



Board of Trustees  
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Orono, ME 04469

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[www.maine.edu](http://www.maine.edu)

June 4, 2018

TO: Members of the Investment Committee

FR: Ellen N. Doughty, Clerk of the Board

The University of Maine

RE: **June 14, 2018 Investment Committee Meeting**

University of Maine  
at Augusta

The Investment Committee will meet from **9:00 am to 11:00 am on June 14, 2018**. The following Polycom sites and conference call connection will be available:

University of Maine  
at Farmington

**Polycom:**

University of Maine  
at Fort Kent

UMS – 253 Estabrooke Hall, 15 Estabrooke Drive, Orono

UMA – 125 Robinson Hall

USM – 211/211A Wishcamper

University of Maine  
at Machias

UMFK – Alumni Conference Room

PHONE: 1-800-605-5167 code – 743544#

University of Maine  
at Presque Isle

University of  
Southern Maine

The meeting materials have been posted to the Diligent Board Portal under 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.

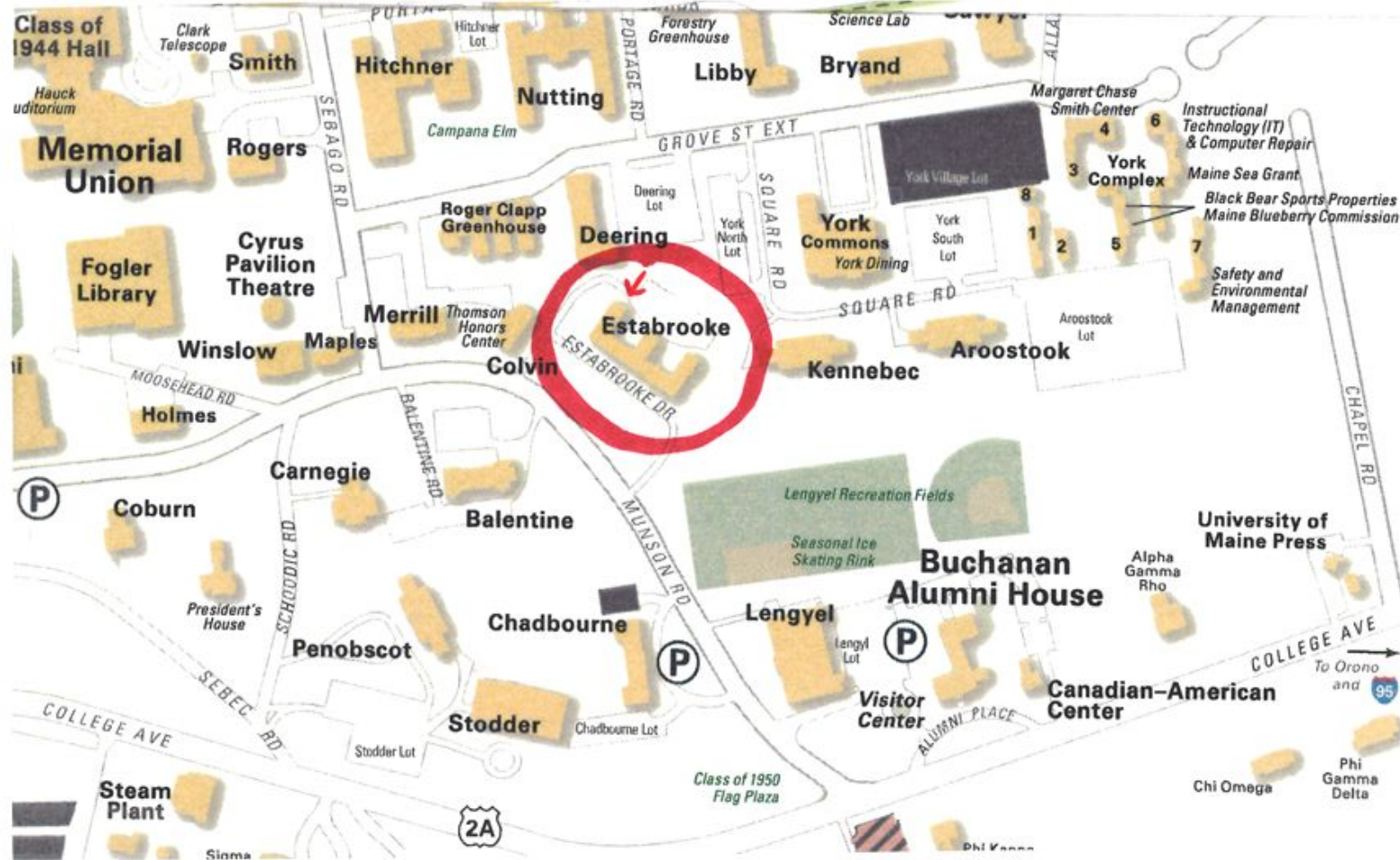
If you have any questions or desire additional information about the agenda items, please call Tracy Elliott at 581-5492.

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

# University of Maine System

15 Estabrooke Drive, Orono

**Rudman Conference Room**  
253 Estabrooke Hall, 2<sup>nd</sup> Floor  
15 Estabrooke Drive, Orono



## Directions to the UMS located on the UMaine Campus

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

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

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

Board of Trustees

**Investment Committee**

June 14, 2018

9:00 am to 11:00 am

Rudman Conference Room, 253 Estabrooke Hall, Orono

**AGENDA**

9:00 am – 9:30 am

Performance Reviews:

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

9:30 am – 9:45 am

- [TAB 5](#)        [Investment Policy Statements Updates](#)
  - Managed Investment Pool
  - Defined Benefit Pension Fund

9:45 am – 10:45 am

- [TAB 6](#)        [Bank Loan Recommendation](#)

10:45 am – 11:00 am

- 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.*




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## AGENDA ITEM SUMMARY

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

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

3. **BOARD INFORMATION:** X

**BOARD ACTION:**

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

**BOARD POLICY:**  
Section 709 - Investments

5. **BACKGROUND:**

Enclosed for your information is the executive summary performance report for all three portfolios for the quarter that ended March 31, 2018 along with April results.

Kelly Regan and Jay Roney of NEPC will provide a brief review at the June 14, 2018 Investment Committee meeting.

6/1/2018



# FIRST QUARTER 2018 INVESTMENT PERFORMANCE SUMMARY



## UNIVERSITY OF MAINE SYSTEM

June 14, 2018

Jay E. Roney, Partner

Kelly Regan, Senior Consultant



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

# MARKET REVIEW

NEPC, LLC

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# PERFORMANCE SUMMARY

## AS OF MARCH 31, 2018

<b>Domestic Equity Benchmarks</b>		<b>Qtr.</b>	<b>1 Yr.</b>	<b>3 Yr.</b>	<b>5 Yr.</b>	<b>10 Yr.</b>
Large Core	S&P 500	-0.8%	14.0%	10.8%	13.3%	9.5%
Small Core	Russell 2000	-0.1%	11.8%	8.4%	11.5%	9.8%
Small Growth	Russell 2000 Growth	2.3%	18.6%	8.8%	12.9%	11.0%
Small Value	Russell 2000 Value	-2.6%	5.1%	7.9%	10.0%	8.6%
Large Core	Russell 1000	-0.7%	14.0%	10.4%	13.2%	9.6%
Large Growth	Russell 1000 Growth	1.4%	21.3%	12.9%	15.5%	11.3%
Large Value	Russell 1000 Value	-2.8%	6.9%	7.9%	10.8%	7.8%
Mid Core	S&P Mid Cap 400	-0.8%	11.0%	9.0%	12.0%	10.9%
REIT	NAREIT Composite	-6.5%	-0.8%	3.2%	6.4%	6.9%
<b>Int'l Equity Benchmarks</b>		<b>Qtr.</b>	<b>1 Yr.</b>	<b>3 Yr.</b>	<b>5 Yr.</b>	<b>10 Yr.</b>
International Developed	MSCI EAFE	-1.5%	14.8%	5.6%	6.5%	2.7%
Emerging Equity	MSCI EM	1.4%	24.9%	8.8%	5.0%	3.0%
Small Cap Int'l	S&P EPAC SmallCap	-0.2%	23.6%	12.0%	11.4%	6.3%
World ex-US	MSCI ACWI ex-US	-1.2%	16.5%	6.2%	5.9%	2.7%
<b>Domestic FI Benchmarks</b>		<b>Qtr.</b>	<b>1 Yr.</b>	<b>3 Yr.</b>	<b>5 Yr.</b>	<b>10 Yr.</b>
Core Bonds	Barclays Aggregate	-1.5%	1.2%	1.2%	1.8%	3.6%
Municipal Bond	Barclays Municipal	-1.1%	2.7%	2.3%	2.7%	4.4%
High Yield	Barclays US High Yield	-0.9%	3.8%	5.2%	5.0%	8.3%
Intermediate Gov/Credit	Barclays Intern. Gov/Credit	-1.0%	0.4%	0.9%	1.2%	2.9%
Long Gov/Credit	Barclays Long Gov/Credit	-3.6%	5.1%	2.1%	4.1%	6.8%
Long Credit	Barclays Long Credit	-3.8%	6.2%	3.3%	4.7%	7.5%
Long Treasuries	Barclays US 20+ Yr Treas	-3.4%	3.9%	0.3%	3.5%	5.9%
Cash	BofA ML US 3-Month T-Bill	0.4%	1.1%	0.5%	0.3%	0.3%
Inflation	Barclays US TIPS 1-10 Yr	-0.4%	0.4%	1.2%	-0.1%	2.2%
Global Inflation	Barclays Global ILB	1.6%	9.0%	3.4%	2.0%	2.8%
STRIPS	Barclays 20+ Yr STRIPS	-4.6%	6.6%	0.1%	5.3%	8.2%
<b>Global FI Benchmarks</b>		<b>Qtr.</b>	<b>1 Yr.</b>	<b>3 Yr.</b>	<b>5 Yr.</b>	<b>10 Yr.</b>
World Gov. Bonds	Citigroup WGBI	2.5%	8.5%	3.5%	1.2%	2.0%
Em. Mkt. Bonds (Local)	JPM GBI-EM Glob. Div.	4.4%	13.0%	5.4%	-0.7%	3.8%
<b>Diversified Benchmark</b>		<b>Qtr.</b>	<b>1 Yr.</b>	<b>3 Yr.</b>	<b>5 Yr.</b>	<b>10 Yr.</b>
Diversified	Diversified*	-1.1%	9.3%	6.3%	7.8%	6.5%
<b>Alternative Benchmarks</b>		<b>Qtr.</b>	<b>1 Yr.</b>	<b>3 Yr.</b>	<b>5 Yr.</b>	<b>10 Yr.</b>
Commodities	Bloomberg Commodity Index	-0.4%	3.7%	-3.2%	-8.3%	-7.7%
Real Estate	NCREIF Property Index**	1.8%	7.0%	9.4%	10.2%	6.1%

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













\*\*As of 12/31/2017



March 31, 2018

# 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
											
-2.3%	8.9	33 bps	-0.8%	-1.5%	1.4%	-1.5%	-0.9%	-1.8%	7.5%	1.7%	-6.5%

- After a strong year for equity markets in 2017, the first quarter of the year saw a spike in volatility – in part due to concerns over a potential trade war between the US and China
- After ending 2017 down over 10%, the US dollar continued to decline in Q1 relative to a basket of major currencies
  - As a result, emerging market equities fared well throughout the quarter and are still supported by strong earnings and GDP growth
- The US yield curve flattened as the Fed rate hike pushed short-term interest rates higher while long-term rates rose more modestly

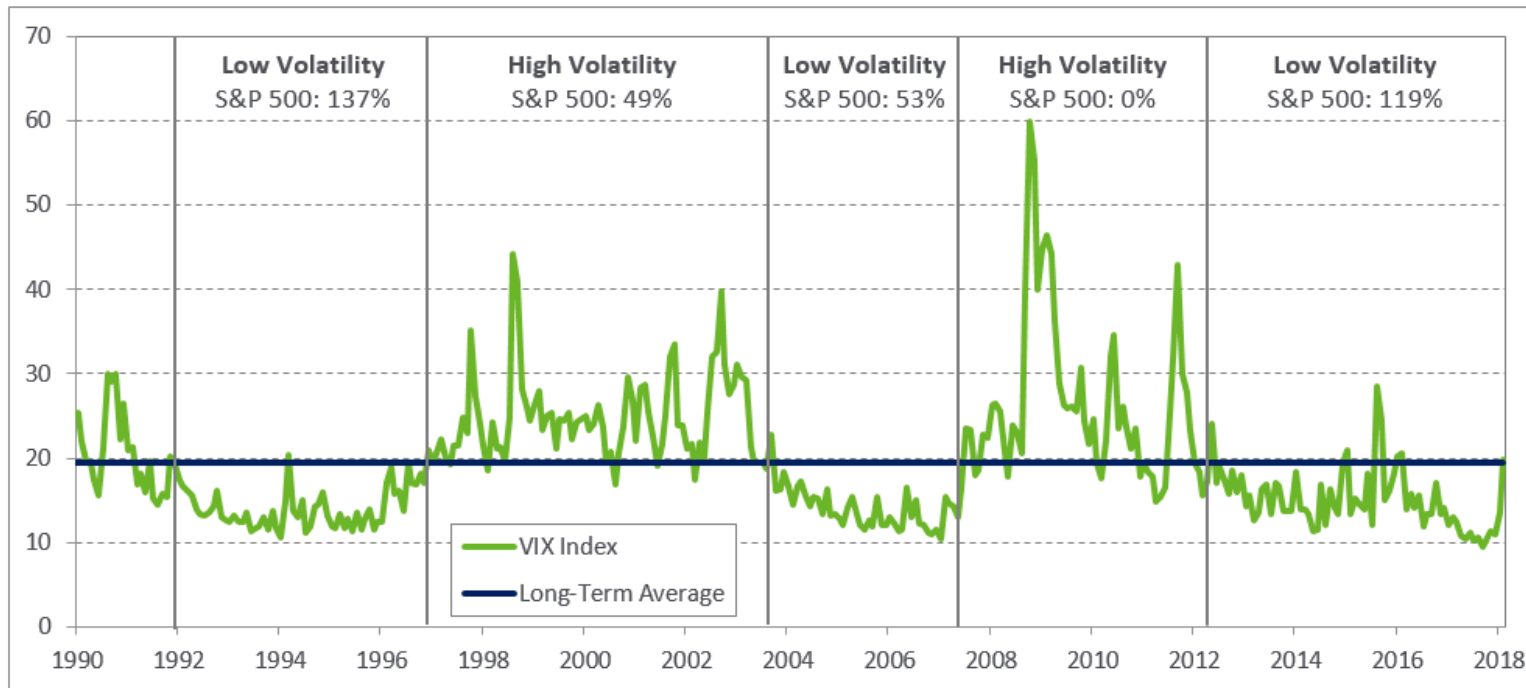
Market segment (index representation) as follows: US Dollar (DXY Index), VIX (CBOE Volatility Index), US 10-Year (US 10-Year Treasury Yield), S&P 500 (US Equity), MSCI EAFE Index (International Developed Equity), MSCI Emerging Markets (Emerging Markets Equity), US Agg (Barclays US Aggregate Bond Index),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



March 31, 2018

# THE RETURN OF VOLATILITY

- **2017 was one of the least-volatile markets in over half a century**
  - The S&P 500 experienced only four greater than 1% moves in 2017, while in 2018 it has already seen 15 of that magnitude through the beginning of April
- **Generally, a more volatile market environment was expected for 2018, but few expected the severity and consistency of swings we have already experienced this year in equity markets**



Source: CBOE, Bloomberg



March 31, 2018



# 2018 THEMES AND OPPORTUNITIES

## Key Market Themes

- Extended US Economic Cycle
- Synchronized Economic Resurgence
- Federal Reserve Gradualism
- China Transitions
- Globalization Backlash

## Current Opportunities

- Trim US Equity Gains
- Overweight Non-US Developed Market Equities
- Maintain a Market Overweight to Emerging Market Equities
- Allocate to TIPS
- Reduce Return Seeking Credit Exposure
- Fund Emerging Local Debt
- Fund MLP Exposure From Risk Assets
- Add Macro Hedge Funds
- Add Long Volatility Exposure



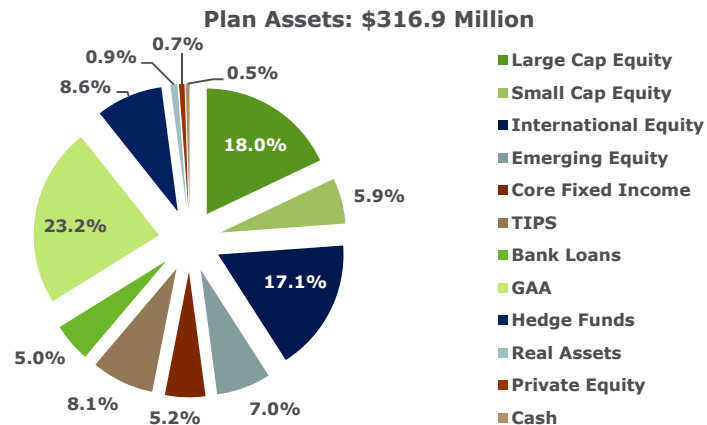
# MANAGED INVESTMENT POOL (MIP)

NEPC, LLC

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# EXECUTIVE SUMMARY

## ASSET ALLOCATION



## PLAN COMMENTS

### Asset Allocation

MIP assets were \$316.9 million as of March 31, 2018, a \$174 thousand decrease over the quarter. During the 1<sup>st</sup> quarter there was a \$300 thousand cash inflow from the Pool and investment losses of \$126 thousand. All asset classes are within policy ranges.

### Performance (Net of Fees)

The Plan returned -0.2% in the 1<sup>st</sup> quarter and 6.5% fiscal-year-to-date, ranking in the 60<sup>th</sup> and 70<sup>th</sup>, respectively.

Bank loan, equity long/short hedge fund, small cap growth equity, and international small cap equity managers were the top contributors to overall performance during the quarter. Emerging market equity, credit hedge fund and select global asset allocation managers detracted from overall performance during the quarter.

## MIP PERFORMANCE: NET OF FEES

	QTR (%)	FYTD (%)	3 YR (%)	5 YR (%)	10 YR (%)
COMPOSITE	-0.2	6.5	5.1	5.7	5.5
ALLOC. INDEX	-0.3	7.5	5.8	6.3	5.3
POLICY INDEX	-0.1	7.8	6.4	6.7	5.8
RANK (E&F \$100-500M)	60	70	78	88	68

## RECENT ACTIONS/RECOMMENDATIONS

### Recent Actions

At the last meeting, Committee approved the asset allocation mix titled "Alternative Mix".

Rebalancing was provided to cover disbursements.

### Recommendations

NEPC has provided information surrounding Bank Loans under separate cover.

NEPC has provided a revised Investment Policy Statement to reflect the new policy targets under separate cover.

### Investment Manager Updates

Aberdeen, Guggenheim and Lighthouse had announcements during the 1<sup>st</sup> quarter; Client Review is recommended for Guggenheim.



# TOTAL PLAN PERFORMANCE DETAIL - NET

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
<b>MIP Composite</b>	<b>316,899,080</b>	<b>100.0</b>	<b>100.0</b>	<b>-0.2</b>	<b>6.5</b>	<b>-0.2</b>	<b>9.7</b>	<b>9.7</b>	<b>5.1</b>	<b>5.7</b>	<b>5.9</b>	<b>5.5</b>
Allocation Index				-0.3	7.5	-0.3	10.7	10.2	5.8	6.3	6.1	5.3
Policy Index				-0.1	7.8	-0.1	11.5	10.9	6.4	6.7	6.3	5.8
<b>Total Domestic Large Cap</b>	<b>57,011,279</b>	<b>18.0</b>	<b>16.0</b>	<b>-0.8</b>	<b>10.5</b>	<b>-0.8</b>	<b>13.9</b>	<b>15.5</b>	<b>10.7</b>	<b>13.0</b>	<b>12.3</b>	<b>10.0</b>
S&P 500				-0.8	10.6	-0.8	14.0	15.6	10.8	13.3	12.7	9.5
SSgA S&P 500	57,011,279	18.0	16.0	-0.8	10.5	-0.8	13.9	15.5	10.7	13.2	12.6	9.5
S&P 500				-0.8	10.6	-0.8	14.0	15.6	10.8	13.3	12.7	9.5
<b>Total Domestic Small/Mid Cap</b>	<b>18,812,138</b>	<b>5.9</b>	<b>6.0</b>	<b>1.4</b>	<b>13.9</b>	<b>1.4</b>	<b>15.7</b>	<b>19.8</b>	<b>8.9</b>	<b>12.2</b>	<b>11.3</b>	<b>11.0</b>
Russell 2500				-0.2	10.0	-0.2	12.3	16.8	8.2	11.5	10.9	10.3
Westfield Capital	9,501,593	3.0	3.0	4.3	19.2	4.3	23.5	22.7	9.2	12.6	11.7	11.5
Russell 2500 Growth				2.4	15.2	2.4	19.9	19.8	9.1	13.4	11.8	11.2
DFA	9,310,545	2.9	3.0	-2.2	7.6	-2.2	6.9	15.2	7.3	10.6	10.0	—
Russell 2000 Value				-2.6	4.4	-2.6	5.1	16.6	7.9	10.0	9.4	8.6
<b>Total International Equity (including emerging markets)</b>	<b>76,200,112</b>	<b>24.0</b>	<b>23.0</b>	<b>-0.3</b>	<b>9.2</b>	<b>-0.3</b>	<b>16.0</b>	<b>12.9</b>	<b>6.1</b>	<b>5.2</b>	<b>5.0</b>	<b>3.1</b>
MSCI EAFE				-1.5	8.2	-1.5	14.8	13.2	5.6	6.5	5.3	2.7
Morgan Stanley	20,464,423	6.5	6.3	-1.6	5.6	-1.6	13.7	11.3	4.9	5.3	5.6	3.4
Globeflex	21,144,839	6.7	6.3	0.1	12.2	0.1	19.1	14.2	8.4	8.2	6.4	2.5
MSCI EAFE				-1.5	8.2	-1.5	14.8	13.2	5.6	6.5	5.3	2.7
Kabouter International Opportunities Offshore Fund II	12,558,913	4.0	3.5	1.1	—	1.1	—	—	—	—	—	—
MSCI EAFE Small Cap				0.2	14.2	0.2	23.5	17.1	12.3	11.1	8.7	6.5
<b>Emerging Markets Equity</b>	<b>22,031,937</b>	<b>7.0</b>	<b>7.0</b>	<b>-0.3</b>	<b>8.3</b>	<b>-0.3</b>	<b>13.6</b>	<b>12.2</b>	<b>4.1</b>	<b>1.1</b>	<b>2.5</b>	<b>—</b>
MSCI Emerging Markets				1.4	17.6	1.4	24.9	21.0	8.8	5.0	2.5	3.0
Aberdeen Emerging Mkts	10,924,262	3.4	3.5	0.1	9.5	0.1	16.3	16.1	6.9	2.6	3.6	—
MSCI Emerging Markets				1.4	17.6	1.4	24.9	21.0	8.8	5.0	2.5	3.0
Mondrian EM Small Cap	11,107,675	3.5	3.5	-0.6	6.9	-0.6	10.6	8.0	1.3	—	—	—
MSCI Emerging Markets Small Cap				0.2	15.6	0.2	18.6	16.5	7.2	4.6	2.5	4.4
<b>Total Fixed Income</b>	<b>57,774,596</b>	<b>18.2</b>	<b>18.0</b>	<b>-0.3</b>	<b>1.6</b>	<b>-0.3</b>	<b>2.8</b>	<b>3.5</b>	<b>2.4</b>	<b>2.8</b>	<b>4.5</b>	<b>4.6</b>
BBgBarc US Aggregate TR				-1.5	-0.2	-1.5	1.2	0.8	1.2	1.8	2.9	3.6
Commonfund	16,451,408	5.2	5.0	-0.7	0.9	-0.7	2.7	2.5	2.0	2.6	3.9	4.3
BBgBarc US Aggregate TR				-1.5	-0.2	-1.5	1.2	0.8	1.2	1.8	2.9	3.6
Vanguard Inflation-Protected Securities	25,576,053	8.1	8.0	-0.9	1.1	-0.9	0.6	1.0	—	—	—	—
BBgBarc US TIPS TR				-0.8	1.3	-0.8	0.9	1.2	1.3	0.0	2.5	2.9
Guggenheim US Bank Loans	15,747,135	5.0	5.0	1.1	3.2	1.1	—	—	—	—	—	—
Credit Suisse Leveraged Loans				1.6	3.9	1.6	4.6	7.2	4.3	4.2	4.5	5.4



March 31, 2018

# TOTAL PLAN PERFORMANCE DETAIL - NET

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
<b>Total GAA</b>	<b>73,532,087</b>	<b>23.2</b>	<b>23.0</b>	<b>-0.4</b>	<b>3.7</b>	<b>-0.4</b>	<b>6.8</b>	<b>6.9</b>	<b>3.0</b>	<b>3.3</b>	<b>3.4</b>	<b>—</b>
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				-0.1	8.1	-0.1	12.1	10.5	6.5	6.6	6.0	4.8
GMO Global Absolute Return	24,777,686	7.8	7.7	0.8	6.1	0.8	9.3	8.7	4.2	4.1	5.3	5.0
Blended Index				-1.0	1.3	-1.0	2.6	3.6	3.0	2.9	4.2	4.7
Wellington	24,757,459	7.8	7.7	-0.8	5.7	-0.8	10.3	11.4	5.9	6.2	3.9	—
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				-0.1	8.1	-0.1	12.1	10.5	6.5	6.6	6.0	4.8
Newton Global Real Return	23,996,942	7.6	7.7	-1.3	-0.7	-1.3	0.8	—	—	—	—	—
60% MSCI ACWI (Net) / 40% BBgBarc Global Agg				0.0	7.8	0.0	11.7	9.9	6.2	6.2	5.7	4.6
<b>Total Hedge Funds</b>	<b>27,101,448</b>	<b>8.6</b>	<b>9.0</b>	<b>0.6</b>	<b>4.7</b>	<b>0.6</b>	<b>4.9</b>	<b>6.1</b>	<b>1.7</b>	<b>2.4</b>	<b>1.5</b>	<b>2.0</b>
HFRI Fund of Funds Composite Index				0.3	4.7	0.3	5.6	5.9	1.9	3.4	2.6	1.6
EntrustPermal	8,470,926	2.7	3.0	-2.6	-0.4	-2.6	0.8	3.7	-0.5	1.7	2.2	3.6
HFRI Fund of Funds Composite Index				0.3	4.7	0.3	5.6	5.9	1.9	3.4	2.6	1.6
Lighthouse	18,630,523	5.9	6.0	2.1	7.1	2.1	6.5	7.3	—	—	—	—
Credit Suisse Long Shrt Eqt USD				1.0	7.4	1.0	10.7	7.3	4.0	6.3	4.9	4.5
<b>Total Real Assets</b>	<b>2,726,494</b>	<b>0.9</b>	<b>3.0</b>	<b>-0.2</b>	<b>1.9</b>	<b>-0.2</b>	<b>1.8</b>	<b>-1.6</b>	<b>0.2</b>	<b>2.8</b>	<b>3.9</b>	<b>—</b>
NCREIF Timberland Index				0.9	3.1	0.9	3.8	3.8	3.5	6.1	5.8	4.1
John Hancock Timber Fund	2,726,494	0.9	3.0	-0.2	1.9	-0.2	1.8	-1.6	0.2	2.8	4.0	-0.1
NCREIF Timberland Index				0.9	3.1	0.9	3.8	3.8	3.5	6.1	5.8	4.1
<b>Private Equity</b>	<b>2,115,274</b>	<b>0.7</b>	<b>2.0</b>	<b>0.0</b>	<b>9.6</b>	<b>0.0</b>	<b>14.3</b>	<b>13.1</b>	<b>10.5</b>	<b>—</b>	<b>—</b>	<b>—</b>
Landmark Equity Partners XV	2,115,274	0.7	2.0	0.0	9.6	0.0	14.3	13.1	10.5	—	—	—
Cambridge Associates US All PE (1 Qtr Lag)				5.3	13.2	5.3	17.6	15.4	12.0	13.6	13.3	9.8
<b>Total Cash</b>	<b>1,625,653</b>	<b>0.5</b>	<b>0.0</b>									
Distribution Account	1,625,653	0.5	0.0	0.3	0.7	0.3	0.8	0.4	0.3	0.2	0.2	0.4
91 Day T-Bills				0.4	0.9	0.4	1.2	0.8	0.5	0.3	0.3	0.3

## Notes:

Fiscal YTD begins 7/1

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

Returns are net of manager fees

John Hancock Timber market value as of 03/31/18

Landmark market value as of 03/31/18



March 31, 2018



# TOTAL PLAN PERFORMANCE DETAIL - NET

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
<b>MIP Composite</b>	<b>318,280,990</b>	<b>100.0</b>	<b>100.0</b>	<b>0.5</b>	<b>0.2</b>	<b>7.0</b>	<b>8.8</b>	<b>9.2</b>	<b>4.7</b>	<b>5.5</b>	<b>5.5</b>	<b>5.2</b>
Allocation Index				0.4	0.1	7.9	9.8	9.8	5.4	6.0	5.7	5.0
Policy Index				0.5	0.4	8.3	10.6	10.6	6.0	6.4	6.0	5.5
<b>Total Domestic Large Cap</b>	<b>57,232,088</b>	<b>18.0</b>	<b>16.0</b>	<b>0.4</b>	<b>-0.4</b>	<b>10.9</b>	<b>13.2</b>	<b>15.5</b>	<b>10.5</b>	<b>12.8</b>	<b>11.9</b>	<b>9.5</b>
S&P 500				0.4	-0.4	11.0	13.3	15.6	10.6	13.0	12.3	9.0
SSgA S&P 500	57,232,088	18.0	16.0	0.4	-0.4	10.9	13.2	15.5	10.5	12.9	12.2	9.0
S&P 500				0.4	-0.4	11.0	13.3	15.6	10.6	13.0	12.3	9.0
<b>Total Domestic Small/Mid Cap</b>	<b>20,324,095</b>	<b>6.4</b>	<b>6.0</b>	<b>0.9</b>	<b>2.3</b>	<b>15.0</b>	<b>15.9</b>	<b>18.9</b>	<b>9.8</b>	<b>12.5</b>	<b>10.9</b>	<b>10.4</b>
Russell 2500				0.2	0.0	10.2	11.7	16.1	8.9	11.5	10.5	9.7
Westfield Capital	9,581,088	3.0	3.0	0.9	5.3	20.3	22.2	21.6	10.2	12.7	11.2	10.5
Russell 2500 Growth				-0.6	1.7	14.4	17.1	18.9	9.6	13.1	11.2	10.5
DFA	10,743,007	3.4	3.0	1.0	-1.3	8.6	8.5	14.5	8.0	11.1	9.9	—
Russell 2000 Value				1.7	-1.0	6.2	6.5	16.4	9.3	10.4	9.4	8.5
<b>Total International Equity (including emerging markets)</b>	<b>77,054,165</b>	<b>24.2</b>	<b>23.0</b>	<b>1.1</b>	<b>0.8</b>	<b>10.4</b>	<b>14.1</b>	<b>12.6</b>	<b>5.1</b>	<b>4.7</b>	<b>4.3</b>	<b>2.6</b>
MSCI EAFE				2.3	0.7	10.7	14.5	12.9	4.9	5.9	4.8	2.4
Morgan Stanley	20,799,716	6.5	6.3	1.6	0.1	7.3	12.3	11.2	3.9	4.8	4.9	3.0
Globeflex	21,739,200	6.8	6.3	2.8	3.0	15.4	18.8	15.1	7.8	7.9	5.8	2.3
MSCI EAFE				2.3	0.7	10.7	14.5	12.9	4.9	5.9	4.8	2.4
Kabouter International Opportunities Offshore Fund II	12,638,310	4.0	3.5	0.6	1.7	—	—	—	—	—	—	—
MSCI EAFE Small Cap				1.4	1.6	15.8	20.0	16.5	11.1	10.6	8.2	6.4
<b>Emerging Markets Equity</b>	<b>21,876,939</b>	<b>6.9</b>	<b>7.0</b>	<b>-0.8</b>	<b>-1.0</b>	<b>7.5</b>	<b>10.2</b>	<b>10.5</b>	<b>2.8</b>	<b>0.7</b>	<b>1.9</b>	<b>—</b>
MSCI Emerging Markets				-0.4	1.0	17.0	21.7	20.4	6.0	4.7	2.0	2.2
Aberdeen Emerging Mkts	10,680,749	3.4	3.5	-2.2	-2.2	7.0	11.3	13.8	5.0	1.8	2.8	—
MSCI Emerging Markets				-0.4	1.0	17.0	21.7	20.4	6.0	4.7	2.0	2.2
Mondrian EM Small Cap	11,196,190	3.5	3.5	0.7	0.0	7.6	8.7	7.0	0.6	—	—	—
MSCI Emerging Markets Small Cap				-0.1	0.1	15.5	17.2	15.6	4.1	4.1	1.9	3.8
<b>Total Fixed Income</b>	<b>57,706,858</b>	<b>18.1</b>	<b>18.0</b>	<b>-0.1</b>	<b>-0.4</b>	<b>1.5</b>	<b>1.9</b>	<b>2.8</b>	<b>2.1</b>	<b>2.5</b>	<b>4.2</b>	<b>4.6</b>
BBgBarc US Aggregate TR				-0.7	-2.2	-1.0	-0.3	0.3	1.1	1.5	2.6	3.6
Commonfund	16,350,237	5.1	5.0	-0.6	-1.3	0.3	1.1	1.7	1.8	2.2	3.6	4.2
BBgBarc US Aggregate TR				-0.7	-2.2	-1.0	-0.3	0.3	1.1	1.5	2.6	3.6
Vanguard Inflation-Protected Securities	25,551,222	8.0	8.0	-0.1	-1.0	1.0	0.1	0.9	—	—	—	—
BBgBarc US TIPS TR				-0.1	-0.8	1.3	0.3	1.0	1.0	-0.1	2.1	3.1
Guggenheim US Bank Loans	15,805,399	5.0	5.0	0.4	1.5	3.6	—	—	—	—	—	—
Credit Suisse Leveraged Loans				0.5	2.1	4.4	4.7	6.4	4.2	4.1	4.5	5.1



April 30, 2018

# TOTAL PLAN PERFORMANCE DETAIL - NET

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
<b>Total GAA</b>	<b>73,692,722</b>	<b>23.2</b>	<b>23.0</b>	<b>0.2</b>	<b>-0.3</b>	<b>3.9</b>	<b>5.7</b>	<b>6.0</b>	<b>2.4</b>	<b>3.0</b>	<b>3.1</b>	<b>--</b>
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				0.1	-0.1	8.2	10.6	9.7	5.7	6.1	5.4	4.5
GMO Global Absolute Return	24,671,124	7.8	7.7	-0.5	0.2	5.6	7.7	8.0	3.5	3.6	4.9	4.9
Blended Index				-0.4	-1.4	1.0	1.3	2.9	2.7	2.6	3.9	4.6
Wellington	24,737,369	7.8	7.7	-0.2	-1.0	5.5	8.1	10.0	5.0	5.8	3.4	--
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				0.1	-0.1	8.2	10.6	9.7	5.7	6.1	5.4	4.5
Newton Global Real Return	24,284,229	7.6	7.7	1.2	-0.1	0.5	1.3	--	--	--	--	--
60% MSCI ACWI (Net) / 40% BBgBarc Global Agg				-0.1	-0.1	7.7	10.1	9.0	5.5	5.7	5.1	4.4
<b>Total Hedge Funds</b>	<b>27,268,982</b>	<b>8.6</b>	<b>9.0</b>	<b>0.6</b>	<b>1.2</b>	<b>5.3</b>	<b>5.3</b>	<b>6.0</b>	<b>2.0</b>	<b>2.4</b>	<b>1.4</b>	<b>1.9</b>
HFRI Fund of Funds Composite Index				0.2	0.5	4.9	5.2	5.7	1.8	3.3	2.4	1.5
EntrustPermal	8,422,658	2.6	3.0	-0.6	-3.2	-1.0	-0.6	2.7	-0.6	1.4	2.0	3.5
HFRI Fund of Funds Composite Index				0.2	0.5	4.9	5.2	5.7	1.8	3.3	2.4	1.5
Lighthouse	18,846,323	5.9	6.0	1.2	3.3	8.4	8.2	7.7	--	--	--	--
Credit Suisse Long Shrt Eqt USD				0.3	1.3	7.7	9.4	7.8	4.1	6.0	4.7	4.3
<b>Total Real Assets</b>	<b>2,726,494</b>	<b>0.9</b>	<b>3.0</b>	<b>0.0</b>	<b>-0.2</b>	<b>1.9</b>	<b>1.8</b>	<b>-1.6</b>	<b>0.2</b>	<b>2.8</b>	<b>3.9</b>	<b>--</b>
NCREIF Timberland Index				0.0	0.9	3.1	3.8	3.8	3.5	6.1	5.8	4.1
John Hancock Timber Fund	2,726,494	0.9	3.0	0.0	-0.2	1.9	1.8	-1.6	0.2	2.8	4.0	-0.1
NCREIF Timberland Index				0.0	0.9	3.1	3.8	3.8	3.5	6.1	5.8	4.1
<b>Private Equity</b>	<b>2,091,876</b>	<b>0.7</b>	<b>2.0</b>	<b>0.0</b>	<b>0.0</b>	<b>9.6</b>	<b>14.3</b>	<b>13.1</b>	<b>10.5</b>	<b>--</b>	<b>--</b>	<b>--</b>
Landmark Equity Partners XV	2,091,876	0.7	2.0	0.0	0.0	9.6	14.3	13.1	10.5	--	--	--
Cambridge Associates US All PE (1 Qtr Lag)				0.0	5.3	13.2	17.6	15.4	12.0	13.6	13.3	9.8
<b>Total Cash</b>	<b>183,709</b>	<b>0.1</b>	<b>0.0</b>									
Distribution Account	183,709	0.1	0.0	0.1	0.4	0.8	0.9	0.5	0.3	0.2	0.2	0.4
91 Day T-Bills				0.1	0.5	1.1	1.2	0.8	0.6	0.4	0.3	0.3

## Notes:

Fiscal YTD begins 7/1

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

Returns are net of manager fees

John Hancock Timber market value estimated as of 04/30/18

Landmark market value estimated as of 04/30/18

Cash account includes \$1,043 currently being held in the MetWest account and \$1,108 being held in the TCW account

Guggenheim is preliminary while we await final manager statement.



April 30, 2018

## 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 \$2.37 million
  - Since inception, the strategy has an IRR of 16.5%, net of fees (9/30/17)
- **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 1.5%, net of fees (3/31/18)



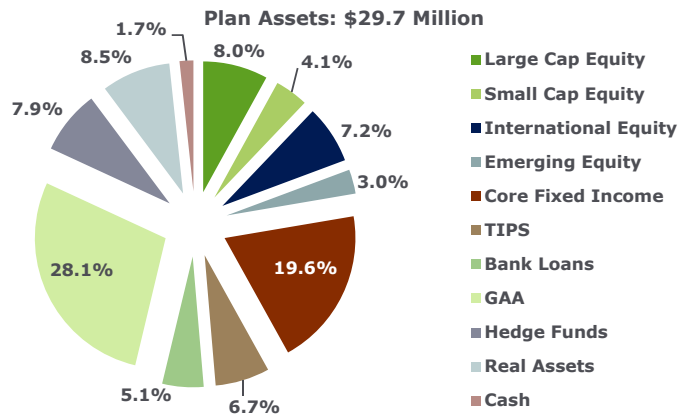
# PENSION FUND

NEPC, LLC

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# EXECUTIVE SUMMARY

## ASSET ALLOCATION



## PLAN COMMENTS

### Asset Allocation

The Plan's assets were \$29.7 million as of March 31, 2018, a \$1.2 million decrease during the first quarter. Investment losses were \$116 thousand and benefit payments amounted to \$1.1 million. All asset classes are within policy ranges.

### Performance (Net of Fees)

The Fund returned -0.6% in the 1<sup>st</sup> quarter and 3.6% fiscal-year-to-date, ranking in the 62<sup>nd</sup> and 82<sup>nd</sup> percentiles, respectively.

The Fund ranks below median over all time periods due to the Fund's conservative asset allocation and select manager underperformance.

Bank loan, equity long/short hedge fund and real estate managers were the top contributors to overall performance during the quarter. Emerging market equity, credit hedge fund and global asset allocation managers detracted from overall performance during the quarter.

## PLAN PERFORMANCE: NET OF FEES

	QTR (%)	FYTD (%)	3 YR (%)	5 YR (%)	10 YR (%)
COMPOSITE	-0.6	3.6	3.7	4.6	4.3
ALLOC. INDEX	-0.1	6.0	5.1	5.9	5.0
POLICY INDEX	-0.2	5.7	5.3	6.1	5.6
RANK (TRUST FUNDS)	62	82	84	83	86

## RECENT ACTIONS/RECOMMENDATIONS

### Recent Actions

At the last meeting, Committee approved the asset allocation mix titled "Alternative Mix".

Rebalancing was provided to cover benefit payments and expenses.

### Recommendations

NEPC has provided information surrounding Bank Loans under separate cover.

NEPC has provided a revised Investment Policy Statement to reflect the new policy targets under separate cover.

### Investment Manager Updates

Guggenheim and Lighthouse had announcements during the 1<sup>st</sup> quarter; Client Review is recommended for Guggenheim.





# TOTAL PLAN PERFORMANCE DETAIL - NET

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
<b>Pension Composite</b>	<b>29,739,883</b>	<b>100.0</b>	<b>100.0</b>	<b>-0.6</b>	<b>3.6</b>	<b>-0.6</b>	<b>6.1</b>	<b>6.5</b>	<b>3.7</b>	<b>4.6</b>	<b>4.9</b>	<b>4.3</b>
Allocation Index				-0.1	6.0	-0.1	8.7	7.8	5.1	5.9	5.9	5.0
Policy Index				-0.2	5.7	-0.2	8.5	7.9	5.3	6.1	6.2	5.6
<b>Total Domestic Large Cap</b>	<b>2,374,930</b>	<b>8.0</b>	<b>8.0</b>	<b>-0.8</b>	<b>10.6</b>	<b>-0.8</b>	<b>14.0</b>	<b>15.5</b>	<b>10.8</b>	<b>13.0</b>	<b>11.7</b>	<b>8.1</b>
S&P 500				-0.8	10.6	-0.8	14.0	15.6	10.8	13.3	12.7	9.5
Vanguard S&P 500 Index	2,374,930	8.0	8.0	-0.8	10.6	-0.8	14.0	15.5	10.8	--	--	--
S&P 500				-0.8	10.6	-0.8	14.0	15.6	10.8	13.3	12.7	9.5
<b>Total Small Cap Composite</b>	<b>1,213,388</b>	<b>4.1</b>	<b>4.0</b>	<b>-0.1</b>	<b>9.1</b>	<b>-0.1</b>	<b>11.8</b>	<b>18.8</b>	<b>8.4</b>	<b>11.2</b>	<b>10.1</b>	<b>--</b>
Russell 2000				-0.1	9.1	-0.1	11.8	18.8	8.4	11.5	10.4	9.8
SSgA R2000 Index Fund Non Lending	1,213,388	4.1	4.0	-0.1	9.1	-0.1	11.8	18.8	8.4	11.3	10.2	--
Russell 2000				-0.1	9.1	-0.1	11.8	18.8	8.4	11.5	10.4	9.8
<b>Total International Equity (including emerging markets)</b>	<b>3,029,220</b>	<b>10.2</b>	<b>10.0</b>	<b>-1.2</b>	<b>6.0</b>	<b>-1.2</b>	<b>12.6</b>	<b>10.3</b>	<b>3.9</b>	<b>3.6</b>	<b>4.3</b>	<b>2.5</b>
MSCI EAFE				-1.5	8.2	-1.5	14.8	13.2	5.6	6.5	5.3	2.7
Morgan Stanley Int'l	2,129,783	7.2	7.0	-1.5	5.6	-1.5	13.7	11.4	5.1	5.4	5.7	3.4
MSCI EAFE				-1.5	8.2	-1.5	14.8	13.2	5.6	6.5	5.3	2.7
<b>Emerging Markets Equity</b>	<b>899,437</b>	<b>3.0</b>	<b>3.0</b>	<b>-0.6</b>	<b>6.9</b>	<b>-0.6</b>	<b>10.6</b>	<b>8.0</b>	<b>1.3</b>	<b>-0.4</b>	<b>--</b>	<b>--</b>
MSCI Emerging Markets				1.4	17.6	1.4	24.9	21.0	8.8	5.0	2.5	3.0
Mondrian EM Small Cap	899,437	3.0	3.0	-0.6	6.9	-0.6	10.6	8.0	1.3	--	--	--
MSCI Emerging Markets Small Cap				0.2	15.6	0.2	18.6	16.5	7.2	4.6	2.5	4.4
<b>Total Fixed Income</b>	<b>9,373,615</b>	<b>31.5</b>	<b>32.0</b>	<b>-1.0</b>	<b>0.5</b>	<b>-1.0</b>	<b>1.8</b>	<b>1.9</b>	<b>1.7</b>	<b>1.9</b>	<b>3.4</b>	<b>4.7</b>
BBgBarc US Aggregate TR				-1.5	-0.2	-1.5	1.2	0.8	1.2	1.8	2.9	3.6
Vanguard Total Bond Market Index	5,841,045	19.6	20.0	-1.5	-0.4	-1.5	1.1	0.8	1.1	--	--	--
BBgBarc US Aggregate TR				-1.5	-0.2	-1.5	1.2	0.8	1.2	1.8	2.9	3.6
Vanguard Inflation-Protected Securities	2,003,056	6.7	7.0	-0.9	1.1	-0.9	--	--	--	--	--	--
BBgBarc US TIPS TR				-0.8	1.3	-0.8	0.9	1.2	1.3	0.0	2.5	2.9
Guggenheim US Bank Loans	1,529,514	5.1	5.0	1.1	3.2	1.1	--	--	--	--	--	--
Credit Suisse Leveraged Loans				1.6	3.9	1.6	4.6	7.2	4.3	4.2	4.5	5.4
<b>Total GAA</b>	<b>8,363,345</b>	<b>28.1</b>	<b>27.5</b>	<b>-1.0</b>	<b>2.6</b>	<b>-1.0</b>	<b>5.6</b>	<b>6.1</b>	<b>2.6</b>	<b>2.9</b>	<b>2.8</b>	<b>--</b>
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				-0.1	8.1	-0.1	12.1	10.5	6.5	6.6	6.0	4.8
Wellington	4,257,515	14.3	13.8	-0.7	5.7	-0.7	10.4	11.5	6.0	6.3	4.0	--
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				-0.1	8.1	-0.1	12.1	10.5	6.5	6.6	6.0	4.8
Newton Global Real Return	4,105,830	13.8	13.8	-1.3	-0.7	-1.3	0.9	--	--	--	--	--
60% MSCI ACWI (Net) / 40% CITI WGBI				0.5	8.3	0.5	12.3	9.8	6.4	6.1	5.5	4.4



March 31, 2018

# TOTAL PLAN PERFORMANCE DETAIL - NET

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
<b>Total Alternative Investments</b>	<b>2,352,178</b>	<b>7.9</b>	<b>7.5</b>	<b>0.6</b>	<b>4.7</b>	<b>0.6</b>	<b>5.0</b>	<b>6.2</b>	<b>1.9</b>	<b>2.9</b>	<b>1.8</b>	<b>--</b>
HFRI Fund of Funds Composite Index				0.3	4.7	0.3	5.6	5.9	1.9	3.4	2.6	1.6
EntrustPermal	755,926	2.5	2.5	-2.6	-0.4	-2.6	0.9	3.8	-0.4	1.8	2.2	3.6
HFRI Fund of Funds Composite Index				0.3	4.7	0.3	5.6	5.9	1.9	3.4	2.6	1.6
Lighthouse	1,596,252	5.4	5.0	2.1	7.1	2.1	6.5	7.3	--	--	--	--
Credit Suisse Long Shrt Eqt USD				1.0	7.4	1.0	10.7	7.3	4.0	6.3	4.9	4.5
<b>Total Real Assets</b>	<b>2,533,813</b>	<b>8.5</b>	<b>8.0</b>									
Principal	2,533,813	8.5	8.0	1.9	5.8	1.9	8.0	8.5	9.7	11.0	11.7	4.3
NCREIF ODCE				2.2	6.3	2.2	8.1	8.2	10.0	11.4	11.8	5.1
<b>Total Cash</b>	<b>499,395</b>	<b>1.7</b>	<b>3.0</b>									
Distribution Account	499,395	1.7	3.0	0.3	0.7	0.3	0.8	0.4	0.3	0.2	0.1	0.3
91 Day T-Bills				0.4	0.9	0.4	1.2	0.8	0.5	0.3	0.3	0.3

Notes:

Fiscal YTD begins 7/1

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

Returns are net of manager fees



March 31, 2018

# TOTAL PLAN PERFORMANCE DETAIL - NET

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
<b>Pension Composite</b>	<b>29,485,409</b>	<b>100.0</b>	<b>100.0</b>	<b>0.3</b>	<b>-0.2</b>	<b>3.9</b>	<b>5.4</b>	<b>6.0</b>	<b>3.4</b>	<b>4.4</b>	<b>4.5</b>	<b>4.1</b>
Allocation Index				0.1	0.0	6.1	7.7	7.4	4.9	5.6	5.6	4.7
Policy Index				0.0	-0.2	5.7	7.4	7.4	5.0	5.7	5.8	5.3
<b>Total Domestic Large Cap</b>	<b>2,384,010</b>	<b>8.1</b>	<b>8.0</b>	<b>0.4</b>	<b>-0.4</b>	<b>11.0</b>	<b>13.2</b>	<b>15.5</b>	<b>10.5</b>	<b>12.8</b>	<b>11.3</b>	<b>7.6</b>
S&P 500				0.4	-0.4	11.0	13.3	15.6	10.6	13.0	12.3	9.0
Vanguard S&P 500 Index	2,384,010	8.1	8.0	0.4	-0.4	11.0	13.2	15.5	10.5	—	—	—
S&P 500				0.4	-0.4	11.0	13.3	15.6	10.6	13.0	12.3	9.0
<b>Total Small Cap Composite</b>	<b>1,224,040</b>	<b>4.2</b>	<b>4.0</b>	<b>0.9</b>	<b>0.8</b>	<b>10.0</b>	<b>11.5</b>	<b>18.4</b>	<b>9.7</b>	<b>11.5</b>	<b>9.9</b>	<b>—</b>
Russell 2000				0.9	0.8	10.0	11.5	18.4	9.6	11.7	10.1	9.5
SSgA R2000 Index Fund Non Lending	1,224,040	4.2	4.0	0.9	0.8	10.0	11.5	18.4	9.7	11.6	9.9	—
Russell 2000				0.9	0.8	10.0	11.5	18.4	9.6	11.7	10.1	9.5
<b>Total International Equity (including emerging markets)</b>	<b>3,071,283</b>	<b>10.4</b>	<b>10.0</b>	<b>1.4</b>	<b>0.1</b>	<b>7.4</b>	<b>11.1</b>	<b>9.9</b>	<b>3.0</b>	<b>3.3</b>	<b>3.5</b>	<b>2.0</b>
MSCI EAFE				2.3	0.7	10.7	14.5	12.9	4.9	5.9	4.8	2.4
Morgan Stanley Int'l	2,164,678	7.3	7.0	1.6	0.1	7.4	12.3	11.2	4.0	5.0	5.0	3.0
MSCI EAFE				2.3	0.7	10.7	14.5	12.9	4.9	5.9	4.8	2.4
<b>Emerging Markets Equity</b>	<b>906,605</b>	<b>3.1</b>	<b>3.0</b>	<b>0.7</b>	<b>0.0</b>	<b>7.6</b>	<b>8.7</b>	<b>7.0</b>	<b>0.7</b>	<b>-0.5</b>	<b>—</b>	<b>—</b>
MSCI Emerging Markets				-0.4	1.0	17.0	21.7	20.4	6.0	4.7	2.0	2.2
Mondrian EM Small Cap	906,605	3.1	3.0	0.7	0.0	7.6	8.7	7.0	0.7	—	—	—
MSCI Emerging Markets Small Cap				-0.1	0.1	15.5	17.2	15.6	4.1	4.1	1.9	3.8
<b>Total Fixed Income</b>	<b>9,329,343</b>	<b>31.6</b>	<b>32.0</b>	<b>-0.5</b>	<b>-1.4</b>	<b>0.0</b>	<b>0.6</b>	<b>1.3</b>	<b>1.6</b>	<b>1.6</b>	<b>3.1</b>	<b>4.6</b>
BBgBarc US Aggregate TR				-0.7	-2.2	-1.0	-0.3	0.3	1.1	1.5	2.6	3.6
Vanguard Total Bond Market Index	5,793,059	19.6	20.0	-0.8	-2.3	-1.2	-0.5	0.2	1.0	—	—	—
BBgBarc US Aggregate TR				-0.7	-2.2	-1.0	-0.3	0.3	1.1	1.5	2.6	3.6
Vanguard Inflation-Protected Securities	2,001,111	6.8	7.0	-0.1	-1.0	1.0	0.1	—	—	—	—	—
BBgBarc US TIPS TR				-0.1	-0.8	1.3	0.3	1.0	1.0	-0.1	2.1	3.1
Guggenheim US Bank Loans	1,535,173	5.2	5.0	0.4	1.5	3.6	—	—	—	—	—	—
Credit Suisse Leveraged Loans				0.5	2.1	4.4	4.7	6.4	4.2	4.1	4.5	5.1



April 30, 2018

# TOTAL PLAN PERFORMANCE DETAIL - NET

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
<b>Total GAA</b>	<b>8,406,918</b>	<b>28.5</b>	<b>27.5</b>	<b>0.5</b>	<b>-0.5</b>	<b>3.1</b>	<b>4.8</b>	<b>5.0</b>	<b>1.9</b>	<b>2.6</b>	<b>2.5</b>	<b>-</b>
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				0.1	-0.1	8.2	10.6	9.7	5.7	6.1	5.4	4.5
Wellington	4,251,934	14.4	13.8	-0.2	-0.9	5.5	8.2	10.0	5.1	5.9	3.5	-
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				0.1	-0.1	8.2	10.6	9.7	5.7	6.1	5.4	4.5
Newton Global Real Return	4,154,984	14.1	13.8	1.2	-0.1	0.5	1.4	-	-	-	-	-
60% MSCI ACWI (Net) / 40% CITI WGBI				-0.2	0.3	8.1	10.5	8.9	5.6	5.6	4.9	4.2
<b>Total Alternative Investments</b>	<b>2,366,360</b>	<b>8.0</b>	<b>7.5</b>	<b>0.6</b>	<b>1.2</b>	<b>5.3</b>	<b>5.3</b>	<b>6.0</b>	<b>2.4</b>	<b>3.0</b>	<b>1.8</b>	<b>-</b>
HFRI Fund of Funds Composite Index				0.2	0.5	4.9	5.2	5.7	1.8	3.3	2.4	1.5
EntrustPermal	751,619	2.5	2.5	-0.6	-3.2	-1.0	-0.6	2.7	-0.6	1.4	2.0	3.5
HFRI Fund of Funds Composite Index				0.2	0.5	4.9	5.2	5.7	1.8	3.3	2.4	1.5
Lighthouse	1,614,741	5.5	5.0	1.2	3.3	8.4	8.2	7.7	-	-	-	-
Credit Suisse Long Shrt Eqt USD				0.3	1.3	7.7	9.4	7.8	4.1	6.0	4.7	4.3
<b>Total Real Assets</b>	<b>2,357,010</b>	<b>8.0</b>	<b>8.0</b>									
Principal	2,357,010	8.0	8.0	0.9	2.8	6.8	8.5	8.7	9.8	11.1	11.7	4.4
NCREIF ODGE				0.0	2.2	6.3	8.1	8.2	10.0	11.4	11.8	5.1
<b>Total Cash</b>	<b>346,445</b>	<b>1.2</b>	<b>3.0</b>									
Distribution Account	346,445	1.2	3.0	0.1	0.4	0.8	0.9	0.5	0.3	0.2	0.2	0.3
91 Day T-Bills				0.1	0.5	1.1	1.2	0.8	0.6	0.4	0.3	0.3

Notes:

Fiscal YTD begins 7/1

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

Returns are net of manager fees

Guggenheim market value is preliminary



April 30, 2018

# OPERATING FUND

NEPC, LLC

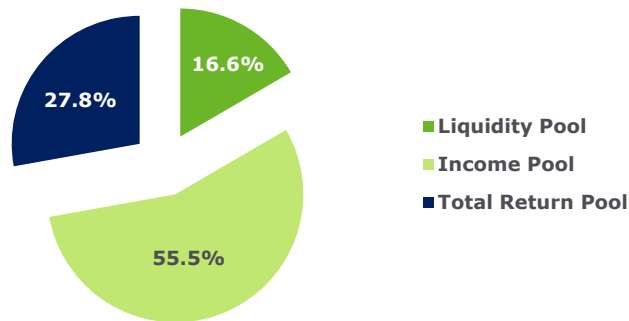
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# EXECUTIVE SUMMARY

## ASSET ALLOCATION

Plan Assets: \$296.0 Million



## PLAN COMMENTS

### Asset Allocation

The Fund's assets as of March 31, 2018 were \$296.0 million. This represents a \$24.7 million increase from the previous quarter.

The Liquidity Pool (16.6% v 25.0%), Income Pool (55.5% v 50.0%) and Total Return Pool (27.8% v 25.0%) are all within allowable ranges. Throughout the year, asset allocation will change based on cash inflows and outflows. NEPC reviews this on a monthly basis.

### Performance (Net of Fees)

The Fund returned 0.0% during the 1<sup>st</sup> quarter and 2.1% fiscal-year-to-date.

## FUND PERFORMANCE: NET OF FEES

	QTR (%)	FYTD (%)	3 YR (%)	5 YR (%)	10 YR (%)
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COMPOSITE	0.0	2.1	2.0	1.9	2.5
ALLOCATION INDEX	0.1	2.4	2.3	2.3	--

## RECENT ACTIONS/RECOMMENDATIONS

### Recent Actions

The System implemented a portfolio rebalance during May to bring asset allocation in-line with policy targets.

The System transferred from BlackRock Strategic Income Opportunities Portfolio Institutional Class (BSIIX) to Class K (BSIKX) in May, resulting in a lower expense ratio.

### Recommendations

There are no recommendations at this time.

NEPC conducted an annual review of the Investment Policy Statement and no updates are recommended.

### Investment Manager Updates

PIMCO and Lighthouse had announcements during the 1<sup>st</sup> quarter; NEPC recommends a "Watch" status for both firms.



March 31, 2018

# TOTAL PLAN PERFORMANCE DETAIL - NET

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
<b>Operating Funds Composite</b>	<b>296,011,327</b>	<b>100.0</b>	<b>100.0</b>	<b>0.0</b>	<b>2.1</b>	<b>2.9</b>	<b>3.5</b>	<b>2.0</b>	<b>1.9</b>	<b>2.3</b>	<b>2.5</b>
<i>Allocation Index</i>				0.1	2.4	3.4	3.4	2.3	2.3	2.4	—
<b>Liquidity Pool Composite</b>	<b>49,239,485</b>	<b>16.6</b>	<b>25.0</b>	<b>0.3</b>	<b>0.8</b>	<b>1.0</b>	<b>0.7</b>	<b>0.6</b>	<b>0.4</b>	<b>0.4</b>	<b>0.5</b>
State Pool	33,152,670	11.2		0.3	0.9	1.1	0.9	0.7	0.5	0.4	0.6
BOA General Fund	2,606,813	0.9		0.0	0.0	0.1	0.0	0.0	0.0	—	—
Federated Gov't Obligations	751,878	0.3		0.3	0.8	0.9	—	—	—	—	—
JP Morgan US Gov't Money Market Fund	12,728,124	4.3		0.3	0.7	0.9	—	—	—	—	—
<i>Citi 3mth Treasury Bill</i>				0.3	0.9	1.1	0.7	0.5	0.3	0.2	0.3
<b>Income Pool Composite</b>	<b>164,413,020</b>	<b>55.5</b>	<b>50.0</b>	<b>-0.2</b>	<b>0.7</b>	<b>1.2</b>	<b>2.1</b>	<b>1.6</b>	<b>1.6</b>	<b>2.1</b>	<b>3.4</b>
Income Research + Management	86,981,573	29.4	26.7	-0.3	-0.2	0.2	0.5	0.7	0.8	—	—
<i>BBgBarc US Govt/Credit 1-3 Yr. TR</i>				-0.2	-0.1	0.2	0.5	0.7	0.8	1.0	1.6
BlackRock Strategic Income Opportunities	22,007,473	7.4	6.7	0.4	2.8	3.8	4.7	—	—	—	—
<i>3-Month Libor Total Return USD</i>				0.5	1.2	1.5	1.2	0.9	0.7	0.6	0.7
Loomis Sayles Bank Loans	22,110,546	7.5	6.7	1.0	2.8	3.5	5.1	3.5	3.2	3.8	4.5
<i>Loomis Bank Loans Custom Index</i>				1.2	3.3	4.0	5.0	3.9	4.0	4.4	5.7
Vanguard Total Bond Market Inst'l Fund	16,752,887	5.7	5.0	-1.5	-0.3	1.2	0.8	1.1	1.8	2.9	—
<i>BBgBarc US Aggregate TR</i>				-1.5	-0.2	1.2	0.8	1.2	1.8	2.9	3.6
Vanguard Inflation-Protected Securities	16,560,541	5.6	5.0	-0.9	1.1	0.6	—	—	—	—	—
<i>BBgBarc US TIPS TR</i>				-0.8	1.3	0.9	1.2	1.3	0.0	2.5	2.9
<b>Total Return Pool Composite</b>	<b>82,358,822</b>	<b>27.8</b>	<b>25.0</b>	<b>0.0</b>	<b>6.0</b>	<b>8.2</b>	<b>9.3</b>	<b>4.8</b>	<b>4.5</b>	<b>4.8</b>	<b>4.9</b>
Lighthouse	14,401,780	4.9	5.0	2.1	7.1	6.5	7.3	—	—	—	—
<i>Credit Suisse Long Shrt Eqt USD</i>				1.0	7.4	10.7	7.3	4.0	6.3	4.9	4.5
Newton Global Real Return	21,788,142	7.4	6.3	-1.3	-0.7	0.9	—	—	—	—	—
<i>60% MSCI ACWI (Net)/ 40% BBgBarc Global Agg</i>				0.0	7.8	11.7	9.9	6.2	6.2	5.7	4.6
PIMCO All Asset	21,604,678	7.3	6.3	0.3	6.8	8.8	11.0	5.7	3.6	4.7	5.3
<i>Blended Index</i>				-1.0	1.3	2.6	3.6	3.0	2.9	4.2	4.7
Vanguard Total World Stock Index	24,564,222	8.3	7.5	-0.5	10.6	15.4	15.7	8.6	9.7	—	—
<i>FTSE Global All Cap Index</i>				-0.9	10.5	15.2	15.5	8.6	9.7	8.0	5.3

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, 2018

# TOTAL PLAN PERFORMANCE DETAIL - NET

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
<b>Operating Funds Composite</b>	<b>286,347,307</b>	<b>100.0</b>	<b>100.0</b>	<b>0.2</b>	<b>0.2</b>	<b>2.2</b>	<b>2.7</b>	<b>3.3</b>	<b>1.9</b>	<b>1.8</b>	<b>2.2</b>	<b>2.4</b>
<i>Allocation Index</i>				0.1	0.2	2.4	2.9	3.2	2.2	2.1	2.4	—
<b>Liquidity Pool Composite</b>	<b>39,174,022</b>	<b>13.7</b>	<b>25.0</b>	<b>0.1</b>	<b>0.4</b>	<b>0.9</b>	<b>1.0</b>	<b>0.8</b>	<b>0.6</b>	<b>0.4</b>	<b>0.4</b>	<b>0.5</b>
State Pool	20,180,294	7.0		0.1	0.4	1.0	1.2	0.9	0.7	0.5	0.5	0.6
BOA General Fund	292,197	0.1		0.1	0.2	0.2	0.2	0.1	0.1	—	—	—
Federated Gov't Obligations	1,154,095	0.4		0.1	0.4	0.9	1.0	—	—	—	—	—
JP Morgan US Gov't Money Market Fund	17,547,436	6.1		0.1	0.4	0.9	1.0	—	—	—	—	—
<i>Citi 3mth Treasury Bill</i>				0.1	0.5	1.0	1.2	0.8	0.5	0.3	0.3	0.3
<b>Income Pool Composite</b>	<b>164,234,228</b>	<b>57.4</b>	<b>50.0</b>	<b>-0.1</b>	<b>-0.3</b>	<b>0.6</b>	<b>0.8</b>	<b>1.7</b>	<b>1.5</b>	<b>1.5</b>	<b>2.0</b>	<b>3.1</b>
Income Research + Management	86,953,169	30.4	26.7	-0.1	-0.4	-0.2	-0.1	0.4	0.7	0.8	—	—
<i>BBgBarc US Govt/Credit 1-3 Yr. TR</i>				-0.1	-0.3	-0.2	-0.1	0.4	0.6	0.7	0.9	1.6
BlackRock Strategic Income Opportunities	21,936,151	7.7	6.7	-0.3	0.1	2.4	3.2	4.1	—	—	—	—
<i>3-Month Libor Total Return USD</i>				0.2	0.7	1.4	1.6	1.3	1.0	0.7	0.6	0.7
Loomis Sayles Bank Loans	22,185,188	7.7	6.7	0.4	1.5	3.2	3.6	4.5	3.3	3.2	3.8	4.2
<i>Loomis Bank Loans Custom Index</i>				0.4	1.6	3.7	4.1	4.6	3.8	3.9	4.3	5.3
Vanguard Total Bond Market Instl' Fund	16,615,257	5.8	5.0	-0.8	-2.3	-1.2	-0.5	0.2	1.0	1.4	2.6	—
<i>BBgBarc US Aggregate TR</i>				-0.7	-2.2	-1.0	-0.3	0.3	1.1	1.5	2.6	3.6
Vanguard Inflation-Protected Securities	16,544,463	5.8	5.0	-0.1	-1.0	1.0	0.0	—	—	—	—	—
<i>BBgBarc US TIPS TR</i>				-0.1	-0.8	1.3	0.3	1.0	1.0	-0.1	2.1	3.1
<b>Total Return Pool Composite</b>	<b>82,939,057</b>	<b>29.0</b>	<b>25.0</b>	<b>0.7</b>	<b>0.7</b>	<b>6.7</b>	<b>8.2</b>	<b>8.8</b>	<b>4.7</b>	<b>4.3</b>	<b>4.6</b>	<b>4.8</b>
Lighthouse	14,568,599	5.1	5.0	1.2	3.3	8.4	8.2	7.7	—	—	—	—
<i>Credit Suisse Long Shrt Eqt USD</i>				0.3	1.3	7.7	9.4	7.8	4.1	6.0	4.7	4.3
Newton Global Real Return	22,047,910	7.7	6.3	1.2	-0.1	0.5	1.4	—	—	—	—	—
<i>60% MSCI ACWI (Net)/ 40% BBgBarc Global Agg</i>				-0.1	-0.1	7.7	10.1	9.0	5.5	5.7	5.1	4.4
PIMCO All Asset	21,622,503	7.6	6.3	0.1	0.4	6.9	8.4	9.4	4.8	3.1	4.3	5.2
<i>Blended Index</i>				-0.4	-1.4	1.0	1.3	2.9	2.7	2.6	3.9	4.6
Vanguard Total World Stock Index	24,700,045	8.6	7.5	0.6	0.0	11.2	14.2	15.2	7.9	9.2	—	—
<i>FTSE Global All Cap Index</i>				1.0	0.1	11.6	14.5	15.2	8.0	9.4	7.6	4.8

## Notes:

Returns are net of manager fees.

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

Fiscal YTD begins 7/1

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

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



April 30, 2018

# MANAGER DUE DILIGENCE MONITOR

NEPC, LLC

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# 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	MIP	Pension	Operating	Manager Changes/ Announcements (Recent Quarter)	NEPC Due Diligence Committee Recommendations
Aberdeen	X			Yes	Maintain Hold
Guggenheim	X	X		Yes	Client Review
Lighthouse	X	X	X	Yes	Watch
PIMCO			X	Yes	Watch

NEPC Due Diligence Committee Recommendation Key	
<b>No Action</b>	Informational items have surfaced; no action is recommended.
<b>Watch</b>	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.
<b>Hold</b>	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.
<b>Client Review</b>	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.
<b>Terminate</b>	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.



March 31, 2018

# APPENDIX

NEPC, LLC

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# GLOSSARY OF TERMS

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

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

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

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

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

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

*Formula:*  

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

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

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

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

*Formula:*  

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

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

*Formula:*  

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

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

*Formula:*  

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

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

*Formula:*  

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

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

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

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

Data Source: InvestorForce



March 31, 2018

# INFORMATION DISCLAIMER

## 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.



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March 31, 2018






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## AGENDA ITEM SUMMARY

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

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

3. **BOARD INFORMATION:** X

**BOARD ACTION:**

4. **OUTCOME:**

Primary Outcomes:

Enhance fiscal positioning

**BOARD POLICY:**

Section 709 - Investments

5. **BACKGROUND:**

Enclosed for your information is the Managed Investment Pool performance report for the quarter that ended March 31, 2018.

Kelly Regan and Jay Roney of NEPC will provide a brief review at the June 14, 2018 Investment Committee meeting.

6/1/2018

# FIRST QUARTER 2018 INVESTMENT REVIEW



## UNIVERSITY OF MAINE SYSTEM MANAGED INVESTMENT POOL

June 14, 2018

Jay E. Roney, Partner

Kelly Regan, Senior Consultant



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



# MARKET OUTLOOK

NEPC, LLC

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March 31, 2018

# PERFORMANCE SUMMARY AS OF MARCH 31, 2018

<b>Domestic Equity Benchmarks</b>		<b>Qtr.</b>	<b>1 Yr.</b>	<b>3 Yr.</b>	<b>5 Yr.</b>	<b>10 Yr.</b>
Large Core	S&P 500	-0.8%	14.0%	10.8%	13.3%	9.5%
Small Core	Russell 2000	-0.1%	11.8%	8.4%	11.5%	9.8%
Small Growth	Russell 2000 Growth	2.3%	18.6%	8.8%	12.9%	11.0%
Small Value	Russell 2000 Value	-2.6%	5.1%	7.9%	10.0%	8.6%
Large Core	Russell 1000	-0.7%	14.0%	10.4%	13.2%	9.6%
Large Growth	Russell 1000 Growth	1.4%	21.3%	12.9%	15.5%	11.3%
Large Value	Russell 1000 Value	-2.8%	6.9%	7.9%	10.8%	7.8%
Mid Core	S&P Mid Cap 400	-0.8%	11.0%	9.0%	12.0%	10.9%
REIT	NAREIT Composite	-6.5%	-0.8%	3.2%	6.4%	6.9%
<b>Int'l Equity Benchmarks</b>		<b>Qtr.</b>	<b>1 Yr.</b>	<b>3 Yr.</b>	<b>5 Yr.</b>	<b>10 Yr.</b>
International Developed	MSCI EAFE	-1.5%	14.8%	5.6%	6.5%	2.7%
Emerging Equity	MSCI EM	1.4%	24.9%	8.8%	5.0%	3.0%
Small Cap Int'l	S&P EPAC SmallCap	-0.2%	23.6%	12.0%	11.4%	6.3%
World ex-US	MSCI ACWI ex-US	-1.2%	16.5%	6.2%	5.9%	2.7%
<b>Domestic FI Benchmarks</b>		<b>Qtr.</b>	<b>1 Yr.</b>	<b>3 Yr.</b>	<b>5 Yr.</b>	<b>10 Yr.</b>
Core Bonds	Barclays Aggregate	-1.5%	1.2%	1.2%	1.8%	3.6%
Municipal Bond	Barclays Municipal	-1.1%	2.7%	2.3%	2.7%	4.4%
High Yield	Barclays US High Yield	-0.9%	3.8%	5.2%	5.0%	8.3%
Intermediate Gov/Credit	Barclays Intern. Gov/Credit	-1.0%	0.4%	0.9%	1.2%	2.9%
Long Gov/Credit	Barclays Long Gov/Credit	-3.6%	5.1%	2.1%	4.1%	6.8%
Long Credit	Barclays Long Credit	-3.8%	6.2%	3.3%	4.7%	7.5%
Long Treasuries	Barclays US 20+ Yr Treas	-3.4%	3.9%	0.3%	3.5%	5.9%
Cash	BofA ML US 3-Month T-Bill	0.4%	1.1%	0.5%	0.3%	0.3%
Inflation	Barclays US TIPS 1-10 Yr	-0.4%	0.4%	1.2%	-0.1%	2.2%
Global Inflation	Barclays Global ILB	1.6%	9.0%	3.4%	2.0%	2.8%
STRIPS	Barclays 20+ Yr STRIPS	-4.6%	6.6%	0.1%	5.3%	8.2%
<b>Global FI Benchmarks</b>		<b>Qtr.</b>	<b>1 Yr.</b>	<b>3 Yr.</b>	<b>5 Yr.</b>	<b>10 Yr.</b>
World Gov. Bonds	Citigroup WGBI	2.5%	8.5%	3.5%	1.2%	2.0%
Em. Mkt. Bonds (Local)	JPM GBI-EM Glob. Div.	4.4%	13.0%	5.4%	-0.7%	3.8%
<b>Diversified Benchmark</b>		<b>Qtr.</b>	<b>1 Yr.</b>	<b>3 Yr.</b>	<b>5 Yr.</b>	<b>10 Yr.</b>
Diversified	Diversified*	-1.1%	9.3%	6.3%	7.8%	6.5%
<b>Alternative Benchmarks</b>		<b>Qtr.</b>	<b>1 Yr.</b>	<b>3 Yr.</b>	<b>5 Yr.</b>	<b>10 Yr.</b>
Commodities	Bloomberg Commodity Index	-0.4%	3.7%	-3.2%	-8.3%	-7.7%
Real Estate	NCREIF Property Index**	1.8%	7.0%	9.4%	10.2%	6.1%

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













\*\*As of 12/31/2017



March 31, 2018

# 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
											
-2.3%	8.9	33 bps	-0.8%	-1.5%	1.4%	-1.5%	-0.9%	-1.8%	7.5%	1.7%	-6.5%

- After a strong year for equity markets in 2017, the first quarter of the year saw a spike in volatility – in part due to concerns over a potential trade war between the US and China
- After ending 2017 down over 10%, the US dollar continued to decline in Q1 relative to a basket of major currencies
  - As a result, emerging market equities fared well throughout the quarter and are still supported by strong earnings and GDP growth
- The US yield curve flattened as the Fed rate hike pushed short-term interest rates higher while long-term rates rose more modestly

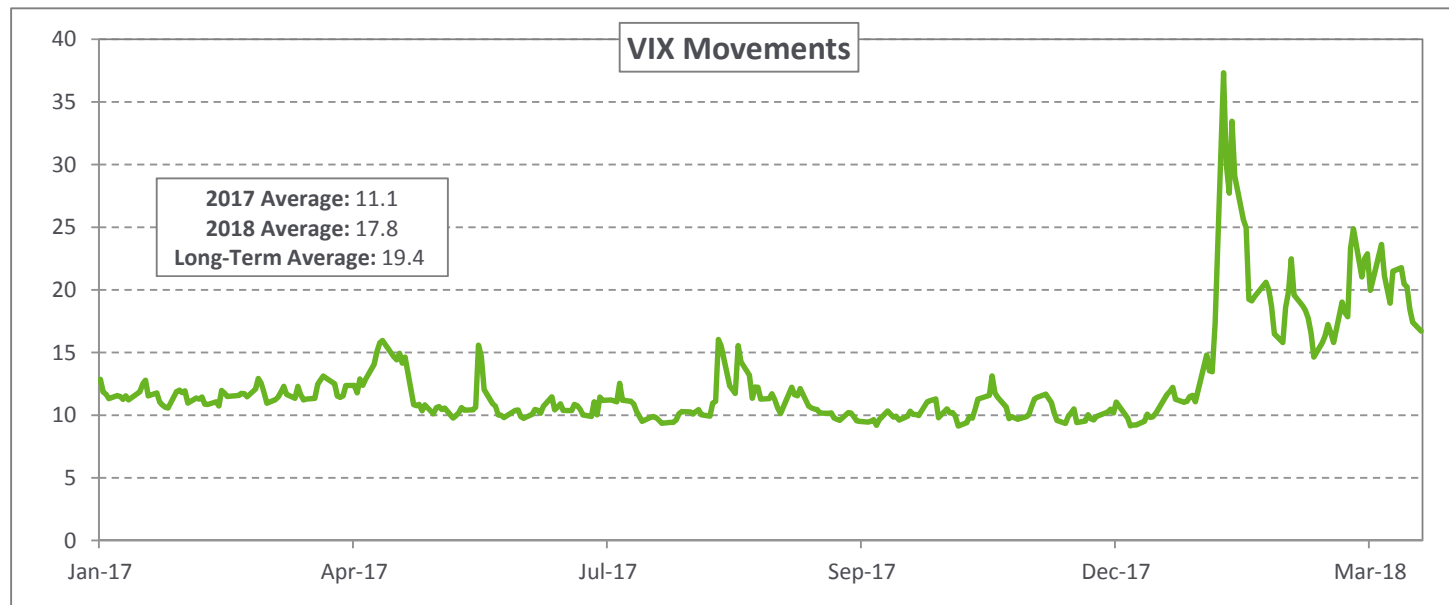
Market segment (index representation) as follows: US Dollar (DXY Index), VIX (CBOE Volatility Index), US 10-Year (US 10-Year Treasury Yield), S&P 500 (US Equity), MSCI EAFE Index (International Developed Equity), MSCI Emerging Markets (Emerging Markets Equity), US Agg (Barclays US Aggregate Bond Index),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



March 31, 2018

# THE RETURN OF VOLATILITY

- **2017 was one of the least-volatile markets in over half a century**
  - The S&P 500 experienced only four greater than 1% moves in 2017, while in 2018 it has already seen 15 of that magnitude through the beginning of April
- **Generally, a more volatile market environment was expected for 2018, but few expected the severity and consistency of swings we have already experienced this year in equity markets**



Source: CBOE, Bloomberg



March 31, 2018

# 2018 THEMES AND OPPORTUNITIES

## Key Market Themes

- Extended US Economic Cycle
- Synchronized Economic Resurgence
- Federal Reserve Gradualism
- China Transitions
- Globalization Backlash

## Current Opportunities

- Trim US Equity Gains
- Overweight Non-US Developed Market Equities
- Maintain a Market Overweight to Emerging Market Equities
- Allocate to TIPS
- Reduce Return Seeking Credit Exposure
- Fund Emerging Local Debt
- Fund MLP Exposure From Risk Assets
- Add Macro Hedge Funds
- Add Long Volatility Exposure





# EXECUTIVE SUMMARY

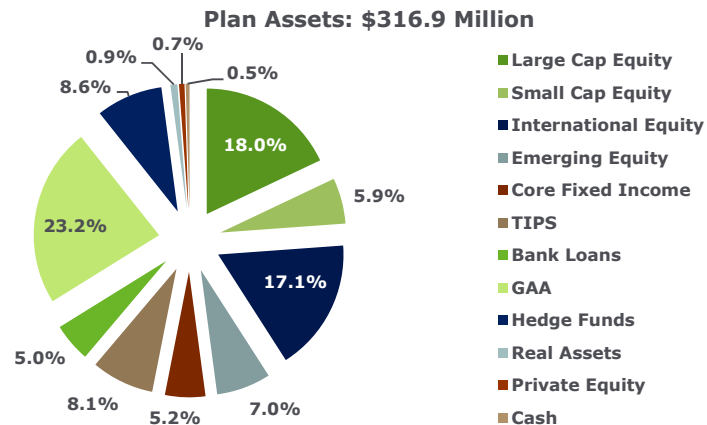
NEPC, LLC

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March 31, 2018

# EXECUTIVE SUMMARY

## ASSET ALLOCATION



## PLAN COMMENTS

### Asset Allocation

MIP assets were \$316.9 million as of March 31, 2018, a \$174 thousand decrease over the quarter. During the 1<sup>st</sup> quarter there was a \$300 thousand cash inflow from the Pool and investment losses of \$126 thousand. All asset classes are within policy ranges.

### Performance (Net of Fees)

The Plan returned -0.2% in the 1<sup>st</sup> quarter and 6.5% fiscal-year-to-date, ranking in the 60<sup>th</sup> and 70<sup>th</sup>, respectively.

Bank loan, equity long/short hedge fund, small cap growth equity, and international small cap equity managers were the top contributors to overall performance during the quarter. Emerging market equity, credit hedge fund and select global asset allocation managers detracted from overall performance during the quarter.

## MIP PERFORMANCE: NET OF FEES

	QTR (%)	FYTD (%)	3 YR (%)	5 YR (%)	10 YR (%)
COMPOSITE	-0.2	6.5	5.1	5.7	5.5
ALLOC. INDEX	-0.3	7.5	5.8	6.3	5.3
POLICY INDEX	-0.1	7.8	6.4	6.7	5.8
RANK (E&F \$100-500M)	60	70	78	88	68

## RECENT ACTIONS/RECOMMENDATIONS

### Recent Actions

At the last meeting, Committee approved the asset allocation mix titled "Alternative Mix".

Rebalancing was provided to cover disbursements.

### Recommendations

NEPC has provided information surrounding Bank Loans under separate cover.

NEPC has provided a revised Investment Policy Statement to reflect the new policy targets under separate cover.

### Investment Manager Updates

Aberdeen, Guggenheim and Lighthouse had announcements during the 1<sup>st</sup> quarter; Client Review is recommended for Guggenheim.



March 31, 2018

# DUE DILIGENCE MONITOR

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Guggenheim	Yes	Client Review
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<b>Terminate</b>	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.



March 31, 2018

# TOTAL PLAN PERFORMANCE DETAIL

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
<b>MIP Composite</b>	<b>316,899,080</b>	<b>100.0</b>	<b>100.0</b>	<b>-0.2</b>	<b>6.5</b>	<b>-0.2</b>	<b>9.7</b>	<b>9.7</b>	<b>5.1</b>	<b>5.7</b>	<b>5.9</b>	<b>5.5</b>
Allocation Index				-0.3	7.5	-0.3	10.7	10.2	5.8	6.3	6.1	5.3
Policy Index				-0.1	7.8	-0.1	11.5	10.9	6.4	6.7	6.3	5.8
<b>Total Domestic Large Cap</b>	<b>57,011,279</b>	<b>18.0</b>	<b>16.0</b>	<b>-0.8</b>	<b>10.5</b>	<b>-0.8</b>	<b>13.9</b>	<b>15.5</b>	<b>10.7</b>	<b>13.0</b>	<b>12.3</b>	<b>10.0</b>
S&P 500				-0.8	10.6	-0.8	14.0	15.6	10.8	13.3	12.7	9.5
SSgA S&P 500	57,011,279	18.0	16.0	-0.8	10.5	-0.8	13.9	15.5	10.7	13.2	12.6	9.5
S&P 500				-0.8	10.6	-0.8	14.0	15.6	10.8	13.3	12.7	9.5
<b>Total Domestic Small/Mid Cap</b>	<b>18,812,138</b>	<b>5.9</b>	<b>6.0</b>	<b>1.4</b>	<b>13.9</b>	<b>1.4</b>	<b>15.7</b>	<b>19.8</b>	<b>8.9</b>	<b>12.2</b>	<b>11.3</b>	<b>11.0</b>
Russell 2500				-0.2	10.0	-0.2	12.3	16.8	8.2	11.5	10.9	10.3
Westfield Capital	9,501,593	3.0	3.0	4.3	19.2	4.3	23.5	22.7	9.2	12.6	11.7	11.5
Russell 2500 Growth				2.4	15.2	2.4	19.9	19.8	9.1	13.4	11.8	11.2
DFA	9,310,545	2.9	3.0	-2.2	7.6	-2.2	6.9	15.2	7.3	10.6	10.0	--
Russell 2000 Value				-2.6	4.4	-2.6	5.1	16.6	7.9	10.0	9.4	8.6
<b>Total International Equity (including emerging markets)</b>	<b>76,200,112</b>	<b>24.0</b>	<b>23.0</b>	<b>-0.3</b>	<b>9.2</b>	<b>-0.3</b>	<b>16.0</b>	<b>12.9</b>	<b>6.1</b>	<b>5.2</b>	<b>5.0</b>	<b>3.1</b>
MSCI EAFE				-1.5	8.2	-1.5	14.8	13.2	5.6	6.5	5.3	2.7
Morgan Stanley	20,464,423	6.5	6.3	-1.6	5.6	-1.6	13.7	11.3	4.9	5.3	5.6	3.4
Globeflex	21,144,839	6.7	6.3	0.1	12.2	0.1	19.1	14.2	8.4	8.2	6.4	2.5
MSCI EAFE				-1.5	8.2	-1.5	14.8	13.2	5.6	6.5	5.3	2.7
Kabouter International Opportunities Offshore Fund II	12,558,913	4.0	3.5	1.1	--	1.1	--	--	--	--	--	--
MSCI EAFE Small Cap				0.2	14.2	0.2	23.5	17.1	12.3	11.1	8.7	6.5
<b>Emerging Markets Equity</b>	<b>22,031,937</b>	<b>7.0</b>	<b>7.0</b>	<b>-0.3</b>	<b>8.3</b>	<b>-0.3</b>	<b>13.6</b>	<b>12.2</b>	<b>4.1</b>	<b>1.1</b>	<b>2.5</b>	<b>--</b>
MSCI Emerging Markets				1.4	17.6	1.4	24.9	21.0	8.8	5.0	2.5	3.0
Aberdeen Emerging Mkts	10,924,262	3.4	3.5	0.1	9.5	0.1	16.3	16.1	6.9	2.6	3.6	--
MSCI Emerging Markets				1.4	17.6	1.4	24.9	21.0	8.8	5.0	2.5	3.0
Mondrian EM Small Cap	11,107,675	3.5	3.5	-0.6	6.9	-0.6	10.6	8.0	1.3	--	--	--
MSCI Emerging Markets Small Cap				0.2	15.6	0.2	18.6	16.5	7.2	4.6	2.5	4.4
<b>Total Fixed Income</b>	<b>57,774,596</b>	<b>18.2</b>	<b>18.0</b>	<b>-0.3</b>	<b>1.6</b>	<b>-0.3</b>	<b>2.8</b>	<b>3.5</b>	<b>2.4</b>	<b>2.8</b>	<b>4.5</b>	<b>4.6</b>
BBgBarc US Aggregate TR				-1.5	-0.2	-1.5	1.2	0.8	1.2	1.8	2.9	3.6
Commonfund	16,451,408	5.2	5.0	-0.7	0.9	-0.7	2.7	2.5	2.0	2.6	3.9	4.3
BBgBarc US Aggregate TR				-1.5	-0.2	-1.5	1.2	0.8	1.2	1.8	2.9	3.6
Vanguard Inflation-Protected Securities	25,576,053	8.1	8.0	-0.9	1.1	-0.9	0.6	1.0	--	--	--	--
BBgBarc US TIPS TR				-0.8	1.3	-0.8	0.9	1.2	1.3	0.0	2.5	2.9
Guggenheim US Bank Loans	15,747,135	5.0	5.0	1.1	3.2	1.1	--	--	--	--	--	--
Credit Suisse Leveraged Loans				1.6	3.9	1.6	4.6	7.2	4.3	4.2	4.5	5.4



March 31, 2018

# TOTAL PLAN PERFORMANCE DETAIL

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
<b>Total GAA</b>	<b>73,532,087</b>	<b>23.2</b>	<b>23.0</b>	<b>-0.4</b>	<b>3.7</b>	<b>-0.4</b>	<b>6.8</b>	<b>6.9</b>	<b>3.0</b>	<b>3.3</b>	<b>3.4</b>	<b>--</b>
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				-0.1	8.1	-0.1	12.1	10.5	6.5	6.6	6.0	4.8
GMO Global Absolute Return	24,777,686	7.8	7.7	0.8	6.1	0.8	9.3	8.7	4.2	4.1	5.3	5.0
Blended Index				-1.0	1.3	-1.0	2.6	3.6	3.0	2.9	4.2	4.7
Wellington	24,757,459	7.8	7.7	-0.8	5.7	-0.8	10.3	11.4	5.9	6.2	3.9	--
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				-0.1	8.1	-0.1	12.1	10.5	6.5	6.6	6.0	4.8
Newton Global Real Return	23,996,942	7.6	7.7	-1.3	-0.7	-1.3	0.8	--	--	--	--	--
60% MSCI ACWI (Net)/ 40% BBgBarc Global Agg				0.0	7.8	0.0	11.7	9.9	6.2	6.2	5.7	4.6
<b>Total Hedge Funds</b>	<b>27,101,448</b>	<b>8.6</b>	<b>9.0</b>	<b>0.6</b>	<b>4.7</b>	<b>0.6</b>	<b>4.9</b>	<b>6.1</b>	<b>1.7</b>	<b>2.4</b>	<b>1.5</b>	<b>2.0</b>
HFRI Fund of Funds Composite Index				0.3	4.7	0.3	5.6	5.9	1.9	3.4	2.6	1.6
EntrustPermal	8,470,926	2.7	3.0	-2.6	-0.4	-2.6	0.8	3.7	-0.5	1.7	2.2	3.6
HFRI Fund of Funds Composite Index				0.3	4.7	0.3	5.6	5.9	1.9	3.4	2.6	1.6
Lighthouse	18,630,523	5.9	6.0	2.1	7.1	2.1	6.5	7.3	--	--	--	--
Credit Suisse Long Shrt Eqt USD				1.0	7.4	1.0	10.7	7.3	4.0	6.3	4.9	4.5
<b>Total Real Assets</b>	<b>2,726,494</b>	<b>0.9</b>	<b>3.0</b>	<b>-0.2</b>	<b>1.9</b>	<b>-0.2</b>	<b>1.8</b>	<b>-1.6</b>	<b>0.2</b>	<b>2.8</b>	<b>3.9</b>	<b>--</b>
NCREIF Timberland Index				0.9	3.1	0.9	3.8	3.8	3.5	6.1	5.8	4.1
John Hancock Timber Fund	2,726,494	0.9	3.0	-0.2	1.9	-0.2	1.8	-1.6	0.2	2.8	4.0	-0.1
NCREIF Timberland Index				0.9	3.1	0.9	3.8	3.8	3.5	6.1	5.8	4.1
<b>Private Equity</b>	<b>2,115,274</b>	<b>0.7</b>	<b>2.0</b>	<b>0.0</b>	<b>9.6</b>	<b>0.0</b>	<b>14.3</b>	<b>13.1</b>	<b>10.5</b>	<b>--</b>	<b>--</b>	<b>--</b>
Landmark Equity Partners XV	2,115,274	0.7	2.0	0.0	9.6	0.0	14.3	13.1	10.5	--	--	--
Cambridge Associates US All PE (1 Qtr Lag)				5.3	13.2	5.3	17.6	15.4	12.0	13.6	13.3	9.8
<b>Total Cash</b>	<b>1,625,653</b>	<b>0.5</b>	<b>0.0</b>									
Distribution Account	1,625,653	0.5	0.0	0.3	0.7	0.3	0.8	0.4	0.3	0.2	0.2	0.4
91 Day T-Bills				0.4	0.9	0.4	1.2	0.8	0.5	0.3	0.3	0.3

## Notes:

Fiscal YTD begins 7/1

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

Returns are net of manager fees

John Hancock Timber market value as of 03/31/18

Landmark market value as of 03/31/18

March 31, 2018

## 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 \$2.37 million
  - Since inception, the strategy has an IRR of 16.5%, net of fees (9/30/17)
- **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 1.5%, net of fees (3/31/18)



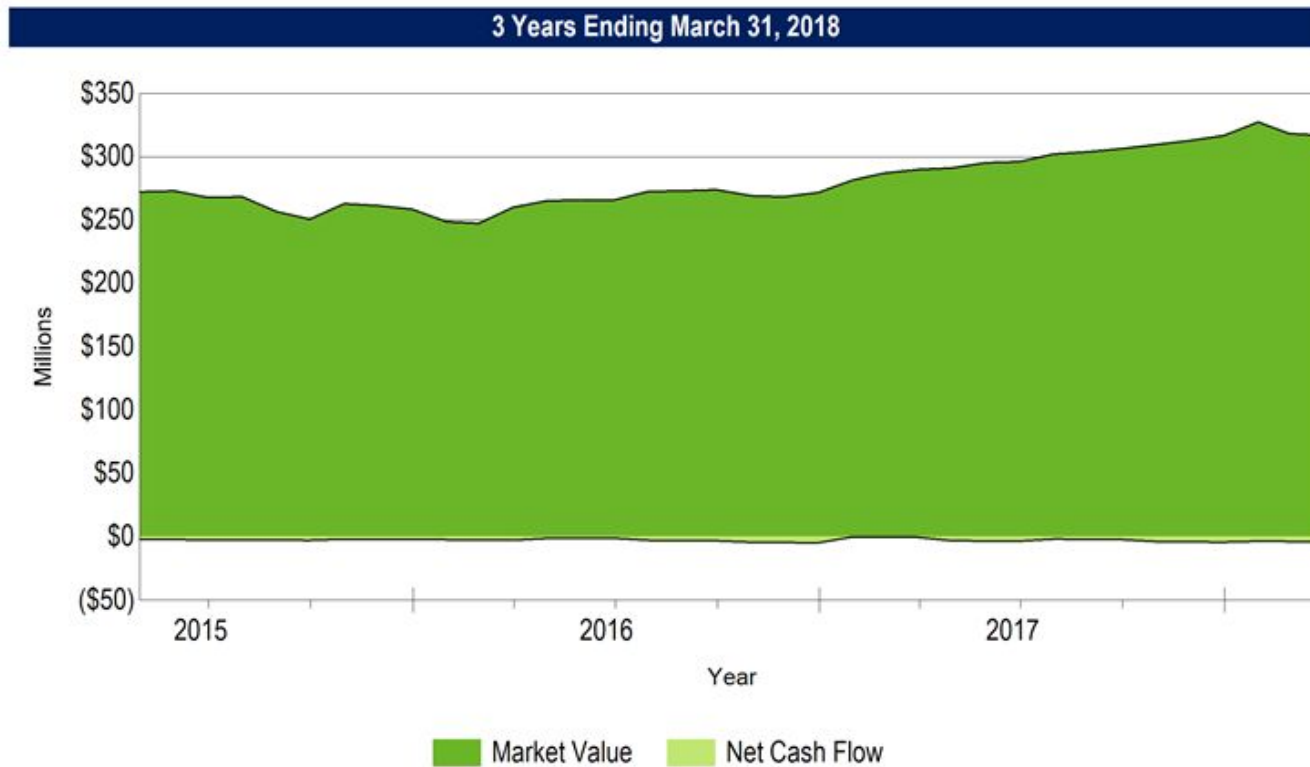
# PLAN SUMMARY AND STATISTICS

NEPC, LLC

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March 31, 2018

# ASSET GROWTH SUMMARY



	Last Three Months	Fiscal Year-To-Date	One Year	Three Years
Beginning Market Value	\$316,725,911	\$296,129,542	\$289,953,967	\$269,901,276
Net Cash Flow	\$299,484	-\$491,658	-\$3,458,518	-\$3,983,043
Net Investment Change	-\$126,315	\$21,261,196	\$30,403,631	\$50,980,848
Ending Market Value	\$316,899,080	\$316,899,080	\$316,899,080	\$316,899,080



March 31, 2018



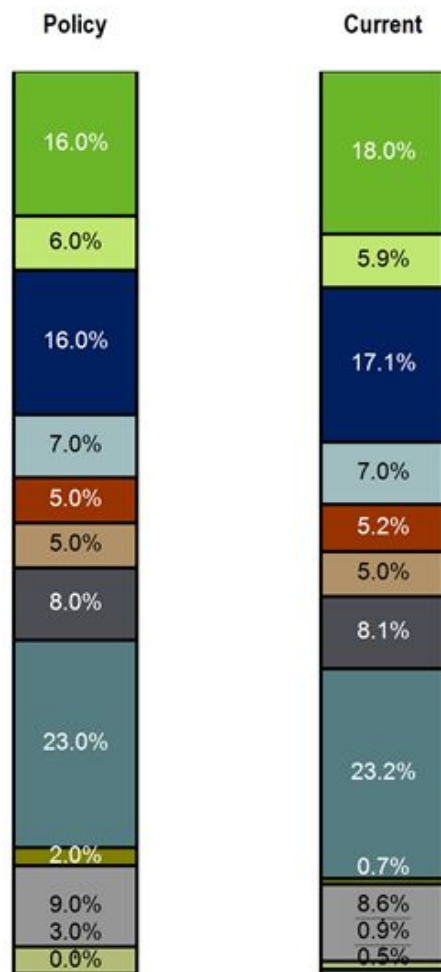
# CASH FLOW SUMMARY

	3 Months Ending March 31, 2018					Ending Market Value
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Net Investment Change	
Aberdeen Emerging Mkts	\$10,917,498	\$0	-\$30,966	-\$30,966	\$37,730	\$10,924,262
Commonfund	\$15,553,798	\$1,000,000	-\$6,308	\$993,692	-\$96,082	\$16,451,408
DFA	\$8,731,242	\$800,000	-\$9,126	\$790,874	-\$211,571	\$9,310,545
Distribution Account	\$223,603	\$3,729,976	-\$2,329,695	\$1,400,281	\$1,769	\$1,625,653
EntrustPermal	\$8,699,775	\$0	\$0	\$0	-\$228,849	\$8,470,926
Globeflex	\$19,711,463	\$1,425,000	-\$39,133	\$1,385,867	\$47,508	\$21,144,839
GMO Global Absolute Return	\$24,528,949	\$0	-\$62,590	-\$62,590	\$311,327	\$24,777,686
Guggenheim US Bank Loans	\$15,574,549	\$0	-\$19,643	-\$19,643	\$192,229	\$15,747,135
John Hancock Timber Fund	\$5,135,385	\$0	-\$2,400,150	-\$2,400,150	-\$8,741	\$2,726,494
Kabouter International Opportunities Offshore Fund II	\$11,436,908	\$1,000,000	-\$30,135	\$969,865	\$152,140	\$12,558,913
Landmark Equity Partners XV	\$1,907,282	\$446,078	-\$238,086	\$207,992	\$0	\$2,115,274
Lighthouse	\$18,240,996	\$0	\$0	\$0	\$389,527	\$18,630,523
Mondrian EM Small Cap	\$11,170,148	\$0	-\$77,028	-\$77,028	\$14,555	\$11,107,675
Morgan Stanley	\$19,340,979	\$1,425,000	-\$47,615	\$1,377,385	-\$253,941	\$20,464,423
Newton Global Real Return	\$24,301,128	\$0	-\$47,938	-\$47,938	-\$256,249	\$23,996,942
SSgA S&P 500	\$60,670,469	\$0	-\$3,226,461	-\$3,226,461	-\$432,730	\$57,011,279
Vanguard Inflation-Protected Securities	\$24,799,411	\$1,000,000	-\$4,344	\$995,656	-\$219,014	\$25,576,053
Wellington	\$24,964,485	\$0	-\$136,238	-\$136,238	-\$70,788	\$24,757,459
Westfield Capital	\$10,817,843	\$0	-\$1,821,115	-\$1,821,115	\$504,865	\$9,501,593
<b>Total</b>	<b>\$316,725,911</b>	<b>\$10,826,054</b>	<b>-\$10,526,570</b>	<b>\$299,484</b>	<b>-\$126,315</b>	<b>\$316,899,080</b>



March 31, 2018

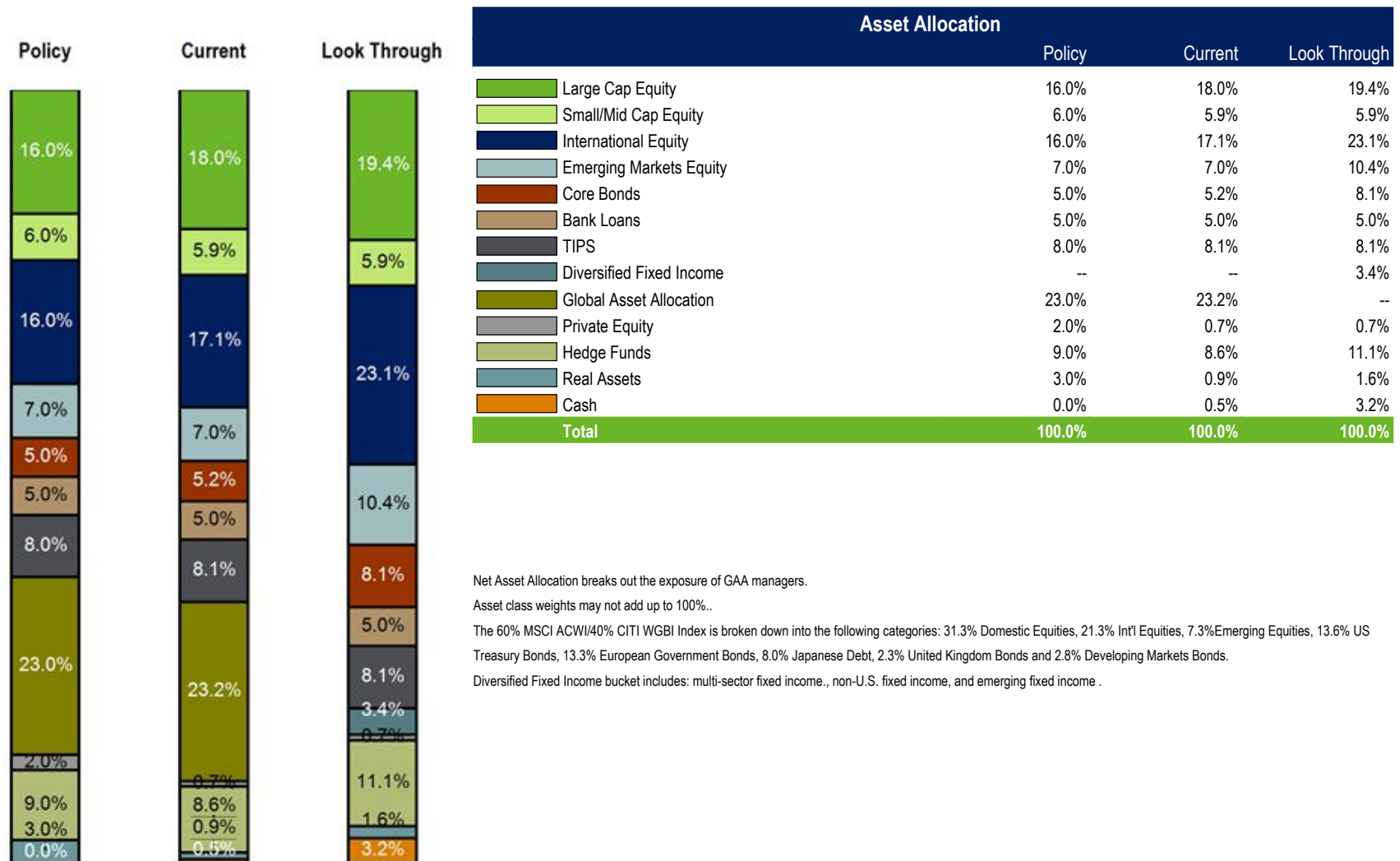
# ASSET CLASS ALLOCATIONS



Asset Allocation vs. Target						
	Current	Policy	Current	Difference	Policy Range	Within Range
<div></div> Large Cap Equity	\$57,011,279	16.0%	18.0%	2.0%	11.0% - 21.0%	Yes
<div></div> Small/Mid Cap Equity	\$18,812,138	6.0%	5.9%	-0.1%	0.0% - 9.0%	Yes
<div></div> International Equity	\$54,168,175	16.0%	17.1%	1.1%	11.0% - 21.0%	Yes
<div></div> Emerging Markets Equity	\$22,031,937	7.0%	7.0%	0.0%	0.0% - 10.0%	Yes
<div></div> Core Bonds	\$16,451,408	5.0%	5.2%	0.2%	0.0% - 10.0%	Yes
<div></div> Bank Loans	\$15,747,135	5.0%	5.0%	0.0%	0.0% - 8.0%	Yes
<div></div> TIPS	\$25,576,053	8.0%	8.1%	0.1%	4.0% - 12.0%	Yes
<div></div> Global Asset Allocation	\$73,532,087	23.0%	23.2%	0.2%	18.0% - 28.0%	Yes
<div></div> Private Equity	\$2,115,274	2.0%	0.7%	-1.3%	0.0% - 5.0%	Yes
<div></div> Hedge Funds	\$27,101,448	9.0%	8.6%	-0.4%	0.0% - 15.0%	Yes
<div></div> Real Assets	\$2,726,494	3.0%	0.9%	-2.1%	0.0% - 6.0%	Yes
<div></div> Cash	\$1,625,653	0.0%	0.5%	0.5%	0.0% - 10.0%	Yes
Total	\$316,899,080	100.0%	100.0%			

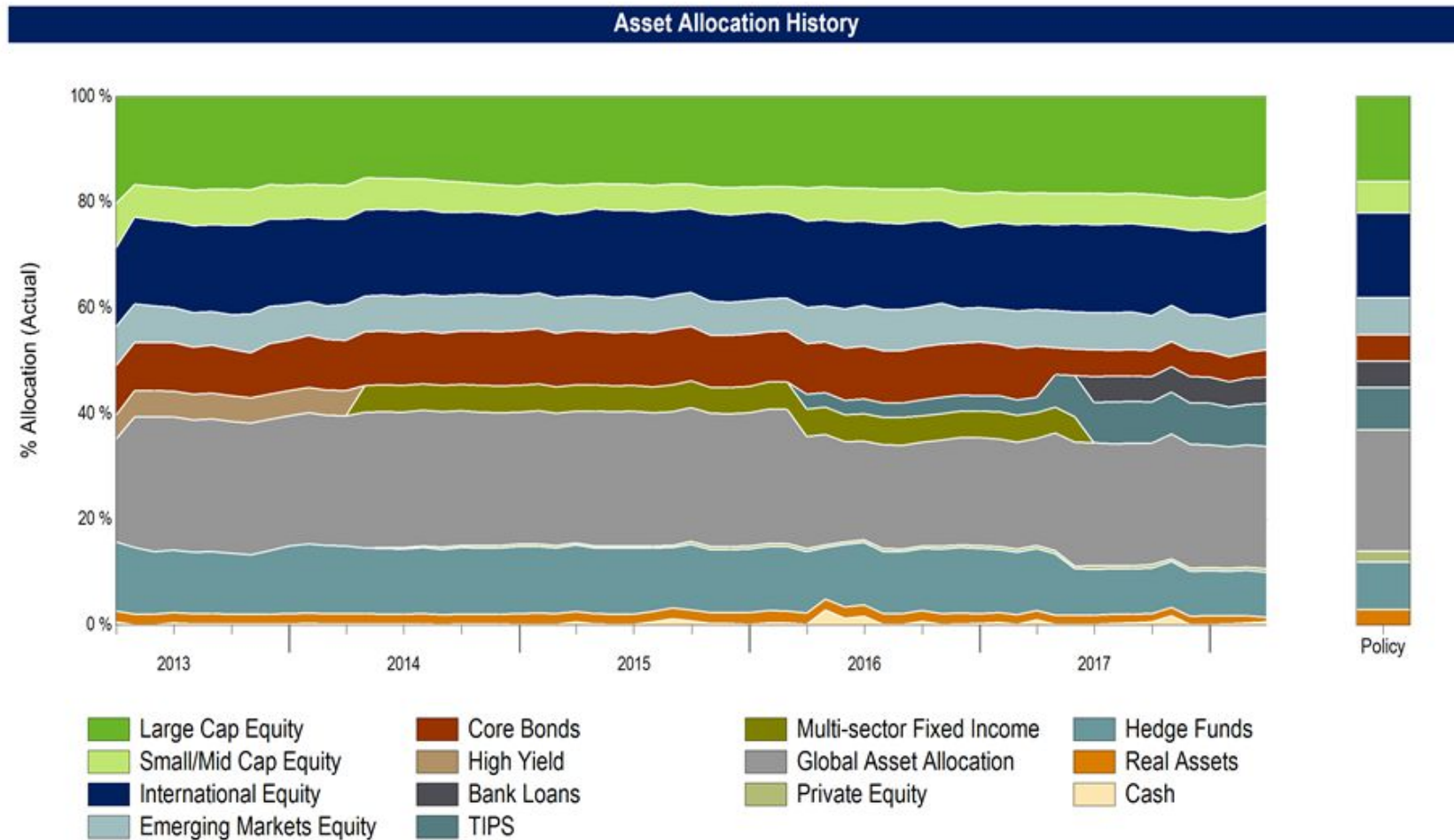


# ASSET CLASS ALLOCATIONS



March 31, 2018

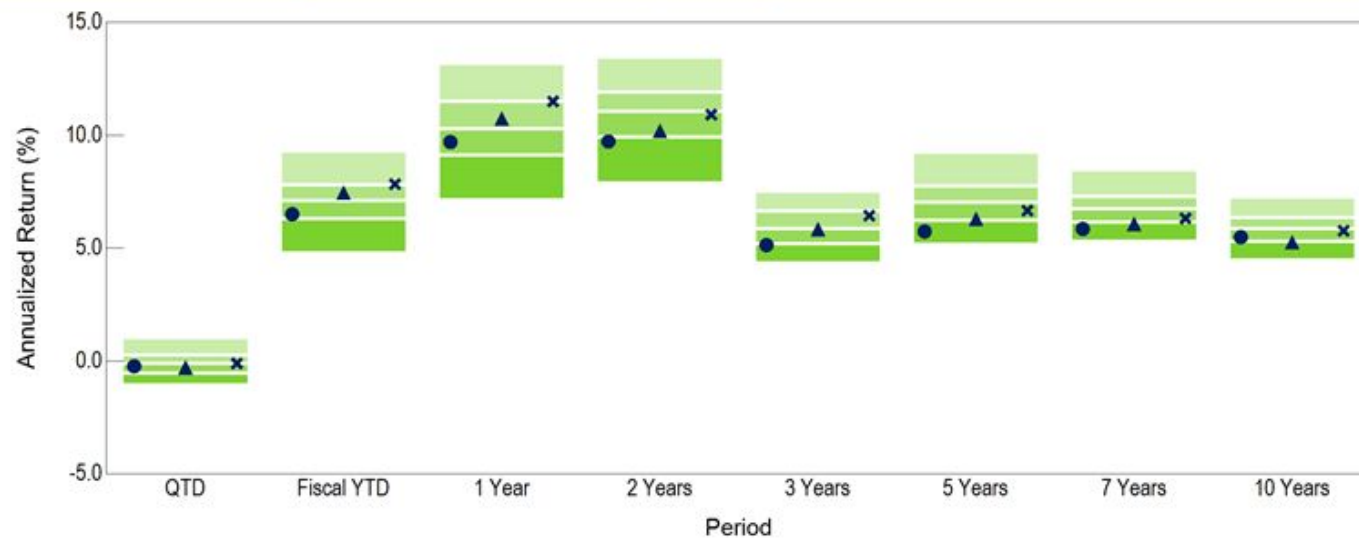
# ASSET ALLOCATION HISTORY



March 31, 2018

# RETURNS VS. PEER UNIVERSE

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



	Return (Rank)							
5th Percentile	1.0	9.3	13.2	13.4	7.5	9.2	8.5	7.2
25th Percentile	0.3	7.8	11.5	11.9	6.6	7.8	7.3	6.4
Median	-0.1	7.1	10.3	11.1	5.9	7.0	6.7	5.9
75th Percentile	-0.5	6.3	9.1	9.9	5.2	6.3	6.2	5.3
95th Percentile	-1.0	4.8	7.1	7.9	4.4	5.2	5.3	4.5
# of Portfolios	168	164	163	161	154	146	138	126
• MIP Composite	-0.2 (60)	6.5 (70)	9.7 (63)	9.7 (82)	5.1 (78)	5.7 (88)	5.9 (86)	5.5 (68)
▲ Allocation Index	-0.3 (64)	7.5 (40)	10.7 (41)	10.2 (72)	5.8 (52)	6.3 (73)	6.1 (77)	5.3 (76)
× Policy Index	-0.1 (51)	7.8 (25)	11.5 (26)	10.9 (55)	6.4 (28)	6.7 (64)	6.3 (69)	5.8 (55)



# RETURNS VS. PEER UNIVERSE

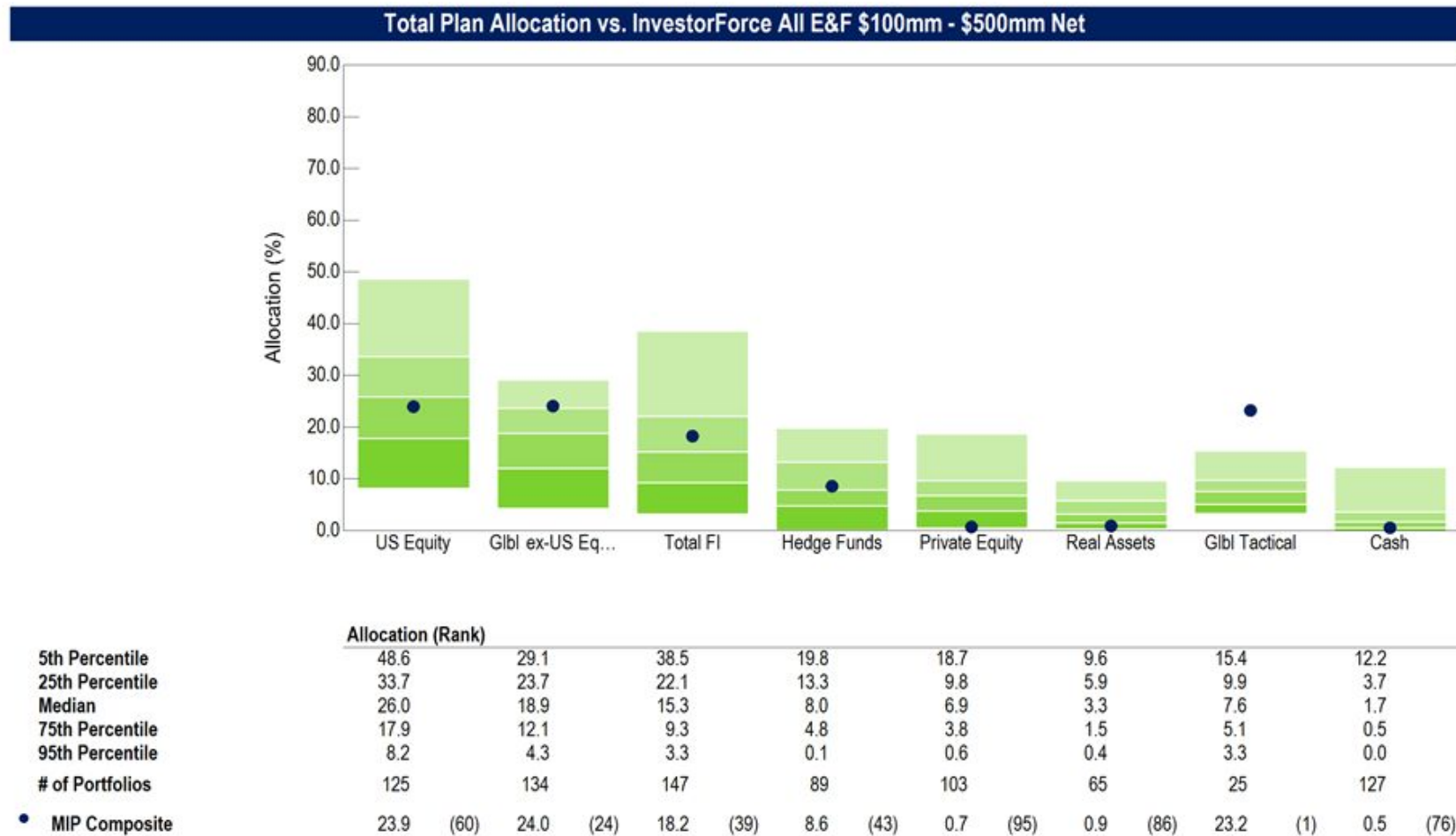
MIP Composite vs. InvestorForce All E&F \$100mm - \$500mm Net



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



# ALLOCATIONS VS. PEER UNIVERSE

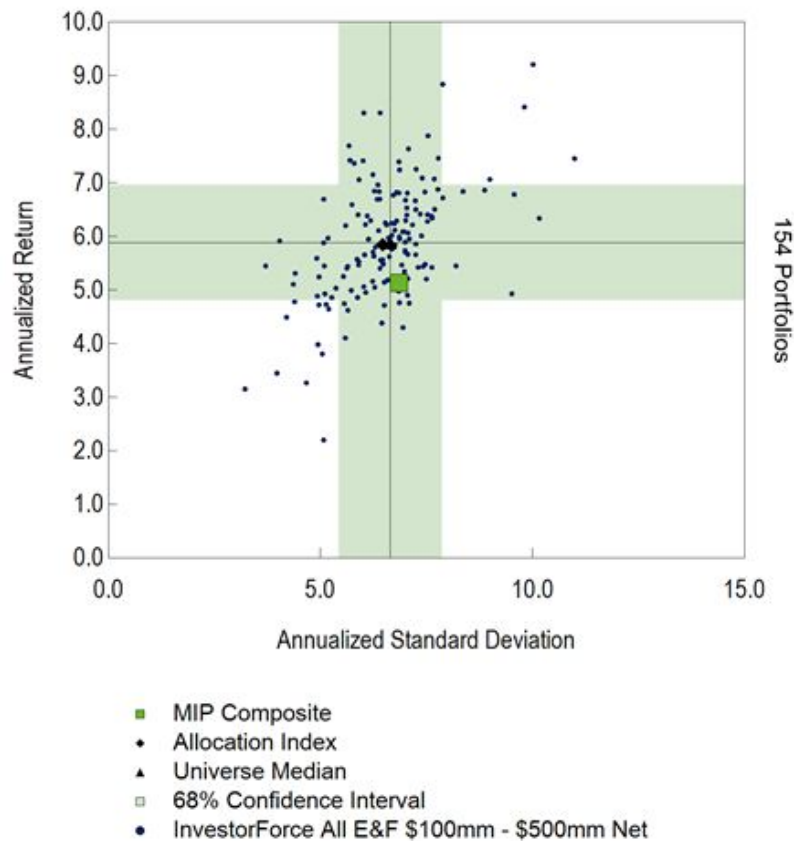


March 31, 2018



# TOTAL PLAN RISK/RETURN - 3 YEAR

3 Years Ending March 31, 2018



3 Years Ending March 31, 2018

	Anlzd Ret	Rank	Anlzd Std Dev	Rank
MIP Composite	5.1%	78	6.9%	61
Allocation Index	5.8%	52	6.5%	45
Policy Index	6.4%	28	6.6%	48
InvestorForce All E&F \$100mm - \$500mm Net Median	5.9%	--	6.6%	--

3 Years Ending March 31, 2018

	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
MIP Composite	0.7	85	0.9	86
Allocation Index	0.8	49	1.2	38
Policy Index	0.9	26	1.3	20
InvestorForce All E&F \$100mm - \$500mm Net Median	0.8	--	1.1	--

\*Returns are net of fees.

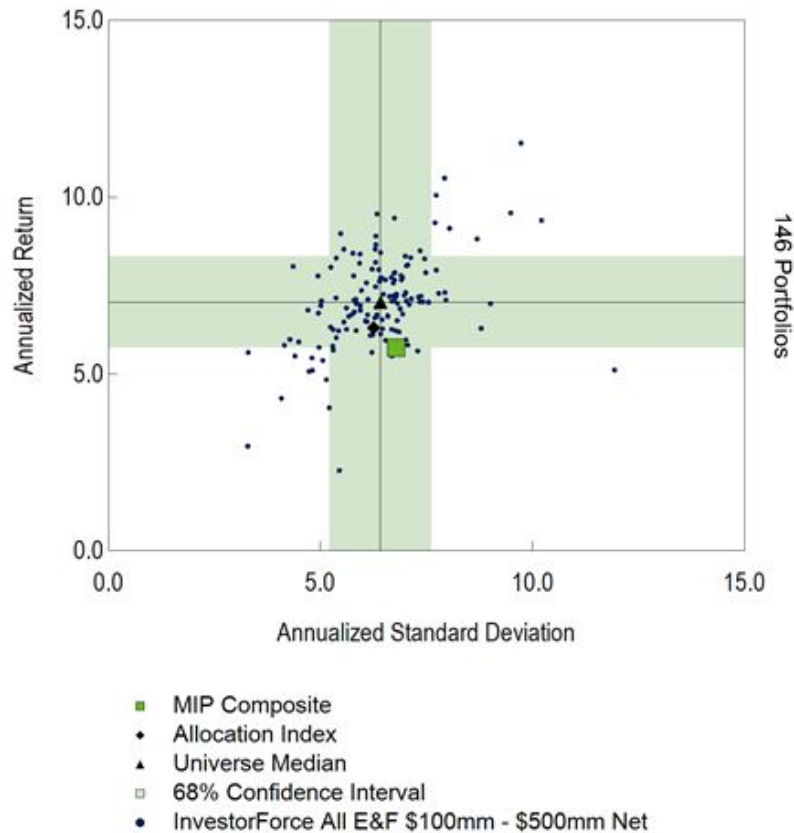


March 31, 2018



# TOTAL PLAN RISK/RETURN - 5 YEAR

5 Years Ending March 31, 2018



5 Years Ending March 31, 2018

	Anlzd Ret	Rank	Anlzd Std Dev	Rank
MIP Composite	5.7%	88	6.8%	69
Allocation Index	6.3%	73	6.3%	41
Policy Index	6.7%	64	6.3%	41
InvestorForce All E&F \$100mm - \$500mm Net Median	7.0%	--	6.4%	--

5 Years Ending March 31, 2018

	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
MIP Composite	0.8	94	1.3	94
Allocation Index	1.0	74	1.6	60
Policy Index	1.0	57	1.7	50
InvestorForce All E&F \$100mm - \$500mm Net Median	1.1	--	1.7	--

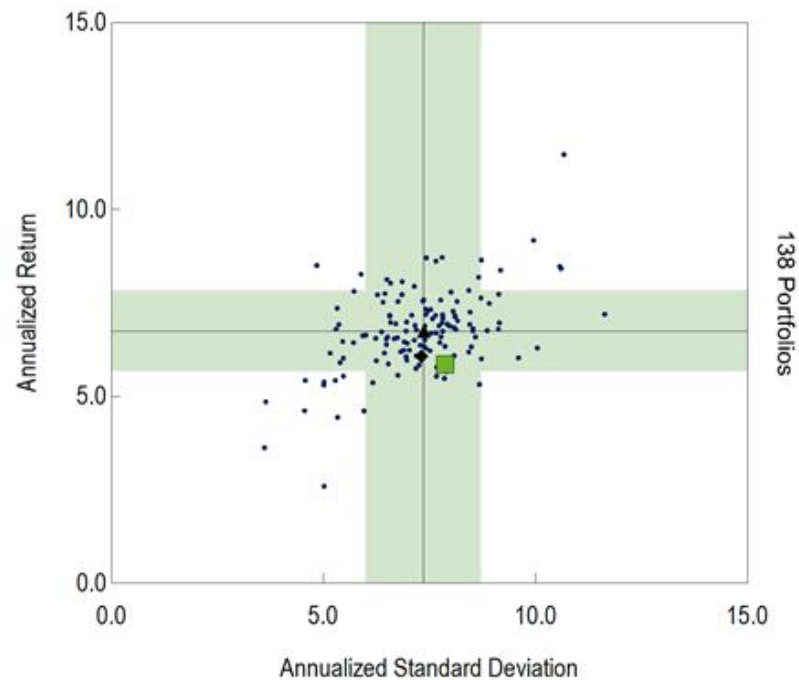
\*Returns are net of fees.



March 31, 2018

# TOTAL PLAN RISK/RETURN - 7 YEAR

7 Years Ending March 31, 2018



7 Years Ending March 31, 2018

	Anlzd Ret	Rank	Anlzd Std Dev	Rank
MIP Composite	5.9%	86	7.9%	73
Allocation Index	6.1%	77	7.3%	48
Policy Index	6.3%	69	7.3%	48
InvestorForce All E&F \$100mm - \$500mm Net Median	6.7%	--	7.4%	--

7 Years Ending March 31, 2018

	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
MIP Composite	0.7	93	1.0	91
Allocation Index	0.8	77	1.1	73
Policy Index	0.8	69	1.2	57
InvestorForce All E&F \$100mm - \$500mm Net Median	0.9	--	1.3	--

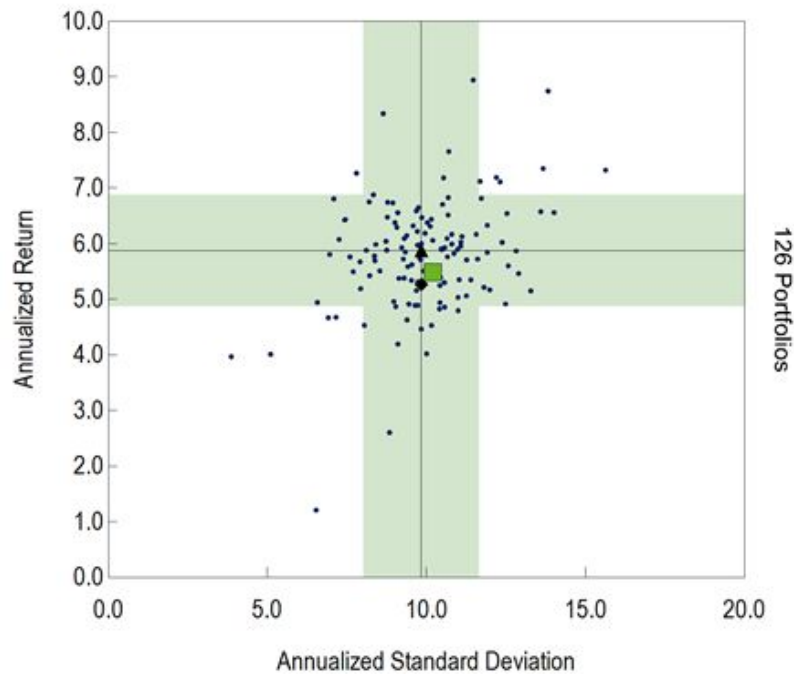
\*Returns are net of fees.



March 31, 2018

# TOTAL PLAN RISK/RETURN - 10 YEAR

10 Years Ending March 31, 2018



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

10 Years Ending March 31, 2018				
	Anlzd Ret	Rank	Anlzd Std Dev	Rank
MIP Composite	5.5%	68	10.2%	59
Allocation Index	5.3%	76	9.8%	50
Policy Index	5.8%	55	9.4%	38
InvestorForce All E&F \$100mm - \$500mm Net Median	5.9%	--	9.8%	--

10 Years Ending March 31, 2018				
	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
MIP Composite	0.5	68	0.6	53
Allocation Index	0.5	71	0.6	59
Policy Index	0.6	45	0.7	26
InvestorForce All E&F \$100mm - \$500mm Net Median	0.6	--	0.6	--

\*Returns are net of fees.



March 31, 2018

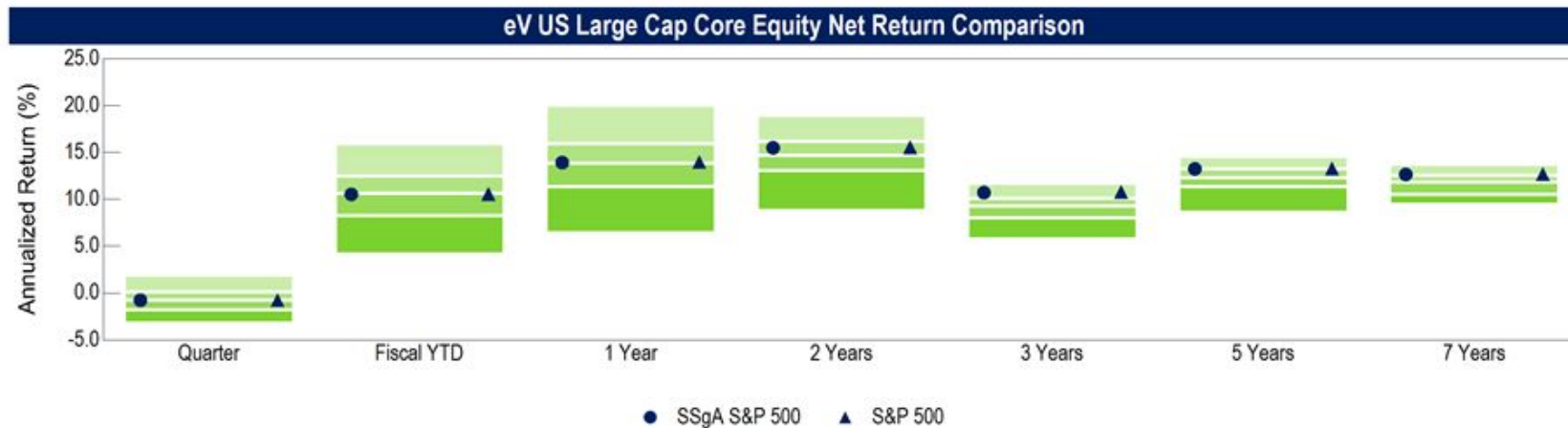
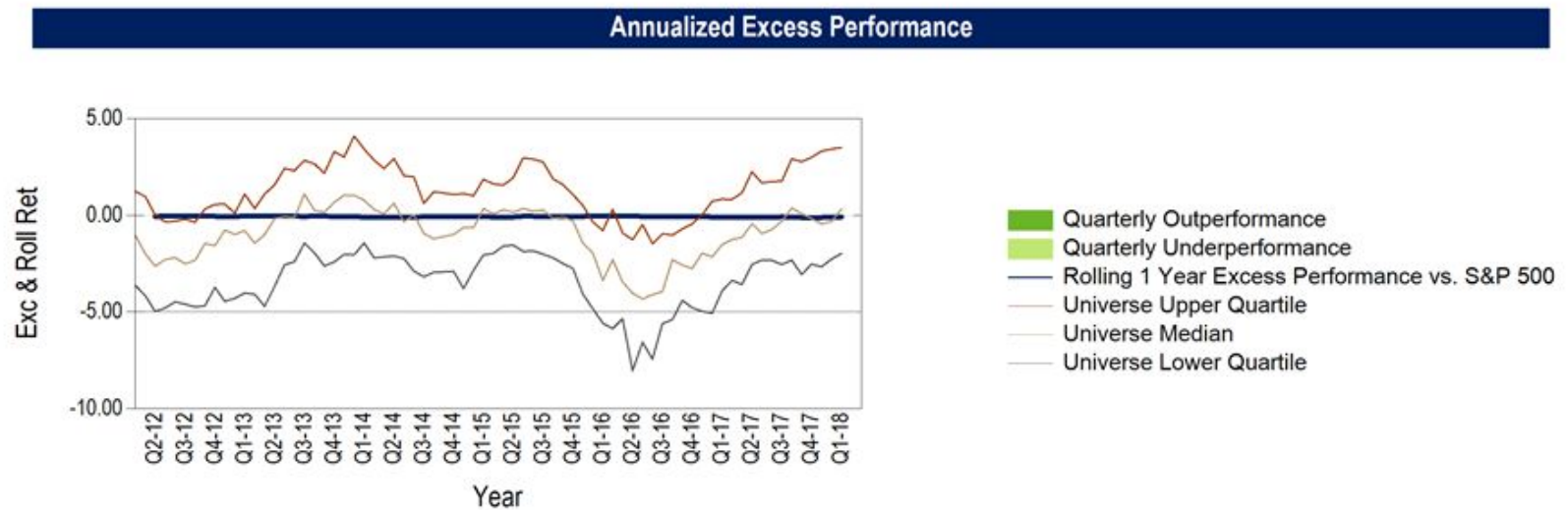
# MANAGER ANALYSIS

NEPC, LLC

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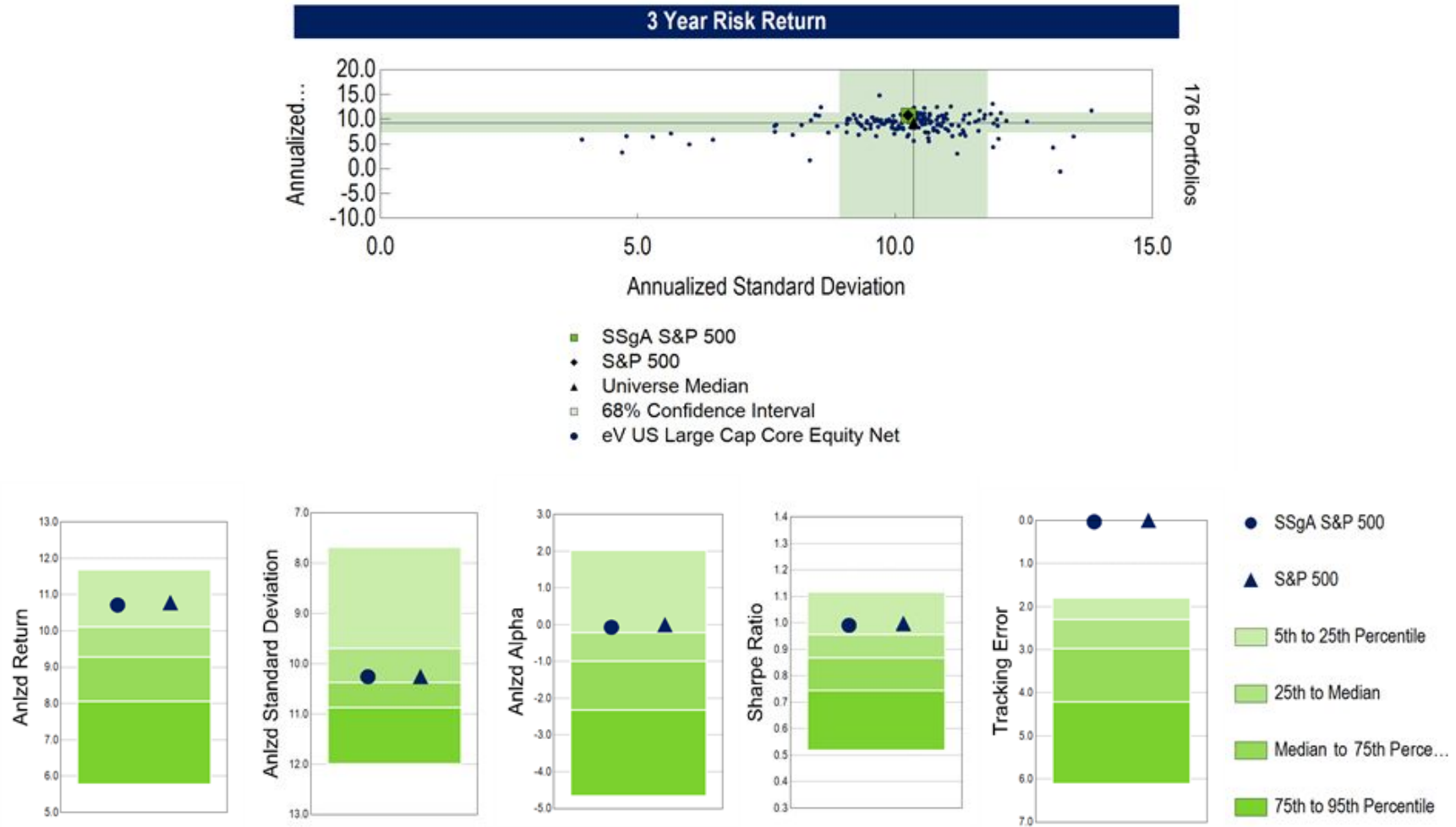
March 31, 2018

# SSgA S&P 500



March 31, 2018

# SSgA S&P 500



\*Returns are net of fees.



March 31, 2018

# SSgA S&P 500

Characteristics		
	Portfolio	S&P 500
Number of Holdings	506	505
Weighted Avg. Market Cap. (\$B)	182.5	182.2
Median Market Cap. (\$B)	20.7	20.7
Price To Earnings	26.5	24.2
Price To Book	5.5	4.6
Price To Sales	4.2	4.0
Return on Equity (%)	24.9	21.6
Yield (%)	2.0	1.9
Beta		1.0
R-Squared		1.0

Equity Sector Attribution									
	Attribution Effects				Returns		Ending Sector Weights		
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark	
Energy	0.0%	0.0%	0.0%	0.0%	-5.9%	-5.9%	5.7%	5.7%	
Materials	0.0%	0.0%	0.0%	0.0%	-5.5%	-5.5%	2.8%	2.9%	
Industrials	0.0%	0.0%	0.0%	0.0%	-1.6%	-1.6%	10.2%	10.2%	
Consumer Discretionary	0.0%	0.0%	0.0%	0.0%	3.1%	3.1%	12.7%	12.7%	
Consumer Staples	0.0%	0.0%	0.0%	0.0%	-7.1%	-7.1%	7.6%	7.7%	
Health Care	0.0%	0.0%	0.0%	0.0%	-1.3%	-1.3%	13.7%	13.7%	
Financials	0.0%	0.0%	0.0%	0.0%	-1.0%	-0.9%	14.8%	14.7%	
Information Technology	0.0%	0.0%	0.0%	0.0%	3.5%	3.5%	24.9%	24.9%	
Telecommunication Services	0.0%	0.0%	0.0%	0.0%	-7.5%	-7.5%	1.9%	1.9%	
Utilities	0.0%	0.0%	0.0%	0.0%	-3.3%	-3.3%	2.8%	2.9%	
Real Estate	0.0%	0.0%	0.0%	0.0%	-5.0%	-5.0%	2.7%	2.8%	
Cash	0.0%	0.0%	0.0%	0.0%	0.4%	--	0.1%	0.0%	
Unclassified	0.0%	--	--	--	--	--	--	--	--
Portfolio	0.0%	=	0.0%	+	0.0%	+	0.0%	-0.8%	-0.8%
							100.0%	100.0%	

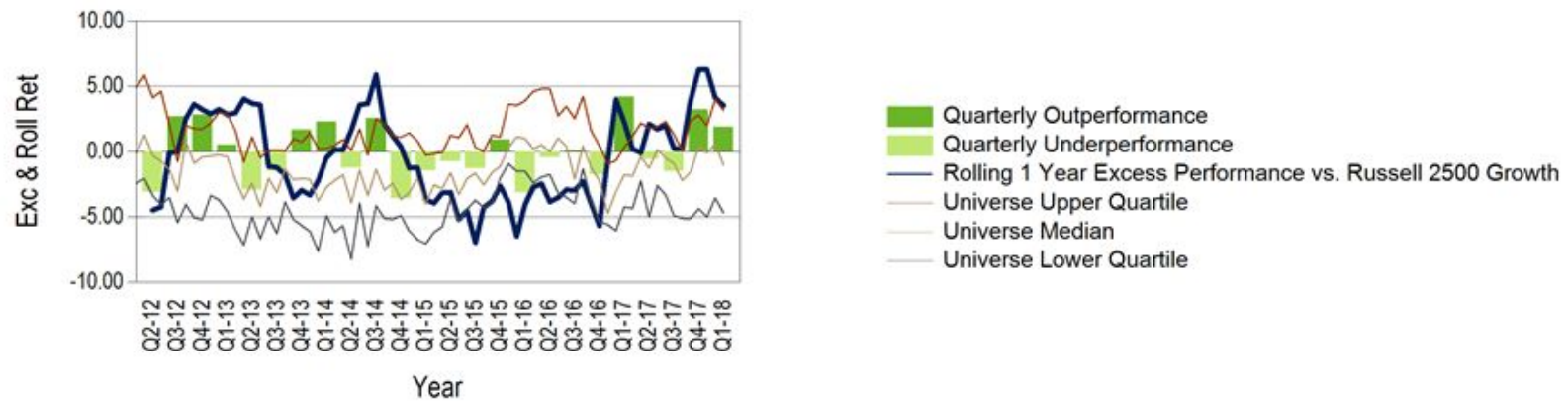
\*Attribution on manager pages is holdings based, using buy-and-hold assumptions from the beginning of period portfolio. Results may differ from actual performance. Returns are net of fees.



March 31, 2018

# WESTFIELD CAPITAL

## Annualized Excess Performance



## eV US Small-Mid Cap Growth Equity Net Return Comparison



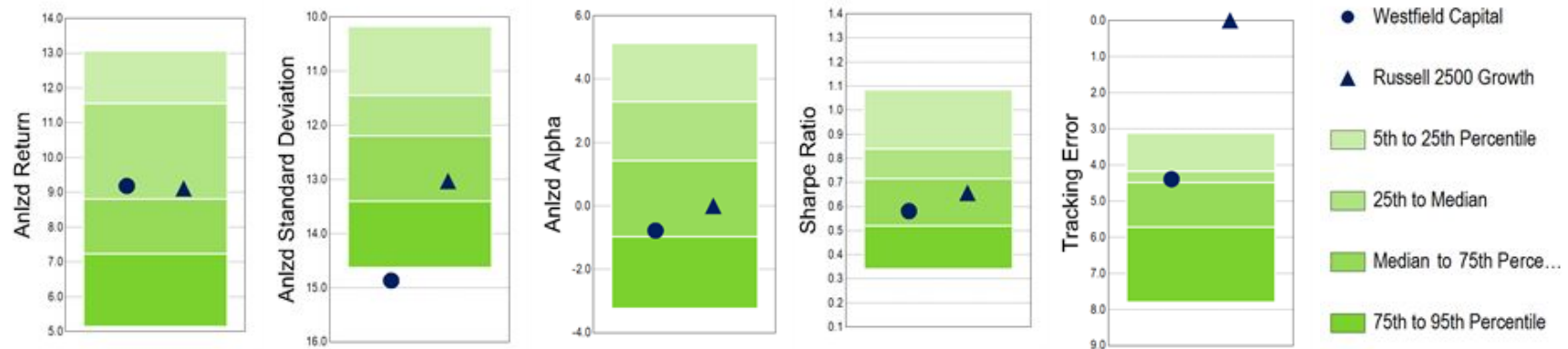
\*Returns are net of fees.



March 31, 2018



# WESTFIELD CAPITAL



\*Returns are net of fees.



March 31, 2018

# WESTFIELD CAPITAL

Characteristics			Top Positive Contributors			Top Negative Contributors		
	Portfolio	Russell 2500 Growth		Relative Contribution %	Return %		Relative Contribution %	Return %
Number of Holdings	74	1,450	NEKTAR THERAPEUTICS	2.0%	77.9%	COHERENT	-0.3%	-33.6%
Weighted Avg. Market Cap. (\$B)	7.9	5.9	COSTAR GP.	0.4%	22.1%	PACIRA PHARMACEUTICALS	-0.3%	-31.8%
Median Market Cap. (\$B)	6.4	1.3	MICROSEMI	0.3%	25.3%	LIONS GATE ENTM.'B' NV. SHS.	-0.3%	-23.8%
Price To Earnings	30.1	25.7	FORTINET	0.3%	22.6%	DANA	-0.2%	-19.2%
Price To Book	5.4	5.9	NEW RELIC	0.3%	28.3%	BUILDERS FIRSTSOURCE	-0.2%	-8.9%
Price To Sales	4.3	4.0	REALPAGE	0.3%	16.3%	W R GRACE	-0.2%	-12.4%
Return on Equity (%)	12.3	16.0	LUMENTUM HOLDINGS	0.2%	30.5%	CYRUSONE	-0.2%	-13.2%
Yield (%)	0.8	0.7	TOTAL SYSTEM SERVICES	0.2%	9.2%	BOYD GAMING	-0.2%	-9.0%
Beta		1.0	JAZZ PHARMACEUTICALS	0.2%	12.1%	ANDEAVOR	-0.2%	-11.5%
R-Squared		1.0	PTC	0.2%	28.4%	PINNACLE FOODS	-0.1%	-8.5%

Equity Sector Attribution											
	Attribution Effects				Returns		Ending Sector Weights				
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.0%	0.1%	-0.2%	0.1%	-4.9%	-10.9%	3.8%	1.4%			
Materials	-0.2%	-0.2%	0.0%	0.0%	-7.4%	-4.7%	7.3%	5.9%			
Industrials	0.5%	0.5%	0.0%	0.0%	2.2%	-0.4%	22.6%	19.7%			
Consumer Discretionary	-0.4%	-0.6%	0.1%	0.1%	-6.1%	-2.0%	13.8%	14.3%			
Consumer Staples	-0.2%	-0.2%	0.0%	0.1%	-8.5%	2.7%	1.5%	2.2%			
Health Care	1.4%	1.6%	0.0%	-0.1%	14.6%	5.5%	14.3%	18.2%			
Financials	0.2%	0.2%	0.0%	0.0%	5.1%	3.1%	8.6%	7.6%			
Information Technology	0.6%	0.5%	0.1%	0.0%	10.2%	8.2%	21.6%	26.3%			
Telecommunication Services	-0.1%	0.0%	0.0%	0.0%	-7.2%	-4.2%	1.2%	0.7%			
Utilities	0.0%	--	0.0%	--	--	-7.4%	0.0%	0.4%			
Real Estate	0.1%	0.1%	0.0%	0.0%	-6.3%	-8.2%	2.9%	3.3%			
Cash	0.0%	0.0%	0.0%	0.0%	0.4%	--	2.4%	0.0%			
Portfolio	2.0%	=	1.8%	+	-0.1%	+	0.2%	4.1%	2.1%	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.

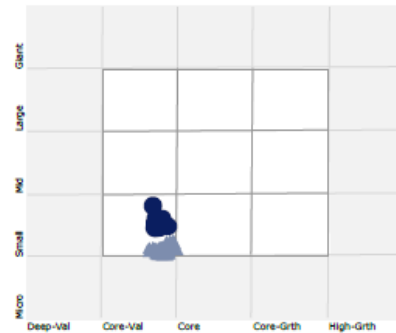


March 31, 2018

# DFA US TARGETED VALUE I

## Holdings Based Style Trail (5 Years)

Time Period: 4/30/2013 to 3/31/2018



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

## Portfolio Statistics

	Fund	Index
# of Holdings	1,438	1,398
% Asset in Top 10 Holdings	7.0	4.7
Turnover Ratio %	23.0	
P/E Ratio	15.9	17.5
P/B Ratio	1.4	1.5
LT Earn Growth	13.4	11.5
Hist Earn Growth	57.2	-4.2
12 Mo Yield	1.1	

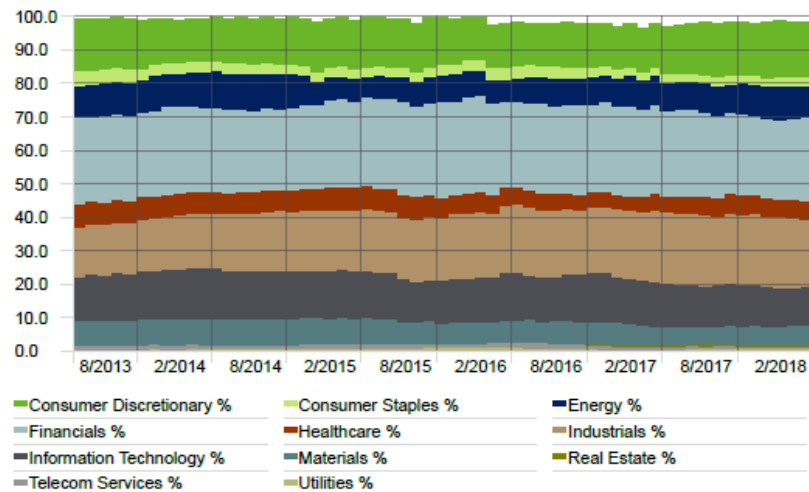
## Market Capitalization Breakdown

	Fund	Index
Market Cap Giant %	0.0	0.0
Market Cap Large %	0.5	0.0
Market Cap Mid %	40.6	18.1
Market Cap Small %	50.1	67.2
Market Cap Micro %	8.9	14.7
Average Market Cap (mil)	2,412.8	1,595.7

## Top 10 Holdings

	Portf Weight %	3 Month Ret %
Kohl's Corp	0.91	21.93
HollyFrontier Corp	0.80	-3.98
Arrow Electronics Inc	0.77	-4.22
Toll Brothers Inc	0.73	-9.77
S+p500 Emini Fut Mar18 Xome 20180316	0.68	
People's United Financial Inc	0.68	0.71
Reliance Steel & Aluminum Co	0.64	0.52
Avnet Inc	0.62	5.88
PacWest Bancorp	0.56	-0.73
Macy's Inc	0.56	19.56

## Historical Sector Allocations (5 Years)



## Attribution (Quarter)

	Portfolio Weights	Benchmark Weights	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Active Return
Consumer Discretionary	16.41	10.95	-2.00	-2.10	0.03	0.02	0.05
Consumer Staples	2.52	2.70	-7.65	-6.84	0.01	-0.02	-0.02
Energy	10.06	6.59	-6.80	-10.65	-0.29	0.41	0.12
Financials	24.28	30.80	2.23	0.53	-0.20	0.40	0.21
Health Care	5.32	6.64	1.98	5.50	-0.07	-0.19	-0.26
Industrials	20.70	12.26	-4.49	-1.68	0.09	-0.60	-0.50
Information Technology	11.47	8.86	-2.69	-3.40	-0.02	0.08	0.07
Materials	5.93	4.53	-3.84	-5.31	-0.04	0.10	0.05
Real Estate	0.41	9.88	1.24	-8.42	0.57	0.04	0.61
Telecommunication Services	0.63	0.50	-0.29	-10.54	-0.01	0.07	0.06
Utilities	0.67	6.21	2.66	-5.88	0.17	0.06	0.23
Attribution Total	98.41	99.91	-2.08	-2.69	0.24	0.36	0.61
Cash	0.79	0.00					
Other	0.77	0.00					
Total	100.00	100.00					



Source: Morningstar

March 31, 2018

# DFA US TARGETED VALUE I

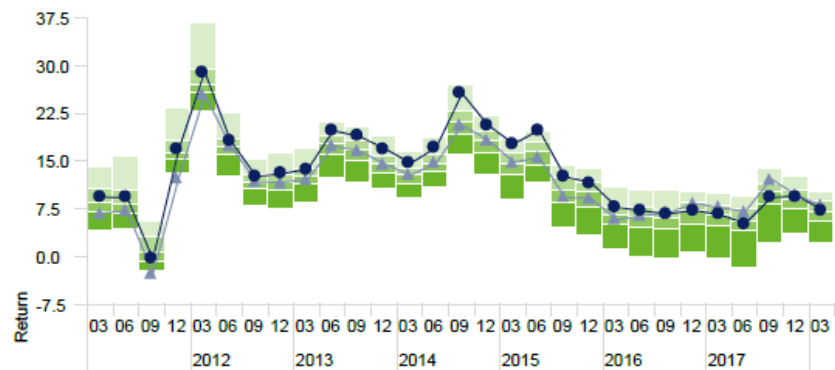
## Risk & Return Characteristics (5 Years)

Time Period: 4/1/2013 to 3/31/2018

	Fund	Index
R2	89.1	100.0
Alpha	1.6	0.0
Beta	0.9	1.0
Std Dev	11.2	11.7
Up Capture Ratio	98.1	100.0
Down Capture Ratio	82.4	100.0
Sharpe Ratio (geo)	0.9	0.8
Information Ratio (geo)	0.2	
Tracking Error	3.9	0.0
Correlation	0.9	1.0

## Rolling Return (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



—DFA US Targeted Value I

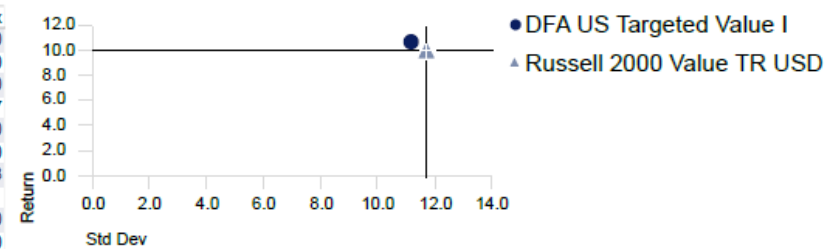
—Russell 2000 Value TR USD

## Calendar Year Returns

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

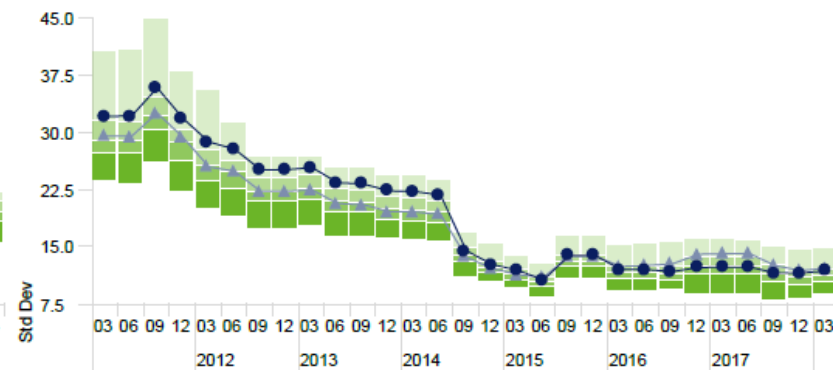
## Risk & Return Illustration (5 Years)

Time Period: 4/1/2013 to 3/31/2018



## Rolling Risk (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



—DFA US Targeted Value I

—Russell 2000 Value TR USD



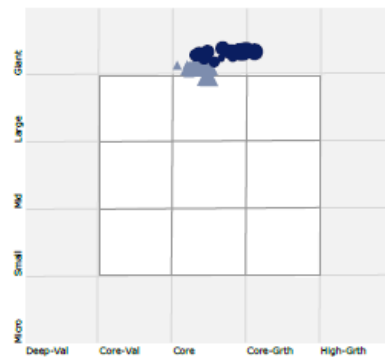
Source: Morningstar

March 31, 2018

# MORGAN STANLEY INTERNATIONAL EQUITY I

## Holdings Based Style Trail (5 Years)

Time Period: 4/30/2013 to 3/31/2018



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

## Portfolio Statistics

	Fund	Index
# of Holdings	68	927
% Asset in Top 10 Holdings	37.2	10.9
Turnover Ratio %	18.0	
P/E Ratio	20.6	14.9
P/B Ratio	2.8	1.6
LT Earn Growth	10.7	9.7
Hist Earn Growth	-1.9	9.3
12 Mo Yield	1.9	

## Market Capitalization Breakdown

	Fund	Index
Market Cap Giant %	74.0	58.4
Market Cap Large %	20.0	34.9
Market Cap Mid %	5.9	6.7
Market Cap Small %	0.0	0.0
Market Cap Micro %	0.0	0.0
Average Market Cap	56,064.6	37,645.7
Equity Region Developed %	96.3	99.4
Equity Region Emerging %	3.7	0.6

## Top Ten Holdings

	Port Weight %	3 Month Return
British American Tobacco PLC	4.79	-13.62
Unilever NV DR	4.31	0.84
Reckitt Benckiser Group PLC	4.13	-9.56
L'Oreal SA	3.94	1.53
Pernod Ricard SA	3.82	4.98
GlaxoSmithKline PLC	3.59	11.11
Shiseido Co Ltd	3.34	32.51
Novartis AG	3.33	-1.13
SAP SE	3.00	-6.87
Tencent Holdings Ltd	2.99	0.49

## Sector Attribution (Quarter)

	Portfolio Weights	Benchmark Weights	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Active Return
Consumer Discretionary	4.37	12.43	0.99	0.75	-0.17	0.01	-0.16
Consumer Staples	30.92	10.91	1.04	-2.92	-0.30	1.28	0.97
Energy	2.92	5.26	7.74	-1.81	0.02	0.28	0.29
Financials	13.52	21.48	-2.03	-2.02	0.04	-0.01	0.03
Health Care	14.43	10.03	-1.44	-0.54	0.04	-0.13	-0.09
Industrials	14.81	14.69	-2.49	-1.32	0.00	-0.18	-0.18
Information Technology	9.46	6.48	-1.40	1.15	0.09	-0.26	-0.17
Materials	4.68	8.23	-11.93	-3.60	0.08	-0.44	-0.36
Real Estate	0.47	3.51	-2.14	-1.83	0.01	0.00	0.01
Telecommunication Services	1.43	3.85	-13.17	-3.85	0.06	-0.15	-0.09
Utilities	0.00	3.11		1.49	-0.09	0.00	-0.09
Attribution Total	97.01	99.97	-1.23	-1.40	-0.22	0.39	0.18
Cash	2.22	0.00					
Other	0.77	0.00					
Missing Performance	0.00	0.03					
Total	100.00	100.00					

## Region Attribution (Quarter)

	Portfolio Weights	Benchmark Weights	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Active Return
Asia - Developed	3.92	4.78	-1.02	-0.27	-0.01	-0.03	-0.04
Asia - Emerging	3.79	0.46	3.59	-3.21	-0.04	0.23	0.19
Australasia	0.00	6.92		-5.67	0.29	0.00	0.29
Canada	2.15	0.00	-13.23		-0.29	0.00	-0.29
Europe - ex Euro	8.00	13.14	-3.17	-2.79	0.07	-0.03	0.04
Eurozone	33.76	31.72	-1.31	-0.43	0.04	-0.31	-0.27
Japan	19.29	24.25	6.21	0.95	-0.11	1.02	0.91
Middle East	0.00	0.46		-5.34	0.02	0.00	0.02
United Kingdom	24.37	17.26	-5.99	-3.79	-0.21	-0.57	-0.78
United States	1.74	0.98	4.17	-0.86	0.00	0.09	0.09
Attribution Total	97.01	99.97	-1.23	-1.40	-0.22	0.40	0.18
Cash	2.22	0.00					
Other	0.77	0.00					
Missing Performance	0.00	0.03					
Total	100.00	100.00					



Source: Morningstar

March 31, 2018

# MORGAN STANLEY INTERNATIONAL EQUITY I

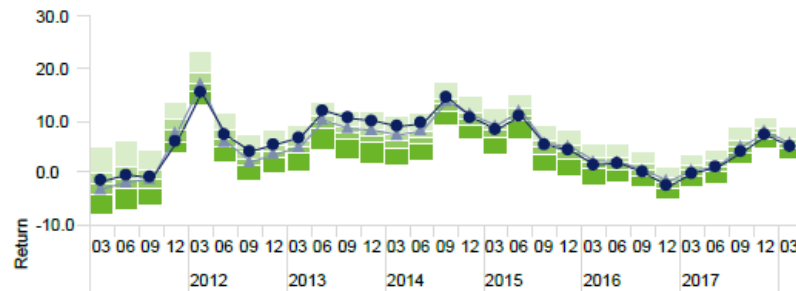
## Risk & Return Characteristics (5 Years)

Time Period: 4/1/2013 to 3/31/2018

	Fund	Index
R2	90.6	100.0
Alpha	-0.3	0.0
Beta	0.9	1.0
Std Dev	9.5	10.4
Up Capture Ratio	88.0	100.0
Down Capture Ratio	94.7	100.0
Sharpe Ratio (geo)	0.5	0.6
Information Ratio (geo)	-0.3	
Tracking Error	3.2	0.0
Correlation	1.0	1.0

## Rolling Returns (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



— Morgan Stanley Inst International Eq I

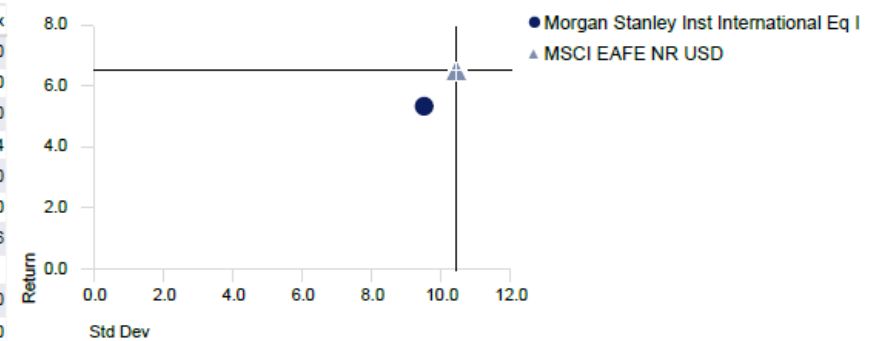
— MSCI EAFE NR USD

## Calendar Year Returns

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

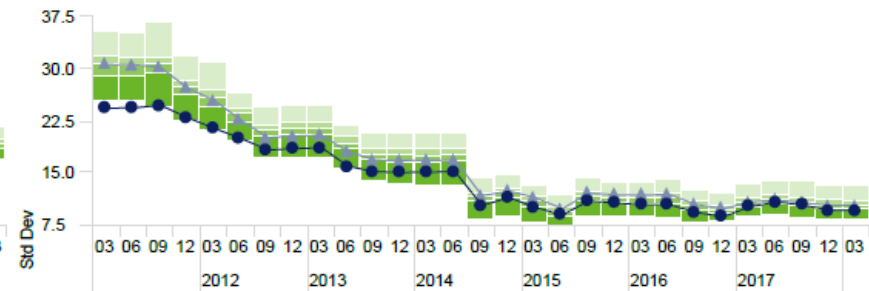
## Risk & Return Illustration (5 Years)

Time Period: 4/1/2013 to 3/31/2018



## Rolling Risk (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



— Morgan Stanley Inst International Eq I

— MSCI EAFE NR USD



Source: Morningstar

March 31, 2018

# GLOBEFLEX



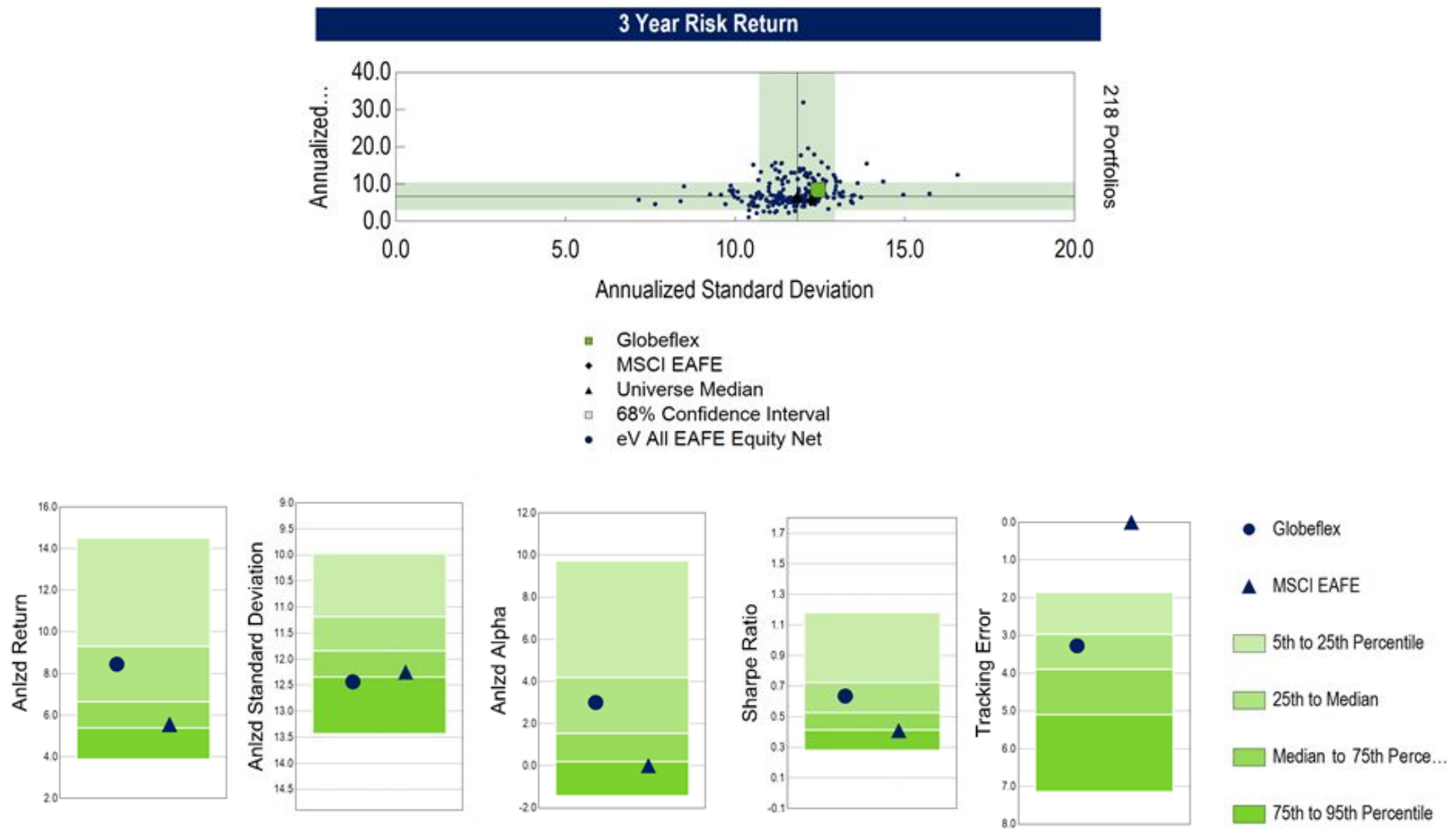
\*Returns are net of fees.



March 31, 2018



# GLOBEFLEX



\*Returns are net of fees.



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# GLOBEFLEX

Characteristics		
	Portfolio	MSCI EAFE
Number of Holdings	125	926
Weighted Avg. Market Cap. (\$B)	27.2	56.9
Median Market Cap. (\$B)	11.1	11.2
Price To Earnings	15.0	18.1
Price To Book	2.5	2.5
Price To Sales	1.6	2.2
Return on Equity (%)	21.5	14.2
Yield (%)	2.9	3.2
Beta		1.0
R-Squared		1.0

Top Positive Contributors		
	Relative Contribution %	Return %
EVRAZ	0.3%	39.1%
EXOR ORD	0.3%	15.7%
IPSEN	0.3%	29.8%
PLUS500	0.3%	42.6%
GKN	0.2%	50.3%
COCA-COLA HBC (CDI)	0.2%	12.9%
LOTTE CHEMICAL	0.2%	18.2%
ROYAL MAIL	0.2%	23.9%
SMURFIT KAPPA GROUP	0.1%	19.6%
SCREEN HOLDINGS	0.1%	13.3%

Top Negative Contributors		
	Relative Contribution %	Return %
SCANDIC HOTELS GROUP	-0.2%	-33.6%
SUBSEA 7	-0.2%	-15.1%
OMV	-0.2%	-8.3%
VALEO	-0.2%	-11.8%
MERCK KGAA	-0.1%	-11.0%
CENOVUS ENERGY	-0.1%	-6.7%
INDL.ALL.IN.& FINL.SVS.	-0.1%	-13.3%
DEUTSCHE LUFTHANSA	-0.1%	-13.5%
LONZA GROUP	-0.1%	-13.0%
OUTOKUMPU 'A'	-0.1%	-23.6%

Equity Sector Attribution								
	Attribution Effects				Returns		Ending Sector Weights	
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark
Energy	-0.1%	0.0%	0.0%	-0.1%	-4.3%	-1.8%	11.4%	5.3%
Materials	0.9%	0.6%	-0.1%	0.4%	2.9%	-3.7%	14.4%	8.0%
Industrials	0.1%	0.2%	0.0%	-0.1%	-1.5%	-1.4%	18.1%	14.6%
Consumer Discretionary	-0.3%	-0.1%	0.0%	-0.1%	-1.5%	0.6%	11.2%	12.6%
Consumer Staples	0.3%	1.2%	0.1%	-1.0%	7.8%	-2.9%	3.7%	11.0%
Health Care	0.2%	0.5%	0.0%	-0.3%	3.4%	-0.6%	8.5%	10.2%
Financials	0.6%	1.2%	0.0%	-0.5%	3.3%	-2.1%	15.4%	21.1%
Information Technology	0.2%	0.1%	0.0%	0.0%	1.7%	1.2%	8.0%	6.5%
Telecommunication Services	0.1%	0.1%	0.0%	0.1%	-2.1%	-3.9%	4.7%	3.8%
Utilities	0.0%	0.0%	0.0%	0.0%	2.7%	1.5%	2.5%	3.3%
Real Estate	-0.1%	-0.1%	0.0%	0.0%	-5.3%	-1.1%	2.0%	3.5%
Cash	0.0%	--	--	--	--	--	0.0%	0.0%
Portfolio	1.8%	=	3.5%	+	-0.1%	+	-1.7%	
					0.4%	-1.4%	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.



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# GLOBEFLEX

Country Allocation				
	Manager Ending Allocation (USD)	Index Ending Allocation (USD)	Manager Return (USD)	Index Return (USD)
<b>Americas</b>				
Canada	8.7%	0.0%	-2.3%	-7.4%
United States	0.5%	0.0%	-5.4%	-0.8%
<b>Total-Americas</b>	<b>9.3%</b>	<b>0.0%</b>	<b>-2.5%</b>	<b>--</b>
<b>Europe</b>				
Austria	2.1%	0.3%	-8.3%	2.2%
Denmark	0.7%	1.8%	6.5%	-1.1%
France	7.1%	10.9%	4.4%	0.5%
Germany	6.8%	9.6%	-8.1%	-3.5%
Ireland	0.3%	0.5%	15.1%	-5.7%
Italy	6.0%	2.5%	5.3%	5.5%
Netherlands	2.5%	3.7%	4.4%	1.0%
Norway	1.8%	0.7%	-5.4%	2.4%
Portugal	0.6%	0.2%	2.3%	3.1%
Spain	4.2%	3.2%	-0.1%	-1.7%
Sweden	1.1%	2.6%	-15.7%	-1.8%
Switzerland	1.5%	7.9%	-4.6%	-3.9%
United Kingdom	18.9%	17.4%	6.8%	-3.8%
<b>Total-Europe</b>	<b>53.7%</b>	<b>63.4%</b>	<b>1.5%</b>	<b>-1.8%</b>

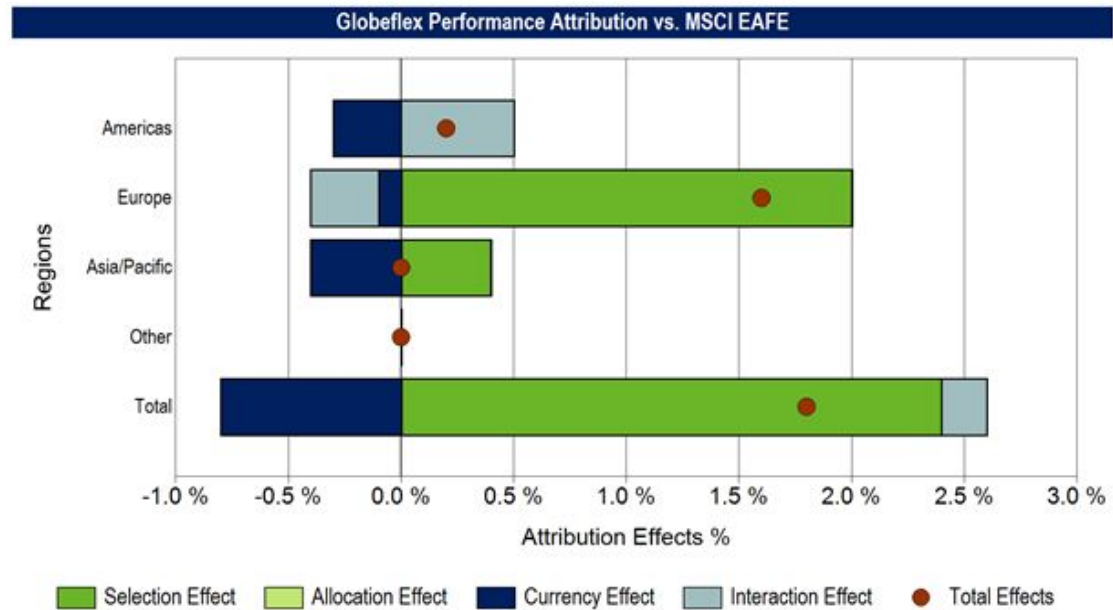
Country Allocation				
	Manager Ending Allocation (USD)	Index Ending Allocation (USD)	Manager Return (USD)	Index Return (USD)
<b>AsiaPacific</b>				
Australia	6.9%	6.6%	-5.1%	-6.1%
China*	0.3%	0.0%	--	--
Hong Kong	2.8%	3.6%	2.0%	-1.4%
Japan	20.6%	24.5%	0.3%	0.8%
Korea*	6.4%	0.0%	1.3%	-0.7%
<b>Total-AsiaPacific</b>	<b>37.0%</b>	<b>36.2%</b>	<b>-0.5%</b>	<b>-0.7%</b>
<b>Totals</b>				
Developed	93.3%	100.0%	0.3%	-1.4%
Emerging*	6.7%	0.0%	1.3%	--

\*Returns are net of fees.



March 31, 2018

# GLOBEFLEX



	Returns and Ending Weights				Attribution Effects				
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	Total Effects
<b>Totals</b>									
Americas	-2.5%	--	9.3%	0.0%	0.0%	0.0%	-0.3%	0.5%	0.2%
Europe	1.5%	-1.8%	53.7%	63.4%	2.0%	0.0%	-0.1%	-0.3%	1.6%
Asia/Pacific	-0.5%	-0.7%	37.0%	36.2%	0.4%	0.0%	-0.4%	0.0%	0.0%
Other	--	-5.3%	0.0%	0.5%	--	0.0%	0.0%	--	0.0%
<b>Total</b>	<b>0.4%</b>	<b>-1.4%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>2.4%</b>	<b>0.0%</b>	<b>-0.8%</b>	<b>0.2%</b>	<b>1.8%</b>
<b>Totals</b>									
Developed	0.3%	-1.4%	93.3%	100.0%	2.4%	0.0%	-0.8%	-0.2%	1.4%
Emerging*	1.3%	--	6.7%	0.0%	0.0%	0.0%	0.0%	0.3%	0.4%

\*Returns are net of fees.



March 31, 2018

# 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	—	1.29	0.30	0.99	1.29	0.30	0.99	1.16	-0.52	0.35
Consumer Discretionary	3.32	18.25	-14.93	-0.12	-0.25	0.13	-3.70	-1.36	0.18	0.27	-0.06	-0.04
Consumer Staples	6.31	6.94	-0.63	-0.59	0.10	-0.70	-8.13	1.38	-0.63	0.03	-0.68	0.02
Energy	—	2.17	-2.17	—	-0.03	0.03	—	-1.65	0.04	0.03	—	0.01
Etf	0.27	—	0.27	0.01	—	0.01	-0.86	—	0.00	0.01	—	-0.01
Financials	12.12	12.33	-0.21	0.00	0.23	-0.22	0.29	2.11	-0.23	0.00	-0.13	-0.10
Health Care	20.53	6.48	14.05	0.83	0.44	0.40	3.71	7.29	0.29	0.95	-0.78	0.11
Industrials	29.21	20.46	8.75	-0.30	-0.45	0.15	-1.23	-2.24	0.08	-0.22	0.30	-0.00
Information Technology	9.63	10.20	-0.57	-0.01	0.32	-0.34	0.46	3.28	-0.32	-0.00	-0.37	0.05
Materials	7.52	9.45	-1.93	0.85	-0.13	0.98	10.45	-1.50	1.01	0.02	0.77	0.22
Real Estate	2.87	10.53	-7.66	-0.24	0.12	-0.36	-8.37	1.13	-0.34	-0.09	-0.26	0.01
Telecommunication Service	—	1.29	-1.29	—	-0.08	0.08	—	-6.32	0.09	0.07	—	0.02
Utilities	8.22	1.90	6.33	0.84	0.02	0.82	11.03	1.02	0.83	0.09	0.68	0.06



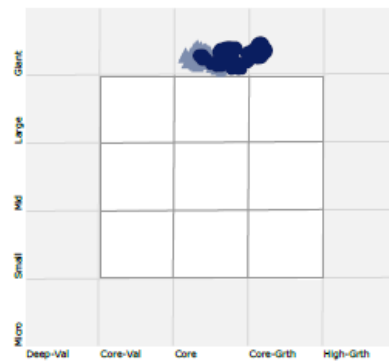
Source: Kabouter

March 31, 2018

# ABERDEEN EMERGING MARKET EQUITY

## Holdings Based Style Trail (5 Years)

Time Period: 4/30/2013 to 3/31/2018



Aberdeen Emerging Markets Instl MSCI EM NR USD

## Portfolio Statistics

	Fund	Index
# of Holdings	63	845
% Asset in Top 10 Holdings	34.2	24.8
Turnover Ratio %	16.6	
P/E Ratio	17.4	14.3
P/B Ratio	2.5	1.7
LT Earn Growth	14.8	15.8
Hist Earn Growth	7.5	-9.5
12 Mo Yield	1.4	

## Market Capitalization Breakdown

	Fund	Index
Market Cap Giant %	61.1	58.2
Market Cap Large %	26.5	31.2
Market Cap Mid %	12.4	10.0
Market Cap Small %	0.0	0.7
Market Cap Micro %	0.0	0.0
Average Market Cap	36,680.9	34,882.4
Equity Region Developed %	21.6	28.7
Equity Region Emerging %	78.4	71.3

## Top Ten Holdings

	Port Weight %	3 Month Return
Samsung Electronics Co Ltd Participating Preferred	6.00	-1.12
Tencent Holdings Ltd	5.58	0.49
Taiwan Semiconductor Manufacturing Co Ltd	4.75	9.40
Housing Development Finance Corp Ltd	3.77	4.65
Bank Bradesco SAADR	3.05	16.13
AIA Group Ltd	2.57	-0.77
China Mobile Ltd	2.17	-9.57
PT Astra International Tbk	2.16	-13.33
Siam Cement PCL Shs Foreign Registered	2.15	6.35
Vale SAADR	2.04	5.24

## Sector Attribution (Quarter)

	Portfolio Weights	Benchmark Weights	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Active Return
Consumer Discretionary	12.59	9.96	1.14	-6.10	-0.19	0.93	0.74
Consumer Staples	15.81	6.41	-4.44	-0.82	-0.25	-0.58	-0.83
Energy	3.07	5.93	3.82	6.69	-0.14	-0.09	-0.23
Financials	26.53	24.00	3.61	4.25	0.08	-0.17	-0.09
Health Care	0.94	2.70	-20.37	7.07	-0.10	-0.28	-0.38
Industrials	2.79	5.16	3.13	-0.62	0.05	0.11	0.15
Information Technology	18.87	27.54	1.81	2.04	-0.04	-0.05	-0.09
Materials	8.98	7.40	-5.27	0.74	-0.01	-0.55	-0.57
Real Estate	5.31	2.68	-1.93	-0.41	-0.03	-0.09	-0.12
Telecommunication Services	3.66	4.68	-7.93	-3.53	0.04	-0.17	-0.12
Utilities	0.00	2.37		2.88	-0.04	0.00	-0.04
Attribution Total	98.55	98.82	-0.19	1.38	-0.63	-0.94	-1.58
Cash	1.32	0.00					
Other	0.00	0.09					
Missing Performance	0.13	1.09					
Total	100.00	100.00					

## Region Attribution (Quarter)

	Portfolio Weights	Benchmark Weights	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Active Return
Africa	3.89	6.90	12.48	-2.79	0.12	0.60	0.71
Asia - Developed	20.08	26.74	0.55	1.98	-0.07	-0.28	-0.36
Asia - Emerging	45.70	46.20	-0.56	0.11	-0.01	-0.31	-0.32
Europe - Emerging	6.94	5.27	-8.14	0.59	0.00	-0.66	-0.65
Europe - ex Euro	0.00	0.02		-8.76	0.00	0.00	0.00
Eurozone	1.07	0.40	-6.37	-7.37	-0.06	0.01	-0.05
Latin America	19.91	12.05	1.11	8.09	0.53	-1.38	-0.85
Middle East	0.00	1.17		1.21	0.00	0.00	0.00
United Kingdom	0.96	0.00	-4.29		-0.05	0.00	-0.05
United States	0.00	0.07		14.91	-0.01	0.00	-0.01
Attribution Total	98.55	98.82	-0.19	1.38	0.44	-2.02	-1.58
Cash	1.32	0.00					
Other	0.00	0.09					
Missing Performance	0.13	1.09					
Total	100.00	100.00					



Source: Morningstar

March 31, 2018

# ABERDEEN EMERGING MARKET EQUITY

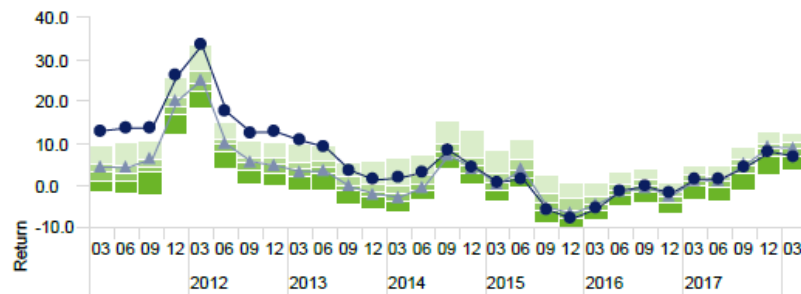
## Risk & Return Characteristics (5 Years)

Time Period: 4/1/2013 to 3/31/2018

	Fund	Index
R2	89.7	100.0
Alpha	-1.8	0.0
Beta	0.9	1.0
Std Dev	12.7	13.6
Up Capture Ratio	79.9	100.0
Down Capture Ratio	96.8	100.0
Sharpe Ratio (geo)	0.2	0.3
Information Ratio (geo)	-0.5	0.0
Tracking Error	4.4	0.0
Correlation	0.9	1.0

## Rolling Returns (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



— Aberdeen Emerging Markets Instl

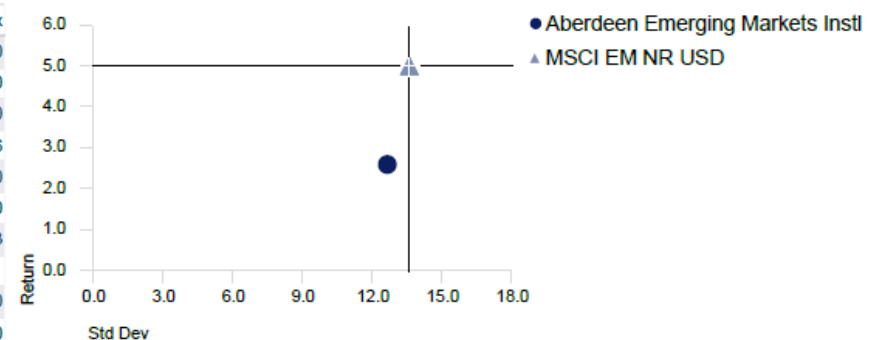
— MSCI EM NR USD

## Calendar Year Returns

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

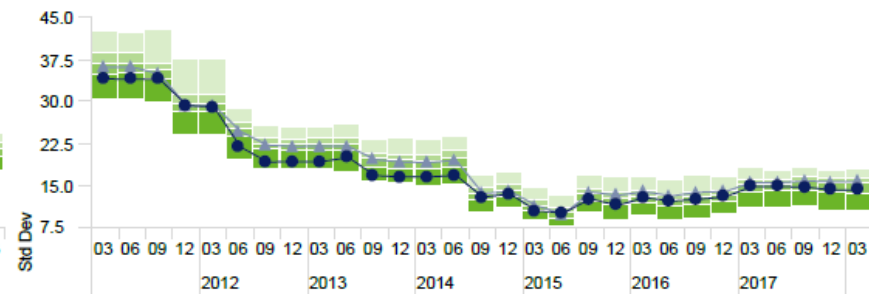
## Risk & Return Illustration (5 Years)

Time Period: 4/1/2013 to 3/31/2018



## Rolling Risk (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



— Aberdeen Emerging Markets Instl

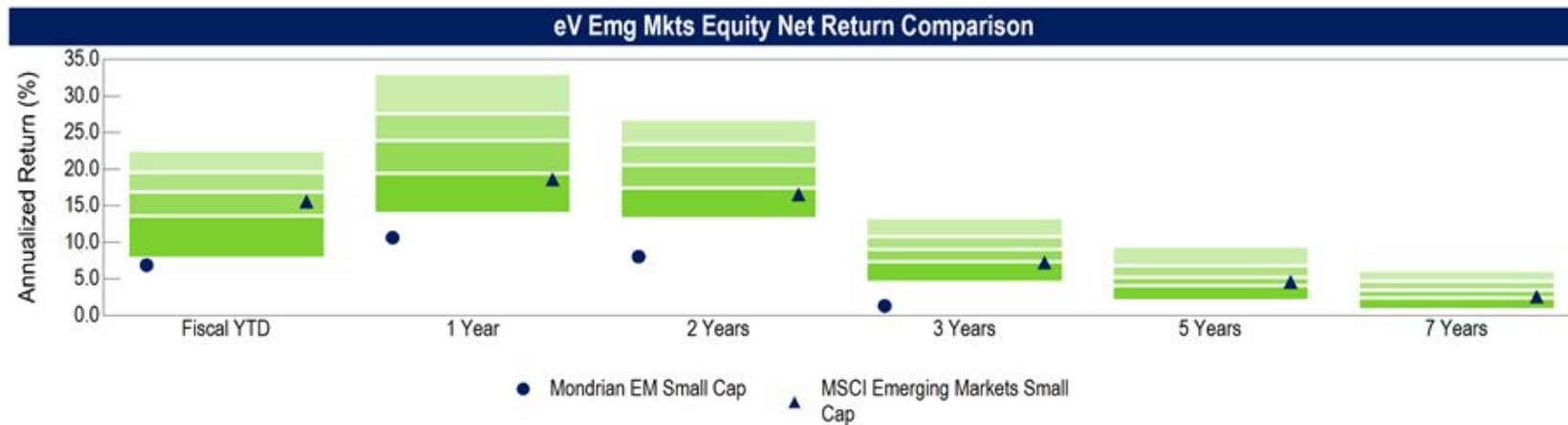
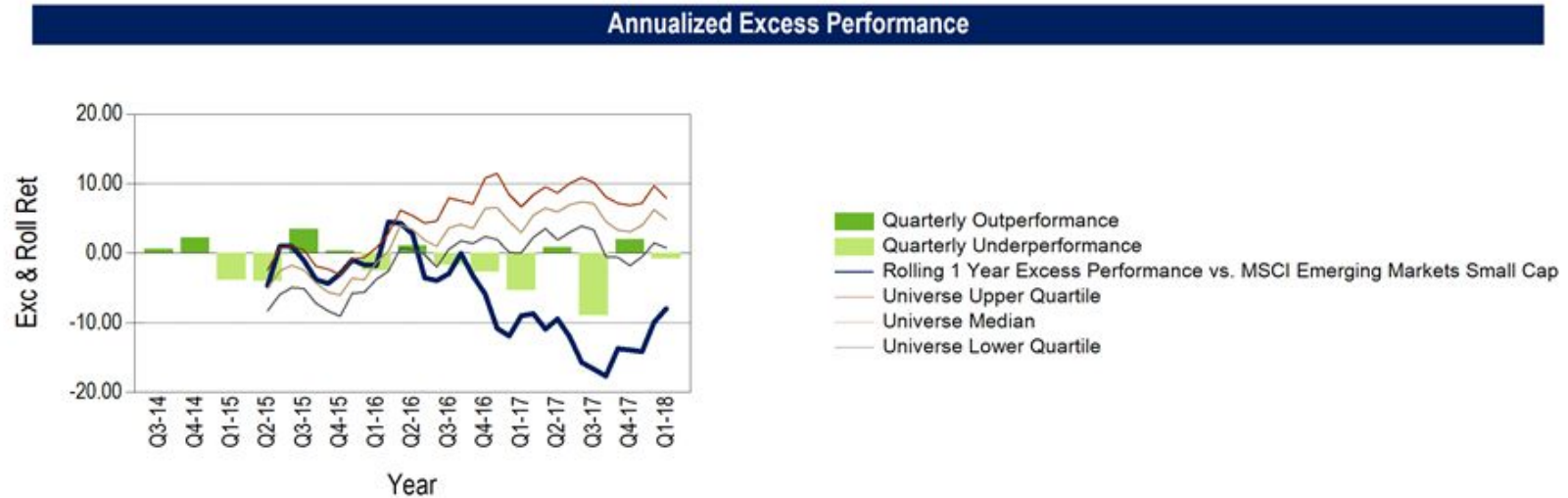
— MSCI EM NR USD



Source: Morningstar

March 31, 2018

# MONDRIAN EM SMALL CAP

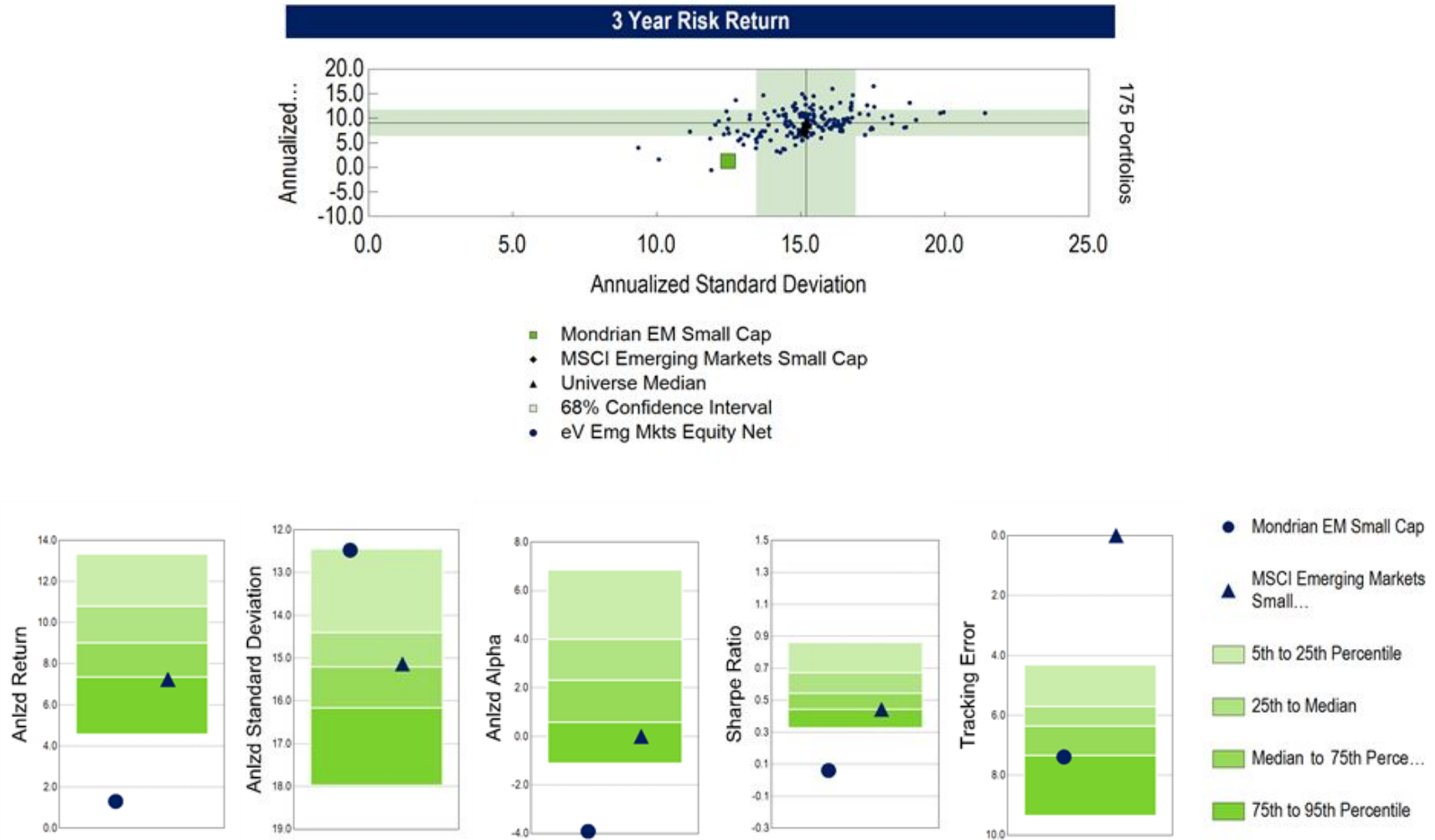


\*Returns are net of fees.



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# MONDRIAN EM SMALL CAP



\*Returns are net of fees.



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# MONDRIAN EM SMALL CAP

## Sector Allocation

	Fund	MSCI EM SC
Consumer Discretionary	15.3	16.7
Consumer Staples	16.0	6.9
Energy	1.8	2.2
Financials	2.1	8.8
Health Care	22.1	9.5
Industrials	14.7	14.1
Information Technology	6.2	16.5
Materials	8.8	11.7
Real Estate	8.1	8.9
Telecommunication Services	-	0.9
Utilities	3.5	3.8
Cash	1.4	-
<b>TOTAL</b>	<b>100.0</b>	<b>100.0</b>

## Country Allocation

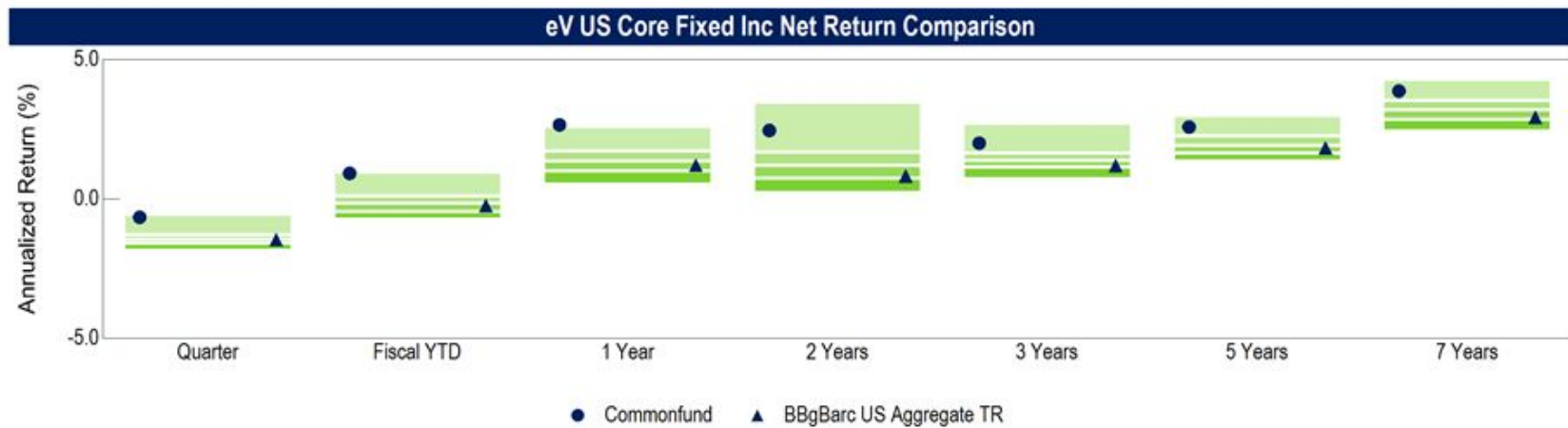
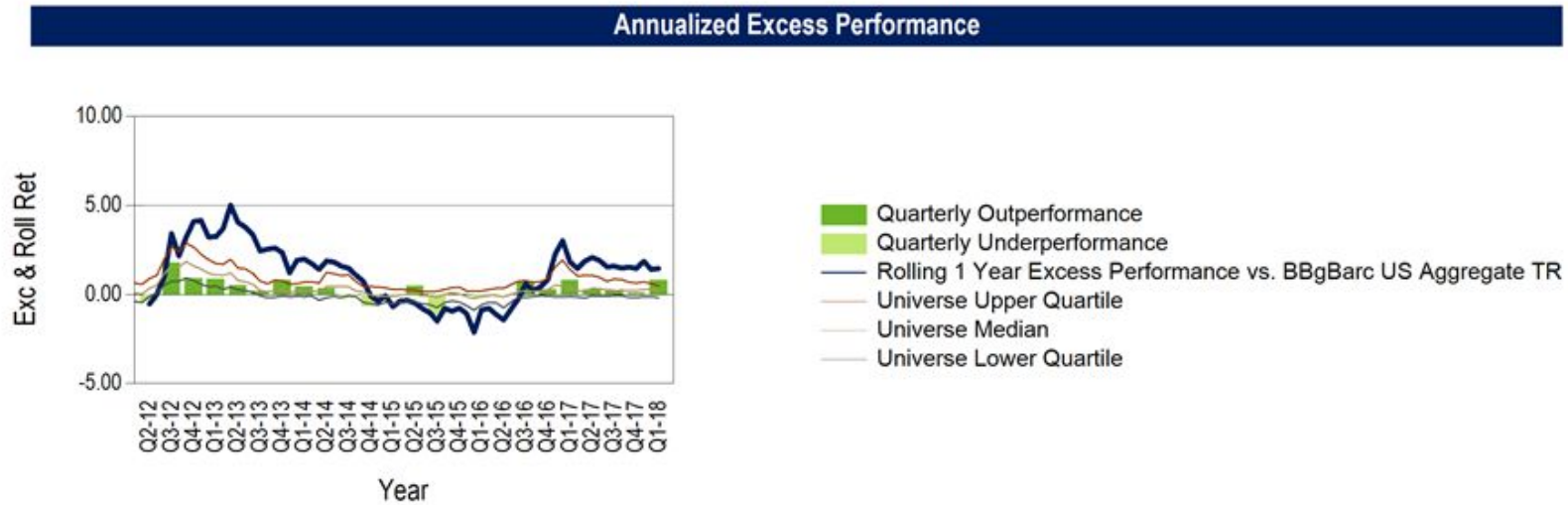
	Fund	MSCI EM SC
<b>Latin America</b>	<b>10.9</b>	<b>10.1</b>
Brazil	3.1	5.6
Mexico	5.6	2.8
Peru	2.2	0.2
<b>Europe, Middle East &amp; Africa</b>	<b>7.9</b>	<b>10.9</b>
Kuwait	1.2	-
Poland	2.8	0.9
Saudi Arabia	1.7	-
South Africa	2.2	5.6
<b>Pacific-Asia</b>	<b>79.8</b>	<b>79.0</b>
<b>North Asia</b>	<b>32.3</b>	<b>54.8</b>
China/Hong Kong	17.9	20.2
South Korea	6.6	17.0
Taiwan	7.8	17.6
<b>South Asia</b>	<b>47.5</b>	<b>23.4</b>
India	25.4	13.3
Indonesia	7.9	2.3
Malaysia	6.5	3.3
Philippines	4.3	0.9
Thailand	3.4	3.6
Cash	1.4	-
<b>TOTAL</b>	<b>100.0</b>	<b>100.0</b>



Source: Mondrian

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# COMMONFUND

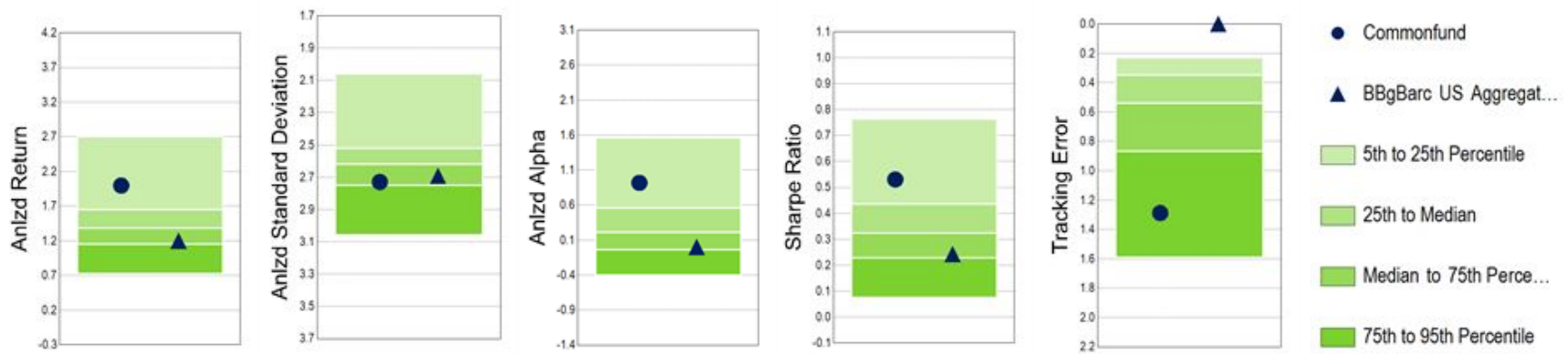


\*Returns are net of fees.



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# COMMONFUND

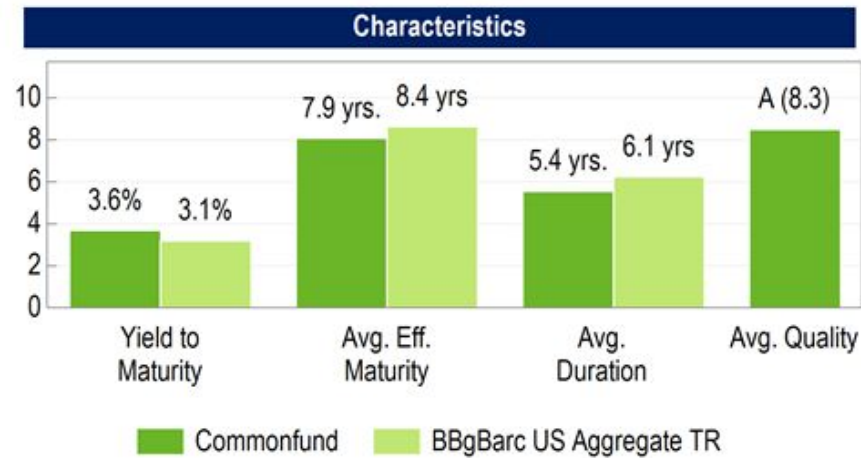


\*Returns are net of fees.



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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		X	
Direct Trading (Treasury Futures)			X
Income Research & Management (IRM)	X		
Other (Iceland)			X
PIMCO			X
Rimrock Capital Management	X		
Rimrock Capital Management			X
Sit Investment Associates			X
Western Asset Management Company (WAMCO)	X		



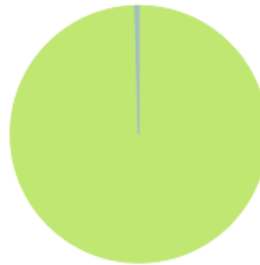
Source: Commonfund

March 31, 2018

# VANGUARD INFLATION PROTECTED SECURITIES

## Asset Allocation

Portfolio Date: 2/28/2018



• Stock	0.0
• Bond	99.6
• Cash	0.0
• Other	0.4
<b>Total</b>	<b>100.0</b>

## Fixed Income Statistics

Portfolio Date: 2/28/2018

Morningstar Fixed Income Style Box™			
			High
			Med
			Low
Ltd	Mod	Ext	

## Fixed-Income Stats

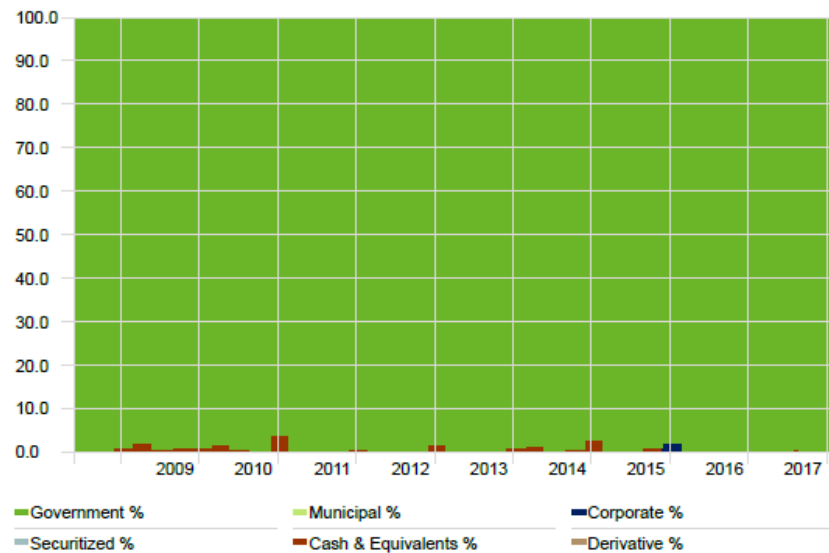
Average Eff Duration	7.5
Average Eff Maturity	8.2
Average Coupon	0.8
Average Price	112.3
Average Credit Quality	AAA

## Credit Quality Breakdown

Portfolio Date: 2/28/2018

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

## Historical Sector Allocations (10 Years)



## Top Holdings

	Detail Holding Type	Portfolio Weighting %
US Treasury Note	BOND - GOV'T INFLATION PROTECTED	5.38
US Treasury Note	BOND - GOV'T INFLATION PROTECTED	4.70
US Treasury Note	BOND - GOV'T INFLATION PROTECTED	4.10
US Treasury Note	BOND - GOV'T INFLATION PROTECTED	3.80
US Treasury Note	BOND - GOV'T INFLATION PROTECTED	3.79
US Treasury Note	BOND - GOV'T INFLATION PROTECTED	3.78
US Treasury Note	BOND - GOV'T INFLATION PROTECTED	3.73
US Treasury TIP	BOND - GOV'T INFLATION PROTECTED	3.71
US Treasury Note	BOND - GOV'T INFLATION PROTECTED	3.69
US Treasury Note	BOND - GOV'T INFLATION PROTECTED	3.65



Source: Morningstar

March 31, 2018

# VANGUARD INFLATION PROTECTED SECURITIES

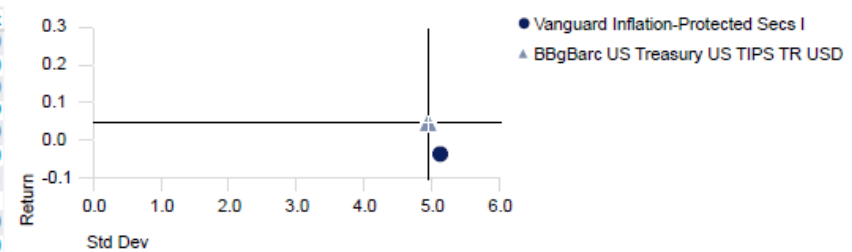
## Risk & Return Characteristics (5 Years)

Time Period: 4/1/2013 to 3/31/2018

	Fund	Index
R2	99.6	100.0
Alpha	-0.1	0.0
Beta	1.0	1.0
Std Dev	5.1	4.9
Up Capture Ratio	101.9	100.0
Down Capture Ratio	104.2	100.0
Sharpe Ratio (geo)	-0.1	-0.1
Information Ratio (geo)	-0.2	
Tracking Error	0.4	0.0
Correlation	1.0	1.0

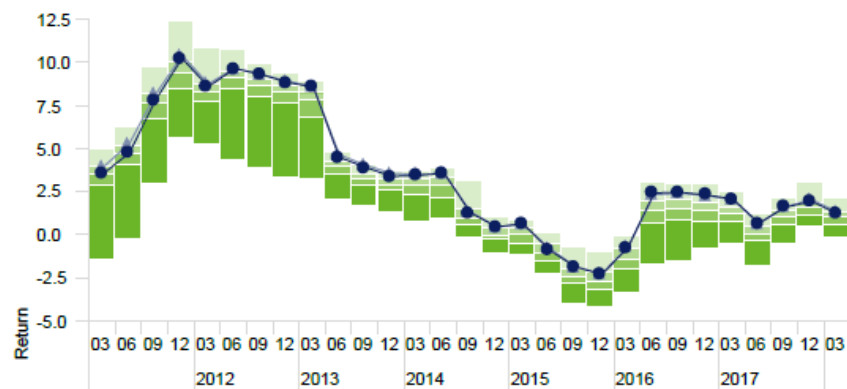
## Risk & Return Illustration (5 Years)

Time Period: 4/1/2013 to 3/31/2018



## Rolling Returns (3 Years)

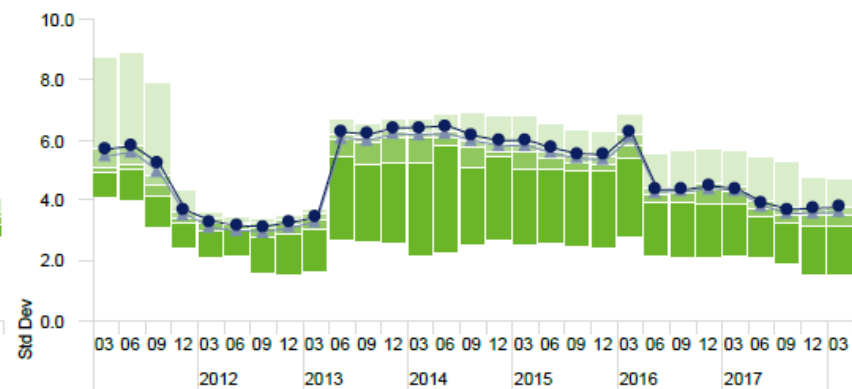
Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



—Vanguard Inflation-Protected Secs I —BBgBarc US Treasury US TIPS TR USD

## Rolling Risk (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



—Vanguard Inflation-Protected Secs I —BBgBarc US Treasury US TIPS TR USD

## Calendar Year Returns

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



Source: Morningstar

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# GUGGENHEIM US BANK LOANS

## Characteristics

	US Bank Loans Composite	Credit Suisse Leveraged Loan Index
Effective Duration	0.15 years	0.14 years
Average Coupon	5.06%	5.45%
Average Market Price	\$99.35	\$99.00
Average YTM	5.84%	6.51%
Average YTW	2.90%	3.22%
Average OAS	272	332
Average Credit Quality <sup>2</sup>	B+	B
WAL to Worst	1.05 years	1.15 years
No. of Issuers	236	1247

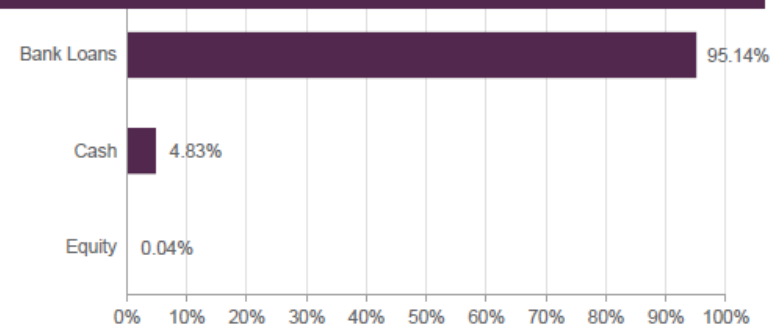
## Performance & Risk Analysis (Since Inception)

	US Bank Loans Composite (Gross)	Credit Suisse Leveraged Loan Index
Annualized Return	6.93%	5.15%
Excess Return	1.77%	–
Standard Deviation	4.94%	6.23%
Correlation	0.97	1
Information Ratio	0.94	–
Sharpe Ratio	1.17	0.65

## Industry Allocation

	Guggenheim	Index
Banking	0.00%	0.01%
Basic Industry	3.80%	5.03%
Brokerage	0.78%	1.03%
Capital Goods	10.74%	9.47%
Communications	8.43%	13.40%
Consumer Cyclical	20.58%	19.51%
Consumer Non Cyclical	22.86%	17.45%
Electric	2.77%	2.82%
Energy	0.73%	2.87%
Finance Companies	2.18%	2.58%
Insurance	1.80%	2.44%
Other Financials	0.61%	1.65%
Other Industry	1.29%	3.20%
Technology	17.75%	15.54%
Transportation	0.81%	1.76%
Cash	4.83%	0.00%
Other <sup>3</sup>	0.03%	1.24%

## Asset Class Allocation

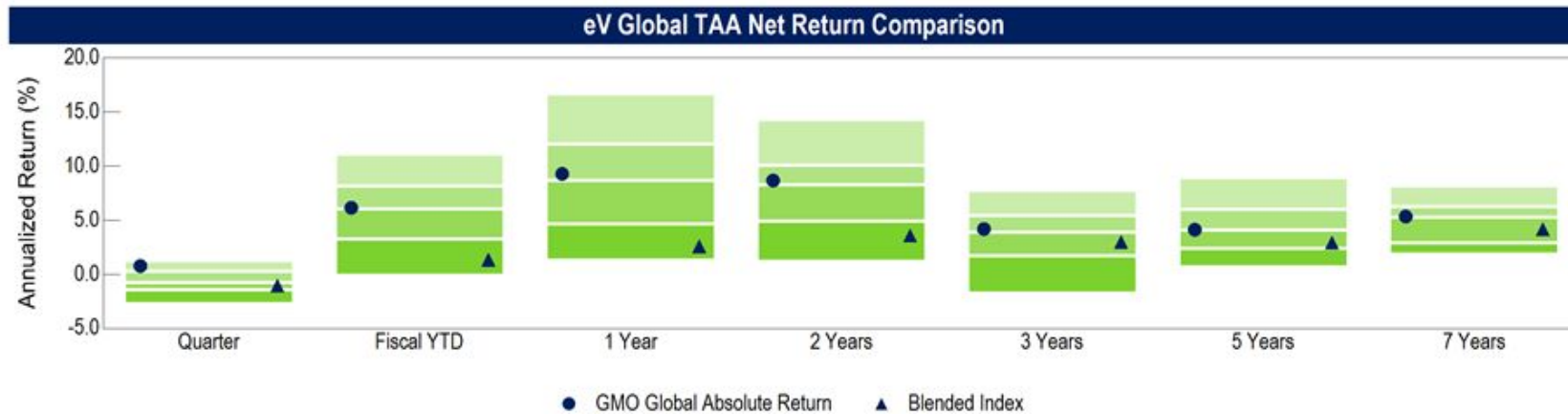
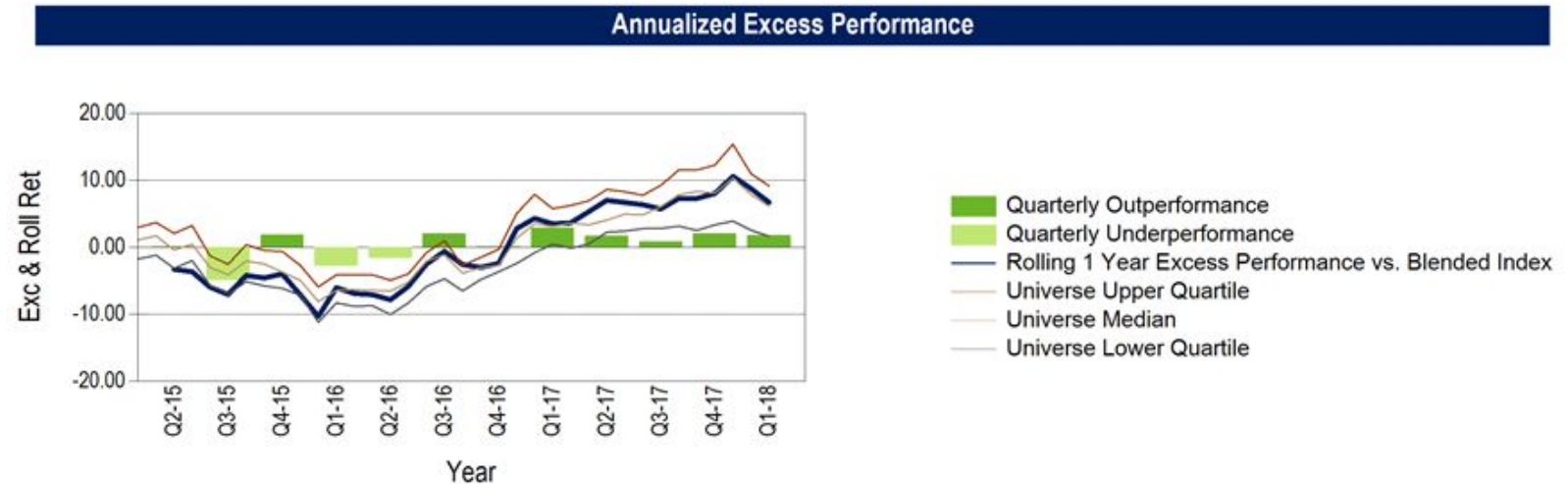


Source: Guggenheim

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# GMO GLOBAL ABSOLUTE RETURN



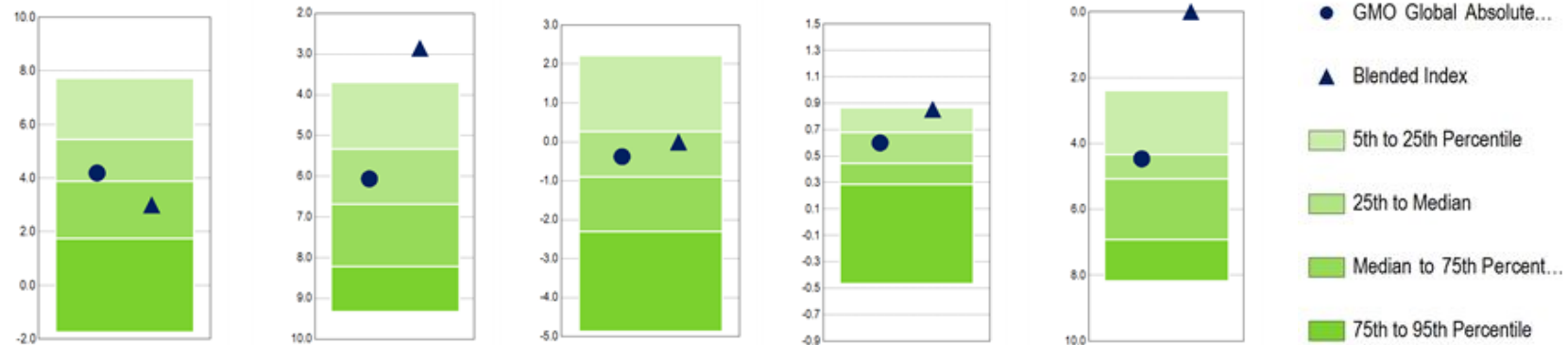
\*Returns are net of fees.

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



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# GMO GLOBAL ABSOLUTE RETURN



\*Returns are net of fees.

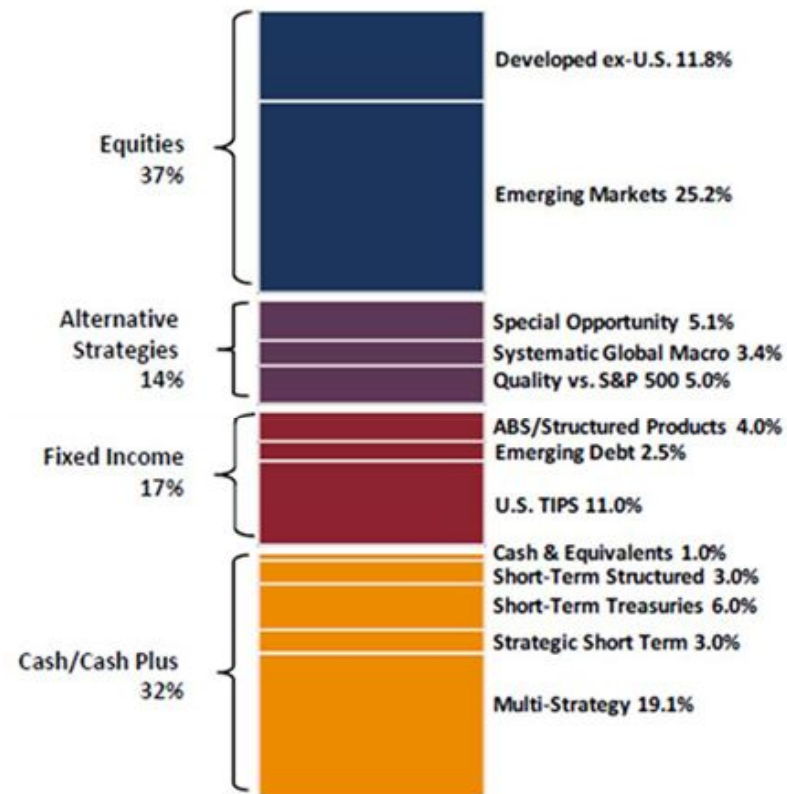
\*Blended Index: 40% BC Aggregate, 30% BC U.S. TIPS 1-10YR, 10% S&P 500, 10% BC High Yield, 10% JPM EMBI+



March 31, 2018

# GMO GLOBAL ABSOLUTE RETURN

## Strategy Composition

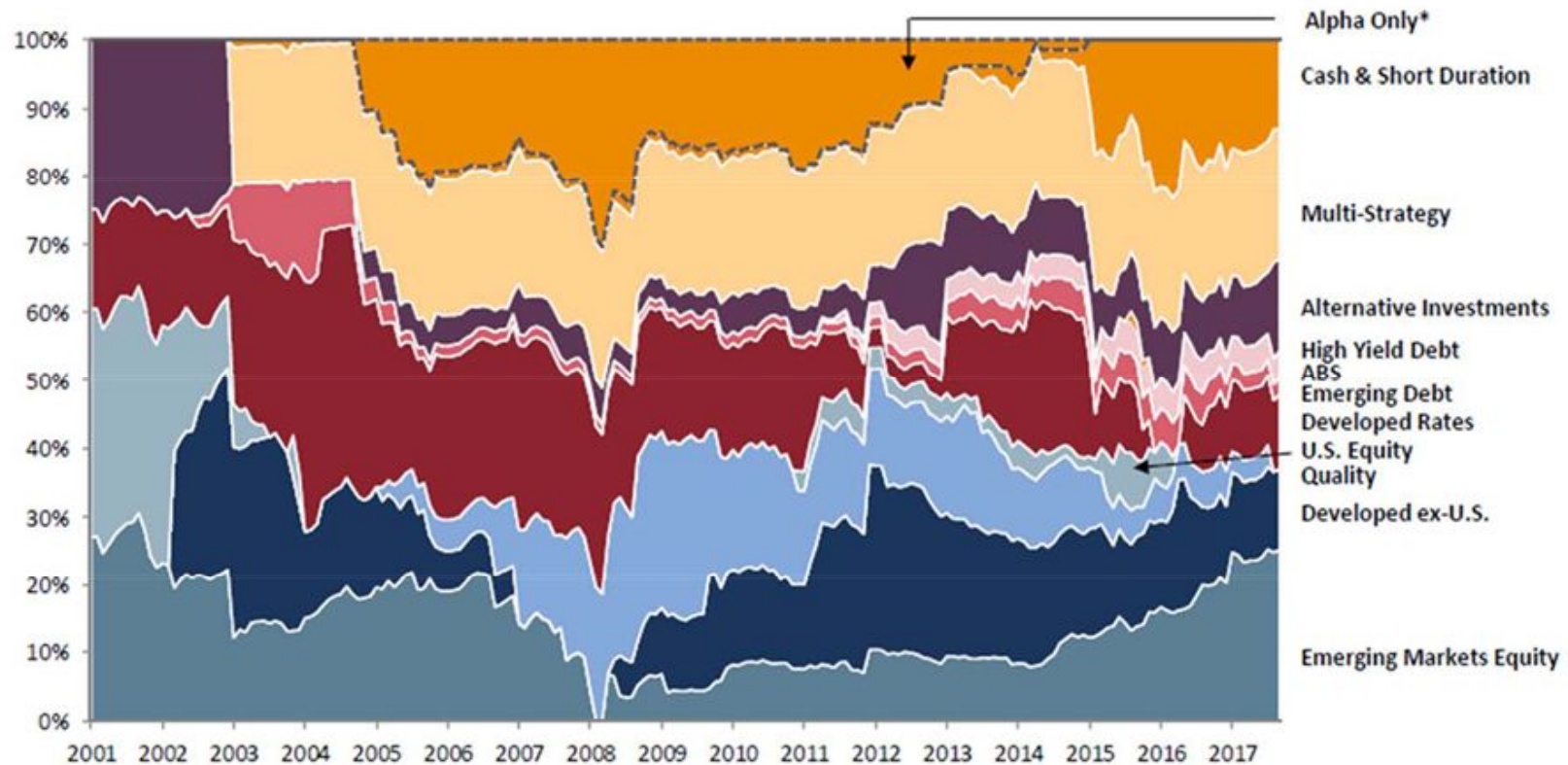


Source: GMO

March 31, 2018

# GMO GLOBAL ABSOLUTE RETURN

## Allocation History

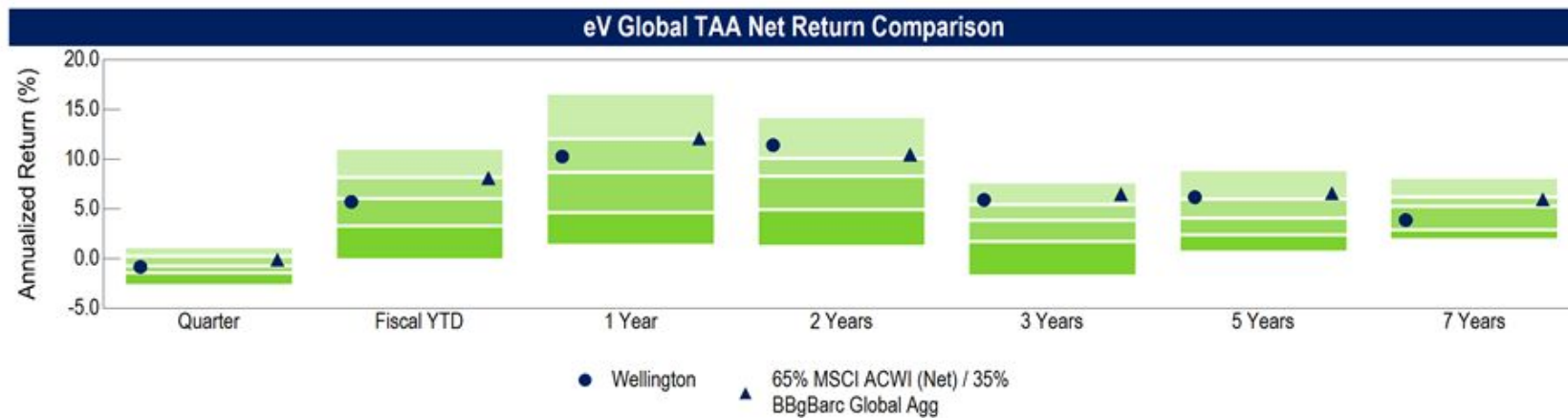
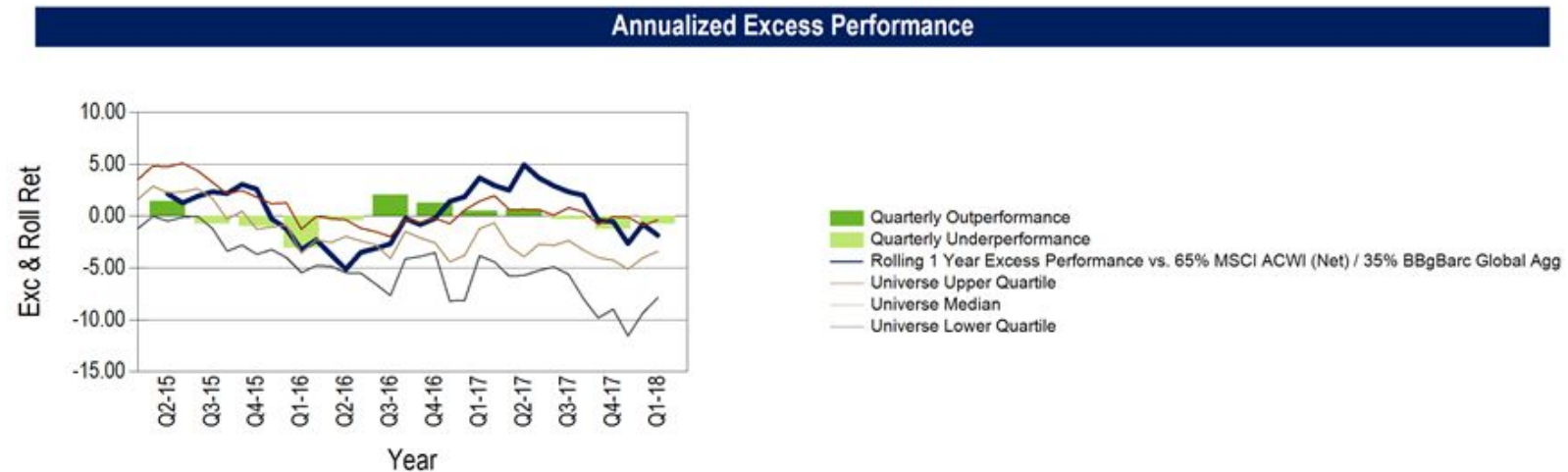


Source: GMO



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# WELLINGTON OPPORTUNISTIC

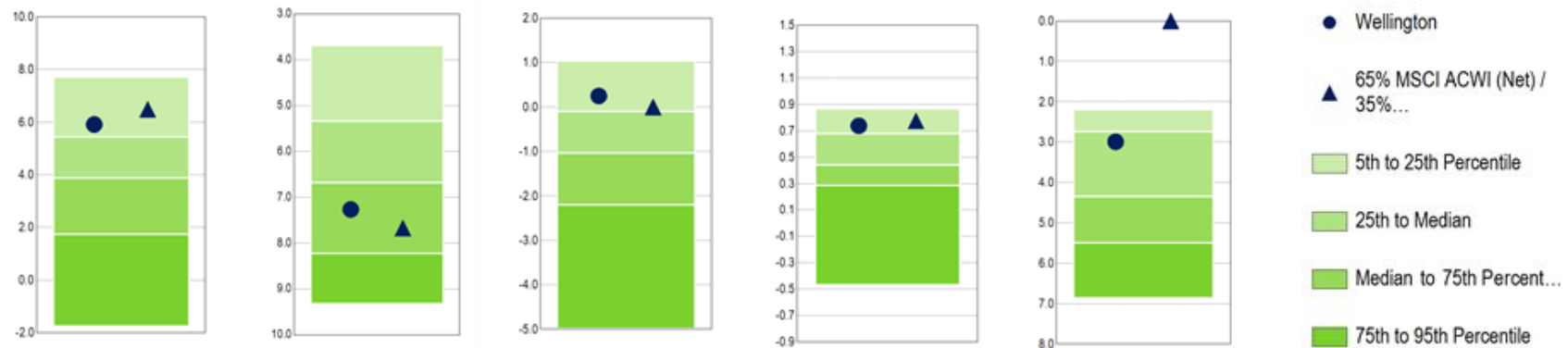


\*Returns are net of fees.



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# WELLINGTON OPPORTUNISTIC



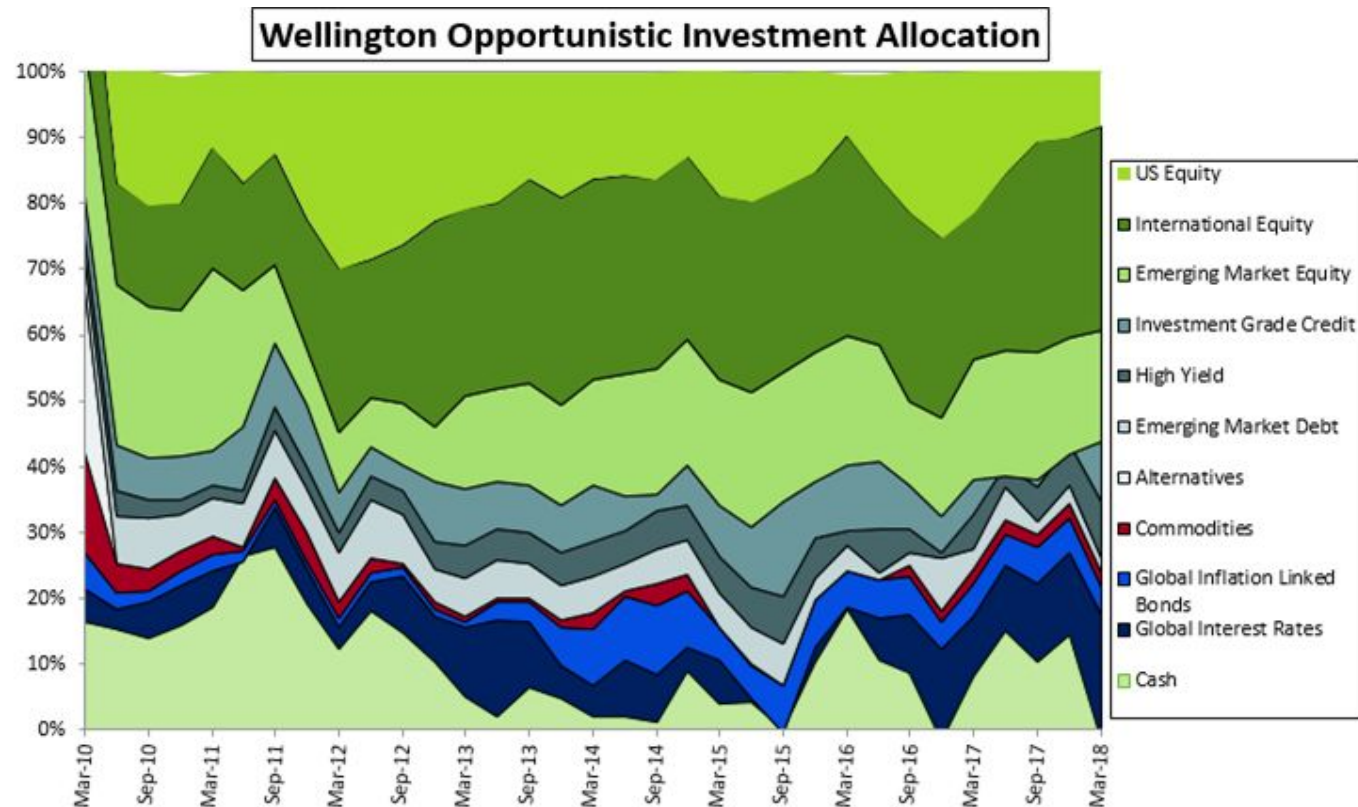
\*Returns are net of fees.



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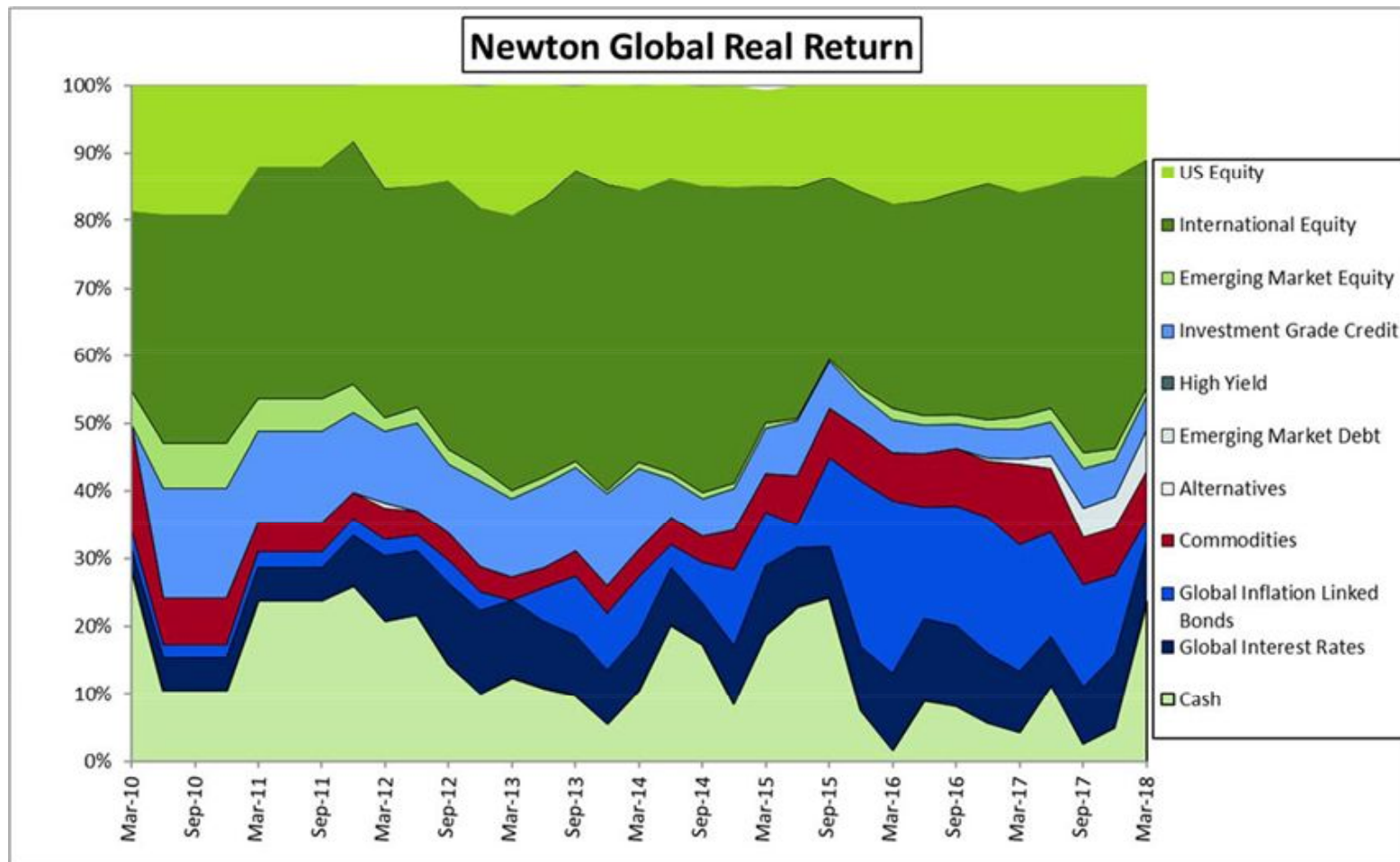
# WELLINGTON OPPORTUNISTIC



Source: Wellington

March 31, 2018

# NEWTON GLOBAL REAL RETURN



Source: Newton

March 31, 2018



# ENTRUSTPERMAL FIXED INCOME HOLDINGS

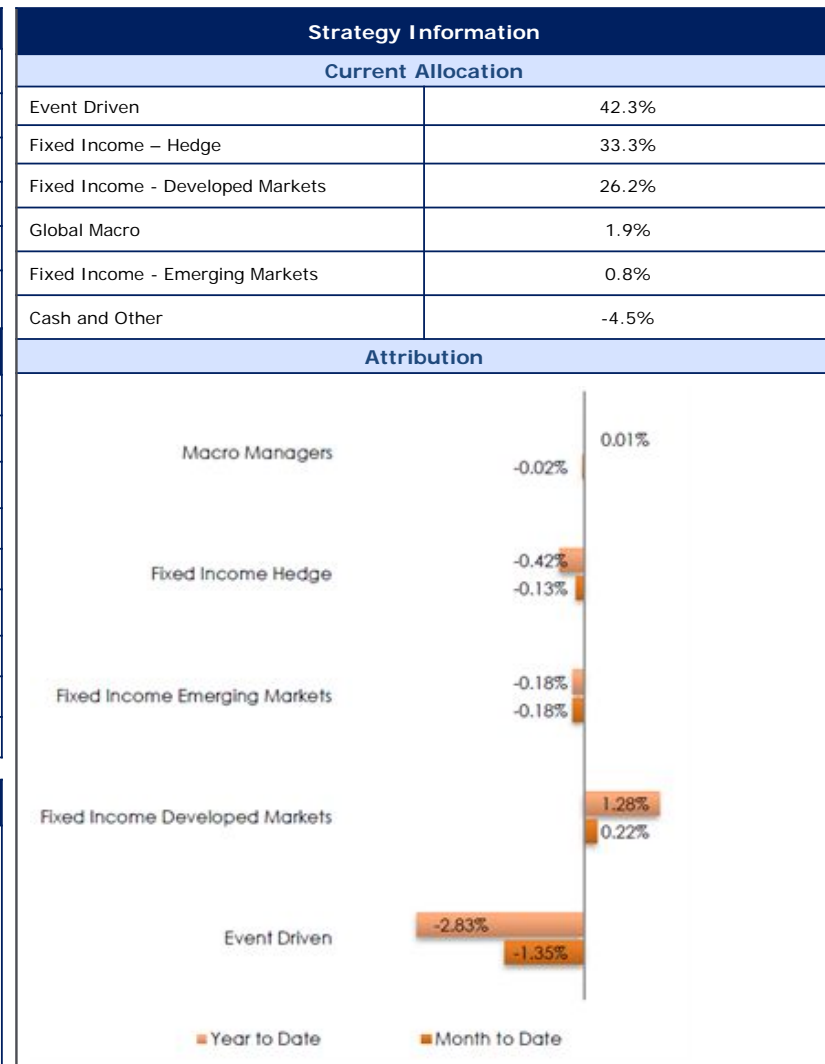


March 31, 2018

# ENTRUSTPERMAL FIXED INCOME HOLDINGS

General Fund Information			
Fund Name	EnTrustPermal Fixed Income Holdings		
Management Company	EnTrustPermal		
Location	New York, NY		
Firm AUM	\$20.9 Billion	Strategy	Fund of Fund
Strategy AUM	\$522.9 Million	Sub-Strategy	Multi-Strategy
Portfolio Managers	Robert Kaplan, Clark Fenton, Javier Dyer	Direct or FOF	FOF
Terms			
Share Class	-		
Minimum Investment	\$1 million		
Management Fee	0.95%		
Incentive Fee	None		
Hurdle Rate	None		
High Water Mark	None		
Subscription	Monthly		
Redemption	Monthly with 20 days		
Lock-Up	None		

Investment Strategy
<p>Permal Fixed Income Holdings features a performance-oriented investment philosophy that employs a unique combination of fixed-income spread strategies, opportunistic bets on events, and nimble, liquid macro strategies. It is positioned as both a performance enhancer and a good diversifier to a core hedge fund allocation</p>



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



March 31, 2018

# LIGHTHOUSE GLOBAL LONG/SHORT



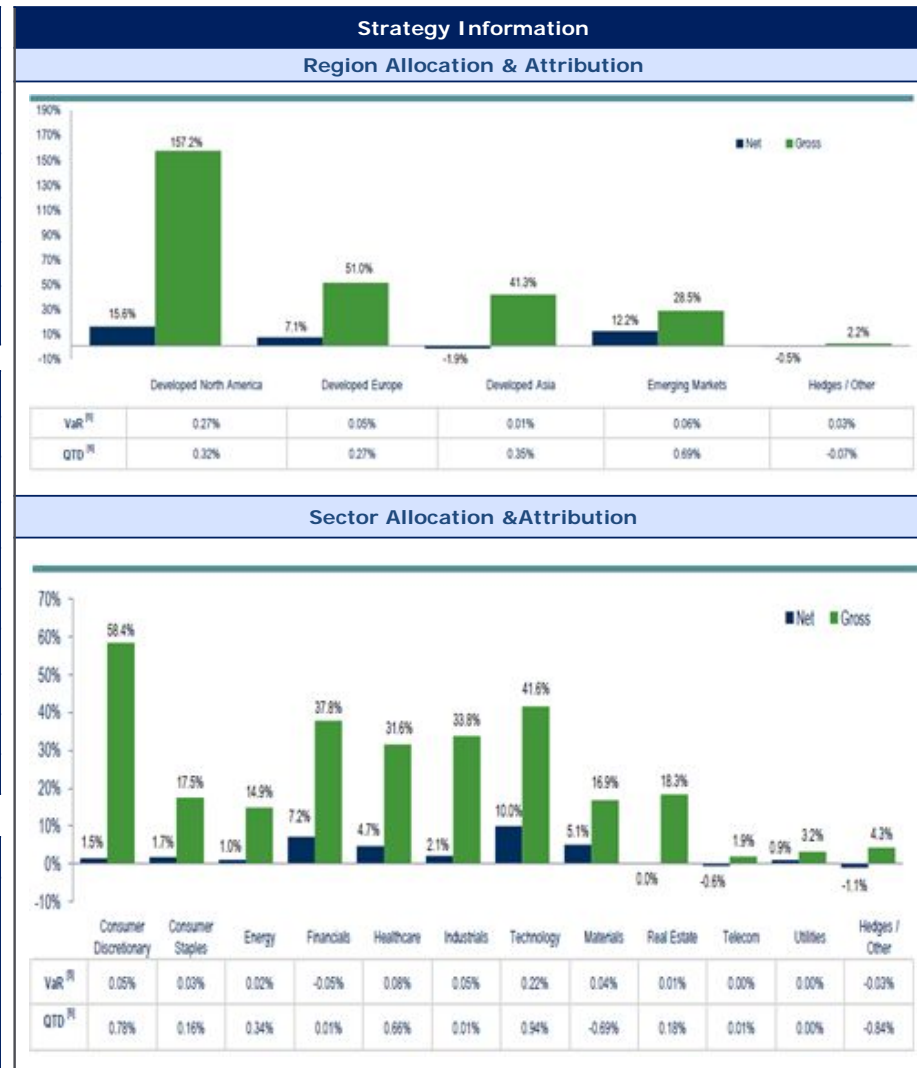
March 31, 2018

# LIGHTHOUSE GLOBAL LONG/SHORT

General Fund Information			
Fund Name	Lighthouse Global Long/Short Fund		
Management Company	Lighthouse Investment Partners, LLC		
Location	Palm Beach, FL		
Firm AUM	\$10.6 billion	Strategy	Fund of Fund
Strategy AUM	\$1.9 billion	Sub-Strategy	Long/Short Equity
Portfolio Managers	Ethan Baron	Direct or FOF	FOF

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

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



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

March 31, 2018

# JOHN HANCOCK TIMBER

## INVESTMENTS

Investments								
<u>Property</u>	<u>Location</u>	<u>Acquisition date</u>	<u>Acres</u>	<u>Independent appraisals</u>		<u>Book value</u>	<u>Fair market value</u>	<u>Unrealized appreciation (depreciation)</u>
				<u>Last</u>	<u>Next</u>			
Pinchot	WA	10/31/05	640	Dec-16	NA	460,765	2,060,000	1,599,235
Plum Grove	PA/NY	10/31/05	15,205	Dec-16	NA	45,097,342	40,925,855	(4,171,487)
Tyler	TX	10/31/05	86,759	Dec-17	Dec-18	76,284,320	165,757,809	89,473,489
<b>Total equity real estate</b>			<b>102,604</b>			<b>\$ 121,842,427</b>	<b>\$ 208,743,664</b>	<b>\$ 86,901,237</b>
Other investments								
		<u>Acquisition date</u>						
Red River Timberlands Company *	LA, TX	4/1/08	119,241	Dec-17	Dec-18	110,552,895	128,381,357	17,828,462
<b>Total other investments</b>			<b>119,241</b>			<b>\$ 110,552,895</b>	<b>\$ 128,381,357</b>	<b>\$ 17,828,462</b>

## INVESTMENT REGIONS

### Hancock Timber Resource Group Total Assets Under Management by Geographical Location As of March 31, 2018

<u>Property Count</u>	<u>NCREIF Region</u>	<u>Real Estate Market Value</u>	<u>Market Value (%)</u>	<u>Acres</u>	<u>Acres (%)</u>
2	Northeast	\$ 173,425,855	1.6%	58,155	1%
3	Lake States	266,159,122	2.4%	441,288	7%
36	Pacific Northwest	2,689,298,977	24.4%	1,236,679	21%
31	Southeast	1,338,320,076	12.2%	728,686	12%
21	Southwest	2,319,874,894	21.1%	1,272,329	21%
9	Non - U.S.A	4,226,119,090	38.4%	2,263,931	38%
102		\$ 11,013,198,014	100.0%	6,001,068	100%



Source: Hancock

March 31, 2018

# LANDMARK EQUITY PARTNERS XV

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

GP Fees, Promote and Commitment	
Preferred Return	<ul style="list-style-type: none"> <li>8% per annum</li> </ul>
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"> <li>1% of aggregate commitments</li> </ul>
Carried Interest	<ul style="list-style-type: none"> <li>10% on secondary investments only</li> </ul>



Fund Strategy			
Investment Strategy	<ul style="list-style-type: none"> <li>Landmark XV's primary objective is to acquire interests in private equity investments through secondary transactions.</li> <li>Landmark will build a diversified portfolio of private equity partnership interests diversified by strategy, geography and vintage year.</li> <li>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.</li> </ul>		
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"> <li>Reactive deal flow is attributed to inbound leads from limited partners, general partners and intermediaries - generally in the form of an auction.</li> <li>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.</li> <li>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.</li> <li>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.</li> </ul>
Value Add	<ul style="list-style-type: none"> <li>Focus on sourcing exclusive transactions should on average produce pricing that is lower than the prices available in the auction channel.</li> <li>Strives to arrange preferred structures to protect downside while preserving commensurate upside participation.</li> <li>Proactive sourcing model allows the investment team more time and better access to data to conduct due diligence.</li> </ul>

March 31, 2018

# APPENDIX

NEPC, LLC

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March 31, 2018



# 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.





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## AGENDA ITEM SUMMARY

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

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

3. **BOARD INFORMATION:** X

**BOARD ACTION:**

4. **OUTCOME:**

Primary Outcomes:

Enhance fiscal positioning

**BOARD POLICY:**

Section 709 - Investments

5. **BACKGROUND:**

Enclosed for your information is the Pension Fund performance report for the quarter that ended March 31, 2018.

Kelly Regan and Jay Roney of NEPC will provide a brief review at the June 14, 2018 Investment Committee meeting.

6/1/2018

# FIRST QUARTER 2018 INVESTMENT REVIEW

## UNIVERSITY OF MAINE SYSTEM PENSION PLAN

June 14, 2018

Jay E. Roney, Partner

Kelly Regan, Senior Consultant



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

# EXECUTIVE SUMMARY

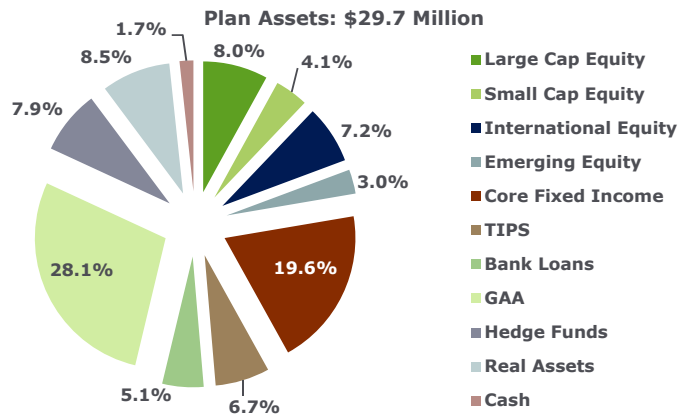
NEPC, LLC

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March 31, 2018

# EXECUTIVE SUMMARY

## ASSET ALLOCATION



## PLAN COMMENTS

### Asset Allocation

The Plan's assets were \$29.7 million as of March 31, 2018, a \$1.2 million decrease during the first quarter. Investment losses were \$116 thousand and benefit payments amounted to \$1.1 million. All asset classes are within policy ranges.

### Performance (Net of Fees)

The Fund returned -0.6% in the 1<sup>st</sup> quarter and 3.6% fiscal-year-to-date, ranking in the 62<sup>nd</sup> and 82<sup>nd</sup> percentiles, respectively.

The Fund ranks below median over all time periods due to the Fund's conservative asset allocation and select manager underperformance.

Bank loan, equity long/short hedge fund and real estate managers were the top contributors to overall performance during the quarter. Emerging market equity, credit hedge fund and global asset allocation managers detracted from overall performance during the quarter.

## PLAN PERFORMANCE: NET OF FEES

	QTR (%)	FYTD (%)	3 YR (%)	5 YR (%)	10 YR (%)
COMPOSITE	-0.6	3.6	3.7	4.6	4.3
ALLOC. INDEX	-0.1	6.0	5.1	5.9	5.0
POLICY INDEX	-0.2	5.7	5.3	6.1	5.6
RANK (TRUST FUNDS)	62	82	84	83	86

## RECENT ACTIONS/RECOMMENDATIONS

### Recent Actions

At the last meeting, Committee approved the asset allocation mix titled "Alternative Mix".

Rebalancing was provided to cover benefit payments and expenses.

### Recommendations

NEPC has provided information surrounding Bank Loans under separate cover.

NEPC has provided a revised Investment Policy Statement to reflect the new policy targets under separate cover.

### Investment Manager Updates

Guggenheim and Lighthouse had announcements during the 1<sup>st</sup> quarter; Client Review is recommended for Guggenheim.



March 31, 2018

# DUE DILIGENCE MONITOR

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

Fund	Manager Changes/ Announcements (Recent Quarter)	NEPC Due Diligence Committee Recommendations
Guggenheim	Yes	Client Review
Lighthouse	Yes	Watch

NEPC Due Diligence Committee Recommendation Key	
<b>No Action</b>	Informational items have surfaced; no action is recommended.
<b>Watch</b>	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.
<b>Hold</b>	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.
<b>Client Review</b>	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.
<b>Terminate</b>	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.



March 31, 2018

# TOTAL PLAN PERFORMANCE DETAIL

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
<b>Pension Composite</b>	<b>29,739,883</b>	<b>100.0</b>	<b>100.0</b>	<b>-0.6</b>	<b>3.6</b>	<b>-0.6</b>	<b>6.1</b>	<b>6.5</b>	<b>3.7</b>	<b>4.6</b>	<b>4.9</b>	<b>4.3</b>
Allocation Index				-0.1	6.0	-0.1	8.7	7.8	5.1	5.9	5.9	5.0
Policy Index				-0.2	5.7	-0.2	8.5	7.9	5.3	6.1	6.2	5.6
<b>Total Domestic Large Cap</b>	<b>2,374,930</b>	<b>8.0</b>	<b>8.0</b>	<b>-0.8</b>	<b>10.6</b>	<b>-0.8</b>	<b>14.0</b>	<b>15.5</b>	<b>10.8</b>	<b>13.0</b>	<b>11.7</b>	<b>8.1</b>
S&P 500				-0.8	10.6	-0.8	14.0	15.6	10.8	13.3	12.7	9.5
Vanguard S&P 500 Index	2,374,930	8.0	8.0	-0.8	10.6	-0.8	14.0	15.5	10.8	--	--	--
S&P 500				-0.8	10.6	-0.8	14.0	15.6	10.8	13.3	12.7	9.5
<b>Total Small Cap Composite</b>	<b>1,213,388</b>	<b>4.1</b>	<b>4.0</b>	<b>-0.1</b>	<b>9.1</b>	<b>-0.1</b>	<b>11.8</b>	<b>18.8</b>	<b>8.4</b>	<b>11.2</b>	<b>10.1</b>	<b>--</b>
Russell 2000				-0.1	9.1	-0.1	11.8	18.8	8.4	11.5	10.4	9.8
SSgA R2000 Index Fund Non Lending	1,213,388	4.1	4.0	-0.1	9.1	-0.1	11.8	18.8	8.4	11.3	10.2	--
Russell 2000				-0.1	9.1	-0.1	11.8	18.8	8.4	11.5	10.4	9.8
<b>Total International Equity (including emerging markets)</b>	<b>3,029,220</b>	<b>10.2</b>	<b>10.0</b>	<b>-1.2</b>	<b>6.0</b>	<b>-1.2</b>	<b>12.6</b>	<b>10.3</b>	<b>3.9</b>	<b>3.6</b>	<b>4.3</b>	<b>2.5</b>
MSCI EAFE				-1.5	8.2	-1.5	14.8	13.2	5.6	6.5	5.3	2.7
Morgan Stanley Int'l	2,129,783	7.2	7.0	-1.5	5.6	-1.5	13.7	11.4	5.1	5.4	5.7	3.4
MSCI EAFE				-1.5	8.2	-1.5	14.8	13.2	5.6	6.5	5.3	2.7
<b>Emerging Markets Equity</b>	<b>899,437</b>	<b>3.0</b>	<b>3.0</b>	<b>-0.6</b>	<b>6.9</b>	<b>-0.6</b>	<b>10.6</b>	<b>8.0</b>	<b>1.3</b>	<b>-0.4</b>	<b>--</b>	<b>--</b>
MSCI Emerging Markets				1.4	17.6	1.4	24.9	21.0	8.8	5.0	2.5	3.0
Mondrian EM Small Cap	899,437	3.0	3.0	-0.6	6.9	-0.6	10.6	8.0	1.3	--	--	--
MSCI Emerging Markets Small Cap				0.2	15.6	0.2	18.6	16.5	7.2	4.6	2.5	4.4
<b>Total Fixed Income</b>	<b>9,373,615</b>	<b>31.5</b>	<b>32.0</b>	<b>-1.0</b>	<b>0.5</b>	<b>-1.0</b>	<b>1.8</b>	<b>1.9</b>	<b>1.7</b>	<b>1.9</b>	<b>3.4</b>	<b>4.7</b>
BBgBarc US Aggregate TR				-1.5	-0.2	-1.5	1.2	0.8	1.2	1.8	2.9	3.6
Vanguard Total Bond Market Index	5,841,045	19.6	20.0	-1.5	-0.4	-1.5	1.1	0.8	1.1	--	--	--
BBgBarc US Aggregate TR				-1.5	-0.2	-1.5	1.2	0.8	1.2	1.8	2.9	3.6
Vanguard Inflation-Protected Securities	2,003,056	6.7	7.0	-0.9	1.1	-0.9	--	--	--	--	--	--
BBgBarc US TIPS TR				-0.8	1.3	-0.8	0.9	1.2	1.3	0.0	2.5	2.9
Guggenheim US Bank Loans	1,529,514	5.1	5.0	1.1	3.2	1.1	--	--	--	--	--	--
Credit Suisse Leveraged Loans				1.6	3.9	1.6	4.6	7.2	4.3	4.2	4.5	5.4
<b>Total GAA</b>	<b>8,363,345</b>	<b>28.1</b>	<b>27.5</b>	<b>-1.0</b>	<b>2.6</b>	<b>-1.0</b>	<b>5.6</b>	<b>6.1</b>	<b>2.6</b>	<b>2.9</b>	<b>2.8</b>	<b>--</b>
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				-0.1	8.1	-0.1	12.1	10.5	6.5	6.6	6.0	4.8
Wellington	4,257,515	14.3	13.8	-0.7	5.7	-0.7	10.4	11.5	6.0	6.3	4.0	--
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				-0.1	8.1	-0.1	12.1	10.5	6.5	6.6	6.0	4.8
Newton Global Real Return	4,105,830	13.8	13.8	-1.3	-0.7	-1.3	0.9	--	--	--	--	--
60% MSCI ACWI (Net) / 40% CITI WGBI				0.5	8.3	0.5	12.3	9.8	6.4	6.1	5.5	4.4



March 31, 2018

# TOTAL PLAN PERFORMANCE DETAIL

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
<b>Total Alternative Investments</b>	<b>2,352,178</b>	<b>7.9</b>	<b>7.5</b>	<b>0.6</b>	<b>4.7</b>	<b>0.6</b>	<b>5.0</b>	<b>6.2</b>	<b>1.9</b>	<b>2.9</b>	<b>1.8</b>	<b>--</b>
HFRI Fund of Funds Composite Index				0.3	4.7	0.3	5.6	5.9	1.9	3.4	2.6	1.6
EntrustPermal	755,926	2.5	2.5	-2.6	-0.4	-2.6	0.9	3.8	-0.4	1.8	2.2	3.6
HFRI Fund of Funds Composite Index				0.3	4.7	0.3	5.6	5.9	1.9	3.4	2.6	1.6
Lighthouse	1,596,252	5.4	5.0	2.1	7.1	2.1	6.5	7.3	--	--	--	--
Credit Suisse Long Shrt Eqt USD				1.0	7.4	1.0	10.7	7.3	4.0	6.3	4.9	4.5
<b>Total Real Assets</b>	<b>2,533,813</b>	<b>8.5</b>	<b>8.0</b>									
Principal	2,533,813	8.5	8.0	1.9	5.8	1.9	8.0	8.5	9.7	11.0	11.7	4.3
NCREIF ODCE				2.2	6.3	2.2	8.1	8.2	10.0	11.4	11.8	5.1
<b>Total Cash</b>	<b>499,395</b>	<b>1.7</b>	<b>3.0</b>									
Distribution Account	499,395	1.7	3.0	0.3	0.7	0.3	0.8	0.4	0.3	0.2	0.1	0.3
91 Day T-Bills				0.4	0.9	0.4	1.2	0.8	0.5	0.3	0.3	0.3

Notes:

Fiscal YTD begins 7/1

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

Returns are net of manager fees



March 31, 2018



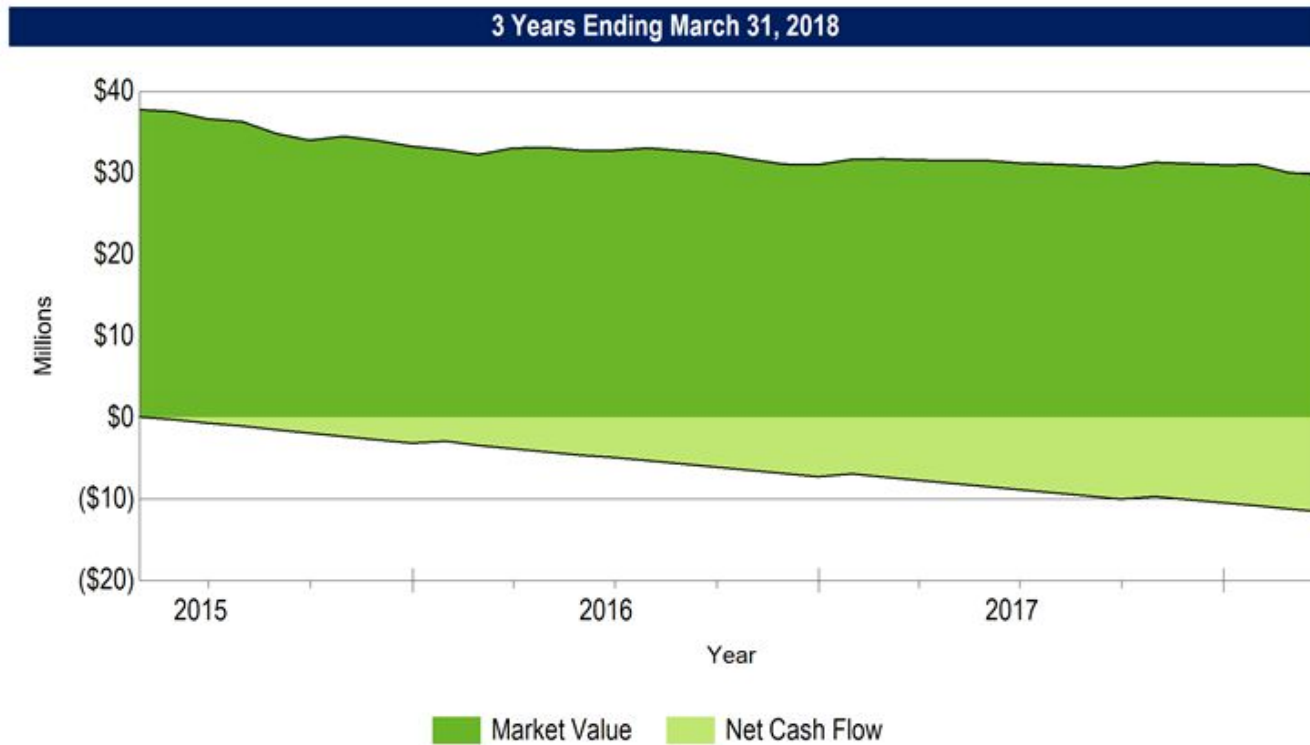
# PLAN SUMMARY AND STATISTICS

NEPC, LLC

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March 31, 2018

# ASSET GROWTH SUMMARY



	Last Three Months	Fiscal Year-To-Date	One Year	Three Years
Beginning Market Value	\$30,986,608	\$31,216,135	\$31,582,299	\$37,268,259
Net Cash Flow	-\$1,130,580	-\$2,737,971	-\$3,894,125	-\$11,596,208
Net Investment Change	-\$116,145	\$1,261,719	\$2,051,708	\$4,067,831
Ending Market Value	\$29,739,883	\$29,739,883	\$29,739,883	\$29,739,883



March 31, 2018

# CASH FLOW SUMMARY

	Beginning Market Value	Quarter Ending March 31, 2018				Ending Market Value
		Contributions	Withdrawals	Net Cash Flow	Net Investment Change	
Distribution Account	\$178,653	\$1,400,000	-\$1,079,552	\$320,448	\$294	\$499,395
EntrustPermal	\$776,348	\$0	\$0	\$0	-\$20,422	\$755,926
Guggenheim US Bank Loans	\$1,512,750	\$0	-\$1,908	-\$1,908	\$18,671	\$1,529,514
Lighthouse	\$1,719,006	\$0	-\$160,000	-\$160,000	\$37,246	\$1,596,252
Mondrian EM Small Cap	\$1,031,879	\$0	-\$132,903	-\$132,903	\$461	\$899,437
Morgan Stanley Int'l	\$2,315,686	\$0	-\$155,367	-\$155,367	-\$30,536	\$2,129,783
Newton Global Real Return	\$4,157,876	\$0	-\$8,202	-\$8,202	-\$43,844	\$4,105,830
Principal	\$2,661,149	\$0	-\$175,000	-\$175,000	\$47,664	\$2,533,813
SSgA R2000 Index Fund Non Lending	\$1,280,095	\$0	-\$65,509	-\$65,509	-\$1,198	\$1,213,388
Vanguard Inflation-Protected Securities	\$2,021,769	\$0	-\$349	-\$349	-\$18,364	\$2,003,056
Vanguard S&P 500 Index	\$2,557,117	\$0	-\$175,245	-\$175,245	-\$6,942	\$2,374,930
Vanguard Total Bond Market Index	\$6,264,444	\$0	-\$331,060	-\$331,060	-\$92,339	\$5,841,045
Wellington	\$4,509,836	\$0	-\$245,486	-\$245,486	-\$6,835	\$4,257,515
<b>Total</b>	<b>\$30,986,608</b>	<b>\$1,400,000</b>	<b>-\$2,530,580</b>	<b>-\$1,130,580</b>	<b>-\$116,145</b>	<b>\$29,739,883</b>



March 31, 2018

# ASSET ALLOCATION

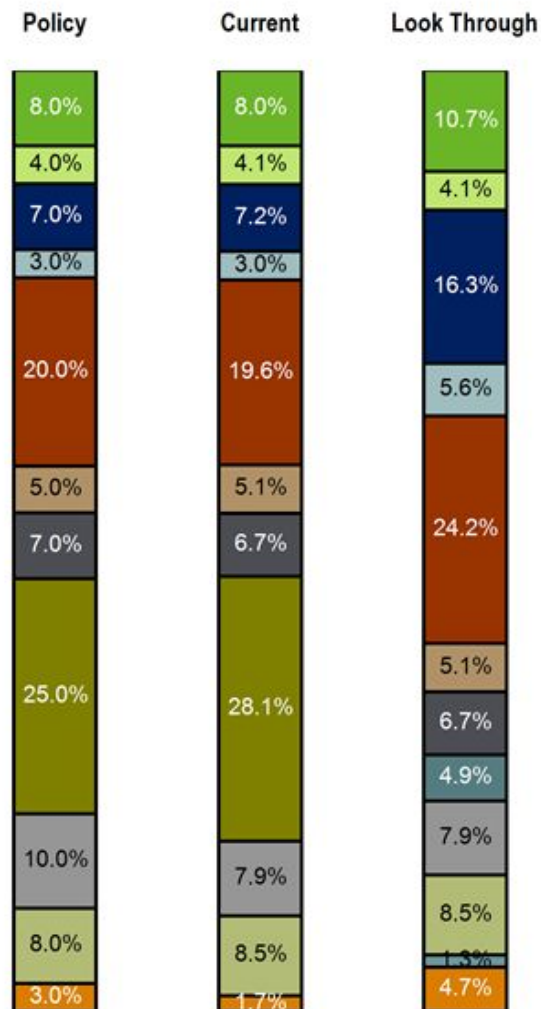


Asset Allocation vs. Target							
	Current	Policy	Current	Difference	Policy Range	Within Range	
Large Cap Equity	\$2,374,930	8.0%	8.0%	0.0%	3.0% - 13.0%	Yes	
Small Cap Equity	\$1,213,388	4.0%	4.1%	0.1%	0.0% - 6.0%	Yes	
International Equity	\$2,129,783	7.0%	7.2%	0.2%	2.0% - 12.0%	Yes	
Emerging Markets Equity	\$899,437	3.0%	3.0%	0.0%	0.0% - 5.0%	Yes	
Core Bonds	\$5,841,045	20.0%	19.6%	-0.4%	15.0% - 25.0%	Yes	
Bank Loans	\$1,529,514	5.0%	5.1%	0.1%	0.0% - 10.0%	Yes	
TIPS	\$2,003,056	7.0%	6.7%	-0.3%	2.0% - 112.0%	Yes	
Global Asset Allocation	\$8,363,345	25.0%	28.1%	3.1%	20.0% - 30.0%	Yes	
Hedge Funds	\$2,352,178	10.0%	7.9%	-2.1%	7.0% - 13.0%	Yes	
Real Estate	\$2,533,813	8.0%	8.5%	0.5%	0.0% - 10.0%	Yes	
Cash	\$499,395	3.0%	1.7%	-1.3%	0.0% - 10.0%	Yes	
<b>Total</b>	<b>\$29,739,883</b>	<b>100.0%</b>	<b>100.0%</b>				



March 31, 2018

# ASSET ALLOCATION



Asset Allocation			
	Policy	Current	Look Through
Large Cap Equity	8.0%	8.0%	10.7%
Small Cap Equity	4.0%	4.1%	4.1%
International Equity	7.0%	7.2%	16.3%
Emerging Markets Equity	3.0%	3.0%	5.6%
Core Bonds	20.0%	19.6%	24.2%
Bank Loans	5.0%	5.1%	5.1%
TIPS	7.0%	6.7%	6.7%
Diversified Fixed Income	--	--	4.9%
Global Asset Allocation	25.0%	28.1%	--
Hedge Funds	10.0%	7.9%	7.9%
Real Estate	8.0%	8.5%	8.5%
Real Assets	--	--	1.3%
Cash	3.0%	1.7%	4.7%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Net Asset Allocation breaks out the exposure of GAA managers.

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

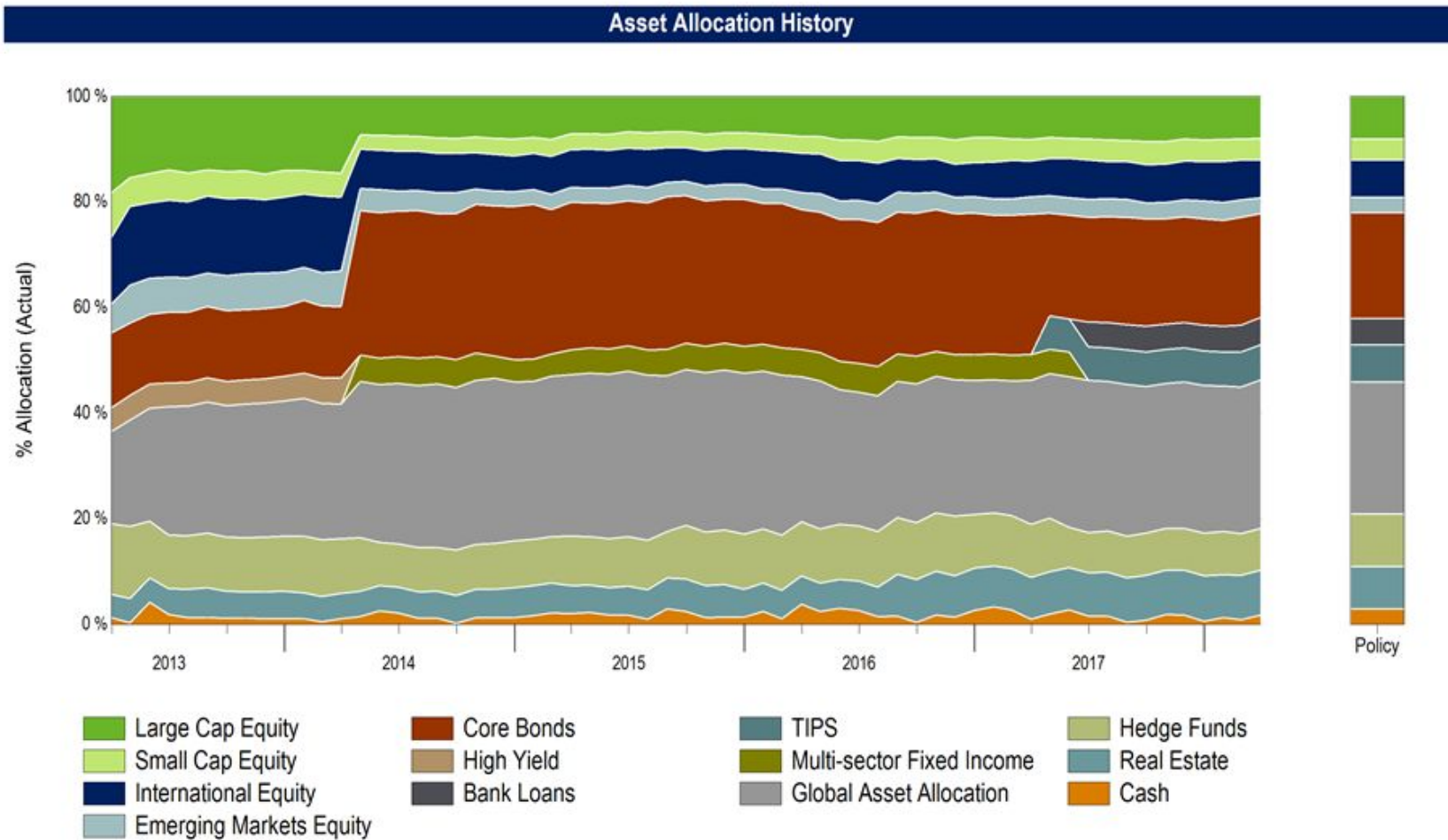
The 60% MSCI ACWI/40% CITI WGBI Index is broken down into the following categories: 31.3% Domestic Equities, 21.3% Int'l Equities, 7.3% Emerging Equities, 13.6% US Treasury Bonds, 13.3% European Government Bonds, 8.0% Japanese Debt, 2.3% United Kingdom Bonds and 2.8% Developing Markets Bonds.

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



March 31, 2018

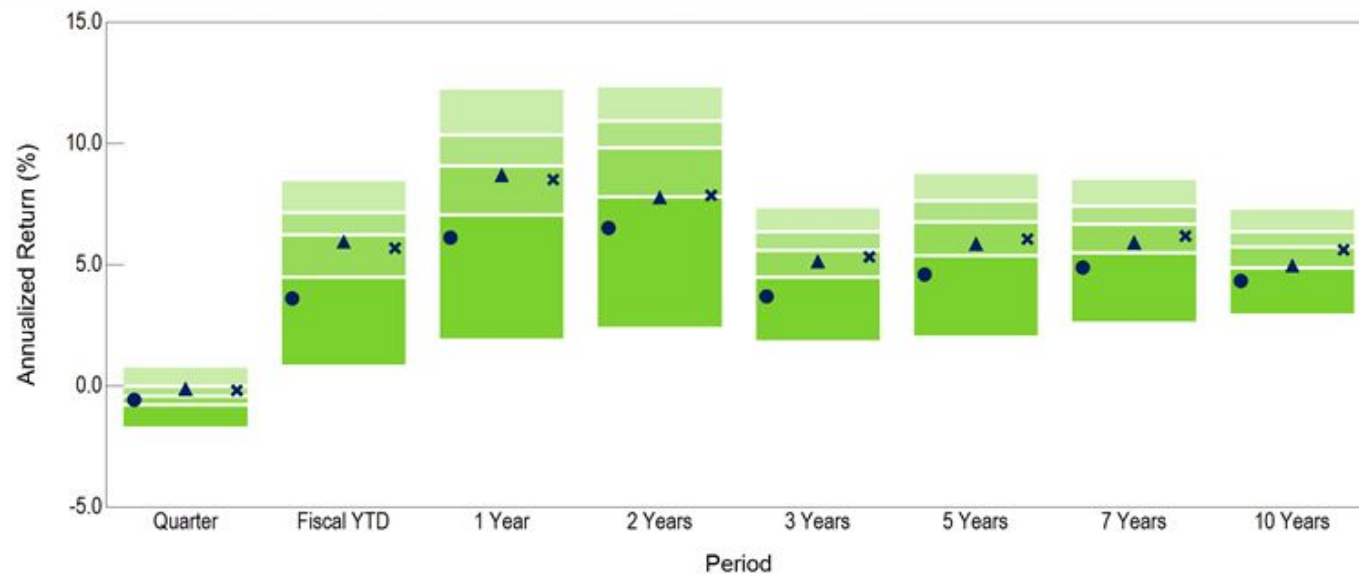
# ASSET ALLOCATION HISTORY



March 31, 2018

# RETURNS VS. PEER UNIVERSE

Pension Composite vs. InvestorForce Trust Funds Net



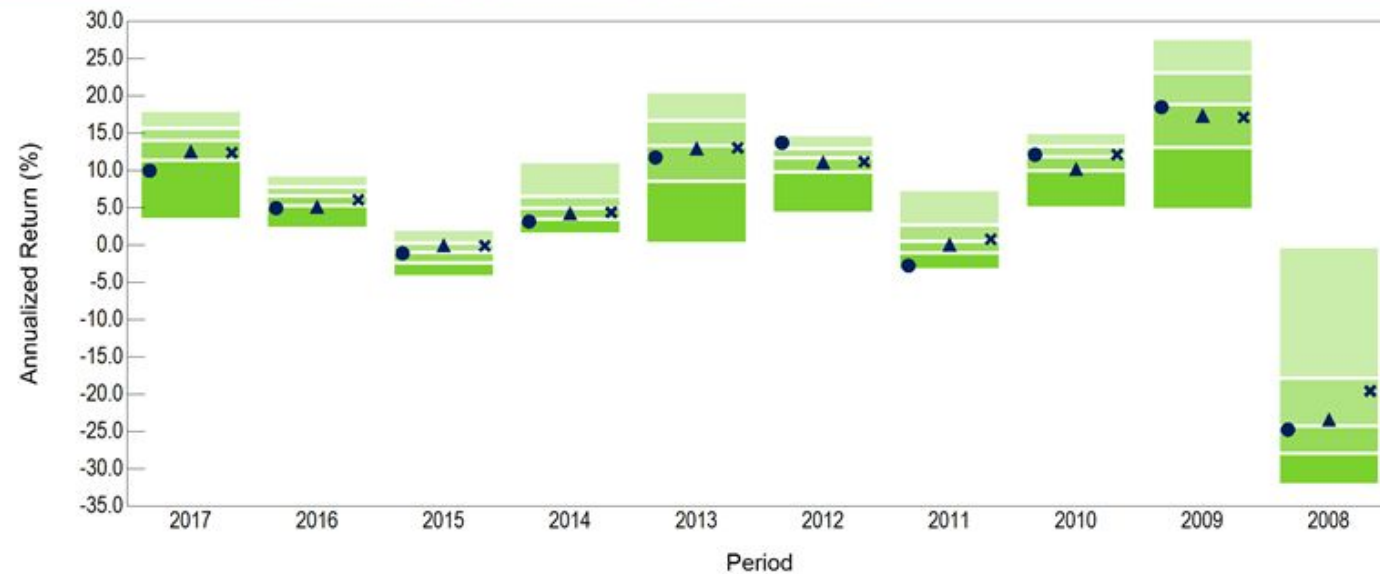
	Return (Rank)							
5th Percentile	0.8	8.5	12.3	12.4	7.4	8.8	8.6	7.3
25th Percentile	0.0	7.2	10.4	10.9	6.4	7.7	7.4	6.4
Median	-0.4	6.3	9.1	9.8	5.6	6.8	6.7	5.7
75th Percentile	-0.8	4.5	7.1	7.8	4.5	5.4	5.5	4.9
95th Percentile	-1.7	0.8	1.9	2.4	1.8	2.0	2.6	3.0
# of Portfolios	2,562	2,522	2,495	2,389	2,298	2,082	1,874	1,582
● Pension Composite	-0.6 (62)	3.6 (82)	6.1 (80)	6.5 (81)	3.7 (84)	4.6 (83)	4.9 (83)	4.3 (86)
▲ Allocation Index	-0.1 (31)	6.0 (57)	8.7 (58)	7.8 (76)	5.1 (63)	5.9 (69)	5.9 (69)	5.0 (73)
× Policy Index	-0.2 (35)	5.7 (62)	8.5 (62)	7.9 (75)	5.3 (58)	6.1 (66)	6.2 (63)	5.6 (54)



March 31, 2018

# RETURNS VS. PEER UNIVERSE

Pension Composite vs. InvestorForce Trust Funds Net



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

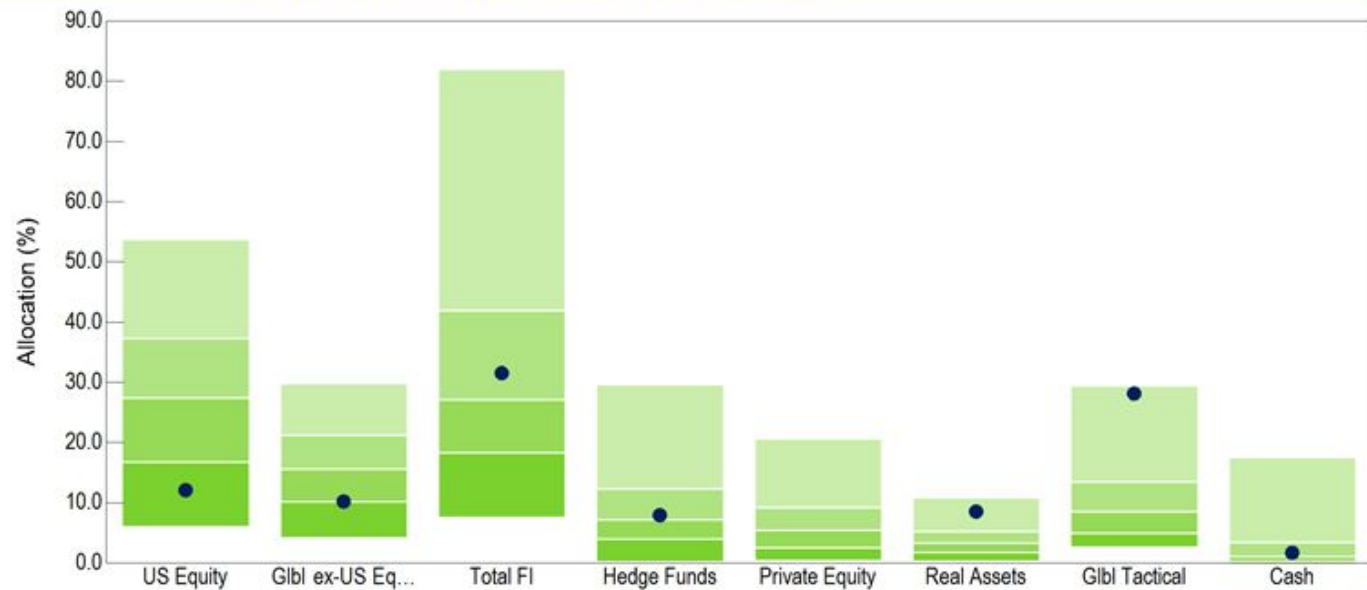


March 31, 2018



# ALLOCATIONS VS. PEER UNIVERSE

Total Plan Allocation vs. InvestorForce Trust Funds Net

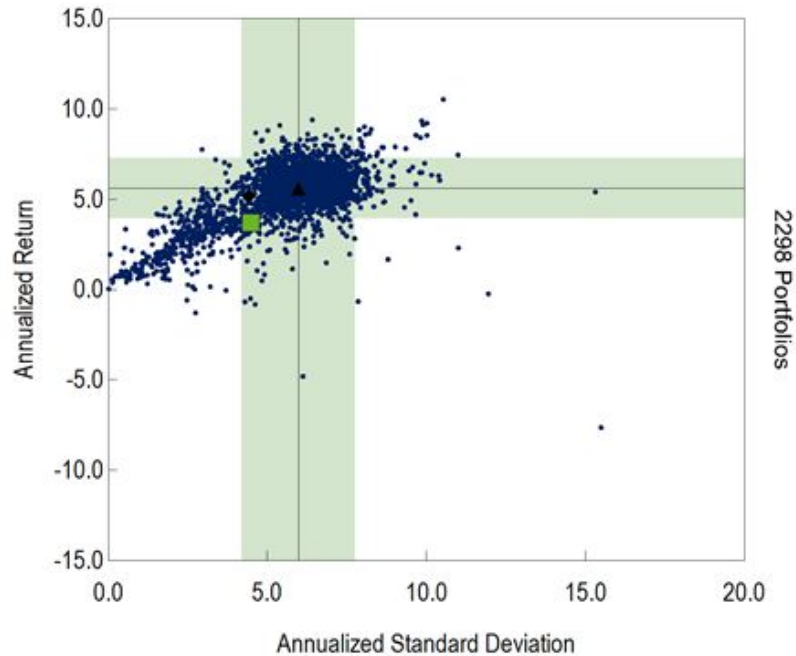


	Allocation (Rank)															
5th Percentile	53.7	29.8	82.0	29.6	20.6	10.8	29.4	17.5								
25th Percentile	37.4	21.2	42.0	12.4	9.3	5.3	13.5	3.5								
Median	27.5	15.7	27.2	7.3	5.5	3.4	8.6	1.1								
75th Percentile	16.8	10.2	18.4	4.1	2.6	1.8	5.0	0.3								
95th Percentile	6.1	4.2	7.6	0.3	0.4	0.3	2.7	0.0								
# of Portfolios	1,745	1,723	2,313	915	767	487	391	1,951								
• Pension Composite	12.1	(86)	10.2	(76)	31.5	(41)	7.9	(46)	--	--	8.5	(13)	28.1	(6)	1.7	(42)



# TOTAL PLAN RISK/RETURN - 3 YEAR

3 Years Ending March 31, 2018



- Pension Composite
- ▲ Allocation Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Trust Funds Net

3 Years Ending March 31, 2018

	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Pension Composite	3.7%	84	4.5%	21
Allocation Index	5.1%	63	4.4%	20
Policy Index	5.3%	58	4.5%	21
InvestorForce Trust Funds Net Median	5.6%	--	6.0%	--

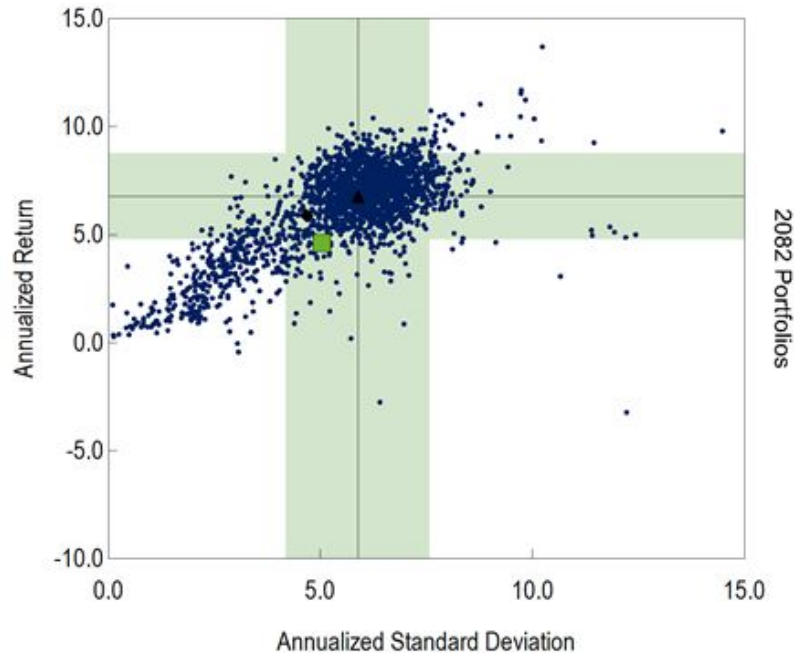
3 Years Ending March 31, 2018

	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Pension Composite	0.7	78	1.2	54
Allocation Index	1.0	20	1.6	12
Policy Index	1.1	17	1.7	8
InvestorForce Trust Funds Net Median	0.8	--	1.2	--

\*Returns are net of fees.

# TOTAL PLAN RISK/RETURN - 5 YEAR

5 Years Ending March 31, 2018



- Pension Composite
- Allocation Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Trust Funds Net

5 Years Ending March 31, 2018

	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Pension Composite	4.6%	83	5.0%	26
Allocation Index	5.9%	69	4.7%	22
Policy Index	6.1%	66	4.7%	22
InvestorForce Trust Funds Net Median	6.8%	--	5.9%	--

5 Years Ending March 31, 2018

	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Pension Composite	0.8	85	1.6	64
Allocation Index	1.2	34	2.1	22
Policy Index	1.2	31	2.3	16
InvestorForce Trust Funds Net Median	1.1	--	1.8	--

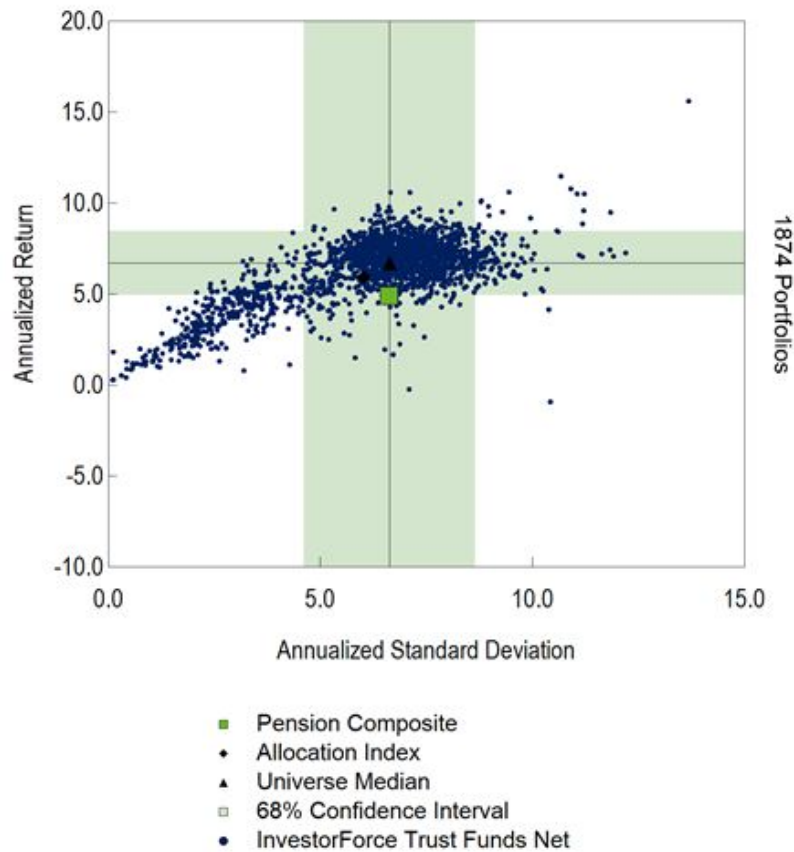
\*Returns are net of fees.



March 31, 2018

# TOTAL PLAN RISK/RETURN - 7 YEAR

7 Years Ending March 31, 2018



7 Years Ending March 31, 2018

	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Pension Composite	4.9%	83	6.6%	50
Allocation Index	5.9%	69	6.0%	33
Policy Index	6.2%	63	5.9%	31
InvestorForce Trust Funds Net Median	6.7%	--	6.6%	--

7 Years Ending March 31, 2018

	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Pension Composite	0.7	93	0.9	94
Allocation Index	0.9	59	1.3	62
Policy Index	1.0	49	1.5	46
InvestorForce Trust Funds Net Median	1.0	--	1.4	--

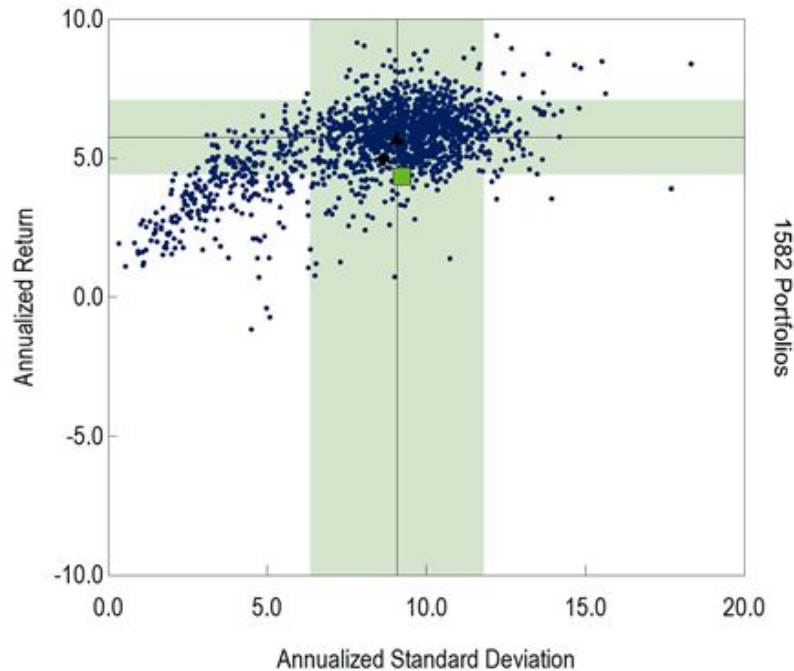
\*Returns are net of fees.



March 31, 2018

# TOTAL PLAN RISK/RETURN - 10 YEAR

10 Years Ending March 31, 2018



- Pension Composite
- Allocation Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Trust Funds Net

10 Years Ending March 31, 2018

	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Pension Composite	4.3%	86	9.2%	55
Allocation Index	5.0%	73	8.6%	41
Policy Index	5.6%	54	8.2%	34
InvestorForce Trust Funds Net Median	5.7%	--	9.1%	--

10 Years Ending March 31, 2018

	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Pension Composite	0.4	92	0.5	91
Allocation Index	0.5	72	0.6	69
Policy Index	0.7	43	0.8	38
InvestorForce Trust Funds Net Median	0.6	--	0.7	--

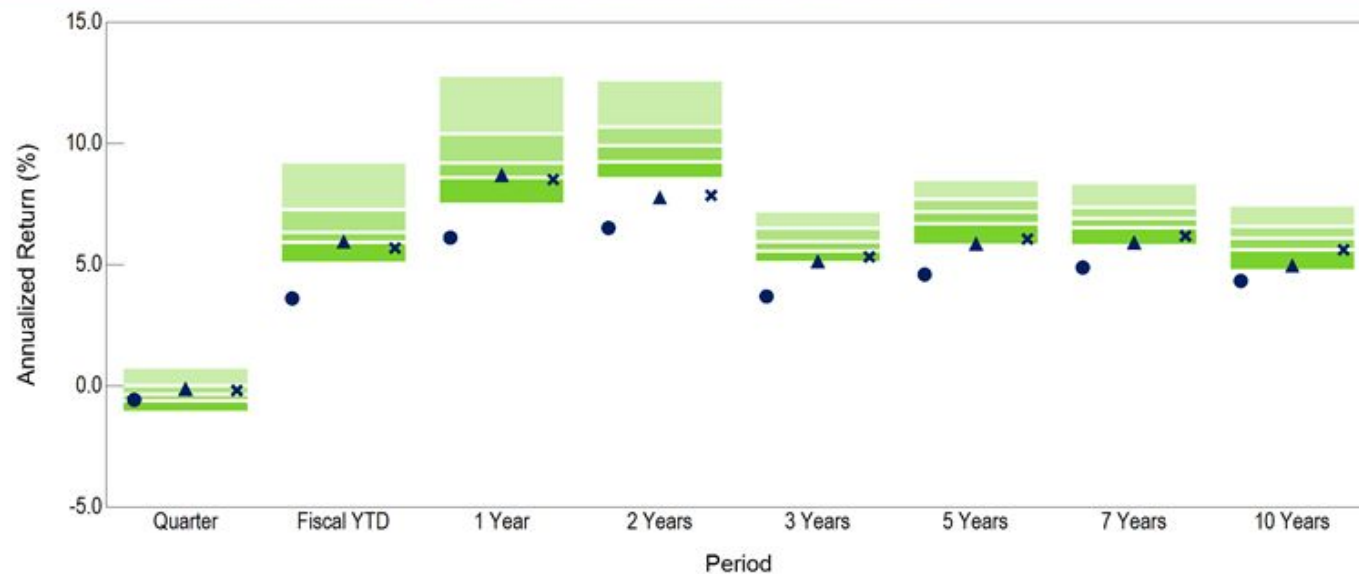
\*Returns are net of fees.



March 31, 2018

# RETURNS VS. PEER UNIVERSE

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



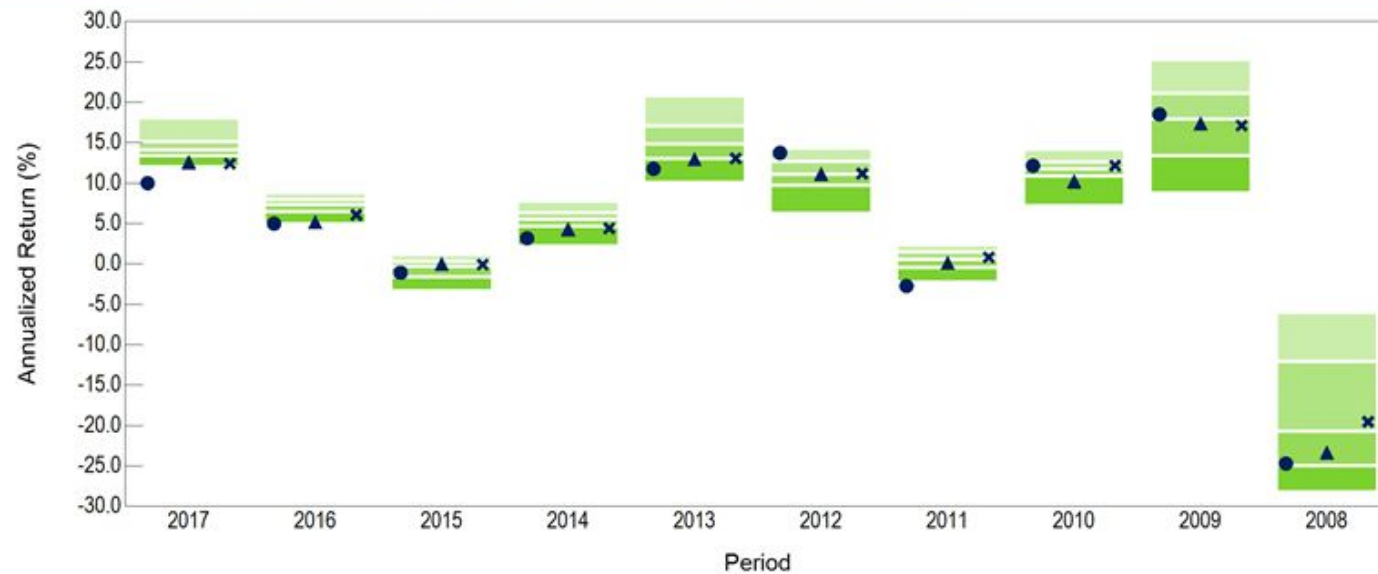
	Return (Rank)											
5th Percentile	0.8		9.2		12.8		12.6		7.2		8.5	
25th Percentile	0.0		7.3		10.4		10.7		6.5		7.7	
Median	-0.3		6.4		9.2		9.9		6.0		7.2	
75th Percentile	-0.6		5.9		8.6		9.3		5.6		6.7	
95th Percentile	-1.1		5.1		7.5		8.6		5.1		5.8	
# of Portfolios	74		74		74		72		72		67	
● Pension Composite	-0.6	(71)	3.6	(99)	6.1	(99)	6.5	(99)	3.7	(99)	4.6	(99)
▲ Allocation Index	-0.1	(35)	6.0	(75)	8.7	(74)	7.8	(99)	5.1	(95)	5.9	(93)
× Policy Index	-0.2	(38)	5.7	(83)	8.5	(79)	7.9	(99)	5.3	(88)	6.1	(92)



March 31, 2018

# RETURNS VS. PEER UNIVERSE

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



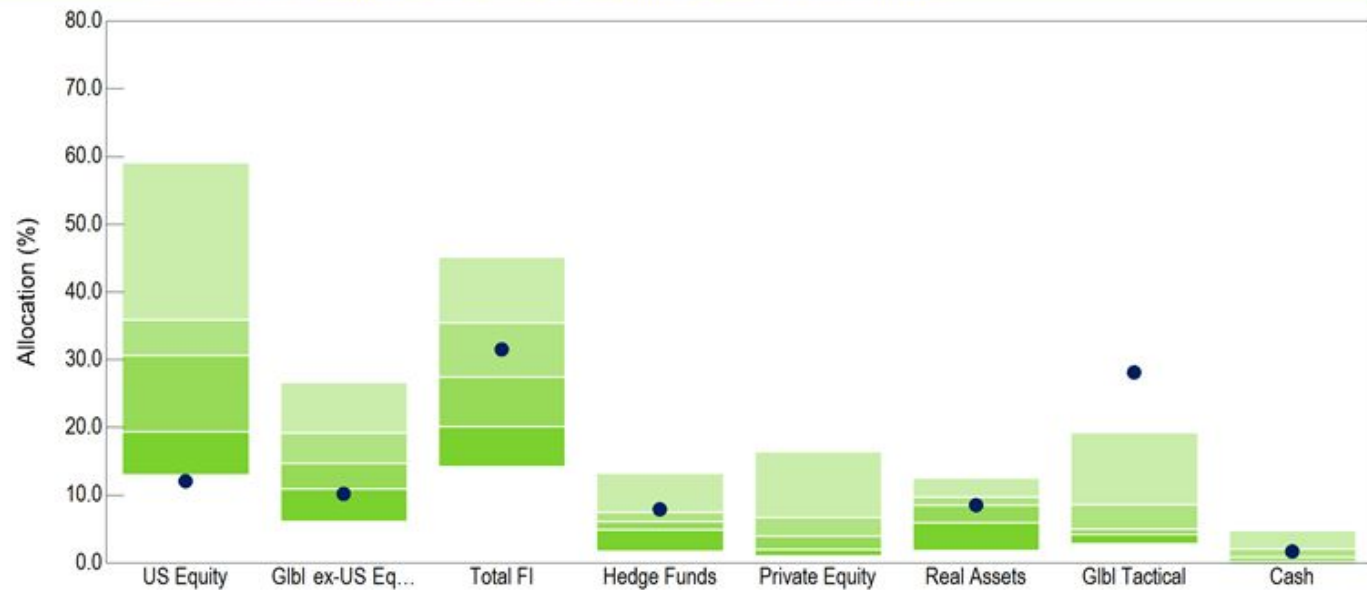
	Return (Rank)									
5th Percentile	18.1	8.7	1.1	7.7	20.8	14.3	2.3	14.2	25.3	-6.0
25th Percentile	15.2	8.0	0.4	6.3	17.1	12.7	1.5	12.6	21.1	-12.0
Median	14.2	7.4	-0.3	5.6	14.9	11.1	0.6	11.7	18.0	-20.7
75th Percentile	13.5	6.5	-1.6	4.7	13.1	9.7	-0.4	10.9	13.4	-25.0
95th Percentile	12.1	5.0	-3.3	2.3	10.1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





# ALLOCATIONS VS. PEER UNIVERSE

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



	Allocation (Rank)							
5th Percentile	59.1	26.6	45.1	13.2	16.4	12.5	19.2	4.8
25th Percentile	36.0	19.3	35.5	7.6	6.8	9.8	8.7	2.1
Median	30.7	14.8	27.5	6.2	4.1	8.6	5.1	0.9
75th Percentile	19.4	11.0	20.2	5.0	2.0	6.0	4.3	0.3
95th Percentile	13.1	6.2	14.3	1.8	1.1	1.9	2.9	0.0
# of Portfolios	54	63	72	14	30	13	18	68
• Pension Composite	12.1 (99)	10.2 (82)	31.5 (40)	7.9 (22)	--	8.5 (59)	28.1 (1)	1.7 (34)

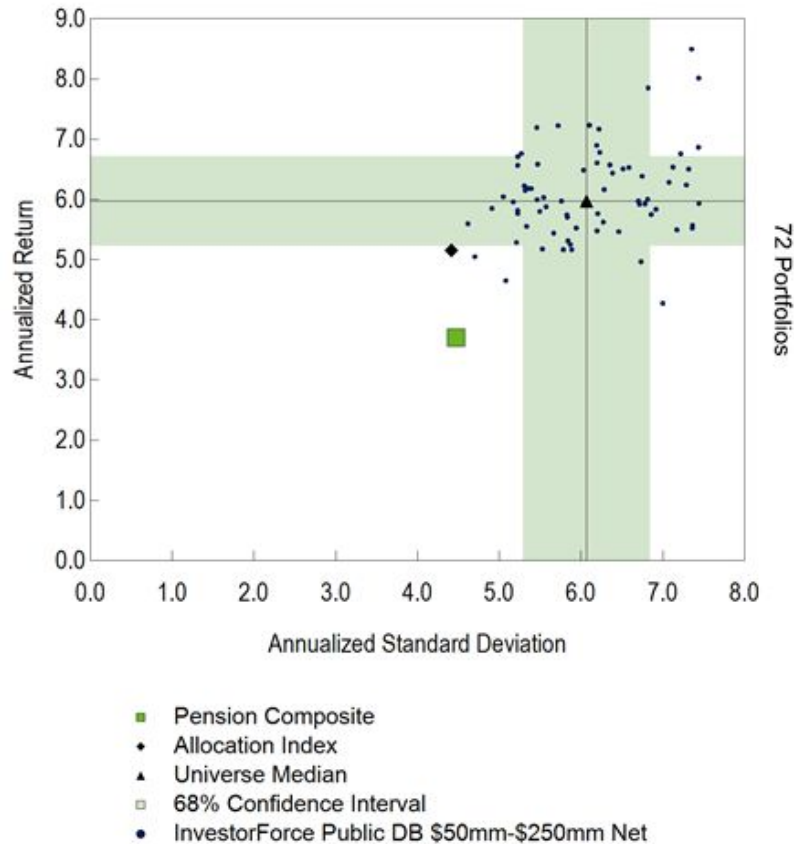


March 31, 2018



# TOTAL PLAN RISK/RETURN - 3 YEAR

3 Years Ending March 31, 2018



3 Years Ending March 31, 2018

	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Pension Composite	3.7%	99	4.5%	1
Allocation Index	5.1%	95	4.4%	1
Policy Index	5.3%	88	4.5%	1
InvestorForce Public DB \$50mm-\$250mm Net Median	6.0%	--	6.1%	--

3 Years Ending March 31, 2018

	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Pension Composite	0.7	94	1.2	67
Allocation Index	1.0	25	1.6	12
Policy Index	1.1	19	1.7	5
InvestorForce Public DB \$50mm-\$250mm Net Median	0.9	--	1.3	--

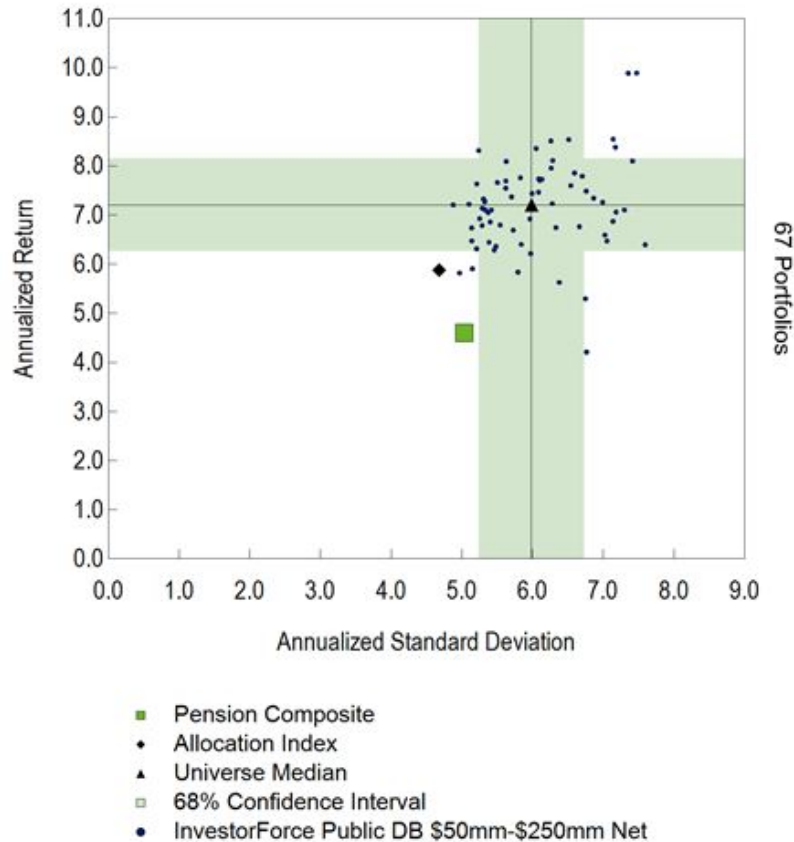
\*Returns are net of fees.



March 31, 2018

# TOTAL PLAN RISK/RETURN - 5 YEAR

5 Years Ending March 31, 2018



5 Years Ending March 31, 2018

	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Pension Composite	4.6%	99	5.0%	3
Allocation Index	5.9%	93	4.7%	1
Policy Index	6.1%	92	4.7%	1
InvestorForce Public DB \$50mm-\$250mm Net Median	7.2%	--	6.0%	--

5 Years Ending March 31, 2018

	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Pension Composite	0.8	95	1.6	80
Allocation Index	1.2	48	2.1	27
Policy Index	1.2	40	2.3	15
InvestorForce Public DB \$50mm-\$250mm Net Median	1.2	--	2.0	--

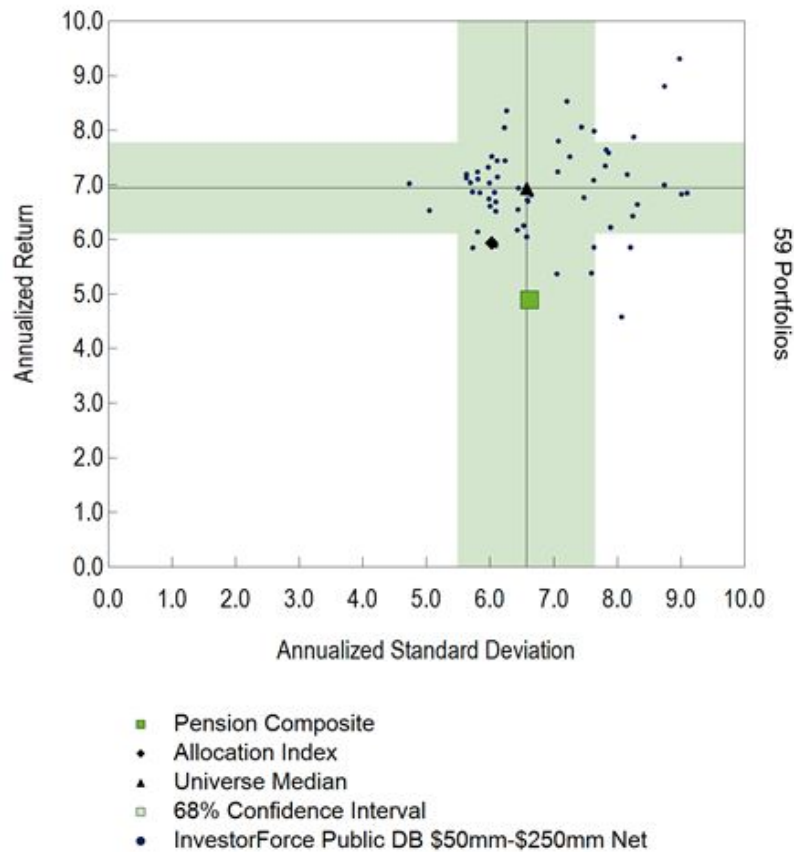
\*Returns are net of fees.



March 31, 2018

# TOTAL PLAN RISK/RETURN - 7 YEAR

7 Years Ending March 31, 2018



7 Years Ending March 31, 2018

	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Pension Composite	4.9%	99	6.6%	55
Allocation Index	5.9%	90	6.0%	26
Policy Index	6.2%	84	5.9%	19
InvestorForce Public DB \$50mm-\$250mm Net Median	6.9%	--	6.6%	--

7 Years Ending March 31, 2018

	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Pension Composite	0.7	96	0.9	99
Allocation Index	0.9	64	1.3	66
Policy Index	1.0	50	1.5	40
InvestorForce Public DB \$50mm-\$250mm Net Median	1.0	--	1.4	--

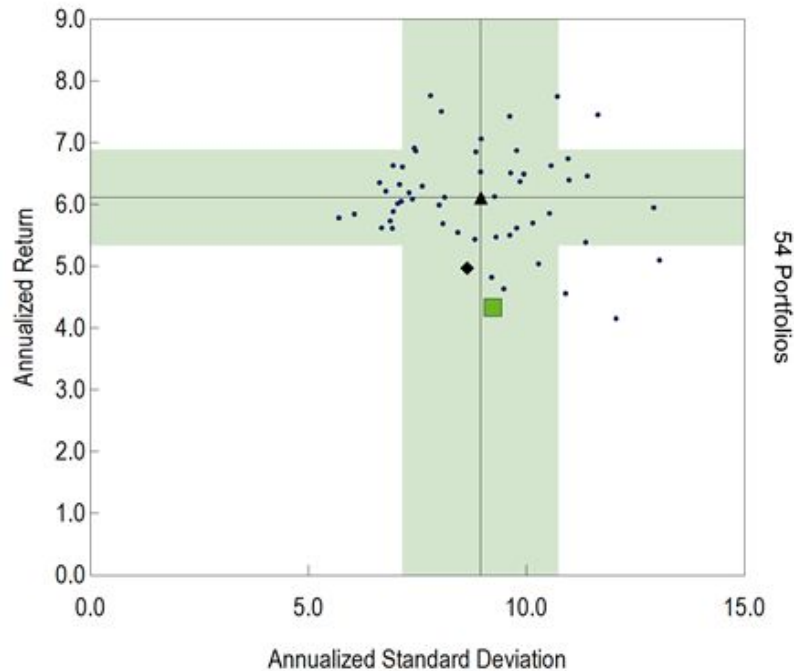
\*Returns are net of fees.



March 31, 2018

# TOTAL PLAN RISK/RETURN - 10 YEAR

10 Years Ending March 31, 2018



- Pension Composite
- ◆ Allocation Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB \$50mm-\$250mm Net

10 Years Ending March 31, 2018				
	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Pension Composite	4.3%	99	9.2%	56
Allocation Index	5.0%	94	8.6%	45
Policy Index	5.6%	76	8.2%	42
InvestorForce Public DB \$50mm-\$250mm Net Median	6.1%	--	9.0%	--

10 Years Ending March 31, 2018				
	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Pension Composite	0.4	95	0.5	95
Allocation Index	0.5	80	0.6	81
Policy Index	0.7	55	0.8	57
InvestorForce Public DB \$50mm-\$250mm Net Median	0.7	--	0.8	--

\*Returns are net of fees.



March 31, 2018

# MANAGER ANALYSIS

NEPC, LLC

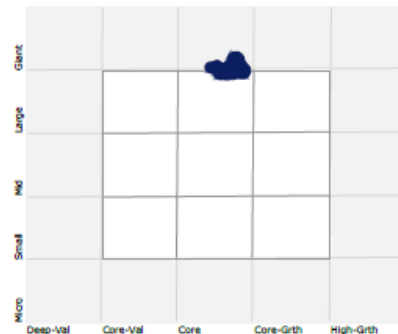
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March 31, 2018

# VANGUARD INSTITUTIONAL INDEX I

## Holdings Based Style Trail (5 Years)

Time Period: 4/1/2013 to 3/31/2018



• Vanguard Institutional Index I • S&amp;P 500 TR USD

## Portfolio Statistics

	Fund	Index
# of Holdings	512	505
% Asset in Top 10 Holdings	20.6	20.3
Turnover Ratio %	5.0	
P/E Ratio	21.8	20.8
P/B Ratio	3.2	3.1
LT Earn Growth	11.8	12.2
Hist Earn Growth	7.1	9.3
12 Mo Yield	1.8	

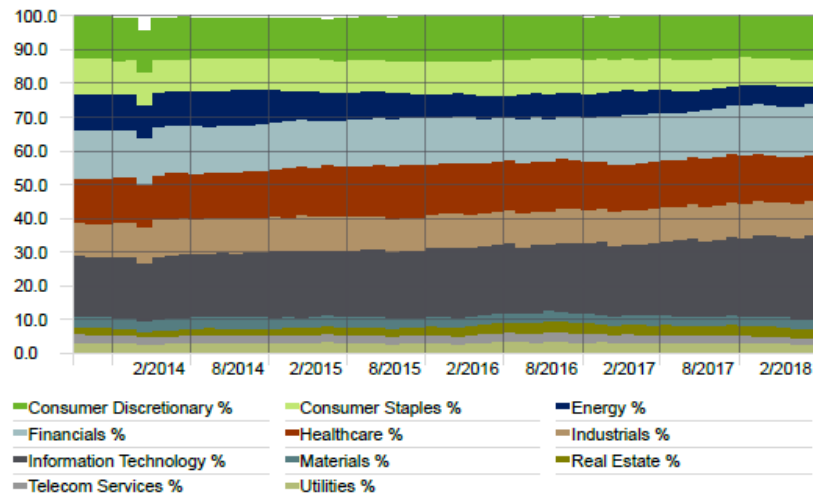
## Market Capitalization Breakdown

	Fund	Index
Market Cap Giant %	56.9	57.0
Market Cap Large %	34.4	34.4
Market Cap Mid %	8.6	8.6
Market Cap Small %	0.0	0.0
Market Cap Micro %	0.0	0.0
Average Market Cap (mil)	100,151.0	100,164.1

## Top 10 Holdings

	Portf Weight %	3 Month Ret %
Apple Inc	3.94	-0.48
Microsoft Corp	3.11	7.19
Amazon.com Inc	2.80	23.78
Facebook Inc A	1.83	-9.45
JPMorgan Chase & Co	1.72	3.38
Berkshire Hathaway Inc B	1.64	0.64
Johnson & Johnson	1.50	-7.68
Alphabet Inc C	1.44	-1.40
Alphabet Inc A	1.42	-1.54
Exxon Mobil Corp	1.38	-9.88

## Historical Sector Allocations (5 Years)



## Attribution (Quarter)

	Portfolio Weights	Benchmark Weights	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Active Return
Consumer Discretionary	12.46	12.50	3.13	3.13	0.00	0.00	0.00
Consumer Staples	7.85	7.87	-7.12	-7.12	0.00	0.00	0.00
Energy	5.83	5.85	-5.89	-5.89	0.00	0.00	0.00
Financials	14.86	14.90	-0.97	-0.97	0.00	0.00	0.00
Health Care	13.77	13.80	-1.25	-1.27	0.00	0.00	0.00
Industrials	10.22	10.25	-1.55	-1.55	0.00	0.00	0.00
Information Technology	24.30	24.38	3.54	3.54	0.00	0.00	0.00
Materials	2.94	2.95	-5.51	-5.51	0.00	0.00	0.00
Real Estate	2.72	2.73	-5.01	-5.01	0.00	0.00	0.00
Telecommunication Services	1.96	1.96	-7.49	-7.49	0.00	0.00	0.00
Utilities	2.76	2.77	-3.30	-3.30	0.00	0.00	0.00
Attribution Total	99.67	99.96	-0.76	-0.76	0.00	0.00	0.00
Cash	0.31	0.00					
Bond	0.02	0.00					
Total	100.00	100.00					



Source: Morningstar

March 31, 2018

# VANGUARD INSTITUTIONAL INDEX I

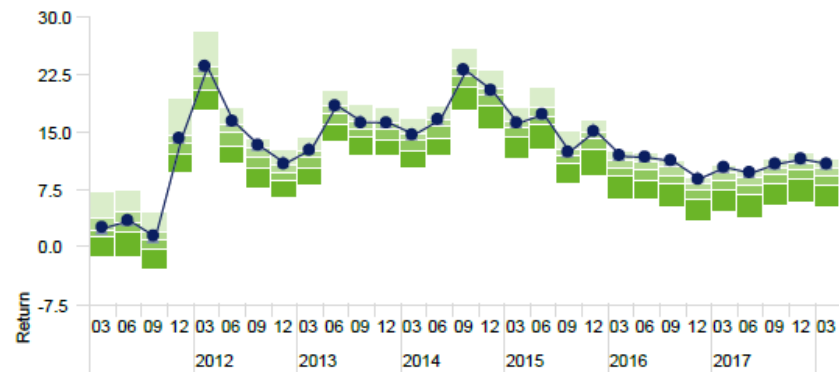
## Risk & Return Characteristics (5 Years)

Time Period: 4/1/2013 to 3/31/2018

	Fund	Index
R2	100.0	100.0
Alpha	0.0	0.0
Beta	1.0	1.0
Std Dev	7.0	7.0
Up Capture Ratio	99.8	100.0
Down Capture Ratio	100.2	100.0
Sharpe Ratio (geo)	1.8	1.8
Information Ratio (geo)	-3.0	0.0
Tracking Error	0.0	0.0
Correlation	1.0	1.0

## Rolling Return (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



—Vanguard Institutional Index I

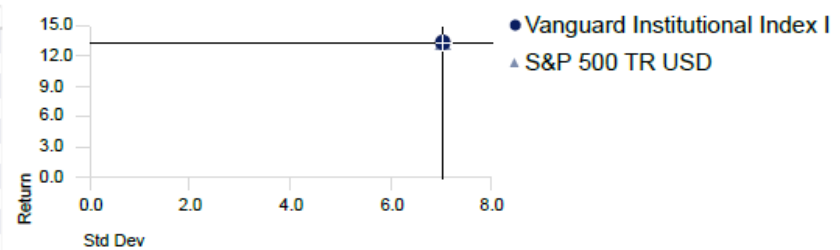
—S&amp;P 500 TR USD

## Calendar Year Returns

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

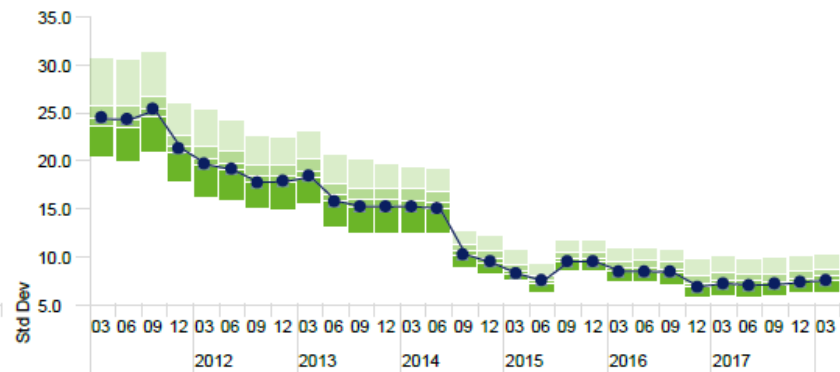
## Risk & Return Illustration (5 Years)

Time Period: 4/1/2013 to 3/31/2018



## Rolling Risk (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



—Vanguard Institutional Index I

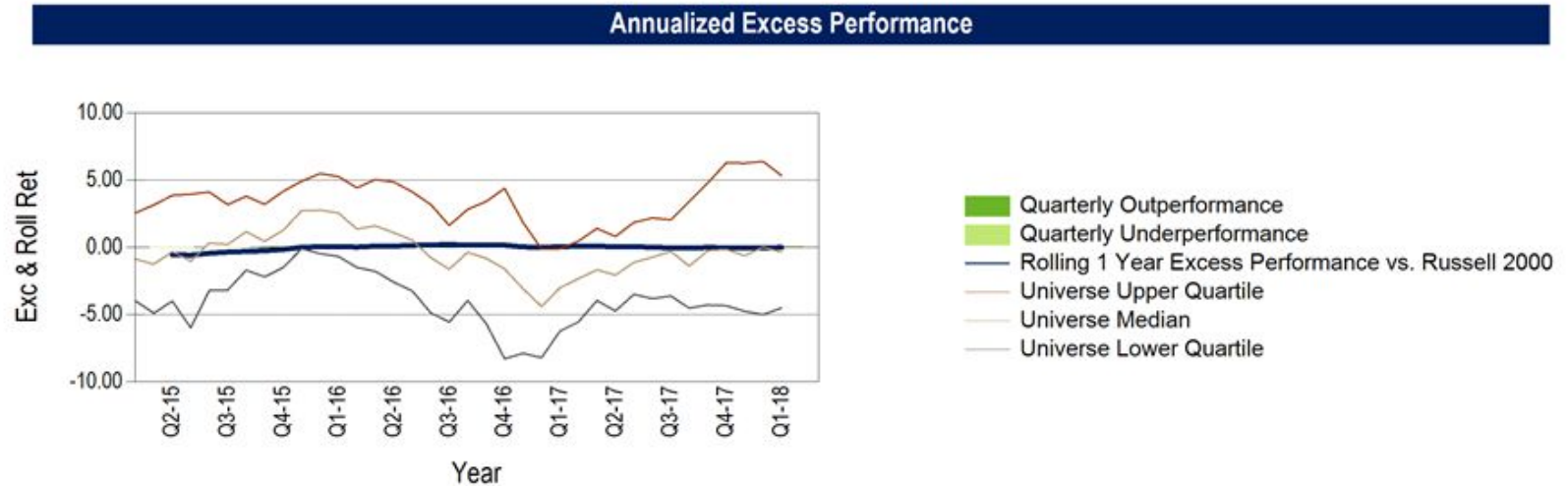
—S&amp;P 500 TR USD



Source: Morningstar

March 31, 2018

# SSgA R2000 NON LENDING



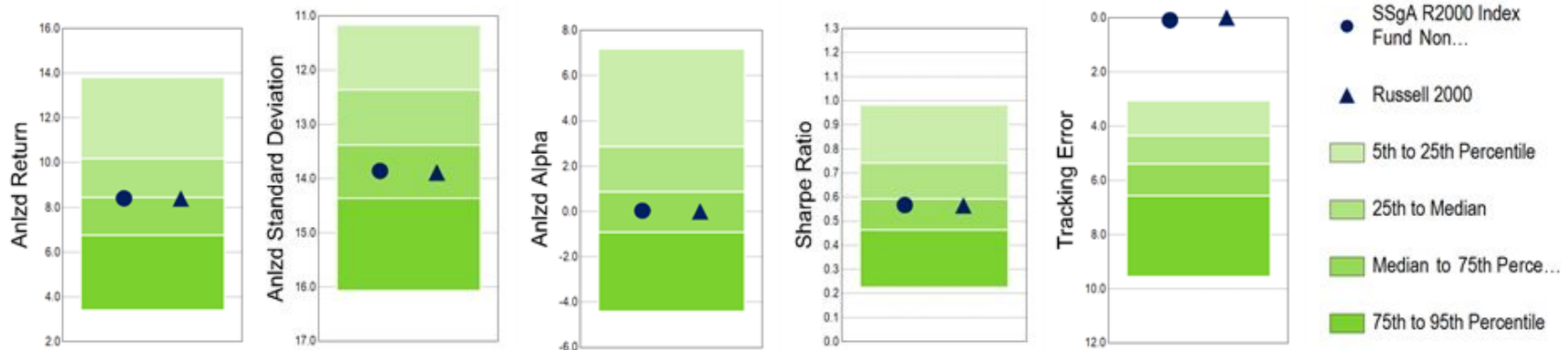
\*Returns are net of fees.



March 31, 2018



# SSgA R2000 NON LENDING



\*Returns are net of fees.



March 31, 2018

# SSgA R2000 NON LENDING

Characteristics		
	Portfolio	Russell 2000
Number of Holdings	1,963	1,983
Weighted Avg. Market Cap. (\$B)	2.5	2.5
Median Market Cap. (\$B)	0.9	0.8
Price To Earnings	17.2	16.8
Price To Book	3.7	3.1
Price To Sales	3.7	3.2
Return on Equity (%)	3.8	8.3
Yield (%)	1.3	1.1
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%	-10.3%	-10.5%	3.6%	3.5%	
Materials	0.0%	0.0%	0.0%	0.0%	-2.8%	-3.0%	4.3%	4.3%	
Industrials	0.0%	0.0%	0.0%	0.0%	-2.7%	-2.5%	15.2%	15.3%	
Consumer Discretionary	0.0%	0.0%	0.0%	0.0%	-2.7%	-2.7%	12.1%	12.1%	
Consumer Staples	0.0%	0.0%	0.0%	0.0%	-5.8%	-5.9%	2.3%	2.3%	
Health Care	0.0%	0.0%	0.0%	0.0%	6.1%	6.2%	16.3%	16.6%	
Financials	0.0%	0.0%	0.0%	0.0%	0.9%	0.8%	17.9%	18.0%	
Information Technology	0.0%	0.0%	0.0%	0.0%	6.7%	6.7%	17.4%	17.6%	
Telecommunication Services	0.0%	0.0%	0.0%	0.0%	-4.9%	-5.2%	0.6%	0.6%	
Utilities	0.0%	0.0%	0.0%	0.0%	-6.4%	-6.4%	3.2%	3.3%	
Real Estate	0.0%	0.0%	0.0%	0.0%	-8.0%	-8.1%	6.3%	6.3%	
Cash	0.0%	--	--	--	--	--	0.7%	0.0%	
Unclassified	0.0%	--	--	--	--	--	0.0%	0.0%	
Portfolio	0.0%	=	0.0%	+	0.0%	0.0%	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.

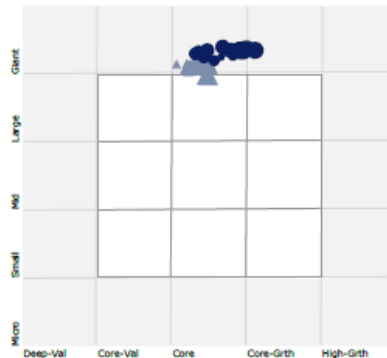


March 31, 2018

# MORGAN STANLEY INTERNATIONAL EQUITY I

## Holdings Based Style Trail (5 Years)

Time Period: 4/30/2013 to 3/31/2018



Morgan Stanley Int International Eq I MSCI EAFE NR USD

## Portfolio Statistics

	Fund	Index
# of Holdings	68	927
% Asset in Top 10 Holdings	37.2	10.9
Turnover Ratio %	18.0	
P/E Ratio	20.6	14.9
P/B Ratio	2.8	1.6
LT Earn Growth	10.7	9.7
Hist Earn Growth	-1.9	9.3
12 Mo Yield	1.9	

## Market Capitalization Breakdown

	Fund	Index
Market Cap Giant %	74.0	58.4
Market Cap Large %	20.0	34.9
Market Cap Mid %	5.9	6.7
Market Cap Small %	0.0	0.0
Market Cap Micro %	0.0	0.0
Average Market Cap	56,064.6	37,645.7
Equity Region Developed %	96.3	99.4
Equity Region Emerging %	3.7	0.6

## Top Ten Holdings

	Port Weight %	3 Month Return
British American Tobacco PLC	4.79	-13.62
Unilever NV DR	4.31	0.84
Reckitt Benckiser Group PLC	4.13	-9.56
L'Oreal SA	3.94	1.53
Pernod Ricard SA	3.82	4.98
GlaxoSmithKline PLC	3.59	11.11
Shiseido Co Ltd	3.34	32.51
Novartis AG	3.33	-1.13
SAP SE	3.00	-6.87
Tencent Holdings Ltd	2.99	0.49

## Sector Attribution (Quarter)

	Portfolio Weights	Benchmark Weights	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Active Return
Consumer Discretionary	4.37	12.43	0.99	0.75	-0.17	0.01	-0.16
Consumer Staples	30.92	10.91	1.04	-2.92	-0.30	1.28	0.97
Energy	2.92	5.26	7.74	-1.81	0.02	0.28	0.29
Financials	13.52	21.48	-2.03	-2.02	0.04	-0.01	0.03
Health Care	14.43	10.03	-1.44	-0.54	0.04	-0.13	-0.09
Industrials	14.81	14.69	-2.49	-1.32	0.00	-0.18	-0.18
Information Technology	9.46	6.48	-1.40	1.15	0.09	-0.26	-0.17
Materials	4.68	8.23	-11.93	-3.60	0.08	-0.44	-0.36
Real Estate	0.47	3.51	-2.14	-1.83	0.01	0.00	0.01
Telecommunication Services	1.43	3.85	-13.17	-3.85	0.06	-0.15	-0.09
Utilities	0.00	3.11		1.49	-0.09	0.00	-0.09
Attribution Total	97.01	99.97	-1.23	-1.40	-0.22	0.39	0.18
Cash	2.22	0.00					
Other	0.77	0.00					
Missing Performance	0.00	0.03					
Total	100.00	100.00					

## Region Attribution (Quarter)

	Portfolio Weights	Benchmark Weights	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Active Return
Asia - Developed	3.92	4.78	-1.02	-0.27	-0.01	-0.03	-0.04
Asia - Emerging	3.79	0.46	3.59	-3.21	-0.04	0.23	0.19
Australasia	0.00	6.92		-5.67	0.29	0.00	0.29
Canada	2.15	0.00	-13.23		-0.29	0.00	-0.29
Europe - ex Euro	8.00	13.14	-3.17	-2.79	0.07	-0.03	0.04
Eurozone	33.76	31.72	-1.31	-0.43	0.04	-0.31	-0.27
Japan	19.29	24.25	6.21	0.95	-0.11	1.02	0.91
Middle East	0.00	0.46		-5.34	0.02	0.00	0.02
United Kingdom	24.37	17.26	-5.99	-3.79	-0.21	-0.57	-0.78
United States	1.74	0.98	4.17	-0.86	0.00	0.09	0.09
Attribution Total	97.01	99.97	-1.23	-1.40	-0.22	0.40	0.18
Cash	2.22	0.00					
Other	0.77	0.00					
Missing Performance	0.00	0.03					
Total	100.00	100.00					



Source: Morningstar

March 31, 2018

# MORGAN STANLEY INTERNATIONAL EQUITY I

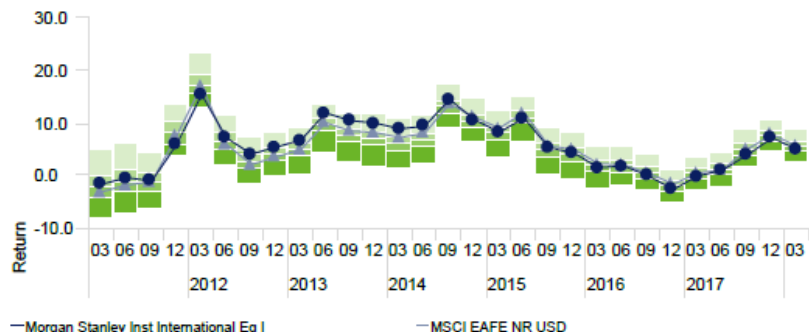
## Risk & Return Characteristics (5 Years)

Time Period: 4/1/2013 to 3/31/2018

	Fund	Index
R2	90.6	100.0
Alpha	-0.3	0.0
Beta	0.9	1.0
Std Dev	9.5	10.4
Up Capture Ratio	88.0	100.0
Down Capture Ratio	94.7	100.0
Sharpe Ratio (geo)	0.5	0.6
Information Ratio (geo)	-0.3	
Tracking Error	3.2	0.0
Correlation	1.0	1.0

## Rolling Returns (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile

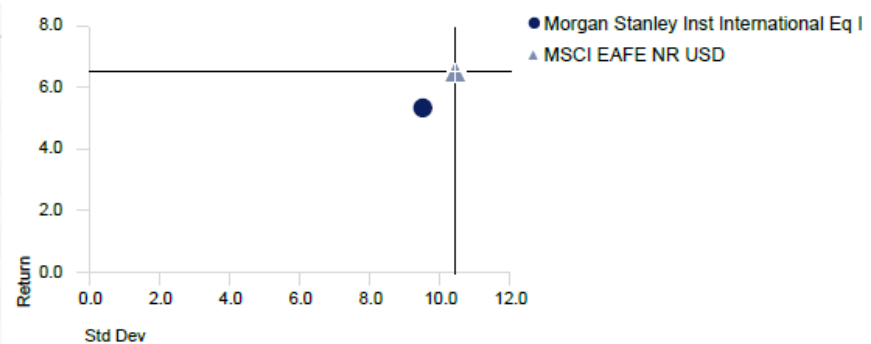


## Calendar Year Returns

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

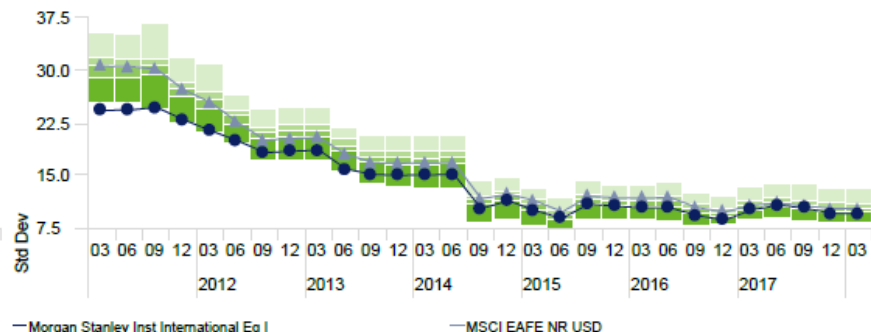
## Risk & Return Illustration (5 Years)

Time Period: 4/1/2013 to 3/31/2018



## Rolling Risk (3 Years)

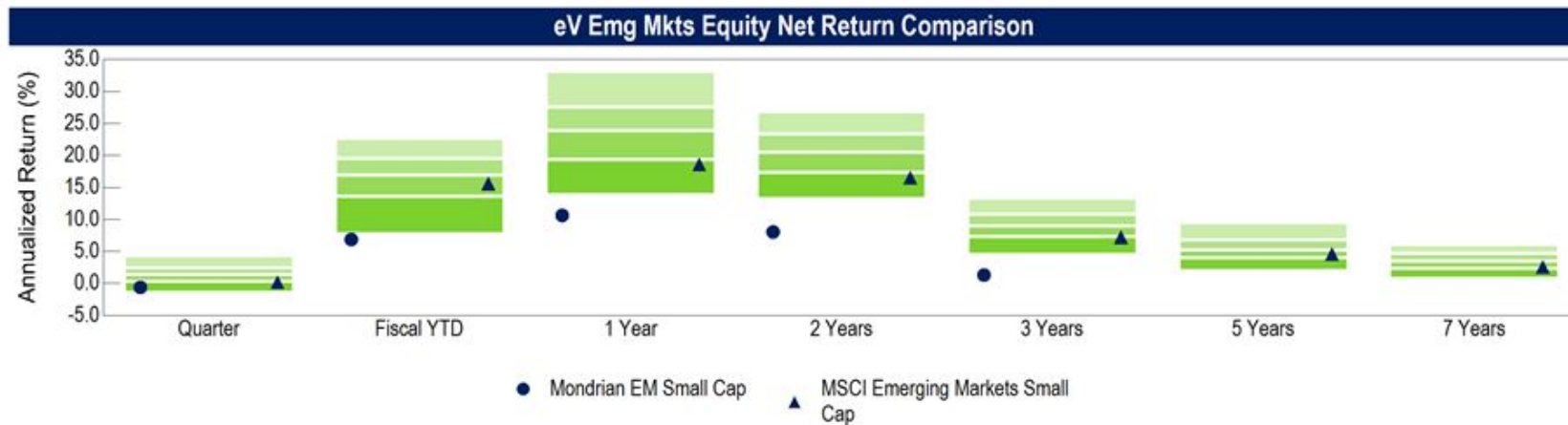
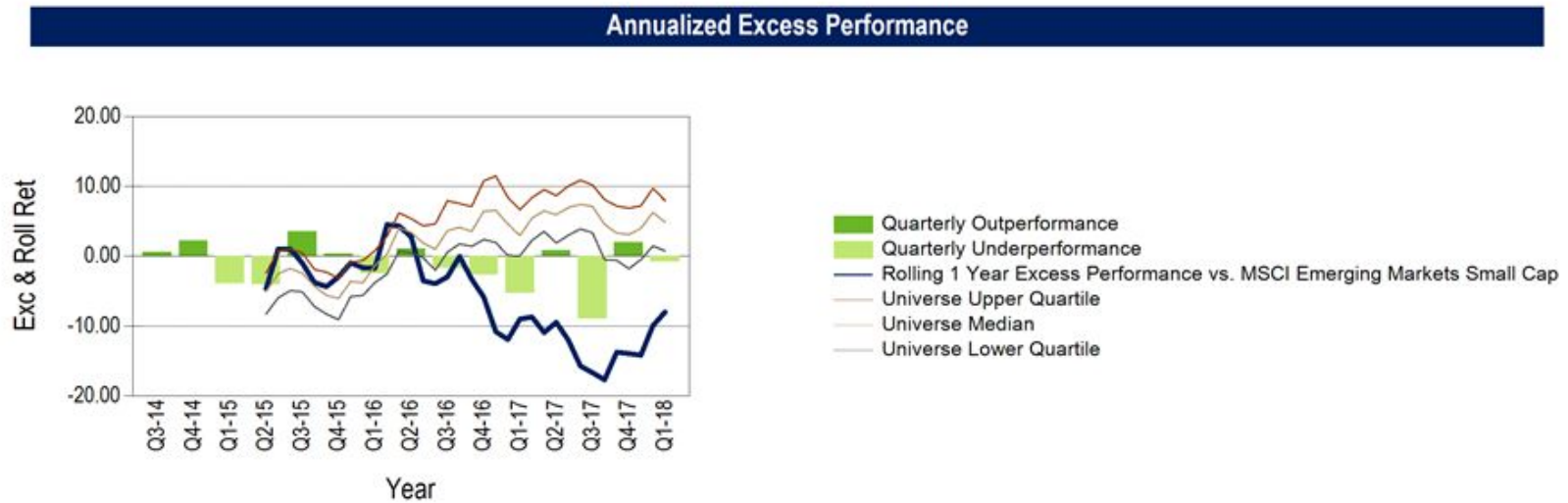
Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



Source: Morningstar

March 31, 2018

# MONDRIAN EM SMALL CAP

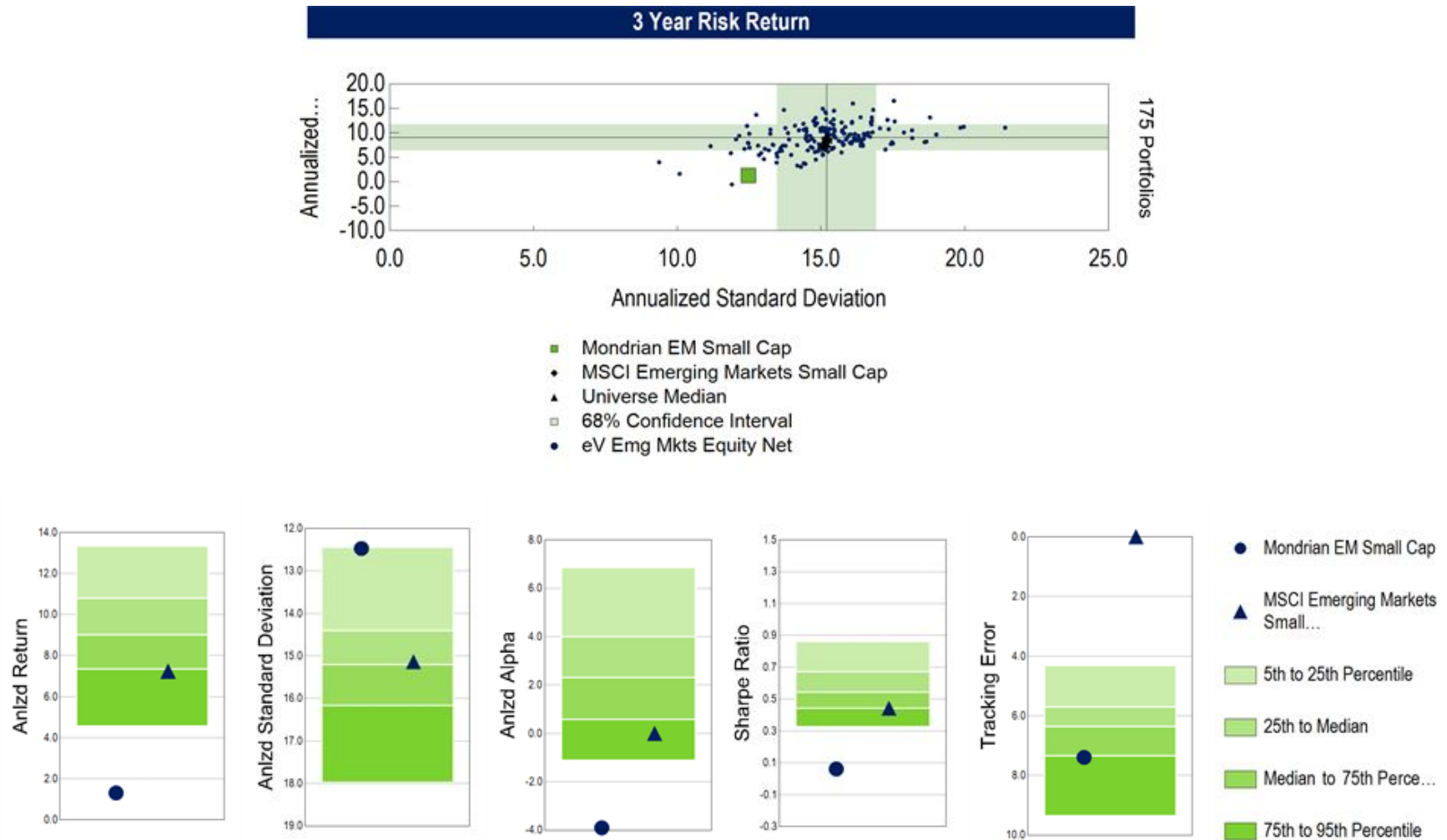


\*Returns are net of fees.



March 31, 2018

# MONDRIAN EM SMALL CAP



March 31, 2018

# MONDRIAN EM SMALL CAP

## Sector Allocation

	Fund	MSCI EM SC
Consumer Discretionary	15.3	16.7
Consumer Staples	16.0	6.9
Energy	1.8	2.2
Financials	2.1	8.8
Health Care	22.1	9.5
Industrials	14.7	14.1
Information Technology	6.2	16.5
Materials	8.8	11.7
Real Estate	8.1	8.9
Telecommunication Services	-	0.9
Utilities	3.5	3.8
Cash	1.4	-
<b>TOTAL</b>	<b>100.0</b>	<b>100.0</b>

## Country Allocation

	Fund	MSCI EM SC
<b>Latin America</b>	<b>10.9</b>	<b>10.1</b>
Brazil	3.1	5.6
Mexico	5.6	2.8
Peru	2.2	0.2
<b>Europe, Middle East &amp; Africa</b>	<b>7.9</b>	<b>10.9</b>
Kuwait	1.2	-
Poland	2.8	0.9
Saudi Arabia	1.7	-
South Africa	2.2	5.6
<b>Pacific-Asia</b>	<b>79.8</b>	<b>79.0</b>
<b>North Asia</b>	<b>32.3</b>	<b>54.8</b>
China/Hong Kong	17.9	20.2
South Korea	6.6	17.0
Taiwan	7.8	17.6
<b>South Asia</b>	<b>47.5</b>	<b>23.4</b>
India	25.4	13.3
Indonesia	7.9	2.3
Malaysia	6.5	3.3
Philippines	4.3	0.9
Thailand	3.4	3.6
Cash	1.4	-
<b>TOTAL</b>	<b>100.0</b>	<b>100.0</b>



Source: Mondrian

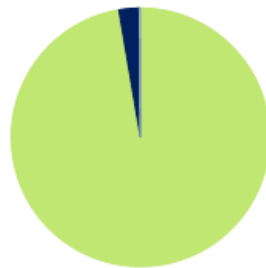
March 31, 2018



# VANGUARD TOTAL BOND MARKET I

## Asset Allocation

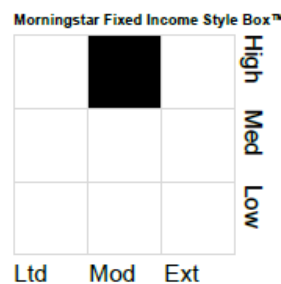
Portfolio Date: 2/28/2018



Stock	0.0
Bond	97.3
Cash	2.6
Other	0.0
<b>Total</b>	<b>100.0</b>

## Fixed Income Statistics

Portfolio Date: 2/28/2018



## Fixed-Income Stats

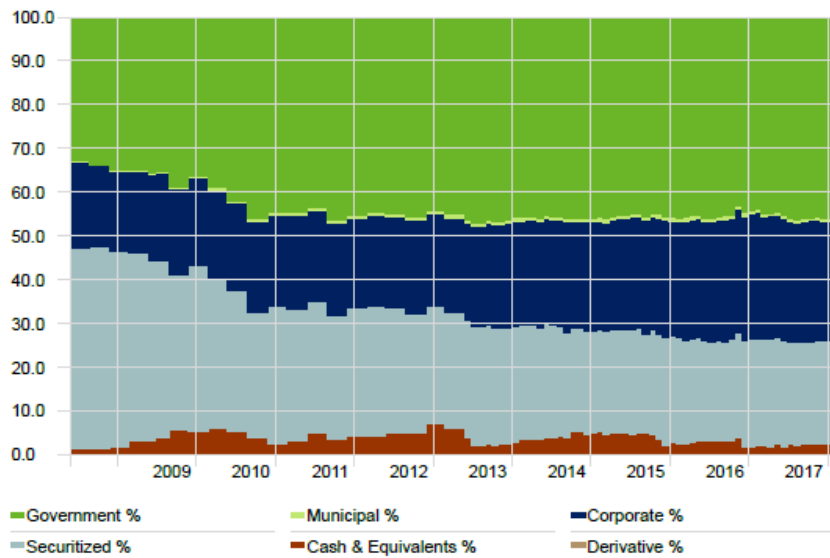
Average Eff Duration	6.1
Average Eff Maturity	8.5
Average Coupon	3.1
Average Price	100.8
Average Credit Quality	AA

## Credit Quality Breakdown

Portfolio Date: 2/28/2018

	Fund	Index
AAA %	69.6	
AA %	3.47	
A %	12.35	
BBB %	14.62	
BB %	0.00	
B %	0.00	
Below B %	0.00	
Not Rated %	0.00	
Yield to Maturity	3.06	

## Historical Sector Allocations (10 Years)



## Top Holdings

	Detail Holding Type	Portfolio Weighting %
United States Treasury Notes 2.125% SNR PIDI NTS 15/05/2025 USD (C-2025)	BOND - GOVT/TREASURY	0.47
United States Treasury Notes 2.825% SNR PIDI NTS 15/11/2020 USD (F-2020)	BOND - GOVT/TREASURY	0.43
United States Treasury Notes 2.125% SNR PIDI NTS 31/12/2022 USD (T-2022)	BOND - GOVT/TREASURY	0.42
United States Treasury Notes 1.375% PIDI NTS 15/02/2020 USD (AJ-2020)	BOND - GOVT/TREASURY	0.42
United States Treasury Notes 1.75% SNR PIDI NTS 15/05/2023 USD (C-2023)	BOND - GOVT/TREASURY	0.41
United States Treasury Notes 1.825% PIDI NTS 15/03/2020 USD (AK-2020)	BOND - GOVT/TREASURY	0.39
United States Treasury Notes 3.825% SNR PIDI NTS 15/08/2019 USD	BOND - GOVT/TREASURY	0.39
United States Treasury Notes 2.25% PIDI NTS 15/11/2027 USD (F-2027)	BOND - GOVT/TREASURY	0.39
United States Treasury Notes 1.75% SNR PIDI NTS 28/02/2022 USD (H-2022)	BOND - GOVT/TREASURY	0.38
United States Treasury Notes 1.5% SNR PIDI NTS 31/10/2019 USD (AE-2019)	BOND - GOVT/TREASURY	0.37



Source: Morningstar

March 31, 2018



# VANGUARD TOTAL BOND MARKET I

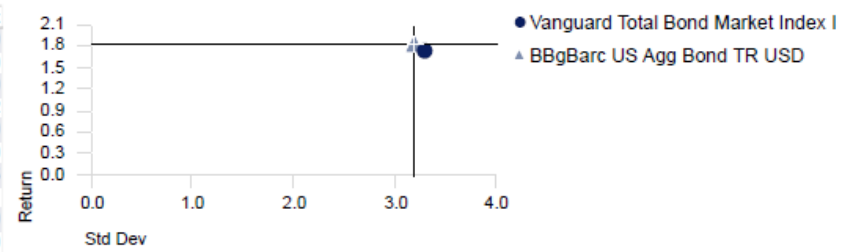
## Risk & Return Characteristics (5 Years)

Time Period: 4/1/2013 to 3/31/2018

	Fund	Index
R2	99.9	100.0
Alpha	-0.1	0.0
Beta	1.0	1.0
Std Dev	3.3	3.2
Up Capture Ratio	100.6	100.0
Down Capture Ratio	105.3	100.0
Sharpe Ratio (geo)	0.4	0.5
Information Ratio (geo)	-0.5	
Tracking Error	0.2	0.0
Correlation	1.0	1.0

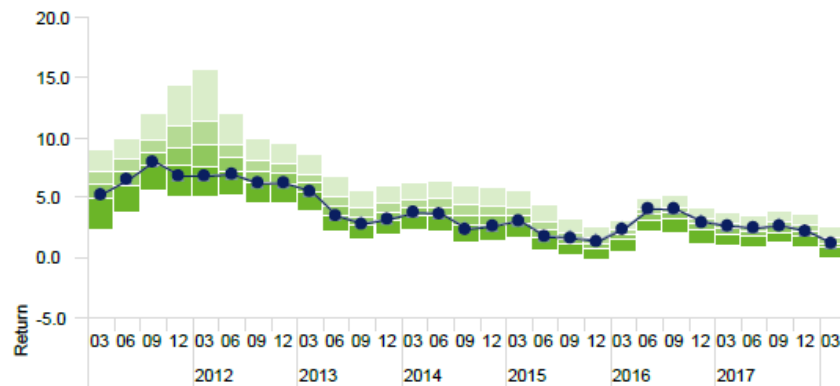
## Risk & Return Illustration (5 Years)

Time Period: 4/1/2013 to 3/31/2018



## Rolling Returns (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile

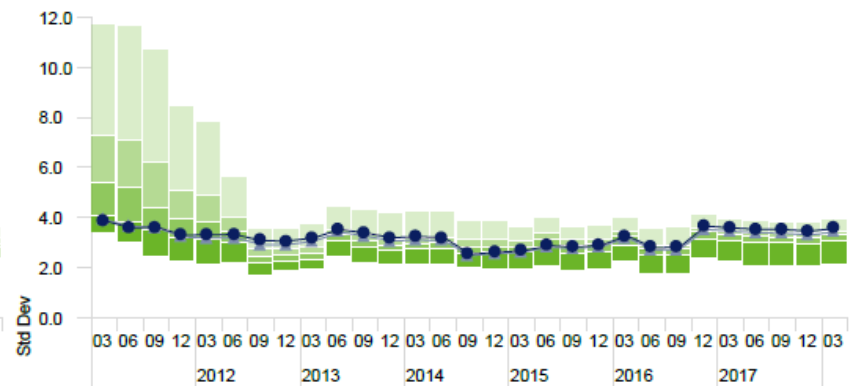


—Vanguard Total Bond Market Index I

—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

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



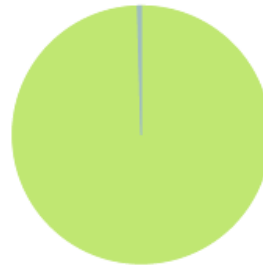
Source: Morningstar

March 31, 2018

# VANGUARD INFLATION PROTECTED SECURITIES

## Asset Allocation

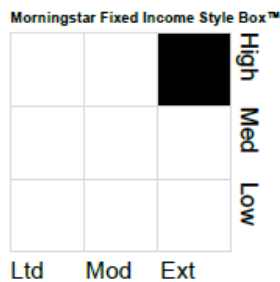
Portfolio Date: 2/28/2018



• Stock	0.0
• Bond	99.6
• Cash	0.0
• Other	0.4
<b>Total</b>	<b>100.0</b>

## Fixed Income Statistics

Portfolio Date: 2/28/2018



## Fixed-Income Stats

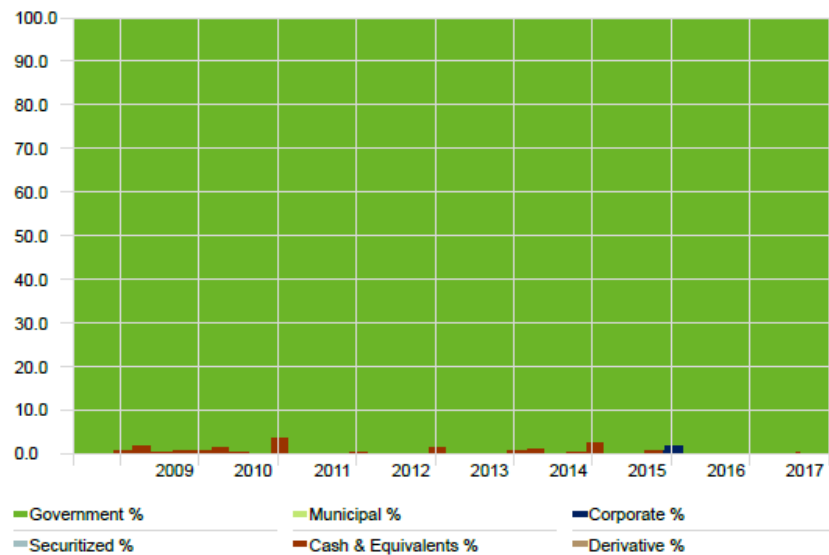
Average Eff Duration	7.5
Average Eff Maturity	8.2
Average Coupon	0.8
Average Price	112.3
Average Credit Quality	AAA

## Credit Quality Breakdown

Portfolio Date: 2/28/2018

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

## Historical Sector Allocations (10 Years)



## Top Holdings

	Detail Holding Type	Portfolio Weighting %
US Treasury Note	BOND - GOV'T INFLATION PROTECTED	5.38
US Treasury Note	BOND - GOV'T INFLATION PROTECTED	4.70
US Treasury Note	BOND - GOV'T INFLATION PROTECTED	4.10
US Treasury Note	BOND - GOV'T INFLATION PROTECTED	3.80
US Treasury Note	BOND - GOV'T INFLATION PROTECTED	3.79
US Treasury Note	BOND - GOV'T INFLATION PROTECTED	3.78
US Treasury Note	BOND - GOV'T INFLATION PROTECTED	3.73
US Treasury TIP	BOND - GOV'T INFLATION PROTECTED	3.71
US Treasury Note	BOND - GOV'T INFLATION PROTECTED	3.69
US Treasury Note	BOND - GOV'T INFLATION PROTECTED	3.65



Source: Morningstar

March 31, 2018

# VANGUARD INFLATION PROTECTED SECURITIES

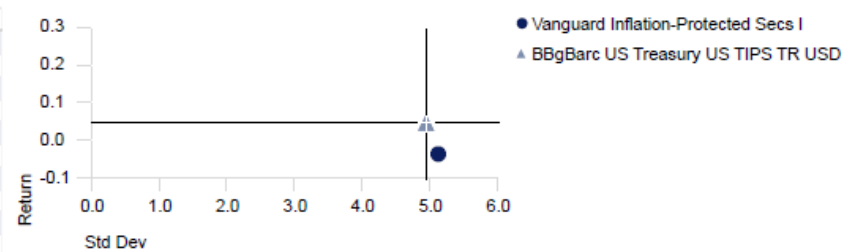
## Risk & Return Characteristics (5 Years)

Time Period: 4/1/2013 to 3/31/2018

	Fund	Index
R2	99.6	100.0
Alpha	-0.1	0.0
Beta	1.0	1.0
Std Dev	5.1	4.9
Up Capture Ratio	101.9	100.0
Down Capture Ratio	104.2	100.0
Sharpe Ratio (geo)	-0.1	-0.1
Information Ratio (geo)	-0.2	
Tracking Error	0.4	0.0
Correlation	1.0	1.0

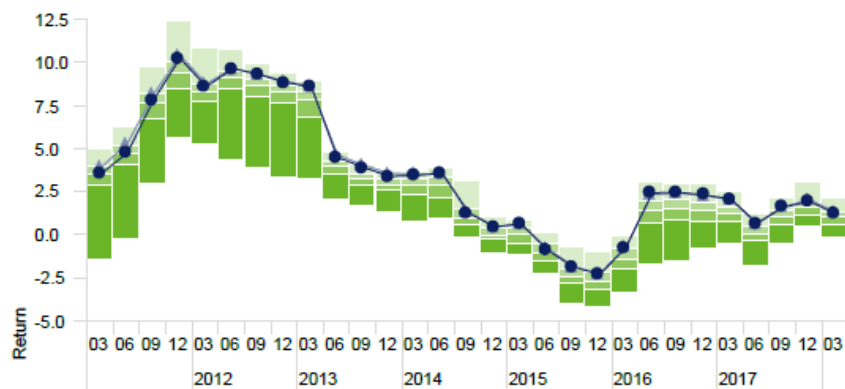
## Risk & Return Illustration (5 Years)

Time Period: 4/1/2013 to 3/31/2018



## Rolling Returns (3 Years)

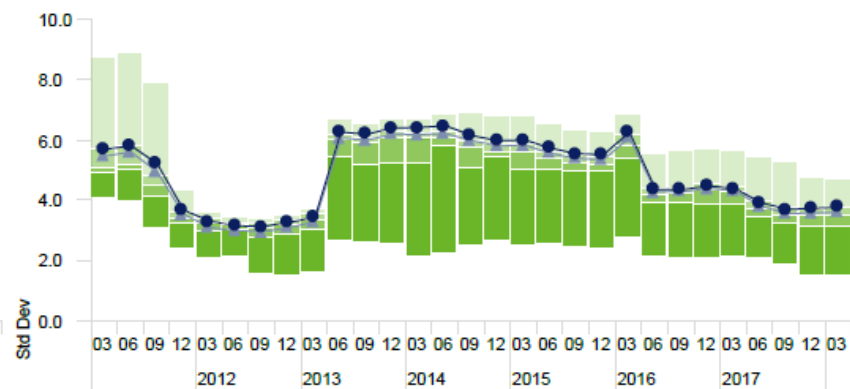
Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



—Vanguard Inflation-Protected Secs I —BBgBarc US Treasury US TIPS TR USD

## Rolling Risk (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



—Vanguard Inflation-Protected Secs I —BBgBarc US Treasury US TIPS TR USD

## Calendar Year Returns

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



Source: Morningstar

March 31, 2018

# GUGGENHEIM US BANK LOANS

## Characteristics

	US Bank Loans Composite	Credit Suisse Leveraged Loan Index
Effective Duration	0.15 years	0.14 years
Average Coupon	5.06%	5.45%
Average Market Price	\$99.35	\$99.00
Average YTM	5.84%	6.51%
Average YTW	2.90%	3.22%
Average OAS	272	332
Average Credit Quality <sup>2</sup>	B+	B
WAL to Worst	1.05 years	1.15 years
No. of Issuers	236	1247

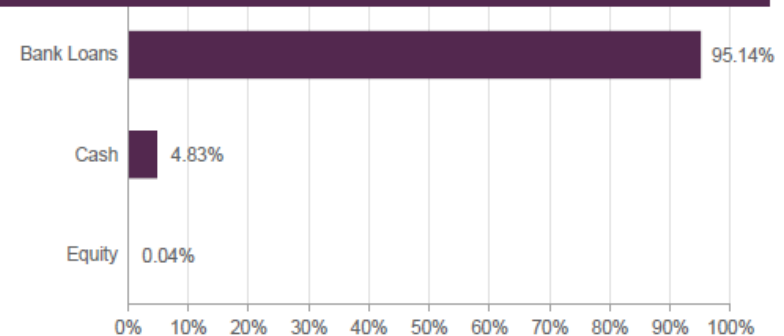
## Performance & Risk Analysis (Since Inception)

	US Bank Loans Composite (Gross)	Credit Suisse Leveraged Loan Index
Annualized Return	6.93%	5.15%
Excess Return	1.77%	–
Standard Deviation	4.94%	6.23%
Correlation	0.97	1
Information Ratio	0.94	–
Sharpe Ratio	1.17	0.65

## Industry Allocation

	Guggenheim	Index
Banking	0.00%	0.01%
Basic Industry	3.80%	5.03%
Brokerage	0.78%	1.03%
Capital Goods	10.74%	9.47%
Communications	8.43%	13.40%
Consumer Cyclical	20.58%	19.51%
Consumer Non Cyclical	22.86%	17.45%
Electric	2.77%	2.82%
Energy	0.73%	2.87%
Finance Companies	2.18%	2.58%
Insurance	1.80%	2.44%
Other Financials	0.61%	1.65%
Other Industry	1.29%	3.20%
Technology	17.75%	15.54%
Transportation	0.81%	1.76%
Cash	4.83%	0.00%
Other <sup>3</sup>	0.03%	1.24%

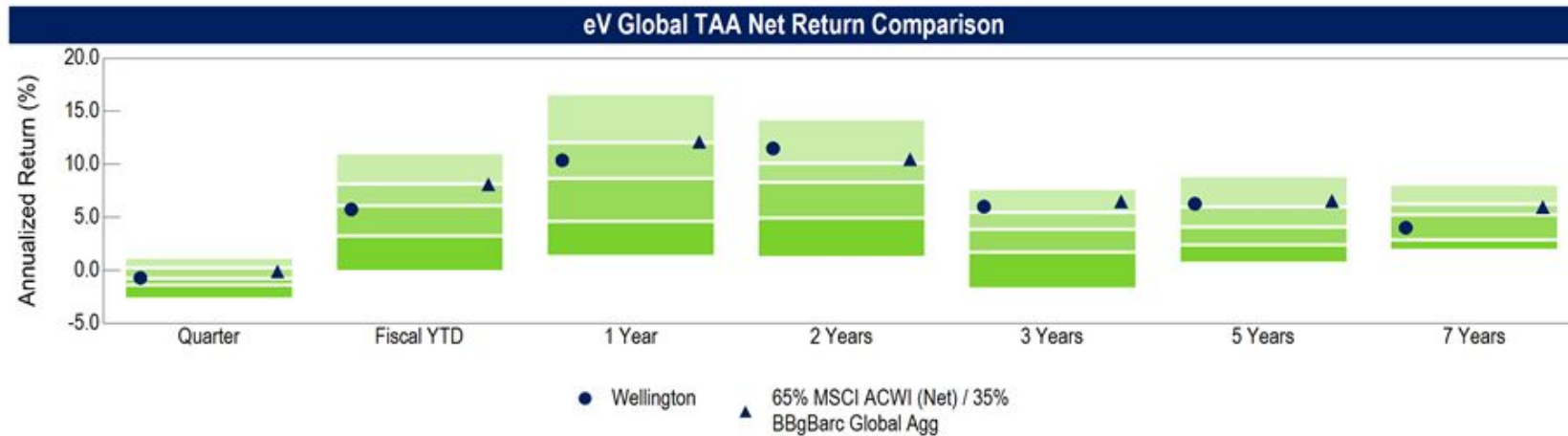
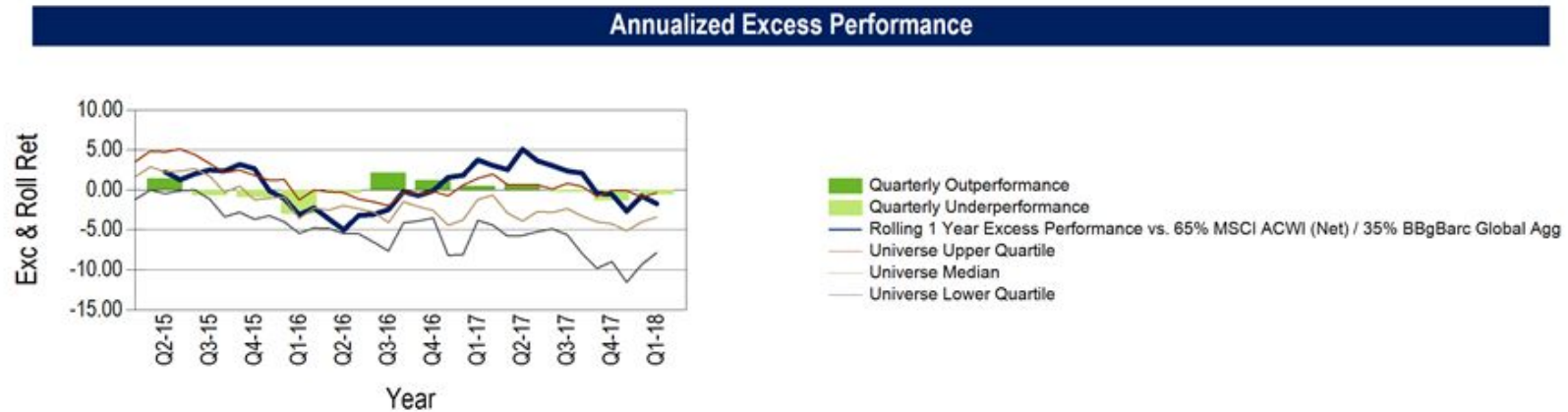
## Asset Class Allocation



Source: Guggenheim

March 31, 2018

# WELLINGTON OPPORTUNISTIC

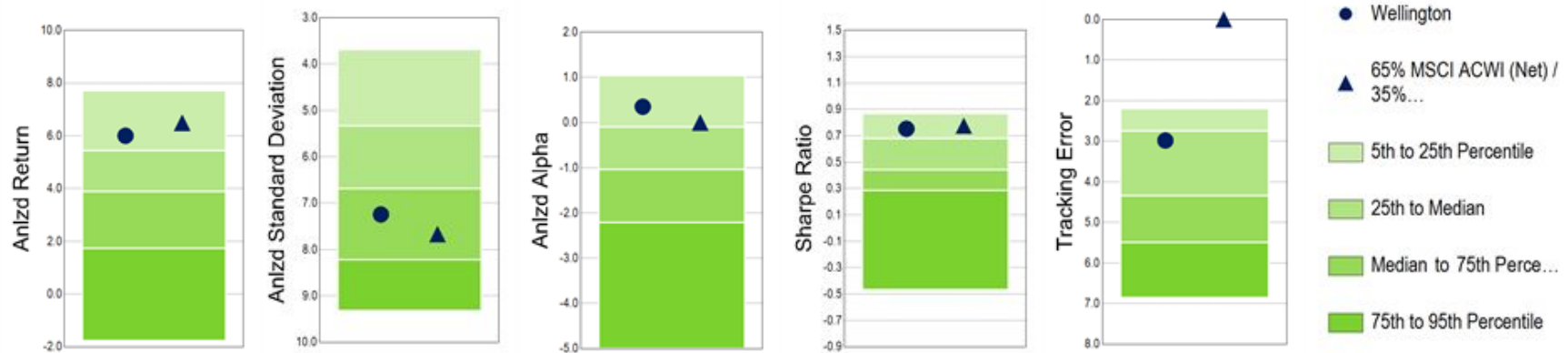


\*Returns are net of fees.



March 31, 2018

# WELLINGTON OPPORTUNISTIC

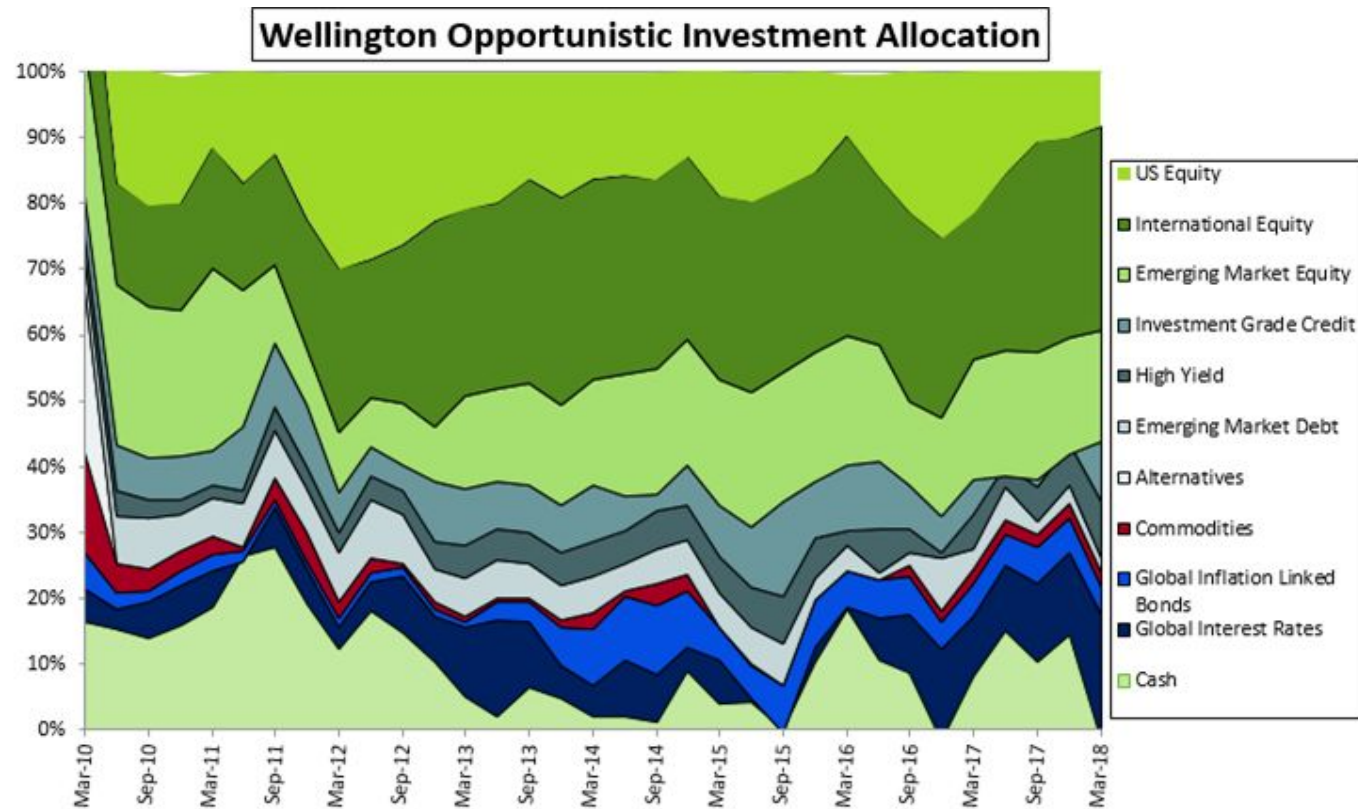


\*Returns are net of fees.



March 31, 2018

# WELLINGTON OPPORTUNISTIC

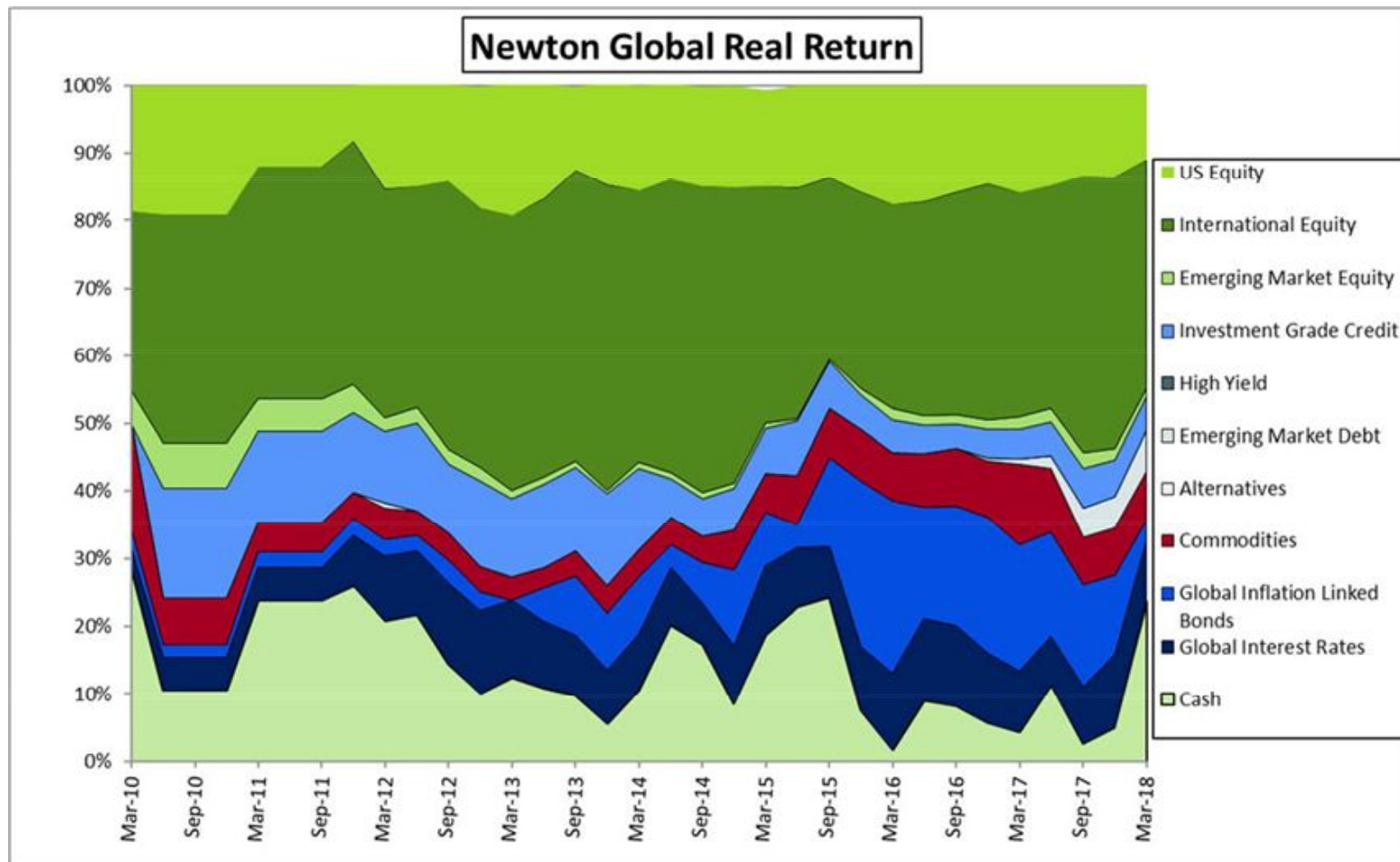


Source: Wellington

March 31, 2018



# NEWTON GLOBAL REAL RETURN



Source: Newton

March 31, 2018



# ENTRUSTPERMAL FIXED INCOME HOLDINGS

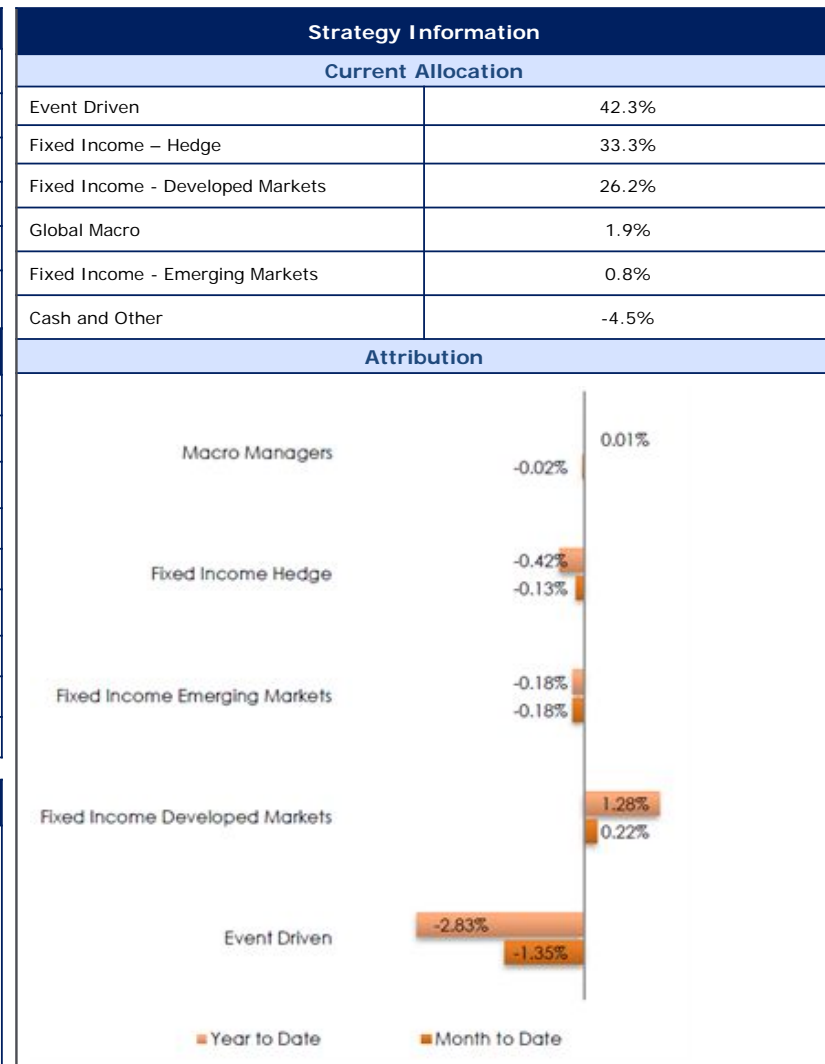


March 31, 2018

# ENTRUSTPERMAL FIXED INCOME HOLDINGS

General Fund Information			
Fund Name	EnTrustPermal Fixed Income Holdings		
Management Company	EnTrustPermal		
Location	New York, NY		
Firm AUM	\$20.9 Billion	Strategy	Fund of Fund
Strategy AUM	\$522.9 Million	Sub-Strategy	Multi-Strategy
Portfolio Managers	Robert Kaplan, Clark Fenton, Javier Dyer	Direct or FOF	FOF
Terms			
Share Class	-		
Minimum Investment	\$1 million		
Management Fee	0.95%		
Incentive Fee	None		
Hurdle Rate	None		
High Water Mark	None		
Subscription	Monthly		
Redemption	Monthly with 20 days		
Lock-Up	None		

Investment Strategy	
<p>Permal Fixed Income Holdings features a performance-oriented investment philosophy that employs a unique combination of fixed-income spread strategies, opportunistic bets on events, and nimble, liquid macro strategies. It is positioned as both a performance enhancer and a good diversifier to a core hedge fund allocation</p>	



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



March 31, 2018

# LIGHTHOUSE GLOBAL LONG/SHORT

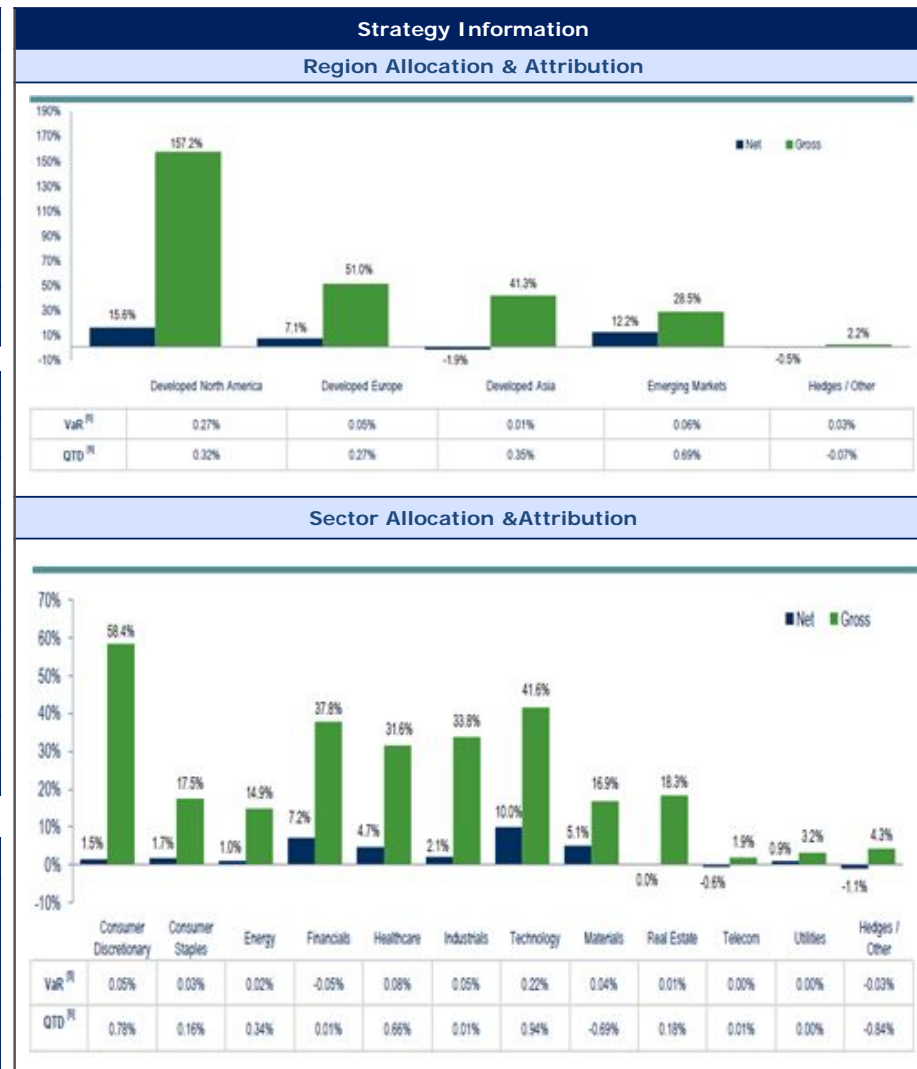


# LIGHTHOUSE GLOBAL LONG/SHORT

General Fund Information			
Fund Name	Lighthouse Global Long/Short Fund		
Management Company	Lighthouse Investment Partners, LLC		
Location	Palm Beach, FL		
Firm AUM	\$10.6 billion	Strategy	Fund of Fund
Strategy AUM	\$1.9 billion	Sub-Strategy	Long/Short Equity
Portfolio Managers	Ethan Baron	Direct or FOF	FOF

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

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



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

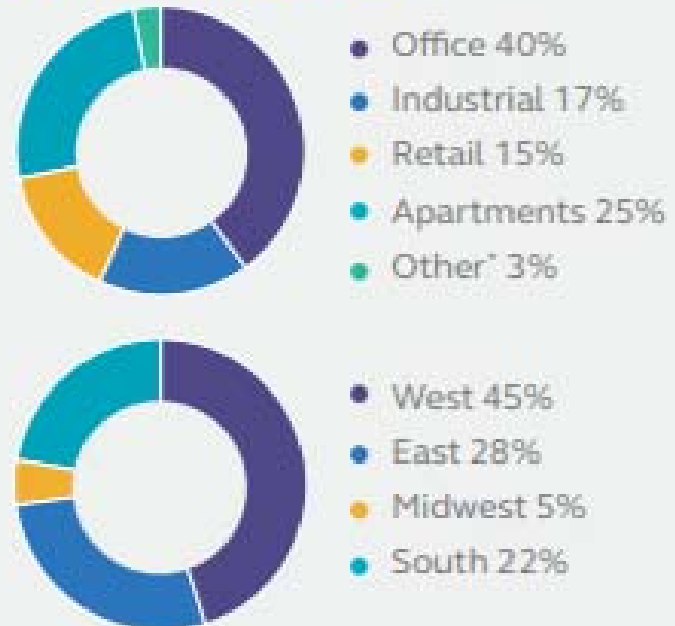
March 31, 2018

# PRINCIPAL U.S. PROPERTY

## 1Q2018 key statistics

Inception date	January, 1982
Gross asset value	\$10.13 billion
Net asset value	\$7.46 billion
Number of investments	143
Number of markets	45
Core portfolio occupancy*	93%
Cash to gross assets	1.4%
Leverage ratio**	23.5%

## Diversification



\*Consists of hotel (2%) and land (1%) exposure.

Photo above: Sonoran Village, Phoenix, AZ



Source: Principal

March 31, 2018

# APPENDIX

NEPC, LLC

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March 31, 2018



# 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.







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## AGENDA ITEM SUMMARY

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

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

3. **BOARD INFORMATION:** X

**BOARD ACTION:**

4. **OUTCOME:**

Primary Outcomes:

Enhance fiscal positioning

**BOARD POLICY:**

Section 709 - Investments

5. **BACKGROUND:**

Enclosed for your information is the Operating Cash Fund performance report for the quarter that ended March 31, 2018.

Kelly Regan and Jay Roney of NEPC will provide a brief review at the June 14, 2018 Investment Committee meeting.

6/1/2018

# FIRST QUARTER 2018 INVESTMENT REVIEW



## UNIVERSITY OF MAINE SYSTEM OPERATING FUND

June 14, 2018

Jay E. Roney, Partner

Kelly Regan, Senior Consultant



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

# EXECUTIVE SUMMARY

NEPC, LLC

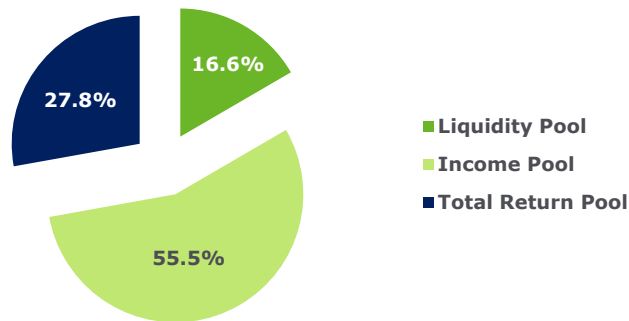
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March 31, 2018

# EXECUTIVE SUMMARY

## ASSET ALLOCATION

Plan Assets: \$296.0 Million



## PLAN COMMENTS

### Asset Allocation

The Fund's assets as of March 31, 2018 were \$296.0 million. This represents a \$24.7 million increase from the previous quarter.

The Liquidity Pool (16.6% v 25.0%), Income Pool (55.5% v 50.0%) and Total Return Pool (27.8% v 25.0%) are all within allowable ranges. Throughout the year, asset allocation will change based on cash inflows and outflows. NEPC reviews this on a monthly basis.

### Performance (Net of Fees)

The Fund returned 0.0% during the 1<sup>st</sup> quarter and 2.1% fiscal-year-to-date.

## FUND PERFORMANCE: NET OF FEES

	QTR (%)	FYTD (%)	3 YR (%)	5 YR (%)	10 YR (%)
--	---------	----------	----------	----------	-----------

COMPOSITE	0.0	2.1	2.0	1.9	2.5
ALLOCATION INDEX	0.1	2.4	2.3	2.3	--

## RECENT ACTIONS/RECOMMENDATIONS

### Recent Actions

The System implemented a portfolio rebalance during May to bring asset allocation in-line with policy targets.

The System transferred from BlackRock Strategic Income Opportunities Portfolio Institutional Class (BSIIX) to Class K (BSIKX) in May, resulting in a lower expense ratio.

### Recommendations

There are no recommendations at this time.

NEPC conducted an annual review of the Investment Policy Statement and no updates are recommended.

### Investment Manager Updates

PIMCO and Lighthouse had announcements during the 1<sup>st</sup> quarter; NEPC recommends a "Watch" status for both firms.



# DUE DILIGENCE MONITOR

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

Fund	Manager Changes/ Announcements (Recent Quarter)	NEPC Due Diligence Committee Recommendations
PIMCO	Yes	Watch
Lighthouse	Yes	Watch

NEPC Due Diligence Committee Recommendation Key	
<b>No Action</b>	Informational items have surfaced; no action is recommended.
<b>Watch</b>	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.
<b>Hold</b>	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.
<b>Client Review</b>	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.
<b>Terminate</b>	We have lost all confidence in the product; manager would not be recommended for searches and clients would be discouraged from using. The manager cannot be in future searches unless a client specifically requests. Current clients must be advised to replace the manager.



# TOTAL PLAN PERFORMANCE DETAIL

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
<b>Operating Funds Composite</b>	<b>296,011,327</b>	<b>100.0</b>	<b>100.0</b>	<b>0.0</b>	<b>2.1</b>	<b>2.9</b>	<b>3.5</b>	<b>2.0</b>	<b>1.9</b>	<b>2.3</b>	<b>2.5</b>
<i>Allocation Index</i>				0.1	2.4	3.4	3.4	2.3	2.3	2.4	--
<b>Liquidity Pool Composite</b>	<b>49,239,485</b>	<b>16.6</b>	<b>25.0</b>	<b>0.3</b>	<b>0.8</b>	<b>1.0</b>	<b>0.7</b>	<b>0.6</b>	<b>0.4</b>	<b>0.4</b>	<b>0.5</b>
State Pool	33,152,670	11.2		0.3	0.9	1.1	0.9	0.7	0.5	0.4	0.6
BOA General Fund	2,606,813	0.9		0.0	0.0	0.1	0.0	0.0	0.0	--	--
Federated Gov't Obligations	751,878	0.3		0.3	0.8	0.9	--	--	--	--	--
JP Morgan US Gov't Money Market Fund	12,728,124	4.3		0.3	0.7	0.9	--	--	--	--	--
<i>Citi 3mth Treasury Bill</i>				0.3	0.9	1.1	0.7	0.5	0.3	0.2	0.3
<b>Income Pool Composite</b>	<b>164,413,020</b>	<b>55.5</b>	<b>50.0</b>	<b>-0.2</b>	<b>0.7</b>	<b>1.2</b>	<b>2.1</b>	<b>1.6</b>	<b>1.6</b>	<b>2.1</b>	<b>3.4</b>
Income Research + Management	86,981,573	29.4	26.7	-0.3	-0.2	0.2	0.5	0.7	0.8	--	--
<i>BBgBarc US Govt/Credit 1-3 Yr. TR</i>				-0.2	-0.1	0.2	0.5	0.7	0.8	1.0	1.6
BlackRock Strategic Income Opportunities	22,007,473	7.4	6.7	0.4	2.8	3.8	4.7	--	--	--	--
<i>3-Month Libor Total Return USD</i>				0.5	1.2	1.5	1.2	0.9	0.7	0.6	0.7
Loomis Sayles Bank Loans	22,110,546	7.5	6.7	1.0	2.8	3.5	5.1	3.5	3.2	3.8	4.5
<i>Loomis Bank Loans Custom Index</i>				1.2	3.3	4.0	5.0	3.9	4.0	4.4	5.7
Vanguard Total Bond Market Instl' Fund	16,752,887	5.7	5.0	-1.5	-0.3	1.2	0.8	1.1	1.8	2.9	--
<i>BBgBarc US Aggregate TR</i>				-1.5	-0.2	1.2	0.8	1.2	1.8	2.9	3.6
Vanguard Inflation-Protected Securities	16,560,541	5.6	5.0	-0.9	1.1	0.6	--	--	--	--	--
<i>BBgBarc US TIPS TR</i>				-0.8	1.3	0.9	1.2	1.3	0.0	2.5	2.9
<b>Total Return Pool Composite</b>	<b>82,358,822</b>	<b>27.8</b>	<b>25.0</b>	<b>0.0</b>	<b>6.0</b>	<b>8.2</b>	<b>9.3</b>	<b>4.8</b>	<b>4.5</b>	<b>4.8</b>	<b>4.9</b>
Lighthouse	14,401,780	4.9	5.0	2.1	7.1	6.5	7.3	--	--	--	--
<i>Credit Suisse Long Shrt Eqt USD</i>				1.0	7.4	10.7	7.3	4.0	6.3	4.9	4.5
Newton Global Real Return	21,788,142	7.4	6.3	-1.3	-0.7	0.9	--	--	--	--	--
<i>60% MSCI ACWI (Net)/ 40% BBgBarc Global Agg</i>				0.0	7.8	11.7	9.9	6.2	6.2	5.7	4.6
PIMCO All Asset	21,604,678	7.3	6.3	0.3	6.8	8.8	11.0	5.7	3.6	4.7	5.3
<i>Blended Index</i>				-1.0	1.3	2.6	3.6	3.0	2.9	4.2	4.7
Vanguard Total World Stock Index	24,564,222	8.3	7.5	-0.5	10.6	15.4	15.7	8.6	9.7	--	--
<i>FTSE Global All Cap Index</i>				-0.9	10.5	15.2	15.5	8.6	9.7	8.0	5.3

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&amp;P 500 / 10% BC High Yield / 10% JPM EMBI+

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



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# PLAN SUMMARY AND STATISTICS

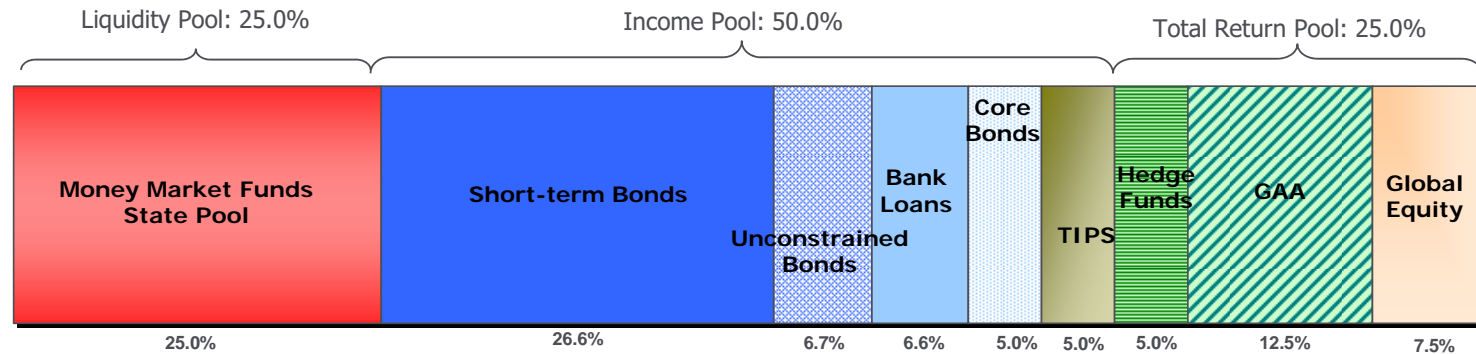
NEPC, LLC

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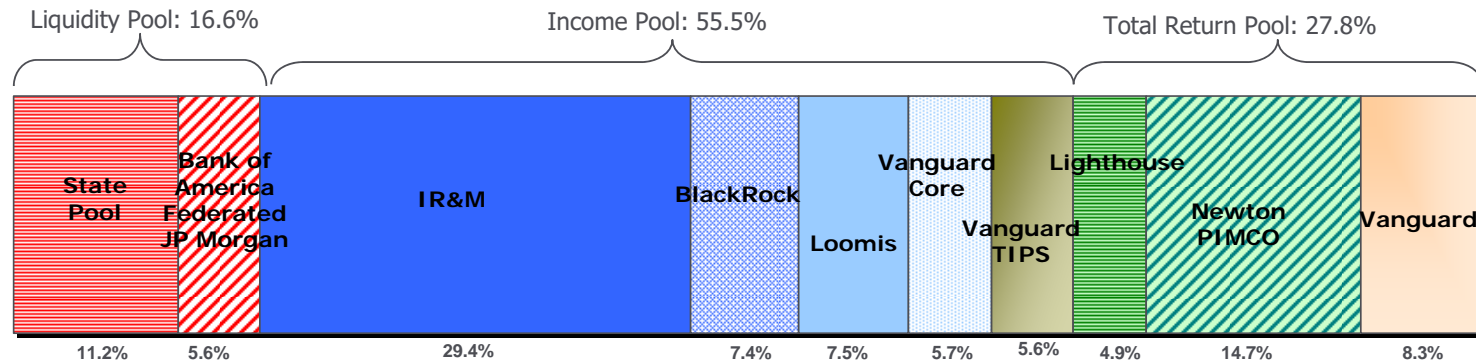
March 31, 2018

# TOTAL FUND ASSET ALLOCATION

## Target Asset Allocation



## Actual Asset Allocation



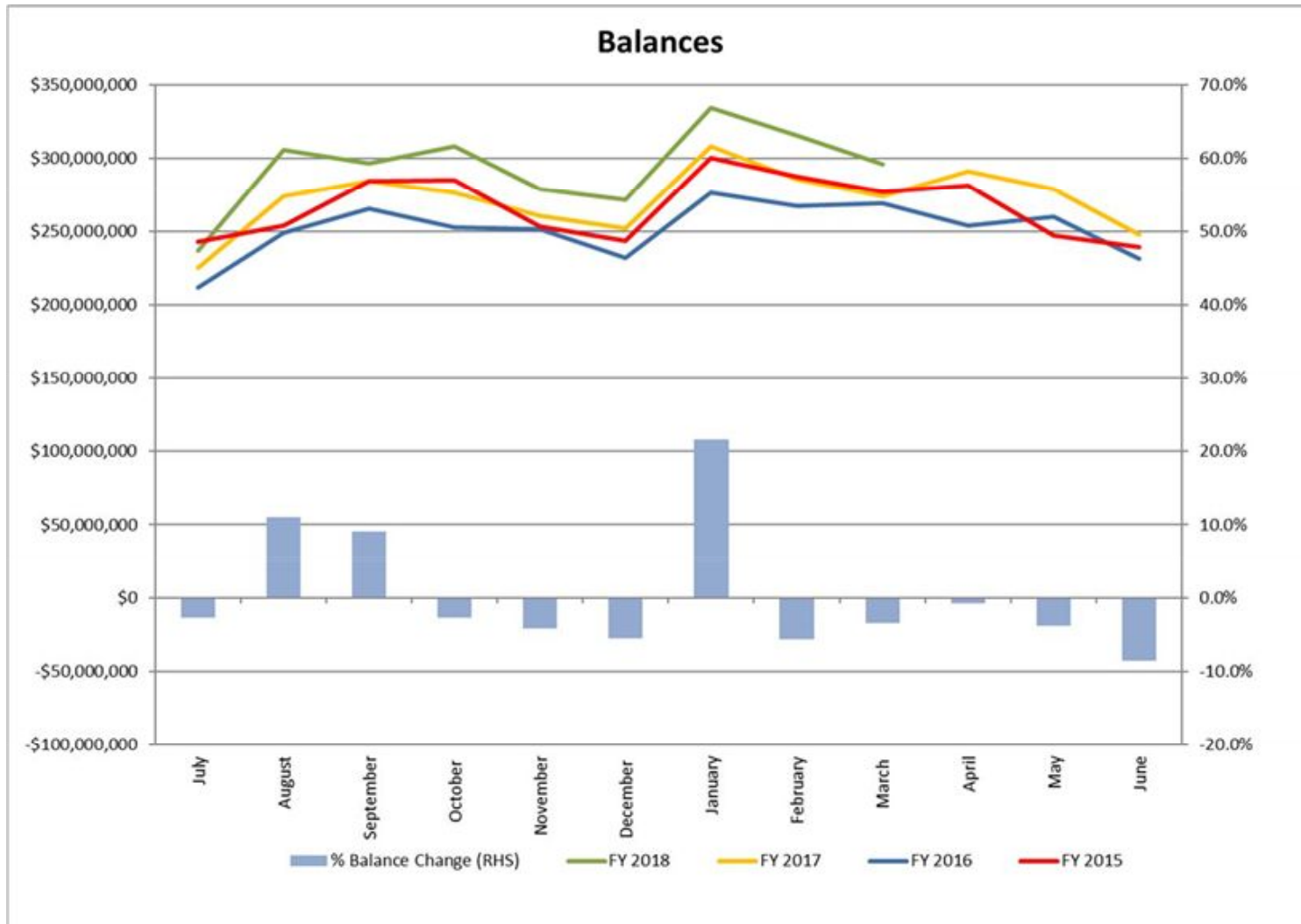
\*May not add up to 100% due to rounding



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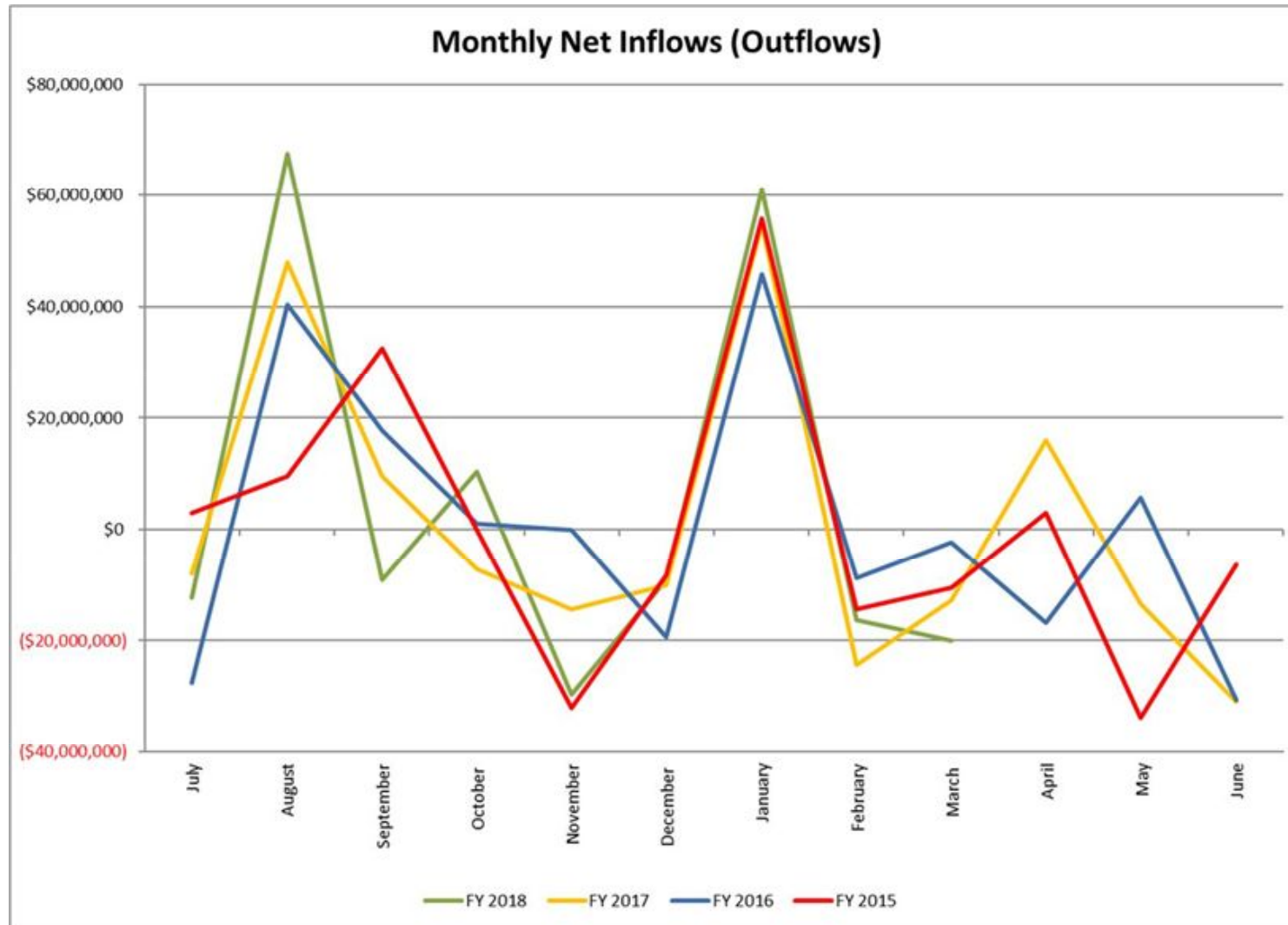
# BALANCES AND MONTHLY CHANGES



March 31, 2018

# MONTHLY NET INFLOWS (OUTFLOWS)

4.1



March 31, 2018

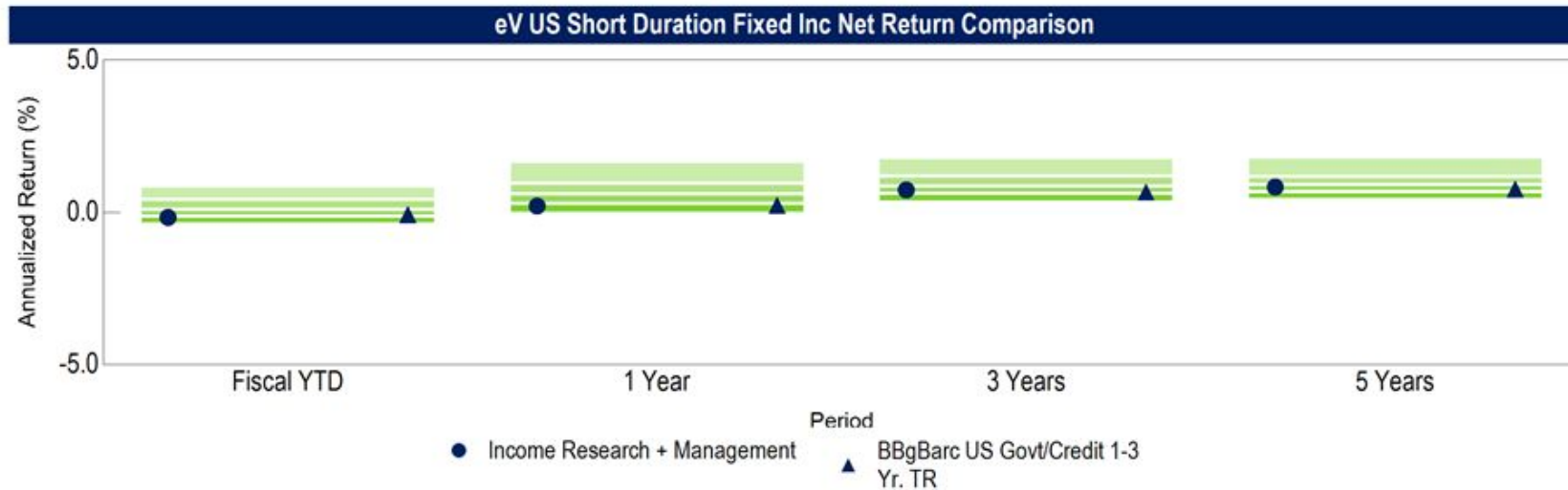
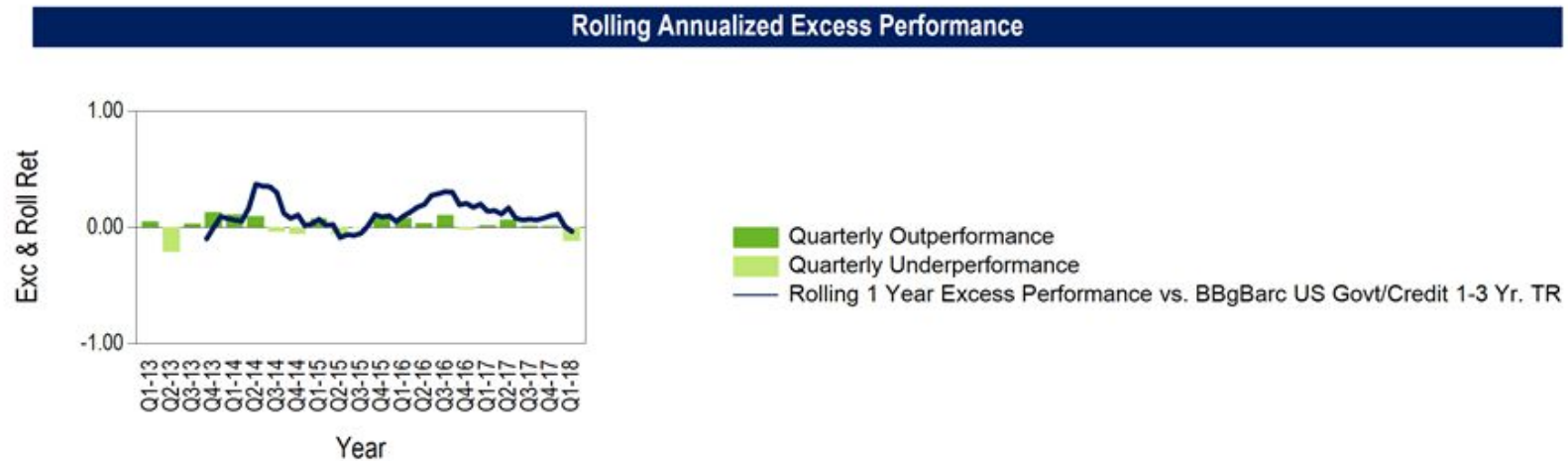
# MANAGER ANALYSIS

NEPC, LLC

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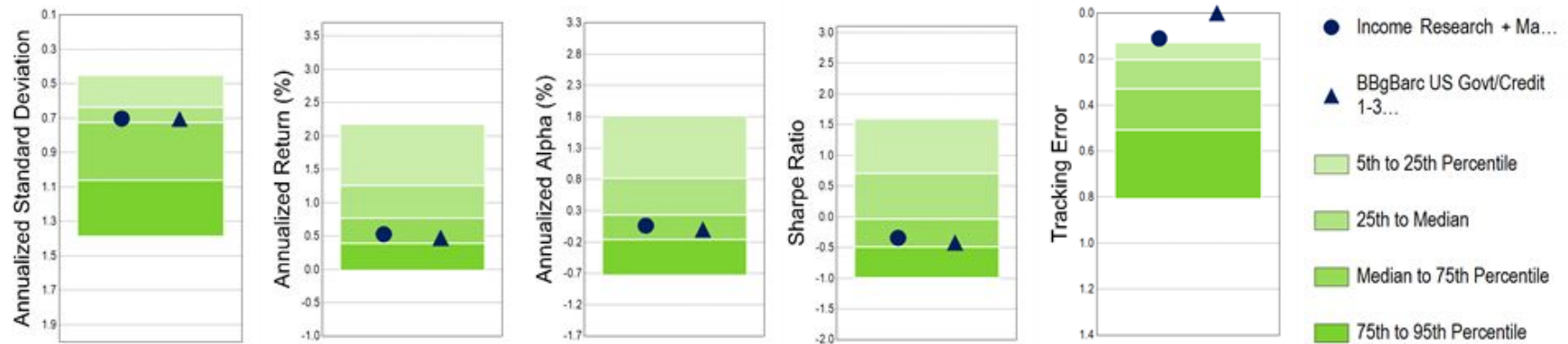
March 31, 2018

# INCOME RESEARCH + MANAGEMENT

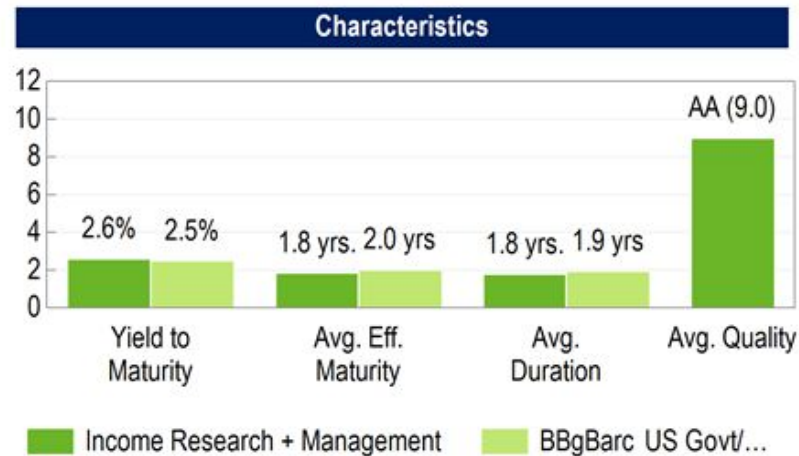


March 31, 2018

# INCOME RESEARCH + MANAGEMENT



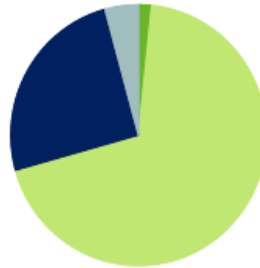
# INCOME RESEARCH + MANAGEMENT



# BLACKROCK STRATEGIC INCOME

## Asset Allocation

Portfolio Date: 2/28/2018



• Stock	1.6
• Bond	69.0
• Cash	25.1
• Other	4.2
<b>Total</b>	<b>100.0</b>

## Fixed Income Statistics

Portfolio Date: 12/31/2017

% Morningstar Fixed Income Style Box™

Not Available

### Fixed-Income Stats

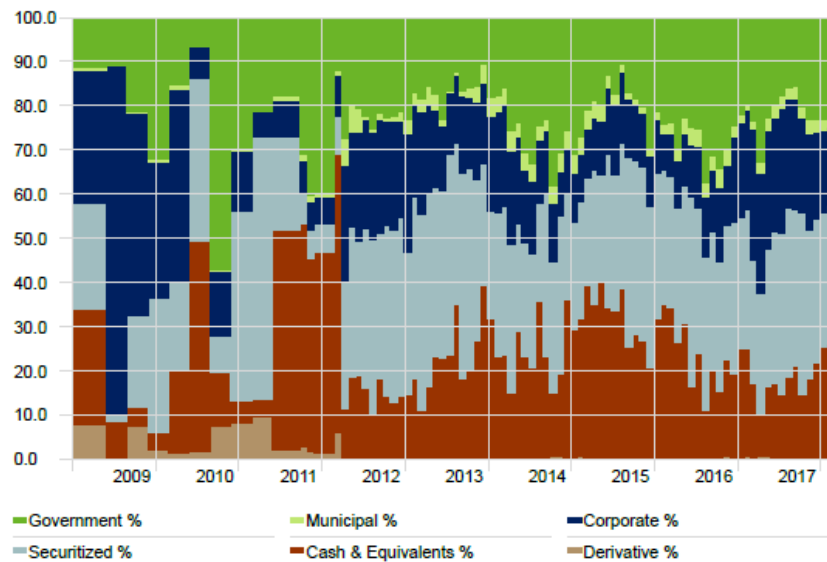
Average Eff Duration	-
Average Eff Maturity	0.0
Average Coupon	3.8
Average Price	144.3
Average Credit Quality	BB

## Credit Quality Breakdown

Portfolio Date: 3/31/2018

	Fund	Index
AAA %	39.7	
AA %	4.70	
A %	6.75	
BBB %	13.88	
BB %	13.14	
B %	10.02	
Below B %	4.55	
Not Rated %	7.27	
Yield to Maturity		

## Historical Sector Allocations (10 Years)



## Top Holdings

	Detail Holding Type	Portfolio Weighting %
US Treasury Note 2%	BOND - GOV'T/TREASURY	16.88
Fed Natl Mort Assc 4%	BOND - GOV'T AGENCY PASS-THRU	8.43
Fed Natl Mort Assc 4%	BOND - GOV'T AGENCY PASS-THRU	5.32
US Treasury Note	BOND - GOV'T INFLATION PROTECTED	3.75
US Treasury Note 2.25%	BOND - GOV'T/TREASURY	-2.75
US Treasury Note 1.75%	BOND - GOV'T/TREASURY	2.15
US Treasury Note 2.25%	BOND - GOV'T/TREASURY	1.80
US Treasury Note	BOND - GOV'T INFLATION PROTECTED	1.26
Japan(Govt Of) 0.1%	BOND - GOV'T INFLATION PROTECTED	1.05
US Treasury Note 2.625%	BOND - GOV'T/TREASURY	-0.99



Source: Morningstar

March 31, 2018

# BLACKROCK STRATEGIC INCOME

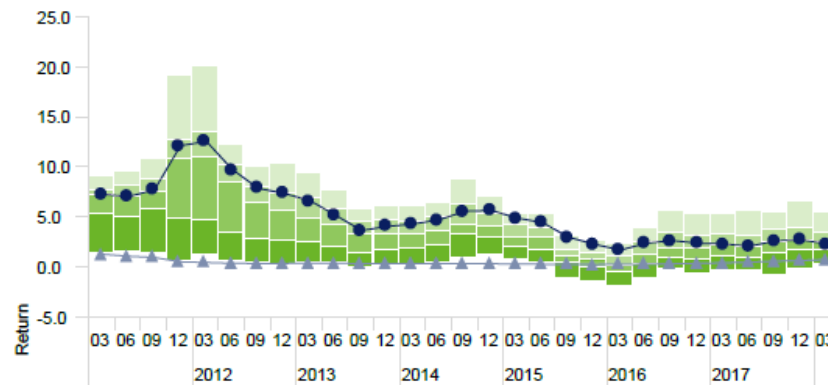
## Risk & Return Characteristics (5 Years)

Time Period: 4/1/2013 to 3/31/2018

	Fund	Index
R2	2.9	100.0
Alpha	1.8	0.0
Beta	3.9	1.0
Std Dev	1.9	0.2
Up Capture Ratio	521.5	100.0
Down Capture Ratio		
Sharpe Ratio (geo)	1.4	0.9
Information Ratio (geo)	1.3	
Tracking Error	1.8	0.0
Correlation	0.2	1.0

## Rolling Returns (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



—BlackRock Strategic Income Opps Instl

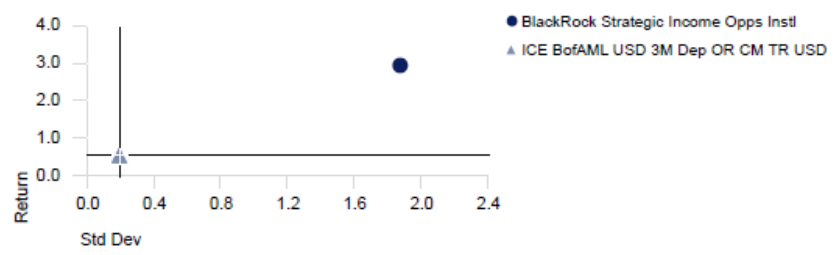
—ICE BofAML USD 3M Dep OR CM TR USD

## Calendar Year Returns

	2008	Rank	2009	Rank	2010	Rank	2011	Rank	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	2017	Rank
BlackRock Strategic Income Opps Instl			25.2	29	13.4	1	-0.7	50	9.9	25	3.3	19	3.9	16	-0.3	32	3.6	66	4.9	39
ICE BofAML USD 3M Dep OR CM TR USD	3.8		1.0		0.3		0.3		0.5		0.3		0.2		0.2		0.7		1.1	

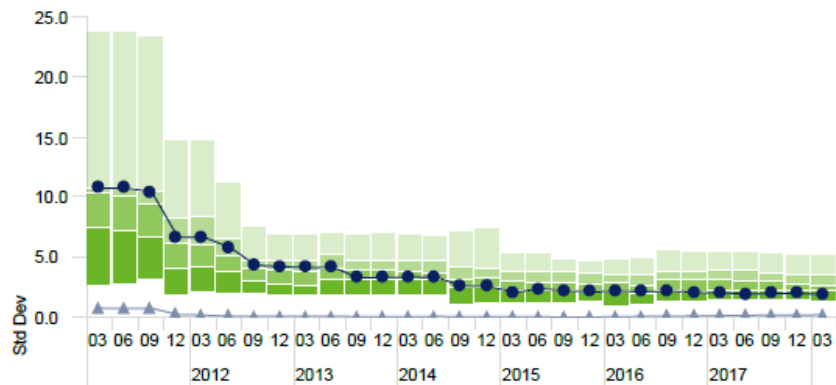
## Risk & Return Illustration (5 Years)

Time Period: 4/1/2013 to 3/31/2018



## Rolling Risk (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



—BlackRock Strategic Income Opps Instl

—ICE BofAML USD 3M Dep OR CM TR USD



Source: Morningstar

March 31, 2018



# LOOMIS SAYLES BANK LOANS

## HOLDINGS BY INDUSTRY (%)

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

## CREDIT QUALITY (%)

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

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

## SECTOR DISTRIBUTION (%)

	Portfolio
Industrial	87.0
Financial	8.2
Utility	3.2
Cash & Equivalents	1.5

## COUNTRY DISTRIBUTION (%)

	Portfolio
United States	93.2
Canada	3.7
Other	3.0

## TOP FIVE HOLDINGS (%)

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



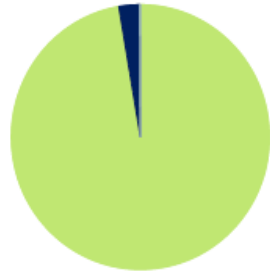
Source: Loomis Sayles

March 31, 2018

# VANGUARD TOTAL BOND MARKET I

## Asset Allocation

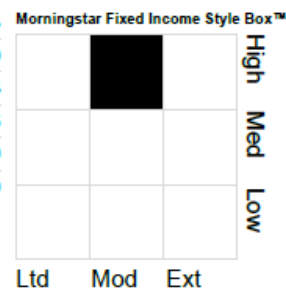
Portfolio Date: 2/28/2018



Stock	0.0
Bond	97.3
Cash	2.6
Other	0.0
<b>Total</b>	<b>100.0</b>

## Fixed Income Statistics

Portfolio Date: 2/28/2018



## Fixed-Income Stats

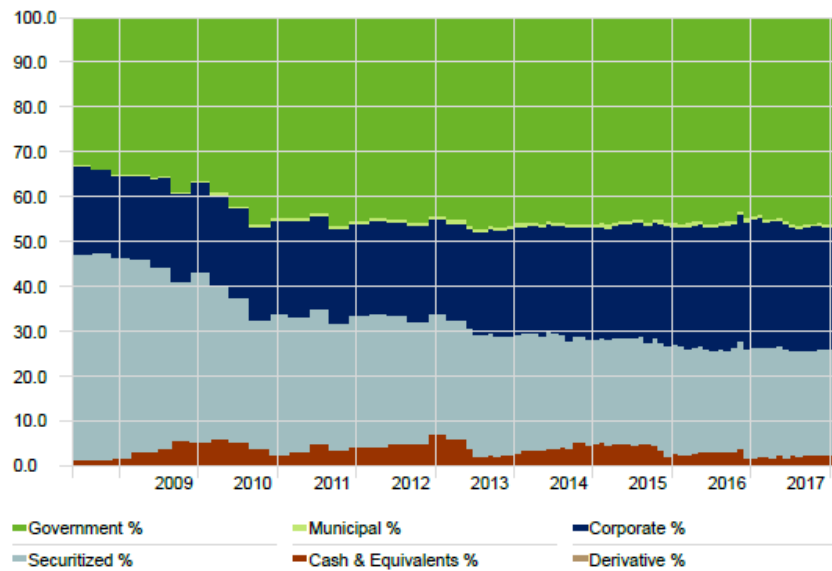
Average Eff Duration	6.1	AAA %
Average Eff Maturity	8.5	AA %
Average Coupon	3.1	A %
Average Price	100.8	BBB %
Average Credit Quality	AA	BB %
		B %
		Below B %
		Not Rated %
		Yield to Maturity

## Credit Quality Breakdown

Portfolio Date: 2/28/2018

	Fund	Index
Average Eff Duration	69.6	
Average Eff Maturity	3.47	
Average Coupon	12.35	
Average Price	14.62	
Average Credit Quality	0.00	
	0.00	
	0.00	
	0.00	
	0.00	
Yield to Maturity	3.06	

## Historical Sector Allocations (10 Years)



## Top Holdings

	Detail Holding Type	Portfolio Weighting %
United States Treasury Notes 2.125% SNR PIDI NTS 15/05/2025 USD (C-2025)	BOND - GOVT/TREASURY	0.47
United States Treasury Notes 2.825% SNR PIDI NTS 15/11/2020 USD (F-2020)	BOND - GOVT/TREASURY	0.43
United States Treasury Notes 2.125% SNR PIDI NTS 31/12/2022 USD (T-2022)	BOND - GOVT/TREASURY	0.42
United States Treasury Notes 1.375% PIDI NTS 15/02/2020 USD (AJ-2020)	BOND - GOVT/TREASURY	0.42
United States Treasury Notes 1.75% SNR PIDI NTS 15/05/2023 USD (C-2023)	BOND - GOVT/TREASURY	0.41
United States Treasury Notes 1.625% PIDI NTS 15/03/2020 USD (AK-2020)	BOND - GOVT/TREASURY	0.39
United States Treasury Notes 3.625% SNR PIDI NTS 15/08/2019 USD	BOND - GOVT/TREASURY	0.39
United States Treasury Notes 2.25% PIDI NTS 15/11/2027 USD (F-2027)	BOND - GOVT/TREASURY	0.39
United States Treasury Notes 1.75% SNR PIDI NTS 28/02/2022 USD (H-2022)	BOND - GOVT/TREASURY	0.38
United States Treasury Notes 1.5% SNR PIDI NTS 31/10/2019 USD (AE-2019)	BOND - GOVT/TREASURY	0.37



Source: Morningstar

March 31, 2018

# VANGUARD TOTAL BOND MARKET I

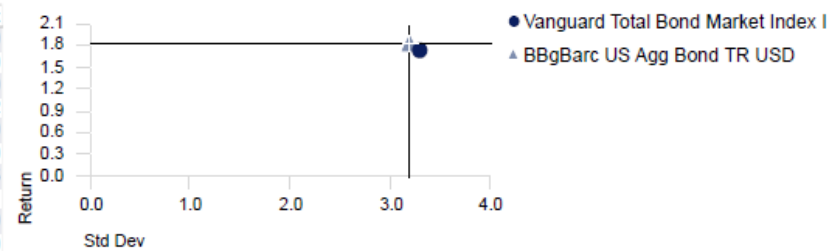
## Risk & Return Characteristics (5 Years)

Time Period: 4/1/2013 to 3/31/2018

	Fund	Index
R2	99.9	100.0
Alpha	-0.1	0.0
Beta	1.0	1.0
Std Dev	3.3	3.2
Up Capture Ratio	100.6	100.0
Down Capture Ratio	105.3	100.0
Sharpe Ratio (geo)	0.4	0.5
Information Ratio (geo)	-0.5	
Tracking Error	0.2	0.0
Correlation	1.0	1.0

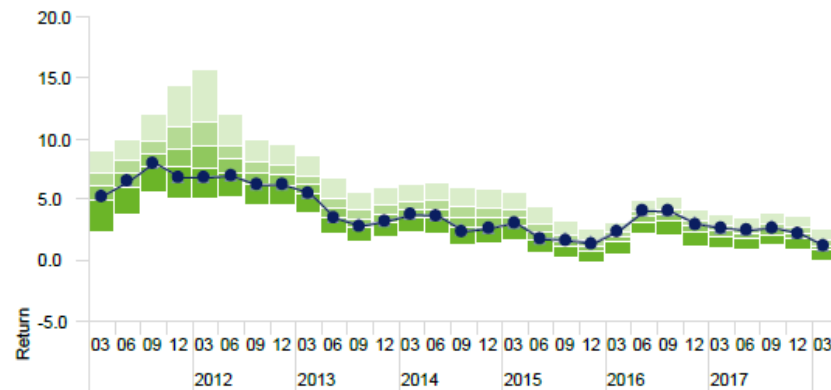
## Risk & Return Illustration (5 Years)

Time Period: 4/1/2013 to 3/31/2018



## Rolling Returns (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile

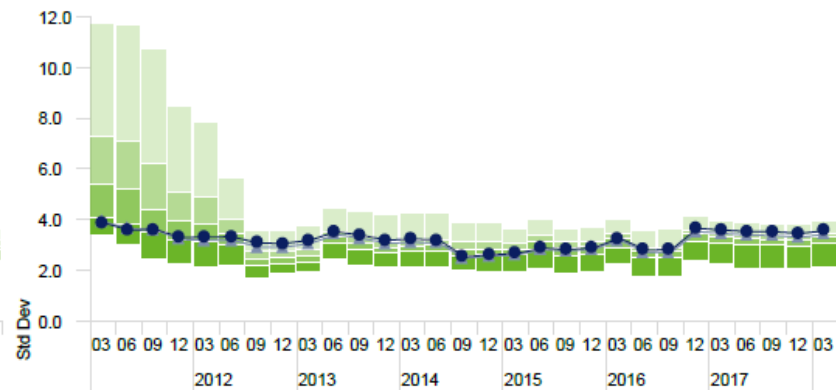


—Vanguard Total Bond Market Index I

—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

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



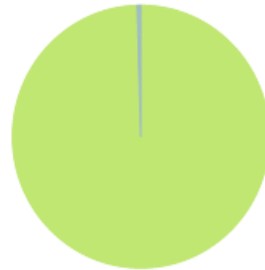
Source: Morningstar

March 31, 2018

# VANGUARD INFLATION PROTECTED SECURITIES

## Asset Allocation

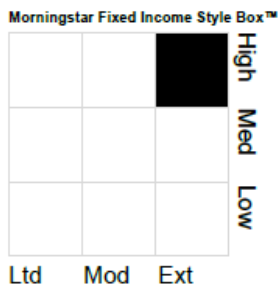
Portfolio Date: 2/28/2018



• Stock	0.0
• Bond	99.6
• Cash	0.0
• Other	0.4
<b>Total</b>	<b>100.0</b>

## Fixed Income Statistics

Portfolio Date: 2/28/2018



## Fixed-Income Stats

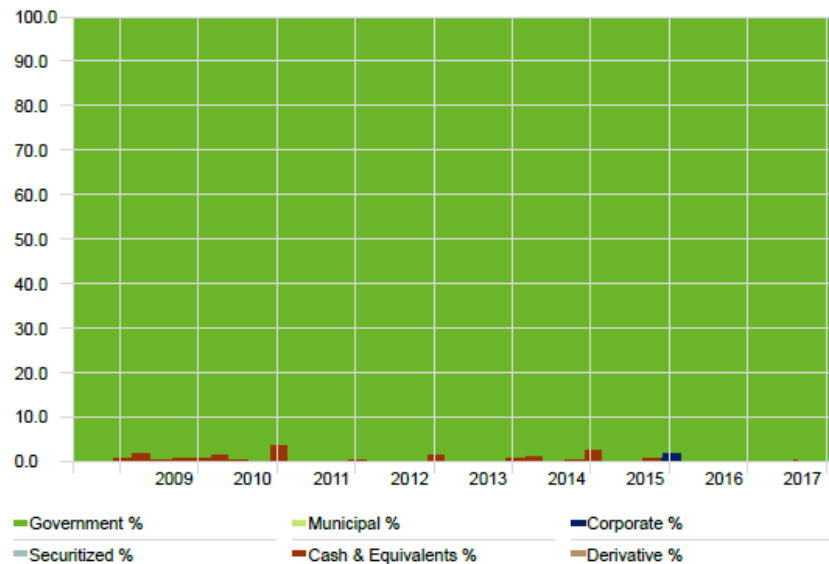
Average Eff Duration	7.5
Average Eff Maturity	8.2
Average Coupon	0.8
Average Price	112.3
Average Credit Quality	AAA

## Credit Quality Breakdown

Portfolio Date: 2/28/2018

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

## Historical Sector Allocations (10 Years)



## Top Holdings

	Detail Holding Type	Portfolio Weighting %
US Treasury Note	BOND - GOV'T INFLATION PROTECTED	5.38
US Treasury Note	BOND - GOV'T INFLATION PROTECTED	4.70
US Treasury Note	BOND - GOV'T INFLATION PROTECTED	4.10
US Treasury Note	BOND - GOV'T INFLATION PROTECTED	3.80
US Treasury Note	BOND - GOV'T INFLATION PROTECTED	3.79
US Treasury Note	BOND - GOV'T INFLATION PROTECTED	3.78
US Treasury Note	BOND - GOV'T INFLATION PROTECTED	3.73
US Treasury TIP	BOND - GOV'T INFLATION PROTECTED	3.71
US Treasury Note	BOND - GOV'T INFLATION PROTECTED	3.69
US Treasury Note	BOND - GOV'T INFLATION PROTECTED	3.65



Source: Morningstar

March 31, 2018

# VANGUARD INFLATION PROTECTED SECURITIES

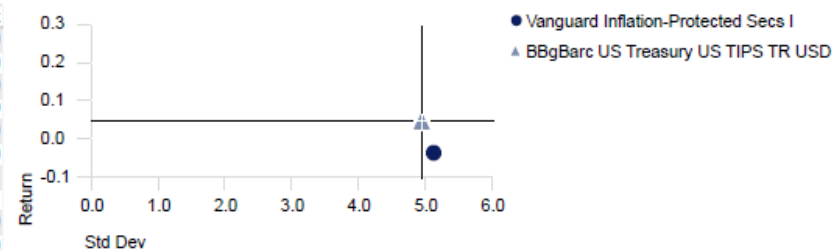
## Risk & Return Characteristics (5 Years)

Time Period: 4/1/2013 to 3/31/2018

	Fund	Index
R2	99.6	100.0
Alpha	-0.1	0.0
Beta	1.0	1.0
Std Dev	5.1	4.9
Up Capture Ratio	101.9	100.0
Down Capture Ratio	104.2	100.0
Sharpe Ratio (geo)	-0.1	-0.1
Information Ratio (geo)	-0.2	
Tracking Error	0.4	0.0
Correlation	1.0	1.0

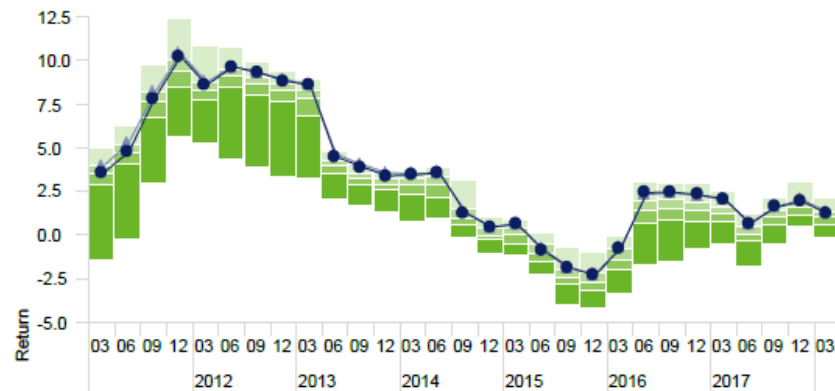
## Risk & Return Illustration (5 Years)

Time Period: 4/1/2013 to 3/31/2018



## Rolling Returns (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile

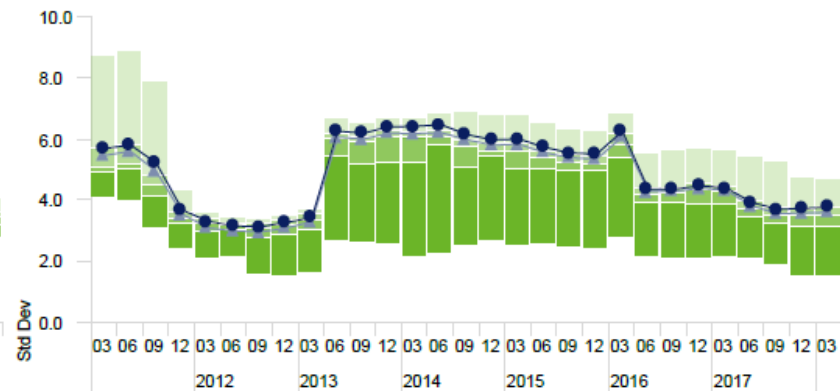


—Vanguard Inflation-Protected Secs I

—BBgBarc US Treasury US TIPS TR USD

## Rolling Risk (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



—Vanguard Inflation-Protected Secs I

—BBgBarc US Treasury US TIPS TR USD

## Calendar Year Returns

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



Source: Morningstar

March 31, 2018

# LIGHTHOUSE GLOBAL LONG/SHORT



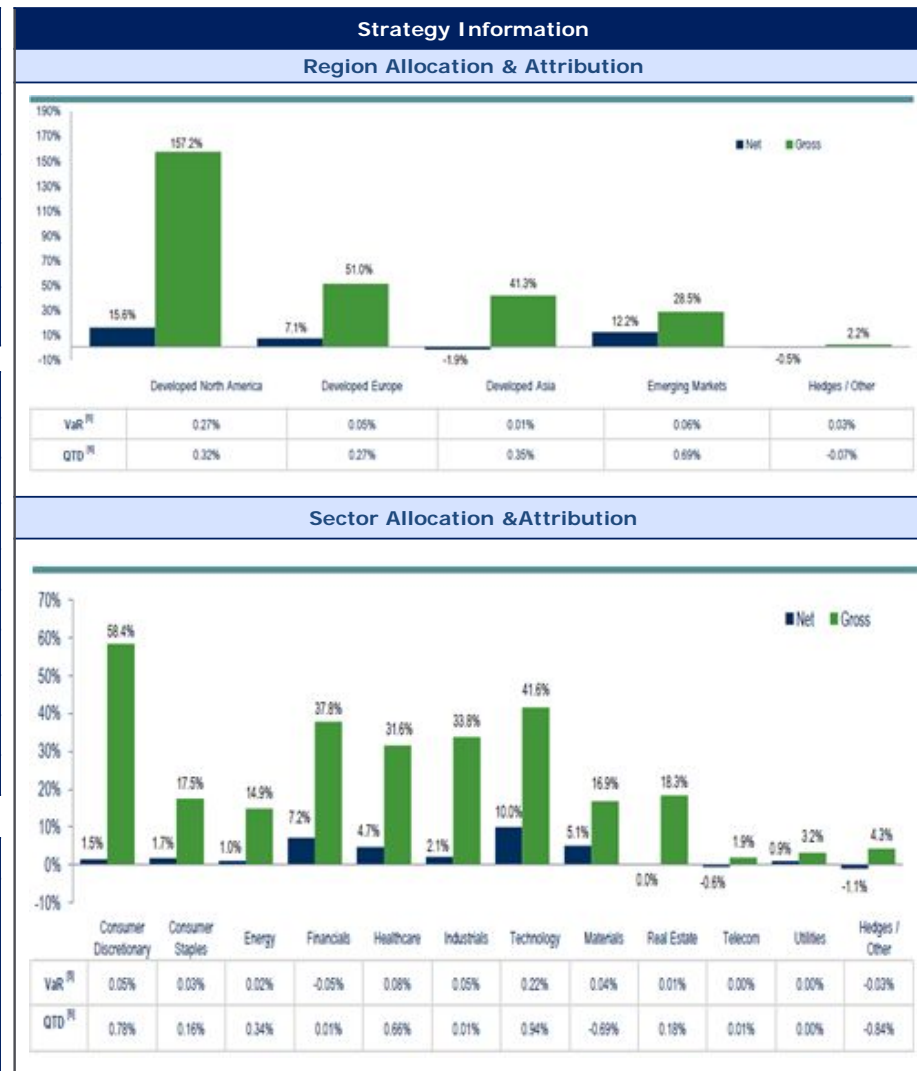


# LIGHTHOUSE GLOBAL LONG/SHORT

General Fund Information			
Fund Name	Lighthouse Global Long/Short Fund		
Management Company	Lighthouse Investment Partners, LLC		
Location	Palm Beach, FL		
Firm AUM	\$10.6 billion	Strategy	Fund of Fund
Strategy AUM	\$1.9 billion	Sub-Strategy	Long/Short Equity
Portfolio Managers	Ethan Baron	Direct or FOF	FOF

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

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

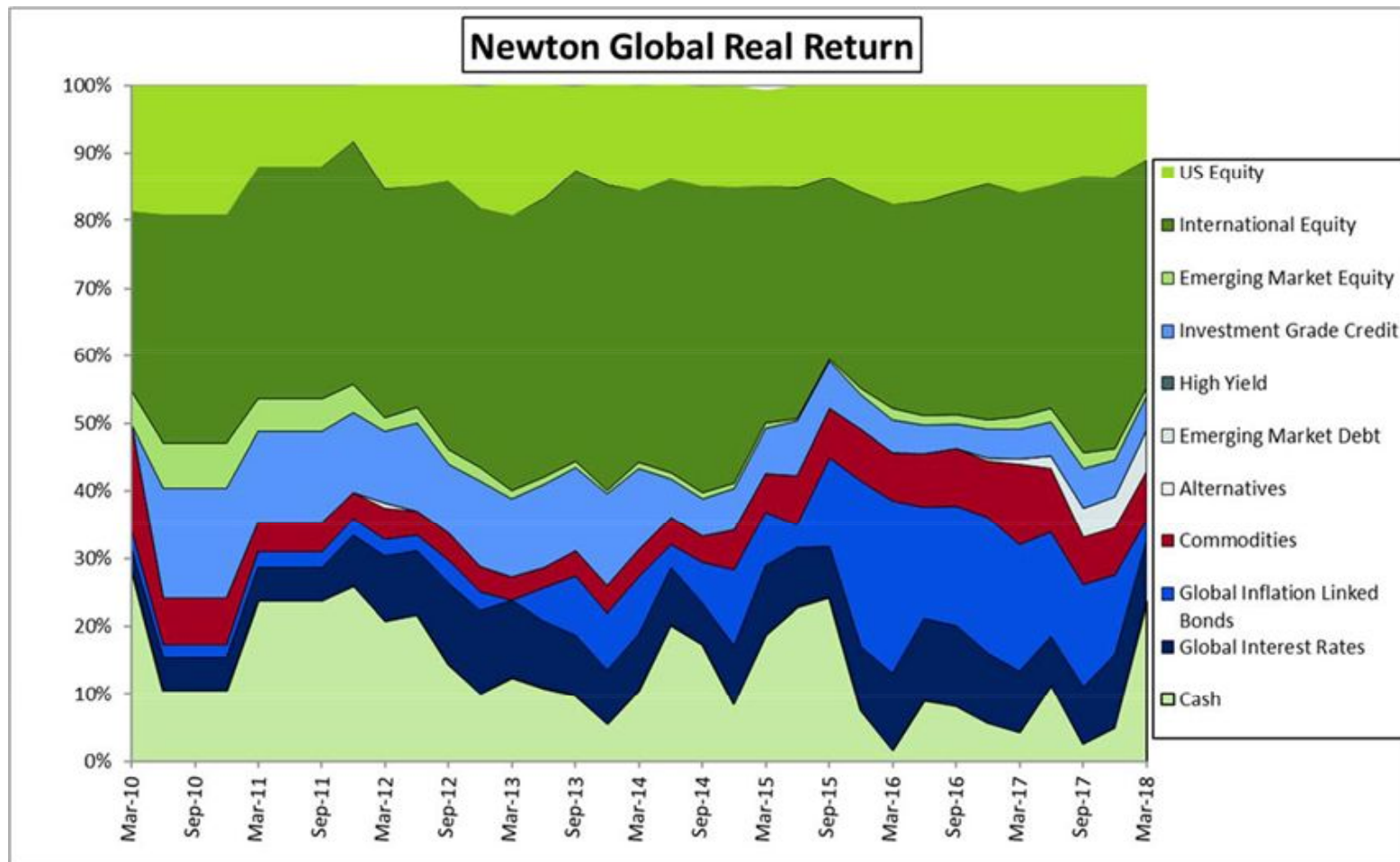


For more information please see NEPC's Investment Due Diligence Report and Operational Due Diligence Report

March 31, 2018

# NEWTON GLOBAL REAL RETURN

4.1



Source: Newton

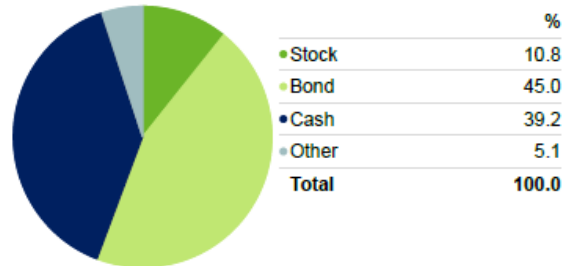
March 31, 2018



# PIMCO ALL ASSET

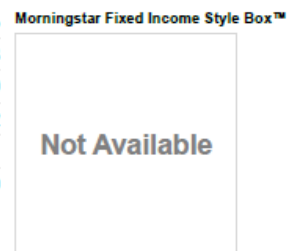
## Asset Allocation

Portfolio Date: 12/31/2017



## Fixed Income Statistics

Portfolio Date: 3/31/2010

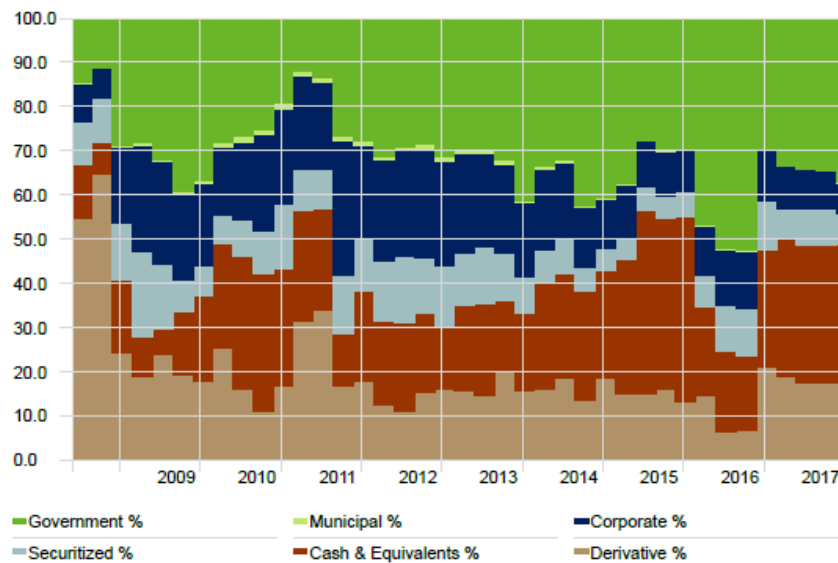


## Credit Quality Breakdown

Portfolio Date: 3/31/2010

Fixed-Income Stats		Fund	Index
Average Eff Duration	3.5	3.0	
Average Eff Maturity	-	65.00	
Average Coupon	3.3	14.00	
Average Price	-	9.00	
Average Credit Quality	-	9.00	
		B %	0.00
		Below B %	0.00
		Not Rated %	0.00
		Yield to Maturity	7.84

## Historical Sector Allocations (10 Years)



## Top Holdings

	Detail Holding Type	Portfolio Weighting %
PIMCO Emerging Markets Currency Instl	MUTUAL FUND - OPEN END	13.66
PIMCO Emerging Local Bond Instl	MUTUAL FUND - OPEN END	6.44
PIMCO RAE Fundamental PLUS EMG Inst	MUTUAL FUND - OPEN END	6.41
PIMCO Income Instl	MUTUAL FUND - OPEN END	6.27
PIMCO RAE Low Volatility PLUS EMG Inst	MUTUAL FUND - OPEN END	5.76
PIMCO CommoditiesPLUS® Strategy Instl	MUTUAL FUND - OPEN END	5.38
PIMCO RAE Fundamental EMkts Instl	MUTUAL FUND - OPEN END	5.33
PIMCO Total Return Instl	MUTUAL FUND - OPEN END	4.90
PIMCO Long-Term US Government Instl	MUTUAL FUND - OPEN END	4.29
PIMCO Real Estate Real Return Strategy I	MUTUAL FUND - OPEN END	4.20



Source: Morningstar

March 31, 2018

# PIMCO ALL ASSET

4.1

Fund Name	All Asset Fund																		
Total Fund Net Assets (\$US MM)	19,801.3																		
	6/30/2014	9/30/2014	12/31/2014	3/31/2015	6/30/2015	9/30/2015	12/31/2015	3/31/2016	6/30/2016	9/30/2016	12/31/2016	3/31/2017	6/30/2017	9/30/2017	12/31/2017	1/31/2018	2/28/2018	3/31/2018	
<b>Third Pillar</b>	<b>78.71%</b>	<b>71.02%</b>	<b>74.17%</b>	<b>85.29%</b>	<b>85.76%</b>	<b>85.46%</b>	<b>81.91%</b>	<b>85.26%</b>	<b>81.04%</b>	<b>78.31%</b>	<b>74.27%</b>	<b>72.48%</b>	<b>70.05%</b>	<b>69.73%</b>	<b>70.82%</b>	<b>72.52%</b>	<b>72.92%</b>	<b>73.64%</b>	
<b>Emerging Markets Equities</b>	<b>12.81%</b>	<b>13.05%</b>	<b>11.83%</b>	<b>13.66%</b>	<b>13.67%</b>	<b>13.09%</b>	<b>14.11%</b>	<b>20.24%</b>	<b>22.17%</b>	<b>20.70%</b>	<b>18.77%</b>	<b>18.42%</b>	<b>17.50%</b>	<b>17.09%</b>	<b>17.76%</b>	<b>19.91%</b>	<b>19.22%</b>	<b>18.21%</b>	
RAE Fundamental Emerging Markets Fund	-	-	-	-	-	-	-	2.98%	4.22%	4.71%	4.63%	3.99%	4.47%	5.11%	5.33%				
RAE Fundamental PLUS EMG Fund	5.99%	4.69%	4.12%	4.75%	4.73%	4.41%	4.65%	5.96%	6.11%	5.07%	3.39%	3.19%	3.70%	4.73%	6.41%				
RAE Low Volatility PLUS EMG Fund	6.80%	8.34%	7.70%	8.92%	8.94%	8.68%	9.46%	11.29%	11.83%	10.91%	10.74%	11.24%	9.33%	7.25%	5.76%				
EqS Emerging Markets Fund	0.02%	0.02%	0.02%	-	-	-	-	-	-	-	-	-	-	-	-				
RAFI Dynamic Multi-Factor EM Equity ETF	6.80%	8.34%	7.70%	8.92%	8.94%	8.68%	9.46%	11.29%	11.83%	10.91%	10.74%	11.24%	9.33%	7.25%	0.26%				
Commodities and REITs	6.76%	8.19%	9.89%	9.09%	6.36%	6.10%	5.52%	7.21%	5.53%	6.49%	5.25%	5.61%	8.29%	10.02%	10.66%	10.33%	10.12%	10.68%	
CommoditiesPLUS™ Strategy Fund	3.03%	3.58%	3.08%	2.88%	2.19%	1.93%	1.68%	4.14%	3.12%	3.33%	3.47%	3.22%	4.05%	4.99%	5.38%				
CommodityRealReturn Strategy Fund®	1.66%	3.00%	3.97%	3.90%	2.18%	1.88%	1.62%	1.52%	0.89%	0.77%	0.53%	0.56%	1.05%	1.04%	1.08%				
RealEstateRealReturn Strategy Fund	4.06%	1.60%	2.86%	2.31%	1.99%	2.29%	2.23%	1.54%	1.53%	1.39%	1.26%	1.73%	3.19%	3.99%	4.20%				
<b>Emerging Markets Bonds</b>	<b>19.86%</b>	<b>20.32%</b>	<b>18.83%</b>	<b>20.62%</b>	<b>22.45%</b>	<b>22.15%</b>	<b>20.83%</b>	<b>22.27%</b>	<b>17.67%</b>	<b>18.30%</b>	<b>19.87%</b>	<b>20.92%</b>	<b>20.56%</b>	<b>20.20%</b>	<b>20.11%</b>	<b>20.16%</b>	<b>20.51%</b>	<b>20.55%</b>	
Emerging Local Bond Fund	7.42%	9.50%	9.10%	9.00%	9.79%	9.42%	8.48%	9.50%	6.94%	7.33%	6.98%	7.09%	6.76%	6.55%	6.44%				
Emerging Markets Currency Fund	7.10%	8.33%	9.05%	11.50%	12.29%	12.33%	11.94%	12.77%	10.73%	10.97%	12.99%	13.83%	13.80%	13.65%	13.66%				
Emerging Markets Bond Fund	3.90%	1.92%	0.47%	0.24%	0.29%	0.32%	0.32%	0.32%	-	-	-	-	-	-	-				
Emerging Markets Corporate Bond Fund	1.43%	0.57%	0.20%	0.07%	0.07%	0.08%	0.09%	-	-	-	-	-	-	-	-				
<b>Credit</b>	<b>21.84%</b>	<b>11.56%</b>	<b>14.21%</b>	<b>14.96%</b>	<b>15.23%</b>	<b>16.08%</b>	<b>15.32%</b>	<b>16.65%</b>	<b>17.72%</b>	<b>18.22%</b>	<b>17.46%</b>	<b>16.40%</b>	<b>14.06%</b>	<b>12.74%</b>	<b>12.40%</b>	<b>11.90%</b>	<b>12.17%</b>	<b>11.80%</b>	
High Yield Fund	1.11%	0.43%	2.64%	2.85%	2.88%	3.11%	2.53%	3.72%	2.90%	2.56%	2.35%	1.87%	1.01%	0.60%	0.59%				
High Yield Spectrum Fund	3.69%	2.66%	2.90%	3.07%	3.20%	3.60%	3.84%	4.25%	4.67%	4.68%	4.64%	4.06%	2.50%	1.57%	1.55%				
Income Fund	10.28%	6.51%	6.21%	5.90%	6.01%	6.47%	6.34%	6.93%	7.51%	8.19%	7.63%	6.44%	6.62%	6.55%	6.27%				
Diversified Income Fund	3.21%	0.09%	0.10%	0.03%	0.21%	0.24%	0.24%	0.25%	0.57%	0.51%	0.49%	0.54%	0.15%	0.00%	0.00%				
Low Duration Income Fund	1.75%	0.28%	0.06%	0.29%	0.33%	0.37%	0.29%	-	-	-	-	-	-	-	-				
Senior Floating Rate Fund	1.79%	1.60%	2.30%	2.82%	2.61%	2.28%	2.07%	1.50%	2.06%	2.28%	2.34%	2.49%	3.81%	4.02%	3.99%				
Convertible Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
European Convertible Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
<b>Global Bonds</b>	<b>1.21%</b>	<b>0.34%</b>	<b>0.35%</b>	<b>0.53%</b>	<b>1.57%</b>	<b>1.24%</b>	<b>1.17%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	
Foreign Bond Fund (Unhedged)	0.26%	0.29%	0.30%	0.30%	0.30%	0.31%	0.29%	-	-	-	-	-	-	-	-				
Global Advantage Strategy Fund	0.95%	0.04%	0.05%	0.23%	0.76%	0.93%	0.88%	-	-	-	-	-	-	-	-				
Global Bond Fund (Unhedged)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
<b>Inflation Linked Bonds</b>	<b>0.90%</b>	<b>2.67%</b>	<b>2.73%</b>	<b>7.87%</b>	<b>7.88%</b>	<b>7.68%</b>	<b>7.90%</b>	<b>5.73%</b>	<b>3.21%</b>	<b>3.48%</b>	<b>3.85%</b>	<b>3.60%</b>	<b>3.97%</b>	<b>3.86%</b>	<b>3.75%</b>	<b>3.10%</b>	<b>3.14%</b>	<b>3.01%</b>	
Real Return Fund	0.29%	1.24%	1.38%	1.31%	1.29%	1.19%	0.81%	0.00%	0.16%	2.77%	3.19%	3.25%	3.53%	3.44%	3.32%				
Real Return Asset Fund	0.53%	1.34%	1.27%	6.49%	6.50%	6.40%	6.99%	5.61%	2.91%	0.59%	0.54%	0.43%	0.44%	0.42%	0.43%				
Global Advantage® Inflation-Linked Bond ETF	0.08%	0.08%	0.08%	0.08%	0.08%	0.09%	0.10%	0.12%	0.12%	0.12%	0.12%	0.12%	-	-	-				
<b>Alternative Strategies</b>	<b>13.34%</b>	<b>14.87%</b>	<b>16.33%</b>	<b>16.36%</b>	<b>19.09%</b>	<b>19.12%</b>	<b>17.05%</b>	<b>13.15%</b>	<b>14.74%</b>	<b>12.12%</b>	<b>9.99%</b>	<b>8.43%</b>	<b>5.65%</b>	<b>5.82%</b>	<b>6.15%</b>	<b>7.12%</b>	<b>7.76%</b>	<b>9.39%</b>	
Unconstrained Bond Fund	2.53%	2.18%	1.79%	2.75%	2.44%	2.32%	2.08%	1.80%	1.96%	-	-	-	-	-	-				
Credit Absolute Return Fund	2.78%	1.10%	0.76%	0.52%	0.44%	0.39%	0.23%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%				
Mortgage Opportunities Fund	0.55%	0.57%	0.61%	0.65%	0.66%	0.75%	0.74%	0.79%	0.78%	0.73%	0.74%	0.72%	0.72%	0.71%	0.69%				
TRENDS Managed Futures Strategy Fund	0.16%	0.18%	0.19%	0.20%	0.20%	0.24%	0.26%	0.30%	0.29%	0.30%	0.29%	0.29%	0.28%	0.28%	0.29%				
EqS Long/Short Fund	0.47%	0.47%	0.49%	0.36%	0.25%	0.18%	-	-	-	-	-	-	-	-	-				
RAE Worldwide Long/Short PLUS Fund	-	-	3.08%	6.53%	7.49%	7.93%	7.96%	6.42%	7.28%	6.90%	5.73%	5.03%	3.06%	2.96%	3.03%				
RAE Fundamental Advantage PLUS Fund	2.62%	4.90%	4.84%	3.93%	3.75%	3.25%	2.62%	1.69%	2.20%	2.02%	1.06%	1.29%	1.59%	1.87%	2.14%				
RAE Worldwide Fundamental Adv PLUS Fund	4.24%	5.47%	4.57%	3.42%	3.86%	4.07%	3.16%	2.16%	2.23%	2.18%	1.15%	1.10%	-	-	-				



Source: PIMCO

March 31, 2018

# PIMCO ALL ASSET

4.1

	6/30/2014	9/30/2014	12/31/2014	3/31/2015	6/30/2015	9/30/2015	12/31/2015	3/31/2016	6/30/2016	9/30/2016	12/31/2016	3/31/2017	6/30/2017	9/30/2017	12/31/2017	1/31/2018	2/28/2018	3/31/2018
<b>Second Pillar</b>	<b>9.08%</b>	<b>16.65%</b>	<b>13.80%</b>	<b>4.95%</b>	<b>6.15%</b>	<b>6.81%</b>	<b>10.78%</b>	<b>4.87%</b>	<b>10.63%</b>	<b>12.82%</b>	<b>14.87%</b>	<b>16.12%</b>	<b>20.07%</b>	<b>21.03%</b>	<b>19.88%</b>	<b>18.88%</b>	<b>19.07%</b>	<b>19.00%</b>
US Core Bonds	3.10%	4.39%	4.58%	2.91%	3.17%	3.78%	3.66%	2.89%	6.28%	7.31%	4.68%	5.80%	7.71%	8.30%	7.21%	7.02%	6.87%	6.33%
Total Return Fund	3.07%	2.37%	2.25%	1.04%	1.39%	1.65%	1.65%	1.22%	3.41%	4.47%	1.92%	2.56%	4.44%	5.70%	4.90%			
Investment Grade Corporate Bond Fund	0.02%	2.02%	2.34%	1.87%	1.78%	2.12%	2.01%	2.66%	2.87%	2.85%	1.76%	3.24%	3.26%	2.66%	2.30%			
Mortgage-Backed Securities Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
GNMA Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
US Long Maturity Bonds	4.82%	10.54%	7.70%	1.28%	1.52%	1.94%	2.31%	0.28%	2.55%	2.10%	5.30%	7.56%	8.63%	8.62%	8.70%	7.57%	7.80%	7.58%
Extended Duration Fund	-	-	-	-	-	-	-	-	0.42%	0.25%	1.51%	2.25%	2.91%	3.05%	3.13%			
Long-Term US Government Fund	0.27%	5.79%	3.91%	0.00%	0.00%	0.00%	0.00%	0.00%	1.18%	1.06%	2.41%	4.18%	4.42%	4.28%	4.29%			
Long Term Credit Fund	4.20%	3.35%	1.93%	0.50%	0.57%	0.77%	0.88%	0.27%	0.27%	0.17%	0.17%	0.12%	-	-	-			
Long Duration Total Return Fund	0.35%	1.80%	1.86%	0.77%	0.95%	1.16%	1.42%	0.00%	0.68%	0.62%	1.20%	1.14%	1.30%	1.29%	1.28%			
Short-Term Bonds	1.13%	0.32%	1.52%	0.77%	1.48%	1.09%	4.81%	0.71%	1.80%	3.40%	4.69%	2.63%	3.73%	4.06%	3.87%	4.29%	4.71%	4.69%
Low Duration Fund	0.94%	0.26%	0.53%	0.24%	0.87%	0.41%	1.54%	0.19%	1.26%	2.38%	2.44%	2.26%	3.37%	3.72%	3.34%			
Low Duration Exchange Traded Fund	0.20%	0.21%	0.22%	0.23%	0.24%	0.29%	0.19%	-	-	-	-	-	-	-	-			
Short Term Fund	0.00%	0.00%	0.00%	-	-	-	-	-	-	-	-	-	-	-	-			
Government Money Market Fund	-	-	0.80%	0.33%	0.35%	0.42%	-	0.54%	0.54%	1.02%	2.26%	0.38%	0.37%	0.33%	0.63%			
Money Market Fund	-	-	-	-	-	-	3.13%	-	-	-	-	-	-	-	-			
Net Short Duration Instruments	-0.01%	-0.16%	-0.02%	-0.03%	-0.01%	-0.02%	-0.04%	-0.01%	0.00%	0.00%	-0.01%	0.00%	-0.01%	0.00%	0.00%			
<b>First Pillar</b>	<b>12.24%</b>	<b>13.34%</b>	<b>12.03%</b>	<b>9.76%</b>	<b>8.16%</b>	<b>7.73%</b>	<b>7.32%</b>	<b>9.87%</b>	<b>8.33%</b>	<b>8.87%</b>	<b>11.06%</b>	<b>11.40%</b>	<b>9.88%</b>	<b>9.24%</b>	<b>9.30%</b>	<b>8.60%</b>	<b>8.01%</b>	<b>7.36%</b>
US Equities	1.12%	2.41%	4.03%	2.79%	2.38%	2.17%	1.53%	0.51%	0.55%	0.23%	0.25%	0.25%	0.25%	0.26%	0.27%	0.27%	0.26%	0.26%
RAE Fundamental PLUS Fund	0.03%	0.03%	0.55%	0.20%	0.21%	0.22%	-	-	-	-	-	-	-	-	-			
RAE Low Volatility PLUS Fund	0.41%	1.72%	2.70%	1.93%	1.74%	1.65%	1.21%	0.51%	0.55%	0.23%	0.25%	0.25%	0.25%	0.26%	0.27%			
RAE Fundamental PLUS Small Fund	0.65%	0.63%	0.74%	0.64%	0.43%	0.30%	0.32%	-	-	-	-	-	-	-	-			
StocksPLUS® Small Fund	0.02%	0.02%	0.02%	-	-	-	-	-	-	-	-	-	-	-	-			
Fundamental IndexPLUS™	-	-	0.00%	-	-	-	-	-	-	-	-	-	-	-	-			
StocksPLUS® Fund	0.00%	0.00%	0.00%	-	-	-	-	-	-	-	-	-	-	-	-			
StocksPLUS® Absolute Return Fund	0.01%	0.01%	0.01%	-	-	-	-	-	-	-	-	-	-	-	-			
Developed ex-US Equities	11.12%	10.93%	8.90%	6.97%	5.73%	5.56%	5.79%	9.36%	7.78%	8.69%	10.81%	11.15%	9.62%	8.96%	9.03%	8.32%	7.74%	7.10%
RAE Fundamental PLUS Intl Fund	3.16%	3.07%	3.01%	1.71%	1.60%	1.47%	1.51%	1.61%	1.56%	1.89%	2.51%	2.88%	3.45%	3.52%	3.43%			
RAE Low Volatility PLUS Intl Fund	5.73%	5.65%	3.79%	4.22%	4.13%	4.08%	4.24%	4.72%	3.35%	3.97%	5.31%	4.95%	2.50%	1.73%	1.80%			
StocksPLUS® International Fund (USD-Hedged)	0.01%	0.01%	0.01%	-	-	-	0.05%	2.76%	2.56%	2.64%	2.83%	2.93%	2.94%	2.98%	3.02%			
StocksPLUS® International Fund (Unhedged)	0.02%	0.02%	0.02%	-	-	-	-	0.27%	0.29%	0.16%	0.16%	0.40%	0.73%	0.76%	0.77%			
EqS Global Dividend Fund	0.01%	0.01%	0.01%	-	-	-	-	-	-	-	-	-	-	-	-			
EqS Pathfinder Fund	2.19%	2.18%	1.16%	1.04%	-	-	-	-	-	-	-	-	-	-	-			



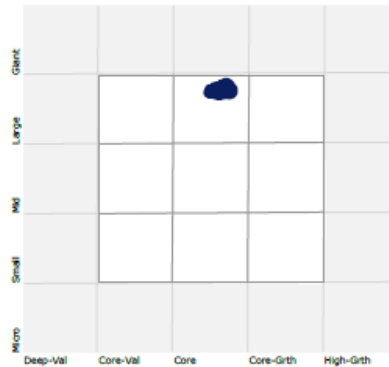
Source: PIMCO

March 31, 2018

# VANGUARD TOTAL WORLD STOCK INDEX I

## Holdings Based Style Trail (5 Years)

Time Period: 6/30/2013 to 2/28/2018



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

## Portfolio Statistics

	Fund	Index
# of Holdings	7,950	7,860
% Asset in Top 10 Holdings	8.7	8.6
Turnover Ratio %	10.0	
P/E Ratio	18.6	17.2
P/B Ratio	2.2	2.1
LT Earn Growth	11.7	11.9
Hist Earn Growth	5.6	7.8
12 Mo Yield	2.1	

## Market Capitalization Breakdown

	Fund	Index
Market Cap Giant %	45.8	
Market Cap Large %	32.0	
Market Cap Mid %	17.4	
Market Cap Small %	4.4	
Market Cap Micro %	0.4	
Average Market Cap	39,554.9	
Equity Region Developed %	91.7	
Equity Region Emerging %	8.3	

## Top Ten Holdings

	Port Weight %	3 Month Return
Apple Inc	1.72	-0.48
Microsoft Corp	1.30	7.19
Amazon.com Inc	1.12	23.76
Facebook Inc A	0.78	-9.45
JPMorgan Chase & Co	0.74	3.36
Alphabet Inc C	0.69	-1.40
Johnson & Johnson	0.65	-7.68
Exxon Mobil Corp	0.59	-9.88
Bank of America Corporation	0.58	2.00
Tencent Holdings Ltd	0.55	0.49

## Sector Attribution (Quarter)

	Portfolio Weights	Benchmark Weights	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Active Return
Consumer Discretionary	12.14		0.64				
Consumer Staples	7.86		-4.46				
Energy	5.79		-3.93				
Financials	17.29		-0.87				
Health Care	10.34		0.04				
Industrials	11.51		-1.54				
Information Technology	17.12		3.34				
Materials	5.68		-3.42				
Real Estate	3.64		-3.68				
Telecommunication Services	2.61		-5.36				
Utilities	2.76		-1.05				
Unclassified	0.01		-0.97				
Attribution Total	96.73		-0.82				
Cash	1.30						
Bond	0.08						
Other	0.04						
Missing Performance	1.84						
Total	100.00						

## Region Attribution (Quarter)

	Portfolio Weights	Benchmark Weights	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Active Return
Africa	0.82		-2.05				
Asia - Developed	4.31		1.45				
Asia - Emerging	5.18		-1.30				
Australasia	2.23		-5.00				
Canada	2.99		-7.15				
Europe - Emerging	0.53		6.29				
Europe - ex Euro	4.37		-2.60				
Eurozone	9.74		-0.30				
Japan	8.23		1.05				
Latin America	1.37		7.58				
Middle East	0.32		-0.97				
United Kingdom	5.69		-3.78				
United States	50.96		-0.57				
Unclassified	0.00		-5.30				
Attribution Total	96.73		-0.82				
Cash	1.30						
Bond	0.08						
Other	0.04						
Missing Performance	1.84						
Total	100.00						



Source: Morningstar

March 31, 2018



# VANGUARD TOTAL WORLD STOCK INDEX I

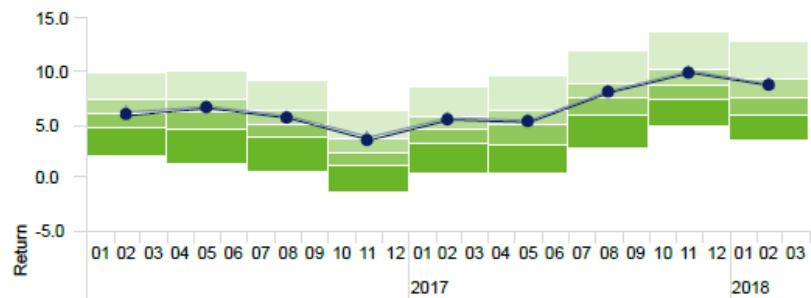
## Risk & Return Characteristics (5 Years)

Time Period: 4/1/2013 to 3/31/2018

	Fund	Index
R2	99.8	100.0
Alpha	-0.1	0.0
Beta	1.0	1.0
Std Dev	8.2	8.3
Up Capture Ratio	98.0	100.0
Down Capture Ratio	98.8	100.0
Sharpe Ratio (geo)	1.1	1.1
Information Ratio (geo)	-0.5	
Tracking Error	0.4	0.0
Correlation	1.0	1.0

## Rolling Returns (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile

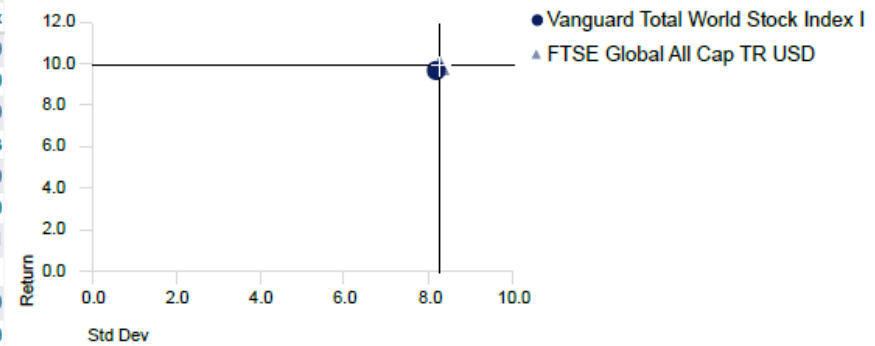


— Vanguard Total World Stock Index I

— FTSE Global All Cap TR USD

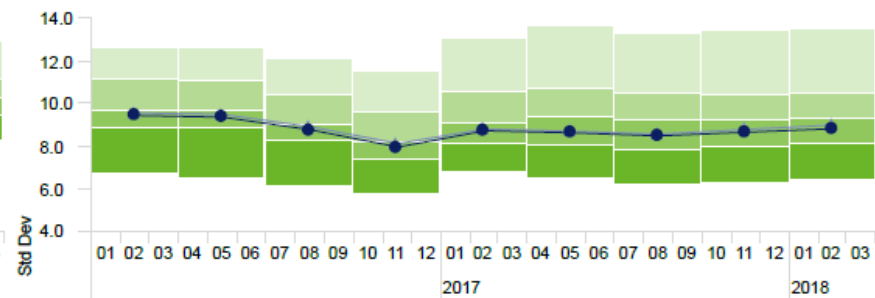
## Risk & Return Illustration (5 Years)

Time Period: 4/1/2013 to 3/31/2018



## Rolling Risk (3 Years)

Top Quartile 2nd Quartile 3rd Quartile Bottom Quartile



— Vanguard Total World Stock Index I

— FTSE Global All Cap TR USD

## Calendar Year Returns

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



Source: Morningstar

March 31, 2018

# APPENDIX

NEPC, LLC

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March 31, 2018

# GLOSSARY OF TERMS

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

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

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

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

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

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

*Formula:*  

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

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

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

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

*Formula:*  

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

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

*Formula:*  

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

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

*Formula:*  

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

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

*Formula:*  

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

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

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

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

Data Source: InvestorForce



# INFORMATION DISCLAIMER AND REPORTING METHODOLOGY

## Information Disclaimer

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

## Reporting Methodology

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







## AGENDA ITEM SUMMARY

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

NEPC and Staff have reviewed and updated the Investment Policy Statements (IPS) for the Managed Investment Pool and Defined Benefit Pension Fund. The policies, using tracking changes, are enclosed for your review and approval. Updates include changes related to asset allocations.
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 and Defined Benefit Pension Fund.

**University of Maine System**  
**Executive Summary - Investment Guidelines and Objectives**  
**Managed Investment Pool (Including Endowments)**  
**Approved by Investment Committee ~~May 15~~ June 14, 2018<sup>1</sup>**

**Minimum Long Term Return Assumption:** 7.50%

**Risk Tolerance:** Moderate

**FY17 and FY18 Spending Policy** 4.50%<sup>1</sup>

**Asset Allocation:**

<u>ASSET CLASS</u>	<u>TARGET %</u>	<u>PERMISSIBLE RANGE %</u>	<u>TARGET BENCHMARK</u>
<b>Equity</b>	<b>45%</b>	<b>35 - 55%</b>	
Domestic Large Cap	16	<del>14-10</del> - <del>24</del> 20	S&P 500
Domestic Small/Mid Cap	6	0 - <del>9</del> 10	Russell 2500
International	<del>14</del> 12.5	6 - 16	MSCI EAFE
International Small Cap	<del>5</del> 3.5	0 - <del>4</del> 7	MSCI EAFE SC
Emerging	7	0 - 10	MSCI EM
<b>Fixed Income</b>	<b>48<del>21</del>%</b>	<b>43-13 - 23<del>29</del>%</b>	
Domestic Core	5	0 - 10	Barclays Capital Aggregate
Bank Loans	5	0 - 10	Credit Suisse Leveraged Loan
TIPS	8	3 - 13	Barclays US TIPS
<u>Absolute Return Fixed Income</u>	<u>3</u>	<u>0 - 6</u>	<u>3 Month Libor</u>
<b>Other</b>	<b>3<del>7</del>34%</b>	<b>24<del>7</del> - 44<del>7</del>%</b>	
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	<del>9</del> 6	<del>6-0</del> - <del>42</del> 10	HFRI Fund of Funds Composite Index
Private Equity	2	0 - 5	Cambridge Private Equity 1 Quarter Lag
<b>Cash</b>	<b>0%</b>	<b>0 - 10%</b>	

**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.

<sup>1</sup> 4.5% spending rate ~~for fiscal year 2019 supported by the Investment Committee~~ was approved by the Board of Trustees at their January 29, 2018 meeting for fiscal year 2018<sup>2</sup>. 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 FY2018<sup>2</sup> of is \$15.1336614.95787 per share was approved by the UMS Board of Trustees at their March 27, 2017 January 29, 2018 meeting. The FY17<sup>2</sup> spending rate was also 4.5% equating to a rate per share of \$14.7833815.13366.

**\*\*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 ~~May 15~~ June 14, 2018<sup>7</sup>**

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

Cash0%0 - 10%

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**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**  
**Non-Contributory Retirement Fund**  
 Approved by Investment Committee ~~May 15~~ June 14, 2018

**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>
<b>Equity</b>	<b>22%</b>	<b>12 - 32%</b>	
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
<b>Fixed Income</b>	<del>32</del> <u>35</u> %	<del>22-25</del> - <del>42</del> <u>45</u> %	
Domestic Core	20	15 - 25	Barclays Capital Aggregate
Bank Loans	5	0 - 10	Credit Suisse Leveraged Loan
TIPS	7	2 - 12	Barclays US TIPS
<u>Absolute Return Fixed Income</u>	<u>3</u>	<u>0 - 6</u>	<u>3 Month Libor</u>
<b>Other</b>	<del>43</del> <u>40</u> %	<del>35-30</del> - <del>50</del> <u>5</u> %	
Global Asset Allocation	27.5	20 - 35	65% MSCI All Country World (net)/ 35% Barclays Capital Global Aggregate
Real Estate	8	0 - 10	NCREIF ODCE
Hedge Funds	<del>7.5</del> <u>4.5</u>	<del>5-0</del> - <del>40</del> <u>9</u>	HFRI Fund of Funds Composite Index
<b>Cash</b>	<b>3%</b>	<b>0 - 10%</b>	

**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 15~~ June 14, 2018

## **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.

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<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&amp;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 Aggregate</u>
<u>Bank Loans</u>	<u>5</u>	<u>0 - 10</u>	<u>Credit Suisse Leveraged Loan</u>
<u>TIPS</u>	<u>7</u>	<u>2 - 12</u>	<u>Barclays US TIPS</u>

<u>Absolute Return Fixed Income</u>	<u>3</u>	<u>0 - 6</u>	<u>3 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 Country World (net)/</u> <u>35% Barclays Capital 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 Composite Index</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>
<b>Equity</b>	<b>22%</b>	<b>12–32%</b>	
Domestic Large-Cap	8	–3–13	S&P 500
Domestic Small/Mid-Cap	4	0–7	Russell 2000
International	7	2–12	MSCI EAFE
Emerging	3	0–6	MSCI EM
<b>Fixed Income</b>	<b>32%</b>	<b>22–42%</b>	
Domestic Core	20	15–25	Barclays Capital Aggregate
Bank Loans	5	0–10	Credit Suisse Leveraged Loan
TIPS	7	2–12	Barclays US TIPS
<b>Other</b>	<b>43%</b>	<b>35–55%</b>	
Global Asset Allocation	27.5	20–35	65% MSCI All Country World (net)/ 35% Barclays Capital Global Aggregate
Real Estate	8	0–10	NCREIF ODGE
Hedge Funds	7.5	5–10	HFRI Fund of Funds Composite Index
<b>Cash</b>	<b>3%</b>	<b>0–10%</b>	

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### 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 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 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:** Bank Loan Recommendation
2. **INITIATED BY:** Kelly Martin, Chair
3. **BOARD INFORMATION:** **BOARD ACTION:** X
4. **OUTCOME:** **BOARD POLICY:**  
 Primary Outcomes: Section 709 - Investments  
 Enhance fiscal positioning

**5. BACKGROUND:**

In April 2018, NEPC elevated Guggenheim Investments, a bank loan manager in the MIP and Pension, to a due diligence status of “Client Review”. The University of Maine System hired Guggenheim back in May 2017. Given Guggenheim’s due diligence status, NEPC recommends discussing the situation at the June 14, 2018 meeting and reviewing an alternative bank loan manager. At the time Guggenheim was selected, the Committee had also interviewed Bain Capital and determined that either Bain or Guggenheim would be a good selection for the bank loan allocation.

The Committee will again interview Bain by polycom at its June meeting. The manager will present for 45 minutes on their firm, investment process and philosophy and performance. Bain attendees include:

- Jon DeSimone, Managing Director and Portfolio Manager
- Alex Dauria, Vice President, Investor Relations

A summary comparing the two managers and highlights regarding Bain Capital and their Liquid Senior Loan Strategy are included for the Committee’s consideration.

**5. TEXT OF PROPOSED RESOLUTION:**

That the Board of Trustees, acting through the Investment Committee, approves retaining Guggenheim Investments or selecting Bain Capital for the following allocations:

- 1) A 5.0% policy allocation in the MIP (currently estimated at \$15,700,000)
- 2) A 5.0% policy allocation in the Pension Fund (currently estimated at \$1,500,000)

6/1/2018



# BANK LOAN MANAGER DISCUSSION



## UNIVERSITY OF MAINE SYSTEM

June 14, 2018

Jay E. Roney, Partner

Kelly Regan, Senior Consultant



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

# MANAGER OVERVIEW

Firm/Product	Firm/Team Comments	Investment Style/Strategy	Performance Expectations	Portfolio Positioning	Other Comments
<b>Bank Loans</b>					
Bain - Senior Loans ex. CLO	Sankaty Advisors was re-branded as Bain Capital Credit, and is an employee-owned credit affiliate of Bain Capital.	A diversified, bottom-up fundamental bank loan strategy with flexibility to invest across capital structure and geographies.	Strategy should outperform the broad bank loan market with less volatility.	Strategy can invest in high yield bonds and a limited amount of distressed and stressed credits. Will take material non-US positions.	
Guggenheim - US Bank Loans	Guggenheim employs a large team of attorneys that are fully integrated into the investment process	Focused on middle-market issuers and avoids the higher-beta larger issuers. Some out-of-benchmark investments in originated loans, club deals, second liens, and Non-US	Higher tracking error strategy, but high alpha expectations coming from better security selection and out-of-benchmark positions	Dedicated bank loan or high yield manager. Ability to combine bank loans with high yield bonds	Strong investment thesis

Firm/Product	NEPC Investment Thesis
<b>Bank Loans</b>	
Bain - Senior Loans ex. CLO	Bain Capital Credit enjoys a competitive advantage in the bank loan space due to their experienced management team and breadth of issuer coverage conducted by a large industry research group. With an investment team of nearly 100 individuals, Bain is able to analyze a greater number of companies and credits than peers. This coverage breadth will lead to investment opportunities in issues that fall outside of the large, liquid flow names, which often offer attractive return potential for little or no additional risk. Furthermore, as an affiliate of a well-known and successful private equity firm, the strategy is able to leverage relationships and contacts of the Bain investment team to gain valuable insights.
Guggenheim - US Bank Loans	Guggenheim is a firm with one foot in public debt markets and the other foot in private debt markets. The information flow from both areas (private debt, mezzanine financing, DIP, and public issuance) provides access to deal flow and an information advantage in secondary markets, particularly in middle-markets, where Guggenheim prefers to operate. Guggenheim tends to avoid the largest bank loan issuers as they believe this is not an area where they can add value. An additional component to Guggenheim's investment thesis is the integration of their legal team in the investment process. Bank loans are a research-intensive asset class and having legal expertise, particularly related to debt covenants, is a distinguishing part of the investment process.



# FIRM AND 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
Bank Loans								
Bain Capital Credit, LP	Boston, Massachusetts	1998	37,007	100	0	NA	0	0
Guggenheim Investments	New York, New York	1999	250,831	0	100	Guggenheim Capital, LLC	0	0

Firm/Product	Inception Date	AUM (\$MM)	# of Portfolio Managers	# of Research Analysts	# of Traders
Bank Loans					
Bain - Senior Loans ex. CLO	2008	5,724	14	98	8
Guggenheim - US Bank Loans	2014	20,501	10	101	10

Firm/Product	PRI Signatory (Y/N)	Strategy is Managed with ESG Considerations (Y/N)
Bank Loans		
Bain - Senior Loans ex. CLO	No	Yes
Guggenheim - US Bank Loans	No	Yes

Firm/Product	Separate Account Min. (\$MM)	Commingled Fund Min. (\$MM)	Mutual Fund Min. (\$MM)	Separate Account Fee Schedule	Commingled Fund Fee Schedule	Mutual Fund Ticker and Fee
Bank Loans						
Bain - Senior Loans ex. CLO	100	3	NA	First \$100 million - 0.50% Next \$100 million - 0.45% Balance - 0.40%	First \$100 million - 0.50% Next \$100 million - 0.45% Balance - 0.40%	Not Available
Guggenheim - US Bank Loans	100	5	2	First \$100 million - 0.55% Next \$200 million - 0.45% Balance - 0.40%	All Assets at 0.50%	GIFIX - 0.80%



Characteristics as of December 31, 2017

6.1

# CURRENT QUALITY ALLOCATIONS

Firm/Product	AAA/Aaa (%)	AA/Aa (%)	A (%)	BBB/Baa (%)	BB/Ba (%)	B (%)	CCC/Caa and Below (%)	Other* (%)
<b>Bank Loans</b>								
Bain - Senior Loans ex. CLO	0.0	0.0	0.0	3.6	27.4	65.2	2.9	1.0
Guggenheim - US Bank Loans	0.0	0.0	0.0	1.0	20.9	73.0	4.5	0.5

Benchmark								
CS Leveraged Loan	0.0	0.0	0.0	8.4	37.9	45.5	8.2	0.0

\*Other includes cash, derivatives, and Not Rated issues.



Characteristics as of December 31, 2017

6.1

# TRAILING AND CALENDAR YEAR RETURNS - (NET OF FEES)

	Qtr	YTD	1 Year	3 Year	5 Year	7 Year	10 Year
<b>Bank Loans</b>							
<b>Bain - Senior Loans ex. CLO</b>	1.0%	1.0%	4.0%	4.0%	3.7%	4.7%	NA
<b>Guggenheim - US Bank Loans</b>	1.0%	1.0%	3.8%	3.9%	4.1%	NA	NA
<b>CS Leveraged Loan</b>	1.6%	1.6%	4.6%	4.3%	4.2%	4.5%	5.4%

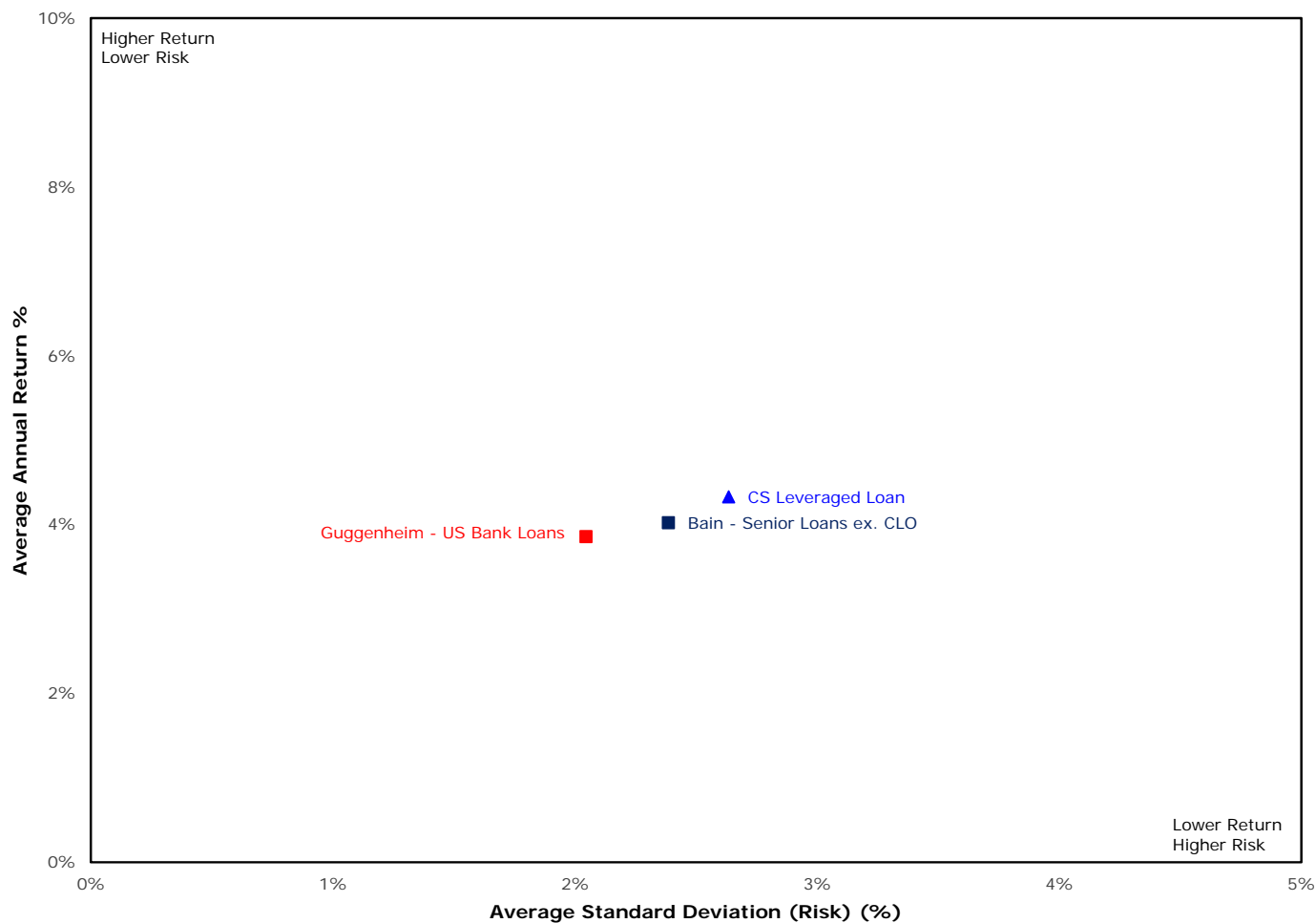
	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
<b>Bank Loans</b>										
<b>Bain - Senior Loans ex. CLO</b>	4.2%	9.2%	-0.4%	1.0%	6.4%	11.7%	4.2%	13.3%	43.1%	NA
<b>Guggenheim - US Bank Loans</b>	3.6%	7.7%	1.3%	2.7%	7.0%	11.6%	NA	NA	NA	NA
<b>CS Leveraged Loan</b>	4.2%	9.9%	-0.4%	2.1%	6.2%	9.4%	1.8%	10.0%	44.9%	-28.8%



Past performance is no guarantee of future results

Performance as of March 31, 2018

## 3 YEAR TOTAL RISK/RETURNS COMPARISON - (NET OF FEES)



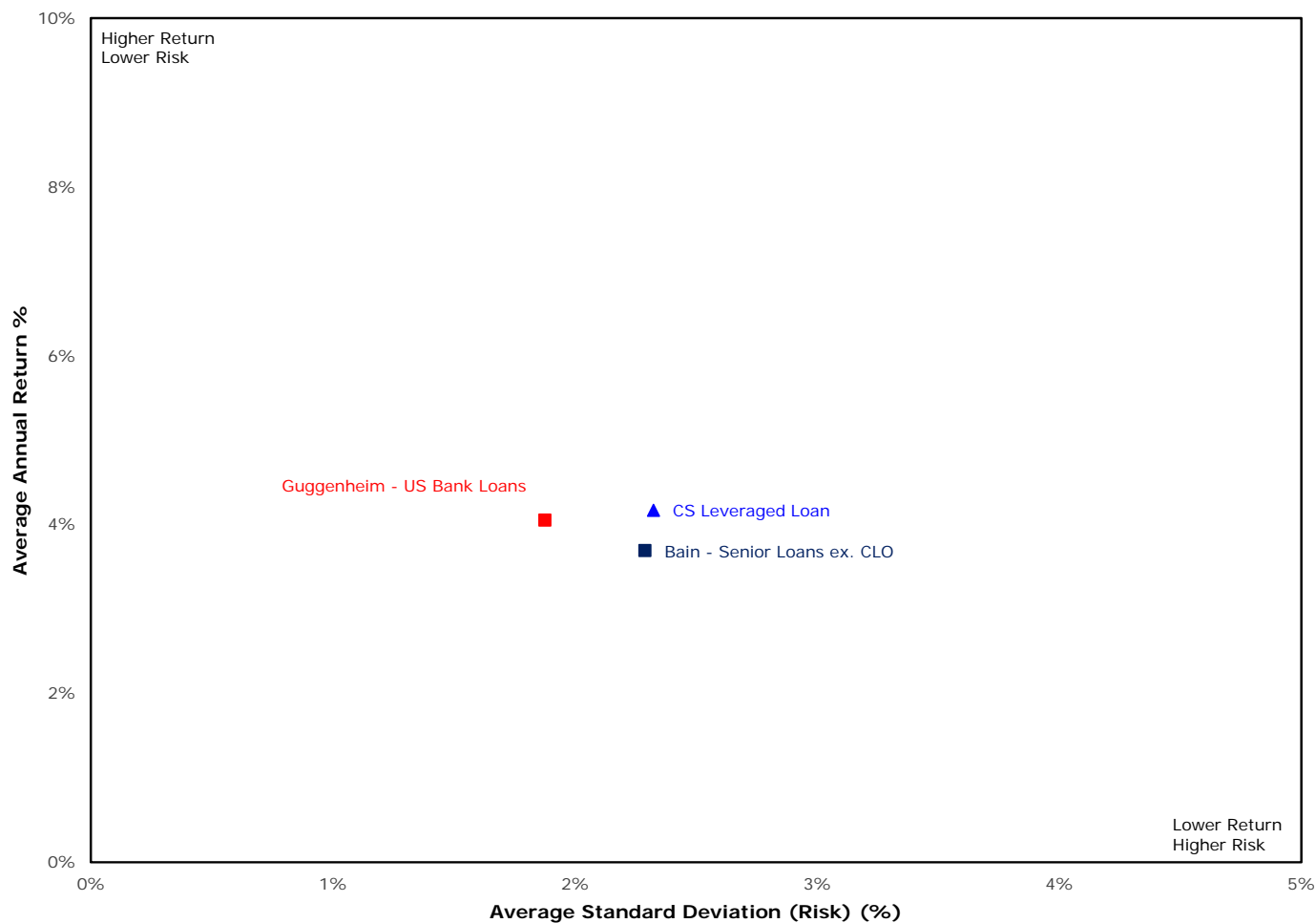
6.1



Past performance is no guarantee of future results

Performance as of March 31, 2018

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



6.1



Past performance is no guarantee of future results

Performance as of March 31, 2018

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- 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.
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6.1





# Liquid Senior Loan Strategy

June 2018

6.2



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## Bain Capital Core Values

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From our founding, we have held to the conviction that there is a different way for an investment to create value. At Bain Capital, we are united by our common purpose: **we are committed to lasting impact.**

Our commitment to lasting impact means that, for us, success is anchored in the four values we aim to live every day:

### **We develop exceptional partnerships**

We believe that great outcomes come from great teams. We are personally invested in each other's successes.

### **We challenge conventional thinking**

We think differently. We nurture a culture of deeply objective inquiry and seek the full potential in every opportunity. We seek the power of facts.

### **We work with tenacity**

We roll up our sleeves, dig in, and come to work every day searching for better outcomes. We relentlessly tackle tough problems. We see things through.

### **We believe character matters**

We prize personal integrity and humility. We believe in acting with both empathy and conviction. We believe in doing the right thing.

**6.2**

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- **Firm Overview**
- **Liquid Senior Loan Strategy**
- **Market Overview**
- **Appendix**

## A Leader In Global Credit for Over 20 Years

### Scale & Experience

- Bain Capital Credit has invested through multiple cycles, covering over 5,000 corporate issuers
- 278 employees, 129 investment professionals
- 34 MDs with average of over 20 years experience

### Depth

- Multiple industry research verticals supporting specialized product teams
- Dedicated Credit and Risk & Oversight Committees
- Over 100 professionals in Finance/Ops/Legal/IT Systems

### Local Market Presence

- ~195 employees in the US, ~60 in Europe, ~20 in Asia Pacific
- ~20 nationalities represented, ~30 languages spoken
- Part of the Bain Capital global network

### Broad Skillset

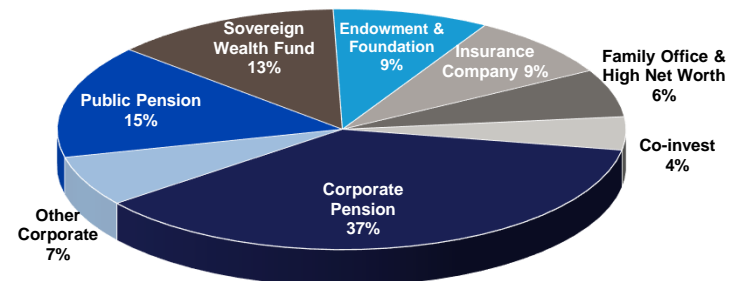
- Liquid Credit
- Direct Lending
- Capital Solutions
- Distressed Debt
- Non-Performing Loans
- Structured Credit/CLOs
- Real Estate

### Alignment of Interest

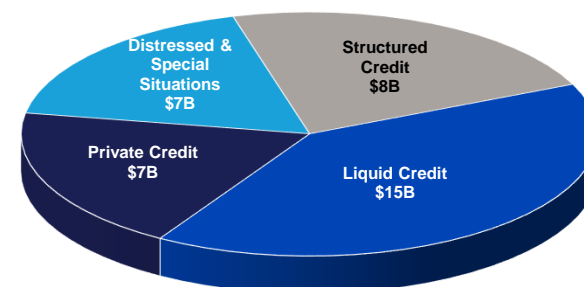
- Employee-owned partnership
- ~\$1B of employee co-investment across credit strategies<sup>(1)</sup>
- Committed to transparency

### \$37B in Firm AUM

#### Bain Capital Credit Investors by Type



#### Bain Capital Credit AUM by Asset Type



# Investment Platform

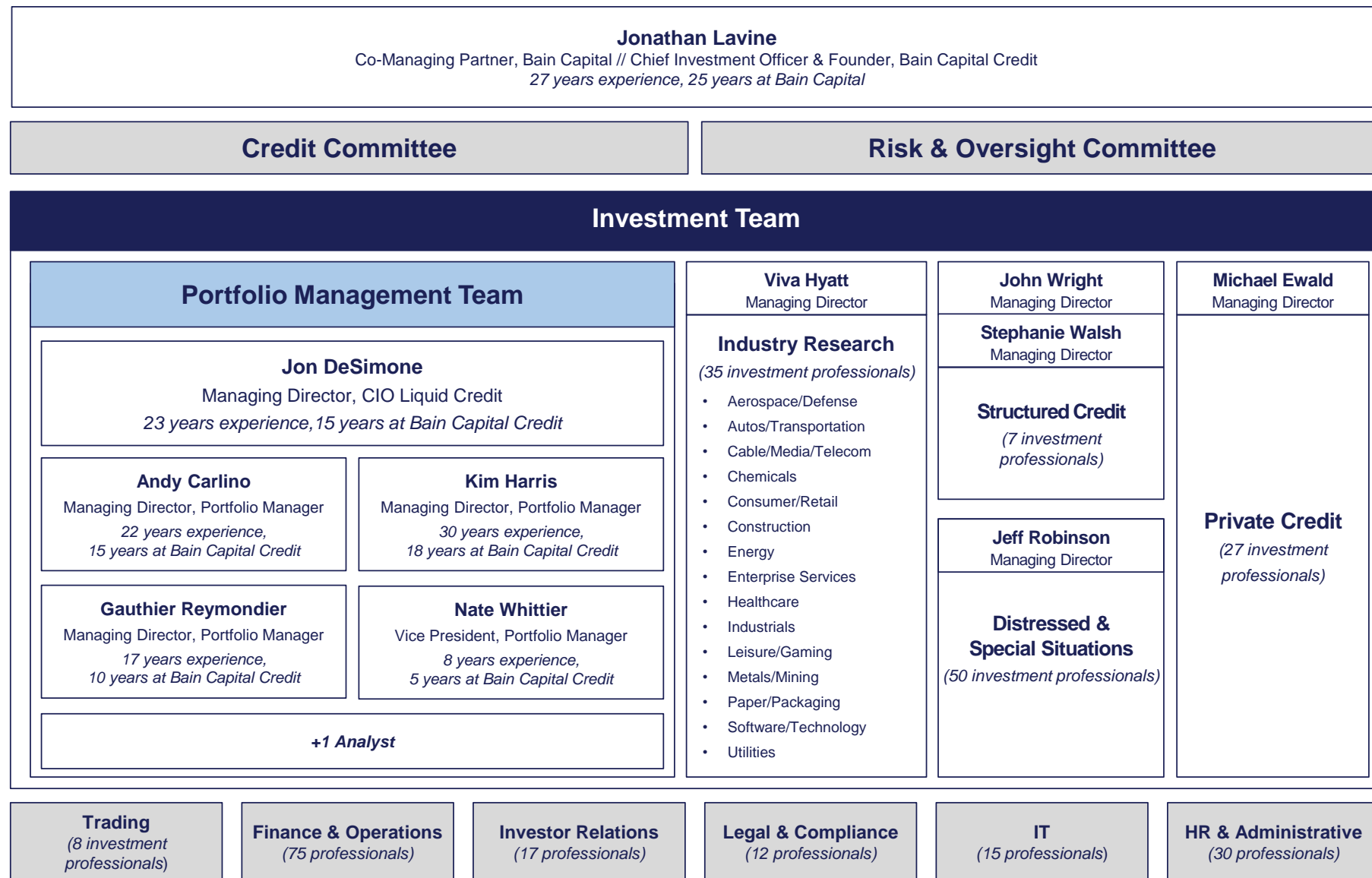
## Bain Capital Credit

*\$37 billion across the spectrum of high-yield credit*

<b>Bank Loan &amp; Multi-Asset Credit \$15B</b>	<b>Structured Credit \$8B</b>	<b>Direct Lending \$7B</b>	<b>Distressed &amp; Special Situations \$7B</b>
Dedicated bank loan and liquid opportunistic credit strategies offered in long only or long/short	Bain Capital Credit managed CLOs and opportunistic investments in CLO debt and equity	Senior, unitranche and mezzanine debt in middle market companies	Distressed debt, capital solutions and opportunistic special situations
Global Bank Loans	US Managed CLOs	Global Senior Direct Lending	Global Distressed & Special Situations
European Bank Loans	European Managed CLOs	Mezzanine & Junior Capital	Special Situations Europe (SSE)
High Income Strategy	Structured Credit Opportunities	Regionally Focused Mandates	Special Situations Asia (SSA)
Customized SMAs			

6.2

# Multi Strategy Credit Team



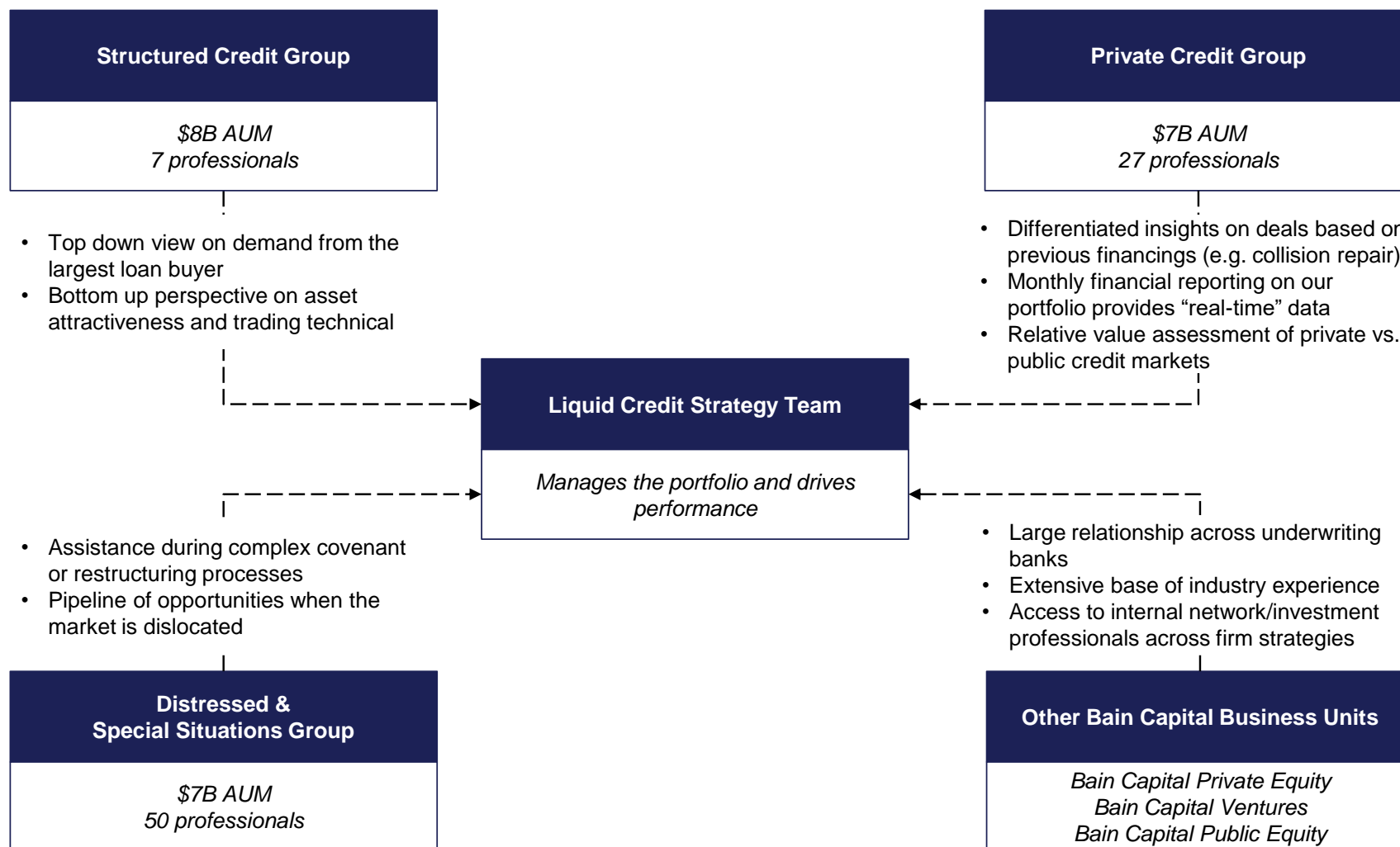
6.2



## The Power of the Platform

Our Liquid Credit Strategy benefits from synergy across the Bain Capital platform.

6.2



## Investment Philosophy

**We seek to maximize expected return, not potential return, in our investments.**

### INDUSTRY ATTRACTIVENESS

- Barriers to entry
- Customer/supplier power
- Substitutes/technology
- Cyclicalities
- Market definition
- Profit drivers
- Event risk



**How healthy is it?**

### COMPETITIVE POSITION

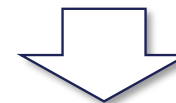
- Basis of competition
- Benefits of scale
- Customer stickiness
- Segment profitability
- Relative cost position
- Product differentiation
- Fragmentation



**Does anyone care if  
they go away?**

### COMPANY/SECURITY

- Historical trends
- Assets/downside protection
- Management/equity sponsor
- Strategy
- Covenants and terms
- Relative value/market technicals
- Position in capital structure



**What do I need to believe?**

**6.2**

## The Engine of Our Liquid Credit Strategy is Our Industry Team

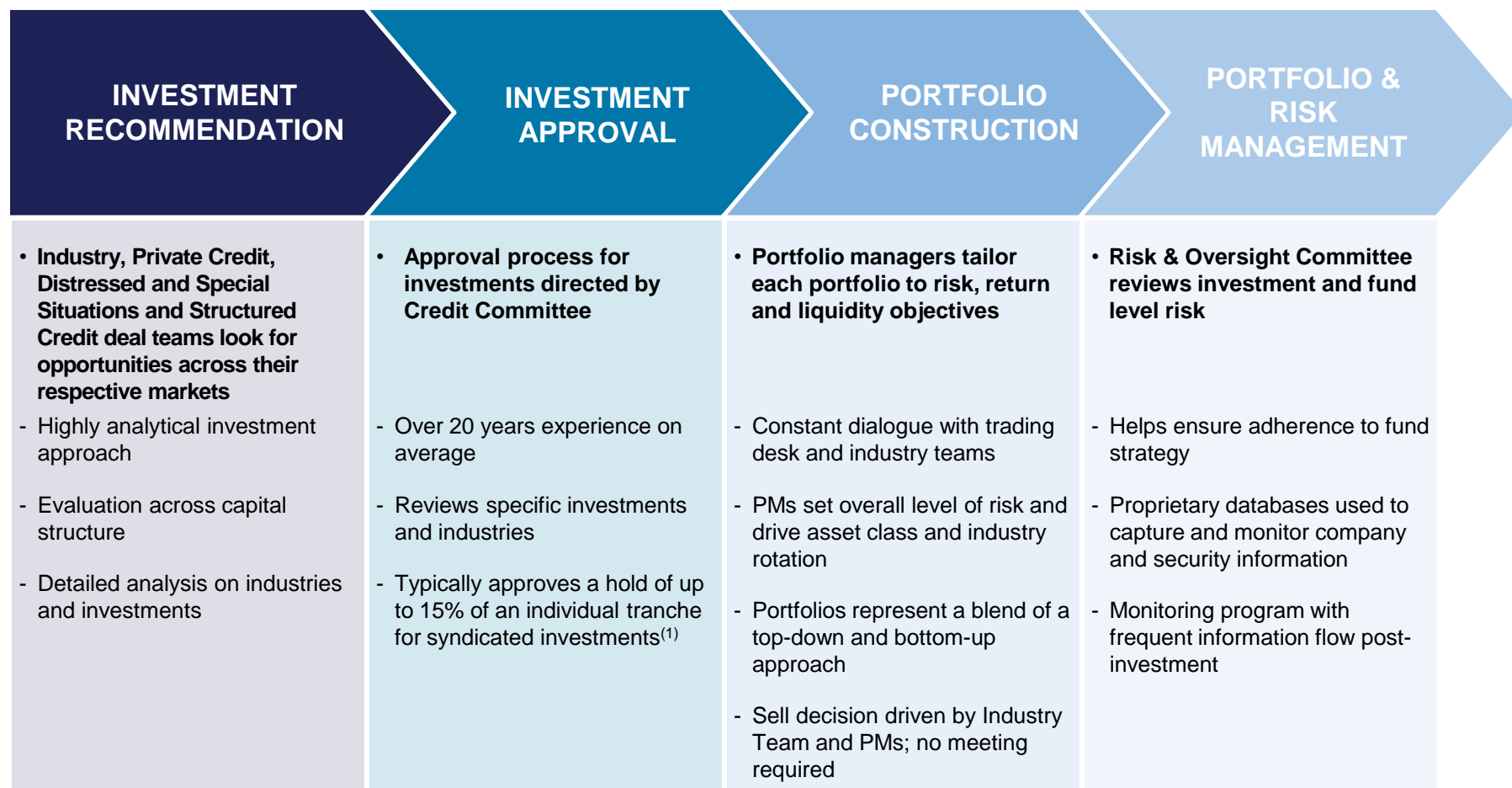
We have one of the largest and most experienced teams in credit which has looked at over 10,000 deals and deployed over \$100B of capital since 1998.



6.2

## Investment Process

To achieve strong results, Bain Capital Credit uses a systematized credit approval and tracking process.



6.2

## Responsibility and ESG Considerations

ESG considerations for certain investments are integrated throughout our investment process with ownership across the Bain Capital Credit team.

### Promote Awareness

- **Industry research teams** analyze ESG on an **industry** as well as **company** level as needed
- Attend industry **conferences**
- Meet regularly with **company management** and evaluate the entire **value chain**

### Monitoring & Transparency

- **Proprietary databases** used to capture and monitor company and security information (which may include, but is not limited to, ESG information)
- **Monitoring program** with frequent information flow post-investment for all Bain Capital Credit funds
- Fund and firm-level reporting (which may include, but is not limited to, ESG information)
- Exploring Advisory Board options



### Thoughtful Approach

- **Not a “one size fits all” solution**
- **Correct answer varies** by company and geography
- Analysis of **impact** to our **returns, reputation and Limited Partners**
- **Engagement with company management** where we have board/observer seats

### Implementation

- On certain new credit investments our **Credit Committee** completes the **ESG/SRI checklist** during the approval process
- We seek to avoid certain industries (e.g. tobacco, armaments)
- High **firm citizenship** standards

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- Firm Overview
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- Market Overview
- Appendix

## Bain Capital Liquid Senior Loan Strategy (Established in 2008)

The objective of the Bain Capital Liquid Senior Loan Strategy is to outperform the LSTA index.

### How Do We Do It?

6.2

*Undertake an intensive evaluation and diligence process, reviewing the industry, company, capital structure and security*

**Focus on the middle of the market aiming to generate alpha while preserving liquidity**

**Tactically allocate to opportunities in the European loan market**

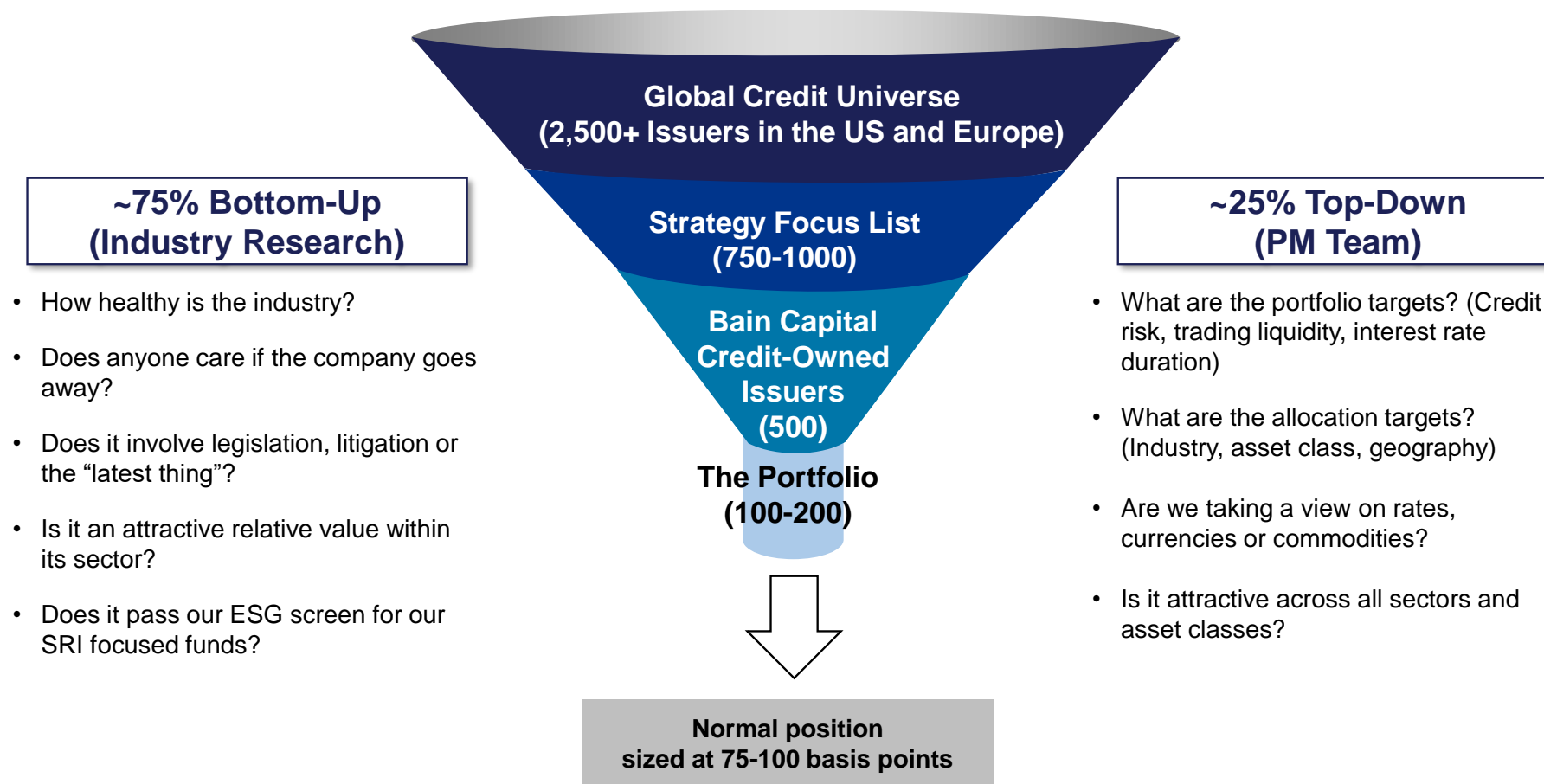
**Aim to protect on the downside with fewer defaults and higher recoveries**



**Bain Capital Credit has been investing in bank loans for 17 years and has a track record of strong performance and credit selection.<sup>(1)</sup>**

## Our Portfolio Blends Bottom-Up and Top-Down Perspectives

Portfolio managers (“PMs”) work closely with the industry research team to construct an active portfolio of what we see as our best ideas.



Tailor position size based on tranche size, level of credit risk and trading liquidity

Often own 3-10% of a tranche with initial approval set at 15%<sup>(1)</sup>

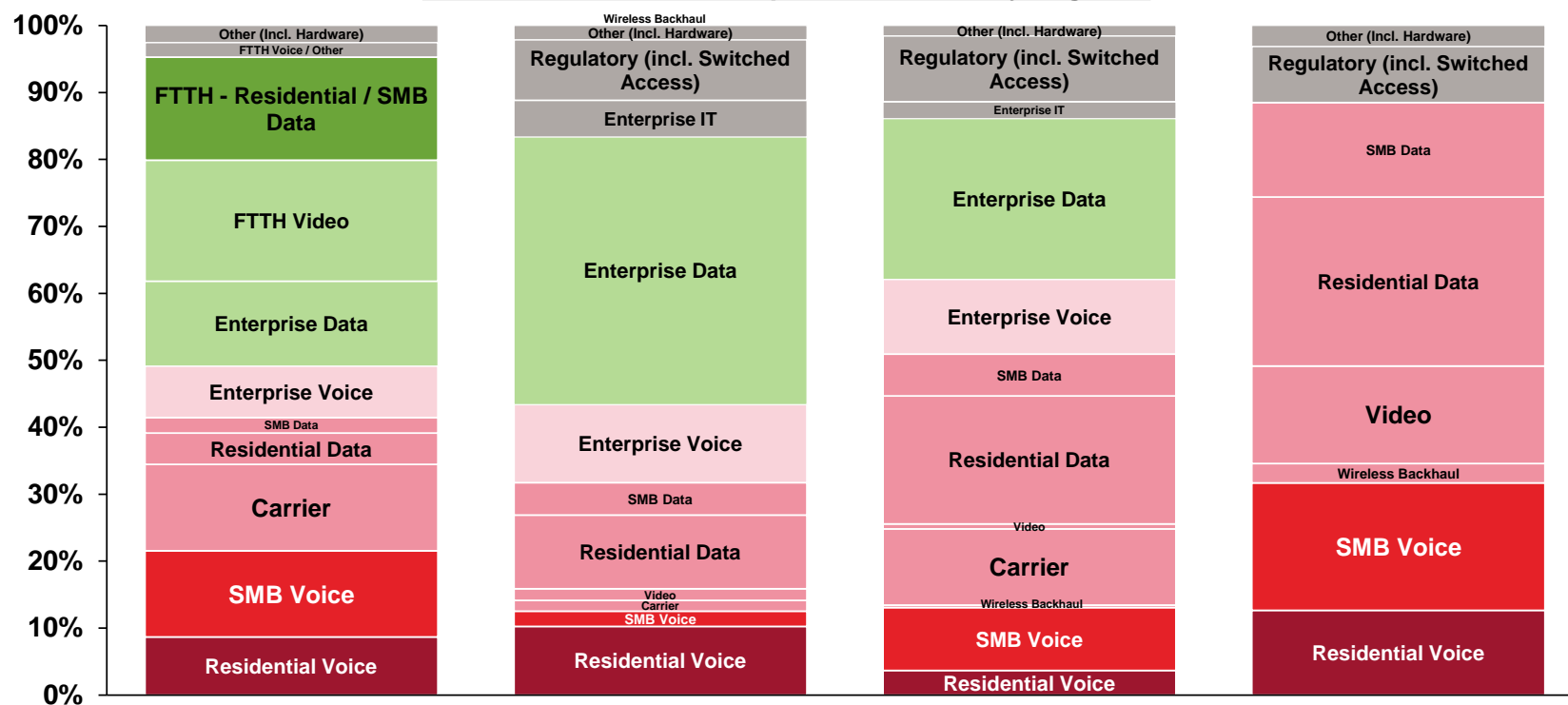
No Credit Committee approval required to sell—driven by Industry Research and PM team dialogue



## Understanding Industry Fundamentals is Critical

These four telecom investment opportunities generate their revenue in very different ways, which we believe is critical to pricing the risk appropriately.

**Wireline Revenue Heat Map: LTM Revenue by Segment**



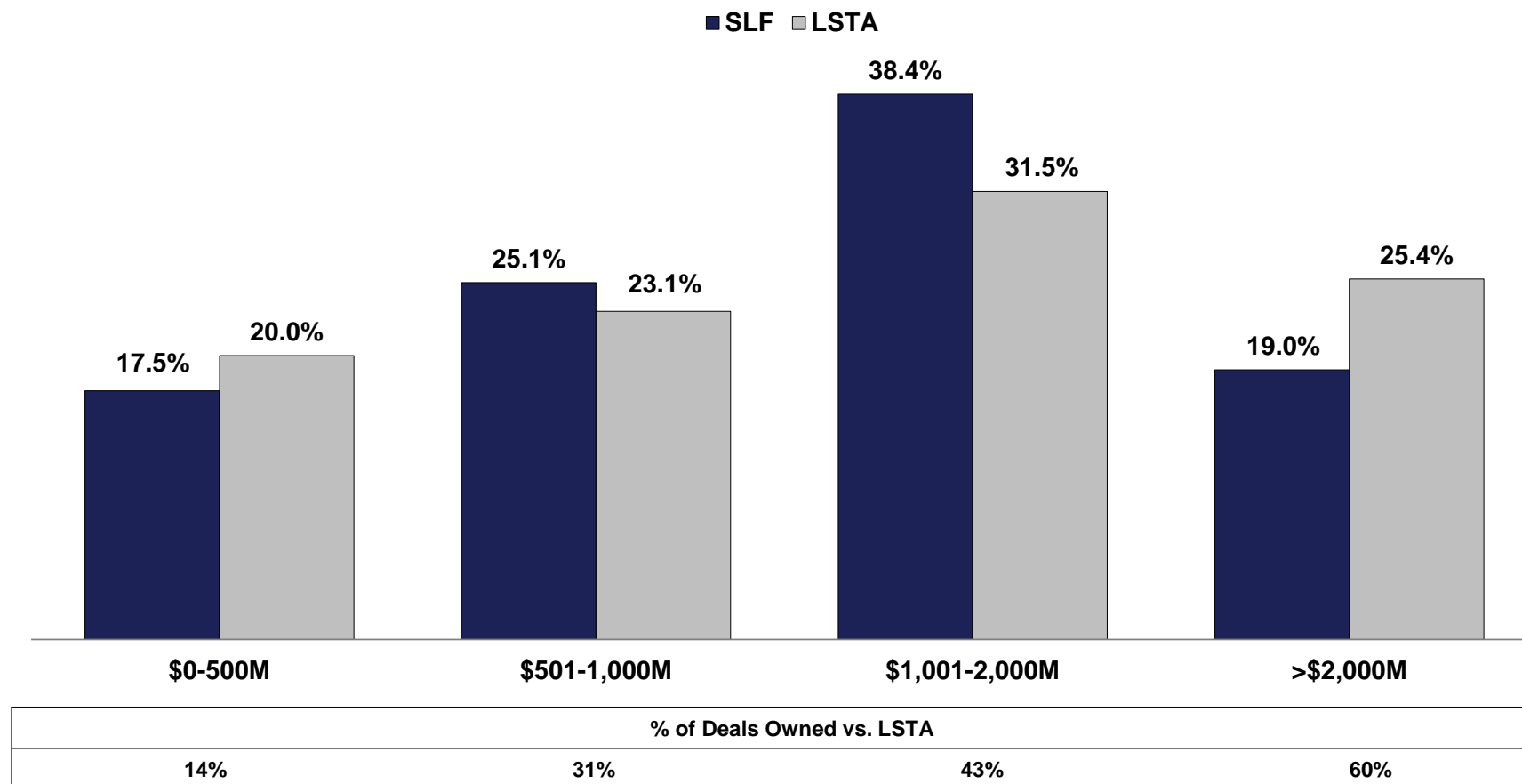
6.2

	Company 1	Company 2	Company 3	Company 4
	STW (bps)	STW (bps)	STW (bps)	STW (bps)
1 <sup>st</sup> Lien	330	385	675	520
Unsecured	505	435	1335	1440

## Active Portfolio Management

Our Senior Loan Fund (“SLF”) is actively managed. We are benchmark-aware and not benchmark-driven given the risk of adverse selection in companies that have issued more debt.

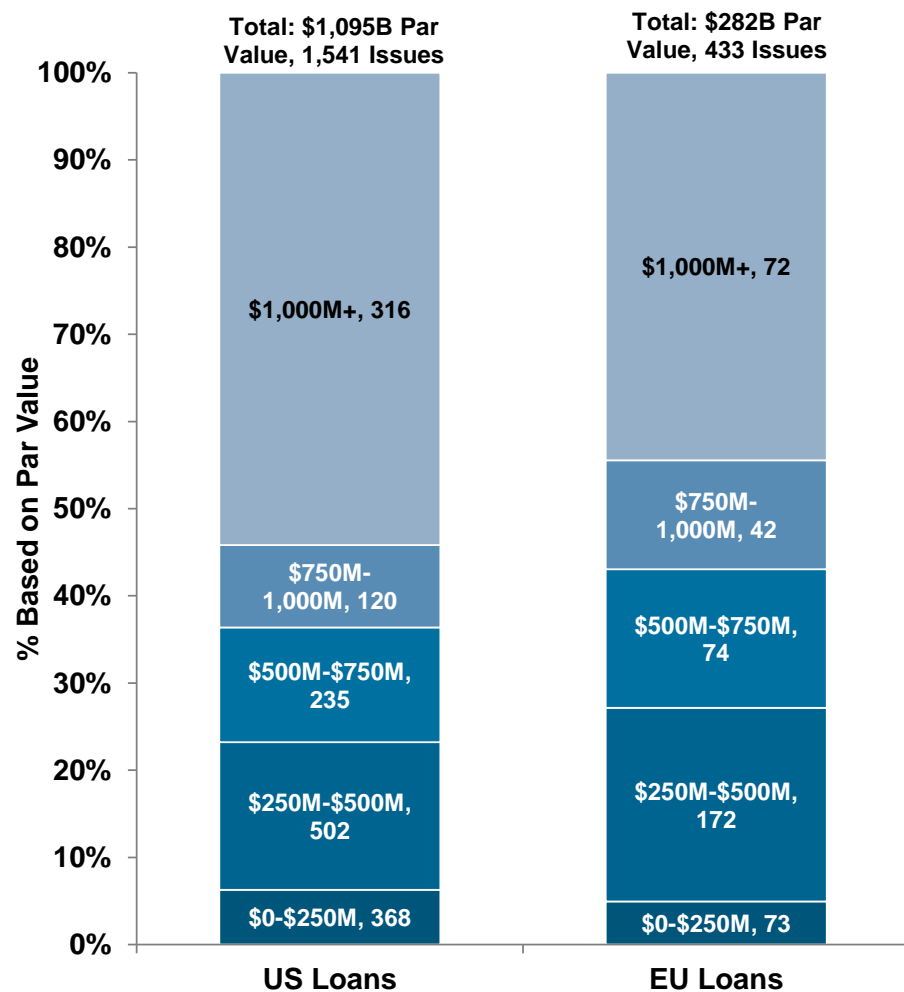
### Issue Size Comparison (3-Year Average)



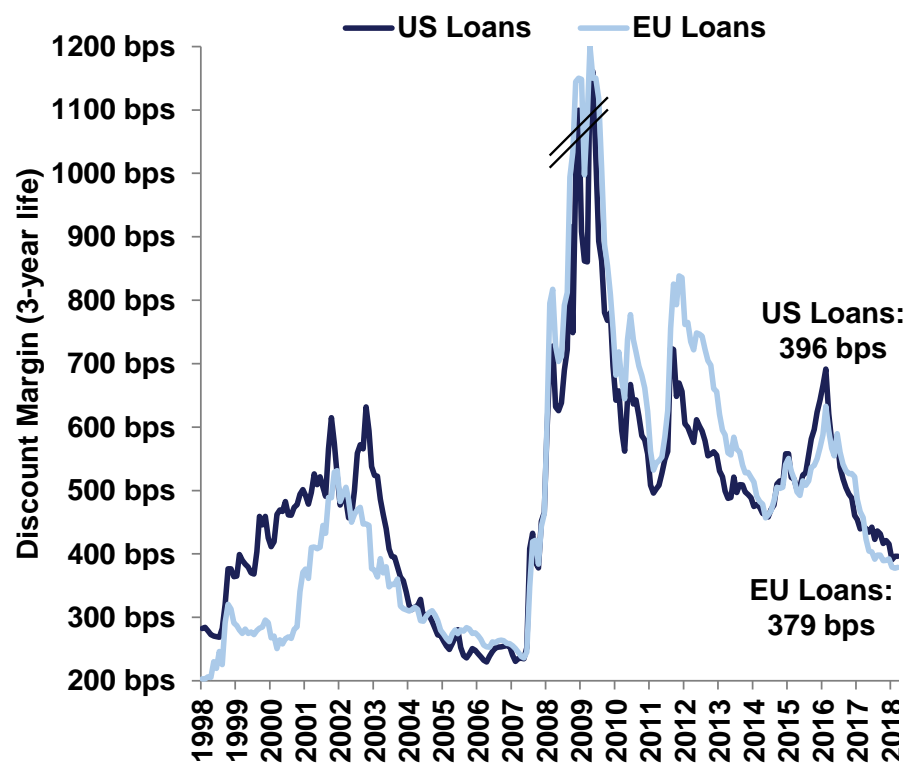
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## The European Loan Market Presents Select Opportunities

Though smaller than the US market, the European loan market has over 100 liquid issuers and periodically offers a premium to the US.<sup>(1)</sup>



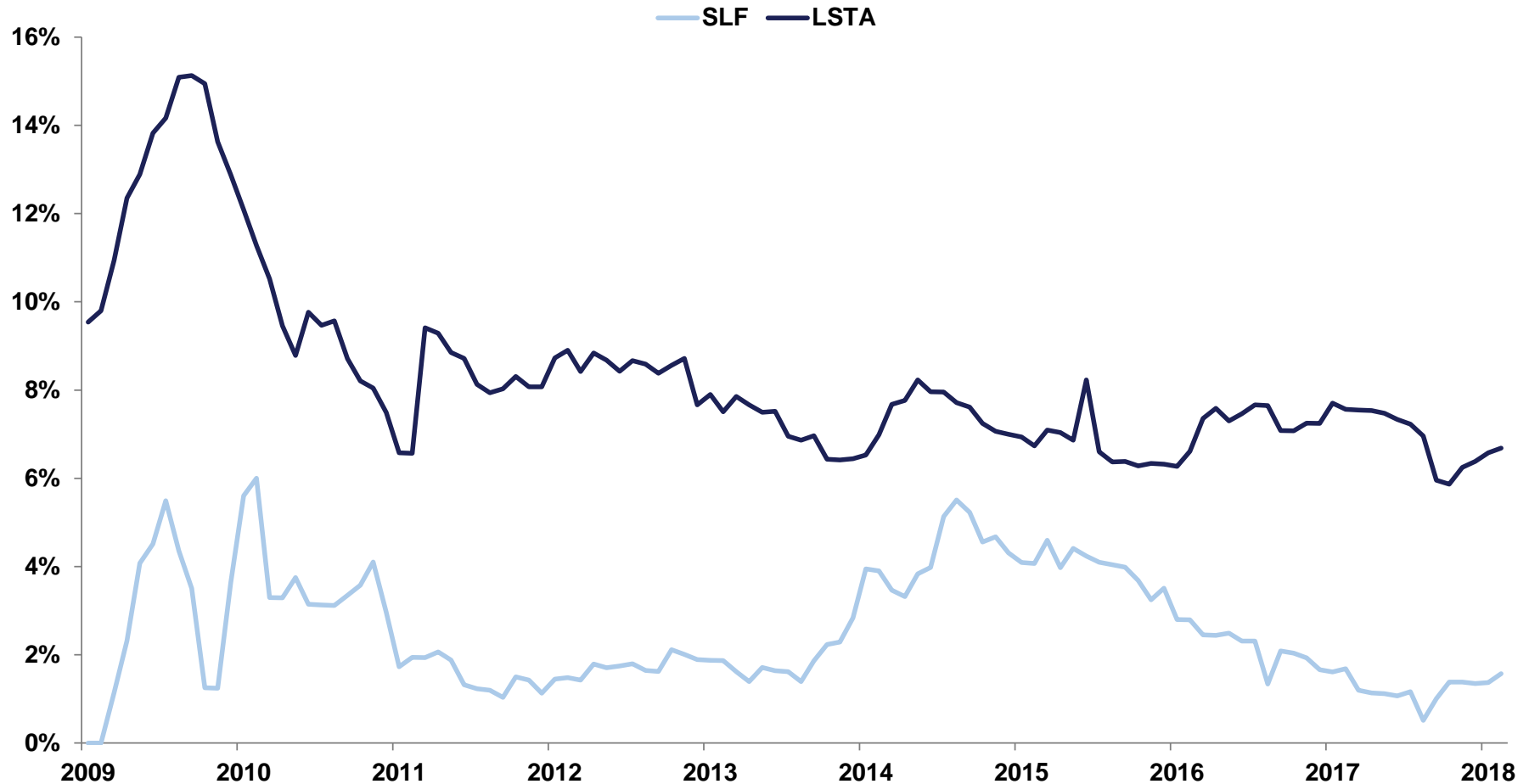
	Current Level	High <sup>(2)</sup>	Low <sup>(2)</sup>	% Rank <sup>(3)</sup>
US Loans:	396 bps	1,799 bps	230 bps	28%
EU Loans:	379 bps	1,973 bps	203 bps	38%



6.2

## Minimizing Downside Starts with Avoiding CCC's

We continue to underweight CCC exposure. SLF average CCC exposure has been 2.6% versus 8.3% for the LSTA.



6.2

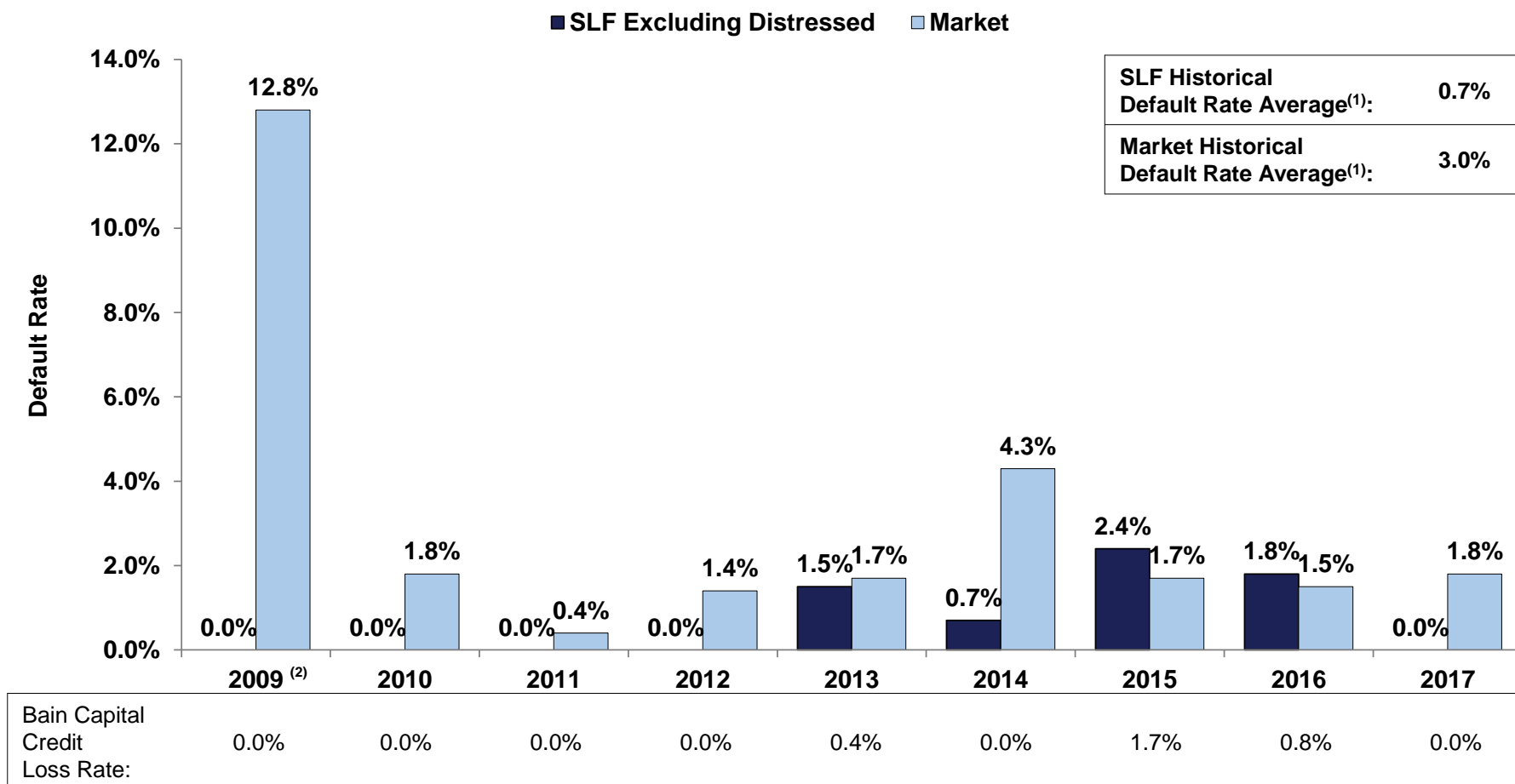
**SLF has delivered strong performance since inception despite typically carrying less credit risk than the LSTA Index**



Data as of March 31, 2018. CCC exposure for SLF shown for loan portfolio only. Bain Capital Credit defines credit risk as CCC exposure. CCC exposure is not the only measure of credit risk. Fund inception is February 12, 2009. Source: LSTA and Bain Capital Credit analysis. Past performance is not indicative of future results. Actual results may vary.

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## We Have Historically Avoided More Defaults Than the Market



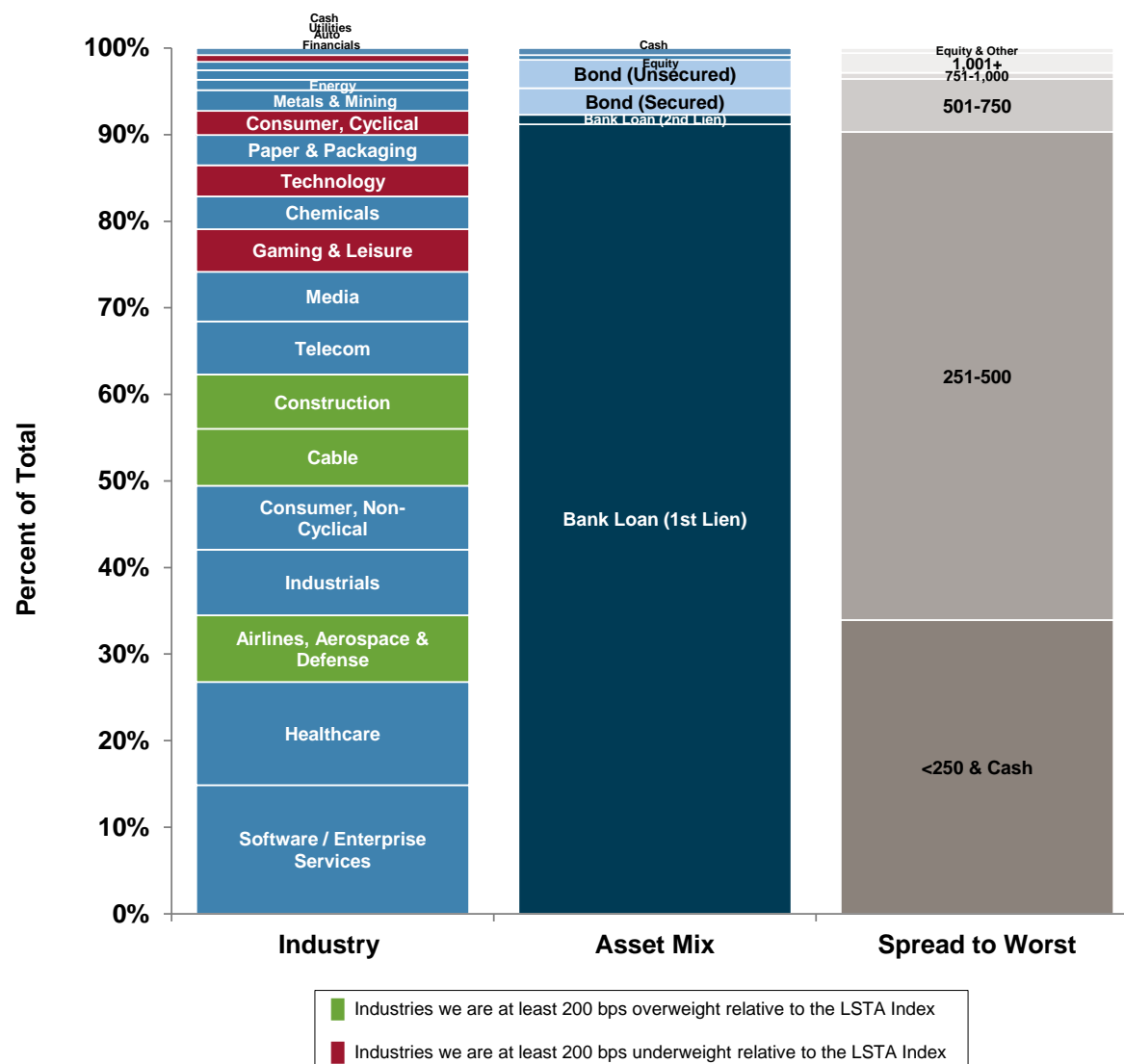
6.2

Data estimated as of December 31, 2017. Market data: JP Morgan Default Monitor. Defaults shown for bank debt and bonds held in Bain Capital Senior Loan Fund, L.P. ("SLF"). SLF defaults exclude distressed purchases, defined as bank debt trading 20 points below the LSTA Index average offer price and bonds trading 30 points below the JPM High Yield Index average offer price. Default rates are calculated based on principal amount. Recovery rate for Bain Capital Credit is the weighted average price of assets one year after default. If sold within one year of default, weighted average sale price is used. If restructured within one year, recovery rate is the value of post-restructured assets on one-year anniversary of default date (or weighted average sale price if sold within one year). Loss Rate is the annual default rate multiplied by difference between: (1) Par and (2) Recovery Rate for each annual period, and measures total impact of default losses on investment population, net of recoveries. 1 Year Loss Rate is shown for Bain Capital Credit. Loss rate for JP Morgan benchmark -- which uses a materially different methodology -- not shown. (1) SLF Historical Default Rate Average is the average default rate for the time period March 1, 2009 – December 31, 2017. Market Historical Default Rate Average is the average default rate for the time period January 1, 2009 - December 31, 2017. (2) SLF 2009 data shown is for March 1, 2009 – December 31, 2009. Past performance is not indicative of future results. Actual results may vary. **An investor should consider that there are material differences between the methodologies underlying the JP Morgan benchmarks and Bain Capital Credit's statistics.**

# SLF Portfolio Characteristics

## Characteristics

Current Yield:	5.5%
Yield to Worst:	5.7%
Interest Rate Duration:	0.3
Credit Spread Duration:	3.9
Avg. Interest Coverage:	3.8x
Avg. Relevant Debt/EBITDA:	4.3x
Avg. Total Debt/EBITDA:	5.7x
Median EBITDA:	\$345M
Avg. 4-year Spread:	336 bps
Avg. Rating:	B
Number of Companies:	275
Non-North American <sup>(1)</sup> :	20%



6.2

## Bain Capital Liquid Senior Loan Strategy

We have outperformed the market by ~140 gross basis points annualized since inception.

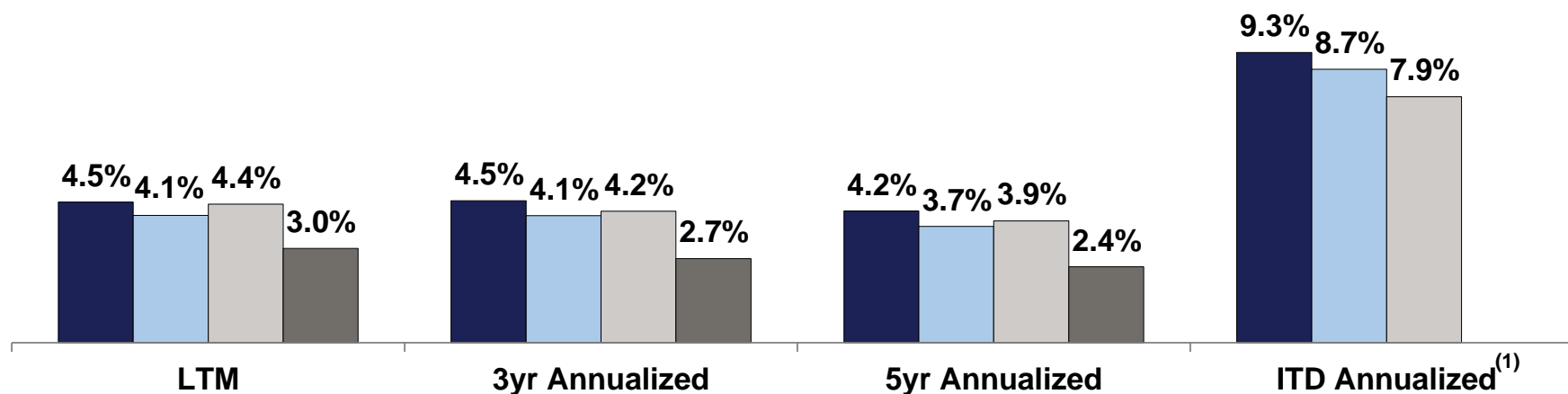
- Bain Capital Liquid Senior Loan Strategy Gross
- Bain Capital Liquid Senior Loan Strategy Net
- LSTA
- BKLN

### Standard Deviation (ITD)

Bain Capital Gross: 5.3%

LSTA: 6.3%

6.2



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	YTD
Liquid Senior Loan Strategy Gross	-5.1% <sup>(2)</sup>	43.8%	13.9%	4.7%	12.3%	6.9%	1.5%	0.1%	9.8%	4.7%	1.1%
Liquid Senior Loan Strategy Net	-5.2% <sup>(2)</sup>	43.1%	13.3%	4.2%	11.7%	6.4%	1.0%	-0.5%	9.3%	4.3%	1.0%
LSTA	-11.2% <sup>(2)</sup>	51.6%	10.1%	1.5%	9.7%	5.3%	1.6%	-0.7%	10.2%	4.1%	1.4%



Data as of March 31, 2018. Bain Capital Senior Loan Composite excluding CLOs ("Bain Capital Liquid Senior Loan Strategy") inception date is November 1, 2008. Performance includes the Bain Capital Senior Loan Fund and loan-focused separate accounts. There can be no assurance that results achieved by the composite will be achieved by the other funds or accounts. Past performance is not indicative of future results. Actual results may vary. See "Endnotes" for important definitions, disclosures and information regarding returns, indices and performance calculation methodologies. (1) BKLN data only available since April 30, 2011. (2) Represents performance from November 1, 2008 – December 31, 2008.

## SLF Summary of Terms

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Fund Parameters <sup>(1)</sup>		
Asset Mix	Minimum 90% secured debt	
Fixed Rate	Maximum 25%	
Max Issuer Exposure	3%	
Geographies <sup>(2)</sup>	Minimum 60% in issuers domiciled in the US or Canada	
Industries	Not to exceed 15% based on Moody's definitions An exception may be made for one industry up to 20% and a second up to 17%	
Currency	The Fund will invest in USD, Canadian Dollars and the currencies used in the EU, EEA and OECD The manager may or may not choose to hedge foreign exchange exposure	
Summary of Terms <sup>(3)</sup>		
Vehicle	Bain Capital Senior Loan Fund, LP	Bain Capital Senior Loan Fund, PLC
Strategy	Invest in a diversified pool of primarily North American and European bank loans and secured bonds on an unlevered basis	Invest in a diversified pool of primarily North American and European bank loans and secured bonds on an unlevered basis
Fee Structure	Annual management fee paid quarterly. <ul style="list-style-type: none"><li>For first \$100M of commitment: 0.50% of NAV</li><li>For next \$100M of commitment: 0.45% of NAV</li><li>For any additional amount of commitment: 0.40% of NAV</li></ul> Operational and administrative expenses capped at 0.13%	Annual management fee paid quarterly. <ul style="list-style-type: none"><li>For first \$100M of commitment: 0.50% of NAV</li><li>For next \$100M of commitment: 0.45% of NAV</li><li>For any additional amount of commitment: 0.40% of NAV</li></ul> Operational and administrative expenses capped at 0.20% for commitments less than \$100 million and at 0.15% for commitments of \$100 million or greater
Structure	Evergreen fund, Delaware LP Monthly redemptions with 30 days notice	Evergreen fund, Irish PLC Monthly redemptions with 30 days notice
Legal Counsel	Fried, Frank, Harris, Shriver & Jacobson LLP	Maples and Calder (Ireland), Fried, Frank, Harris, Shriver & Jacobson LLP (UK, US)
Auditor	PricewaterhouseCoopers	PricewaterhouseCoopers
Fund Administrator	SEI Global Services, Inc.	International Fund Services (Ireland) Limited

(1) Compliance with all tests calculated on a par basis.

(2) 40% non U.S./Canada basket also allowed to purchase securities from issuers in favourable tax jurisdictions such as Bermuda and the Cayman Islands so long as the business has significant operating activities in the US, Canada, EU, EEA or OECD.

(3) Refer to fund documents for full details of terms and conditions.



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- Firm Overview
- Liquid Senior Loan Strategy
- Market Overview
- Appendix

## We Remain Cautious on Markets Given Where We Are in the Cycle

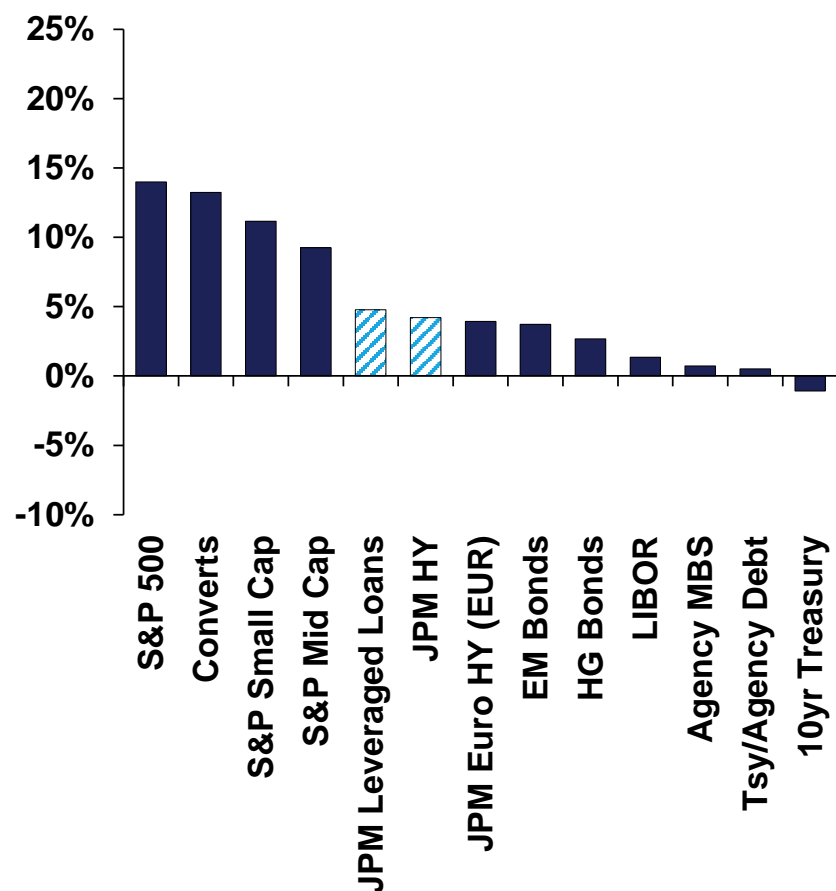
**While the macroeconomic backdrop is supportive to take modest risk, there are few “good businesses with a bad capital structure” which need growth and that are trading at attractive levels.**

Fundamentals	Valuations	Financial Stress	Technicals
<ul style="list-style-type: none"> <li>• We appear to be in a period of synchronized global growth               <ul style="list-style-type: none"> <li>- US expansion 3<sup>rd</sup> longest ever with tax bill that may extend cycle</li> <li>- Europe improving</li> <li>- China seems strong</li> </ul> </li> <li>• Corporate leverage has risen in IG and HY, but cheap funding cost has supported cash flows</li> <li>• Underlying corporate results have been good in most sectors across our portfolio</li> <li>• Few unforeseen defaults outside challenged sectors (retail, energy, radio)</li> </ul>	<ul style="list-style-type: none"> <li>• Credit markets at tighter than average conditions               <ul style="list-style-type: none"> <li>- Loans at 23<sup>rd</sup> percentile<sup>(1)</sup></li> <li>- Bonds at 15<sup>th</sup> percentile<sup>(1)</sup></li> </ul> </li> <li>• Credit market is bifurcated with few total return opportunities outside challenged sectors</li> <li>• Equity valuations also stretched at high 80s — low 90s percentile on P/E basis</li> </ul>	<ul style="list-style-type: none"> <li>• Lending conditions remain favorable (Fed SLO survey) and capital markets are open to solve most funding issues</li> <li>• Financial CDS remains cheap — no bank funding issues</li> <li>• Treasury curve has flattened with short end coming up— typically a negative sign</li> <li>• Higher rates and increase in deficit could present medium term problems</li> </ul>	<ul style="list-style-type: none"> <li>• Demand for credit continues to outstrip supply with investors allocating away from core plus fixed income to the asset class</li> <li>• Private capital markets continue to grow strongly and terms are converging</li> <li>• Issuers able to drive debt terms: covenant-lite is the norm with flexible baskets for additional debt and dividends</li> <li>• Repeal of leveraged lending guidance beginning to feed through to issuance (&gt;6x leverage more common)</li> </ul>

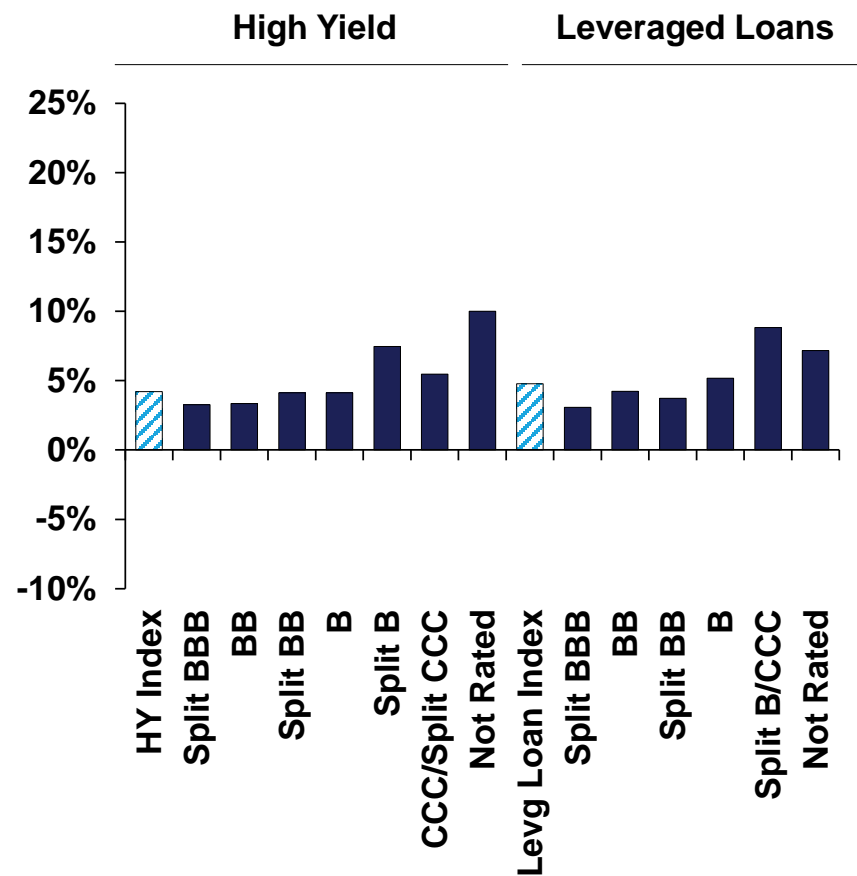
6.2

## Risk Assets Have Performed Well

### Cross Asset Returns (LTM)



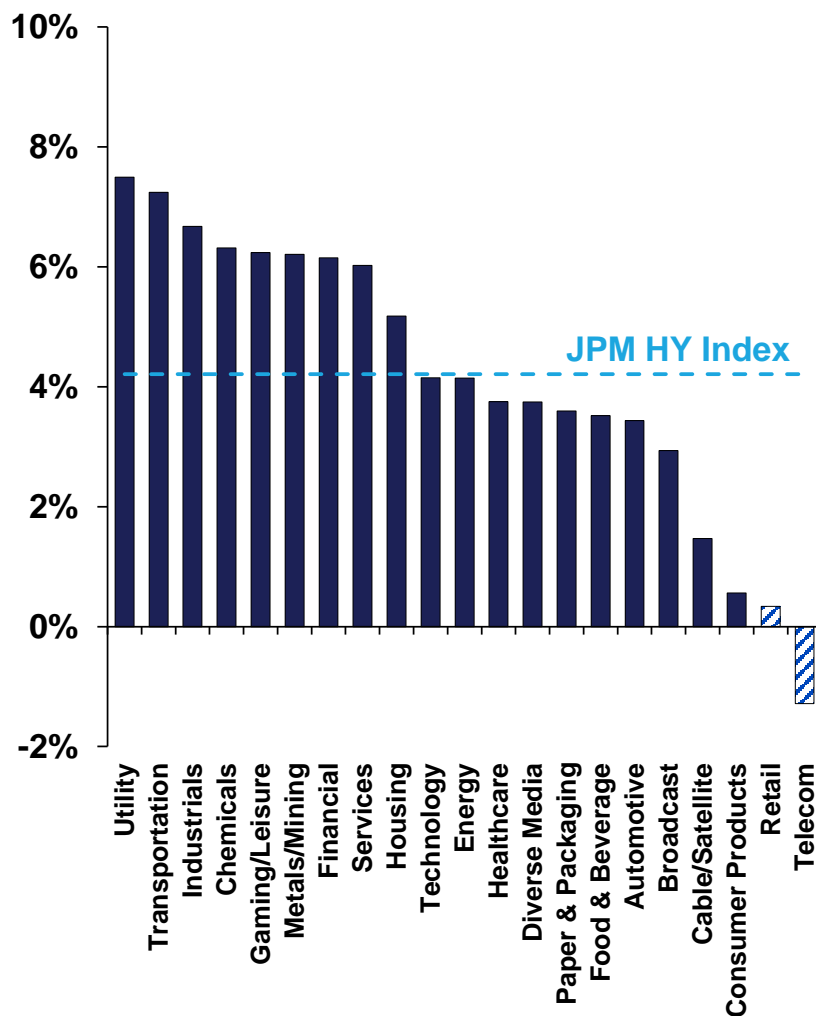
### Corporate Credit Returns (LTM)



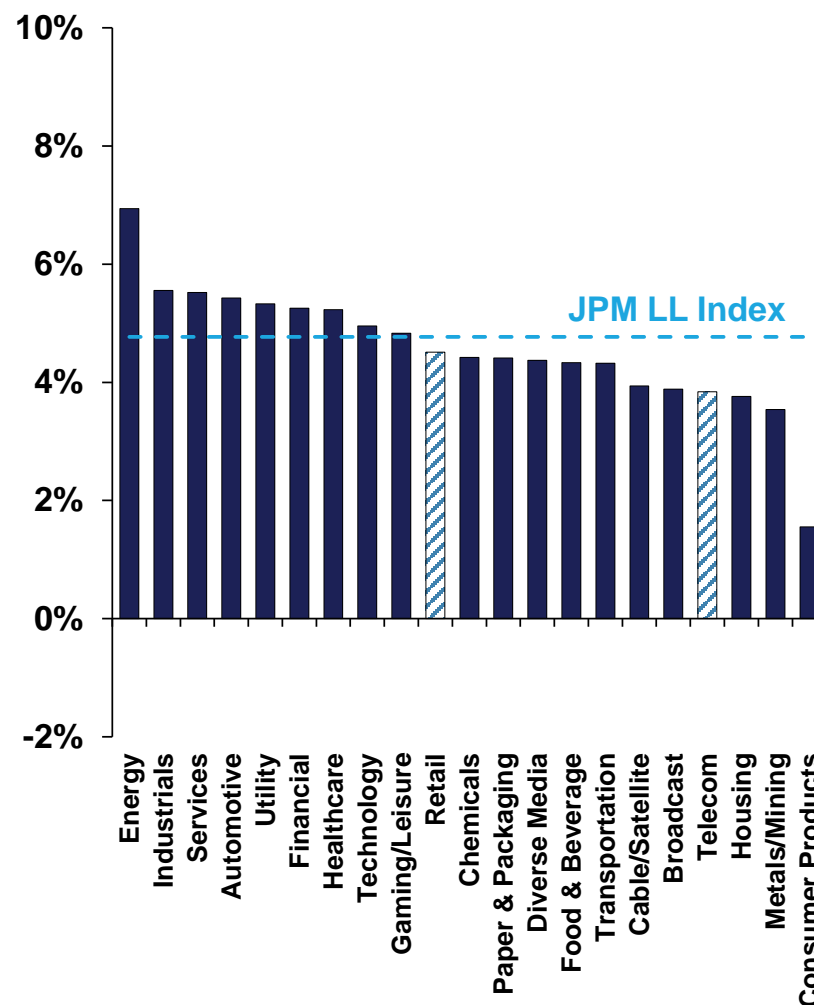
6.2

## Retail and Telecom Have Underperformed

### JPM High Yield Index Returns (LTM)



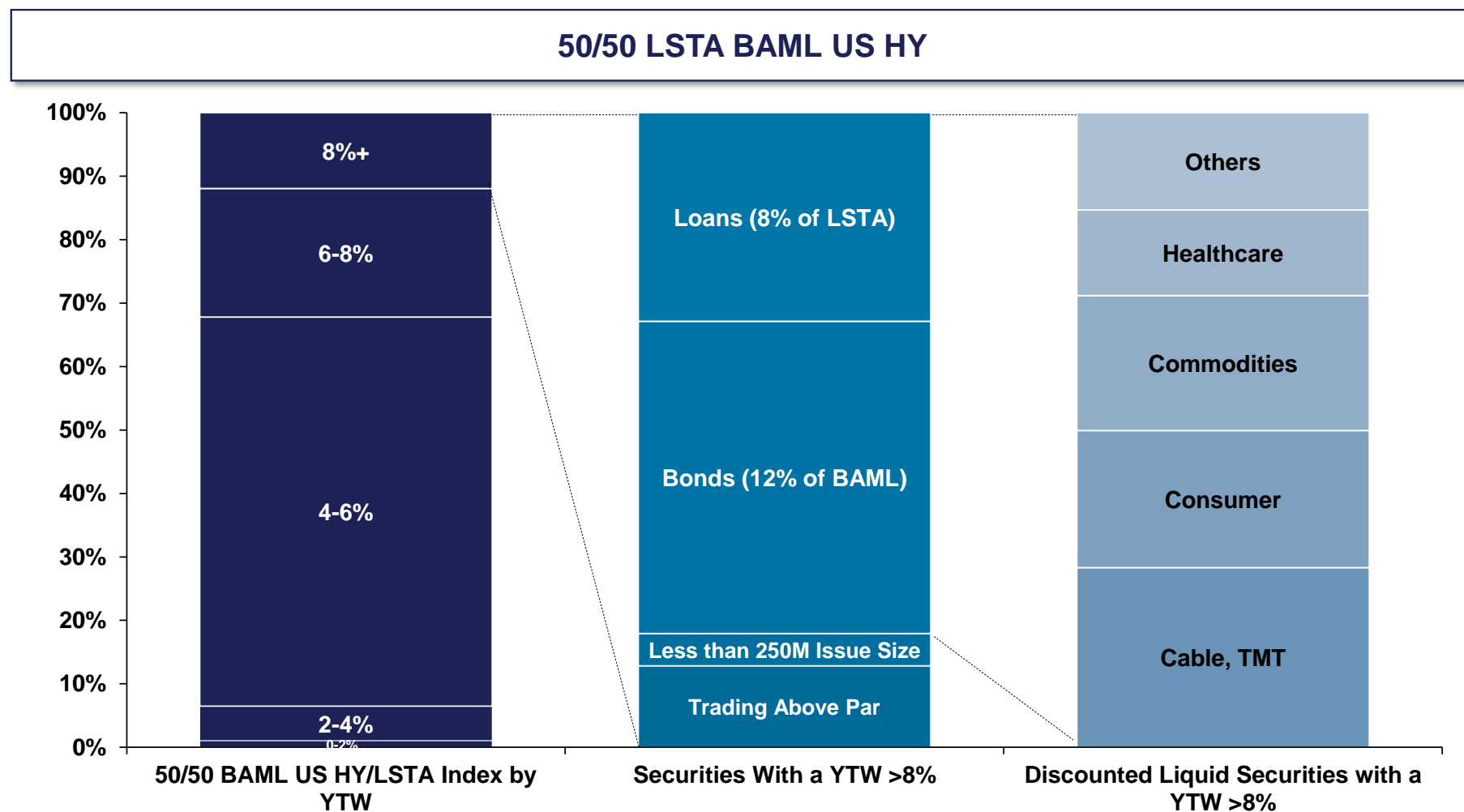
### JPM Leveraged Loan Index Returns (LTM)



6.2

## Only 10% of the Index is Trading Over 8%...

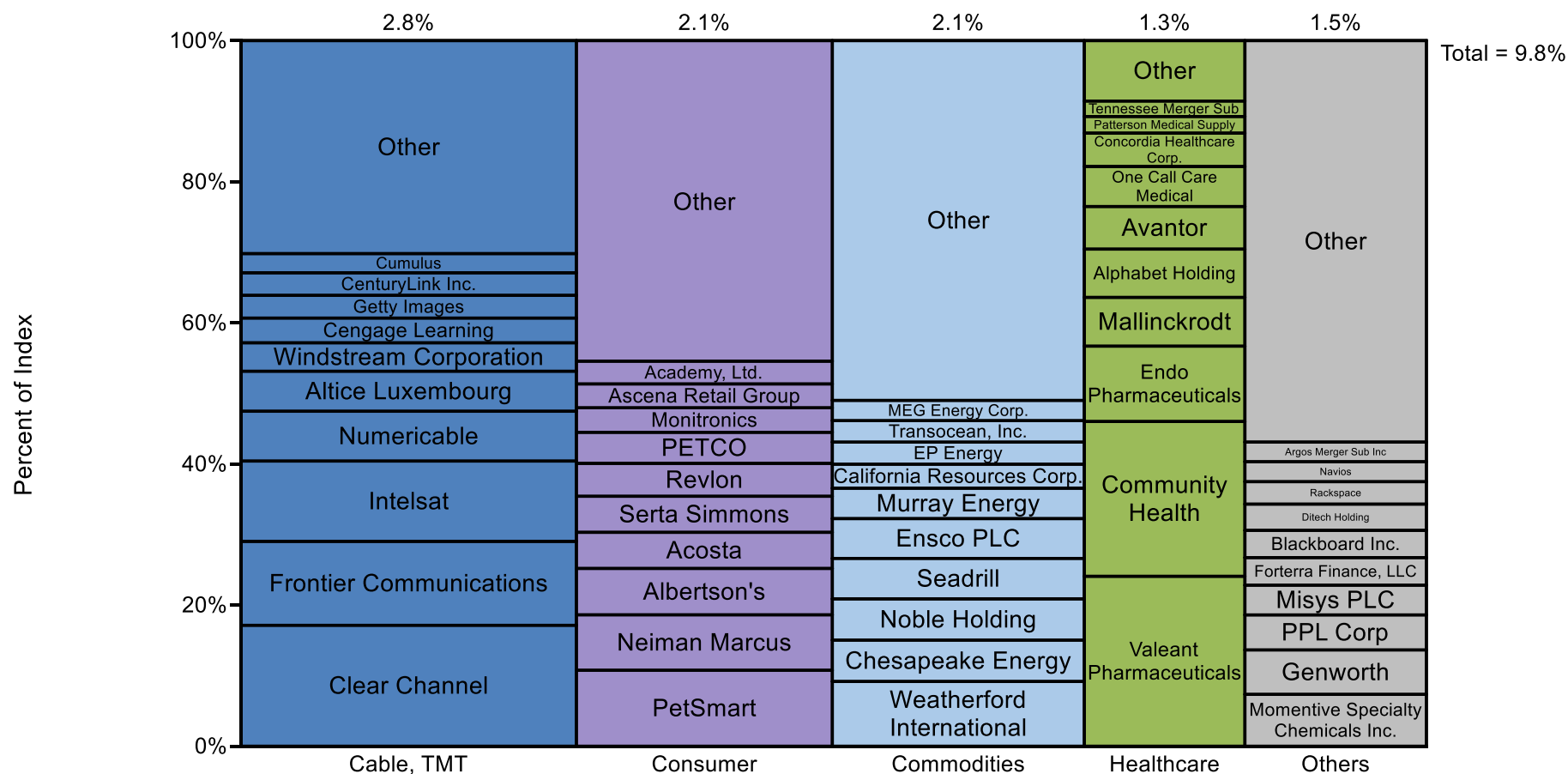
The liquid risk market is 9.8% of the index and contributes ~110 bps of spread.<sup>(1)</sup>



6.2

## ...And This Segment Is Concentrated

Only 9.8% of the index has a YTW >8%, is trading below par and has a tranche size greater than \$250M.

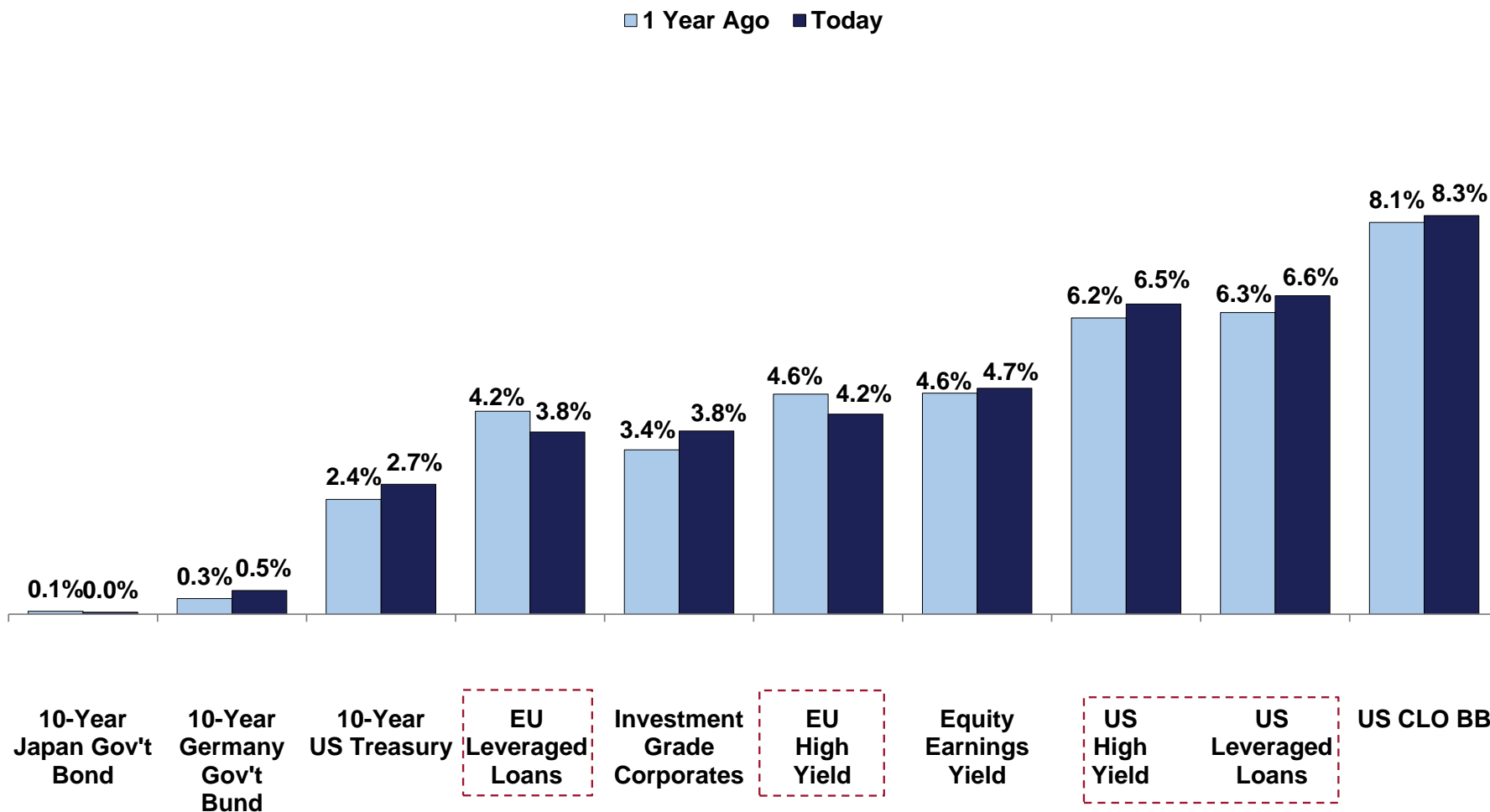


6.2

Loan/Bond Split	Bonds:	1.9%	1.5%	0.7%	1.0%	0.8%
	Loans:	0.9%	0.6%	1.4%	0.3%	0.7%

## Yields Look Attractive in a Broader Credit Context

While loan and bond yields have rallied with the rest of fixed income, in a world of low rates and defaults, valuations look reasonable.



6.2

# Financial Stress Remains Low But Valuations Are High

Financial System Stress						
US Funding markets	Current	%ile	Median	Max	Min	Data since
3M Libor	236	54%	190	687	22	Jan-95
3M Libor - Tbill (TED)	56	80%	34	464	(6)	Jan-95
2yr swap spreads	25	35%	34	167	(3)	Jan-95
30D CP level	186	53%	176	658	12	Jan-95
Treasury curve (10-2)	0.5	30%	1.0	2.9	(2.4)	Jan-80
SIFI and bank levels (bps)	Current	%ile	Median	Max	Min	Data since
BofA	49	39%	67	485	8	Aug-01
Citi	50	35%	76	1,636	7	Sep-02
Goldman	64	36%	85	580	19	Aug-01
JPM	48	33%	63	243	11	Sep-01
MS	61	34%	82	1,311	15	Sep-01
Wells Fargo	56	57%	51	310	6	Nov-02
HSBC	25	30%	57	290	5	Jul-02
Bank of China	67	34%	105	400	16	Jan-02
BTMU	53	40%	63	198	6	Feb-05
DB	114	78%	79	320	10	Aug-01
BNP Paribas	29	37%	60	370	5	Sep-01
Unicredit	68	42%	93	700	7	Sep-01
Equity vol	Current	%ile	Median	Max	Min	Data since
Vix (spot)	15.4	37%	17.4	81	9	Jan-90
Vix (6M-spot)	2.7	35%	4.0	12	(42)	May-04
10% OTM Put vol	20.4	47%	20.8	68	11	Jan-05
Skew (Put - Call)	10.0	70%	8.9	18	2	Jan-05
Credit differentials (bps)	Current	%ile	Median	Max	Min	Data since
AAA - 10Yr Ts	98	33%	129	301	(40)	Jan-83
HY - BBB	299	18%	401	1,455	161	Jan-80
CCC - B	387	19%	505	1,855	217	Jan-95
Other funding mkts (3M)	Current	%ile	Median	Max	Min	Data since
Euribor	(33)	1%	210	539	(33)	Dec-98
Shibor	410	51%	400	730	112	Oct-06
JPY Libor	(3)	4%	19	244	(8)	Jan-95
Sterling Libor	71	28%	418	788	28	Jan-95



- Financial system stress low overall with a few exceptions

Valuations						
Equities (Trailing)	Current	%ile	Median	Max	Min	Data since
S&P 500	20.3x	82%	16.9x	30.6x	6.8x	Jan-54
S&P 500 EV/EBITDA	13.0x	91%	10.6x	15.0x	6.2x	Jan-90
S&P Mid Cap	22.4x	74%	21.1x	27.9x	4.4x	Dec-90
S&P Small Cap	26.7x	84%	23.4x	37.3x	11.6x	Jan-95
Nasdaq	26.0x	17%	32.5x	18472.2x	15.6x	Nov-01
S&P Trailing Earnings	130					
Equities (Forward)	Current	%ile	Median	Max	Min	Data since
S&P 500	16.7x	60%	16.3x	26.9x	10.0x	Jan-90
S&P Mid Cap	17.7x	51%	17.9x	22.9x	8.8x	Jan-95
S&P Small Cap	19.1x	60%	18.7x	27.8x	11.3x	Jan-95
Nasdaq	21.4x	42%	22.3x	72.8x	13.1x	Nov-01
S&P Forward Earnings	158					
Credit	Current	%ile	Median	Max	Min	Data since
10yr Treasury yield	2.96	20%	5.7	15.8	1.4	Jan-80
10yr TIPs yield	0.78	34%	1.7	4.4	-0.9	Jan-97
HG BBB (5yr spread)	88	24%	119	486	44	Apr-91
HY	387	20%	526	1,929	266	Jan-95
HY B	394	21%	527	1,860	247	Jan-95
HY CDX	338	25%	420	1,889	175	Jan-06
LL	383	40%	426	2,089	214	Jan-92
HY - BBB	299	18%	401	1,455	161	Jan-80
CCC - B	387	19%	505	1,855	217	Jan-95
European Xover	271	24%	335	1,153	149	Jun-04
European HY	371	22%	541	2,255	179	Jan-99
CMBS AAA	177	69%	140	1,325	20	Dec-04



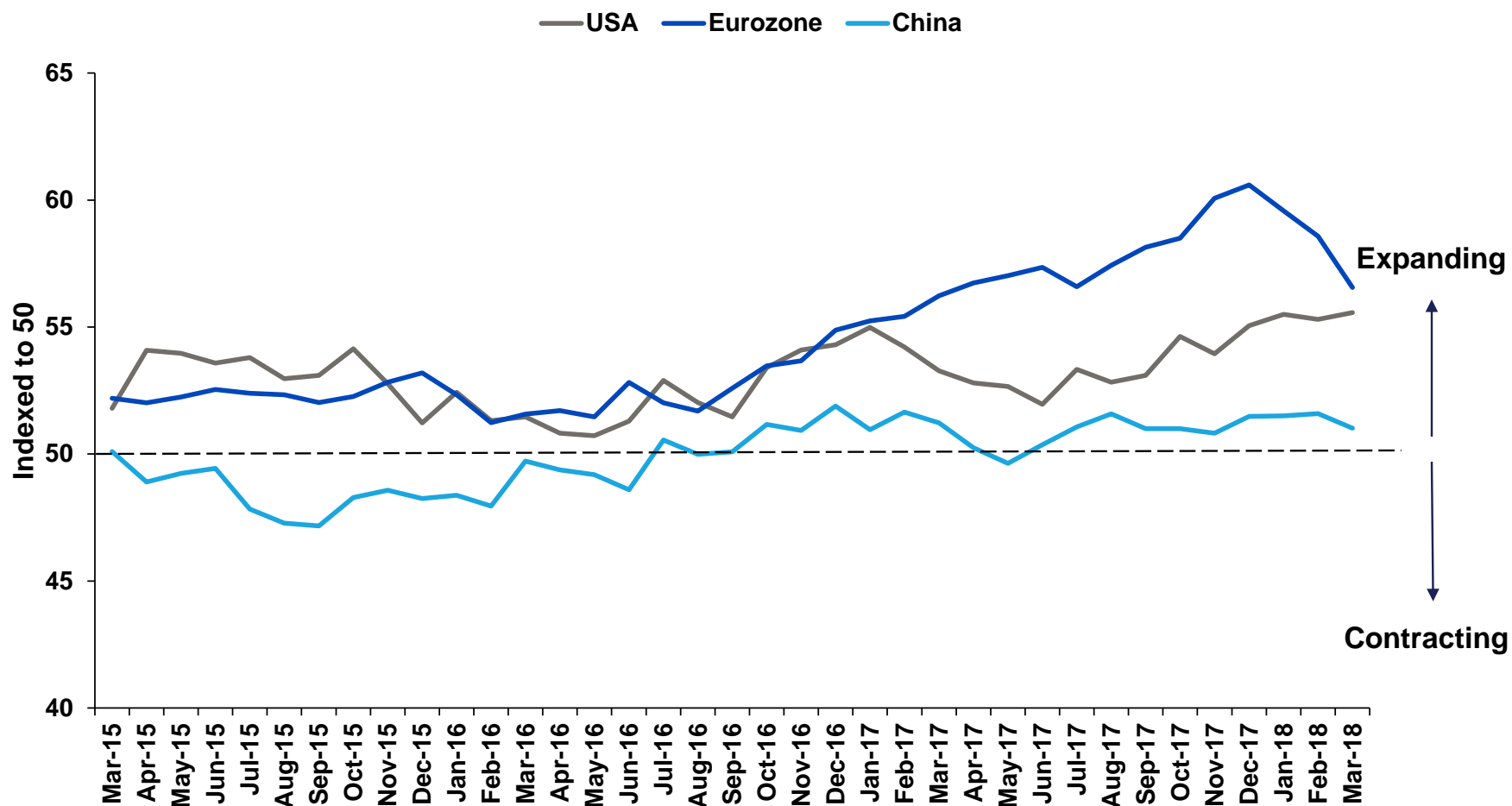
- Equity valuations rich to credit
- Loans look cheaper than bonds



## Fundamentals Continue to Look Strong

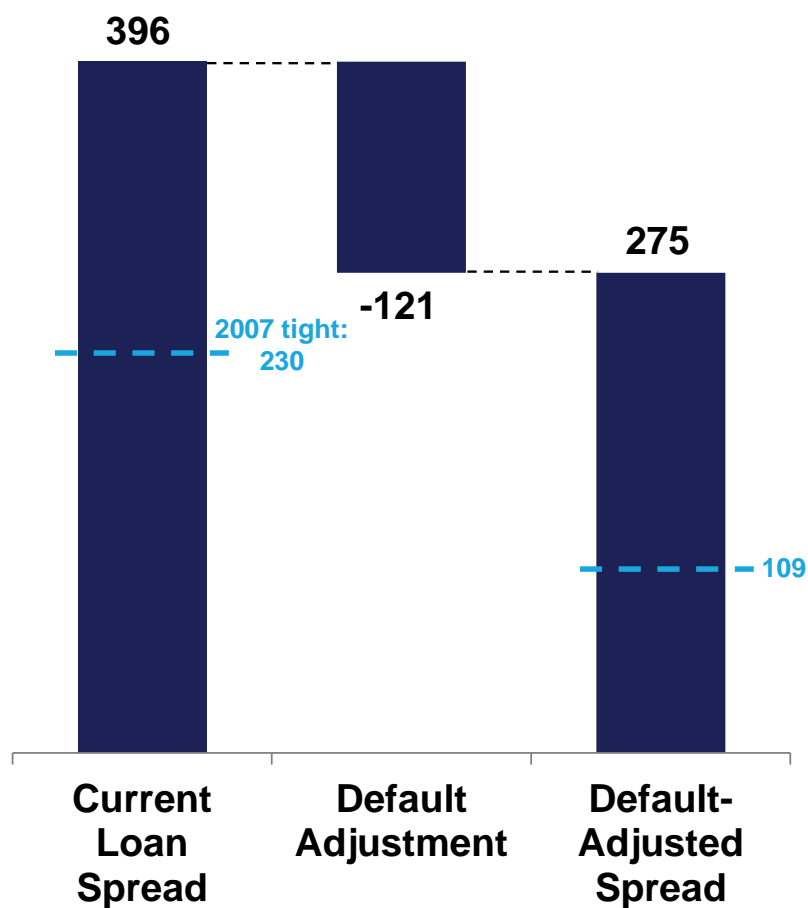
### Purchasing Managers' Index "PMI"

6.2

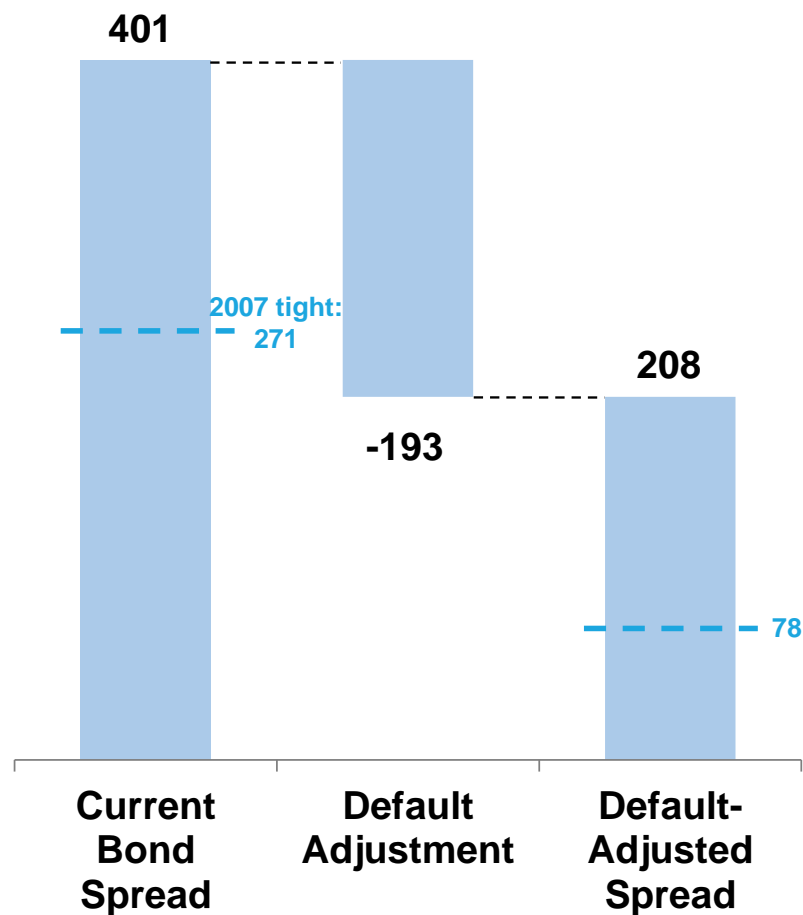


## Credit Can Provide Attractive Absolute Returns

### Default-Adjusted Loan Spreads (bps)



### Default-Adjusted HY Bond Spreads (bps)

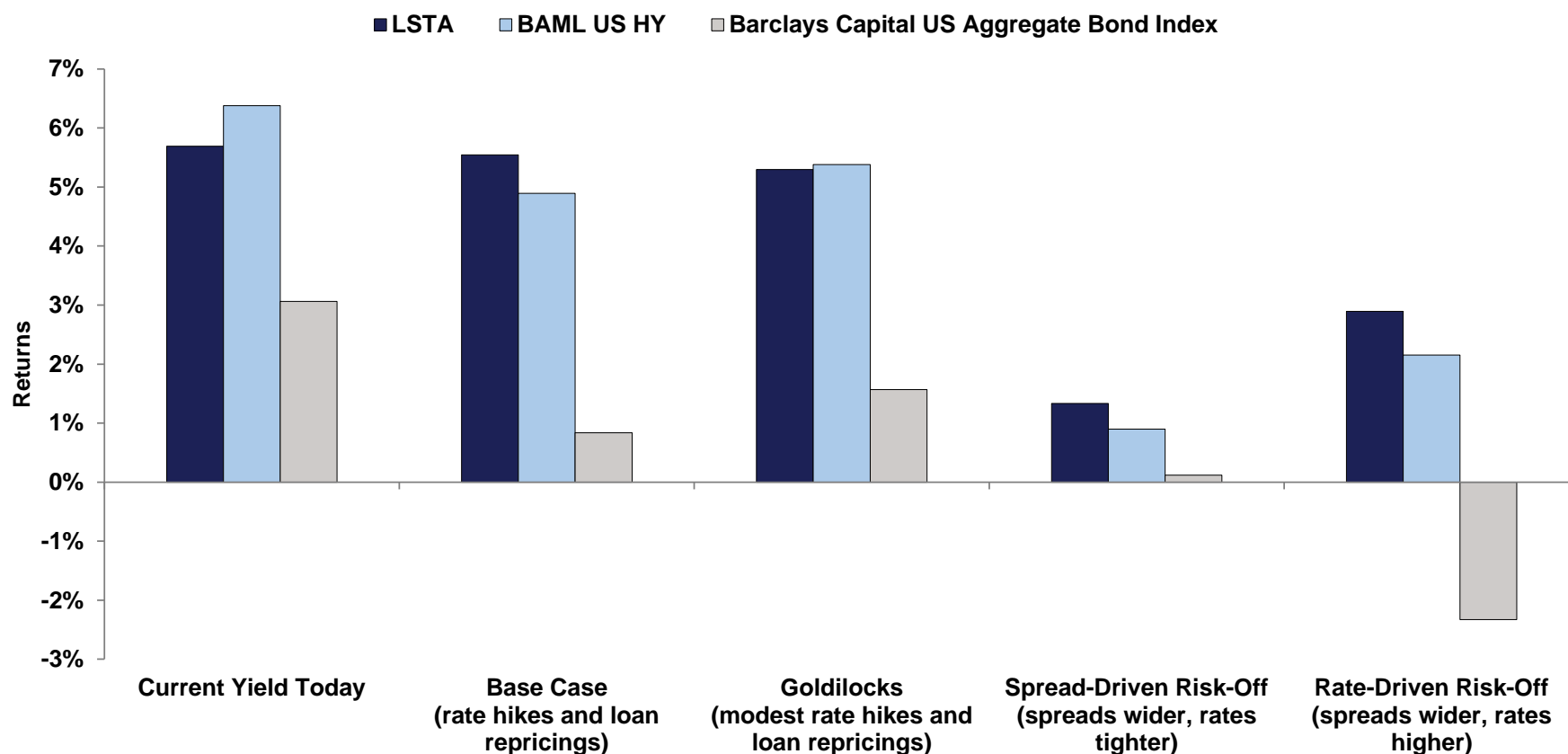


6.2

## Weighing Loan Reprice Risk Against Rising Interest Rates

As rates rise, bond prices will generally be negatively impacted by their duration while loans will experience an increase in their floating-rate coupon. However, loans also face the risk of being repriced at a lower coupon.

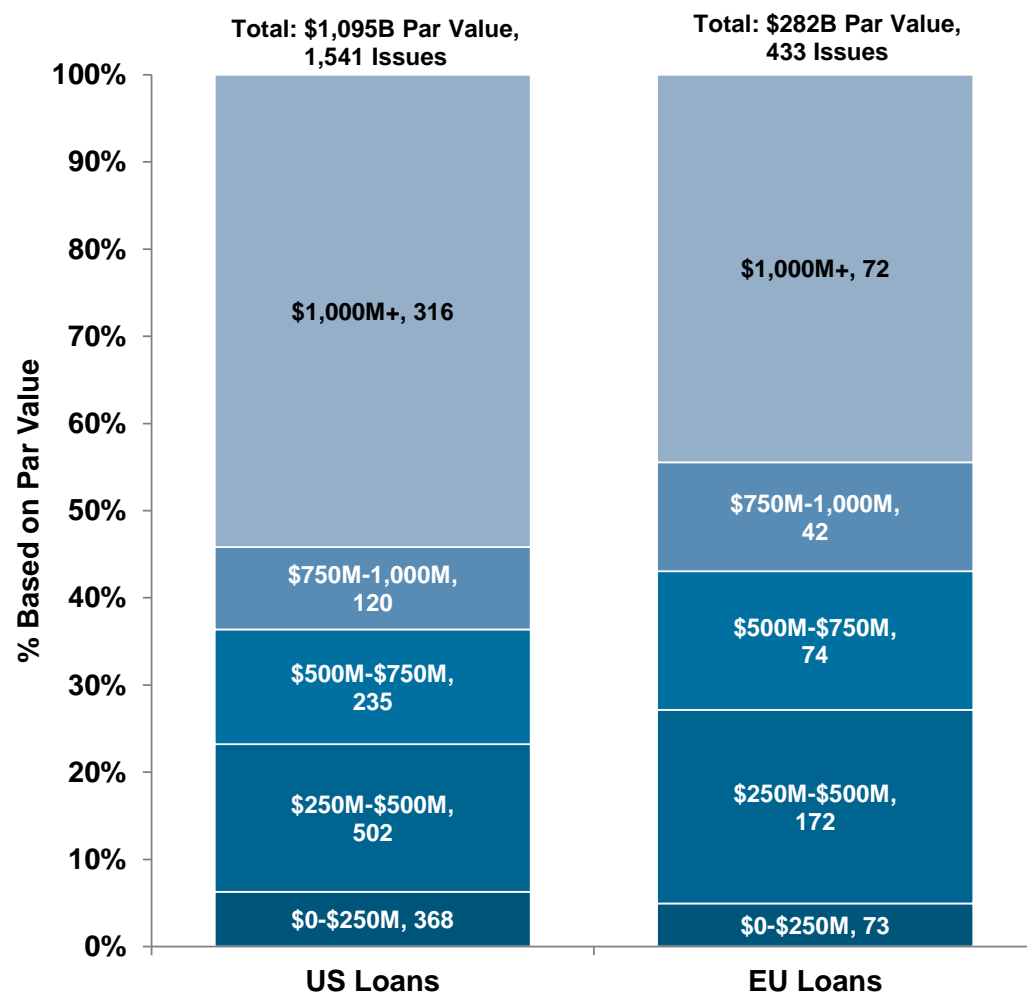
### Potential Next Twelve Month Return



6.2

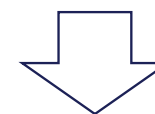
## The European Loan Market Presents Select Opportunities

Though smaller than the US market, the European loan market has over 100 liquid issuers and Euro loans currently offer a premium to USD loans.<sup>(1)</sup>



### Illustrative Term Loan Example<sup>(2)</sup>

	USD Tranche due 1/26	Euro Tranche due 1/26
Coupon	3.00	3.00
LIBOR/EURIBOR	2.41	0.00 <sup>(3)</sup>
1 Year Euro Forward	--	3.17
Total Yield (@Par)	5.41	6.17

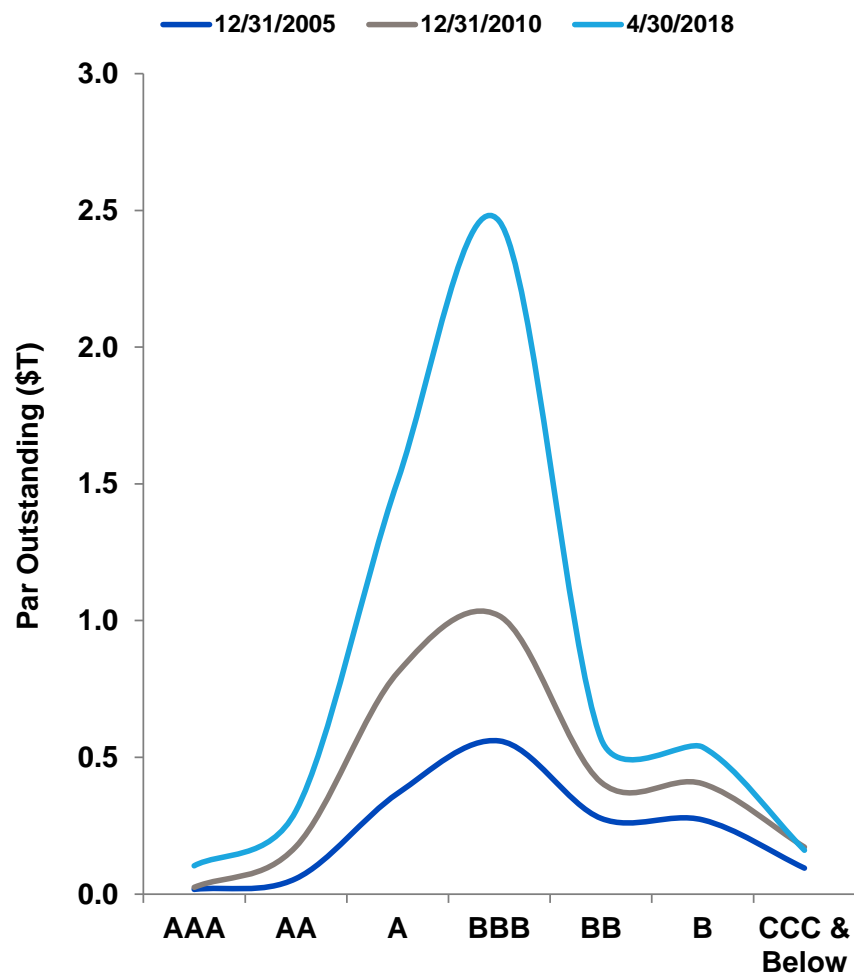


A USD investor can earn almost 70 bps of additional return without taking FX risk due to the forward market's difference from spot.

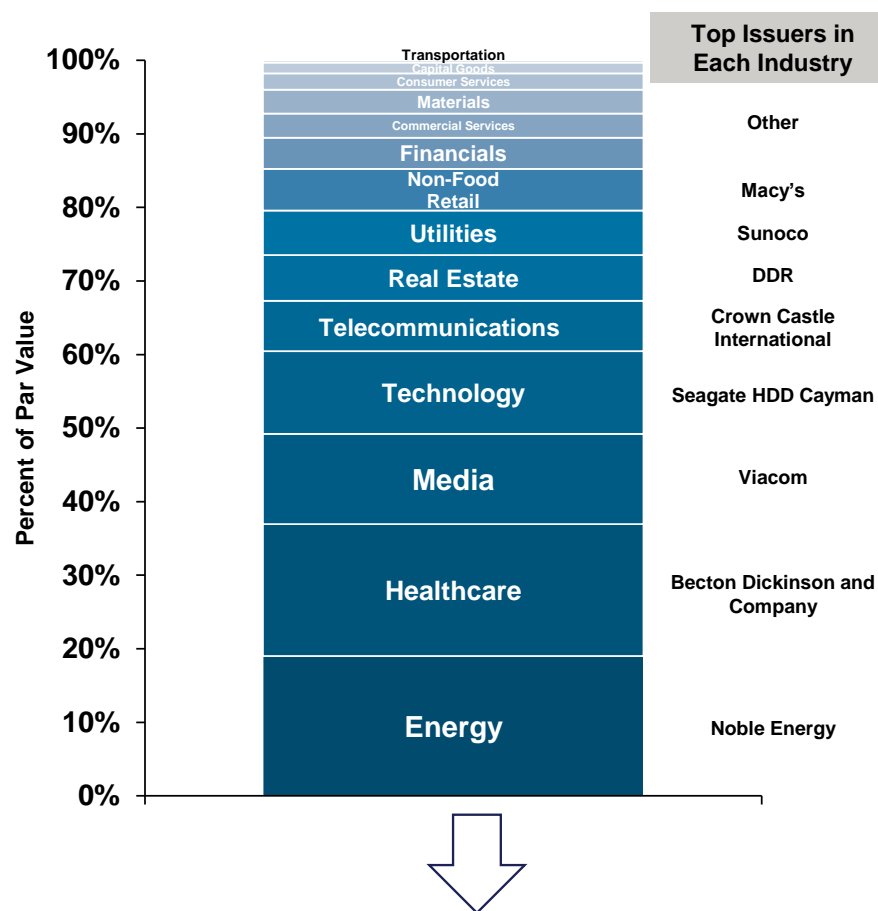
6.2

# Fallen Angels May be an Opportunity During the Next Downturn

## Growth of BBB Presents Risk and Opportunity<sup>(1)</sup>



## Fallen Angel Candidates from the BAML US IG Index on Watch Outlook<sup>(2)</sup>



**\$121B in par, equivalent to 9.7% of the BAML US HY Index**

## Liquid Credit Outlook

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- Given the flattening of the credit curve, we plan to maintain our defensive positioning across liquid credit, avoiding CCCs and second liens.
- We will continue to trim risk positions and increase the overall liquidity of the portfolio to enable us to take advantage of future volatility.
- We prefer loans over bonds given the safer risk profile and valuation levels, though we continue to watch for how repricing activity might change this relationship.
- With a large portion of the market trading at or above par value, recent purchases have favored the new issue market where issuers price deals at a discount to obtain timely execution.
- While technicals remain strong in the credit markets, fundamentals continue to show late cycle characteristics. We are avoiding deep cyclical sectors like autos and steel. We are also concerned about secular pressures in retail, utilities and media.
- European loans remain interesting given their earlier point in the economic cycle.
- We are comfortable being fully invested with a higher-quality portfolio.

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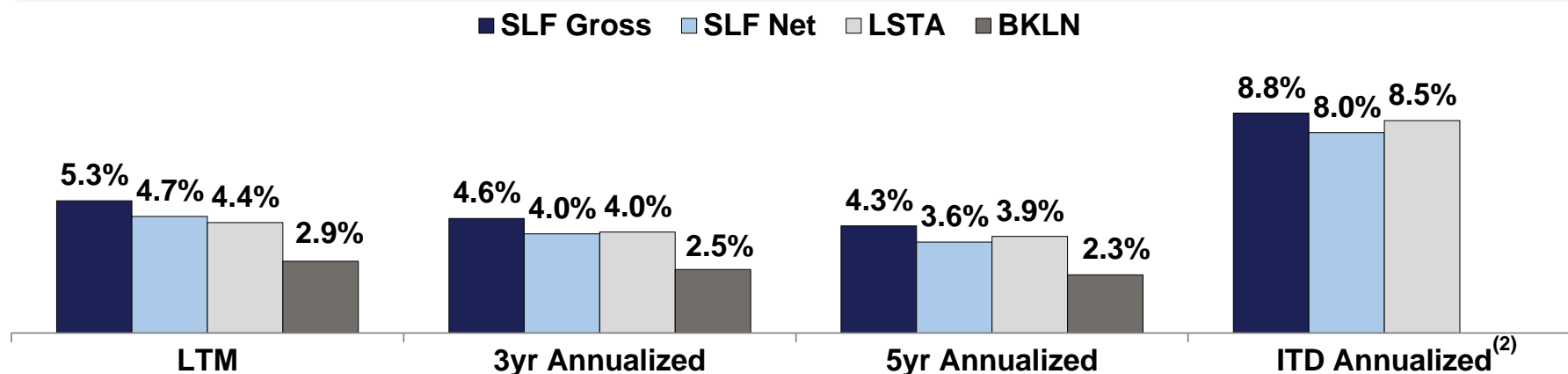
- **Firm Overview**
- **Liquid Senior Loan Strategy**
- **Market Overview**
- **Appendix**

## SLF Returns

### SLF Monthly Net Returns

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD	LSTA
<b>2018</b>	0.8%	0.2%	0.2%	0.5%									1.7%	1.9%
<b>2017</b>	0.7%	0.6%	0.1%	0.4%	0.4%	0.1%	0.7%	0.0%	0.4%	0.6%	0.4%	0.3%	4.8%	4.1%
<b>2016</b>	-0.6%	-0.5%	2.4%	1.6%	1.1%	-0.1%	1.4%	0.9%	0.8%	0.7%	0.2%	1.3%	9.6%	10.2%
<b>2015</b>	0.0%	1.4%	0.3%	0.9%	0.2%	-0.3%	0.2%	-0.6%	-0.7%	-0.3%	-1.2%	-1.1%	-1.2%	-0.7%
<b>2014</b>	0.7%	0.4%	0.4%	0.1%	0.6%	0.5%	0.1%	0.2%	-0.6%	0.1%	0.3%	-1.4%	1.1%	1.6%
<b>2013</b>	1.2%	0.2%	0.8%	0.8%	0.2%	-0.7%	1.0%	-0.1%	0.4%	0.9%	0.4%	0.4%	5.5%	5.3%
<b>2012</b>	2.2%	1.3%	0.7%	0.8%	-0.8%	0.7%	0.9%	1.1%	1.0%	0.5%	0.3%	0.7%	9.9%	9.7%
<b>2011</b>	1.8%	0.7%	0.2%	0.8%	0.2%	-0.3%	0.3%	-3.8%	-0.5%	3.0%	-0.8%	0.9%	2.3%	1.5%
<b>2010</b>	1.3%	0.0%	1.8%	1.1%	-2.0%	0.0%	1.9%	0.6%	1.5%	1.9%	0.3%	1.3%	10.0%	10.1%
<b>2009</b>			2.0% <sup>(1)</sup>	5.8%	6.8%	3.4%	4.7%	1.4%	2.8%	0.9%	-0.2%	2.1%	33.5%	39.1%

### SLF LTM, 3yr, 5yr and ITD Annualized Gross and Net Returns





# Endnotes

## Definitions

1. "Bank Loans" is defined as all USD denominated loans held in various Bain Capital Credit managed structured funds, Bain Capital Senior Loan fund, Bain Capital High Income Partnership, and Bain Capital Credit Separate Accounts.
2. "Bond Portfolios" or "Bonds" is defined as all USD denominated bonds held in Bain Capital Senior Loan fund, Bain Capital High Income Partnership, and Bain Capital Credit Separate Accounts.
3. "CLOs" is defined as all collateralized loan obligations issued or currently managed by Bain Capital Credit.
4. "High Income Strategy" is defined as the Bain Capital High Income Partnership and various Bain Capital Credit separate accounts where the invested assets are predominately bank loans and corporate bonds with strategic allocations to structured products, RMBS and credit hedges.
5. "RMBS"/"Mortgages" is defined as all investments in residential mortgage backed securities.
6. "Liquid Senior Loan Strategy" is defined as the Bain Capital Senior Loan Fund and various Bain Capital Credit separate accounts where the invested assets are predominately bank loans and corporate bonds.

## Performance Disclosures

1. The performance information contained in this presentation is intended solely to provide investors with information about funds and accounts advised by Bain Capital Credit. There can be no assurance that the results achieved by Bain Capital Credit will be achieved by other investments, including other investments made by Bain Capital Credit. **Past performance should not be relied upon as an indication of future results.** Actual results may vary.
2. The information in this presentation has been prepared solely to assist interested parties in making their own evaluation of the strategy and does not purport to be complete or to contain all of the information that a prospective client or investor may consider material, or desirable, in making a decision to invest. The information contained herein is not a substitute for the recipient's independent evaluation and analysis.
3. Investors should not assume that the performance of any specific investment or investment strategy will be profitable or similar to past performance levels. An investment or investment strategy is impacted by numerous factors, including market and economic conditions, which are out of the control of Bain Capital Credit, which may result in loss to investors. Investment in a fund may fluctuate and the value may decline as well as appreciate and an investment should only be made by those persons who could sustain a total loss on their investment.
4. Some of the performance information contained in this document does NOT reflect the performance of any specific Bain Capital Credit fund, unless specifically noted. Performance is being shown to demonstrate Bain Capital Credit's relevant experience as an investment manager of the relevant assets. The returns of any Bain Capital Credit fund may be materially different from the returns shown. As such, investors should not construe the information contained in this presentation as an indication of potential performance of any Bain Capital Credit fund and should not rely on past performance when making an investment decision in any Bain Capital Credit fund. Full Bain Capital Credit fund returns are available upon request.
5. Investments shown are not a complete list of Bain Capital Credit fund investments. A full list of Bain Capital Credit fund investments and performance is available upon request.

## Discussion of Returns

1. Gross returns shown do not reflect origination fees, advisory fees, performance allocations, taxes, transaction costs incurred in connection with the disposition of investments and other expenses to be borne by investors, which will have the effect of reducing returns and in the aggregate, are expected to be substantial. The compounding effect of fees on a portfolio reduce performance returns of an account. For example, an account paying no fees that begins with \$1,000,000 and experiencing a consistent 8% return for 10 years would grow to approximately \$2,169,000. An account charged a 1% fee and experiencing the same rate of return would grow to \$1,998,000. Investment advisory fees including management fee, carried interest and other expenses are described in Part 2 of Bain Capital Credit's Form ADV, available upon request. Net returns may not be provided because the fees and expenses associated with individual investments are applied in aggregate at the vehicle level of the various Bain Capital Credit funds, which made these investments.
2. Net returns for commingled funds represent the returns to fee-paying non-affiliated investors after deduction of management fees, performance reallocation and partnership expenses. Performance information is unaudited and subject to change. These performance results may not have been compiled, reviewed, or audited by an independent party.
3. Fund level returns shown include returns generated by reinvested proceeds. If such returns were not included, the returns shown herein may have been lower. Composite level returns could include returns generated by reinvested proceeds. Pro forma returns do not include returns generated by reinvested proceeds.

## Performance Calculations Methodologies

1. Multiple of Money (MoM) is equal to the total value for each investment divided by the investment amount for such investment.
2. Annualized returns are computed based on the change in value during the period of a theoretical investment made at the beginning of the period. The change in value of a theoretical investment is measured by comparing the aggregate ending value of Limited Partners with the aggregate beginning value adjusted for cash flows related to capital contributions or withdrawals during the period. Returns are geometrically linked on a monthly basis.

## Assets Under Management Calculations

1. In this calculation, certain investment vehicles are included at either their gross asset exposure or their historical notional. These investment vehicles are included in the GIPS® AUM calculation at their fair value. Firm AUM includes AUM of Bain Capital Credit, LP, its subsidiaries and its credit vehicles managed by its AIFM affiliate.

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# Endnotes

## Indices Information

1. The Bank of America Merrill Lynch BBB & Lower Sovereign USD External Debt Index (EM Bonds) tracks the performance of US dollar denominated emerging market and cross-over sovereign debt publicly issued in the eurobond or US domestic market. Qualifying countries must have a BBB1 or lower foreign currency long-term sovereign debt rating (based on an average of Moody's, S&P and Fitch). Countries that are not rated, or that are rated "D" or "SD" by one or several rating agencies qualify for inclusion in the index but individual non-performing securities are removed.
2. The Bank of America Merrill Lynch U.S. All Convertibles Index (Converts) is a rule driven index, which includes all bonds and preferred stocks of U.S.-registered companies, which have \$50 million or more in aggregate market value and are convertibles in U.S. dollar-denominated common stocks, ADRs or cash equivalents.
3. The Bank of America Merrill Lynch US Corporate Index (HG Bonds or BAML US IG) tracks the performance of US dollar denominated investment grade corporate debt publicly issued in the US domestic market. Qualifying securities must have an investment grade rating (based on an average of Moody's, S&P and Fitch), at least 18 months to final maturity at the time of issuance, at least one year remaining term to final maturity as of the rebalancing date, a fixed coupon schedule and a minimum amount outstanding of \$250 million.
4. The Bank of America Merrill Lynch US Mortgage Backed Securities Index (Agency MBS) tracks the performance of US dollar denominated fixed rate and hybrid residential mortgage pass-through securities publicly issued by US agencies in the US domestic market.
5. The Bank of America Merrill Lynch US Treasury & Agency Index (Tsy/Agency Debt) tracks the performance of US dollar denominated US Treasury and non-subordinated US agency debt issued in the US domestic market.
6. The Bank of America Merrill Lynch U.S. High Yield Master II Index (BAML US HY) tracks the performance of below investment grade U.S. dollar-denominated corporate bonds publicly issued in the US domestic market.
7. The Barclays U.S. Aggregate Bond Index (Investment Grade Corporates) is a broad-based, market-value-weighted benchmark that measures the performance of the U.S. dollar-denominated, investment-grade, fixed-rate, taxable bond market. Sectors in the index include Treasuries, government-related and corporate securities, mortgage-backed securities (MBS) – agency fixed-rate and hybrid ARM pass-throughs -asset-backed securities (ABS), and commercial mortgage-backed securities (CMBS).
8. The BKLN shows the PowerShares Senior Loan ETF.
9. The Credit Suisse High Yield Index is designed to mirror the investable universe of the \$US-denominated high yield debt market. The highest Moody's/S&P ratings are Baa1/BB+ or Ba1/BBB+. Issues must be \$US-denominated straight corporate debt, including cashpay, zero-coupon, stepped-rate and pay-in-kind (PIK) bonds. Floating-rate and convertible bonds and preferred stock are not included.
10. The Credit Suisse Western European High Yield Index is designed to mirror the investible universe of the Western European high yield debt market, with issues denominated in \$US, Euro and British Pounds.
11. The Credit Suisse Leveraged Loan Index tracks the investable market of the U.S. dollar denominated leveraged loan market. It consists of issues rated "5B" or lower, meaning that the highest rated issues included in this index are Moody's/S&P ratings of Baa1/BB+ or Ba1/BBB+. All loans are funded term loans with a tenor of at least one year and are made by issuers domiciled in developed countries.
12. The Credit Suisse Western European Leveraged Loan Index (CS Western Euro LLI) is a weekly total return index that uses mark-to-market pricing to calculate market value change. The CS Western Euro LLI represents the investable universe of non-\$US-denominated Western European loan market, with fully funded term loans denominated in Western European currencies, a minimum tenor of at least one year and a Moody's/S&P rating of Baa1/BB+, Ba1/BBB+ or lower; if unrated, the minimum initial spread must be 125 bps over LIBOR (or equivalent).
13. The High Yield Corporate Bond ETF (HYG) is an exchange-traded fund incorporated in the USA. The ETF seeks to track the investment results of an index composed of U.S. dollar-denominated, high yield corporate bonds.
14. The J.P. Morgan European High Yield Index (JPM Euro HY) invests primarily in European and non-European below investment grade bonds denominated in European currencies.
15. The J.P. Morgan High Yield Index (JPM HY) is an unmanaged index of fixed income securities of domestic and foreign issuers with a maximum credit rating of BB+ or Ba1.
16. The J.P. Morgan Leveraged Loan Index (JPM LL) is designed to mirror the investable universe of U.S. dollar institutional leveraged loans, including U.S. and international borrowers. The J.P. Morgan U.S. Liquid Index is a market-weighted index that measures the performance of the most liquid issues in the investment grade, dollar-denominated corporate bond market.
17. The monthly rate shown for the 1 Month LIBOR+300 benchmark is based on an annualized rate of the current monthly LIBOR plus 3%. This benchmark will change based on any adjustments to LIBOR. 1 Month LIBOR +300 is shown since it is the performance hurdle for the Sankaty High Income Partnership, L.P. Refer to fund documents for full details of the performance hurdle.
18. The S&P 500 Index (S&P 500) is a market capitalization-weighted index of common stocks of large capitalization companies. Companies in the S&P 500 Index have market capitalizations of at least \$5 billion.
19. The S&P European Leveraged Loan Index (ELLI) is a multi-currency index that covers the European leveraged loan market back to 2003 and currently calculates on a weekly basis.
20. The S&P/LSTA Leveraged Loan Index (LSTA) is a daily total return index that uses mark-to-market pricing to calculate market value change. The LSTA tracks, on a real-time basis, the current outstanding balance and spread over LIBOR for fully funded term loans. The facilities included in the LSTA represent a broad cross section of leveraged loans syndicated in the United States, including dollar-denominated loans to overseas issuers.
21. The S&P/LSTA U.S. Leveraged Loan 100 (LL100) is a market value-weighted index designed to measure the performance of the U.S. leveraged loan market. The index consists of 100 loan facilities drawn from a larger benchmark – the S&P/LSTA (Loan Syndications and Trading Association) Leveraged Loan Index (LLI).
22. The S&P MidCap 400 provides investors with a benchmark for mid-sized companies. The index, which is distinct from the large-cap S&P 500®, measures the performance of mid-sized companies, reflecting the distinctive risk and return characteristics of this market segment.
23. The S&P SmallCap 600 measures the small-cap segment of the U.S. equity market. The index is designed to track companies that meet specific inclusion criteria to ensure that they are liquid and financially viable.

## Endnotes

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### Indices Information Continued

24. The 50/50 LSTA/BAML US HY Blend Index is weighted as follows: 50% in the LSTA Index and 50% in the Bank of America Merrill Lynch US High Yield Master II Index.
25. These indices may not necessarily be indicative of the investment strategies for the investment vehicles advised by Bain Capital Credit. Assets and securities contained within indices are different than the assets and securities contained in Bain Capital Credit's investment vehicles and will therefore have different risk and reward profiles. Prospective investors should note that there are significant differences between the investment vehicles advised by Bain Capital Credit and the investments included in the various indices described herein. The investment vehicles advised by Bain Capital Credit will not necessarily invest in any of the investments that are included in an index, and may invest in types of investments not included in any index. The investment vehicles advised by Bain Capital Credit may have higher levels of risk, including through the limited use of leverage and concentrated positions, and volatility.
26. The returns of the indices are provided solely as an illustration of the market and economic conditions generally prevailing during the periods shown. Indices are not investments, are not professionally managed and do not reflect deductions for fees or expenses.

6.2

## Endnotes: GIPS® Presentation

### Bain Capital Senior Loan Composite excluding CLOs

November 1, 2008 through December 31, 2016

Year	Gross-of-Fees Return (%)	Net-of-Fees Return (%)	Benchmark Return† (%)	Composite 3-Yr St Dev (%)	Benchmark 3-Yr St Dev (%)	Number of Portfolios	Internal Dispersion (%)	Total Composite Assets (USD millions)	Composite Percentage of Firm Assets (%)	Total Firm Assets (USD millions)
2008*	-5.09%	-5.18%	-11.20%	N/A	N/A	1	N/A	\$484.5	3.51%	\$13,803.3
2009	43.79%	43.05%	51.62%	N/A	N/A	2	N/A	\$738.6	4.07%	\$18,168.4
2010	13.89%	13.32%	10.13%	N/A	N/A	3	N/A	\$892.8	5.15%	\$17,332.0
2011	4.68%	4.15%	1.52%	7.39%	8.43%	4	N/A	\$1,210.2	7.85%	\$15,411.1
2012	12.28%	11.68%	9.66%	4.88%	4.42%	4	N/A	\$1,384.9	7.38%	\$18,764.1
2013	6.95%	6.40%	5.29%	4.17%	3.77%	7	N/A	\$1,722.0	7.93%	\$21,714.3
2014	1.51%	1.02%	1.60%	2.68%	2.10%	13	N/A	\$3,170.2	12.79%	\$24,789.4
2015	0.04%	-0.46%	-0.69%	2.34%	2.14%	13	0.79%	\$4,044.1	14.04%	\$28,799.9
2016	9.79%	9.29%	10.16%	2.71%	2.89%	14	0.82%	\$4,630.8	14.50%	\$31,945.4

\*Represents performance from November 1, 2008 – December 31, 2008.

Bain Capital Credit, LP (formerly Sankaty Advisors, LP) claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Bain Capital Credit, LP has been independently verified for the periods January 1, 2001 – December 31, 2016. 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. The Bain Capital Senior Loan Composite excluding CLOs (formerly Sankaty Senior Loan Composite excluding CLOs) has been examined for the periods November 1, 2008 – December 31, 2016. The verification and performance examination reports are available upon request.

#### Firm and Composite Information

Bain Capital Credit, LP, the credit affiliate of Bain Capital, LP, is an investment advisor registered with the Securities and Exchange Commission under the Investment Advisers Act of 1940. Bain Capital Credit, LP invests in a wide variety of securities and investments, including leveraged loans, high-yield bonds, distressed/stressed debt, mezzanine debt, structured products and equities.

The Bain Capital Senior Loan Composite excluding CLOs invests in assets that are predominately bank loans and corporate bonds.

The Bain Capital Senior Loan Composite excluding CLOs was created on February 1, 2012. As of January 7, 2014, the Bain Capital Credit, LP Unlevered Loan Composite was renamed the Bain Capital Senior Loan Composite excluding CLOs. A complete list and description of firm composites is available upon request.

#### Benchmark

† The benchmark presented is the LSTA Leveraged Loan Index. Benchmark returns are not covered by the report of independent verifiers.

#### Performance Calculations

Valuations and returns are computed and stated in U.S. dollars. Results reflect the reinvestment of dividends and other earnings.

Gross-of-fees returns are presented before management fees, operating expenses, and carried interest, but after all trading expenses and withholding taxes. Net-of-fees returns are presented before operating expenses but after all actual custodial fees, management fees, all transaction expenses, and carried interest. Prior to January 7, 2014, Net-of-fees returns were presented after management fees, operating expenses, all trading expenses, and withholding taxes.

## Endnotes: GIPS® Presentation

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### **Bain Capital Senior Loan Composite excluding CLOs**

November 1, 2008 through December 31, 2016

A representative fee for the Bain Capital Senior Loan Composite excluding CLOs is 0.50% per annum though the actual management fees can vary by account structure and size. Additional details are available upon request.

Internal dispersion is calculated using the asset-weighted standard deviation of all accounts included in the composite for the entire year; it is not presented for periods less than one year or when there were five or fewer portfolios in the composite for the entire year.

The three-year annualized standard deviation measures the variability of the composite and the benchmark returns over the preceding 36-month period.

The composite uses forward currency contracts to attempt to hedge foreign exchange risk. Additional information regarding policies for valuing portfolios, calculating performance, and preparing compliant presentations are available upon request.

**Past performance does not guarantee future results.**

6.2



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## AGENDA ITEM SUMMARY

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

Michael Pratico, Senior Vice President with CAPTRUST Financial Advisors, will provide a quarterly update regarding the Defined Contribution Plan at the June 14, 2018 Investment Committee meeting.

UNIVERSITY OF MAINE SYSTEM  
1ST QUARTER, 2018

**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 3.31.18 | Q1 18

University of Maine System

### University of Maine System Defined Contribution Plans

1st Quarter, 2018 Quarterly Review

prepared by:

**Michael S. Pratico**

Senior Vice President | Financial Advisor

**Barron V. Schmitt**

Senior Vice President | Financial Advisor

Section 1

**RETIREMENT INDUSTRY UPDATES**

Section 2

**MARKET COMMENTARY AND REVIEW**

Section 3

**PLAN INVESTMENT REVIEW**

Section 4

**FUND FACT SHEETS**

Appendix

7.1



## SECTION 1: RETIREMENT INDUSTRY UPDATES

Period Ending 3.31.18 | Q1 18

University of Maine System

### SECTION 1: RETIREMENT INDUSTRY UPDATES

Industry Updates.....

7.1

## IMPACT OF RISING RATES ON DEFINED CONTRIBUTION INVESTMENTS

The Federal Reserve has raised interest rates six times since the end of 2015 and is likely to raise them further in 2018 due to a strengthening U.S. economy. Higher interest rates can benefit retirement savers because they offer higher yields on savings and higher income in retirement. But rising interest rates may not be a positive for all investors. Below we discuss considerations for some common retirement plan investments.

7.1



### FIXED INCOME

#### Active core/core-plus managers:

- Have the ability to be tactical
- May avoid certain sectors or alter duration relative to a benchmark
- Core-plus managers typically have exposure to more diverse sectors than core managers

#### Passive core managers:

- May have more interest rate sensitivity than active managers
- Are usually concentrated in high-quality sectors
- May be unable to alter duration relative to a benchmark



### CAPITAL PRESERVATION

#### Money market funds:

- Type of money market matters
- Clawback fee provisions may affect investor returns

#### Stable value funds:

- Underlying bond portfolios vary greatly by manager
- Durations can range from 1.5 to 6 years

#### General account guaranteed funds:

- Contract terms vary by client
- Rate methodology and liquidity provisions can have a big impact



### TARGET DATE FUNDS

#### Active and passive series:

- Often the single most used investment option in a defined contribution plan
- Shape and slope of the glidepath are the most impactful variables
- Ability to be tactical with the glidepath varies by manager
- Composition and duration of the fixed income portion of portfolios vary among target date series, even for passive products
- Exposure to uncorrelated asset classes may serve to offset losses within the fixed income portfolio

The investments in your retirement plan will be impacted by rising interest rates, but the degree depends on many factors. Plan sponsors should understand what they own and how plan investments may be affected and be prepared to answer participant questions.

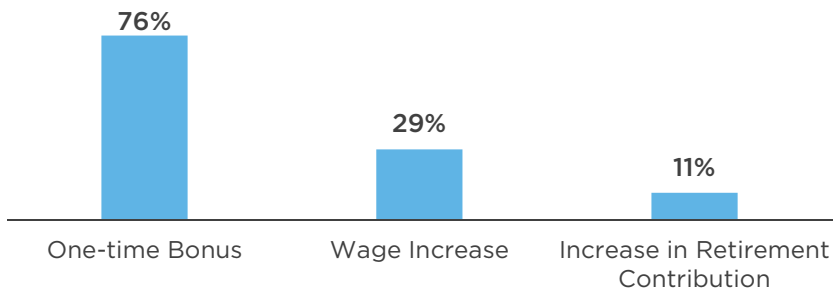
## RETIREMENT PLAN MARKETPLACE—INDUSTRY UPDATE

Period Ending 3.31.18 | Q1 18

## WHEN TAX REFORM MEETS TIGHT LABOR MARKETS

According to U.S. taxpayer advocacy group Americans for Tax Reform, more than 400 companies have reported a change in their approach to employee wages and benefits as a result of tax reform, including one or more of the following: one-time bonuses, wage increases, and increased contributions into retirement programs.

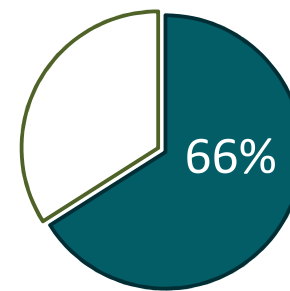
## HOW ARE COMPANIES SHARING THEIR TAX WINDFALLS?



## NOTABLE COMPANIES INCREASING PLAN CONTRIBUTIONS

Aflac	MasterCard
Anthem	Nationwide
AutoNation	Penske Auto
Cigna	Starbucks
Honeywell	SunTrust Bank
Hostess	Visa

Source: Americans for Tax Reform, [www.atr.org](http://www.atr.org)



Of the two-thirds of employers implementing or considering a change to benefits, the most common changes being considered are:

- Expanding personal financial planning (34%); and
- Increasing 401(k) contributions (26%).

Source: *PLANSponsor Magazine*, Willis Towers Watson

## THINGS TO CONSIDER

- It's important for employers to periodically evaluate their retirement programs' competitiveness. This need is heightened by companies touting how they are sharing the rewards of tax reform with employees.
- Although passthrough entities—such as S-corporations, limited liability corporations, and sole proprietorships—did not receive the same tax breaks as C-corporations, they must compete for talent and cannot ignore current wage and benefit trends.

7.1

## FIDUCIARY UPDATE (*UPDATED AS OF MAY 7, 2018*)

On March 15, the 5th Circuit Court of Appeals, which covers Texas, Louisiana, and Mississippi, vacated the Fiduciary Rule, finding that the Department of Labor (DOL) overreached its authority. In doing so, the Fiduciary Rule, in its current form, has been vacated in its entirety, with no formal challenge by the DOL.

### WHAT LED THE COURT TO THIS DECISION?

- The court found the DOL's "fiduciary" definition too broad.
- The rule removed the line between fiduciaries and brokers or agents acting in a sales role, a distinction recognized by ERISA.
- The DOL violated a Supreme Court precedent that only Congress can create rights of action.
- Imposing the Best Interest Contract requirement for individual retirement accounts was an abuse of authority.

### WHERE ARE WE NOW?

- The deadline for the DOL to challenge the ruling directly to the 5<sup>th</sup> Circuit Court of Appeals passed, so the decision to vacate stands.
- As a result, the Fiduciary Rule in its totality will be completely vacated, and it will be as if the rule never existed.
- Of note, technically, the DOL still has a window to appeal to the U.S. Supreme Court, but most industry experts do not expect the Department to take this step.

### THE FIDUCIARY RULE IS VACATED - NOW WHAT?

- The definition of investment advice will revert back to what it was from 1975 through June 2017, and the rule's prohibited transaction exemptions will disappear, most notably the Best Interest Contract (BIC) Exemption.
- The Securities Exchange Commission (SEC) proposed its own best interest standard on April 18 and is in the middle of a 90-day comment period. Several states, have indicated interest in their own fiduciary rules.
- On May 7, the DOL issued Field Assistance Bulletin 2018-02 saying that the "Department will not pursue prohibited transactions claims against investment advice fiduciaries who are working diligently and in good faith to comply with the impartial conduct standards for transactions that would have been exempted..."

### WHAT SHOULD PLAN SPONSORS DO?

- Understand what changes will occur with your providers' services once the rule is vacated.
- Understand what, if any, decisions you need to make regarding your providers' services, including any agreement amendments.
- Evaluate any potential disruption to your participants resulting from service changes.
- Document your information gathering and analysis and any decisions made.
- Monitor developments from other regulators like the SEC and legislative entities, including Congress and state legislatures, for guidance, rules, or laws related to new fiduciary standards.

7.1

## SECTION 2: MARKET COMMENTARY AND REVIEW

Period Ending 3.31.18 | Q1 18

University of Maine System

### SECTION 2: MARKET COMMENTARY AND REVIEW

Market Commentary.....
Market Review.....
Asset Class Returns.....
Index Performance.....

7.1

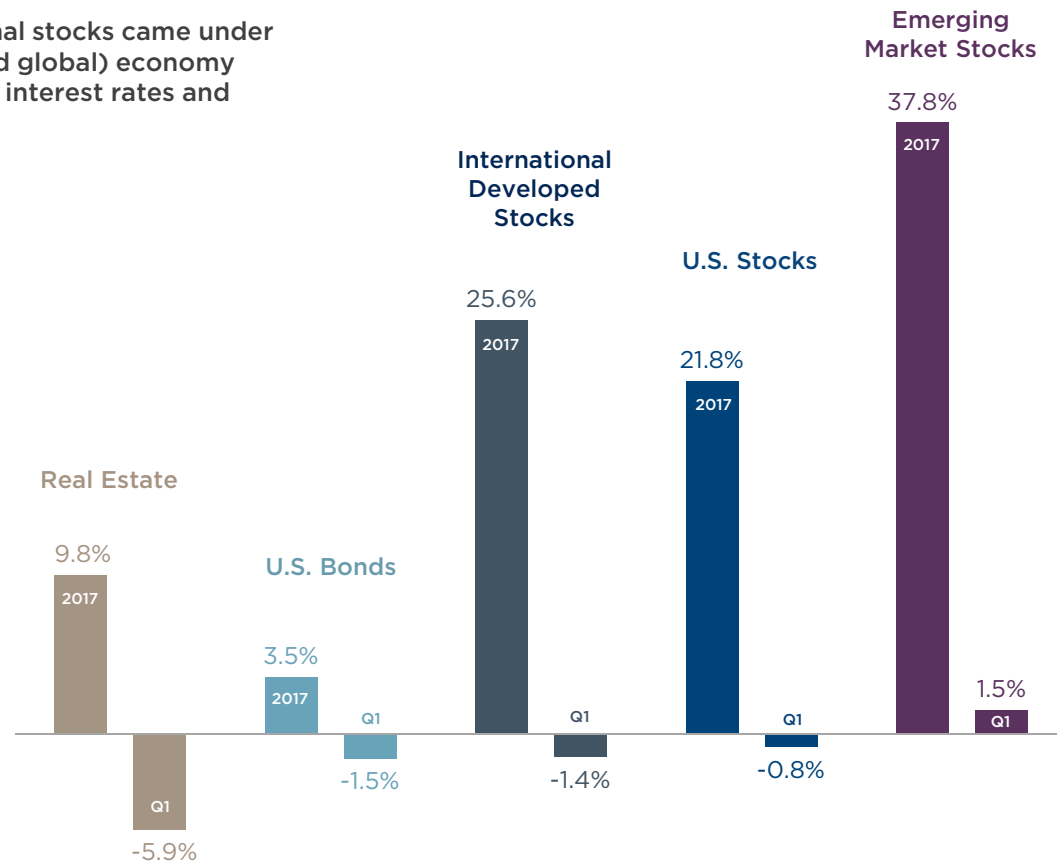
## MARKET COMMENTARY

Period Ending 3.31.18 | Q1 18

## VOLATILITY REASSERTS ITSELF

After a strong start to the year, U.S. and international stocks came under pressure in February and March. While the U.S. (and global) economy seems to be on solid ground, concerns about rising interest rates and escalating trade tensions have roiled markets.

- U.S. stocks continued their 2017 rally into January, but the budget debate and trade tensions between the U.S. and China created volatility later in the quarter. They closed the quarter down slightly.
- International developed stocks followed a similar pattern and are also down slightly for the year.
- Emerging market stocks benefited from a weaker U.S. dollar and remain in positive territory.
- Bonds fell in January and February but rose modestly in March when investors sought shelter from market volatility. They fared better than stocks during the recent selloff.
- Following sharp declines in January and February, public real estate rebounded in March as lower interest rates provided a tailwind.



Asset class returns are represented by the following indexes: S&P 500 Index (U.S. large-cap stocks), MSCI EAFE Index (international 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).

7.1

## MARKET REVIEW

Period Ending 3.31.18 | Q1 18

## DIGGING DEEPER – STOCKS AND BONDS

## Equities

	QTD 2018	YTD 2018	Last 12 Months
U.S. Stocks	-0.8%	-0.8%	11.8%
- Best Sector: Technology	3.5%	3.5%	29.7%
- Worst Sector: Telecom	-7.5%	-7.5%	-2.7%
International Stocks	-1.4%	-1.4%	11.7%
Emerging Market Stocks	1.5%	1.5%	22.0%

## Fixed Income

	3.31.18	12.31.17	3.31.17
1-Year U.S. Treasury Yield	2.09%	1.76%	1.03%
10-Year U.S. Treasury Yield	2.74%	2.40%	2.40%
	QTD 2018	YTD 2018	Last 12 Months
10-Year U.S. Treasury Total Return	-2.25%	-2.25%	-0.74%

7.1

## Equities – Relative Performance by Market Capitalization and Style

QTD 2018				YTD 2018				2017			
	Value	Blend	Growth		Value	Blend	Growth		Value	Blend	Growth
Large	-2.8%	-0.8%	1.4%	Large	-2.8%	-0.8%	1.4%	Large	13.7%	21.8%	30.2%
Mid	-2.5%	-0.5%	2.2%	Mid	-2.5%	-0.5%	2.2%	Mid	13.3%	18.5%	25.3%
Small	-2.6%	-0.1%	2.3%	Small	-2.6%	-0.1%	2.3%	Small	7.8%	14.6%	22.2%

Asset class returns are represented by the following indexes: S&P 500 Index (U.S. large-cap 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 and JP Morgan.

## MARKET COMMENTARY

Period Ending 3.31.18 | Q1 18

## ECONOMIC OUTLOOK

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

## TAILWINDS

**Tax Cut Boosts Pay and Consumer Confidence**

- Pay increases for many and federal tax withholding rates have been lowered.
- Early surveys show an increase in after-tax take-home pay for many.
- The University of Michigan's Index of Consumer Sentiment is at its highest level in more than 10 years.

**Blue Collar Bounce**

- Manufacturing and construction job growth is accelerating.
- Home Depot donated \$50 million to train 20,000 new construction workers.
- 425 firms have offered \$9.6 billion in bonuses or increased wages or other benefits to 3.7 million workers.

**Business Confidence Bodes Well**

- The National Federation of Independent Business Optimism Index hit a 10-year high, returning to its 2005 peak.
- The Federal Reserve of Philadelphia's survey of future capital equipment spending is at the highest level since 1984.

## HEADWINDS

**Midterm Maelstrom**

- Midterm election years typically experience more volatile markets until the fall—setting up a nice rally the following year.
- Midterm elections are about turnout, and turnout is driven by emotion. The Democrats have it at present.
- If the election were held today, the House and the Senate would flip from Republican to Democrat control.

**Trump Trade Tariffs—Politics Trump Stock Prices**

- Steel and aluminum tariffs announced in late February were substantially revised and diluted afterwards.
- Intellectual property tariffs announced in late March could be more negotiating tactics than final decisions.

**Privacy Concerns for Tech Companies**

- Increasing public distrust of Facebook and other tech companies may trigger increased government regulation that could depress tech stock prices.

**Rising Gas Prices**

- Gas prices today are 30 cents higher than last year—now \$2.60/gallon.
- At \$3.00/gallon, the increase would consume the extra take-home pay for many workers earning less than \$40,000.



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Overall, the global economic backdrop continues to strengthen. At current valuations, international stocks are more attractively priced than U.S. stocks.

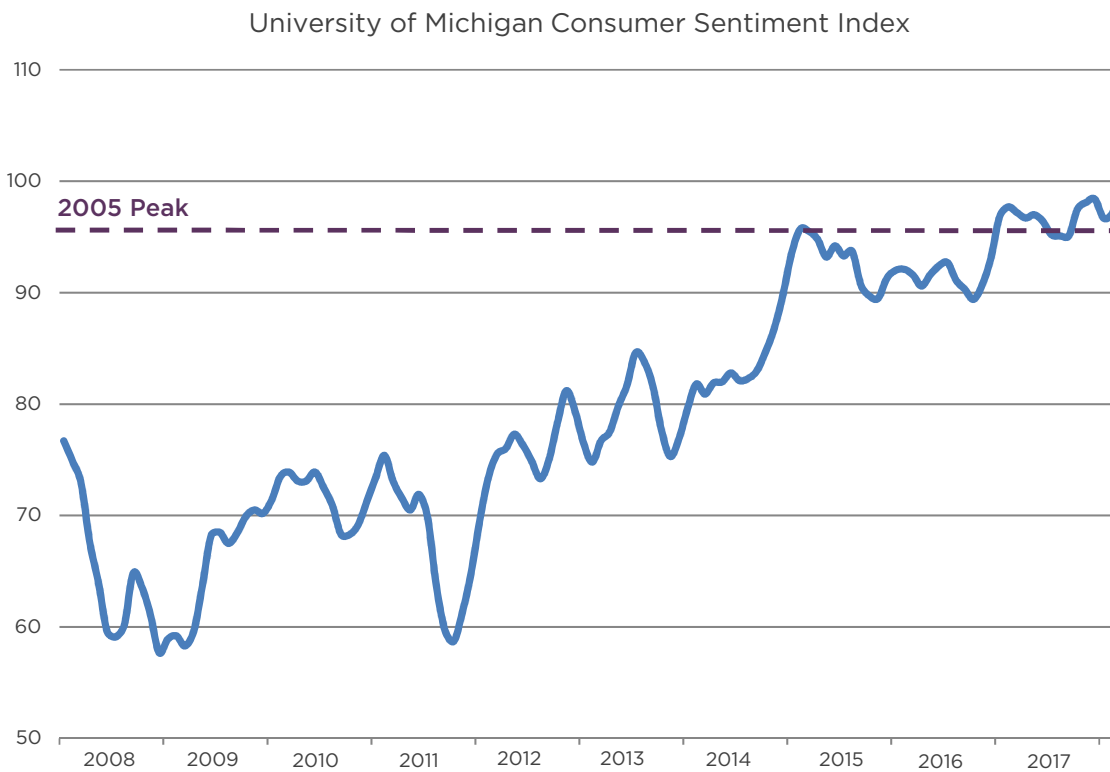


## MARKET COMMENTARY

Period Ending 3.31.18 | Q1 18

## TAX CUTS SPUR CONSUMER CONFIDENCE

Consumer sentiment is at a post-recession high and the best reading in more than 10 years. Consumers feel confident because jobs are easy to get and unemployment is low. Nationally, the prices of homes—the single largest asset for many Americans—have climbed to new peaks, surpassing 2006 price levels.



Source: University of Michigan

## OBSERVATIONS

- According to taxpayer advocacy group Americans for Tax Reform, 425 firms have announced one-time bonuses or increased wages or other benefits, such as higher 401(k) matches and spending on participant advice and financial wellness programs, totaling \$9.6 billion.
- A recent LendEDU survey found the average increase in take-home pay resulting from the tax cuts was 3.5%. This, combined with a national average annual raise of 2.5%, amounts to a noticeably larger-than-average increase in annual income.

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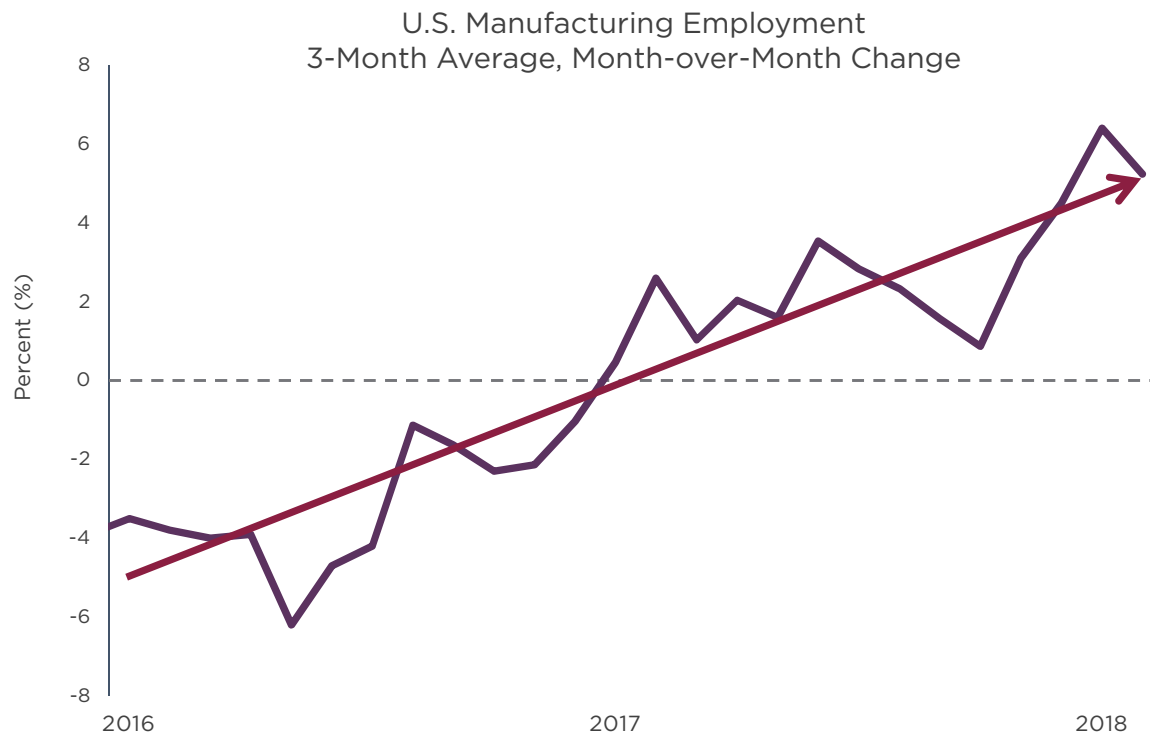
## MARKET COMMENTARY

Period Ending 3.31.18 | Q1 18

## INCREASE IN MANUFACTURING EMPLOYMENT

The tremendous incentives for corporate reinvestment enacted in the Tax Cuts and Jobs Act—combined with older and less productive plant and equipment—augur for a strong and long period of investment in capital and equipment. Firms are hiring in both the manufacturing and construction sectors. Our recent discussions with clients across the country have confirmed government reports of the scarcity of skilled manufacturing and construction workers.

7.1



Source: Federal Reserve

## OBSERVATIONS

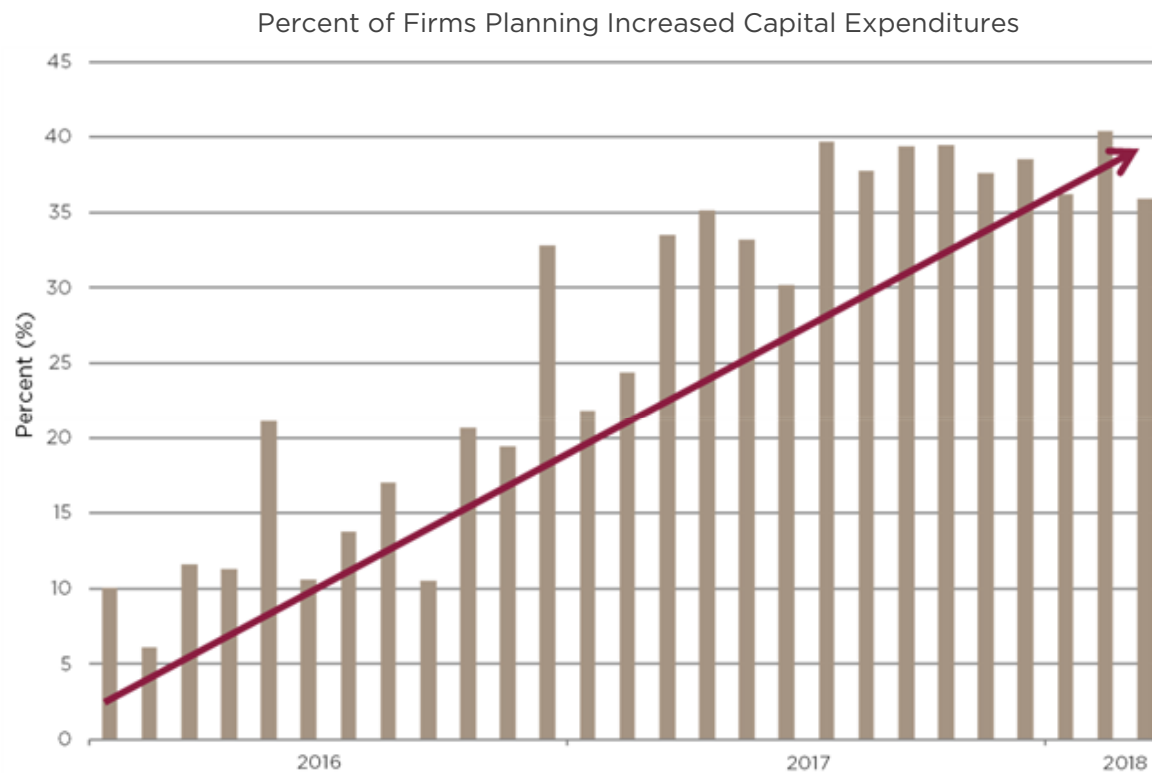
- Numerous Federal Reserve District reports have highlighted the growing shortage of skilled manufacturing, construction, and information technology workers.
- China's manufacturing cost advantage is nearly gone. In 2004, it was 14% less expensive to manufacture goods in China and transport them to the U.S. Now, it is just 1% less expensive than manufacturing in the U.S.

## MARKET COMMENTARY

Period Ending 3.31.18 | Q1 18

## FIRMS PLAN INCREASED REINVESTMENT

Business confidence is high. One measure, the National Federation of Independent Business Optimism Index, is at a 10-year high. As a result, businesses plan to increase their capital expenditures by more than 12% from last year.



Source: Federal Reserve Bank of Philadelphia

## OBSERVATIONS

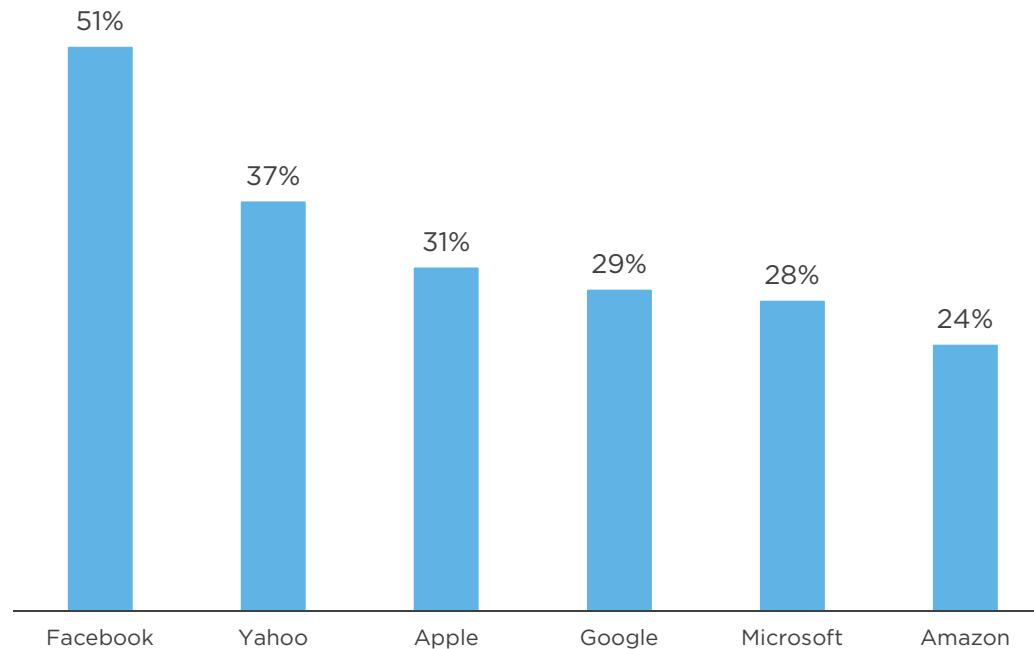
- Corporations will have more after-tax profits because the marginal corporate tax rate has been cut from 35% to 21%.
- In addition, corporations benefit from the provision in the new tax law that allows 100% write-off of reinvestment via capital expenditure in most cases.
- Corporate plant and equipment is old. Surveys show that the average age of plant and equipment is 13 years old, older than the first iPhone!
- The average age of plant and equipment is the oldest since 1950 and has gotten older each year since 2000.

7.1

## PRIVACY CONCERNS FOR TECH COMPANIES

Facebook has garnered lots of negative publicity recently with reports that it might have allowed political organizations to download users' data and preferences without consent. This latest scandal highlights the importance of protecting your personal information and the responsibility technology companies have to ensure your privacy. These companies may face increased regulation in the future.

I Do Not Trust These Companies to Obey Laws That  
Protect Your Personal Information



Source: Reuters/Ipsos Public Opinion Poll

### OBSERVATIONS

- More than half of Facebook's users don't trust the company to protect their personal information—compared to 75% of users who trust Amazon.
- Mark Zuckerberg testified before Congress, and Facebook is also being sought to testify in front of several governmental bodies in Europe as well.
- Price-to-earnings valuation multiples for more highly regulated firms tend to be lower than for less regulated firms. Increased regulation may bring tech stock prices down to earth.

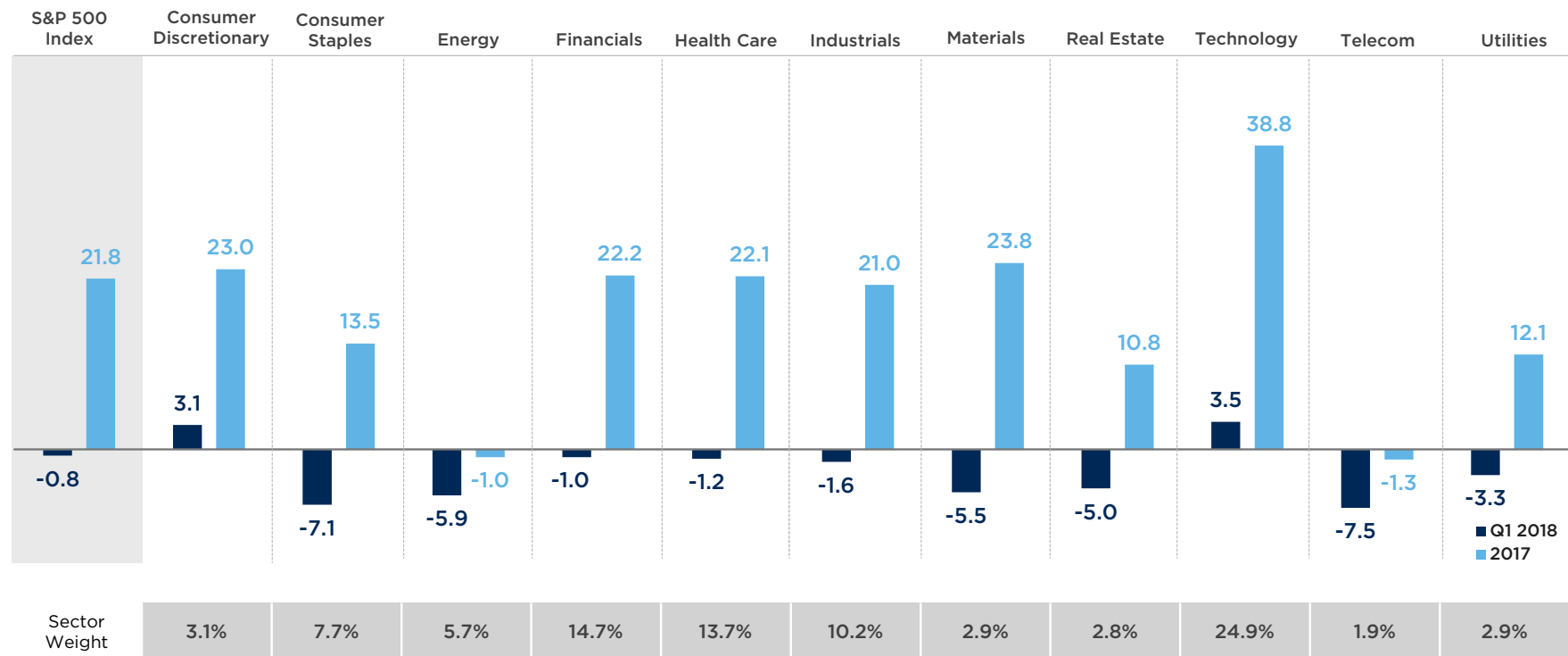
## MARKET COMMENTARY

Period Ending 3.31.18 | Q1 18

## DIGGING DEEPER: U.S. EQUITY MARKETS

The S&P 500 Index is a market-capitalization-weighted index of U.S. large-cap stocks across 11 diverse industry sectors.

### Returns by S&P 500 Sector (%)



**Source:** Standard & Poor's, J.P. Morgan Asset Management, Cornerstone Macro. Data as of 3.31.2018. 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 3.31.18 | Q1 18

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	YTD 2018
International Equities 14.02%	International Equities 26.86%	Large-Cap Growth 11.81%	Fixed Income 5.08%	Mid-Cap Growth 46.29%	Small-Cap Growth 29.09%	Fixed Income 7.84%	Mid-Cap Value 18.51%	Small-Cap Growth 43.30%	Mid-Cap Value 14.75%	Large-Cap Growth 5.67%	Small-Cap Value 31.74%	Large-Cap Growth 30.21%	Small-Cap Growth 2.30%
Mid-Cap Value 12.65%	Small-Cap Value 23.48%	International Equities 11.63%	Cash 1.51%	Large-Cap Growth 37.21%	Mid-Cap Growth 26.38%	Large-Cap Growth 2.64%	Small-Cap Value 18.05%	Mid-Cap Growth 35.74%	Large-Cap Value 13.45%	Fixed Income 0.55%	Mid-Cap Value 20.00%	International Equities 25.62%	Mid-Cap Growth 2.17%
Mid-Cap Growth 12.10%	Large-Cap Value 22.25%	Mid-Cap Growth 11.43%	Small-Cap Value -28.92%	Small-Cap Growth 34.47%	Mid-Cap Value 24.75%	Large-Cap Value 0.39%	International Equities 17.90%	Small-Cap Value 34.52%	Large-Cap Growth 13.05%	Cash 0.05%	Large-Cap Value 17.34%	Mid-Cap Growth 25.27%	Large-Cap Growth 1.42%
Large-Cap Value 7.05%	Mid-Cap Value 20.22%	Fixed Income 7.39%	Large-Cap Value -36.85%	Mid-Cap Value 34.21%	Small-Cap Value 24.50%	Cash 0.10%	Large-Cap Value 17.51%	Large-Cap Growth 33.48%	Mid-Cap Growth 11.90%	Mid-Cap Growth -0.20%	Small-Cap Growth 11.32%	Small-Cap Growth 22.17%	Cash 0.35%
Large-Cap Growth 5.26%	Small-Cap Growth 13.35%	Small-Cap Growth 7.05%	Mid-Cap Value -38.44%	International Equities 32.46%	Large-Cap Growth 16.71%	Mid-Cap Value -1.38%	Mid-Cap Growth 15.81%	Mid-Cap Value 33.46%	Fixed Income 5.97%	International Equities -0.39%	Mid-Cap Growth 7.33%	Large-Cap Value 13.66%	International Equities -1.41%
Small-Cap Value 4.71%	Mid-Cap Growth 10.66%	Cash 4.71%	Large-Cap Growth -38.44%	Small-Cap Value 20.58%	Large-Cap Value 15.51%	Mid-Cap Growth -1.65%	Large-Cap Growth 15.26%	Large-Cap Value 32.53%	Small-Cap Growth 5.60%	Small-Cap Growth -1.38%	Large-Cap Growth 7.08%	Mid-Cap Value 13.34%	Fixed Income -1.46%
Small-Cap Growth 4.15%	Large-Cap Growth 9.07%	Large-Cap Value -0.17%	Small-Cap Growth -38.54%	Large-Cap Value 19.69%	International Equities 8.21%	Small-Cap Growth -2.91%	Small-Cap Growth 14.59%	International Equities 23.29%	Small-Cap Value 4.22%	Large-Cap Value -3.83%	Fixed Income 2.65%	Small-Cap Value 7.84%	Mid-Cap Value -2.50%
Cash 3.35%	Cash 5.08%	Mid-Cap Value -1.42%	International Equities -43.06%	Fixed Income 5.24%	Fixed Income 5.89%	Small-Cap Value -5.50%	Fixed Income 4.22%	Cash 0.07%	Cash 0.03%	Mid-Cap Value -4.78%	International Equities 1.51%	Fixed Income 3.54%	Small-Cap Value -2.64%
Fixed Income 1.58%	Fixed Income 4.08%	Small-Cap Value -9.78%	Mid-Cap Growth -44.32%	Cash 0.21%	Cash 0.13%	International Equities -11.73%	Cash 0.11%	Fixed Income -2.02%	International Equities -4.48%	Small-Cap Value -7.47%	Cash 0.33%	Cash 0.86%	Large-Cap Value -2.83%

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

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

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Source: Markov Processes, Inc., Bloomberg, Mobius

## INDEX PERFORMANCE

Period Ending 3.31.18 | Q1 18

INDEXES	Q1 2018	YTD 2018	2017	2016	2015	2014	2013	1 YEAR	3 YEAR	5 YEAR	10 YEAR
90-Day US Treasury	0.35%	0.35%	0.86%	0.33%	0.05%	0.03%	0.07%	1.11%	0.53%	0.34%	0.34%
Bloomberg Barclays Government 1-3 Year	-0.15%	-0.15%	0.45%	0.87%	0.57%	0.64%	0.37%	0.02%	0.40%	0.53%	1.22%
Bloomberg Barclays Intermediate Govt	-0.73%	-0.73%	1.14%	1.05%	1.18%	2.52%	-1.25%	-0.14%	0.46%	0.75%	2.21%
Bloomberg Barclays Muni Bond	-1.11%	-1.11%	5.45%	0.25%	3.30%	9.05%	-2.55%	2.66%	2.25%	2.73%	4.40%
Bloomberg Barclays Intermediate Govt/Credit	-0.98%	-0.98%	2.14%	2.08%	1.07%	3.13%	-0.86%	0.35%	0.94%	1.25%	2.92%
Bloomberg Barclays Intermediate Credit	-1.36%	-1.36%	3.67%	3.68%	0.90%	4.16%	-0.17%	1.10%	1.67%	2.05%	4.27%
Bloomberg Barclays Aggregate Bond	-1.46%	-1.46%	3.54%	2.65%	0.55%	5.97%	-2.02%	1.20%	1.20%	1.82%	3.63%
Bloomberg Barclays Corporate IG Bond	-2.32%	-2.32%	6.42%	6.11%	-0.68%	7.46%	-1.53%	2.70%	2.30%	3.02%	5.42%
Bloomberg Barclays High Yield	-0.86%	-0.86%	7.50%	17.13%	-4.47%	2.45%	7.44%	3.78%	5.17%	4.99%	8.27%
Bloomberg Barclays US Long Corporate	-4.05%	-4.05%	12.09%	10.97%	-4.61%	15.73%	-5.68%	6.11%	3.30%	4.83%	7.68%
S&P 500	-0.76%	-0.76%	21.83%	11.96%	1.38%	13.69%	32.39%	13.99%	10.78%	13.31%	9.49%
Dow Jones Industrial Average	-1.96%	-1.96%	28.11%	16.50%	0.21%	10.04%	29.65%	19.39%	13.48%	13.32%	9.86%
NASDAQ Composite	2.33%	2.33%	28.24%	7.50%	5.73%	13.40%	38.32%	19.50%	12.96%	16.67%	11.98%
Russell 1000 Value	-2.83%	-2.83%	13.66%	17.34%	-3.83%	13.45%	32.53%	6.95%	7.88%	10.78%	7.78%
Russell 1000	-0.69%	-0.69%	21.69%	12.05%	0.92%	13.24%	33.11%	13.98%	10.39%	13.17%	9.61%
Russell 1000 Growth	1.42%	1.42%	30.21%	7.08%	5.67%	13.05%	33.48%	21.25%	12.90%	15.53%	11.34%
Russell Mid-Cap Value Index	-2.50%	-2.50%	13.34%	20.00%	-4.78%	14.75%	33.46%	6.50%	7.23%	11.11%	9.81%
Russell Mid-Cap Index	-0.46%	-0.46%	18.52%	13.80%	-2.44%	13.22%	34.76%	12.20%	8.01%	12.09%	10.21%
Russell Mid-Cap Growth Index	2.17%	2.17%	25.27%	7.33%	-0.20%	11.90%	35.74%	19.74%	9.17%	13.31%	10.61%
MSCI EAFE	-1.41%	-1.41%	25.62%	1.51%	-0.39%	-4.48%	23.29%	15.32%	6.05%	6.98%	3.23%
MSCI ACWI ex US	-1.08%	-1.08%	27.77%	5.01%	-5.25%	-3.44%	15.78%	17.05%	6.68%	6.37%	3.17%
Russell 2000 Value	-2.64%	-2.64%	7.84%	31.74%	-7.47%	4.22%	34.52%	5.13%	7.87%	9.96%	8.61%
Russell 2000	-0.08%	-0.08%	14.65%	21.31%	-4.41%	4.89%	38.82%	11.79%	8.39%	11.47%	9.84%
Russell 2000 Growth	2.30%	2.30%	22.17%	11.32%	-1.38%	5.60%	43.30%	18.63%	8.77%	12.90%	10.95%
MSCI Emerging Markets	1.47%	1.47%	37.75%	11.60%	-14.60%	-1.82%	-2.27%	25.37%	9.21%	5.37%	3.36%
Dow Jones US Real Estate Index	-5.91%	-5.91%	9.84%	7.56%	2.14%	27.24%	1.77%	0.13%	2.88%	6.28%	6.36%
HFRX Absolute Return Index	0.30%	0.30%	3.40%	0.31%	2.86%	0.79%	3.58%	3.03%	1.71%	2.20%	-0.68%
Consumer Price Index (Inflation)	1.00%	1.00%	2.11%	2.07%	0.73%	0.76%	1.50%	2.21%	1.99%	1.41%	1.64%
BLENDING BENCHMARKS	Q1 2018	YTD 2018	2017	2016	2015	2014	2013	1 YEAR	3 YEAR	5 YEAR	10 YEAR
25% S&P 500/5% MSCI EAFE/70% Barclays Agg	-1.22%	-1.22%	8.93%	5.00%	0.92%	7.37%	7.01%	5.04%	3.89%	4.97%	5.33%
30% S&P 500/10% MSCI EAFE/60% Barclays Agg	-1.17%	-1.17%	10.90%	5.43%	0.95%	7.21%	9.92%	6.38%	4.64%	5.82%	5.66%
35% S&P 500/15% MSCI EAFE/50% Barclays Agg	-1.13%	-1.13%	12.90%	5.85%	0.97%	7.04%	12.89%	7.72%	5.37%	6.67%	5.96%
40% S&P 500/20% MSCI EAFE/40% Barclays Agg	-1.10%	-1.10%	14.93%	6.26%	0.96%	6.87%	15.93%	9.07%	6.10%	7.51%	6.23%
45% S&P 500/25% MSCI EAFE/30% Barclays Agg	-1.07%	-1.07%	16.99%	6.65%	0.93%	6.69%	19.04%	10.43%	6.82%	8.34%	6.47%
60% S&P 500/40% Barclays Agg	-0.97%	-0.97%	14.21%	8.31%	1.28%	10.62%	17.56%	8.81%	6.99%	8.72%	7.42%

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## SECTION 3: PLAN INVESTMENT REVIEW

Period Ending 3.31.18 | Q1 18

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.....

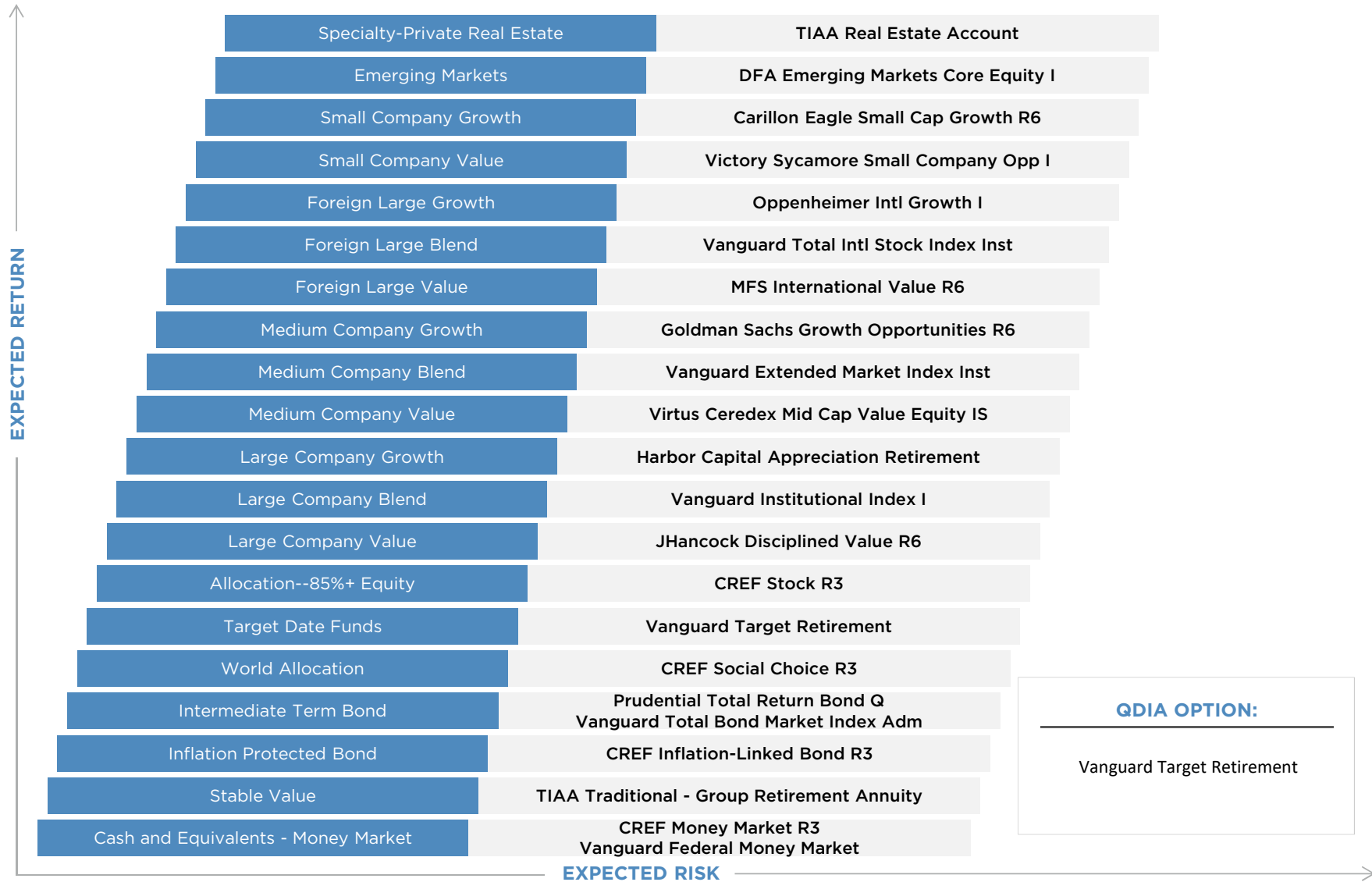
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## PLAN INVESTMENT REVIEW | PLAN MENU

Period Ending 3.31.18 | Q1 18

University of Maine System




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## PLAN INVESTMENT REVIEW | EXECUTIVE ASSET SUMMARY

Period Ending 3.31.18 | Q1 18

## University of Maine System

Plan Name	Plan/Contract Number	Plan Assets
University of Maine System Retirement Plan for Faculty and Professionals 403(b) DC	102965	\$1,238,244,784
University of Maine System Retirement Tax Deferred Annuity Plan 403(b) TDA	102966	\$161,628,595
University of Maine System Optional Retirement Savings 403(b)	102967	\$1,421,103
University of Maine System Optional Retirement Savings 401(a)	102968	\$1,198,982
University of Maine System Basic Retirement Plan for Classified Employees 403(b)	102969	\$36,682,575
University of Maine System Basic Retirement Plan for Classified Employees 401(a)	102970	\$69,218,761
University of Maine System Deferred Compensation Plan 457(b)	102971	\$30,316,963
<b>TOTALS</b>		<b>\$1,538,711,763</b>

 <p>University of Maine System * Alternate Carrier Transfers In Date Range January 1, 2018 - March 31, 2018</p>	
Alternate Carrier	Amount
VALIC	\$ 80,116.50
VOYA	\$ 357,864.44
MID ATLANTIC TRUST COMPANY	\$ 3,443.99
<b>Total</b>	<b>\$ 441,424.93</b>
* 7 plans : 102965, 102966, 102967, 102968, 102969, 102970 & 102971	

Disclosures

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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.

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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 3.31.18 | Q1 18

University of Maine System Retirement Plan for Faculty and Professionals 403(b) DC - 102965

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2017	(%)	CURRENT	(%)
Cash and Equivalents - Money Market	CREF Money Market R3	\$8,746,690	0.70%	\$9,030,657	0.73%
Cash and Equivalents - Money Market	Vanguard Federal Money Market	\$990,060	0.08%	\$1,792,631	0.14%
Stable Value	TIAA Traditional - Group Retirement Annuity	\$434,258,268	34.92%	\$433,561,888	35.01%
Inflation Protected Bond	CREF Inflation-Linked Bond R3	\$13,593,255	1.09%	\$13,349,237	1.08%
Intermediate Term Bond	Prudential Total Return Bond Q	\$16,352,164	1.32%	\$17,355,719	1.40%
Intermediate Term Bond	Vanguard Total Bond Market Index Adm	\$7,174,322	0.58%	\$6,744,661	0.54%
World Allocation	CREF Social Choice R3	\$35,791,845	2.88%	\$35,291,027	2.85%
Target Date Ret Income Moderate	Vanguard Target Retirement Income Inv	\$7,058,640	0.57%	\$5,859,191	0.47%
Target Date 2015 Moderate	Vanguard Target Retirement 2015 Inv	\$4,705,291	0.38%	\$5,779,851	0.47%
Target Date 2020 Moderate	Vanguard Target Retirement 2020 Inv	\$11,281,830	0.91%	\$11,417,543	0.92%
Target Date 2025 Moderate	Vanguard Target Retirement 2025 Inv	\$10,262,935	0.83%	\$11,091,058	0.90%
Target Date 2030 Conservative	Vanguard Target Retirement 2030 Inv	\$9,821,585	0.79%	\$9,685,971	0.78%
Target Date 2035 Moderate	Vanguard Target Retirement 2035 Inv	\$9,633,940	0.77%	\$10,049,711	0.81%
Target Date 2040 Moderate	Vanguard Target Retirement 2040 Inv	\$9,440,954	0.76%	\$9,764,324	0.79%
Target Date 2045 Moderate	Vanguard Target Retirement 2045 Inv	\$7,820,688	0.63%	\$8,210,000	0.66%
Target Date 2050 Moderate	Vanguard Target Retirement 2050 Inv	\$4,582,436	0.37%	\$4,960,894	0.40%
Target Date 2055 Moderate	Vanguard Target Retirement 2055 Inv	\$1,668,316	0.13%	\$1,826,041	0.15%
Target Date 2060+ Moderate	Vanguard Target Retirement 2060 Inv	\$72,722	0.01%	\$124,854	0.01%

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## PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.18 | Q1 18

University of Maine System Retirement Plan for Faculty and Professionals 403(b) DC - 102965

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2017	(%)	CURRENT	(%)
Target Date 2060+ Moderate	Vanguard Target Retirement 2065 Inv	\$0	0.00%	\$0	0.00%
Allocation--85%+ Equity	CREF Stock R3	\$214,743,505	17.27%	\$208,763,065	16.86%
Large Company Value	JHancock Disciplined Value R6	\$22,058,927	1.77%	\$22,169,550	1.79%
Large Company Blend	Vanguard Institutional Index I	\$34,031,139	2.74%	\$33,946,393	2.74%
Large Company Growth	Harbor Capital Appreciation Retirement	\$12,028,018	0.97%	\$12,597,140	1.02%
Medium Company Value	Virtus Ceredex Mid Cap Value Equity IS	\$15,548,636	1.25%	\$15,134,605	1.22%
Medium Company Blend	Vanguard Extended Market Index Inst	\$15,548,329	1.25%	\$15,200,467	1.23%
Medium Company Growth	Goldman Sachs Growth Opportunities R6	\$4,930,354	0.40%	\$5,544,460	0.45%
Foreign Large Value	MFS International Value R6	\$21,124,769	1.70%	\$21,044,805	1.70%
Foreign Large Blend	Vanguard Total Intl Stock Index Inst	\$11,073,927	0.89%	\$11,662,974	0.94%
Foreign Large Growth	Oppenheimer Intl Growth I	\$4,866,072	0.39%	\$4,894,591	0.40%
Small Company Value	Victory Sycamore Small Company Opp I	\$11,471,306	0.92%	\$11,855,007	0.96%
Small Company Growth	Carillon Eagle Small Cap Growth R6	\$3,712,424	0.30%	\$3,548,754	0.29%
Emerging Markets	DFA Emerging Markets Core Equity I	\$19,843,594	1.60%	\$20,648,433	1.67%
Specialty-Private Real Estate	TIAA Real Estate Account	\$51,256,299	4.12%	\$50,063,094	4.04%
Other Assets	Non Approved Funds	\$157,443,150	12.66%	\$151,508,513	12.24%
Self-Directed Brokerage	Self Directed Accounts	\$50,540,429	4.06%	\$53,767,675	4.34%
TOTALS		\$1,243,476,821	100%	\$1,238,244,784	100%

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## PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.18 | Q1 18

University of Maine System Retirement Tax Deferred Annuity Plan 403(b) TDA- 102966

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2017	(%)	CURRENT	(%)
Cash and Equivalents - Money Market	CREF Money Market R3	\$826,248	0.51%	\$955,856	0.59%
Cash and Equivalents - Money Market	Vanguard Federal Money Market	\$32,998	0.02%	\$46,147	0.03%
Stable Value	TIAA Traditional - Group Retirement Annuity	\$54,259,359	33.55%	\$55,390,165	34.27%
Inflation Protected Bond	CREF Inflation-Linked Bond R3	\$2,436,960	1.51%	\$2,355,970	1.46%
Intermediate Term Bond	Prudential Total Return Bond Q	\$3,904,319	2.41%	\$4,156,654	2.57%
Intermediate Term Bond	Vanguard Total Bond Market Index Adm	\$1,628,320	1.01%	\$1,530,332	0.95%
World Allocation	CREF Social Choice R3	\$5,850,210	3.62%	\$5,718,189	3.54%
Target Date Ret Income Moderate	Vanguard Target Retirement Income Inv	\$1,815,210	1.12%	\$1,768,702	1.09%
Target Date 2015 Moderate	Vanguard Target Retirement 2015 Inv	\$957,555	0.59%	\$978,323	0.61%
Target Date 2020 Moderate	Vanguard Target Retirement 2020 Inv	\$2,655,509	1.64%	\$2,778,271	1.72%
Target Date 2025 Moderate	Vanguard Target Retirement 2025 Inv	\$2,449,593	1.51%	\$2,627,973	1.63%
Target Date 2030 Conservative	Vanguard Target Retirement 2030 Inv	\$1,668,874	1.03%	\$1,693,681	1.05%
Target Date 2035 Moderate	Vanguard Target Retirement 2035 Inv	\$1,050,291	0.65%	\$1,059,410	0.66%
Target Date 2040 Moderate	Vanguard Target Retirement 2040 Inv	\$807,796	0.50%	\$811,140	0.50%
Target Date 2045 Moderate	Vanguard Target Retirement 2045 Inv	\$266,425	0.16%	\$274,053	0.17%
Target Date 2050 Moderate	Vanguard Target Retirement 2050 Inv	\$179,787	0.11%	\$172,507	0.11%
Target Date 2055 Moderate	Vanguard Target Retirement 2055 Inv	\$74,520	0.05%	\$76,163	0.05%
Target Date 2060+ Moderate	Vanguard Target Retirement 2060 Inv	\$4,082	0.00%	\$4,377	0.00%

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## PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.18 | Q1 18

University of Maine System Retirement Tax Deferred Annuity Plan 403(b) TDA- 102966

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2017	(%)	CURRENT	(%)
Target Date 2060+ Moderate	Vanguard Target Retirement 2065 Inv	\$0	0.00%	\$0	0.00%
Allocation--85%+ Equity	CREF Stock R3	\$19,887,105	12.30%	\$19,006,689	11.76%
Large Company Value	JHancock Disciplined Value R6	\$2,253,669	1.39%	\$2,336,495	1.45%
Large Company Blend	Vanguard Institutional Index I	\$9,515,741	5.88%	\$9,437,797	5.84%
Large Company Growth	Harbor Capital Appreciation Retirement	\$1,952,121	1.21%	\$2,135,279	1.32%
Medium Company Value	Virtus Ceredex Mid Cap Value Equity IS	\$1,414,278	0.87%	\$1,418,041	0.88%
Medium Company Blend	Vanguard Extended Market Index Inst	\$2,580,396	1.60%	\$2,532,402	1.57%
Medium Company Growth	Goldman Sachs Growth Opportunities R6	\$392,521	0.24%	\$411,831	0.25%
Foreign Large Value	MFS International Value R6	\$3,471,616	2.15%	\$3,388,286	2.10%
Foreign Large Blend	Vanguard Total Intl Stock Index Inst	\$1,501,184	0.93%	\$1,629,873	1.01%
Foreign Large Growth	Oppenheimer Intl Growth I	\$544,502	0.34%	\$517,847	0.32%
Small Company Value	Victory Sycamore Small Company Opp I	\$1,518,633	0.94%	\$1,579,544	0.98%
Small Company Growth	Carillon Eagle Small Cap Growth R6	\$239,191	0.15%	\$225,000	0.14%
Emerging Markets	DFA Emerging Markets Core Equity I	\$2,072,874	1.28%	\$2,251,689	1.39%
Specialty-Private Real Estate	TIAA Real Estate Account	\$11,065,712	6.84%	\$10,433,503	6.46%
Other Assets	Non Approved Funds	\$20,305,370	12.55%	\$19,521,056	12.08%
Self-Directed Brokerage	Self Directed Accounts	\$2,155,163	1.33%	\$2,405,350	1.49%
TOTALS		\$161,738,129	100%	\$161,628,595	100%

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## PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.18 | Q1 18

University of Maine System Optional Retirement Savings 403(b) - 102967

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2017	(%)	CURRENT	(%)
Cash and Equivalents - Money Market	CREF Money Market R3	\$12,370	0.84%	\$9,456	0.67%
Cash and Equivalents - Money Market	Vanguard Federal Money Market	\$0	0.00%	\$0	0.00%
Stable Value	TIAA Traditional - Group Retirement Annuity	\$615,697	41.88%	\$589,995	41.52%
Inflation Protected Bond	CREF Inflation-Linked Bond R3	\$17,389	1.18%	\$17,281	1.22%
Intermediate Term Bond	Prudential Total Return Bond Q	\$10,084	0.69%	\$9,932	0.70%
Intermediate Term Bond	Vanguard Total Bond Market Index Adm	\$339	0.02%	\$334	0.02%
World Allocation	CREF Social Choice R3	\$37,626	2.56%	\$37,266	2.62%
Target Date Ret Income Moderate	Vanguard Target Retirement Income Inv	\$1,373	0.09%	\$1,366	0.10%
Target Date 2015 Moderate	Vanguard Target Retirement 2015 Inv	\$160	0.01%	\$159	0.01%
Target Date 2020 Moderate	Vanguard Target Retirement 2020 Inv	\$53,140	3.61%	\$51,310	3.61%
Target Date 2025 Moderate	Vanguard Target Retirement 2025 Inv	\$2,339	0.16%	\$2,325	0.16%
Target Date 2030 Conservative	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 3.31.18 | Q1 18

University of Maine System Optional Retirement Savings 403(b) - 102967

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2017	(%)	CURRENT	(%)
Target Date 2060+ Moderate	Vanguard Target Retirement 2065 Inv	\$0	0.00%	\$0	0.00%
Allocation--85%+ Equity	CREF Stock R3	\$241,018	16.40%	\$236,861	16.67%
Large Company Value	JHancock Disciplined Value R6	\$1,618	0.11%	\$1,584	0.11%
Large Company Blend	Vanguard Institutional Index I	\$14,114	0.96%	\$12,166	0.86%
Large Company Growth	Harbor Capital Appreciation Retirement	\$1,179	0.08%	\$1,279	0.09%
Medium Company Value	Virtus Ceredex Mid Cap Value Equity IS	\$1,631	0.11%	\$1,611	0.11%
Medium Company Blend	Vanguard Extended Market Index Inst	\$2,439	0.17%	\$2,436	0.17%
Medium Company Growth	Goldman Sachs Growth Opportunities R6	\$48	0.00%	\$1,394	0.10%
Foreign Large Value	MFS International Value R6	\$3,328	0.23%	\$3,350	0.24%
Foreign Large Blend	Vanguard Total Intl Stock Index Inst	\$1,952	0.13%	\$1,928	0.14%
Foreign Large Growth	Oppenheimer Intl Growth I	\$865	0.06%	\$866	0.06%
Small Company Value	Victory Sycamore Small Company Opp I	\$1,405	0.10%	\$1,384	0.10%
Small Company Growth	Carillon Eagle Small Cap Growth R6	\$261	0.02%	\$266	0.02%
Emerging Markets	DFA Emerging Markets Core Equity I	\$1,782	0.12%	\$1,796	0.13%
Specialty-Private Real Estate	TIAA Real Estate Account	\$45,204	3.08%	\$45,567	3.21%
Other Assets	Non Approved Funds	\$402,667	27.39%	\$389,191	27.39%
Self-Directed Brokerage	Self Directed Accounts	\$0	0.00%	\$0	0.00%
TOTALS		\$1,470,030	100%	\$1,421,103	100%

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## PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.18 | Q1 18

University of Maine System Optional Retirement Savings 401(a) - 102968

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2017	(%)	CURRENT	(%)
Cash and Equivalents - Money Market	CREF Money Market R3	\$8,054	0.66%	\$6,423	0.54%
Cash and Equivalents - Money Market	Vanguard Federal Money Market	\$0	0.00%	\$0	0.00%
Stable Value	TIAA Traditional - Group Retirement Annuity	\$379,021	31.10%	\$369,085	30.78%
Inflation Protected Bond	CREF Inflation-Linked Bond R3	\$17,721	1.45%	\$17,563	1.46%
Intermediate Term Bond	Prudential Total Return Bond Q	\$17,554	1.44%	\$18,842	1.57%
Intermediate Term Bond	Vanguard Total Bond Market Index Adm	\$11,383	0.93%	\$12,737	1.06%
World Allocation	CREF Social Choice R3	\$26,384	2.17%	\$26,116	2.18%
Target Date Ret Income Moderate	Vanguard Target Retirement Income Inv	\$911	0.07%	\$906	0.08%
Target Date 2015 Moderate	Vanguard Target Retirement 2015 Inv	\$0	0.00%	\$0	0.00%
Target Date 2020 Moderate	Vanguard Target Retirement 2020 Inv	\$43,013	3.53%	\$41,465	3.46%
Target Date 2025 Moderate	Vanguard Target Retirement 2025 Inv	\$487	0.04%	\$1,427	0.12%
Target Date 2030 Conservative	Vanguard Target Retirement 2030 Inv	\$947	0.08%	\$0	0.00%
Target Date 2035 Moderate	Vanguard Target Retirement 2035 Inv	\$0	0.00%	\$0	0.00%
Target Date 2040 Moderate	Vanguard Target Retirement 2040 Inv	\$0	0.00%	\$0	0.00%
Target Date 2045 Moderate	Vanguard Target Retirement 2045 Inv	\$0	0.00%	\$0	0.00%
Target Date 2050 Moderate	Vanguard Target Retirement 2050 Inv	\$0	0.00%	\$0	0.00%
Target Date 2055 Moderate	Vanguard Target Retirement 2055 Inv	\$0	0.00%	\$0	0.00%
Target Date 2060+ Moderate	Vanguard Target Retirement 2060 Inv	\$0	0.00%	\$0	0.00%

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## PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.18 | Q1 18

University of Maine System Optional Retirement Savings 401(a) - 102968

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2017	(%)	CURRENT	(%)
Target Date 2060+ Moderate	Vanguard Target Retirement 2065 Inv	\$0	0.00%	\$0	0.00%
Allocation--85%+ Equity	CREF Stock R3	\$149,370	12.26%	\$145,545	12.14%
Large Company Value	JHancock Disciplined Value R6	\$10,951	0.90%	\$9,683	0.81%
Large Company Blend	Vanguard Institutional Index I	\$6,948	0.57%	\$6,893	0.57%
Large Company Growth	Harbor Capital Appreciation Retirement	\$1,118	0.09%	\$1,215	0.10%
Medium Company Value	Virtus Ceredex Mid Cap Value Equity IS	\$722	0.06%	\$717	0.06%
Medium Company Blend	Vanguard Extended Market Index Inst	\$607	0.05%	\$608	0.05%
Medium Company Growth	Goldman Sachs Growth Opportunities R6	\$21,918	1.80%	\$21,649	1.81%
Foreign Large Value	MFS International Value R6	\$19,488	1.60%	\$19,358	1.61%
Foreign Large Blend	Vanguard Total Intl Stock Index Inst	\$584	0.05%	\$581	0.05%
Foreign Large Growth	Oppenheimer Intl Growth I	\$323	0.03%	\$323	0.03%
Small Company Value	Victory Sycamore Small Company Opp I	\$333	0.03%	\$330	0.03%
Small Company Growth	Carillon Eagle Small Cap Growth R6	\$473	0.04%	\$480	0.04%
Emerging Markets	DFA Emerging Markets Core Equity I	\$21,241	1.74%	\$20,487	1.71%
Specialty-Private Real Estate	TIAA Real Estate Account	\$56,858	4.67%	\$57,166	4.77%
Other Assets	Non Approved Funds	\$283,149	23.23%	\$278,574	23.23%
Self-Directed Brokerage	Self Directed Accounts	\$139,084	11.41%	\$140,809	11.74%
TOTALS		\$1,218,640	100%	\$1,198,982	100%

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## PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.18 | Q1 18

University of Maine System Basic Retirement Plan for Classified Employees 403(b) - 102969

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2017	(%)	CURRENT	(%)
Cash and Equivalents - Money Market	CREF Money Market R3	\$431,803	1.18%	\$447,788	1.22%
Cash and Equivalents - Money Market	Vanguard Federal Money Market	\$47,383	0.13%	\$37,053	0.10%
Stable Value	TIAA Traditional - Group Retirement Annuity	\$6,314,386	17.23%	\$6,339,763	17.28%
Inflation Protected Bond	CREF Inflation-Linked Bond R3	\$484,117	1.32%	\$493,024	1.34%
Intermediate Term Bond	Prudential Total Return Bond Q	\$619,270	1.69%	\$653,338	1.78%
Intermediate Term Bond	Vanguard Total Bond Market Index Adm	\$127,295	0.35%	\$122,868	0.33%
World Allocation	CREF Social Choice R3	\$1,064,178	2.90%	\$1,061,484	2.89%
Target Date Ret Income Moderate	Vanguard Target Retirement Income Inv	\$522,092	1.42%	\$417,702	1.14%
Target Date 2015 Moderate	Vanguard Target Retirement 2015 Inv	\$553,650	1.51%	\$581,824	1.59%
Target Date 2020 Moderate	Vanguard Target Retirement 2020 Inv	\$1,202,160	3.28%	\$1,172,815	3.20%
Target Date 2025 Moderate	Vanguard Target Retirement 2025 Inv	\$1,460,601	3.99%	\$1,543,779	4.21%
Target Date 2030 Conservative	Vanguard Target Retirement 2030 Inv	\$599,958	1.64%	\$598,414	1.63%
Target Date 2035 Moderate	Vanguard Target Retirement 2035 Inv	\$533,790	1.46%	\$574,217	1.57%
Target Date 2040 Moderate	Vanguard Target Retirement 2040 Inv	\$492,684	1.34%	\$542,047	1.48%
Target Date 2045 Moderate	Vanguard Target Retirement 2045 Inv	\$344,417	0.94%	\$352,738	0.96%
Target Date 2050 Moderate	Vanguard Target Retirement 2050 Inv	\$146,145	0.40%	\$154,388	0.42%
Target Date 2055 Moderate	Vanguard Target Retirement 2055 Inv	\$156,473	0.43%	\$169,822	0.46%
Target Date 2060+ Moderate	Vanguard Target Retirement 2060 Inv	\$29,069	0.08%	\$35,096	0.10%

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## PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.18 | Q1 18

University of Maine System Basic Retirement Plan for Classified Employees 403(b) - 102969

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2017	(%)	CURRENT	(%)
Target Date 2060+ Moderate	Vanguard Target Retirement 2065 Inv	\$0	0.00%	\$409	0.00%
Allocation--85%+ Equity	CREF Stock R3	\$3,607,550	9.84%	\$3,496,184	9.53%
Large Company Value	JHancock Disciplined Value R6	\$830,159	2.27%	\$821,530	2.24%
Large Company Blend	Vanguard Institutional Index I	\$986,139	2.69%	\$1,001,821	2.73%
Large Company Growth	Harbor Capital Appreciation Retirement	\$643,998	1.76%	\$654,868	1.79%
Medium Company Value	Virtus Ceredex Mid Cap Value Equity IS	\$514,046	1.40%	\$519,746	1.42%
Medium Company Blend	Vanguard Extended Market Index Inst	\$473,869	1.29%	\$506,656	1.38%
Medium Company Growth	Goldman Sachs Growth Opportunities R6	\$306,344	0.84%	\$299,063	0.82%
Foreign Large Value	MFS International Value R6	\$962,912	2.63%	\$959,911	2.62%
Foreign Large Blend	Vanguard Total Intl Stock Index Inst	\$430,086	1.17%	\$456,705	1.24%
Foreign Large Growth	Oppenheimer Intl Growth I	\$105,558	0.29%	\$105,226	0.29%
Small Company Value	Victory Sycamore Small Company Opp I	\$406,457	1.11%	\$407,163	1.11%
Small Company Growth	Carillon Eagle Small Cap Growth R6	\$189,283	0.52%	\$177,214	0.48%
Emerging Markets	DFA Emerging Markets Core Equity I	\$902,556	2.46%	\$923,712	2.52%
Specialty-Private Real Estate	TIAA Real Estate Account	\$2,020,549	5.51%	\$1,949,948	5.32%
Other Assets	Non Approved Funds	\$6,413,795	17.50%	\$6,224,594	16.97%
Self-Directed Brokerage	Self Directed Accounts	\$2,726,671	7.44%	\$2,882,665	7.86%
TOTALS		\$36,649,444	100%	\$36,685,575	100%

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## PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.18 | Q1 18

University of Maine System Basic Retirement Plan for Classified Employees 401(a) - 102970

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2017	(%)	CURRENT	(%)
Cash and Equivalents - Money Market	CREF Money Market R3	\$1,131,460	1.63%	\$1,172,308	1.69%
Cash and Equivalents - Money Market	Vanguard Federal Money Market	\$95,429	0.14%	\$93,514	0.14%
Stable Value	TIAA Traditional - Group Retirement Annuity	\$14,288,311	20.64%	\$14,238,592	20.57%
Inflation Protected Bond	CREF Inflation-Linked Bond R3	\$968,323	1.40%	\$978,361	1.41%
Intermediate Term Bond	Prudential Total Return Bond Q	\$1,078,551	1.56%	\$1,134,071	1.64%
Intermediate Term Bond	Vanguard Total Bond Market Index Adm	\$238,818	0.34%	\$232,206	0.34%
World Allocation	CREF Social Choice R3	\$2,850,961	4.12%	\$2,832,499	4.09%
Target Date Ret Income Moderate	Vanguard Target Retirement Income Inv	\$894,108	1.29%	\$729,810	1.05%
Target Date 2015 Moderate	Vanguard Target Retirement 2015 Inv	\$946,725	1.37%	\$1,005,716	1.45%
Target Date 2020 Moderate	Vanguard Target Retirement 2020 Inv	\$1,915,567	2.77%	\$1,974,110	2.85%
Target Date 2025 Moderate	Vanguard Target Retirement 2025 Inv	\$1,961,821	2.83%	\$1,976,649	2.86%
Target Date 2030 Conservative	Vanguard Target Retirement 2030 Inv	\$1,045,411	1.51%	\$1,026,028	1.48%
Target Date 2035 Moderate	Vanguard Target Retirement 2035 Inv	\$879,719	1.27%	\$942,152	1.36%
Target Date 2040 Moderate	Vanguard Target Retirement 2040 Inv	\$745,198	1.08%	\$774,807	1.12%
Target Date 2045 Moderate	Vanguard Target Retirement 2045 Inv	\$524,036	0.76%	\$545,308	0.79%
Target Date 2050 Moderate	Vanguard Target Retirement 2050 Inv	\$259,364	0.37%	\$275,172	0.40%
Target Date 2055 Moderate	Vanguard Target Retirement 2055 Inv	\$143,155	0.21%	\$158,966	0.23%
Target Date 2060+ Moderate	Vanguard Target Retirement 2060 Inv	\$28,998	0.04%	\$34,965	0.05%

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## PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.18 | Q1 18

University of Maine System Basic Retirement Plan for Classified Employees 401(a) - 102970

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2017	(%)	CURRENT	(%)
Target Date 2060+ Moderate	Vanguard Target Retirement 2065 Inv	\$0	0.00%	\$409	0.00%
Allocation--85%+ Equity	CREF Stock R3	\$9,179,601	13.26%	\$9,033,010	13.05%
Large Company Value	JHancock Disciplined Value R6	\$1,198,822	1.73%	\$1,243,336	1.80%
Large Company Blend	Vanguard Institutional Index I	\$1,624,846	2.35%	\$1,666,940	2.41%
Large Company Growth	Harbor Capital Appreciation Retirement	\$1,093,668	1.58%	\$1,143,045	1.65%
Medium Company Value	Virtus Ceredex Mid Cap Value Equity IS	\$683,696	0.99%	\$708,373	1.02%
Medium Company Blend	Vanguard Extended Market Index Inst	\$724,862	1.05%	\$760,659	1.10%
Medium Company Growth	Goldman Sachs Growth Opportunities R6	\$428,766	0.62%	\$457,219	0.66%
Foreign Large Value	MFS International Value R6	\$1,555,197	2.25%	\$1,602,795	2.32%
Foreign Large Blend	Vanguard Total Intl Stock Index Inst	\$542,316	0.78%	\$629,468	0.91%
Foreign Large Growth	Oppenheimer Intl Growth I	\$160,570	0.23%	\$158,688	0.23%
Small Company Value	Victory Sycamore Small Company Opp I	\$546,281	0.79%	\$548,320	0.79%
Small Company Growth	Carillon Eagle Small Cap Growth R6	\$194,206	0.28%	\$196,945	0.28%
Emerging Markets	DFA Emerging Markets Core Equity I	\$1,169,774	1.69%	\$1,250,343	1.81%
Specialty-Private Real Estate	TIAA Real Estate Account	\$3,553,456	5.13%	\$3,450,640	4.99%
Other Assets	Non Approved Funds	\$14,368,429	20.75%	\$13,967,123	20.18%
Self-Directed Brokerage	Self Directed Accounts	\$2,219,020	3.20%	\$2,276,214	3.29%
TOTALS		\$69,239,464	100%	\$69,218,761	100%

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## PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.18 | Q1 18

University of Maine System Deferred Compensation Plan 457(b) - 102971

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2017	(%)	CURRENT	(%)
Cash and Equivalents - Money Market	CREF Money Market R3	\$568,491	1.91%	\$543,551	1.79%
Cash and Equivalents - Money Market	Vanguard Federal Money Market	\$35,912	0.12%	\$90,721	0.30%
Stable Value	TIAA Traditional - Group Retirement Annuity	\$7,133,436	23.96%	\$7,419,080	24.47%
Inflation Protected Bond	CREF Inflation-Linked Bond R3	\$528,055	1.77%	\$552,828	1.82%
Intermediate Term Bond	Prudential Total Return Bond Q	\$919,646	3.09%	\$960,282	3.17%
Intermediate Term Bond	Vanguard Total Bond Market Index Adm	\$183,568	0.62%	\$160,801	0.53%
World Allocation	CREF Social Choice R3	\$1,389,989	4.67%	\$1,391,532	4.59%
Target Date Ret Income Moderate	Vanguard Target Retirement Income Inv	\$483,934	1.63%	\$432,473	1.43%
Target Date 2015 Moderate	Vanguard Target Retirement 2015 Inv	\$511,514	1.72%	\$588,185	1.94%
Target Date 2020 Moderate	Vanguard Target Retirement 2020 Inv	\$866,151	2.91%	\$933,315	3.08%
Target Date 2025 Moderate	Vanguard Target Retirement 2025 Inv	\$968,607	3.25%	\$975,863	3.22%
Target Date 2030 Conservative	Vanguard Target Retirement 2030 Inv	\$588,562	1.98%	\$586,479	1.93%
Target Date 2035 Moderate	Vanguard Target Retirement 2035 Inv	\$242,119	0.81%	\$231,817	0.76%
Target Date 2040 Moderate	Vanguard Target Retirement 2040 Inv	\$256,932	0.86%	\$280,485	0.93%
Target Date 2045 Moderate	Vanguard Target Retirement 2045 Inv	\$137,767	0.46%	\$129,852	0.43%
Target Date 2050 Moderate	Vanguard Target Retirement 2050 Inv	\$36,617	0.12%	\$36,919	0.12%
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 3.31.18 | Q1 18

University of Maine System Deferred Compensation Plan 457(b) - 102971

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2017	(%)	CURRENT	(%)
Target Date 2060+ Moderate	Vanguard Target Retirement 2065 Inv	\$0	0.00%	\$0	0.00%
Allocation--85%+ Equity	CREF Stock R3	\$1,975,792	6.64%	\$1,976,607	6.52%
Large Company Value	JHancock Disciplined Value R6	\$737,600	2.48%	\$716,776	2.36%
Large Company Blend	Vanguard Institutional Index I	\$1,322,232	4.44%	\$1,350,698	4.46%
Large Company Growth	Harbor Capital Appreciation Retirement	\$619,078	2.08%	\$633,436	2.09%
Medium Company Value	Virtus Ceredex Mid Cap Value Equity IS	\$389,160	1.31%	\$409,088	1.35%
Medium Company Blend	Vanguard Extended Market Index Inst	\$715,468	2.40%	\$673,628	2.22%
Medium Company Growth	Goldman Sachs Growth Opportunities R6	\$158,848	0.53%	\$179,088	0.59%
Foreign Large Value	MFS International Value R6	\$704,999	2.37%	\$667,075	2.20%
Foreign Large Blend	Vanguard Total Intl Stock Index Inst	\$448,106	1.50%	\$450,986	1.49%
Foreign Large Growth	Oppenheimer Intl Growth I	\$145,454	0.49%	\$144,399	0.48%
Small Company Value	Victory Sycamore Small Company Opp I	\$348,544	1.17%	\$356,303	1.18%
Small Company Growth	Carillon Eagle Small Cap Growth R6	\$154,110	0.52%	\$140,132	0.46%
Emerging Markets	DFA Emerging Markets Core Equity I	\$720,796	2.42%	\$756,948	2.50%
Specialty-Private Real Estate	TIAA Real Estate Account	\$1,940,793	6.52%	\$1,972,977	6.51%
Other Assets	Non Approved Funds	\$3,557,299	11.95%	\$3,422,208	11.29%
Self-Directed Brokerage	Self Directed Accounts	\$988,434	3.32%	\$1,152,431	3.80%
TOTALS		\$29,778,011	100%	\$30,316,963	100%

Information provided by Record Keeper. For informational purposes. Not a substitute for official statements produced by the plan custodian. Information has been obtained from sources considered reliable, but its accuracy and completeness are not guaranteed. This report is not an illustration of investment performance, but rather a historical illustration of asset allocation.

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## INVESTMENT REVIEW | INVESTMENT POLICY MONITOR

Period Ending 3.31.18 | Q1 18

University of Maine System

INVESTMENT	QUANTITATIVE								QUALITATIVE		TOTALS	
	Risk-Adjusted Performance		vs. Peers Performance		Style		Confidence		Fund Management	Fund Firm	Overall	Total Score
	3 Yr	5 Yr	3 Yr	5 Yr	3 Yr	5 Yr	3 Yr	5 Yr				
Inflation Protected Bond CREF Inflation-Linked Bond R3	●	●	▼	●	●	●	▼	▼	●	●	●	86
Intermediate Term Bond Prudential Total Return Bond Q	●	●	●	●	●	●	●	●	●	●	●	100
World Allocation CREF Social Choice R3	●	●	●	●	●	●	●	●	●	●	●	100
Large Company Value JHancock Disciplined Value R6	●	●	●	●	●	●	●	●	●	●	●	95
Large Company Growth Harbor Capital Appreciation Retirement	●	●	●	●	●	●	●	●	●	●	●	98
Medium Company Value Virtus Ceredex Mid Cap Value Equity IS	●	●	●	●	●	●	●	●	●	●	●	91
Medium Company Growth Goldman Sachs Growth Opportunities R6	▼	●	▼	▼	●	●	▼	▼	▼	●	▼	76
Foreign Large Value MFS International Value R6	●	●	●	●	▼	▼	●	●	●	●	●	97

## 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.

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## INVESTMENT REVIEW | INVESTMENT POLICY MONITOR

Period Ending 3.31.18 | Q1 18

University of Maine System

INVESTMENT	QUANTITATIVE								QUALITATIVE		TOTALS	
	Risk-Adjusted Performance		vs. Peers Performance		Style		Confidence		Fund Management	Fund Firm	Overall	Total Score
	3 Yr	5 Yr	3 Yr	5 Yr	3 Yr	5 Yr	3 Yr	5 Yr				
Foreign Large Growth Oppenheimer Intl Growth I	●	●	●	●	●	●	●	●	●	▼	●	90
Small Company Value Victory Sycamore Small Company Opp I	●	●	●	●	●	●	●	●	●	●	●	100
Small Company Growth Carillon Eagle Small Cap Growth R6	●	▼	●	●	●	●	●	●	●	●	●	88
Emerging Markets DFA Emerging Markets Core Equity I	●	●	●	●	●	●	●	●	●	▼	●	90

7.1

## LEGEND

●	IN GOOD STANDING	▼	MARKED FOR REVIEW	●	CONSIDER FOR TERMINATION
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## INVESTMENT REVIEW | INVESTMENT POLICY MONITOR

Period Ending 3.31.18 | Q1 18

University of Maine System

## TARGET DATE INVESTMENTS

INVESTMENT	QUANTITATIVE						QUALITATIVE				TOTALS	
	Risk-Adjusted Performance		vs. Peers Performance		Glidepath		Portfolio Construct.	Underlying Inv. Vehicles	Fund Mgmt	Fund Firm	Overall	Total Score
	3 Yr	5 Yr	3 Yr	5 Yr	% of Equities	Beta to Equities						
Vanguard Target Retirement	●	●	●	●	●	●	●	●	●	●	●	95

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## CAPITAL PRESERVATION INVESTMENTS

INVESTMENT	Overall	Commentary
CREF Money Market R3	●	According to CAPTRUST Financial Advisors, this Capital Preservation option is in good standing per the guidelines as established by the Investment Policy Statement.
Vanguard Federal Money Market	●	According to CAPTRUST Financial Advisors, this Capital Preservation option is in good standing per the guidelines as established by the Investment Policy Statement.
TIAA Traditional - Group Retirement Annuity	●	According to CAPTRUST Financial Advisors, this Capital Preservation option is in good standing per the guidelines as established by the Investment Policy Statement.

## CONTINUED...





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 3.31.18 | Q1 18

University of Maine System

## PASSIVE INVESTMENTS

INVESTMENT	Overall	Commentary
Vanguard Total Bond Market Index Adm		This fund currently meets the guidelines set forth by CAPTRUST for passively managed investments. This assessment is based on both quantitative and qualitative data. Examples of quantitative and qualitative items considered include, but are not limited to, quality of management, tracking error, and cost.
Vanguard Institutional Index I		This fund currently meets the guidelines set forth by CAPTRUST for passively managed investments. This assessment is based on both quantitative and qualitative data. Examples of quantitative and qualitative items considered include, but are not limited to, quality of management, tracking error, and cost.
Vanguard Extended Market Index Inst		This fund currently meets the guidelines set forth by CAPTRUST for passively managed investments. This assessment is based on both quantitative and qualitative data. Examples of quantitative and qualitative items considered include, but are not limited to, quality of management, tracking error, and cost.
Vanguard Total Intl Stock Index Inst		This fund currently meets the guidelines set forth by CAPTRUST for passively managed investments. This assessment is based on both quantitative and qualitative data. Examples of quantitative and qualitative items considered include, but are not limited to, quality of management, tracking error, and cost.

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## INVESTMENT REVIEW | INVESTMENT POLICY MONITOR

Period Ending 3.31.18 | Q1 18

University of Maine System

## INVESTMENTS IN DISTINCT ASSET CLASSES

INVESTMENT	Overall	Commentary
CREF Stock R3		This fund currently meets the guidelines set forth by CAPTRUST for distinct investments in the Investment Policy Statement. This assessment is based on both quantitative and qualitative data. Examples of quantitative and qualitative items considered include, but are not limited to, quality of management, excess return, and risk-adjusted performance.
TIAA Real Estate Account		This fund currently meets the guidelines set forth by CAPTRUST for distinct investments in the Investment Policy Statement. This assessment is based on both quantitative and qualitative data. Examples of quantitative and qualitative items considered include, but are not limited to, quality of management, excess return, and risk-adjusted performance.

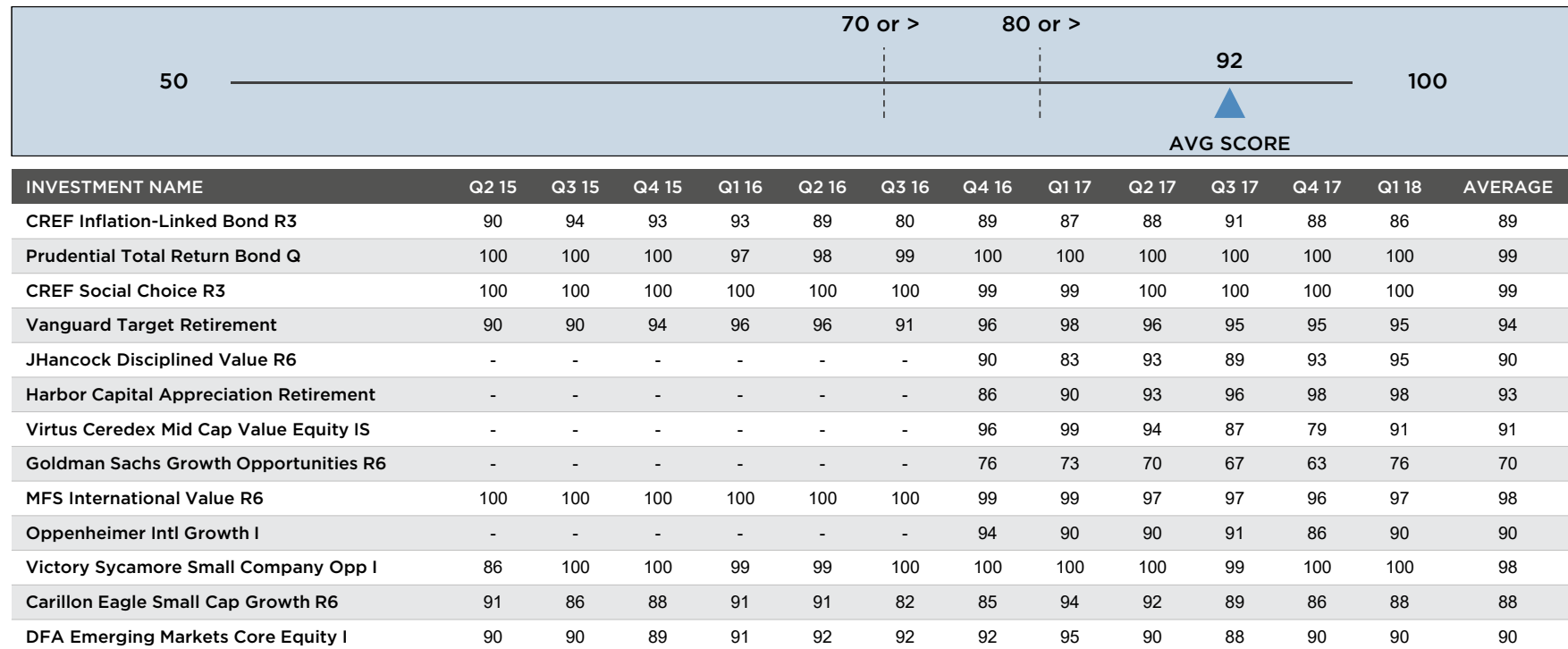
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## PLAN INVESTMENT REVIEW | PLAN PERFORMANCE MEASUREMENT

Period Ending 3.31.18 | Q1 18

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 92.

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 3.31.18 | Q1 18

University of Maine System

FUND MANAGEMENT ITEMS	COMMENTARY
<a href="#">Goldman Sachs Growth Opp</a>	Goldman Sachs recently announced changes to its U.S. fundamental equity business. The firm will combine its U.S. value and growth teams into a single fundamental equity team. Sean Gallagher will join Steve Barry as Co-Chief Investment Officer of the combined team. Importantly, these changes will not impact the Small Cap Value strategy as it will continue to be managed by a separate team. Sally Pope Davis and Rob Crystal have been at the helm of this strategy since 2006 and are supported by a team of five experienced sector analysts.
FUND FIRM ITEMS	COMMENTARY
<a href="#">OppenheimerFunds</a>	On September 29th, 2017, Chief Risk Officer Geoff Craddock left the firm to join the parent company MassMutual Financial Group as CRO. Bob Agan and Jerry Cubbin will serve as interim co-heads of Risk management while the firm searches for a replacement.
<a href="#">Virtus</a>	On June 1, 2017, Virtus completed the acquisition of RidgeWorth, changing the name of RidgeWorth to Virtus Fund Advisors, a wholly owned subsidiary of Virtus.
<a href="#">Dimensional Fund Advisors</a>	<p>Savina Rizova and Marlena Lee were named co-heads of Research.</p> <p>Dimensional added 3 new members to their investment committee: Dave Butler co-CEO and head of Global Financial Advisor Services, Ryan Wiley co-head of Global Equity Trading, and Savina Rizova head of Strategy Research.</p> <p>On August 15, 2017, Dimensional Fund Advisors announced that Gerald O'Reilly will become co-CEO alongside Dave Butler, Co-CEO and head of Global Financial Advisor Services. Gerald is replacing Eduardo Reppetto as co-CEO and will continue as CIO following Eduardo's departure from the firm in September.</p>

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## INVESTMENT REVIEW | SELECT COMMENTARY

Period Ending 3.31.18 | Q1 18

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FUND FIRM ITEMS	COMMENTARY
TIAA-CREF	In Q4 2017 there was a realignment of reporting relationships, as the reporting line of the risk management team shifted to the Enterprise Risk Management function within Nuveen's parent company TIAA. As a result, Michell Beck, CRO of Nuveen, now reports to Steve Gruppo, CRO of TIAA.
Harbor Funds	Effective September 30, 2017, David Van Hooser will retire as CEO of Harbor Capital and resign as chair and trustee of Harbor Funds. He will continue to serve as chair of Harbor Capital. He will be replaced as CEO by Charlie McCain who was named president and chief operating officer of Harbor Capital on June 1, 2017. In addition, Erik Ojala was named general counsel and chief compliance officer of Harbor Funds, replacing Mr. McCain.
MFS Family of Funds	<p>Aditi Taylor joined MFS as chief risk officer, replacing MFS' former CRO who departed at the end of 2017.</p> <p>Effective January 1, 2018, Carol Geremia became president of MFS and head of Global Distribution. Jim Jessee, who served as co-head of Global Distribution along with Carol since 2011, will continue to assist their global retail business.</p> <p>James Swanson, MFS chief investment strategist and portfolio manager, plans to retire from MFS on December 31, 2018. Effective January 1, 2019, Robert Almeida, currently an institutional portfolio manager, will become the firm's global investment strategist.</p>

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## PLAN INVESTMENT REVIEW | TARGET DATE REVIEW

Period Ending 3.31.18 | Q1 18

University of Maine System

## VANGUARD TARGET RETIREMENT

MEETING DATE: APRIL 24, 2018

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## 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**

Despite a more favorable backdrop for active managers, Vanguard Target Retirement produced solid results with each vintage outperforming peers in the first quarter.

- Target Retirement was aided by its higher allocation to international fixed income relative to peers with the Bloomberg Barclays Global Aggregate ex-US index returning 1% for the quarter compared to -1.5% for the US Aggregate Bond Index
- In addition, the series's higher allocation to emerging markets equities throughout the glidepath boosted peer-relative performance, especially in the near-dated vintages as many peers reduce their exposure to emerging markets equities as the retirement date approaches

There were no changes made to the series's strategic asset allocation during the quarter.

## PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY

Period Ending 3.31.18 | Q1 18

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INVESTMENT NAME	Q1 '18	YTD '18	2017	2016	2015	2014	2013	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
<b>CASH AND EQUIVALENTS - MONEY MARKET</b>											
CREF Money Market R3	0.22%	0.22%	0.50%	0.13%	0.00%	0.00%	0.00%	0.65%	0.28%	0.17%	0.25%
Vanguard Federal Money Market	0.33%	0.33%	0.81%	0.30%	0.04%	0.01%	0.02%	1.02%	0.49%	0.30%	0.35%
ICE BofA ML US Treasury Bill 3 Mon USD	0.35%	0.35%	0.86%	0.33%	0.05%	0.03%	0.07%	1.11%	0.53%	0.34%	0.34%
<b>STABLE VALUE</b>											
TIAA Traditional			Current rate is 4.00%								
ICE BofA ML US Treasury Bill 3 Mon USD	0.35%	0.35%	0.86%	0.33%	0.05%	0.03%	0.07%	1.11%	0.53%	0.34%	0.34%
Hueler Stable Value Index (gross)	0.52%	0.52%	1.95%	1.79%	1.77%	1.69%	1.83%	2.03%	1.87%	1.82%	2.41%
<b>INFLATION PROTECTED BOND</b>											
CREF Inflation-Linked Bond R3	-0.53%	-0.53%	1.85%	4.23%	-1.68%	3.34%	-9.01%	0.21%	0.77%	-0.37%	2.45%
BBgBarc US Treasury US TIPS TR USD	-0.79%	-0.79%	3.01%	4.68%	-1.44%	3.64%	-8.61%	0.92%	1.30%	0.05%	2.93%
Inflation Protected Bond Universe	-0.67%	-0.67%	2.54%	4.58%	-2.22%	1.94%	-7.56%	0.65%	1.00%	-0.32%	2.19%
<b>INTERMEDIATE TERM BOND</b>											
Prudential Total Return Bond Q	-1.35%	-1.35%	6.71%	4.83%	0.09%	7.25%	-0.91%	3.37%	2.62%	3.16%	5.78%
Vanguard Total Bond Market Index Adm	-1.47%	-1.47%	3.57%	2.60%	0.40%	5.89%	-2.15%	1.12%	1.12%	1.73%	3.57%
BBgBarc Aggregate Bond Index	-1.46%	-1.46%	3.54%	2.65%	0.55%	5.97%	-2.02%	1.20%	1.20%	1.82%	3.63%
Intermediate Term Bond Universe	-1.33%	-1.33%	3.81%	3.26%	-0.29%	5.17%	-1.40%	1.35%	1.28%	1.78%	3.85%
<b>WORLD ALLOCATION</b>											
CREF Social Choice R3	-0.71%	-0.71%	14.27%	7.40%	-0.87%	6.83%	16.68%	9.30%	5.86%	7.15%	6.47%
60% MSCI World 40% BBgBarc Agg Index	-1.21%	-1.21%	14.90%	6.09%	0.26%	5.77%	14.83%	8.92%	5.72%	6.98%	5.69%
World Allocation Universe	-0.86%	-0.86%	14.38%	5.82%	-4.03%	1.93%	11.81%	8.69%	4.17%	5.00%	4.64%

\*ANNUALIZED

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## PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY

Period Ending 3.31.18 | Q1 18

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INVESTMENT NAME	Q1 '18	YTD '18	2017	2016	2015	2014	2013	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
<b>TARGET DATE RET INCOME MODERATE</b>											
Vanguard Target Retirement Income Inv	-0.50%	-0.50%	8.47%	5.25%	-0.17%	5.54%	5.87%	5.35%	3.68%	4.33%	4.93%
Morningstar Lifetime Moderate Income Index	-0.35%	-0.35%	8.55%	5.98%	-1.30%	4.09%	6.45%	5.64%	3.84%	4.00%	-
Retirement Income Moderate	-0.96%	-0.96%	9.75%	5.04%	-1.38%	4.58%	6.61%	5.82%	3.42%	4.22%	4.50%
<b>TARGET DATE 2015 MODERATE</b>											
Vanguard Target Retirement 2015 Inv	-0.52%	-0.52%	11.50%	6.16%	-0.46%	6.56%	13.00%	7.30%	4.73%	6.17%	5.74%
Morningstar Lifetime Moderate 2015 Index	-0.74%	-0.74%	11.39%	7.10%	-1.73%	5.55%	10.50%	7.31%	4.71%	5.42%	-
2015 Moderate	-0.83%	-0.83%	11.31%	6.29%	-1.40%	4.69%	11.76%	6.64%	4.30%	5.48%	4.91%
<b>TARGET DATE 2020 MODERATE</b>											
Vanguard Target Retirement 2020 Inv	-0.57%	-0.57%	14.08%	6.95%	-0.68%	7.11%	15.85%	8.95%	5.65%	7.26%	6.21%
Morningstar Lifetime Moderate 2020 Index	-0.83%	-0.83%	12.79%	7.66%	-1.88%	5.87%	12.98%	8.19%	5.20%	6.12%	-
2020 Moderate	-0.72%	-0.72%	13.46%	6.14%	-1.41%	5.02%	15.43%	8.20%	4.92%	6.46%	5.43%
<b>TARGET DATE 2025 MODERATE</b>											
Vanguard Target Retirement 2025 Inv	-0.59%	-0.59%	15.94%	7.48%	-0.85%	7.17%	18.14%	10.20%	6.30%	7.96%	6.48%
Morningstar Lifetime Moderate 2025 Index	-0.87%	-0.87%	14.54%	8.39%	-2.06%	6.04%	16.28%	9.31%	5.84%	7.00%	-
2025 Moderate	-0.62%	-0.62%	15.26%	6.84%	-1.42%	5.11%	17.80%	9.54%	5.69%	7.09%	5.89%
<b>TARGET DATE 2030 CONSERVATIVE</b>											
Vanguard Target Retirement 2030 Inv	-0.56%	-0.56%	17.52%	7.85%	-1.03%	7.17%	20.49%	11.19%	6.83%	8.60%	6.71%
Morningstar Lifetime Conservative 2030 Index	-0.94%	-0.94%	13.16%	7.73%	-2.06%	6.09%	12.23%	8.34%	5.22%	6.10%	-
2030 Conservative	-1.02%	-1.02%	15.86%	7.25%	-2.00%	5.10%	15.31%	9.66%	5.60%	6.86%	5.49%

\*ANNUALIZED

CONTINUED...

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## PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY

Period Ending 3.31.18 | Q1 18

University of Maine System

INVESTMENT NAME	Q1 '18	YTD '18	2017	2016	2015	2014	2013	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
<b>TARGET DATE 2035 MODERATE</b>											
Vanguard Target Retirement 2035 Inv	-0.58%	-0.58%	19.12%	8.26%	-1.26%	7.24%	22.82%	12.23%	7.35%	9.22%	7.02%
Morningstar Lifetime Moderate 2035 Index	-0.82%	-0.82%	18.52%	10.07%	-2.58%	5.80%	22.04%	11.95%	7.31%	8.65%	-
2035 Moderate	-0.39%	-0.39%	19.40%	8.01%	-1.34%	5.34%	22.01%	12.50%	7.37%	8.80%	6.97%
<b>TARGET DATE 2040 MODERATE</b>											
Vanguard Target Retirement 2040 Inv	-0.53%	-0.53%	20.71%	8.73%	-1.59%	7.15%	24.37%	13.25%	7.86%	9.73%	7.34%
Morningstar Lifetime Moderate 2040 Index	-0.79%	-0.79%	19.87%	10.61%	-2.83%	5.51%	23.05%	12.86%	7.78%	9.03%	-
2040 Moderate	-0.44%	-0.44%	20.12%	7.48%	-1.42%	5.53%	23.38%	12.95%	7.27%	9.05%	6.63%
<b>TARGET DATE 2045 MODERATE</b>											
Vanguard Target Retirement 2045 Inv	-0.58%	-0.58%	21.42%	8.87%	-1.57%	7.16%	24.37%	13.68%	8.10%	9.88%	7.40%
Morningstar Lifetime Moderate 2045 Index	-0.78%	-0.78%	20.53%	10.84%	-3.03%	5.25%	23.07%	13.31%	7.96%	9.11%	-
2045 Moderate	-0.53%	-0.53%	20.49%	7.99%	-1.99%	5.03%	22.00%	13.14%	7.33%	8.74%	6.55%
<b>TARGET DATE 2050 MODERATE</b>											
Vanguard Target Retirement 2050 Inv	-0.55%	-0.55%	21.39%	8.85%	-1.58%	7.18%	24.34%	13.69%	8.11%	9.88%	7.41%
Morningstar Lifetime Moderate 2050 Index	-0.78%	-0.78%	20.78%	10.89%	-3.19%	5.00%	22.83%	13.47%	7.98%	9.05%	-
2050 Moderate	-0.52%	-0.52%	20.59%	7.99%	-1.79%	5.23%	23.68%	13.22%	7.40%	9.04%	6.80%
<b>TARGET DATE 2055 MODERATE</b>											
Vanguard Target Retirement 2055 Inv	-0.56%	-0.56%	21.38%	8.88%	-1.72%	7.19%	24.33%	13.69%	8.05%	9.85%	-
Morningstar Lifetime Moderate 2055 Index	-0.79%	-0.79%	20.95%	10.90%	-3.34%	4.74%	22.49%	13.57%	7.97%	8.96%	-
2055 Moderate	-0.64%	-0.64%	20.87%	8.38%	-1.55%	5.95%	23.75%	13.29%	7.66%	9.38%	7.88%

\*ANNUALIZED

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7.1

## PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY

Period Ending 3.31.18 | Q1 18

University of Maine System

INVESTMENT NAME	Q1 '18	YTD '18	2017	2016	2015	2014	2013	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
<b>TARGET DATE 2060+ MODERATE</b>											
Vanguard Target Retirement 2060 Inv	-0.55%	-0.55%	21.36%	8.84%	-1.68%	7.16%	24.35%	13.68%	8.05%	9.85%	-
Vanguard Target Retirement 2065 Inv	-0.60%	-0.60%	-	-	-	-	-	-	-	-	-
Morningstar Lifetime Moderate 2060 Index	-0.79%	-0.79%	21.06%	10.88%	-3.48%	4.53%	-	13.63%	7.94%	-	-
2060+ Moderate	-0.42%	-0.42%	20.99%	8.72%	-0.89%	7.24%	24.34%	13.48%	8.22%	9.93%	-
<b>ALLOCATION--85%+ EQUITY</b>											
CREF Stock R3	-0.43%	-0.43%	23.45%	9.17%	-0.84%	6.41%	27.83%	15.14%	9.03%	10.82%	7.49%
85% S&P 500, 15% BBgBarc Agg	-0.82%	-0.82%	18.92%	10.60%	1.38%	12.54%	26.65%	12.04%	9.37%	11.59%	8.76%
Allocation--85%+ Equity Universe	-0.75%	-0.75%	19.17%	8.61%	-2.36%	5.63%	27.47%	12.00%	6.86%	9.38%	6.71%
<b>LARGE COMPANY VALUE</b>											
JHancock Disciplined Value R6	-1.78%	-1.78%	19.33%	14.07%	-4.81%	11.04%	35.97%	12.84%	8.44%	11.60%	9.67%
Russell 1000 Value	-2.83%	-2.83%	13.66%	17.34%	-3.83%	13.45%	32.53%	6.95%	7.88%	10.78%	7.78%
Large Value Universe	-2.55%	-2.55%	15.88%	14.56%	-3.95%	10.50%	31.61%	8.92%	7.50%	10.27%	7.61%
<b>LARGE COMPANY BLEND</b>											
Vanguard Institutional Index I	-0.77%	-0.77%	21.79%	11.93%	1.37%	13.65%	32.35%	13.96%	10.75%	13.28%	9.50%
S&P 500 Index	-0.76%	-0.76%	21.83%	11.96%	1.38%	13.69%	32.39%	13.99%	10.78%	13.31%	9.49%
Large Blend Universe	-1.04%	-1.04%	20.31%	10.39%	-0.81%	11.33%	31.95%	12.86%	8.89%	11.75%	8.55%
<b>LARGE COMPANY GROWTH</b>											
Harbor Capital Appreciation Retirement	4.35%	4.35%	36.68%	-1.04%	10.99%	9.93%	37.66%	28.88%	14.07%	17.27%	11.93%
Russell 1000 Growth	1.42%	1.42%	30.21%	7.08%	5.67%	13.05%	33.48%	21.25%	12.90%	15.53%	11.34%
Large Growth Universe	2.58%	2.58%	28.34%	3.05%	3.86%	10.02%	34.35%	21.05%	10.84%	13.97%	9.94%

\*ANNUALIZED

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7.1

## PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY

Period Ending 3.31.18 | Q1 18

University of Maine System

INVESTMENT NAME	Q1 '18	YTD '18	2017	2016	2015	2014	2013	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
<b>MEDIUM COMPANY VALUE</b>											
Virtus Ceredex Mid Cap Value Equity IS	-0.79%	-0.79%	11.98%	20.53%	-5.63%	11.05%	31.21%	5.57%	7.93%	10.62%	10.99%
Russell Mid Cap Value	-2.50%	-2.50%	13.34%	20.00%	-4.78%	14.75%	33.46%	6.50%	7.23%	11.11%	9.81%
Mid Value Universe	-2.26%	-2.26%	12.97%	18.07%	-5.44%	9.65%	34.93%	6.76%	6.49%	10.04%	8.80%
<b>MEDIUM COMPANY BLEND</b>											
Vanguard Extended Market Index Inst	0.16%	0.16%	18.12%	16.15%	-3.24%	7.56%	38.42%	13.14%	8.08%	11.88%	10.44%
Russell Mid Cap	-0.46%	-0.46%	18.52%	13.80%	-2.44%	13.22%	34.76%	12.20%	8.01%	12.09%	10.21%
Mid Blend Universe	-1.26%	-1.26%	15.58%	14.33%	-4.42%	8.52%	34.50%	9.43%	6.29%	10.21%	8.84%
<b>MEDIUM COMPANY GROWTH</b>											
Goldman Sachs Growth Opportunities R6	3.88%	3.88%	27.24%	1.49%	-5.24%	11.44%	32.38%	21.44%	7.56%	11.41%	10.34%
Russell Mid Cap Growth	2.17%	2.17%	25.27%	7.33%	-0.20%	11.90%	35.74%	19.74%	9.17%	13.31%	10.61%
Mid Growth Universe	2.48%	2.48%	24.66%	5.94%	-0.69%	7.22%	34.98%	18.98%	8.50%	12.10%	9.48%
<b>FOREIGN LARGE VALUE</b>											
MFS International Value R6	-0.69%	-0.69%	27.25%	4.31%	6.85%	1.61%	27.80%	17.76%	9.70%	11.08%	7.40%
MSCI EAFE	-1.41%	-1.41%	25.62%	1.51%	-0.39%	-4.48%	23.29%	15.32%	6.05%	6.98%	3.23%
Foreign Large Value Universe	-1.45%	-1.45%	22.75%	3.10%	-3.24%	-6.27%	20.76%	12.88%	4.85%	5.56%	2.10%
<b>FOREIGN LARGE BLEND</b>											
Vanguard Total Intl Stock Index Inst	-0.45%	-0.45%	27.55%	4.70%	-4.24%	-4.15%	15.15%	17.08%	6.95%	6.43%	2.85%
MSCI EAFE	-1.41%	-1.41%	25.62%	1.51%	-0.39%	-4.48%	23.29%	15.32%	6.05%	6.98%	3.23%
Foreign Large Blend Universe	-0.80%	-0.80%	25.35%	1.00%	-1.57%	-4.98%	19.51%	15.45%	5.66%	6.24%	2.71%

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## PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY

Period Ending 3.31.18 | Q1 18

University of Maine System

INVESTMENT NAME	Q1 '18	YTD '18	2017	2016	2015	2014	2013	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
<b>FOREIGN LARGE GROWTH</b>											
Oppenheimer Intl Growth I	0.18%	0.18%	27.15%	-1.88%	3.63%	-6.80%	25.71%	18.22%	7.53%	7.42%	5.61%
MSCI EAFE	-1.41%	-1.41%	25.62%	1.51%	-0.39%	-4.48%	23.29%	15.32%	6.05%	6.98%	3.23%
Foreign Large Growth Universe	0.40%	0.40%	31.65%	-2.16%	0.89%	-3.86%	19.97%	21.00%	7.51%	7.64%	3.91%
<b>SMALL COMPANY VALUE</b>											
Victory Sycamore Small Company Opp I	-1.10%	-1.10%	11.88%	30.04%	-0.39%	6.80%	33.39%	10.62%	11.81%	12.92%	11.02%
Russell 2000 Value	-2.64%	-2.64%	7.84%	31.74%	-7.47%	4.22%	34.52%	5.13%	7.87%	9.96%	8.61%
Small Value Universe	-2.59%	-2.59%	9.21%	25.70%	-6.75%	3.39%	35.63%	5.95%	6.81%	9.36%	8.88%
<b>SMALL COMPANY GROWTH</b>											
Carillon Eagle Small Cap Growth R6	1.64%	1.64%	23.40%	10.45%	-0.39%	5.59%	34.70%	14.02%	9.16%	12.16%	11.17%
Russell 2000 Growth	2.30%	2.30%	22.17%	11.32%	-1.38%	5.60%	43.30%	18.63%	8.77%	12.90%	10.95%
Small Growth Universe	2.56%	2.56%	22.31%	11.24%	-2.28%	2.70%	41.24%	18.69%	8.80%	12.00%	10.40%
<b>EMERGING MARKETS</b>											
DFA Emerging Markets Core Equity I	1.68%	1.68%	36.55%	12.35%	-14.86%	-0.91%	-2.64%	22.14%	9.22%	5.27%	4.33%
MSCI Emerging Markets	1.47%	1.47%	37.75%	11.60%	-14.60%	-1.82%	-2.27%	25.37%	9.21%	5.37%	3.36%
Emerging Markets Universe	1.99%	1.99%	35.22%	8.24%	-13.59%	-2.74%	0.32%	23.48%	8.44%	4.86%	3.11%
<b>SPECIALTY-PRIVATE REAL ESTATE</b>											
TIAA Real Estate Account	0.95%	0.95%	4.37%	5.20%	8.16%	12.22%	9.65%	4.19%	5.20%	7.69%	2.52%
NCREIF Property Index	1.70%	1.70%	6.98%	7.97%	13.33%	11.81%	10.99%	7.13%	8.73%	10.00%	6.09%
Specialty-Real Estate Universe	-6.93%	-6.93%	5.74%	6.63%	2.46%	28.39%	1.69%	-2.42%	0.91%	5.60%	5.93%

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## SECTION 4: FUND FACT SHEETS

Period Ending 3.31.18 | Q1 18

University of Maine System

### SECTION 4: FUND FACT SHEETS

Fund Fact Sheets.....

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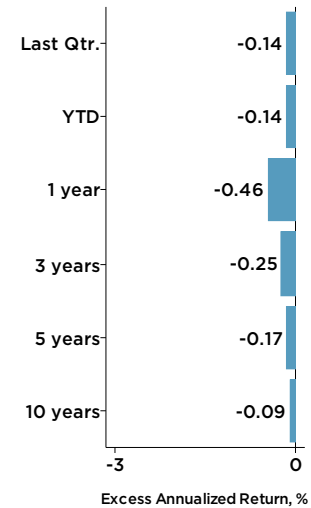
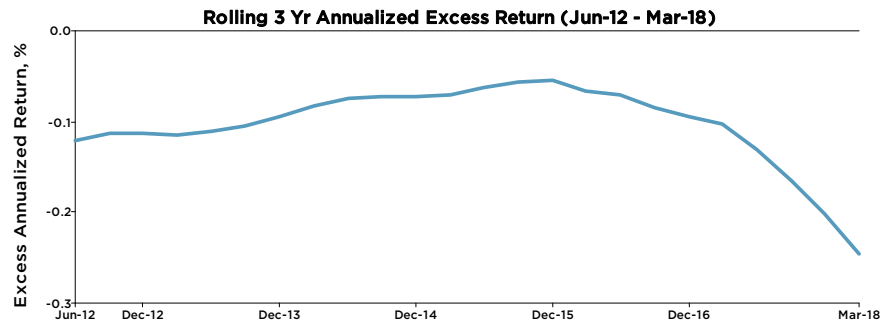
## CREF MONEY MARKET R3

Period Ending 3.31.18 | Q1 18

## INDUSTRY ANALYSIS

Money market reform passed in 2010 imposed new mandates on 2a-7 managers including shorter average maturities, tighter restrictions on allowable securities, increased liquidity mandates and mandatory stress testing by fund managers. In July 2014, the SEC passed further 2a-7 regulations that mandated a floating rate NAV for some products and allowed managers, under certain circumstances, to limit redemptions or charge a fee for withdrawals. The July regulations will have a multi-year phase-in period,

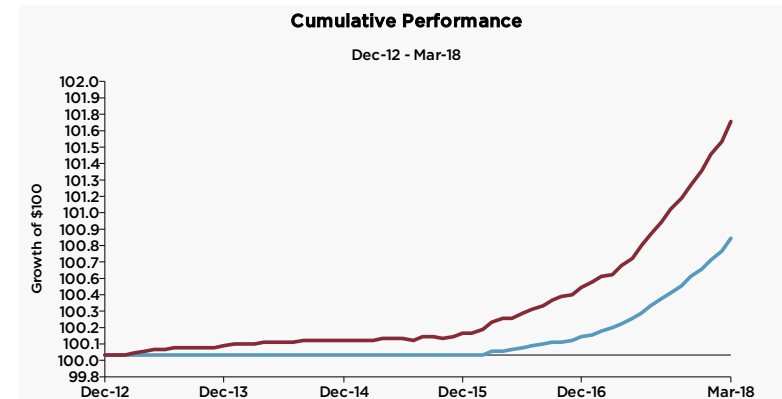
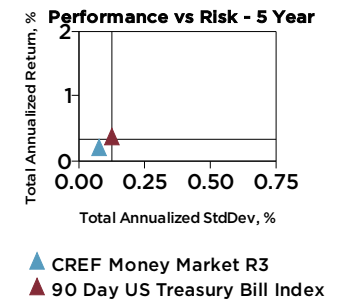
	CREF Money Market R3	90 Day US Treasury Bill Index
<b>TRAILING RETURNS</b>		
Last Qtr.	0.22	0.35
YTD	0.22	0.35
1 Year	0.65	1.11
3 Years	0.28	0.53
5 Years	0.17	0.34
10 Years	0.25	0.34
<b>CALENDAR RETURNS</b>		
2017	0.50	0.86
2016	0.13	0.33
2015	0.00	0.05
2014	0.00	0.03
2013	0.00	0.07
<b>KEY MEASURES / 5 YEAR</b>		
5 Year	0.08	0.13



CREF Money Market R3  
■ Excess

## INVESTMENT PROFILE

Ticker	-
Strategy Incept Date	-
Prospectus Exp Ratio	-
12 Mo Yield	-



Performance Disclosure: The performance data quoted represents past performance and does not guarantee future results. The investment return and principal value of an investment will fluctuate thus an investor's shares, when redeemed, may be worth more or less than their original cost. Current performance may be lower or higher than return data quoted herein. For performance data current to the most recent month-end, please call (800) 216-0645. Index averages are derived from Morningstar. The opinions expressed in this report are subject to change without notice. This material is not a solicitation or an offer to buy any security or to participate in any investment strategy and is not guaranteed as to accuracy. Any such solicitation must be made by prospectus only. To obtain a prospectus, please call your Financial Advisor at (800) 216-0645. CAPTRUST Financial Advisors.

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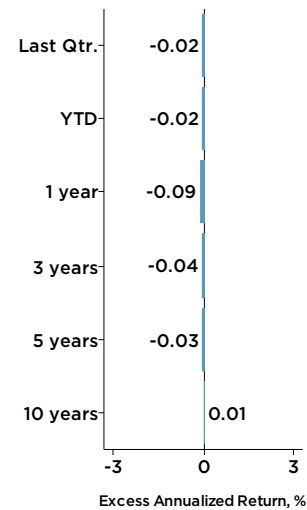
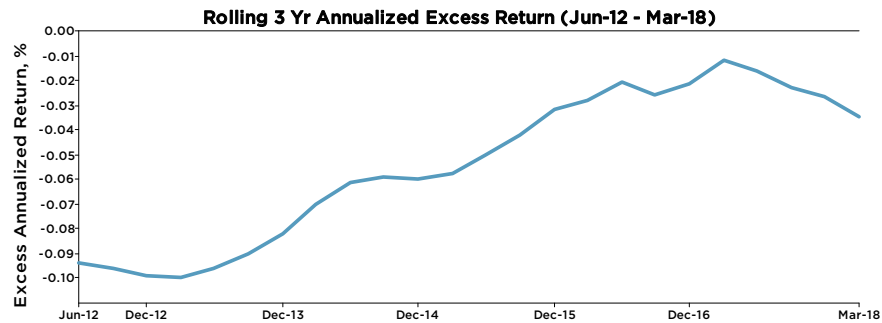
## VANGUARD FEDERAL MONEY MARKET

Period Ending 3.31.18 | Q1 18

## INDUSTRY ANALYSIS

Money market reform passed in 2010 imposed new mandates on 2a-7 managers including shorter average maturities, tighter restrictions on allowable securities, increased liquidity mandates and mandatory stress testing by fund managers. In July 2014, the SEC passed further 2a-7 regulations that mandated a floating rate NAV for some products and allowed managers, under certain circumstances, to limit redemptions or charge a fee for withdrawals. The July regulations will have a multi-year phase-in period,

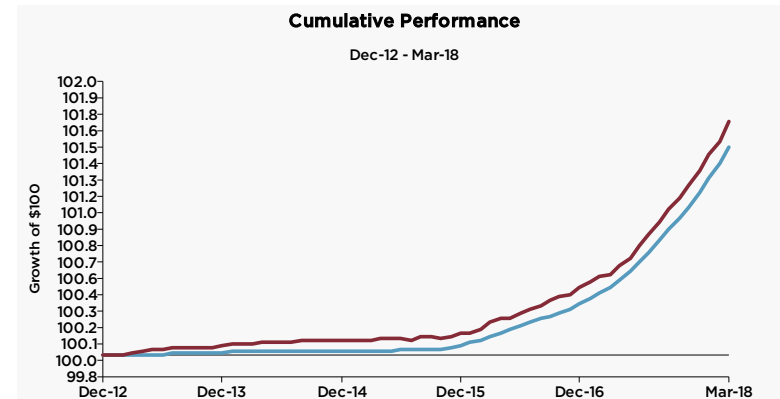
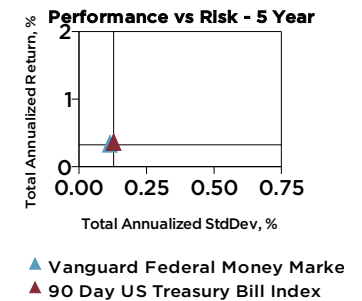
	Vanguard Federal Money Market	90 Day US Treasury Bill Index
<b>TRAILING RETURNS</b>		
Last Qtr.	0.33	0.35
YTD	0.33	0.35
1 Year	1.02	1.11
3 Years	0.49	0.53
5 Years	0.30	0.34
10 Years	0.35	0.34
<b>CALENDAR RETURNS</b>		
2017	0.81	0.86
2016	0.30	0.33
2015	0.04	0.05
2014	0.01	0.03
2013	0.02	0.07
<b>KEY MEASURES / 5 YEAR</b>		
5 Year	0.12	0.13



Vanguard Federal Money Market  
■ Excess

## INVESTMENT PROFILE

Ticker	VMFXX
Strategy Incept Date	07/13/1981
Prospectus Exp Ratio	0.11%
12 Mo Yield	1.02%



Performance Disclosure: The performance data quoted represents past performance and does not guarantee future results. The investment return and principal value of an investment will fluctuate thus an investor's shares, when redeemed, may be worth more or less than their original cost. Current performance may be lower or higher than return data quoted herein. For performance data current to the most recent month-end, please call (800) 216-0645. Index averages are derived from Morningstar. The opinions expressed in this report are subject to change without notice. This material is not a solicitation or an offer to buy any security or to participate in any investment strategy and is not guaranteed as to accuracy. Any such solicitation must be made by prospectus only. To obtain a prospectus, please call your Financial Advisor at (800) 216-0645. CAPTRUST Financial Advisors.

7.1

## TIAA TRADITIONAL – GROUP RETIREMENT ANNUITY (GRA)

Period Ending 3.31.18 | Q1 18

7.1

## INDUSTRY ANALYSIS

The insurance providers and industry as a whole have historically exhibited a high degree of sensitivity to broad financial markets. The economic and market downturn of 2008 and 2009 proved to be no exception as many of these providers watched as the assets on their balance sheets – public and private – were marked meaningfully lower. The shrinking assets resulted in deterioration of capital ratios and reserve amounts across the industry, leading to system-wide downgrades from the ratings agencies. However, the drive in equity markets since the nadir in March of 2009 have presented a formidable rally across every major fixed income sector. As this rally strengthened the balance sheets of insurers, attention shifted away from the industry, which has now been able to breathe a collective sigh of relief. While the insurance industry has staged an impressive recovery, investors should use this episode as a reminder of the risks inherent with single-insurer backed products.

## CAPTRUST ANALYSIS

## Jennifer Dunbar – Senior Manager| Investment Research

The TIAA Traditional Annuity is a guaranteed annuity account (group annuity contract) that is backed by the financial strength and claims-paying ability of TIAA. The product offers participants guaranteed principal and a contractually specified interest rate. The contractually agreed upon minimum annual interest rate is 3%. The TIAA Board of Trustees also reserves the right each year to declare a higher crediting rate to participants which remains effective for a twelve month period that begins each March 1.

The product has a payout structure at the participant level that varies the length of time it takes for a participant to fully redeem. This payout structure is individual contract-specific.

## GROSS CREDITING RATES - For Contributions Applied:

1/1/17 - 3/31/17	4/1/17 - 6/30/17	7/1/17 - 9/30/17	10/1/17 - 12/31/17	1/1/18 - 3/31/18
4.00%	4.00%	4.00%	4.00%	4.00%

## INVESTMENT DETAILS

Crediting Rate Details:	Current contributions are invested at the new money rate, which can change monthly but is guaranteed until the last day of February. Old Money is grouped by time period into vintages, rate on all vintages are reviewed for reset every March 1 <sup>st</sup> .
Competing Options:	Allowed.
Minimum Rate:	3.00% during accumulation stage and 2.50% during annuity payout stage, reset annually.

## LIQUIDITY PROVISIONS

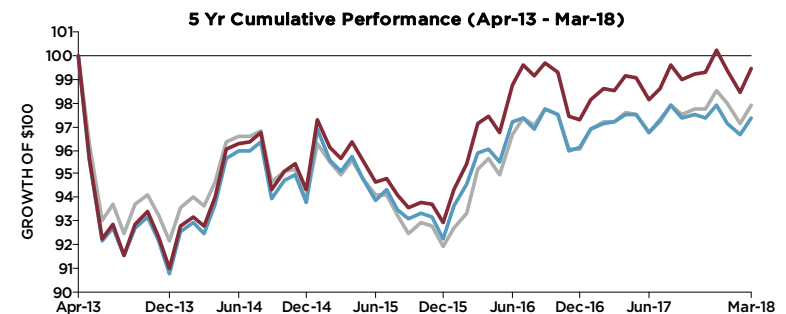
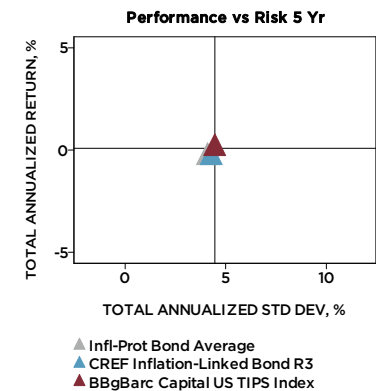
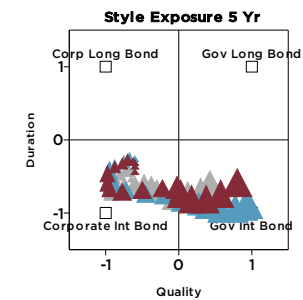
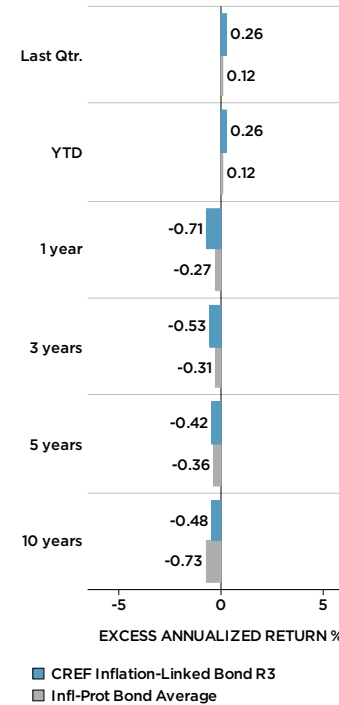
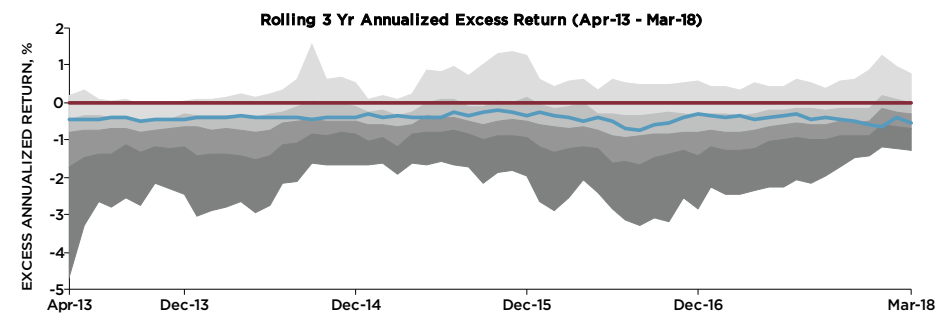
Plan Sponsor	Participant
Not applicable. Contracts are individually owned by the participant.	Lump Sum withdrawals are available within 120 days of termination of employment with a 2.5% surrender charge. Transfers and withdrawals can be made in 10 annual installments (paid over 9 years and 1 day).

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## CREF INFLATION-LINKED BOND R3

Period Ending 3.31.18 | Q1 18

	CREF Inflation-Linked Bond R3	Peer Group Rank	BBgBarc Capital US TIPS Index	Infl-Prot Bond	# of Funds
<b>KEY MEASURES / 5 YEAR</b>					
Standard Deviation	4.36	50%	4.51	4.16	214
Sharpe Ratio	-0.16	50%	-0.06	-0.16	214
Alpha	-0.43	51%	0.00	-0.41	214
Beta	0.96	55%	1.00	0.85	214
R-Squared	97.64	44%	100.00	85.17	214
Up Mkt Capture	88.06	56%	100.00	82.50	214
Down Mkt Capture	95.58	36%	100.00	88.70	214
Information Ratio	-0.60	61%	NA	-0.68	214
<b>TRAILING RETURNS</b>					
Last Qtr.	-0.53	31%	-0.79	-0.67	233
YTD	-0.53	31%	-0.79	-0.67	233
1 Year	0.21	73%	0.92	0.65	233
3 Years	0.77	67%	1.30	1.00	226
5 Years	-0.37	52%	0.05	-0.32	214
10 Years	2.45	43%	2.93	2.19	153
<b>CALENDAR RETURNS</b>					
2017	1.85	73%	3.01	2.54	238
2016	4.23	53%	4.68	4.58	245
2015	-1.68	36%	-1.44	-2.22	254
2014	3.34	22%	3.64	1.94	253
2013	-9.01	67%	-8.60	-7.56	253



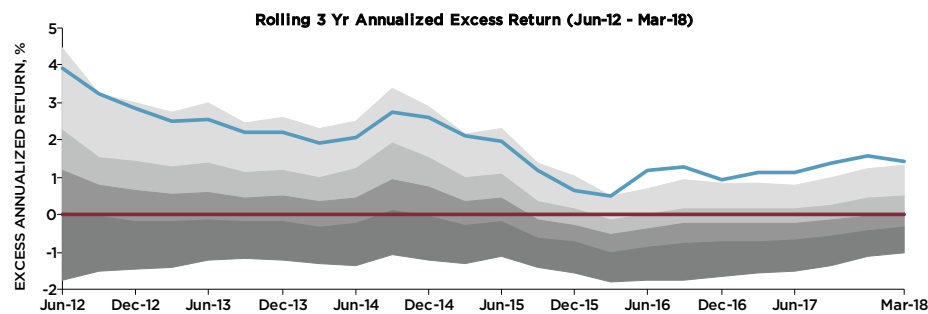
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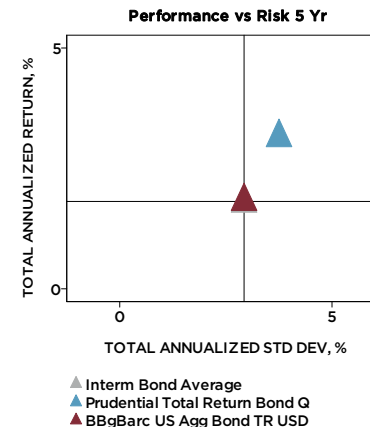
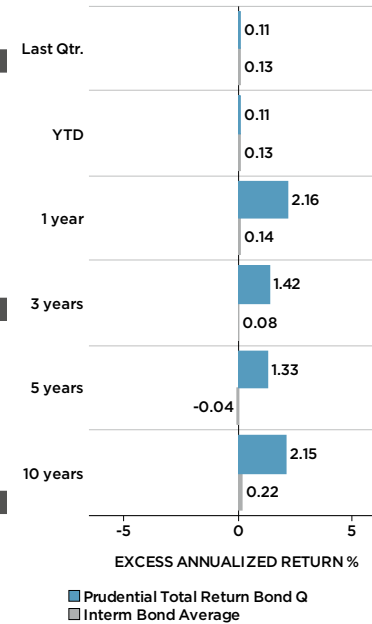
## PRUDENTIAL TOTAL RETURN BOND Q

Period Ending 3.31.18 | Q1 18

KEY MEASURES / 5 YEAR	Prudential Total Return Bond Q	Peer Group Rank	BBgBarc US Agg Bond TR USD	Interm Bond	# of Funds
Standard Deviation	3.76	96%	2.93	2.93	920
Sharpe Ratio	0.75	12%	0.51	0.50	920
Alpha	1.01	8%	0.00	0.08	920
Beta	1.22	1%	1.00	0.92	920
R-Squared	90.83	50%	100.00	86.22	920
Up Mkt Capture	138.23	1%	100.00	94.85	920
Down Mkt Capture	116.32	94%	100.00	93.35	920
Information Ratio	1.00	5%	NA	-0.22	920
TRAILING RETURNS					
Last Qtr.	-1.35	44%	-1.46	-1.33	1023
YTD	-1.35	44%	-1.46	-1.33	1023
1 Year	3.37	4%	1.20	1.35	1011
3 Years	2.62	5%	1.20	1.28	949
5 Years	3.16	3%	1.82	1.78	920
10 Years	5.78	2%	3.63	3.85	806
CALENDAR RETURNS					
2017	6.71	2%	3.54	3.81	1021
2016	4.83	13%	2.65	3.26	1043
2015	0.09	44%	0.55	-0.29	1046
2014	7.25	5%	5.97	5.17	1089
2013	-0.91	28%	-2.02	-1.40	1108



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## INVESTMENT PROFILE

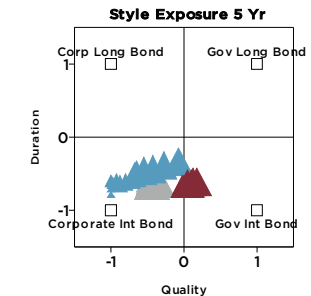
Ticker	PTRQX
CUSIP	74440B884
Net Assets \$MM	\$32,396.00
Manager Names	Team Managed
Manager Tenure	15.4 Years
Prospectus Exp Ratio	0.41%
Cat Median Exp Ratio	0.79%
Current 12b-1	N/A
Annld Ret Since Incept	4.75%
Inception Date	12/27/2010
Phone Number	800-225-1852
Sub Advisor	PGIM Fixed Income

## HOLDINGS OVERVIEW

Total Number of Holdings	2770
% Assets in Top 10 Holdings	50.04%
Avg Mkt Cap \$MM	N/A
Turnover Ratio	95.00%

## TOP HOLDINGS

US 5 Year Note (CBT) June	25.71%
US 10 Year Note (CBT) Jun	9.87%
Us Ultra Bond Cbt Jun18	6.38%
2 Year US Treasury Note Fi	3.70%
SGX 10-Year Mini Japanese	1.03%

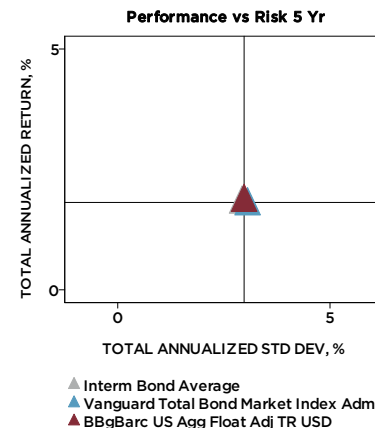
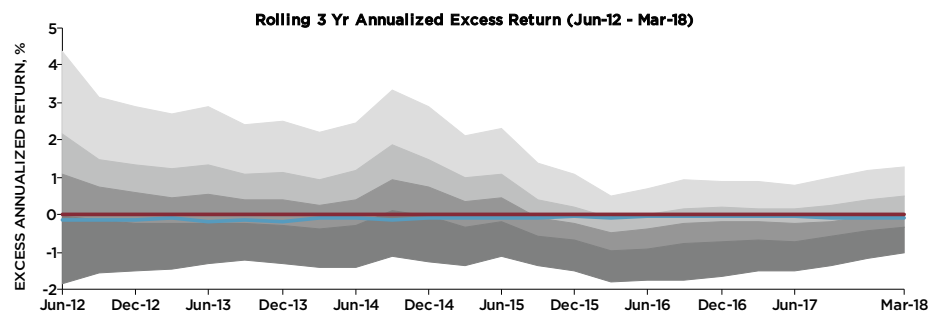


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## VANGUARD TOTAL BOND MARKET INDEX ADM

Period Ending 3.31.18 | Q1 18

	Vanguard Total Bond Market Index Adm	Peer Group Rank	BBgBarc US Agg Float Adj TR USD	Intern Bond	# of Funds
<b>KEY MEASURES / 5 YEAR</b>					
Standard Deviation	3.06	71%	2.98	2.93	920
Sharpe Ratio	0.46	55%	0.50	0.50	920
Alpha	-0.12	62%	0.00	0.10	920
Beta	1.02	11%	1.00	0.91	920
R-Squared	99.37	3%	100.00	86.23	920
Up Mkt Capture	101.20	30%	100.00	93.75	920
Down Mkt Capture	104.54	78%	100.00	91.69	920
Information Ratio	-0.34	66%	NA	-0.20	920
<b>TRAILING RETURNS</b>					
Last Qtr.	-1.47	59%	-1.48	-1.33	1023
YTD	-1.47	59%	-1.48	-1.33	1023
1 Year	1.12	57%	1.24	1.35	1011
3 Years	1.12	58%	1.20	1.28	949
5 Years	1.73	51%	1.82	1.78	920
10 Years	3.57	68%	NA	3.85	806
<b>CALENDAR RETURNS</b>					
2017	3.57	57%	3.63	3.81	1021
2016	2.60	65%	2.75	3.26	1043
2015	0.40	28%	0.44	-0.29	1046
2014	5.89	31%	5.85	5.17	1089
2013	-2.15	68%	-1.97	-1.40	1108



## INVESTMENT PROFILE

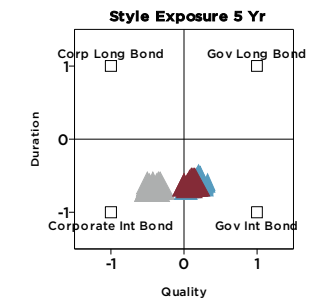
Ticker	VBTLX
CUSIP	921937603
Net Assets \$MM	\$197,795.00
Manager Names	Team Managed
Manager Tenure	5.1 Years
Prospectus Exp Ratio	0.05%
Cat Median Exp Ratio	0.79%
Current 12b-1	N/A
Annld Ret Since Incept	4.04%
Inception Date	11/12/2001
Phone Number	800-662-7447
Sub Advisor	N/A

## HOLDINGS OVERVIEW

Total Number of Holdings	17491
% Assets in Top 10 Holdings	4.07%
Avg Mkt Cap \$MM	N/A
Turnover Ratio	55.00%

## TOP HOLDINGS

United States Treasury Note	0.47%
United States Treasury Note	0.43%
United States Treasury Note	0.42%
United States Treasury Note	0.42%
United States Treasury Note	0.41%

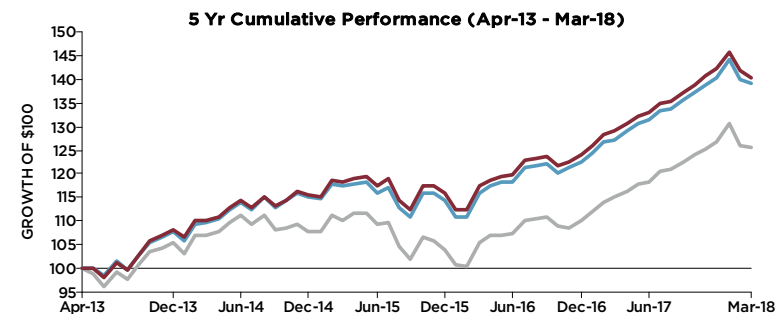
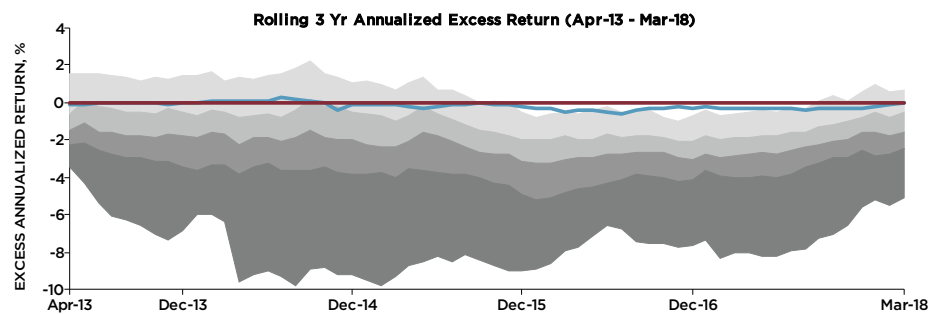
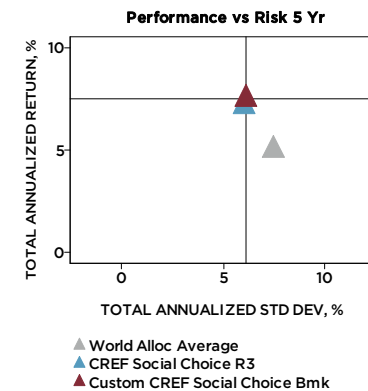
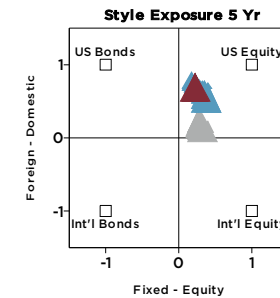
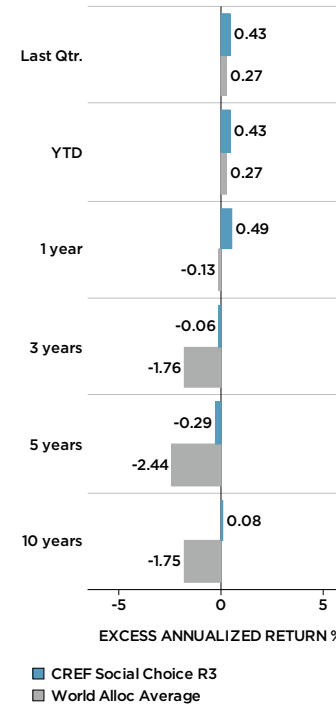


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## CREF SOCIAL CHOICE R3

Period Ending 3.31.18 | Q1 18

KEY MEASURES / 5 YEAR	CREF Social Choice R3	Peer Group Rank	Custom CREF Social Choice Bmk	World Alloc	# of Funds
Standard Deviation	6.03	13%	6.14	7.48	401
Sharpe Ratio	1.13	1%	1.16	0.64	401
Alpha	-0.12	1%	0.00	-3.12	401
Beta	0.98	80%	1.00	1.09	401
R-Squared	99.04	1%	100.00	82.49	401
Up Mkt Capture	97.13	46%	100.00	94.81	401
Down Mkt Capture	98.69	10%	100.00	129.75	401
Information Ratio	-0.44	29%	NA	-0.73	401
TRAILING RETURNS					
Last Qtr.	-0.71	50%	-1.14	-0.86	495
YTD	-0.71	50%	-1.14	-0.86	495
1 Year	9.30	40%	8.81	8.69	478
3 Years	5.86	17%	5.92	4.17	427
5 Years	7.15	9%	7.44	5.00	401
10 Years	6.47	5%	6.39	4.64	255
CALENDAR RETURNS					
2017	14.27	52%	14.44	14.38	480
2016	7.40	25%	7.12	5.82	495
2015	-0.87	18%	0.20	-4.03	507
2014	6.83	5%	6.91	1.93	505
2013	16.68	27%	16.23	11.81	503



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## VANGUARD TARGET RETIREMENT

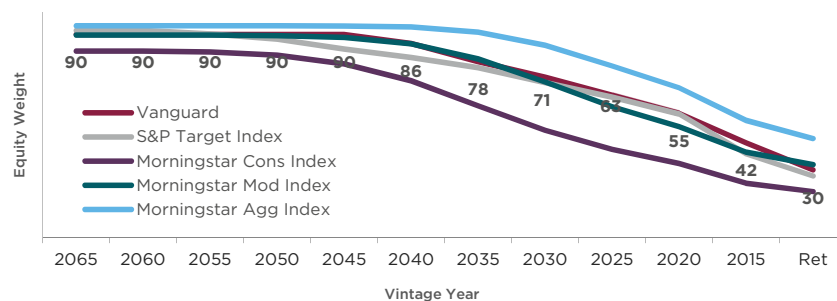
Period Ending 3.31.18 | Q1 18

## Investor Assumptions/Glidepath Methodology

Glidepath Management	• Through retirement (assumed at age 65) ending 7 years after retirement
Assumed Investor Savings Rate:	• Contributions start at 5% at age 25 and increase to 10% at age 65. Also includes a 50% employer match up to 3% of salary.
Assumed Investor Income Growth Rate	• 1.1% annual salary growth
Income Replacement	• The portfolios are designed to provide withdrawals in retirement based on multiples of an investor's age 65 salary.
Assumed Accumulated Savings at Retirement	• N/A
Life Expectancy	• Through age 95
Asset Allocation Flexibility	• Strict targets with narrow ranges.
Other Assumptions	• Glidepath was tested against 10,000 potential lifetime return outcomes

Vanguard uses a proprietary capital markets modeling tool to statistically analyze historical data, including interest rates, inflation, and other risk factors for global equities, fixed income, and commodity markets. This tool is used to generate forward-looking distributions of expected returns. Then, by combining these figures with their investor assumptions, Vanguard constructs target portfolios with asset allocations that seek to provide the highest probability of a successful outcome (not outliving retirement savings).

## Target Asset Allocation Glidepath per Vintage Year



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## Investment Profile

% Open Architecture:	0%	Active/Passive:	Passive
Inception Date:	10-27-2003	% Active:	0%
Net Assets \$MM:	\$243,591	Manager Tenure:	5.17 years (longest)
Manager Name:	Team	Expense Range:	0.13% - 0.15%
Avg # of Holdings:	5	Investment Structure:	Mutual Fund

## Dedicated Asset Class Granularity/Diversification

Emerging Market Equities	Through Intl Index Fund
International/Global Debt	Yes
Inflation-Protected Securities	Yes
High Yield Fixed Income	No
Real Estate	No
Commodities	No

The Vanguard Target Retirement funds allocate to five broad index funds that provide comprehensive exposure to U.S. and non-U.S. equity and bond markets. Using index funds allows Vanguard to provide investment diversification at a low cost while also producing returns in line with equity and fixed income markets. Through its five index funds, the strategies gain exposure to over 25 sub-asset classes, capturing over 90% of the world's investable market.

7.1



## VANGUARD TARGET RETIREMENT

Period Ending 3.31.18 | Q1 18

## Material Changes to the Series

## 2006:

- Increased minimum equity allocation from 20% to 30%
- Added Emerging Markets Equity

## Rationale:

- Participant behavior showed lower savings rate
- Decreased costs within the EM space led to increased liquidity

## 2010:

- Collapsed three international equity index funds (Europe, Pacific, and Emerging Markets) with Vanguard Total International Stock Index

## Rationale:

- More cost-effective way to gain international exposure

## 2013:

- Replaced the broad TIPs fund with a short-term TIPs allocation
- Eliminated the Prime Money Market fund
- Added a 20% International Bond Index Allocation

## Rationale:

- Short-Term TIPs provide better inflation exposure with lower interest rate risk
- Deemed to be an unnecessary asset class
- Dedicated exposure to move more in line with the Global fixed income Market Cap; better FI diversification

## 2015:

- Increased international stock allocation from 30% to 40%
- Increased International bond allocation from 20% to 30%

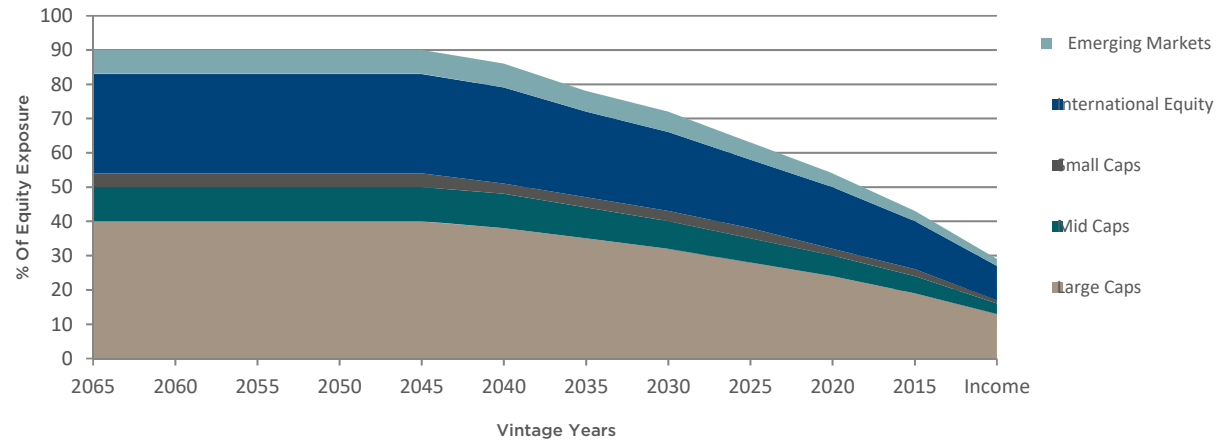
## Rationale:

- Move to be more in line with the Global Market Cap

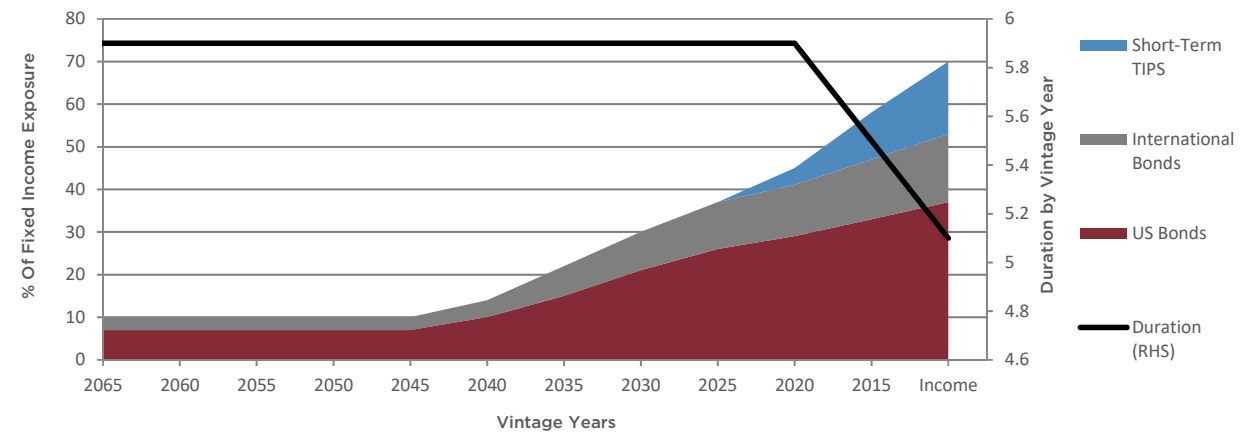
\*All information provided by the asset manager, as of 12/31/17. Asset allocations shown are static in nature and do not incorporate any tactical views implemented by the manager.

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## Equity Exposure



## Fixed Income Exposure



7.1

## TARGET DATE ANALYSIS

Period Ending 3.31.18 | Q1 18

	3 Year				5 Year			
	Beta	Sharpe	Up Capture	Down Capture	Beta	Sharpe	Up Capture	Down Capture
Vanguard Target Retirement 2015 Inv	0.98	0.84	97.62	96.04	0.99	1.14	100.80	95.79
Morningstar Target Date 2015	0.97	0.76	95.19	99.79	0.97	0.94	92.98	102.30
S&P Target Date 2015 TR	1.00	0.83	100.00	100.00	1.00	1.08	100.00	100.00

	3 Year				5 Year			
	Beta	Sharpe	Up Capture	Down Capture	Beta	Sharpe	Up Capture	Down Capture
Vanguard Target Retirement 2025 Inv	1.03	0.84	104.30	103.25	1.02	1.13	104.94	100.47
Morningstar Target Date 2025	1.00	0.72	96.38	103.76	1.00	0.95	96.09	103.44
S&P Target Date 2025 TR	1.00	0.83	100.00	100.00	1.00	1.06	100.00	100.00

	3 Year				5 Year			
	Beta	Sharpe	Up Capture	Down Capture	Beta	Sharpe	Up Capture	Down Capture
Vanguard Target Retirement 2045 Inv	1.06	0.81	104.51	105.33	1.04	1.06	104.70	103.25
Morningstar Target Date 2045	1.05	0.74	100.30	106.67	1.03	0.95	99.24	104.59
S&P Target Date 2045 TR	1.00	0.84	100.00	100.00	1.00	1.05	100.00	100.00

\*Lowest cost share class shown

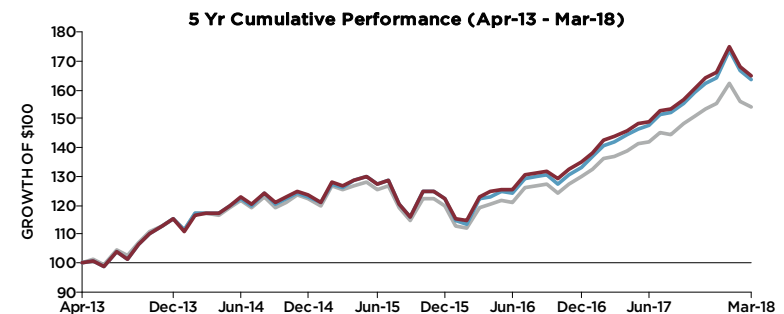
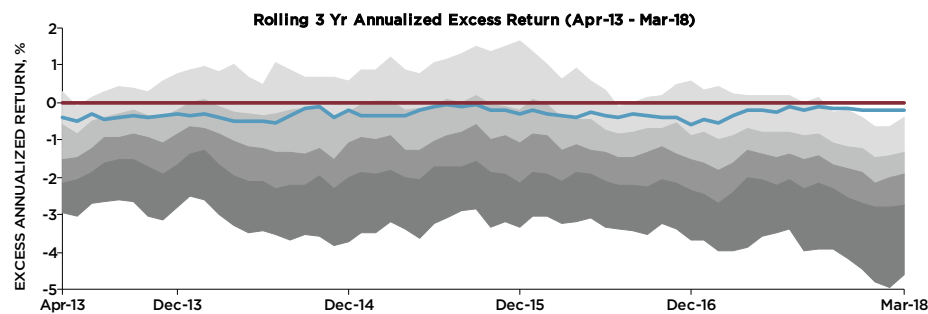
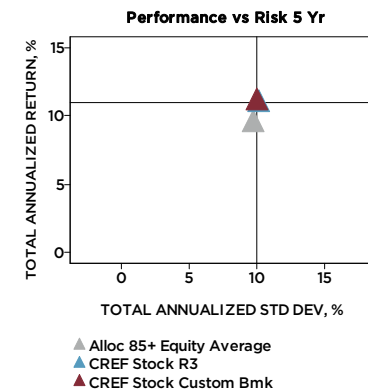
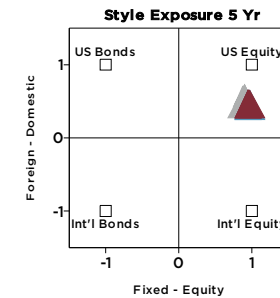
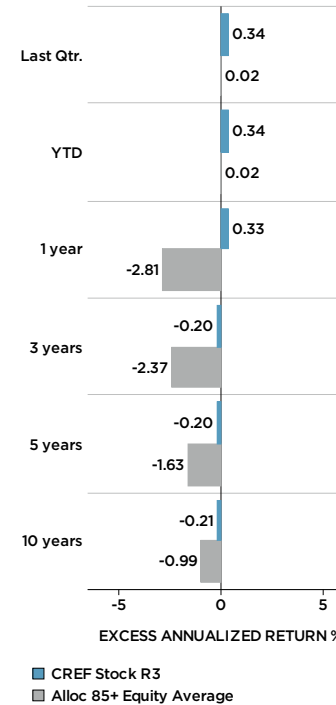
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## CREF STOCK R3

Period Ending 3.31.18 | Q1 18

KEY MEASURES / 5 YEAR	CREF Stock R3	Peer Group Rank	CREF Stock Custom Bmk	Alloc 85+ Equity	# of Funds
Standard Deviation	10.07	82%	10.03	9.66	177
Sharpe Ratio	1.04	16%	1.06	0.94	177
Alpha	-0.21	23%	0.00	-0.91	177
Beta	1.00	9%	1.00	0.93	177
R-Squared	99.58	1%	100.00	94.13	177
Up Mkt Capture	100.00	4%	100.00	89.89	177
Down Mkt Capture	101.83	86%	100.00	96.44	177
Information Ratio	-0.27	18%	NA	-0.74	177
TRAILING RETURNS					
Last Qtr.	-0.43	43%	-0.77	-0.75	200
YTD	-0.43	43%	-0.77	-0.75	200
1 Year	15.14	17%	14.81	12.00	199
3 Years	9.03	3%	9.23	6.86	196
5 Years	10.82	9%	11.01	9.38	177
10 Years	7.49	15%	7.69	6.71	148
CALENDAR RETURNS					
2017	23.45	7%	23.13	19.17	199
2016	9.17	24%	10.25	8.61	209
2015	-0.84	26%	-1.02	-2.36	211
2014	6.41	33%	7.41	5.63	204
2013	27.83	35%	28.07	27.47	184

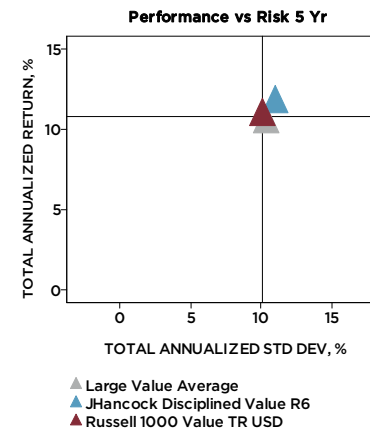
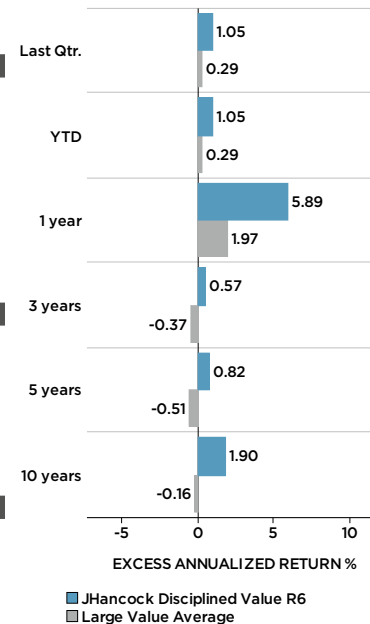
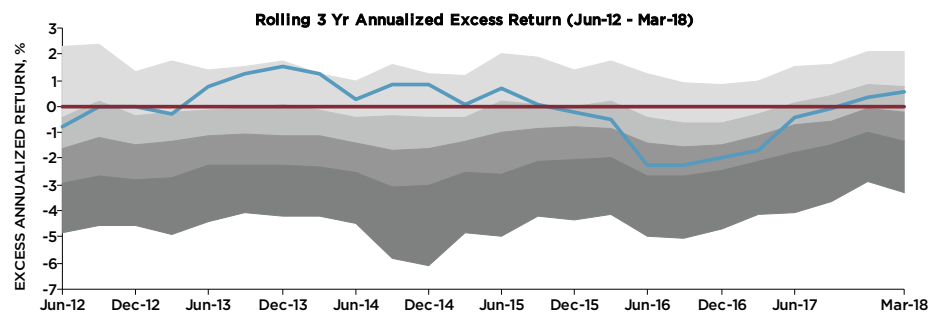


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# JHancock Disciplined Value R6

Period Ending 3.31.18 | Q1 18

	JHancock Disciplined Value R6	Peer Group Rank	Russell 1000 Value TR USD	Large Value	# of Funds
<b>KEY MEASURES / 5 YEAR</b>					
Standard Deviation	10.98	75%	10.02	10.39	1099
Sharpe Ratio	1.03	37%	1.04	0.97	1099
Alpha	0.25	38%	0.00	-0.35	1099
Beta	1.05	28%	1.00	0.98	1099
R-Squared	92.71	53%	100.00	90.52	1099
Up Mkt Capture	104.14	20%	100.00	96.35	1099
Down Mkt Capture	99.99	54%	100.00	97.83	1099
Information Ratio	0.25	19%	NA	-0.16	1099
<b>TRAILING RETURNS</b>					
Last Qtr.	-1.78	21%	-2.83	-2.55	1261
YTD	-1.78	21%	-2.83	-2.55	1261
1 Year	12.84	8%	6.95	8.92	1244
3 Years	8.44	32%	7.88	7.50	1164
5 Years	11.60	18%	10.78	10.27	1099
10 Years	9.67	4%	7.78	7.61	949
<b>CALENDAR RETURNS</b>					
2017	19.33	14%	13.66	15.88	1266
2016	14.07	53%	17.34	14.56	1324
2015	-4.81	68%	-3.83	-3.95	1335
2014	11.04	47%	13.45	10.50	1335
2013	35.97	14%	32.53	31.61	1313



## INVESTMENT PROFILE

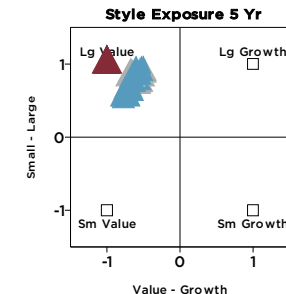
Ticker	JDVWX
CUSIP	47803U418
Net Assets \$MM	\$15,000.00
Manager Names	Team Managed
Manager Tenure	21.3 Years
Prospectus Exp Ratio	0.72%
Cat Median Exp Ratio	1.08%
Current 12b-1	0.00%
Annld Ret Since Incept	14.52%
Inception Date	09/01/2011
Phone Number	888-972-8696
Sub Advisor	Boston Partners Global Investors, Inc

## HOLDINGS OVERVIEW

Total Number of Holdings	86
% Assets in Top 10 Holdings	33.75%
Avg Mkt Cap \$MM	\$91,340.66
Turnover Ratio	65.00%

## TOP HOLDINGS

JPMorgan Chase & Co	5.05%
Bank of America Corporal	5.01%
Berkshire Hathaway Inc B	4.23%
Citigroup Inc	3.68%
Cisco Systems Inc	2.93%



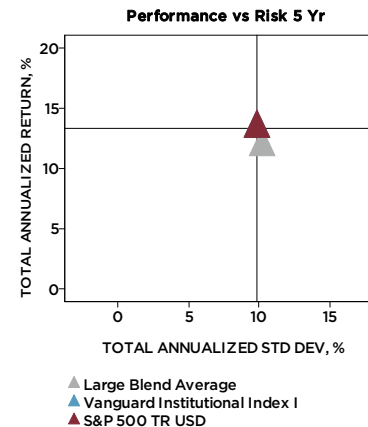
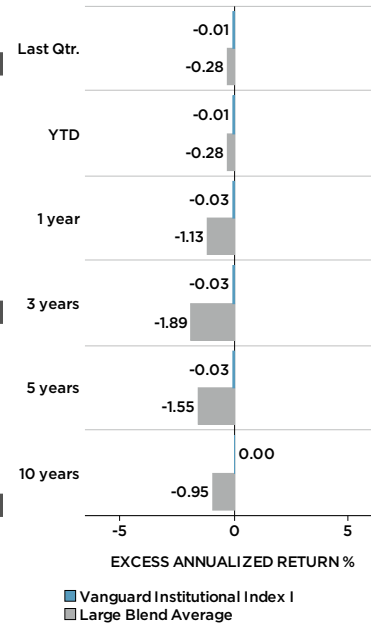
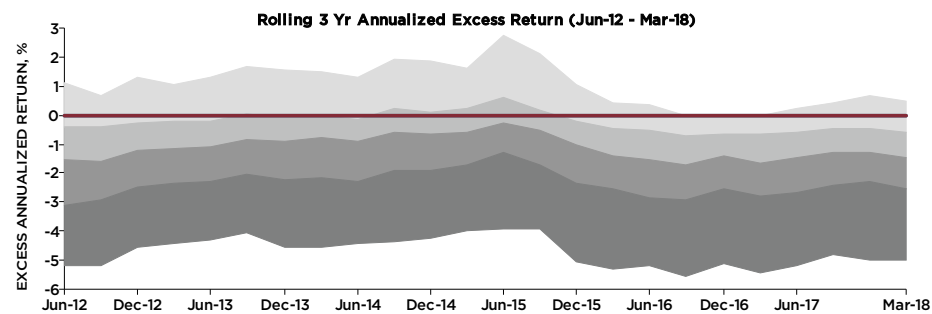
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## VANGUARD INSTITUTIONAL INDEX I

Period Ending 3.31.18 | Q1 18

	Vanguard Institutional Index I	Peer Group Rank	S&P 500 TR USD	Large Blend	# of Funds
<b>KEY MEASURES / 5 YEAR</b>					
Standard Deviation	9.87	30%	9.87	10.23	1187
Sharpe Ratio	1.31	7%	1.31	1.12	1187
Alpha	-0.03	13%	0.00	-1.49	1187
Beta	1.00	54%	1.00	1.00	1187
R-Squared	100.00	1%	100.00	92.52	1187
Up Mkt Capture	99.89	25%	100.00	94.96	1187
Down Mkt Capture	100.08	23%	100.00	104.91	1187
Information Ratio	-2.47	91%	NA	-1.24	1187
<b>TRAILING RETURNS</b>					
Last Qtr.	-0.77	41%	-0.76	-1.04	1370
YTD	-0.77	41%	-0.76	-1.04	1370
1 Year	13.96	35%	13.99	12.86	1336
3 Years	10.75	10%	10.78	8.89	1257
5 Years	13.28	13%	13.31	11.75	1187
10 Years	9.50	18%	9.49	8.55	1051
<b>CALENDAR RETURNS</b>					
2017	21.79	30%	21.83	20.31	1344
2016	11.93	26%	11.96	10.39	1413
2015	1.37	21%	1.38	-0.81	1473
2014	13.65	18%	13.69	11.33	1508
2013	32.35	43%	32.39	31.95	1514



## INVESTMENT PROFILE

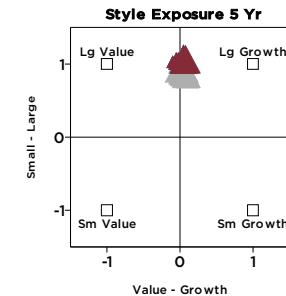
Ticker	VINIX
CUSIP	922040100
Net Assets \$MM	\$220,311.00
Manager Names	Team Managed
Manager Tenure	17.3 Years
Prospectus Exp Ratio	0.04%
Cat Median Exp Ratio	1.10%
Current 12b-1	N/A
Annld Ret Since Incept	9.81%
Inception Date	07/31/1990
Phone Number	888-809-8102
Sub Advisor	N/A

## HOLDINGS OVERVIEW

Total Number of Holdings	512
% Assets in Top 10 Holdings	20.58%
Avg Mkt Cap \$MM	\$100,151.04
Turnover Ratio	5.00%

## TOP HOLDINGS

Apple Inc	3.94%
Microsoft Corp	3.11%
Amazon.com Inc	2.60%
Facebook Inc A	1.83%
JPMorgan Chase & Co	1.72%

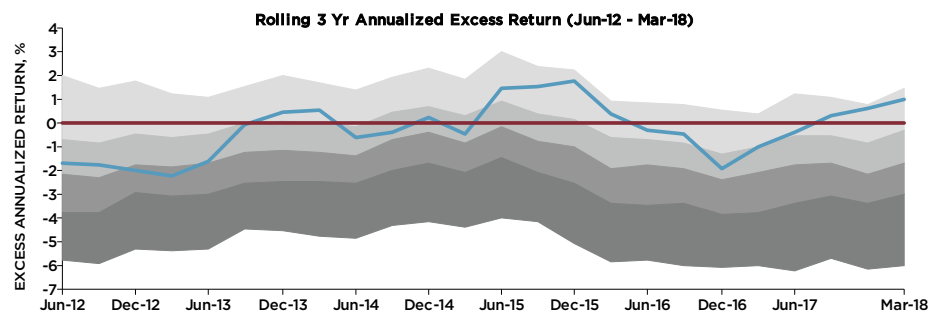


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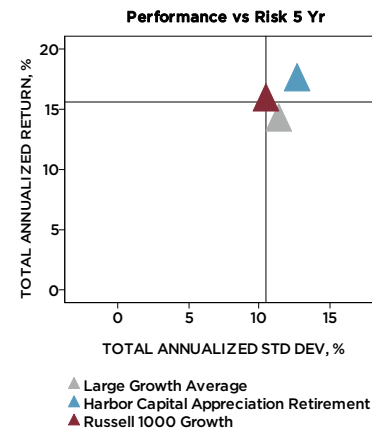
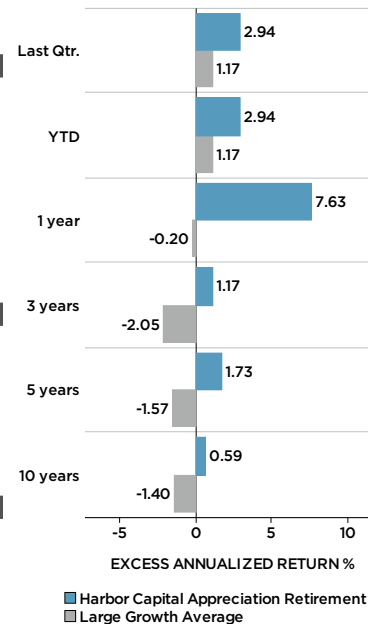
## HARBOR CAPITAL APPRECIATION RETIREMENT

Period Ending 3.31.18 | Q1 18

KEY MEASURES / 5 YEAR	Harbor Capital Appreciation Retirement	Peer Group Rank	Russell 1000 Growth	Large Growth	# of Funds
Standard Deviation	12.65	90%	10.48	11.33	1307
Sharpe Ratio	1.34	27%	1.45	1.21	1307
Alpha	-0.26	24%	0.00	-1.72	1307
Beta	1.13	8%	1.00	1.01	1307
R-Squared	87.86	63%	100.00	88.15	1307
Up Mkt Capture	114.75	4%	100.00	96.24	1307
Down Mkt Capture	116.73	82%	100.00	106.69	1307
Information Ratio	0.33	6%	NA	-0.41	1307
TRAILING RETURNS					
Last Qtr.	4.35	24%	1.42	2.58	1403
YTD	4.35	24%	1.42	2.58	1403
1 Year	28.88	7%	21.25	21.05	1387
3 Years	14.07	7%	12.90	10.84	1341
5 Years	17.27	6%	15.53	13.97	1307
10 Years	11.93	12%	11.34	9.94	1122
CALENDAR RETURNS					
2017	36.68	5%	30.21	28.34	1397
2016	-1.04	84%	7.08	3.05	1513
2015	10.99	4%	5.67	3.86	1606
2014	9.93	54%	13.05	10.02	1657
2013	37.66	20%	33.48	34.35	1721



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## INVESTMENT PROFILE

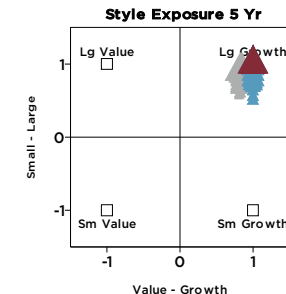
Ticker	HNACX
CUSIP	411512528
Net Assets \$MM	\$29,862.00
Manager Names	Spiros "Sig" Segalas
Manager Tenure	27.9 Years
Prospectus Exp Ratio	0.58%
Cat Median Exp Ratio	1.17%
Current 12b-1	N/A
Annld Ret Since Incept	23.00%
Inception Date	03/01/2016
Phone Number	800-422-1050
Sub Advisor	Jennison Associates LLC

## HOLDINGS OVERVIEW

Total Number of Holdings	54
% Assets in Top 10 Holdings	37.31%
Avg Mkt Cap \$MM	\$139,723.45
Turnover Ratio	52.00%

## TOP HOLDINGS

Apple Inc	5.83%
Amazon.com Inc	4.35%
Microsoft Corp	4.03%
Alibaba Group Holding Lt	3.96%
Facebook Inc A	3.95%

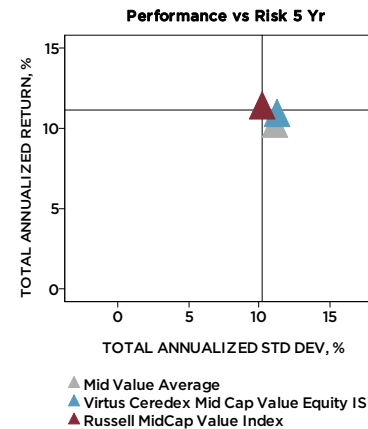
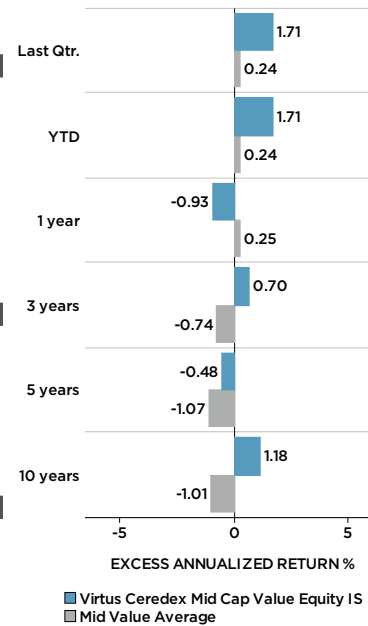
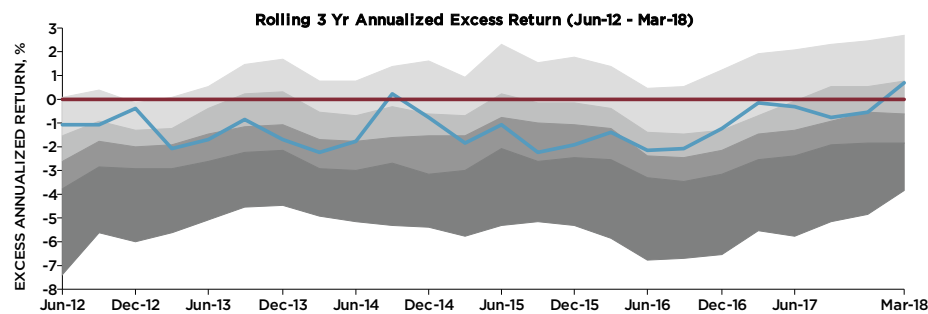


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## VIRTUS CEREDEX MID CAP VALUE EQUITY IS

Period Ending 3.31.18 | Q1 18

KEY MEASURES / 5 YEAR	Virtus Ceredex Mid Cap Value Equity IS	Peer Group Rank	Russell MidCap Value Index	Mid Value	# of Funds
Standard Deviation	11.31	64%	10.27	11.17	351
Sharpe Ratio	0.91	41%	1.05	0.88	351
Alpha	-1.09	44%	0.00	-1.35	351
Beta	1.06	36%	1.00	1.03	351
R-Squared	91.84	49%	100.00	89.31	351
Up Mkt Capture	101.36	31%	100.00	97.58	351
Down Mkt Capture	106.96	57%	100.00	105.32	351
Information Ratio	-0.13	39%	NA	-0.27	351
TRAILING RETURNS					
Last Qtr.	-0.79	14%	-2.50	-2.26	410
YTD	-0.79	14%	-2.50	-2.26	410
1 Year	5.57	70%	6.50	6.76	397
3 Years	7.93	27%	7.23	6.49	383
5 Years	10.62	36%	11.11	10.04	351
10 Years	10.99	6%	9.81	8.80	307
CALENDAR RETURNS					
2017	11.98	61%	13.34	12.97	402
2016	20.53	33%	20.00	18.07	414
2015	-5.63	58%	-4.78	-5.44	425
2014	11.05	38%	14.75	9.65	410
2013	31.21	81%	33.46	34.93	409



## INVESTMENT PROFILE

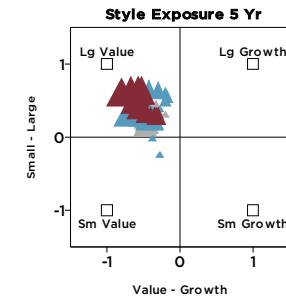
Ticker	SMVZX
CUSIP	92837F441
Net Assets \$MM	\$2,886.00
Manager Names	Don Wordell
Manager Tenure	16.3 Years
Prospectus Exp Ratio	0.80%
Cat Median Exp Ratio	1.17%
Current 12b-1	N/A
Annld Ret Since Incept	8.30%
Inception Date	08/01/2014
Phone Number	888-784-3863
Sub Advisor	Ceredex Value Advisors LLC

## HOLDINGS OVERVIEW

Total Number of Holdings	66
% Assets in Top 10 Holdings	26.99%
Avg Mkt Cap \$MM	\$11,511.47
Turnover Ratio	82.00%

## TOP HOLDINGS

First Republic Bank	3.66%
Martin Marietta Materials Ir	2.90%
Zimmer Biomet Holdings Ir	2.85%
Humana Inc	2.85%
American Campus Comm	2.69%



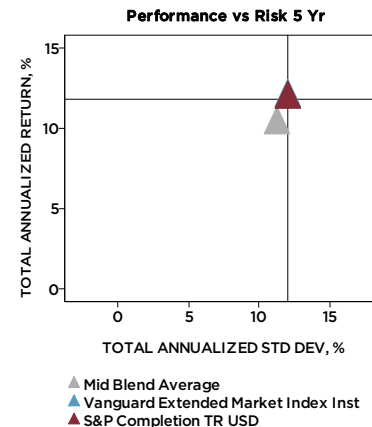
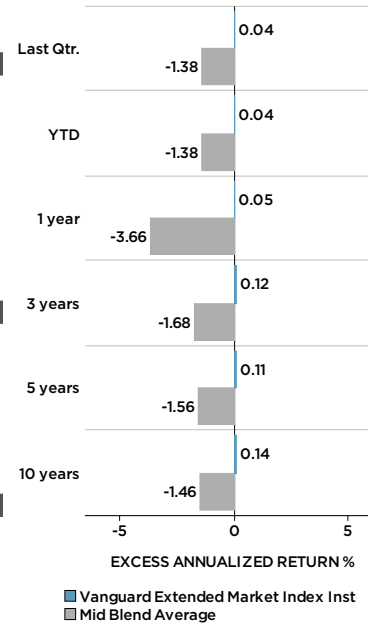
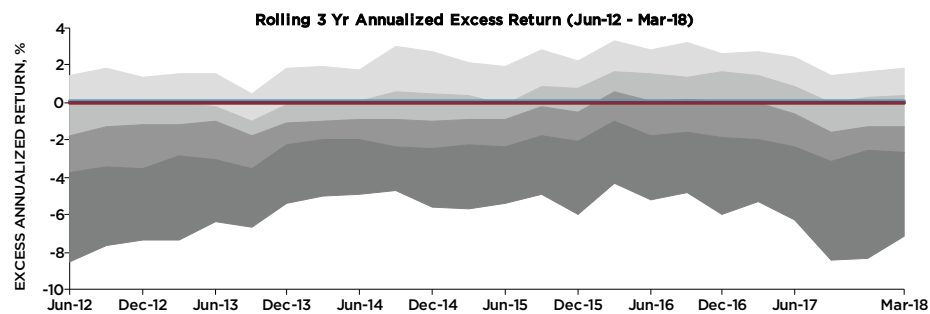
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## VANGUARD EXTENDED MARKET INDEX INST

Period Ending 3.31.18 | Q1 18

KEY MEASURES / 5 YEAR	Vanguard Extended Market Index Inst	Peer Group Rank	S&P Completion TR USD	Mid Blend	# of Funds
Standard Deviation	12.01	84%	11.99	11.21	365
Sharpe Ratio	0.96	45%	0.95	0.90	365
Alpha	0.09	53%	0.00	0.02	365
Beta	1.00	6%	1.00	0.86	365
R-Squared	100.00	1%	100.00	85.62	365
Up Mkt Capture	100.45	5%	100.00	86.08	365
Down Mkt Capture	99.93	83%	100.00	87.72	365
Information Ratio	1.29	1%	NA	-0.26	365
TRAILING RETURNS					
Last Qtr.	0.16	13%	0.12	-1.26	434
YTD	0.16	13%	0.12	-1.26	434
1 Year	13.14	16%	13.09	9.43	433
3 Years	8.08	30%	7.97	6.29	383
5 Years	11.88	19%	11.77	10.21	365
10 Years	10.44	15%	10.29	8.84	307
CALENDAR RETURNS					
2017	18.12	25%	18.11	15.58	436
2016	16.15	40%	15.95	14.33	420
2015	-3.24	53%	-3.35	-4.42	439
2014	7.56	65%	7.50	8.52	437
2013	38.42	20%	38.24	34.50	439



## INVESTMENT PROFILE

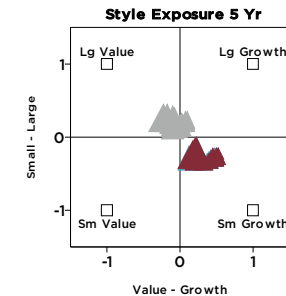
Ticker	VIEIX
CUSIP	922908884
Net Assets \$MM	\$63,255.00
Manager Names	Team Managed
Manager Tenure	20.3 Years
Prospectus Exp Ratio	0.06%
Cat Median Exp Ratio	1.17%
Current 12b-1	N/A
Annld Ret Since Incept	8.81%
Inception Date	07/07/1997
Phone Number	888-809-8102
Sub Advisor	N/A

## HOLDINGS OVERVIEW

Total Number of Holdings	3176
% Assets in Top 10 Holdings	4.71%
Avg Mkt Cap \$MM	\$4,226.55
Turnover Ratio	11.00%

## TOP HOLDINGS

Tesla Inc	0.92%
ServiceNow Inc	0.56%
Las Vegas Sands Corp	0.53%
Worldpay Inc Class A	0.49%
Twitter Inc	0.42%



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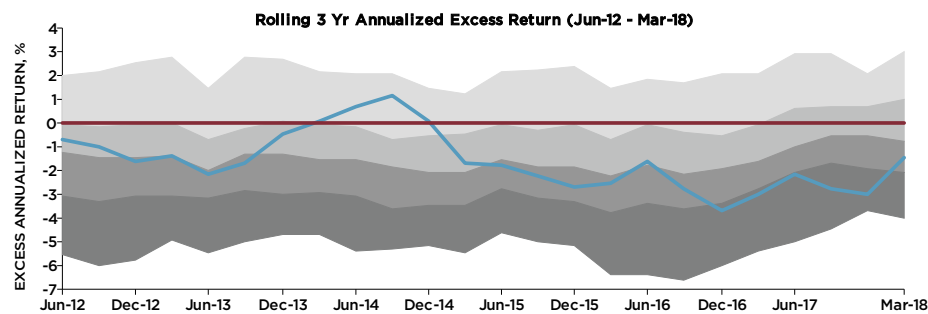
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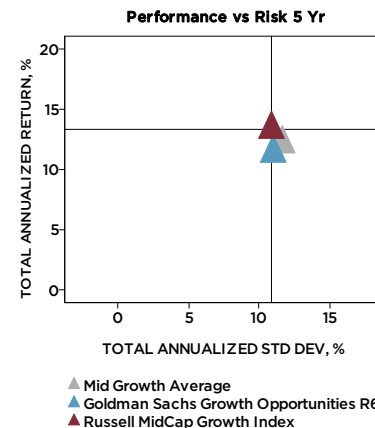
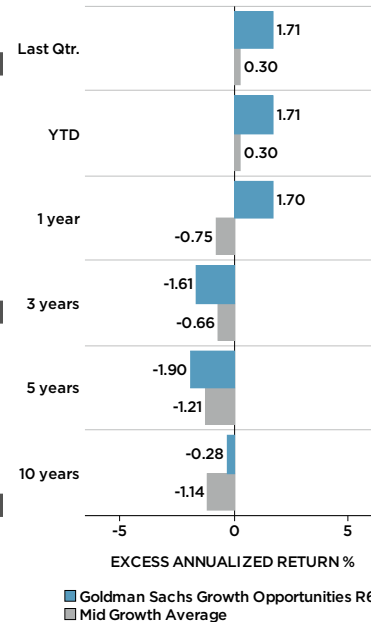
## GOLDMAN SACHS GROWTH OPPORTUNITIES R6

Period Ending 3.31.18 | Q1 18

	Goldman Sachs Growth Opportunities R6	Peer Group Rank	Russell MidCap Growth Index	Mid Growth	# of Funds
<b>KEY MEASURES / 5 YEAR</b>					
Standard Deviation	11.04	35%	10.90	11.66	567
Sharpe Ratio	1.00	47%	1.19	1.02	567
Alpha	-1.59	54%	0.00	-1.16	567
Beta	0.98	61%	1.00	1.00	567
R-Squared	93.01	28%	100.00	87.25	567
Up Mkt Capture	90.73	78%	100.00	96.50	567
Down Mkt Capture	98.47	33%	100.00	103.78	567
Information Ratio	-0.58	72%	NA	-0.32	567
<b>TRAILING RETURNS</b>					
Last Qtr.	3.88	25%	2.17	2.48	608
YTD	3.88	25%	2.17	2.48	608
1 Year	21.44	29%	19.74	18.98	606
3 Years	7.56	65%	9.17	8.50	590
5 Years	11.41	63%	13.31	12.10	567
10 Years	10.34	31%	10.61	9.48	509
<b>CALENDAR RETURNS</b>					
2017	27.24	27%	25.27	24.66	618
2016	1.49	82%	7.33	5.94	661
2015	-5.24	87%	-0.20	-0.69	682
2014	11.44	14%	11.90	7.22	703
2013	32.38	67%	35.74	34.98	693



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## INVESTMENT PROFILE

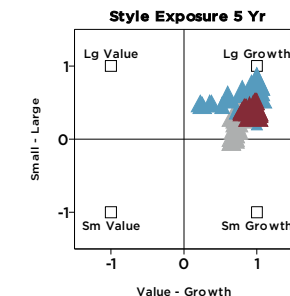
Ticker	GGOUX
CUSIP	38148U601
Net Assets \$MM	\$2,378.00
Manager Names	Team Managed
Manager Tenure	18.8 Years
Prospectus Exp Ratio	0.94%
Cat Median Exp Ratio	1.26%
Current 12b-1	N/A
Annld Ret Since Incept	8.34%
Inception Date	07/31/2015
Phone Number	800-526-7384
Sub Advisor	N/A

## HOLDINGS OVERVIEW

Total Number of Holdings	79
% Assets in Top 10 Holdings	23.48%
Avg Mkt Cap \$MM	\$14,360.03
Turnover Ratio	61.00%

## TOP HOLDINGS

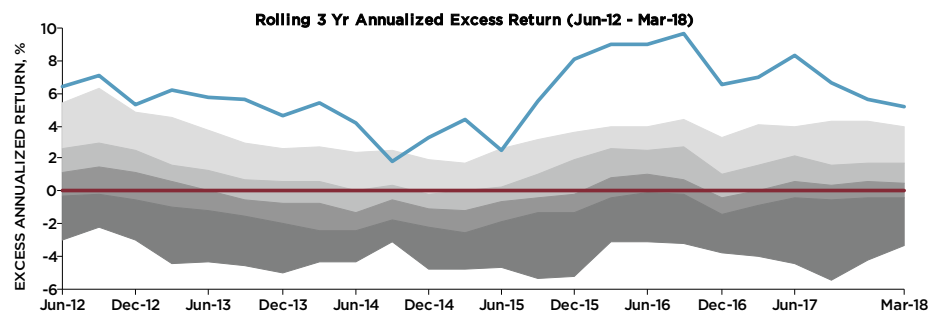
Amphenol Corp Class A	3.30%
Roper Technologies Inc	2.90%
The Middleby Corp	2.58%
Xylem Inc	2.24%
Zoetis Inc	2.21%



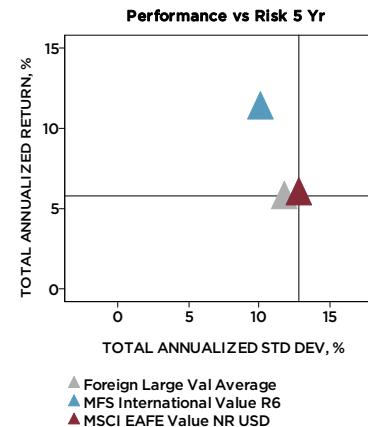
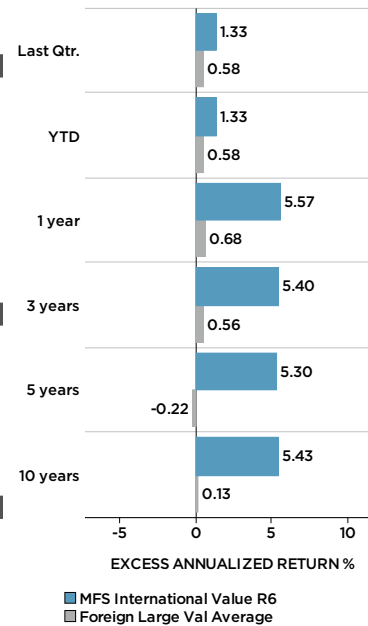
## MFS INTERNATIONAL VALUE R6

Period Ending 3.31.18 | Q1 18

	MFS International Value R6	Peer Group Rank	MSCI EAFE Value NR USD	Foreign Large Val	# of Funds
<b>KEY MEASURES / 5 YEAR</b>					
Standard Deviation	10.07	6%	12.77	11.80	258
Sharpe Ratio	1.07	1%	0.43	0.45	258
Alpha	7.24	1%	0.00	0.50	258
Beta	0.64	99%	1.00	0.87	258
R-Squared	66.68	98%	100.00	88.62	258
Up Mkt Capture	81.11	75%	100.00	87.03	258
Down Mkt Capture	45.45	1%	100.00	85.97	258
Information Ratio	0.67	5%	NA	0.00	258
<b>TRAILING RETURNS</b>					
Last Qtr.	-0.69	25%	-2.03	-1.45	299
YTD	-0.69	25%	-2.03	-1.45	299
1 Year	17.76	5%	12.19	12.88	299
3 Years	9.70	4%	4.29	4.85	286
5 Years	11.08	1%	5.78	5.56	258
10 Years	7.40	1%	1.97	2.10	200
<b>CALENDAR RETURNS</b>					
2017	27.25	12%	21.44	22.75	305
2016	4.31	29%	5.02	3.10	332
2015	6.85	1%	-5.68	-3.24	355
2014	1.61	1%	-5.39	-6.27	348
2013	27.80	2%	22.95	20.76	341



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## INVESTMENT PROFILE

Ticker	MINJX
CUSIP	552746349
Net Assets \$MM	\$29,865.00
Manager Names	Team Managed
Manager Tenure	9.4 Years
Prospectus Exp Ratio	0.66%
Cat Median Exp Ratio	1.21%
Current 12b-1	N/A
Annld Ret Since Incept	7.17%
Inception Date	05/01/2006
Phone Number	800-225-2606
Sub Advisor	N/A

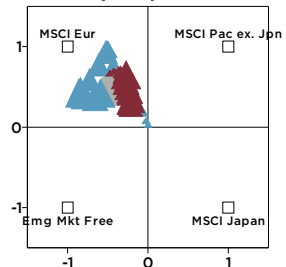
## HOLDINGS OVERVIEW

Total Number of Holdings	108
% Assets in Top 10 Holdings	24.57%
Avg Mkt Cap \$MM	\$25,379.56
Turnover Ratio	7.00%

## TOP HOLDINGS

Nestle SA	3.87%
Taiwan Semiconductor Mar	2.60%
Pernod Ricard SA	2.39%
Givaudan SA	2.39%
Danone SA	2.37%

## Style Exposure 5 Yr

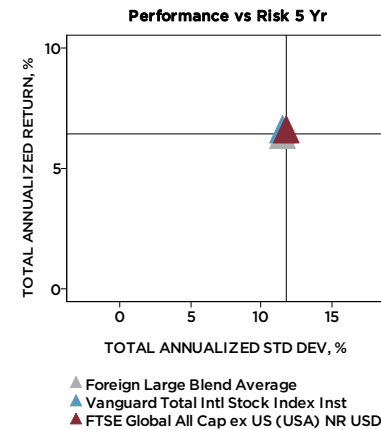
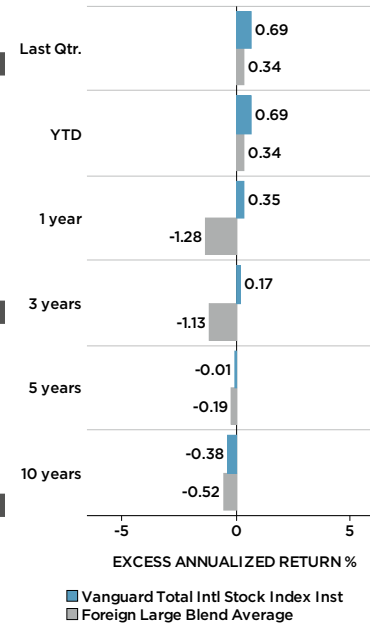
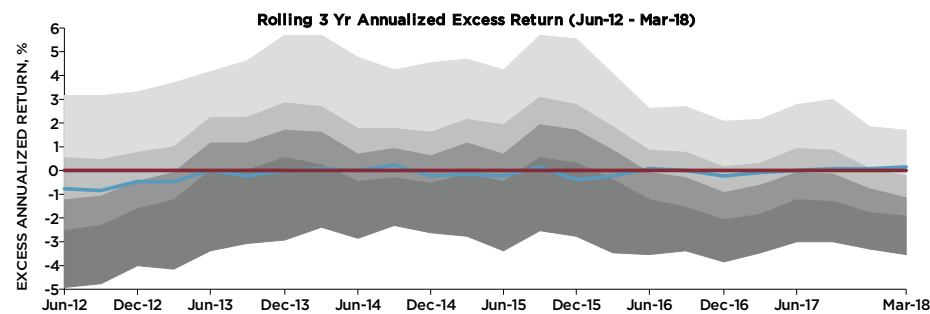


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## VANGUARD TOTAL INTL STOCK INDEX INST

Period Ending 3.31.18 | Q1 18

	Vanguard Total Intl Stock Index Inst	Peer Group Rank	FTSE Global All Cap ex US (USA) NR USD	Foreign Large Blend	# of Funds
<b>KEY MEASURES / 5 YEAR</b>					
Standard Deviation	11.55	58%	11.74	11.49	632
Sharpe Ratio	0.53	48%	0.52	0.52	632
Alpha	0.15	54%	0.00	0.28	632
Beta	0.97	21%	1.00	0.92	632
R-Squared	98.13	1%	100.00	89.04	632
Up Mkt Capture	98.28	17%	100.00	92.99	632
Down Mkt Capture	97.87	75%	100.00	92.27	632
Information Ratio	0.00	47%	NA	-0.05	632
<b>TRAILING RETURNS</b>					
Last Qtr.	-0.45	32%	-1.14	-0.80	764
YTD	-0.45	32%	-1.14	-0.80	764
1 Year	17.08	29%	16.73	15.45	750
3 Years	6.95	15%	6.78	5.66	662
5 Years	6.43	47%	6.43	6.24	632
10 Years	2.85	42%	3.23	2.71	497
<b>CALENDAR RETURNS</b>					
2017	27.55	24%	27.41	25.35	753
2016	4.70	12%	4.72	1.00	768
2015	-4.24	80%	-4.29	-1.57	745
2014	-4.15	31%	-3.39	-4.98	756
2013	15.15	83%	15.59	19.51	778



## INVESTMENT PROFILE

Ticker	VTSNX
CUSIP	921909784
Net Assets \$MM	\$341,618.00
Manager Names	Team Managed
Manager Tenure	9.7 Years
Prospectus Exp Ratio	0.09%
Cat Median Exp Ratio	1.15%
Current 12b-1	N/A
Annld Ret Since Incept	5.89%
Inception Date	11/29/2010
Phone Number	800-662-7447
Sub Advisor	N/A

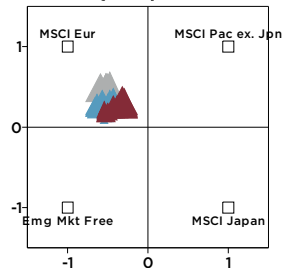
## HOLDINGS OVERVIEW

Total Number of Holdings	6229
% Assets in Top 10 Holdings	7.54%
Avg Mkt Cap \$MM	\$23,870.04
Turnover Ratio	3.00%

## TOP HOLDINGS

Tencent Holdings Ltd	1.14%
Nestle SA	0.96%
Samsung Electronics Co Lt	0.80%
HSBC Holdings PLC	0.77%
Taiwan Semiconductor Mar	0.75%

## Style Exposure 5 Yr



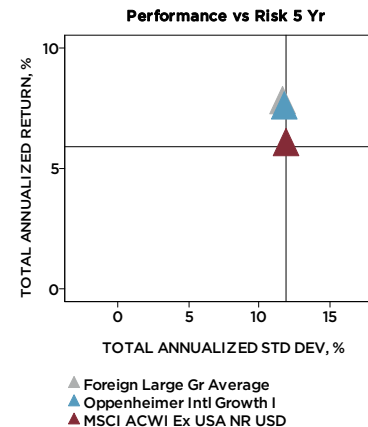
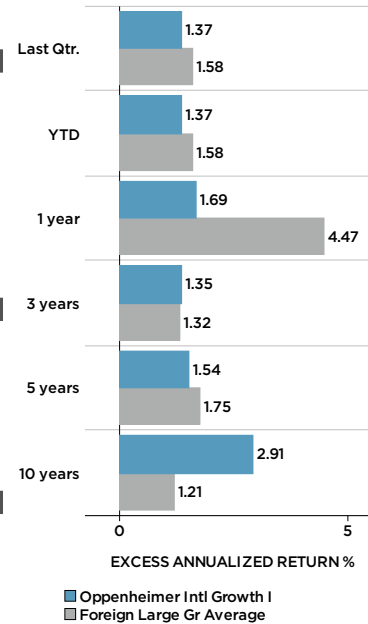
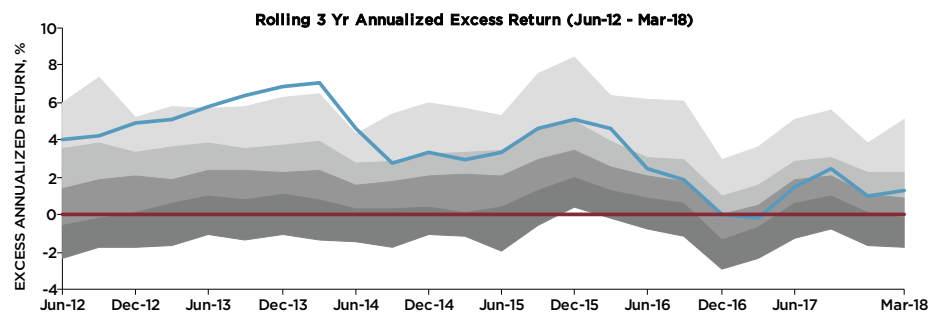
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7.1

# OPPENHEIMER INTL GROWTH I

Period Ending 3.31.18 | Q1 18

KEY MEASURES / 5 YEAR	Oppenheimer Intl Growth I	Peer Group Rank	MSCI ACWI Ex USA NR USD	Foreign Large Gr	# of Funds
Standard Deviation	11.72	66%	11.88	11.64	360
Sharpe Ratio	0.60	50%	0.47	0.63	360
Alpha	2.07	48%	0.00	2.32	360
Beta	0.90	39%	1.00	0.90	360
R-Squared	84.05	58%	100.00	83.92	360
Up Mkt Capture	95.58	47%	100.00	95.56	360
Down Mkt Capture	84.67	52%	100.00	83.20	360
Information Ratio	0.30	48%	NA	0.33	360
TRAILING RETURNS					
Last Qtr.	0.18	47%	-1.18	0.40	421
YTD	0.18	47%	-1.18	0.40	421
1 Year	18.22	68%	16.53	21.00	417
3 Years	7.53	44%	6.18	7.51	377
5 Years	7.42	47%	5.89	7.64	360
10 Years	5.61	10%	2.70	3.91	308
CALENDAR RETURNS					
2017	27.15	82%	27.19	31.65	422
2016	-1.88	50%	4.50	-2.16	426
2015	3.63	18%	-5.66	0.89	426
2014	-6.80	83%	-3.87	-3.86	421
2013	25.71	13%	15.29	19.97	422



## INVESTMENT PROFILE

Ticker	OIGIX
CUSIP	68380L605
Net Assets \$MM	\$28,056.00
Manager Names	Team Managed
Manager Tenure	22.0 Years
Prospectus Exp Ratio	0.69%
Cat Median Exp Ratio	1.23%
Current 12b-1	N/A
Annld Ret Since Incept	8.68%
Inception Date	03/29/2012
Phone Number	800-225-5677
Sub Advisor	OppenheimerFunds Inc

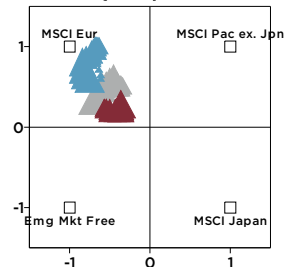
## HOLDINGS OVERVIEW

Total Number of Holdings	93
% Assets in Top 10 Holdings	18.03%
Avg Mkt Cap \$MM	\$21,771.04
Turnover Ratio	22.00%

## TOP HOLDINGS

Infineon Technologies AG	2.49%
SAP SE	1.91%
Nippon Telegraph & Telep	1.83%
Keyence Corp	1.80%
Continental AG	1.79%

## Style Exposure 5 Yr



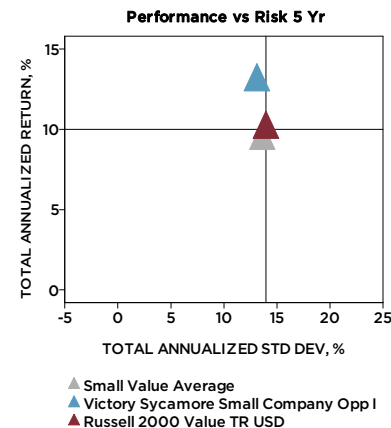
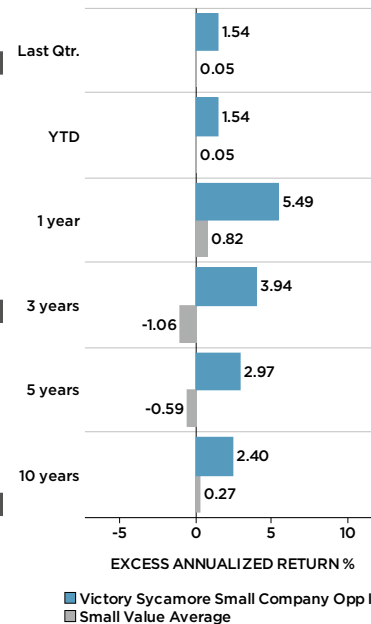
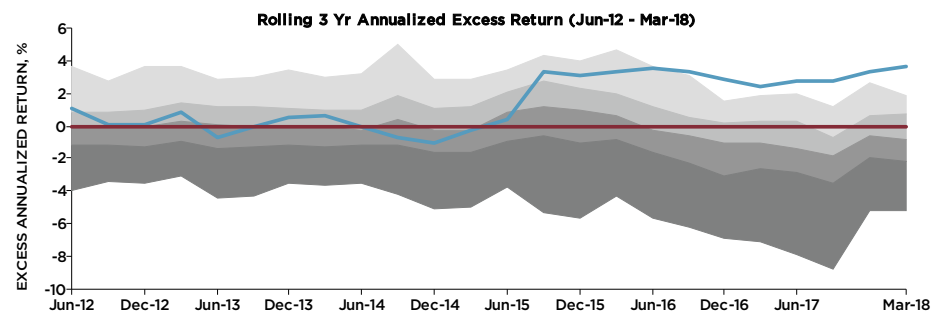
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## VICTORY SYCAMORE SMALL COMPANY OPP I

Period Ending 3.31.18 | Q1 18

KEY MEASURES / 5 YEAR	Victory Sycamore Small Company Opp I	Peer Group Rank	Russell 2000 Value TR USD	Small Value	# of Funds
Standard Deviation	13.07	36%	13.89	13.61	350
Sharpe Ratio	0.96	5%	0.69	0.68	350
Alpha	3.76	4%	0.00	0.11	350
Beta	0.92	57%	1.00	0.93	350
R-Squared	94.93	33%	100.00	90.24	350
Up Mkt Capture	102.98	13%	100.00	91.95	350
Down Mkt Capture	86.78	27%	100.00	92.09	350
Information Ratio	0.85	2%	NA	-0.06	350
TRAILING RETURNS					
Last Qtr.	-1.10	10%	-2.64	-2.59	404
YTD	-1.10	10%	-2.64	-2.59	404
1 Year	10.62	7%	5.13	5.95	393
3 Years	11.81	1%	7.87	6.81	369
5 Years	12.92	3%	9.96	9.36	350
10 Years	11.02	6%	8.61	8.88	299
CALENDAR RETURNS					
2017	11.88	26%	7.84	9.21	396
2016	30.04	18%	31.74	25.70	404
2015	-0.39	4%	-7.47	-6.75	412
2014	6.80	13%	4.22	3.39	411
2013	33.39	70%	34.52	35.63	416



## INVESTMENT PROFILE

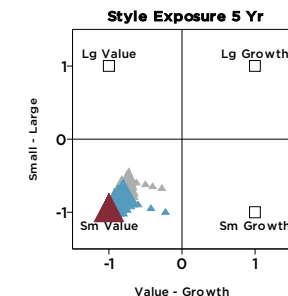
Ticker	VSOIX
CUSIP	92646A815
Net Assets \$MM	\$5,064.00
Manager Names	Team Managed
Manager Tenure	19.8 Years
Prospectus Exp Ratio	0.90%
Cat Median Exp Ratio	1.30%
Current 12b-1	0.00%
Annld Ret Since Incept	9.49%
Inception Date	08/31/2007
Phone Number	800-539-3863
Sub Advisor	N/A

## HOLDINGS OVERVIEW

Total Number of Holdings	100
% Assets in Top 10 Holdings	15.43%
Avg Mkt Cap \$MM	\$2,528.33
Turnover Ratio	36.00%

## TOP HOLDINGS

EMCOR Group Inc	1.77%
Wolverine World Wide Inc	1.70%
UniFirst Corp	1.62%
Haemonetics Corp	1.61%
iShares Russell 2000 Value	1.51%



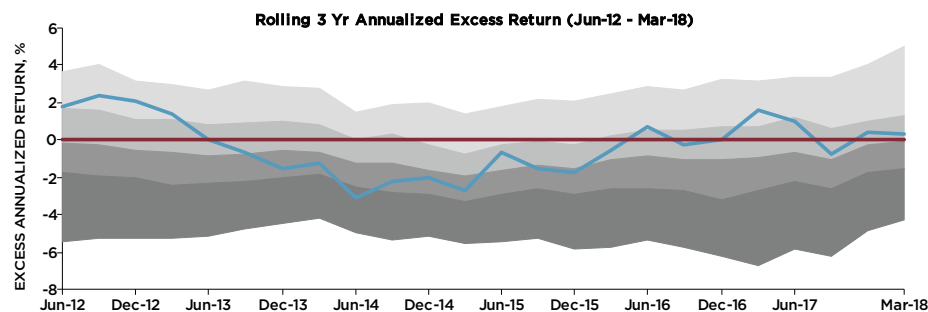
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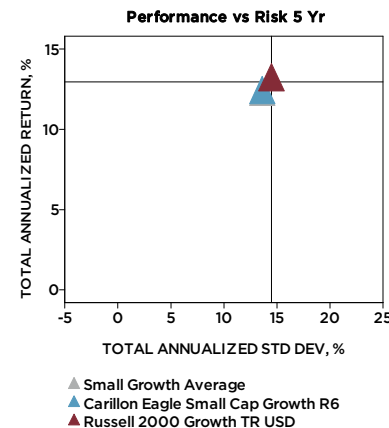
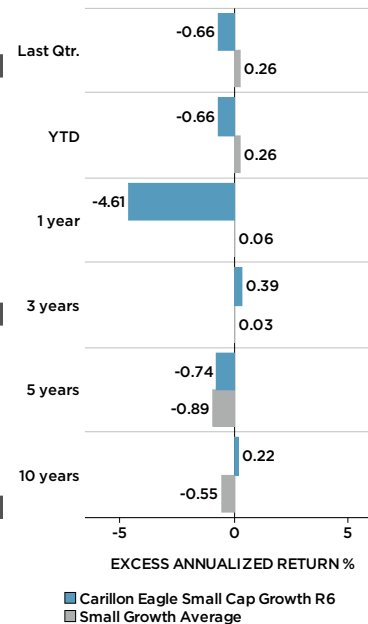
## CARILLON EAGLE SMALL CAP GROWTH R6

Period Ending 3.31.18 | Q1 18

	Carillon Eagle Small Cap Growth R6	Peer Group Rank	Russell 2000 Growth TR USD	Small Growth	# of Funds
<b>KEY MEASURES / 5 YEAR</b>					
Standard Deviation	13.62	50%	14.43	13.67	645
Sharpe Ratio	0.87	51%	0.87	0.86	645
Alpha	0.40	55%	0.00	0.50	645
Beta	0.91	47%	1.00	0.89	645
R-Squared	92.73	30%	100.00	88.43	645
Up Mkt Capture	92.94	33%	100.00	89.11	645
Down Mkt Capture	93.50	61%	100.00	88.28	645
Information Ratio	-0.17	50%	NA	-0.17	645
<b>TRAILING RETURNS</b>					
Last Qtr.	1.64	62%	2.30	2.56	716
YTD	1.64	62%	2.30	2.56	716
1 Year	14.02	70%	18.63	18.69	705
3 Years	9.16	43%	8.77	8.80	688
5 Years	12.16	46%	12.90	12.00	645
10 Years	11.17	33%	10.95	10.40	576
<b>CALENDAR RETURNS</b>					
2017	23.40	44%	22.17	22.31	722
2016	10.45	52%	11.32	11.24	748
2015	-0.39	28%	-1.38	-2.28	768
2014	5.59	26%	5.60	2.70	778
2013	34.70	85%	43.30	41.24	778



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## INVESTMENT PROFILE

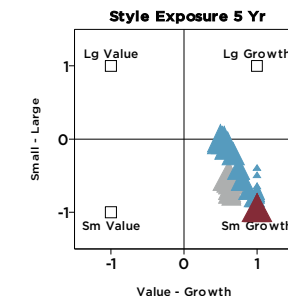
Ticker	HSRUX
CUSIP	14214L452
Net Assets \$MM	\$5,149.00
Manager Names	Team Managed
Manager Tenure	22.3 Years
Prospectus Exp Ratio	0.66%
Cat Median Exp Ratio	1.33%
Current 12b-1	0.00%
Annld Ret Since Incept	13.24%
Inception Date	08/15/2011
Phone Number	800-421-4184
Sub Advisor	Eagle Asset Management, Inc.

## HOLDINGS OVERVIEW

Total Number of Holdings	109
% Assets in Top 10 Holdings	18.48%
Avg Mkt Cap \$MM	\$3,897.77
Turnover Ratio	40.00%

## TOP HOLDINGS

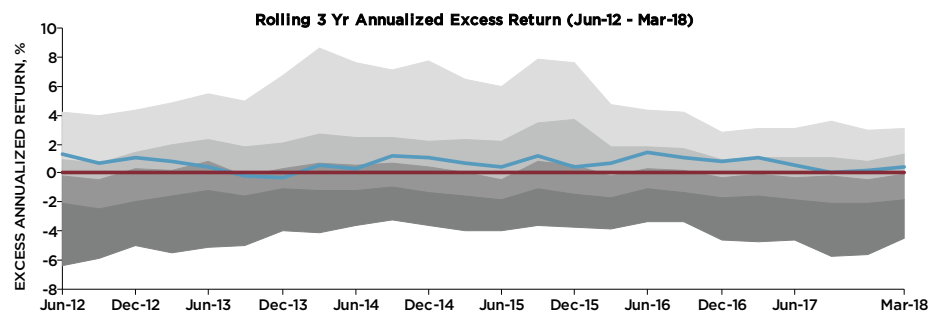
PTC Inc	2.29%
RSP Permian Inc	2.23%
Coherent Inc	2.06%
Quaker Chemical Corp	1.97%
The Ultimate Software Grc	1.76%



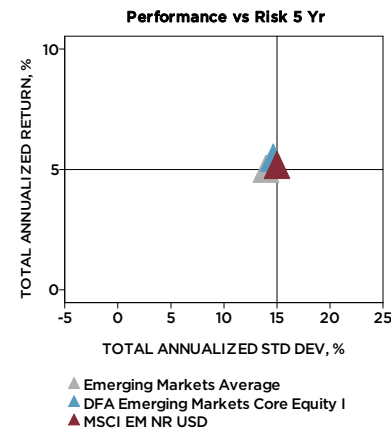
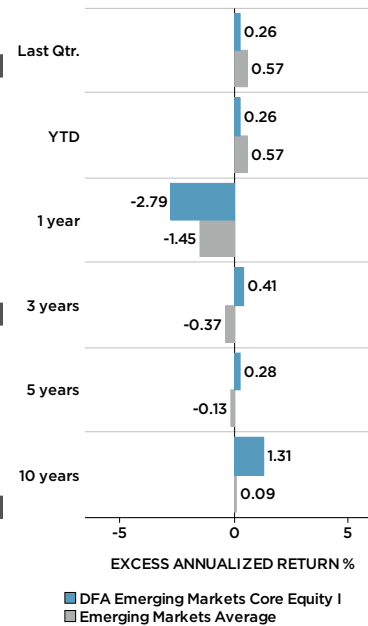
## DFA EMERGING MARKETS CORE EQUITY I

Period Ending 3.31.18 | Q1 18

	DFA Emerging Markets Core Equity I	Peer Group Rank	MSCI EM NR USD	Emerging Markets	# of Funds
<b>KEY MEASURES / 5 YEAR</b>					
Standard Deviation	14.58	61%	14.97	13.99	556
Sharpe Ratio	0.34	45%	0.31	0.33	556
Alpha	0.46	47%	0.00	0.46	556
Beta	0.96	26%	1.00	0.87	556
R-Squared	97.48	7%	100.00	87.32	556
Up Mkt Capture	98.53	23%	100.00	88.91	556
Down Mkt Capture	97.12	66%	100.00	88.52	556
Information Ratio	0.11	38%	NA	-0.03	556
<b>TRAILING RETURNS</b>					
Last Qtr.	1.68	60%	1.42	1.99	800
YTD	1.68	60%	1.42	1.99	800
1 Year	22.14	61%	24.93	23.48	789
3 Years	9.22	42%	8.81	8.44	705
5 Years	5.27	42%	4.99	4.86	556
10 Years	4.33	19%	3.02	3.11	292
<b>CALENDAR RETURNS</b>					
2017	36.55	48%	37.28	35.22	800
2016	12.35	20%	11.19	8.24	841
2015	-14.86	59%	-14.92	-13.59	830
2014	-0.91	30%	-2.19	-2.74	778
2013	-2.64	61%	-2.60	0.32	687



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## INVESTMENT PROFILE

Ticker	DFCEX
CUSIP	233203421
Net Assets \$MM	\$29,829.00
Manager Names	Team Managed
Manager Tenure	8.1 Years
Prospectus Exp Ratio	0.53%
Cat Median Exp Ratio	1.43%
Current 12b-1	N/A
Annld Ret Since Incept	8.93%
Inception Date	04/05/2005
Phone Number	888-576-1167
Sub Advisor	DFA Australia Limited/ Dimensional Fund Advisors Ltd

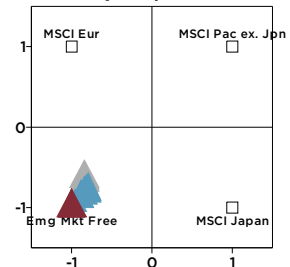
## HOLDINGS OVERVIEW

Total Number of Holdings	5051
% Assets in Top 10 Holdings	12.03%
Avg Mkt Cap \$MM	\$9,182.67
Turnover Ratio	4.00%

## TOP HOLDINGS

Samsung Electronics Co Ltd	3.47%
Tencent Holdings Ltd	1.94%
Taiwan Semiconductor Mar	1.28%
Taiwan Semiconductor Mar	1.15%
China Construction Bank C	0.81%

## Style Exposure 5 Yr

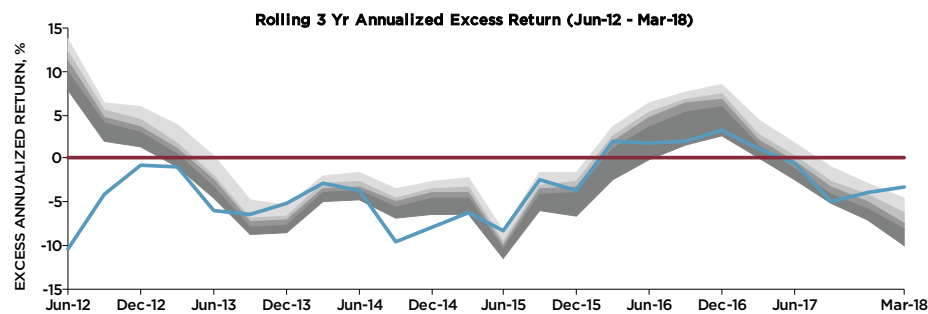


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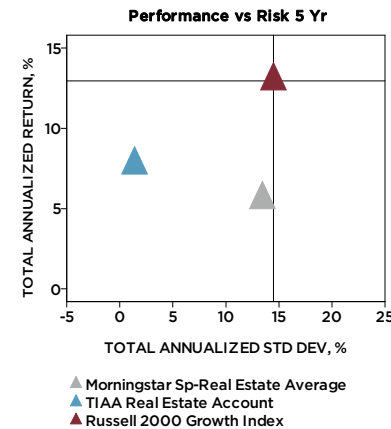
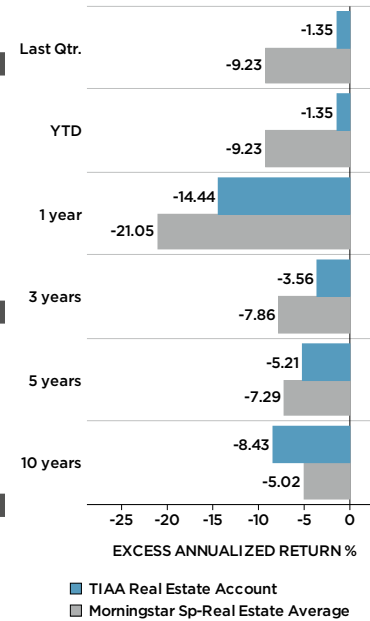
## TIAA REAL ESTATE ACCOUNT

Period Ending 3.31.18 | Q1 18

	TIAA Real Estate Account	Peer Group Rank	Russell 2000 Growth Index	Morningstar Sp-Real Estate	# of Funds
<b>KEY MEASURES / 5 YEAR</b>					
Standard Deviation	1.42	1%	14.43	13.52	220
Sharpe Ratio	5.17	1%	0.87	0.40	220
Alpha	7.10	1%	0.00	1.38	220
Beta	0.02	100%	1.00	0.31	220
R-Squared	3.79	100%	100.00	11.61	220
Up Mkt Capture	16.96	100%	100.00	29.65	220
Down Mkt Capture	-17.91	1%	100.00	23.18	220
Information Ratio	-0.32	11%	NA	-0.40	220
<b>TRAILING RETURNS</b>					
Last Qtr.	0.95	1%	2.30	-6.93	255
YTD	0.95	1%	2.30	-6.93	255
1 Year	4.19	3%	18.63	-2.42	246
3 Years	5.20	2%	8.77	0.91	236
5 Years	7.69	6%	12.90	5.60	220
10 Years	2.52	100%	10.95	5.93	196
<b>CALENDAR RETURNS</b>					
2017	4.37	64%	22.17	5.74	248
2016	5.20	72%	11.32	6.63	268
2015	8.16	1%	-1.38	2.46	272
2014	12.22	99%	5.60	28.39	271
2013	9.65	2%	43.30	1.69	265



Performance Disclosure: The performance data quoted represents past performance and does not guarantee future results. The investment return and principal value of an investment will fluctuate thus an investor's shares, when redeemed, may be worth more or less than their original cost. Current performance may be lower or higher than return data quoted herein. For performance data current to the most recent month-end, please call (800) 216-0645. Index averages are derived from Morningstar. The opinions expressed in this report are subject to change without notice. This material is not a solicitation or an offer to buy any security or to participate in any investment strategy and is not guaranteed as to accuracy. Any such solicitation must be made by prospectus only. To obtain a prospectus, please call your Financial Advisor at (800) 216-0645. CAPTRUST Financial Advisors.



## INVESTMENT PROFILE

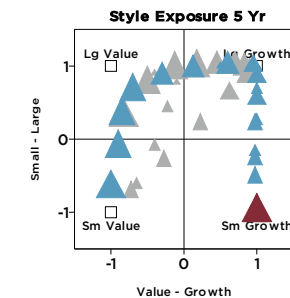
ID VAUSA059TL  
 Cusip 878094200  
 Net Assets \$ \$24,868,008,642.00  
 Manager Name Team Managed  
 Manager Start Date 2016-05-01  
 Expense Ratio 0.83%  
 Cat Median Exp Ratio 1.25%  
 Annlzd Ret Since Incept 6.33%  
 Inception Date 10-02-1995  
 Share Class Incep Date 10/02/1995  
 Phone Number 877-518-9161  
 Sub Advisor N/A

## HOLDINGS OVERVIEW

% Assets in Top 10 Holdings 22.00%  
 Avg Mkt Cap \$MM \$12,703.40  
 Turnover Ratio 2.70%

## TOP HOLDINGS

Fashion Show 3.11%  
 1001 Pennsylvania Avenue 2.89%  
 The Florida Mall 2.79%  
 Ddr Joint Venture 2.34%  
 Fourth And Madison 1.95%



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## APPENDIX

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### APPENDIX

Your CAPTRUST Service Team.....
Glossary of Terms.....
Evaluation Methodology.....

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## YOUR CAPTRUST SERVICE TEAM MEMBERS

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TEAM MEMBERS	RESPONSIBILITIES
<b>Michael S. Pratico</b> Senior Vice President   Financial Advisor <a href="mailto:Michael.Pratico@CAPTRUSTAdvisors.com">Michael.Pratico@CAPTRUSTAdvisors.com</a>	<b>Account Role: Lead Consultant</b> 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.
<b>Barron V. Schmitt</b> Senior Vice President   Financial Advisor <a href="mailto:barry.schmitt@CapTrustAdvisors.com">barry.schmitt@CapTrustAdvisors.com</a>	<b>Account Role: Consultant</b> 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.
<b>Scott T. Matheson, CFA, CPA</b> Senior Director   Defined Contribution Practice Leader <a href="mailto:Scott.Matheson@CAPTRUSTAdvisors.com">Scott.Matheson@CAPTRUSTAdvisors.com</a>	<b>Account Role: Research Analyst</b> 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.
<b>Che-Che S. McCrimmon</b> Senior Client Management Consultant <a href="mailto:Che-Che.McCrimmon@captrustadvisors.com">Che-Che.McCrimmon@captrustadvisors.com</a>	<b>Account Role: Client Management Consultant</b> The Client Management Consultants are focused on overall client management from initial conversion of new plans to CAPTRUST throughout their 'life' at CAPTRUST. As the primary contact for day-to-day client service needs, the main goal of the Client Management Consultant is to deliver exceptional proactive client service. On a daily basis, the Client Management Consultants are available to assist employees with questions related to plan enrollment and education, available investment options, and other areas.

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## GLOSSARY

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**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

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	QUANTITATIVE EVALUATION ITEMS	QUALITATIVE EVALUATION ITEMS
 <b>MARKED FOR REVIEW</b>  <b>The following categories of the Investment Policy Monitor appear “Marked For Review” when:</b>	<b>3/5 Year Risk- adjusted Performance</b> The investment option's 3 or 5 Year Annualized Risk Adjusted Performance falls below the 50th percentile of the peer group.	<b>Fund Management</b> A significant disruption to the investment option's management team has been discovered.
	<b>3/5 Year Performance vs. Peers</b> The investment option's 3 or 5 Year Annualized Peer Relative Performance falls below the 50th percentile of the peer group.	<b>Fund Family</b> A significant disruption to the investment option's parent company has been discovered.
<b>CAPTRUST's Investment Policy Monitoring Methodology</b> 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:  <a href="http://captrustadvisors.com/investmentmonitoring">captrustadvisors.com/investmentmonitoring</a>	<b>3/5 Year Style</b> The investment option's 3 or 5 Year R-Squared measure falls below the absolute threshold set per asset class.	<b>Portfolio Construction</b> The investment option's combined Portfolio Construction score is 6 or below out of a possible 15 points.
	<b>3/5 Year Confidence</b> The investment option's 3 or 5 Year Confidence Rating falls below the 50 <sup>th</sup> percentile of the peer group.	<b>Underlying Investment Vehicles</b> The investment option's combined Underlying Investment Vehicles score is 6 or below out of a possible 15 points.
	<b>Glidepath Assessment</b> % of Equity Exposure: The combined percentage of an investment option's equity exposure ranks in the top 20th percentile or bottom 20th percentile of the peer group.  Regression to the Benchmark: The investment option's sensitivity to market risk - as measured by beta relative to a Global Equity Index - is above 0.89.	

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