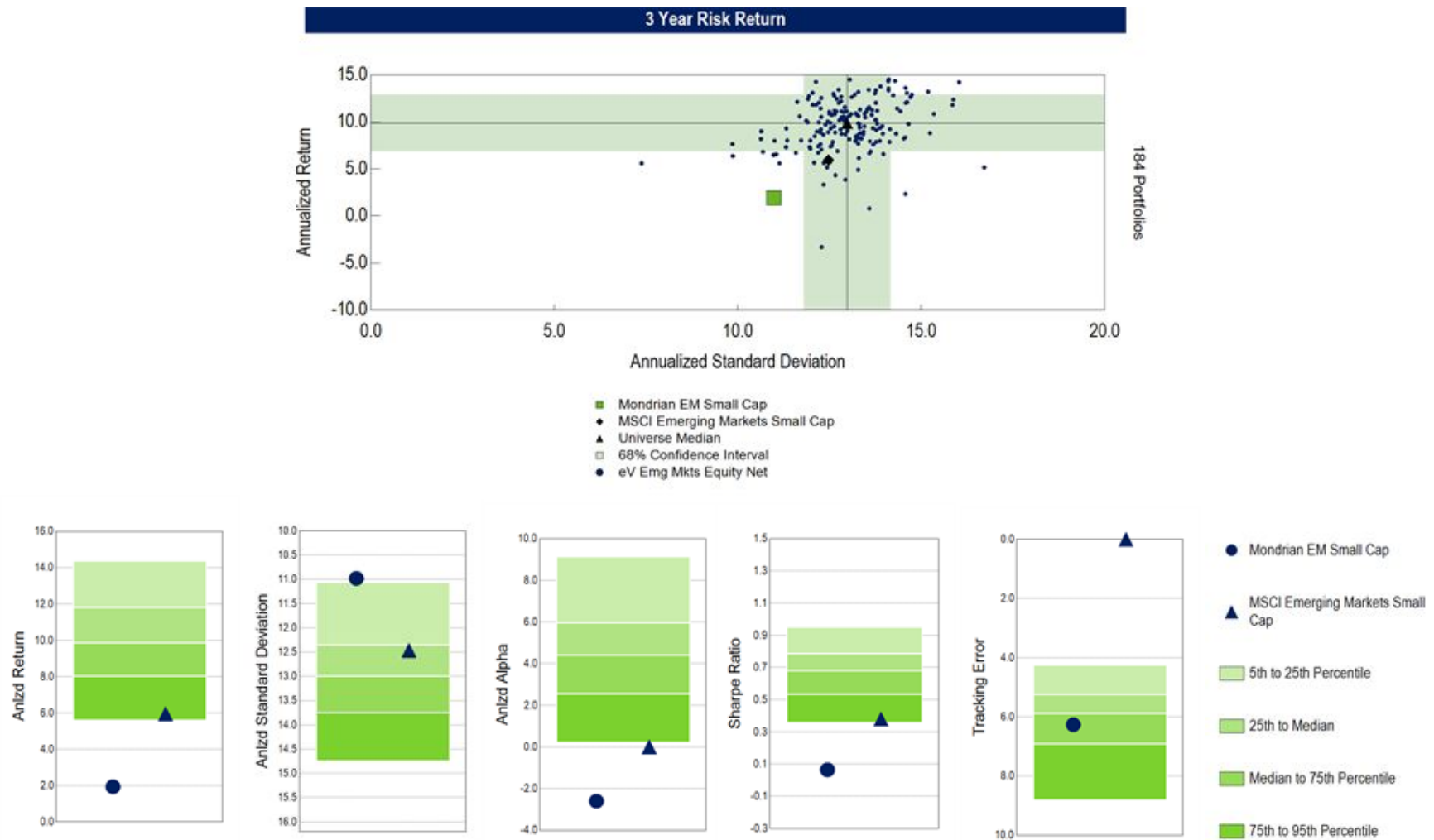


*Returns are net of fees.



March 31, 2019

MONDRIAN EM SMALL CAP



MONDRIAN EM SMALL CAP

Characteristics	Portfolio	MSCI Emerging Markets Small Cap
Number of Holdings	107	1,567
Weighted Avg. Market Cap. (\$B)	1.5	1.2
Median Market Cap. (\$B)	1.1	0.7
Price To Earnings	21.2	13.3
Price To Book	3.6	2.3
Price To Sales	2.3	0.9
Return on Equity (%)	18.2	13.0
Yield (%)	2.7	2.7
Beta		1.0
R-Squared		1.0

Top Positive Contributors	Relative Contribution %	Return %
HAND ENTERPRISE SLTN.'A'	0.7%	77.0%
AIRTAC INTERNATIONAL GP.	0.5%	32.4%
SINOSOFT TECHNOLOGY GP.	0.4%	30.5%
FU SHOU YUAN INTL.GP.	0.4%	21.7%
DINO POLSKA SA	0.4%	23.7%
PI INDUSTRIES	0.4%	20.6%
ARWANA CITRAMULIA	0.3%	25.5%
MERRY ELECTRONICS	0.3%	37.0%
BANGKOK CHAIN HOSP. FB	0.3%	22.0%
GREENTOWN SER.GP.	0.3%	15.7%

Top Negative Contributors	Relative Contribution %	Return %
HARTALEGA HOLDINGS	-0.3%	-23.3%
CPMC HOLDINGS	-0.2%	-16.4%
MANILA WATER	-0.2%	-16.9%
DUZONBIZON	-0.1%	-11.7%
FIBRA INN REIT	-0.1%	-12.6%
AJANTA PHARMA	-0.1%	-12.0%
NEXTEER AUTOMOTIVE GROUP	-0.1%	-13.3%
KANSAI NEROLAC PAINTS	-0.1%	-5.8%
WILSON SONS BDR (BSP)	-0.1%	-7.7%
SAWIT SUMBERMAS SARANA	-0.1%	-14.0%

	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%		0.0%		-0.1%	2.9%	11.7%	1.3%	1.9%	
Materials	-0.5%	-0.7%		0.0%		0.2%	3.0%	7.9%	12.0%	11.8%	
Industrials	1.1%	1.0%		0.0%		0.1%	12.1%	5.0%	15.6%	14.3%	
Consumer Discretionary	0.0%	0.0%		0.0%		0.1%	7.3%	7.1%	12.6%	14.2%	
Consumer Staples	-0.1%	0.1%		-0.4%		0.2%	5.6%	3.4%	16.1%	6.7%	
Health Care	-0.4%	-0.2%		-0.2%		0.0%	3.8%	4.5%	14.0%	8.4%	
Financials	0.2%	0.4%		0.1%		-0.4%	10.2%	6.8%	2.5%	11.2%	
Information Technology	-0.1%	0.9%		-0.5%		-0.4%	20.5%	14.2%	8.4%	14.9%	
Communication Services	0.0%	-0.1%		0.0%		0.1%	6.1%	7.3%	4.9%	4.1%	
Utilities	-0.1%	-0.3%		0.0%		0.1%	-0.5%	5.3%	3.8%	4.5%	
Real Estate	-0.6%	-0.6%		0.0%		0.0%	4.8%	13.5%	7.0%	7.8%	
Cash	-0.1%	0.0%		-0.1%		0.0%	0.6%	--	0.5%	0.0%	
Unclassified	0.0%	0.0%		0.0%		0.0%	5.1%	7.9%	1.2%	0.1%	
Portfolio	-0.9%	=	0.3%	+	-1.0%	+	-0.2%	7.0%	7.9%	100.0%	100.0%



March 31, 2019

MONDRIAN EM SMALL CAP

Sector Allocation

	Fund	MSCI EM SC
Communication Services	4.8	4.2
Consumer Discretionary	13.4	14.4
Consumer Staples	15.7	6.7
Energy	1.3	1.9
Financials	3.2	11.1
Health Care	15.4	8.4
Industrials	15.2	14.2
Information Technology	8.2	14.9
Materials	11.8	11.7
Real Estate	6.9	7.9
Utilities	3.8	4.6
Cash	0.5	—
TOTAL	100.0	100.0

Country Allocation

	Fund	MSCI EM SC
Latin America	9.2	11.5
Brazil	2.9	6.4
Mexico	4.0	3.0
Peru	2.2	0.1
Europe, Middle East & Africa	11.9	11.8
Czech Republic	1.3	0.0
Estonia	1.2	—
Kuwait	1.4	—
Poland	2.6	1.1
Saudi Arabia	1.7	—
Slovenia	0.7	—
South Africa	1.4	5.3
UAE	0.7	0.5
United Kingdom	0.8	—
Asia	78.4	76.8
North Asia	33.6	49.5
China/Hong Kong	21.0	12.5
South Korea	4.7	17.5
Taiwan	7.9	19.5
South Asia	44.8	26.6
India	27.6	16.1
Indonesia	6.7	2.4
Malaysia	3.3	3.3
Philippines	4.3	1.0
Thailand	2.9	3.8
Cash	0.5	—
TOTAL	100.0	100.0



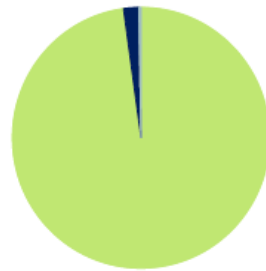
Source: Mondrian

March 31, 2019

VANGUARD TOTAL BOND MARKET I

Asset Allocation

Portfolio Date: 3/31/2019



• Stock	0.0
• Bond	97.8
• Cash	1.9
• Other	0.3
Total	100.0

Fixed Income Statistics

Portfolio Date: 3/31/2019

Morningstar Fixed Income Style Box™			
	Ltd	Mod	Ext
High			
Med			
Low			

Fixed-Income Stats

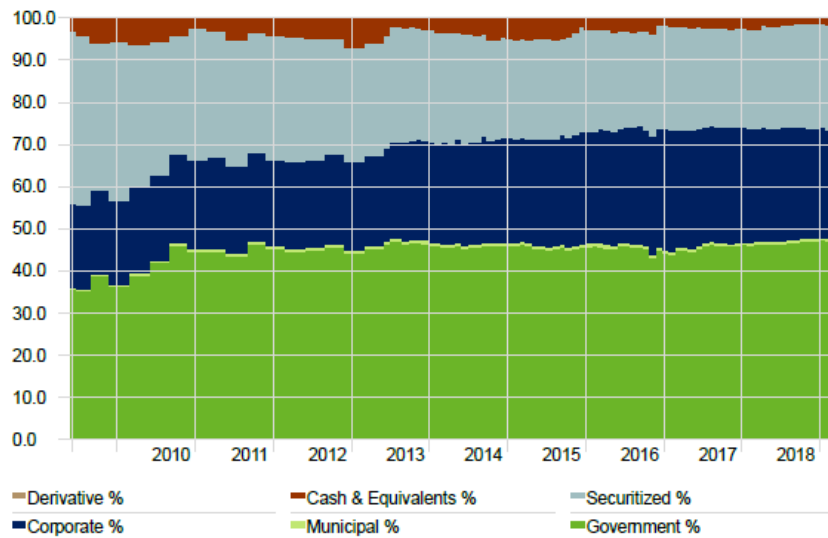
Average Eff Duration	6.0
Average Eff Maturity	8.3
Average Coupon	3.2
Average Price	102.2

Credit Quality Breakdown

Portfolio Date: 1/31/2019

	Fund	Index
AAA %	71.1	
AA %	3.34	
A %	10.67	
BBB %	14.87	
BB %	0.00	
B %	0.00	
Below B %	0.02	
Not Rated %	0.00	
Yield to Maturity	3.19	

Historical Sector Allocations (10 Years)



Top Holdings

	Detail Holding Type	Portfolio Weighting %
Cmt Market Liquidity Rate	MUTUAL FUND - MONEY MARKET	1.91
United States Treasury Notes 2.88%	BOND - GOV'T/TREASURY	0.45
United States Treasury Notes 2.12%	BOND - GOV'T/TREASURY	0.44
United States Treasury Notes 2.12%	BOND - GOV'T/TREASURY	0.39
United States Treasury Notes 2.62%	BOND - GOV'T/TREASURY	0.39
United States Treasury Notes 3.12%	BOND - GOV'T/TREASURY	0.39
United States Treasury Notes 2.5%	BOND - GOV'T/TREASURY	0.38
United States Treasury Notes 2.25%	BOND - GOV'T/TREASURY	0.37
United States Treasury Notes 1.75%	BOND - GOV'T/TREASURY	0.36
United States Treasury Notes 2.25%	BOND - GOV'T/TREASURY	0.36



Source: Morningstar

March 31, 2019

VANGUARD TOTAL BOND MARKET I

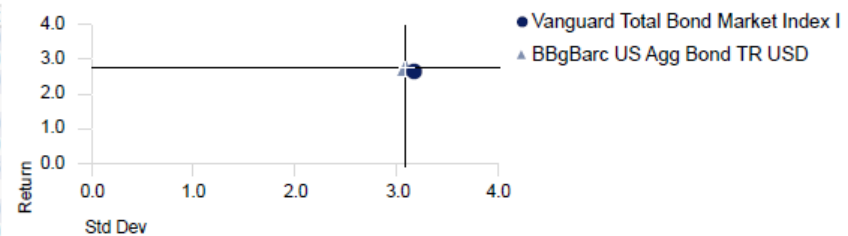
Risk & Return Characteristics (5 Years)

Time Period: 4/1/2014 to 3/31/2019

	Fund	Index
R2	99.8	100.0
Alpha	-0.1	0.0
Beta	1.0	1.0
Std Dev	3.2	3.1
Up Capture Ratio	100.3	100.0
Down Capture Ratio	105.0	100.0
Sharpe Ratio (geo)	0.6	0.6
Information Ratio (geo)	-0.4	0.0
Tracking Error	0.2	0.0
Correlation	1.0	1.0

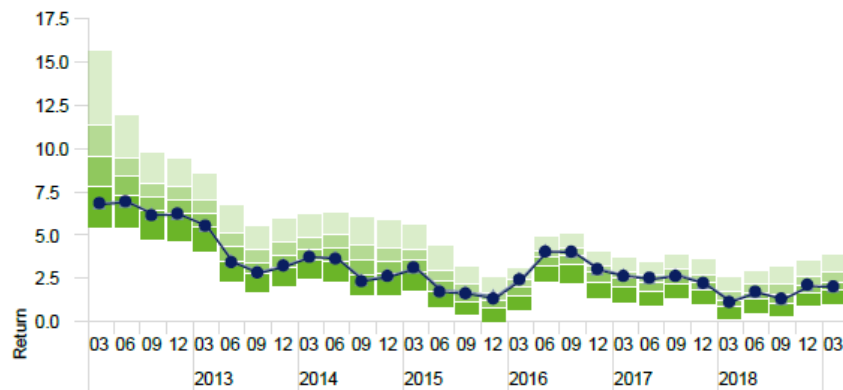
Risk & Return Illustration (5 Years)

Time Period: 4/1/2014 to 3/31/2019



Rolling Returns (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile

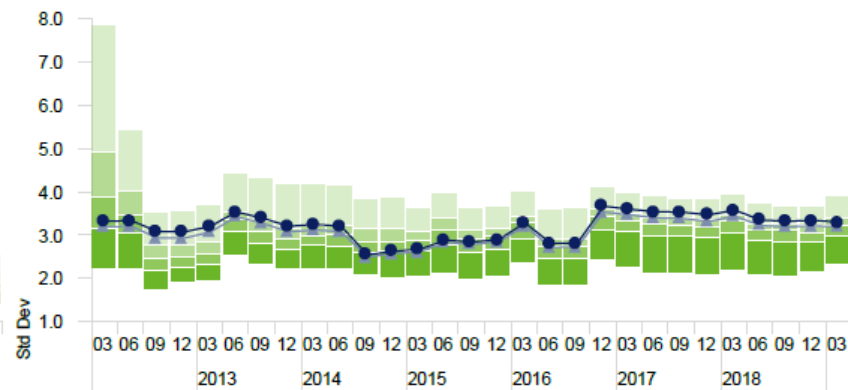


—Vanguard Total Bond Market Index I

—BBgBarc US Agg Bond TR USD

Rolling Risk (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

	2009	Rank	2010	Rank	2011	Rank	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	2017	Rank	2018	Rank
Vanguard Total Bond Market Index I	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	0.0	30
BBgBarc US Agg Bond TR USD	5.9		6.5		7.8		4.2		-2.0		6.0		0.5		2.6		3.5		0.0	



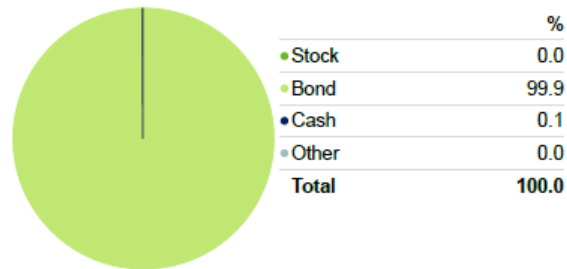
Source: Morningstar

March 31, 2019

VANGUARD INFLATION PROTECTED SECURITIES

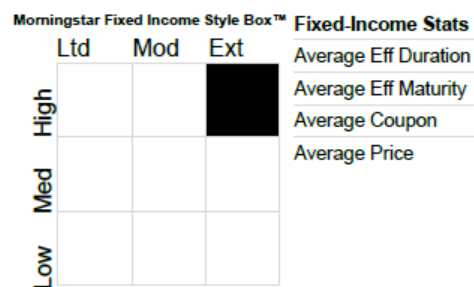
Asset Allocation

Portfolio Date: 3/31/2019



Fixed Income Statistics

Portfolio Date: 3/31/2019

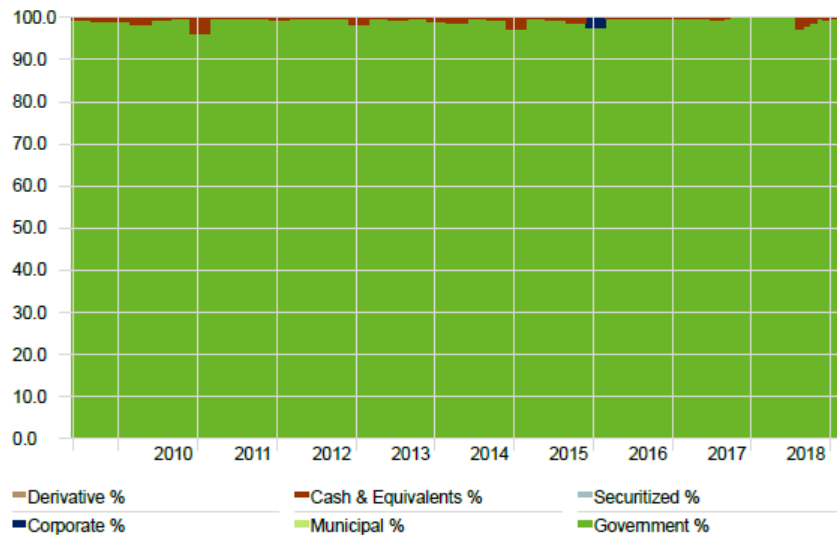


Credit Quality Breakdown

Portfolio Date: 1/31/2019

	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	5.21
United States Treasury Notes 0.12%	BOND - GOV'T INFLATION PROTECTED	3.85
United States Treasury Notes 0.62%	BOND - GOV'T INFLATION PROTECTED	3.81
United States Treasury Notes 0.12%	BOND - GOV'T INFLATION PROTECTED	3.78
United States Treasury Notes 0.62%	BOND - GOV'T INFLATION PROTECTED	3.67
United States Treasury Notes 0.38%	BOND - GOV'T INFLATION PROTECTED	3.64
United States Treasury Notes 0.12%	BOND - GOV'T INFLATION PROTECTED	3.61
United States Treasury Notes 0.38%	BOND - GOV'T INFLATION PROTECTED	3.59
United States Treasury Notes 0.12%	BOND - GOV'T INFLATION PROTECTED	3.57
United States Treasury Notes 0.12%	BOND - GOV'T INFLATION PROTECTED	3.48



Source: Morningstar

March 31, 2019

VANGUARD INFLATION PROTECTED SECURITIES

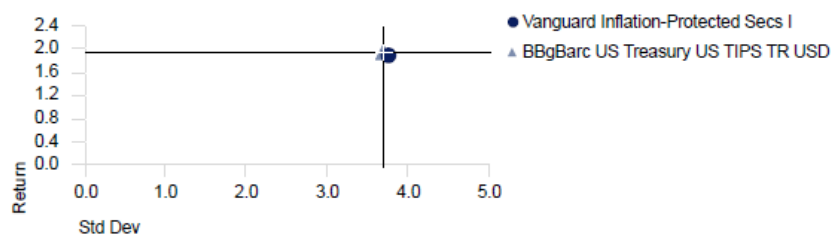
Risk & Return Characteristics (5 Years)

Time Period: 4/1/2014 to 3/31/2019

	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	100.5	100.0
Down Capture Ratio	102.7	100.0
Sharpe Ratio (geo)	0.3	0.3
Information Ratio (geo)	-0.1	0.0
Tracking Error	0.3	0.0
Correlation	1.0	1.0

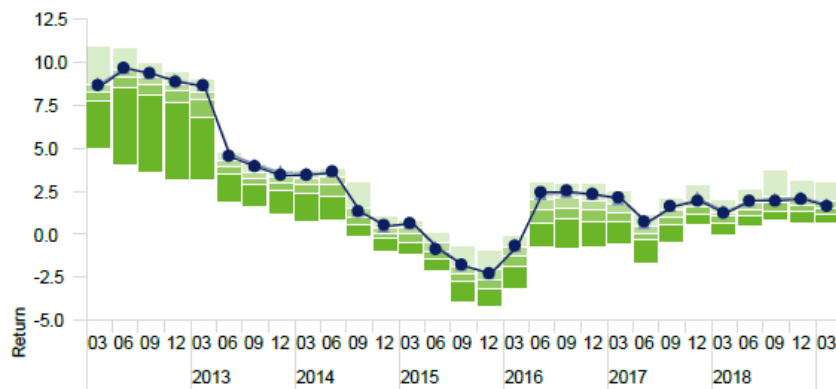
Risk & Return Illustration (5 Years)

Time Period: 4/1/2014 to 3/31/2019



Rolling Returns (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile

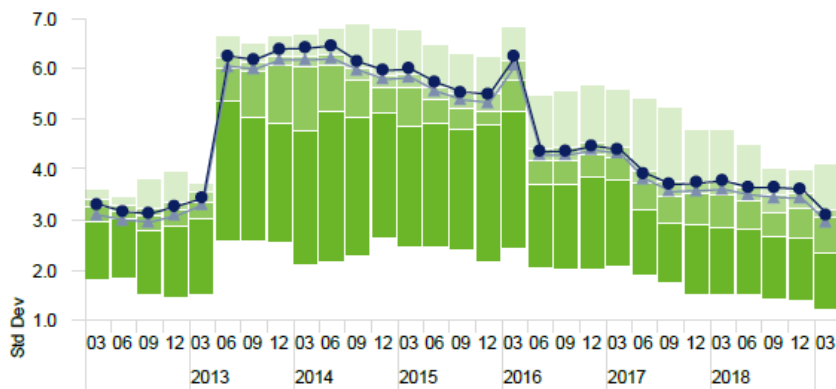


—Vanguard Inflation-Protected Secs I

—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

	2009	Rank	2010	Rank	2011	Rank	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	2017	Rank	2018	Rank
Vanguard Inflation-Protected Secs I	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	-1.4	48
BBgBarc US Treasury US TIPS TR USD	11.4		6.3		13.6		7.0		-8.6		3.6		-1.4		4.7		3.0		-1.3	



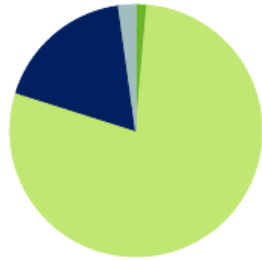
Source: Morningstar

March 31, 2019

BLACKROCK STRATEGIC INCOME

Asset Allocation

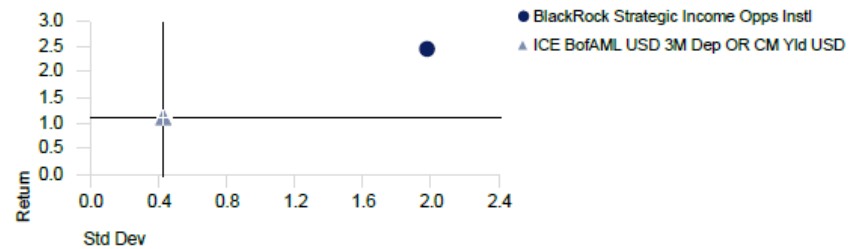
Portfolio Date: 6/30/2018



	%
Stock	1.4
Bond	78.5
Cash	17.9
Other	2.2
Total	100.0

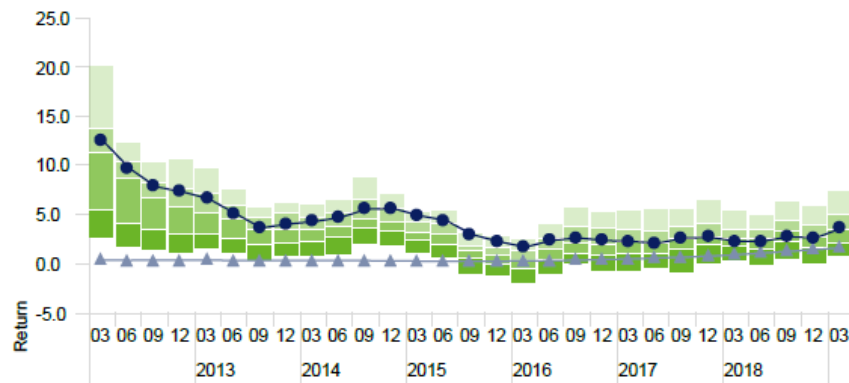
Risk & Return Illustration (5 Years)

Time Period: 4/1/2014 to 3/31/2019



Rolling Returns (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile

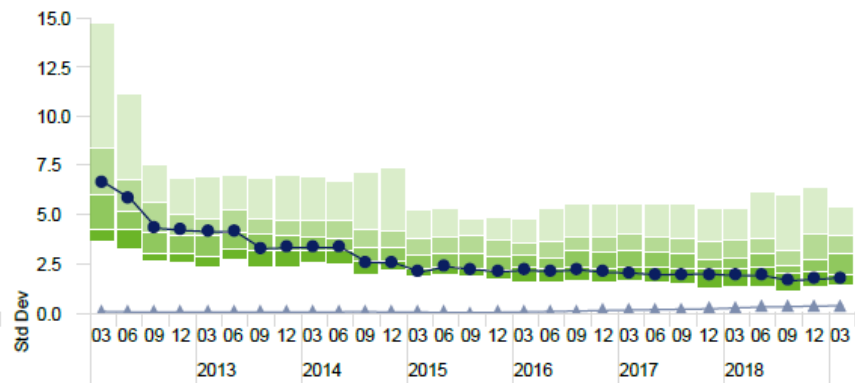


—BlackRock Strategic Income Opps Instl

—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

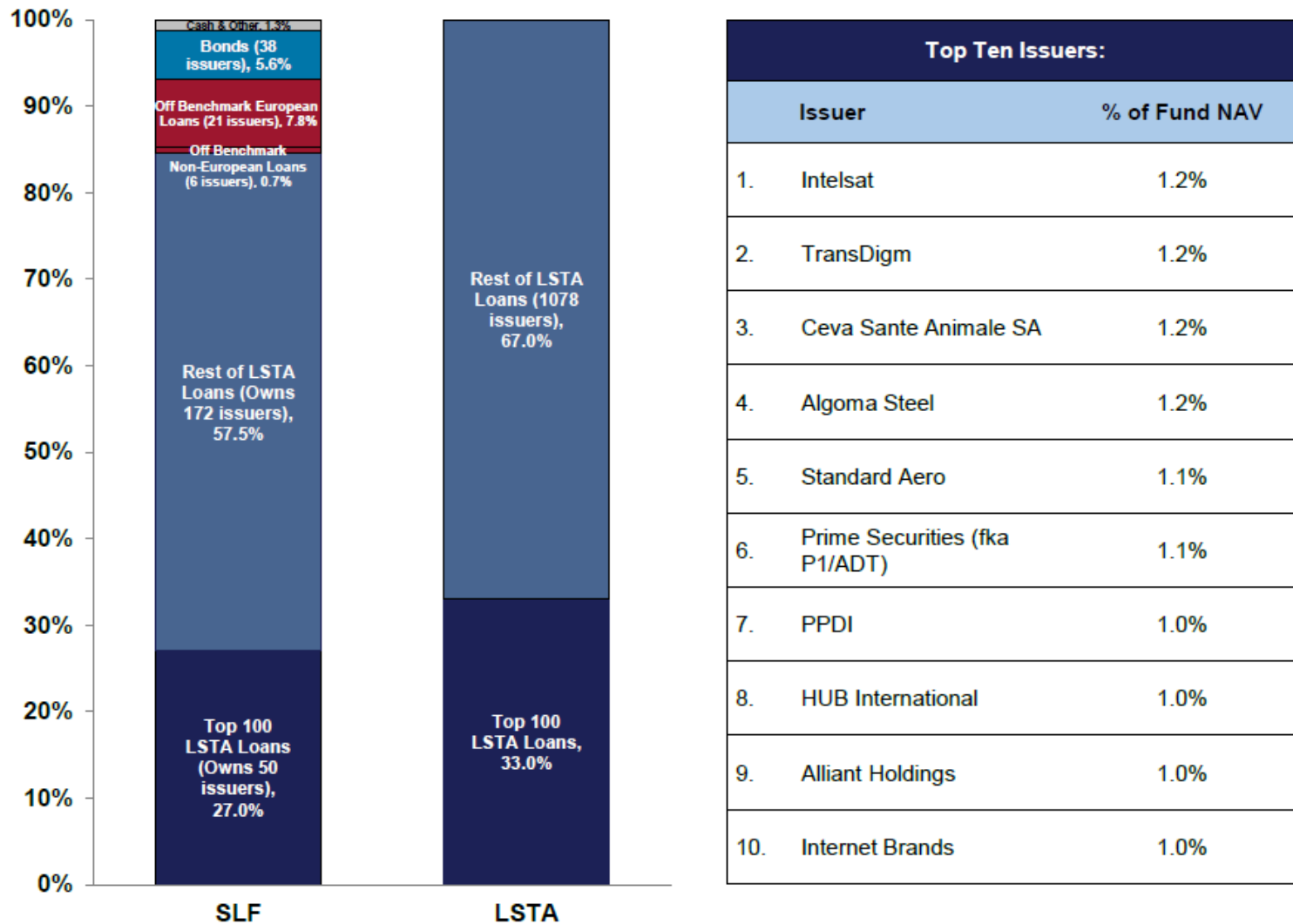
	2009	Rank	2010	Rank	2011	Rank	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	2017	Rank	2018	Rank
BlackRock Strategic Income Opps Instl	25.2	29	13.4	1	-0.7	50	9.9	25	3.3	19	3.9	16	-0.3	32	3.6	66	4.9	39	-0.5	46
ICE BofAML USD 3M Dep OR CM Yld USD	0.7		0.3		0.3		0.4		0.3		0.2		0.3		0.8		1.3		2.4	



Source: Morningstar

March 31, 2019

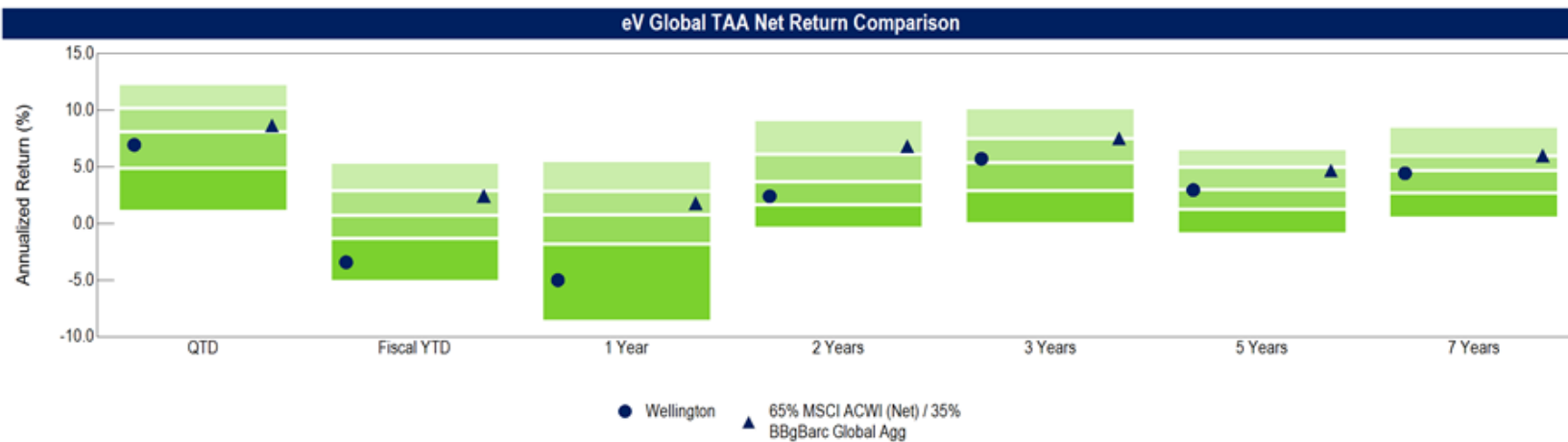
BAIN CAPITAL SENIOR LOAN FUND



Source: Bain Capital

March 31, 2019

WELLINGTON OPPORTUNISTIC

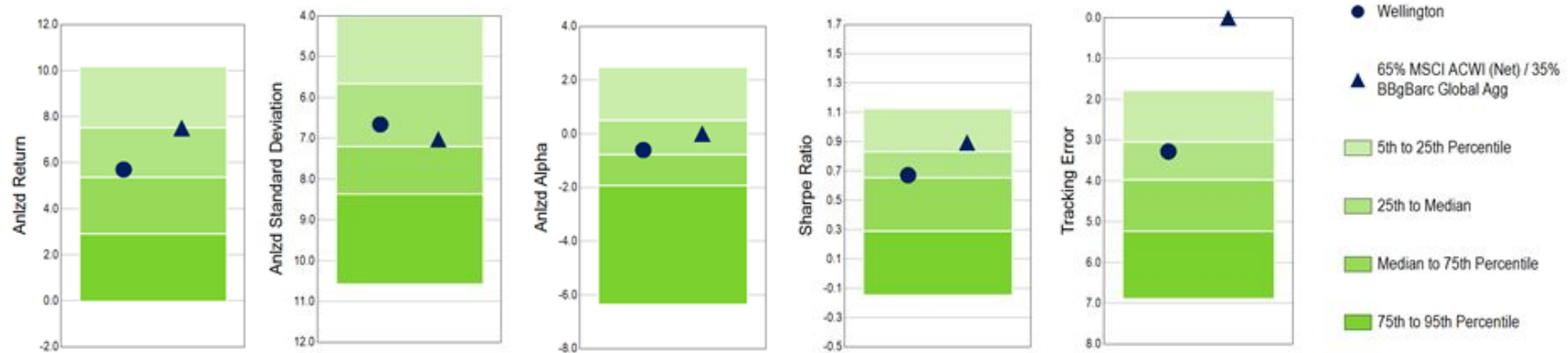
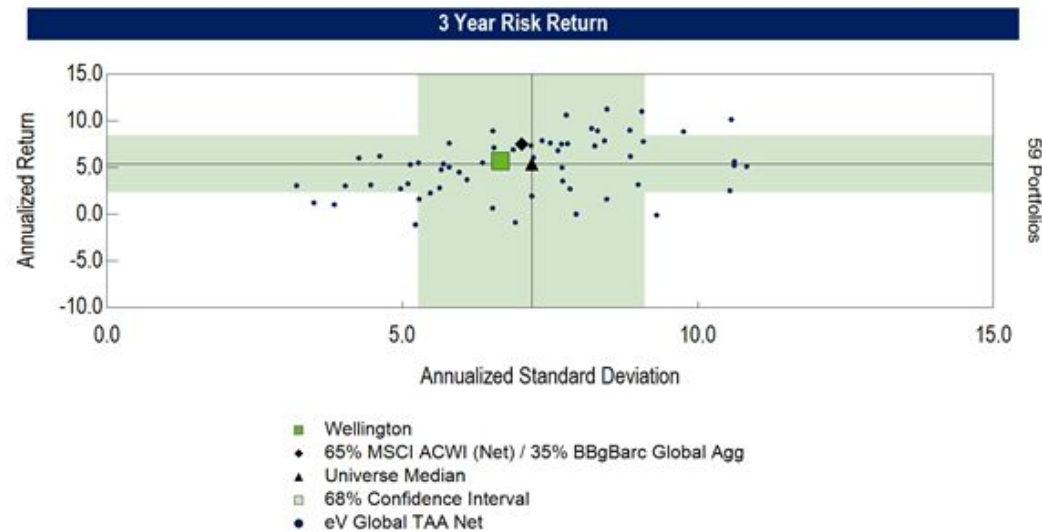


*Returns are net of fees.



March 31, 2019

WELLINGTON OPPORTUNISTIC

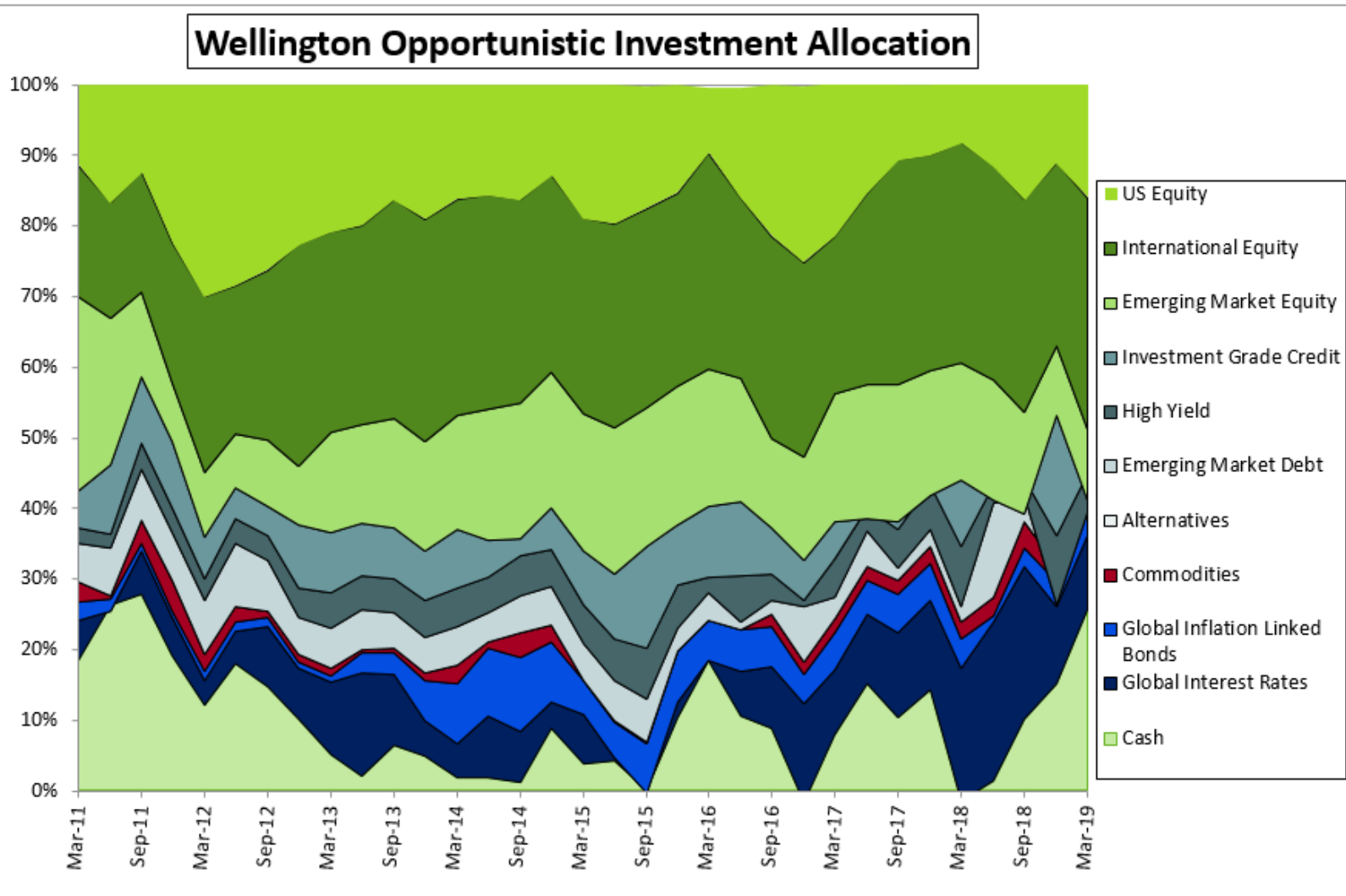


*Returns are net of fees.



March 31, 2019

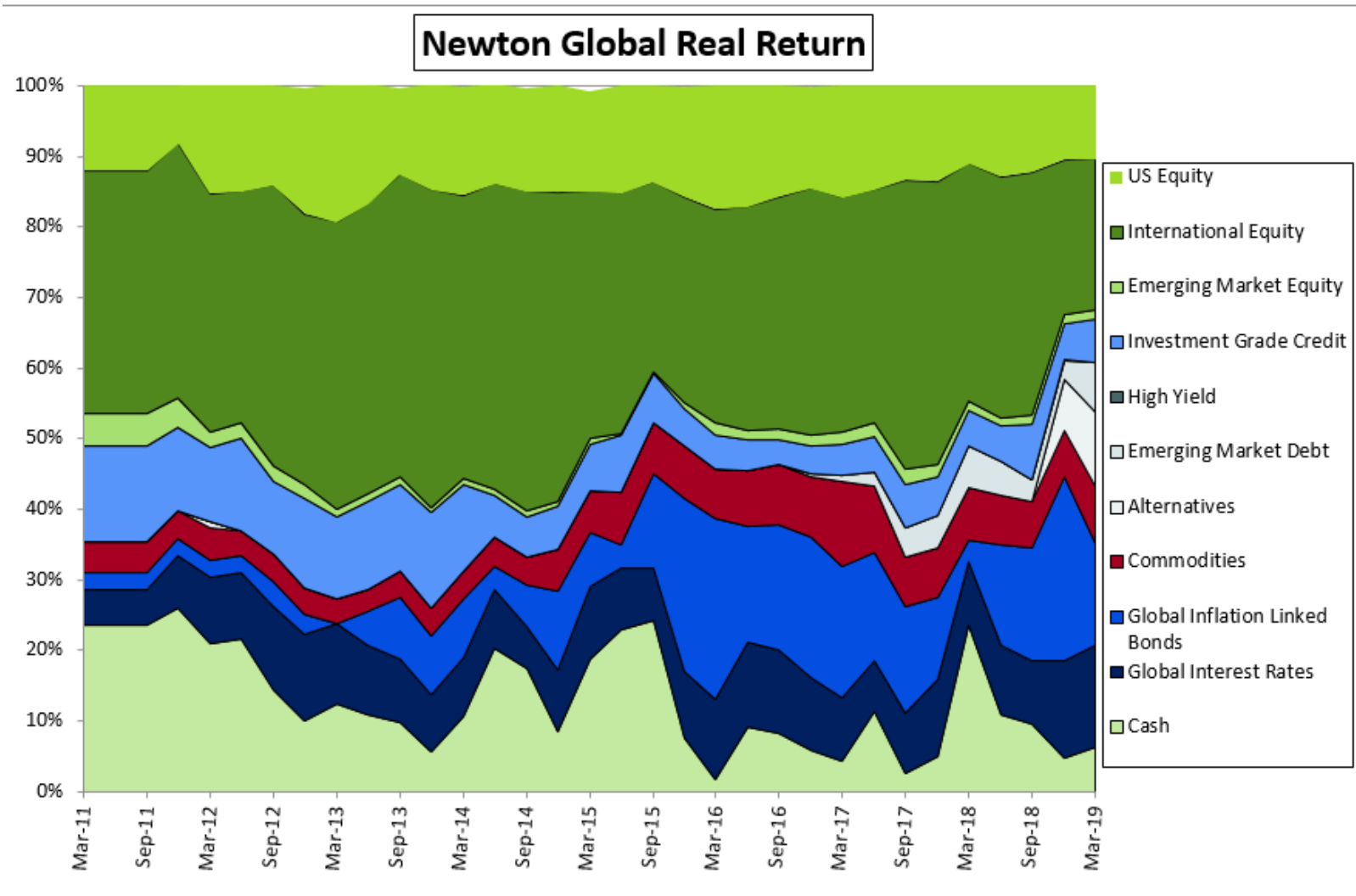
WELLINGTON OPPORTUNISTIC



Source: Wellington

March 31, 2019

NEWTON GLOBAL REAL RETURN



Source: Newton

March 31, 2019

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	\$14.9 billion	Strategy	Fund of Fund
Fund AUM	\$1.3 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

	Developed North America	Developed Europe	Developed Asia	Emerging Markets	Hedges / Other
Net	9.8%	6.4%	-0.5%	11.9%	0.5%
Gross	156.5%	53.8%	41.7%	23.4%	1.5%

	Developed North America	Developed Europe	Developed Asia	Emerging Markets	Hedges / Other
VaR TM	0.20%	0.11%	0.00%	0.22%	0.01%
QTD TM	4.13%	-0.08%	-0.40%	1.23%	-0.23%

Sector Allocation & Attribution

	Communication Services	Consumer Discretionary	Consumer Staples	Energy	Financials	Healthcare	Industrials	Technology	Materials	Real Estate	Utilities	Hedges / Other
Net	4.8%	3.7%	-1.2%	1.7%	9.0%	3.6%	-2.0%	1.2%	5.3%	1.0%	0.0%	0.8%
Gross	15.2%	43.5%	14.6%	14.1%	51.6%	34.6%	38.2%	23.8%	15.5%	19.2%	5.0%	1.6%

	Communication Services	Consumer Discretionary	Consumer Staples	Energy	Financials	Healthcare	Industrials	Technology	Materials	Real Estate	Utilities	Hedges / Other
VaR TM	0.11%	0.13%	0.01%	0.02%	0.00%	0.10%	0.01%	0.06%	0.09%	0.03%	0.01%	-0.03%
QTD TM	0.58%	1.18%	0.30%	-0.08%	1.69%	0.89%	0.08%	-0.14%	0.60%	0.16%	-0.06%	-0.55%



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

March 31, 2019

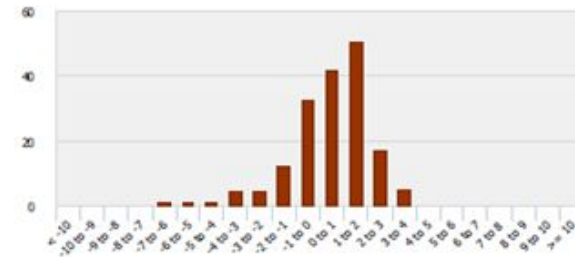
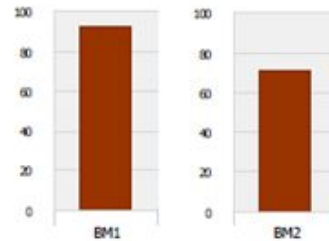
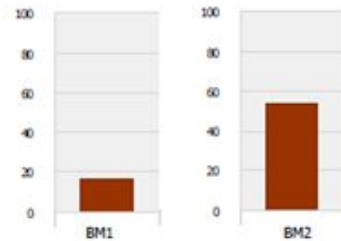
LIGHTHOUSE GLOBAL LONG/SHORT

Monthly Performance														Performance Analysis													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Lighthouse Global Long/Short Fund, L.P.	S&P 500	Barclays Aggregate Bond Index											
2019	3.5	0.8	0.3	---	---	---	---	---	---	---	---	---	4.6	Since Inception Return 1 Yr Return 3 Yr Return 5 Yr Return 7 Yr Return 10 Yr Return Best Month Worst Month Percent Profitable Periods Product Inception Date	5.4	8.4	4.0										
2018	2.4	-0.3	-0.5	0.8	3.1	-1.9	0.3	-0.6	-0.4	-5.1	-2.0	-1.8	-5.8		-3.1	9.5	4.5										
2017	1.6	0.3	1.1	-0.5	-0.3	0.0	0.7	1.0	0.1	2.2	-0.6	1.1	6.7		3.3	13.5	2.0										
2016	-3.6	-0.7	-0.4	0.6	1.0	0.3	1.7	-0.2	1.0	-0.9	1.2	0.3	0.0		3.3	10.9	2.7										
2015	1.0	1.0	1.6	-0.5	1.1	0.2	0.4	-0.8	-1.0	2.2	0.0	1.7	7.2		5.5	12.8	2.5										
2014	0.9	1.8	-1.7	-2.0	1.2	1.9	-0.5	1.7	-0.1	0.3	1.2	0.6	5.3		5.6	15.9	3.8										
2013	3.2	0.5	2.7	1.5	1.0	1.0	2.2	-0.3	2.2	1.2	1.1	2.4	20.5		3.5	10.9	3.7										
2012	1.7	1.7	1.6	1.2	-3.7	0.5	0.2	1.1	1.3	-0.1	0.8	0.4	6.7		-6.4	-16.8	-2.4										
2011	-0.2	1.2	0.7	2.1	-1.1	-1.5	0.6	-3.1	-0.6	1.7	-1.0	-0.6	-1.9		673	66.4	64.9										
2010	0.0	0.3	1.9	0.6	-2.4	-1.7	1.7	-0.6	1.3	1.8	0.2	2.1	5.1		01/01/2005	---	01/01/2018										
2009	0.3	-0.5	1.1	1.3	2.3	0.7	1.6	1.4	1.5	-0.9	0.3	0.9	10.2														
2008	-3.2	1.2	-4.7	1.5	2.8	-0.5	-1.4	-0.3	-6.4	-2.0	-0.6	0.0	-13.1														
2007	2.7	0.4	1.5	2.6	3.2	1.3	-0.2	-2.3	1.8	3.3	-2.4	0.2	12.6														
Outperform BM in Up Markets														Outperform BM in Down Markets													
														Distribution of Returns													

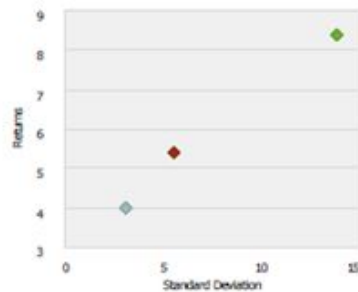
Outperform BM in Up Markets

Outperform BM in Down Markets

Distribution of Returns



Risk/Return Profile



◆ Lighthouse Global Long/Short Fund, L.P.
◆ S&P 500
◆ Barclays Aggregate Bond Index

Underwater Drawdown



— Lighthouse Global Long/Short Fund, L.P.
— S&P 500
— Barclays Aggregate Bond Index

Risk Analysis

Since Inception Standard Deviation	5.5	13.9	3.1
3 Yr Standard Deviation	5.3	10.7	3.0
5 Yr Standard Deviation	5.0	11.2	2.9
7 Yr Standard Deviation	5.0	10.8	2.8
10 Yr Standard Deviation	4.9	12.7	2.8
Sharpe Ratio	0.7	0.5	0.9
Sortino Ratio	1.1	0.7	1.5
Loss Deviation	3.9	9.7	1.8
Max Drawdown	15.2	50.9	3.8
Max Drawdown Length	16	16	7
Max Drawdown Recovery Length	25	37	2

Comparison to Benchmarks

Annualized Alpha	3.2	6.0
Beta	0.2	-0.1
Correlation Coefficient	0.6	-0.1
R-Squared	0.4	0.0

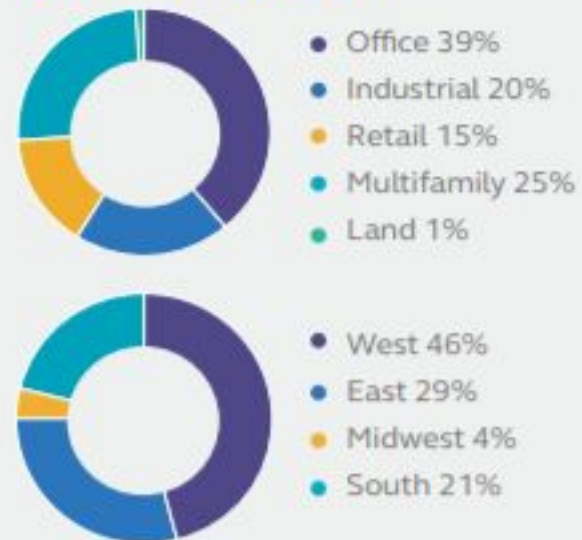


PRINCIPAL U.S. PROPERTY

1Q2019 key statistics

Inception date	January, 1982
Gross asset value	\$10.30 billion
Net asset value	\$8.15 billion
Number of investments	135
Number of markets	42
Core portfolio occupancy*	92.1%
Cash to gross assets	2.7%
Leverage ratio**	18.6%

Diversification



Source: Principal

March 31, 2019

APPENDIX

NEPC, LLC

March 31, 2019

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:

$$\frac{(\text{Annualized Return of Portfolio} - \text{Annualized Return of Benchmark})}{\text{Annualized Standard Deviation}(\text{Period Portfolio Return} - \text{Period Benchmark Return})}$$
 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:

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

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:

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

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.

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

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

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:** Environmental, Social and Governance (ESG) Update

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

3. **BOARD INFORMATION:** X

BOARD ACTION:

4. **OUTCOME:**

Primary Outcome:

Enhance fiscal positioning

BOARD POLICY:

Section 709 - Investments

5. **BACKGROUND:**

Kelly Regan and Jay Roney of NEPC will provide a brief review of the enclosed ESG update at the May 28, 2019 Investment Committee meeting.

May 17, 2019

ESG REPORT



UNIVERSITY OF MAINE SYSTEM

May 28, 2019

Jay E. Roney, Partner

Kelly Regan, Senior Consultant



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

SUMMARY

NEPC, LLC

INTRODUCTION

- **Goals for today's meeting**
 - Update the Investment Committee on the MIP's Environmental, Social and Governance (ESG) progress
 - Provide a summary of MSCI's ESG report
- **The University of Maine System has completed a number of items with regards to impact investing**
 - Divested from coal securities in all separate account mandates in 2015
 - Incorporated ESG language into the Managed Investment Pool (MIP) investment policy statement in September 2016
 - Periodically monitors fossil fuel exposure in the MIP
 - Contracted with MSCI to complete an annual report to evaluate the MIP's equity and fixed income holdings with regards to ESG factors
 - Evaluated managers who incorporate ESG considerations into their investment process during manager search review process
 - Bain Bank Loans and Kaboutier International small cap are new managers that evaluate ESG in their investment process
- **Additional information about the MIP portfolio is below:**
 - Sixteen out of 19 investment managers are PRI signatories
- **The following slides provide a summary of the MSCI ESG Report**
 - Overall the MIP's ESG scores have improved versus last year
 - This is a result of the Committee's work, changes to managers' holdings and improvements to MSCI's ESG score assessments



MIP PORTFOLIO SUMMARY

- The MIP Overall ESG Score improved by almost 50 points since monitoring ESG in 2017
- The overall score of the MIP Portfolio is 5.62 which is above the broad benchmark but falls below the ESG benchmark

	Client Benchmark		Client ESG Benchmark		UMS MIP 2019		UMS MIP 2018		UMS MIP 2017	
Summary	Score	Weight	Score	Weight	Score	Weight	Score	Weight	Score	Weight
ESG Quality Score	5.58	100%	6.43	100%	5.62	100%	5.53	100%	5.14	100%
Absolute Pillar Scores										
Environment	5.07	25%	5.72	24%	5.33	24%	5.37	26%	5.29	28%
Social	4.98	38%	5.19	41%	4.97	40%	4.73	41%	4.33	42%
Governance	5.69	37%	5.77	35%	5.68	36%	5.41	33%	5.28	30%

- **The majority of the MIP's holdings are covered by MSCI Research (~87%)**
- **The analysis excludes Landmark and John Hancock (Private Investments)**
- **Scores are based on a scale from 0-10 with 10 being the best**
- **Client Benchmark is 70% MSCI ACWI/30% Barclays Aggregate**
- **Client ESG Benchmark is 70% MSCI ACWI ESG/30% Barclays Aggregate ESG**



ENVIRONMENTAL SCORES

	Client Benchmark		Client ESG Benchmark		UMS MIP 2019		UMS MIP 2018		UMS MIP 2017	
Key Issues - Environment	Score	Weight	Score	Weight	Score	Weight	Score	Weight	Score	Weight
Climate Change										
Carbon Emissions	6.70	3.2%	7.28	4.0%	6.38	4.2%	6.52	3.9%	6.23	3.8%
Energy Efficiency	n/a	0.0%	n/a	0.0%	n/a	0.0%	n/a	0.0%	7.26	0.9%
Insuring Climate Change	4.67	0.3%	5.99	0.4%	4.42	0.4%	4.64	0.5%	4.60	0.6%
Product Carbon Footprint	5.58	0.9%	7.27	1.0%	5.17	0.9%	6.01	1.5%	5.48	1.9%
Environmental Opportunities										
Clean Tech	4.74	2.2%	5.05	3.4%	4.65	3.3%	4.83	4.8%	4.85	5.2%
Green Building	5.06	0.8%	5.83	0.8%	5.19	1.0%	5.11	1.0%	5.62	1.1%
Renewable Energy	5.08	0.5%	5.42	0.5%	5.62	0.3%	5.30	0.4%	5.34	0.5%
Natural Resource Use										
Biodiversity and Land Use	3.64	1.7%	4.47	1.6%	3.82	1.8%	3.90	1.7%	3.31	2.0%
Financing Environmental Impact	5.78	1.8%	6.26	1.4%	4.91	0.6%	5.21	0.6%	5.47	0.6%
Raw Material Sourcing	5.42	0.6%	5.91	1.0%	5.51	0.7%	5.48	1.2%	5.35	1.7%
Water Stress	5.60	1.7%	6.13	2.1%	5.55	1.9%	5.47	2.3%	5.61	2.4%
Waste Management										
Electronic Waste	4.44	0.3%	5.91	0.1%	4.81	0.2%	4.84	0.3%	6.57	0.3%
Packaging Material & Waste	5.82	0.3%	7.54	0.2%	5.48	0.2%	5.73	0.4%	6.39	0.5%
Toxic Emissions & Waste	4.64	3.3%	5.32	3.1%	4.71	3.2%	4.76	3.6%	4.60	4.1%
Overall Environmental Score	5.29	21.2%	5.95	19.8%	5.18	18.7%	5.27	22.1%	5.23	25.5%

- The overall Environmental score declined YOY, however the number of factors with a score above the broad benchmark improved (6 factors in 2019 versus 4 in 2018)
- Highlighted in green are factors where the MIP portfolio outperforms the broad benchmark
- Highlighted in green/blue are factors where the MIP portfolio outperforms both the ESG and broad benchmark



SOCIAL SCORES

	Client Benchmark		Client ESG Benchmark		UMS MIP 2019		UMS MIP 2018		UMS MIP 2017	
Key Issues - Social	Score	Weight	Score	Weight	Score	Weight	Score	Weight	Score	Weight
Human Capital										
Controversial Sourcing	6.84	0.5%	6.99	0.7%	6.64	0.8%	7.12	0.8%	6.24	0.9%
Health & Safety	5.21	2.3%	5.85	2.6%	5.24	3.0%	5.39	3.2%	5.17	3.6%
Human Capital Development	4.18	6.9%	4.77	8.8%	4.09	7.9%	4.19	8.1%	4.08	7.6%
Labor Management	3.74	3.3%	4.29	4.1%	4.30	4.8%	4.18	4.6%	3.97	5.4%
Supply Chain Labor Standards	4.52	0.9%	5.14	1.1%	5.01	1.1%	4.09	1.1%	4.04	1.7%
Product Safety										
Chemical Safety	3.70	1.0%	4.32	1.6%	3.78	1.2%	3.31	1.9%	3.04	2.6%
Financial Product Safety	4.40	2.1%	4.94	2.0%	4.70	1.3%	4.93	1.5%	4.56	1.5%
Insuring Health & Demographic Risk	4.25	0.4%	5.06	0.3%	4.28	0.3%	4.29	0.4%	4.46	0.4%
Privacy & Data Security	4.34	4.8%	5.14	6.2%	4.70	5.8%	4.29	5.8%	3.68	5.1%
Product Safety & Quality	3.54	3.0%	3.99	3.6%	4.38	4.5%	3.98	4.9%	3.47	5.4%
Responsible Investment	5.55	0.7%	6.21	0.8%	5.43	0.8%	5.38	0.9%	5.59	1.0%
Social Opportunities										
Access to Communications	5.68	0.3%	5.89	0.4%	5.93	0.4%	5.84	0.5%	5.48	0.5%
Access to Finance	4.11	2.5%	4.55	2.3%	4.28	1.5%	4.42	1.5%	4.41	1.6%
Access to Healthcare	4.93	0.6%	5.44	0.9%	4.62	1.0%	4.76	1.1%	4.82	1.2%
Opportunities in Nutrition & Health	5.04	0.7%	5.27	1.3%	4.84	0.8%	4.87	1.1%	4.94	1.2%
Overall Social Score	4.30	29.9%	4.89	36.7%	4.55	35.2%	4.43	37.3%	4.15	39.7%

- Social factors have the highest weighting in the MIP portfolio. The overall Social score improved YOY with 10 factors outperforming the broad benchmark compared to 4 in 2018
- Highlighted in green are factors where the MIP portfolio outperforms the broad benchmark
- Highlighted in green/blue are factors where the MIP portfolio outperforms both the ESG and broad benchmark

GOVERNANCE SCORES

5

	Client Benchmark		Client ESG Benchmark		UMS MIP 2019		UMS MIP 2018		UMS MIP 2017	
Key Issues - Governance	Score	Weight	Score	Weight	Score	Weight	Score	Weight	Score	Weight
Business Ethics										
Anticompetitive Practices	3.54	0.4%	3.61	0.6%	3.67	0.4%	3.49	0.5%	3.66	0.5%
Business Ethics & Fraud	3.13	0.5%	3.53	0.6%	3.72	0.6%	3.42	0.6%	3.23	0.5%
Corruption & Instability	4.31	4.9%	5.00	5.5%	4.24	6.5%	4.61	6.0%	4.70	5.8%
Corporate Governance										
Corporate Governance	5.42	12.9%	5.76	16.1%	5.75	16.2%	5.30	16.3%	5.22	17.0%
Government & Public Policy										
Financial System Instability	3.00	2.3%	4.13	2.2%	4.34	1.3%	4.37	1.5%	3.98	1.5%
Overall Governance Score	4.81	20.9%	5.34	25.1%	5.20	24.9%	5.00	24.9%	4.96	25.2%

- Corporate Governance factor has the second largest weighting in the MIP portfolio and the score increased YOY and is higher than the broad benchmark and slightly below the ESG benchmark
- Highlighted in green are factors where the MIP portfolio outperforms the broad benchmark
- Highlighted in blue are factors where the MIP portfolio outperforms the ESG broad benchmark



CONTROVERSY AND BUSINESS INVOLVEMENT EXPOSURE

ESG CONTROVERSIES COVERAGE

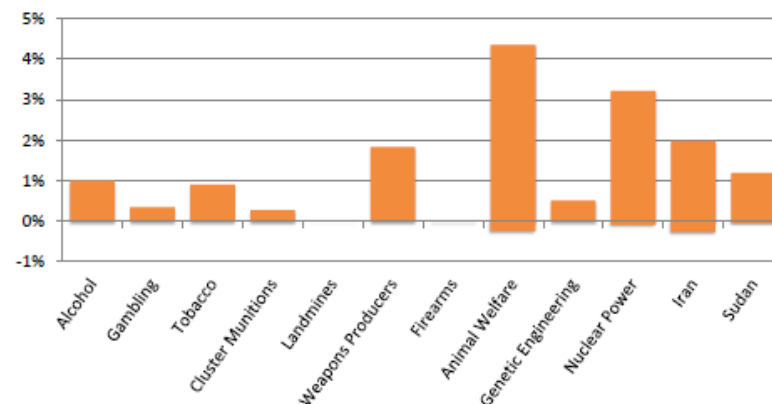
GROSS PORTFOLIO WEIGHT			
Percentage of portfolio covered		69.93%	
EXPOSURE OF ESG CONTROVERSIES COVERAGE			
	NET PORTFOLIO WEIGHT		
	Red	Orange	Yellow
Environment	0.78%	1.12%	3.39%
Customers	0.01%	6.61%	14.06%
Human Rights & Community	0.64%	1.59%	2.57%
Labor Rights & Supply Chain	0.28%	4.28%	9.71%
Governance	0.68%	5.18%	14.16%

- Very low weights in the MIP Portfolio to highly (red) controversial companies. Environment and Human Rights controversy exposure is the lowest

ESG Controversies Exposure



Business Involvement Exposure*



* This is a subset of a wider range of business activities for which research is available.

- Animal Welfare is the most common business involvement and makes up 4% of the MIP portfolio (down from 8% in 2018)
- Defined as: Companies that conduct animal testing for non-pharmaceutical products including cosmetic, personal care, and household cleaning products, as well as industrial and chemical products.



FULL REPORT

NEPC, LLC

ESG Portfolio Analytics

Prepared for:	University of Maine System
Portfolio Name:	UMS Managed Investment Pool
Benchmarked ESG Index:	Client ESG Benchmark
Benchmarked Market Index:	Client Benchmark

December 31, 2018

** The funds analyzed in this report may be based on or linked to MSCI Indexes, for which MSCI Inc., or its subsidiaries, maybe compensated based on the fund's assets under management or other measures. MSCI Inc. has established an information barrier between equity index research and ESG Portfolio Analytics. Additionally, ESG Portfolio Analytics are based on a variety of aggregation methodologies of the underlying covered holdings, and are not subject to intervention by any analyst.*

Portfolio Summary - MSCI ESG Ratings

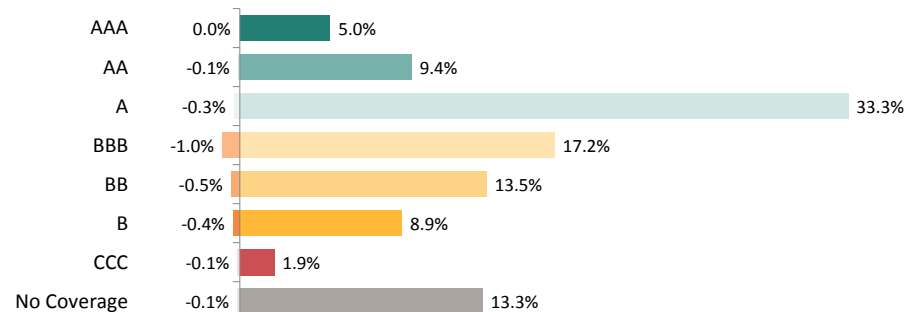
MSCI ESG Portfolio Analytics

University of Maine System - UMS Managed Investment Pool

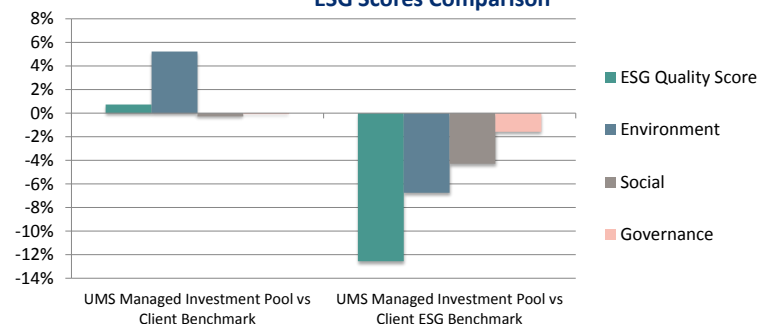
							UMS Managed Investment Pool vs Client Benchmark	UMS Managed Investment Pool vs Client ESG Benchmark	
Client Benchmark			Client ESG Benchmark		UMS Managed Investment Pool				
SUMMARY	SCORE*	WEIGHT**	SCORE	WEIGHT	SCORE	WEIGHT	SCORE COMPARISON		
% Covered by ESG Research (Gross)		91.41%		96.83%		86.57%			
ESG Quality Score	5.58	100.00%	6.43	100.00%	5.62	100.00%	↔	0.73%	↓ -12.55%
ABSOLUTE PILLAR SCORES									
Environment	5.07	24.54%	5.72	24.31%	5.33	23.94%	↑	5.22%	↓ -6.75%
Social	4.98	38.04%	5.19	41.26%	4.97	40.48%	↔	-0.28%	↔ -4.28%
Governance	5.69	37.42%	5.77	34.43%	5.68	35.57%	↔	-0.09%	↔ -1.57%

ESG RATINGS

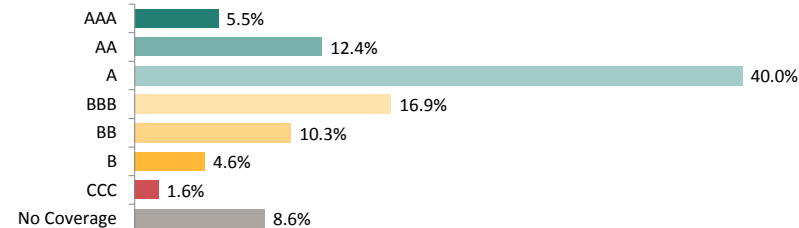
Portfolio Rating Distribution (Gross Wt)



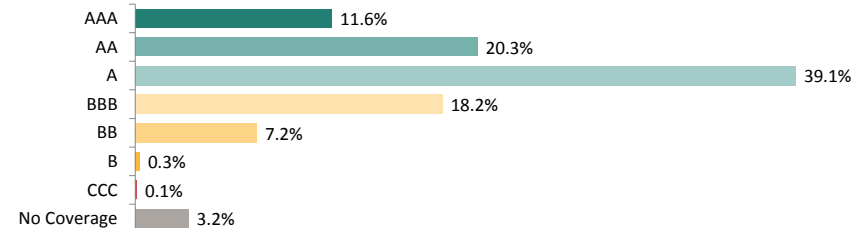
ESG Scores Comparison



Client Benchmark



Client ESG Benchmark



Sector Breakdown - Corporates

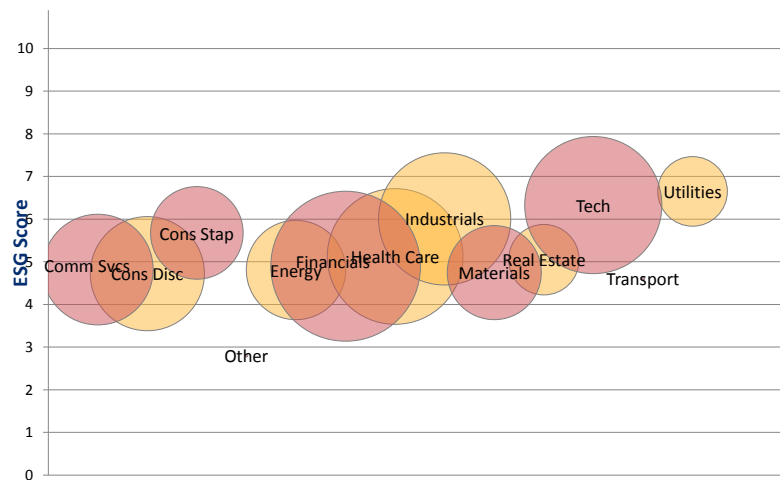
MSCI ESG Portfolio Analytics

University of Maine System - UMS Managed Investment Pool

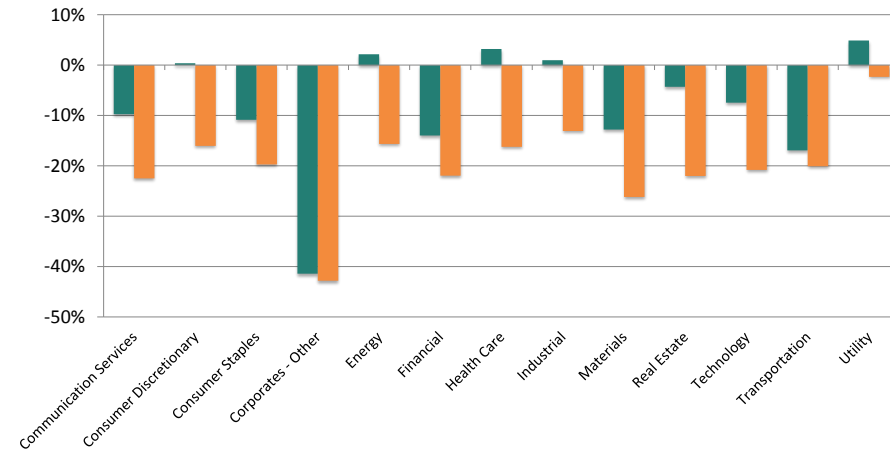
SECTOR ESG SCORES	Client Benchmark		Client ESG Benchmark		UMS Managed Investment Pool*		UMS Managed Investment Pool vs Client Benchmark	UMS Managed Investment Pool vs Client ESG Benchmark
	SCORE	WEIGHT	SCORE	WEIGHT	SCORE	WEIGHT	SCORE COMPARISON	
Communication Services	5.34	4.73%	6.21	6.96%	4.82	6.85%	↓	-9.73%
Consumer Discretionary	4.71	5.40%	5.63	7.13%	4.72	7.32%	↔	0.39%
Consumer Staples	6.37	4.84%	7.07	6.28%	5.67	4.82%	↓	-10.85%
Corporates - Other ¹	4.78	0.09%	4.90	0.06%	2.80	0.00%	↓	-41.43%
Energy	4.71	4.21%	5.70	4.27%	4.81	5.54%	↔	2.16%
Financial	5.69	18.88%	6.28	18.75%	4.90	12.61%	↓	-13.97%
Health Care	4.96	5.90%	6.12	7.96%	5.12	10.31%	↔	3.22%
Industrial	5.95	6.20%	6.91	7.72%	6.01	9.81%	↔	1.00%
Materials	5.44	3.00%	6.43	3.97%	4.75	4.94%	↓	-12.78%
Real Estate	5.28	2.12%	6.48	2.49%	5.05	2.78%	↔	-4.30%
Technology	6.84	6.42%	7.99	10.94%	6.33	10.56%	↓	-7.45%
Transportation	5.54	0.07%	5.76	0.05%	4.60	0.01%	↓	-16.92%
Utility	6.34	3.99%	6.81	4.05%	6.65	2.71%	↔	4.91%
Overall	5.66	65.87%	6.56	80.64%	5.34	78.27%		-5.69%

*Shading indicates low or high score in portfolio

Portfolio ESG Scores & Weights (Bubble size)

¹ Aggregate category comprised of Corporation and Special Company Barra sectors.

Relative Sector ESG Scores



■ UMS Managed Investment Pool vs Client Benchmark

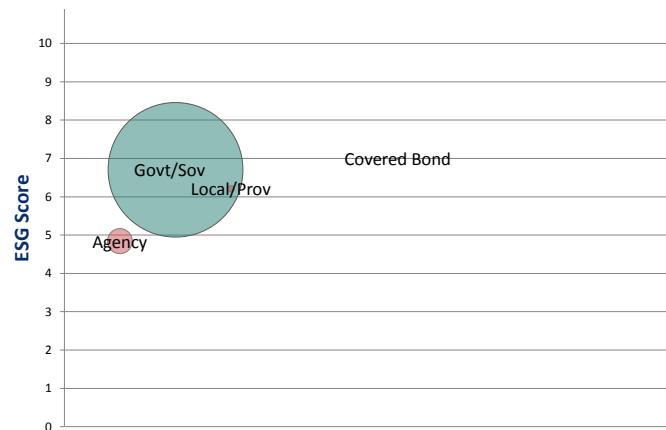
■ UMS Managed Investment Pool vs Client ESG Benchmark

Sector Breakdown - Government Related & Securitized

University of Maine System - UMS Managed Investment Pool

SECTOR ESG SCORES	Client Benchmark		Client ESG Benchmark		UMS Managed Investment Pool		UMS Managed Investment Pool vs Client Benchmark	UMS Managed Investment Pool vs Client ESG Benchmark			
	SCORE	WEIGHT	SCORE	WEIGHT	SCORE	WEIGHT					
	SCORE COMPARISON										
Government Related											
Agency	6.42	1.17%	6.43	0.75%		4.84	0.72%	↓	-24.56%	↓	-24.71%
Government/Sovereign ¹	6.23	29.40%	6.29	16.24%		6.70	20.96%	↑	7.55%	↑	6.56%
Local/Provincial	6.82	1.33%	6.82	0.88%		6.21	0.05%	↓	-8.90%	↓	-8.99%
Supranational	8.05	0.91%	8.11	0.63%		N/A	0.00%		NA		NA
Government Related - Other ²	4.53	0.29%	4.68	0.18%		N/A	0.00%		NA		NA
Securitized											
Covered Bond	6.51	1.02%	6.66	0.68%		7.00	0.00%	↑	7.47%	↑	5.14%
Securitized - Other ³	ESG coverage of securitized assets is limited to covered bonds. Other securitized assets do not have recourse to the issuer and thus do not map to the issuer's ESG rating.										
Overall	6.30	34.13%	6.38	19.36%		6.64	21.73%		5.33%		4.11%

Portfolio ESG Scores & Weights (Bubble size)

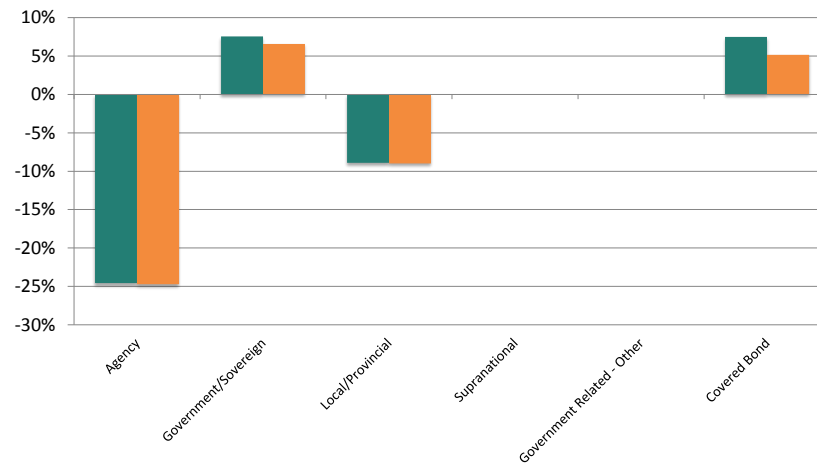


¹ Aggregate category comprised of Government, Sovereign, Japan 40Yr, Jpn Govt 5Yr, Jpn Govt T-bill, Jpn Govt 6Yr, Jpn Govt Long, Jpn Govt Mid, Jpn Govt Short, Jpn Govt SuperLong, and Jpn Govt Other Barra sectors.

² Fiscal Investment & Loan Agency and Government Guaranteed.

³ Asset Backed Security and Mortgage Backed Security.

Relative Sector ESG Scores



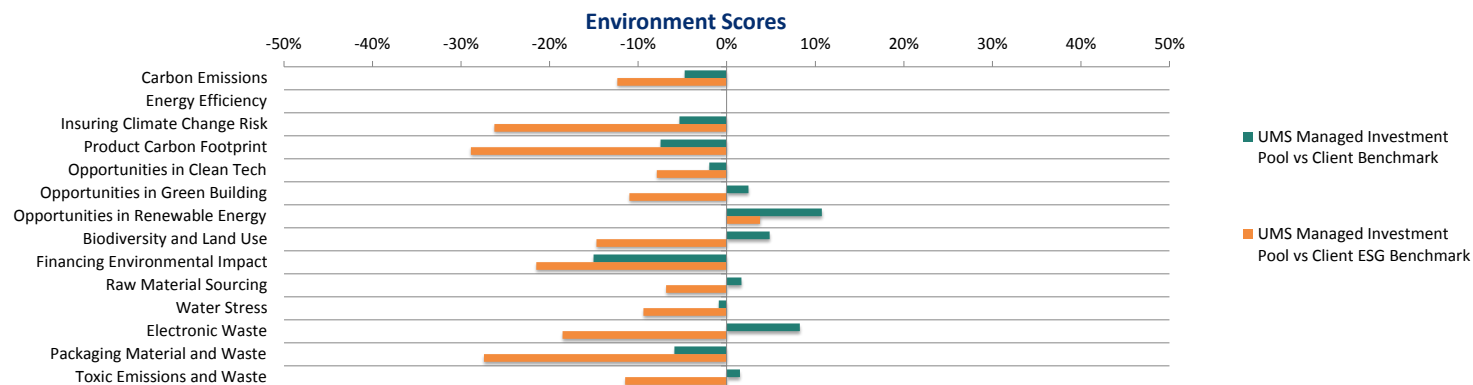
■ UMS Managed Investment Pool vs Client Benchmark

■ UMS Managed Investment Pool vs Client ESG Benchmark

ESG Ratings Key Issue Breakdown - Environment

MSCI ESG Portfolio Analytics
University of Maine System - UMS Managed Investment Pool

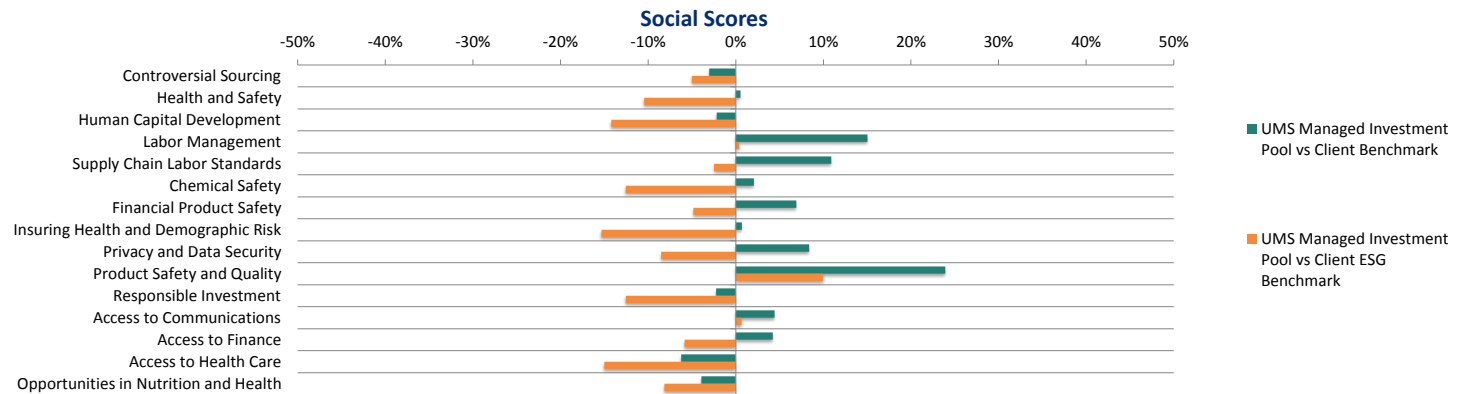
KEY ISSUE SCORES - ENVIRONMENT	Client Benchmark		Client ESG Benchmark		UMS Managed Investment Pool*		UMS Managed Investment Pool vs Client Benchmark	UMS Managed Investment Pool vs Client ESG Benchmark		
	SCORE	WEIGHT	SCORE	WEIGHT	SCORE	WEIGHT	SCORE COMPARISON			
Climate Change										
Carbon Emissions	6.70	3.15%	7.28	4.00%	6.38	4.22%	↔	-4.74%	↓	-12.35%
Energy Efficiency	N/A	0.00%	N/A	0.00%	N/A	0.00%		NA		NA
Insuring Climate Change Risk	4.67	0.33%	5.99	0.41%	4.42	0.43%	↓	-5.33%	↓	-26.22%
Product Carbon Footprint	5.58	0.88%	7.27	1.03%	5.17	0.91%	↓	-7.46%	↓	-28.88%
Environmental Opportunities										
Opportunities in Clean Tech	4.74	2.22%	5.05	3.39%	4.65	3.31%	↔	-1.96%	↓	-7.89%
Opportunities in Green Building	5.06	0.77%	5.83	0.82%	5.19	0.96%	↔	2.45%	↓	-10.98%
Opportunities in Renewable Energy	5.08	0.51%	5.42	0.51%	5.62	0.32%	↑	10.74%	↔	3.77%
Natural Resource Use										
Biodiversity and Land Use	3.64	1.70%	4.47	1.64%	3.82	1.75%	↔	4.85%	↓	-14.70%
Financing Environmental Impact	5.78	1.77%	6.26	1.42%	4.91	0.56%	↓	-15.03%	↓	-21.50%
Raw Material Sourcing	5.42	0.62%	5.91	1.03%	5.51	0.68%	↔	1.66%	↓	-6.84%
Water Stress	5.60	1.73%	6.13	2.12%	5.55	1.89%	↔	-0.89%	↓	-9.40%
Waste Management										
Electronic Waste	4.44	0.15%	5.91	0.11%	4.81	0.22%	↑	8.26%	↓	-18.52%
Packaging Material and Waste	5.82	0.13%	7.54	0.17%	5.48	0.22%	↓	-5.90%	↓	-27.40%
Toxic Emissions and Waste	4.64	2.46%	5.32	3.11%	4.71	3.18%	↔	1.49%	↓	-11.47%
Overall IVA Environment Pillar	5.29	16.43%	5.95	19.75%	5.18	18.65%		-2.11%		-12.88%



ESG Ratings Key Issue Breakdown - Social

University of Maine System - UMS Managed Investment Pool

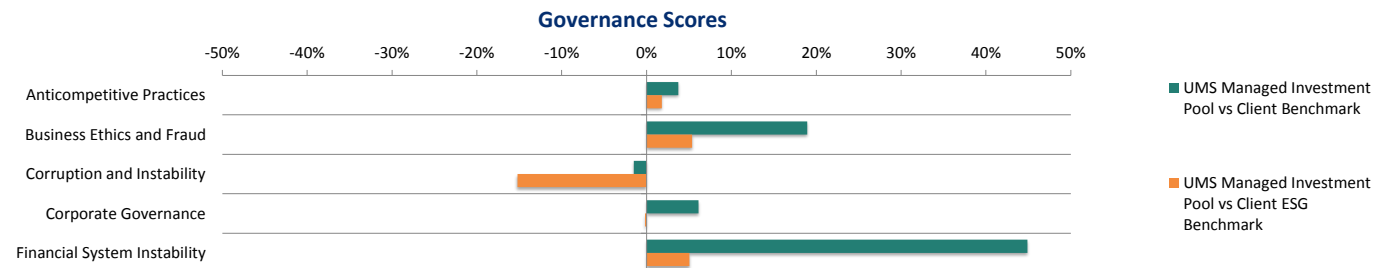
KEY ISSUE SCORES - SOCIAL	Client Benchmark		Client ESG Benchmark		UMS Managed Investment Pool*		UMS Managed Investment Pool vs Client Benchmark	UMS Managed Investment Pool vs Client ESG Benchmark		
	SCORE	WEIGHT	SCORE	WEIGHT	SCORE	WEIGHT	SCORE COMPARISON			
Human Capital										
Controversial Sourcing	6.84	0.48%	6.99	0.70%	6.64	0.80%	↔	-3.02%	↓	-5.01%
Health and Safety	5.21	2.26%	5.85	2.64%	5.24	3.04%	↔	0.55%	↓	-10.45%
Human Capital Development	4.18	6.91%	4.77	8.76%	4.09	7.86%	↔	-2.16%	↓	-14.19%
Labor Management	3.74	3.32%	4.29	4.06%	4.30	4.82%	↑	15.03%	↔	0.38%
Supply Chain Labor Standards	4.52	0.85%	5.14	1.10%	5.01	1.07%	↑	10.91%	↔	-2.46%
Product Safety										
Chemical Safety	3.70	0.98%	4.32	1.64%	3.78	1.18%	↔	2.08%	↓	-12.55%
Financial Product Safety	4.40	2.12%	4.94	2.02%	4.70	1.33%	↑	6.92%	↔	-4.83%
Insuring Health and Demographic Risk	4.25	0.31%	5.06	0.33%	4.28	0.29%	↔	0.72%	↓	-15.33%
Privacy and Data Security	4.34	4.80%	5.14	6.15%	4.70	5.83%	↑	8.38%	↓	-8.50%
Product Safety and Quality	3.54	3.03%	3.99	3.61%	4.38	4.47%	↑	23.92%	↑	9.95%
Responsible Investment	5.55	0.73%	6.21	0.79%	5.43	0.81%	↔	-2.24%	↓	-12.55%
Social Opportunities										
Access to Communications	5.68	0.32%	5.89	0.39%	5.93	0.38%	↔	4.44%	↔	0.65%
Access to Finance	4.11	2.47%	4.55	2.31%	4.28	1.46%	↔	4.23%	↓	-5.84%
Access to Health Care	4.93	0.63%	5.44	0.91%	4.62	1.02%	↓	-6.22%	↓	-14.99%
Opportunities in Nutrition and Health	5.04	0.72%	5.27	1.31%	4.84	0.81%	↔	-3.91%	↓	-8.15%
Overall IVA Social Pillar	4.30	29.93%	4.89	36.72%	4.55	35.19%		5.74%		-6.92%



ESG Ratings Key Issue Breakdown - Governance

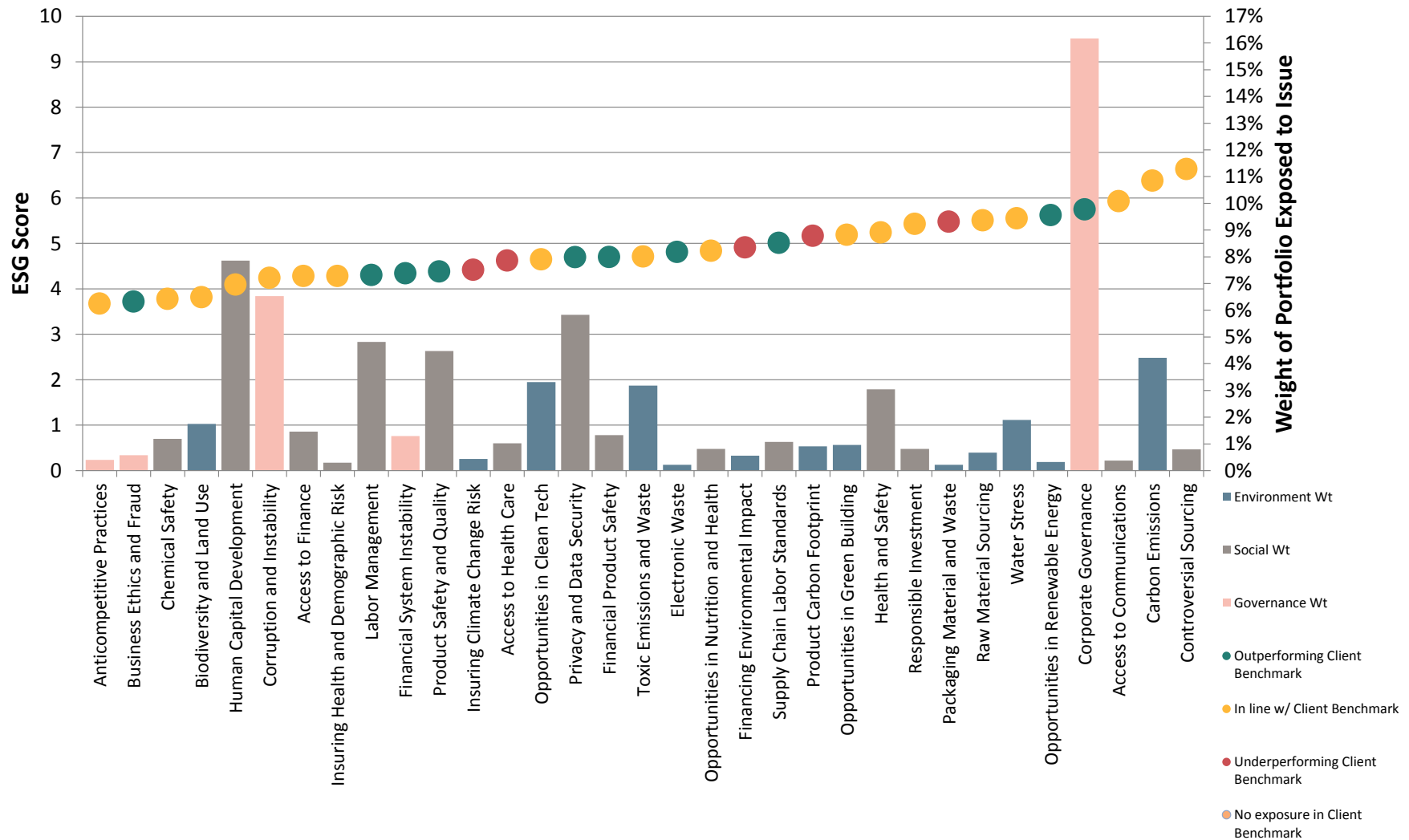
MSCI ESG Portfolio Analytics
University of Maine System - UMS Managed Investment Pool

KEY ISSUE SCORES - GOVERNANCE	Client Benchmark		Client ESG Benchmark		UMS Managed Investment Pool*		UMS Managed Investment Pool vs Client Benchmark	UMS Managed Investment Pool vs Client ESG Benchmark		
	SCORE	WEIGHT	SCORE	WEIGHT	SCORE	WEIGHT	SCORE COMPARISON			
Business Ethics										
Anticompetitive Practices	3.54	0.35%	3.61	0.57%	3.67	0.40%	↔	3.75%	↔	1.80%
Business Ethics and Fraud	3.13	0.54%	3.53	0.69%	3.72	0.58%	↑	18.93%	↑	5.37%
Corruption and Instability	4.31	4.85%	5.00	5.51%	4.24	6.53%	↔	-1.51%	↓	-15.20%
Corporate Governance										
Corporate Governance	5.42	12.86%	5.76	16.14%	5.75	16.17%	↑	6.13%	↔	-0.18%
Government and Public Policy										
Financial System Instability	3.00	2.34%	4.13	2.23%	4.34	1.30%	↑	44.89%	↑	5.06%
Overall IVA Governance Pillar	4.80	20.94%	5.34	25.14%	5.20	24.96%		8.41%		-2.57%



ESG Ratings Key Issue Summary (Portfolio)

University of Maine System - UMS Managed Investment Pool



Holdings Breakdown - Long Positions

University of Maine System - UMS Managed Investment Pool

LOWEST ESG RATED POSITIONS IN PORTFOLIO

RANK	ISSUER NAME	PORTFOLIO WEIGHT	SECTOR	RATING
1	WELLS FARGO & COMPANY	0.22%	Financial	CCC
2	SUZUKI MOTOR CORPORATION	0.11%	Consumer Discretionary	CCC
3	EVRAZ PLC	0.10%	Materials	CCC
4	BOSTON SCIENTIFIC CORPORATION	0.07%	Health Care	CCC
5	GENERAL MOTORS COMPANY	0.05%	Consumer Discretionary	CCC
6	NAVIENT CORPORATION	0.05%	Financial	CCC
7	HANGZHOU HIKVISION DIGITAL TECHNOLOGY CO., LTD	0.04%	Technology	CCC
8	SOUTHERN COPPER CORPORATION	0.04%	Materials	CCC
9	PT INDOCEMENT TUNGGAL PRAKARSA TBK	0.04%	Materials	CCC
10	NAVIENT CORPORATION	0.04%	Financial	CCC

HIGHEST ESG RATED POSITIONS IN PORTFOLIO

RANK	ISSUER NAME	PORTFOLIO WEIGHT	SECTOR	RATING
1	MICROSOFT CORPORATION	0.93%	Technology	AAA
2	CAE INC.	0.32%	Industrial	AAA
3	ACCENTURE PUBLIC LIMITED COMPANY	0.18%	Technology	AAA
4	TELEPERFORMANCE SE	0.14%	Industrial	AAA
5	OMV AKTIENGESELLSCHAFT	0.14%	Energy	AAA
6	3M COMPANY	0.14%	Industrial	AAA
7	TELIA COMPANY AB	0.14%	Communication Services	AAA
8	IBERDROLA, S.A.	0.13%	Utility	AAA
9	DEXUS	0.13%	Real Estate	AAA
10	SALESFORCE.COM, INC.	0.12%	Technology	AAA

LARGEST POSITIONS IN PORTFOLIO

RANK	ISSUER NAME	PORTFOLIO WEIGHT	SECTOR	RATING
1	UNITED STATES OF AMERICA	1.29%	Government/Sovereign	A
2	MICROSOFT CORPORATION	0.93%	Technology	AAA
3	UNITED STATES OF AMERICA	0.88%	Government/Sovereign	A
4	UNITED STATES OF AMERICA	0.86%	Government/Sovereign	A
5	APPLE INC.	0.77%	Technology	A
6	UNITED STATES OF AMERICA	0.65%	Government/Sovereign	A
7	AMAZON.COM, INC.	0.64%	Consumer Discretionary	BB
8	UNITED STATES OF AMERICA	0.56%	Government/Sovereign	A
9	UNITED STATES OF AMERICA	0.49%	Government/Sovereign	A
10	SHIRE PLC	0.44%	Health Care	BBB

Holdings Breakdown - Short Positions

University of Maine System - UMS Managed Investment Pool

LOWEST ESG RATED POSITIONS IN PORTFOLIO

RANK	ISSUER NAME	PORTFOLIO WEIGHT	SECTOR	RATING
1	WELLS FARGO BANK, NATIONAL ASSOCIATION	-0.10%	Financial	CCC
2	GENERAL MOTORS COMPANY	-0.01%	Consumer Discretionary	CCC
3	GTL TRADE FINANCE INC.	-0.01%	Materials	CCC
4	PETROLEOS MEXICANOS	-0.004%	Energy	CCC
5	TRANSOCEAN INC.	-0.002%	Energy	CCC
6	BAUSCH HEALTH COMPANIES INC.	-0.001%	Health Care	CCC
7	COMCAST CORPORATION	-0.10%	Communication Services	B
8	PFIZER INC.	-0.08%	Health Care	B
9	VALE S.A.	-0.04%	Materials	B
10	TEVA PHARMACEUTICAL FINANCE NETHERLANDS III B.V.	-0.04%	Health Care	B

HIGHEST ESG RATED POSITIONS IN PORTFOLIO

RANK	ISSUER NAME	PORTFOLIO WEIGHT	SECTOR	RATING
1	3M COMPANY	-0.03%	Industrial	AAA
2	MICROSOFT CORPORATION	-0.02%	Technology	AAA
3	PEPSICO, INC.	-0.07%	Consumer Staples	AA
4	PEPSICO, INC.	-0.01%	Consumer Staples	AA
5	GENERAL MILLS, INC.	-0.01%	Consumer Staples	AA
6	INTEL CORPORATION	-0.003%	Technology	AA
7	CARDINAL HEALTH, INC.	-0.001%	Health Care	AA
8	HCA INC.	-0.07%	Health Care	A
9	GENERAL ELECTRIC COMPANY	-0.05%	Industrial	A
10	GENERAL ELECTRIC COMPANY	-0.04%	Industrial	A

LARGEST POSITIONS IN PORTFOLIO

RANK	ISSUER NAME	PORTFOLIO WEIGHT	SECTOR	RATING
1	EXXON MOBIL CORPORATION	-0.13%	Energy	BBB
2	WELLS FARGO BANK, NATIONAL ASSOCIATION	-0.10%	Financial	CCC
3	COMCAST CORPORATION	-0.10%	Communication Services	B
4	PFIZER INC.	-0.08%	Health Care	B
5	CONSECO FINANCE MANUFACTURED HOUSING CONTRACT	-0.08%	Communication Services	BBB
6	REPUBLICA FEDERATIVA DO BRASIL	-0.07%	Government/Sovereign	BBB
7	HCA INC.	-0.07%	Health Care	A
8	REPUBLICA DE COLOMBIA	-0.07%	Government/Sovereign	BBB
9	PEPSICO, INC.	-0.07%	Consumer Staples	AA
10	SHELL INTERNATIONAL FINANCE B.V.	-0.06%	Financial	BBB

ESG Controversies Exposure

MSCI ESG Portfolio Analytics

University of Maine System - UMS Managed Investment Pool

CORPORATE POSITIONS IN PORTFOLIO WITH THE MOST CONTROVERSY EXPOSURE

RANK*	ISSUER NAME	PORTFOLIO WEIGHT	SECTOR (GICS)	ENVIRONMENT	CUSTOMERS	HUMAN RIGHTS & COMMUNITY	LABOR RIGHTS & SUPPLY CHAIN	GOVERNANCE
1	FREEPORT-MCMORAN INC.	0.06%	Materials	●	●	●	●	●
2	FREEPORT-MCMORAN INC.	0.01%	Materials	●	●	●	●	●
3	FREEPORT-MCMORAN INC.	0.00%	Materials	●	●	●	●	●
4	FREEPORT-MCMORAN INC.	0.00%	Materials	●	●	●	●	●
5	TOKYO ELECTRIC POWER COMPANY HOLDINGS, INCORPORATED	0.00%	Utility	●	●	●	●	●
6	WALMART INC.	0.15%	Consumer Staples	●	●	●	●	●
7	BHP GROUP PLC	0.13%	Materials	●	●	●	●	●
8	VOLKSWAGEN AG	0.02%	Consumer Discretionary	●	●	●	●	●
9	WALMART INC.	-0.01%	Consumer Staples	●	●	●	●	●
10	VOLKSWAGEN AG	0.01%	Consumer Discretionary	●	●	●	●	●

ESG CONTROVERSIES COVERAGE

GROSS PORTFOLIO WEIGHT

Percentage of portfolio covered	69.93%
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EXPOSURE OF ESG CONTROVERSIES COVERAGE

NET PORTFOLIO WEIGHT

	Red	Orange	Yellow
Environment	0.78%	1.12%	3.39%
Customers	0.01%	6.61%	14.06%
Human Rights & Community	0.64%	1.59%	2.57%
Labor Rights & Supply Chain	0.28%	4.28%	9.71%
Governance	0.68%	5.18%	14.16%

ESG Controversies Exposure



Business Involvement Screening Research

MSCI ESG Portfolio Analytics

University of Maine System - UMS Managed Investment Pool

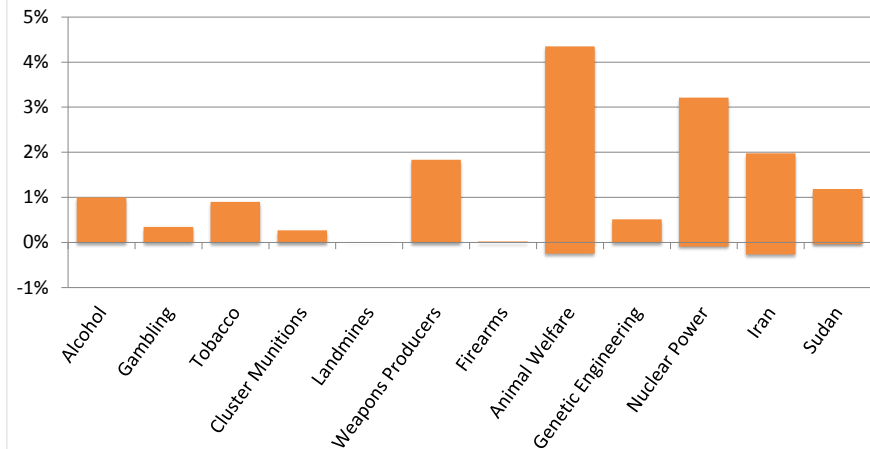
LARGEST CORPORATE POSITIONS WITH BUSINESS INVOLVEMENT EXPOSURE

RANK	COMPANY NAME	PORTFOLIO WEIGHT	SECTOR (GICS)	BUSINESS INVOLVEMENT
1	BERKSHIRE HATHAWAY INC.	0.40%	Financial	Animal Welfare; Nuclear Power
2	JOHNSON & JOHNSON	0.38%	Health Care	Animal Welfare
3	NOVARTIS AG	0.33%	Health Care	Sudan
4	CAE INC.	0.32%	Industrial	Weapons Producers
5	EXXON MOBIL CORPORATION	0.29%	Energy	Animal Welfare
6	THE PROCTER & GAMBLE COMPANY	0.23%	Consumer Staples	Animal Welfare
7	UNITED TECHNOLOGIES CORPORATION	0.21%	Industrial	Weapons Producers
8	THE COCA-COLA COMPANY	0.20%	Consumer Staples	Animal Welfare
9	ROYAL DUTCH SHELL PLC	0.20%	Energy	Animal Welfare; Iran
10	THE BOEING COMPANY	0.17%	Industrial	Cluster Munitions; Weapons Producers

BUSINESS INVOLVEMENT EXPOSURE ANALYSIS

	NET PORTFOLIO WEIGHT
Alcohol	1.00%
Gambling	0.34%
Tobacco	0.90%
Cluster Munitions	0.27%
Landmines	0.00%
Weapons Producers	1.83%
Firearms	0.02%
Animal Welfare	4.10%
Genetic Engineering	0.51%
Nuclear Power	3.12%
Iran	1.71%
Sudan	1.15%

Business Involvement Exposure*



* This is a subset of a wider range of business activities for which research is available.

Screen Definition

University of Maine System - UMS Managed Investment Pool

5

Category	Description
Alcohol	· Companies that derive 5% or more of revenues from manufacturing, distributing, retailing, licensing, or supplying alcoholic products.
Gambling	· Companies that derive 5% or more of revenues from gambling-related business activities.
Tobacco	· Companies that manufacture tobacco products, such as cigars, blunts, cigarettes, electronic cigarettes, beedis, kreteks, smokeless tobacco, snuff, snus, and chewing tobacco; or · Companies that derive 5% or more of revenues from tobacco distribution, retail, licensing, or the supply of key products necessary for the manufacture of tobacco products.
Cluster Munitions	· Companies that manufacture cluster munitions whole systems or components. This category also includes manufacturers of specific delivery systems of cluster munitions. · Companies that own 20 to 49.99 percent of a company that manufactures cluster munitions and/or components/delivery systems. When a company owns 50 percent or more of a company with involvement, MSCI ESG Research treats it as a consolidated subsidiary, unless the parent company in question is a financial institution. · Companies that are 50 percent or more owned by a company with cluster munitions involvement.
Landmines	· Companies that manufacture landmines whole systems or components. · Companies that own 20 to 49.99 percent of a company that manufactures landmines and/or components. When a company owns 50 percent or more of a company with involvement, MSCI ESG Research treats it as a consolidated subsidiary, unless the parent company in question is a financial institution. · Companies that are 50 percent or more owned by a company with landmine involvement.
Weapons Producers	· Companies that derive revenue from the production of biological or chemical weapons and related systems and components. · Companies that derive 5% or more of revenues from the manufacture of conventional weapons and related systems and components. · Companies that derive 2% or more of revenue from the production of nuclear weapons and related systems and components.
Firearms	· Companies that derive 5% or more of revenues from the manufacture and retail of civilian firearms and ammunition.
Animal Welfare	· Companies that conduct animal testing for non-pharmaceutical products including cosmetic, personal care, and household cleaning products, as well as industrial and chemical products.
Genetic Engineering	· Companies that genetically modify plants, such as seeds and crops, and other organisms intended for agricultural use or human consumption.
Nuclear Power	· Companies that own or operate nuclear power plants. · Companies that supply key nuclear-specific products or services to the nuclear power industry.
Iran	· Global Sanctions - California Department of Insurance Iran · Global Sanctions - State of California Iran · Global Sanctions - State of Florida Iran · Global Sanctions - State of Georgia Iran · Global Sanctions - State of Illinois Iran
Sudan	· Global Sanctions - State of Florida Sudan · Global Sanctions - Sudan Focus · Global Sanctions - State of Illinois Sudan · Global Sanctions - State of New Jersey Sudan · Global Sanctions - State of Oregon Sudan

Securities in this report are rated using either MSCI's ESG Ratings model or Government model. At a security level, both models include a Rating, ESG Quality Score, Environment Score, Social Score, and Governance Score. Drilling further down, the models utilize different data fields. Due to these differences, some pages of the report are based on a comingled universe of Government and ESG Ratings analyzed securities, while the results of other pages are based only on securities reviewed using a single rating model. In addition to the ESG Ratings and Government rating models, some sections of the report assess securities using MSCI's ESG Controversies and Business Involvement Screening Research (BISR) products. Following is an explanation of the models used in each section of the report:

	ESG Ratings	Government	Controversies	BISR
Portfolio Summary (p.2)	Y	Y		
Sector Breakdown - Corporates (p.3)	Y			
Sector Breakdown - Governments (p.4)		Y		
ESG Ratings Key Issue Breakdown - Environment (p.5)	Y			
ESG Ratings Key Issue Breakdown - Social - (p.6)	Y			
ESG Ratings Key Issue Breakdown - Governance (p.7)	Y			
ESG Ratings Key Issue Summary (p.8)	Y			
Holdings Breakdown (p.9 & 10)	Y	Y		
ESG Controversies Exposure (p.11)			Y	
Business Involvement Screening Research (p.12)				Y

Coverage of the portfolio is based on our existing research universe for each ESG product line, as outlined in the chart below.

Product	Research Universe
MSCI ESG Ratings	~6,500 companies (plus bond-issuing subsidiaries), primarily publicly-traded, but also including government-owned entities that operate as companies, and supra-national financial institutions.
Government Ratings	218 government entities (plus bond-issuing subsidiaries) including Sovereigns, Local Authorities and Agencies.
ESG Controversies	ACWI IMI+
BISR	All publicly-traded equities.

Please refer to ESG Manager for complete methodology documents.

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- **Past performance is no guarantee of future results.**
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AGENDA ITEM SUMMARY

1. **NAME OF ITEM:** Defined Contribution Fee Benchmark Report
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 and Barry Schmitt, Senior Vice Presidents with CAPTRUST Financial Advisors, will present their Fee Benchmark Report. The report assists with fulfilling fiduciary responsibilities by demonstrating and documenting the process used to ensure plan costs are reasonable.

May 17, 2019

VENDOR FEE BENCHMARK

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UNIVERSITY OF MAINE SYSTEM

May 2019

Michael S. Pratico

Senior Vice President | Financial Advisor

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- I. Executive Summary
- II. Evaluation
- III. Conclusion

EXECUTIVE SUMMARY

Broad-based Provider Experience

CAPTRUST's expertise is derived from over 1,700 institutional client relationships which spread across an extensive range of retirement plan service providers. In addition to day to day client related interactions, we also continuously monitor developments in the provider space as well as conduct in-depth meetings and annual due diligence.

ADP Retirement Services	Mass Mutual	The Standard
Ascensus Retirement Services	MetLife	State Street Corporation
Bank of America Merrill Lynch	Milliman	SunAmerica
BB&T	MVP Plan Administrators, Inc.	SunTrust Bank, Inc.
BNY Mellon	Nationwide Financial Services	T. Rowe Price
BPAS-Hand Benefits & Trust	Newport Group, Inc.	TIAA-CREF
Empower Retirement	Northern Trust	Transamerica Institutional Markets
Fidelity Management & Research LLC	OneAmerica	US Bank Institutional
ICMA-RC	PNC Advisors	VALIC
John Hancock Retirement Plan Services	Principal Financial Group	Vanguard Group
JPMorgan Retirement Plan Services	Prudential Retirement Services	Voya Financial
Lincoln Financial Group	Schwab Retirement Services	Wells Fargo Institutional Retirement

EXECUTIVE SUMMARY

Meeting Your Fiduciary Responsibilities

The monitoring of fees for your plan service providers is a fiduciary function.

Fiduciaries are tasked with the responsibility of acting solely in the interest of plan participants and their beneficiaries with the exclusive purpose of providing benefits to those individuals.

It is critical that fiduciaries maintain documentation of the process used for identifying and monitoring their plan expenses.

Plan Sponsors are not obligated to choose the lowest-cost provider, but rather to ensure that fees are reasonable in light of the services being provided.

This analysis will assist with the fulfillment of your fiduciary responsibilities in this regard. In the pages to follow, we will demonstrate a documented process, the identification of plan expenses, and whether the costs are reasonable.

FIDUCIARY DUTIES

Document the process

Identify plan expenses

Ensure costs are reasonable

EXECUTIVE SUMMARY

Plan Information Summary

Common drivers of pricing include: plan assets, average account balance, number of participants, participation rate, cash flow, and administrative complexity. The below information was considered by prospective provider candidates when preparing their proposals.

GENERAL

Current Provider	TIAA-CREF
Plan Types	401(a), 403(b), 457(b)
Core Plan Assets as of 3/31/19	\$1.56 billion
Loan Assets as of 3/31/19	\$81,440.89

PARTICIPATION

Unique Participants with Balances	11,779
Average Account Balance	\$132,400

EVALUATION

Evaluating Provider Fees

Providers quote their fees differently. We have identified all fees and expenses and quantified them in a format that is easy to compare.

Mutual fund fees are charged in the form of expense ratios. Investment fund companies are permitted to rebate some of their fees to other plan service providers through transactions that are referred to as revenue sharing. Revenue sharing can be used to directly offset the administrative expenses of the plan.

Plan expenses are usually broken down into two categories: investment management and administrative expenses.

For purposes of this analysis, we have compared the administrative expenses of each prospective provider regardless of fund selection. However, an illustrative total cost is given based on a sample fund line-up to aid in the comparison. It is also important to note that varying revenue sharing agreements exist among providers.

Administrative expenses can be quoted as an asset based or per participant fee. Expenses can be paid by 1) the revenue sharing allotted; 2) billing to the participants from plan assets; 3) billing to the plan sponsor; or 4) a combination of these three options.

Investment Management Expenses are purely the costs of managing the fund, and revenue sharing is excluded.

Administrative Expenses are the costs associated with keeping the records of participants accounts and the services the provider offers to the plan.

EVALUATION

Expense Analysis – 3.31.19

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Allocation Tier				Total Cost		Recordkeeper Cost	
Asset Class	Investment Name	Value	% Assets	Expense Ratio		Revenue Share	
				%	\$	%	\$
World Allocation	CREF Social Choice R3	\$44,359,029	2.84%	0.34%	\$150,821	0.10%	\$44,359
Target-Date Retirement	Vanguard Instl Trgt Retire Inc Instl	\$10,023,167	0.64%	0.09%	\$9,021	0.00%	\$0
Target-Date 2015	Vanguard Instl Trgt Retire 2015 Instl	\$7,233,218	0.46%	0.09%	\$6,510	0.00%	\$0
Target-Date 2020	Vanguard Instl Trgt Retire 2020 Instl	\$19,663,782	1.26%	0.09%	\$17,697	0.00%	\$0
Target-Date 2025	Vanguard Instl Trgt Retire 2025 Instl	\$22,223,990	1.43%	0.09%	\$20,002	0.00%	\$0
Target-Date 2030	Vanguard Instl Trgt Retire 2030 Instl	\$16,516,503	1.06%	0.09%	\$14,865	0.00%	\$0
Target-Date 2035	Vanguard Instl Trgt Retire 2035 Instl	\$15,342,270	0.98%	0.09%	\$13,808	0.00%	\$0
Target-Date 2040	Vanguard Instl Trgt Retire 2040 Instl	\$15,037,434	0.96%	0.09%	\$13,534	0.00%	\$0
Target-Date 2045	Vanguard Instl Trgt Retire 2045 Instl	\$12,183,914	0.78%	0.09%	\$10,966	0.00%	\$0
Target-Date 2050	Vanguard Instl Trgt Retire 2050 Instl	\$7,932,873	0.51%	0.09%	\$7,140	0.00%	\$0
Target-Date 2055	Vanguard Instl Trgt Retire 2055 Instl	\$3,074,950	0.20%	0.09%	\$2,767	0.00%	\$0
Target-Date 2060+	Vanguard Instl Trgt Retire 2060 Instl	\$468,854	0.03%	0.09%	\$422	0.00%	\$0
Target-Date 2060+	Vanguard Instl Trgt Retire 2065 Instl	\$5,577	0.00%	0.09%	\$5	0.00%	\$0
Allocation--85%+ Equity	CREF Stock R3	\$224,994,850	14.43%	0.37%	\$832,481	0.10%	\$224,995
Allocation Total		\$399,060,409	25.59%	0.28%	\$1,100,038	0.07%	\$269,354

Passive Tier				Total Cost		Recordkeeper Cost	
Asset Class	Investment Name	Value	% Assets	Expense Ratio		Revenue Share	
				%	\$	%	\$
Intermediate-Term Bond	Vanguard Total Bond Market Index I	\$8,342,221	0.54%	0.04%	\$3,337	0.00%	\$0
Large Blend	Vanguard Institutional Index I	\$91,388,698	5.86%	0.04%	\$31,986	0.00%	\$0
Mid-Cap Blend	Vanguard Extended Market Index Instl	\$21,014,964	1.35%	0.06%	\$12,609	0.00%	\$0
Foreign Large Blend	Vanguard Total Intl Stock Index I	\$19,512,925	1.25%	0.09%	\$17,562	0.00%	\$0
Passive Total		\$140,258,808	9.00%	0.05%	\$65,494	0.00%	\$0

EVALUATION

Expense Analysis – 3.31.19

Active Tier				Total Cost		Recordkeeper Cost	
Asset Class	Investment Name	Value	% Assets	Expense Ratio		Revenue Share	
				%	\$	%	\$
Money Market - Taxable	CREF Money Market R3	\$13,639,441	0.87%	0.32%	\$43,646	0.10%	\$13,639
Money Market - Taxable	Vanguard Federal Money Market Investor	\$2,557,221	0.16%	0.11%	\$2,813	0.00%	\$0
Stable Value	TIAA Traditional - Group Retirement Annuity	\$519,629,575	33.33%	0.52%	\$2,702,074	0.15%	\$779,444
Intermediate-Term Bond	PGIM Total Return Bond R6	\$32,302,778	2.07%	0.41%	\$132,441	0.00%	\$0
Inflation-Protected Bond	CREF Inflation-Linked Bond R3	\$18,638,086	1.20%	0.33%	\$61,506	0.10%	\$18,638
Large Value	JHancock Disciplined Value R6	\$22,446,186	1.44%	0.70%	\$157,123	0.00%	\$0
Large Growth	Harbor Capital Appreciation Retirement	\$16,964,403	1.09%	0.58%	\$98,394	0.00%	\$0
Mid-Cap Value	Virtus Ceredex Mid-Cap Value Equity R6	\$12,769,279	0.82%	0.80%	\$102,154	0.00%	\$0
Mid-Cap Growth	MFS* Mid Cap Growth R6	\$7,653,072	0.49%	0.85%	\$65,051	0.00%	\$0
Foreign Large Blend	MFS* International Value R6	\$28,760,333	1.84%	0.66%	\$189,818	0.00%	\$0
Foreign Large Growth	American Funds Europacific Growth R6	\$4,238,346	0.27%	0.49%	\$20,768	0.00%	\$0
Small Value	Victory Sycamore Small Company Opp I	\$11,123,238	0.71%	0.90%	\$100,109	0.10%	\$11,123
Small Growth	Carillon Eagle Small Cap Growth R6	\$4,687,724	0.30%	0.66%	\$30,939	0.00%	\$0
Diversified Emerging Mkts	DFA Emerging Markets Core Equity I	\$18,729,547	1.20%	0.53%	\$99,267	0.00%	\$0
Real Estate	TIAA Real Estate	\$71,439,379	4.58%	0.89%	\$635,810	0.24%	\$171,455
Other Assets	Non Approved Funds	\$180,814,114	11.60%	0.35%	\$632,849	0.10%	\$180,814
Active Total		\$966,392,724	61.98%	0.53%	\$5,074,763	0.12%	\$1,175,114

Other			
Asset Class	Investment Name	Value	% Assets
Self-Directed Brokerage	Self-Directed Brokerage	\$53,518,862	3.43%
Loan	Loan	\$81,441	0.01%

Plan Totals*	\$1,559,230,803	100%	0.40%	\$6,240,294	0.09%	\$1,444,468
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*Plan totals do not include loan assets

Total RK/Admin. Cost:		0.065%	\$1,013,500
Excess Revenue:		-0.03%	-\$430,968
Total Plan Cost:	0.40%	\$6,240,294	

FEE COMPARISON

CAPTRUST maintains expense data in a central proprietary database for evaluating administrative fees, derived from institutional client relationships which spread across an extensive range of retirement plan service providers. In addition to disclosing retirement plan fees, we also continuously monitor trends in provider pricing and mutual fund revenue. We track this data in a proprietary database that includes expense information on current clients in addition to provider bids for administrator searches and fee benchmarks. The expense data represents a diverse collection of plan sizes, locations, and industries.

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Data Summary			
Year	Number of Projects	Total Price Points Evaluated	Total Number of Providers
2014	105	465	40
2015	140	629	32
2016	136	651	28
2017	150	698	30
2018	156	590	41

Driving Factors for Plan Complexity:

- Payroll
- Participant advice
- Self-directed
- Plan design
- Company stock
- Frozen assets

Driving Factors for Pricing:

- Total plan assets
- Total participants with a balance
- Net contributions
- Plan complexity

Market Segment (in \$ millions)	Number of Projects
< \$5	67
\$5 - \$15	142
\$15 - \$25	94
\$25 - \$50	102
\$50 - \$100	107
\$100 - \$250	113
> \$250	62

Source: CAPTRUST Institutional Client Data -

FEE COMPARISON

From continuous analysis of the data, we have derived multiple fee ranges for a wide variety of retirement plans. The ranges are broken down into segments driven by average account balance and total plan assets, which are two main factors used by administrators when pricing their services.

		Average Account Balance (in \$ thousands)							
			\$10 - \$25	\$25 - \$50	\$50 - \$75	\$75 - \$100	\$100 - \$150	\$150+	
		Plan Size (in \$ millions)	Range						
Total Assets	\$1.56 billion	<\$5	Hi	.66%	.44%	.49%	.42%	.47%	.55%
			Avg	.53%	.33%	.36%	.31%	.31%	.34%
			Low	.39%	.24%	.25%	.20%	.17%	.22%
Average Account Balance	\$132,400	\$5 - \$15	Hi	.55%	.38%	.31%	.33%	.34%	.27%
			Avg	.42%	.31%	.24%	.23%	.22%	.18%
			Low	.32%	.25%	.18%	.14%	.14%	.12%
Total RK/Admin. Fees	0.065%	\$15 - \$25	Hi	.52%	.32%	.27%	.24%	.25%	.24%
			Avg	.40%	.26%	.21%	.19%	.17%	.15%
			Low	.28%	.21%	.17%	.15%	.11%	.09%
		\$25 - \$50	Hi	.43%	.31%	.24%	.19%	.19%	.21%
			Avg	.35%	.26%	.18%	.15%	.14%	.14%
			Low	.27%	.20%	.13%	.12%	.11%	.09%
		\$50- \$100	Hi	.37%	.28%	.20%	.18%	.17%	.11%
			Avg	.30%	.22%	.16%	.14%	.12%	.07%
			Low	.23%	.17%	.12%	.11%	.09%	.05%
		\$100 - \$250	Hi	.33%	.23%	.17%	.11%	.11%	.09%
			Avg	.27%	.18%	.14%	.09%	.09%	.07%
			Low	.21%	.13%	.10%	.08%	.08%	.05%
		\$500 +	Hi	.31%	.21%	.13%	.10%	.09%	.06%
			Avg	.25%	.16%	.11%	.08%	.07%	.05%
			Low	.18%	.11%	.09%	.06%	.05%	.04%

Information shown has been obtained from sources deemed to be reliable but is not guaranteed to be accurate or complete. This information has been prepared or is distributed for informational purposes only and is not a solicitation or an offer to buy any security or to participate in any investment strategy. Plans with over \$500M in assets may have additional pricing complexities that could warrant further analysis. Source: CAPTRUST Institutional Client Data -

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SAMPLE EXPENSE RANGES FOR SIMILAR PLANS

University of Maine System

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401(a), 403(b), 457(b) Plans	
Total Plan Assets	\$1.56 billion
Participants	11,779
Avg. Balance	\$132,400
Estimated Expense	0.065%

Sample TIAA Plans (CAPTRUST Clients)

Sample Plan A		Sample Plan B		Sample Plan C	
Total Plan Assets	\$1.8 billion	Total Plan Assets	\$2.0 billion	Total Plan Assets	\$1.6 billion
Participants	10,700	Participants	12,600	Participants	8,700
Avg. Balance	\$168,200	Avg. Balance	\$158,700	Avg. Balance	\$183,900
Admin. Expense	0.05%	Admin. Expense	0.048%	Bid Range	0.03%-0.035%

Source: CAPTRUST Institutional Client Data - 2019

FEE BENCHMARK SUMMARY

Conclusions

- Identified total weighted plan cost of \$6,240,294 (or 0.40% of plan assets), with TIAA's administration & recordkeeping revenue at \$1,013,500 (or 0.065% of plan assets).
- Benchmarking the current plan expenses against the CAPTRUST database, administrative & recordkeeping fees for comparable sized plans range from 0.03% to 0.09%.
- Based on the plan demographic information utilized to benchmark the plan against the industry, TIAA's current fees are within the current benchmark range.





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 and Barry Schmitt, Senior Vice Presidents with CAPTRUST Financial Advisors, will provide a quarterly update regarding the Defined Contribution Plan at the May 28, 2019 Investment Committee meeting.

May 17, 2019

UNIVERSITY OF MAINE SYSTEM
1ST QUARTER, 2019

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 3.31.19 | Q1 19

University of Maine System

University of Maine System Defined Contribution Plans

1st Quarter, 2019 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

SECTION 1: RETIREMENT INDUSTRY UPDATES

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University of Maine System

SECTION 1: RETIREMENT INDUSTRY UPDATES

Industry Updates.....

DEFINED CONTRIBUTION MARKETPLACE — INDUSTRY UPDATE

Period Ending 3.31.19 | Q1 19

RECORDKEEPING FEE TRENDS: AN INDUSTRY SHIFT

Revenue compression for retirement plan recordkeepers has accelerated since fee disclosure regulations were finalized in 2012. For more than six years, plan sponsors have been focused on answering a key question: Is their recordkeeper's fee for core services—either asset-based or per-participant-based—reasonable for the level of services being provided? Continuous benchmarking has resulted in revenue compression, and recordkeeper margins have been squeezed as continued demand for reinvestment into technology, cybersecurity, and client service has increased the cost of service delivery. As a result, recordkeepers are now looking for new sources of revenue from their clients.

**TRANSACTION FEES**

Increases in loan setup, loan maintenance, and distribution fees

**WELLNESS TOOLS**

Debt financing, insurance, HSAs, and checking or savings accounts

**PLATFORM FEES**

Agreements between asset managers and recordkeepers to gain access to investors

**PROJECT AND SERVICE COSTS**

Additional fees charged to cover fund changes, testing, and other one-time projects

HOW DID WE GET HERE?




- Fee disclosure has allowed for more precise benchmarking practices
- Fiduciary pressure has resulted in moves to low-cost investments and recordkeeping services
- The demand for open architecture has reduced the capture rates of active proprietary asset management
- Fixed-fee pricing is becoming typical among plans of all sizes and is moving down market
- Investment in information security increases year after year
- Smaller margins have increased the need for scale

DEFINED CONTRIBUTION MARKETPLACE — INDUSTRY UPDATE

Period Ending 3.31.19 | Q1 19

MANAGING PARTICIPANT NEEDS

A growing number of professionally managed solutions—or managed accounts—are now available to participants in defined contribution plans. According to Cerulli Associates, total defined contribution assets in managed accounts have grown from \$108 billion in 2012 to \$271 billion in 2017. Today, more plan sponsors are considering adding managed accounts to their retirement plans due to an increased focus on participant advice and financial wellness programs, improved recordkeeper data integration, and lower costs.

			<p>The selection and monitoring of a managed account provider is a fiduciary act. Below are some considerations:</p>
<p>What is a managed account?</p> <p>Managed accounts are personalized diversified portfolios created using inputs such as salary, deferral rate, and allocation of non-plan assets in addition to age and risk profile to customize participant portfolios. They are monitored and updated as financial circumstances change.</p>	<p>What are the benefits?</p> <p>Managed accounts provide participants with a do-it-for-me professionally managed solution. Investment decisions are taken out of the hands of the investor, who may not have the expertise or desire to design his or her own portfolio. By using inputs beyond age, managed accounts can be customized to the needs of the individual.</p>	<p>How are they used?</p> <p>Most managed accounts can be offered on an opt-in or opt-out basis and are QDIA-eligible. Newer versions of managed accounts may be dynamic, using a target date fund for younger investors and shifting to a managed account when an investor reaches a specified age.</p>	<ul style="list-style-type: none"> • What are the fees associated with the service, and are they reasonable? • What level of integration does the managed account provider have with the recordkeeper (data, website, etc.)? • Who is the discretionary investment manager? What asset allocation methodology is used? • What services beyond investment advice are offered to participants? • What reporting is available to plan sponsors?

Managed accounts can benefit participants by offering access to professional investment management customized to their financial needs. However, plan sponsors should be aware of the considerations associated with managed accounts and the differences among service providers.

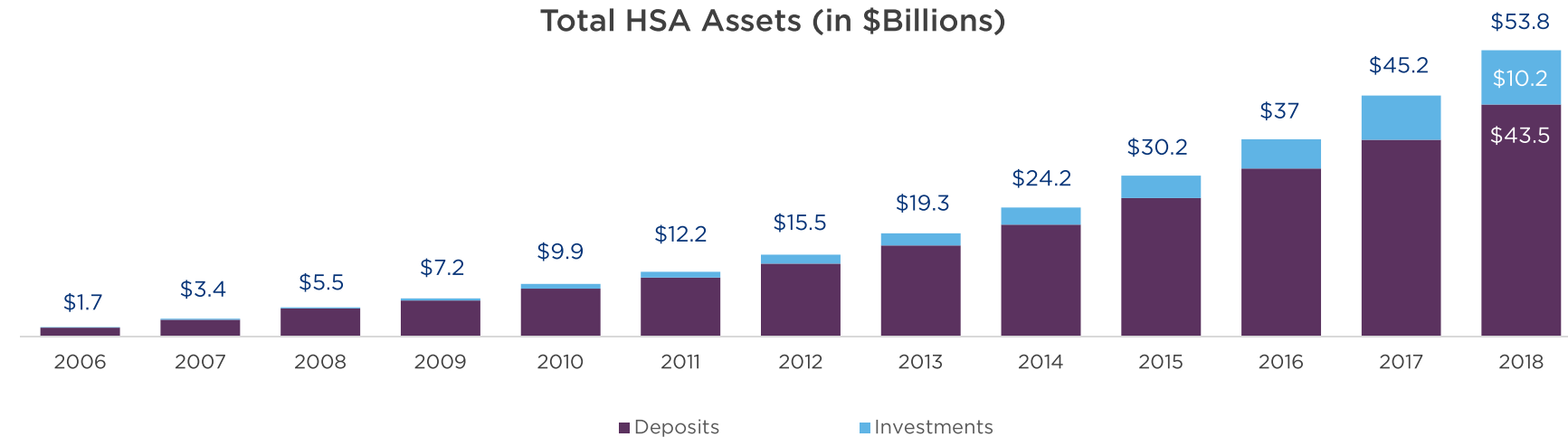
DEFINED CONTRIBUTION MARKETPLACE — INDUSTRY UPDATE

Period Ending 3.31.19 | Q1 19

HEALTH SAVINGS ACCOUNTS ON THE RISE

Health savings accounts (HSAs) are growing in popularity, surpassing an estimated 25 million total accounts in 2018—a 13% increase from 2017 and a 50% increase since 2015. As more retirement plan providers roll out proprietary HSA solutions, the potential for these accounts to be used as long-term investment vehicles rises. HSA balances held in investments (vs. cash deposits) now represent 19% of account assets and recently surpassed the \$10 billion mark. This trend is expected to continue; the percentage of invested assets in HSAs has risen each year since 2008.

Total HSA Assets (in \$Billions)



WHEN IS AN HSA PROGRAM COVERED BY ERISA?

HSAs continue to rise in popularity, and employers may be eager to help shape these programs. That said, too much involvement can create unwanted ERISA fiduciary obligations. Here are a few employer actions that could cause an HSA program to be covered by ERISA:

- Making employee contributions to an HSA involuntary
- Limiting employees' ability to move funds to another HSA
- Influencing HSA investment decisions
- Telling employees that the HSA is subject to ERISA
- Receiving payment in connection with the HSA
- Imposing conditions on the use of HSA funds—if employees want to use the funds for something other than medical expenses, they must be allowed to, even though they may have to pay penalties and taxes

Source: Estimates derived from 2018 Year-End Devenir HSA Market Survey, press releases, previous market research, and market growth rates.

SECTION 2: MARKET COMMENTARY AND REVIEW

Period Ending 3.31.19 | Q1 19

University of Maine System

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

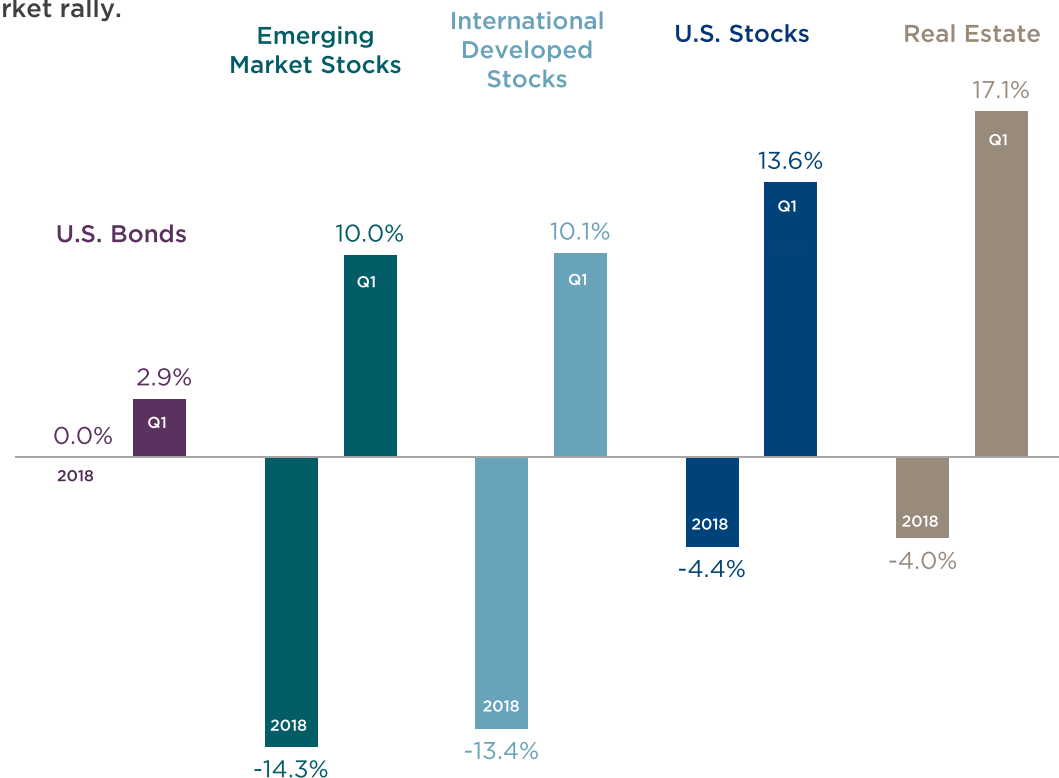
MARKET COMMENTARY

Period Ending 3.31.19 | Q1 19

MARKETS BOUNCE BACK

After a challenging end to 2018, all major asset classes rang in the new year with solid gains. Public real estate and U.S. and international stocks all but recovered from their fourth quarter woes as a respite from Fed rate hikes renewed investor confidence in stocks and fueled a bond market rally.

- U.S. stocks notched double-digit gains in the first quarter, with large-cap stocks posting their best quarter since 2009 on hopes of a patient Federal Reserve and a trade deal with China.
- International developed stocks followed suit but lagged their U.S. counterparts due to concerns about sluggish European growth.
- Emerging market stocks also rallied, aided by a stable U.S. dollar and expectations of fiscal stimulus in China.
- Bonds posted a strong March and closed out the first quarter with a solid gain as interest rates fell sharply.
- Public real estate has been this year's standout performer so far, driven by lower interest rates and favorable market dynamics across most property types.



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).

MARKET COMMENTARY

Period Ending 3.31.19 | Q1 19

DIGGING DEEPER: STOCKS AND BONDS

Equities

	Q1 2019	YTD 2019	Last 12 Months
U.S. Stocks	13.6%	13.6%	9.5%
- Best Sector: Technology	19.9%	19.9%	15.4%
- Worst Sector: Health Care	6.6%	6.6%	14.9%
International Stocks	10.1%	10.1%	-3.2%
Emerging Market Stocks	10.0%	10.0%	-7.1%

Fixed Income

	3.31.19	12.31.18	3.31.18
1-Year U.S. Treasury Yield	2.40%	2.63%	2.09%
10-Year U.S. Treasury Yield	2.41%	2.69%	2.74%
	QTD 2019	YTD 2019	Last 12 Months
10-Year U.S. Treasury Total Return	3.08%	3.08%	5.60%

Equities – Relative Performance by Market Capitalization and Style

Q1 2019/YTD 2019				2018				Last 12 Months			
	Value	Blend	Growth		Value	Blend	Growth		Value	Blend	Growth
Large	11.9%	13.6%	16.1%	Large	-8.3%	-4.4%	-1.5%	Large	5.7%	9.5%	12.7%
Mid	14.4%	16.5%	19.6%	Mid	-12.3%	-9.1%	-4.8%	Mid	2.9%	6.5%	11.5%
Small	11.9%	14.6%	17.1%	Small	-12.9%	-11.0%	-9.3%	Small	0.2%	2.0%	3.9%

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.

MARKET COMMENTARY

Period Ending 3.31.19 | Q1 19

DIGGING DEEPER: FIXED INCOME MARKET

Interest Rates	3 Month	2 Year	5 Year	10 Year	30 Year	Mortgage Rate
December 2018	2.45%	2.48%	2.51%	2.69%	3.02%	4.51%
March 2019	2.40%	2.27%	2.23%	2.41%	2.81%	4.08%
Change	-0.05%	-0.21%	-0.28%	-0.28%	-0.21%	-0.43%

Interest rates continued to decline in the first quarter across the yield curve. Mortgage rates declined significantly, providing relief to the housing sector.

Bloomberg Barclays U.S. Aggregate Bond Index	Yield to Worst	Duration	Total Return	Spread	Treasury Rate	AA Spread	BBB Spread
December 2018	3.28%	5.87		0.66%	2.62%	0.74%	1.97%
March 2019	2.93%	5.82		0.58%	2.35%	0.57%	1.57%
Change	-0.35%	-0.05	2.94%	-0.08%	-0.27%	-0.17%	-0.40%

A 2.94% return for the Bloomberg Barclays Aggregate is an unsustainably strong return for the quarter. It is unusual to see both interest rates and credit spreads decline this much at the same time.

Bloomberg Barclays U.S. Long Credit Index	Yield to Worst	Duration	Total Return	Spread	Treasury Rate	AA Spread	BBB Spread
December 2018	4.89%	13.28		1.96%	2.93%	1.18%	2.46%
March 2019	4.39%	13.68		1.72%	2.67%	1.05%	2.17%
Change	-0.50%	0.4	7.86%	-0.24%	-0.26%	-0.13%	-0.29%

Long Credit rallied hard in the first quarter, returning nearly 8%. Both credit spreads and interest rates declined, particularly BBB spreads as liquidity concerns eased.

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

MARKET COMMENTARY

Period Ending 3.31.19 | Q1 19

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

Turnabout at the Fed

- The market misbehaved in Q4 2018, but the Federal Reserve reacted by pausing short-term rate increases and halting the decline of its balance sheet.
- In reaction, the stock market posted its best first quarter in 21 years.

**Bull Market Bounce Back**

- Given the current bull market's advancing age, many pundits suggest that its end is near and that a recession is right around the corner.
- However, bull market peak indicators do not suggest to us that a recession is imminent in the near term.

Housing Helped by Fed Policy Change

- Mortgage rates declined from more than 5% to 4%, making mortgages (and housing) more affordable.

Solid Bank Balance Sheets

- Banks' financial strength, credit quality, and profitability have improved significantly over the past decade.
- Today, banks are much better prepared for economic stress than prior to the financial crisis.

HEADWINDS

Inverted Yield Curve

- An inverted curve always incites recession worries, and Q4's 20% stock price decline added fuel to the fire.
- The stock market's sharp Q1 rebound, however, should dampen recession fears.

**Moderating Economic Growth**

- The global economy continues to grow, albeit at a slowing pace, and economic growth in Europe is anemic.

China Trade Deal Hopes

- U.S. and China are on track to sign a trade deal, but the negotiations are volatile and risks remain.
- Lack of resolution continues to weigh on business confidence (although a signed deal could buoy the markets).

Confidence Trending Down

- Consumer and business confidence has declined from peak levels in Q2 2018, a negative indicator for corporate reinvestment.

Flattish Corporate Earnings

- Earnings growth expectations for 2019 have declined from 7.9% to 3.7% over the last three months.

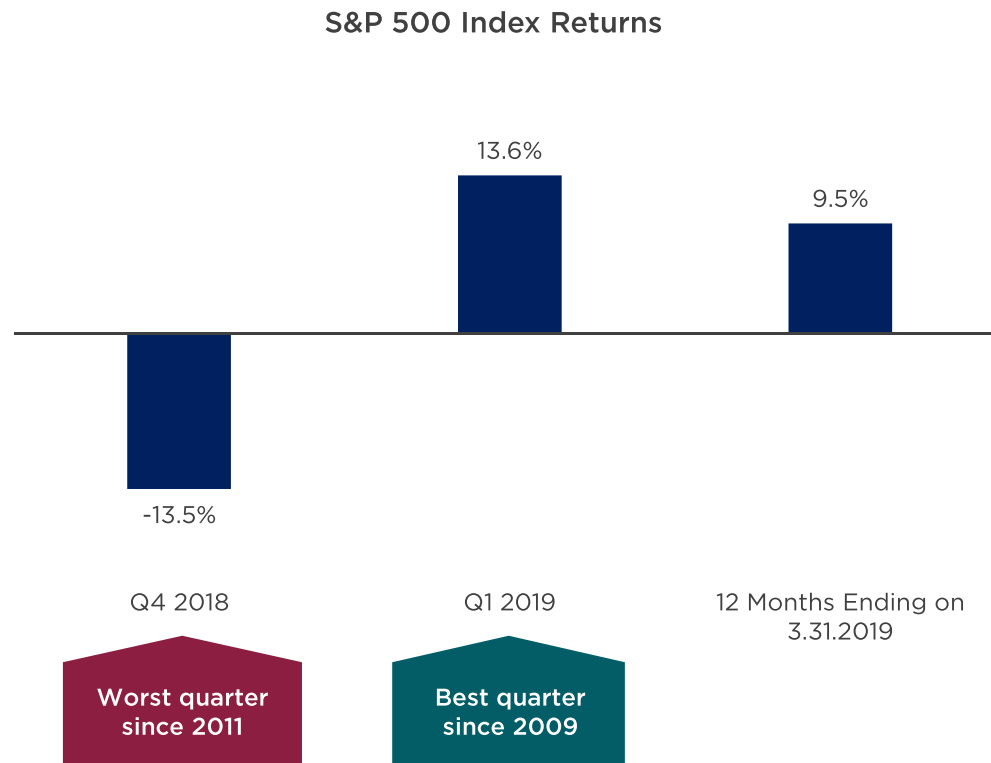
Stock prices are up and bond prices are up. Anxiety is high, too.

MARKET COMMENTARY

Period Ending 3.31.19 | Q1 19

VOLATILITY WORKS BOTH WAYS

The U.S. stock market suffered its worst quarter (negative volatility) in 7 years in the fourth quarter of 2018. In the first quarter of 2019, volatility caused major swings in the market. But this time it was a positive. The first quarter was the best quarter in 10 years. Interestingly, rather than pointing to a recession, the fourth-quarter slump might have prevented one. The Federal Reserve's rapid response—announcing policy changes to stop increasing rates and halting the decline of the Fed's balance sheet—propelled a major market reversal and fueled the first quarter's stock (and bond) market rally.



Source: Bloomberg

OBSERVATIONS

- The stock market plunged in 2018's fourth quarter on investors' recession fears driven by an economic slowdown, especially in the emerging markets and parts of Europe.
- Investors had worried that Fed interest rate hikes had been too aggressive, hampering U.S. economic growth.
- Bad news from the U.S.-China trade negotiations also contributed to the selloff.
- In Q1, stocks erased Q4's losses and posted their best first quarter in years. Fed policy changes, in conjunction with aggressive stimulus from Chinese policy makers, relieved concerns about a looming recession triggered by a weak China dragging down a very weak Europe.
- The substantial increase in market prices could be a signal that we have already put a near-term recession in the rearview mirror.

MARKET COMMENTARY

Period Ending 3.31.19 | Q1 19

BULL MARKET CHECKLIST

As the saying goes, “Without data, you’re just another person with an opinion.” Given all the talk in the media about our aging bull market and recession fears, we thought it might be helpful to look at key market indicators at the market tops in 2000 and 2007 to see if they apply to where we sit at the end of the first quarter of 2019

	Indicator	2000	2007	Now	Comments
1	Blow-off top (steep and rapid rise of stock prices)	✓	✓	✗	Equity market expectations have remained constrained since the market low in 2009, and investors are not paying peak multiples for peak earnings.
2	Heavy inflows into equity mutual funds and exchange-traded funds (ETFs)	✓	✓	✗	Net inflows into equity mutual funds and ETFs are underwhelming while inflows into bond funds remain robust.
3	Big pick-up in merger and acquisition activity	✓	✓	✓	M&A activity has picked up significantly. In absolute dollar terms, activity is approaching historical highs.
4	Initial public offering (IPO) activity	✓	✓	?	IPO activity has been lackluster during this bull market, but the current list of pending IPOs will test whether fear gives way to greed among investors.
5	Rising real interest rates	✓	✓	✗	Real interest rates have declined meaningfully from their peak in early November.
6	Weakening upward earnings revisions	✓	✓	✓	Analysts have revised earnings estimates down recently.
7	Erosion in number of stocks making new highs	✓	✓	✗	Breadth has improved significantly during the current rally.
8	Shift towards defensive leadership	✓	✓	✗	Cyclical stocks have outpaced defensive stocks since last year’s selloff.
9	Widening credit spreads	✓	✓	✗	High yield and investment grade credit spreads have moved higher recently but remain contained compared to historical levels.

Source: Strategas

MARKET COMMENTARY

Period Ending 3.31.19 | Q1 19

IS ANOTHER FINANCIAL CRISIS LOOMING?

In the aftermath of the financial crisis, U.S. and international regulators implemented a regulatory framework to manage the systematic risk of large banks. Banks were forced to get safer, and they now must undergo annual stress tests. They face heavy scrutiny and must do business in less risky ways if they want to satisfy their stringent leverage and capital requirements. Although it's hard to foresee what would trigger another financial crisis, it's unlikely to come from the much stronger global banking system we have today.

Citigroup – Key Financial Strength Measures

Measure	Indicator	2007	2018	Change
Financial Strength	Tangible Common Equity Ratio	2.7%	8.0%	193%
	Tier 1 Capital Ratio	7.1%	13.5%	89%
Credit Quality and Leverage	Nonperforming Loans to Total Loans	1.1%	0.5%	-54%
	Nonperforming Assets to Total Assets	0.5%	0.2%	-60%
	Total Debt to Total Equity	10.1x	2.8x	-72%
	Loans to Deposits	101%	71%	-30%
Profitability	Return on Common Equity	3.1%	9.3%	201%
	Efficiency Ratio	75%	58%	-24%
	Full-time Employees	374,000	204,000	-45%

Source: Bloomberg

OBSERVATIONS

- Citigroup is the U.S.'s third largest bank and a good example of a systematically important ("too big to fail") financial institution whose failure might trigger a financial crisis.
- As shown in a range of key measures, Citigroup's financial strength, credit quality, and profitability have all improved dramatically over the past decade.
- Citi's improved profitability has benefited from the growing economy we have seen over the past 10 years, but it has also cut costs by investing in technology and shrinking the bank's headcount.
- Between 2007 and 2018, Citigroup's assets declined by \$270 billion while shareholders' equity rose by \$84 billion.
- The last financial crisis was caused by bad housing credit from poorly capitalized banks. Today, the lowest-quality credit is in student loans that sit on the U.S. government's balance sheet.

MARKET COMMENTARY

Period Ending 3.31.19 | Q1 19

YIELD CURVE INVERSION: CORRELATION, NOT CAUSATION

An inverted yield curve occurs when short-term Treasury yields exceed the yields of longer-term Treasuries. Yield curve inversions are correlated with recessions, but they do not cause recessions. Simply put, yield curve inversion does not mean that the next recession is imminent. The yield curve inversion we are currently experiencing has not been preceded by worries about excessive inflation, wage growth, or credit expansion. Therefore, we don't believe the Fed is trying to engineer an economic slowdown to counter such economic issues. We think the chance of a recession in the U.S. in the next 12 months is less than one in four.

S&P 500 Returns One Year after Yield Curve Inversion
(Since 1960)

Inversion Date	1-Year Return
01.12.1966	-11.1%
12.17.1968	-15.0%
06.01.1973	-16.4%
10.28.1974	30.2%
11.01.1978	4.0%
10.27.1980	-7.3%
02.16.1982	27.1%
03.28.1989	15.1%
09.11.1998	33.6%
04.05.2000	-25.6%
01.18.2006	11.9%
03.22.2019	???
Average	4.2%
% Positive	54.5%

Source: Strategas



Since 1960, the yield on 3-month Treasuries has exceeded that of the 10-year eleven times. One year later, the S&P 500 had risen 6 times—54% of the time—for an average gain of 4.2%.

POTENTIAL CAUSES OF YIELD CURVE INVERSION THIS TIME:

- Investors lost faith in central bankers' ability to generate higher interest rates and inflation.
- As investors feared a deteriorating global outlook, they retreated from risky assets to longer-term U.S. Treasury bonds, pushing bond prices up and yields down.
- The very low interest rates in Europe, especially in Germany, may act as an anchor pulling U.S. rates down.
- The Federal Reserve is pursuing policies to slow down U.S. economic growth.

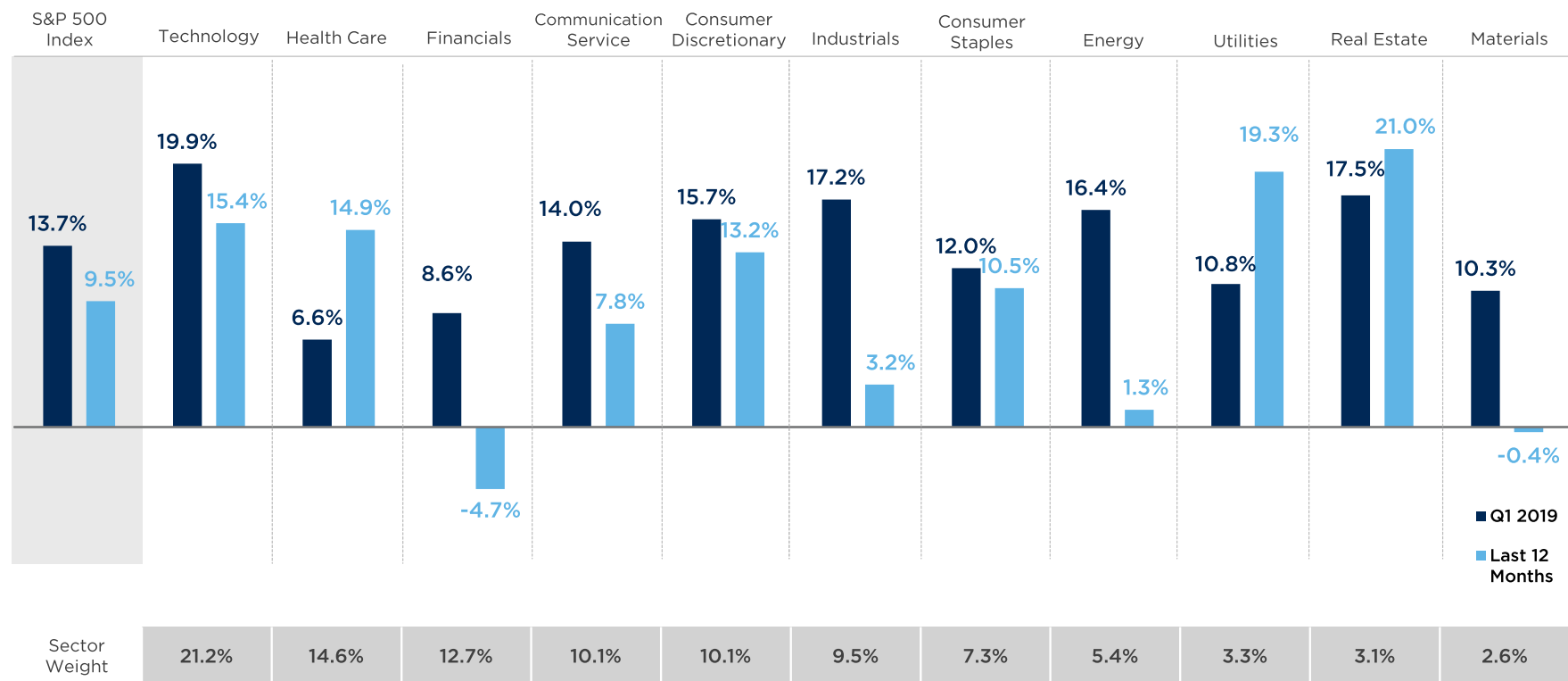
MARKET COMMENTARY

Period Ending 3.31.19 | Q1 19

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 diverse set of industry sectors. The stocks represented in those 11 sectors generated a range of returns over the last 3-12 months.

Returns by S&P 500 Sector



Source: Bloomberg. Data as of 03.31.2019. All calculations are cumulative total return, not annualized, including dividends for the stated period. Past performance is not indicative of future returns.

ASSET CLASS RETURNS

Period Ending 3.31.19 | Q1 19

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	YTD 2019
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%	Cash 1.87%	Mid-Cap Growth 19.62%
Small-Cap Value 23.48%	International Equities 11.63%	Cash 1.51%	Large-Cap Growth 37.21%	Mid-Cap Growth 26.38%	Large-Cap Value 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%	Fixed Income 0.01%	Small-Cap Growth 17.14%
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%	Large-Cap Growth -1.51%	Large-Cap Growth 16.10%
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%	Mid-Cap Growth -4.75%	Mid-Cap Value 14.37%
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 -8.27%	Large-Cap Value 11.93%
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%	Small-Cap Growth -9.31%	Small-Cap Value 11.93%
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%	Mid-Cap Value -12.29%	International Equities 10.13%
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%	Small-Cap Value -12.86%	Fixed Income 2.94%
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%	International Equities -13.36%	Cash 0.60%

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)	Fixed Income (Bloomberg Barclays U.S. Aggregate Bond)
Large-Cap Growth Stocks (Russell 1000 Growth)	Mid-Cap Value Stocks (Russell Mid-Cap Value)	Cash (Merrill Lynch 3-Month Treasury Bill)

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.

Source: Markov Processes, Inc., Bloomberg, Mobius

INDEX PERFORMANCE

Period Ending 3.31.19 | Q1 19

INDEXES	Q1 2019	2018	2017	2016	2015	2014	1 YEAR	3 YEAR	5 YEAR	10 YEAR
90-Day U.S. Treasury	0.60%	1.87%	0.86%	0.33%	0.05%	0.03%	2.12%	1.19%	0.74%	0.43%
Bloomberg Barclays Government 1-3 Year	0.99%	1.58%	0.45%	0.87%	0.57%	0.64%	2.74%	1.00%	0.99%	1.10%
Bloomberg Barclays Intermediate Govt	1.58%	1.43%	1.14%	1.05%	1.18%	2.52%	3.79%	0.97%	1.65%	2.00%
Bloomberg Barclays Muni Bond	2.90%	1.28%	5.45%	0.25%	3.30%	9.05%	5.38%	2.71%	3.73%	4.72%
Bloomberg Barclays Intermediate Govt/Credit	2.32%	0.88%	2.14%	2.08%	1.07%	3.13%	4.24%	1.66%	2.12%	3.14%
Bloomberg Barclays Intermediate Credit	3.55%	0.01%	3.67%	3.68%	0.90%	4.16%	5.00%	2.72%	2.85%	5.21%
Bloomberg Barclays Aggregate Bond	2.94%	0.01%	3.54%	2.65%	0.55%	5.97%	4.48%	2.03%	2.74%	3.77%
Bloomberg Barclays Corporate IG Bond	5.14%	-2.51%	6.42%	6.11%	-0.68%	7.46%	4.94%	3.64%	3.72%	6.66%
Bloomberg Barclays High Yield	7.26%	-2.08%	7.50%	17.13%	-4.47%	2.45%	5.93%	8.56%	4.68%	11.26%
Bloomberg Barclays U.S. Long Corporate	7.97%	-7.24%	12.09%	10.97%	-4.61%	15.73%	4.38%	5.26%	5.31%	9.24%
S&P 500	13.65%	-4.38%	21.83%	11.96%	1.38%	13.69%	9.50%	13.51%	10.91%	15.92%
Dow Jones Industrial Average	11.81%	-3.48%	28.11%	16.50%	0.21%	10.04%	10.09%	16.37%	12.21%	15.97%
NASDAQ Composite	16.49%	-3.88%	28.24%	7.50%	5.73%	13.40%	9.41%	16.65%	12.98%	17.59%
Russell 1000 Value	11.93%	-8.27%	13.66%	17.34%	-3.83%	13.45%	5.67%	10.45%	7.72%	14.52%
Russell 1000	14.00%	-4.78%	21.69%	12.05%	0.92%	13.24%	9.30%	13.52%	10.63%	16.05%
Russell 1000 Growth	16.10%	-1.51%	30.21%	7.08%	5.67%	13.05%	12.75%	16.53%	13.50%	17.52%
Russell Mid-Cap Value Index	14.37%	-12.29%	13.34%	20.00%	-4.78%	14.75%	2.89%	9.50%	7.22%	16.39%
Russell Mid-Cap Index	16.54%	-9.06%	18.52%	13.80%	-2.44%	13.22%	6.47%	11.82%	8.81%	16.88%
Russell Mid-Cap Growth Index	19.62%	-4.75%	25.27%	7.33%	-0.20%	11.90%	11.51%	15.06%	10.89%	17.60%
MSCI EAFE	10.13%	-13.36%	25.62%	1.51%	-0.39%	-4.48%	-3.22%	7.80%	2.81%	9.47%
MSCI ACWI ex U.S.	10.44%	-13.78%	27.77%	5.01%	-5.25%	-3.44%	-3.74%	8.61%	3.05%	9.35%
Russell 2000 Value	11.93%	-12.86%	7.84%	31.74%	-7.47%	4.22%	0.17%	10.86%	5.59%	14.12%
Russell 2000	14.58%	-11.01%	14.65%	21.31%	-4.41%	4.89%	2.05%	12.92%	7.05%	15.36%
Russell 2000 Growth	17.14%	-9.31%	22.17%	11.32%	-1.38%	5.60%	3.85%	14.87%	8.41%	16.52%
MSCI Emerging Markets	9.97%	-14.25%	37.75%	11.60%	-14.60%	-1.82%	-7.06%	11.09%	4.06%	9.31%
Dow Jones U.S. Real Estate Index	17.08%	-4.03%	9.84%	7.56%	2.14%	27.24%	19.41%	8.08%	9.67%	18.06%
HFRX Absolute Return Index	0.56%	-0.49%	3.39%	0.31%	2.86%	0.79%	-0.23%	1.44%	1.21%	0.47%
Consumer Price Index (Inflation)	0.61%	1.85%	2.14%	2.07%	0.73%	0.76%	1.52%	2.01%	1.36%	1.74%
BLENDED BENCHMARKS	Q1 2019	2018	2017	2016	2015	2014	1 YEAR	3 YEAR	5 YEAR	10 YEAR
25% S&P 500/5% MSCI EAFE/70% BB Agg	5.94%	-1.55%	8.93%	5.00%	0.92%	7.37%	5.57%	5.22%	4.89%	7.19%
30% S&P 500/10% MSCI EAFE/60% BB Agg	6.83%	-2.44%	10.90%	5.43%	0.95%	7.21%	5.46%	6.10%	5.32%	8.12%
35% S&P 500/15% MSCI EAFE/50% BB Agg	7.72%	-3.34%	12.90%	5.85%	0.97%	7.04%	5.32%	6.97%	5.74%	9.03%
40% S&P 500/20% MSCI EAFE/40% BB Agg	8.62%	-4.25%	14.93%	6.26%	0.96%	6.87%	5.16%	7.84%	6.15%	9.93%
45% S&P 500/25% MSCI EAFE/30% BB Agg	9.52%	-5.17%	16.99%	6.65%	0.93%	6.69%	4.98%	8.71%	6.55%	10.82%
60% S&P 500/40% Bloomberg Barclays Agg	9.31%	-2.28%	14.25%	8.41%	1.40%	10.75%	7.82%	9.01%	7.84%	11.28%

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SECTION 3: PLAN INVESTMENT REVIEW

Period Ending 3.31.19 | Q1 19

University of Maine System

SECTION 3: PLAN INVESTMENT REVIEW

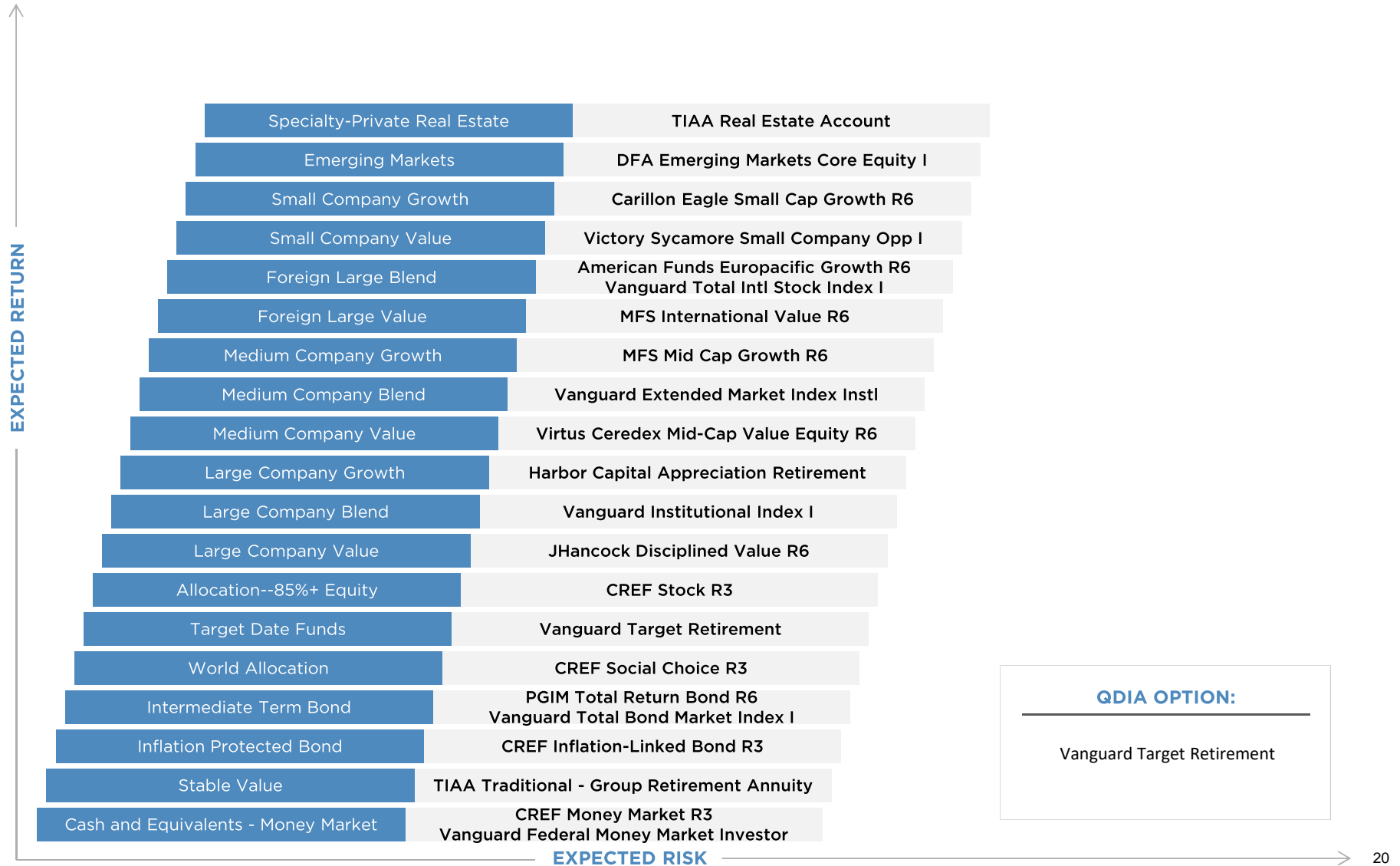
Plan Investment Menu Review.....
Plan Assets.....
Investment Policy Monitor.....
Investment Review Select Commentary.....
Investment Performance Summary.....
Plan Performance Measurement.....

7

PLAN INVESTMENT REVIEW | PLAN MENU

Period Ending 3.31.19 | Q1 19

University of Maine System





PLAN INVESTMENT REVIEW | EXECUTIVE ASSET SUMMARY

Period Ending 3.31.19 | Q1 19

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	\$1,247,232,797
University of Maine System Retirement Tax Deferred Annuity Plan 403(b) TDA	102966	\$166,511,418
University of Maine System Optional Retirement Savings 403(b)	102967	\$1,521,761
University of Maine System Optional Retirement Savings 401(a)	102968	\$1,165,517
University of Maine System Basic Retirement Plan for Classified Employees 403(b)	102969	\$38,119,016
University of Maine System Basic Retirement Plan for Classified Employees 401(a)	102970	\$72,421,812
University of Maine System Deferred Compensation Plan 457(b)	102971	\$32,339,923
TOTALS		\$1,559,312,244

 <p>University of Maine System *</p> <p>Alternate Carrier Transfers In</p> <p>Date Range January 1, 2019 - March 31, 2019</p>	
Alternate Carrier	Amount
VALIC	\$ 91,613.28
VOYA	\$ 259,168.55
TIAA	\$ 1,903.07
Total	\$ 352,684.90
* 7 plans : 102965, 102966, 102967, 102968, 102969, 102970 & 102971	

 <p><u>Disclosures</u></p> <p>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.</p> <p>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.</p> <p>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.</p>

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 3.31.19 | Q1 19

University of Maine System Retirement Plan for Faculty and Professionals 403(b) DC - 102965

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2018	(%)	CURRENT	(%)
Cash and Equivalents - Money Market	CREF Money Market R3	\$33,741,188	2.87%	\$10,471,291	0.84%
Cash and Equivalents - Money Market	Vanguard Federal Money Market Investor	\$3,245,798	0.28%	\$2,419,855	0.19%
Stable Value	TIAA Traditional - Group Retirement Annuity	\$433,231,435	36.79%	\$432,153,776	34.65%
Inflation Protected Bond	CREF Inflation-Linked Bond R3	\$13,977,742	1.19%	\$13,964,512	1.12%
Intermediate Term Bond	PGIM Total Return Bond R6	\$21,528,393	1.83%	\$23,234,019	1.86%
Intermediate Term Bond	Vanguard Total Bond Market Index I	\$5,319,901	0.45%	\$5,795,130	0.46%
World Allocation	CREF Social Choice R3	\$31,116,545	2.64%	\$33,487,517	2.68%
Target Date Ret Income Moderate	Vanguard Target Retirement Income Inv	\$6,252,363	0.53%	\$6,748,318	0.54%
Target Date 2015 Moderate	Vanguard Target Retirement 2015 Inv	\$4,581,987	0.39%	\$4,506,860	0.36%
Target Date 2020 Moderate	Vanguard Target Retirement 2020 Inv	\$10,668,569	0.91%	\$11,797,016	0.95%
Target Date 2025 Moderate	Vanguard Target Retirement 2025 Inv	\$11,636,300	0.99%	\$13,203,625	1.06%
Target Date 2030 Moderate	Vanguard Target Retirement 2030 Inv	\$9,811,752	0.83%	\$11,586,259	0.93%
Target Date 2035 Moderate	Vanguard Target Retirement 2035 Inv	\$10,491,797	0.89%	\$11,989,349	0.96%
Target Date 2040 Moderate	Vanguard Target Retirement 2040 Inv	\$10,398,259	0.88%	\$12,029,373	0.96%
Target Date 2045 Moderate	Vanguard Target Retirement 2045 Inv	\$8,840,912	0.75%	\$10,486,811	0.84%
Target Date 2050 Moderate	Vanguard Target Retirement 2050 Inv	\$5,836,262	0.50%	\$7,126,908	0.57%
Target Date 2055 Moderate	Vanguard Target Retirement 2055 Inv	\$2,071,139	0.18%	\$2,553,877	0.20%
Target Date 2060+ Moderate	Vanguard Target Retirement 2060 Inv	\$244,692	0.02%	\$333,507	0.03%

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PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.19 | Q1 19

University of Maine System Retirement Plan for Faculty and Professionals 403(b) DC - 102965

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2018	(%)	CURRENT	(%)
Target Date 2060+ Moderate	Vanguard Target Retirement 2065 Inv	\$0	0.00%	\$0	0.00%
Allocation--85%+ Equity	CREF Stock R3	\$175,595,931	14.91%	\$192,433,819	15.43%
Large Company Value	JHancock Disciplined Value R6	\$16,925,133	1.44%	\$18,011,763	1.44%
Large Company Blend	Vanguard Institutional Index I	\$35,014,254	2.97%	\$72,812,869	5.84%
Large Company Growth	Harbor Capital Appreciation Retirement	\$10,165,637	0.86%	\$11,679,110	0.94%
Medium Company Value	Virtus Ceredex Mid-Cap Value Equity R6	\$9,207,455	0.78%	\$10,440,983	0.84%
Medium Company Blend	Vanguard Extended Market Index Instl	\$14,041,707	1.19%	\$16,086,912	1.29%
Medium Company Growth	Goldman Sachs Growth Opportunities R6	\$5,113,494	0.43%	-	-
Medium Company Growth	MFS Mid Cap Growth R6	-	-	\$6,283,112	0.50%
Foreign Large Value	MFS International Value R6	\$19,243,386	1.63%	\$22,145,556	1.78%
Foreign Large Blend	American Funds Europacific Growth R6	-	-	\$3,542,726	0.28%
Foreign Large Blend	Vanguard Total Intl Stock Index I	\$12,831,913	1.09%	\$15,220,218	1.22%
Foreign Large Growth	Oppenheimer International Growth I	\$3,309,664	0.28%	-	-
Small Company Value	Victory Sycamore Small Company Opp I	\$7,696,760	0.65%	\$8,448,354	0.68%
Small Company Growth	Carillon Eagle Small Cap Growth R6	\$3,516,252	0.30%	\$3,880,762	0.31%
Emerging Markets	DFA Emerging Markets Core Equity I	\$12,978,914	1.10%	\$14,712,836	1.18%
Specialty-Private Real Estate	TIAA Real Estate Account	\$52,094,873	4.42%	\$52,771,154	4.23%
Other Assets	Non Approved Funds	\$126,995,957	10.78%	\$138,868,205	11.13%

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PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.19 | Q1 19

University of Maine System Retirement Plan for Faculty and Professionals 403(b) DC - 102965

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2018	(%)	CURRENT	(%)
Self-Directed Brokerage	Self Directed Accounts	\$49,871,532	4.23%	\$45,989,881	3.69%
Loan	Default Loan	\$16,365	0.00%	\$16,536	0.00%
Loan	Loan Balance	\$0	0.00%	\$0	0.00%
TOTALS		\$1,177,614,259	100%	\$1,247,232,798	100%

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PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.19 | Q1 19

University of Maine System Retirement Tax Deferred Annuity Plan 403(b) TDA- 102966

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2018	(%)	CURRENT	(%)
Cash and Equivalents - Money Market	CREF Money Market R3	\$2,776,789	1.77%	\$1,218,804	0.73%
Cash and Equivalents - Money Market	Vanguard Federal Money Market Investor	\$213,653	0.14%	\$30	0.00%
Stable Value	TIAA Traditional - Group Retirement Annuity	\$56,098,968	35.75%	\$56,693,323	34.05%
Inflation Protected Bond	CREF Inflation-Linked Bond R3	\$2,381,360	1.52%	\$2,440,793	1.47%
Intermediate Term Bond	PGIM Total Return Bond R6	\$5,142,723	3.28%	\$5,356,815	3.22%
Intermediate Term Bond	Vanguard Total Bond Market Index I	\$1,339,285	0.85%	\$1,607,549	0.97%
World Allocation	CREF Social Choice R3	\$5,187,134	3.31%	\$5,556,317	3.34%
Target Date Ret Income Moderate	Vanguard Target Retirement Income Inv	\$1,672,675	1.07%	\$1,671,800	1.00%
Target Date 2015 Moderate	Vanguard Target Retirement 2015 Inv	\$841,090	0.54%	\$877,667	0.53%
Target Date 2020 Moderate	Vanguard Target Retirement 2020 Inv	\$2,788,232	1.78%	\$3,021,810	1.81%
Target Date 2025 Moderate	Vanguard Target Retirement 2025 Inv	\$3,610,502	2.30%	\$4,100,884	2.46%
Target Date 2030 Moderate	Vanguard Target Retirement 2030 Inv	\$1,721,577	1.10%	\$2,224,367	1.34%
Target Date 2035 Moderate	Vanguard Target Retirement 2035 Inv	\$1,117,230	0.71%	\$1,247,402	0.75%
Target Date 2040 Moderate	Vanguard Target Retirement 2040 Inv	\$980,701	0.62%	\$1,110,958	0.67%
Target Date 2045 Moderate	Vanguard Target Retirement 2045 Inv	\$304,310	0.19%	\$355,068	0.21%
Target Date 2050 Moderate	Vanguard Target Retirement 2050 Inv	\$193,325	0.12%	\$228,879	0.14%
Target Date 2055 Moderate	Vanguard Target Retirement 2055 Inv	\$72,237	0.05%	\$80,814	0.05%
Target Date 2060+ Moderate	Vanguard Target Retirement 2060 Inv	\$4,452	0.00%	\$5,279	0.00%

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PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.19 | Q1 19

University of Maine System Retirement Tax Deferred Annuity Plan 403(b) TDA- 102966

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2018	(%)	CURRENT	(%)
Target Date 2060+ Moderate	Vanguard Target Retirement 2065 Inv	\$0	0.00%	\$0	0.00%
Allocation--85%+ Equity	CREF Stock R3	\$16,035,834	10.22%	\$18,016,255	10.82%
Large Company Value	JHancock Disciplined Value R6	\$1,802,893	1.15%	\$1,912,397	1.15%
Large Company Blend	Vanguard Institutional Index I	\$9,011,773	5.74%	\$11,689,282	7.02%
Large Company Growth	Harbor Capital Appreciation Retirement	\$1,622,489	1.03%	\$1,776,952	1.07%
Medium Company Value	Virtus Ceredex Mid-Cap Value Equity R6	\$1,000,005	0.64%	\$1,184,360	0.71%
Medium Company Blend	Vanguard Extended Market Index Instl	\$2,393,286	1.53%	\$2,787,331	1.67%
Medium Company Growth	Goldman Sachs Growth Opportunities R6	\$339,964	0.22%	-	-
Medium Company Growth	MFS Mid Cap Growth R6	-	-	\$380,002	0.23%
Foreign Large Value	MFS International Value R6	\$2,816,190	1.79%	\$3,174,907	1.91%
Foreign Large Blend	American Funds Europacific Growth R6	-	-	\$383,184	0.23%
Foreign Large Blend	Vanguard Total Intl Stock Index I	\$1,968,499	1.25%	\$2,319,269	1.39%
Foreign Large Growth	Oppenheimer International Growth I	\$373,437	0.24%	-	-
Small Company Value	Victory Sycamore Small Company Opp I	\$1,550,403	0.99%	\$1,785,613	1.07%
Small Company Growth	Carillon Eagle Small Cap Growth R6	\$244,205	0.16%	\$230,941	0.14%
Emerging Markets	DFA Emerging Markets Core Equity I	\$1,566,956	1.00%	\$1,728,178	1.04%
Specialty-Private Real Estate	TIAA Real Estate Account	\$10,567,548	6.73%	\$10,783,295	6.48%
Other Assets	Non Approved Funds	\$16,811,525	10.71%	\$18,544,867	11.14%

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PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.19 | Q1 19

University of Maine System Retirement Tax Deferred Annuity Plan 403(b) TDA- 102966

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2018	(%)	CURRENT	(%)
Self-Directed Brokerage	Self Directed Accounts	\$2,311,384	1.47%	\$1,951,121	1.17%
Loan	Default Loan	\$64,204	0.04%	\$64,905	0.04%
TOTALS		\$156,926,838	100%	\$166,511,418	100%

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PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.19 | Q1 19

University of Maine System Optional Retirement Savings 403(b) - 102967

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2018	(%)	CURRENT	(%)
Cash and Equivalents - Money Market	CREF Money Market R3	\$10,011	0.69%	\$9,127	0.60%
Cash and Equivalents - Money Market	Vanguard Federal Money Market Investor	\$0	0.00%	\$0	0.00%
Stable Value	TIAA Traditional - Group Retirement Annuity	\$708,840	48.69%	\$709,287	46.61%
Inflation Protected Bond	CREF Inflation-Linked Bond R3	\$16,036	1.10%	\$16,311	1.07%
Intermediate Term Bond	PGIM Total Return Bond R6	\$10,372	0.71%	\$10,493	0.69%
Intermediate Term Bond	Vanguard Total Bond Market Index I	\$129	0.01%	\$209	0.01%
World Allocation	CREF Social Choice R3	\$33,411	2.29%	\$36,155	2.38%
Target Date Ret Income Moderate	Vanguard Target Retirement Income Inv	\$270	0.02%	\$285	0.02%
Target Date 2015 Moderate	Vanguard Target Retirement 2015 Inv	\$155	0.01%	\$165	0.01%
Target Date 2020 Moderate	Vanguard Target Retirement 2020 Inv	\$50,294	3.45%	\$52,716	3.46%
Target Date 2025 Moderate	Vanguard Target Retirement 2025 Inv	\$2,218	0.15%	\$6,261	0.41%
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%

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PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.19 | Q1 19

University of Maine System Optional Retirement Savings 403(b) - 102967

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2018	(%)	CURRENT	(%)
Target Date 2060+ Moderate	Vanguard Target Retirement 2065 Inv	\$0	0.00%	\$0	0.00%
Allocation--85%+ Equity	CREF Stock R3	\$202,585	13.92%	\$226,484	14.88%
Large Company Value	JHancock Disciplined Value R6	\$1,643	0.11%	\$1,793	0.12%
Large Company Blend	Vanguard Institutional Index I	\$12,154	0.83%	\$14,173	0.93%
Large Company Growth	Harbor Capital Appreciation Retirement	\$1,306	0.09%	\$1,582	0.10%
Medium Company Value	Virtus Ceredex Mid-Cap Value Equity R6	\$653	0.04%	\$806	0.05%
Medium Company Blend	Vanguard Extended Market Index Instl	\$2,301	0.16%	\$2,690	0.18%
Medium Company Growth	Goldman Sachs Growth Opportunities R6	\$45	0.00%	-	-
Medium Company Growth	MFS Mid Cap Growth R6	-	-	\$86	0.01%
Foreign Large Value	MFS International Value R6	\$3,092	0.21%	\$3,623	0.24%
Foreign Large Blend	American Funds Europacific Growth R6	-	-	\$543	0.04%
Foreign Large Blend	Vanguard Total Intl Stock Index I	\$2,712	0.19%	\$3,012	0.20%
Foreign Large Growth	Oppenheimer International Growth I	\$481	0.03%	-	-
Small Company Value	Victory Sycamore Small Company Opp I	\$1,625	0.11%	\$1,845	0.12%
Small Company Growth	Carillon Eagle Small Cap Growth R6	\$225	0.02%	\$265	0.02%
Emerging Markets	DFA Emerging Markets Core Equity I	\$1,342	0.09%	\$1,510	0.10%
Specialty-Private Real Estate	TIAA Real Estate Account	\$44,719	3.07%	\$45,283	2.98%
Other Assets	Non Approved Funds	\$349,219	23.99%	\$377,057	24.78%

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PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.19 | Q1 19

University of Maine System Optional Retirement Savings 403(b) - 102967

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2018	(%)	CURRENT	(%)
Self-Directed Brokerage	Self Directed Accounts	\$0	0.00%	\$0	0.00%
TOTALS		\$1,455,840	100%	\$1,521,761	100%

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PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.19 | Q1 19

University of Maine System Optional Retirement Savings 401(a) - 102968

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2018	(%)	CURRENT	(%)
Cash and Equivalents - Money Market	CREF Money Market R3	\$8,004	0.72%	\$6,880	0.59%
Cash and Equivalents - Money Market	Vanguard Federal Money Market Investor	\$0	0.00%	\$0	0.00%
Stable Value	TIAA Traditional - Group Retirement Annuity	\$343,012	31.06%	\$341,567	29.31%
Inflation Protected Bond	CREF Inflation-Linked Bond R3	\$17,093	1.55%	\$17,303	1.48%
Intermediate Term Bond	PGIM Total Return Bond R6	\$24,413	2.21%	\$25,199	2.16%
Intermediate Term Bond	Vanguard Total Bond Market Index I	\$12,738	1.15%	\$13,103	1.12%
World Allocation	CREF Social Choice R3	\$23,450	2.12%	\$25,125	2.16%
Target Date Ret Income Moderate	Vanguard Target Retirement Income Inv	\$623	0.06%	\$658	0.06%
Target Date 2015 Moderate	Vanguard Target Retirement 2015 Inv	\$0	0.00%	\$0	0.00%
Target Date 2020 Moderate	Vanguard Target Retirement 2020 Inv	\$40,812	3.70%	\$42,713	3.66%
Target Date 2025 Moderate	Vanguard Target Retirement 2025 Inv	\$1,361	0.12%	\$2,463	0.21%
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%

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PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.19 | Q1 19

University of Maine System Optional Retirement Savings 401(a) - 102968

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2018	(%)	CURRENT	(%)
Target Date 2060+ Moderate	Vanguard Target Retirement 2065 Inv	\$0	0.00%	\$0	0.00%
Allocation--85%+ Equity	CREF Stock R3	\$119,792	10.85%	\$132,081	11.33%
Large Company Value	JHancock Disciplined Value R6	\$7,768	0.70%	\$8,457	0.73%
Large Company Blend	Vanguard Institutional Index I	\$6,720	0.61%	\$8,607	0.74%
Large Company Growth	Harbor Capital Appreciation Retirement	\$1,077	0.10%	\$1,313	0.11%
Medium Company Value	Virtus Ceredex Mid-Cap Value Equity R6	\$551	0.05%	\$661	0.06%
Medium Company Blend	Vanguard Extended Market Index Instl	\$550	0.05%	\$638	0.05%
Medium Company Growth	Goldman Sachs Growth Opportunities R6	\$18,314	1.66%	-	-
Medium Company Growth	MFS Mid Cap Growth R6	-	-	\$21,708	1.86%
Foreign Large Value	MFS International Value R6	\$16,797	1.52%	\$18,866	1.62%
Foreign Large Blend	American Funds Europacific Growth R6	-	-	\$224	0.02%
Foreign Large Blend	Vanguard Total Intl Stock Index I	\$640	0.06%	\$719	0.06%
Foreign Large Growth	Oppenheimer International Growth I	\$200	0.02%	-	-
Small Company Value	Victory Sycamore Small Company Opp I	\$366	0.03%	\$433	0.04%
Small Company Growth	Carillon Eagle Small Cap Growth R6	\$408	0.04%	\$480	0.04%
Emerging Markets	DFA Emerging Markets Core Equity I	\$15,693	1.42%	\$17,003	1.46%
Specialty-Private Real Estate	TIAA Real Estate Account	\$56,699	5.13%	\$57,198	4.91%
Other Assets	Non Approved Funds	\$249,934	22.63%	\$271,279	23.28%

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PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.19 | Q1 19

University of Maine System Optional Retirement Savings 401(a) - 102968

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2018	(%)	CURRENT	(%)
Self-Directed Brokerage	Self Directed Accounts	\$137,233	12.43%	\$150,839	12.94%
TOTALS		\$1,104,249	100%	\$1,165,517	100%

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PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.19 | Q1 19

University of Maine System Basic Retirement Plan for Classified Employees 403(b) - 102969

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2018	(%)	CURRENT	(%)
Cash and Equivalents - Money Market	CREF Money Market R3	\$1,371,931	3.91%	\$487,321	1.28%
Cash and Equivalents - Money Market	Vanguard Federal Money Market Investor	\$19,321	0.06%	\$17,875	0.05%
Stable Value	TIAA Traditional - Group Retirement Annuity	\$6,550,622	18.65%	\$6,599,285	17.31%
Inflation Protected Bond	CREF Inflation-Linked Bond R3	\$518,912	1.48%	\$531,173	1.39%
Intermediate Term Bond	PGIM Total Return Bond R6	\$851,848	2.43%	\$899,028	2.36%
Intermediate Term Bond	Vanguard Total Bond Market Index I	\$115,399	0.33%	\$120,195	0.32%
World Allocation	CREF Social Choice R3	\$910,818	2.59%	\$994,271	2.61%
Target Date Ret Income Moderate	Vanguard Target Retirement Income Inv	\$400,402	1.14%	\$346,440	0.91%
Target Date 2015 Moderate	Vanguard Target Retirement 2015 Inv	\$370,253	1.05%	\$387,262	1.02%
Target Date 2020 Moderate	Vanguard Target Retirement 2020 Inv	\$1,428,448	4.07%	\$1,561,288	4.10%
Target Date 2025 Moderate	Vanguard Target Retirement 2025 Inv	\$1,435,893	4.09%	\$1,604,225	4.21%
Target Date 2030 Moderate	Vanguard Target Retirement 2030 Inv	\$695,804	1.98%	\$788,019	2.07%
Target Date 2035 Moderate	Vanguard Target Retirement 2035 Inv	\$461,102	1.31%	\$606,879	1.59%
Target Date 2040 Moderate	Vanguard Target Retirement 2040 Inv	\$527,090	1.50%	\$601,307	1.58%
Target Date 2045 Moderate	Vanguard Target Retirement 2045 Inv	\$378,277	1.08%	\$443,464	1.16%
Target Date 2050 Moderate	Vanguard Target Retirement 2050 Inv	\$159,959	0.46%	\$190,774	0.50%
Target Date 2055 Moderate	Vanguard Target Retirement 2055 Inv	\$187,988	0.54%	\$226,737	0.59%
Target Date 2060+ Moderate	Vanguard Target Retirement 2060 Inv	\$49,443	0.14%	\$69,071	0.18%

CONTINUED...

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PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.19 | Q1 19

University of Maine System Basic Retirement Plan for Classified Employees 403(b) - 102969

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2018	(%)	CURRENT	(%)
Target Date 2060+ Moderate	Vanguard Target Retirement 2065 Inv	\$1,769	0.01%	\$2,789	0.01%
Allocation--85%+ Equity	CREF Stock R3	\$3,053,369	8.69%	\$3,450,922	9.05%
Large Company Value	JHancock Disciplined Value R6	\$703,713	2.00%	\$746,871	1.96%
Large Company Blend	Vanguard Institutional Index I	\$989,242	2.82%	\$1,154,870	3.03%
Large Company Growth	Harbor Capital Appreciation Retirement	\$447,951	1.28%	\$1,759,769	4.62%
Medium Company Value	Virtus Ceredex Mid-Cap Value Equity R6	\$314,378	0.90%	\$347,096	0.91%
Medium Company Blend	Vanguard Extended Market Index Instl	\$436,113	1.24%	\$500,699	1.31%
Medium Company Growth	Goldman Sachs Growth Opportunities R6	\$246,048	0.70%	-	-
Medium Company Growth	MFS Mid Cap Growth R6	-	-	\$284,142	0.75%
Foreign Large Value	MFS International Value R6	\$846,757	2.41%	\$981,640	2.58%
Foreign Large Blend	American Funds Europacific Growth R6	-	-	\$83,528	0.22%
Foreign Large Blend	Vanguard Total Intl Stock Index I	\$470,116	1.34%	\$560,439	1.47%
Foreign Large Growth	Oppenheimer International Growth I	\$72,983	0.21%	-	-
Small Company Value	Victory Sycamore Small Company Opp I	\$213,626	0.61%	\$231,531	0.61%
Small Company Growth	Carillon Eagle Small Cap Growth R6	\$162,294	0.46%	\$196,484	0.52%
Emerging Markets	DFA Emerging Markets Core Equity I	\$597,850	1.70%	\$664,137	1.74%
Specialty-Private Real Estate	TIAA Real Estate Account	\$2,054,078	5.85%	\$2,062,767	5.41%
Other Assets	Non Approved Funds	\$5,424,116	15.44%	\$6,013,649	15.78%

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PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.19 | Q1 19

University of Maine System Basic Retirement Plan for Classified Employees 403(b) - 102969

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2018	(%)	CURRENT	(%)
Self-Directed Brokerage	Self Directed Accounts	\$2,656,996	7.56%	\$2,603,071	6.83%
TOTALS		\$35,124,910	100%	\$38,119,016	100%

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PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.19 | Q1 19

University of Maine System Basic Retirement Plan for Classified Employees 401(a) - 102970

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2018	(%)	CURRENT	(%)
Cash and Equivalents - Money Market	CREF Money Market R3	\$2,164,846	3.23%	\$1,073,414	1.48%
Cash and Equivalents - Money Market	Vanguard Federal Money Market Investor	\$103,838	0.15%	\$38,451	0.05%
Stable Value	TIAA Traditional - Group Retirement Annuity	\$14,737,647	22.00%	\$14,809,532	20.45%
Inflation Protected Bond	CREF Inflation-Linked Bond R3	\$1,059,929	1.58%	\$1,090,917	1.51%
Intermediate Term Bond	PGIM Total Return Bond R6	\$1,497,133	2.23%	\$1,579,149	2.18%
Intermediate Term Bond	Vanguard Total Bond Market Index I	\$246,046	0.37%	\$269,358	0.37%
World Allocation	CREF Social Choice R3	\$2,555,632	3.81%	\$2,747,658	3.79%
Target Date Ret Income Moderate	Vanguard Target Retirement Income Inv	\$782,154	1.17%	\$766,920	1.06%
Target Date 2015 Moderate	Vanguard Target Retirement 2015 Inv	\$795,796	1.19%	\$846,796	1.17%
Target Date 2020 Moderate	Vanguard Target Retirement 2020 Inv	\$1,971,028	2.94%	\$2,167,219	2.99%
Target Date 2025 Moderate	Vanguard Target Retirement 2025 Inv	\$2,201,354	3.29%	\$2,489,676	3.44%
Target Date 2030 Moderate	Vanguard Target Retirement 2030 Inv	\$1,137,658	1.70%	\$1,287,582	1.78%
Target Date 2035 Moderate	Vanguard Target Retirement 2035 Inv	\$929,292	1.39%	\$1,062,120	1.47%
Target Date 2040 Moderate	Vanguard Target Retirement 2040 Inv	\$809,531	1.21%	\$929,853	1.28%
Target Date 2045 Moderate	Vanguard Target Retirement 2045 Inv	\$613,813	0.92%	\$716,431	0.99%
Target Date 2050 Moderate	Vanguard Target Retirement 2050 Inv	\$290,146	0.43%	\$343,744	0.47%
Target Date 2055 Moderate	Vanguard Target Retirement 2055 Inv	\$173,984	0.26%	\$212,532	0.29%
Target Date 2060+ Moderate	Vanguard Target Retirement 2060 Inv	\$45,984	0.07%	\$60,681	0.08%

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PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.19 | Q1 19

University of Maine System Basic Retirement Plan for Classified Employees 401(a) - 102970

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2018	(%)	CURRENT	(%)
Target Date 2060+ Moderate	Vanguard Target Retirement 2065 Inv	\$1,769	0.00%	\$2,789	0.00%
Allocation--85%+ Equity	CREF Stock R3	\$7,778,316	11.61%	\$8,753,494	12.09%
Large Company Value	JHancock Disciplined Value R6	\$1,025,700	1.53%	\$1,107,057	1.53%
Large Company Blend	Vanguard Institutional Index I	\$1,719,143	2.57%	\$3,469,333	4.79%
Large Company Growth	Harbor Capital Appreciation Retirement	\$1,027,266	1.53%	\$1,260,938	1.74%
Medium Company Value	Virtus Ceredex Mid-Cap Value Equity R6	\$439,521	0.66%	\$488,721	0.67%
Medium Company Blend	Vanguard Extended Market Index Instl	\$736,299	1.10%	\$846,296	1.17%
Medium Company Growth	Goldman Sachs Growth Opportunities R6	\$412,042	0.61%	-	-
Medium Company Growth	MFS Mid Cap Growth R6	-	-	\$484,599	0.67%
Foreign Large Value	MFS International Value R6	\$1,517,269	2.26%	\$1,741,643	2.40%
Foreign Large Blend	American Funds Europacific Growth R6	-	-	\$120,077	0.17%
Foreign Large Blend	Vanguard Total Intl Stock Index I	\$728,621	1.09%	\$881,154	1.22%
Foreign Large Growth	Oppenheimer International Growth I	\$104,291	0.16%	-	-
Small Company Value	Victory Sycamore Small Company Opp I	\$340,374	0.51%	\$377,188	0.52%
Small Company Growth	Carillon Eagle Small Cap Growth R6	\$198,893	0.30%	\$231,069	0.32%
Emerging Markets	DFA Emerging Markets Core Equity I	\$924,399	1.38%	\$1,031,375	1.42%
Specialty-Private Real Estate	TIAA Real Estate Account	\$3,628,969	5.42%	\$3,679,475	5.08%
Other Assets	Non Approved Funds	\$12,177,225	18.18%	\$13,421,158	18.53%

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PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.19 | Q1 19

University of Maine System Basic Retirement Plan for Classified Employees 401(a) - 102970

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2018	(%)	CURRENT	(%)
Self-Directed Brokerage	Self Directed Accounts	\$2,123,109	3.17%	\$2,033,413	2.81%
TOTALS		\$66,999,016	100%	\$72,421,812	100%

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PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.19 | Q1 19

University of Maine System Deferred Compensation Plan 457(b) - 102971

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2018	(%)	CURRENT	(%)
Cash and Equivalents - Money Market	CREF Money Market R3	\$1,205,273	4.00%	\$372,604	1.15%
Cash and Equivalents - Money Market	Vanguard Federal Money Market Investor	\$76,407	0.25%	\$81,011	0.25%
Stable Value	TIAA Traditional - Group Retirement Annuity	\$7,899,472	26.22%	\$8,322,805	25.74%
Inflation Protected Bond	CREF Inflation-Linked Bond R3	\$557,696	1.85%	\$577,077	1.78%
Intermediate Term Bond	PGIM Total Return Bond R6	\$1,102,632	3.66%	\$1,198,076	3.70%
Intermediate Term Bond	Vanguard Total Bond Market Index I	\$155,447	0.52%	\$536,677	1.66%
World Allocation	CREF Social Choice R3	\$1,359,775	4.51%	\$1,511,987	4.68%
Target Date Ret Income Moderate	Vanguard Target Retirement Income Inv	\$449,876	1.49%	\$488,746	1.51%
Target Date 2015 Moderate	Vanguard Target Retirement 2015 Inv	\$506,383	1.68%	\$614,468	1.90%
Target Date 2020 Moderate	Vanguard Target Retirement 2020 Inv	\$878,160	2.91%	\$1,021,019	3.16%
Target Date 2025 Moderate	Vanguard Target Retirement 2025 Inv	\$971,820	3.23%	\$816,855	2.53%
Target Date 2030 Moderate	Vanguard Target Retirement 2030 Inv	\$548,525	1.82%	\$630,275	1.95%
Target Date 2035 Moderate	Vanguard Target Retirement 2035 Inv	\$367,559	1.22%	\$436,518	1.35%
Target Date 2040 Moderate	Vanguard Target Retirement 2040 Inv	\$314,980	1.05%	\$365,944	1.13%
Target Date 2045 Moderate	Vanguard Target Retirement 2045 Inv	\$157,570	0.52%	\$182,140	0.56%
Target Date 2050 Moderate	Vanguard Target Retirement 2050 Inv	\$37,154	0.12%	\$42,568	0.13%
Target Date 2055 Moderate	Vanguard Target Retirement 2055 Inv	\$288	0.00%	\$990	0.00%
Target Date 2060+ Moderate	Vanguard Target Retirement 2060 Inv	\$0	0.00%	\$315	0.00%

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PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.19 | Q1 19

University of Maine System Deferred Compensation Plan 457(b) - 102971

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2018	(%)	CURRENT	(%)
Target Date 2060+ Moderate	Vanguard Target Retirement 2065 Inv	\$0	0.00%	\$0	0.00%
Allocation--85%+ Equity	CREF Stock R3	\$1,778,279	5.90%	\$1,981,796	6.13%
Large Company Value	JHancock Disciplined Value R6	\$606,838	2.01%	\$657,848	2.03%
Large Company Blend	Vanguard Institutional Index I	\$1,500,515	4.98%	\$2,239,564	6.93%
Large Company Growth	Harbor Capital Appreciation Retirement	\$403,685	1.34%	\$484,739	1.50%
Medium Company Value	Virtus Ceredex Mid-Cap Value Equity R6	\$282,698	0.94%	\$306,651	0.95%
Medium Company Blend	Vanguard Extended Market Index Instl	\$671,538	2.23%	\$790,399	2.44%
Medium Company Growth	Goldman Sachs Growth Opportunities R6	\$149,980	0.50%	-	-
Medium Company Growth	MFS Mid Cap Growth R6	-	-	\$199,424	0.62%
Foreign Large Value	MFS International Value R6	\$604,312	2.01%	\$694,098	2.15%
Foreign Large Blend	American Funds Europacific Growth R6	-	-	\$108,064	0.33%
Foreign Large Blend	Vanguard Total Intl Stock Index I	\$446,512	1.48%	\$528,115	1.63%
Foreign Large Growth	Oppenheimer International Growth I	\$98,030	0.33%	-	-
Small Company Value	Victory Sycamore Small Company Opp I	\$246,682	0.82%	\$278,273	0.86%
Small Company Growth	Carillon Eagle Small Cap Growth R6	\$124,423	0.41%	\$147,722	0.46%
Emerging Markets	DFA Emerging Markets Core Equity I	\$500,334	1.66%	\$574,508	1.78%
Specialty-Private Real Estate	TIAA Real Estate Account	\$2,076,757	6.89%	\$2,040,209	6.31%
Other Assets	Non Approved Funds	\$3,116,681	10.34%	\$3,317,900	10.26%

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PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.19 | Q1 19

University of Maine System Deferred Compensation Plan 457(b) - 102971

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2018	(%)	CURRENT	(%)
Self-Directed Brokerage	Self Directed Accounts	\$932,610	3.10%	\$790,536	2.44%
TOTALS		\$30,128,891	100%	\$32,339,923	100%

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INVESTMENT REVIEW | INVESTMENT POLICY MONITOR

Period Ending 3.31.19 | Q1 19

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	●	●	●	●	●	●	●	●	●	●	●	93
Intermediate Term Bond PGIM Total Return Bond R6	●	●	●	●	●	●	●	●	●	●	●	100
World Allocation CREF Social Choice R3	●	●	●	●	●	●	●	●	●	●	●	99
Large Company Value JHancock Disciplined Value R6	▼	▼	●	▼	●	●	●	▼	●	●	●	81
Large Company Growth Harbor Capital Appreciation Retirement	●	●	●	●	●	●	●	●	●	●	●	100
Medium Company Value Virtus Ceredex Mid-Cap Value Equity R6	●	●	●	●	●	●	●	●	●	●	●	100
Medium Company Growth MFS Mid Cap Growth R6	●	●	●	●	●	●	●	●	●	▼	●	99
Foreign Large Value MFS International Value R6	●	●	●	●	▼	▼	●	●	●	▼	●	96

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 3.31.19 | Q1 19

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 Blend American Funds Europacific Growth R6	●	●	●	●	●	●	●	●	●	●	●	100
Small Company Value Victory Sycamore Small Company Opp I	●	●	●	●	●	●	●	●	●	●	●	100
Small Company Growth Carillon Eagle Small Cap Growth R6	▼	▼	▼	●	●	●	▼	●	●	●	●	83
Emerging Markets DFA Emerging Markets Core Equity I	▼	●	▼	●	●	●	▼	▼	●	▼	●	83

LEGEND

●	IN GOOD STANDING	▼	MARKED FOR REVIEW	●	CONSIDER FOR TERMINATION
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INVESTMENT REVIEW | INVESTMENT POLICY MONITOR

Period Ending 3.31.19 | Q1 19

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	●	●	●	●	●	●	●	●	●	▲	●	97

CAPITAL PRESERVATION INVESTMENTS

INVESTMENT	Overall	Commentary
CREF Money Market R3	●	This Capital Preservation option is in good standing per the guidelines as established by the Investment Policy Statement.
Vanguard Federal Money Market Investor	●	This Capital Preservation option is in good standing per the guidelines as established by the Investment Policy Statement.
TIAA Traditional - Group Retirement Annuity	●	This Capital Preservation option is in good standing per the guidelines as established by the Investment Policy Statement.

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The CAPTRUST Financial Advisors Investment 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. Quantitative scoring areas for target date funds include Risk Adjusted Performance (3 & 5 yr.); Performance vs. Relevant Peer Group; and Glidepath. Qualitative Scoring Areas for target date funds 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. Qualitative Scoring for Target Date funds also includes a score for Portfolio Construction and Underlying Investment vehicles to express CAPTRUST's views on the manager or strategy. 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. Capital Preservation options are evaluated using a comprehensive scoring methodology proprietary to the Investment Consultant. This methodology incorporates both qualitative and quantitative metrics, depending on the type of capital preservation option being evaluated, and may include quantitative criteria such as: Crediting Rate/Yield, Market to Book Ratio, Average Crediting Quality, Insurer Quality/Diversification, Duration, and Sector Allocations, and/or qualitative criteria such as quality and experience of the Management Team and stewardship of the investment option's parent company. Passively Managed options are evaluated using a comprehensive scoring methodology proprietary to the Investment Consultant. This methodology incorporates both qualitative and quantitative metrics and may include quantitative criteria such as: Tracking Error, Fees, and Performance versus relevant peer group, and/or qualitative criteria such as index replication strategy, securities lending practices, and fair value pricing methodology. Distinct investment options are evaluated using a comprehensive scoring methodology proprietary to the Investment Consultant. This methodology incorporates both qualitative and quantitative metrics. 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 3.31.19 | Q1 19

University of Maine System

PASSIVE INVESTMENTS

INVESTMENT	Overall	Commentary
Vanguard Total Bond Market 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 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 Instl		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 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.



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INVESTMENT REVIEW | INVESTMENT POLICY MONITOR

Period Ending 3.31.19 | Q1 19

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.

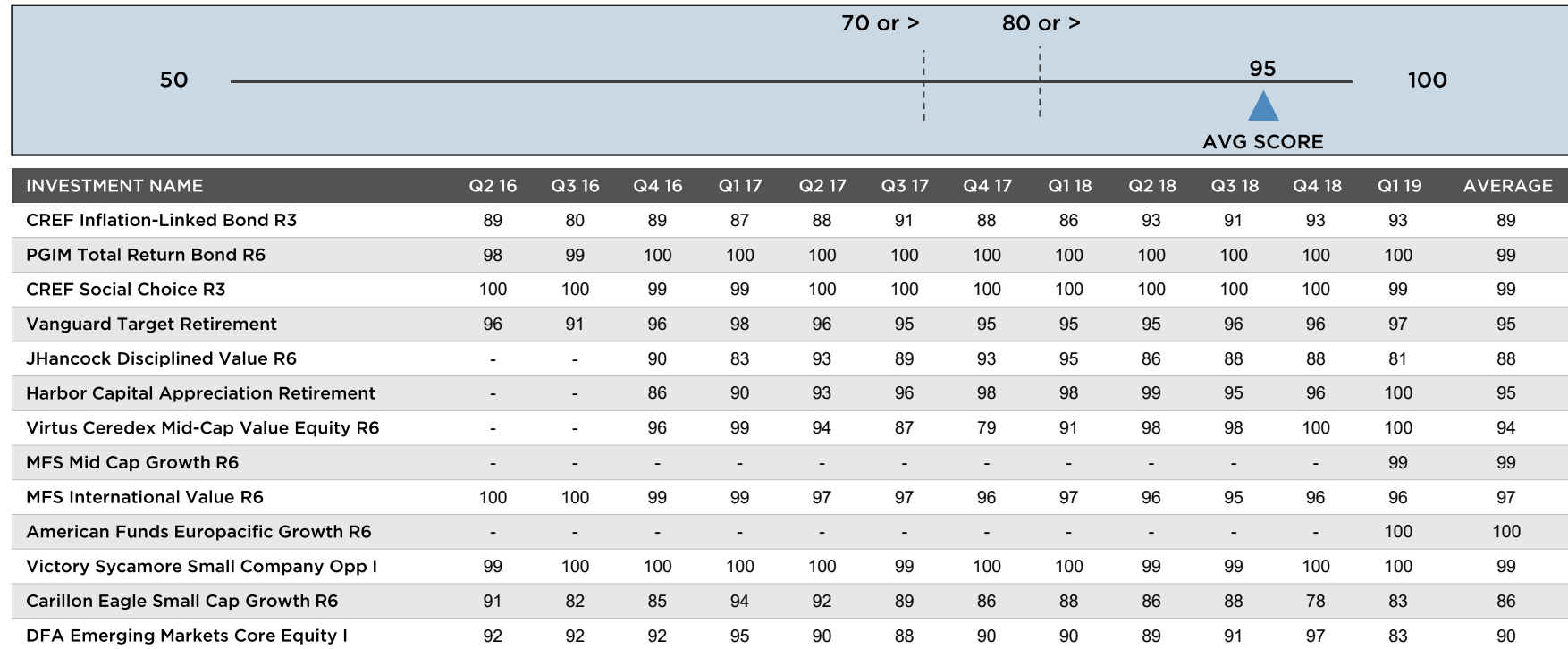
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The CAPTRUST Financial Advisors Investment Scorecard is an illustration of our monitoring system and is designed to assist our clients in their efforts to provide fiduciary oversight to investment assets. It is not intended as a solicitation to buy any security. The scoring system measures quantitative areas as well as qualitative (or subjective) fields. Quantitative scoring areas for target date funds include Risk Adjusted Performance (3 & 5 yr.); Performance vs. Relevant Peer Group; and Glidepath. Qualitative Scoring Areas for target date funds 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. Qualitative Scoring for Target Date funds also includes a score for Portfolio Construction and Underlying Investment vehicles to express CAPTRUST's views on the manager or strategy. 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. Capital Preservation options are evaluated using a comprehensive scoring methodology proprietary to the Investment Consultant. This methodology incorporates both qualitative and quantitative metrics, depending on the type of capital preservation option being evaluated, and may include quantitative criteria such as: Crediting Rate/Yield, Market to Book Ratio, Average Crediting Quality, Insurer Quality/Diversification, Duration, and Sector Allocations, and/or qualitative criteria such as quality and experience of the Management Team and stewardship of the investment option's parent company. Passively Managed options are evaluated using a comprehensive scoring methodology proprietary to the Investment Consultant. This methodology incorporates both qualitative and quantitative metrics and may include quantitative criteria such as: Tracking Error, Fees, and Performance versus relevant peer group, and/or qualitative criteria such as index replication strategy, securities lending practices, and fair value pricing methodology. Distinct investment options are evaluated using a comprehensive scoring methodology proprietary to the Investment Consultant. This methodology incorporates both qualitative and quantitative metrics. This material is for institutional investor use only and is not intended to be shared with individual investors.

PLAN INVESTMENT REVIEW | PLAN PERFORMANCE MEASUREMENT

Period Ending 3.31.19 | Q1 19

University of Maine System

Plan Performance Success Rate: Average score of plan investments illustrated below

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SUMMARY: Over the previous quarters the plan investment options have averaged a score of 95.

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 3.31.19 | Q1 19

University of Maine System

FUND MANAGEMENT ITEMS	COMMENTARY
Harbor Capital App	Blair Boyer and Natasha Kuhlkin have been added as portfolio managers to the Harbor Capital Appreciation Fund alongside Sig Segalas and Kathleen McCarragher. Mr. Boyer and Ms. Kuhlkin have been members of Jennison's large cap growth team since 2003 and 2004, respectively. Additionally, Mr. Boyer was named co-head of Large Cap Growth Equity, alongside Ms. McCarragher.
John Hancock Disciplined Value	Analysts Stephanie McGirr and David Cohen have been promoted to portfolio managers of the Boston Partners Large Cap Value strategy, including the John Hancock Disciplined Value Fund. These promotions do not affect the roles of current Portfolio Managers Mark Donovan and David Pyle, but reflect Boston Partners' long-term succession planning. Mr. Cohen's analyst responsibilities have been assumed by Aaron DeCoste, while Ms. McGirr's coverage has been assumed by Jacklyn Hall.
MFS Mid Cap Growth	Matthew Sabel has relinquished his portfolio management responsibilities for the following strategies: MFS Growth Equity, MFS Growth Equity Concentrated, MFS Mid Cap Growth and MFS Mid Cap Growth Focused. He continues to serve as the portfolio manager of the MFS Technology Equity strategy.
FUND FIRM ITEMS	COMMENTARY
TIAA-CREF	TH Real Estate has re-launched as Nuveen Real Estate. This re-launch is consistent with TIAA-CREF's efforts to rebrand its asset management businesses with the Nuveen name following TIAA-CREF's acquisition of Nuveen in 2014.
Dimensional Fund Advisors	<p>Michael Holmes recently joined Dimensional Fund Advisors as chief technology officer. He reports to Gerard O'Reilly, the firm's co-CEO and CIO.</p> <p>Sam Gilliland, senior advisor and chief operating officer, left the firm to become CEO for a private firm outside of the financial services industry.</p>

INVESTMENT REVIEW | SELECT COMMENTARY

Period Ending 3.31.19 | Q1 19

University of Maine System

FUND FIRM ITEMS	COMMENTARY
Vanguard Group, Inc.	<p>Vanguard CEO Tim Buckley has been elected chairman of Vanguard's Board of Directors. He replaces Bill McNabb, who he previously succeeded as CEO at the beginning of 2018.</p> <p>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.</p>
MFS Family of Funds	<p>Effective January 1, 2019, MFS 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>
Victory Capital Management	<p>Victory Capital announced its acquisition of Harvest Volatility Management, a \$12 billion asset manager that specializes in derivatives-based strategies. The transaction is expected to close in the first quarter of 2019.</p> <p>Victory also announced its acquisition of USAA Asset Management, with the deal expected to close in April 2019. USAA will become Victory's 11th investment franchise and will continue to operate under the USAA brand. No changes to USAA's or Victory's investment teams are expected at this time.</p>
Harbor Funds	<p>Kristof Gleich recently joined Harbor Capital as president of the firm and reports to CEO Charles McCain, who previously held the role of president. Mr. McCain continues to serve as CEO of Harbor Capital.</p>

PLAN INVESTMENT REVIEW | TARGET DATE REVIEW

Period Ending 3.31.19 | Q1 19

University of Maine System

VANGUARD TARGET RETIREMENT

MEETING DATE: APRIL 2, 2019

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 had somewhat disappointing performance in the first quarter as most of the series's vintages underperformed peers.

- The primary driver of the series's underperformance was its larger allocations to non-U.S. developed and emerging markets equities as these markets trailed the U.S. to start the year
- This was a bit of a reversal from Q4 2018 when these positions led Target Retirement above peers
- The series was also held back by its underlying manager's slight bias towards large-cap growth stocks within U.S. equities as mid- and small-cap stocks led the way in the beginning of the year
- Somewhat mitigating the series's underperformance was its exposure to Chinese equities, which was one of the top performing markets in the first quarter
- Despite Vanguard Target Retirement's near-term peer-relative underperformance, it remains one of the top performers over the long-term

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 3.31.19 | Q1 19

University of Maine System

INVESTMENT NAME	Q1 '19	YTD '19	2018	2017	2016	2015	2014	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
CASH AND EQUIVALENTS - MONEY MARKET											
CREF Money Market R3	0.54%	0.54%	1.46%	0.50%	0.13%	0.00%	0.00%	1.78%	0.87%	0.52%	0.26%
Vanguard Federal Money Market Investor	0.57%	0.57%	1.78%	0.81%	0.30%	0.04%	0.01%	2.03%	1.13%	0.70%	0.37%
ICE BofA ML US Treasury Bill 3 Mon USD	0.60%	0.60%	1.87%	0.86%	0.33%	0.05%	0.03%	2.12%	1.19%	0.74%	0.43%
STABLE VALUE											
TIAA Traditional - Group Retirement Annuity	Current Rate is 3.50%										
ICE BofA ML US Treasury Bill 3 Mon USD	0.60%	0.60%	1.87%	0.86%	0.33%	0.05%	0.03%	2.12%	1.19%	0.74%	0.43%
Hueler Stable Value Index (gross)	0.60%	0.60%	2.26%	1.95%	1.79%	1.77%	1.69%	2.26%	2.00%	1.89%	2.25%
INFLATION PROTECTED BOND											
CREF Inflation-Linked Bond R3	2.56%	2.56%	-0.49%	1.85%	4.23%	-1.68%	3.34%	2.60%	1.37%	1.55%	3.00%
BBgBarc US Treasury US TIPS TR USD	3.19%	3.19%	-1.26%	3.01%	4.68%	-1.44%	3.64%	2.70%	1.70%	1.94%	3.41%
Inflation Protected Bond Universe	3.07%	3.07%	-1.65%	2.51%	4.51%	-2.22%	1.96%	2.06%	1.61%	1.26%	2.83%
INTERMEDIATE TERM BOND											
PGIM Total Return Bond R6	4.02%	4.02%	-0.63%	6.71%	4.83%	0.09%	7.25%	4.78%	3.85%	3.92%	6.62%
Vanguard Total Bond Market Index I	2.95%	2.95%	-0.01%	3.57%	2.61%	0.41%	5.90%	4.47%	2.00%	2.68%	3.71%
BBgBarc Aggregate Bond Index	2.94%	2.94%	0.01%	3.54%	2.65%	0.55%	5.97%	4.48%	2.03%	2.74%	3.77%
Intermediate Term Bond Universe	3.17%	3.17%	-0.58%	3.79%	3.26%	-0.27%	5.19%	3.94%	2.38%	2.51%	4.71%
WORLD ALLOCATION											
CREF Social Choice R3	8.74%	8.74%	-4.29%	14.27%	7.40%	-0.87%	6.83%	4.81%	7.91%	5.86%	10.07%
60% MSCI World 40% BBgBarc Agg Index	10.28%	10.28%	-6.33%	17.99%	6.67%	-0.09%	5.63%	4.58%	8.90%	6.21%	10.03%
World Allocation Universe	8.23%	8.23%	-8.09%	14.28%	6.06%	-4.35%	1.75%	0.51%	6.12%	3.03%	8.31%

*ANNUALIZED

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PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY

Period Ending 3.31.19 | Q1 19

University of Maine System

INVESTMENT NAME	Q1 '19	YTD '19	2018	2017	2016	2015	2014	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
TARGET DATE RET INCOME MODERATE											
Vanguard Target Retirement Income Inv	5.50%	5.50%	-1.99%	8.47%	5.25%	-0.17%	5.54%	3.92%	4.87%	4.13%	6.69%
Morningstar Lifetime Moderate Income Index	6.03%	6.03%	-2.20%	8.55%	5.98%	-1.30%	4.09%	4.06%	5.21%	3.77%	6.79%
Retirement Income Moderate	5.95%	5.95%	-3.55%	9.24%	4.86%	-1.30%	4.47%	3.16%	4.72%	3.56%	6.49%
TARGET DATE 2015 MODERATE											
Vanguard Target Retirement 2015 Inv	6.49%	6.49%	-2.97%	11.50%	6.16%	-0.46%	6.56%	3.87%	6.28%	4.98%	9.25%
Morningstar Lifetime Moderate 2015 Index	7.44%	7.44%	-3.54%	11.39%	7.10%	-1.73%	5.55%	4.41%	6.42%	4.62%	9.05%
2015 Moderate	7.01%	7.01%	-4.18%	11.21%	6.15%	-1.38%	4.75%	3.38%	6.04%	4.25%	8.79%
TARGET DATE 2020 MODERATE											
Vanguard Target Retirement 2020 Inv	7.82%	7.82%	-4.24%	14.08%	6.95%	-0.68%	7.11%	3.82%	7.39%	5.65%	10.19%
Morningstar Lifetime Moderate 2020 Index	8.13%	8.13%	-4.16%	12.79%	7.66%	-1.88%	5.87%	4.50%	7.08%	5.00%	9.99%
2020 Moderate	7.68%	7.68%	-4.93%	13.25%	6.10%	-1.33%	5.13%	3.12%	6.71%	4.67%	9.70%
TARGET DATE 2025 MODERATE											
Vanguard Target Retirement 2025 Inv	8.82%	8.82%	-5.15%	15.94%	7.48%	-0.85%	7.17%	3.83%	8.20%	6.07%	10.95%
Morningstar Lifetime Moderate 2025 Index	8.96%	8.96%	-4.90%	14.54%	8.39%	-2.06%	6.04%	4.52%	7.94%	5.47%	11.00%
2025 Moderate	8.52%	8.52%	-5.54%	15.15%	6.78%	-1.38%	5.27%	3.17%	7.61%	5.17%	10.63%
TARGET DATE 2030 MODERATE											
Vanguard Target Retirement 2030 Inv	9.54%	9.54%	-5.86%	17.52%	7.85%	-1.03%	7.17%	3.71%	8.87%	6.39%	11.65%
Morningstar Lifetime Moderate 2030 Index	9.93%	9.93%	-5.82%	16.59%	9.26%	-2.30%	6.01%	4.42%	8.96%	5.95%	11.88%
2030 Moderate	9.71%	9.71%	-6.43%	17.27%	7.27%	-1.36%	5.47%	3.19%	8.59%	5.78%	11.47%

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PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY

Period Ending 3.31.19 | Q1 19

University of Maine System

INVESTMENT NAME	Q1 '19	YTD '19	2018	2017	2016	2015	2014	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
TARGET DATE 2035 MODERATE											
Vanguard Target Retirement 2035 Inv	10.20%	10.20%	-6.58%	19.12%	8.26%	-1.26%	7.24%	3.55%	9.52%	6.69%	12.27%
Morningstar Lifetime Moderate 2035 Index	10.88%	10.88%	-6.82%	18.52%	10.07%	-2.58%	5.80%	4.18%	9.87%	6.33%	12.46%
2035 Moderate	10.55%	10.55%	-7.33%	19.10%	7.72%	-1.45%	5.58%	2.97%	9.25%	6.13%	11.91%
TARGET DATE 2040 MODERATE											
Vanguard Target Retirement 2040 Inv	10.96%	10.96%	-7.32%	20.71%	8.73%	-1.59%	7.15%	3.38%	10.20%	6.96%	12.55%
Morningstar Lifetime Moderate 2040 Index	11.58%	11.58%	-7.65%	19.87%	10.61%	-2.83%	5.51%	3.87%	10.44%	6.51%	12.70%
2040 Moderate	11.22%	11.22%	-7.90%	20.10%	7.53%	-1.39%	5.73%	2.90%	9.62%	6.35%	12.14%
TARGET DATE 2045 MODERATE											
Vanguard Target Retirement 2045 Inv	11.48%	11.48%	-7.90%	21.42%	8.87%	-1.57%	7.16%	3.27%	10.43%	7.08%	12.63%
Morningstar Lifetime Moderate 2045 Index	11.92%	11.92%	-8.17%	20.53%	10.84%	-3.03%	5.25%	3.59%	10.65%	6.53%	12.74%
2045 Moderate	11.59%	11.59%	-8.42%	20.57%	7.89%	-1.89%	5.27%	2.70%	9.81%	6.31%	12.22%
TARGET DATE 2050 MODERATE											
Vanguard Target Retirement 2050 Inv	11.50%	11.50%	-7.90%	21.39%	8.85%	-1.58%	7.18%	3.27%	10.43%	7.08%	12.63%
Morningstar Lifetime Moderate 2050 Index	12.00%	12.00%	-8.41%	20.78%	10.89%	-3.19%	5.00%	3.39%	10.66%	6.46%	12.69%
2050 Moderate	11.66%	11.66%	-8.33%	20.76%	7.77%	-1.60%	5.55%	2.85%	9.90%	6.43%	12.31%
TARGET DATE 2055 MODERATE											
Vanguard Target Retirement 2055 Inv	11.50%	11.50%	-7.89%	21.38%	8.88%	-1.72%	7.19%	3.28%	10.43%	7.05%	-
Morningstar Lifetime Moderate 2055 Index	12.01%	12.01%	-8.57%	20.95%	10.90%	-3.34%	4.74%	3.22%	10.65%	6.38%	12.61%
2055 Moderate	11.55%	11.55%	-8.95%	20.73%	8.35%	-1.65%	5.97%	2.28%	9.76%	6.43%	-

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PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY

Period Ending 3.31.19 | Q1 19

University of Maine System

INVESTMENT NAME	Q1 '19	YTD '19	2018	2017	2016	2015	2014	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
TARGET DATE 2060+ MODERATE											
Vanguard Target Retirement 2060 Inv	11.48%	11.48%	-7.87%	21.36%	8.84%	-1.68%	7.16%	3.25%	10.42%	7.05%	-
Vanguard Target Retirement 2065 Inv	11.47%	11.47%	-7.95%	-	-	-	-	3.24%	-	-	-
Morningstar Lifetime Moderate 2060 Index	11.99%	11.99%	-8.69%	21.06%	10.88%	-3.48%	4.53%	3.06%	10.61%	6.29%	-
2060+ Moderate	11.95%	11.95%	-8.56%	20.72%	8.79%	-1.07%	6.35%	2.88%	10.09%	6.77%	-
ALLOCATION--85%+ EQUITY											
CREF Stock R3	13.22%	13.22%	-9.65%	23.45%	9.17%	-0.84%	6.41%	2.73%	11.26%	7.52%	13.49%
85% S&P 500, 15% BBgBarc Agg	13.04%	13.04%	20.67%	11.32%	1.33%	13.12%	29.03%	9.23%	12.78%	10.38%	14.77%
Allocation--85%+ Equity Universe	12.17%	12.17%	-9.51%	19.16%	8.91%	-2.41%	5.59%	2.28%	9.61%	6.00%	12.39%
LARGE COMPANY VALUE											
JHancock Disciplined Value R6	9.31%	9.31%	-9.47%	19.33%	14.07%	-4.81%	11.04%	0.76%	10.59%	6.77%	14.27%
Russell 1000 Value	11.93%	11.93%	-8.27%	13.66%	17.34%	-3.83%	13.45%	5.67%	10.45%	7.72%	14.52%
Large Value Universe	11.29%	11.29%	-8.87%	15.84%	14.55%	-3.94%	10.59%	4.08%	9.93%	7.03%	13.51%
LARGE COMPANY BLEND											
Vanguard Institutional Index I	13.65%	13.65%	-4.42%	21.79%	11.93%	1.37%	13.65%	9.47%	13.48%	10.88%	15.90%
S&P 500 Index	13.65%	13.65%	-4.38%	21.83%	11.96%	1.38%	13.69%	9.50%	13.51%	10.91%	15.92%
Large Blend Universe	12.88%	12.88%	-6.56%	20.43%	10.43%	-0.72%	11.33%	6.60%	11.78%	8.84%	14.50%
LARGE COMPANY GROWTH											
Harbor Capital Appreciation Retirement	17.59%	17.59%	-0.96%	36.68%	-1.04%	10.99%	9.93%	11.60%	18.57%	13.99%	17.23%
Russell 1000 Growth	16.10%	16.10%	-1.51%	30.21%	7.08%	5.67%	13.05%	12.75%	16.53%	13.50%	17.52%
Large Growth Universe	15.97%	15.97%	-1.97%	28.26%	3.08%	3.76%	9.98%	10.81%	15.52%	11.36%	15.97%

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PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY

Period Ending 3.31.19 | Q1 19

University of Maine System

INVESTMENT NAME	Q1 '19	YTD '19	2018	2017	2016	2015	2014	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
MEDIUM COMPANY VALUE											
Virtus Ceredex Mid-Cap Value Equity R6	14.31%	14.31%	-7.58%	11.98%	20.53%	-5.63%	11.05%	6.49%	11.51%	7.65%	15.99%
Russell Mid Cap Value	14.37%	14.37%	-12.29%	13.34%	20.00%	-4.78%	14.75%	2.89%	9.50%	7.22%	16.39%
Mid Value Universe	13.50%	13.50%	-13.50%	13.15%	17.77%	-5.38%	9.45%	0.41%	8.41%	5.67%	14.27%
MEDIUM COMPANY BLEND											
Vanguard Extended Market Index Instl	15.99%	15.99%	-9.35%	18.12%	16.15%	-3.24%	7.56%	4.97%	13.32%	7.88%	16.62%
Russell Mid Cap	16.54%	16.54%	-9.06%	18.52%	13.80%	-2.44%	13.22%	6.47%	11.82%	8.81%	16.88%
Mid Blend Universe	14.50%	14.50%	-11.82%	15.55%	14.13%	-4.53%	8.45%	2.16%	9.43%	6.00%	14.40%
MEDIUM COMPANY GROWTH											
MFS Mid Cap Growth R6	18.86%	18.86%	1.21%	26.39%	4.75%	4.60%	8.95%	14.12%	17.05%	12.52%	17.83%
Russell Mid Cap Growth	19.62%	19.62%	-4.75%	25.27%	7.33%	-0.20%	11.90%	11.51%	15.06%	10.89%	17.60%
Mid Growth Universe	18.67%	18.67%	-5.87%	24.88%	6.04%	-0.72%	7.20%	8.95%	14.72%	9.40%	15.92%
FOREIGN LARGE VALUE											
MFS International Value R6	12.18%	12.18%	-8.89%	27.25%	4.31%	6.85%	1.61%	2.92%	9.74%	7.84%	13.16%
MSCI EAFE	10.13%	10.13%	-13.36%	25.62%	1.51%	-0.39%	-4.48%	-3.22%	7.80%	2.81%	9.47%
Foreign Large Value Universe	8.64%	8.64%	-16.69%	22.69%	3.30%	-3.21%	-6.21%	-8.13%	5.19%	0.49%	7.75%
FOREIGN LARGE BLEND											
American Funds Europacific Growth R6	13.20%	13.20%	-14.91%	31.17%	1.01%	-0.48%	-2.29%	-4.66%	9.33%	4.27%	9.94%
Vanguard Total Intl Stock Index I	10.26%	10.26%	-14.39%	27.55%	4.70%	-4.24%	-4.15%	-5.18%	8.08%	2.79%	8.93%
MSCI EAFE	10.13%	10.13%	-13.36%	25.62%	1.51%	-0.39%	-4.48%	-3.22%	7.80%	2.81%	9.47%
Foreign Large Blend Universe	10.46%	10.46%	-15.45%	25.36%	0.89%	-1.45%	-5.04%	-5.83%	6.42%	1.95%	8.51%

*ANNUALIZED

CONTINUED...

This summary is intended for "Institutional (Plan Sponsor) Use Only" and only includes historical performance of the funds currently in the plan's fund lineup as compared to the peer group (universe) maintained/developed by CAPTRUST (using Morningstar open-end mutual fund data), which may include other investment types such as collective investment trusts. Fund and peer group returns are shown net of investment management fees, unless otherwise indicated, but gross of CAPTRUST advisory fees. The plan's overall performance will be reduced by CAPTRUST's advisory fees and other plan level fees not contemplated in this summary. Therefore, each participant's account performance will differ substantially. Past performance is not indicative of future results. Information from sources believed to be reliable, but not warranted by CAPTRUST to be accurate or complete.

PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY

Period Ending 3.31.19 | Q1 19

University of Maine System

INVESTMENT NAME	Q1 '19	YTD '19	2018	2017	2016	2015	2014	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
SMALL COMPANY VALUE											
Victory Sycamore Small Company Opp I	10.97%	10.97%	-8.26%	11.88%	30.04%	-0.39%	6.80%	2.93%	13.16%	8.84%	16.36%
Russell 2000 Value	11.93%	11.93%	-12.86%	7.84%	31.74%	-7.47%	4.22%	0.17%	10.86%	5.59%	14.12%
Small Value Universe	12.37%	12.37%	-15.60%	9.21%	25.33%	-6.82%	3.57%	-2.70%	8.27%	4.25%	14.00%
SMALL COMPANY GROWTH											
Carillon Eagle Small Cap Growth R6	17.69%	17.69%	-10.06%	23.40%	10.45%	-0.39%	5.59%	4.15%	14.41%	8.62%	16.68%
Russell 2000 Growth	17.14%	17.14%	-9.31%	22.17%	11.32%	-1.38%	5.60%	3.85%	14.87%	8.41%	16.52%
Small Growth Universe	17.72%	17.72%	-5.65%	22.24%	11.23%	-2.39%	2.67%	8.22%	16.29%	8.69%	16.45%
EMERGING MARKETS											
DFA Emerging Markets Core Equity I	8.61%	8.61%	-15.25%	36.55%	12.35%	-14.86%	-0.91%	-9.48%	9.60%	3.44%	9.85%
MSCI Emerging Markets	9.97%	9.97%	-14.25%	37.75%	11.60%	-14.60%	-1.82%	-7.06%	11.09%	4.06%	9.31%
Emerging Markets Universe	10.75%	10.75%	-16.58%	35.28%	8.22%	-13.55%	-2.74%	-9.46%	9.24%	2.78%	8.97%
SPECIALTY-PRIVATE REAL ESTATE											
TIAA Real Estate Account	1.71%	1.71%	4.79%	4.37%	5.20%	8.16%	12.22%	5.58%	4.73%	6.78%	5.65%
NCREIF Property Index	1.80%	1.80%	6.71%	6.98%	7.97%	13.33%	11.81%	6.82%	7.07%	9.12%	8.50%
Specialty-Real Estate Universe	16.34%	16.34%	-6.41%	5.72%	6.65%	2.48%	28.41%	16.85%	5.46%	8.26%	17.27%

*ANNUALIZED

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SECTION 4: FUND FACT SHEETS

Period Ending 3.31.19 | Q1 19

University of Maine System

SECTION 4: FUND FACT SHEETS

Fund Fact Sheets.....

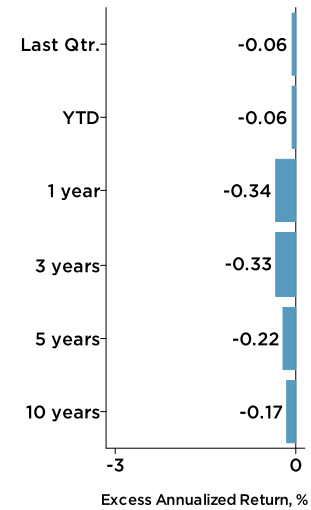
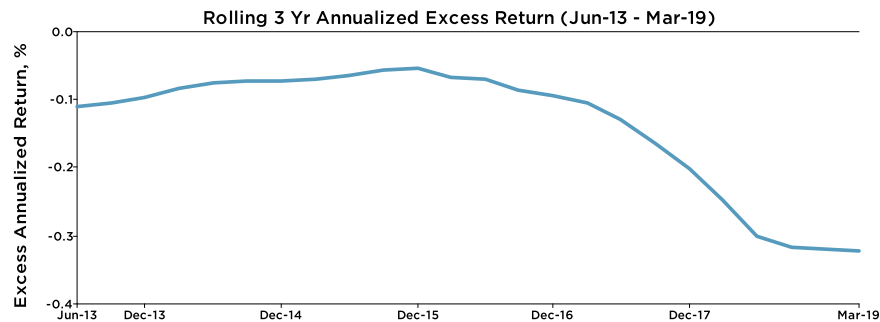
CREF MONEY MARKET R3

Period Ending 3.31.19 | Q1 19

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.

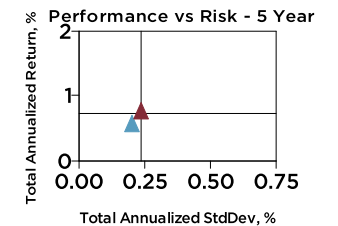
	CREF Money Market R3	90 Day US Treasury Bill Index
TRAILING RETURNS		
Last Qtr.	0.54	0.60
YTD	0.54	0.60
1 Year	1.78	2.12
3 Years	0.87	1.19
5 Years	0.52	0.74
10 Years	0.26	0.43
CALENDAR RETURNS		
2018	1.46	1.87
2017	0.50	0.86
2016	0.13	0.33
2015	0.00	0.05
2014	0.00	0.03
KEY MEASURES / 5 YEAR		
5 Year	0.20	0.23



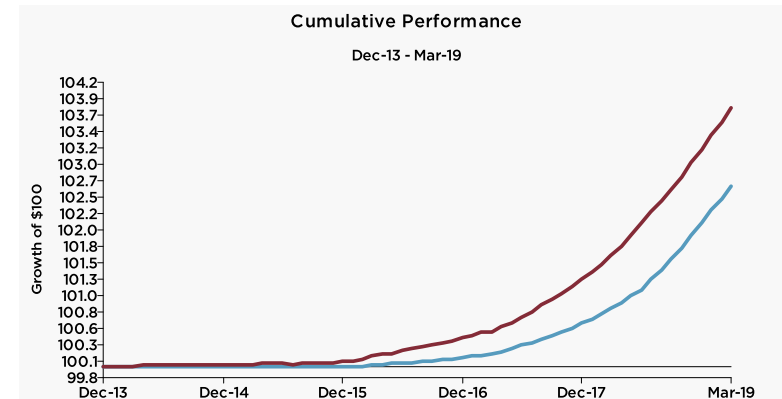
CREF Money Market R3
■ Excess

INVESTMENT PROFILE

Ticker	-
Strategy Incept Date	-
Prospectus Exp Ratio	-
12 Mo Yield	-



▲ CREF Money Market R3
▲ 90 Day US Treasury Bill Index



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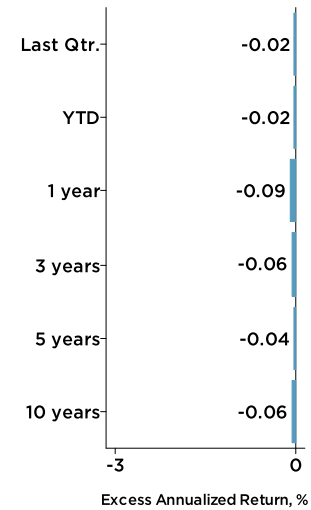
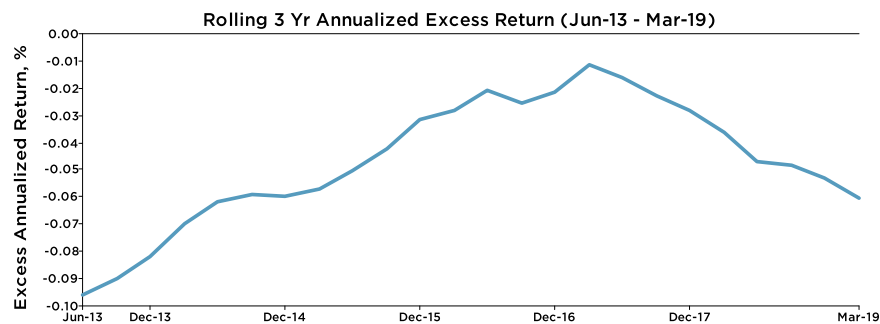
VANGUARD FEDERAL MONEY MARKET INVESTOR

Period Ending 3.31.19 | Q1 19

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.

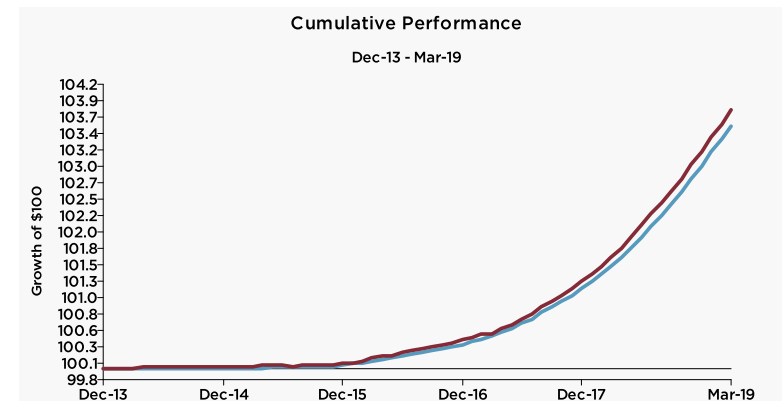
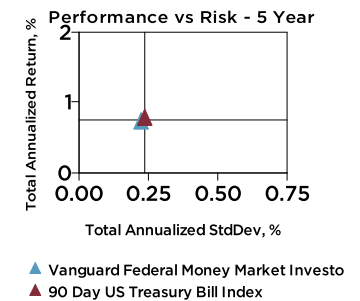
	Vanguard Federal Money Market Investor	90 Day US Treasury Bill Index
TRAILING RETURNS		
Last Qtr.	0.57	0.60
YTD	0.57	0.60
1 Year	2.03	2.12
3 Years	1.13	1.19
5 Years	0.70	0.74
10 Years	0.37	0.43
CALENDAR RETURNS		
2018	1.78	1.87
2017	0.81	0.86
2016	0.30	0.33
2015	0.04	0.05
2014	0.01	0.03
KEY MEASURES / 5 YEAR		
5 Year	0.22	0.23



Vanguard Federal Money Market
■ Excess

INVESTMENT PROFILE

Ticker	VMFXX
Strategy Incept Date	07/13/1981
Prospectus Exp Ratio	0.11%
12 Mo Yield	2.01%



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TIAA TRADITIONAL – GROUP RETIREMENT ANNUITY (GRA)

Period Ending 3.31.19 | Q1 19

7

INDUSTRY ANALYSIS

The insurance industry remains strong following a nice recovery from the 2008 financial crisis. Following the recession, many new regulations such as the Dodd-Frank Wall Street Reform and Consumer Protection Act impacted the operations of insurance companies. Although no action has been taken to date, the Trump administration has stated their intention to remove or reform many of these regulations which could again have a large impact on the insurance industry. Late in 2015, the United States Federal Reserve began increasing short-term interest rates for the first time since 2006. The U.S. fixed income marketplace as a whole has seen interest rates rise along with the Fed hikes, which poses a challenge for insurance general account managers. Increases in interest rates means a decline in value for the investments already in general accounts, which could lower the guaranteed rate. Alternatively, increased rates allow for reinvestment of new cash flows at higher levels which could increase the guaranteed rate. Managers are reacting differently to the dichotomy of these forces with some increasing guaranteed rates due to higher reinvestment while others are more reluctant to increase guaranteed rates due to losses on the current portfolio. This merits evaluation as interest rates continue to shift.

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:

1/1/18 - 3/31/18	4/1/18 - 6/30/18	7/1/18 - 9/30/18	10/1/18 - 12/31/18	1/1/19 - 3/31/19
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

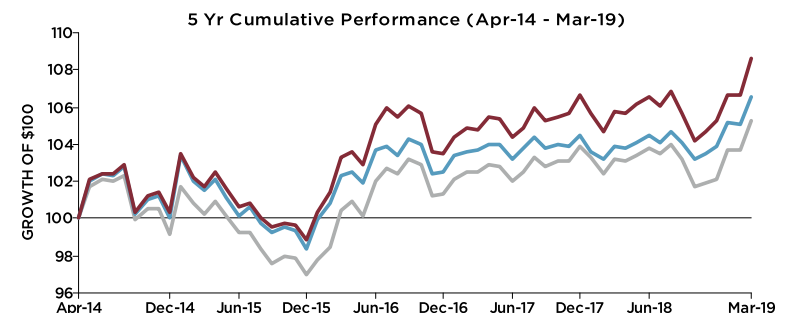
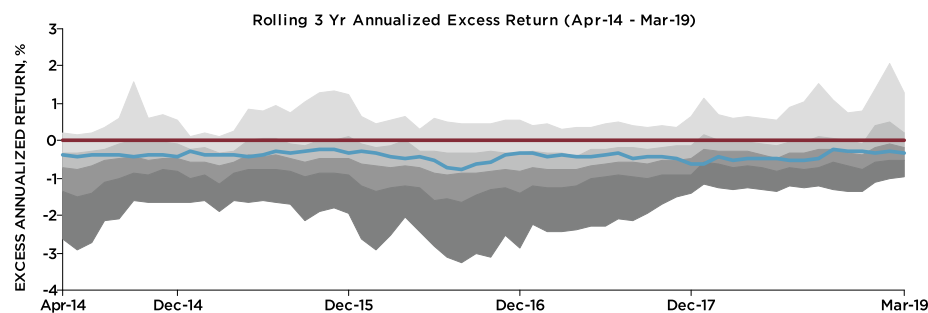
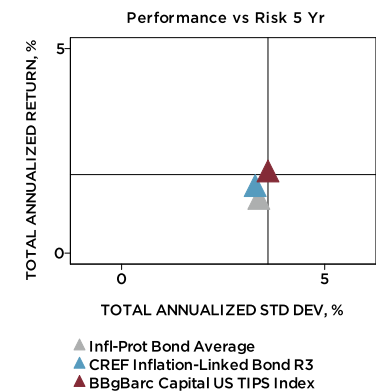
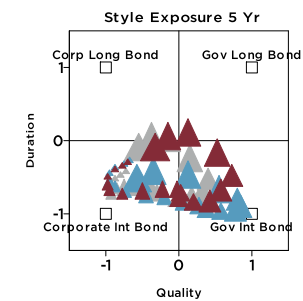
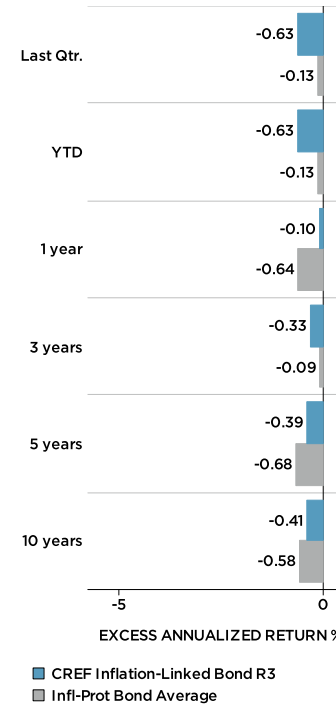
Plan Sponsor	Participant
Not applicable. Contracts are individually owned by the participant.	Lump Sum withdrawals are available within 120 days of termination of employment with a 2.5% surrender charge. Transfers and withdrawals can be made in 10 annual installments (paid over 9 years and 1 day).

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CREF INFLATION-LINKED BOND R3

Period Ending 3.31.19 | Q1 19

	CREF Inflation-Linked Bond R3	Peer Group Rank	BBgBarc Capital US TIPS Index	Infl-Prot Bond	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	3.28	32%	3.58	3.38	208
Sharpe Ratio	0.25	27%	0.33	0.14	208
Alpha	-0.26	29%	0.00	-0.49	208
Beta	0.90	62%	1.00	0.84	208
R-Squared	95.21	42%	100.00	83.10	208
Up Mkt Capture	85.04	57%	100.00	80.36	208
Down Mkt Capture	88.16	38%	100.00	88.10	208
Information Ratio	-0.47	42%	NA	-0.81	208
TRAILING RETURNS					
Last Qtr.	2.56	83%	3.19	3.07	221
YTD	2.56	83%	3.19	3.07	221
1 Year	2.60	13%	2.70	2.06	218
3 Years	1.37	62%	1.70	1.61	212
5 Years	1.55	30%	1.94	1.26	208
10 Years	3.00	40%	3.41	2.83	146
CALENDAR RETURNS					
2018	-0.49	14%	-1.26	-1.65	216
2017	1.85	72%	3.01	2.51	236
2016	4.23	52%	4.68	4.51	243
2015	-1.68	37%	-1.44	-2.22	252
2014	3.34	22%	3.64	1.96	257

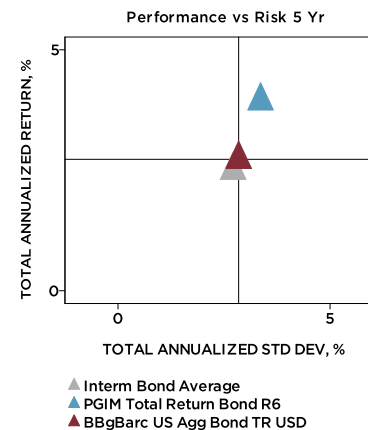
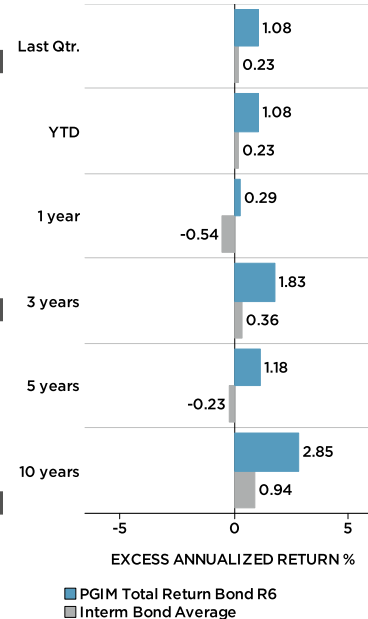
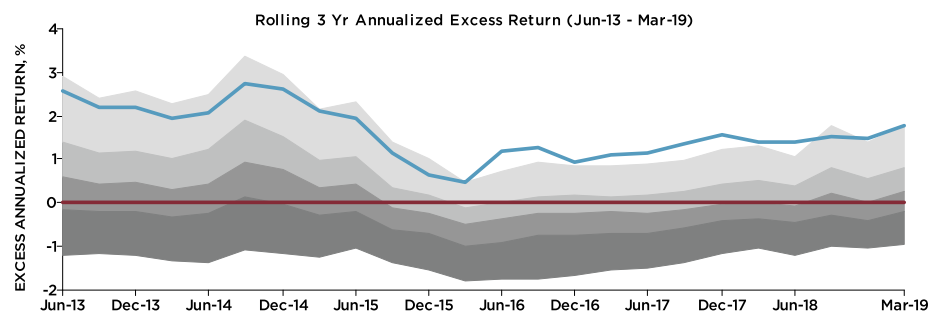


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PGIM TOTAL RETURN BOND R6

Period Ending 3.31.19 | Q1 19

	PGIM Total Return Bond R6	Peer Group Rank	BBgBarc US Agg Bond TR USD	Interm Bond	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	3.34	95%	2.86	2.73	911
Sharpe Ratio	0.95	10%	0.70	0.66	911
Alpha	0.95	8%	0.00	0.05	911
Beta	1.12	1%	1.00	0.86	911
R-Squared	91.20	45%	100.00	84.07	911
Up Mkt Capture	124.15	1%	100.00	89.47	911
Down Mkt Capture	103.49	82%	100.00	87.57	911
Information Ratio	1.11	2%	NA	-0.35	911
TRAILING RETURNS					
Last Qtr.	4.02	9%	2.94	3.17	1060
YTD	4.02	9%	2.94	3.17	1060
1 Year	4.78	10%	4.48	3.94	1022
3 Years	3.85	6%	2.03	2.38	973
5 Years	3.92	2%	2.74	2.51	911
10 Years	6.62	7%	3.77	4.71	806
CALENDAR RETURNS					
2018	-0.63	53%	0.01	-0.58	1025
2017	6.71	2%	3.54	3.79	1074
2016	4.83	13%	2.65	3.26	1076
2015	0.09	45%	0.55	-0.27	1079
2014	7.25	5%	5.97	5.19	1122



INVESTMENT PROFILE

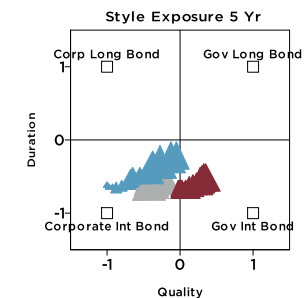
Ticker	PTRQX
CUSIP	74440B884
Net Assets \$MM	\$39,359.00
Manager Names	Team Managed
Manager Tenure	16.4 Years
Prospectus Exp Ratio	0.41%
Cat Median Exp Ratio	0.77%
Current 12b-1	N/A
Annld Ret Since Incept	4.76%
Inception Date	12/27/2010
Phone Number	800-225-1852
Sub Advisor	PGIM Fixed Income

HOLDINGS OVERVIEW

Total Number of Holdings	2860
% Assets in Top 10 Holdings	110.07%
Avg Mkt Cap \$MM	\$931.61
Turnover Ratio	56.00%

TOP HOLDINGS

US 5 Year Note (CBT) Jun	27.60%
2 Year US Treasury Note F	21.67%
US 10 Year Note (CBT) Ju	18.79%
Payb Fra Usd 3.94 26mar	7.31%
Recv Fra Usd 2.56 26mar1	7.31%

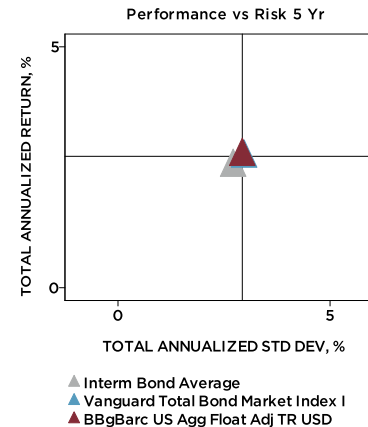
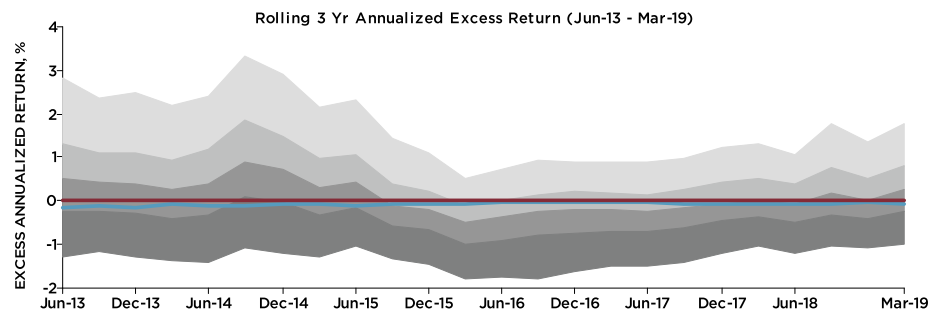


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VANGUARD TOTAL BOND MARKET INDEX I

Period Ending 3.31.19 | Q1 19

	Vanguard Total Bond Market Index I	Peer Group Rank	BBgBarc US Agg Float Adj TR USD	Interm Bond	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	2.96	84%	2.92	2.73	911
Sharpe Ratio	0.65	51%	0.68	0.66	911
Alpha	-0.07	60%	0.00	0.09	911
Beta	1.01	6%	1.00	0.85	911
R-Squared	99.25	4%	100.00	84.30	911
Up Mkt Capture	99.84	14%	100.00	88.32	911
Down Mkt Capture	101.38	84%	100.00	84.92	911
Information Ratio	-0.18	49%	NA	-0.32	911
TRAILING RETURNS					
Last Qtr.	2.95	68%	3.00	3.17	1060
YTD	2.95	68%	3.00	3.17	1060
1 Year	4.47	21%	4.46	3.94	1022
3 Years	2.00	66%	2.05	2.38	973
5 Years	2.68	40%	2.73	2.51	911
10 Years	3.71	81%	NA	4.71	806
CALENDAR RETURNS					
2018	-0.01	25%	-0.08	-0.58	1025
2017	3.57	56%	3.63	3.79	1074
2016	2.61	64%	2.75	3.26	1076
2015	0.41	28%	0.44	-0.27	1079
2014	5.90	31%	5.85	5.19	1122



INVESTMENT PROFILE

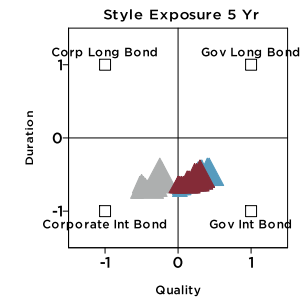
Ticker	VBIX
CUSIP	921937504
Net Assets \$MM	\$215,926.00
Manager Names	Team Managed
Manager Tenure	6.1 Years
Prospectus Exp Ratio	0.04%
Cat Median Exp Ratio	0.77%
Current 12b-1	N/A
Annld Ret Since Incept	5.04%
Inception Date	09/18/1995
Phone Number	888-809-8102
Sub Advisor	N/A

HOLDINGS OVERVIEW

Total Number of Holdings	17322
% Assets in Top 10 Holdings	3.95%
Avg Mkt Cap \$MM	N/A
Turnover Ratio	54.00%

TOP HOLDINGS

United States Treasury Noi	0.45%
United States Treasury Noi	0.45%
United States Treasury Noi	0.40%
United States Treasury Noi	0.40%
United States Treasury Noi	0.39%

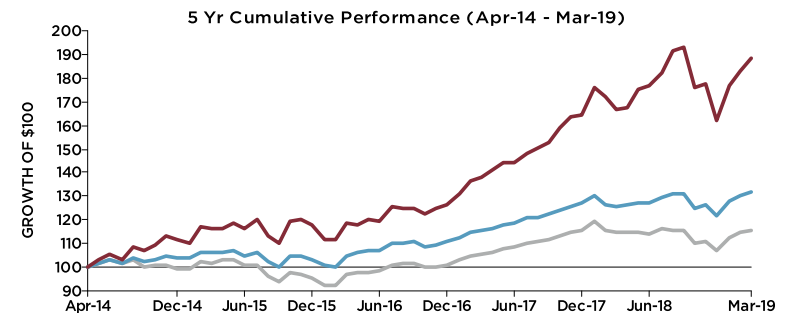
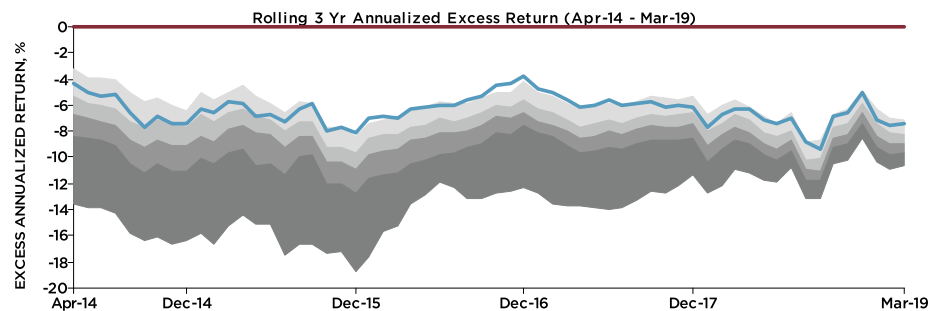
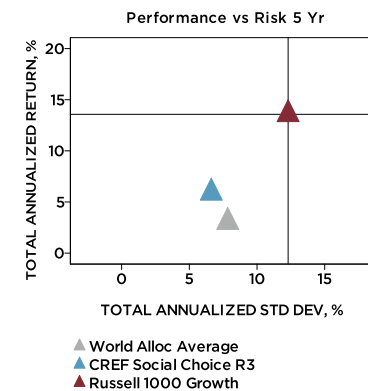
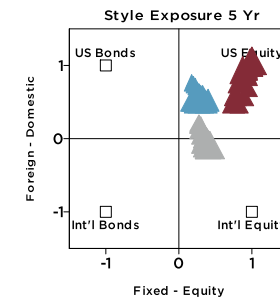
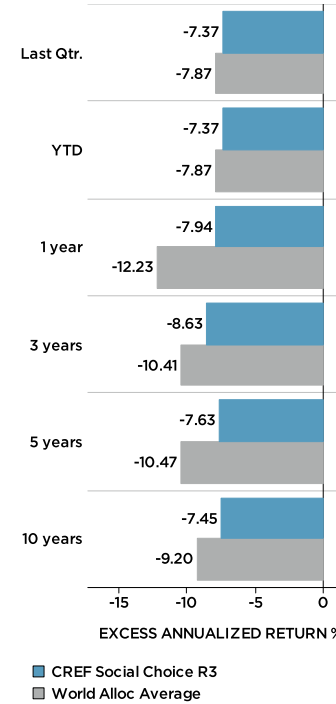


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CREF SOCIAL CHOICE R3

Period Ending 3.31.19 | Q1 19

	CREF Social Choice R3	Peer Group Rank	Russell 1000 Growth	World Alloc	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	6.61	11%	12.28	7.84	397
Sharpe Ratio	0.77	1%	1.04	0.31	397
Alpha	-1.36	3%	0.00	-4.37	397
Beta	0.51	45%	1.00	0.52	397
R-Squared	89.24	1%	100.00	68.82	397
Up Mkt Capture	46.17	20%	100.00	40.13	397
Down Mkt Capture	55.26	19%	100.00	67.24	397
Information Ratio	-1.05	12%	NA	-1.28	397
TRAILING RETURNS					
Last Qtr.	8.74	35%	16.10	8.23	490
YTD	8.74	35%	16.10	8.23	490
1 Year	4.81	9%	12.75	0.51	471
3 Years	7.91	7%	16.53	6.12	433
5 Years	5.86	2%	13.50	3.03	397
10 Years	10.07	12%	17.52	8.31	249
CALENDAR RETURNS					
2018	-4.29	3%	-1.51	-8.09	463
2017	14.27	52%	30.21	14.28	504
2016	7.40	27%	7.08	6.06	528
2015	-0.87	19%	5.67	-4.35	540
2014	6.83	4%	13.05	1.75	534



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VANGUARD TARGET RETIREMENT

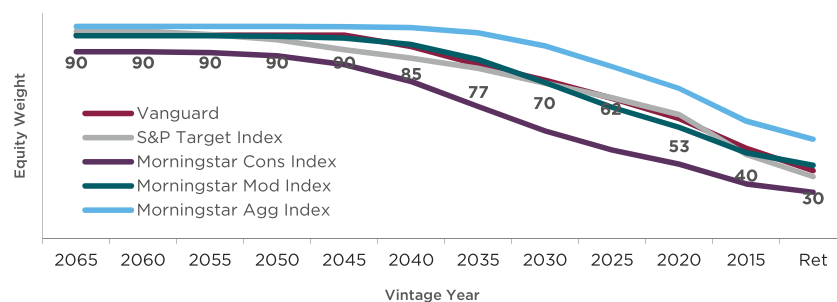
Period Ending 3.31.19 | Q1 19

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:	\$258,902	Manager Tenure:	6.17 years (longest)
Manager Name:	Team	Expense Range:	0.12% - 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.

VANGUARD TARGET RETIREMENT

Period Ending 3.31.19 | Q1 19

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:

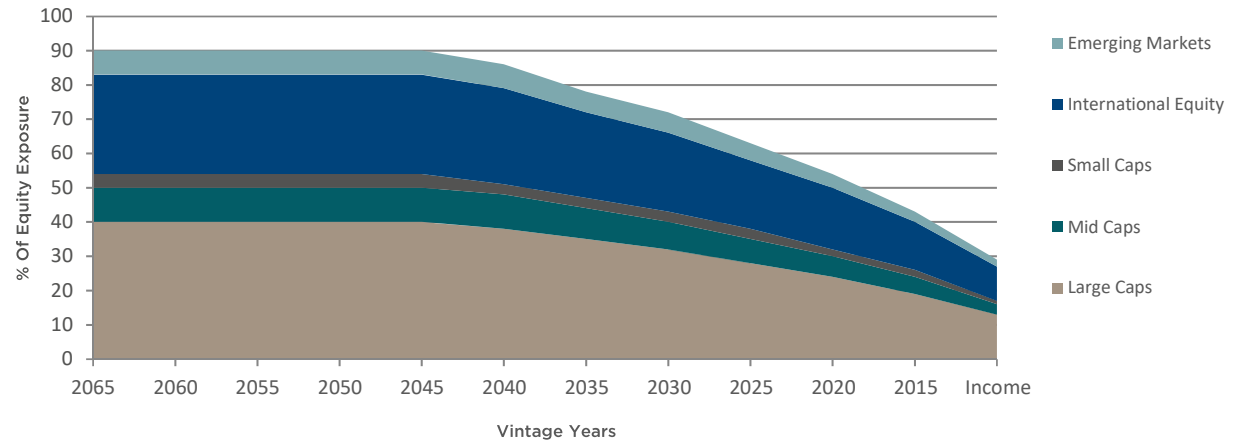
- Increased international stock allocation from 30% to 40%
- Increased International bond allocation from 20% to 30%

Rationale:

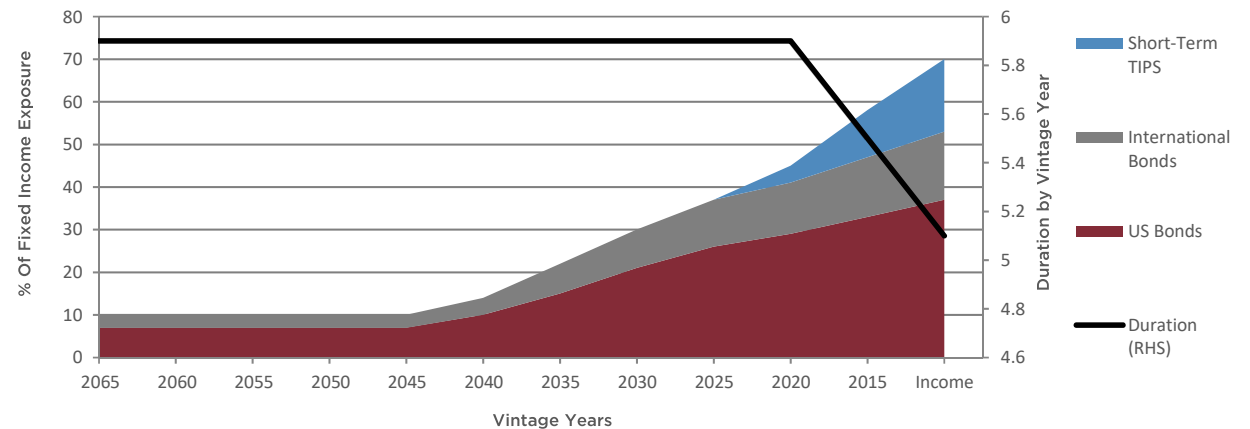
- Move to be more in line with the Global Market Cap

*All information provided by the asset manager, as of 12/31/18. Asset allocations shown are static in nature and do not incorporate any tactical views implemented by the manager.

Equity Exposure



Fixed Income Exposure



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TARGET DATE ANALYSIS

Period Ending 3.31.19 | Q1 19

	3 Year				5 Year			
	Beta	Sharpe	Up Capture	Down Capture	Beta	Sharpe	Up Capture	Down Capture
Vanguard Target Retirement 2015 Inv	0.90	1.16	94.85	86.53	0.94	0.83	97.09	92.32
Morningstar Target Date 2015	0.97	1.04	96.00	94.65	0.97	0.67	93.61	100.08
S&P Target Date 2015 TR	1.00	1.05	100.00	100.00	1.00	0.76	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	1.02	1.09	103.94	100.68	1.02	0.75	104.15	101.29
Morningstar Target Date 2025	0.97	1.02	96.04	96.37	0.99	0.62	95.72	101.74
S&P Target Date 2025 TR	1.00	1.05	100.00	100.00	1.00	0.71	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	1.02	1.01	104.08	101.28	1.04	0.64	104.06	103.46
Morningstar Target Date 2045	1.01	0.96	100.22	99.95	1.03	0.57	99.69	104.21
S&P Target Date 2045 TR	1.00	0.97	100.00	100.00	1.00	0.64	100.00	100.00

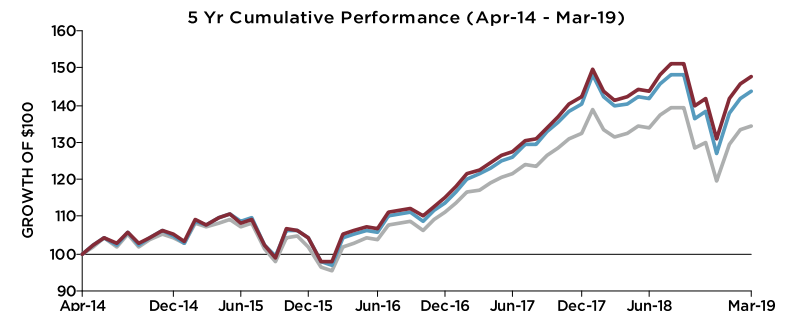
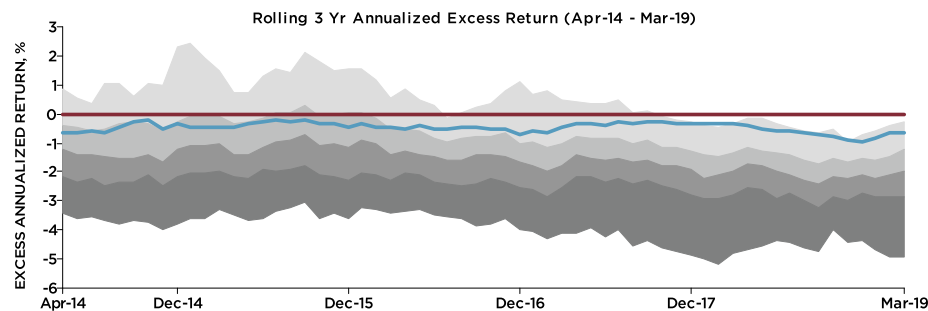
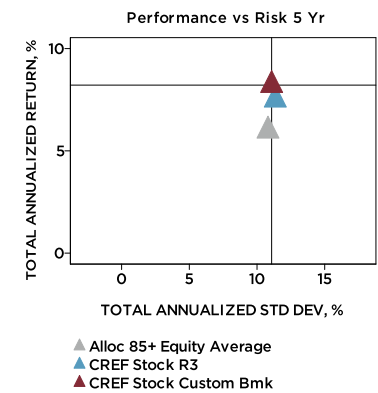
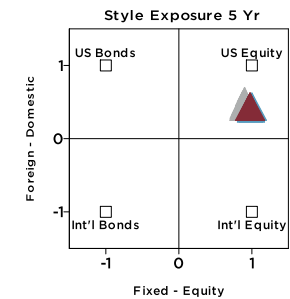
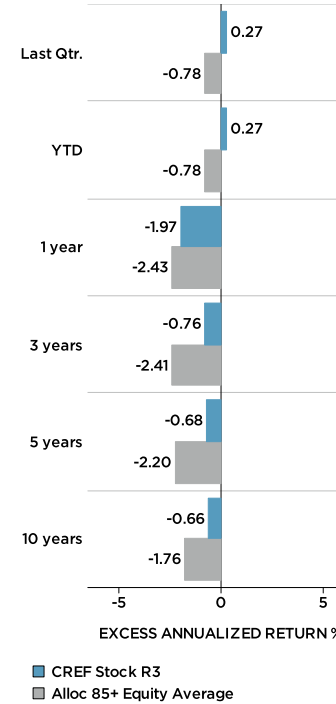
*Lowest cost share class shown

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CREF STOCK R3

Period Ending 3.31.19 | Q1 19

KEY MEASURES / 5 YEAR	CREF Stock R3	Peer Group Rank	CREF Stock Custom Bmk	Alloc 85+ Equity	# of Funds
Standard Deviation	11.28	82%	11.12	10.85	171
Sharpe Ratio	0.60	16%	0.67	0.49	171
Alpha	-0.78	19%	0.00	-1.81	171
Beta	1.01	13%	1.00	0.95	171
R-Squared	99.64	1%	100.00	94.67	171
Up Mkt Capture	98.68	7%	100.00	87.49	171
Down Mkt Capture	103.56	75%	100.00	99.03	171
Information Ratio	-0.91	48%	NA	-1.00	171
TRAILING RETURNS					
Last Qtr.	13.22	16%	12.95	12.17	187
YTD	13.22	16%	12.95	12.17	187
1 Year	2.73	42%	4.71	2.28	187
3 Years	11.26	10%	12.02	9.61	181
5 Years	7.52	9%	8.20	6.00	171
10 Years	13.49	10%	14.15	12.39	136
CALENDAR RETURNS					
2018	-9.65	57%	-7.98	-9.51	186
2017	23.45	7%	23.30	19.16	207
2016	9.17	24%	10.41	8.91	217
2015	-0.84	26%	-0.89	-2.41	219
2014	6.41	32%	7.55	5.59	212

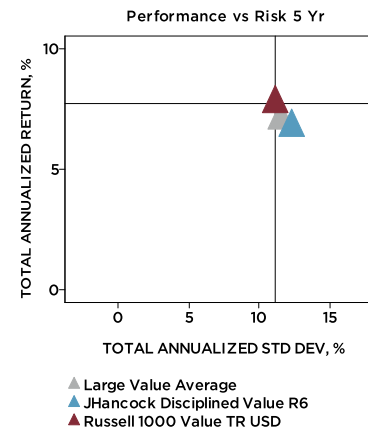
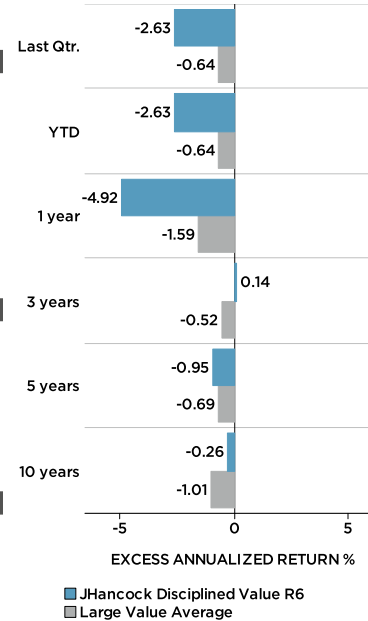
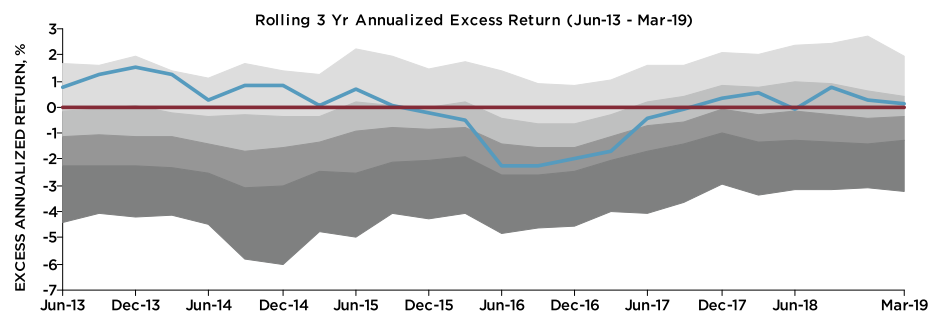


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JHANCOCK DISCIPLINED VALUE R6

Period Ending 3.31.19 | Q1 19

	JHancock Disciplined Value R6	Peer Group Rank	Russell 1000 Value TR USD	Large Value	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	12.29	77%	11.08	11.46	1053
Sharpe Ratio	0.49	68%	0.63	0.56	1053
Alpha	-1.49	69%	0.00	-0.62	1053
Beta	1.08	23%	1.00	0.99	1053
R-Squared	94.22	49%	100.00	91.68	1053
Up Mkt Capture	98.95	35%	100.00	95.59	1053
Down Mkt Capture	106.17	70%	100.00	99.00	1053
Information Ratio	-0.29	56%	NA	-0.23	1053
TRAILING RETURNS					
Last Qtr.	9.31	92%	11.93	11.29	1169
YTD	9.31	92%	11.93	11.29	1169
1 Year	0.76	82%	5.67	4.08	1167
3 Years	10.59	34%	10.45	9.93	1133
5 Years	6.77	57%	7.72	7.03	1053
10 Years	14.27	27%	14.52	13.51	942
CALENDAR RETURNS					
2018	-9.47	59%	-8.27	-8.87	1191
2017	19.33	14%	13.66	15.84	1263
2016	14.07	54%	17.34	14.55	1319
2015	-4.81	68%	-3.83	-3.94	1329
2014	11.04	48%	13.45	10.59	1333



INVESTMENT PROFILE

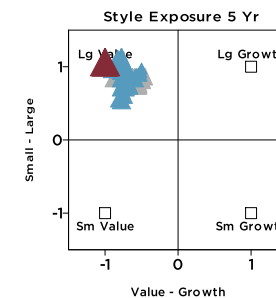
Ticker	JDVWX
CUSIP	47803U418
Net Assets \$MM	\$14,908.00
Manager Names	Team Managed
Manager Tenure	22.3 Years
Prospectus Exp Ratio	0.70%
Cat Median Exp Ratio	1.07%
Current 12b-1	0.00%
Annld Ret Since Incept	12.60%
Inception Date	09/01/2011
Phone Number	888-972-8696
Sub Advisor	Boston Partners Global Investors, Inc

HOLDINGS OVERVIEW

Total Number of Holdings	87
% Assets in Top 10 Holdings	32.20%
Avg Mkt Cap \$MM	\$87,370.56
Turnover Ratio	45.00%

TOP HOLDINGS

Johnson & Johnson	4.33%
Berkshire Hathaway Inc B	4.31%
Cisco Systems Inc	3.56%
JPMorgan Chase & Co	3.09%
Bank of America Corporat	3.06%

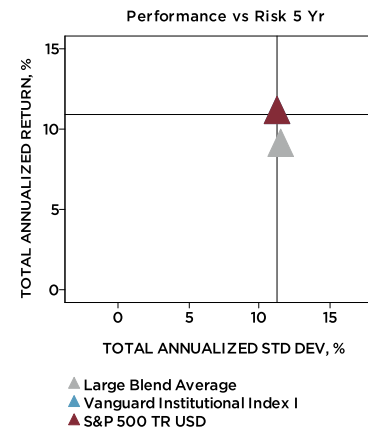
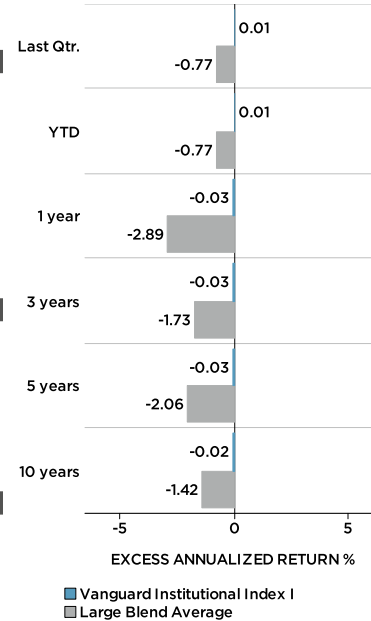
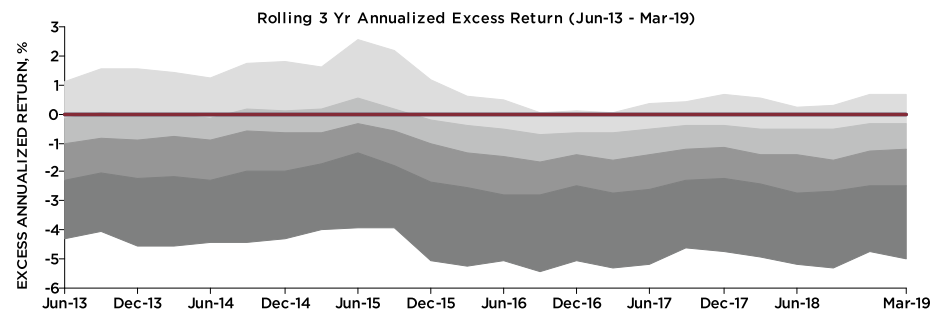


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VANGUARD INSTITUTIONAL INDEX I

Period Ending 3.31.19 | Q1 19

	Vanguard Institutional Index I	Peer Group Rank	S&P 500 TR USD	Large Blend	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	11.19	38%	11.19	11.49	1183
Sharpe Ratio	0.91	8%	0.91	0.71	1183
Alpha	-0.03	11%	0.00	-1.99	1183
Beta	1.00	51%	1.00	0.99	1183
R-Squared	100.00	1%	100.00	93.50	1183
Up Mkt Capture	99.90	12%	100.00	92.25	1183
Down Mkt Capture	100.07	26%	100.00	104.15	1183
Information Ratio	-2.13	92%	NA	-1.28	1183
TRAILING RETURNS					
Last Qtr.	13.65	27%	13.65	12.88	1346
YTD	13.65	27%	13.65	12.88	1346
1 Year	9.47	17%	9.50	6.60	1321
3 Years	13.48	15%	13.51	11.78	1241
5 Years	10.88	7%	10.91	8.84	1183
10 Years	15.90	12%	15.92	14.50	1042
CALENDAR RETURNS					
2018	-4.42	21%	-4.38	-6.56	1323
2017	21.79	30%	21.83	20.43	1378
2016	11.93	28%	11.96	10.43	1449
2015	1.37	21%	1.38	-0.72	1505
2014	13.65	18%	13.69	11.33	1542



INVESTMENT PROFILE

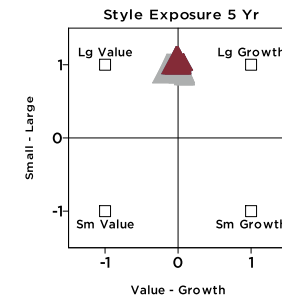
Ticker	VINIX
CUSIP	922040100
Net Assets \$MM	\$224,719.00
Manager Names	Team Managed
Manager Tenure	18.3 Years
Prospectus Exp Ratio	0.04%
Cat Median Exp Ratio	1.09%
Current 12b-1	N/A
Annld Ret Since Incept	9.79%
Inception Date	07/31/1990
Phone Number	888-809-8102
Sub Advisor	N/A

HOLDINGS OVERVIEW

Total Number of Holdings	511
% Assets in Top 10 Holdings	20.53%
Avg Mkt Cap \$MM	\$101,361.37
Turnover Ratio	6.00%

TOP HOLDINGS

Microsoft Corp	3.69%
Apple Inc	3.32%
Amazon.com Inc	2.87%
Facebook Inc A	1.65%
Berkshire Hathaway Inc E	1.64%

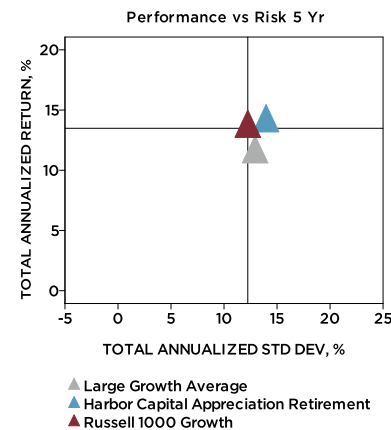
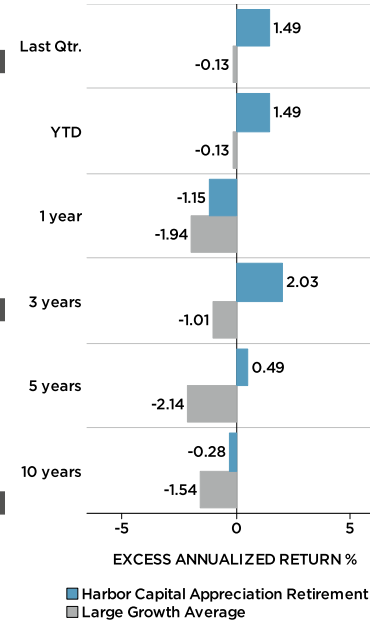
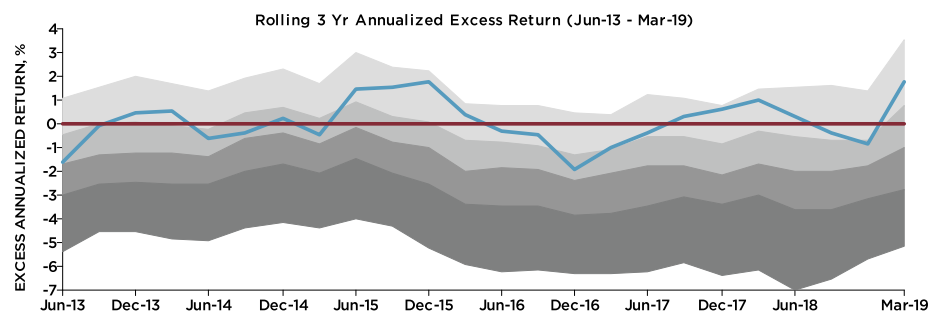


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HARBOR CAPITAL APPRECIATION RETIREMENT

Period Ending 3.31.19 | Q1 19

	Harbor Capital Appreciation Retirement	Peer Group Rank	Russell 1000 Growth	Large Growth	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	13.90	85%	12.28	12.89	1288
Sharpe Ratio	0.95	24%	1.04	0.83	1288
Alpha	-0.56	24%	0.00	-2.07	1288
Beta	1.08	15%	1.00	0.99	1288
R-Squared	91.36	55%	100.00	90.35	1288
Up Mkt Capture	108.14	7%	100.00	93.40	1288
Down Mkt Capture	111.08	77%	100.00	104.59	1288
Information Ratio	0.10	14%	NA	-0.53	1288
TRAILING RETURNS					
Last Qtr.	17.59	20%	16.10	15.97	1388
YTD	17.59	20%	16.10	15.97	1388
1 Year	11.60	45%	12.75	10.81	1380
3 Years	18.57	15%	16.53	15.52	1335
5 Years	13.99	13%	13.50	11.36	1288
10 Years	17.23	22%	17.52	15.97	1110
CALENDAR RETURNS					
2018	-0.96	39%	-1.51	-1.97	1394
2017	36.68	5%	30.21	28.26	1429
2016	-1.04	84%	7.08	3.08	1545
2015	10.99	4%	5.67	3.76	1637
2014	9.93	54%	13.05	9.98	1687



INVESTMENT PROFILE

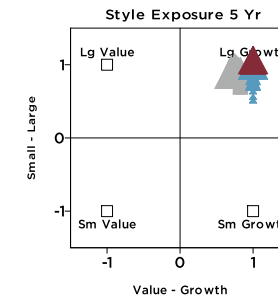
Ticker	HNACX
CUSIP	411512528
Net Assets \$MM	\$30,535.00
Manager Names	Team Managed
Manager Tenure	28.9 Years
Prospectus Exp Ratio	0.58%
Cat Median Exp Ratio	1.15%
Current 12b-1	N/A
Annld Ret Since Incept	19.19%
Inception Date	03/01/2016
Phone Number	800-422-1050
Sub Advisor	Jennison Associates LLC

HOLDINGS OVERVIEW

Total Number of Holdings	58
% Assets in Top 10 Holdings	38.05%
Avg Mkt Cap \$MM	\$133,658.90
Turnover Ratio	40.00%

TOP HOLDINGS

Amazon.com Inc	5.72%
Microsoft Corp	5.09%
Mastercard Inc A	3.80%
Salesforce.com Inc	3.76%
Tencent Holdings Ltd	3.53%

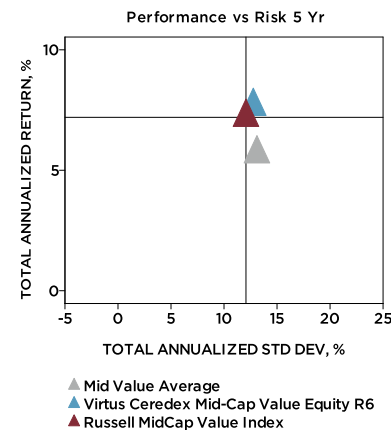
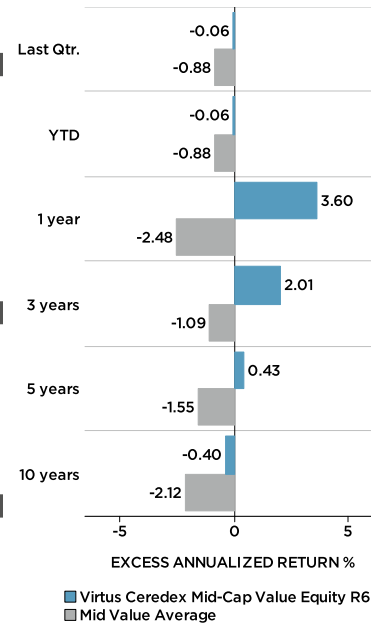
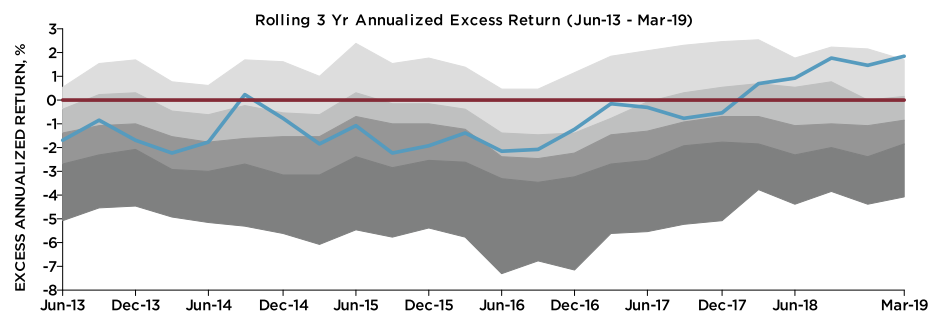


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VIRTUS CEREDEX MID-CAP VALUE EQUITY R6

Period Ending 3.31.19 | Q1 19

	Virtus Ceredex Mid-Cap Value Equity R6	Peer Group Rank	Russell MidCap Value Index	Mid Value	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	12.83	46%	12.04	13.17	351
Sharpe Ratio	0.54	15%	0.54	0.38	351
Alpha	0.24	16%	0.00	-1.84	351
Beta	1.03	51%	1.00	1.04	351
R-Squared	93.52	50%	100.00	91.55	351
Up Mkt Capture	104.20	12%	100.00	95.66	351
Down Mkt Capture	102.51	40%	100.00	105.46	351
Information Ratio	0.12	11%	NA	-0.37	351
TRAILING RETURNS					
Last Qtr.	14.31	31%	14.37	13.50	399
YTD	14.31	31%	14.37	13.50	399
1 Year	6.49	6%	2.89	0.41	397
3 Years	11.51	5%	9.50	8.41	375
5 Years	7.65	12%	7.22	5.67	351
10 Years	15.99	12%	16.39	14.27	307
CALENDAR RETURNS					
2018	-7.58	9%	-12.29	-13.50	412
2017	11.98	64%	13.34	13.15	413
2016	20.53	30%	20.00	17.77	422
2015	-5.63	59%	-4.78	-5.38	436
2014	11.05	36%	14.75	9.45	421



INVESTMENT PROFILE

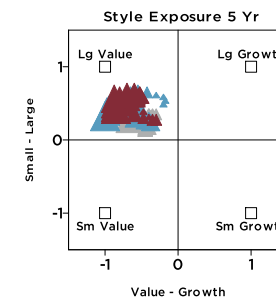
Ticker	SMVZX
CUSIP	92837F441
Net Assets \$MM	\$2,898.00
Manager Names	Don Wordell
Manager Tenure	17.3 Years
Prospectus Exp Ratio	0.80%
Cat Median Exp Ratio	1.15%
Current 12b-1	N/A
Annld Ret Since Incept	7.91%
Inception Date	08/01/2014
Phone Number	888-784-3863
Sub Advisor	Ceredex Value Advisors LLC

HOLDINGS OVERVIEW

Total Number of Holdings	59
% Assets in Top 10 Holdings	28.41%
Avg Mkt Cap \$MM	\$14,289.38
Turnover Ratio	N/A

TOP HOLDINGS

Humana Inc	4.62%
Zimmer Biomet Holdings Ir	4.28%
Pinnacle Financial Partners	2.73%
Energizer Holdings Inc	2.66%
The Hartford Financial Ser	2.55%

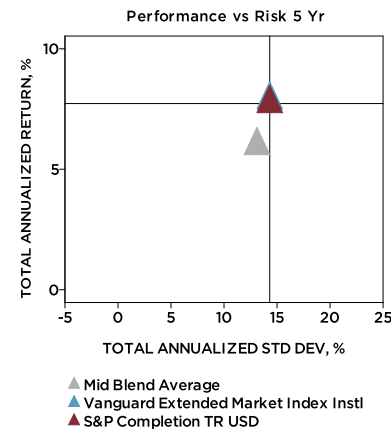
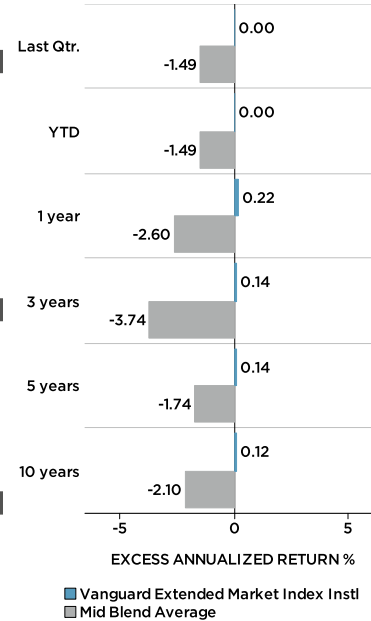
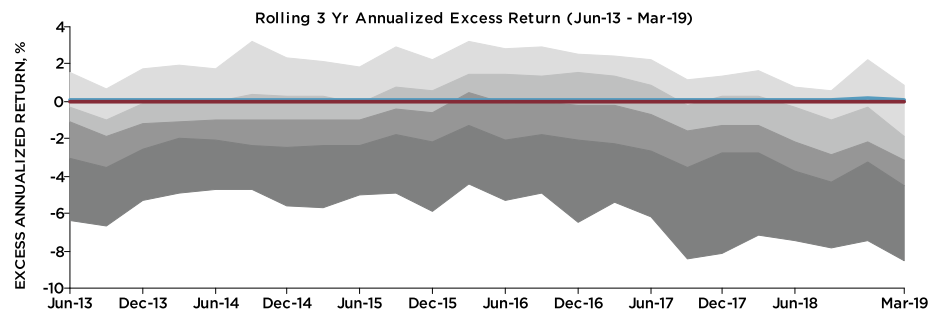


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VANGUARD EXTENDED MARKET INDEX INSTL

Period Ending 3.31.19 | Q1 19

	Vanguard Extended Market Index Instl	Peer Group Rank	S&P Completion TR USD	Mid Blend	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	14.32	86%	14.32	13.17	367
Sharpe Ratio	0.50	40%	0.49	0.41	367
Alpha	0.14	43%	0.00	-0.79	367
Beta	1.00	5%	1.00	0.86	367
R-Squared	100.00	1%	100.00	88.43	367
Up Mkt Capture	100.41	3%	100.00	82.14	367
Down Mkt Capture	99.73	87%	100.00	87.06	367
Information Ratio	1.74	1%	NA	-0.27	367
TRAILING RETURNS					
Last Qtr.	15.99	20%	15.99	14.50	427
YTD	15.99	20%	15.99	14.50	427
1 Year	4.97	23%	4.76	2.16	424
3 Years	13.32	9%	13.17	9.43	389
5 Years	7.88	22%	7.75	6.00	367
10 Years	16.62	7%	16.49	14.40	309
CALENDAR RETURNS					
2018	-9.35	25%	-9.57	-11.82	424
2017	18.12	26%	18.11	15.55	441
2016	16.15	39%	15.95	14.13	431
2015	-3.24	50%	-3.35	-4.53	446
2014	7.56	63%	7.50	8.45	443



INVESTMENT PROFILE

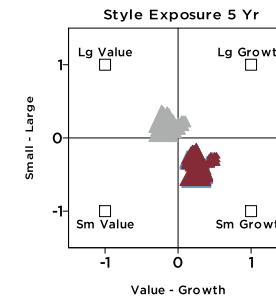
Ticker	VIEIX
CUSIP	922908884
Net Assets \$MM	\$68,067.00
Manager Names	Team Managed
Manager Tenure	21.3 Years
Prospectus Exp Ratio	0.06%
Cat Median Exp Ratio	1.15%
Current 12b-1	N/A
Annld Ret Since Incept	8.63%
Inception Date	07/07/1997
Phone Number	888-809-8102
Sub Advisor	N/A

HOLDINGS OVERVIEW

Total Number of Holdings	3267
% Assets in Top 10 Holdings	5.46%
Avg Mkt Cap \$MM	\$4,341.96
Turnover Ratio	10.00%

TOP HOLDINGS

Tesla Inc	0.86%
ServiceNow Inc	0.85%
Workday Inc Class A	0.58%
Worldpay Inc Class A	0.57%
Square Inc A	0.50%

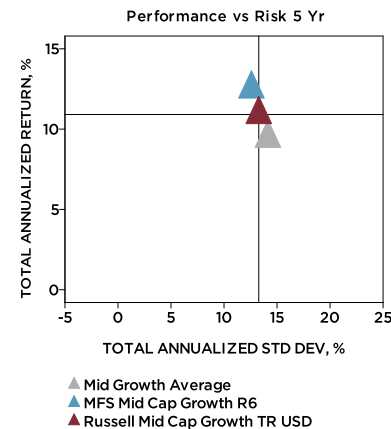
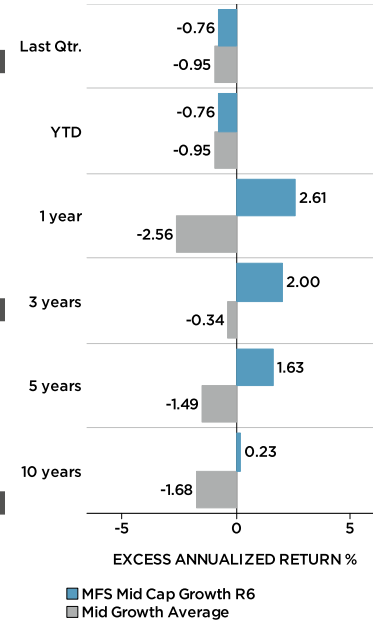
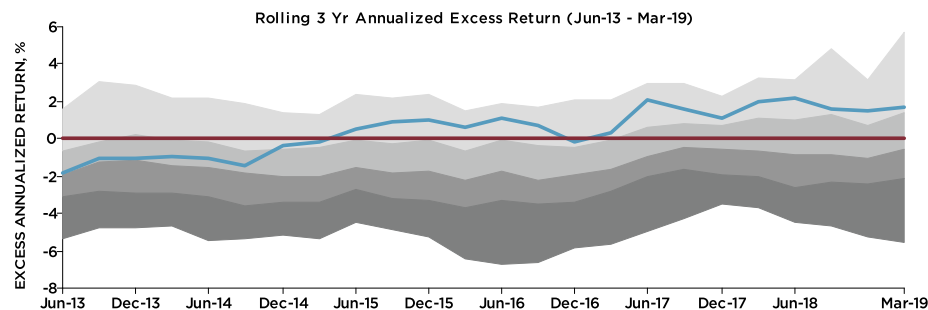


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MFS MID CAP GROWTH R6

Period Ending 3.31.19 | Q1 19

	MFS Mid Cap Growth R6	Peer Group Rank	Russell Mid Cap Growth TR USD	Mid Growth	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	12.57	16%	13.26	14.08	549
Sharpe Ratio	0.94	4%	0.76	0.62	549
Alpha	2.50	8%	0.00	-1.52	549
Beta	0.91	83%	1.00	1.00	549
R-Squared	93.04	44%	100.00	89.77	549
Up Mkt Capture	99.26	36%	100.00	96.56	549
Down Mkt Capture	87.51	9%	100.00	104.92	549
Information Ratio	0.43	5%	NA	-0.37	549
TRAILING RETURNS					
Last Qtr.	18.86	47%	19.62	18.67	599
YTD	18.86	47%	19.62	18.67	599
1 Year	14.12	16%	11.51	8.95	596
3 Years	17.05	22%	15.06	14.72	575
5 Years	12.52	8%	10.89	9.40	549
10 Years	17.83	12%	17.60	15.92	494
CALENDAR RETURNS					
2018	1.21	9%	-4.75	-5.87	595
2017	26.39	35%	25.27	24.88	618
2016	4.75	56%	7.33	6.04	654
2015	4.60	9%	-0.20	-0.72	674
2014	8.95	32%	11.90	7.20	695



INVESTMENT PROFILE

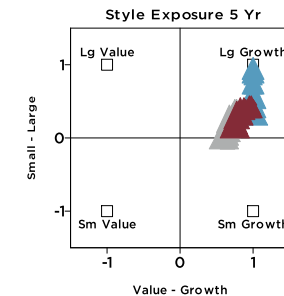
Ticker	OTCKX
CUSIP	552987554
Net Assets \$MM	\$4,609.00
Manager Names	Team Managed
Manager Tenure	10.4 Years
Prospectus Exp Ratio	0.77%
Cat Median Exp Ratio	1.26%
Current 12b-1	N/A
Annld Ret Since Incept	15.28%
Inception Date	01/02/2013
Phone Number	800-225-2606
Sub Advisor	N/A

HOLDINGS OVERVIEW

Total Number of Holdings	102
% Assets in Top 10 Holdings	22.64%
Avg Mkt Cap \$MM	\$14,570.31
Turnover Ratio	33.00%

TOP HOLDINGS

Bright Horizons Family Sol	3.44%
PerkinElmer Inc	2.86%
Global Payments Inc	2.32%
AMETEK Inc	2.16%
Verisk Analytics Inc	2.08%

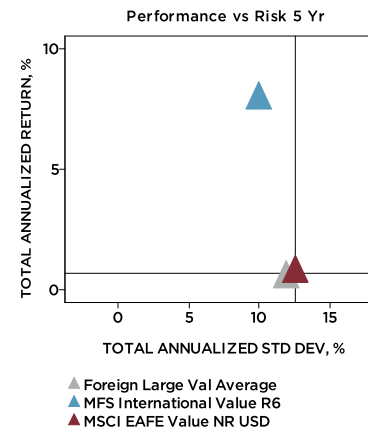
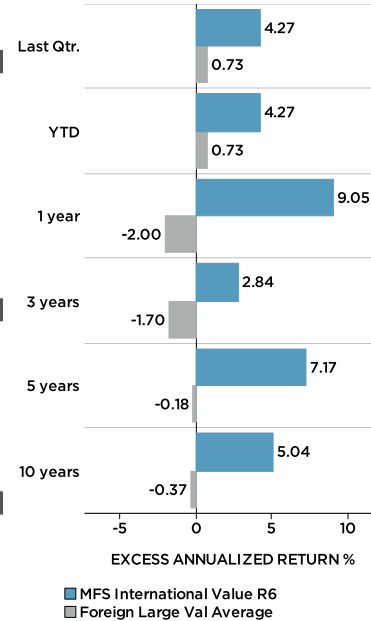
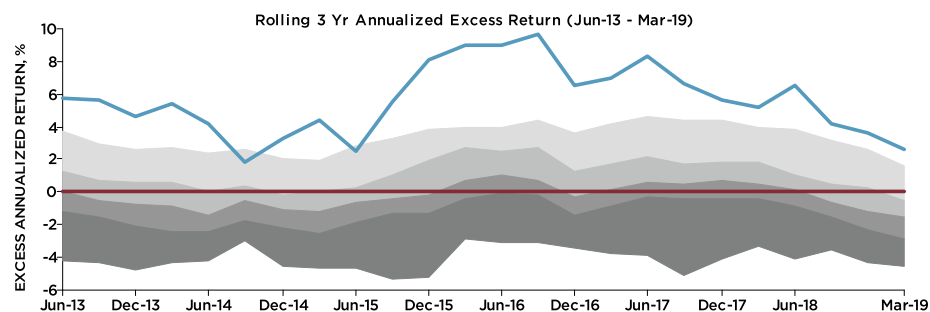


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MFS INTERNATIONAL VALUE R6

Period Ending 3.31.19 | Q1 19

	MFS International Value R6	Peer Group Rank	MSCI EAFE Value NR USD	Foreign Large Val	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	9.98	4%	12.48	11.94	255
Sharpe Ratio	0.71	1%	-0.01	-0.02	255
Alpha	7.14	1%	0.00	-0.19	255
Beta	0.61	100%	1.00	0.89	255
R-Squared	58.80	98%	100.00	87.31	255
Up Mkt Capture	75.49	87%	100.00	86.41	255
Down Mkt Capture	37.73	1%	100.00	88.78	255
Information Ratio	0.88	1%	NA	-0.03	255
TRAILING RETURNS					
Last Qtr.	12.18	2%	7.92	8.64	296
YTD	12.18	2%	7.92	8.64	296
1 Year	2.92	1%	-6.13	-8.13	287
3 Years	9.74	1%	6.90	5.19	283
5 Years	7.84	1%	0.67	0.49	255
10 Years	13.16	1%	8.12	7.75	209
CALENDAR RETURNS					
2018	-8.89	2%	-14.78	-16.69	293
2017	27.25	11%	21.44	22.69	315
2016	4.31	29%	5.02	3.30	340
2015	6.85	1%	-5.68	-3.21	362
2014	1.61	1%	-5.39	-6.21	355



INVESTMENT PROFILE

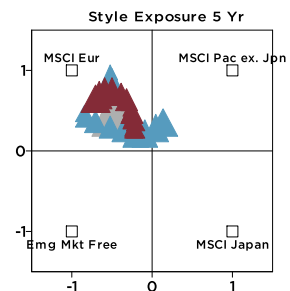
Ticker	MINJX
CUSIP	552746349
Net Assets \$MM	\$28,441.00
Manager Names	Team Managed
Manager Tenure	10.4 Years
Prospectus Exp Ratio	0.63%
Cat Median Exp Ratio	1.20%
Current 12b-1	N/A
Annld Ret Since Incept	6.84%
Inception Date	05/01/2006
Phone Number	800-225-2606
Sub Advisor	N/A

HOLDINGS OVERVIEW

Total Number of Holdings	110
% Assets in Top 10 Holdings	27.13%
Avg Mkt Cap \$MM	\$24,049.40
Turnover Ratio	14.00%

TOP HOLDINGS

Nestle SA	4.70%
Givaudan SA	3.16%
Cadence Design Systems	3.01%
Pernod Ricard SA	2.68%
Diageo PLC	2.46%

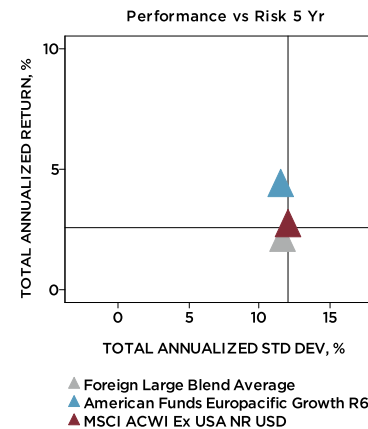
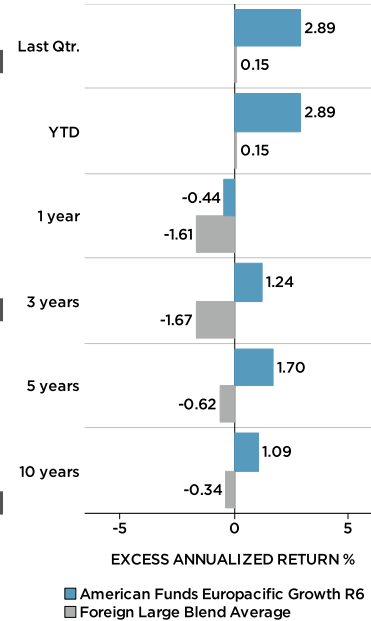
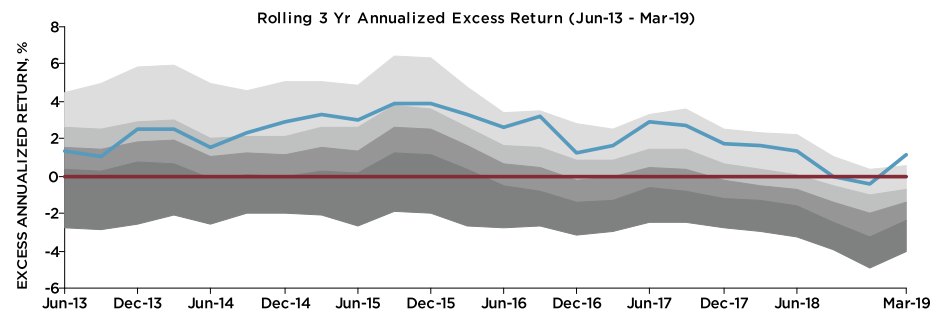


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AMERICAN FUNDS EUROPACIFIC GROWTH R6

Period Ending 3.31.19 | Q1 19

	American Funds Europacific Growth R6	Peer Group Rank	MSCI ACWI Ex USA NR USD	Foreign Large Blend	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	11.54	53%	12.01	11.66	614
Sharpe Ratio	0.31	6%	0.15	0.11	614
Alpha	1.86	5%	0.00	-0.47	614
Beta	0.91	62%	1.00	0.92	614
R-Squared	90.29	62%	100.00	90.02	614
Up Mkt Capture	95.23	20%	100.00	89.34	614
Down Mkt Capture	84.92	17%	100.00	92.89	614
Information Ratio	0.44	4%	NA	-0.16	614
TRAILING RETURNS					
Last Qtr.	13.20	6%	10.31	10.46	738
YTD	13.20	6%	10.31	10.46	738
1 Year	-4.66	35%	-4.22	-5.83	723
3 Years	9.33	4%	8.09	6.42	684
5 Years	4.27	5%	2.57	1.95	614
10 Years	9.94	11%	8.85	8.51	522
CALENDAR RETURNS					
2018	-14.91	46%	-14.20	-15.45	716
2017	31.17	3%	27.19	25.36	765
2016	1.01	46%	4.50	0.89	785
2015	-0.48	39%	-5.66	-1.45	763
2014	-2.29	17%	-3.87	-5.04	774



INVESTMENT PROFILE

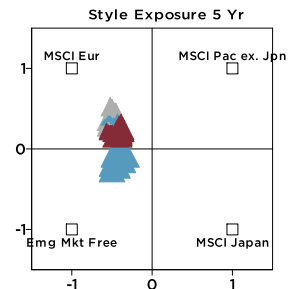
Ticker	RERGX
CUSIP	298706821
Net Assets \$MM	\$156,745.00
Manager Names	Team Managed
Manager Tenure	27.3 Years
Prospectus Exp Ratio	0.49%
Cat Median Exp Ratio	1.15%
Current 12b-1	N/A
Annld Ret Since Incept	8.87%
Inception Date	05/01/2009
Phone Number	800-421-4225
Sub Advisor	N/A

HOLDINGS OVERVIEW

Total Number of Holdings	426
% Assets in Top 10 Holdings	19.52%
Avg Mkt Cap \$MM	\$37,460.49
Turnover Ratio	29.00%

TOP HOLDINGS

AIA Group Ltd	2.67%
HDFC Bank Ltd	2.44%
Reliance Industries Ltd	2.27%
Airbus SE	2.10%
Samsung Electronics Co L	1.93%

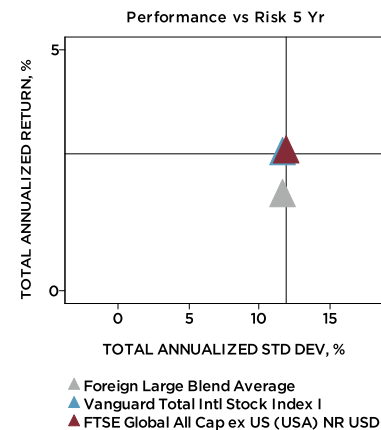
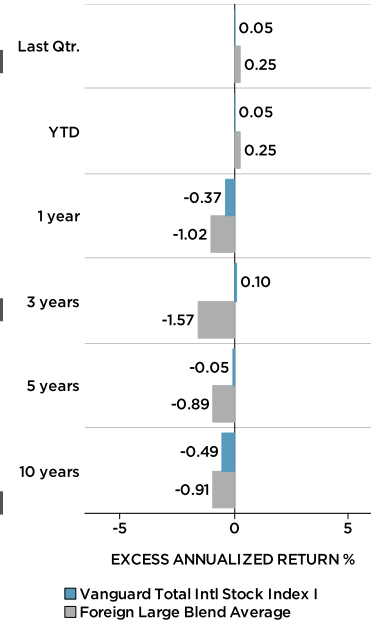
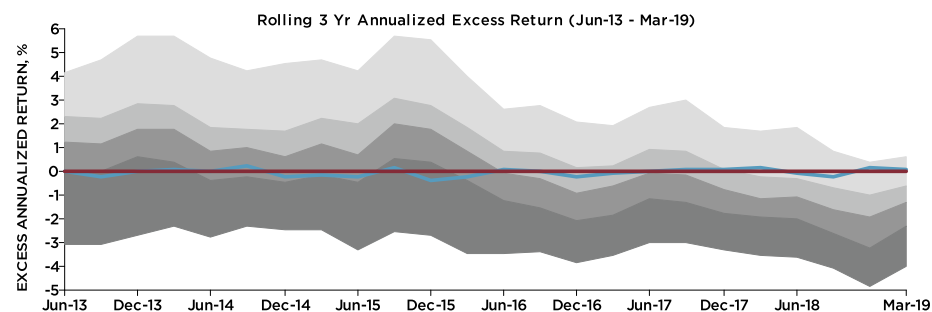


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VANGUARD TOTAL INTL STOCK INDEX I

Period Ending 3.31.19 | Q1 19

	Vanguard Total Intl Stock Index I	Peer Group Rank	FTSE Global All Cap ex US (USA) NR USD	Foreign Large Blend	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	11.66	60%	11.92	11.66	614
Sharpe Ratio	0.18	24%	0.18	0.11	614
Alpha	0.01	26%	0.00	-0.74	614
Beta	0.97	25%	1.00	0.93	614
R-Squared	98.29	1%	100.00	90.10	614
Up Mkt Capture	97.01	16%	100.00	89.73	614
Down Mkt Capture	97.26	64%	100.00	94.88	614
Information Ratio	-0.03	23%	NA	-0.24	614
TRAILING RETURNS					
Last Qtr.	10.26	48%	10.21	10.46	738
YTD	10.26	48%	10.21	10.46	738
1 Year	-5.18	44%	-4.81	-5.83	723
3 Years	8.08	13%	7.99	6.42	684
5 Years	2.79	22%	2.84	1.95	614
10 Years	8.93	33%	9.42	8.51	522
CALENDAR RETURNS					
2018	-14.39	38%	-14.62	-15.45	716
2017	27.55	25%	27.41	25.36	765
2016	4.70	12%	4.72	0.89	785
2015	-4.24	81%	-4.29	-1.45	763
2014	-4.15	30%	-3.39	-5.04	774



INVESTMENT PROFILE

Ticker	VTSNX
CUSIP	921909784
Net Assets \$MM	\$369,856.00
Manager Names	Team Managed
Manager Tenure	10.7 Years
Prospectus Exp Ratio	0.08%
Cat Median Exp Ratio	1.15%
Current 12b-1	N/A
Annld Ret Since Incept	4.50%
Inception Date	11/29/2010
Phone Number	800-662-7447
Sub Advisor	N/A

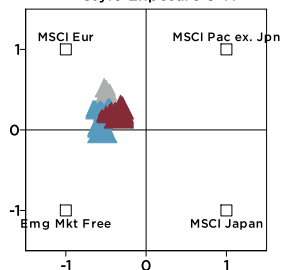
HOLDINGS OVERVIEW

Total Number of Holdings	6308
% Assets in Top 10 Holdings	8.19%
Avg Mkt Cap \$MM	\$22,599.89
Turnover Ratio	3.00%

TOP HOLDINGS

Nestle SA	1.14%
Tencent Holdings Ltd	1.02%
Alibaba Group Holding Ltd	0.92%
Novartis AG	0.83%
Roche Holding AG Dividen	0.81%

Style Exposure 5 Yr

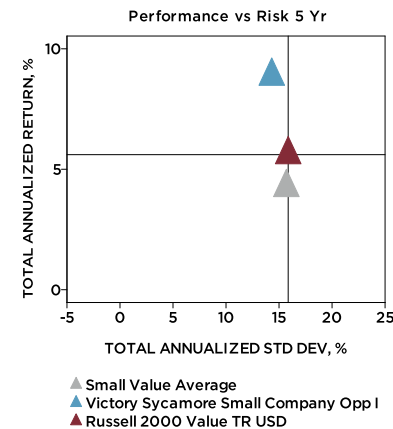
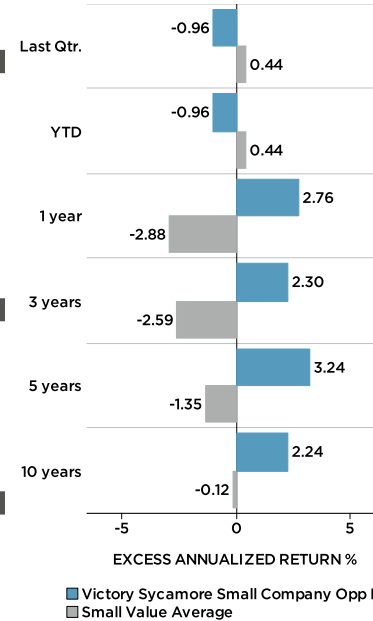
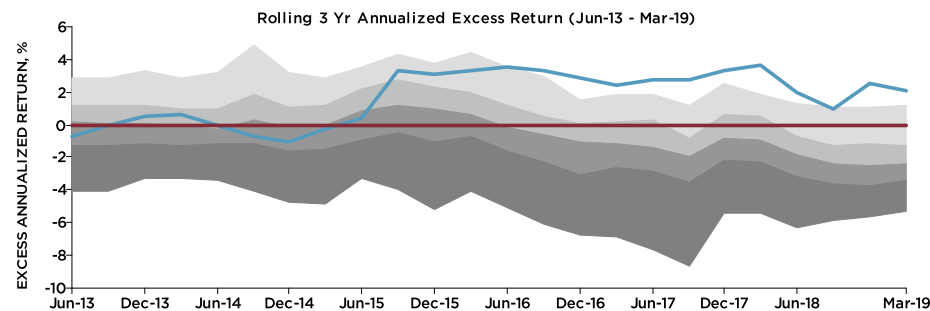


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VICTORY SYCAMORE SMALL COMPANY OPP I

Period Ending 3.31.19 | Q1 19

	Victory Sycamore Small Company Opp I	Peer Group Rank	Russell 2000 Value TR USD	Small Value	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	14.35	16%	15.81	15.62	381
Sharpe Ratio	0.56	1%	0.31	0.23	381
Alpha	3.79	1%	0.00	-1.08	381
Beta	0.89	82%	1.00	0.94	381
R-Squared	95.25	38%	100.00	91.72	381
Up Mkt Capture	99.31	13%	100.00	88.83	381
Down Mkt Capture	83.83	17%	100.00	94.26	381
Information Ratio	0.85	1%	NA	-0.27	381
TRAILING RETURNS					
Last Qtr.	10.97	84%	11.93	12.37	431
YTD	10.97	84%	11.93	12.37	431
1 Year	2.93	5%	0.17	-2.70	424
3 Years	13.16	2%	10.86	8.27	406
5 Years	8.84	1%	5.59	4.25	381
10 Years	16.36	8%	14.12	14.00	337
CALENDAR RETURNS					
2018	-8.26	4%	-12.86	-15.60	425
2017	11.88	26%	7.84	9.21	431
2016	30.04	17%	31.74	25.33	442
2015	-0.39	4%	-7.47	-6.82	450
2014	6.80	15%	4.22	3.57	448



INVESTMENT PROFILE

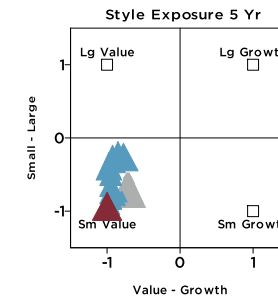
Ticker	VSOIX
CUSIP	92646A815
Net Assets \$MM	\$5,159.00
Manager Names	Team Managed
Manager Tenure	20.8 Years
Prospectus Exp Ratio	0.88%
Cat Median Exp Ratio	1.27%
Current 12b-1	0.00%
Annld Ret Since Incept	8.91%
Inception Date	08/31/2007
Phone Number	800-539-3863
Sub Advisor	N/A

HOLDINGS OVERVIEW

Total Number of Holdings	102
% Assets in Top 10 Holdings	14.88%
Avg Mkt Cap \$MM	\$2,216.84
Turnover Ratio	43.00%

TOP HOLDINGS

Sanderson Farms Inc	1.81%
Performance Food Group	1.69%
The Hanover Insurance Gr	1.46%
Choice Hotels Internationa	1.46%
Maximus Inc	1.43%

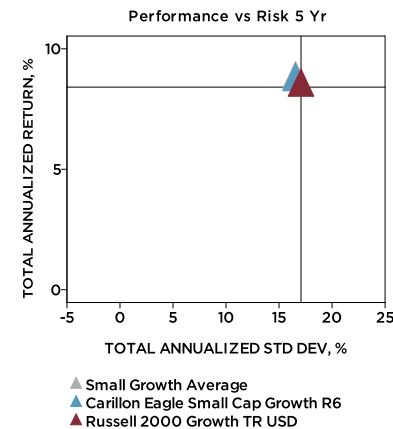
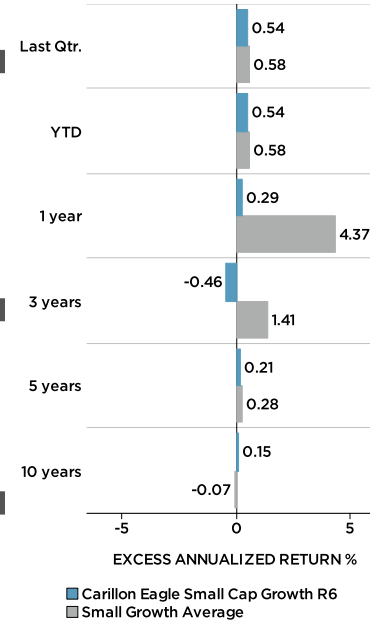
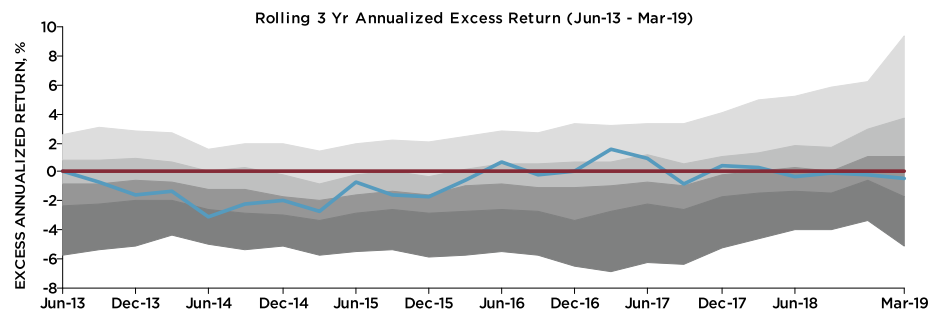


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CARILLON EAGLE SMALL CAP GROWTH R6

Period Ending 3.31.19 | Q1 19

	Carillon Eagle Small Cap Growth R6	Peer Group Rank	Russell 2000 Growth TR USD	Small Growth	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	16.62	54%	17.05	16.57	631
Sharpe Ratio	0.47	53%	0.45	0.48	631
Alpha	0.58	54%	0.00	0.85	631
Beta	0.95	43%	1.00	0.93	631
R-Squared	95.24	28%	100.00	91.32	631
Up Mkt Capture	96.14	36%	100.00	92.59	631
Down Mkt Capture	94.64	65%	100.00	90.01	631
Information Ratio	0.05	50%	NA	0.04	631
TRAILING RETURNS					
Last Qtr.	17.69	43%	17.14	17.72	679
YTD	17.69	43%	17.14	17.72	679
1 Year	4.15	73%	3.85	8.22	677
3 Years	14.41	66%	14.87	16.29	656
5 Years	8.62	51%	8.41	8.69	631
10 Years	16.68	44%	16.52	16.45	558
CALENDAR RETURNS					
2018	-10.06	78%	-9.31	-5.65	680
2017	23.40	44%	22.17	22.24	724
2016	10.45	52%	11.32	11.23	745
2015	-0.39	27%	-1.38	-2.39	764
2014	5.59	26%	5.60	2.67	776



INVESTMENT PROFILE

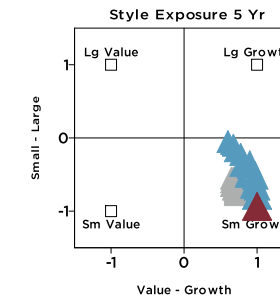
Ticker	HSRUX
CUSIP	14214L452
Net Assets \$MM	\$4,594.00
Manager Names	Team Managed
Manager Tenure	23.3 Years
Prospectus Exp Ratio	0.65%
Cat Median Exp Ratio	1.31%
Current 12b-1	0.00%
Annld Ret Since Incept	12.01%
Inception Date	08/15/2011
Phone Number	800-421-4184
Sub Advisor	Eagle Asset Management, Inc.

HOLDINGS OVERVIEW

Total Number of Holdings	109
% Assets in Top 10 Holdings	19.79%
Avg Mkt Cap \$MM	\$2,893.71
Turnover Ratio	35.00%

TOP HOLDINGS

Quaker Chemical Corp	3.01%
Planet Fitness Inc A	2.58%
Chart Industries Inc	1.96%
Cornerstone OnDemand I	1.88%
Green Dot Corp	1.88%

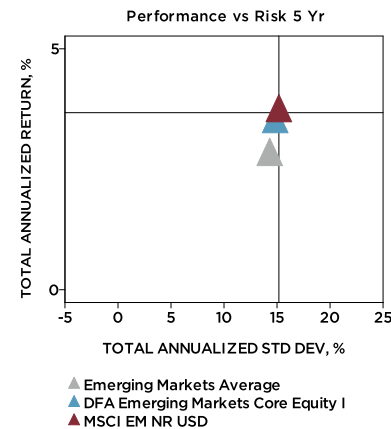
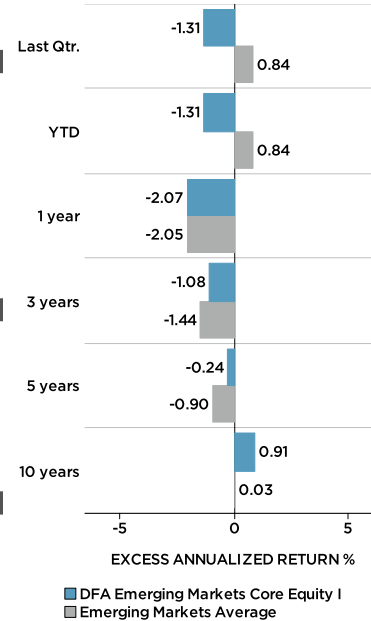
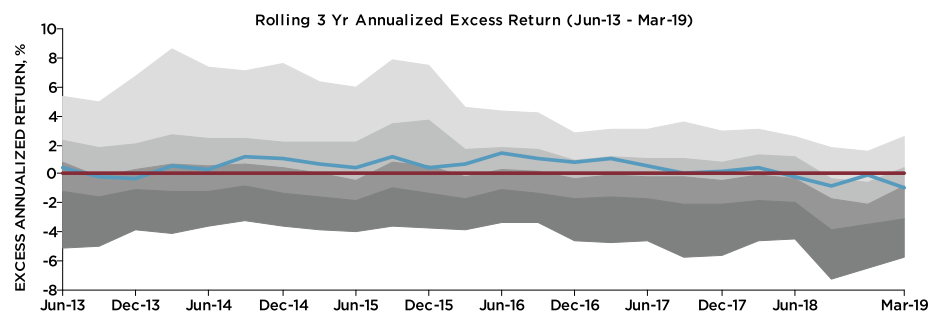


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DFA EMERGING MARKETS CORE EQUITY I

Period Ending 3.31.19 | Q1 19

	DFA Emerging Markets Core Equity I	Peer Group Rank	MSCI EM NR USD	Emerging Markets	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	14.78	59%	15.25	14.24	628
Sharpe Ratio	0.18	43%	0.19	0.14	628
Alpha	-0.11	46%	0.00	-0.53	628
Beta	0.96	32%	1.00	0.88	628
R-Squared	97.33	7%	100.00	87.75	628
Up Mkt Capture	97.21	29%	100.00	87.82	628
Down Mkt Capture	98.41	66%	100.00	91.87	628
Information Ratio	-0.09	48%	NA	-0.16	628
TRAILING RETURNS					
Last Qtr.	8.61	78%	9.92	10.75	820
YTD	8.61	78%	9.92	10.75	820
1 Year	-9.48	50%	-7.41	-9.46	786
3 Years	9.60	52%	10.68	9.24	733
5 Years	3.44	42%	3.68	2.78	628
10 Years	9.85	26%	8.94	8.97	342
CALENDAR RETURNS					
2018	-15.25	37%	-14.57	-16.58	796
2017	36.55	48%	37.28	35.28	820
2016	12.35	19%	11.19	8.22	861
2015	-14.86	59%	-14.92	-13.55	848
2014	-0.91	30%	-2.19	-2.74	794



INVESTMENT PROFILE

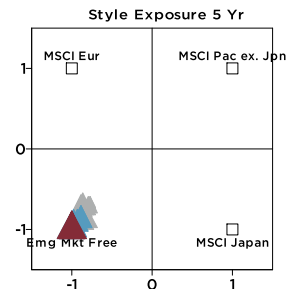
Ticker	DFCEX
CUSIP	233203421
Net Assets \$MM	\$28,467.00
Manager Names	Team Managed
Manager Tenure	9.1 Years
Prospectus Exp Ratio	0.52%
Cat Median Exp Ratio	1.39%
Current 12b-1	N/A
Annld Ret Since Incept	7.50%
Inception Date	04/05/2005
Phone Number	888-576-1167
Sub Advisor	DFA Australia Limited/ Dimensional Fund Advisors Ltd

HOLDINGS OVERVIEW

Total Number of Holdings	5068
% Assets in Top 10 Holdings	12.59%
Avg Mkt Cap \$MM	\$8,511.72
Turnover Ratio	4.00%

TOP HOLDINGS

Samsung Electronics Co Ltd	3.73%
Tencent Holdings Ltd	1.65%
Taiwan Semiconductor Mar	1.50%
Taiwan Semiconductor Mar	1.13%
Alibaba Group Holding Ltd	0.99%

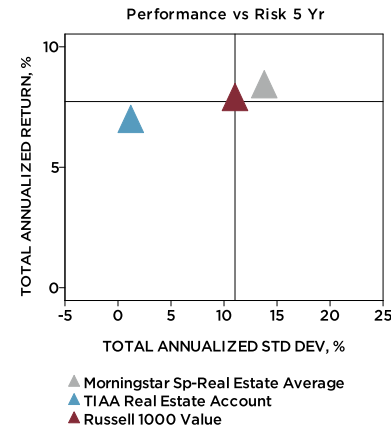
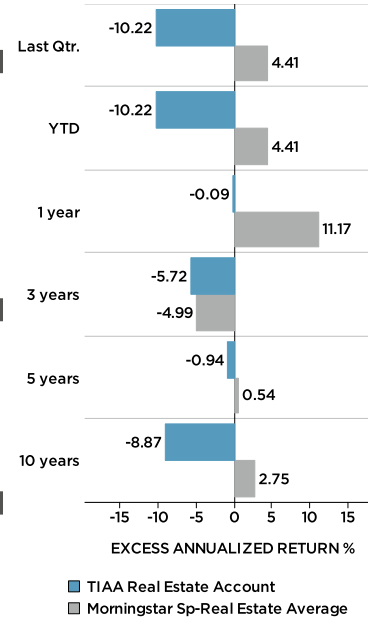
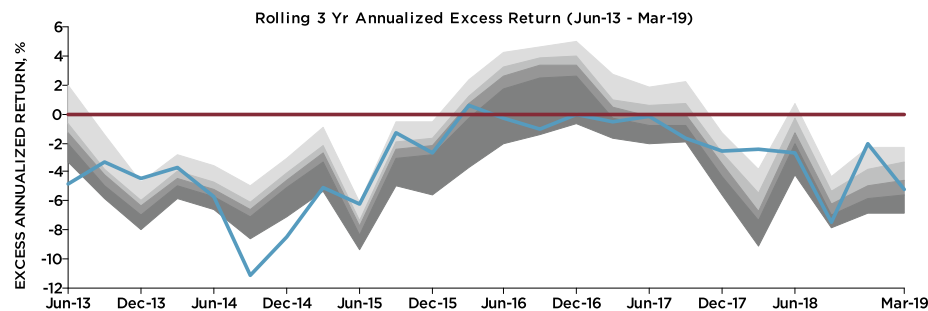


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TIAA REAL ESTATE ACCOUNT

Period Ending 3.31.19 | Q1 19

KEY MEASURES / 5 YEAR	TIAA Real Estate Account	Peer Group Rank	Russell 1000 Value	Morningstar Sp-Real Estate	# of Funds
Standard Deviation	1.24	1%	11.08	13.86	226
Sharpe Ratio	4.88	1%	0.63	0.56	226
Alpha	5.78	1%	0.00	2.63	226
Beta	0.04	100%	1.00	0.70	226
R-Squared	9.66	100%	100.00	31.86	226
Up Mkt Capture	24.82	100%	100.00	79.99	226
Down Mkt Capture	-16.62	1%	100.00	65.18	226
Information Ratio	-0.08	88%	NA	0.04	226
TRAILING RETURNS					
Last Qtr.	1.71	100%	11.93	16.34	244
YTD	1.71	100%	11.93	16.34	244
1 Year	5.58	99%	5.67	16.85	240
3 Years	4.73	64%	10.45	5.46	231
5 Years	6.78	87%	7.72	8.26	226
10 Years	5.65	100%	14.52	17.27	190
CALENDAR RETURNS					
2018	4.79	1%	-8.27	-6.41	240
2017	4.37	63%	13.66	5.72	258
2016	5.20	73%	17.34	6.65	278
2015	8.16	1%	-3.83	2.48	282
2014	12.22	99%	13.45	28.41	281



INVESTMENT PROFILE

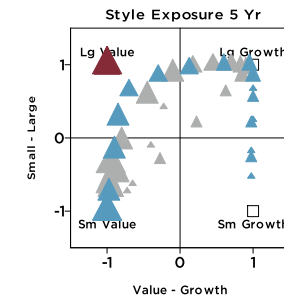
ID VAUSA059TL
 Cusip 878094200
 Net Assets \$ \$26,313,793,835.43
 Manager Name Team Managed
 Manager Start Date 2016-05-01
 Expense Ratio 0.76%
 Cat Median Exp Ratio 1.25%
 Annlzd Ret Since Incept 6.30%
 UF Inception Date 10-02-1995
 Share Class Incept Date 10/02/1995
 Phone Number 877-518-9161
 Sub Advisor

HOLDINGS OVERVIEW

% Assets in Top 10 Holdings 20.00%
 Avg Mkt Cap \$MM \$12,829.49
 Turnover Ratio 11.80%

TOP HOLDINGS

Fashion Show 2.88%
 1001 Pennsylvania Avenue 2.75%
 The Florida Mall 2.70%
 Ddr Joint Venture 2.30%
 Fourth And Madison 2.04%



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YOUR CAPTRUST SERVICE TEAM MEMBERS

Period Ending 3.31.19 | Q1 19

University of Maine System Retirement Plan for Faculty and Professionals 403(b) DC - 102965

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.

7

GLOSSARY

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 3.31.19 | Q1 19

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 50 th 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.	