

Board of Trustees 15 Estabrooke Drive Orono, ME 04469

May 5, 2017

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TO: Members of the Investment CommitteeFR: Trage B. Bigney, Clerk of the BoardRE: May 15, 2017 Investment Committee Meeting

The Investment Committee will meet from **<u>1:00 pm to 4:00 pm on Monday</u>**, **<u>May 15, 2017</u>**. The following Polycom sites and conference call connection will

### Polycom:

be available:

UMS – 253 Estabrooke Hall, 15 Estabrooke Drive, Orono USM – 337 Wishcamper Center, Portland UMPI – Executive Conference Room, Preble Hall UMFK – Alumni Conference Room UMA – 125 Robinson Hall PHONE: 1-800-605-5167 code – 743544#

The meeting materials have been posted to the Diligent 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/meetingagendas/investment-committee/). If you have questions about the meeting arrangements or accessing the meeting materials please call me at 581-5841.

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 Rebecca Wyke Robert Neely Tracy Elliott

### Board of Trustees

### **Investment Committee**

May 15, 2017 1:00 – 4:00 pm

University of Maine Rudman Conference Room 253 Estabrooke Hall, 15 Estabrooke Drive, Orono

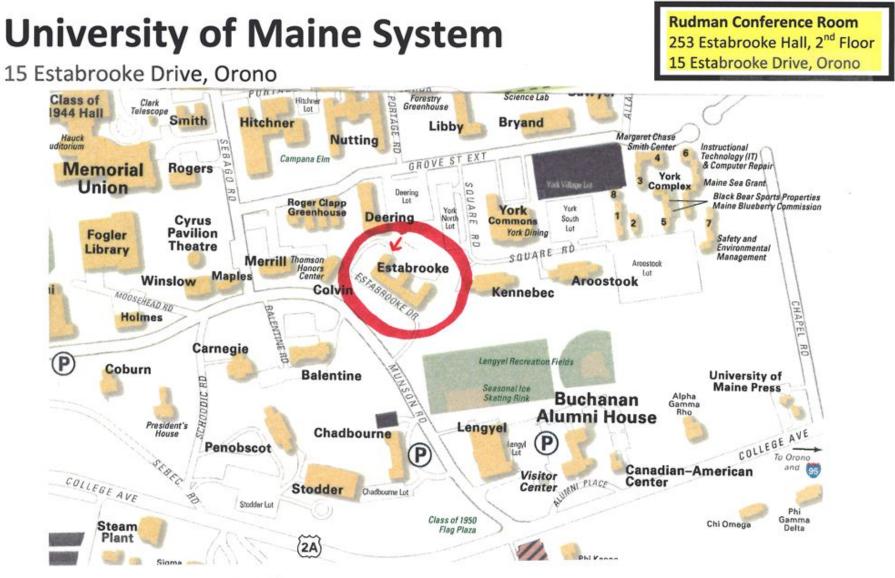
### AGENDA

1:00 - 1:20	Performance Review Tab 1 - Managed Investment Pool Tab 2 - Defined Benefit Pension Fund Tab 3 - Operating Fund
1:20 - 2:35	Tab 4 - Bank Loan Manager Search Selection 1:20-1:25 Bank Loan Introduction 1:25-1:55 Bain Presentation 1:55-2:00 Break 2:00-2:30 Guggenheim Presentation 2:30-2:35 Bank Loan Discussion and Selection
2:35 - 2:45	Tab 5 - ESG Update
2:45 - 3:00	Tab 6 - Updated Investment Policy Statements Managed Investment Pool Defined Benefit Pension Fund Operating Fund

3:00 - 4:00 Tab 7 - Defined Contribution Plan Update

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.



### Directions to the UMS located on the UMaine Campus

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

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

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



# AGENDA ITEM SUMMARY

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

- 2. INITIATED BY: Karl W. Turner, Chair
- **3. BOARD INFORMATION:** X **BOARD ACTION:**

### 4. BACKGROUND:

Enclosed for your information is the Managed Investment Pool performance report for the quarter ended March 31, 2017.

Ms. Kelly Regan and Mr. Jay Roney of NEPC will provide a brief review at the May 15, 2017 Investment Committee meeting.

# Total Plan Performance Detail (Net of Fees)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
MIP Composite	289,889,035	100.0	100.0	4.9	8.1	9.7	2.9	2.9	5.9	6.2	4.7
Allocation Index				4.6	8.2	9.7	3.5	3.7	6.1	6.1	4.3
Policy Index				4.7	8.9	10.3	4.0	4.0	6.2	6.4	4.8
Total Domestic Large Cap	52,841,941	18.2	16.0	6.0	14.3	17.1	9.1	10.3	12.8	12.9	8.3
S&P 500				6.1	14.4	17.2	9.2	10.4	13.3	12.9	7.5
SSgA S&P 500	52,841,941	18.2	16.0	6.0	14.3	17.1	9.1	10.3	13.2	12.9	7.5
S&P 500				6.1	14.4	17.2	9.2	10.4	13.3	12.9	7.5
Total Domestic Small/Mid Cap	17,149,777	5.9	6.0	5.5	21.7	24.0	5.6	6.4	12.8	13.0	10.3
Russell 2500				3.8	17.3	21.5	6.1	7.4	12.6	12.7	7.7
Westfield Capital	9,162,355	3.2	3.0	10.5	19.3	22.0	2.7	5.1	11.3	12.8	9.9
Russell 2500 Growth				6.3	16.6	19.8	4.1	7.2	12.2	13.1	8.5
DFA	7,987,422	2.8	3.0	0.3	22.3	24.0	7.5	6.5	13.5		
Russell 2000 Value				-0.1	24.0	29.4	9.3	7.6	12.5	11.6	6.1
Total International Equity (including emerging markets)	67,084,267	23.1	23.0	9.2	10.3	9.9	1.5	0.4	4.4	4.7	1.7
MSCI EAFE				7.2	13.3	11.7	1.2	0.5	5.8	4.7	1.1
Morgan Stanley	22,987,624	7.9	8.0	8.4	8.5	9.0	0.8	0.0	5.2	4.8	1.9
Globeflex	24,006,740	8.3	8.0	9.4	14.4	9.6	3.5	1.1	7.0	5.7	0.7
MSCI EAFE				7.2	13.3	11.7	1.2	0.5	5.8	4.7	1.1
Emerging Markets Equity	20,089,903	6.9	7.0	10.0	7.7	10.8	-0.4	-0.2	0.4		
MSCI Emerging Markets				11.4	16.4	17.2	1.5	1.2	0.8	1.7	2.7
Aberdeen Emerging Mrkts	10,071,584	3.5	3.5	12.0	11.1	15.9	2.4	1.5	1.4	4.1	
MSCI Emerging Markets				11.4	16.4	17.2	1.5	1.2	0.8	1.7	2.7
Mondrian EM Small Cap	10,018,319	3.5	3.5	7.7	3.9	5.5	-3.1				
MSCI Emerging Markets Small Cap				13.0	14.0	14.5	2.0	1.7	2.9	2.4	3.9
Total Fixed Income	50,623,715	17.5	18.0	2.0	1.6	4.3	2.2	2.7	4.2	5.0	4.8
BBgBarc US Aggregate TR				0.8	-1.7	0.4	1.2	2.7	2.3	3.5	4.3
Commonfund	27,949,431	9.6	10.0	1.6	0.0	2.3	1.7	2.8	3.4	4.4	4.7
BBgBarc US Aggregate TR				0.8	-1.7	0.4	1.2	2.7	2.3	3.5	4.3
Loomis Sayles Fixed Income	14,111,252	4.9	5.0	3.1	6.0	10.0	3.6				
BBgBarc Global Aggregate TR				1.8	-4.7	-1.9	1.3	-0.4	0.4	2.0	3.3
Vanguard Inflation-Protected Securities	8,563,032	3.0	3.0	1.4	-0.4	1.4					
BBgBarc US TIPS TR	, , ,			1.3	-0.2	1.5	1.5	2.0	1.0	3.5	4.2

# Total Plan Performance Detail (Net of Fees)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Total GAA	58,805,424	20.3	20.0	4.2	5.5	7.1	1.2	1.1	3.4	3.8	
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				5.1	7.1	8.9	3.8	3.3	5.6	5.9	4.1
GMO Global Absolute Return	19,773,849	6.8	6.6	4.8	6.9	8.1	1.7	1.5	4.1	4.5	4.8
Blended Index				1.9	1.9	4.6	3.2	3.6	3.7	4.9	5.1
Wellington	19,809,890	6.8	6.7	5.6	11.2	12.6	3.8	3.2	5.1	4.5	
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				5.1	7.1	8.9	3.8	3.3	5.6	5.9	4.1
Newton Global Real Return	19,221,685	6.6	6.7	2.1	-3.0						
60% MSCI ACWI (Net)/ 40% BBgBarc Global Agg				4.8	6.2	8.0	3.6	3.0	5.2	5.6	4.0
Total Hedge Funds	33,917,053	11.7	12.0	1.3	5.4	7.4	0.1	0.3	2.2	1.7	2.4
HFRI Fund of Funds Composite Index				2.3	5.6	6.2	0.0	1.8	3.2	2.5	1.2
EntrustPermal	16,426,214	5.7	6.0	-0.4	4.5	6.7	-1.1	-0.2	3.6	3.5	
HFRI Fund of Funds Composite Index				2.3	5.6	6.2	0.0	1.8	3.2	2.5	1.2
Lighthouse	17,490,839	6.0	6.0	3.0	6.3	8.2					
Credit Suisse Long Shrt Eqt USD				3.5	5.2	3.9	0.8	2.4	5.4	4.6	4.0
Total Real Assets	5,214,079	1.8	3.0	-0.1	-5.0	-4.9	-0.6	1.1	6.3		
NCREIF Timberland Index				0.8	2.6	3.8	3.3	5.7	7.2	5.4	5.7
John Hancock Timber Fund	5,214,079	1.8	3.0	-0.1	-5.0	-4.9	-0.6	1.1	6.3	3.9	1.1
NCREIF Timberland Index				0.8	2.6	3.8	3.3	5.7	7.2	5.4	5.7
Private Equity	1,612,088	0.6	2.0	0.0	6.0	7.2	6.4				
Landmark Equity Partners XV	1,612,088	0.6	2.0	0.0	6.0	7.2	6.4				
Cambridge Associates US All PE (1 Qtr Lag)				4.7	13.0	13.3	9.3	9.9	13.0	13.7	10.0
Total Cash	2,640,692	0.9	0.0								
Distribution Account	2,640,692	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8
91 Day T-Bills				0.1	0.3	0.4	0.2	0.2	0.1	0.1	0.5

Notes: Fiscal YTD begins 7/1 Blended Index: 40% BC Aggregate, 30% BC U.S. TIPS 1-10YR, 10% S&P 500, 10% BC High Yield, 10% JPM EMBI+ Returns are net of manager fees John Hancock Timber market value as of 03/31/17 Landmark market value estimated as of 03/31/17 Distribution Account market value includes \$1.25 million in transit from Morgan Stanley





# Highlights of First Quarter Happenings at NEPC

### **NEPC Insights**

- Will a Higher Fed Funds Rate Raise Long-Term Rates? (January 2017)
- 2016 4<sup>th</sup> Quarter Market Thoughts (January 2017)
- 2016 O4 Endowment & Foundation Survey Results and Infographic (February 2017)
- The Times Are a Changin': NEPC's 2017 Annual Asset Allocation Letter (February 2017)
- NEPC's 2017 Healthcare Operating Fund Universe & Infographic (March 2017)
- The Fed's Masterful Move (March 2017)
- Fossil Fuel Divestment: Considerations for Institutional Portfolios (March 2017)
- Globalization Backlash Europe's Political Roadmap (March 2017)
- Are Loose Personal Trading Policies at Hedge Funds A Red Flag? (March 2017)

### Webinar Replays

NEPC 2017 Market Outlook (January 2017)

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

### **Recent Updates**

- Expanded Private Wealth business with two new NEPC Partners and three senior hires
- Opened new Private Wealth office in Portland, OR
- Launched updated NEPC website
- Collaborated with RiskFirst's Pension Risk Analytics platform, Pfaroe, to improve effectiveness of asset-liability strategies and ongoing monitoring
- Named a "Greenwich Quality Leader" by Greenwich Associates. See Greenwich.com for more information.









March 31, 2017

### Upcoming Events

NEPC's 22<sup>nd</sup> Annual Investment Conference will be held on May 9-10, 2017 at the InterContinental Hotel in Boston, MA.

This year's conference will focus on opportunities and threats in these uncertain political and economic times. In addition to the messages delivered by our exceptional keynote speakers, attendees will learn about asset allocation and investment ideas across the market spectrum. Register today!

http://info.nepc.com/nepc-22nd-annual-investmentconference

### **NEPC Gives Back**

Basketball teams made up of Boston's working professionals, Year Up students and alumni including two NEPC teams, participated in the Annual Year Up Basketball Tournament fundraising event. Year Up, is a nonprofit connecting low-income young adults with companies looking for talent. The program is a one-year, intensive training program providing hands-on skills development, coursework eligible for college credit, corporate internships, and wraparound support.





NEPC LLC

Investment Committee Meeting - Managed Investment Pool - Performanc Review

# Market Environment



# Key Market Themes

## • The US economy is experiencing an extended economic growth cycle

- Eight years removed from recession, US consumers continue to drive the US economy
- Continued economic gains support positive but subdued risk asset returns

## • Federal Reserve monetary policy remains on a gradual normalization path

- Despite the March increase, the path for rate hikes appears subdued in 2017 and beyond
- As the Fed looks to reduce its \$4.5 trillion balance sheet, clear messaging will be critical
- Chair Yellen's uncertain tenure may stoke market unease as her term expires in Feb. 2018

# • Stimulative policies ease China's transition to a consumption led economy

- However, credit expansion and infrastructure spending risk inflating asset price bubbles
- Central bank's yuan defense has been sizable but a rapid price fall remains a global tail-risk

# • Globalization backlash is disrupting the political and economic orthodoxy

- Anti-establishment political sentiment fuels a wider range of potential outcomes both at the polls (e.g. Europe) and in the actions of political leaders (e.g. US Trade Policy)
- Capital market fundamentals are not materially altered but the associated risks of globalization backlash likely lead to larger price shifts among developed market currencies



# Index Performance Summary as of 04/28/2017

	2009	2010	2011	2012	2013	2014	2015	2016	Jan	Feb	Mar	April	YTD
MSCI EM	78.5%	18.9%	-18.4%	18.2%	-2.6%	-2.2%	-14.9%	11.2%	5.5%	3.1%	2.5%	2.2%	13.9%
MSCI EAFE	31.8%	7.8%	-12.1%	17.3%	22.8%	-4.9%	-0.8%	1.0%	2.9%	1.4%	2.8%	2.5%	10.0%
MSCI ACWI	34.6%	12.7%	-7.3%	16.1%	22.8%	4.2%	-2.4%	7.9%	2.7%	2.8%	1.2%	1.6%	8.6%
JPM GBI-EM Global Div	22.0%	15.7%	-1.8%	16.8%	-9.0%	-5.7%	-14.9%	9.9%	2.3%	1.8%	2.3%	1.2%	7.7%
S&P 500	26.5%	15.1%	2.1%	16.0%	32.4%	13.7%	1.4%	12.0%	1.9%	4.0%	0.1%	1.0%	7.2%
Russell 1000	28.4%	16.1%	1.5%	16.4%	33.1%	13.2%	0.9%	12.1%	2.0%	3.9%	0.1%	1.1%	7.1%
JPM EMBI Glob Div	29.8%	12.2%	7.3%	17.4%	-5.3%	7.4%	1.2%	10.2%	1.4%	2.0%	0.4%	1.6%	5.6%
Russell 2500	34.4%	26.7%	-2.5%	17.9%	36.8%	7.1%	-2.9%	17.6%	1.4%	2.4%	-0.1%	0.8%	4.5%
BC US Corporate HY	58.2%	15.1%	5.0%	15.8%	7.4%	2.5%	-4.5%	17.1%	1.5%	1.5%	-0.2%	1.2%	3.9%
BC US STRIPS 20+ Yr	-36.0%	10.9%	58.5%	3.0%	-21.0%	46.4%	-3.7%	1.4%	0.5%	2.3%	-1.0%	1.8%	3.6%
Russell 2000	27.2%	26.9%	-4.2%	16.3%	38.8%	4.9%	-4.4%	21.3%	0.4%	1.9%	0.1%	1.1%	3.6%
BC US Govt/Credit Long	1.9%	10.2%	22.5%	8.8%	-8.8%	19.3%	-3.3%	6.7%	0.3%	1.8%	-0.6%	1.6%	3.2%
BC Global Agg	-6.5%	-5.3%	-5.3%	-4.1%	2.7%	-0.6%	3.3%	2.1%	1.1%	0.5%	0.2%	1.1%	2.9%
Alerian MLP	76.4%	35.9%	13.9%	4.8%	27.6%	4.8%	-32.6%	18.3%	4.9%	0.4%	-1.3%	-1.3%	2.6%
BC Municipal	12.9%	2.4%	10.7%	6.8%	-2.6%	9.1%	3.3%	0.2%	0.7%	0.7%	0.2%	0.7%	2.3%
BC TIPS	11.4%	6.3%	13.6%	7.0%	-8.6%	3.6%	-1.4%	4.7%	0.8%	0.5%	-0.1%	0.6%	1.9%
BC US Long Credit	16.8%	10.7%	17.1%	12.7%	-6.6%	16.4%	-4.6%	10.2%	0.2%	2.0%	-0.6%	1.6%	3.2%
Credit Suisse Lev Loan	44.9%	10.0%	1.8%	9.4%	6.2%	2.1%	-0.4%	9.9%	0.5%	0.6%	0.1%	0.4%	1.6%
BC US Agg Bond	5.9%	6.5%	7.8%	4.2%	-2.0%	6.0%	0.5%	2.6%	0.2%	0.7%	-0.1%	0.8%	1.6%
Credit Suisse Hedge Fund	18.6%	10.9%	-2.5%	7.7%	9.7%	4.1%	-0.7%	1.2%	0.7%	1.0%	0.4%	-	2.1%
BC US Agg Interm	6.5%	6.1%	6.0%	3.6%	-1.0%	4.1%	1.2%	2.0%	0.2%	0.5%	0.0%	0.6%	1.3%
FTSE NAREIT Equity REITs	28.0%	28.0%	8.3%	18.1%	2.5%	30.1%	3.2%	8.5%	0.1%	3.4%	-2.3%	0.1%	1.3%
BC US Govt/Credit 1-3 Yr	3.8%	2.8%	1.6%	1.3%	0.6%	0.8%	0.7%	1.3%	0.2%	0.2%	0.1%	0.2%	0.6%
Bloomberg Commodity	18.9%	16.8%	-13.3%	-1.1%	-9.5%	-17.0%	-24.7%	11.8%	0.1%	0.2%	-2.7%	-1.6%	-4.0%

Source: Bloomberg, Barclays, Alerian, Nareit, MSCI, JP Morgan, Credit Suisse



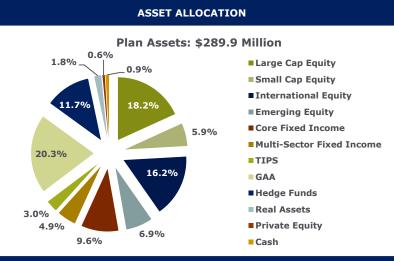
April 28, 2017

Investment Committee Meeting - Managed Investment Pool - Performanc Review





# Executive Summary



MIP PE	RFORMAN	CE: NET O	F FEES		
QTR	FYTD	1 YR	3 YR	7 YR	10 YR

COMPOSITE	4.9%	8.1%	9.7%	2.9%	6.2%	4.7%
ALLOC. INDEX	4.6%	8.2%	9.7%	3.7%	6.1%	4.3%
POLICY INDEX	4.7%	8.9%	10.3%	4.0%	6.4%	4.8%

### PLAN COMMENTS

### Asset Allocation

MIP assets were \$289.9 million as of March 31, 2017, a \$18.2 million increase over the quarter. During the  $1^{st}$  quarter there was a \$4.3 million cash inflow of the Pool and investment gains of \$13.9 million. All asset classes are within policy ranges.

### Performance (Net of Fees)

The MIP returned 4.9% over the quarter, 8.1% fiscal year to date and 9.7% over the past year. The MIP was in-line with the allocation index over the quarter, fiscal year to date and one year time frame. Long term returns have outperformed the allocation index on a 7 and 10 year basis.

The MIP ranked in the 29<sup>th</sup> percentile during the quarter and in the 80<sup>th</sup> percentile for the fiscal year to date period. (Universe = Endowments & Foundations with 100m - 500m)

The managers with the highest absolute returns over the first quarter were Aberdeen (emerging market equity), Westfield (domestic small cap equity) and Globeflex (international market equity).

# NE NEPC, LLC

### **RECENT ACTIONS/RECOMMENDATIONS**

### **Recent Actions**

The System approved new asset allocation targets at the previous meeting.

The System funded an allocation to Vanguard TIPS with proceeds from Vanguard Total Bond Market in early April.

The System placed a redemption for half of the investment in EntrustPermal and proceeds will be allocated to GAA managers when received.

### **Recommendations**

Review bank loan manager search.

Approve updated Investment Policy Statements.

### Manager Due Diligence

There are two new manager updates detailed on the Due Diligence Monitor pages.

EntrustPermal remains on Hold.

# Due Diligence Monitor

The items below summarize any changes or announcements from your Plan managers/funds. A "Yes" indicates there was an announcement and a brief 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. NEPC considers ourselves to be a fiduciary, as ERISA defines the term in Section 3(21).

Investment Manager	Manager Changes/ Announcements (Recent Quarter)	NEPC Due Diligence Committee Recommendations
Aberdeen	Yes	No Action / Maintain Hold
GMO	Yes	Hold
EntrustPermal	No	Maintain Hold

A legend key to our recommendations is provided below.

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



# Due Diligence Commentary

Below is a summary of manager changes, announcements and due diligence events since the issuance of our last quarterly report.

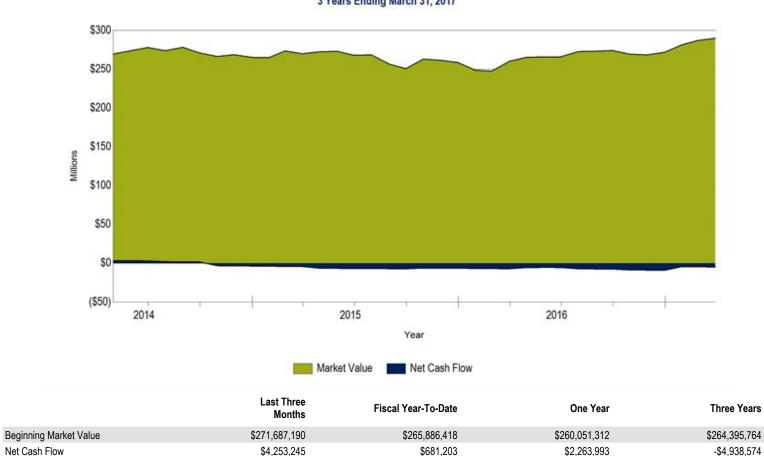
Manager Changes/Announcements	
Investment Option	Commentary
<b>Aberdeen Asset Management</b> <i>Emerging Markets Equity</i>	On March 6, 2017, Aberdeen Asset Management and Standard Life announced a proposed merger of the firms. The proposed merger will create an investment business with £660 billion under administration of which £580 billion is assets under management. Details remain limited on the merger, since both firms are public companies. Below are the currently available details: Standard Life and Aberdeen have agreed to an all-stock merger valued around \$4.7B The merger is subject to both shareholder and regulatory approval – which are expected to be completed by Q3 2017 The merger would result in equal representation at the board level but in total Aberdeen shareholders will own $\approx 1/3$ of the new group, with Standard Life shareholders owning $\approx 2/3$ It has been reported that Martin Gilbert (Aberdeen) and Keith Skeoch (Standard Life) will be co-chief executives in the new structure NEPC's initial assessment is that the merger appears to be a move by both firms to consolidate assets and bring down operating costs. NEPC is announcing <b>No Action</b> on the announcement and recommending no change to the current <b>Hold</b> status. We will provide further details as they become available.
<b>GMO</b> Global Absolute Return	In February, GMO announced two senior level hires, a new CEO of the Firm and a new position at GMO of Head of Investments. The new CEO will be Scott Hayward, formerly the CEO of Quantitative Management Associates (QMA) for more than 13 years. Mr. Hayward will be based in Boston full time and had a start date of February 13 <sup>th</sup> . GMO announced Andy Martin will become Head of Investments, a new role for the firm. Mr. Martin was previously Head of Global Hedge Fund Research at Cambridge Associates and worked closely over the years with GMO and senior leaders there, including Jeremy Grantham. Mr. Martin will not have any pure investment responsibility but rather will serve as an "internal consultant" to assess both the investment process of GMO strategies and ensure strategies are consistent with strategic goals and culture. NEPC Research recommends maintaining the <b>Hold</b> recommendation on the firm. NEPC views this announcement favorably and believe it sets GMO's strategic goals on a more stable path but will keep the recommendation in place until later reviewing in 2017.

Investment Committee Meeting - Managed Investment Pool - Performanc Review

# **Plan Summary and Statistics**



# Total Plan Asset Growth Summary



3 Years Ending March 31, 2017



Net Investment Change

Ending Market Value

March 31, 2017

\$30,431,845

\$289,889,035

\$23,321,414

\$289,889,035

\$27,573,731

\$289,889,035

\$13,948,601

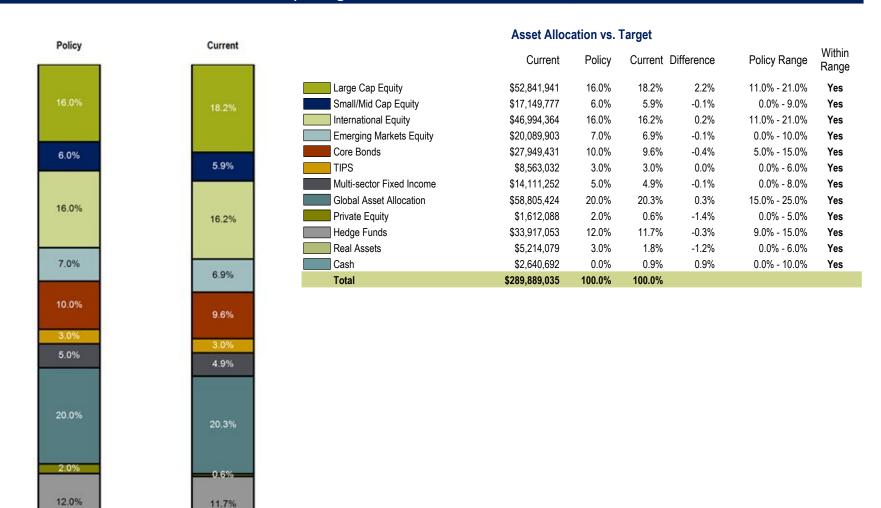
\$289,889,035

# University of Maine System Managed Investment Pool Total Plan Asset Growth Summary by Manager

			3 Months Ending M	arch 31, 2017		
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Net Investment Change	Ending Market Value
Aberdeen Emerging Mrkts	\$9,654,094	\$0	-\$778,037	-\$778,037	\$1,195,526	\$10,071,584
Commonfund	\$27,507,133	\$0	-\$11,147	-\$11,147	\$453,446	\$27,949,431
DFA	\$7,967,224	\$0	-\$8,210	-\$8,210	\$28,408	\$7,987,422
Distribution Account	\$546,076	\$7,375,164	-\$5,280,547	\$2,094,617	\$0	\$2,640,692
EntrustPermal	\$16,491,328	\$0	\$0	\$0	-\$65,114	\$16,426,214
Globeflex	\$20,988,065	\$1,000,000	-\$43,892	\$956,108	\$2,062,567	\$24,006,740
GMO Global Absolute Return	\$18,823,679	\$0	-\$48,802	-\$48,802	\$998,972	\$19,773,849
John Hancock Timber Fund	\$5,221,858	\$0	\$0	\$0	-\$7,779	\$5,214,079
Landmark Equity Partners XV	\$1,514,509	\$172,212	-\$74,633	\$97,579	\$0	\$1,612,088
Lighthouse	\$16,988,725	\$0	\$0	\$0	\$502,114	\$17,490,839
Loomis Sayles Fixed Income	\$13,501,327	\$668,000	-\$520,506	\$147,494	\$462,431	\$14,111,252
Mondrian EM Small Cap	\$8,316,410	\$1,000,000	-\$68,716	\$931,284	\$770,625	\$10,018,319
Morgan Stanley	\$21,366,551	\$1,000,000	-\$1,304,991	-\$304,991	\$1,926,064	\$22,987,624
Newton Global Real Return	\$17,825,138	\$1,000,000	-\$37,992	\$962,008	\$434,539	\$19,221,685
SSgA S&P 500	\$49,831,483	\$0	-\$6,464	-\$6,464	\$3,016,921	\$52,841,941
Vanguard Inflation-Protected Securities	\$8,079,614	\$369,861	-\$1,497	\$368,364	\$115,053	\$8,563,032
Wellington	\$18,761,146	\$0	-\$106,130	-\$106,130	\$1,154,874	\$19,809,890
Westfield Capital	\$8,302,830	\$0	-\$40,428	-\$40,428	\$899,953	\$9,162,355
Total	\$271,687,190	\$12,585,237	-\$8,331,992	\$4,253,245	\$13,948,601	\$289,889,035



# University of Maine System Managed Investment Pool Total Plan Asset Allocation vs. Policy Targets

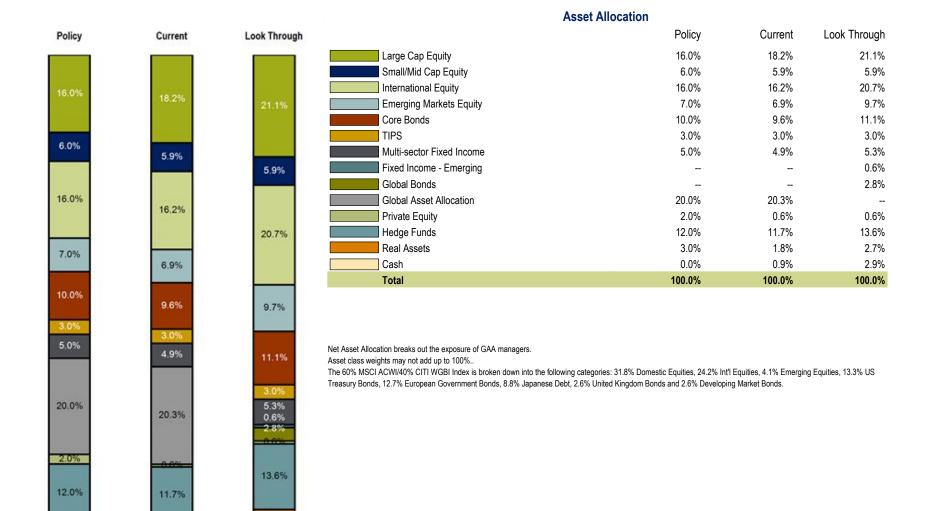




3.0%

2.9%

# Asset Class Allocations

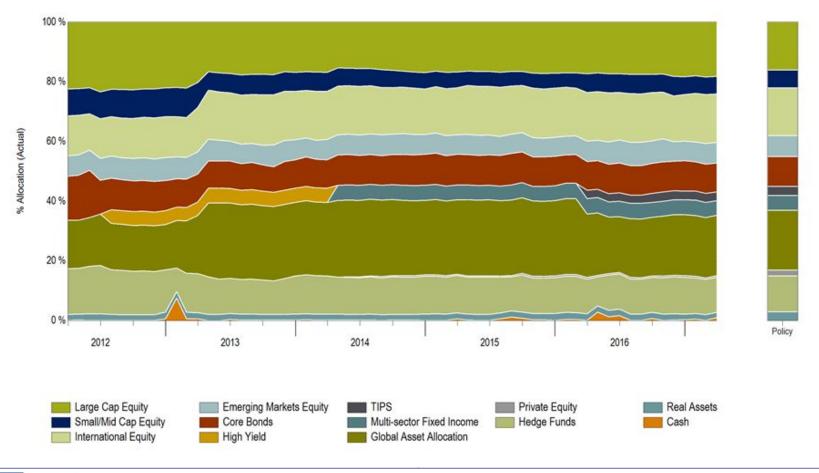




3.0%

0.0%

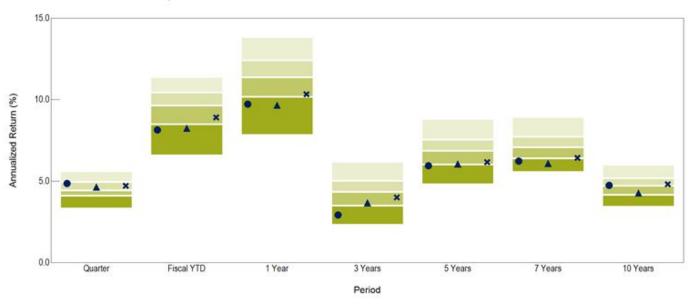
# Total Plan Asset Allocation History



Asset Allocation History



Total Plan Return Summary vs. Peer Universe (Net of Fees)

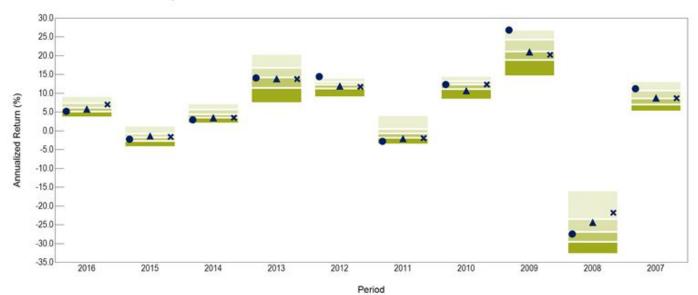


MIP Composite vs. InvestorForce All E&F \$100mm - \$500mm Net

	Return (Rank)													
5th Percentile	5.6		11.4		13.8		6.2		8.8		8.9		6.0	
25th Percentile	5.0		10.5		12.4		5.0		7.6		7.7		5.2	
Median	4.4		9.6		11.4		4.4		6.9		7.1		4.7	
75th Percentile	4.1		8.5		10.2		3.5		6.0		6.4		4.2	
95th Percentile	3.3		6.6		7.8		2.3		4.8		5.6		3.4	
# of Portfolios	72		72		72		71		66		64		61	
MIP Composite	4.9	(29)	8.1	(80)	9.7	(81)	2.9	(91)	5.9	(78)	6.2	(80)	4.7	(50)
Allocation Index	4.6	(38)	8.2	(80)	9.7	(83)	3.7	(72)	6.1	(74)	6.1	(81)	4.3	(68)
Policy Index	4.7	(37)	8.9	(70)	10.3	(73)	4.0	(61)	6.2	(69)	6.4	(75)	4.8	(45)



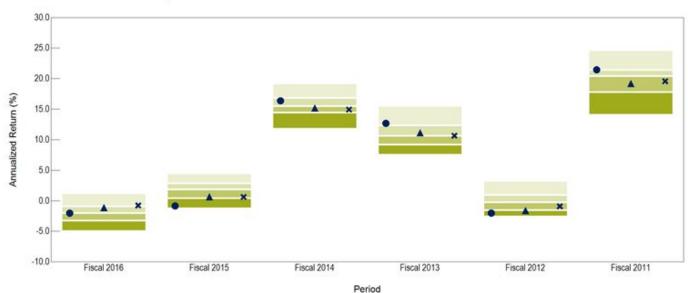
Total Plan Return Summary vs. Peer Universe (Net of Fees)



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

	Return (Ra	ank)																		
5th Percentile	9.2		1.3		7.3		20.5		14.1		4.2		14.6		26.9		-15.9		13.2	
25th Percentile	7.4		-0.7		5.7		16.8		13.0		0.5		13.3		24.3		-23.4		10.7	
Median	6.2		-1.7		4.4		14.2		12.3		-0.6		12.4		21.1		-26.9		8.7	
75th Percentile	5.2		-2.7		3.6		11.5		11.3		-1.8		11.1		18.9		-29.5		7.0	
95th Percentile	3.6		-4.3		2.0		7.4		9.0		-3.6		8.3		14.6		-32.7		5.2	
# of Portfolios	186		142		98		75		78		75		70		69		67		62	
MIP Composite	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)	11.2	(15)
<ul> <li>Allocation Index</li> </ul>	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)	8.8	(50)
× Policy Index	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)	8.7	(50)

Total Plan Return Summary vs. Peer Universe (Net of Fees)

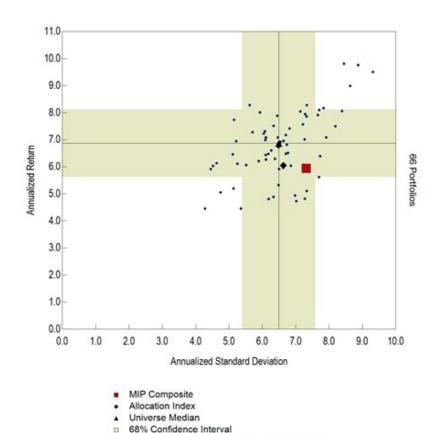


MIP Composite vs. InvestorForce All E&F \$100mm - \$500mm Net

	Return (Rank)											
5th Percentile	1.2		4.5		19.2		15.5		3.3		24.7	
25th Percentile	-0.9		2.9		16.9		12.4		1.0		21.4	
Median	-2.0		1.9		15.5		10.7		-0.2		20.4	
75th Percentile	-3.2		0.4		14.5		9.2		-1.5		17.8	
95th Percentile	-4.9		-1.2		11.8		7.6		-2.6		14.1	
# of Portfolios	157		130		83		81		75		73	
MIP Composite	-2.0	(51)	-0.8	(94)	16.4	(32)	12.7	(23)	-2.0	(88)	21.4	(24)
Allocation Index	-1.1	(29)	0.7	(70)	15.2	(63)	11.1	(45)	-1.6	(83)	19.2	(66)
Policy Index	-0.8	(24)	0.6	(70)	14.9	(65)	10.7	(50)	-0.9	(66)	19.6	(60)

# Total Plan Risk/Return - 5 Years

### 5 Years Ending March 31, 2017



InvestorForce All E&F \$100mm - \$500mm Net

5 Ye	ars Ending Mar	ch 31, 2017		
	Anlzd Ret	Rank	Anlzd Std Dev	Rank
MIP Composite	5.9%	78	7.3%	78
Allocation Index	6.1%	74	6.6%	56
Policy Index	6.2%	69	6.6%	53
InvestorForce All E&F \$100mm - \$500mm Net Median	6.9%		6.5%	-

5 Ye	5 Years Ending March 31, 2017										
	Sharpe Ratio	Rank	Sortino Ratio RF	Rank							
MIP Composite	0.8	89	1.2	91							
Allocation Index	0.9	79	1.3	81							
Policy Index	0.9	77	1.4	72							
InvestorForce All E&F \$100mm - \$500mm Net Median	1.0		1.5								

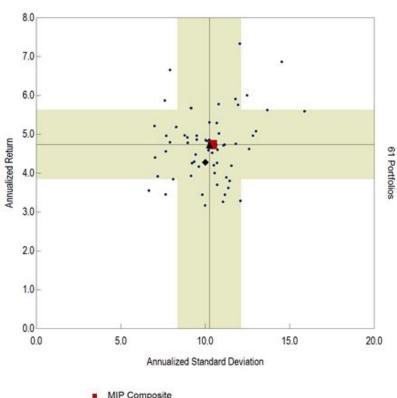
### \*Returns are net of fees.

•



# Total Plan Risk/Return - 10 Years

### 10 Years Ending March 31, 2017



10 Ye	ars Ending Ma	rch 31, 2017	,	
	Anlzd Ret	Rank	Anlzd Std Dev	Rank
MIP Composite	4.7%	50	10.4%	53
Allocation Index	4.3%	68	10.0%	43
Policy Index	4.8%	45	9.5%	38
InvestorForce All E&F \$100mm - \$500mm Net Median	4.7%	-	10.2%	

### 10 Years Ending March 31, 2017

	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
MIP Composite	0.4	53	0.5	39
Allocation Index	0.4	68	0.5	59
Policy Index	0.4	35	0.6	20
InvestorForce All E&F \$100mm - \$500mm Net Median	0.4		0.5	

**MIP Composite** 

Allocation Index

- Universe Median
- 68% Confidence Interval 11 InvestorForce All E&F \$100mm - \$500mm Net

\*Returns are net of fees.



# 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 \$2.78 million
- Since inception, the strategy has an IRR of 15.8%, net of fees (9/30/16)

# • 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 1.4%, net of fees (12/31/16)



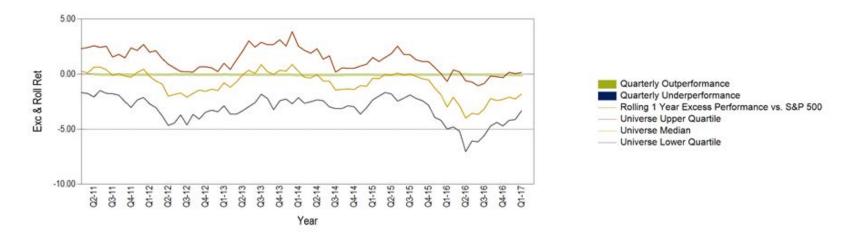
Investment Committee Meeting - Managed Investment Pool - Performanc Review





# SSgA S&P 500

Annualized Excess Performance

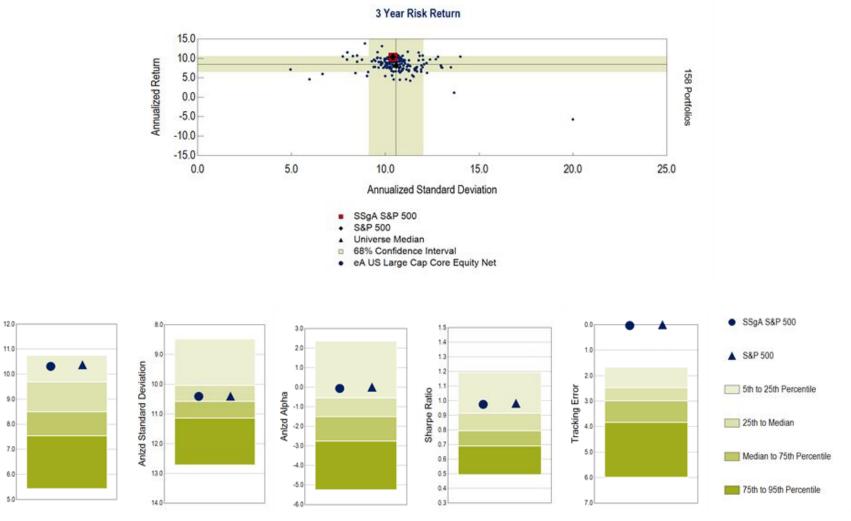




\*Returns are net of fees.



# SSgA S&P 500



\*Returns are net of fees.

Anlzd Return



# SSgA S&P 500

			Top Positive C	ontributors		Top Negativ	Top Negative Contributors				
				Relative			Relative				
Characteristics	Portfolio	S&P 500		Contribution %	Return %		Contribution %	Return %			
Number of Holdings	509	505	HALLIBURTON	0.0%	-8.7%	ADOBE SYSTEMS	-0.1%	26.4%			
Weighted Avg. Market Cap. (\$B) Median Market Cap. (\$B)	151.7 19.9	151.4 19.9	APPLE	0.0%	24.6%	ANTHEM	0.0%	15.5%			
Price To Earnings	24.6	23.7	VISA 'A'	0.0%	14.1%	WAL MART STORES	0.0%	5.0%			
Price To Book	4.9	4.4	PRICELINE GROUP	0.0%	21.4%	EBAY	0.0%	13.1%			
Price To Sales	3.6	3.3	AMAZON.COM	0.0%	18.2%	BLACKROCK	0.0%	1.4%			
Return on Equity (%)	21.0	18.8	AMSURG	0.0%	-3.1%	US BANCORP	0.0%	0.8%			
Yield (%)	2.0	2.0	ORACLE	0.0%	16.5%	ACTIVISION BLIZZARD	0.0%	38.9%			
Beta		1.0	CSX	0.0%	30.0%	EXXON MOBIL	0.0%	-8.3%			
R-Squared		1.0	TRANSOCEAN	0.0%	-15.5%	ALCOA	0.0%	42.4%			
			FRONTIER COMMUNICATIONS	0.0%	-34.1%	VIACOM 'B'	0.0%	33.4%			

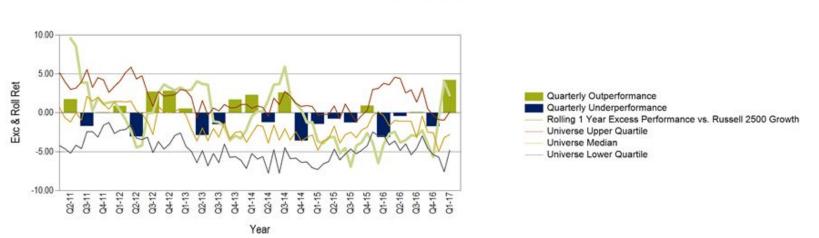
### Equity Sector Attribution

			-1								
			Attribution Effects		Returns	S	Ending Sector	Weights			
	Total	Selection	Allocation	Interaction							
	Effects	Effect	Effect	Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.0%	0.0%	0.0%	0.0%	-6.8%	-6.8%	6.5%	6.6%			
Materials	0.0%	0.0%	0.0%	0.0%	6.4%	6.4%	2.8%	2.9%			
Industrials	0.0%	0.0%	0.0%	0.0%	4.4%	4.4%	10.1%	10.0%			
Consumer Discretionary	0.0%	0.0%	0.0%	0.0%	8.5%	8.5%	12.2%	12.3%			
Consumer Staples	0.0%	0.0%	0.0%	0.0%	6.3%	6.3%	9.3%	9.3%			
Health Care	0.0%	0.0%	0.0%	0.0%	8.2%	8.2%	13.9%	13.9%			
Financials	0.0%	0.0%	0.0%	0.0%	2.5%	2.5%	14.4%	14.4%			
Information Technology	0.0%	0.0%	0.0%	0.0%	12.6%	12.6%	22.0%	22.1%			
Telecommunication Services	0.0%	0.0%	0.0%	0.0%	-4.0%	-4.0%	2.4%	2.4%			
Utilities	0.0%	0.0%	0.0%	0.0%	6.4%	6.4%	3.2%	3.2%			
Real Estate	0.0%	0.0%	0.0%	0.0%	3.6%	3.6%	2.9%	2.9%			
Cash	0.0%	0.0%	0.0%	0.0%	0.1%		0.4%	0.0%			
Unclassified	0.0%				-	-	0.0%	0.0%			
Portfolio	0.0%	= 0.0% +	• 0.0% +	0.0%	6.1%	6.1%	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.

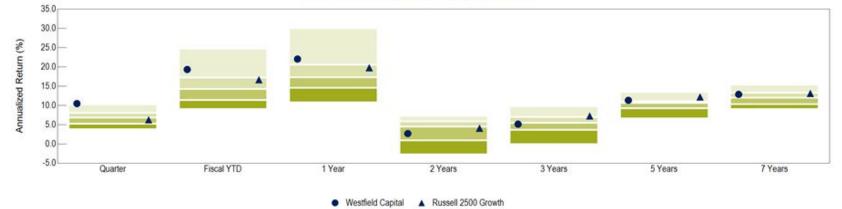


# Westfield Capital



Annualized Excess Performance

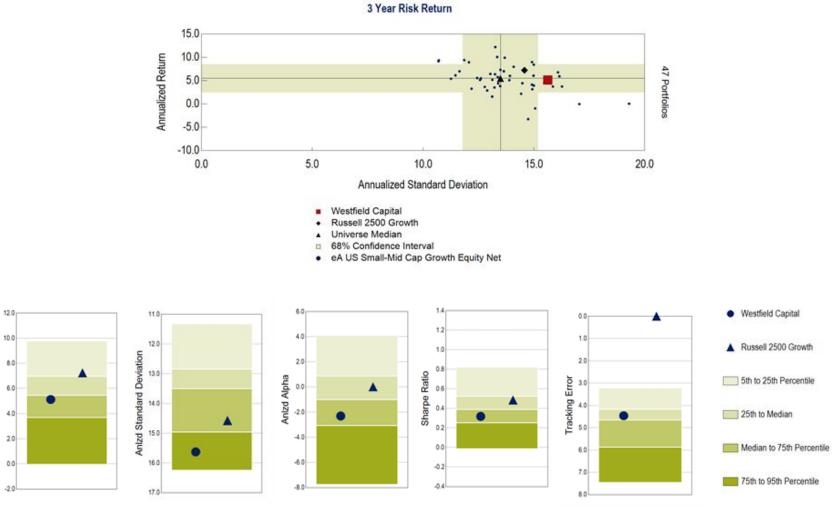




### \*Returns are net of fees.



# Westfield Capital



\*Returns are net of fees.

Anlzd Return



# Westfield Capital

			Top Positive (	Contributors		Top Negativ	e Contributors	
Characteristics		Russell		Relative Contribution %	Return %		Relative Contribution %	Return %
	Portfolio	2500 Growth	NEKTAR THERAPEUTICS		01 20/	KNOLL	-0.2%	-14.2%
Number of Holdings	75	1,449		0.8%	91.3%	SABRE	-0.2%	-14.2 %
Weighted Avg. Market Cap. (\$B)	6.6	4.8	JAZZ PHARMACEUTICALS	0.6%	33.1%			
Median Market Cap. (\$B)	6.3	1.2	WRIGHT MEDICAL GROUP	0.5%	35.4%	MERRIMACK PHARMS.	-0.1%	-24.5%
Price To Earnings	31.4	29.3	BUILDERS FIRSTSOURCE	0.5%	35.8%	LULULEMON ATHLETICA	-0.1%	-20.2%
Price To Book	6.1	5.4	PACIRA PHARMACEUTICALS	0.5%	41.2%	TESORO	-0.1%	-6.7%
Price To Sales	3.6	3.3	SHOPIFY SUBD.VTG.SHS.'A'	0.4%	58.1%	HUNT JB TRANSPORT SVS.	-0.1%	-5.3%
Return on Equity (%)	21.8	18.7	METTLER TOLEDO INTL.	0.4%	14.4%	TRANSDIGM GROUP	-0.1%	-11.6%
Yield (%)	0.9	0.8	VAIL RESORTS	0.4%	19.6%	JACK IN THE BOX	-0.1%	-8.5%
Beta		1.0	ON SEMICONDUCTOR	0.4%	21.4%	LKQ	-0.1%	-4.5%
R-Squared		1.0	TRANSUNION	0.4%	24.0%	ALLEGIANT TRAVEL	-0.1%	-3.3%
			Equity Sector	r Attribution				
			Attribution Effects			Returns	Ending Sector Weig	hts

			Attribution Effects	Returns			Ending Sector Weights		
	Total	Selection	Allocation	Interaction					
	Effects	Effect	Effect	Effects	Portfolio	Benchmark	Portfolio	Benchmark	
Energy	0.0%	0.1%	-0.1%	0.0%	-6.7%	-14.7%	1.4%	1.0%	
Materials	0.0%	0.0%	0.0%	0.0%	6.5%	6.8%	8.2%	6.8%	
Industrials	-0.1%	-0.1%	-0.1%	0.0%	3.9%	4.2%	20.9%	18.5%	
Consumer Discretionary	0.0%	0.0%	0.0%	0.0%	5.0%	4.9%	15.9%	16.6%	
Consumer Staples	0.3%	0.3%	0.2%	-0.1%	4.3%	-2.6%	2.4%	4.0%	
Health Care	1.7%	1.7%	0.0%	0.0%	21.6%	12.2%	18.5%	19.0%	
Financials	0.5%	0.4%	0.0%	0.2%	11.1%	5.7%	8.8%	6.4%	
Information Technology	1.2%	1.8%	-0.1%	-0.4%	15.8%	7.5%	16.5%	21.6%	
Telecommunication Services	0.0%	0.0%	0.0%	0.0%	0.1%	0.5%	1.5%	0.6%	
Utilities	0.0%		0.0%			1.8%	0.0%	0.4%	
Real Estate	0.2%	0.3%	0.0%	-0.1%	10.5%	4.6%	4.0%	5.1%	
Cash	-0.1%	0.0%	-0.1%	0.0%	0.1%		2.0%	0.0%	
Portfolio	3.8%	= 4.4%	+ -0.2%	+ -0.5%	10.0%	6.2%	100.0%	100.0%	

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



Core-Grth

A Russell 2000 Value TR USD

High-Grth

# DFA US Targeted Value I

Holdings Based Sty	/le Trail (5 Years)	Portfolio Statistics		Market Capitalization Breakdown					
Time Period: 4/30/2012 t	o 3/31/2017		Fund Index Po		Portfolio Date: 2/28/2017				
		# of Holdings	1,472	1,352		Fund	Index		
		% Asset in Top 10 Holdings	7.2	4.9	Market Cap Giant %	0.0	0.0		
8		Turnover Ratio %	28.0		Market Cap Large %	0.9	0.0		
		P/E Ratio	18.3	19.4	Market Cap Mid %	31.6	8.0		
2		P/B Ratio	1.5	1.6	Market Cap Small %	46.7	56.9		
		LT Earn Growth	10.2	9.5	Market Cap Micro %	20.8	35.0		
	1	Hist Earn Growth	-0.9	1.2	Average Market Cap (mil)	2,480.4	1,627.9		
6		12 Mo Yield	1.0						

Historical Sector Allocations (5 Years)

Core-Val

Core

Deep-Val

DFA US Targeted Value I

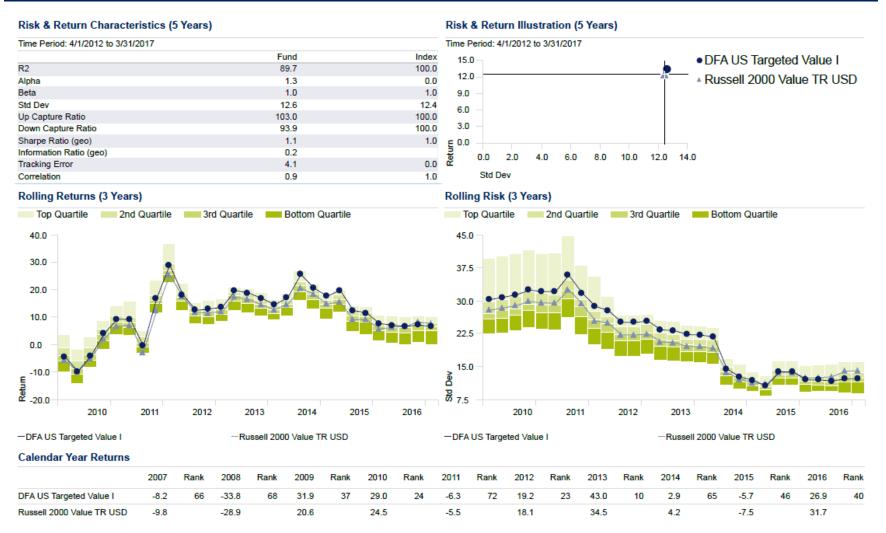
Attribution (Quarter)

100.0					Portfolio E Weights	Benchmark I Weights		Benchmark Al Return	llocation S Effect		Active Return
90.0				Consumer Discretionary	12.96	9.62	0.88	-0.52	0.02	0.16	0.18
80.0 -				Consumer Staples	2.43	2.75	1.14	-2.77	0.01	0.10	0.10
				Energy	8.64	5.74	-10.54	-9.86	-0.32	-0.07	-0.39
70.0 -				Financials	26.79	32.38	-1.59	-2.32	0.11	0.21	0.32
60.0 —				Health Care	4.59	4.45	5.28	9.44	0.02	-0.19	-0.17
50.0 -		and the second se		Industrials	20.72	12.82	1.76	0.44	0.05	0.28	0.33
30.0				Information Technology	13.34	10.41	5.37	6.36	0.22	-0.13	0.09
40.0				Materials	6.11	4.76	5.16	2.26	0.06	0.17	0.24
30.0 -				Real Estate	0.39	10.14	4.44	-1.62	0.14	0.02	0.17
				Telecommunication Services	0.97	0.67	-16.51	-9.17	-0.03	-0.08	-0.10
20.0 -				Utilities	0.40	6.11	5.00	5.06	-0.30	0.01	-0.29
10.0 —				Attribution Total	97.33	99.85	0.29	-0.20	-0.01	0.50	0.49
0.0				Cash	1.43	0.00					
9/2012 3/2013 9/201	13 3/2014 9/2014 3/2015	9/2015 3/2016	9/2016 3/20	17 Other	1.09	0.00					
				Missing Performance	0.15	0.15					
Energy %	Materials %	Industrials %		Total	100.00	100.00					
-Consumer Discretionary %	-Consumer Staples %	-Healthcare %		Reported Total			0.25	-0.13			
Financials %	Information Technology %	Telecom Servi	ces %	Expense Ratio			0.09	0.00			
Utilities %	Real Estate %			Residual(Reported - Attribution + Expense	)		0.05	0.07			

Source: Morningstar



# DFA US Targeted Value I



Source: Morningstar



# Morgan Stanley International Equity I

Holdings	Based Style	e Trail (5 )	(ears)	
Time Period:	1/31/2012 to	12/31/2016		
Bian				_
Parge 1				
ž		_		
Small				_
S.	Course Mark			Web Cab
Deep-Val	Core-Val	Core	Core-Grth	High-Grth

Portfolio Statistics			Market Capitalization Breakdown						
	Fund	Index	Portfolio Date: 9/30/2016						
# of Holdings	65	930		Fund	Index				
% Asset in Top 10 Holdings	40.1	11.8	Market Cap Giant %	70.3	56.5				
Turnover Ratio %	28.0		Market Cap Large %	22.8	35.2				
P/E Ratio	20.1	16.9	Market Cap Mid %	6.9	8.3				
P/B Ratio	2.5	1.6	Market Cap Small %	0.0	0.1				
LT Earn Growth	7.2	8.1	Market Cap Micro %	0.0	0.0				
Hist Earn Growth	5.8	-2.0	Average Market Cap	50,700.9	31,196.7				
12 Mo Yield	1.1		Equity Region Developed %	97.9	99.7				
			Equity Region Emerging %	2.1	0.3				

#### Historical Country Allocations (5 Years)

#### Attribution (Quarter)

100.0	_				_			_				Portfolio Weights	Benchmark Weights		Benchmark Return	Allocation Effect		Active Return
90.0 -											Consumer Discretionary	5.28	12.47	3.19	1.58	-0.16	0.09	-0.08
80.0 -											Consumer Staples	32.58	11.97	-9.85	-10.43	-2.11	0.20	-1.91
											Energy	2.42	5.05	6.53	9.93	-0.27	-0.08	-0.35
70.0 -					-						Financials	10.86	19.97	11.46	9.60	-0.89	0.21	-0.68
60.0 -											Health Care	15.78	10.94	-3.84	-7.71	-0.35	0.64	0.29
50.0 -											Industrials	13.15	14.14	-2.31	-1.79	0.01	-0.07	-0.06
50.0											Information Technology	6.68	5.51	0.32	-3.02	-0.03	0.22	0.19
40.0 -											Materials	8.61	7.71	2.16	3.53	0.05	-0.12	-0.07
30.0 -											Real Estate	0.65	3.90	7.03	-7.25	0.21	0.09	0.30
				_	_	_					Telecommunication Services	2.53	4.68	-7.88	-7.01	0.14	-0.03	0.11
20.0 -											Utilities	0.00	3.49		-7.21	0.23	0.00	0.23
10.0 -											Unclassified	0.00	0.13		0.87	0.00	0.00	0.00
0.0											Attribution Total	98.55	99.97	-2.75	-0.73	-3.17	1.15	-2.02
	12/2	012	6/2013	12/2013	6/2014	12/2014	6/2015	12/2015	6/2016	12/2016	Cash	1.36	0.00					
-bloth	America %			-Latin Ar			_	Inited Kingd			Other	0.08	0.03					
								•			Total	100.00	100.00					
-Europ				-Europe	-			frica/Middle	e East %		Reported Total			-2.36	-0.71			
-Austra				-Japan 9	6		—A	sia dev %			Expense Ratio			0.23	0.00			
—Asia e	mrg %										Residual(Reported - Attribution + Expense	e)		0.62	0.01			

Source: Morningstar

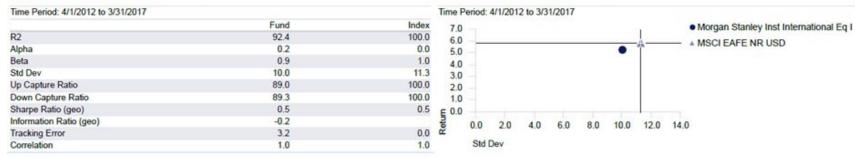


# Morgan Stanley International Equity I

#### **Risk & Return Characteristics (5 Years)**

#### **Risk & Return Illustration (5 Years)**

Rolling Risk (3 Years)



#### Rolling Returns (3 Years)



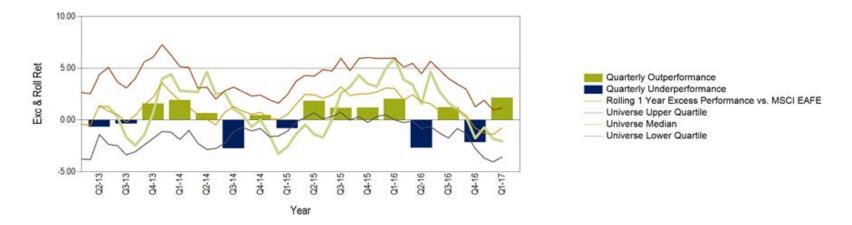
	2001	1 Salities	2000		2000	1 540 115	2010		2011	1 Contract	2012	I COMPTEN	2010	1 Statistic	2014	1 Starring	2010	1 1400 111	2010	- starter.
Morgan Stanley Inst International Eq I	9.8	42	-33.1	8	21.6	85	6.1	87	-7.6	5	19.6	26	20.4	43	-6.1	64	0.4	30	-2.0	82
MSCI EAFE NR USD	11.2		-43.4		31.8		7.8		-12.1		17.3		22.8		-4.9		-0.8		1.0	

Source: Morningstar



# Globeflex

Annualized Excess Performance

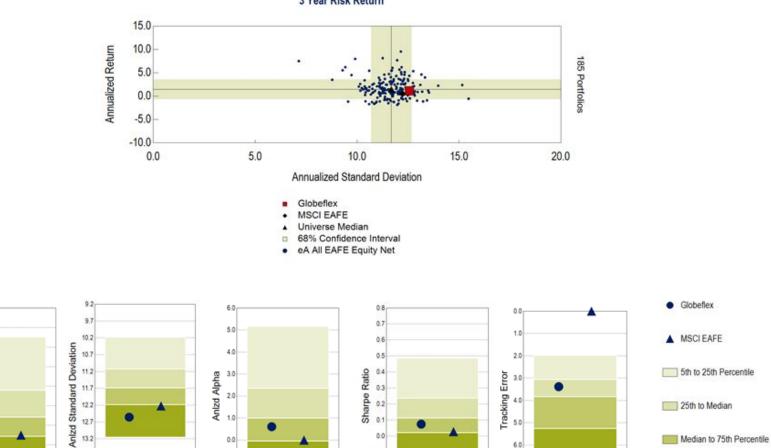




\*Returns are net of fees.



# Globeflex



-0.1

-0.2

-0.3

7.0

8.0

3 Year Risk Return

#### \*Returns are net of fees.

13.7

14.2

-1.0

-2.0

7.0

6.0

5.0

4.0

2.0

1.0

0.0

-1.0

-2.0

Anlzd Return 3.0



March 31, 2017

75th to 95th Percentile

# Globeflex

			Top Positive C	contributors		Top Negative C	contributors	
Characteristics	Portfolio MS			Relative Contribution %	Return %		Relative Contribution %	Return %
Number of Holdings	127	929	VESTAS WINDSYSTEMS	0.3%	25.2%	AURELIUS	-0.2%	-25.1%
Weighted Avg. Market Cap. (\$B)	21.5	53.0	EXOR ORD	0.3%	20.0%	GRIEG SEAFOOD	-0.2%	-20.9%
Median Market Cap. (\$B)	6.5	9.4	AENA SHS	0.3%	16.0%	GTT	-0.1%	-13.0%
Price To Earnings	18.6	21.2	COCA-COLA HBC (CDI)	0.3%	17.8%	TECHNICOLOR	-0.1%	-15.0%
Price To Book	2.9	2.4	STMICROELECTRONICS (MIL)	0.3%	34.9%	TELEFONICA	-0.1%	20.5%
Price To Sales	1.8	2.0	SUBSEA 7	0.3%	21.8%	MAZDA MOTOR	-0.1%	-11.1%
Return on Equity (%) Yield (%)	17.3 2.5	12.5 3.0	BLUESCOPE STEEL	0.3%	39.6%	HEIDELB.DRUCKMASCHINEN	-0.1%	-6.5%
Beta	2.0	1.0	BRIDGESTONE	0.3%	11.8%	NISSAN MOTOR	-0.1%	-2.4%
R-Squared		1.0	IPSEN	0.3%	38.4%	GALENICA 'R'	-0.1%	-6.7%
·			CLP HOLDINGS	0.3%	15.4%	GLAXOSMITHKLINE	0.0%	9.0%

#### **Equity Sector Attribution**

		Attribution Effects			F	Returns	Ending S	ector Weights
	Total	Selection	Allocation	Interaction				
	Effects	Effect	Effect	Effects	Portfolio	Benchmark	Portfolio	Benchmark
Energy	0.6%	0.7%	0.2%	-0.3%	12.3%	-1.7%	6.4%	5.0%
Materials	0.6%	0.4%	0.0%	0.2%	13.4%	7.6%	13.3%	8.0%
Industrials	0.4%	0.3%	0.1%	0.0%	10.5%	9.2%	15.3%	14.3%
Consumer Discretionary	0.4%	0.2%	-0.1%	0.3%	7.2%	5.2%	16.2%	12.2%
Consumer Staples	-0.2%	0.1%	-0.1%	-0.2%	9.2%	9.1%	5.1%	11.4%
Health Care	0.1%	0.2%	0.0%	-0.1%	10.5%	8.7%	7.9%	10.7%
Financials	0.0%	0.3%	0.0%	-0.3%	8.8%	7.4%	16.5%	21.3%
Information Technology	0.3%	0.2%	0.0%	0.1%	15.0%	11.7%	7.8%	5.7%
Telecommunication Services	-0.1%	-0.1%	0.0%	0.0%	3.8%	5.1%	6.1%	4.4%
Utilities	0.3%	0.2%	0.0%	0.1%	13.8%	7.8%	2.1%	3.4%
Real Estate	0.2%	0.1%	0.0%	0.0%	9.1%	6.1%	3.4%	3.7%
Cash	0.0%		-				0.0%	0.0%
Portfolio	2.6%	= 2.6%	+ 0.0%	+ 0.0%	9.9%	7.3%	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.



# Globeflex

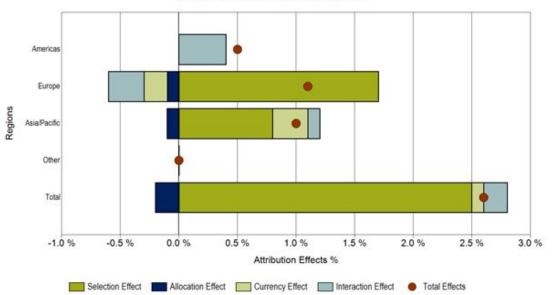
	Country Allocation					Country Allo	cation		
	Manager	Index	Manager	Index		Manager	Index	Manager	Index
	Ending Allocation (USD) Alloc	Ending ation (USD)	Return (USD)	Return (USD)		Ending Allocation (USD) Allo	Ending cation (USD)	Return (USD)	Return (USD)
Americas					AsiaPacific				
Canada	7.2%	0.0%	10.3%	2.5%	Australia	9.3%	7.7%	17.9%	11.0%
United States	0.6%	0.0%	16.9%	6.1%	Hong Kong	4.8%	3.5%	14.0%	13.2%
Total-Americas	7.8%	0.0%	11.2%		Japan	18.6%	23.5%	4.3%	4.5%
Europe					Korea*	6.0%	0.0%	14.5%	16.8%
Austria	1.6%	0.2%		9.1%	Singapore	1.4%	1.3%	11.3%	13.5%
Denmark	2.4%	1.6%	21.9%	6.5%	Total-AsiaPacific	40.1%	36.2%	9.3%	6.9%
France	8.4%	10.1%	12.0%	7.4%	Totals				
Germany	6.9%	9.4%	1.6%	8.5%	Developed	94.0%	100.0%	9.7%	7.3%
Ireland	0.9%	0.5%	9.3%	3.9%	Emerging*	6.0%	0.0%	14.5%	
Italy	2.6%	2.2%	20.0%	6.2%					
Netherlands	2.6%	3.4%	12.2%	11.3%					
Norway	2.7%	0.6%	6.3%	1.5%					
Spain	4.6%	3.3%	16.3%	14.7%					
Sweden	1.5%	2.9%	13.0%	10.0%					
Switzerland	3.5%	8.8%	5.5%	8.8%					
United Kingdom	14.4%	17.9%	10.2%	5.1%					
Total-Europe	52.1%	63.2%	10.3%	7.6%					

\*Returns are net of fees.



# Globeflex

Globeflex Performance Attribution vs. MSCI EAFE



	Ret	urns and End	ing Weights		Attribution Effects						
	Manager	Index	Manager	Index	Selection	Allocation	Currency	Interaction	Total		
	Return	Return	Weight	Weight	Effect	Effect	Effect	Effect	Effects		
Totals											
Americas	11.2%		7.8%	0.0%	0.0%	0.0%	0.0%	0.4%	0.5%		
Europe	10.3%	7.6%	52.1%	63.2%	1.7%	-0.1%	-0.2%	-0.3%	1.1%		
Asia/Pacific	9.3%	6.9%	40.1%	36.2%	0.8%	-0.1%	0.3%	0.1%	1.0%		
Other		5.7%	0.0%	0.7%		0.0%	0.0%		0.0%		
Total	9.9%	7.3%	100.0%	100.0%	2.5%	-0.2%	0.1%	0.2%	2.6%		
Totals											
Developed	9.7%	7.3%	94.0%	100.0%	2.6%	0.0%	-0.4%	-0.1%	2.1%		
Emerging*	14.5%		6.0%	0.0%	0.0%	0.0%	0.4%	0.1%	0.5%		

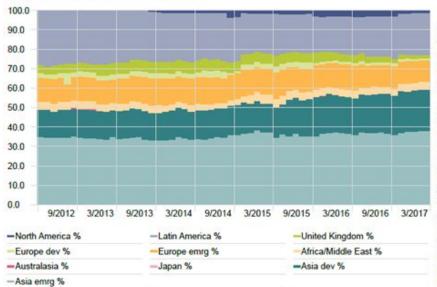
#### \*Returns are net of fees.

# Aberdeen EME

4/30/2012 to	3/31/2017		
	100	Br.	
Core-Val	Core	Core-Grth	High-Grth
		4/30/2012 to 3/31/2017	

Portfolio Statistics			Market Capitalization Break	kdown	
	Fund	Index	Portfolio Date: 2/28/2017		
# of Holdings	66	830		Fund	Index
% Asset in Top 10 Holdings	32.8	22.2	Market Cap Giant %	57.7	59.2
Turnover Ratio %	9.2		Market Cap Large %	33.0	32.4
P/E Ratio	17.4	14.5	Market Cap Mid %	9.3	8.2
P/B Ratio	2.0	1.6	Market Cap Small %	0.0	0.2
LT Earn Growth	9.8	12.7	Market Cap Micro %	0.0	0.0
Hist Earn Growth	2.5	-41.5	Average Market Cap	22,403.5	25,138.7
12 Mo Yield	1.1		Equity Region Developed %	25.5	29.7
			Equity Region Emerging %	74.5	70.3

#### Historical Country Allocations (5 Years)



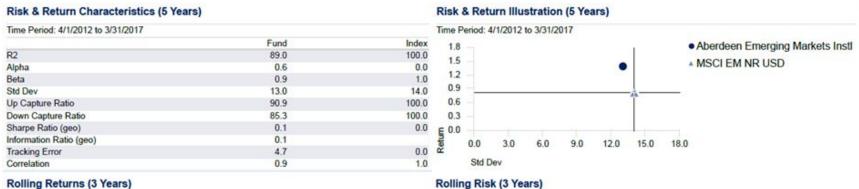
#### Attribution (Quarter)

		Portfolio Weights	Benchmark Weights					Active
	Consumer Discretionary	10.26	10.27	10.44	12.70	0.00	-0.23	-0.23
	Consumer Staples	17.66	7.05	8.64	7.57	-0.43	0.19	-0.24
	Energy	5.74	7.66	0.00	4.31	0.13	-0.28	-0.16
	Financials	26.36	24.36	14.48	10.04	-0.02	1.17	1.15
-	Health Care	1.16	2.47	7.30	5.57	0.08	0.02	0.10
	Industrials	2.34	5.76	16.61	13.51	-0.06	0.11	0.05
-	Information Technology	13.02	23.69	15.20	16.97	-0.55	-0.24	-0.79
	Materials	9.35	7.52	18.86	11.92	0.00	0.65	0.65
	Real Estate	7.08	2.51	12.77	11.03	-0.02	0.12	0.11
	Telecommunication Services	4.69	5.77	4.97	7.65	0.04	-0.13	-0.09
	Utilities	0.00	2.83		10.29	0.03	0.00	0.03
	Unclassified	0.00	0.02		0.32	0.00	0.00	0.00
	Attribution Total	97.66	99.92	11.98	11.41	-0.80	1.38	0.57
	Cash	2.09	0.00					
17	Other	0.00	0.07					
	Missing Performance	0.25	0.02					
	Total	100.00	100.00					
	Reported Total			12.02	11.45			
	Expense Ratio			0.31	0.00			
	Residual(Reported - Attribution + Expense)			0.35	0.03			

#### Source: Morningstar



# Aberdeen EME



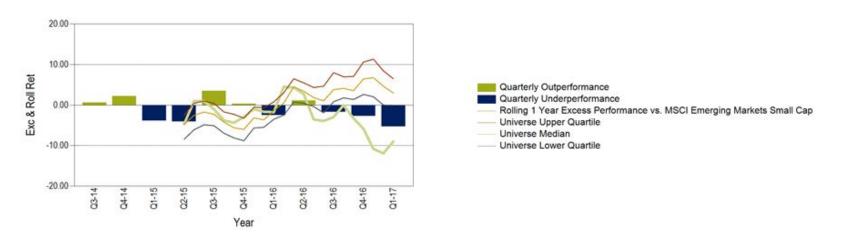
#### Rolling Returns (3 Years)



Source: Morningstar



# Mondrian EM Small Cap



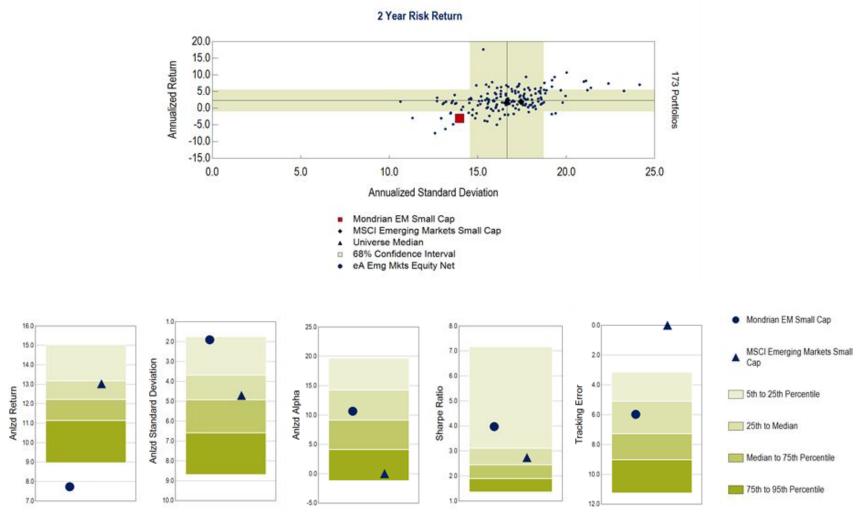
#### Annualized Excess Performance



\*Returns are net of fees.



# Mondrian EM Small Cap



\*Returns are net of fees.



# Mondrian EM Small Cap

			Top Positive Co	ontributors		Top Negative C	Contributors	
				Relative			Relative	
Characteristics		MSCI		Contribution %	Return %		Contribution %	Return %
	Portfolio	Emerging Markets	SILOAM INTL.HOSPS.	0.5%	29.9%	GINKO INTERNATIONAL	-0.2%	-11.5%
		Small Cap	MAYORA INDAH	0.4%	30.9%	NUTRIBIOTECH	-0.1%	-23.6%
Number of Holdings	109	1,831	CENTURY PLYBOARDS INDIA	0.4%	60.9%	BOER POWER HOLDINGS	-0.1%	-15.7%
Weighted Avg. Market Cap. (\$B)	1.3	1.2	KMC KUEI MENG INTL.	0.4%	39.4%	SARANA MEDITAMA MET.TBK	-0.1%	-9.4%
Median Market Cap. (\$B)	0.9	0.6	NEXTEER AUTOMOTIVE GROUP	0.4%	24.3%	MICROPORT SCIENTIFIC	-0.1%	-5.5%
Price To Earnings	28.6	18.9	MEDY-TOX	0.4%	40.2%	CRISIL	-0.1%	-9.2%
Price To Book	5.0	2.4	SYMPHONY	0.3%	38.9%	EOH	-0.1%	-13.6%
Price To Sales	4.1	2.1	BERGER PAINTS INDIA	0.3%	20.2%	ARWANA CITRAMULIA	-0.1%	-7.1%
Return on Equity (%)	20.4 1.9	13.6 2.2	TORRENT PHARMACEUTICALS	0.3%	24.2%	BLOOMAGE BIOTECHNOLOGY	-0.1%	-5.9%
Yield (%) Beta	1.9	1.0	CPMC HOLDINGS	0.3%	20.2%	OCEANA GROUP	-0.1%	-8.9%
R-Squared		1.0						

#### **Equity Sector Attribution**

			Attribution Effects		F	Returns	Ending S	ector Weights
	Total	Selection	Allocation	Interaction				
	Effects	Effect	Effect	Effects	Portfolio	Benchmark	Portfolio	Benchmark
Energy	0.0%		0.0%			9.2%	0.0%	1.6%
Materials	0.3%	0.5%	0.0%	-0.1%	15.5%	12.7%	11.6%	11.2%
Industrials	-0.8%	-0.6%	0.0%	-0.2%	7.9%	13.1%	16.7%	15.0%
Consumer Discretionary	0.0%	0.2%	0.0%	-0.2%	14.9%	13.7%	14.5%	17.8%
Consumer Staples	0.1%	0.2%	-0.3%	0.2%	8.1%	6.7%	11.8%	6.8%
Health Care	-0.6%	0.0%	-1.0%	0.4%	5.7%	7.2%	23.8%	8.3%
Financials	-0.6%	-0.9%	-0.1%	0.4%	5.5%	15.5%	2.3%	8.6%
Information Technology	-1.8%	-2.3%	-0.6%	1.1%	0.3%	18.8%	3.0%	17.0%
Telecommunication Services	0.0%		0.0%			9.8%	0.0%	1.0%
Utilities	-0.4%	-0.3%	0.0%	-0.1%	3.4%	12.7%	5.2%	3.7%
Real Estate	-0.2%	-0.6%	0.0%	0.4%	9.2%	11.7%	9.0%	9.1%
Cash	-0.1%	0.0%	-0.1%	0.0%	0.1%		0.7%	0.0%
Portfolio	-4.3%	= -3.9%	+ -2.1%	+ 1.6%	8.7%	13.1%	98.4%	100.0%

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



# University of Maine System Managed Investment Pool Mondrian EM Small Cap

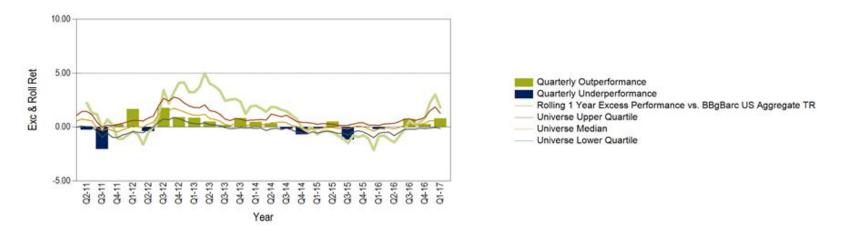
Sector Allocation*			Country Allocation*		
	Fund	MSCI EM SC		Fund	MSCI EM SC
Consumer Discretionary	14.3	17.8	LATIN AMERICA	10.3	8.8
			Brazil	3.0	4.5
Consumer Staples	13.2	6.7	Mexico	5.4	2.9
Energy	_	1.6	Peru	1.9	1000
Ci			EUROPE, MIDDLE EAST & AFRICA	5.7	11.0
Financials	2.3	8.6	Poland	1.4	1.2
Health Care	24.8	8.4	Saudi Arabia	1.4	-
			South Africa	2.8	5.4
Industrials	16.4	15.0	PACIFIC-ASIA	83.4	80.3
Information Technology	2.9	17.0	China/Hong Kong	17.5	22.3
0,			India	26.3	13.1
Materials	11.4	11.2	Indonesia	9.4	2.4
Real Estate	8.8	9.0	Korea	6.4	16.6
			Malaysia	6.6	3.1
Telecommunication Services	_	1.0	Philippines	4.6	1.1
Utilities	5.1	3.7	Taiwan	7.9	18.0
			Thailand	4.6	3.6
CASH	0.7		CASH	0.7	
TOTAL	100.0	100.0	TOTAL	100.0	100.0

Source: Mondrian

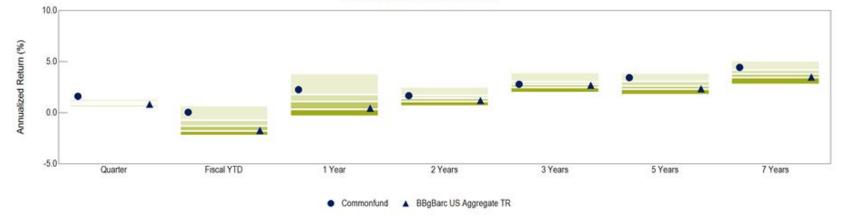


# Commonfund





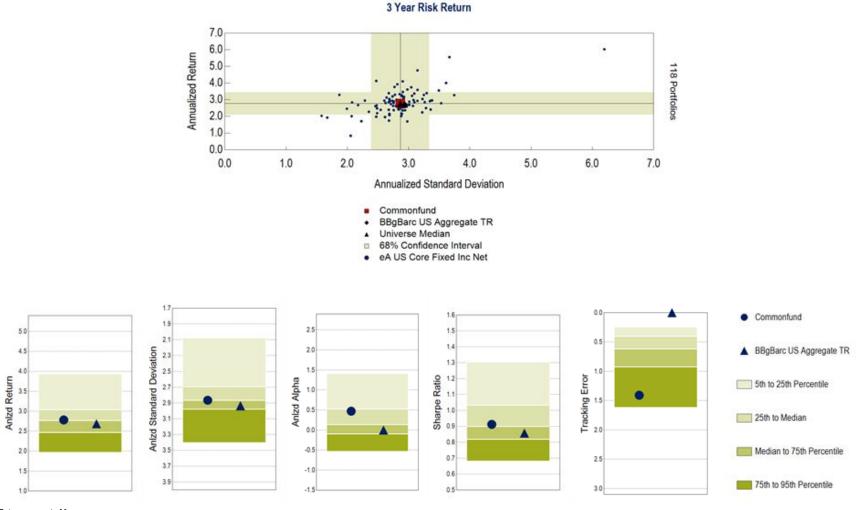
eA US Core Fixed Inc Net Accounts



\*Returns are net of fees.



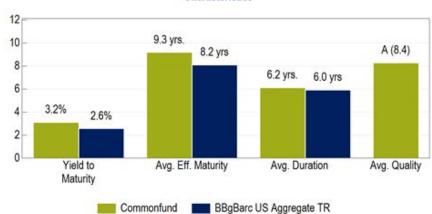
# Commonfund



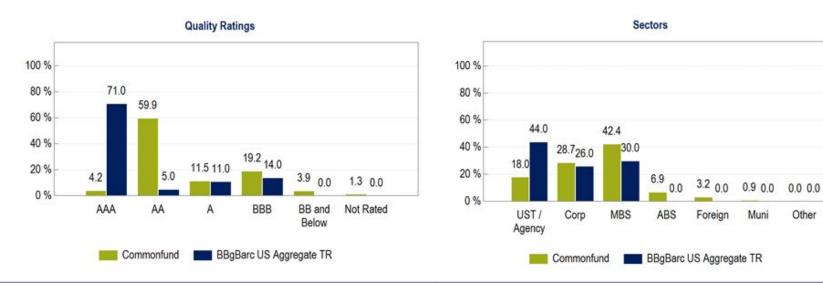
\*Returns are net of fees.



## Commonfund



#### Characteristics



NE NEPC, LLC

Commonfund

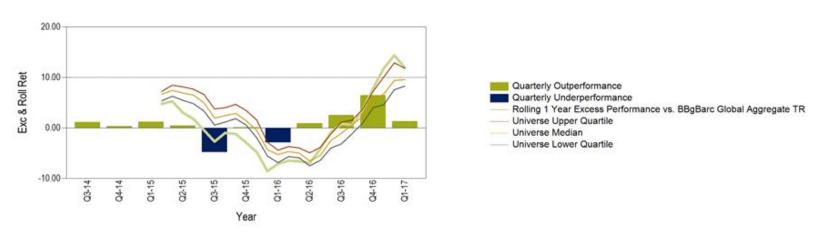
# Multi-Strategy Bond Fund | Managers March 31, 2017

	Core	Opportunistic	Credit
AEA Investors			
Ashmore Investment Management			
Bain Capital			-
Brandywine Asset Management			
CarVal Investors			-
Centerbridge Capital Partners			
Cerberus Capital Management			-
Convexity Capital Management			
EOS Partners			-
Fortress Investment Group			
GoldenTree Asset Management			-
Income Research & Management (IRM)			
KPS Capital Partners			-
Oaktree			
Rimrock Capital Management			
Sit Investment Associates			
Trust Company of the West (TCW)			-
Western Asset Management Company (WAMCO)			
WL Ross & Co			

Source: Commonfund



# Loomis Sayles Fixed Income



#### Annualized Excess Performance

Multisector Bond MStar MF Accounts 15.0 10.0 Annualized Return (%) 5.0 0.0 -5.0 -10.0 Quarter Fiscal YTD 1 Year 2 Years 3 Years 5 Years 7 Years Loomis Sayles Fixed Income BBgBarc Global Aggregate ٠ TR

\*Returns are net of fees.



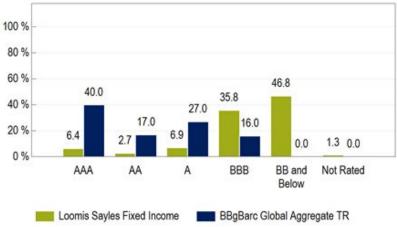
# Loomis Sayles Fixed Income



Characteristics







NE NEPC, LLC

### Loomis Sayles Fixed Income

Historical Sector Allocations (10 Years)



100.0 90.0 80.0 70.0 60.0 50.0 40.0 30.0 20.0 10.0 0.0 2007 2012 2013 2016 2008 2009 2010 2011 2014 2015 -Government % -Municipal % -Corporate % -Securitized % -Cash & Equivalents % Derivative %

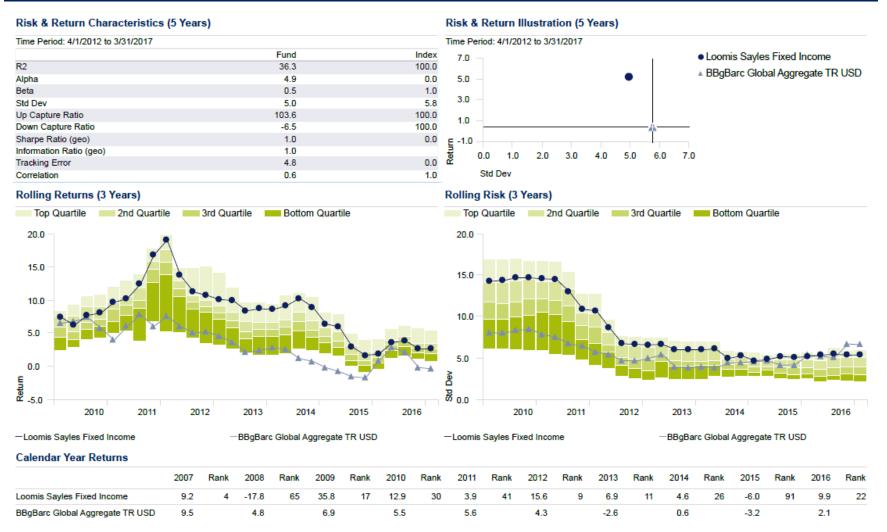
#### **Top Holdings**

	Detail Holding Type	Portfolio Weighting %
Old Rep Intl Cv 3.75%	BOND - CONVERTIBLE	2.18
US Treasury Note 0.75%	BOND - GOV'T/TREASURY	1.86
New Zealand(Govt) 5%	BOND - GOV'T/TREASURY	1.50
Ontario Prov Cda 4.2%	BOND - GOV'T/TREASURY	1.44
Intel Corp	EQUITY	1.35
Morgan Stanley 4.1%	BOND - CORPORATE BOND	1.26
Owens Brockway 144A 5.375%	BOND - CORPORATE BOND	1.10
Bk N S Halifax 2.462%	BOND - CORPORATE BOND	1.06
Amer Air Pt Tr 2016-1 5.25%	BOND - ASSET BACKED	1.05
Bombardier 144A 6%	BOND - CORPORATE BOND	0.97

Source: Morningstar



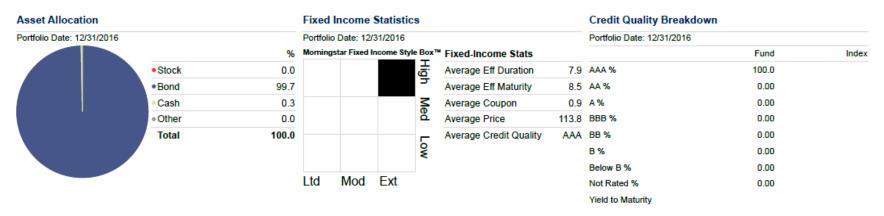
# Loomis Sayles Fixed Income



Source: Morningstar



# Vanguard Inflation Protected Securities





#### **Top Holdings**

March 31, 2017

Portfolio

5.24

4.83

4.65

4.47

4.30

4.17

4.10

3.96

3.88

3.84

Weighting %

Detail

Туре

Holding

BOND - GOV'T INFLATION PROTECTED

Source: Morningstar

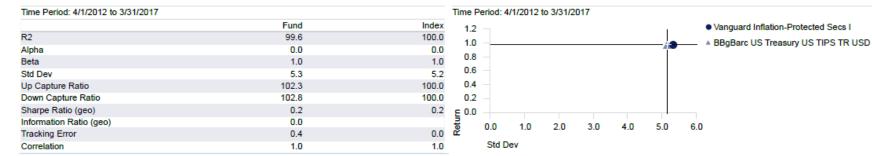


# Vanguard Inflation Protected Securities

#### Risk & Return Characteristics (5 Years)

#### **Risk & Return Illustration (5 Years)**

Rolling Risk (3 Years)



#### Rolling Returns (3 Years)

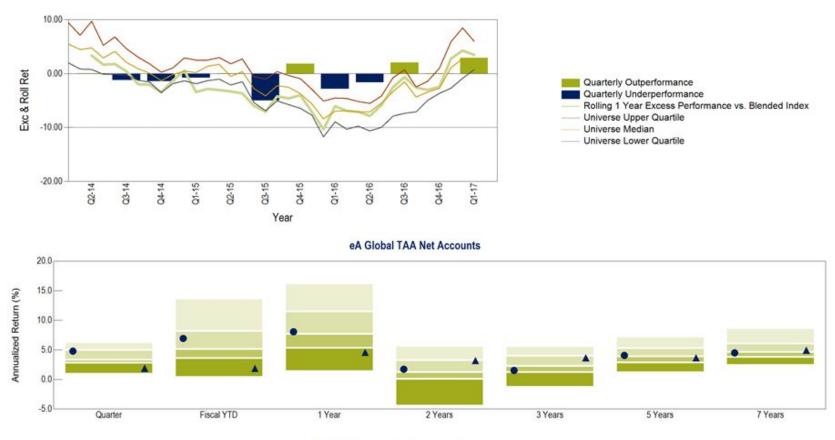


Source: Morningstar



# GMO Global Absolute Return

#### Annualized Excess Performance



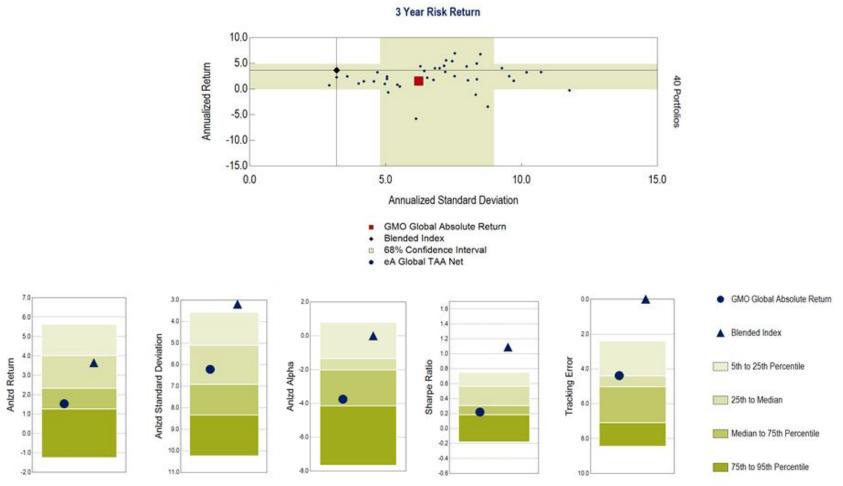
GMO Global Absolute Return A Blended Index

#### \*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+



# GMO Global Absolute Return

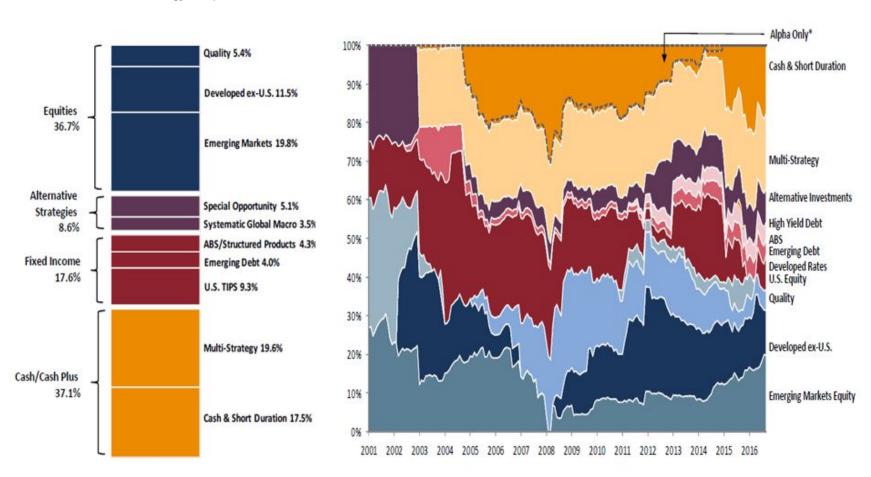


#### \*Returns are net of fees.

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



### University of Maine System Managed Investment Pool GMO Allocation Absolute Return Strategy



### **Strategy Composition**

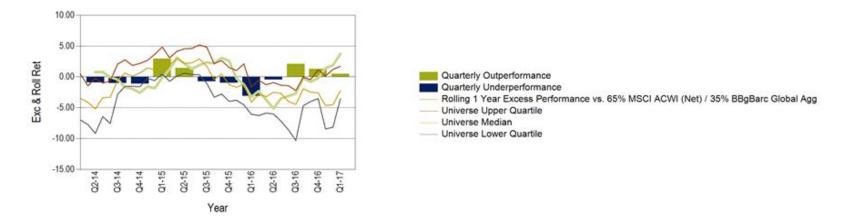
**Historical Allocation** 

Source: GMO



# Wellington Opportunistic



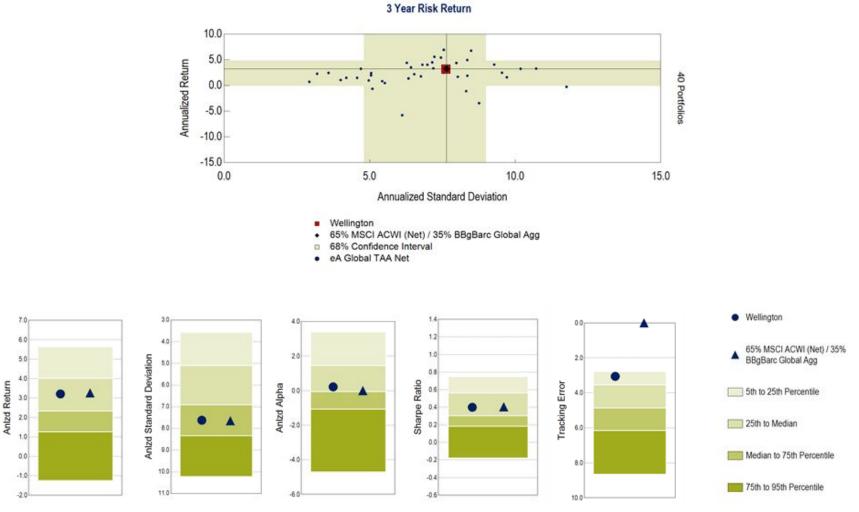




\*Returns are net of fees.



# Wellington Opportunistic



\*Returns are net of fees.

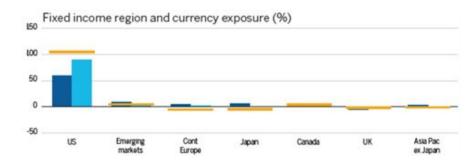


# Wellington Opportunistic

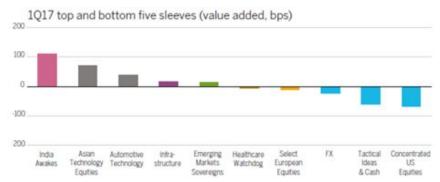
#### **Portfolio Characteristics**

	Portfolio	Benchmark
Yield to worst (%)	3.3	2.6
Option adjusted spread (bps)	142	47
Duration – effective (yrs)	5.8	5.9
Convexity – effective	0.6	0.1

#### Fixed Income Sector



#### **Top Relative Contributors and Detractors**



#### 30 Sector exposure (%) Portfolio **MSCI ACWI Index** Portfolio currency 20 10 0 Info Financials Cons Industrials Materials Health Real Cons Ublities Energy Telecom technology estate discretonary care staples SVCS

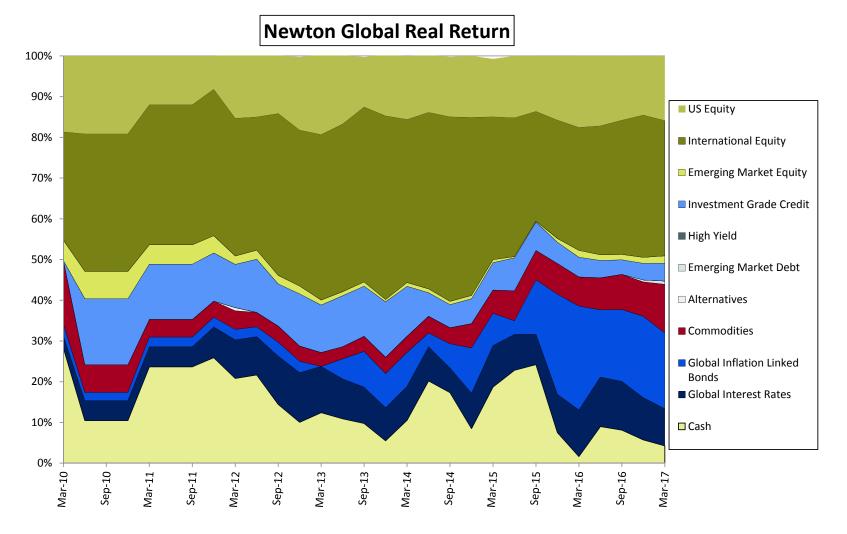
#### **Equity Sector**

Source: Wellington



University of Maine System Managed Investment Pool

### Newton Global Real Return



\*As of March 2012, Newton is reporting High Yield separately from Credit

	Fixed Inc roup Ltd.	ome Ho	ldings N.	v.													
	rk 1 (BM)	-	S&P 500														
senchma	rk 2 (BM2	21	Barciays		Bond Ind		ce (95) 8	lat of Fa	-					Statistical Analysis	Fund	BM1	8
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Returns	00000		
2017	-0.4%	1.3%	-1.3%	- day				nug		<b>U</b> LL			-0.4%	Annualized Compound ROR	6.3%	7.9%	5
2016	-3.0%	-1.1%	1.5%	1.5%	0.9%	-0.3%	2.0%	0.4%	-0.7%	0.4%	1.5%	1.2%	4.4%	3 Yr Return	-0.1%	10.4%	2
2015	0.1%	1.5%	0.5%	-0.2%	0.5%	-1.4%	0.3%	-2.0%	-1.8%	0.7%	-0.4%	-1.9%	-4.0%	5 Yr Return	3.7%	13.3%	
2014	-0.6%	2.3%	0.0%	0.2%	0.9%	1.2%	-0.9%	0.5%	-0.8%	-2.0%	1.3%	-0.4%	1.5%	Best Month	5.9%	10.9%	3
2013	2.6%	0.4%	1.7%	1.2%	1.6%	-1.9%	1.4%	-0.8%	1.5%	1.5%	1.4%	1.3%	12.4%	Worst Month	-27.9%	-16.8%	
2012	2.3%	2.1%	0.2%	-0.1%	-1.0%	0.2%	1.2%	0.9%	1.5%	0.8%	0.2%	1.8%	10.3%	% Positive Months	70.8%	63.4%	6
2011	1.4%	1.4%	0.1%	1.2%	-0.2%	-1.4%	0.3%	-3.0%	-4.0%	1.9%	-0.8%	-1.0%	-4.2%	Risk			
2010	1.2%	0.7%	2.4%	2.1%	-2.3%	-0.7%	1.0%	0.4%	1.9%	2.1%	0.1%	2.3%	11.7%	Standard Deviation	8.8%	15.2%	3
2009	1.1%	-0.8%	0.5%	2.8%	5.5%	2.9%	3.3%	2.9%	2.9%	1.2%	1.4%	2.0%	28.7%	3 Yr Standard Deviation	4.3%	10.4%	2
2008	-0.7%	0.2%	-1.0%	0.5%	0.3%	0.3%	-1.8%	-1.2%	-4.0%	-7.4%	-2.8%	-2.0%	-17.5%		4.3%	10.2%	2
														Sharpe Ratio (3.5%)	0.4	0.4	
														Sortino Ratio (700.0%)	-3.4	-3.4	
Outper	form BM	in Up H	arkets	Outper	form BH	n Down I	larkets		D	istributio	on of Ret	urns		Downside Deviation (700.0%)	64.2%	64.8%	6
1075		-		100%			100000 States							Max Drawdown	-36.8%	-50.9%	-
														Months In Maximum Drawdown	5	16	
90%				90%		1	_	20					-	Months To Recover	33	37	
80%				80%		-	_	60						Comparison To Benchmark(s)			
70%				70%		_	_							Monthly Alpha		0.3%	0
60%				60%				\$ 50-						Annualized Alpha		4.1%	7
7.00								2 10-					_	Beta		0.3	(
50%				50%				1						Correlation		0.5	(
40%				40%				^ ~ ~						R-Squared		24.2%	0
32%				30%				20			┓╠╢╫╢╟		_	Annual Returns		Construction and	
20%								10						2017-(YTD)	-0.4%	6.1%	0
				20%										2016	4.4%	12.0%	2
10%				10%				0.4	2 0 0	7 7	0 11		0	2015	-4.0%	1.4%	0
0%	S&P 500 (TR)	Barris	ys Aggregitte	0%							1102	310.4	1 al	2014	1.5%	13.7%	3
		80	nd Index		S&P 500 (TR)	Barclays . Bond	Aggregate Index				um Range (%)		-	2013	12.4%	32.4%	-
- INTERNE			_			9693	802				Contraction of the			2012	10.3%	16.0%	
Risk/	Return P	rofile				- 14 A		Underw	rater Dra	wdowns				Latest Returns	2010/2010/2010		_
-							-	·······						Last Month	-1.3%	0,1%	-(
				+			° 🕅	ALC:		1		1		Last 3 Months	-0.4%	6.1%	0
							-10%			1		V).	I.	Last Year	6.0%	17.2%	C
7%				elen S.V.	al Parel Shore H	oktings.				~	1 1	r		2-Year	-1.1%	9.2%	3
5							-20%			J.	1 1			3-Year	-0.1%	10.4%	2
8									M J					4-Year	2.1%	13.1%	3
2 00				4540	500 (770)	-	-30%		11		11			5-Year	3.7%	13,3%	2
1				100	and a state of the	ð	-		4		U			Drawdown Analysis			
1							-40%		P <sup>1</sup>		V			1	-36.0%	-50.9%	
5%				1.550			-52%		- St.					2	-17.7%	-44.7%	-
				+Beck	inys Appropria Ro	of lindex								3	-10.1%	-15.4%	-
							60%			-				4	-8.0%	-8.4%	-
								1999	2000	8 8 8	X X X X	CTION CTION	NXXX	5	-2.9%	-6.8%	



# EnTrustPermal Fixed Income Holdings

Fund Name Management Company	EnTrustPermal Fixed Inc	ome Holdings			
				Current Alloca	ation
company	EnTrustPermal			Event Driven	36%
Location	New York, NY			Fixed Income – Hedge	23%
Firm AUM	\$24.4 Billion	Strategy	Fund of Fund	Fixed Income - Developed Markets	32%
Strategy AUM	\$1.3 Billion	Sub- Strategy	Multi-Strategy	Global Macro	8%
Portfolio Managers	Robert Kaplan, Clark Fenton, Javier Dyer	Direct or FOF	FOF	Fixed Income - Emerging Markets	1%
J. J	. ,	erms		Attributio	n
Share Class				De la companya de la companya de	
Minimum	\$1 million			Performance by Strategy <sup>5</sup>	
Investment Management Fee	0.95%			MTD YTD	٦
Incentive Fee	None			Dvipd. Mrkts Fxd Inc.	
Hurdle Rate	None				
High Water Mark	None				-
Subscription	Monthly			Fixed Income Hedge	
Redemption	Monthly with 20 days			71	-
Lock-Up	None			Emerg. Mrkts Fxd Inc.	
					_
	Investme	ent Strategy		Macro Managers	
					I
that employs a u	inique combination of fixe	d-income spread			-
	and nimble, liquid macro s ancer and a good diversif			Event Driven	- <b>1</b>
				-10% -5%	0%



	use Glob use Partne		Short Fun	d, L.P.													
	ark 1 (BM		S&P 500 (														
Benchm	ark 2 (BM	2):	Barclays A													-	_
	-	144			Honthly P					-		-		Statistical Analysis	Fund	BM1	
2017	Jan 1.5%	0.3%	Mar 1.1%	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2.8%	Annualized Compound ROR	6.1%	7.8%	
2016	-3.6%	-0.7%	-0.4%	0.5%	1.0%	0.3%	1.7%	-0.2%	1.0%	-0.9%	1.2%	0.3%	0.0%	3 Yr Return	4.8%	10.4%	
2015	1.0%	1.0%	1.6%	-0.5%	1.1%	0.2%	0.4%	-0.8%	-1.0%	2.2%	0.0%	1.7%	7.2%	5 Yr Return	7.3%	13.3%	
2014	0.9%	1.8%	-1.7%	-2.0%	1.2%	1.9%	-0.5%	1.7%	-0.1%		1.2%	0.6%	5.3%	Best Month	3.3%	10.9%	
2013	3.2%	0.5%	2.7%	1.5%	1.0%	1.0%	2.2%	-0.3%	2.2%	1.2%	1.1%	2.4%	20.5%	Worst Month	-6.4%	-16.8%	-
2012	1.7%	1.7%	1.6%	1.2%	-3.7%	0.5%	0.1%	1.1%	1.3%	-0.1%	0.8%	0.4%	6.7%	% Positive Months	69.4%	66.0%	6
2011	-0.2%	1.2%	0.7%	2.1%	-1.1%	-1.5%	0.6%	-3.1%	-0.6%	1.7%	-1.0%	-0.6%	-1.9%	Risk			
2010	0.0%	0.3%	1.9%	0.6%	-2.4%	-1.7%	1.7%	-0.6%	1.3%	1.8%	0.2%	2.1%	5.1%	Standard Deviation	5.4%	14.1%	3
2009	0.3%	-0.5%	1.1%	1.3%	2.3%	0.7%	1.6%	1.4%	1.5%	-0.9%	0.3%	0.9%	10.2%	3 Yr Standard Deviation	4.0%	10.4%	2
2008	-3.2%	1.2%	-4.7%	1.5%	2.8%	-0.5%	-1.4%	-0.3%	-6.4%		-0.6%	0.0%	-13.1%		4.5%	10.2%	2
														Sharpe Ratio (3.5%)	0.5	0.4	
														Sortino Ratio (700.0%)	-3.5	-3.4	
Outpe	orform BM	l in Up H	arkets	Outper	form BH	in Down I	Markets		D	istributio	on of Ret	urns		Downside Deviation (700.0%)	64.0%	64.6%	6
102%				100%			a construction of the					1000		Max Drawdown	-15.2%	-50.9%	-
								~						Months In Maximum Drawdown	16	16	
90%			_	90%			_							Months To Recover	25	37	
80%			_	80%			_							Comparison To Benchmark(s)			
70%				70%			-	- 40	_					Monthly Alpha		0.3%	0
60%				60%				8						Annualized Alpha		4.1%	6
1.1.1								2 30-						Beta		0.2	(
50%				50%				3			n			Correlation		0.6	(
40%			H	40%				20					_	R-Squared		38.6%	0
32%				30%										Annual Returns			
22%				22%				- 20						2017-(YTD)	2.8%	6.1%	c
10000										00		-		2016	0.0%	12.0%	2
10%				10%				04	2 9 4	TT	0 14		9	2015	7.2%	1.4%	C
0%	SB/P 500 (TR)	Barrie	rs Aggregate	0%							1 100 2	3005		2014	5.3%	13.7%	5
			nd Index		58P 500 (TR)	Barclays	Aggregate		5 S S	200	um Range (%)			2013	20.5%	32.4%	-
and the second s	1	-				9.670	- ASS. 20				CHENNEL MARKED			2012	6.7%	16.0%	4
Risk	/Return P	rofile				- 10 A		Underw	rater Dra	awdowns	1			Latest Returns			
25			1.4	10			-							Last Month	1.1%	0,1%	-(
			1	2			M		4					Last 3 Months	2.8%	6.1%	0
1000				1.200			-10%		h l		1			Last Year	7.8%	17.2%	0
7%				Auto	house Global Long	plinort					V			2-Year	3.1%	9.2%	1
5				-			-20%			M				3-Year	4.0%	10.4%	
y on						1				NW.				4-Year	7.0%	13.1%	
allar				4580	500 (77)	1	-30%			<u> </u>				5-Year	7.3%	13.3%	2
1 54				1000			-475							Drawdown Analysis		50.00	
35									1					1	-15.2%	-50.9%	
	+			1500	1.		-62%		Y					2	-5.6%	-8.4%	-
				* fed	inys Appropria Ro	10 2109x								3	-4.6%	-6.6%	



# University of Maine System Managed Investment Pool Lighthouse Global Long/Short

	General Fun				Strategy	Informa	tion					
Fund Name	Lighthouse Global Long/	Short Fund					Curren	t Allocati	on			
Management Company	Lighthouse Investment F	Partners, LLC		Region ex	posures and c	ontribution <sup>m</sup>	IPU 4					
Location	Palm Beach, FL			170%	185.0%							· Oross
Firm AUM	\$8.7 billion	Strategy	Fund of Fund	1305								
Strategy AUM	\$1.8 billion	Sub- Strategy	Long/Short Equity	90% 70%								
Portfolio Managers	Ethan Baron	Direct or FOF	FOF	50% 30% 18		45	43.1%	27.4%	5.0	19.8%		1.9%
	Τε	erms		-10%	Developed North A		oped Europe	1.8% Developed Asia		Emerging Ma	den.	-0.4% Hedges / Other
Share Class				WR <sup>R</sup>	0.29%	2020 2020	0.00%	0.02%		0.03%		0.02%
Minimum Investment	\$1 million			0.00 <sup>90</sup> 1.58% 0.48% 0.30% 0.42% -2.02%								
Management Fee	1.15%			- 			Att	ibution				
Incentive Fee				1								
Hurdle Rate	None			-								
Hurdle Rate High Water Mark	None Yes				sure and con	tribution <sup>mpg</sup>	N.					
High Water				Sector expo	sure and con	tribution <sup>mpa</sup>	V.					Net BGross
High Water Mark	Yes	ce) or Monthly (9	0 days notice)	60% ] 518V	sure and con	tribution <sup>says</sup>	34.6%	4.9% 34.2%				Net Bi Gross
High Water Mark Subscription	Yes Monthly	ce) or Monthly (9	0 days notice)	60% 50% 518%		198% 22.8%	34.0%	995 925	18.0%	12.0%		■Net ■Gross
High Water Mark Subscription Redemption	Yes Monthly Quarterly (60 days notic None	, , , , ,	0 days notice)	60% 50% 40% 30% 10% 6.0%			34.6%	NIN 3125	18.0%	12.0%	35 455	• Net • Gross
High Water Mark Subscription Redemption	Yes Monthly Quarterly (60 days notic None	ce) or Monthly (9 ent Strategy	0 days notice)	60% 51.8% 50% 40% - 30% -			3485 375 <u>375</u>	45% 342%	18.0%	12.0%	3% 45%	144
High Water Mark Subscription Redemption	Yes Monthly Quarterly (60 days notic None	, , , , ,	0 days notice)	60% 50% 40% 30% 20% 10% 60% 0% 50% 0% 50% 0% 50% 0% 50% 0% 50% 50	18.0% -0.8% er Consumer		175 175	04.5% 54.2% 6.5%	405	12 dh Qifh Reil Estate	3% 4.5% Telecom	695 335
High Water Mark Subscription Redemption Lock-Up	Yes Monthly Quarterly (60 days notion None Investme bobal Long/Short Fund is a g industry sector and country similar to the MSCI World I	ent Strategy global portfolio of specialist manag	20-30 separately managed ers. The geographical	60% 50% 40% 20% - 10% - 0% - 0% - 0% - 0% - 0% - 0% -	18.0% -0.8% er Consumer stag: Stagles 0.02%	19.8% 22.8%	37% 37% Heathcare In 0.07%	03%	405		34	0.9% 3.9% 2 -0.4%

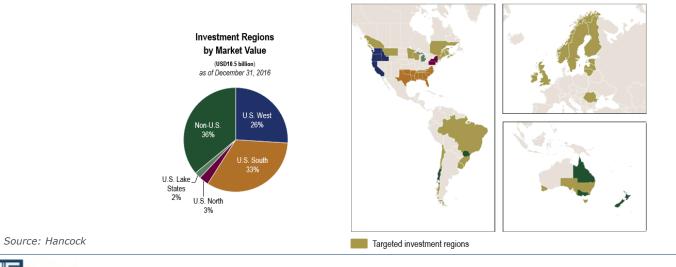
For more information please see NEPC's Investment Due Diligence Report and Operational Due Diligence Report



# John Hancock Timber

		I	NVESTMENTS								
Property	Location	Acquisition <u>date</u>	Acres	Independe <u>Last</u>	nt appraisals <u>Next</u>		Book value	1	Fair narket value		Unrealized
Elkhorn	WA	10/31/05	9,049	Dec-15	NA	\$	14,838,789	s	25,264,750	s	10,425,9
Pinchot	WA	10/31/05	34,469	Dec-16	Dec-17		41,820,577		124,600,000		82,779,42
Plum Grove	PA/NY	10/31/05	48,193	Dec-16	Dec-17		142,310,159		139,700,000		(2,610,15
Tyler	TX	10/31/05	86,901	Dec-16	Dec-17		77,298,728		169,000,000		91,701,27
Total equity real estate			178,612			\$	276,268,253	\$	458,564,750	\$	182,296,49
Other investments		Acquisition <u>date</u>									
Minerals		10/31/05		NA	NA	\$	959,680	\$	959,680	s	
Other miscellaneous investments		10/31/05		NA	NA		28,150		28,150		
Red River Timberlands Company *	AR, LA, TX	4/1/08	120,623	Dec-16	Dec-17		116,346,143		134,669,134		18,322,99
Total other investments			120,623			s	117,333,973	s	135,656,964	s	18,322,9

**INVESTMENT REGIONS** 





# Landmark Equity Partners XV

	General Fund	Information								
Fund Name	Landmark Equity Partners	Landmark Equity Partners XV								
General Partner	Landmark Partners									
Main Address	10 Mill Pond Lane, Simsb	ury, 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	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	• 8% per annum
GP Fees	Years 1 - 4: 1.00% of LP's capital commitments Years 5 - 8: 1.00% of the aggregate amount of LP's capital contributions plus amounts subject to call for Fund obligations Years 8 - remaining life of fund: 1.00% of LP's investment percentage of the reported value of Fund XV's portfolio investments
GP Commitment	1% of aggregate commitments
Carried Interest	10% on secondary investments only

Fund Strategy			
Investment Strategy	<ul> <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
Fur	d Sourcing and Asset	Management (	Capabilities
Sourcing Capabilities	<ul> <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 cellers.</li> </ul>		
Value Add	<ul> <li>undertaken with potential sellers.</li> <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>		

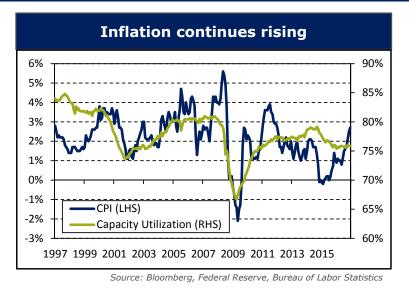


Investment Committee Meeting - Managed Investment Pool - Performanc Review





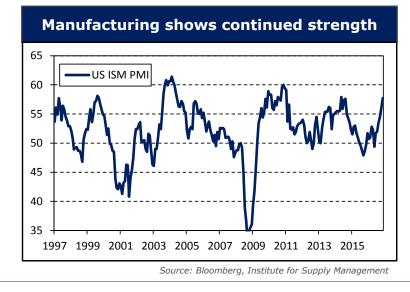
# University of Maine System Managed Investment Pool US Economic Indicators

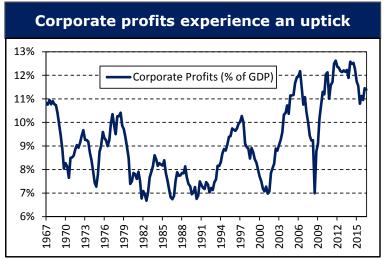


Unemployment has steadied



Source: Bloomberg, Bureau of Labor Statistics

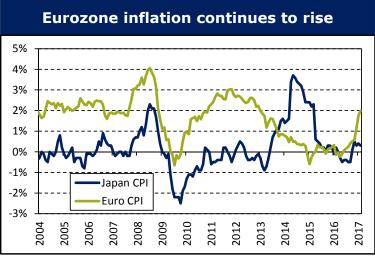




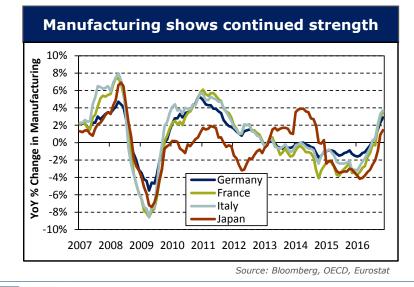




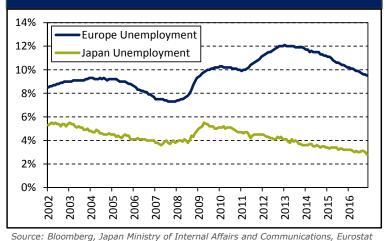
# University of Maine System Managed Investment Pool International Economic Indicators



Source: Bloomberg, Japan Ministry of Internal Affairs and Communications, Eurostat

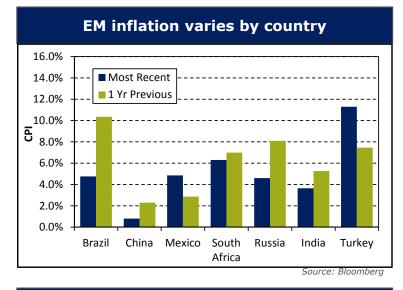


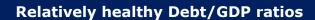
Europe unemployment edges lower

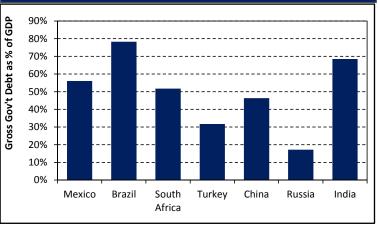


Leading indicators are trending higher

# University of Maine System Managed Investment Pool Emerging Market Economic Indicators

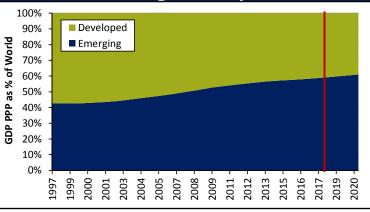




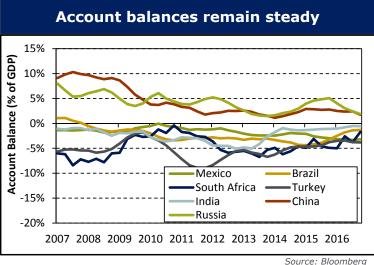


Source: Bloomberg, IMF

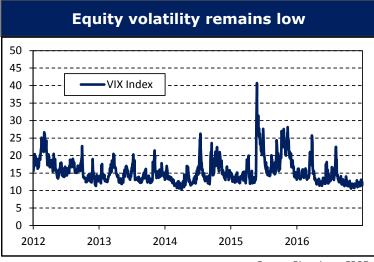




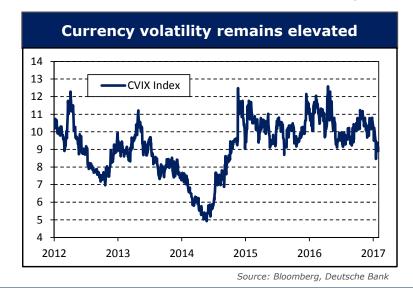
Source: Bloomberg, IMF



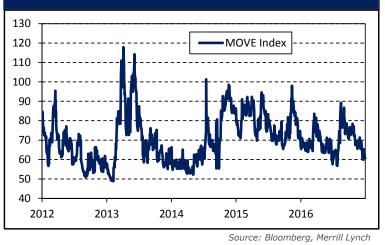
Source: Blo

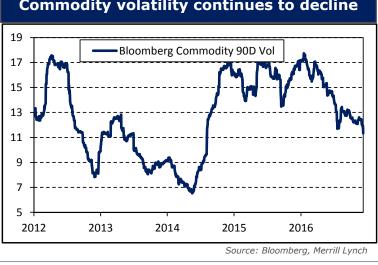


Source: Bloomberg, CBOE



Treasury volatility has recently subsided

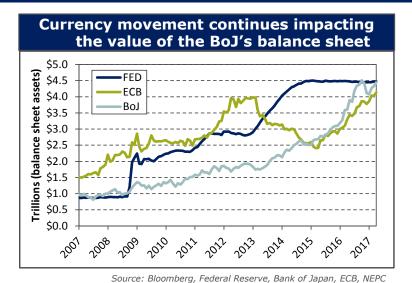




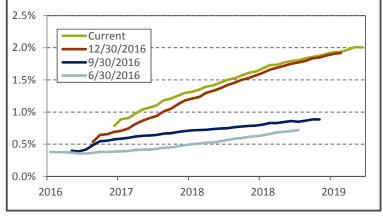
# **Commodity volatility continues to decline**



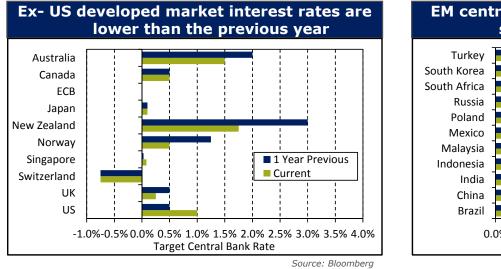
# University of Maine System Managed Investment Pool Central Banks



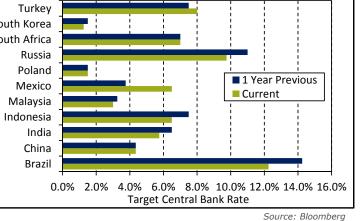




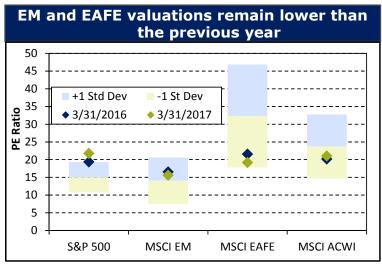
Source: Bloomberg, Federal Reserve



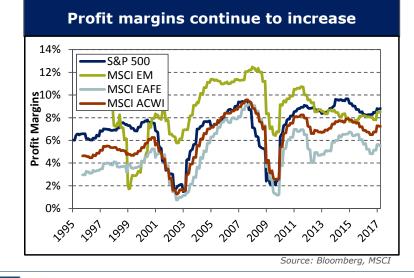




# University of Maine System Managed Investment Pool Global Equity

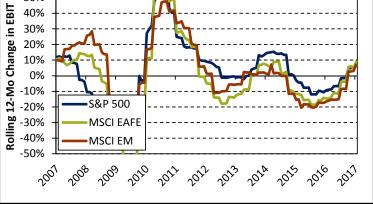


Source: Bloomberg, Standard and Poors, MSCI \*MSCI EAFE is ex UK Telecom \*Standard deviation calculations on 20 years of data except S&P 500 (30 years)



NEPC, LLC

# Rolling annual earnings growth continues trending upward off contraction



Source: Bloomberg, Standard and Poors, MSCI

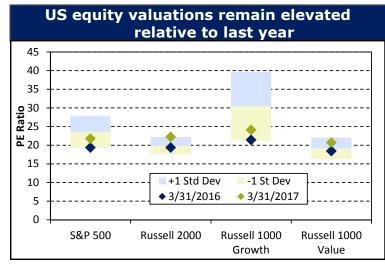


# Equities have experienced positive shortterm performance

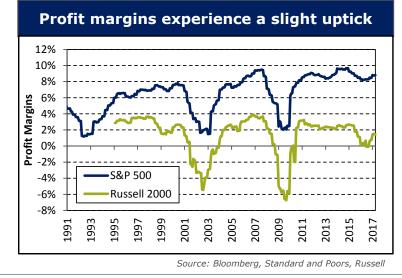
March 31, 2017

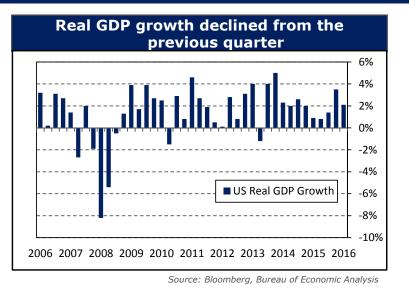
79

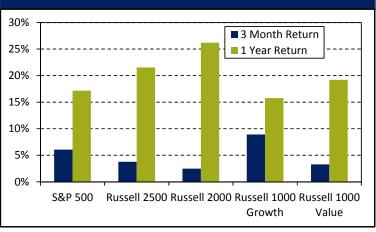
# **US** Equity



Source: Bloomberg, Standard and Poors, Russell \*Russell 2000 PE is index adjusted positive\* Standard deviation calculations based on 20 years of data





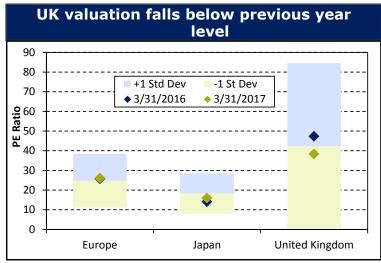


# US equity posts positive short-term returns

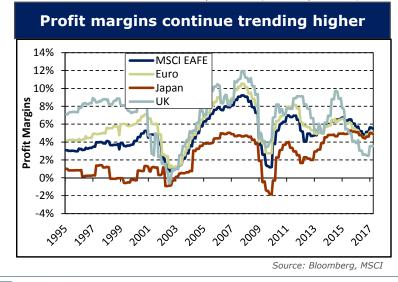
Source: Bloomberg, Standard and Poors, Russell

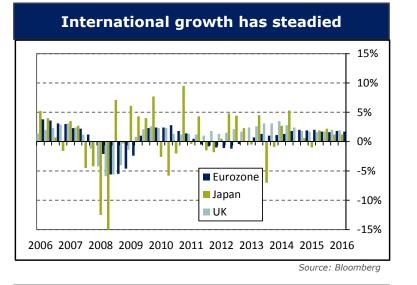


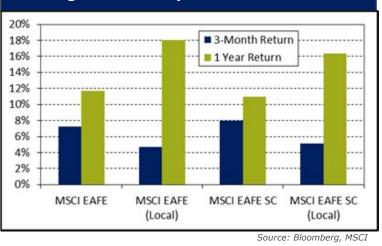
# University of Maine System Managed Investment Pool International Equity



Source: Bloomberg, MSCI, FTSE \*UK represented by FTSE 100 Index \*Standard deviation calculations based on 20 years of data, with Europe since 12/1998



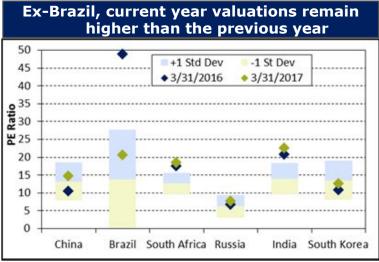




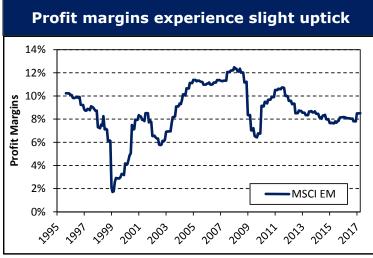
# Strong short-term performance for EAFE



# University of Maine System Managed Investment Pool Emerging Markets Equity

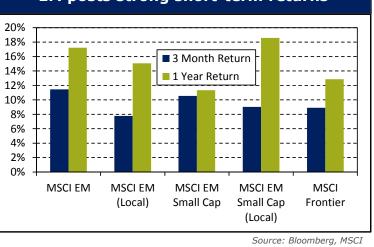


Source: Bloomberg, MSCI \*Standard deviation calculations based on 20 years of data, with Russia since 01/1998



Source: Bloomberg, MSCI

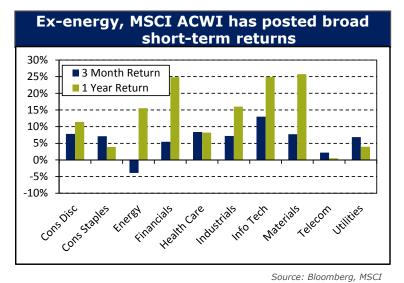




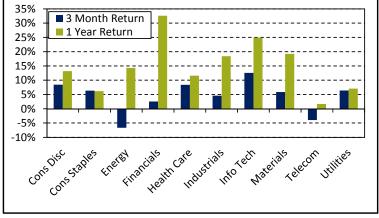
# EM posts strong short-term returns



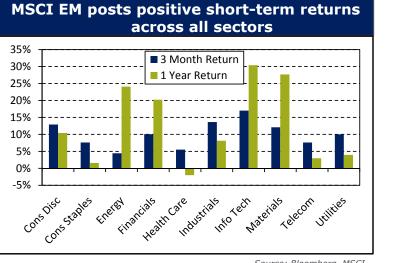
# Global Equity by Sector



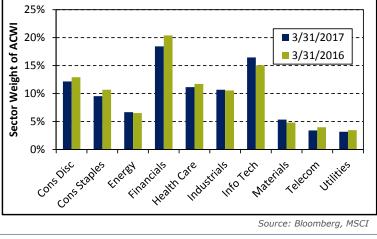
# Energy and Telecom sectors drag S&P 500 short-term returns



Source: Bloomberg, Standard and Poors



# Financials sector weight has decreased in favor of Info Tech and Materials



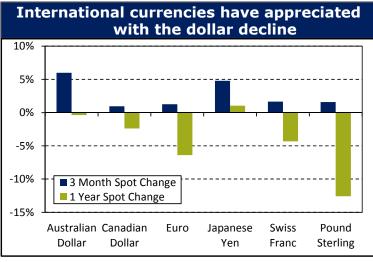
Source: Bloomberg, MSCI



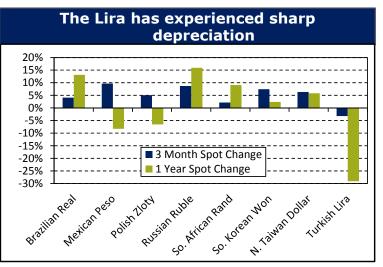
March 31, 2017

# Currencies

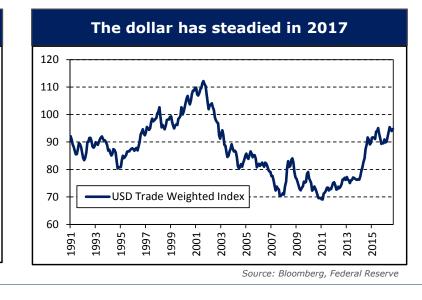
NEPC, LLC

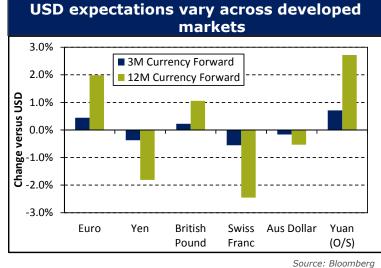






Source: Bloomberg

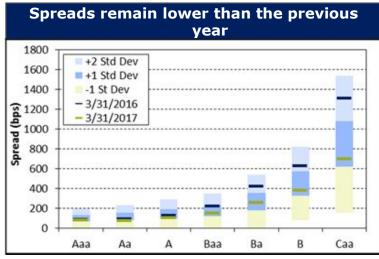






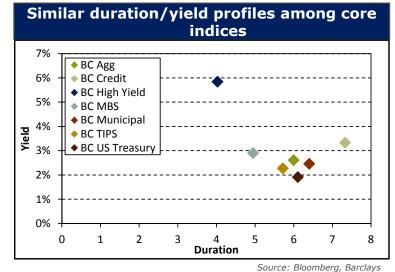
84

# US Fixed Income

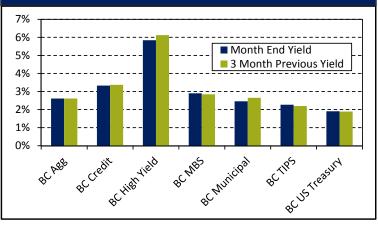


Source: Bloomberg, Barclays

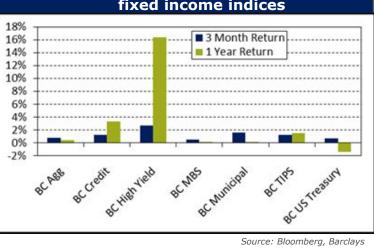
\*Standard deviation calculations based on 20 years of data



Yields are similar to three months prior



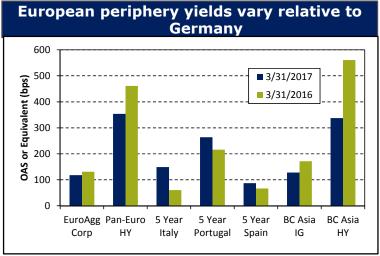
Source: Bloomberg, Barclays



# High yield continues to outperform other fixed income indices

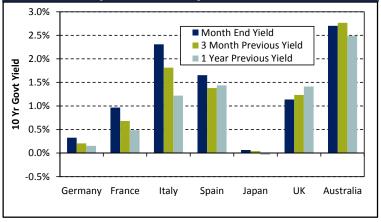


# International Developed Fixed Income



Source: Barclays, Bloomberg, \*European periphery spreads are over equivalent German Bund

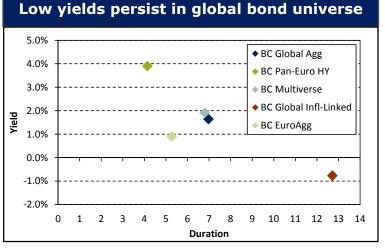






# Global bonds post relatively strong shortterm returns

Source: Bloomberg



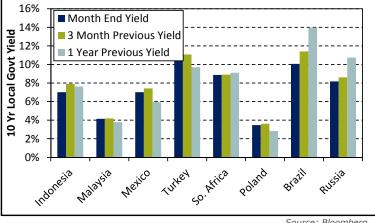
Source: Bloomberg, Citigroup, Barclays

Source: Bloomberg, Citigroup, Barclays

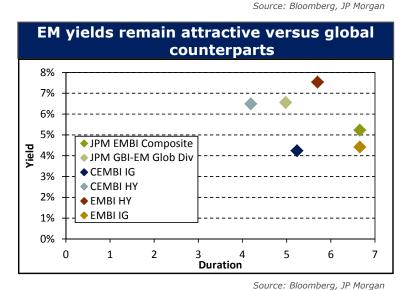
# University of Maine System Managed Investment Pool **Emerging Markets Fixed Income**

#### Spreads continue to decline 1400 EMBI Glob Div EMBI Glob Div IG 1200 EMBI Glob Div HY CEMBI Div Broad IG CEMBI Div Broad HY 1000 **ğ**800 ead in t **5**400 200 0 2020 2009 2027 2022 2013 2026 2007 2008 2014 2015 2027

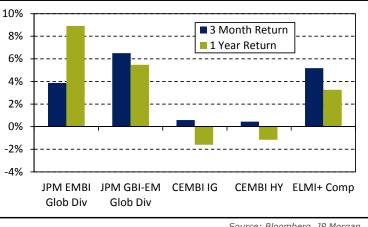
## Ex Russia and Brazil, EM local bond yields remain largely unchanged for the year







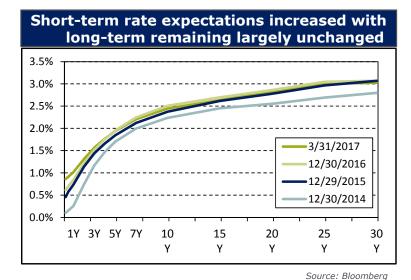
## EM debt posts strong positive short-term returns



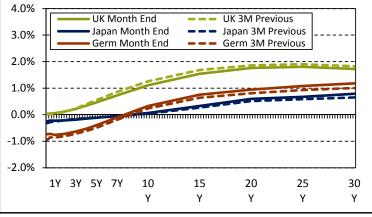
Source: Bloomberg, JP Morgan

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# Rates







Source: Bloomberg

Japan 10 Yr

Japan 2 Yr

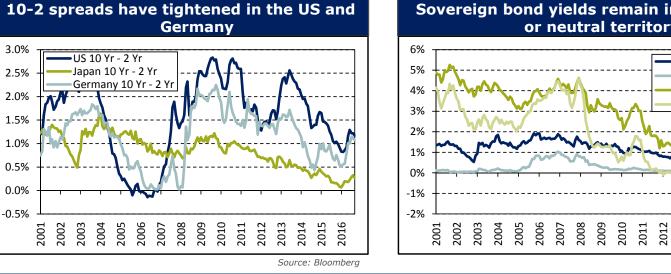
2013 2014

Germany 10 Yr

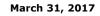
Germany 2 Yr

2015 2016

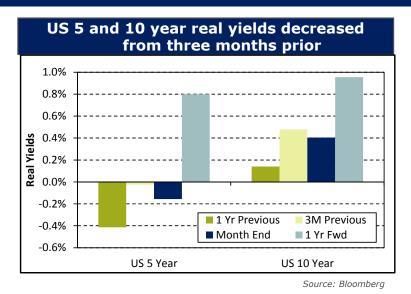
Source: Bloomberg



# Sovereign bond yields remain in negative or neutral territory



# University of Maine System Managed Investment Pool Inflation and Real Rates



# Uncertainty

France's yield has increased with election

Source: Bloomberg

Yr

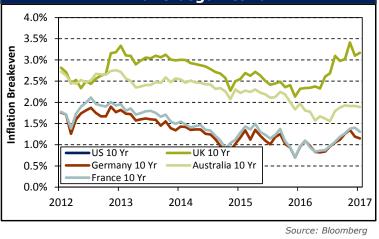
10 Yr



Yr

Yr

10 Yr

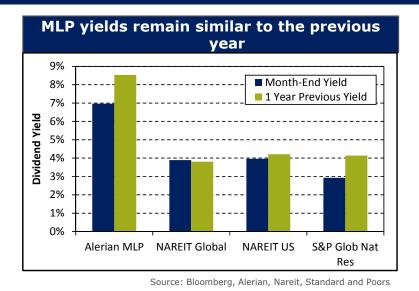




Source: Bloomberg



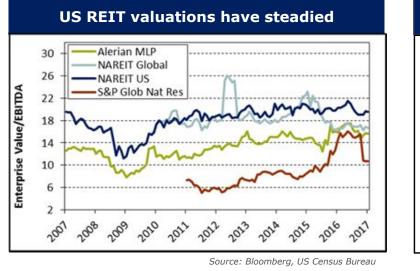
# University of Maine System Managed Investment Pool Inflation-Sensitive Growth Assets



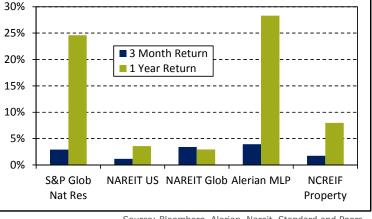




Source: NCREIF







Source: Bloomberg, Alerian, Nareit, Standard and Poors

NEPC, LLC

# Glossary of Terms

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

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

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

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

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

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

#### Formula:

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

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

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

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

#### Formula:

Calculation Average (X-Y)/Downside Deviation (X-Y) \* 2 Where X=Return Series X Y = Return Series Y which is the risk free return (91 day T-bills) Standard Deviation - The standard deviation is a statistical term that describes the distribution of results. It is a commonly used measure of volatility of returns of a portfolio, asset class, or security. The higher the standard deviation the more volatile the returns are.

#### Formula:

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

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

#### Formula:

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

NE NEPC, LLC

# University of Maine System Managed Investment Pool 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: Pension Fund Performance Review

- 2. INITIATED BY: Karl W. Turner, Chair
- **3. BOARD INFORMATION:** X **BOARD ACTION:**

## 4. BACKGROUND:

Enclosed for your information is the Pension Fund performance report for the quarter ended March 31, 2017.

Ms. Kelly Regan and Mr. Jay Roney of NEPC will provide a brief review at the May 15, 2017 Investment Committee meeting.

# Total Plan Performance Detail (Net of Fees)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Pension Composite	31,582,299	100.0	100.0	3.1	4.6	6.9	2.5	2.8	5.3	5.8	3.7
Allocation Index				3.5	5.2	6.9	3.4	3.8	6.0	6.2	4.1
Policy Index				3.4	5.5	7.2	3.8	4.1	6.1	6.7	4.9
Total Domestic Large Cap	2,570,362	8.1	8.0	6.1	14.3	17.1	9.2	10.3	13.1	11.9	6.2
S&P 500				6.1	14.4	17.2	9.2	10.4	13.3	12.9	7.5
Vanguard S&P 500 Index	2,570,362	8.1	8.0	6.1	14.3	17.1	9.2	10.3			
S&P 500				6.1	14.4	17.2	9.2	10.4	13.3	12.9	7.5
Total Small Cap Composite	1,307,799	4.1	4.0	2.5	21.7	26.2	6.8	7.0	12.1	12.0	
Russell 2000				2.5	21.6	26.2	6.7	7.2	12.4	12.3	7.1
SSgA R2000 Index Fund Non Lending	1,307,799	4.1	4.0	2.5	21.7	26.2	6.8	7.0	12.2	12.0	
Russell 2000				2.5	21.6	26.2	6.7	7.2	12.4	12.3	7.1
Total International Equity (including emerging markets)	3,167,860	10.0	10.0	8.2	7.1	8.0	-0.2	-0.3	3.5	3.6	1.1
MSCI EAFE				7.2	13.3	11.7	1.2	0.5	5.8	4.7	1.1
Morgan Stanley Int'l	2,143,444	6.8	7.0	8.4	8.6	9.1	1.0	0.1	5.3	4.9	1.9
MSCI EAFE				7.2	13.3	11.7	1.2	0.5	5.8	4.7	1.1
Emerging Markets Equity	1,024,416	3.2	3.0	7.7	3.9	5.5	-3.1	-1.7	-0.2		
MSCI Emerging Markets				11.4	16.4	17.2	1.5	1.2	0.8	1.7	2.7
Mondrian EM Small Cap	1,024,416	3.2	3.0	7.7	3.9	5.5	-3.1				
MSCI Emerging Markets Small Cap				13.0	14.0	14.5	2.0	1.7	2.9	2.4	3.9
Total Fixed Income	9,940,668	31.5	32.0	1.3	-0.7	2.1	1.7	2.4	3.3	4.1	5.3
BBgBarc US Aggregate TR				0.8	-1.7	0.4	1.2	2.7	2.3	3.5	4.3
Vanguard Total Bond Market Index	8,395,807	26.6	27.0	0.9	-1.9	0.4	1.1				
BBgBarc US Aggregate TR				0.8	-1.7	0.4	1.2	2.7	2.3	3.5	4.3
Loomis Sayles Fixed Income	1,544,861	4.9	5.0	3.2	6.0	10.1	3.6				
BBgBarc Global Aggregate TR				1.8	-4.7	-1.9	1.3	-0.4	0.4	2.0	3.3
Total GAA	8,612,310	27.3	25.0	3.9	4.1	6.6	1.1	0.9	3.2	4.0	
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				5.1	7.1	8.9	3.8	3.3	5.6	5.9	4.1
Wellington	4,218,331	13.4	12.5	5.6	11.3	12.6	3.9	3.3	5.2	4.6	
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				5.1	7.1	8.9	3.8	3.3	5.6	5.9	4.1
Newton Global Real Return	4,393,979	13.9	12.5	2.2	-2.9						
60% MSCI ACWI (Net)/40% CITI WGBI				4.7	5.2	7.3	3.5	2.7	4.9	5.4	4.0

# Total Plan Performance Detail (Net of Fees)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Total Alternative Investments	3,190,344	10.1	10.0	1.3	5.4	7.4	0.4	1.2	2.7	2.0	
HFRI Fund of Funds Composite Index				2.3	5.6	6.2	0.0	1.8	3.2	2.5	1.2
EntrustPermal	1,542,032	4.9	5.0	-0.4	4.6	6.7	-1.1	-0.2	3.6	3.5	
HFRI Fund of Funds Composite Index				2.3	5.6	6.2	0.0	1.8	3.2	2.5	1.2
Lighthouse	1,648,312	5.2	5.0	3.0	6.3	8.2					
Credit Suisse Long Shrt Eqt USD				3.5	5.2	3.9	0.8	2.4	5.4	4.6	4.0
Total Real Assets	2,510,920	8.0	8.0								
Principal	2,510,920	8.0	8.0	1.8	6.6	9.0	10.6	11.6	11.8	13.3	4.6
NCREIF ODCE				1.8	6.1	8.3	11.0	11.8	12.0	13.5	5.6
Total Cash	282,036	0.9	3.0								
Distribution Account	282,036	0.9	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
91 Day T-Bills				0.1	0.3	0.4	0.2	0.2	0.1	0.1	0.5

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





Investment Committee Meeting - Defined Benefit Pension Fund Performance Review





# **Executive Summary**



	PLAN PE	RFORMAN	ICE: NET O	F FEES		
	QTR	FYTD	1 YR	3 YR	7 YR	10 YR
COMPOSITE	3.1%	4.6%	6.9%	2.8%	5.8%	3.7%
ALLOC. INDEX	3.5%	5.2%	6.9%	3.8%	6.2%	4.1%
POLICY INDEX	3.4%	5.5%	7.2%	4.1%	6.7%	4.9%

## Asset Allocation

The Plan's assets were \$31.6 million as of March 31, 2017, a \$0.6 million increase during the first quarter. Investment gains were \$1.0 million, benefit payments amounted to \$1.1 million and the Plan received a contribution of \$735k. All asset classes are within policy ranges.

#### Performance (Net of Fees)

The Plan returned 3.1% over the quarter, 4.6% fiscal year to date and 6.9% over the trailing year. The Pension matched the allocation index over the one year time frame, but fell short during the quarter and fiscal year to date. Specifically, during the FYTD time frame, Morgan Stanley, Mondrian and Newton contributed to the underperformance versus the Allocation Index.

The Plan ranked in the  $77^{th}$  percentile during the quarter and  $79^{th}$  over the fiscal year to date period (Universe = Trust Funds).

The managers with the highest absolute returns over the first quarter were Morgan Stanley (international equity), Mondrian (emerging market small cap equity) and Vanguard (S&P 500).



# RECENT ACTIONS/RECOMMENDATIONS

#### **Recent Actions**

The System approved new asset allocation targets at the previous meeting.

The System funded an allocation to Vanguard TIPS with proceeds from Vanguard Total Bond Market in early April.

The System placed a redemption for half of the investment in EntrustPermal and proceeds will be allocated to GAA managers when received.

#### **Recommendations**

Review bank loan manager search.

Approve updated Investment Policy Statements.

#### Manager Due Diligence

There were no new manager updates during the quarter.

EntrustPermal remains on Hold.

# Due Diligence Monitor

The items below summarize any changes or announcements from your Plan managers/funds. A "Yes" indicates there was an announcement and a brief 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. NEPC considers ourselves to be a fiduciary, as ERISA defines the term in Section 3(21).

Investment Manager	Manager Changes/ Announcements (Recent Quarter)	NEPC Due Diligence Committee Recommendations
EntrustPermal	No	Maintain Hold

#### A legend key to our recommendations is provided below.

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

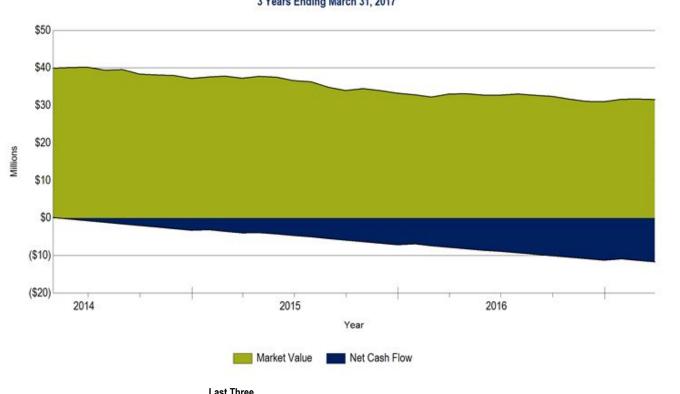


Investment Committee Meeting - Defined Benefit Pension Fund Performance Review

# **Plan Summary and Statistics**



# Total Plan Asset Growth Summary



3 Years Ending March 31, 2017

	Last Three Months	Fiscal Year-To-Date	One Year	Three Years
Beginning Market Value	\$31,010,184	\$32,763,516	\$33,045,455	\$39,555,337
Net Cash Flow	-\$429,404	-\$2,790,983	-\$3,863,524	-\$11,672,572
Net Investment Change	\$1,001,519	\$1,609,766	\$2,400,368	\$3,699,535
Ending Market Value	\$31,582,299	\$31,582,299	\$31,582,299	\$31,582,299



# Total Plan Asset Growth Summary by Manager

			Quarter Ending Ma	arch 31, 2017		
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Net Investment Change	Ending Market Value
Distribution Account	\$812,839	\$1,147,027	-\$1,677,830	-\$530,803	\$0	\$282,036
EntrustPermal	\$1,548,145	\$0	\$0	\$0	-\$6,113	\$1,542,032
Lighthouse	\$1,600,993	\$0	\$0	\$0	\$47,319	\$1,648,312
Loomis Sayles Fixed Income	\$1,497,558	\$0	-\$2,193	-\$2,193	\$49,496	\$1,544,861
Mondrian EM Small Cap	\$950,772	\$0	-\$7,322	-\$7,322	\$80,966	\$1,024,416
Morgan Stanley Int'l	\$2,014,970	\$150,000	-\$205,254	-\$55,254	\$183,727	\$2,143,444
Newton Global Real Return	\$3,909,658	\$400,000	-\$8,161	\$391,839	\$92,481	\$4,393,979
Principal	\$2,466,054	\$0	\$0	\$0	\$44,867	\$2,510,920
SSgA R2000 Index Fund Non Lending	\$1,469,803	\$0	-\$200,273	-\$200,273	\$38,269	\$1,307,799
Vanguard S&P 500 Index	\$2,423,690	\$0	-\$254	-\$254	\$146,926	\$2,570,362
Vanguard Total Bond Market Index	\$8,320,038	\$0	-\$1,467	-\$1,467	\$77,236	\$8,395,807
Wellington	\$3,995,663	\$0	-\$23,678	-\$23,678	\$246,346	\$4,218,331
Total	\$31,010,184	\$1,697,027	-\$2,126,431	-\$429,404	\$1,001,519	\$31,582,299



# University of Maine System Pension Plan Total Plan Asset Allocation vs. Policy Targets

Current

4.1% 6.8% 3.2%

26.6%

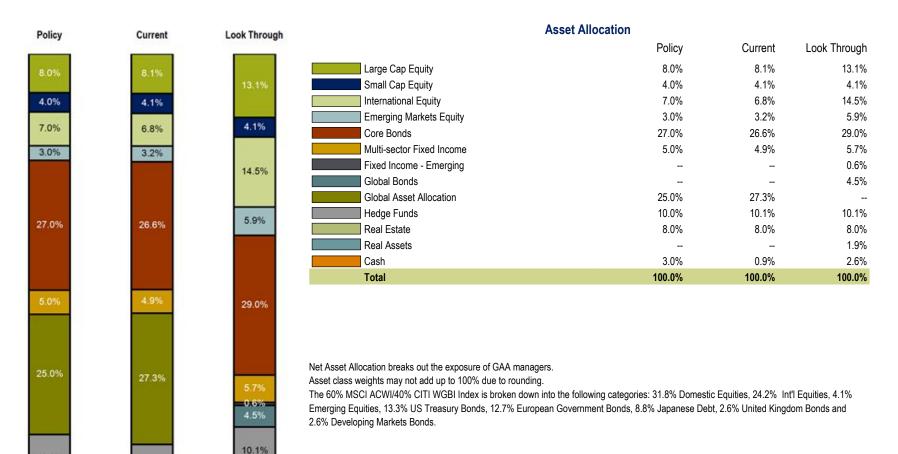
27.3%

Policy	5 te
8.0%	
4.0%	
7.0%	
3.0%	
27.0%	
5.0%	
25.0%	
10.0%	
8.0%	
3.0%	

	Asset Alloc	ation vs.	Target			
	Current	Policy	Current	Difference	Policy Range	Within Range
Large Cap Equity	\$2,570,362	8.0%	8.1%	0.1%	3.0% - 13.0%	Yes
Small Cap Equity	\$1,307,799	4.0%	4.1%	0.1%	0.0% - 6.0%	Yes
International Equity	\$2,143,444	7.0%	6.8%	-0.2%	2.0% - 12.0%	Yes
Emerging Markets Equity	\$1,024,416	3.0%	3.2%	0.2%	0.0% - 5.0%	Yes
Core Bonds	\$8,395,807	27.0%	26.6%	-0.4%	22.0% - 32.0%	Yes
Multi-sector Fixed Income	\$1,544,861	5.0%	4.9%	-0.1%	0.0% - 10.0%	Yes
Global Asset Allocation	\$8,612,310	25.0%	27.3%	2.3%	20.0% - 30.0%	Yes
Hedge Funds	\$3,190,344	10.0%	10.1%	0.1%	7.0% - 13.0%	Yes
Real Estate	\$2,510,920	8.0%	8.0%	0.0%	0.0% - 10.0%	Yes
Cash	\$282,036	3.0%	0.9%	-2.1%	0.0% - 10.0%	Yes
Total	\$31,582,299	100.0%	100.0%			

# NE NEPC, LLC

# Asset Allocation





10.0%

8.0%

10.1%

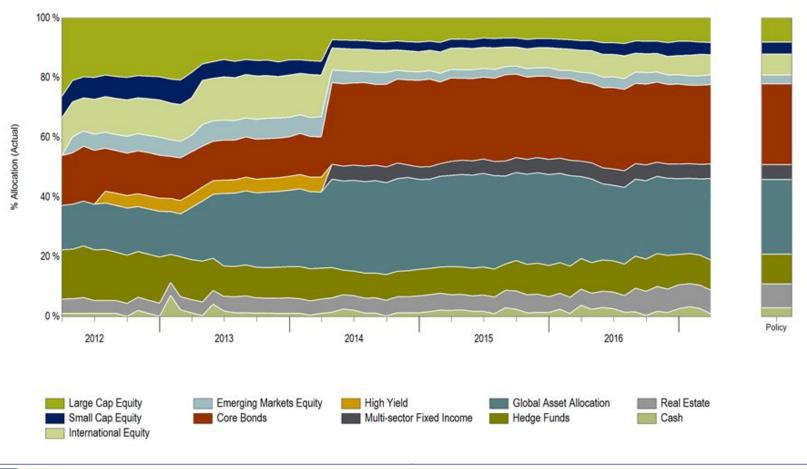
8.0%

-

8.0%

1.9%

# Total Plan Asset Allocation History

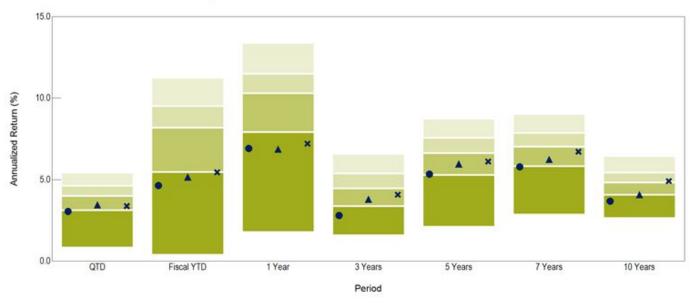


Asset Allocation History



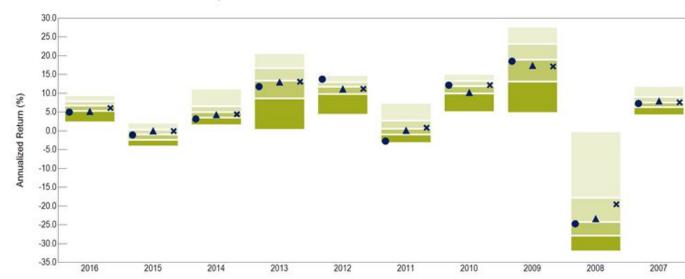
# Total Plan Return Summary vs. Peer Universe (Net of Fees)





	Return (Rank)													
5th Percentile	5.4		11.2		13.4		6.6		8.7		9.0		6.5	
25th Percentile	4.6		9.5		11.5		5.4		7.6		7.9		5.4	
Median	4.0		8.2		10.3		4.5		6.6		7.0		4.8	
75th Percentile	3.1		5.5		7.9		3.4		5.3		5.8		4.1	
95th Percentile	0.8		0.4		1.8		1.6		2.1		2.9		2.6	
# of Portfolios	1,183		1,163		1,148		1,064		960		867		714	
Pension Composite	3.1	(77)	4.6	(79)	6.9	(80)	2.8	(86)	5.3	(75)	5.8	(76)	3.7	(85)
Allocation Index	3.5	(70)	5.2	(77)	6.9	(80)	3.8	(67)	6.0	(65)	6.2	(70)	4.1	(76)
Policy Index	3.4	(72)	5.5	(76)	7.2	(79)	4.1	(60)	6.1	(63)	6.7	(60)	4.9	(45)

Total Plan Return Summary vs. Peer Universe (Net of Fees)

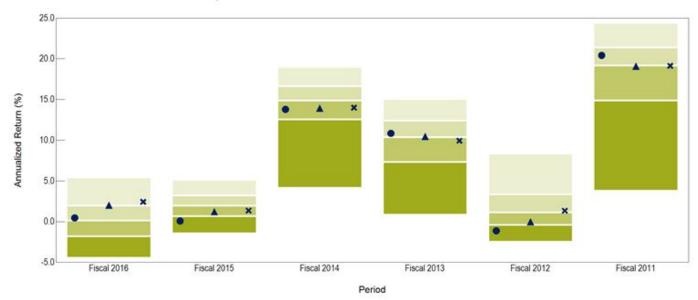


Period

Pension Composite vs. InvestorForce Trust Funds Net

	Return (Ra	ink)																		
5th Percentile	9.4	199	2.1		11.2		20.6		14.8		7.4		15.1		27.7		-0.2		11.9	
25th Percentile	7.9		0.3		6.6		16.7		13.0		2.8		13.3		23.1		-17.8		9.1	
Median	6.7		-0.9		5.0		13.4		11.7		0.6		11.9		18.9		-24.2		7.5	
75th Percentile	5.3		-2.3		3.6		8.7		9.8		-1.0		10.0		13.2		-27.9		6.3	
95th Percentile	2.3		-4.2		1.5		0.3		4.3		-3.2		5.0		4.8		-32.1		4.2	
# of Portfolios	2,446		2,339		2,007		1,709		1,539		1,403		1,326		1,233		1,161		1,074	
Pension Composite	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)	7.3	(55)
Allocation Index	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)	7.9	(44)
Policy Index	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)	7.6	(50)

# Total Plan Return Summary vs. Peer Universe (Net of Fees)

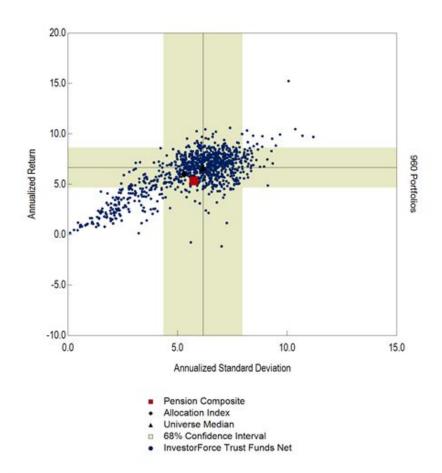


Pension Composite vs. InvestorForce Trust Funds Net

	Return (Rank)											
5th Percentile	5.4		5.1		19.0		15.0		8.4		24.4	
25th Percentile	2.0		3.3		16.6		12.4		3.4		21.4	
Median	0.1		2.0		14.9		10.4		1.2		19.2	
75th Percentile	-1.8		0.7		12.6		7.4		-0.4		14.9	
95th Percentile	-4.4		-1.4		4.2		0.9		-2.4		3.8	
# of Portfolios	2,289		2,198		1,565		1,828		1,431		1,362	
Pension Composite	0.5	(46)	0.1	(84)	13.8	(66)	10.8	(44)	-1.1	(86)	20.4	(36)
Allocation Index	2.0	(25)	1.2	(67)	13.9	(65)	10.5	(49)	0.0	(70)	19.1	(51)
Policy Index	2.4	(21)	1.4	(64)	14.0	(64)	9.9	(55)	1.3	(48)	19.1	(51)

# Total Plan Risk/Return - 5 Years

### 5 Years Ending March 31, 2017



*Returns are	net of fees.
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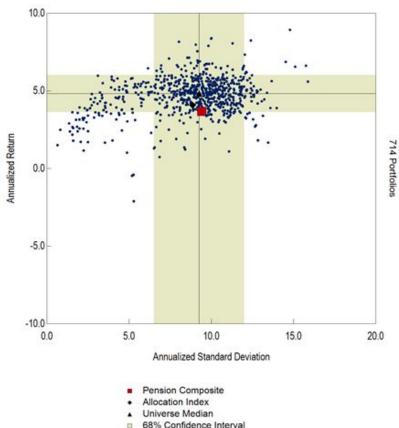
5 Years Ending March 31, 2017						
	Anlzd Ret	Rank	Anlzd Std Dev	Rank		
Pension Composite	5.3%	75	5.8%	38		
Allocation Index	6.0%	65	5.3%	29		
Policy Index	6.1%	63	5.2%	28		
InvestorForce Trust Funds Net Median	6.6%		6.2%			

### 5 Years Ending March 31, 2017

	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Pension Composite	0.9	79	1.4	76
Allocation Index	1.1	47	1.6	50
Policy Index	1.1	41	1.8	37
InvestorForce Trust Funds Net Median	1.1		1.6	

# Total Plan Risk/Return - 10 Years

### 10 Years Ending March 31, 2017



68% Confidence Interval
 InvestorForce Trust Funds Net

\*Returns are net of fees.



10 Years Ending March 31, 2017							
	Anlzd Ret	Rank	Anlzd Std Dev	Rank			
Pension Composite	3.7%	85	9.4%	53			
Allocation Index	4.1%	76	8.9%	43			
Policy Index	4.9%	45	8.3%	34			
InvestorForce Trust Funds Net Median	4.8%		9.3%				

### 10 Years Ending March 31, 2017

	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Pension Composite	0.3	85	0.4	84
Allocation Index	0.4	70	0.5	67
Policy Index	0.5	38	0.7	34
InvestorForce Trust Funds Net Median	0.5		0.6	

Investment Committee Meeting - Defined Benefit Pension Fund Performance Review





# Vanguard Institutional Index I

Holdings B	Holdings Based Style Trail (5 Years)									
Time Period: 4/30/2012 to 3/31/2017										
Giant		-								
Large										
Piw										
Small										
Micro										
Deep-Val	Core-Val	Core	Core-Grth	High-Grth						
Vanguard Institution	anal Index I	▲ S&P	500 TR USD							

Portfolio Statistics			Market Capitalization Breakdown				
	Fund	Index	Portfolio Date: 3/31/2017				
# of Holdings	515	505		Fund	Index		
% Asset in Top 10 Holdings	18.5	18.6	Market Cap Giant %	50.0	50.0		
Turnover Ratio %	5.0		Market Cap Large %	36.5	36.5		
P/E Ratio	21.3	21.3	Market Cap Mid %	13.4	13.4		
P/B Ratio	3.0	3.0	Market Cap Small %	0.1	0.1		
LT Earn Growth	2.2	2.2	Market Cap Micro %	0.0	0.0		
Hist Earn Growth	7.5	7.5	Average Market Cap (mil)	85,611.7	85,703.3		
12 Mo Yield	2.0						

#### Historical Sector Allocations (5 Years)

#### Attribution (Quarter)

100.0											Portfolio E Weights	Benchmark Weights		Benchmark Al Return	llocation S Effect		Active Return
90.0 -		_			_					Consumer Discretionary	12.09	12.14	8.44	8.44	0.00	0.00	0.00
80.0 -										Consumer Staples	9.35	9.39	6.35	6.35	0.00	0.00	0.00
										Energy	7.09	7.12	-6.65	-6.65	0.00	0.00	0.00
70.0 —										Financials	14.67	14.71	2.52	2.51	0.00	0.00	0.00
60.0 -										Health Care	13.69	13.75	8.30	8.30	0.00	0.00	0.00
50.0 -										Industrials	10.17	10.18	4.54	4.40	0.00	0.01	0.01
50.0									_	Information Technology	21.10	21.18	12.46	12.46	0.00	0.00	0.00
40.0 -										Materials	2.85	2.86	5.89	5.89	0.00	0.00	0.00
30.0 -										Real Estate	2.85	2.86	3.59	3.59	0.00	0.00	0.00
										Telecommunication Services	2.52	2.53	-4.03	-4.03	0.00	0.00	0.00
20.0 -										Utilities	3.16	3.17	6.40	6.40	0.00	0.00	0.00
10.0 -										Attribution Total	99.54	99.89	6.04	6.02	0.00	0.02	0.02
0.0										Cash	0.36	0.00					
0.0	3/2013	9/2013	3/2014	9/2014	3/2015	9/2015	3/2016	9/2016	3/2017	Bond	0.02	0.00					
										Missing Performance	0.08	0.11					
Energy %			-Material				ndustrials %			Total	100.00	100.00					
	Discretionary 9	%	-Consum				Healthcare %			Reported Total			6.05	6.07			
Financials	%		Informat	ion Techno	logy %		Telecom Sen	vices %		Expense Ratio			0.01	0.00			
Utilities %	=Utilities % =Real Estate %				Residual(Reported - Attribution + Expense	e)		0.02	0.04								

#### Source: Morningstar



15.0

12.0

9.0

6.0

3.0

0.0

Std Dev

### University of Maine System Pension Plan

## Vanguard Institutional Index I

#### **Risk & Return Characteristics (5 Years)**

#### Risk & Return Illustration (5 Years)

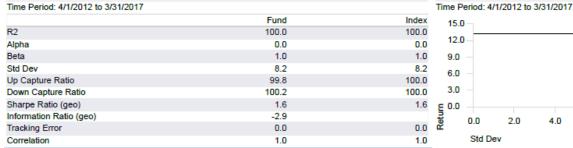
2.0

4.0

6.0

8.0

10.0



### Rolling Returns (3 Years)



2.1

16.0

32.4

13.7

#### Source: Morningstar

5.5

-37.0



S&P 500 TR USD

March 31, 2017

12.0

1.4

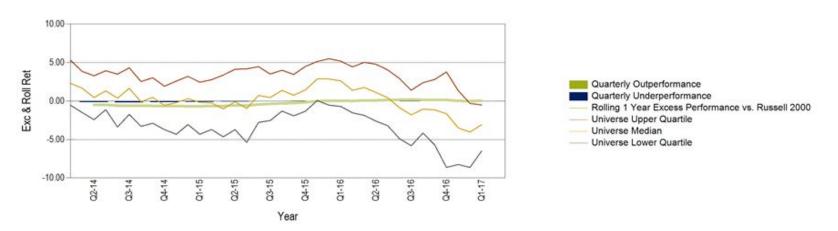
Vanguard Institutional Index I

S&P 500 TR USD

15.1

26.5

# SSgA R2000 Index Fund Non Lending



Annualized Excess Performance

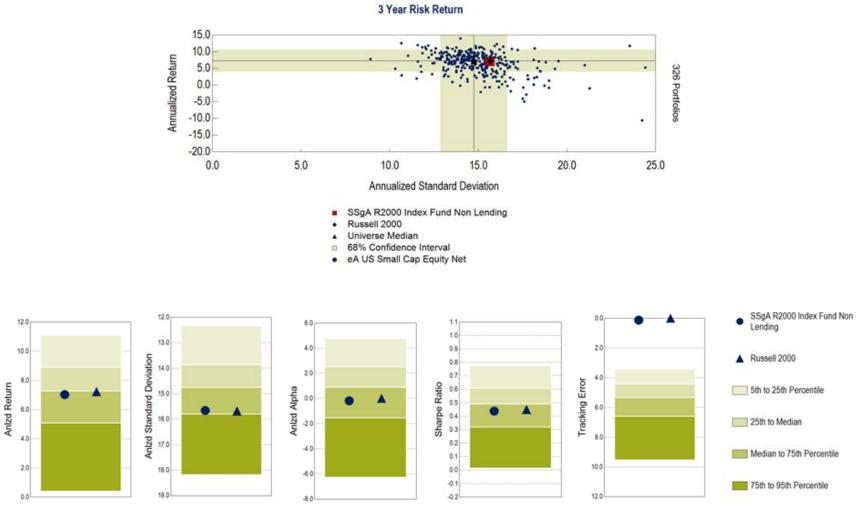




\*Returns are net of fees.



# SSgA R2000 Index Fund Non Lending



\*Returns are net of fees.



# SSgA R2000 Index Fund Non Lending

			Top Positive	Contributors		Top Negative	Contributors	
Characteris	lies			Relative Contribution	Return %		Relative Contribution	Return %
Characteris		Russell		%	Relum %		%	Relum %
	Portfolio	2000	CHEMOURS	0.0%	74.4%	APPLIED OPTOELECTRONICS	0.0%	139.5%
Number of Holdings	0	1,946	EXELIXIS	0.0%	45.3%	SCORPIO BULKERS	0.0%	82.2%
Weighted Avg. Market Cap. (\$B)		2.2	UNIVERSAL DISPLAY	0.0%	53.0%	NIMBLE STORAGE	0.0%	57.8%
Median Market Cap. (\$B)		0.8	GEO GROUP	0.0%	31.1%	TETRAPHASE PHARMS.	0.0%	128.0%
Price To Earnings Price To Book		24.3 3.0	GLAUKOS	0.0%	49.6%	PORTOLA PHARMACEUTICALS	0.0%	74.6%
Price To Sales		3.1	PIONEER ENERGY SERVICES	0.0%	-41.6%	XBIOTECH INC	0.0%	62.9%
Return on Equity (%)		10.0	FAIRMONT SANTROL HDG.	0.0%	-37.8%	HESKA	0.0%	46.6%
Yield (%)		1.2	BANCORP	0.0%	-35.1%	BABCOCK & WILCOX ENTS.	0.0%	-43.7%
Beta		1.0	PENUMBRA	0.0%	30.8%	TG THERAPEUTICS	0.0%	150.5%
R-Squared		1.0	CONCERT PHARMACEUTICALS	0.0%	65.8%	NUTRISYSTEM	0.0%	60.7%
		Equity Secto	r Attribution					
			Attribution Effects			Returns	Ending Sector Weig	jhts
	Total	Selection	n Allocation	Interaction				

			Autouton Litects		Retuins		Enality 5	Enality Sector Weights	
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark	
Energy	0.0%	0.0%	0.0%	0.0%	-10.6%	-10.6%	0.0%	3.4%	
Materials	0.0%	0.0%	0.0%	0.0%	6.1%	6.0%	0.0%	5.2%	
Industrials	0.0%	0.0%	0.0%	0.0%	1.1%	1.1%	0.0%	14.3%	
Consumer Discretionary	0.0%	0.0%	0.0%	0.0%	0.8%	0.8%	0.0%	12.2%	
Consumer Staples	0.0%	0.0%	0.0%	0.0%	-1.2%	-1.3%	0.0%	2.9%	
Health Care	0.0%	0.0%	0.0%	0.0%	11.8%	11.7%	0.0%	13.0%	
Financials	0.0%	0.0%	0.0%	0.0%	-1.6%	-1.5%	0.0%	19.7%	
Information Technology	0.0%	0.0%	0.0%	0.0%	6.0%	6.1%	0.0%	17.5%	
Telecommunication Services	0.0%	0.0%	0.0%	0.0%	-4.2%	-4.3%	0.0%	0.7%	
Utilities	0.0%	0.0%	0.0%	0.0%	4.7%	4.7%	0.0%	3.7%	
Real Estate	0.0%	0.0%	0.0%	0.0%	0.4%	0.1%	0.0%	7.4%	
Cash	0.0%	0.0%	0.0%	0.0%	0.1%		0.0%	0.0%	
Unclassified	0.0%								
Portfolio	0.0% =	0.0%	+ 0.0%	+ 0.0%	2.4%	2.4%	0.0%	100.0%	

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



# Morgan Stanley International Equity I

Holdings	Based Styl	e Trail (5 Y	(ears)		Portfolio Statistics
Time Period:	1/31/2012 to	12/31/2016			
			-		# of Holdings
Giant					% Asset in Top 10 Holdin
8					Turnover Ratio %
5	-				P/E Ratio
3					P/B Ratio
					LT Earn Growth
S and					Hist Earn Growth
8					12 Mo Yield
Deep-Val	Core-Val	Core	Core-Grth	High-Grth	
Morgan Stanley	Inst International E	iqi 🗚	ISCI EAFE NR USD		

Portfolio Statistics			Market Capitalization Breakdown				
	Fund Index		x Portfolio Date: 9/30/2016				
# of Holdings	65	930		Fund	Index		
% Asset in Top 10 Holdings	40.1	11.8	Market Cap Giant %	70.3	56.5		
Turnover Ratio %	28.0		Market Cap Large %	22.8	35.2		
P/E Ratio	20.1	16.9	Market Cap Mid %	6.9	8.3		
P/B Ratio	2.5	1.6	Market Cap Small %	0.0	0.1		
LT Earn Growth	7.2	8.1	Market Cap Micro %	0.0	0.0		
Hist Earn Growth	5.8	-2.0	Average Market Cap	50,700.9	31,196.7		
12 Mo Yield	1.1		Equity Region Developed %	97.9	99.7		
			Equity Region Emerging %	2.1	0.3		

Historical Country Allocations (5 Years)

#### Attribution (Quarter)

	-		-	-													
100.0				_			_				Portfolio Weights	Benchmark Weights		Benchmark / Return	Allocation Effect		Active Return
90.0										Consumer Discretionary	5.28	12.47	3.19	1.58	-0.16	0.09	-0.08
80.0										Consumer Staples	32.58	11.97	-9.85	-10.43	-2.11	0.20	-1.91
										Energy	2.42	5.05	6.53	9.93	-0.27	-0.08	-0.38
70.0				-						Financials	10.86	19.97	11.46	9.60	-0.89	0.21	-0.68
60.0								_		Health Care	15.78	10.94	-3.84	-7.71	-0.35	0.64	0.29
50.0										Industrials	13.15	14.14	-2.31	-1.79	0.01	-0.07	-0.06
50.0										Information Technology	6.68	5.51	0.32	-3.02	-0.03	0.22	0.1
40.0										Materials	8.61	7.71	2.16	3.53	0.05	-0.12	-0.0
30.0										Real Estate	0.65	3.90	7.03	-7.25	0.21	0.09	0.3
			_	_	_		_			Telecommunication Services	2.53	4.68	-7.88	-7.01	0.14	-0.03	0.1
20.0										Utilities	0.00	3.49		-7.21	0.23	0.00	0.2
10.0										Unclassified	0.00	0.13		0.87	0.00	0.00	0.0
0.0										Attribution Total	98.55	99.97	-2.75	-0.73	-3.17	1.15	-2.0
	12/2012	6/2013	12/2013	6/2014	12/2014	6/2015	12/2015	6/2016	12/2016	Cash	1.36	0.00					
-North Am			-Latin Ar			_	United Kingd			Other	0.08	0.03					
							-			Total	100.00	100.00					
Europe d			-Europe	-			Africa/Middle	e East %		Reported Total			-2.36	-0.71			
-Australas			-Japan 9	%		/	Asia dev %			Expense Ratio			0.23	0.00			
-Asia emr	g %									Residual(Reported - Attribution + Expens	e)		0.62	0.01			

Source: Morningstar



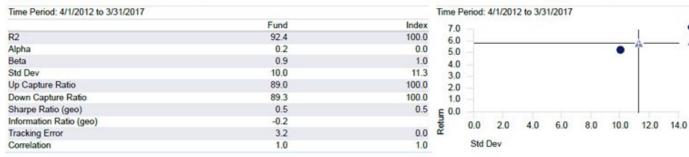
# Morgan Stanley International Equity I

#### **Risk & Return Characteristics (5 Years)**

#### **Risk & Return Illustration (5 Years)**

Rolling Risk (3 Years)

.



#### Rolling Returns (3 Years)



	2007	Rank	2008	Rank	2009	Rank	2010	Rank	2011	Rank	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank
Morgan Stanley Inst International Eq I	9.8	42	-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
MSCI EAFE NR USD	11.2		-43.4		31.8		7.8		-12.1		17.3		22.8		-4.9		-0.8		1.0	

Source: Morningstar

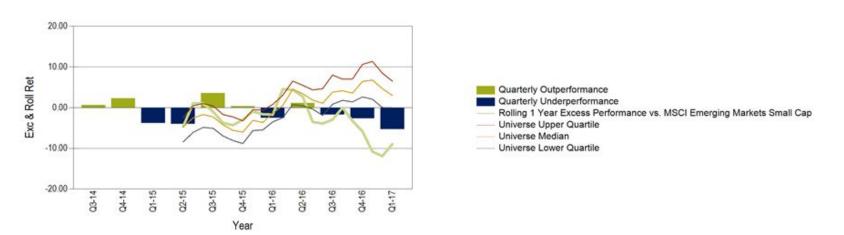


March 31, 2017

Morgan Stanley Inst International Eq I

A MSCI EAFE NR USD

# Mondrian EM Small Cap



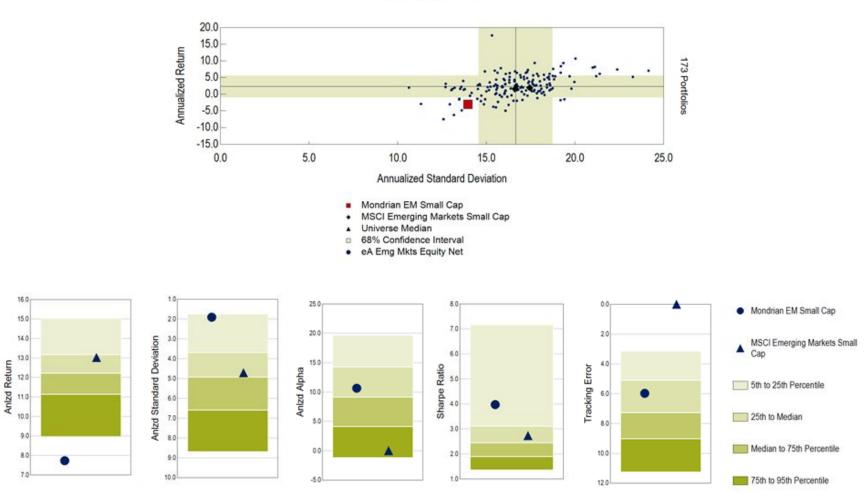




\*Returns are net of fees.



# Mondrian EM Small Cap



## 2 Year Risk Return

\*Returns are net of fees.



# Mondrian EM Small Cap

			Top Positive Co	ontributors		Top Negative C	ontributors	
Characteristics		MSCI Emerging		Relative Contribution %	Return %		Relative Contribution %	Return %
	Portfolio	Markets	SILOAM INTL.HOSPS.	0.5%	29.9%	GINKO INTERNATIONAL	-0.2%	-11.5%
Number of Holdings	109	Small Cap	MAYORA INDAH	0.4%	30.9%	NUTRIBIOTECH	-0.1%	-23.6%
Weighted Avg. Market Cap. (\$B)	1.3	1,831 1.2	CENTURY PLYBOARDS INDIA	0.4%	60.9%	BOER POWER HOLDINGS	-0.1%	-15.7%
Median Market Cap. (\$B)	0.9	0.6	KMC KUEI MENG INTL.	0.4%	39.4%	SARANA MEDITAMA MET.TBK	-0.1%	-9.4%
Price To Earnings	28.6	18.9	NEXTEER AUTOMOTIVE GROUP	0.4%	24.3%	MICROPORT SCIENTIFIC	-0.1%	-5.5%
Price To Book	5.0	2.4	MEDY-TOX	0.4%	40.2%	CRISIL	-0.1%	-9.2%
Price To Sales	4.1	2.1	SYMPHONY	0.3%	38.9%	EOH	-0.1%	-13.6%
Return on Equity (%)	20.4	13.6	BERGER PAINTS INDIA	0.3%	20.2%	ARWANA CITRAMULIA	-0.1%	-7.1%
Yield (%)	1.9	2.2	TORRENT PHARMACEUTICALS	0.3%	24.2%	BLOOMAGE BIOTECHNOLOGY	-0.1%	-5.9%
Beta R-Squared		1.0 1.0	CPMC HOLDINGS	0.3%	20.2%	OCEANA GROUP	-0.1%	-8.9%

#### **Equity Sector Attribution**

			Attribution Effects		F	Returns	Ending S	ector Weights
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark
Energy	0.0%	-	0.0%	-		9.2%	0.0%	1.6%
Materials	0.3%	0.5%	0.0%	-0.1%	15.5%	12.7%	11.6%	11.2%
Industrials	-0.8%	-0.6%	0.0%	-0.2%	7.9%	13.1%	16.7%	15.0%
Consumer Discretionary	0.0%	0.2%	0.0%	-0.2%	14.9%	13.7%	14.5%	17.8%
Consumer Staples	0.1%	0.2%	-0.3%	0.2%	8.1%	6.7%	11.8%	6.8%
Health Care	-0.6%	0.0%	-1.0%	0.4%	5.7%	7.2%	23.8%	8.3%
Financials	-0.6%	-0.9%	-0.1%	0.4%	5.5%	15.5%	2.3%	8.6%
Information Technology	-1.8%	-2.3%	-0.6%	1.1%	0.3%	18.8%	3.0%	17.0%
Telecommunication Services	0.0%		0.0%			9.8%	0.0%	1.0%
Utilities	-0.4%	-0.3%	0.0%	-0.1%	3.4%	12.7%	5.2%	3.7%
Real Estate	-0.2%	-0.6%	0.0%	0.4%	9.2%	11.7%	9.0%	9.1%
Cash	-0.1%	0.0%	-0.1%	0.0%	0.1%		0.7%	0.0%
Unclassified	0.0%						1.6%	0.0%
Portfolio	-4.3%	= -3.9%	+ -2.1%	+ 1.6%	8.7%	13.1%	100.0%	100.0%
*Deturne are not of feen								

\*Returns are net of fees.



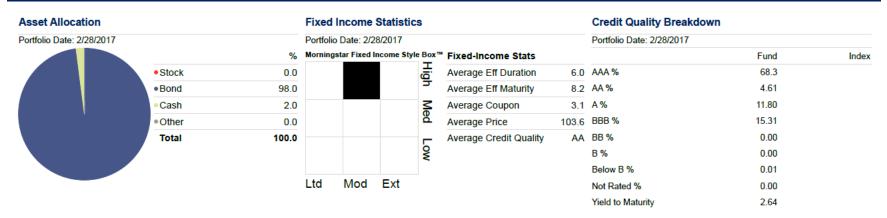
# University of Maine System Pension Plan Mondrian EM Small Cap

Sector Allocation*	14.		Country Allocation*		
	Fund	MSCI EM SC		Fund	MSCI EM SC
Consumer Discretionary	14.3	17.8	LATIN AMERICA	10.3	8.8
			Brazil	3.0	4.5
Consumer Staples	13.2	6.7	Mexico	5.4	2.9
Energy	_	1.6	Peru	1.9	
			EUROPE, MIDDLE EAST & AFRICA	5.7	11.0
Financials	2.3	8.6	Poland	1.4	1.2
Health Care	24.8	8.4	Saudi Arabia	1.4	-
			South Africa	2.8	5.4
Industrials	16.4	15.0	PACIFIC-ASIA	83.4	80.3
Information Technology	2.9	17.0	China/Hong Kong	17.5	22.3
			India	26.3	13.1
Materials	11.4	11.2	Indonesia	9.4	2.4
Real Estate	8.8	9.0	Korea	6.4	16.6
The second s		1.0	Malaysia	6.6	3.1
Telecommunication Services	_	1.0	Philippines	4.6	1.1
Utilities	5.1	3.7	Taiwan	7.9	18.0
CACH	0.7		Thailand	4.6	3.6
CASH	0.7	_	CASH	0.7	_
TOTAL	100.0	100.0	TOTAL	100.0	100.0

Source: Mondrian



## Vanguard Total Bond Market I



Historical Sector Allocations (10 Years)

#### **Top Holdings**

100.0 90.0 -												Detail Holding Type	Portfolio Weighting %
80.0											US Treasury Note 2.125%	BOND - GOV'T/TREASURY	0.54
70.0 -											US Treasury Note 3.625%	BOND - GOV'T/TREASURY	0.49
											US Treasury Note 1%	BOND - GOV'T/TREASURY	0.48
60.0											US Treasury Note 2.625%	BOND - GOV'T/TREASURY	0.47
50.0					_						US Treasury Note 1.75%	BOND - GOV'T/TREASURY	0.42
40.0 -											US Treasury Note 2.25%	BOND - GOV'T/TREASURY	0.42
40.0											US Treasury Note 1%	BOND - GOV'T/TREASURY	0.41
30.0 -					_						US Treasury Note 1.25%	BOND - GOV'T/TREASURY	0.39
20.0 -											US Treasury Note 1%	BOND - GOV'T/TREASURY	0.38
											US Treasury Note 3.375%	BOND - GOV'T/TREASURY	0.38
10.0 -													
0.0		2008	2009	2010	2011	2012	2013	2014	2015	2016			
-Gove	rnme	nt %		-Munici	ipal %		-0	orporate 9	%				

Source: Morningstar

-Cash & Equivalents %

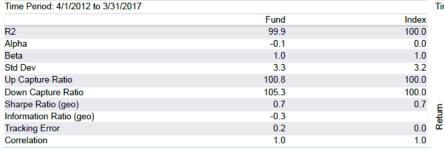
Derivative %



-Securitized %

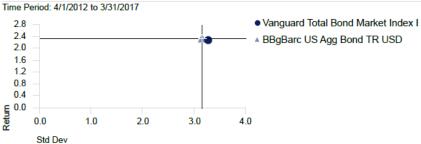
# Vanguard Total Bond Market I

#### Risk & Return Characteristics (5 Years)



#### **Risk & Return Illustration (5 Years)**

Rolling Risk (3 Years)



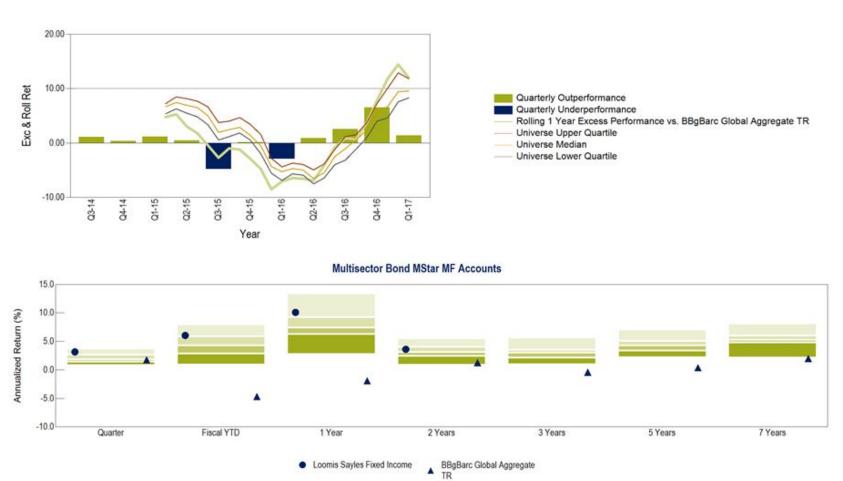
#### **Rolling Returns (3 Years)**



Source: Morningstar



# Loomis Sayles Fixed Income



Annualized Excess Performance

\*Returns are net of fees.

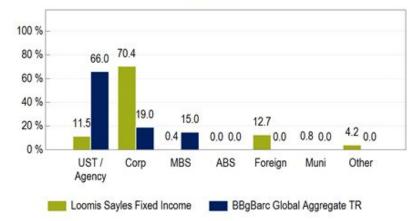


# Loomis Sayles Fixed Income

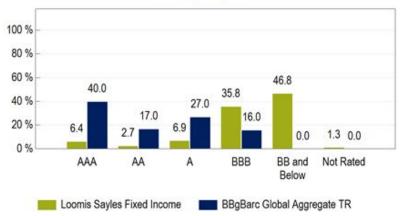


Characteristics





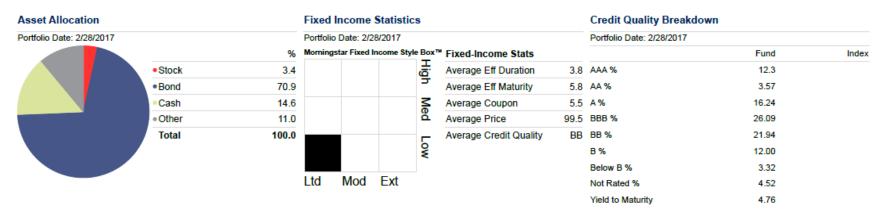




NE NEPC, LLC

# Loomis Sayles Fixed Income

Historical Sector Allocations (10 Years)



100.0 90.0 80.0 70.0 60.0 50.0 40.0 30.0 20.0 10.0 0.0 2007 2011 2012 2013 2016 2008 2009 2010 2014 2015 -Government % -Municipal % -Corporate % -Securitized % -Cash & Equivalents % Derivative %

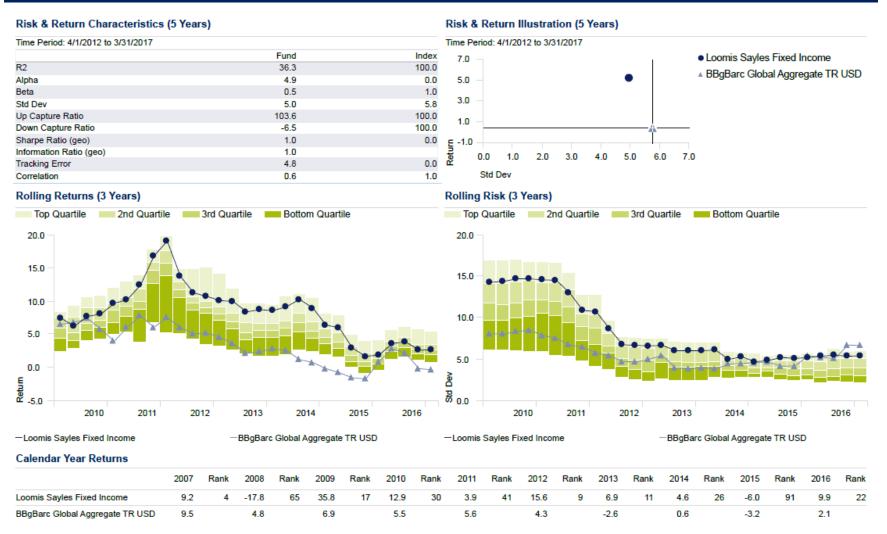
#### **Top Holdings**

	Detail Holding Type	Portfolio Weighting %
Old Rep Intl Cv 3.75%	BOND - CONVERTIBLE	2.18
US Treasury Note 0.75%	BOND - GOV'T/TREASURY	1.86
New Zealand(Govt) 5%	BOND - GOV'T/TREASURY	1.50
Ontario Prov Cda 4.2%	BOND - GOV'T/TREASURY	1.44
Intel Corp	EQUITY	1.35
Morgan Stanley 4.1%	BOND - CORPORATE BOND	1.26
Owens Brockway 144A 5.375%	BOND - CORPORATE BOND	1.10
Bk N S Halifax 2.462%	BOND - CORPORATE BOND	1.06
Amer Air Pt Tr 2016-1 5.25%	BOND - ASSET BACKED	1.05
Bombardier 144A 6%	BOND - CORPORATE BOND	0.97

Source: Morningstar



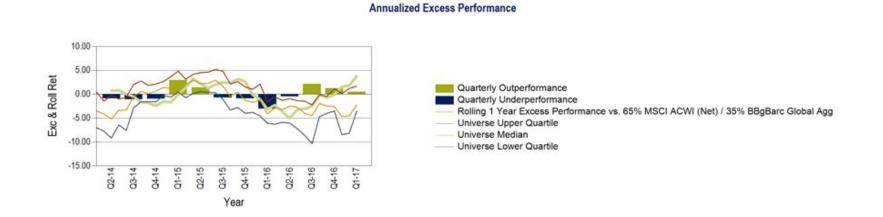
## Loomis Sayles Fixed Income

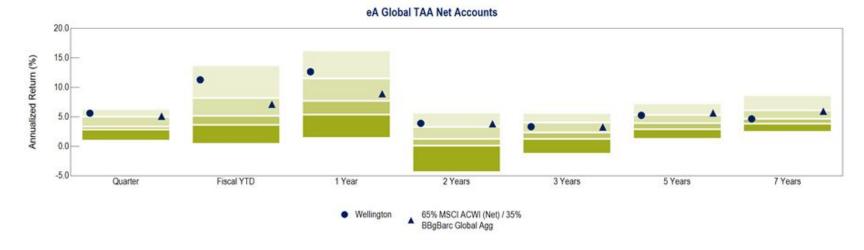


Source: Morningstar



## University of Maine System Pension Plan Wellington Opportunistic

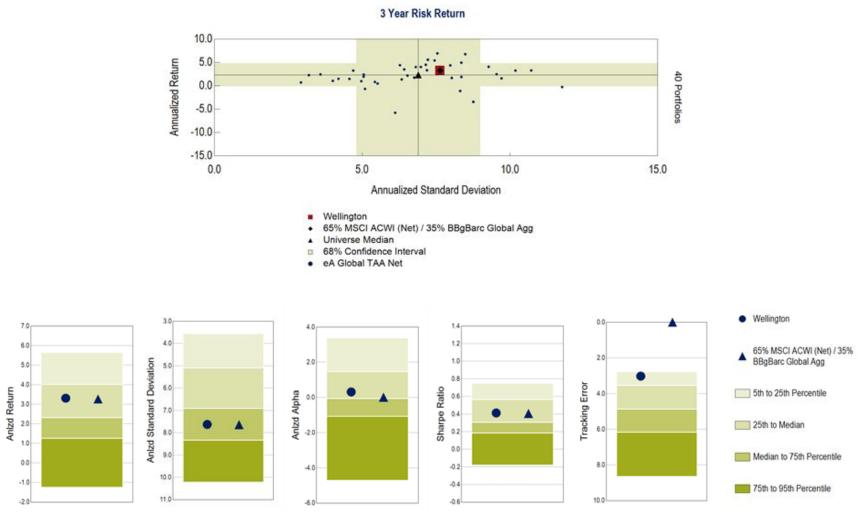




#### \*Returns are net of fees.



# Wellington Opportunistic



\*Returns are net of fees.

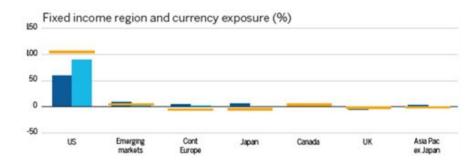


# Wellington Opportunistic

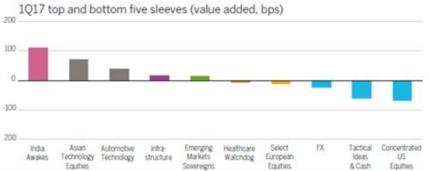
### **Portfolio Characteristics**

	Portfolio	Benchmark
Yield to worst (%)	3.3	2.6
Option adjusted spread (bps)	142	47
Duration – effective (yrs)	5.8	5.9
Convexity – effective	0.6	0.1

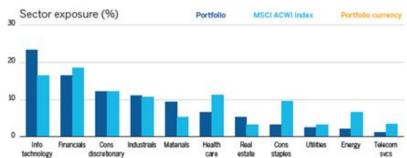
#### Fixed Income Sector



### **Top Relative Contributors and Detractors**



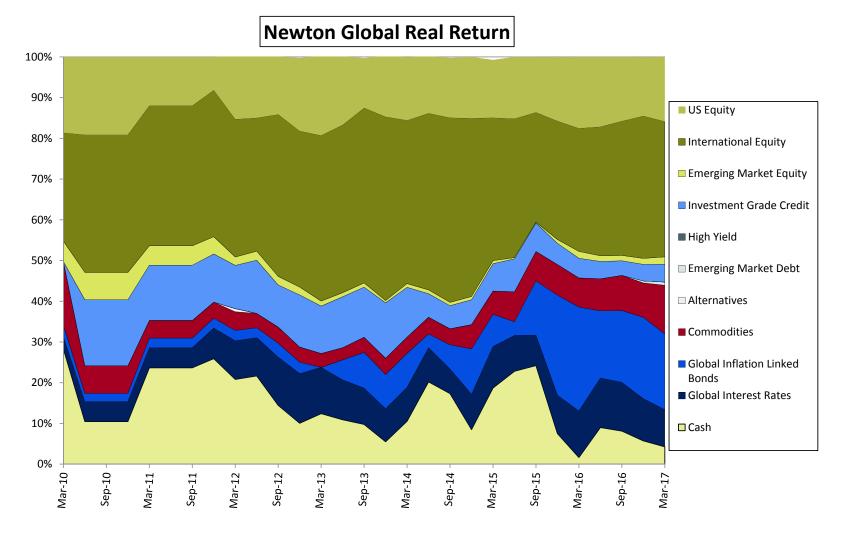
Equity Sector



Source: Wellington



## Newton Global Real Return



\*As of March 2012, Newton is reporting High Yield separately from Credit



	Fixed In Group Ltd.		Idings N.V														N P
	ark 1 (BM		S&P 500 (														
Benchm	ark 2 (BM	2):	Barclays A											Statistical Analysis	Fund	BM1	
Year	Jan	Feb	Har	Apr	Monthly P May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Returns	Fund	DAT	
2017	-0.4%	1.3%	-1.3%	Apr	мау	Jun	201	Aug	Sep	oa	NOV	Dec	-0.4%	Annualized Compound ROR	6.3%	7.9%	
2016	-3.0%	-1.1%	1.5%	1.5%	0.9%	-0.3%	2.0%	0.4%	-0.7%	0.4%	1.5%	1.2%	4.4%	3 Yr Return	-0.1%	10.4%	
2015	0.1%	1.5%	0.5%	-0.2%	0.5%	-1.4%	0.3%	-2.0%	-1.8%	0.7%	-0.4%	-1.9%	-4.0%	5 Yr Return	3.7%	13.3%	
2014	-0.6%	2.3%	0.0%	0.2%	0.9%	1.2%	-0.9%	0.5%	-0,8%	-2.0%	1.3%	-0.4%	1.5%	Best Month	5.9%	10.9%	
2013	2.6%	0.4%	1.7%	1.2%	1.6%	-1.9%	1.4%	-0.8%	1.5%	1.5%	1.4%	1.3%	12.4%	Worst Month	-27.9%	-16.8%	
2012	2.3%	2.1%	0.2%	-0.1%	-1.0%	0.2%	1.2%	0.9%	1.5%	0.8%	0.2%	1.8%	10.3%	% Positive Months	70.8%	63.4%	
2011	1.4%	1.4%	0.1%	1.2%	-0.2%	-1.4%	0.3%	-3.0%	-4.0%	1.9%	-0.8%	-1.0%	-4.2%	Risk	199/100 00:00	TRANSFORMERST	
2010	1.2%	0.7%	2.4%	2.1%	-2.3%	-0.7%	1.0%	0.4%	1.9%	2.1%	0.1%	2.3%	11.7%	Standard Deviation	8.8%	15.2%	
2009	1.1%	-0.8%	0.5%	2.8%	5.5%	2.9%	3.3%	2.9%	2.9%	1.2%	1.4%	2.0%	28.7%	3 Yr Standard Deviation	4.3%	10.4%	
2008	-0.7%	0.2%	-1.0%	0.5%	0.8%	0.3%	-1.8%	-1.2%	-4.0%		-2.8%	-2.0%	-17.5%		4.3%	10.2%	
														Sharpe Ratio (3.5%)	0.4	0.4	
		11122						_						Sortino Ratio (700.0%)	-3.4	-3.4	
Outpe	erform BM	l in Up P	arkets	Outper	form BH	in Down I	Markets		D	istributio	on of Ret	urns		Downside Deviation (700.0%)	64.2%	64.8%	
1075	0.00000000	an support	CONTRACTOR NO.	100%	on a name	All states and states	and the second s	10 r		an a	and the second	10100.076	-	Max Drawdown	-36.8%	-50.9%	
														Months In Maximum Drawdown	5	16	
90%				90%				- 20 -			- 1			Months To Recover	33	37	
80%			-	80%		-	_	60						Comparison To Benchmark(s)			
70%				72%		_	_							Monthly Alpha		0.3%	
62%			_	60%				8						Annualized Alpha		4.1%	
52%								2 40-					-	Beta		0.3	
1.516				50%				1						Correlation		0.5	
40%				40%										R-Squared		24.2%	-
30%				30%				20			THEFT		_	Annual Returns			
20%			-	22%				20				_		2017-(YTD)	-0.4%	6.1%	
10%														2016	4.4%	12.0%	
				10%					2 9 4	PTT	6 7 G	* * *	9	2015	-4.0%	1.4%	
0% L	S&P 500 (TR)		ys Aggregate	0%	CAR 500 (00)	Part I	Annual I		46	* # 7 # F	4 B	30	016	2014	1.5%	13.7%	
			nd Index		58P 500 (TR)	Bond	Aggregate Index			Auto-	um Range (%)			2013	12.4%	32.4%	
-	-	-	_		_			-			Construction of the Article			2012	10.3%	16.0%	
Risk	/Return F	rofile				-		Underw	ater Dra	awdowns				Latest Returns		0.11	1
- 25							0%					-	-	Last Month	-1.3%	0,1%	
				T				Val.	1.1	1.				Last 3 Months	-0.4%	6.1%	
					1000	000	-10%			5		N		Last Year	6.0%	17.2%	
7%				R.V.	al Parel Scione P	odings.				N				2-Year	-1.1%	9.2%	
5							-20%		N N	N				3-Year	-0.1%	10.4%	
d Ret						1			N /		11			4-Year	2.1%	13.1%	
10				4580	500 (778)		-30%	1	11		11			S-Year	3.7%	13.3%	
1							-475		W		V			Drawdown Analysis	24.45	- E0.04	
	+										V			1	-36.0%	-50.9%	
2%						and a	-50%							2	-17.7%	-44.7%	
				*560	inys Appropria Bo	10 2000k								3	-10.1%	-15.4%	
							40%								-8.0%	-8.4%	



# EnTrustPermal Fixed Income Holdings

	General Fur	d Informatio	n	Strategy	Information
Fund Name	EnTrustPermal Fixed Inc	ome Holdings		Curren	t Allocation
Management Company	EnTrustPermal			Event Driven	42.55%
Location	New York, NY			Fixed Income – Hedge	21.37%
Firm AUM	\$25.2 Billion	Strategy	Fund of Fund	Fixed Income - Developed Markets	35.28%
Strategy AUM	\$3.8 Billion	Sub- Strategy	Multi-Strategy	Global Macro	8.47%
Portfolio Managers	Robert Kaplan, Clark Fenton, Javier Dyer	Direct or FOF	FOF	Fixed Income - Emerging Markets	0.89%
	Те	erms		Att	ribution
Share Class	-				0.06%
Minimum Investment	\$1 million			Macro	0.15%
Management Fee	0.95%				
Incentive Fee	None			End house linder	0.62%
Hurdle Rate	None			Fixed Income Hedge	0.10%
High Water Mark	None				
Subscription	Monthly			Fixed Income Emerging Markets	0.17%
Redemption	Monthly with 20 days			nxed income Enlerging Markets	0.06%
Lock-Up	None				
	Investme	ent Strategy		Fixed Income Developed Markets	0.07%
that employs a ubets on events,	come Holdings features a j unique combination of fixe and nimble, liquid macro s hancer and a good diversif	d-income spread trategies. It is po	ositioned as both a	Event Driven	1.26% 1.02%
				¥ear to De	ate Month to Date

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



Lighthou	ise Partne		Short Fun	id, L.P.													N F
Benchm	ark 1 (BM	1):	S&P 500 (	(TR)													
Benchma	ark 2 (BM	2):	Barclays A														
1	- 22	1.2	100		Monthly P					- 2.2			124	Statistical Analysis	Fund	BM1	
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Returns	6.1%	2.00	
2017	1.5%	0.3%	1.1%	0.5%	1.0%	0.3%	1.7%	-0.2%	1.0%	-0.9%	1.2%	0.3%	2.8%	Annualized Compound ROR 3 Yr Return	4.8%	7.8%	
2015	1.0%	1.0%	1.6%	-0.5%	1.1%	0.2%	0.4%	-0.8%	-1.0%	2.2%	0.0%	1.7%	7.2%	5 Yr Return	7.3%	13.3%	
2014	0.9%	1.8%	-1.7%	-2.0%	1.2%	1.9%	-0.5%	1.7%	-0.1%	0.3%	1.2%	0.6%	5.3%	Best Month	3.3%	10.9%	
2013	3.2%	0.5%	2.7%	1.5%	1.0%	1.0%	2.2%	-0.3%	2.2%	1.2%	1.1%	2.4%	20.5%	Worst Month	-6.4%	-16.8%	
2012	1.7%	1.7%	1.6%	1.2%	-3.7%	0.5%	0.1%	1.1%	1.3%	-0.1%	0.8%	0.4%	6.7%	% Positive Months	69.4%	66.0%	
2011	-0.2%	1.2%	0.7%	2.1%	-1.1%	-1.5%	0.6%	-3.1%	-0.6%	1.7%	-1.0%	-0.6%	-1.9%	Risk	0000000	Contraction of the local division of the loc	
2010	0.0%	0.3%	1.9%	0.6%	-2.4%	-1.7%	1.7%	-0.6%	1.3%	1.8%	0.2%	2.1%	5.1%	Standard Deviation	5.4%	14.1%	115
2009	0.3%	-0.5%	1.1%	1.3%	2.3%	0.7%	1.6%	1.4%	1.5%	-0.9%	0.3%	0.9%	10.2%	3 Yr Standard Deviation	4.0%	10.4%	
2008	-3.2%	1.2%	-4.7%	1.5%	2.8%	-0.5%	-1.4%	-0.3%	-6.4%	-2.0%	-0.6%	0.0%	-13.1%		4.5%	10.2%	
														Sharpe Ratio (3.5%)	0.5	0.4	
												_		Sortino Ratio (700.0%)	-3.5	-3.4	
Outpe	rform BM	l in Up H	arkets	Outper	form BH	in Down I	Harkets		D	istributio	n of Ret	urns		Downside Deviation (700.0%)	64.0%	64.6%	
100%		en valensen		100%	en de la cola	a de contra co	Transmission of the	er r		en anno anno an		Second Second	_	Max Drawdown	-15.2%	-50.9%	
90%				90%										Months In Maximum Drawdown	16	16	
87%								- 50					- 1	Months To Recover	25	37	
				80%		10	1							Comparison To Benchmark(s)			
70%			_	70%									- 1	Monthly Alpha		0.3%	
80%			-	50%				1			nll			Annualized Alpha		4.1%	
50%		1		50%				2 30						Beta		0.2	
475								ž						Correlation R-Squared		0.6	
				40%				20						Annual Returns		33.6%	-
32%				30%				20					_	2017-(YTD)	2.8%	6.1%	
20%	_			20%										2016	0.0%	12.0%	
10%			- H	10%										2015	7.2%	1.4%	
0%									5 4 4	184	1002	1004	01.01	2014	5.3%	13.7%	
	S&P 500 (TR)	Barda	vs Aggregate nd Index		58P 500 (TR)	Barclays	Aggregate		* * *			0		2013	20.5%	32.4%	
						-	202			Reta	m Range (%)			2012	6.7%	16.0%	
Risk/	Return P	rofile				1		Underw	ater Dra	wdowns				Latest Returns	10000	10000000	
-			1122				10000							Last Month	1.1%	0,1%	
	-		+				0% W	- mul	λ.			A March		Last 3 Months	2.8%	6.1%	
1000				24			-10%			- A	J.			Last Year	7.8%	17.2%	
7%				*Lapto	house Global Long	plikert			ળ_●	1	V I			2-Year	3.1%	9.2%	
							-20%			11	•			3-Year	4.8%	10.4%	
g on						3				NW.				4-Year	7.0%	13.1%	
allard				4580	500 (78)	1	-30%			· ·				5-Year	7.3%	13.3%	
1 54				1000		a	-47%		1					Drawdown Analysis			
100									V					1	-15.2%	-50,9%	
	+			1500	1.		-62%		Y					2	-5.6%	-8.4%	
				*Red	inys Appropria Bo	nd 21099								3	-4.6%	-6.6%	
							40%							4	-3.7%	-4.7%	



# Lighthouse Global Long/Short

	General i un	d Informatio	n				Strate	gy Info	ormat	ion				
Fund Name	Lighthouse Global Long/S	Short Fund					Curre	ent All	ocatio	n				
Management Company	Lighthouse Investment Pa	Partners, LLC			posures and	d contribut	ion motes							
Location	Palm Beach, FL			170%	165.0%							<ul> <li>Net</li> </ul>	· Oross	
Firm AUM	\$8.7 billion	Strategy	Fund of Fund	130%										
Strategy AUM	\$1.8 billion	Sub- Strategy	Long/Short Equity	90% 70%			43.15							
Portfolio Managers	Ethan Baron	Direct or FOF	FOF	50% 30%	8.15	485		1	27.4%	5.8%	19.8%			1.9%
	Те	erms		-10%	Developed No	e Laura	Developed Europe	-1.8%	veloped Asia		Emerging Mar		-0.4% Hadnas	/ Other
Share Class				WR <sup>R</sup>	0.25		0.00%	7	0.02%		0.03%		0.0	
Minimum Investment	\$1 million			OTD <sup>NI</sup>	1.50	6	0.48%		0.36%		0.42%			10%
Management Fee	1.15%						A	ttribut	ion					
Incentive Fee														
	 None			-			231116							
Incentive Fee					osure and c	ontribution	l stine							
Incentive Fee Hurdle Rate High Water	None			Sector exp		ontribution	aine .						Net a	Gross
Incentive Fee Hurdle Rate High Water Mark	None Yes	ce) or Monthly (9	0 days notice)	60% ] 518		ontribution	348%	34.9%	34.2%				Net a	Gross
Incentive Fee Hurdle Rate High Water Mark Subscription	None Yes Monthly	ce) or Monthly (9	0 days notice)	60% - 518			50/20	34.9%	342%	11.05			Net a	Gross
Incentive Fee Hurdle Rate High Water Mark Subscription Redemption	None Yes Monthly Quarterly (60 days notic None		0 days notice)	60% 50% 40% 30% 20% 10% 60%	Ì		34.0%	нњ 1 <b>љ</b> (	342%	18.0%	12.6%	3% 4.5%	•Net =	Gross 2.7%
Incentive Fee Hurdle Rate High Water Mark Subscription Redemption	None Yes Monthly Quarterly (60 days notic None	ce) or Monthly (9 ent Strategy	0 days notice)	60% 50% 40% 30% 20% - 10% 60%	Ì		34.0%	34% 176	342%	145	12 0%	34 4.5%	195 195	Gross 2.7% -0.4%
Incentive Fee Hurdle Rate High Water Mark Subscription Redemption	None Yes Monthly Quarterly (60 days notic None		0 days notice)	60% 50% 40% 30% 20% 10% 60%	18 0% 0 8%	19.8%	34.0%	34.9%	34 2%	145	1	3% 4.5% (	195 195	275
Incentive Fee Hurdle Rate High Water Mark Subscription Redemption Lock-Up	None Yes Monthly Quarterly (60 days notic None Investme obal Long/Short Fund is a g industry sector and country s similar to the MSCI World IF	nt Strategy	20-30 separately managed ers. The geographical	60% 50% 40% 30% 20% - 10% - 60% - 60% - 0% - Cons	18 0% -0.8% -0.8% -0.9% -0.02%	19.8% 4.1% Energy Fir 0.00% C	348% 28%	175 4	16	1.05	0.1%	_	195 195	2.7% -0.4% Hedges

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

# Principal U.S. Property

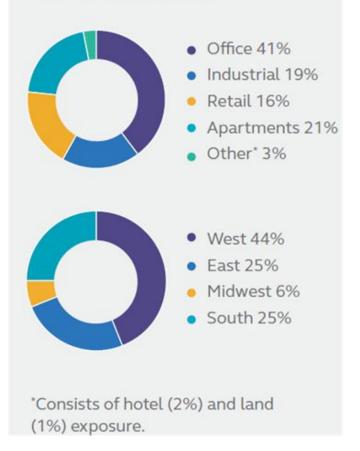
# 1Q2017 key statistics

Inception date	January, 1982					
Gross asset value	\$9.35 billion					
Net asset value	\$7.07 billion					
Number of investmen	nts 138					
Number of markets	43					
Core portfolio occupa	ancy* 94%					
Cash to gross assets	5.5%					
Leverage ratio**	21.4%					

\*Occupancy excludes value-added assets which are acquired at less than 85% occupancy, are under development or redevelopment or are land parcels. Occupancy for the total portfolio was 90%.

"Account's share of total debt (both property and portfolio) divided by Account's share of total gross assets.

# Diversification



Source: Principal

NE NEPC, LLC

Investment Committee Meeting - Defined Benefit Pension Fund Performance Review





## 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  $(X-Y) * \sqrt{(\# of periods per year)}$ Where X = periods portfolio return and Y = the period's benchmark returnFor monthly returns, the periods per year = 12For 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

NE NEPC, LLC

## 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: Operating Cash Fund Performance Review

- 2. INITIATED BY: Karl W. Turner, Chair
- **3. BOARD INFORMATION:** X **BOARD ACTION:**

### 4. BACKGROUND:

Enclosed for your information is the Operating Cash Fund performance report for the quarter ended March 31, 2017.

Ms. Kelly Regan and Mr. Jay Roney of NEPC will provide a brief review at the May 15, 2017 Investment Committee meeting.

## University of Maine System Operating Fund

# Total Plan Performance Detail (Net of Fees)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Operating Funds Composite	273,921,957	100.0	100.0	1.5	2.7	4.2	1.6	1.5	2.3	2.4	2.4
Allocation Index				1.4	2.4	3.4	1.7	1.9	2.3	2.3	
Liquidity Pool Composite	60,986,874	22.3	25.0	0.2	0.3	0.5	0.4	0.3	0.3	0.2	1.0
State Pool	40,867,434	14.9		0.2	0.4	0.6	0.5	0.4	0.3	0.3	1.0
BOA General Fund	414,313	0.2		0.0	0.0	0.0	0.0	0.0	0.1		
Federated Gov't Obligations	653,387	0.2		0.1							
JP Morgan US Gov't Money Market Fund	19,051,740	7.0		0.1							
Citi 3mth Treasury Bill				0.1	0.3	0.3	0.2	0.1	0.1	0.1	0.6
Income Pool Composite	140,590,581	51.3	49.9	0.7	1.4	3.0	1.8	1.8	2.3	2.6	2.8
Income Research + Management	76,717,758	28.0	26.6	0.4	0.1	0.9	1.0	1.1			
BBgBarc US Govt/Credit 1-3 Yr. TR				0.4	0.0	0.7	0.9	1.0	0.9	1.2	2.3
BlackRock Strategic Income Opportunities	18,322,798	6.7	6.7	1.4	4.3	5.7					
3-Month Libor Total Return USD				0.3	0.7	0.9	0.6	0.5	0.4	0.4	1.1
Loomis Sayles Bank Loans	17,958,587	6.6	6.6	0.7	4.5	6.7	3.4	3.1	3.8	4.2	
Loomis Bank Loans Custom Index				0.7	4.3	6.1	3.9	3.8	4.7	4.9	4.6
Vanguard Total Bond Market Instl' Fund	14,591,438	5.3	5.0	0.9	-1.9	0.4	1.1	2.6	2.3	3.4	
BBgBarc US Aggregate TR				0.8	-1.7	0.4	1.2	2.7	2.3	3.5	4.3
Vanguard Inflation-Protected Securities	13,000,000	4.7	5.0								
Total Return Pool Composite	72,344,502	26.4	25.1	4.4	7.6	10.4	3.1	2.7	4.4	5.1	4.1
Lighthouse	13,520,781	4.9	3.8	2.9	6.3	8.2					
Credit Suisse Long Shrt Eqt USD				3.5	5.2	3.9	0.8	2.4	5.4	4.6	4.0
EntrustPermal Fixed Income Holdings	6,285,511	2.3	3.8	-0.4	4.6	6.7	-1.1	-0.2	3.6		
HFRI Fund of Funds Composite Index				2.3	5.6	6.2	0.0	1.8	3.2	2.5	1.2
Newton Global Real Return	13,692,194	5.0	5.0	2.1							
60% MSCI ACWI (Net)/ 40% BBgBarc Global Agg				4.8	6.2	8.0	3.6	3.0	5.2	5.6	4.0
PIMCO All Asset	17,326,479	6.3	5.0	5.1	8.8	13.2	4.2	2.3	3.7	5.4	5.1
Blended Index				1.9	1.9	4.6	3.2	3.6	3.7	4.9	5.1
Vanguard Total World Stock Index	21,519,537	7.9	7.5	7.1	14.2	16.0	5.4	5.4			
FTSE Global All Cap Index				6.9	14.4	15.8	5.4	5.5	8.9		



University of Maine System Operating Fund

# Total Plan Performance Detail (Net of Fees)

Notes:

Returns are net of manager fees. The inception date for the allocation index is 07/01/2009 Fiscal YTD begins 7/1 Blended Index: 40% BC Aggregate / 30% BC U.S. TIPS 1-10YR / 10% S&P 500 / 10% BC High Yield / 10% JPM EMBI+ Loomis Bank Loans Custom Index blends performance of "S&P/LSTA Leveraged Loan Index" before 9/1/2014 and "S&P/LSTA Leveraged BB Loan Index" after 9/1/2014. Composite excludes external loans. Lighthouse market value includes \$3 million in transit from Vanguard World Stock Index.



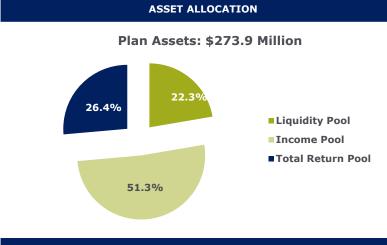


Investment Committee Meeting - Operating Fund Performance Review





# Executive Summary



FUND PERFORMANCE: NET OF FEES						
	QTR	FYTD	1 YR	3 YR	7 YR	10 YR
			1		1	

COMPOSITE	1.5%	2.7%	4.2%	1.5%	2.4%	2.4%
ALLOC. INDEX	1.4%	2.4%	3.4%	1.9%	2.3%	

#### PLAN COMMENTS

#### Asset Allocation

The Fund's assets as of March 31, 2017 were \$273.9 million. This represents a \$22.0 million increase from the previous quarter.

The Liquidity Pool (22.3% v 25.0%), Income Pool (51.3% v 50.0%) and Total Return Pool (26.4% 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 1.5% over the quarter, 2.7% fiscal year to date, and 4.2% over the trailing year. The Operating Fund outperformed the allocation index over the quarter, fiscal year to date and one year time frames. Specifically, during the FYTD time frame, PIMCO, BlackRock and Lighthouse contributed to the outperformance versus the Allocation Index. Long term returns have matched or outperformed the allocation index (7 year).

The managers with the highest absolute returns over the quarter were Vanguard, PIMCO and Lighthouse.

#### **RECENT ACTIONS/RECOMMENDATIONS**

#### **Recent Actions**

The System approved new asset allocation targets at the previous meeting.

The System funded an allocation to Vanguard TIPS with proceeds from Vanguard Total Bond Market at the end of March.

The System placed a full redemption for EntrustPermal and proceeds will be allocated to HFOF and GAA managers when received.

#### **Recommendations**

Review bank loan manager search.

Approve updated Investment Policy Statements.

#### Manager Due Diligence

There were no new manager updates during the quarter.



# Due Diligence Monitor

The items below summarize any changes or announcements from your Plan managers/funds. A "Yes" indicates there was an announcement and a brief 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. NEPC considers ourselves to be a fiduciary, as ERISA defines the term in Section 3(21).

Investment Manager	Manager Changes/ Announcements (Recent Quarter)	NEPC Due Diligence Committee Recommendations
No New Manager Updates		

A legend key to our recommendations is provided below.

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

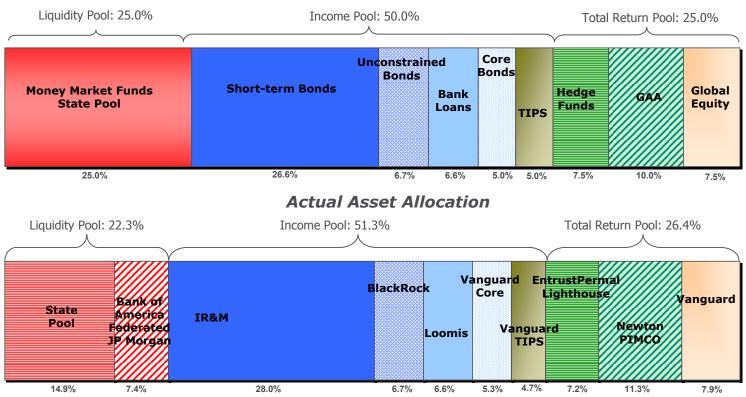


Investment Committee Meeting - Operating Fund Performance Review

# **Plan Summary and Statistics**



# Total Fund Asset Allocation

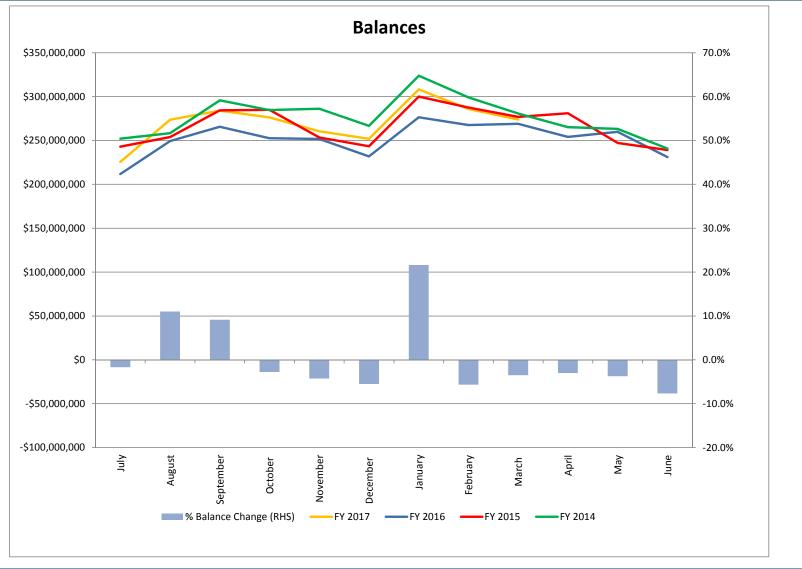


**Target Asset Allocation** 

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

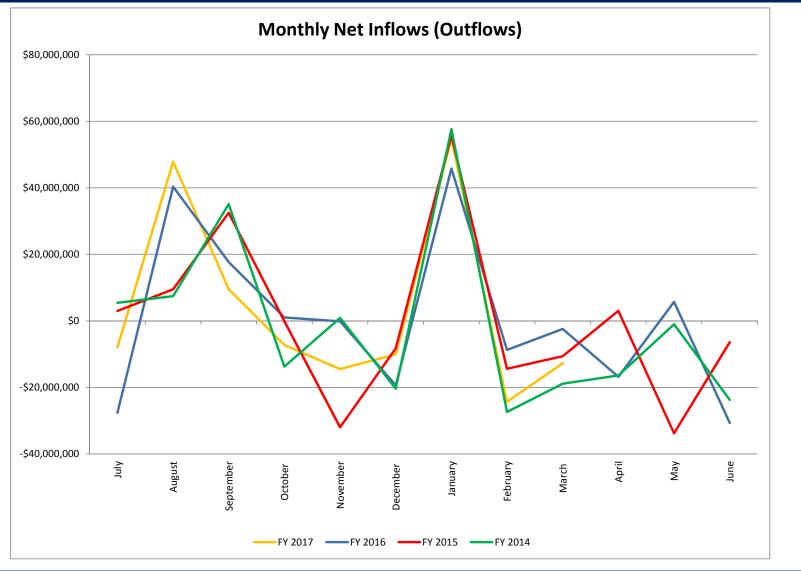








# Monthly Net Inflows (Outflows)





Investment Committee Meeting - Operating Fund Performance Review





# Income Research + Management

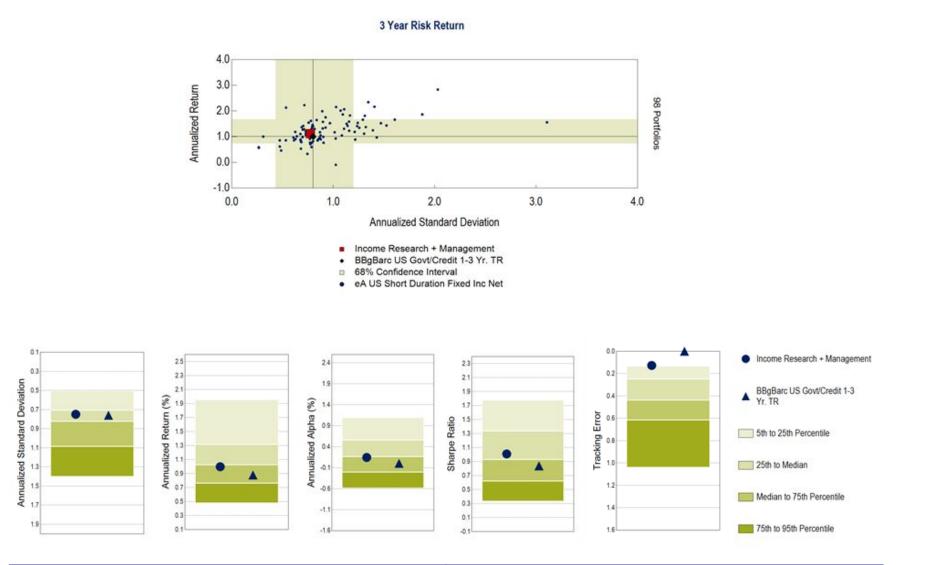


eA US Short Duration Fixed Inc Net Accounts



NE NEPC, LLC

# Income Research + Management





### Income Research + Management





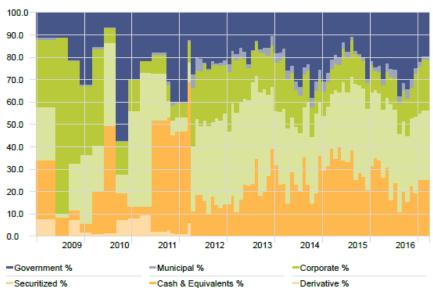


Sectors



# BlackRock Strategic Income Opportunities





#### Historical Sector Allocations (10 Years)

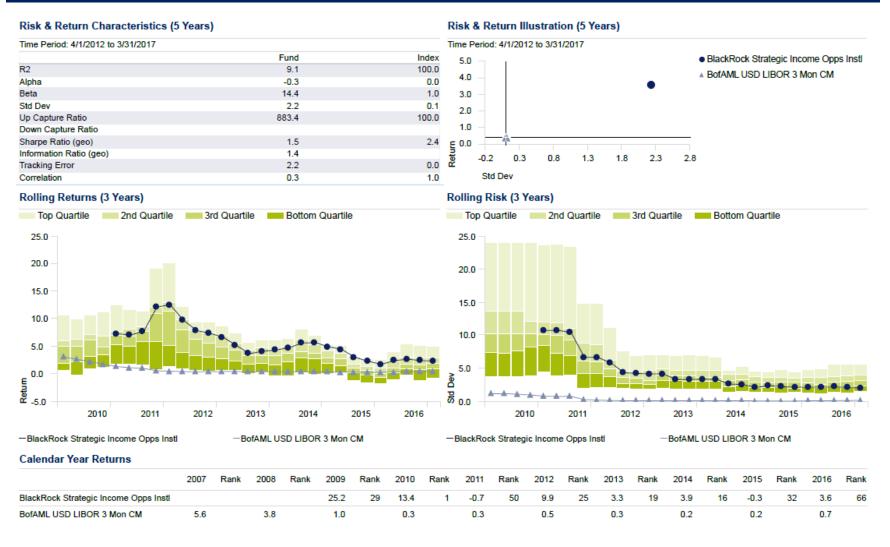
**Top Holdings** 

	Detail Holding Type	Portfolio Weighting %
US Treasury Note 1.375%	BOND - GOV'T/TREASURY	-9.54
US Treasury Note	BOND - GOV'T INFLATION PROTECTED	7.45
Freddie Mac Gold Single Family TBA 4% 2047-03-01	BOND - GOV'T AGENCY PASS-THRU	4.88
Ginnie Mae Jumbos TBA 3.5% 2047-03-01	BOND - GOV'T AGENCY PASS-THRU	4.11
FHLMC 3.5%	BOND - GOV'T AGENCY PASS-THRU	-3.06
US Treasury Bond 3%	BOND - GOV'T/TREASURY	2.27
BlackRock Liquidity T-Fund Instl	MUTUAL FUND - MONEY MARKET	1.53
US Treasury Note 2.25%	BOND - GOV'T/TREASURY	1.23
PowerShares QQQ ETF	MUTUAL FUND - ETF	1.22
SPDR® S&P 500 ETF	MUTUAL FUND - ETF	1.18

Source: Morningstar



# BlackRock Strategic Income Opportunities



Source: Morningstar

NE NEPC, LLC

# Loomis Sayles Bank Loans

HOLDINGS BY INDUSTRY (%)		
Healthcare	9.2	
Technology	9.1	
Consumer Cyclical Services	8.6	
Chemicals	5.7	
Retailers	5.6	
Building Materials	4.7	
Industrials - Other	4.5	
Pharmaceuticals	3.5	
P&C	3.5	
Media Entertainment	3.1	
Wirelines	3.1	
Consumer Products	2.7	
Cable Satellite	2.6	
Food & Beverage	2.6	
Internet & Data	2.0	

Automotive	1.9
Transportation Services	1.8
Financial Other	1.8
Leisure	1.7
Electric	1.3
Environmental	1.3
Wireless	1.2
Aerospace/Defense	1.1
Media - Cable	1.1
Restaurants	1.1
Diversified Manufacturing	1.0
Packaging	1.0
Lodging	1.0
Metals and Mining	1.0
Health Insurance	1.0

Oil Field Services	0.9
Midstream	0.8
Gaming	0.8
Refining	0.8
Media - NonCable	0.7
Supermarkets	0.7
Insurance	0.6
Other Utility	0.5
Auto Loan	0.4
Independent	0.3
Conglomerates	0.3
Airlines	0.3
Banking	0.3
Home Construction	0.2
Cash & Equivalents	2.1

#### CREDIT QUALITY (%)

	Portfolio 1	8cP/LST leveraged oan Inde
AA	0.0	0.0
A	0.0	0.0
BBB	4.4	10.5
BB	47.7	35.3
В	43.9	44.0
CCC & Lower	1.2	7.6
Not Rated	0.6	2.5
Second Lien	0.0	3.6
Avg. Credit Quality	BB-	B+
Cash & Equivalents	2.1	0.0
the state of the s		

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

#### SECTOR DISTRIBUTION (%)

	Portfolio
Industrial	88.9
Financial	7.1
Utility	1.8
Cash & Equivalents	2.1

#### **COUNTRY DISTRIBUTION (%)**

Portfolio
92.8
2.8
4.4

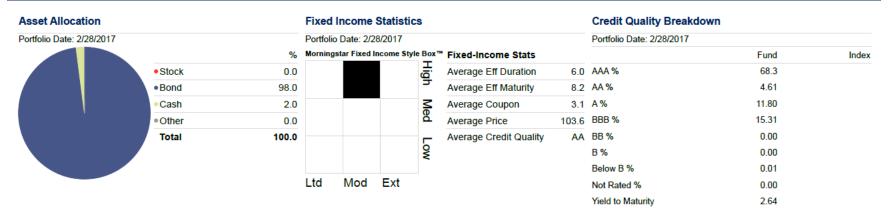
#### **TOP FIVE HOLDINGS (%)**

	Portfolio
Energy Transfer Equity, L.P.	0.8
Virgin Media Investment Holdings Limited	0.7
West Corporation	0.7
Ziggo Secured Finance Partnership	0.7
Hub International Limited	0.7

Source: Loomis Sayles



## Vanguard Total Bond Market I



Historical Sector Allocations (10 Years)

#### **Top Holdings**

100.0 90.0 -												Detail Holding Type	Portfolio Weighting %
80.0											US Treasury Note 2.125%	BOND - GOV'T/TREASURY	0.54
70.0 -											US Treasury Note 3.625%	BOND - GOV'T/TREASURY	0.49
				_							US Treasury Note 1%	BOND - GOV'T/TREASURY	0.48
60.0											US Treasury Note 2.625%	BOND - GOV'T/TREASURY	0.47
50.0									_		US Treasury Note 1.75%	BOND - GOV'T/TREASURY	0.42
40.0 -											US Treasury Note 2.25%	BOND - GOV'T/TREASURY	0.42
40.0											US Treasury Note 1%	BOND - GOV'T/TREASURY	0.41
30.0 -									-		US Treasury Note 1.25%	BOND - GOV'T/TREASURY	0.39
20.0 -											US Treasury Note 1%	BOND - GOV'T/TREASURY	0.38
											US Treasury Note 3.375%	BOND - GOV'T/TREASURY	0.38
10.0 -													
0.0		2008	2009	2010	2011	2012	2013	2014	2015	2016			
-Gove	rnme	nt %		-Munic	ipal %		-	Corporate	%				

Source: Morningstar

-Cash & Equivalents %

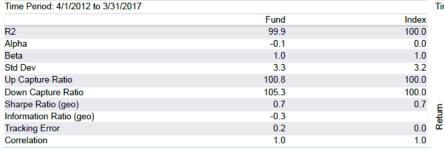
Derivative %



-Securitized %

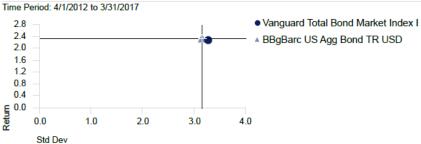
# Vanguard Total Bond Market I

#### Risk & Return Characteristics (5 Years)



#### **Risk & Return Illustration (5 Years)**

Rolling Risk (3 Years)



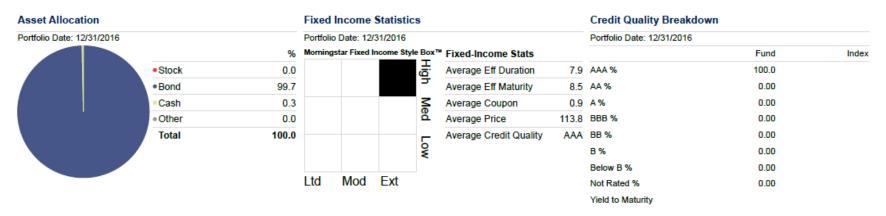
#### **Rolling Returns (3 Years)**



Source: Morningstar



# Vanguard Inflation Protected Securities



100.0 90.0 80.0 US Treasury Not US Treasury Not 70.0 US Treasury Not 60.0 US Treasury Not US Treasury Not 50.0 US Treasury Not 40.0 US Treasury Not 30.0 US Treasury Not US Treasury Not 20.0 US Treasury Not 10.0 0.0 2008 2009 2010 2011 2012 2013 2014 2015 2016 -Government % -Municipal % -Corporate % -Securitized % -Cash & Equivalents % Derivative %

#### Top Holdings

	Detail Holding Type	Portfolio Weighting %
ote	BOND - GOV'T INFLATION PROTECTED	5.24
ote	BOND - GOV'T INFLATION PROTECTED	4.83
ote	BOND - GOV'T INFLATION PROTECTED	4.65
ote	BOND - GOV'T INFLATION PROTECTED	4.47
ote	BOND - GOV'T INFLATION PROTECTED	4.30
ote	BOND - GOV'T INFLATION PROTECTED	4.17
ote	BOND - GOV'T INFLATION PROTECTED	4.10
ote	BOND - GOV'T INFLATION PROTECTED	3.96
ote	BOND - GOV'T INFLATION PROTECTED	3.88
ote	BOND - GOV'T INFLATION PROTECTED	3.84

Source: Morningstar

Historical Sector Allocations (10 Years)



# Vanguard Inflation Protected Securities

#### **Risk & Return Characteristics (5 Years)** Time Period: 4/1/2012 to 3/31/2017 Fund Index 1.2 R2 99.6 100.0 1.0 Alpha 0.0 0.0 0.8 Beta 1.0 1.0 0.6 Std Dev 5.3 5.2 0.4 Up Capture Ratio 102.3 100.0 102.8 100.0 Down Capture Ratio 0.2 Sharpe Ratio (geo) 0.2 0.2 E 0.0 Information Ratio (geo) 0.0 Ret 0.0 Tracking Error 0.4 Correlation 1.0 1.0 Rolling Risk (3 Years)



#### Time Period: 4/1/2012 to 3/31/2017 Vanguard Inflation-Protected Secs I BBgBarc US Treasury US TIPS TR USD 0.0 1.0 2.0 3.0 4.0 5.0 6.0 Std Dev

#### Rolling Returns (3 Years)



Source: Morningstar



	Fixed Indiroup Ltd.	come Ho	ldings N.	<b>v</b> .													N
	irk 1 (BM		S&P 500	(TR)													
Benchma	irk 2 (BM	2):	Barclays		Bond Ind									Chatland Analysis			
Year	Jan	Feb	Mar	Apr	May	erforman Jun	ce (%) I Jul	Aug	Sep	Oct	Nov	Dec	Year	Statistical Analysis Returns	Fund	BM1	
2017	-0.4%	1.3%	-1.3%	Apr	may	Jun	301	Aug	sep	Uct	NOV	Dec	-0.4%	Annualized Compound ROR	6.3%	7.9%	
2016	-3.0%	-1.1%	1.5%	1.5%	0.9%	-0.3%	2.0%	0.4%	-0.7%	0.4%	1.5%	1.2%	4.4%	3 Yr Return	-0.1%	10.4%	
2015	0.1%	1.5%	0.5%	-0.2%	0.5%	-1.4%	0.3%	-2.0%	-1.8%	0.7%	-0.4%	-1.9%	-4.0%	5 Yr Return	3.7%	13.3%	
2014	-0.6%	2.3%	0.0%	0.2%	0.9%	1.2%	-0.9%	0.5%	-0.8%	-2.0%	1.3%	-0.4%	1.5%	Best Month	5.9%	10.9%	
2013	2.6%	0.4%	1.7%	1.2%	1.6%	-1.9%	1.4%	-0.8%	1.5%	1.5%	1.4%	1.3%	12.4%	Worst Month	-27.9%	-16.8%	
2012	2.3%	2.1%	0.2%	-0.1%	-1.0%	0.2%	1.2%	0.9%	1.5%	0.8%	0.2%	1.8%	10.3%	% Positive Months	70.8%	63.4%	
2011	1.4%	1.4%	0.1%	1.2%	-0.2%	-1.4%	0.3%	-3.0%	-4.0%	1.9%	-0.8%	-1.0%	-4.2%	Risk	10,100,000	1996-9996-998	
2010	1.2%	0.7%	2.4%	2.1%	-2.3%	-0.7%	1.0%	0.4%	1.9%	2.1%	0.1%	2.3%	11.7%	Standard Deviation	8.8%	15.2%	
2009	1.1%	-0.8%	0.5%	2.8%	5.5%	2.9%	3.3%	2.9%	2.9%	1.2%	1.4%	2.0%	28.7%	3 Yr Standard Deviation	4.3%	10.4%	
2008	-0.7%	0.2%	-1.0%	0.5%	0.8%	0.3%	-1.8%	-1.2%	-4.0%	-7.4%	-2.8%	-2.0%	-17.5%	5 Yr Standard Deviation	4.3%	10.2%	
														Sharpe Ratio (3.5%)	0.4	0.4	
1	1		_		_	_					_			Sortino Ratio (700.0%)	-3.4	-3.4	
Outpe	rform BM	l in Up H	arkets	Outper	form BH i	n Down M	larkets		Di	stributio	n of Ret	urns		Downside Deviation (700.0%)	64.2%	64.8%	
100%				100%				10 T					_	Max Drawdown	-36.8%	-50.9%	
92%				90%							-			Months In Maximum Drawdown	5	16	
87%														Months To Recover	33	37	
				80%				60			n			Comparison To Benchmark(s)			-
70%				70%				5 50 -					_	Monthly Alpha		0.3%	
87%				60%				1						Annualized Alpha		4.1%	
50%		_		50%				10			n			Beta Correlation		0.3	
475				47%				¥ 30-					-	R-Squared		24.2%	
				1.111				20						Annual Returns		24.270	-
30%				30%										2017-(YTD)	-0.4%	6.1%	
20%	_			20%			- 14	- 20 -						2016	4.4%	12.0%	
10%				10%								-0		2015	-4.0%	1.4%	
0%										T T	1 102	1004	01.0	2014	1.5%	13.7%	
	SB/P 500 (TR)		vs Aggregate and Endex		58P 500 (TR)	Barclays / Bond	Lagoregate			4 4				2013	12.4%	32.4%	
						pord	Profes			Arts	m Range (%)			2012	10.3%	16.0%	
Risk/	Return P	rofile						Underw	ater Dra	wdowns				Latest Returns	20. states 22	10000000	
														Last Month	-1.3%	0.1%	
-				+			0% IT			1		1 1		Last 3 Months	-0.4%	6.1%	
							-10%			N .		<b>N1</b>	1	Last Year	6.0%	17.2%	
76				#Jem	al Paret Shome H	oktings.				1		r	100	2-Year	-1.1%	9.2%	
E							-20%			r.	1 1	1		3-Year	-0.1%	10.4%	
3									M J		N			4-Year	2.1%	13.1%	
1 00		_		4540	100 (77) 002	1	-30%		11		11'			5-Year	3.7%	13.3%	_
1					10000	ð	1		4		V			Drawdown Analysis			
1							-42%		P		V			1	-36.8%	-50.9%	
5%				1.550			-52%		22.					2	-17.7%	-44.7%	
				*Beck	nys Appropria Ro	wheel be								3	-10.1%	-15,4%	
							60%	-	-	No. 14. 14. 1		B4 B4 51	AL	4	-8.0%	-8.4%	
							211202230000	199 100	8 8 8	8 8 8 2	S N N N	CTION CTION	H H H	5	-2.9%	-6.8%	



# University of Maine System Operating Fund EnTrustPermal Fixed Income Holdings

	General Fur	nd Informatio	on	Strategy Inf	ormation
Fund Name	EnTrustPermal Fixed Inc	ome Holdings		Current All	location
Management Company	EnTrustPermal			Event Driven	36%
ocation	New York, NY			Fixed Income – Hedge	23%
Firm AUM	\$24.4 Billion	Strategy	Fund of Fund	Fixed Income - Developed Markets	32%
Strategy AUM	\$1.3 Billion	Sub- Strategy	Multi-Strategy	Global Macro	8%
Portfolio Managers	Robert Kaplan, Clark Fenton, Javier Dyer	Direct or FOF	FOF	Fixed Income - Emerging Markets	1%
	т	erms		Attribu	tion
Share Class	-			Portormanco by Stratogy <sup>5</sup>	
Minimum Investment	\$1 million			Performance by Strategy <sup>5</sup>	
Management Fee	0.95%			MTD YTD	1
Incentive Fee	None			Dvlpd. Mrkts Fxd Inc.	
Hurdle Rate	None				
High Water Mark	None			Fixed Income Hedge	
Subscription	Monthly			rixed income heage	
Redemption	Monthly with 20 days				-
.ock-Up	None			Emerg, Mrkts Fxd Inc.	
	Investme	ent Strategy			-
				Macro Managers	
Permal Fived Inc	ome Holdings features a	oerformance-orig	ented investment philosophy	,	
that employs a u bets on events, a		d-income spread strategies. It is p	strategies, opportunistic ositioned as both a	Event Driven	1
				-10% -5%	0%

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



	use Glob ise Partne		Short Fur	nd, L.P.												
Benchm	ark 1 (BM	1):	S&P 500	(TR)												
Benchm	ark 2 (BM	2):	Barclays		Bond Ind		-								Landar - De	
1.00		1.12	123		Monthly P					- 2.2		-	1	Statistical Analysis	Fund	BM1
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Returns	6.1%	7.00
2017 2016	1.5%	0.3%	1.1%	0.5%	1.0%	0.3%	1.7%	-0.2%	1.0%	-0.9%	1.2%	0.3%	2.8%	Annualized Compound ROR 3 Yr Return	4.8%	7.8%
2016	1.0%	1.0%	1.6%	-0.5%	1.1%	0.2%	0.4%	-0.8%	-1.0%	2.2%	0.0%	1.7%	7.2%	5 Yr Return	7.3%	13.3%
2014	0.9%	1.8%	-1.7%	-2.0%	1.2%	1.9%	-0.5%	1.7%	-0.1%	0.3%	1.2%	0.6%	5.3%	Best Month	3.3%	10.9%
2013	3.2%	0.5%	2.7%	1.5%	1.0%	1.0%	2.2%	-0.3%	2.2%	1.2%	1.196	2.4%	20.5%	Worst Month	-6.4%	-16.8%
2012	1.7%	1.7%	1.6%	1.2%	-3.7%	0.5%	0.1%	1.1%	1.3%	-0.1%	0.8%	0.4%	6.7%	% Positive Months	69.4%	66.0%
2011	-0.2%	1.2%	0.7%	2.1%	-1.1%	-1.5%	0.6%	-3.1%	-0.6%	1.7%	-1.0%	-0.6%	-1.9%	Risk	0.00000000	100000000
2010	0.0%	0.3%	1.9%	0.6%	-2.4%	-1.7%	1.7%	-0.6%	1.3%	1.8%	0.2%	2.1%	5.1%	Standard Deviation	5.4%	14.1%
2009	0.3%	-0.5%	1.1%	1.3%	2.3%	0.7%	1.6%	1.4%	1.5%	-0.9%	0.3%	0.9%	10.2%	3 Yr Standard Deviation	4.0%	10.4%
2008	-3.2%	1.2%	-4.7%	1.5%	2.8%	-0.5%	-1.4%	-0.3%	-6.4%	-2.0%	-0.6%	0.0%	-13.1%	5 Yr Standard Deviation	4.5%	10.2%
_														Sharpe Ratio (3.5%)	0.5	0.4
							2							Sortino Ratio (700.0%)	-3.5	-3.4
Outpe	rform Bl	l in Up I	arkets	Outper	form BH i	in Down I	larkets		D	stributio	n of Ret	urns		Downside Deviation (700.0%)	64.0%	64.6%
102%		services of		100%	en an an an a	n de composición	The second s	er r			and a state of	1000 M	_	Max Drawdown	-15.2%	-50.9%
90%				90%	_									Months In Maximum Drawdown	16	16
								- 50						Months To Recover	25	37
82%				80%		10.	1.12							Comparison To Benchmark(s)		
70%				70%									- 1	Monthly Alpha		0.3%
80%				50%				1						Annualized Alpha		4.1%
50%				50%				2 30			-			Beta Correlation		0.2
475				47%				* 20						R-Squared		38.6%
32%								~						Annual Returns		30,076
				30%				20					_	2017-(YTD)	2.8%	6.1%
20%	_			20%										2016	0.0%	12.0%
10%				10%										2015	7.2%	1.4%
0% L				0%						1 9	1 10 2	1004	10 10	2014	5.3%	13.7%
1000	SB/P 500 (TR	) Barda Br	vs Apprepate and Endex		S&P 500 (TR)	Barclays	Appregate Index			4 4				2013	20.5%	32.4%
							5005			Arts	m Range (%)			2012	6.7%	16.0%
Risk	Return I	Profile						Underw	ater Dra	wdowns				Latest Returns		
25			112				-		-				a company	Last Month	1.1%	0,1%
			1	2			~ ~	. M	A			A March		Last 3 Months	2.8%	6.1%
1000							-10%		h	T A	J.			Last Year	7.8%	17.2%
76				- agin Puno	thouse Global Long	plinort			<b>v</b>					2-Year	3.1%	9.2%
5				-			-20%			M	•			3-Year	4.8%	10.4%
3 00						1				MM.				4-Year	7.0%	13.1%
attac.				4580	500 (78)	1	-37%							S-Year	7.3%	13.3%
2 54						0	-47%		V					Drawdown Analysis	-15.2%	-50.9%
100									V					2	-15.2%	-50.9%
	+				lays Appropria Ro	of locks	-52%		1					3	-4.6%	-6.6%
				1000	and the second second		22							4	-3.7%	-6.6%
							40%								- de 1 70	41.5.10



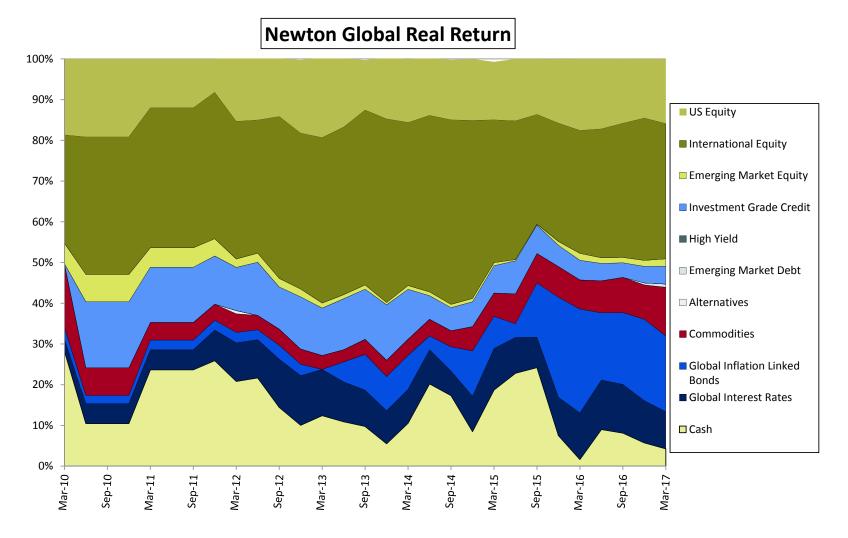
# University of Maine System Operating Fund Lighthouse Global Long/Short

	General Fu	nd Informatio	n				Str	ategy In	format	tion				
und Name	Lighthouse Global Long,	/Short Fund					С	urrent A	llocatio	on				
Management Company	Lighthouse Investment	Partners, LLC		Region	exposures	and contri	ibution arrest	u						
Location	Palm Beach, FL			170%	165	0%						•Net	· Oross	
Firm AUM	\$8.7 billion	Strategy	Fund of Fund	130%										
Strategy AUM	\$1.8 billion	Sub- Strategy	Strategy Long/Short Equity	90% 70%										
Portfolio Managers	Ethan Baron	Direct or FOF	FOF	50% 30%	18.75		43.5		27.4%	5.8*	19,8%			19%
	т	erms		-10%	Develop	ed North America	Developed 8	-1.8%	Developed Asia		Emerging Mar		-0.4% Hedges	
Share Class				WR <sup>R</sup>	181.55	0.29%	0.00%		0.02%		0.03%		0.0	
Minimum Investment	\$1 million		gtD a	E.	1.50%	0.42%	9	0.30%		0.42%		40	*	
Management Fee	1.15%						Attrib	ution						
Incentive Fee			11											
Incentive i ee														
Hurdle Rate	None			-										
	None Yes				cposure an	d contribu	ition <sup>mpq</sup>							
Hurdle Rate High Water				60% 1	eposure an	d contribu	ution <sup>2019</sup>						Net .	Grosa
Hurdle Rate High Water Mark	Yes	ice) or Monthly (9	0 days notice)	60%		d contribu		24.0% 34.9%	3425				Net B	Gross
Hurdle Rate High Water Mark Subscription	Yes Monthly	ice) or Monthly (9	10 days notice)	60% 50% 40% 30%				3485 - 3485	34.2%	18.0%			Net m	Gross
Hurdle Rate High Water Mark Subscription Redemption	Yes Monthly Quarterly (60 days not None	<u> </u>	0 days notice)	60% 50% 40%	51.8%			455 H H	3425	18.0%	12.6%	45%	144	Gross 2 7%
Hurdle Rate High Water Mark Subscription Redemption	Yes Monthly Quarterly (60 days not None	ice) or Monthly (9 ent Strategy	10 days notice)	60% 50% - 40% - 30% - 20% - 10% - 6.0% 0%	51.8%			H05 H95	342%	0.4%	120%	34 454	01% 35%	Gross 2.74 -0.4%
Hurdle Rate High Water Mark Subscription Redemption	Yes Monthly Quarterly (60 days not None	<u> </u>	0 days notice)	60% 50% 40% 30% 20% 10% 60%	51.8%	19.8%	22.8%	3455 3495 375	095	0.4%	12.0% 1 -0.1% Real Estate	3% 4.5% Telecom	01% 35%	274
Hurdle Rate High Water Mark Subscription Redemption Lock-Up	Yes Monthly Quarterly (60 days not None Investme obal Long/Short Fund is a ndustry sector and country similar to the MSCI World	ent Strategy global portfolio of / specialist manag	20-30 separately managed ers. The geographical	60% 50% 40% 30% 20% 10% - 60% - 60% - 0% - 0% - 0% - 0% - 0% - 0%	51 8% 18.0% 0.8%	19.8% 0.6% 19 19 19 10 10 10 10 10 10 10 10 10 10 10 10 10	22.8% 4.1% 3.7% Financias Hi 0.00%	175	095	6.4%			<u>195</u> 395	2.7% 0.4% Hedges

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



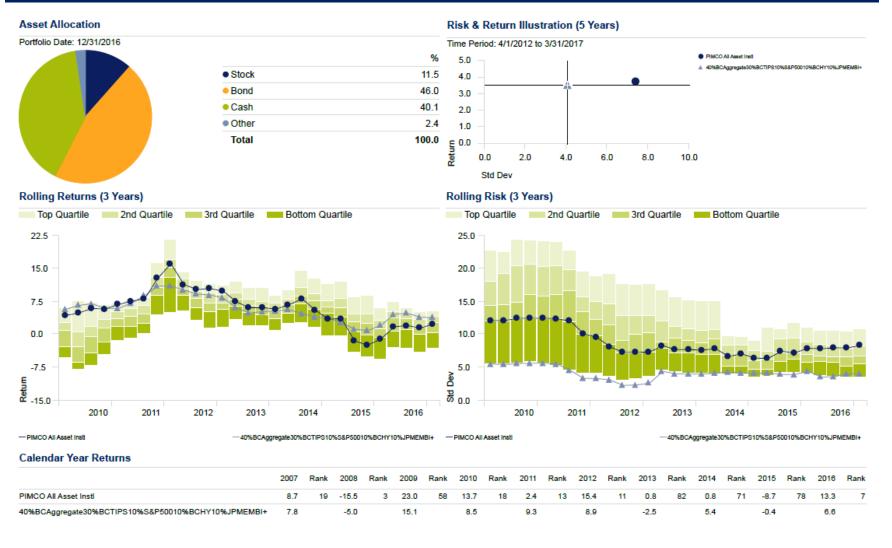
### University of Maine System Operating Fund Newton Global Real Return



\*As of March 2012, Newton is reporting High Yield separately from Credit



# PIMCO All Asset



#### Source: Morningstar



# PIMCO All Asset

Fund Number	736																	
Fund Name	All Asset Fund																	
Total Fund Net Assets (\$US MM)	18,871.9																	
	6/30/2013	9/30/2013	12/31/2013	3/31/2014	6/35/2014	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	1/31/2017	2/28/2017	\$/31/201
Third Pillar	80.91%	80.25%	82.04%	82.03%	78.71%	71.02%	74.17%	85.29%	85.75%	85.46%	81.91%	85.26%	81.04%	78.315	74.27%	72.95%	71.96%	72.48%
Emerging Markets Equites	8.45%	10.18%	11.86%	11.49%	12.81%	13.05%	11.83%	13.66%	13.67%	13.09%	14.11%	20.24%	22.17%	20.70%	18.77%	18.26N	18.35%	18.42%
RAE Fundamental Emerging Markets Fund	1.00					1.000					+	2.98%	4.22%	4.71%	4.63%			
RAE Fundamental PLUS EMG Fund	8.25%	9.98%	11.63%	7.33%	5.99%	4,69%	4.12%	4.75%	4.73%	4.41%	4.65%	5.96%	6.11%	5.07%	3.39%			
RAE Low Volatility PLUS EMG Fund			0.02%	3.97%	6.80%	8.34%	7.70%	8.92%	8.94%	8.68%	9.46%	11.29%	11.83%	10.91%	10.74%			
EqS Emerging Markets Fund	0.19%	0.20%	0.21%	0.19%	0.02%	0.02%	0.02%		1000					100	1000			
Commodities and REITs	2.01%	4.46%	7.58%	8.25%	8.76%	8.10%	0.89%	9.08%	8.36%	6,10%	5.52%	7.25%	5.53%	5.49%	5.25%	5.18%	5.11%	5.51%
CommoditiesPLUS <sup>Ter</sup> Strategy Fund	1.77%	2.07%	2.79%	2.89%	3.03%	3.58%	3.06%	2.88%	2.19%	1.93%	1.68%	4.14%	3.12%	3.33%	3.47%			
CommodityRealReturn Strategy Fund®	0.06%	0.79%	1.35%	1.46%	1.66%	3.00%	3.97%	3.90%	2.18%	1.88%	1.62%	1.52%	0.89%	0.77%	0.53%			
RealEstateRealReturn Strategy Fund	0.18%	1.60%	3.45%	3.91%	4.06%	1.60%	2.86%	2.31%	1.99%	2.29%	2.23%	1.54%	1.53%	1.39%	1.26%			
Emerging Markets Bonds	17.81%	19.00%	19.81%	19:05%	19.86%	20.32%	18.83%	20.82%	22.45%	22.15%	20.63%	22.27%	17.67%	18.30%	19.97%	20.67%	20.59%	20.92%
Emerging Local Bond Fund	7,13%	7.35%	7.23%	7.27%	7.42%	9.50%	9.10%	9.00%	9.79%	9.42%	8.48%	9.50%	6.94%	7.33%	6.98%			and the second s
Emerging Cocal Bond Pand Emerging Markets Currency Fund	6.85%	7.22%	7.44%	7.22%	7,10%	8.33%	9.05%	11.50%	12.29%	12.33%	11.94%	12.77%	10.73%	10.97%	12.99%			
Emerging Markets Sources y Fund Emerging Markets Bond Fund	3.11%	3.48%	3.75%	3.96%	3.90%	1.92%	0.47%	0.24%	0.29%	0.32%	0.32%	12.11%	10.1076	10.0176	12.00%			
Emerging Markets Corporate Bond Fund	0.73%	1.00%	1.40%	1,44%	1.43%	0.57%	0.20%	0.07%	0.07%	0.08%	0.09%							
															and the second sec	202000	1000	-
Credit	32.95%	29.64%	27.50%	26.91%	21.84%	11.58%	14.21%	14.96%	15.23%	16.00%	15.32%	16.65%	17.72%	18.22%	17.46%	16.49%	15.81%	15,60%
High Yield Fund	6.27%	5.50%	4.76%	4,61%	1,11%	0.43%	2.64%	2.85%	2.88%	3.11%	2.53%	3,72%	2.90%	2.55%	2.35%			
High Yield Spectrum Fund	4.11%	4.22%	4.32%	4.48%	3.69%	2.66%	2.90%	3.07%	3.20%	3.60%	3.84%	4.25%	4.67%	4.68%	4.64%			
Income Fund	10.29%	10.49%	10.66%	10.47%	10.28%	6.51%	6.21%	5.90%	6.01%	6.47%	6.34%	6.93%	7.51%	8.19%	7,63%			
Diversified Income Fund	3.62%	3.56%	3.59%	3.51%	3.21%	0.09%	0.10%	0.03%	0.21%	0.24%	0.24%	0.25%	0.57%	0.51%	0.49%			
Floating Income Fund	5.44%	3.34%	1.99%	1.92%	1.75%	0.28%	0.06%	0.29%	0.33%	0.37%	0.29%	-	-	-				
Senior Floating Rate Fund	3.08%	2.54%	2.19%	1.93%	1.79%	1.60%	2.30%	2.82%	2.61%	2.28%	2.07%	1.50%	2.06%	2.28%	2.34%			
Convertible Fund	0.13%																	
European Convertible Fund	-		-			-		-	-		-	-	-					
Global Bonds		2.41%		0.99%		0.34%		0.53%	1.07%						0.00%	0.00%		
Foreign Bond Fund (Unhedged)	2.41%	0.65%	0.05%	0.05%	0.26%	0.29%	0.30%	0.30%	0.30%	0.31%	0.29%					and the second second		Y
Global Advantage Strategy Fund	2.97%	1.76%	1.02%	0.94%	0.95%	0.04%	0.05%	0.23%	0.76%	0.93%	0.88%				-			
Global Bond Fund (Unhedged)	1.1.1.4		12															
Inflation Linked Bonds	0.08%	0.76%	0.72%	0.65%	0.90%	2.67%	2.73%	7.87%	7.88%	7.68%	7.90%	5.73%	3.21%	3.48%	3.85%	3.97%	3.66%	3.80%
Real Return Fund	0.00%	0.32%	0.31%	0.24%	0.29%	1.24%	1.38%	1.31%	1.29%	1.19%	0.81%	0.00%	0.18%	2.77%	3.19%			
Real Return Asset Fund	0.00%	0.37%	0.34%	0.37%	0.53%	1.34%	1.27%	6,49%	6.50%	6.40%	6.99%	5.61%	2.91%	0.59%	0.54%			
Global Advantage® Inflation-Linked Bond ETF	0.08%	0.08%	0.08%	0.08%	0.08%	0.08%	0.08%	0.08%	0.08%	0.09%	0.10%	0.12%	0.12%	0.12%	0.12%			
Atternative Strategies	14.23%	13,74%	13.49%	13.81%	13.34%	16.07%	16.33%	18.36%	19.09%	19,12%	17.05%	13,15%	14.74%	12,12%	1.97%	1.35%	8.44%	8.47%
Unconstrained Bond Fund	6.16%	5.38%	3.84%	2.82%	2.53%	2.18%	1.79%	2.75%	2.44%	2.32%	2.08%	1.80%	1.96%				1	
Credit Absolute Return Fund	0.97%	2.01%	2.04%	2.96%	2.55%	1.10%	0.76%	0.52%	0.44%	0.39%	0.23%	0.00%	0.00%	0.00%	0.00%			
Mortgage Opportunities Fund	0.09%	0.54%	0.55%	0.56%	0.55%	0.57%	0.61%	0.65%	0.66%	0.75%	0.74%	0.79%	0.78%	0.73%	0.74%			
TRENDS Managed Futures Strategy Fund	4.47.0	ware of	0.0010	0.15%	0.16%	0.18%	0.19%	0.20%	0.20%	0.24%	0.26%	0.30%	0.29%	0.29%	0.30%			
EqS Long/Short Fund	0.40%	0.43%	0.44%	0.46%	0.47%	0.47%	0.49%	0.36%	0.25%	0.18%	0.40.0	V.0V/1	0.25%	VARIA	waw n			
RAE Worldwide Long/Short PLUS Fund	0.40%	0,4576	0.4475	0.40%	0.4/76	0.4/%	3.08%	6.53%	7.49%	7.93%	7.96%	6.42%	7.28%	6.90%	5.73%			
RAE Fundamental Advantage PLUS Fund	2.85%	1.49%	2.28%	2.44%	2.62%	4.90%	4.84%	3.93%	3.75%	3.25%	2.62%	1.69%	2.20%	2.02%	1.06%			
RAE Worldwide Fundamental Adv PLUS Fund	3.75%	3.88%	4.34%	4.41%	4.24%	5.47%	4.57%	3.42%	3.86%	4.07%	3.16%	2.16%	2.23%	2.18%	1.15%			

Source: PIMCO



# PIMCO All Asset

	6/30/2013	9/30/2013	1231/2013	3/31/2014	6/30/2014	9/30/2014	1201/2014	3/31/2015	6/30/2015	9/30/2015	12/31/2015	3/31/2016	6/30/2016	9/30/2016	1201/2016	1/31/2017	2/28/2017	3/31/201
Second Pillar	10.12%	9.07%	5.42%	5.42%	9.05%	15.65%	13.80%	4.95%	6.15%	6.815	10.78%	4.87%	19.63%	12.82%	14.67%	15.22%	16.11%	16.12%
US Core Bonds	2.78N	1,73%	0.78%	0.62%	3.10%	4395	4.58%	2.91%	3.17%	3.78%	1.66%	1185	6.28%	7.115	4.68%	5.0%	5.09%	5.80%
Total Return Fund	0.16%	0.86%	0.53%	0.62%	3.07%	2.37%	2.25%	1.04%	1.39%	1.65%	1.65%	1.22%	3.41%	4.47%	1.92%			
Investment Grade Corporate Bond Fund	2.62%	0.87%	0.25%	0.01%	0.02%	2.02%	2.34%	1.87%	1.78%	2.12%	2.01%	2.66%	2.87%	2.85%	2.76%			
Mortgage-Backed Securities Fund									-									
GNMA Fund				12								1			÷			
US Long Maturity Bonds	7.59%	6.52%	4.01%	4215	4.82%	10.94%	1.70%	1.28%	1.52%	1.94%	2.31%	0.28%	2.55	2.10%	5,30%	6.93%	7.91%	7.68%
Extended Duration Fund													0.42%	0.25%	1.51%	and the second second	Contraction of the local division of the loc	
Long-Term US Government Fund	0.66%	0.50%	0.05%	0.06%	0.27%	5.79%	3.91%	0.00%	0.00%	0.00%	0.00%	0.00%	1.18%	1.06%	2.41%			
Long Term Credit Fund	3.84%	3.85%	3.82%	4.11%	4.20%	3.35%	1.93%	0.50%	0.57%	0.77%	0.88%	0.27%	0.27%	0.17%	0.17%			
Long Duration Total Return Fund	3.08%	2.18%	0.14%	0.04%	0.35%	1.80%	1.85%	0.77%	0.95%	1.16%	1.42%	0.00%	0.68%	0.62%	1.20%			
Short-Term Bonds	4.75%	0.82%	0.63%	0.59%	1.10%	0.32%	1.57%	0.77%	1.46%	1.00%	4.61%	0.71%	1.80%	3.40%	4.6%	2.87%	3.115	2.63%
Low Duration Fund		0.83%	0.55%	0.61%	0.94%	0.26%	0.53%	0.24%	0.87%	0.41%	1.54%	0.19%	1.26%	2.38%	2.44%		110-20-00	
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%	0.00%	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%			
Money Market Fund											3.13%							
Net Short Duration Instruments	-0.25%	-0.02%	0.08%	-0.02%	-0.01%	-0.16%	-0.02%	-0.03%	-0.01%	-0.02%	-0.04%	-0.01%	0.00%	0.00%	-0.01%			
First Pillar	8.97%	10.68%	12.54%	12.55%	12.26%	13.345	12.03%	9.76%	8.10%	7.73%	7.32%	9,87%	8.33%	8.87%	11.06%	11.835	11.93%	11.40%
US Equilies	1.04%	1.145	1.17%	1.16%	1.12%	2.41%	4.03%	2.78%	2.38%	2.17%	1.53%	0.51%	0.55%	0.23%	0.25%	0.22%	0.25%	0.25%
RAE Fundamental PLUS Fund	0.08%	0.09%	0.10%	0.08%	0.03%	0.03%	0.55%	0.20%	0.21%	0.22%								
RAE Low Volatility PLUS Fund			0.02%	0.16%	0.41%	1.72%	2.70%	1.93%	1.74%	1.65%	1.21%	0.51%	0.55%	0.23%	0.25%			
RAE Fundamental PLUS Small Fund	0.67%	0.75%	0.82%	0.83%	0.65%	0.63%	0.74%	0.64%	0.43%	0.30%	0.32%							
StocksPLUS® Small Fund	0.15%	0.17%	0.11%	0.07%	0.02%	0.02%	0.02%					2						
Fundamental IndexPLUS™							0.00%		-									
StocksPLUS® Fund	0.01%	0.01%	0.01%	0.01%	0.00%	0.00%	0.00%		-									
StocksPLUS® Absolute Return Fund	0.12%	0.13%	0.11%	0.01%	0.01%	0.01%	0.01%	+										
Developed ex-US Equities	7.92%	9.55%	11.37%	11.395	11.12	10.935	8.00%	6.97%	5,75%	5.55%	5.79%	9.35%	7.78%	8.65%	10.81%	11,515	11.68%	11.15%
RAE Fundamental PLUS Intl Fund	5.26%	6.28%	6.91%	4.01%	3.16%	3.07%	3.01%	1.71%	1.60%	1.47%	1.51%	1.61%	1.56%	1.89%	2.51%		1	
RAE Low Volatility PLUS Intl Fund			0.02%	3.22%	5.73%	5.65%	3.79%	4.22%	4.13%	4.08%	4.24%	4.72%	3.35%	3.97%	5.31%			
StocksPLUS® International Fund (USD-Hedged)	0.18%	0.19%	0.21%	0.20%	0.01%	0.01%	0.01%		-		0.05%	2.76%	2.58%	2.64%	2.83%			
StocksPLUS® International Fund (Unhedged)	0.56%	0.63%	0.64%	0.51%	0.02%	0.02%	0.02%					0.27%	0.29%	0.16%	0.16%			
EdS Global Dividend Fund	0.10%	0.11%	0.11%	0.12%	0.01%	0.01%	0.01%	- 2										
EqS Pathfinder Fund	1.82%	2.32%	3.48%	3.34%	2.19%	2.18%	1.16%	1.04%										

Source: PIMCO



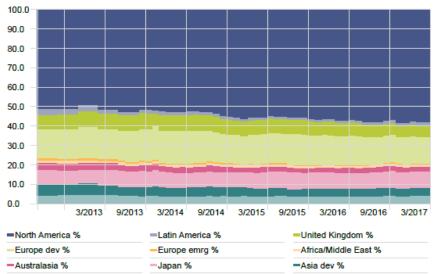
# Vanguard Total World Stock Index I

Holdings B	ased Style	Trail (5 Y	'ears)		Portfolio Statistics			Market Capitalization Breal	cdown	
Time Period: (	6/30/2012 to 2	28/2017				Fund	Index	Portfolio Date: 2/28/2017		
					# of Holdings	7,643	7,745		Fund	Index
Glan					% Asset in Top 10 Holdings	8.0	8.1	Market Cap Giant %	45.0	
8					Turnover Ratio %	15.0		Market Cap Large %	31.1	
3	-			-	P/E Ratio	19.3	19.0	Market Cap Mid %	18.2	
P					P/B Ratio	2.1	2.1	Market Cap Small %	5.0	
Σ					LT Earn Growth	9.1	2.8	Market Cap Micro %	0.6	
and a second sec					Hist Earn Growth	-35.2	-27.7	Average Market Cap	33,843.6	
0					12 Mo Yield	2.3		Equity Region Developed %	93.1	
Deep-Val	Core-Val	Core	Core-Grth	High-Grth				Equity Region Emerging %	6.9	

Vanguard Total World Stock Index I

#FTSE Global All Cap TR USD

#### Historical Country Allocations (5 Years)



# Attribution (Quarter)

			Portfolio Weights			Benchmark Alle Return	ocation Effect		Active Return
		Consumer Discretionary	11.87	0.00	7.49		0.08	0.00	0.08
		Consumer Staples	8.78	0.00	7.19		0.03	0.00	0.03
		Energy	6.52	0.00	-3.97		-0.76	0.00	-0.76
		Financials	17.09	0.00	5.17		-0.30	0.00	-0.30
		Health Care	10.66	0.00	8.84		0.22	0.00	0.22
		Industrials	11.37	0.00	7.19		0.04	0.00	0.04
		Information Technology	14.84	0.00	12.64		0.87	0.00	0.87
_		Materials	5.67	0.00	8.06		0.07	0.00	0.07
		Real Estate	3.81	0.00	4.58		-0.09	0.00	-0.09
		Telecommunication Services	2.98	0.00	2.04		-0.15	0.00	-0.15
		Utilities	3.05	0.00	7.07		0.01	0.00	0.01
		Unclassified	0.01	0.00	-4.66		0.00	0.00	0.00
		Attribution Total	96.64	0.00	6.86		0.00	0.00	0.00
		Cash	0.98	0.00					
2016	3/2017	Bond	0.04	0.00					
2010	5/2017	Other	0.12	0.00					
%		Missing Performance	2.21	0.00					
st %		Total	100.00	0.00					
<i>n n</i>		Reported Total			7.10	6.89			
		Expense Ratio			0.03	0.00			
		Residual(Reported - Attribution + Expense)			0.26				

Source: Morningstar



-Asia emrg %

# Vanguard Total World Stock Index I



Source: Morningstar

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Investment Committee Meeting - Operating Fund Performance Review





### 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  $(X-Y) * \sqrt{(\# of periods per year)}$ 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

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### 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: Bank Loan Manager Presentations and Selection
- 2. INITIATED BY: Karl W. Turner, Chair
- **3. BOARD INFORMATION: BOARD ACTION:** X

### 4. BACKGROUND:

At its March 27, 2017 meeting, the Board of Trustees approved a new allocation (5%) to bank loans in the Managed Investment Pool (MIP) and the Pension Fund, replacing global multi-sector fixed income.

NEPC subsequently provided the University of Maine System with a bank loan search book for the MIP and Pension Fund. The Operating Fund currently has a 7% allocation to bank loans which will also be considered in the search. NEPC, University of Maine System Staff and select Committee members reviewed the search book and determined that Bain Capital, Guggenheim Investments or Loomis Sayles (current Operating Fund manager) could be a good fit for the allocations.

The Investment Committee will interview two Bank Loan managers by Polycom at the May 15, 2017 Committee meeting. The managers will present for 30 minutes each on their firm, investment process and philosophy and performance. The managers and attendees include:

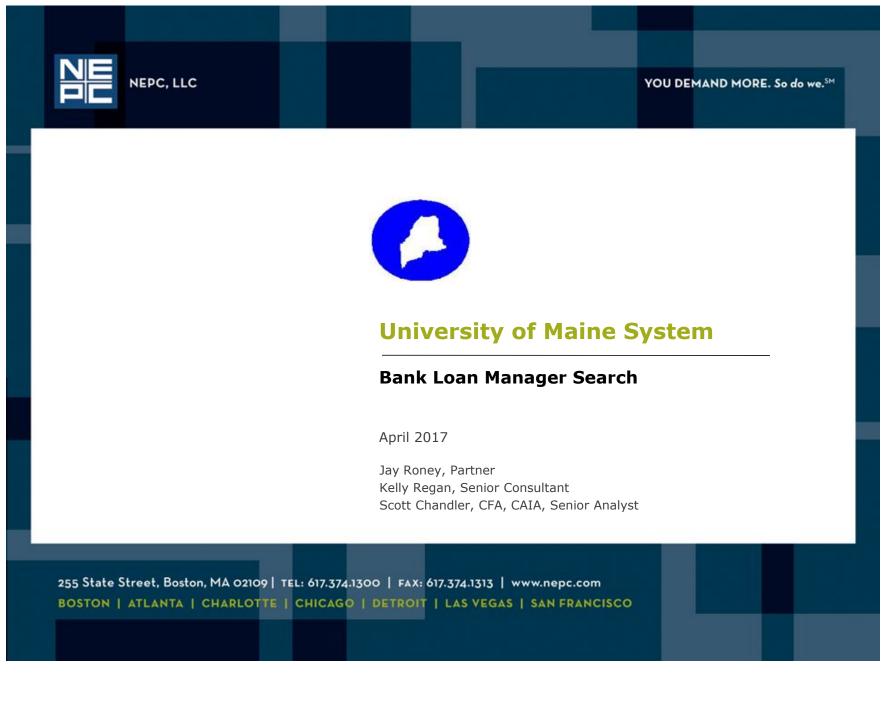
- Bain Capital
  - o Jon DeSimone, Portfolio Manager
  - Kyle Betty, Global Head of Investor Relations and Business Development
- Guggenheim Investments
  - Thomas Hauser, Senior Portfolio Manager
  - Alexandra Court, Global Head of Institutional Distribution
  - Ryan Paradis, Institutional Distribution

### 5. TEXT OF PROPOSED RESOLUTION:

That the Investment Committee approves the selection of an investment manager (Bain Capital, Guggenheim Investments and/or Loomis Sayles) for each of the following allocations:

- 1) A 5.0% policy allocation in the MIP Fund with funds coming from global multi-sector fixed income (currently estimated at \$14,500,000)
- 2) A 5.0% policy allocation in the Pension Fund with funds coming from global multisector fixed income (currently estimated at \$1,500,000)
- 3) A 7.0% policy allocation in the Operating Fund, currently invested in Loomis Sayles Bank Loans (currently estimated at \$18,000,000).

05/05/2017



# Search Candidates

The following is a list of managers under consideration for this search. The table below summarizes the products proposed for each manager.

Firm	Strategy	Comments
Bank Loans		
Bain Capital Credit, LP	Sankaty Senior Loan Strategy ex. CLOs	Composite Track Record Shown
Guggenheim Investments	US Bank Loans	Composite Track Record Shown
Loomis, Sayles & Company, L.P.	Bank Loan	Composite Track Record Shown

Details regarding securities lending are available from the manager upon request.



Investment Committee Meeting - Bank Loan Manager Search Selection

# Firm and Product Summary



# Firm and Product Summary

Firm/Product	Firm/Team Comments	Investment Style/Strategy	Performance Expectations	Portfolio Positioning	Other Comments
Bank Loans					
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	Fund will hold unhedged non- USD 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
Loomis - Bank Loan	Loomis draws from a firm-wide culture of credit research and fixed income expertise. Credit analysts research the entire capital structure of the credits that they cover, informing multiple products in the Loomis line-up	Loomis is known for running aggressive credit strategies, however, bank loans is a strategy that is not run aggressively. Portfolio is highly diversified, with virtually no second lien loans	A low beta manager. Performance may lag during up and flat credit markets	Strategy is focused only on high quality (BB/B) rated loans. Second lien loan allocations are minimal	Also offer a Floating Rate and Fixed Income Fund that invests outside of bank loans



# NEPC Investment Thesis

Firm/Product	NEPC Investment Thesis
Bank Loans	
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.
Loomis - Bank Loan	Loomis adds value to bank loan portfolios through their proprietary credit research platform. Loomis credit analysts are career positions. The firm is able to leverage research on specific credits across their product spectrum. Analysts develop nuanced opinions on credits spanning the capital structure, with the objective to develop a thesis before the marketplace and rating agencies can react. John Bell, Kevin Perry and Michael Klawitter, drive the investment strategy and decision making process.



# Firm Comparison Summary

Firm Name	Location	Year Firm Founded	Total Assets Under Mgmt (\$MM)	% Employee Owned	% Parent Owned		% Publicly Held	% Other Ownership
Bank Loans								
Bain Capital Credit, LP	Boston, Massachusetts	1998	33,500	100	0	NA	0	0
Guggenheim Investments	New York, New York	1999	209,211	45	0	NA	0	55
Loomis, Sayles & Company, L.P.	Boston, Massachusetts	1926	240,193	0	100	Natixis Global Asset Management (NGAM)	0	0

Firm Name	Registered Investment Advisor	GIPS Compliant	Past or Pending Litigation	Firm uses Placement Agent
Bank Loans				
Bain Capital Credit, LP	Yes	Yes	No	Yes
Guggenheim Investments	Yes	Yes	Yes	Yes
Loomis, Sayles & Company, L.P.	Yes	Yes	Yes	Yes



# Product Comparison

Firm/Product	Inception Date	AUM (\$MM)	# of Portfolio Managers	# of Research Analysts	# of Traders
Bank Loans					
Bain - Senior Loans ex. CLO	2008	4,616	5	100	8
Guggenheim - US Bank Loans	2003	18,180	10	91	9
Loomis - Bank Loan	2004	3,548	3	2	3

Firm/Product	Vehicle Proposed	Liquidity In	Liquidity Out	Reported Fee for \$37.60 mm	Reported Fee in (bps)
Bank Loans					
Bain - Senior Loans ex. CLO	Commingled Fund	Monthly	Monthly	188,000.00	50
Guggenheim - US Bank Loans	Commingled Fund Mutual Fund	Monthly Daily	Monthly Daily	188,000.00 297,040.00	50 79
Loomis - Bank Loan	Commingled Fund	Monthly	Monthly	176,720.00	47



# ESG Product Comparison

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	No
Loomis - Bank Loan	Yes	No

Firm/Product	Internal ESG Research Utilized (Y/N)	Third Party ESG Research Utilized (Y/N)	Manager Explanation of Research Methodologies Used
Bank Loans			
Bain - Senior Loans ex. CLO	Yes	Yes	ESG factors are considered and debated as a part of the diligence process and are incorporated into all Credit Committee approvals. We complete our ESG/SRI checklist on every investment. Bain Capital Credit also subscribes to REPRISK. Reports for each issuer are pulled and reviewed prior to each Credit Committee. If a name isn't in the REPRISK database, we request to have it added.
Guggenheim - US Bank Loans	No	No	NA
Loomis - Bank Loan	No	No	NA



# Fixed Income Comparison

Firm/Product	Weighted Average Coupon (%)	Yield to Maturity (%)	Average Maturity (Years)	Duration (Years)	Average Quality	Minimum Quality
Bank Loans						
Bain - Senior Loans ex. CLO	5.0	5.5	5.26	0.33	В	Not Rated
Guggenheim - US Bank Loans	4.5	4.7	4.31	0.14	BB	CCC
Loomis - Bank Loan	4.4	4.4	4.95	0.10	BB	Not Rated

Firm/Product	# of Countries	# of Issues	Current Cash (%)	Annual Turnover (%)	Yield to Worst (%)
Bank Loans					
Bain - Senior Loans ex. CLO	11	201	0.1	64.0	5.5
Guggenheim - US Bank Loans	8	232	9.7	32.2	4.7
Loomis - Bank Loan	11	287	2.7	27.4	4.4

Firm/Product	AAA/Aaa (%)	AA/Aa (%)	A (%)	BBB/Baa (%)	BB/Ba (%)	B (%)	CCC/Caa and Below (%)	Other (%)
Bank Loans								
Bain - Senior Loans ex. CLO	0.0	0.0	0.0	1.5	31.6	62.0	4.3	0.0
Guggenheim - US Bank Loans	0.0	0.0	0.0	1.5	17.7	78.1	2.3	0.0
Loomis - Bank Loan	0.0	0.0	0.0	4.4	48.2	45.2	2.3	0.0



Investment Committee Meeting - Bank Loan Manager Search Selection





# Trailing Period Returns - (Net of Fees)

	Benchmark	Qtr	YTD	1 Year	3 Year	5 Year	7 Year	10 Year
Bank Loans								
Bain - Senior Loans ex. CLO	1	2.1%	9.2%	9.2%	3.2%	5.5%	6.4%	NA
Guggenheim - US Bank Loans	1	1.6%	7.7%	7.7%	4.3%	5.9%	6.7%	6.0%
Loomis - Bank Loan	1	1.5%	7.5%	7.5%	3.2%	4.4%	4.7%	3.7%
Actual Return								
1 CS Leveraged Loan		2.3%	9.9%	9.9%	3.8%	5.4%	5.5%	4.3%

	Bench mark	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Bank Loans											
Bain - Senior Loans ex. CLO	1	9.2%	-0.4%	1.0%	6.4%	11.7%	4.2%	13.3%	43.1%	NA	NA
Guggenheim - US Bank Loans	1	7.7%	2.2%	2.9%	6.7%	10.2%	3.7%	13.6%	38.4%	-21.5%	4.9%
Loomis - Bank Loan	1	7.5%	1.0%	1.2%	4.2%	8.1%	2.5%	8.4%	37.2%	-24.8%	1.6%
Actual Index Return											
1 CS Leveraged Loan		9.9%	-0.4%	2.1%	6.2%	9.4%	1.8%	10.0%	44.9%	-28.8%	1.9%

	Bench mark	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Bank Loans											
Bain - Senior Loans ex. CLO	1	<b>-0.7%</b>	-0.1%	-1.1%	0.3%	2.3%	2.3%	3.3%	-1.8%	NA	NA
Guggenheim - US Bank Loans	1	-2.1%	2.6%	<b>0.9</b> %	0.6%	0.8%	1.8%	3.6%	<b>-6.4%</b>	7.3%	3.0%
Loomis - Bank Loan	1	-2.3%	1.4%	<b>-0.9%</b>	-1.9%	-1.3%	0.7%	-1.6%	-7.6%	3.9%	-0.3%
Actual Index Return											
1 CS Leveraged Loan		9.9%	-0.4%	2.1%	6.2%	9.4%	1.8%	10.0%	44.9%	-28.8%	1.9%

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



NEPC, LLC Past performance is no guarantee of future results

# Excess Returns Performance Summary - (Net of Fees)

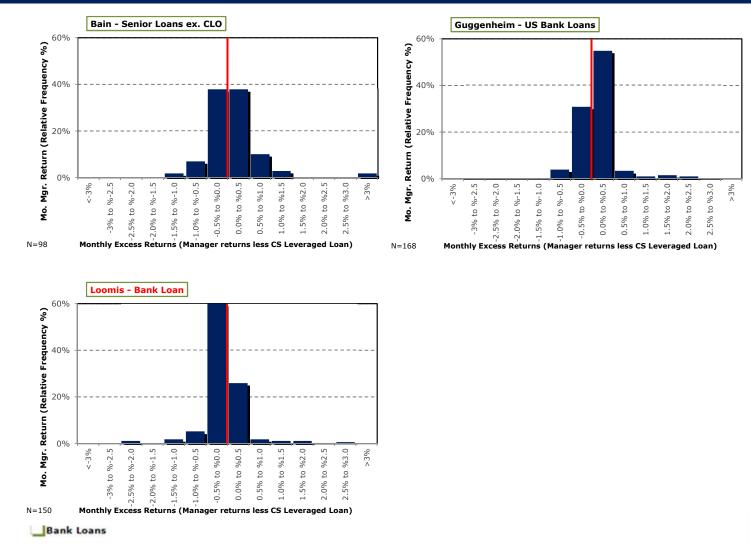
	Primary	# of Months	ns % Positive (Mo.)	High	Low (Mo.)	Average (Mo.)	% >	Rolling 1 Yr. Rtr.			Rolling 3 Yr. Rtr.	
	Benchmark	(Track Record)		(Mo.)			0.5%	> 0%	> 3%	> 0%	> 3%	
Bank Loans												
Bain - Senior Loans ex. CLO	CS Leveraged Loan	98	53%	3.4%	(1.3%)	0.1%	15%	56%	11%	65%	5%	
Guggenheim - US Bank Loans	CS Leveraged Loan	168	63%	2.9%	(2.8%)	0.1%	8%	87%	15%	100%	9%	
Loomis - Bank Loan	CS Leveraged Loan	150	31%	3.0%	(2.4%)	(0.1%)	5%	31%	6%	13%	0%	

	# of Months		Excess Return			Tracking Error			Information Ratio			Beta vs.			
	(Track Record)	1 Yr.	3 Yrs.	5 Yrs.	7 Yrs.	10 Yrs.	3 Yrs.	5 Yrs.	7 Yrs.	10 Yrs.	3 Yrs.	5 Yrs.	7 Yrs.	10 Yrs.	Primary Benchmark
Bank Loans															
Bain - Senior Loans ex. CLO	98	(0.7%)	(0.6%)	0.1%	0.9%	NA	0.5%	0.9%	1.3%	NA	(1.16)	0.16	0.67	NA	0.85
Guggenheim - US Bank Loans	168	(2.1%)	0.5%	0.6%	1.2%	1.7%	0.9%	0.8%	1.0%	2.3%	0.53	0.71	1.18	0.73	0.77
Loomis - Bank Loan	150	(2.3%)	(0.6%)	(1.0%)	(0.8%)	(0.6%)	0.8%	0.7%	0.9%	2.0%	(0.73)	(1.42)	(0.88)	(0.29)	0.89



NEPC, LLC Past performance is no guarantee of future results

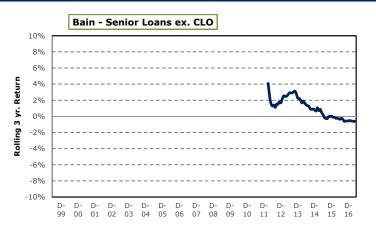
# Excess Monthly Returns Histogram - (Net of Fees)





NEPC, LLC Past performance is no guarantee of future results

# Rolling 3 Year Excess Returns - (Net of Fees)



Excess Returns (Manager returns less CS Leveraged Loan)



Loomis - Bank Loan 10% 8% 6% Rolling 3 yr. Return 4% 2% 0% -2% -4% -6% -8% -10% D- D- D- D- D-99 00 01 02 03 D-D- D- D- D- D-12 13 14 15 16 D-D-D-D-D-D-D-04 05 06 07 09 10 11 08



Bank Loans



NEPC, LLC Past performance is no guarantee of future results

Excess Returns (Manager returns less CS Leveraged Loan)

0%

Rolling 3 yr. Index Return

5%

10%

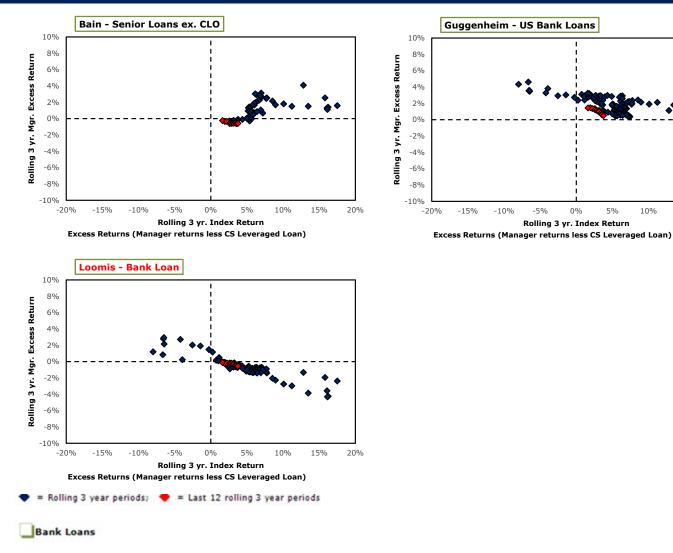
15%

20%

-10%

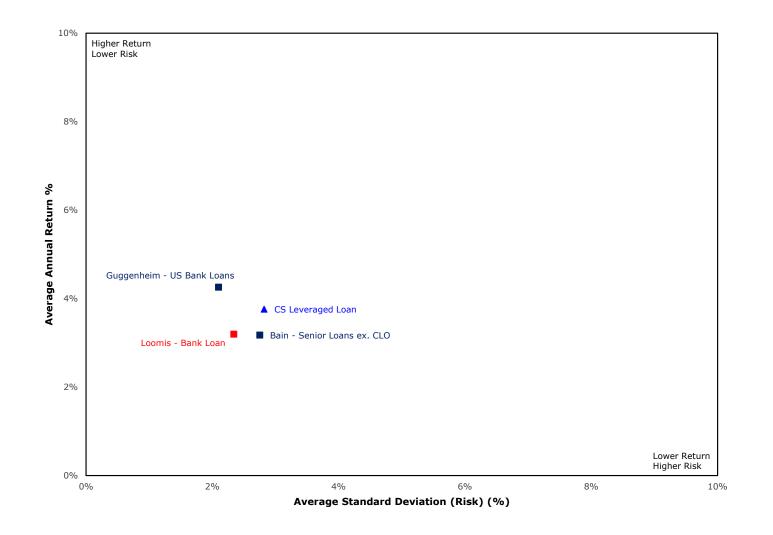
-5%

## Rolling 3 Year Excess Returns - (Net of Fees)



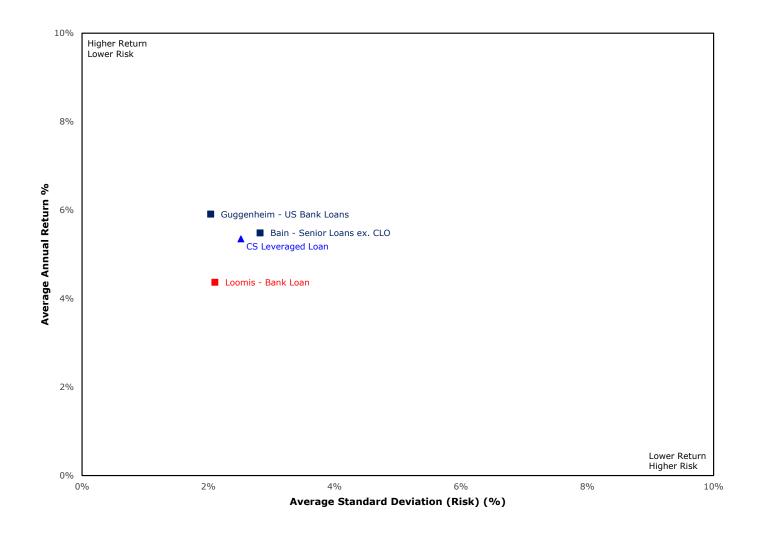


NEPC, LLC Past performance is no guarantee of future results



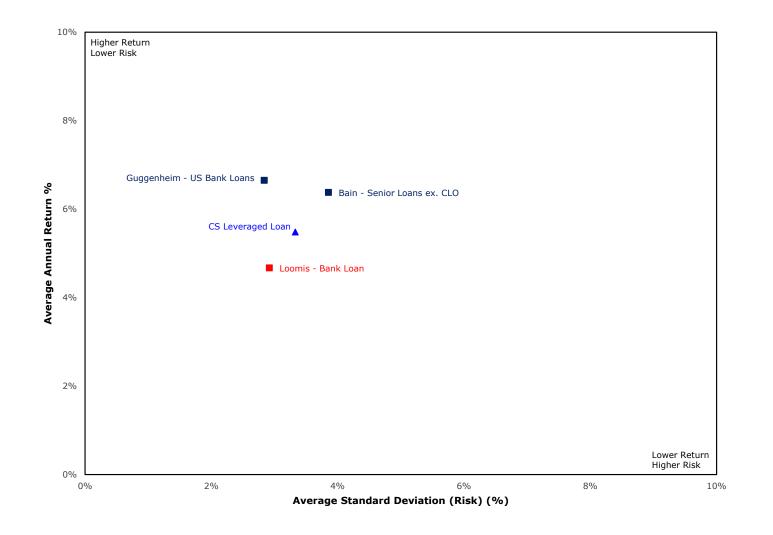


NEPC, LLC Past performance is no guarantee of future results



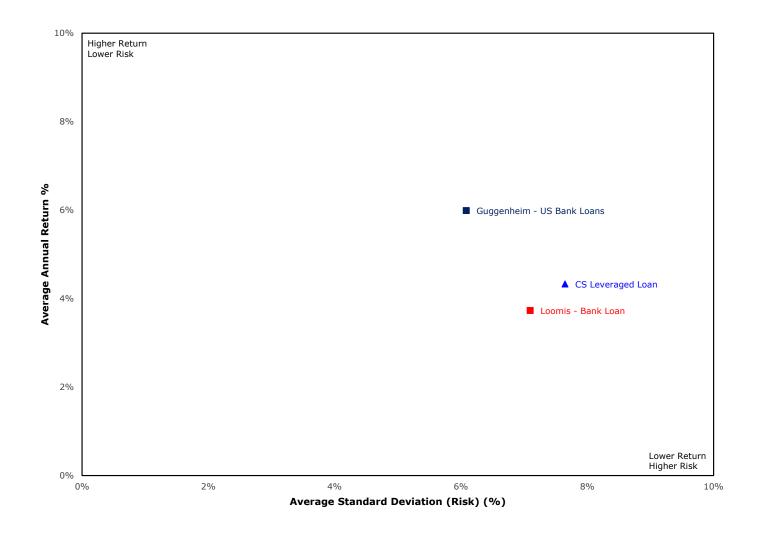


NEPC, LLC Past performance is no guarantee of future results





NEPC, LLC Past performance is no guarantee of future results





NEPC, LLC Past performance is no guarantee of future results

Investment Committee Meeting - Bank Loan Manager Search Selection





#### Bain Capital Credit, LP Sankaty Senior Loan Strategy ex. CLOs

Taylor Furlong, Research Analyst Source: NEPC and eVestment October 2016

#### **Firm Description**

Sankaty Advisors (Sankaty) was founded in 1998 as a credit affiliate of Bain Capital. Sankaty is wholly-owned by Bain Capital, which is in turn owned by its Managing Directors, many of whom are Sankaty professionals. The firm specializes in performing and non-performing credit, mezzanine debt, and structured products. Jonathon Lavine is the founder, CIO, and Managing Partner of Sankaty Advisors. He is responsible for overseeing investment strategy, firm management, and risk management.

#### **NEPC Investment Thesis**

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.

#### People

The Senior Loan strategy at Bain is managed by a five portfolio manager team dedicated to performing credit strategies. The group is led by CIO of Performing Credit Jon DeSimone. A team of four portfolio managers work with Mr. DeSimone in managing the bank loan strategy. Bain organizes its research group by industry into 14 teams, which consist of 2-3 individuals each. All industry groups include one senior analyst and/or portfolio manager and at least one other junior analyst. The traders at the firm are organized by industry vertical as well. A four-person Credit Committee consisting of Managing Partner Jonathon Levine, Tim Barns (Chief Credit Officer), Stuart Davies (CIO of Opportunistic Credit and Middle Market) and Jon DeSimone are charged with approving credits across Bain portfolios and setting industry/sector allocation. As the lead portfolio manager for the Senior Loan strategy, Jon DeSimone is the primary decision maker for the strategy's industry and risk allocation. A separate Risk & Oversight Committee is fully integrated into the investment process and is charged with ensuring guideline adherence, monitoring portfolio risks, and maintaining a proprietary issuer and security information database.



## Bain Capital Credit, LP Sankaty Senior Loan Strategy ex. CLOs

#### Philosophy

Bain seeks to construct diversified portfolios of high quality companies and to add value through superior security selection and default avoidance. By employing a very large team of industry experts, Bain can add value by investing in issues and issuers that peer firms choose not to follow due to 1) a lack of resources or 2) too large such that the position would not have a meaningful impact on the portfolio.

#### **Investment Strategy**

Bain employs a bottom-up approach to credit investing. 14 industry teams are responsible for generating investment ideas and monitoring portfolio credits. Bain differentiates itself in its investment process by heavily emphasizing industry level research, where most peers begin at the company level. Portfolio positioning will tilt towards industries with attractive characteristics, such as high barriers to entry, low cyclicality, and diverse profit drivers, among others. Within industries, analysts seek to identify the top companies by assessing product, pricing, customers, and costs with the goal of answering the simple question "does anyone care of this company goes away?" A thorough credit analysis is performed on companies where there is a potential investment opportunity. Analysts evaluate credits via a multi-factor assessment of leverage, free cash flow relative to debt, enterprise/liquidation value, and covenant structure. Creditor agreements also undergo a third-party legal assessment, which provides an independent evaluation of security structure.



## Bain Capital Credit, LP Sankaty Senior Loan Strategy ex. CLOs

Once industry teams have completed their thorough industry, company, and credit analysis, the potential investment is presented to the Credit Committee. Credit Committee meetings are attended by many Bain investment professionals. The group debates the merits of the investment and its appropriateness for Bain strategies. Decisions are typically made on a consensus basis by the four-member Committee. Jon DeSimone will make the ultimate decision on suitability for the Senior Loan strategy. In addition to assessing suitability, Mr. DeSimone is responsible for determining the strategic industry allocation and positioning sizes in the Fund. Position sizing is based on the view of risk/reward, which is a function of investment fundamentals and liquidity. Weekly positioning meetings are held where portfolio managers, the Credit Committee, the Risk & Oversight Committee, and head traders meet to analyze portfolio positioning changes to ensure consistent strategy Firm-wide. On a quarterly and ad hoc basis, portfolio managers present to the Risk & Oversight Committee. The objective of these meetings are to assess several facets of risk at the strategy and firm level such as attribution, asset allocation, investors base, and counterparty exposure.

#### Portfolio

The Senior Loan strategy will consist mainly of liquid, first lien bank loans, but has the flexibility to invest across the corporate capital structure and geographies. Illiquid securities can be purchased but will not comprise more than 10% of the portfolio. The strategy must maintain a minimum 90% allocation to secured debt which may include secured high yield bonds. 25% or less of the portfolio can be invested in fixed-rate debt. The manager has discretion with regards to currency hedging, but non-USD currency positions will be typically be less than 10%. The strategy will hold 125-175 positions with position sizes ranging from 0.5% to 1.5%; maximum issuer allocation is 3%.



## Bain Capital Credit, LP Sankaty Senior Loan Strategy ex. CLOs

#### **Performance Expectations**

Through fundamental credit selection and active management, Bain aims to provide investors with exposure to the bank loan asset class in a benchmark agnostic approach. The Senior Loan strategy seeks to outperform the S&P LSTA Leveraged Loan Index with fewer defaults than the broad market. Investors should expect Bain to outperform in most market environments, especially those with elevated defaults. Given the group's emphasis on industry analysis, material active positions will be taken at the industry level. While distressed and stressed companies are not a material component of the portfolio, defaults do occur; Bain has significant resources devoted to restructurings and bankruptcy processes and as such will not indiscriminately sell a position if bankruptcy is expected.



## Biographies of Key Professionals

## Bain Capital Credit, LP Sankaty Senior Loan Strategy ex. CLOs

#### Jonathon Lavine, Managing Partner

Mr. Lavine founded Sankaty Advisors in 1997 having previously joined Bain Capital in 1993. He is a Managing Director, and since inception, Managing Partner and the Chief Investment Officer. He is chair of the firm's Credit Committee and Risk & Oversight Committee with overall responsibility for investment strategy, firm management and risk. Before the formation of Sankaty, and the eventual re-branding to Bain Capital Credit, Mr. Lavine worked in Bain Capital's private equity business. Prior to joining Bain Capital, Mr. Lavine was a consultant at McKinsey & Company. He began his career at Drexel Burnham Lambert in the Mergers & Acquisitions Department. Mr. Lavine graduated Columbia College, Phi Beta Kappa and magna cum laude, and holds an M.B.A. with Distinction from Harvard Business School.

#### Jonathan DeSimone, Managing Directcr

Mr. DeSimone joined Bain Capital Credit (previously Sankaty Advisors) in 2002. He is a Managing Director, member of the Credit Committee, and portfolio manager for the Senior Loan Fund, High Income Partnership and Bain's separate accounts in liquid credit. Prior to his current role, Mr. DeSimone covered the enterprise services and chemicals industries. In addition, he opened Bain's London office and served as its head from 2005-2009. Previously, Mr. DeSimone was a Manager at Bain & Company where he worked in the firm's Private Equity Practice performing strategic due diligence and post-acquisition strategy assessments. Mr. DeSimone received an M.B.A. from the Amos Tuck School of Business at Dartmouth College as an Edward Tuck Scholar with Highest Distinction and a B.A. from Georgetown University.



## **Guggenheim Investments US Bank Loans**

Taylor Furlong, Research Analyst Source: NEPC and eVestment October 2016

#### **Firm Description**

Guggenheim Investment Management LLC (GIM) is a Registered Investment Advisor and the corporate credit-based investment management group of Guggenheim Capital LLC. GIM is 50% employee owned, while Guggenheim Capital holds the remaining 50% stake. Guggenheim Partners Asset Management (GPAM) is another Registered Investment Advisor and affiliate of Guggenheim Capital LLC, with a focus on core fixed income, securitized bonds and special situations. GIM and GPAM are currently in the process of forming one legal entity (one Registered Investment Advisor) which will include firm-wide GIPS compliance. GIM traces its roots back to the early 2000s when the group managed private debt and public corporate debt for the Guggenheim family. GIM began managing money for other high net worth individuals and institutions, thus launching the investment management business. GIM specializes in private debt markets, asset-backed securities, mezzanine lending, high yield bonds and bank loans, with a particular emphasis on middle market issuers.

#### **NEPC Investment Thesis**

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.

#### People

Scott Minerd, CIO, is in charge of the investment teams at Guggenheim. a five-member Investment Committee is charged with approving all investments in Guggenheim credit portfoios. Credit research is organized by sector teams, with one or more senior team leaders representing each sector. The team leader is an experienced, senior-level analyst that works collaborates with junior level analysts in the sector and organizes the research effort to vet credit ideas. Credit research consists of fifteen senior members, plus a large team of junior analysts. The legal team consists of seventeen members.



## **Guggenheim Investments US Bank Loans**

#### Philosophy

The firm's investment philosophy centers on performing intensive bottom-up credit analysis in order to identify the most attractive investments and to manage downside risk. Deep industry, company, and debt structure due diligence by both analysts and a team of legal experts is required to consistenly add value and, most importantly, preserve investor capital. Guggenheim believes portfolios should be constructed without regard to a benchmark and only high conviction investments should be considered.

#### **Investment Strategy**

Guggenheim's strategy for bank loans focuses on investing in senior secured bank loans with a preference for middle market companies, which may be defined as companies that have less than \$1.0 billion of debt outstanding. Although Guggenheim will invest in the securities of larger-capitalized companies, those securities generally have characteristics that set it apart within the company's capital structure. Before performing in-depth credit research, Guggenheim screens issuers based on basic criteria. The team looks for established businesses that have an economic reason to exist, an enterprise value that comfortably exceeds the relevant entry point in the capital structure, and market leaders that possess demonstrated strategic advantages to competitors. In addition, analysts look for management teams with strong credentials and track records, and equity sponsors that have a demonstrated commitment to portfolio companies. Fundamental credit research focuses on the entire capital structure of an issuer. Guggenheim will not investment in a company until all debt covenants and structure are completely understood. Research will focus on identifying companies with strong capitalization, balanced leverage, and financial coverage. Further research includes a quantitative analysis of the financial aspects of the company including the revenue, EBITDA, cash flow, and financial coverage. They also conduct a qualitative analysis focused on the management team, equity sponsor, competitors and barriers to entry. Particular attention is paid to the review and analysis of covenants, legal entitlements to collateral, multi-scenario stress testing and cash flow valuation. Credit analysts and sector specialist are directly responsible for determining and monitoring the credit quality of each investment. Matt Bloom and Joe McCurdy, co-Heads of Research, leads the credit research team. Credit analysts and sector specialists evaluate key quantitative and qualitative factors which serve as important tools to assess credit quality and relative value.



## **Guggenheim Investments US Bank Loans**

#### Portfolio

The portfolio is relatively concentrated, targeting between 80-100 issuers. Maximum issue size is 3%. Securities are purchased with the intent to hold for longer terms; turnover is usually under 50%. Credit quality averages around B, CCC rated issues are a meaningful part of the portfolio, but usually not exceed 14% of the total market value. The strategy may invest up to 25% in high yield bonds, but seldom uses the full allocation permitted. The strategy will also invest in non-US securities, mostly in western Europe.

#### **Performance Expectations**

Since some of the securities are not as liquid as the broad leveraged loan market, lower liquidity profile of the strategy should be taken into account. Historically, the strategy has performed well in down-markets, with reasonable upside capture in recovery periods.



## Biographies of Key Professionals

#### **Guggenheim Investments** US Bank Loans

#### B. Scott Minerd, Chief Investment Officer, Managing Partner

Scott Minerd is a Managing Partner of Guggenheim Partners and CIO of Guggenheim Partners Asset Management (GPAM), where he oversees approximately \$42 billion in client assets. Mr. Minerd previously worked as a Managing Director for Morgan Stanley; at Credit Suisse, he was responsible for overseeing fixed-income credit trading in the United States, Europe and Asia. Early in his career, Mr. Minerd made significant contributions to the development and use of derivative securities in the global capital markets. During the 1993 European exchange rate crisis, he orchestrated the restructuring of Italy's Eurobond debt. Mr. Minerd began his career as a CPA and worked for the public accounting firm of Price Waterhouse. He received a bachelor's degree in economics from the Wharton School at the University of Pennsylvania and completed graduate work at both the University of Chicago Graduate School Of Business and the Wharton School at the University of Pennsylvania. Mr. Minerd is a regular featured guest on FOX Business News, Bloomberg Television, and CNBC sharing his insight on today's financial climate.

#### Kevin Gunderson, CFA, Managing Director, Portfolio Manager

Mr. Gundersen is a portfolio manager for Guggenheim's Corporate Credit Strategies and is a member of the Investment Committee. He has been with Guggenheim Partners since December 2002. Since joining Guggenheim, Mr. Gundersen has been instrumental in the growth of the Corporate Credit business. During his career at the firm, Mr. Gundersen has been an analyst covering a variety of sectors, and subsequently led an industry team that focused on investing across the capital structure in the media, telecommunications and technology sectors. In addition, in his capacity as a senior analyst and as a team leader, Mr. Gundersen has sourced and structured directly negotiated middle market debt investments. Prior to joining Guggenheim, Mr. Gundersen worked at GeoTrust, a technology company focused on eCommerce security solutions. Mr. Gundersen received his A.B. from Harvard University and is a CFA Charter holder.



# Biographies of Key Professionals

## **Guggenheim Investments US Bank Loans**

#### Zach Warren, Senior Managing Director, Fixed Income Analyst

Mr. Warren joined Guggenheim in 2004, focusing originally on middle market lending transactions. Currently, Mr. Warren leads Guggenheim's west coast initiatives and is focused on investing across the capital structure and across various leveraged credit markets in a variety of industries including business services, industrials and energy. Prior to Guggenheim, Mr. Warren was a senior research analyst at Centre Pacific, LLC, a Los Angeles-based high yield and bank loan portfolio manager where he focused on the food, retail, restaurant and telecommunication industries. Prior to Centre, Mr. Warren was a Vice President at Bear Stearns in the equity research group. Mr. Warren received his MBA from the Anderson School of Business at UCLA and his B.A. in Economics from the College of William & Mary.



Investment Committee Meeting - Bank Loan Manager Search Selection





# Total Firm and Product Assets

	YTD		20	15	20	14	2013	
Firm	\$MM	# of accounts	\$ММ	# of accounts	\$ММ	# of accounts	\$ММ	# of accounts
Bank Loans		_		_				_
Bain Capital Credit, LP	33,500	2,327	30,121	2,343	25,384	1,730	21,689	1,785
Guggenheim Investments	209,211	915	198,753	941	195,857	955	171,837	969
Loomis, Sayles & Company, L.P.	240,193	1,554	229,126	1,430	230,229	1,363	199,777	1,299

	YTD		20	15	20	14	2013	
Firm/Product	\$MM	# of accounts	\$ММ	# of accounts	\$ММ	# of accounts	\$ММ	# of accounts
Bank Loans								
Bain - Senior Loans ex. CLO	4,616	201	4,039	203	3,170	183	1,524	148
Guggenheim - US Bank Loans	18,180	50	14,842	48	10,552	38	8,857	28
Loomis - Bank Loan	3,548	4	2,986	4	3,635	4	3,414	4



As of December 31, 2016

# Product Assets By Vehicle Type and Fee Schedules

Firm/Product	Separate	Account	Comming	jled Fund	Inst. Mutual Fund	Retail Mutual Fund
	\$MM	# of accounts	\$MM	# of accounts	\$ММ	\$ММ
Bank Loans						
Bain - Senior Loans ex. CLO	2,247	11	2,369	190	0	0
Guggenheim - US Bank Loans	4,680	25	10,513	23	0	2,987
Loomis - Bank Loan	0	0	3,548	4	0	0

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	All Assets at 0.50%	All Assets at 0.50%	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 - 0.79%
Loomis - Bank Loan	50	5	NA	First \$100 million - 0.47% Balance - 0.40%	First \$100 million - 0.47% Balance - 0.40%	Not Available



As of December 31, 2016

# Litigation

Firm	Manager's explanation of Prior or Pending Litigation
Bank Loans	
Bain Capital Credit, LP	There is no prior or pending litigation.
Guggenheim Investments	From time to time, Guggenheim Partners Investment Management, LLC (including, as applicable, its affiliates and employees) has been and can be expected to be involved in various legal proceedings, regulatory matters, and claims arising out of the conduct of its business. Other than what is disclosed on GPIM's ADV, it is generally not firm practice to disclose additional information regarding such matters. We can state that there are no such matters or proceedings pending that we believe would have a material impact on GPIM's ability to manage client portfolios. GPIM's required SEC disclosures can be found on the Form ADV Part 1, which can be found at www.sec.gov.
Loomis, Sayles & Company, L.P.	Pending Firm Litigation The Loomis Sayles Credit Alpha Fund was named as a defendant along with all former shareholders of the Tribune Corporation (the Company ) that received cash in exchange for shares of the Company in a public-to-private leveraged buyout in 2007 (the LBO ). The Fund received \$1, 190, 000 for the shares it owned at the time of the LBO. Within one year of the LBO, the company filed for Chapter 11 bankruptcy. Pre-bankruptcy bondholders and unsecured creditors seek to recover all amounts paid to the shareholder defendants ( Defendants ) in connection with the LBO, with pre-bankruptcy interest, alleging that the LBO constituted a fraudulent conveyance by the Company. The entirety of this litigation, consisting of approximately 40 lawsuits, has been consolidated in federal district court in New York. The Fund is a member of a joint defense group formed by Ropes & Gray, which represents several similarly situated defendants. A settlement offer, which would have involved Defendants agreeing to repay 57.2% of the proceeds received, was rejected on the advice of counsel as premature, at the high end of the range of reasonableness, and not in the best interests of the Fund. In April 2014, the presiding judge ordered Ropes & Gray, on behalf of shareholder defendants (including Loomis) to file a Global Motion to Dismiss. The motion was filed in May 2014. In March 2016, the United States Court of Appeals for the Second Clicuit dismissed the plaintiffs' claim of constructive fraudulent conveyance arising under state law. The plaintiffs will likely seek an appeal of this decision to the Supreme Court of the United States. The plaintiffs second claim, for intentional fraudulent conveyance arising under federal law, remains in federal district court. Past Firm Litigation (within ten years) In December, 2011, a complaint was filed in the U.S. District Court for the District of Colorado naming Loomis Sayles as a co-defendant along with its affiliate, Natixis Distributors, L.P. The complaint alleged that the us



# Contact Information

Manager	Location	U.S. Client Contact	Phone	Email
Bank Loans				
Bain Capital Credit, LP	Boston, Massachusetts	Kyle Betty	(617) 516-2335	kbetty@baincapital.com
Guggenheim Investments	New York, New York	Alexandra Court	(212)518-9209	Alexandra.Court@guggenheimpartn ers.com
Loomis, Sayles & Company, L.P.	Boston, Massachusetts	Lynsey Fitzgerald	(617) 960-2556	lfitzgerald@loomissayles.com



## Glossary of Terms

**Beta**: A measure of volatility, or systematic risk, of a security or a portfolio in comparison to the market as a whole. Beta can be thought of as the tendency of a security's returns to respond to swings in the market. A beta of 1 indicates that the security's price will move with the market. A beta of less than 1 indicates that the security's price will be less volatile than the market.

**Correlation**: A statistical measure of how two securities move in relation to each other. Correlation is computed into a correlation coefficient which ranges between -1 to +1. A perfect positive correlation (+1) implies that as one security moves either up or down, the other security will move in the same direction. Alternatively, a perfect negative correlation (-1) means that if one security moves in either direction the security that is perfectly negatively correlated will move by an equal amount in the opposite direction.

**Information Ratio:** A measure of portfolio management's performance against risk and return relative to a benchmark or alternative measure.

**Kurtosis**: A statistical measure used to describe the distribution of observed data around the mean. Kurtosis describes trends in charts. A high kurtosis portrays a chart with fat tails and a low, even distribution, whereas a low kurtosis portrays a chart with skinny tails and a distribution concentrated toward the mean.

**Skewness**: A statistical term used to describe a situation's asymmetry in relation to a normal distribution. A positive skew describes a distribution favoring the right tail, whereas a negative skew describes a distribution favoring the left tail.

**Tracking Error:** A divergence between the price behavior of a position or a portfolio and the price behavior of a benchmark. Tracking errors are reported as a "standard deviation percentage" difference. It tells you the difference between the return you received and that of the benchmark you were trying to copy.



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- 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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# University of Maine

May 2017



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An investment in the partnership is speculative and involves a high degree of risk, which may not be suitable for all investors. The fund often engages in leveraging and other speculative investment practices that may increase the risk of investment loss and the investments may be highly illiguid. The fund is not required to provide periodic pricing or valuation information to investors. Investing in the fund may involve complex tax structure and that there may be delays in distributing important tax information. Private funds are not subject to the same regulatory requirements as mutual funds, and private fund advisers and sponsors often charge high fees. An investment in the partnership involves a number of significant risks and other important factors relating to investments in limited partnerships generally, and relating to the structure and investment objectives of the partnership in particular. Investors should consider risks associated with the following: limited operating history; recent market experience; nature of partnership investments (bank loans, high yield debt, convertible securities, highly volatile instruments, contingent liabilities, risks of the bankruptcy process affecting partnership interests, middle-market companies, event-driven special situations); general market and credit risks of debt securities; potential illiquidity of partnership investments; widening risk; custodial risk; third-party involvement; restrictions on transfer and withdrawal of limited partnership interests; reliance on management; conflicts of interest; in-kind distributions; absence of regulatory oversight; repayment of certain distributions; market disruption and terrorism risk; cybersecurity risk; interest rate, currency exchange and investment risk management; investment in non-U.S. issuers; investments in undervalued assets; participation on creditors' committees; third-party litigation; lender liability considerations and equitable subordination; fraudulent conveyance and preference considerations; projections; unspecified use of proceeds; potential for insufficient investment opportunities; competition; post-reorganization securities; concentration of investments; certain business and regulatory risks; tax considerations; withholding taxes; ERISA compliance; trading risk; and the impact of fees on returns. The foregoing list of risk factors does not purport to be a complete enumeration of the risks involved in an investment in the partnership. Prospective investors should reference the offering document and consult with their own legal, tax and financial advisors before deciding to invest in the partnership. Refer to a particular fund's private placement memorandum for additional details, risk factors and other important considerations including registration requirements for certain jurisdictions.

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Certain information contained herein are not purely historical in nature, but are "forward-looking statements," which can be identified by the use of terms such as "may," "will," "should," "expect," "anticipate," "project," "estimate," "intend," "continue," or "believe" (or negatives thereof) or other variations thereof. These statements are based on certain assumptions and are intended to illustrate hypothetical results under those assumptions (not all of which are specified herein). Due to various risks and uncertainties, actual events or results may differ materially from those reflected or contemplated in such forward-looking statements. As a result, investors should not rely on such forward-looking statements.

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  - Team Biographies



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#### **Committed to Lasting Impact**

## We develop exceptional partnerships

We know that great outcomes come from great teams. We are personally invested in each others' success.

## We challenge conventional thinking

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











#### **Bain Capital Global Platform**



Boston • Chicago • New York • Palo Alto • San Francisco • Dublin • London • Munich • Mumbai Hong Kong • Shanghai • Tokyo • Melbourne • Sydney

> 100% Employee Owned • Over 400 Investment Professionals Worldwide ~\$75 billion in AUM • Principal Investor



#### Large interconnected firm with global reach and global resources



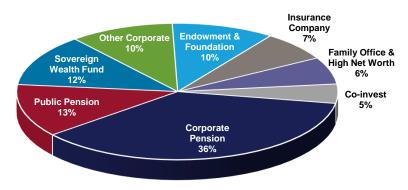
Employee data and estimated AUM data as of December 31, 2016. Bain Capital Credit AUM includes Bain Capital Credit, LP, its subsidiaries and its AIFM 6 affiliate, as well as January 1, 2017 contributions.

#### **Firm Overview**

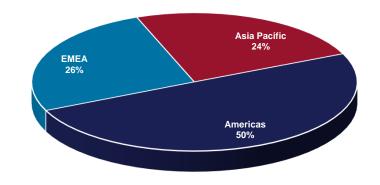
#### **Bain Capital Credit's Platform**



#### **Bain Capital Credit Investors by Type**



#### **Bain Capital Credit Investors by Geography**



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Employee data as of January 1, 2017. AUM, employee co-investments and investors by type and geography data estimated as of January 1, 2017. Data for Bain Capital Credit's investors by type and geography is based on a percentage of AUM excluding CLOs. EMEA = Europe, Middle East and Africa. Charts may not sum to 100% due to rounding. Bain Capital Credit AUM includes Bain Capital Credit, LP, its subsidiaries and its AIFM affiliate.

(1) Bain Capital Credit and Bain Capital employee investments include general partner, employee co-invest and other affiliate capital invested in Bain Capital Credit managed funds.

#### **Investment Platform**

#### Bain Capital Credit

#### \$33.5 billion credit affiliate of Bain Capital

Liquid	Credit	Opportunistic Credit			
Bank Loan & Multi-Sector Credit \$12.6B	Structured Credit \$9.3B	Middle Market Direct Lending \$5.4B	Distressed & Special Situations \$6.2B		
Dedicated bank loan and liquid opportunistic credit strategies offered in long only or long/short	CLO management and investments in CLO debt and equity	Senior, unitranche and mezzanine debt in middle market companies	Distressed debt, capital solutions and opportunistic special situations		
Bank Loans: \$6.6B	Managed CLOs: \$8.7B	Senior Direct Lending: \$4.0B	Credit Opportunities: \$6.0B		
High Income Strategy: \$4.3B	CLO Investing Strategy: \$0.6B	Middle Market Credit: \$1.4B	Opportunistic Energy: \$0.2B <sup>(1)</sup>		
High Income Total Return Strategy: \$1.7B			<ul> <li>Open-ended</li> <li>Close-ended</li> <li>Separate Accounts Only</li> </ul>		

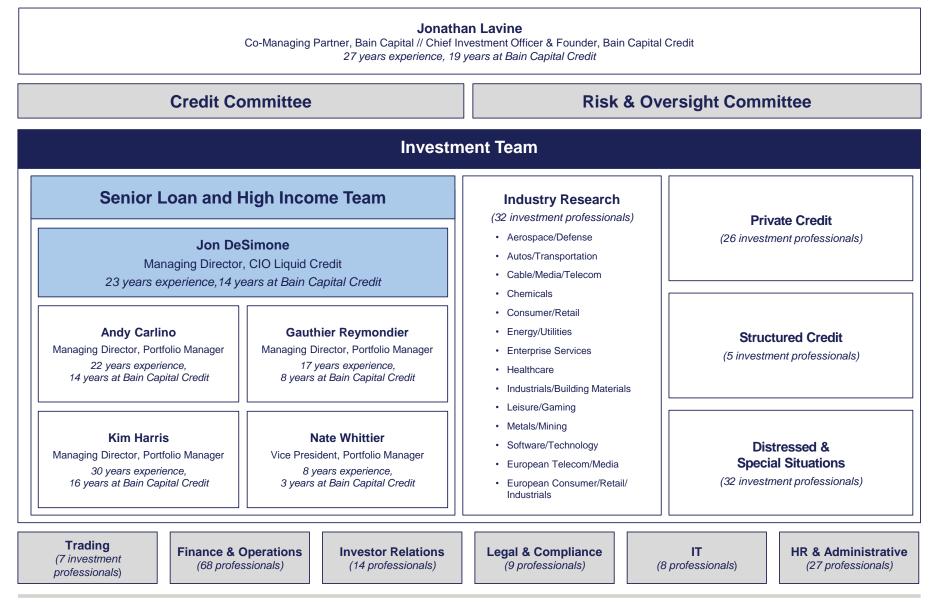


Bain Capital Credit AUM estimated as of January 1, 2017 and includes Bain Capital Credit, LP, its subsidiaries and its AIFM affiliate. Open-ended and closedended classifications may also include separately managed accounts. The GIPS<sup>®</sup> compliant AUM is \$28.8B as of December 31, 2015. See "Endnotes" for important definitions, disclosures and information regarding returns, indices, performance calculation and AUM calculation methodologies.

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(1) Balance represents assets in dedicated separate account mandates.

#### Senior Loan and High Income Team





Employee data as of January 1, 2017. Reflects team changes effective February 1, 2017. Due to cross-functional roles, numbers may not add to the Firm's total 9 headcount of 237 employees.

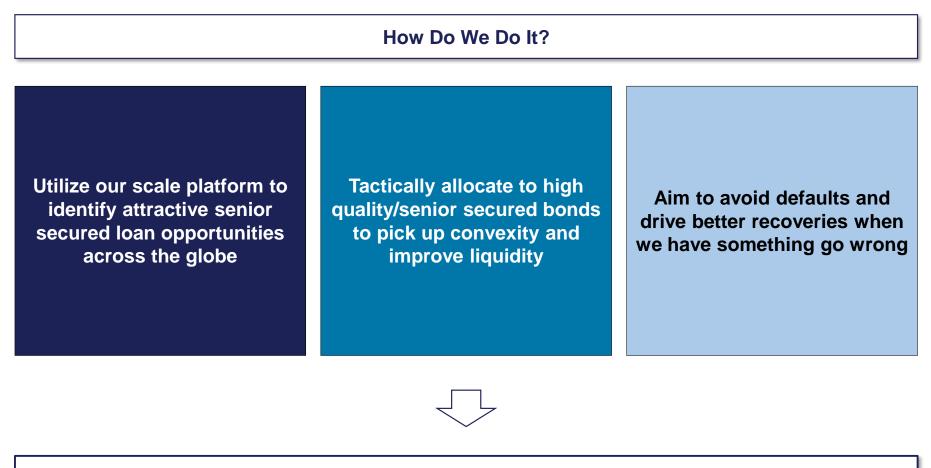
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#### **Bain Capital Senior Loan Strategy**

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



## Our Senior Loan Strategy has a 16-year track record of strong performance and credit selection.



Data as of March 31, 2017. Represents Bain Capital Credit's view at the time of this presentation and is subject to change. Targeted returns may not be achieved. 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.

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#### **Investment Process**

We leverage our integrated industry teams to identify what we see as the best relative value with a focus on senior secured, floating-rate debt.



#### **Selection Criteria**

- Eliminate poor quality issuers and those in unattractive industries
- Leverage extensive credit research across 14 industry teams
- Actively monitor securities which meet our risk and liquidity preferences to find the best relative value
- Seek attractive risk-adjusted return, not just high return potential

#### **Investment Process**

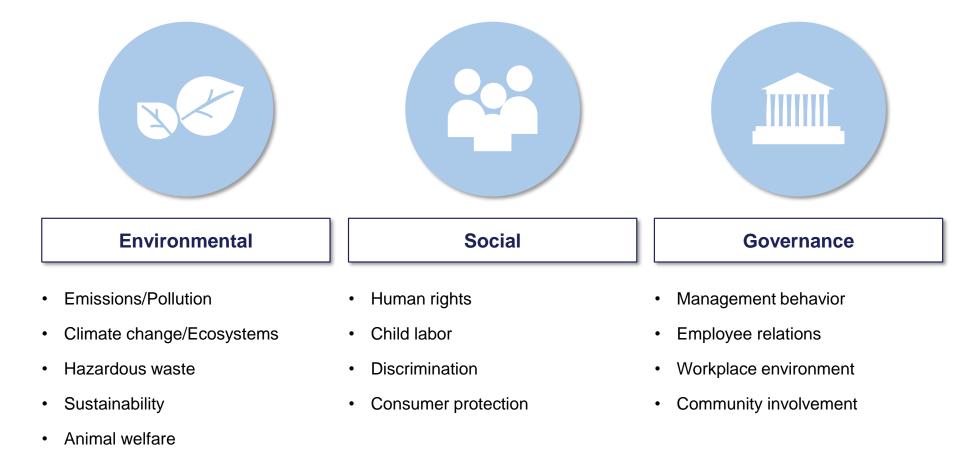
To achieve strong results, Bain Capital Credit uses a systematized credit approval and tracking process.

INVESTMENT RECOMMENDATION	CREDIT COMMITTEE APPROVAL	PORTFOLIO CONSTRUCTION	PORTFOLIO & RISK MANAGEMENT
<ul> <li>14 industry teams of 2-3 people</li> <li>26-person Private Credit team</li> <li>5-person Structured Credit team</li> <li>32-person Distressed &amp; Special Situations Team</li> <li>Analytical investment approach</li> <li>Evaluation across capital structure</li> <li>Detailed analysis on industries and investments</li> </ul>	<ul> <li>Committee approves all new investments</li> <li>Over 20 years experience on average per member</li> <li>Reviews specific investments and industries</li> </ul>	<ul> <li>Each Credit Committee member takes lead role in fund management</li> <li>Constant dialogue with trading desk and industry teams</li> <li>Asset class and industry rotation</li> <li>Top-down and bottom-up approach</li> </ul>	<ul> <li>6-member Risk &amp; Oversight Committee reviews investment and fund level risk</li> <li>Helps ensure adherence to fund strategy</li> <li>Proprietary databases used to capture and monitor company and security information</li> <li>Monitoring program with frequent information flow post- investment</li> </ul>



#### **Factors**

Our diligence for new investments seeks to incorporate environmental, social and governance factors, understanding that the answers will vary across industries and geographies.





The illustration is representative of what Bain Capital Credit may evaluate when looking at environmental, social and governance issues.

### **ESG Considerations**

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

#### **Ensure Awareness**

- 14 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
- **Monitoring program** with frequent information flow post-investment
- 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

#### **Consistent 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



Monitoring and transparency processes described are not ESG specific and are part of the typical process for all investments and accounts.

## Analysis

## Bain Capital Credit's diligence of a leading UK food retailer specializing in handmade natural foods evaluated the entire value chain, beginning with the inputs and ending with the consumer.

<ul> <li>Aiming for waste diversion of 75% in stores</li> <li>80% of stores to have recycling carbabilities</li> <li>B0% of stores to have recycling carbabilities</li> </ul>	Product Design	Procurement	Manufacturing Distribution	on Marketing	g Retailers	End Consumers
	<ul><li>diversion of 75% in stores</li><li>80% of stores to</li></ul>	sourcing from small coops and family farms	<ul> <li>Committed to reducing carbon footprint and water usage</li> </ul>	accurate message • Focus on	growth <ul> <li>Clean, <ul> <li>streamlined</li> </ul> </li> </ul>	<ul> <li>Accessible feedback</li> </ul>
avoiding • Teach health • Attractive food to local,	capabilities	<ul><li>preservatives</li><li>Focus on organic</li></ul>	wade neon daily	Teach health	compensation	hunger-focused

We liked the company's story for a number of reasons, including its solid market position and strong ESG conviction, and added investments across a number of Bain Capital Credit funds



Transactions may not be illustrative of all Bain Capital Credit investments.

#### **Case Studies**

**Z** BainCapital

CREDIT

Company Example	Retail	Packaging	Retail	Media
Business Description	<ul> <li>Specialty retailer of hunting, fishing, boating and sporting equipment in US and Canada</li> </ul>	<ul> <li>Leading global producer of specialty high- performance films, food packaging, tobacco overwrap and labels</li> </ul>	<ul> <li>Jeweler located primarily on US military bases domestically and internationally</li> </ul>	<ul> <li>Largest independent video game publisher in the US and Europe, due to its popular war simulation video game</li> </ul>
ESG Application	<ul> <li>Following a public shooting a few years past we reviewed every Bain Capital Credit investment to see if we had any exposure to firearms</li> <li>We discovered one of our outdoor retailers derived &lt;5% of annual revenue from hunting rifles</li> <li>We elected to sell this small term loan position across the complex given the exposure</li> </ul>	<ul> <li>Large senior lender approached Bain Capital Credit with opportunity to buy position at a discount with the potential to also refinance the business</li> <li>Approximately a quarter of sales volume generated through tobacco industry</li> <li>With that knowledge, Bain Capital Credit passed on the opportunity at the outset</li> </ul>	<ul> <li>Bain Capital Credit evaluated a 1<sup>st</sup> lien term loan opportunity for jewelry stores that sold its products via cash or credit purchase</li> <li>The default risk was viewed as low because the purchases on credit were indirectly backed by the US government as payments were deducted from soldiers' paychecks</li> <li>Bain Capital Credit critically reviewed the company's outsized margins relative to peers and discovered differing price schemes for purchases on credit versus cash</li> </ul>	<ul> <li>Evaluated a 1<sup>st</sup> lien term loan in September 2013</li> <li>In the wake of several recent mass tragedies, first-person shooter video games have received attention as potential triggers for mass violence</li> <li>The investment team wrote a business practices memo alongside investment materials that outlined the media focus, inconclusive academic studies and recent regulatory developments on the issue</li> <li>Bain Capital Credit decided to pass on the investment due to concerns around the video games</li> </ul>

Transactions may not be illustrative of all Bain Capital Credit investments.

### Checklist

#### On certain new credit investments we complete our ESG/SRI checklist.

Individual ESG Risk Factors - Are we aware of			
	Yes	Are there mitigants? <sup>(1)</sup>	No
Excessive contribution to air, water or soil pollution?			
Promotion of the output of hazardous waste?			
Unsustainable resource practices?			
Clearly discriminatory or exclusionary human resources practices?			
Involvement with child or slave labor?			
Business dealings with regimes that do not support human rights?			
Business dealings with regimes on the OFAC list?			
Offering of exploitative products or services?			
Practices that would be considered cruel to animals?			
Inappropriate conduct by the board and/or management?			
Significantly acrimonious labor relations?			
Poor corporate citizenship?			
Any other factors which might conflict with our ESG philosophy?			
RepRisk Report			
Did we review this report?			
Did we find anything that was concerning?			
If the company was not in their database, have we requested it be added?			

Are more than 10% of revenues generated from		
	Yes	No
Tobacco?		
Alcohol (SSLF SRI Only)?		
Firearms?		
Gaming or Gaming-Related Activities (SSLF SRI Only)?		
Munitions?		
Adult Entertainment?		

Is this issuer approved for investment in		
	Yes	No
Any Bain Capital Credit Fund?		
Bain Capital Credit SRI Funds?		



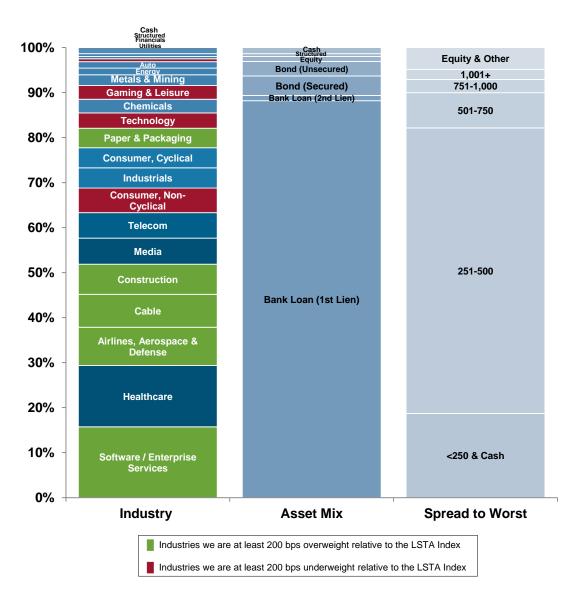
(1) Mitigants include a clear commitment to improvement and action; we expect go forward adherence to our ESG standards.

#### **SLF Portfolio Characteristics**

Characteristics

Current Yield:	4.6%
Yield to Worst:	5.2%
Interest Rate Duration:	0.3
Credit Spread Duration:	3.9
Avg. Interest Coverage:	3.6x
Avg. Relevant Debt/EBITDA:	4.2x
Avg. Total Debt/EBITDA:	5.7x
Avg. EBITDA:	\$995M
Avg. 4-year Spread:	405 bps
% Cov Lite:	52%
Avg. Rating:	B+
Number of Companies:	192
Non-North American <sup>(1)</sup> :	16%
LTM Portfolio Turnover:	87%

Percent of Total

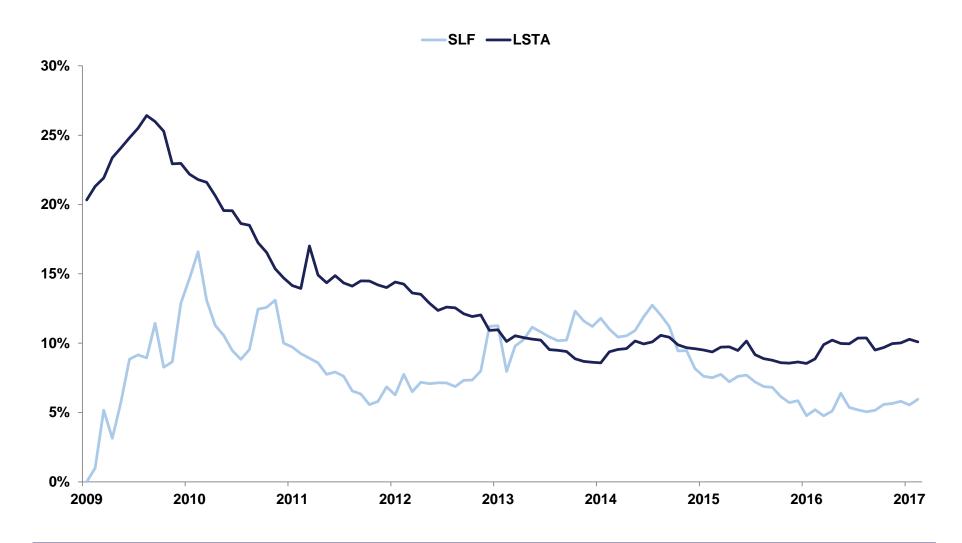


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Data for the owned portfolio as of March 31, 2017. Holdings by market value, financial statistics and Moody's rating as of March 2017. An internal rating is used if a Moody's rating does not exist. Current yield represents a percentage of net asset value. Yield to worst excludes cash. Spreads include the value of LIBOR (and floor, where applicable) and exclude cash. LTM portfolio turnover includes trades and pay-downs. Spread to worst represents the spread to worst of long assets and cash equivalents. Based on internal analysis. (1) Includes non-North American currency and domiciled issuers.

### % Allocation to CCC/NR-Rating Loans



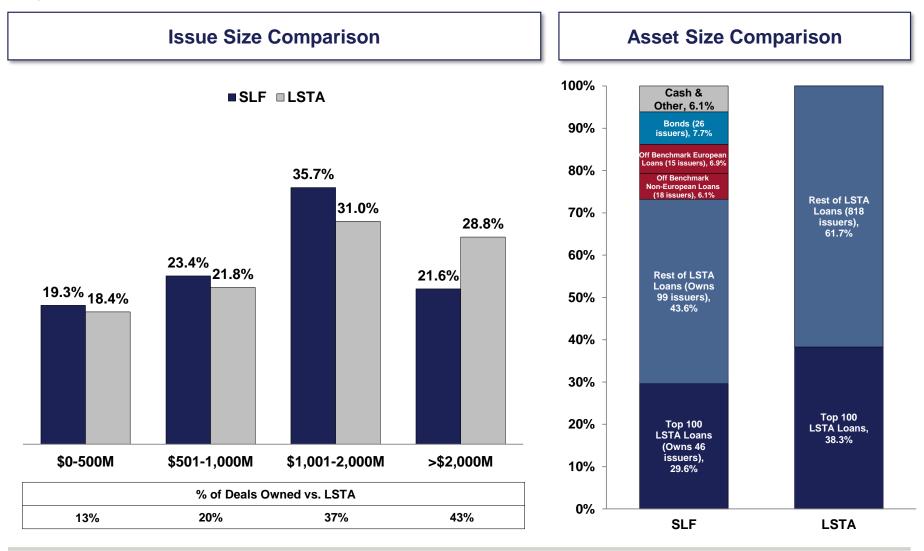
SLF has delivered strong performance since inception despite typically carrying less credit risk than the LSTA Index



Data as of March 31, 2017. Fund inception is February 12, 2009. Source: LSTA and Bain Capital Credit analysis.

#### **SLF Active Portfolio Management**

Our Senior Loan Fund is actively managed. Of the top 100 issuers in the LSTA index, SLF owns only 46 of those names.





Data as of March 31, 2017 for the Bain Capital Senior Loan Fund, L.P. Weights for the issue size analysis include long loan and bonds portfolio only.

### SLF 2017 Outlook

- We are maintaining our defensive positioning across the Senior Loan strategy, underweighting CCCs and second liens. We are adding interesting opportunities for yield with discipline and only where we believe our diligence provides us with differential insights.
- Amid market strength, we are trimming risk positions into the rally and focusing on running a liquid portfolio to take advantage of future volatility. Should the cycle extend, this liquid portfolio also should allow us to reposition.
- With the strong market technical and favorable supply/demand balance, we find new issue attractive, though it requires a high degree of selectivity.
- We believe global mandates can find attractive value in European loans with the pickup from FX.
- We are targeting a bond allocation of 5-10% and a cash range of 2-4%, while continuing to deploy capital in higher quality loans.



Data as of March 31, 2017. Represents Bain Capital Credit's view at the time of this presentation and is subject to change. Targeted allocations are subject to change. Targeted allocations may not be achieved.

#### **Table of Contents**

- Firm Overview
- Senior Loan Fund
- Appendix
  - <u>Returns & Terms</u>
  - Market Overview
  - Team Biographies

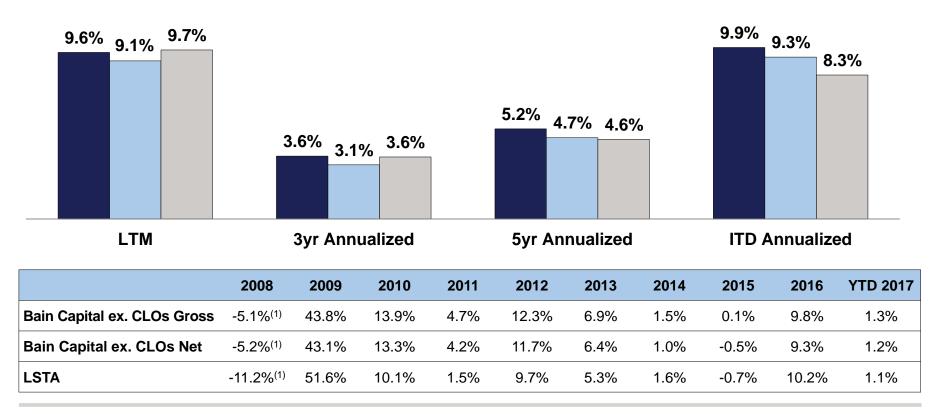


#### **Bank Loan Returns**

We have outperformed the market by ~160 gross basis points annualized since inception.

Bain Capital Senior Loan Composite ex. CLOs Gross
 Bain Capital Senior Loan Composite ex. CLOs Net
 LSTA

Standard Deviation (ITD)				
Bain Capital Gross:	5.6%			
LSTA:	6.7%			





Data as of March 31, 2017. 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) Bain Capital Senior Loan Composite excluding CLOs inception date is November 1, 2008.

#### **Bain Capital Senior Loan Composite Returns**

**Bain Capital Net** 

BainCa CREDIT

LSTA

6.1%

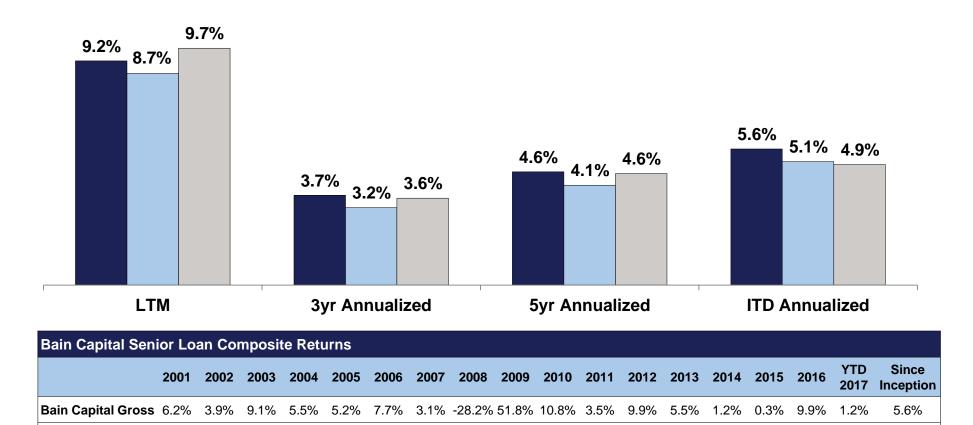
3.6%

8.8%

5.0%

4.7% 6.9%

■ Bain Capital Senior Loan Composite Gross ■ Bain Capital Senior Loan Composite Net ■ LSTA



apital	Return data as of March 31, 2017. Bain Capital Senior Loan Composite inception date is January 1, 2001. There can be no assurance that results achieved by the composite will be achieved by the other funds or accounts. "Since Inception" returns are annualized. 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.	25

9.2%

4.9%

0.6%

-0.2%

9.3%

1.0%

5.1%

4.9%

2.5% -28.7% 51.0% 10.0% 2.9%

4.2% 1.9% 10.0% 5.2% 5.1% 6.8% 2.0% -29.1% 51.6% 10.1% 1.5% 9.7% 5.3% 1.6% -0.7% 10.2% 1.1%

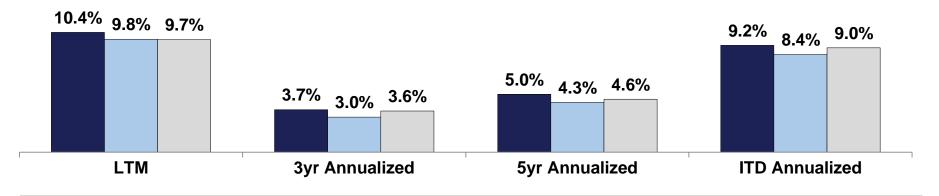
SI F Monthly Net Returns

#### **SLF Returns**

	Jan	Feb	Mar	Apr	Мау	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD	LSTA
2017	0.7%	0.6%	0.1%										1.4%	1.1%
2016	-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%
2015	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%
2014	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%
2013	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%
2012	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%
2011	1.8%	0.7%	0.2%	0.8%	0.2%	-0.3%	0.3%	-3.8%	-0.5%	3.0%	-0.8%	0.9%	2.4%	1.5%
2010	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%
2009			2.0%(1)	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

■ SLF Gross ■ SLF Net ■ LSTA





Data as of March 31, 2017. Returns shown herein represent Bain Capital Senior Loan Fund, L.P. Class A shares. Bain Capital Senior Loan Fund, L.P. inception date is February 12, 2009. 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) Includes return from fund inception (February 12, 2009).

### **SLF Summary of Terms**

Fund Parameters <sup>(1)</sup>							
Asset Mix	Minimum 90% secured debt	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	d 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	<ul> <li>Annual management fee paid quarterly.</li> <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> <li>Operational and administrative expenses capped at 0.13%</li> </ul>	<ul> <li>Annual management fee paid quarterly.</li> <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> <li>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</li> </ul>					
Structure	Evergreen fund, Delaware LLC 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.

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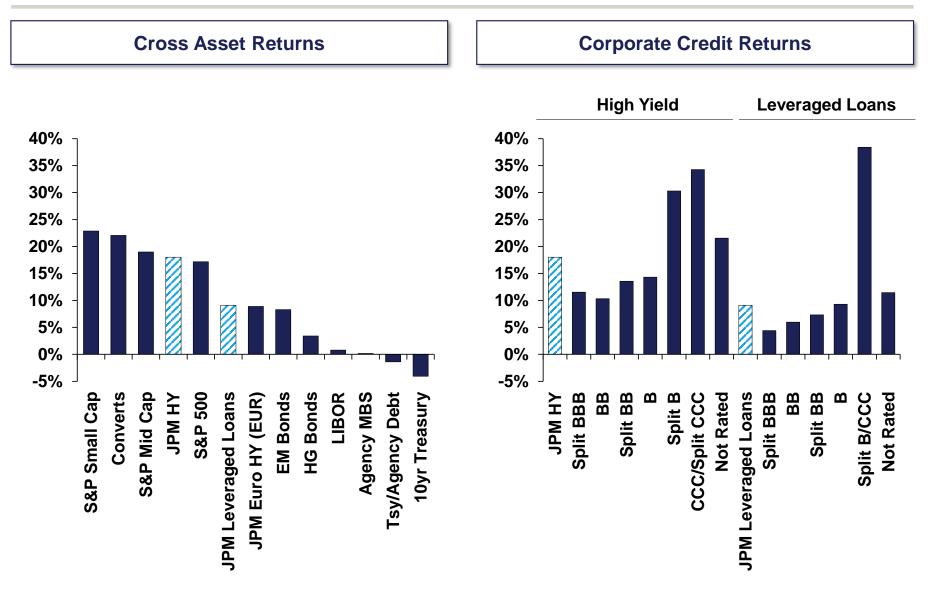
(3) Refer to fund documents for full details of terms and conditions.

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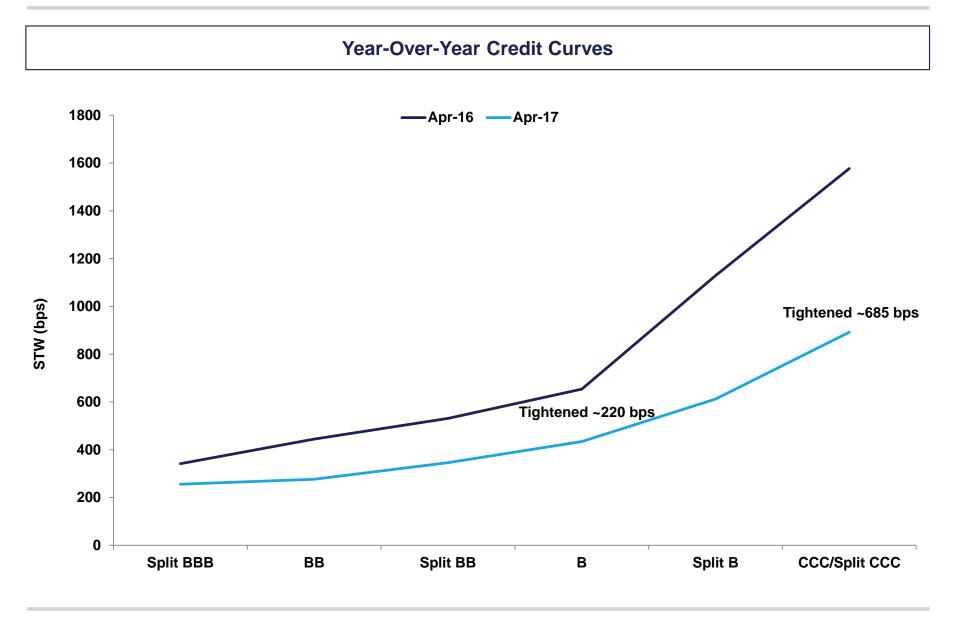
### Total Returns – LTM





Data as of March 31, 2017. Source: Bloomberg. See "Endnotes" for important definitions, disclosures and information regarding returns, indices and performance calculation methodologies.

#### The Credit Curve Has Flattened in the Last Year



Data as of April 11, 2017. Source: JP Morgan Domestic High Yield index.

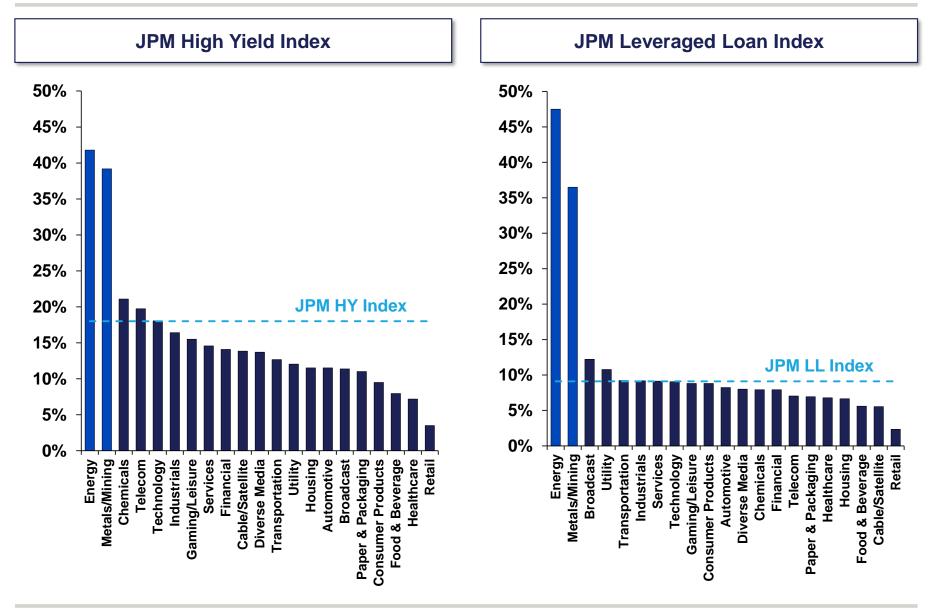
**BainCapital** 

CREDIT

243

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#### Industry Returns – LTM

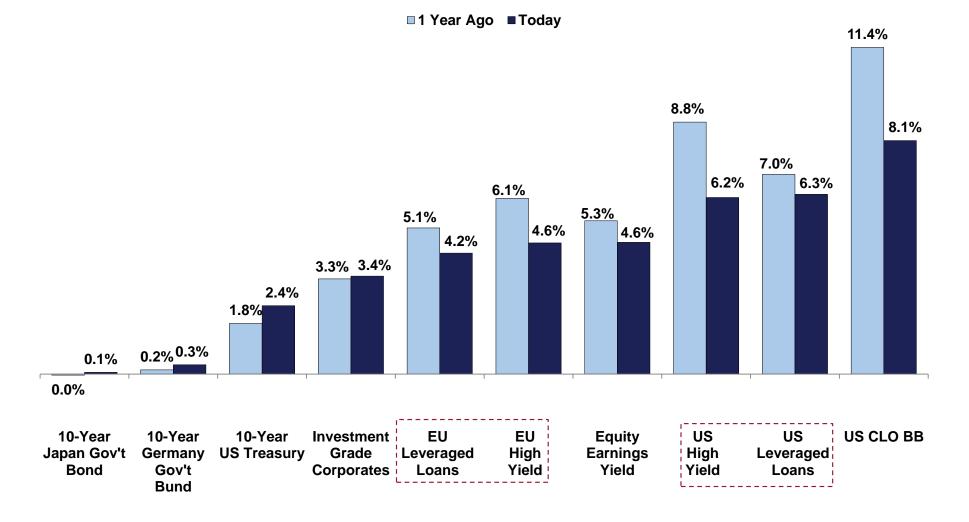




Data as of March 31, 2017. Source: Bloomberg. See "Endnotes" for important definitions, disclosures and information regarding returns, indices and performance calculation methodologies.

### **Yields in a Wider Credit Context**

## While loan and bond yields have rallied with the rest of fixed income, in a world of low or negative rates the opportunity still looks compelling.





Data as of March 31, 2017. "10-Year Japan Government Bond," "10-Year Germany Government Bund" and "10-Year US Treasury" are the bid prices per Bloomberg. "Investment Grade Corporates" is the yield to worst of the Barclays US Aggregate Industrial Corporate index. "Equity Earnings Yield" is based on the price/earnings ratio from the S&P 500 index per Bloomberg. "EU Leveraged Loans" is the yield to maturity of the S&P European Leveraged Loan Index. "EU High Yield" is the yield to worst of the Credit Suisse Western European High Yield Index. "US Leveraged Loans" is the 3-year life swapped to fixed yield of the Credit Suisse Leveraged Loan index. "US High Yield" is the yield to worst of the Credit Suisse High Yield index. "US CLO BB" is the JPM CLOIE BB Post Crisis Yield.

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#### **Valuations Dashboard**

US Funding markets	Current	%ile	Median	Max	Min	Data since
3M Libor	115	38%	203	687	22	Jan-95
3M Libor - Tbill (TED)	40 (	61%	35	464	(6)	Jan-95
2yr swap spreads	36	54%	35	167	(3)	Jan-95
30D CP level	97	37%	180	658	12	Jan-95
Treasury curve (10-2)	1.1	55%	1.0	2.9	(2.4)	Jan-80
SIFI and bank levels (bps)	Current	%ile	Median	Max	Min	Data since
BofA	63 (	42%	71	485	8	Aug-01
Citi	64	36%	80	1,636	7	Sep-02
Goldman	82	42%	88	580	19	Aug-01
JPM	55 (	36%	65	243	11	Sep-01
MS	79 (	43%	86	1,311	15	Sep-01
Wells Fargo	45 (	41%	53	310	6	Nov-02
HSBC	64	52%	61	290	5	Jul-0
Bank of China	101	45%	109	400	16	Jan-02
BTMU	47	30%	66	198	6	Feb-05
DB	125	80%	77	320	10	Aug-0
BNP Paribas	90	74%	63	370	5	Sep-0
Unicredit	164	72%	96	700	7	Sep-0
Equity vol	Current	%ile	Median	Max	Min	Data since
Vix (spot)	12.4	13%	17.7	81	9	Jan-90
Vix (6M-spot)	3.9	50%	3.9	12	(42)	May-0
10% OTM Put vol	17.2	15%	21.1	68	11	Jan-0
	7.9	22%	9.0	14	2	Jan-0
Skew (Put - Call)	1.3	22.70				
	Current	%ile	Median	Max	Min	Data since
Credit differentials (bps)		19 9 19 19 19 19 19 19 19 19 19 19 19 19		Max 301	Min (40)	statement of a subscription of
Credit differentials (bps) AAA - 10Yr Ts	Current	%ile	Median 130		the local division in which the	Jan-8
Credit differentials (bps) AAA - 10Yr Ts HY - BBB	Current 152	%ile	Median 130 410	301	(40)	Jan-8 Jan-8
Credit differentials (bps) AAA - 10Yr Ts HY - BBB CCC - B	Current 152 366	%ile 62% 35%	Median 130 410	301 1,455	(40) 161	Jan-8 Jan-80 Jan-99
Credit differentials (bps) AAA - 10Yr Ts HY - BBB CCC - B Other funding mkts (3M)	Current 152 366 490	%ile 62% 35% 44%	Median 130 410 516	301 1,455 1,855	(40) 161 217	Jan-8 Jan-80 Jan-99 Data since
Skew (Put - Call) Credit differentials (bps) AAA - 10Yr Ts HY - BBB CCC - B Other funding mkts (3M) Euribor Shibor	Current 152 366 490 Current	%ile 62% 35% 44% %ile	Median 130 410 516 Median	301 1,455 1,855 Max	(40) 161 217 Min	Data since Jan-80 Jan-90 Data since Dec-90 Oct-00
Credit differentials (bps) AAA - 10Yr Ts HY - BBB CCC - B Other funding mkts (3M) Euribor	Current 152 366 490 Current (33)	%ile           62%           35%           44%           %ile           0%	Median 130 410 516 Median 213	301 1,455 1,855 Max 539	(40) 161 217 Min (33)	Jan-8 Jan-8 Jan-9 Data since Dec-9

Valuations									
Equities (Trailing)	Current	%ile_	Median	Max	Min	Data since			
5&P 500	21.8x	87%	16.8x	30.6x	6.8x	Jan-54			
S&P 500 EV/EBITDA	13.0x	92%	10.4x	15.0x	6.2x	Jan-90			
S&P Mid Cap	24.7×	95%	20.9x	27.9x	4.4x	Dec-90			
S&P Small Cap	27.2x	89%	23.0x	37.3x	11.6x	Jan-95			
Nasdaq	118.6x	94%	32.6x	1139.4x	15.7x	Nov-0			
S&P Trailing Earnings	109								
Equities (Forward)	Current	%ile	Median	Max	Min	Data since			
S&P 500	18.3x	80%	16.1x	26.9x	9,9x	Jan-90			
S&P Mid Cap	20.6x	91%	17.8x	22.9x	8.8x	Jan-95			
S&P Small Cap	21.6x	92%	18.5×	27.8x	11.3x	Jan-95			
Nasdaq	22.6x	64%	21.5×	43.6x	13.0x	Nov-02			
S&P Forward Earnings	129								
Credit	Current	%ile	Median	Max	Min	Data since			
10yr Treasury yield	2.39	11%	5.8	15.8	1.4	Jan-80			
10yr TIPs yield	0.40	18%	1.8	4.4	-0.9	Jan-9			
HG BBB (5yr spread)	90	24%	124	486	44	Apr-91			
HY	456	33%	540	1,929	266	Jan-95			
HY B	437	28%	537	1,860	247	Jan-95			
HY CDX	339	21%	437	1,889	175	Jan-06			
u	436	52%	428	2,089	214	Jan-92			
HY - BBB	366	35%	410	1,455	161	Jan-80			
CCC - B	490	9 44%	516	1,855	217	Jan-95			
European Xover	290	28%	349	1,153	149	Jun-04			
European HY	401	23%	558	2,255	179	Jan-99			
CMBS AAA	144	58%	130	1,325	20	Dec-04			



## Financial system stress low overall with a few exceptions

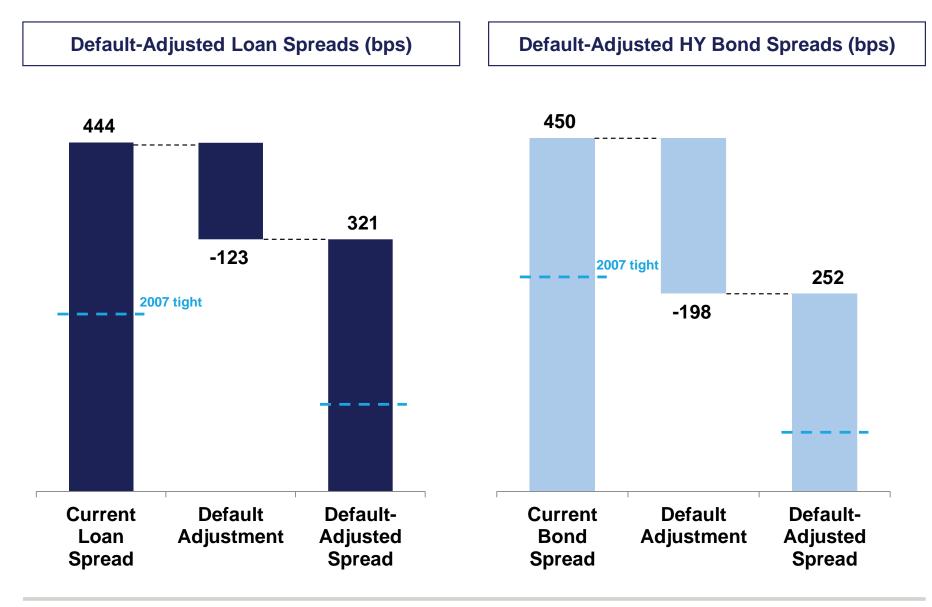
#### Equity valuations rich to credit

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Data as of March 31, 2017. Source: Bloomberg, Bain Capital Credit analysis. Reflects Bain Capital Credit's view as of the date of this presentation and is subject to change.

#### **Credit Continues to Provide Attractive Absolute Returns**



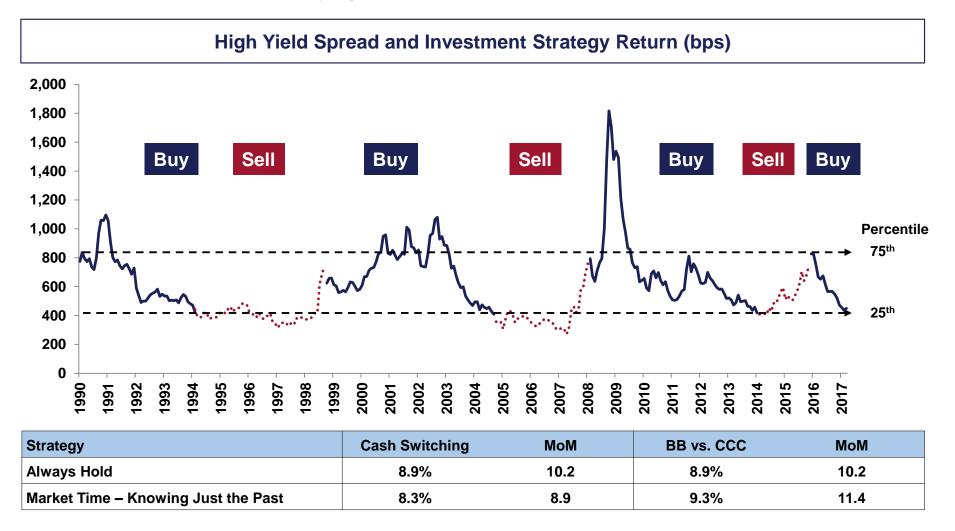


Data as of March 31, 2017. Market spread data per Credit Suisse. Default adjustment per JP Morgan. Shows the Credit Suisse High Yield index and Credit Suisse Leveraged Loan index. Default adjustment for loans assumes 3.2% default rate and 64.2 recovery rate since 1990. Default adjustment for bonds assumes 3.0% default rate and 41.2 recovery rate since 1982.

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### **Timing Credit Does Not Work**

## Attempting to time entry and exit into the credit markets based on spreads has historically produced lower returns than staying in the market.



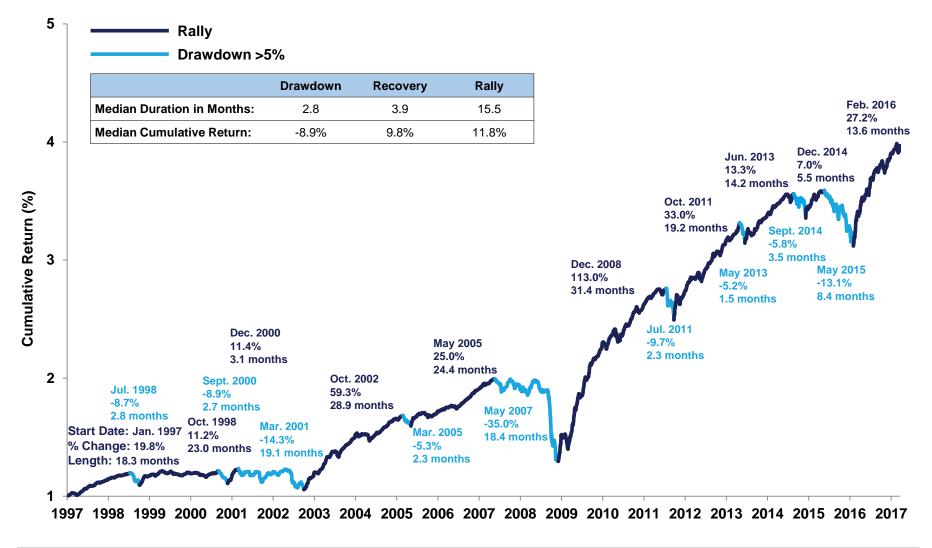


Data as of March 31, 2017. Source: Credit Suisse. Returns are annualized from January 1, 1990 and are gross. Spread is spread to worst. Market time strategy defined as holding the Credit Suisse High Yield Index until spread reaches 75th percentile and then moving to investing in 3-month Treasury bills until high yield spread hits its 25th percentile.

(1) Assumes 50 bps trading cost in month with direction change in buy/sell.

## **High Yield Cycles**

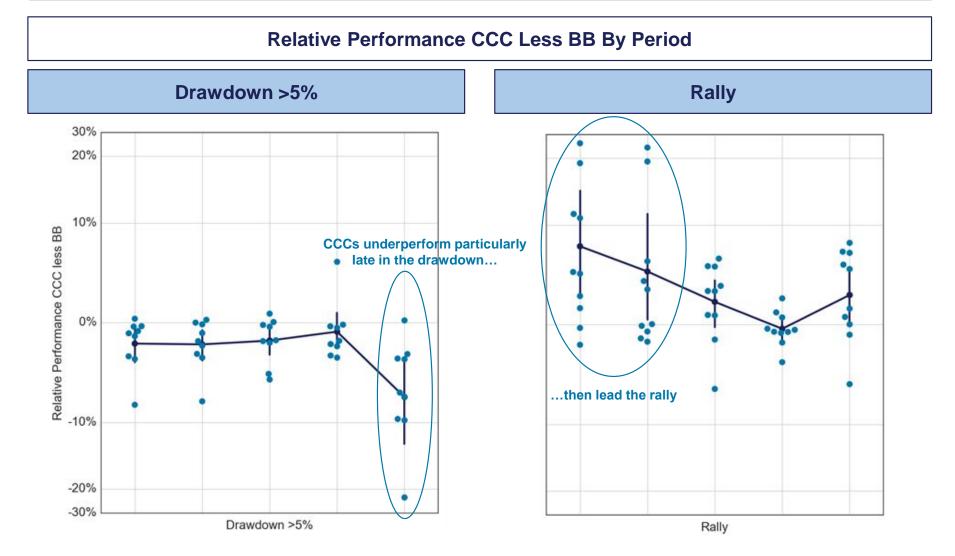
## The median drawdown lasts 2.8 months and is down -8.9%, while the amount of time to retrace those has been 3.9 months.





Data as of March 31, 2017. Source: BAML HY Index. Shows the growth of \$1 for the BAML US HY from January 1997. A drawdown is defined as a period with a loss of >5%. A recovery is defined as a period in which the loss from a drawdown is recovered. A rally includes all other periods.

#### When To Own CCCs?

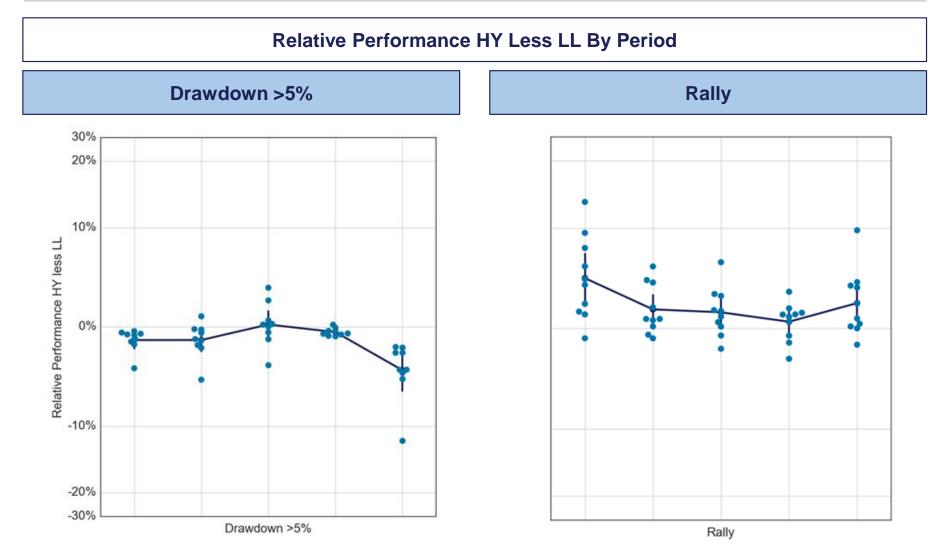


We divided each rally and drawdown on the previous page into 5 equal length segments, then compared the performance of CCCs vs. BBs.



Data as of March 31, 2017. Source: Bain Capital Credit analysis. BAML HY index. A drawdown is defined as a period with a loss of >5%. A rally includes all other periods.

#### Loan vs. Bond Performance



Similarly, we divided each rally and drawdown into 5 equal length segments, then compared the performance of HY vs. LL. Bonds tend to underperform late in the drawdown and then lead the rally.



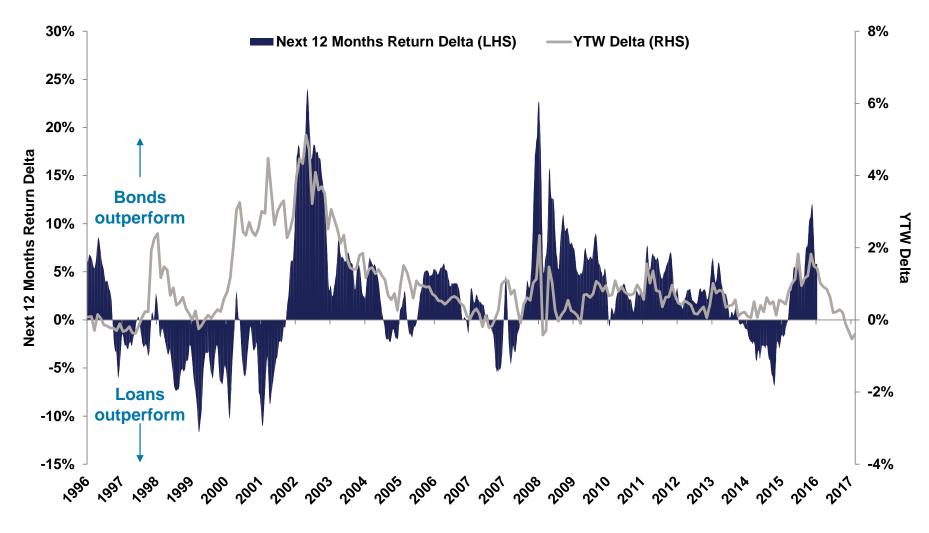
Data as of March 31, 2017. Source: BAML HY Index and LSTA. A drawdown is defined as a period with a loss of >5%. A rally includes all other periods.

#### Loan vs. Bonds

BainCapital

CREDIT

## While HY bonds often outperform loans, when the yield differential narrows, loans usually outperform.



Data as of March 31, 2017. Source: BAML HY Index and LSTA.

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  - Team Biographies



# **Global Team**

#### Jonathan Lavine Co-Managing Partner, Bain Capital Chief Investment Officer & Founder, Bain Capital Credit Credit Committee and Risk & Oversight Committee

Credit Committee	Risk & Oversight Committee
Applies Bain Capital Credit's uniform set of credit underwriting standards to approve	Active monitoring of material macro, investment and operational risks.
<ul><li>investments.</li><li>Cross disciplinary committee comprised of senior investment professionals.</li></ul>	Cross disciplinary committee comprised of senior professionals, including trading, legal, risk and operations.
Well-positioned to assess relative value across the globe.	<ul> <li>Internal review of investments and operations designed to protect firm and fund capital.</li> </ul>

Professionals	Distressed & Special Situations (32)	Private Credit Gro (26)	oup Liquid Credit Portfolio Management (6)	Structured Credit (5)	t Trading (7)					
Investment P	Industry Research (5 Managing Directors, 8 Vice Presidents and 19 additional investment professionals divided into 14 industry teams) Aerospace/Defense • Autos/Transportation • Cable/Media/Telecom • Chemicals • Consumer/Retail • Energy/Utilities • Enterprise Services • Healthcare • Industrials/Building Materials • Leisure/Gaming • Metals/Mining • Software/Technology • European Telecom/Media • European Consumer/Retail/Industrials									
Additional Professionals	Finance & Operations (68)	Investor Relation (14)	ns Legal & Compliance (9)	IT (8)	HR & Administrative (27)					
By Geography	United State Boston, Chicago and (175)	-	<b>Europe</b> London and Dublin <i>(48)</i>		Asia Pacific Melbourne and Hong Kong <i>(14)</i>					



Employee data as of January 1, 2017. Reflects team changes effective February 1, 2017. Due to cross-functional roles, numbers may not add to the Firm's total 41 headcount of 237 employees.

#### **General Fund Management**

Jonathan S. Lavine. Mr. Lavine founded Bain Capital Credit, formerly known as Sankaty Advisors, in 1997 having joined Bain Capital in 1993. He is Co-Managing Partner of Bain Capital and, since inception, Chief Investment Officer of Bain Capital Credit and its related funds. He is a Credit Committee member and Risk & Oversight Committee member, and has overall responsibility for the Firm's investment strategy, management and risk. Before the formation of Bain Capital Credit, Mr. Lavine worked in Bain Capital's private equity business. Prior to joining Bain Capital, Mr. Lavine was a consultant at McKinsey & Company. He began his career at Drexel Burnham Lambert in the Mergers & Acquisitions Department. Mr. Lavine graduated Columbia College, Phi Beta Kappa and magna cum laude, and holds an M.B.A. with Distinction from Harvard Business School. He is the Chair of the City Year Board of Trustees and is a Vice Chairman of the Trustees of Columbia University. He is a past recipient of Columbia's John Jay Award for professional achievement, Voices for National Service Citizen Service Award and the New England Anti-Defamation League's Distinguished Community Service Award. In 2016, Mr. Lavine was appointed a Member of the United States Holocaust Memorial Museum Council by President Obama.

Tim Barns. Mr. Barns joined Bain Capital Credit in 2001. He is a Managing Director, the Chief Credit Officer and the Chair of the Credit Committee. Previously, Mr. Barns was a Managing Director and a Portfolio Manager at CypressTree Investment Management Company where he managed leveraged loan portfolios. From 1989 to 1998, Mr. Barns held various positions at BankBoston, including Division Executive, in divisions originating and investing in leveraged loans and managing problem loans. Mr. Barns received a B.S. from St. Lawrence University.

Jonathan DeSimone. Mr. DeSimone joined Bain Capital Credit in 2002. He is a Managing Director, a Credit Committee member and the Chief Investment Officer of Bain Capital Credit's Liquid Credit business including separate accounts and dedicated funds. He serves as the Portfolio Manager for the Bain Capital Senior Loan Fund, Bain Capital High Income Partnership and Bain Capital Credit's London Credit's separate accounts in liquid credit. Prior to his current role, Mr. DeSimone covered the Enterprise Services and Chemicals industries. In addition, he opened Bain Capital Credit's London office and served as its head from 2005 to 2009. Previously, Mr. DeSimone was a Manager at Bain & Company where he worked in the firm's Private Equity Practice performing strategic due diligence and post-acquisition strategy assessments. Mr. DeSimone received an M.B.A. from the Amos Tuck School of Business at Dartmouth College as an Edward Tuck Scholar with Highest Distinction and a B.A. from Georgetown University.

Jeffrey B. Hawkins. Mr. Hawkins joined Bain Capital Credit in 2001. He is a Managing Director, the Chief Operating Officer and a Risk & Oversight Committee member. As the Chief Operating Officer, he is responsible for the Firm's business strategy and all non-investment activities. He also serves as the Chairman of Bain Capital Specialty Finance, Inc., a registered business development company. Previously, Mr. Hawkins was at Ropes & Gray, LLP working on securities law, mergers and acquisitions, and collateralized debt funds. Mr. Hawkins received a J.D. from Harvard Law School and a B.A. Phi Beta Kappa from Trinity College.

**Chris Linneman**. Mr. Linneman joined Bain Capital Credit in 2015. He is a Managing Director and head of Bain Capital Credit's New York office and a Credit Committee member. Previously, he ran the J.P. Morgan Mezzanine business as part of the J.P. Morgan Global Special Opportunities Group, a multi-billion dollar private investment business. Between 2001 and 2008, he was Co-Head of Syndicated and Leveraged Finance, having previously headed high yield banking and capital markets at J.P. Morgan. He joined Chemical Securities in 1994 to help launch its high-yield bond business. Mr. Linneman received a J.D. and M.B.A. from Columbia University and a B.S.E. from Princeton University.

#### Trading

James F. Kellogg. Mr. Kellogg joined Bain Capital Credit in 1999. He is a Managing Director, a Risk & Oversight Committee member and the head of Bain Capital Credit's Trading Desk. Previously, Mr. Kellogg spent five years at John Hancock Funds where he held various positions in the Fixed Income group. Mr. Kellogg received an M.B.A. from Boston University and a B.A. from Lake Forest College. Mr. Kellogg is a Chartered Financial Analyst® charterholder.

**Dan Shugrue**. Mr. Shugrue joined Bain Capital Credit in 1999. He is a Director and a Trader. Previously, Mr. Shugrue worked in the Loan Trading group at BankBoston. He also worked for the Media and Communications division at BankBoston. Mr. Shugrue received an M.B.A. from Boston College and a B.S. from the University of Richmond.

Greg Wipf. Mr. Wipf joined Bain Capital Credit in 2008. He is a Director and a Trader. Previously, Mr. Wipf was a fixed income salesperson at Bank of America. Prior to that, he was a fixed income salesperson at J.P. Morgan where he traded bank loans and structured products for their Bank Portfolio group. Mr. Wipf received a B.S. from the University of New Hampshire.

**Una Mason**. Ms. Mason joined Bain Capital Credit in 2006. She is a Senior Vice President and a Trader based in Bain Capital Credit's London office. Previously, Ms. Mason worked at J.P. Morgan London for the Fixed Income Syndicate desk for five years. Ms. Mason received a B.A. and a postgraduate degree in Marketing from University College Dublin.

**Melonie Darcy.** Ms. Darcy joined Bain Capital Credit in 2003. She is a Vice President and Trader. Previously, Ms. Darcy was a Registered Marketing Associate at Smith Barney where she assisted a team of Senior Financial Advisors with day-to-day client interactions, including executing trades and financial planning. Ms. Darcy studied Business Administration at Northeastern University.



### **Trading Continued**

**Barry McCann.** Mr. McCann joined Bain Capital Credit in 2013. He is a Vice President and Trader based in London with a focus on European Trading. He began his career at Lehman Brothers/ Nomura where he held various positions in London between 2008-2012, his last being in European Equity Derivative Sales. Mr. McCann has a B.A. Hons degree in Accountancy and Finance from Liverpool University.

#### Liquid Credit Portfolio Management

Jonathan DeSimone. Mr. DeSimone joined Bain Capital Credit in 2002. He is a Managing Director, a Credit Committee member and the Chief Investment Officer of Bain Capital Credit's Liquid Credit business including separate accounts and dedicated funds. He serves as the Portfolio Manager for the Bain Capital Senior Loan Fund, Bain Capital High Income Partnership and Bain Capital Credit's Lordon Credit's separate accounts in liquid credit. Prior to his current role, Mr. DeSimone covered the Enterprise Services and Chemicals industries. In addition, he opened Bain Capital Credit's London office and served as its head from 2005 to 2009. Previously, Mr. DeSimone was a Manager at Bain & Company where he worked in the firm's Private Equity Practice performing strategic due diligence and post-acquisition strategy assessments. Mr. DeSimone received an M.B.A. from the Amos Tuck School of Business at Dartmouth College as an Edward Tuck Scholar with Highest Distinction and a B.A. from Georgetown University.

Andrew Carlino. Mr. Carlino joined Bain Capital Credit in 2002. He is a Managing Director and Portfolio Manager in Liquid Credit. Prior to his current role, Mr. Carlino was responsible for investments in the Airlines, Aerospace & Defense, and Homebuilding & Building Product sectors. Previously, Mr. Carlino was a consultant for The Boston Consulting Group where he worked on engagements in the Healthcare, Software and Retail Banking sectors. He also spent five years in the US Air Force as an intelligence officer. Mr. Carlino received an M.B.A. from The University of Chicago Booth Graduate School of Business and a B.S. from the United States Air Force Academy.

**Kim Harris**. Ms. Harris joined Bain Capital Credit in 2000. She is a Managing Director and Portfolio Manager in Liquid Credit. She also oversees capital markets activities. Previously, Ms. Harris was a Senior Vice President at BankBoston where she was responsible for underwriting and investing in leveraged bank debt across a wide range of industries. During her eight-year tenure at BankBoston, Ms. Harris also spent three years originating and structuring real estate debt. Ms. Harris received an M.B.A. from Babson College and a B.A. from Bates College.

Gauthier Reymondier. Mr. Reymondier joined Bain Capital Credit in 2008. He is a Managing Director based in Bain Capital Credit's London office and Portfolio Manager of Bain Capital Credit's European CLOs and separate accounts. Previously, Mr. Reymondier was a Manager at Bain & Company for eight years supporting private equity funds in Europe during their strategic due diligence process and working on portfolio companies in the Retail, Media and Consumer Goods sectors. Prior to that, he worked at Schroder Salomon Smith Barney. Mr. Reymondier received a B.A. from HEC Paris.

**Nate Whittier**. Mr. Whittier joined Bain Capital Credit in 2013. He is a Vice President and Associate Portfolio Manager in Liquid Credit. He is also responsible for risk management and portfolio analytics across the Firm's strategies. Previously, Mr. Whittier worked in the Global Portfolio Solutions Group of the Asset Management Division of Goldman Sachs. Prior to that, he spent several years in the Equity Derivatives Group of Goldman Sachs. Mr. Whittier received a B.Sc. in Computer Science and Finance from Northeastern University.

#### Industry Research

Viva Hyatt. Ms. Hyatt joined Bain Capital Credit in 2002. She is a Managing Director, head of the US Industry Research team and a Credit Committee member. She is also responsible for investments in the Construction, Industrial and Packaging sectors. Previously, Ms. Hyatt was a Project Leader at The Boston Consulting Group where she primarily worked with industrial companies. Ms. Hyatt has also worked for Arthur Andersen. Ms. Hyatt received an M.B.A. from The Wharton School at the University of Pennsylvania and a B.S. from the University of Illinois at Urbana-Champaign. Ms. Hyatt is a Certified Public Accountant.

**Brian J. Hirschfeld**. Mr. Hirschfeld joined Bain Capital Credit in 2008. He is a Managing Director in the Industry Research team responsible for investments in the Telecom, Cable and Media sectors. Previously, Mr. Hirschfeld was Senior Vice President of Global Strategy at State Street Corporation where he developed strategies for the Asset Management and Broker/Dealer divisions. Prior to that, he spent five years at Capital One Financial. Mr. Hirschfeld received an M.B.A. from Stanford Graduate School of Business and a B.A. from Harvard College.

Anita Meconiates. Ms. Meconiates joined Bain Capital Credit in 2003. She is a Managing Director based in Bain Capital Credit's New York office in the Industry Research team responsible for investments in the Healthcare, Gaming and Lodging sectors. Prior to her current role, she covered the Power and Utilities sector as well. Previously, Ms. Meconiates was a consultant at McKinsey & Company. Ms. Meconiates received a B.S. from MIT and is a Chartered Financial Analyst® charterholder.



#### **Industry Research Continued**

**David Byrne**. Mr. Byrne joined Bain Capital Credit in 2015. He is a Director in the Industry Research team responsible for investments in the Chemicals and Metals & Mining sectors. Previously, Mr. Byrne worked at Fidelity Investments in their High Yield Group covering Autos and Financial Services. He has also covered Metals & Mining, Shipping, Homebuilders and Real Estate Services, and Industrials. Before business school, he worked as an Analyst at Stonebridge Associates, a boutique investment banking firm providing services to middle market and emerging growth clients. Mr. Byrne received an M.B.A. from the Amos Tuck School of Business at Dartmouth College and a B.A. in Economics from Tufts University.

Matthew Evans. Mr. Evans joined Bain Capital Credit in 2009. He is a Senior Vice President in the Industry Research team responsible for investments in the Transportation and Utilities sectors. Mr. Evans received a B.A. summa cum laude in Ethics, Politics and Economics from Yale University.

Tara Pullen. Ms. Pullen joined Bain Capital Credit in 2010. She is a Senior Vice President in the Industry Research team responsible for investments across the Consumer sector including Consumer Products, Retail, Food & Beverage, Restaurants and Leisure industries among others. Previously, Ms. Pullen worked for Citi Capital Advisors as a high-yield credit analyst covering the Retail, Consumer Products, Food & Beverage, Tobacco and Media sectors. Prior to that, she worked for Citigroup Global Markets in the Leveraged Portfolio Group. Ms. Pullen received a B.S. summa cum laude in Business Administration from the University of Richmond.

**Chelsea Cole-Kelly.** Ms. Cole-Kelly joined Bain Capital Credit in 2014. She is a Vice President in the Industry Research team focusing on the Industrial, Gaming, and Lodging sectors. Previously, Ms. Cole-Kelly was a Metals & Mining Equity Research Analyst at Goldman Sachs in New York. Ms. Cole-Kelly received a B.A. cum laude in Economics and Mathematics from Bates College.

Andrew Hailey. Mr. Hailey joined Bain Capital Credit in 2014. He is a Vice President in the Industry Research team responsible for investments in the Energy space. Previously, Mr. Hailey was a Vice President at Cadent Energy Partners, an energy-focused private equity firm. Prior to that, he worked as an investment banking analyst at Simmons & Company. Mr. Hailey received degrees in Finance, Business Honors, and Plan II Honors at the University of Texas.

Malin Hedman. Ms. Hedman joined Bain Capital Credit in 2015. She is a Vice President in the Industry Research team based in Bain Capital Credit's London office focusing on the Telecom, Media, Business Services and Industrials sectors. Previously, Ms. Hedman was a TMT Credit Analyst at Cairn Capital in London. Prior to that, she was a Vice President in Credit Research focusing on European TMT at ING in Amsterdam. She also worked at J.P. Morgan in London for six years in the TMT Credit and Telecoms Equity Research teams. Ms. Hedman has an M.Sci. in Business and Economics from the Stockholm School of Economics.

**Masha Kiryanova.** Ms. Kiryanova joined Bain Capital Credit in 2014. She is a Vice President in the Industry Research team in the London office, focusing on Retail and Healthcare. Previously, Ms. Kiryanova worked in the Industrials Corporate Finance team at Deutsche Bank in London. Ms. Kiryanova received a B.Sc. Hons in Economics from the London School of Economics.

#### Private Credit Group

Michael A. Ewald. Mr. Ewald joined Bain Capital Credit in 1998. He is a Managing Director, Global Head of the Private Credit Group, Portfolio Manager for the Middle Market Credit and Senior Direct Lending strategies and a Credit Committee member. He also serves as President and CEO of Bain Capital Specialty Finance, Inc., a registered business development company. Previously, Mr. Ewald was an Associate Consultant at Bain & Company for three years where he focused on strategy consulting to the Financial Services, Manufacturing and Consumer Products industries. Prior to that, he worked at Credit Suisse First Boston as an analyst in the Regulated Industries group. Mr. Ewald received an M.B.A. from the Amos Tuck School of Business at Dartmouth College and a B.A. magna cum laude from Tufts University.

James S. Athanasoulas. Mr. Athanasoulas joined Bain Capital Credit in 2005. He is a Managing Director in the Private Credit Group. Previously, Mr. Athanasoulas was a Manager at Bain & Company where he led case teams in the firm's Private Equity Practice performing strategic due diligence and post-acquisition strategy assessments. Mr. Athanasoulas received an M.B.A. from the Amos Tuck School of Business at Dartmouth College and a B.S. from Georgetown University where he won the Shandwick Scholar award.

**Olof Bergqvist**. Mr. Bergqvist joined Bain Capital Credit in 2014. He is a Managing Director in the Private Credit Group based in Bain Capital Credit's New York office. Previously, Mr. Bergqvist was a Managing Director at J.P. Morgan responsible for J.P. Morgan Mezzanine's North American team, part of the Global Special Opportunities Group, a private multi-billion dollar investment vehicle of J.P. Morgan. He also worked in Technology, Media and Telecom Investment Banking and as a Credit Portfolio Manager at J.P. Morgan. Mr. Bergqvist received an M.B.A. from The Stern School at New York University and a B.S. in Engineering from Pennsylvania State University.



#### Private Credit Group Continued

**Brad Charchut**. Mr. Charchut joined Bain Capital Credit in 2011. He is a Managing Director based in Bain Capital Credit's Chicago office in the Private Credit Group and is responsible for capital markets and originations in North America, including private equity sponsor coverage. Previously, Mr. Charchut was a Senior Director at Cerberus Capital where he originated, underwrote and syndicated senior and subordinated financings for private equity sponsors. Prior to Cerberus, Mr. Charchut was a Vice President in Merchant Banking Syndications at Heller Financial and also underwrote leveraged loan transactions at BT Alex. Brown and First Chicago NBD. Mr. Charchut received an M.B.A. from the Kellogg School of Management at Northwestern University and a B.A. from Northwestern University.

**Carolyn Hastings**. Ms. Hastings joined Bain Capital Credit in 2008. She is a Managing Director in the Private Credit Group. Previously, Ms. Hastings was an Associate at Thomas H. Lee Partners. Prior to that, she was an analyst in the Healthcare Group in the Investment Banking Division of Goldman Sachs & Co. Ms. Hastings received an M.B.A. from Harvard Business School, a B.S.Ec. from The Wharton School at the University of Pennsylvania and a B.A. from the University of Pennsylvania.

Tom Maughan. Mr. Maughan joined Bain Capital Credit in 2014. He is a Managing Director in the Private Credit Group and Head of Bain Capital Credit's European Middle Market efforts. Previously, Mr. Maughan was a Managing Director at J.P. Morgan responsible for leading the European team of J.P. Morgan Mezzanine, part of the Global Special Opportunities Group, a private multi-billion dollar investment vehicle of J.P. Morgan. Mr. Maughan received an M.B.S. and a B.Comm. from University College Dublin.

David McWilliam. Mr. McWilliam joined Bain Capital Credit in 2014. He is a Managing Director in the Private Credit Group based in Bain Capital Credit's Melbourne office. Previously, Mr. McWilliam was a Managing Director at Investec Investment Bank in Sydney where he led its private equity and debt restructuring practice. Prior to that, he spent eight years at CVC Capital Partners where he was involved in a number of large buyouts and restructurings in Australasia. Mr. McWilliam received a Bachelor of Commerce and Bachelor of Economics (Honors) from the University of Queensland.

**Mike Boyle.** Mr. Boyle joined Bain Capital Credit in 2007. He is a Director and Portfolio Manager in the Private Credit Group. As a Portfolio Manager, he is responsible for Bain Capital Credit's Senior Direct Lending strategy and Bain Capital Specialty Finance, Inc. Mr. Boyle started his career at Bain Capital Credit, over which time he has been a member of the portfolio analytics team, the Industry Research team, and the Liquid Credit portfolio management team. Mr. Boyle received a B.S. from Boston College.

Kelly Brink. Ms. Brink joined Bain Capital Credit in 2014. She is a Director in the Private Credit Group based in Bain Capital Credit's New York office. Previously, Ms. Brink was an Executive Director at J.P. Morgan where she focused on origination and management of North American junior capital and equity investments within J.P. Morgan Mezzanine, part of the Global Special Opportunities Group, a private multi-billion dollar investment vehicle of J.P. Morgan. She joined as a graduate and worked in Investment Banking for five years, initially within South Africa's M&A practice and then covering Financial Institutions in New York before joining J.P. Morgan Mezzanine. Ms. Brink received a B.Bus.Sci. from the University of Cape Town.

**David Brooks**. Mr. Brooks joined Bain Capital Credit in 2007. He is a Director based in Bain Capital Credit's London office in the Private Credit Group. Previously, he was a consultant at Bain & Company in London and San Francisco, working in the Private Equity and Strategy Practices. Mr. Brooks received an M.B.A. from The Wharton School at the University of Pennsylvania and a B.A. from the University of Oxford.

Thomas Kolinski. Mr. Kolinski rejoined Bain Capital Credit in 2010 after working for the Firm from 2004 to 2008. He is a Director in the Private Credit Group. Previously, Mr. Kolinski was a summer consultant with The Boston Consulting Group. Mr. Kolinski received an M.B.A. from the MIT Sloan School of Management and a B.B.A. summa cum laude from the University of Notre Dame. Mr. Kolinski is a Chartered Financial Analyst® charterholder.

**Carolyn Wintner**. Ms. Wintner rejoined Bain Capital Credit in 2013 after working for the Firm from 2008 to 2011. She is a Senior Vice President in the Private Credit Group. Prior to her current role, Ms. Wintner was an Industry Research team member responsible for investments in the Industrials and Home Building sectors. Ms. Wintner received an M.B.A. with Distinction from Harvard Business School and an A.B. summa cum laude from Harvard College.

**Christopher Coates**. Mr. Coates joined Bain Capital Credit in 2014. He is a Vice President based in Bain Capital Credit's Melbourne office in the Private Credit Group. Previously, he was an Investment Associate at Archer Capital where he focused on private equity investments and portfolio management. Prior to that, he worked for Morgan Stanley in the Investment Banking Group as an Associate in M&A working across a range of industries including Financial Sponsors, Infrastructure and Industrials. Mr. Coates started his career in Investment Banking at Macquarie Capital. Mr. Coates holds a Bachelor of Commerce and Bachelor of Laws (Distinction) from the University of Western Australia.



#### Private Credit Group Continued

**Spencer Elliott.** Mr. Elliott joined Bain Capital Credit in 2014. He is a Vice President in the Private Credit Group based in Bain Capital Credit's New York office. Previously, Mr. Elliott was a Vice President at J.P. Morgan within J.P. Morgan Mezzanine, part of the Global Special Opportunities Group, a private multi-billion dollar investment vehicle of J.P. Morgan. He was also an Associate in J.P. Morgan's syndicated and leveraged finance group where he structured and originated high-yield bonds and syndicated leveraged loans for financial sponsors and general industry clients, and an analyst in J.P. Morgan's mid-corporate banking group. Mr. Elliott received a B.B.A. summa cum laude from Baylor University.

Augustin Mine. Mr. Mine joined Bain Capital Credit in 2014. He is a Vice President in the Private Credit Group based in Bain Capital Credit's London office. Previously, Mr. Mine was at J.P. Morgan within J.P. Morgan Mezzanine, part of the Global Special Opportunities Group, a private multi-billion dollar investment vehicle of J.P. Morgan. He started his career within the Investment Banking Group at J.P. Morgan. Mr. Mine received a B.Sc. Accounting and Finance and M.Sc. International Management from the London School of Economics and Political Sciences.

#### **Distressed & Special Situations**

Alon Avner. Mr. Avner joined Bain Capital Credit in 2006. He has been the Head of Bain Capital Credit Europe since 2009, is a Managing Director in Distressed and Special Situations and a Credit Committee member. Between 2006 and 2009, Mr. Avner was responsible for Bain Capital Credit's European Telecom and Media investments. Previously, Mr. Avner was a Manager at Bain & Company where he focused on private equity as well as the media and telecoms sectors. In addition, he spent six years in operations and marketing roles at Comverse Technology and Creo/Scitex. Mr. Avner received an M.B.A. from INSEAD and a B.Sc. in Industrial Engineering from Tel Aviv University.

Michael J. Bevacqua. Mr. Bevacqua joined Bain Capital Credit in 1999. He is a Managing Director in Distressed and Special Situations and the head of the Restructuring team. Prior to his current role, he was responsible for investments in the Automotive, Building Products, Transportation, Equipment Rental, Waste Services and Aerospace & Defense sectors. Previously, Mr. Bevacqua was a Vice President at First Union Capital Markets where he worked in the Asset Securitization Group. Mr. Bevacqua was also an Associate in Corporate Finance at NationsBanc Capital Markets and spent four years as an officer in the United States Marine Corps. Mr. Bevacqua received an M.B.A. from Pennsylvania State University and a B.S. from Ithaca College.

Sarit Chopra. Mr. Chopra joined Bain Capital Credit in 2015. He is a Managing Director based in Bain Capital Credit's Hong Kong office and is a member of the Distressed and Special Situations team focused on special situations and portfolio investing. Previously, Mr. Chopra worked for 12 years at Standard Chartered Bank focused on special situations and distressed investing across Asia, with a particular focus on Southeast Asia and India. Prior to that, he worked at KPMG, advising on a variety of M&A transactions, mostly in India and in the UK. Mr. Chopra received a B.A. in economics from Delhi University and is a qualified chartered accountant.

Kei W. Chua. Mr. Chua joined Bain Capital Credit in 2016. He is a Managing Director based in Bain Capital Credit's Hong Kong office and is a member of the Distressed and Special Situations team focused on special situations and portfolio investing. Previously, Mr. Chua was the co-head of Asia for Mount Kellett Capital focused on special situations and distressed investing. Prior to that, Mr. Chua was a partner with Unitas Capital (fka J.P. Morgan Partners Asia) where he was responsible for investments in Greater China and Southeast Asia. Prior to that, Mr. Chua worked at Cerberus Capital and DLJ in Hong Kong and New York. Mr. Chua received a B.A. from Columbia College.

Fabio Longo. Mr. Longo joined Bain Capital Credit in 2013. He is a Managing Director in the Non-Performing Loan and Real Estate team that is part of Distressed and Special Situations and is based in Bain Capital Credit's London office. Previously, Mr. Longo was a Principal in the European Principal Finance Fund at Apollo investing in non-performing loan portfolios and real estate assets being disposed by European financial institutions. Mr. Longo started his career in the Investment Banking group at Goldman Sachs. Mr. Longo received an M.Eng. from the University of Cambridge.

Barnaby Lyons. Mr. Lyons joined Bain Capital Credit in 2006. He is a Managing Director and Head of Bain Capital Credit Asia based in Bain Capital Credit's Hong Kong office. Mr. Lyons is also a member of the Distressed and Special Situations team focused on special situations and portfolio investing. Prior to his current role, Mr. Lyons was based in Bain Capital Credit's London office covering European distressed opportunities. Previously, Mr. Lyons was a consultant at Bain & Company where he advised clients in a range of industries. Mr. Lyons received an A.B. Phi Beta Kappa from Princeton University.



#### **Distressed and Special Situations Continued**

**Brad Palmer**. Mr. Palmer joined Bain Capital Credit in 2013. He is a Managing Director and Head of the European Portfolio Group responsible for driving operating improvement initiatives across Bain Capital Credit's investments. Previously, Mr. Palmer held a number of roles as a Senior Executive in private equity backed businesses. Specific experience includes FMCG manufacturing management, as well as Finance Director roles. He received a B.Sc. in Chemical Engineering from the University of Natal.

Vikram Punwani. Mr. Punwani joined Bain Capital Credit in 2000. He is a Managing Director in Distressed and Special Situations responsible for investments in North America. Prior to his current role, he covered various other sectors including Automotive, Consumer Products, Enterprise Services, Lodging, Packaging, Software, Telecom and Transportation. Previously, Mr. Punwani was an Associate Consultant at Bain & Company where he advised clients on cost reduction, restructuring and strategic transactions in the Telecommunications, Technology and Financial Services industries. Mr. Punwani received an M.B.A. from Harvard Business School and a B.S. from Cornell University.

Jeff Robinson. Mr. Robinson joined Bain Capital Credit in 2002. He is a Managing Director, Head of the Distressed and Special Situations Group, the Portfolio Manager of the firm's Distressed and Special Situations funds and a Credit Committee member. Prior to his current role, he covered the Metals & Mining and Gaming & Leisure sectors and also led several of the Firm's large portfolio purchases. Previously, he was a Senior Manager of Corporate Development at RSA Security where he led the strategic planning efforts of the company, oversaw four acquisitions during his tenure and co-managed the company's venture investment portfolio. Before RSA, Mr. Robinson was a Senior Consultant at Strategic Decisions Group where he led case teams in the Private Equity, Energy, Insurance and Industrial Goods industries. Mr. Robinson received an M.B.A. from the Fuqua School of Business at Duke University and a B.S. from Cornell University.

Jeffrey Chung. Mr. Chung joined Bain Capital Credit in 2007. He is a Director in Distressed and Special Situations. Prior to his current role, he helped open Bain Capital Credit's Melbourne office covering distressed and mezzanine opportunities in Australia/New Zealand and was a member of the Industry Research team responsible for investments in the Telecommunications, Metals & Mining and Consumer sectors. Mr. Chung received a B.S. summa cum laude from The Wharton School at the University of Pennsylvania.

Steve Glick. Mr. Glick joined Bain Capital Credit in 2010. He is a Director in Distressed and Special Situations responsible for driving operating improvement initiatives across Bain Capital Credit's investments. Previously, Mr. Glick was a Principal at Lineage Capital, LLC where he structured and executed transactions, served on boards of directors and spearheaded performance improvement initiatives within the portfolio. Mr. Glick received an M.B.A. from The Wharton School at the University of Pennsylvania and an A.B. from Harvard College.

Brett L'Esperance. Mr. L'Esperance joined Bain Capital Credit in 2008. He is a Director in Distressed and Special Situations responsible for leading restructurings and driving operating improvement initiatives across Bain Capital Credit's investments. He currently sits on five boards of companies that Bain Capital Credit controls. In addition to his responsibilities within Distressed and Special Situations, he also is tasked with sourcing special situation investments where Bain Capital Credit can take control of companies through the Firm's unique structuring capabilities. Previously, Mr. L'Esperance was a Principal at Woodside Capital, and prior to that, at the Watermill Group where in both roles he sourced and closed distressed investment opportunities, led restructurings (both in and out-of-court processes), supported portfolio company improvement efforts and, in some cases, acted as interim CEO, CRO and CFO. Prior to that, he held investment, advisory and operating positions in companies such as the Watermill Group, Arthur D. Little and the Monsanto Chemical Company. Mr. L'Esperance received an M.B.A. from the Harvard Business School and a B.B.A. from the University of Massachusetts at Amherst.

Fabio Panzeri. Mr. Panzeri joined Bain Capital Credit in 2015. He is a Director in Distressed and Special Situations based in Bain Capital Credit's London office. Previously, Mr. Panzeri worked at Eni, a multinational oil and gas company, where he held various roles as a Senior Executive in Finance, Planning and Control and Risk Management both in Milan and London. Prior to that, he was a Manager at Bain & Company in Milan working as part of the corporate turnaround and financial restructuring practice. He received an M.B.A. from the Kellogg School of Management at Northwestern University and a B.A. in Business Administration from Bocconi University.

Nikolay Golubev. Mr. Golubev joined Bain Capital Credit in 2014. He is a Senior Vice President in the Non-Performing Loan and Real Estate team that is part of Distressed and Special Situations and is based in Bain Capital Credit's London office. Previously, Mr. Golubev worked in the European Principal Finance Fund at Apollo in London and invested in non-performing loan portfolios and real estate assets across Europe. Prior to that, he was an Associate at Peakside Capital, a spin-off of Merrill Lynch's Global Principal Investments team, and began his investment career at Merrill Lynch in Frankfurt. Mr. Golubev received an M.Sc. in Economics and Management from Humboldt University in Berlin and a B.A. in Strategic Management from the Higher School of Economics in Moscow. He is fluent in German and Russian.



#### **Distressed and Special Situations Continued**

**David Cullen**. Mr. Cullen joined Broadhaven Credit Partners, a wholly-owned subsidiary of Bain Capital Credit, LP, in 2014. He is a Principal based in Bain Capital Credit's Dublin office. Previously, he was a Managing Director of Better Ireland, a €100 million turnaround fund which was formed in partnership with the National Pension Reserve Fund of Ireland. Prior to that, he was a Director at Ulster Banks Global Restructuring Group. Mr. Cullen received a B.A. in Accounting and Finance from Dublin City University and is a Fellow of the Institute of Chartered Accountants in Ireland.

Matthew Cannan. Mr. Cannan joined Bain Capital Credit in 2012. He is a Vice President in Distressed and Special Situations based in Bain Capital Credit's Hong Kong office. Prior to his current role, Mr. Cannan was a member of Bain Capital Credit's Private Credit Group focused on direct lending to companies across a variety of industries. Previously, he was an Associate and Analyst in the Financial Institutions Group at Goldman Sachs & Co. Mr. Cannan received a B.S. cum laude from Case Western Reserve University.

Daniele Carella. Mr. Carella joined Bain Capital Credit in 2016. He is a Vice President in the Non-Performing Loan and Real Estate team that is part of Distressed and Special Situations and is based in Bain Capital Credit's London office. Previously, Mr. Carella worked in the Global Credit and Special Situations team at Bank of America Merrill Lynch, in the Rome office, where he invested in non-performing and sub-performing loans, real estate backed loans, ABS, debt restructuring and other special situations. Prior to that, he was an Investment Analyst at Martin Currie Investment Management in Edinburgh. Mr. Carella holds a double M.Sc. degree from Bocconi University and Oxford University and is a Chartered Financial Analyst® charterholder.

**David DesPrez.** Mr. DesPrez joined Bain Capital Credit in 2015. He is a Vice President in Distressed and Special Situations. Previously, Mr. DesPrez worked in the Distressed Opportunities funds at Oaktree Capital Management, a Los Angeles-based alternative asset manager, and in the Investment Banking division at Goldman Sachs. Mr. DesPrez received an A.B. in Economics from Brown University.

John Ezekowitz. Mr. Ezekowitz joined Bain Capital in 2013. He is a Vice President in Distressed and Special Situations. Prior to his current role, he was a member of the Industry Research team responsible for investments in the Oil and Gas sector. Mr. Ezekowitz received an A.B. magna cum laude from Harvard College.

Simon Hardy. Mr. Hardy joined Bain Capital Credit in 2016. He is a Vice President in Distressed and Special Situations based in Bain Capital Credit's London office, responsible for driving operating improvements in Bain Capital Credit's investments/corporate portfolio. Previously, Mr. Hardy worked at Element Six, part of the De Beers Group, where he held a number of Strategy, Product and Line Management roles in industrial, construction and oil & gas sectors. Prior to that he worked at L.E.K. Consulting in London. Mr. Hardy graduated from Imperial College with an MSci in Physics and has subsequently attended Harvard Business School's Programme for Leadership Development.

Yuxi Jiang. Ms. Jiang joined Bain Capital Credit in 2016. She is a Vice President in Distressed and Special Situations based in Bain Capital Credit Hong Kong Office. Previously, she was a Vice President at Clearwater Capital Partners focused on distressed and special situations investing across Asia. Prior to that, she worked at Deutsche Bank Hong Kong Real Estate Investment Banking. Ms. Jiang received her master degree in Finance, B.A. in Business Administration and B.S. in Mathematics from Peking University.

Ivan Kuznetsov. Mr. Kuznetsov joined Bain Capital Credit in 2015. He is a Vice President in the Non-Performing Loans and Real Estate team that is part of Distressed and Special Situations and is based in Bain Capital Credit's London office. Previously, Mr. Kuznetsov was an analyst in Blackstone Advisory Partners' London office (now spun-off into PJT Partners) in the M&A and Restructuring team since joining full-time in 2013. Mr. Kuznetsov holds a B.A. in Economics from the University of Cambridge, where he graduated top of his year.

Bernard Mah. Mr. Mah joined Bain Capital Credit in 2014. He is a Vice President in Distressed and Special Situations based in Bain Capital Credit's Hong Kong office focused on investments in Asia. Mr. Mah has over 10 years of experience in real estate investing and investment banking across Asia and Australia with several organizations including J.P. Morgan and Deutsche Bank. Prior to that, Mr. Mah worked with Mercer Investment Consulting in Sydney and The Boston Consulting Group in Southeast Asia. Mr. Mah received a Masters of Commerce in International Finance from the University of New South Wales and a Bachelor of Commerce in Accounting and Finance from the University of Melbourne. He was a recipient of the Renong Group Scholarship from the UEM Group, a government linked company in Malaysia.

Fabrizio S. Nisii. Mr. Nisii joined Bain Capital Credit in 2016. He is a Vice President in Distressed and Special Situations based in the London office. Prior to joining Bain Capital Credit, Mr. Nisii spent several years working on turnaround and interim management assignments, holding senior roles at McKinsey and FTI Consulting. He started his career in Ernst & Young, focusing on M&A transaction services. Mr. Nisii graduated with a B.Sc. in Business Administration from the University of Rome, La Sapienza, and also holds an MBA from ESADE Business School.

Andrew Pain. Mr. Pain joined Broadhaven Credit Partners, a wholly-owned subsidiary of Bain Capital Credit, LP, in 2014. He is a Vice President in Bain Capital Credit's Dublin office. Previously, he spent ten years in corporate banking across a number of institutions. During his time in banking, Mr. Pain managed portfolios of large corporate, SME and development loans. Mr. Pain received a Bachelor of Commerce from the University College Dublin.



#### **Structured Credit**

John Wright. Mr. Wright joined Bain Capital Credit in 2000. He is a Managing Director, the head of Bain Capital Credit's CLO/Structured Products Business, and the Portfolio Manager for Bain Capital CLO Partners. His team is responsible for originating, structuring and managing Bain Capital Credit's CLOs, as well as investments in structured products. Previously, he worked at Evergreen Investments focusing on fixed income mutual funds. Mr. Wright received a B.A. from Tufts University and is a Chartered Financial Analyst® charterholder.

Jenny Zhen. Ms. Zhen joined Bain Capital Credit in 2001. She is a Director in the Structured Credit team primarily responsible for analyzing, managing and trading corporate-backed structured investments. Additionally, Ms. Zhen focuses on originating and structuring new issue CLOs in the US and Europe. Ms. Zhen received a B.S. from Boston College and is a Chartered Financial Analyst® charterholder.

Stephanie Walsh. Ms. Walsh joined Bain Capital Credit in 2007. She is a Director and Portfolio Manager in Structured Credit focused on loan mandates and CLOs. During 2014 through 2016, she resided in London and was based in the London office. Prior to her current role, Ms. Walsh was an Industry Research team member responsible for investments in the Energy and Utility sectors. Previously, Ms. Walsh was an analyst at Goldman Sachs in the Bank Debt Portfolio Group. Ms. Walsh received a B.B.A. in Finance from the University of Notre Dame.

**Dominic DeBonis**. Mr. DeBonis joined Bain Capital Credit in 2008. He is a Senior Vice President in Structured Credit. Prior to his current role, Mr. DeBonis was an Industry Research team member responsible for investments in the Business Services, Software and Technology sectors. Mr. DeBonis received a B.B.A. magna cum laude from the University of Notre Dame.

Lakshya Madhok. Mr. Madhok joined Bain Capital Credit in 2013. He is a Vice President in the Structured Credit team responsible for investments in corporate-backed structured products, primarily CLOs. Prior to joining Bain Capital Credit, Mr. Madhok worked at Morgan Stanley where he was responsible for analytics in the Commodities sector, focusing on energy and metals. Mr. Madhok received a B.A. in Computer Science and Economics from Duke University.

#### **Operations**

Sally F. Dornaus. Ms. Dornaus joined Bain Capital Credit in 2006. She is a Managing Director, the Chief Financial Officer and a Risk & Oversight Committee member. Previously, Ms. Dornaus was a Senior Manager at PricewaterhouseCoopers in their Investment Management practice focusing on alternative investment products. Ms. Dornaus received an M.S./M.B.A from Northeastern University and a B.A. from Brandeis University. Ms. Dornaus is a Certified Public Accountant.

Ranesh Ramanathan. Mr. Ramanathan joined Bain Capital Credit in 2008. He is a Managing Director, the General Counsel and a Risk & Oversight Committee member. Previously, Mr. Ramanathan was the General Counsel of Citi Private Equity and Associate General Counsel of Citi Alternative Investments at Citigroup. Prior to that, Mr. Ramanathan was an Associate at Cleary Gottlieb Steen & Hamilton LLP. Mr. Ramanathan received a J.D. from New York University School of Law and a B.A. from The Johns Hopkins University.

Kathleen H. Rockey. Ms. Rockey joined Bain Capital Credit in 2006 having previously joined Bain Capital in 2001. She is a Managing Director, the Chief Administrative Officer, and is responsible for human capital and administration. Previously, Ms. Rockey was a Manager in Human Resources at The Boston Consulting Group where she focused on compensation and firm-wide performance management. Ms. Rockey received an M.B.A. from Bentley College and a B.S. from Boston College.

Scott Weisman. Mr. Weisman joined Bain Capital in 2016 and is the Firm's Global Chief Compliance Officer and Senior Regulatory Counsel. Prior to joining Bain Capital, he was a Managing Director in the Financial Services Regulatory Practice at PricewaterhouseCoopers and earlier served as an Assistant Director in the SEC's Division of Enforcement. Scott holds an LLM degree in Securities and Financial Regulation from Georgetown University, a J.D. summa cum laude from American University, and B.A. cum laude from the University of Pennsylvania.

Andrew Viens. Mr. Viens joined Bain Capital Credit in 2005. He is an Executive Vice President, Chairman of the Risk & Oversight Committee, and a Valuation Committee member. In his capacity as the Global Head of Operations, Mr. Viens is responsible for all trade allocation and settlement, data management, reconciliation, document management, valuation and investor relations operations functions. Previously, Mr. Viens was the Director of Treasury Operations at Investors Bank & Trust where he was responsible for all operations activities related to securities lending, foreign exchange, cash management and MBS portfolio functions. Mr. Viens received a B.A. in Economics from Assumption College.

John Ference. Mr. Ference first joined Bain Capital Credit in 2008 and rejoined the Firm in 2013 following graduate school. He is a Senior Vice President in Operations. Prior to joining Bain Capital Credit, Mr. Ference was part of Morgan Stanley's Global Capital Markets group where he structured and executed principal investments on behalf of the firm. Mr. Ference received an M.B.A. from Harvard Business School and a B.S.E. from Princeton University. He is a Chartered Financial Analyst® charterholder.



#### **Operations Continued**

**Daniel Katz.** Dr. Katz joined Bain Capital Credit in 2016 having previously joined Bain Capital in 2011. He is a Principal Software Engineer in Operations. His role is to develop analytical tools to support the investment processes of both Bain Capital Credit and Bain Capital Public Equity. Prior to joining the Operations team, he worked on the investment software systems for Bain Capital's global macro fund, Absolute Return Capital, and in senior software development roles at Akamai, Oracle, ProfitLogic, Lucent and Kenan Systems. Dr. Katz got his Ph.D. (Applied Physics) at Harvard University and his B.A. from the University of Chicago.

Krista Snow. Ms. Snow joined Bain Capital Credit in 2005. She is a Senior Vice President in Tax responsible for managing fund tax matters and tax matters specifically related to deal structuring across the business units. Previously, Ms. Snow was a Senior Manager in the International Tax Group at Ernst & Young. Prior to that, Ms. Snow was a Senior Manager in Tax at Grant Thornton LLP. Ms. Snow received a B.S. in Accounting and Finance from Bentley University and a Masters in Taxation from Suffolk University. She is also a Certified Public Accountant.

**David C. Ball.** Mr. Ball joined Bain Capital Credit in 1999. He is a Vice President in Finance responsible for compliance and reporting for Bain Capital Credit's collateralized loan obligations (CLOs). Previously, Mr. Ball was a Senior Accountant at PricewaterhouseCoopers in their Investment Management practice. Mr. Ball received an M.B.A. from Boston University and a B.A. from The College of William and Mary. He is a Chartered Financial Analyst® charterholder and a Certified Public Accountant.

Thomas D'Orsi. Mr. D'Orsi joined Bain Capital Credit in 2007. He is a Vice President in Finance and is Head of Treasury, Capital Markets. Previously, Mr. D'Orsi was a member of the finance team at Sowood Capital. Prior to that, he was a Manager at Investors Bank & Trust focusing on middle office support activities. Mr. D'Orsi received an M.B.A. from Boston University and a B.B.A. from The George Washington University. Mr. D'Orsi is a Chartered Financial Analyst® charterholder.

**Patrick Dury**. Mr. Dury joined Bain Capital Credit in 2015. He is a Vice President in Finance responsible for managing the finance teams' responsibilities from fund reporting requirements to specific deal structuring. Previously, Mr. Dury was a Senior Manager at PricewaterhouseCoopers in their Asset Management practice focusing on alternative investment products. Mr. Dury received a B.A. from College of the Holy Cross. Mr. Dury is a Certified Public Accountant.

Kevin Gallagher. Mr. Gallagher joined Bain Capital Credit in 2006. He is a Vice President in Operations responsible for the portfolio operations, reconciliation, middle office and valuation functions. Previously, Mr. Gallagher was a Senior Manager at Investors Bank & Trust where he was responsible for running the middle office operations for their alternative investment clients. Mr. Gallagher received a B.S. in Finance from Providence College.

James Goldman. Mr. Goldman joined Bain Capital Credit in 2014. He is a Senior Counsel and Vice President in Compliance responsible for providing compliance support to Bain Capital Credit. Previously, Mr. Goldman served as Senior Counsel in the SEC's Division of Enforcement and as an attorney at the law firm of WilmerHale. Mr. Goldman received a J.D. magna cum laude from Boston College Law School and a B.A. magna cum laude in History from Harvard University. Mr. Goldman is admitted to the bar of Massachusetts.

John Lutz. Mr. Lutz joined Bain Capital Credit in 2014. He is Head Global Funds Counsel based in Bain Capital Credit's London office. Previously, Mr. Lutz was an Associate at Ropes & Gray, LLP working on private investment funds. Mr. Lutz received a J.D. from Harvard Law School and an A.B. from Dartmouth College.

Fong Ng. Ms. Ng joined Bain Capital Credit in 2002. She is a Vice President in Finance responsible for the accounting and financial reporting for Bain Capital Credit's funds and separate accounts. Ms. Ng received a B.A. in Finance from Babson College.

**Orla Mernagh.** Ms. Mernagh joined Bain Capital Credit in 2005. She is a Vice President in Finance responsible for budget and compensation reporting for Bain Capital Credit. Previously, Ms. Mernagh was a Senior Associate at Ernst & Young in their Asset Management practice focusing on banking. Ms. Mernagh received a B.S. in Accounting and a M.S. in Finance from Boston College. Ms. Mernagh is a Certified Public Accountant.

Michael Treisman. Mr. Treisman joined Bain Capital Credit in 2015. He is the Deputy General Counsel. Previously, Mr. Treisman was the General Counsel of Tiger Management L.L.C. Prior to that, Mr. Treisman was the General Counsel of Citi Infrastructure Investors and Associate General Counsel of Citi Alternative Investments at Citigroup. Mr. Treisman also worked as an Associate at Cleary Gottlieb Steen & Hamilton LLP. Mr. Treisman received a J.D. from Duke University School of Law and a B.A. from the University of Pennsylvania.

Adriana Rojas Garzón. Ms. Rojas joined Bain Capital Credit in 2010. She is the Assistant General Counsel. Ms. Rojas was previously an Associate at Sullivan & Worcester LLP where her practice focused on credit transactions, corporate, securities and mid-sized private equity transactions. Ms. Rojas received an LL.M. from Boston University School of Law with concentrations in both Securities Laws and Financial Services Transactions, a J.D. from Boston College Law School and a B.S. in Economics and Marketing from Boston College.



#### **Investor Relations**

**Kyle Betty**. Mr. Betty joined Bain Capital Credit in 2007. He is a Managing Director and Global Head of Investor Relations and Business Development. Previously, Mr. Betty was a Vice President at Loomis, Sayles & Co. where he spent seven years in institutional sales and client relationship management with a focus on the corporate pension fund and endowment and foundation markets. Prior to that, he was a Vice President and Relationship Manager at Fidelity Investments in their Institutional Asset Management division. Mr. Betty received an M.B.A. from Boston College and a B.A. from Gettysburg College.

Tom Sargeant. Mr. Sargeant joined Bain Capital Credit in 2010. He is a Managing Director based in Bain Capital Credit's London office responsible for investor relations and business development. Mr. Sargeant also serves on Bain Capital Credit's European Risk and Oversight Committee and Board of Directors. Previously, Mr. Sargeant was the Director of International Product Development at Tudor Capital where he was responsible for capital raising and business development. Prior to that, Mr. Sargeant was an Executive Director in the Hedge Fund Strategies Group at Goldman Sachs Asset Management. Mr. Sargeant began his career in the Investment Banking Division of Goldman Sachs. Mr. Sargeant received an M.A. from Oxford University in Politics, Philosophy and Economics and is a Chartered Financial Analyst® charterholder.

**Mitchell J. Stack.** Mr. Stack joined Bain Capital Credit in 2013. He is Head of Bain Capital Credit Australia and a Managing Director in Investor Relations. Previously, Mr. Stack was the Head of Debt and Alternatives at the Future Fund, Australia's sovereign wealth fund. Prior to that, Mr. Stack was the head of the Australian investment team at the global fixed income specialist Western Asset Management and its predecessor organization Citigroup Asset Management. Mr. Stack also worked at J.P. Morgan in credit and corporate finance in Melbourne and New York. Mr. Stack received a Bachelor of Commerce from the University of Melbourne and is a Chartered Financial Analyst® charterholder.

Lisle Albro. Ms. Albro joined Bain Capital Credit in 2009. She is a Director in Investor Relations. Previously, Ms. Albro was a Director in the Capital Markets Group at Ameriquest Mortgage Company. From 2000 to 2003, Ms. Albro was a Structured Credit Analyst in the Fixed Income Department of Nomura Securities International. Ms. Albro received an M.B.A. from the Amos Tuck School of Business at Dartmouth College and a B.A. from Bowdoin College.

**Riddhi Bhalla.** Ms. Bhalla joined Bain Capital Credit in 2012. She is a Director based in Bain Capital Credit's London office responsible for investor relations and business development. Previously, Ms. Bhalla worked for Och-Ziff Capital managing investor relations with European and Middle East institutions. Ms. Bhalla began her career with Goldman Sachs within the Investment Management Division in London. Ms. Bhalla received an M.A. from the University of Cambridge in Economics and Management.

Jeff Doran. Mr. Doran joined Bain Capital Credit in 2011. He is a Director responsible for investor relations and business development. Previously, Mr. Doran spent five years at Acadian Asset Management as a Vice President of Consultant Relations. From 2000 to 2006, he led the institutional business development efforts at Longfellow Investment Management as the Director of Marketing. Mr. Doran received an M.B.A. summa cum laude from the F.W. Olin Graduate School of Business at Babson College and a B.A. in Economics from Middlebury College. Mr. Doran is a Chartered Financial Analyst® charterholder.

Andrew Kateiva. Mr. Kateiva joined Bain Capital Credit in 2013. He is a Director based in Bain Capital Credit's Melbourne office responsible for investor relations and business development. Previously, Mr. Kateiva was responsible for business development and investor relations with L1 Capital, and prior to that, was responsible for institutional sales at Challenger Financial Services. From 2000 to 2009, Mr. Kateiva held various roles within Warakirri Asset Management, including Head of Investor Relations and Head of Sales. Mr. Kateiva holds a Bachelor of Commerce and Arts from Deakin University together with a Graduate Diploma in Applied Finance from the Kaplan Institute. He also holds the Certified Investment Management Analyst (CIMA) designation.

**Dorothy C. Sumption**. Ms. Sumption joined Bain Capital Credit in 2010. She is a Director based in Bain Capital Credit's New York office responsible for investor relations and business development. Previously, Ms. Sumption was a Senior Vice President at Halcyon Asset Management where she spent four years in investor relations and marketing. From 2004 to 2006, Ms. Sumption was in the Private Fund Group at Credit Suisse where she raised capital for third-party hedge funds. Prior to that, Ms. Sumption was a marketing writer at PIMCO Advisors. Ms. Sumption received an A.B. from Princeton University and she holds the Chartered Alternative Investment Advisor (CAIA) designation.



# **Endnotes**

#### Definitions

- 1. "Bank Loans" is defined as all USD denominated loans held in various Bain Capital Credit managed structured funds, Bain Capital Credit Senior Loan fund, Bain Capital Credit 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 Credit Senior Loan fund, Bain Capital Credit 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 Credit 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. "Senior Loan Strategy" is defined as the Bain Capital Credit 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 funds.
- 2. 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 herein as an indication of potential performance of any Bain Capital Credit fund or strategy and should not rely on past performance when making a decision to invest in any Bain Capital Credit fund. Full Bain Capital Credit fund returns are available upon request.
- 3. Past performance is not indicative of future results. Actual results may vary. 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. 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. For Bain Capital Credit, LP's funds and accounts 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. Returns shown may include returns generated by reinvested proceeds. If such returns were not included, the returns shown herein may have been lower.

#### **Performance Calculations Methodologies**

1. Annualized returns are computed based on the change in value during the period of a relevant investment made at the beginning of the period. The change in value of a relevant 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 AIFM affiliate.





# **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) 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 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, investmentgrade, 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 passthroughs -asset-backed securities (ABS), and commercial mortgage-backed securities (CMBS).
- 7. 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.
- 8. 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.
- 9. 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.
- 10. 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).
- 11. 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.
- 12. 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.
- 13. 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.
- 14. 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.
- 15. 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.
- 16. 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.
- 17. 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.
- 18. 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.
- 19. These indices may not necessarily be indicative of the investment strategies for the funds 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 may be significant differences between the funds advised by Bain Capital Credit and the investments included in the various indices described herein. The funds 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 funds advised by Bain Capital Credit may have higher levels of risk, including through the limited use of leverage and concentrated positions, and volatility.
- 20. 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.



### Sankaty Senior Loan Composite

January 1, 2001 through December 31, 2015

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)
2001	6.21%	6.14%	4.18%	N/A	N/A	3	N/A	\$1,269.5	27.86%	\$4,556.2
2002	3.87%	3.63%	1.91%	N/A	N/A	4	N/A	\$1,684.1	29.42%	\$5,725.0
2003	9.09%	8.77%	9.97%	N/A	N/A	7	N/A	\$3,054.1	43.19%	\$7,070.6
2004	5.47%	5.03%	5.17%	N/A	N/A	7	0.62%	\$3,211.4	42.20%	\$7,609.5
2005	5.19%	4.68%	5.08%	N/A	N/A	12	0.35%	\$5,467.1	50.76%	\$10,770.8
2006	7.66%	6.86%	6.77%	N/A	N/A	12	0.66%	\$5,735.0	48.71%	\$11,773.2
2007	3.11%	2.50%	2.02%	N/A	N/A	13	0.84%	\$6,024.8	38.26%	\$15,746.6
2008	-28.23%	-28.69%	-29.10%	N/A	N/A	15	1.83%	\$6,142.4	44.49%	\$13,803.3
2009	51.82%	51.02%	51.62%	N/A	N/A	12	1.77%	\$5,016.9	27.61%	\$18,168.4
2010	10.76%	10.03%	10.13%	N/A	N/A	8	1.04%	\$3,560.1	20.54%	\$17,332.0
2011	3.46%	2.88%	1.52%	8.20%	8.43%	9	0.85%	\$3,267.4	21.20%	\$15,411.1
2012	9.89%	9.21%	9.66%	4.14%	4.42%	10	2.18%	\$4,490.1	23.93%	\$18,764.1
2013	5.54%	4.93%	5.29%	3.48%	3.77%	14	0.65%	\$5,278.6	24.31%	\$21,714.3
2014	1.16%	0.64%	1.60%	2.20%	2.10%	21	0.42%	\$7,109.6	28.68%	\$24,789.4
2015	0.27%	-0.21%	-0.69%	2.12%	2.14%	23	0.66%	\$8,712.3	30.25%	\$28,799.9

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, 2015. 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 Sankaty Senior Loan Composite has been examined for the periods January 1, 2001 – December 31, 2015. 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 Sankaty Senior Loan Composite includes funds, separately managed accounts, and CLOs that invest in assets that are predominately bank loans.

The Sankaty Senior Loan Composite was created on February 1, 2012. 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 (if any), but after all trading expenses and withholding taxes. Net-of-fees returns are calculated using actual management fees paid. Net-of-fees returns are presented before operating expenses but after management fees, all trading expenses, withholding taxes, and carried interest (if any). Prior to January 7, 2014, Net-of-fees returns were presented after management fees, all trading expenses, and withholding taxes.



### Sankaty Senior Loan Composite

January 1, 2001 through December 31, 2015

A representative management fee for the Sankaty Senior Loan Composite 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.



### Sankaty Senior Loan Composite excluding CLOs

November 1, 2008 through December 31, 2015

Year	Gross-of-Fees Return (%)	Net-of-Fees Return (%)	Benchmark Return <sup>†</sup> (%)	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
*Represe	*Represents performance from November 1, 2008 – December 31, 2008.									

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

The Sankaty Senior Loan Composite excluding CLOs was created on February 1, 2012. As of January 7, 2014, the Sankaty Unlevered Loan Composite was renamed the Sankaty 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 (if any), but after all trading expenses and withholding taxes. Net-of-fees returns are calculated using actual management fees paid. Net-of-fees returns are presented before operating expenses but after management fees, all trading expenses, withholding taxes, and carried interest (if any). Prior to January 7, 2014, Net-of-fees returns were presented after management fees, all trading expenses, and withholding taxes.



### Sankaty Senior Loan Composite excluding CLOs

November 1, 2008 through December 31, 2015

A representative fee for the Sankaty 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.

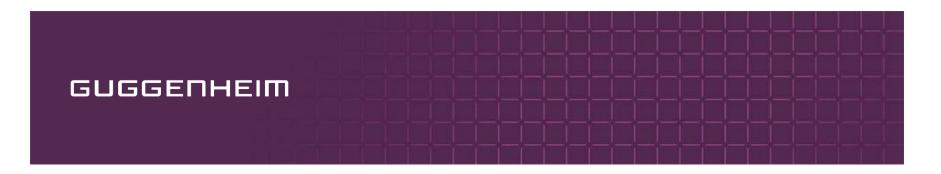
Internal dispersion is calculated using the asset-weighted standard deviation of all accounts included in the composite for the entire year; it is not presented for periods less than one year or when there were five or fewer portfolios in the composite for the entire year.

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.





Guggenheim Investments

# **Bank Loans Investment Capabilities**

May 2017

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# Introduction to Guggenheim

# Introduction to Guggenheim

- Guggenheim Partners Investment Management ("Guggenheim") is an asset management firm which was established in 2001 and has a proven track record of delivering results through a broad range of market environments.
- The senior investment professional team has remained intact since inception with a notably low turnover of senior investment professionals, resulting in a stable and integrated investment platform.
- This stability has been reinforced by a consistent and disciplined investment philosophy and process combining a macroeconomic overlay, fundamental research and an integrated risk-management framework.
- Guggenheim's culture is rooted in enduring values, personal integrity, dedication, responsibility and accountability. These principles guide us in the creation of bespoke and tailored solutions for our clients on the back of a proactive, disciplined risk management framework.
- As of March 31, 2017 Guggenheim Investments had approximately \$217 billion in total assets.

Guggenheim Investments total asset figure is as of 03/31/2017. The assets include leverage of \$11.7 billion for assets under management and \$0.4 billion for assets for which we provide administrative services. Guggenheim Investments represents the following affiliated investment management businesses: Guggenheim Partners Investment Management, LLC, Security Investors, LLC, Guggenheim Funds Investment Advisors, LLC, Guggenheim Funds Distributors, LLC, Guggenheim Real Estate, LLC, GS GAMMA Advisors, LLC, Guggenheim Partners Europe Limited and Guggenheim Partners India Management.

# **Guggenheim Investments**

- A culture of innovation and investment excellence rooted in the desire to solve our clients' complex challenges.
- A commitment to advancing the strategic interests of our clients and to delivering long-term results with excellence and integrity.
- 2,300 professionals based in more than 25 offices in six countries<sup>1</sup>.

Fixed Income	Equity	Alternatives							
Multi- and single-sector solutions provide advanced blueprints for the challenging fixed income environment	Strategies engineered to meet investors' different preferences for market exposures	Original strategies designed to deliver superior risk-adjusted returns							
Core / Core Plus	US Value	Opportunistic Corporate Credit							
Multi Credit	Large, Mid and Small Cap	Opportunistic Structured Credit							
ABS / RMBS / CMBS	Enhanced Equity	Multi-Asset							
High Yield	Minimum Volatility	Liquid Alternatives							
Bank Loans	Socially Responsible	Private Debt							
Municipals		Real Estate							
		Aviation							
\$161 billion	\$38 billion	\$18 billion							
	\$217 billion Total Assets								

Guggenheim Investments total asset figure is as of 03/31/2017. The assets include leverage of \$11.7 billion for assets under management and \$0.4 billion for assets for which we provide administrative services. <sup>1</sup>Total figures for Guggenheim Partners. Guggenheim Investments represents the following affiliated investment management businesses: Guggenheim Partners Investment Management, LLC, Security Investors, LLC, Guggenheim Funds Investment Advisors, LLC, Guggenheim Partners Europe Limited and Guggenheim Partners India Management.

### **Proven Investment Excellence**

	evestment ALLIANCE		
Market-Leading Strategies <sup>1</sup>	Manager Universe Ranking	Inception Date	U.S. INVESTMENT MANAGEMENT AWARDS
US Bank Loans	Top 1%	01/01/2003	
Opportunistic Credit	Top 1%	09/01/2006	
Core Fixed Income	Top 1%	01/01/1999	2015 Core Plus
Multi Credit	Тор 7%	10/01/2007	Fixed Income
High Yield	Top 11%	05/01/2009	Manager of the Year
Multi Asset	Top 16%	09/01/2007	

Creditflux							
2011	2012	2013	2014	2015	2016		
<ul> <li>Best US CLO Manager</li> <li>Best 2007 US CLO <i>Copper River</i></li> </ul>	<ul> <li>Manager of the Year</li> <li>Best boom-years US CLO (2006-2008) <i>Copper River</i></li> </ul>	<ul> <li>Best US CLO 2.0 5180</li> </ul>	<ul> <li>Best Seasoned US CLO <i>Copper River</i></li> <li>Best Seasoned Euro CLO <i>Iron Hill</i></li> </ul>	<ul> <li>Manager of the Year</li> </ul>	<ul> <li>Best US CLO Redeemed</li> <li>Copper River</li> </ul>		
			<ul> <li>Best Called CLO 1888</li> </ul>				

<sup>1</sup>Based on eVestment Alliance universe rankings since strategy inception as of 03/31/2017. Opportunistic Credit ranking is as of 02/28/2017.

Past performance should not be construed as a guarantee of and may not be indicative of future performance. Please see additional disclosures regarding the rankings at the end of the presentation.

# **Corporate Credit Total Assets**

Our unified investment team of more than 120 members has \$74.8 billion in corporate credit assets across separately managed accounts, private commingled funds, CLOs and other registered vehicles.

Total Corporate Credit Assets: \$74.8 billion <sup>1</sup>								
	Investment Grade Corporate <sup>2</sup> \$39.5 billion	High Yield Corporate \$11.7 billion	Bank Loans \$23.6 billion					
Separately Managed Accounts	\$32.3	\$6.1	\$6.6					
Private Commingled Funds	\$0.1	\$0.3	\$5.9					
Collateralized Loan Obligations	-	\$0.0	\$6.5					
Registered Vehicles <sup>3</sup>	\$7.1	\$5.3	\$4.5					

Data is as of 03/31/2017. <sup>1</sup>Passive Account Strategies within Corporate Credit include \$8.808 billion of passive account strategies including UITs, Corporate Bonds and HY Bond Bullet Shares. The "Asset Class" columns categorize the underlying securities in which our Accounts invest and they do not represent an investable strategy. This differs from "Account Strategy" which categorizes the overall strategy of an entire Account. Totals may not equal due to rounding. <sup>2</sup>Preferred Stock is included in the Investment Grade Corporate Asset Class. <sup>3</sup>Registered Vehicles include Exchange Traded Funds, Unit Investment Trusts, Mutual Funds, UCITS, Closed End Funds, Variable Insurance Trusts and other vehicles.



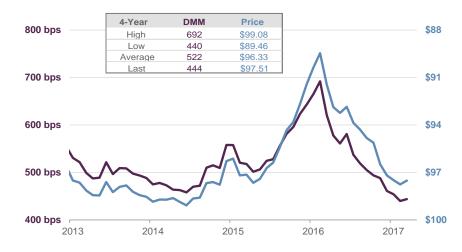
# Market Review and Outlook

### Bank Loan Market Recap March 2017

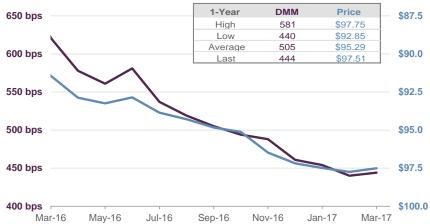
- The Credit Suisse Leveraged Loan Index posted a gain of 0.08 percent in March 2017. The average discount margin widened by 4 basis points to 444 basis points.
- Nearly \$60 billion of new institutional loans were issued in March, versus a trailing 12-month average of \$40 billion. Repricings and refinancing activity continue to represent the majority of new issuance by purpose.
- Bank loan funds continue to see strong consistent inflows. Year-to-date inflows stand at \$11.4 billion as of the end of March.

	12/30/2016		2/28	/2017	3/31/2017	
BENCHMARK INDICES	DMM	Price	DMM	Price	DMM	Price
Credit Suisse LL Index	461	\$97.18	440	\$97.75	444	\$97.51
Split BBB	228	\$100.60	234	\$100.58	232	\$100.44
ВВ	296	\$100.41	292	\$100.28	295	\$100.04
Split BB	364	\$100.28	358	\$100.31	350	\$100.18
В	480	\$98.12	455	\$98.70	456	\$98.57
CCC / Split CCC	1251	\$83.63	1139	\$85.95	907	\$90.35

### CS LL Index Discount Margin / Price (Inverted) Snapshot (4-Year View)



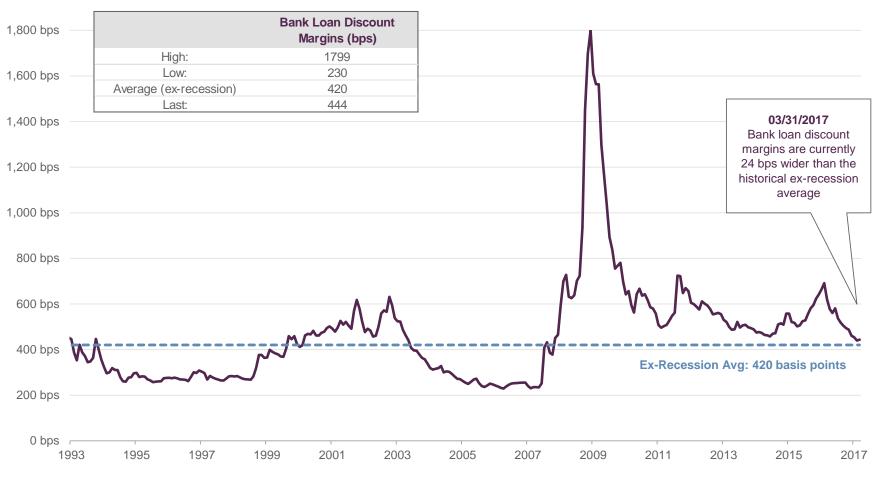
### CS LL Index Discount Margin / Price (Inverted) Snapshot (1-Year View)



Source: BofA Merrill Lynch, Lipper, Bloomberg, Credit Suisse, S&P LCD. Data is as of 03/31/2017. Institutional loan primary issuance includes U.S.-dollar denominated non-investment grade fully-drawn institutional term loans (TLBs, TLCs, TLDs), but excludes revolvers and term-loan As, which are typically retained by banks. Past performance is no guarantee of future results.

## Bank Loan Discount Margins Near their Historical Ex-Recession Average

Credit Suisse Leveraged Loan Index Discount Margin vs. Ex-Recession Average



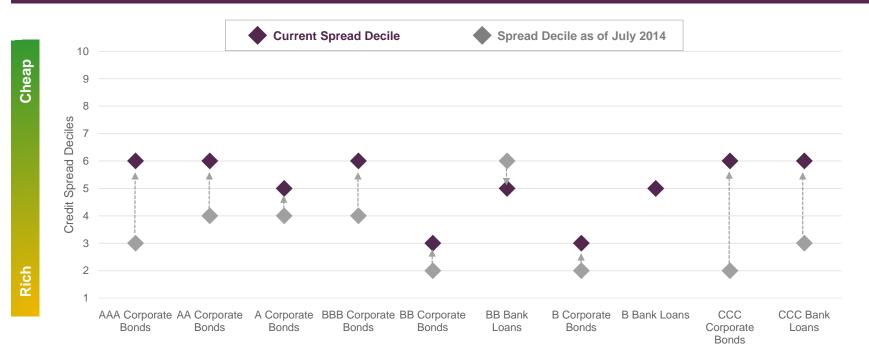
Source: Credit Suisse. Data is as of 03/31/2017.

### GUGGENHEIM

# Measuring Value in Corporate Bond and Bank Loan Markets

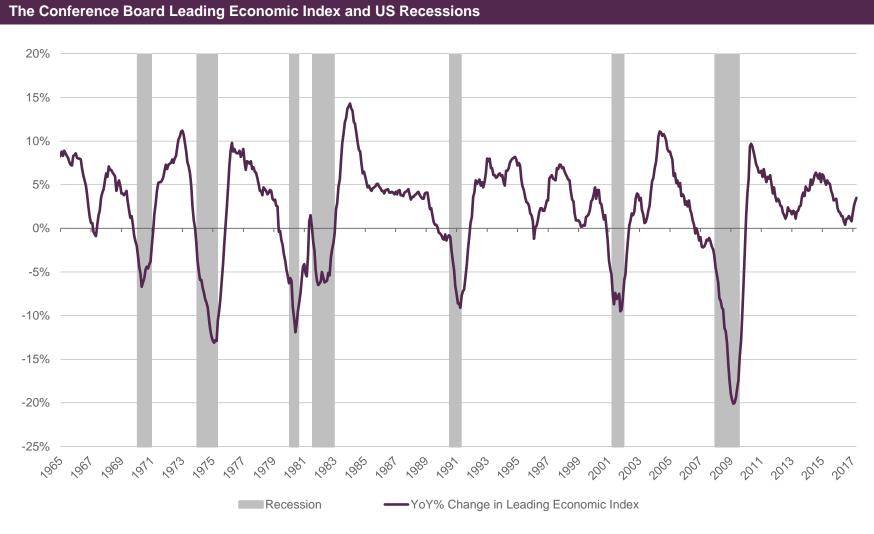
- Bond spreads and loan discount margins tightened significantly in the second half of 2016.
- Our internal analysis suggests higher quality high-yield corporate bond spreads and bank loan discount margins are in their 3<sup>rd</sup> 6<sup>th</sup> deciles whereas CCC-rated bonds and loans are in their 6<sup>th</sup> percentiles, respectively. The 10<sup>th</sup> decile represents the widest spreads on record.
- We maintain a constructive outlook on credit, but our analysis suggests that BB-rated and B-rated high-yield corporate bonds are rich versus historical levels.

### Current Spread Deciles, Corporate Bond and Bank Loans, by Rating



Source: Credit Suisse, Guggenheim Investments. Data is as of 03/31/2017. Index Legend: Bloomberg Barclays US Corporate Index (AAA, AA, A, and BBB subsets), Credit Suisse High Yield Bond Index (BB, B, and CCC subsets), Credit Suisse Leveraged Loan Index (BB, B and CCC subsets).

### Leading Indicators Suggest No US Recession Ahead

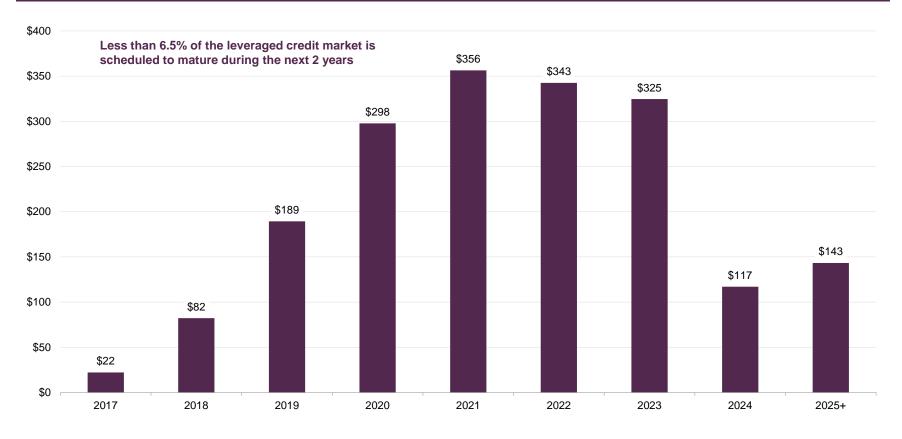


Source: Bloomberg, Guggenheim Investments. Data is as of 03/31/2017.

# Lack of Upcoming Maturities Eases Credit Concerns

The wave of refinancing immediately following the end of the financial crisis initially pushed the maturity wall to 2018, and recent high refinancing activity has pushed it out even further. Less than 6.5 percent of high yield bonds and bank loans are expected to mature over the next two years. This alleviates concerns that defaults could rise as a result of an inability for borrowers to repay maturing principal.

### Value of Maturing High Yield Bonds and Bank Loans, by Year



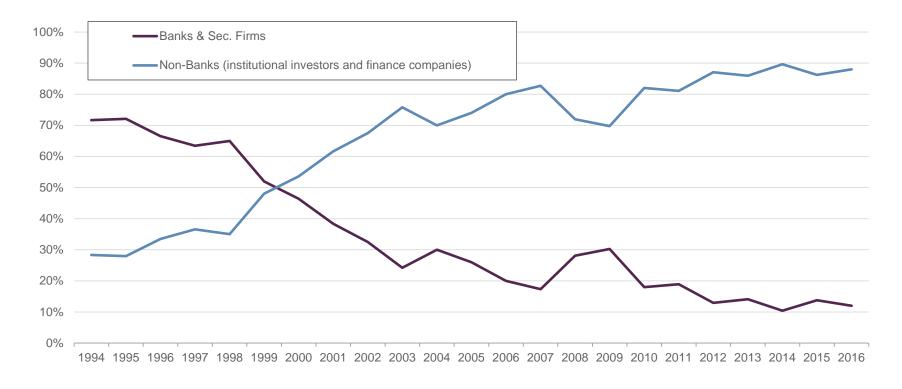
Source: Credit Suisse. Data is as of 03/31/2017.

### GUGGENHEIM

# **Declining Bank Participation in Bank Loans**

Bank participation in primary market for loans fell sharply in the fourth quarter of 2016, reversing the uptick seen in the first part of 2016, on the back of increased CLO volume and strong fund flows into loan mutual funds. We believe the longer-term downtrend of bank participation remains intact; bank participation will remain limited as a result of regulatory changes and declining bond and loan covenants.

### Primary Market for Bank Loans, Banks vs. Non-Banks



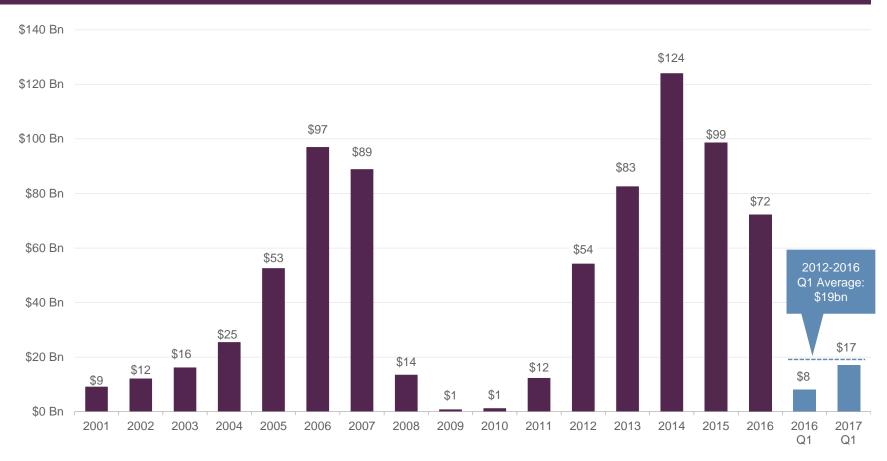
Source: S&P LCD. Data as of 12/31/2016.

### GUGGENHEIM

# 2014 Was the Highest US CLO Volume on Record

Coupled with recent strong inflows to loan mutual funds, CLO formation—which totaled \$124 billion in 2014, the highest on record—continues to be a primary source of bank loan demand.

### US CLO Annual Volume, \$billion



Source: S&P LCD. Data as of 03/31/2017.

### GUGGENHEIM

# Credit Cycle Metrics: Today versus Pre-Crisis Peaks

- Deteriorating covenant quality continues to be among the most widely discussed trends in leveraged credit.
- The prominence of covenant-lite loans, increased M&A and LBO-driven activity, and increased leverage multiples have evoked memories of 2006- and 2007-like excesses.
- While several of today's credit cycle drivers are concerning, we believe we are only beginning to enter the speculative phase of the current cycle.

### **Credit Cycle Drivers**

New Issuance	Historical Average	2006	2007	2013	2014	2015	2016 YTD
M&A / LBO as % of Total Loan Issuance	42%	56%	62%	32%	48%	61%	51%
Refinancings as a % of Total Issuance	38%	22%	21%	47%	32%	26%	37%
Dividend Deals as % of Total Loan Issuance	6%	7%	7%	9%	9%	7%	7%
Covenant-Lite as % of Total Loan Issuance	22%	8%	29%	57%	63%	69%	59%
PIK Toggle as % of Total High Yield Bond Issuance	3%	1%	3%	1%	1%	0%	0%
Leveraged Buyout Activity (LBO)							
Purchase Price Multiples	8.0x	8.1x	9.3x	8.8x	9.6x	10.7x	9.9x
Equity Contribution as % of Financing	39%	34%	32%	46%	40%	45%	45%
LBO Leverage (Debt/EBITDA)	4.9x	4.7x	5.8x	4.6x	5.3x	5.3x	4.9x
LBO EBITDA / Cash Interest	3.0x	2.5x	2.1x	3.3x	3.4x	3.1x	2.6x

Near worst levels<sup>1</sup>

Worse than average

Better than historical average

Source: BofA Merrill Lynch, S&P LCD, Barclays. Data as 11/30/2016. <sup>1</sup>Historical averages range depending on metric data availability. Near worst levels indicates a metric worse than 1 standard deviation from its historical average. Worse than average indicates a metric level between 1 standard deviation and its historical average.

## Identifying Market Segments Where Investors Can Create Value

Smaller debt tranches have offered significant yield pickup in high yield bonds and bank loans over similarly-rated, larger debt tranches. In select transactions, investors have the ability to drive deal terms, an opportunity generally not available in larger debt tranche offerings.

### **Bloomberg Barclays Corporate High Yield Index**

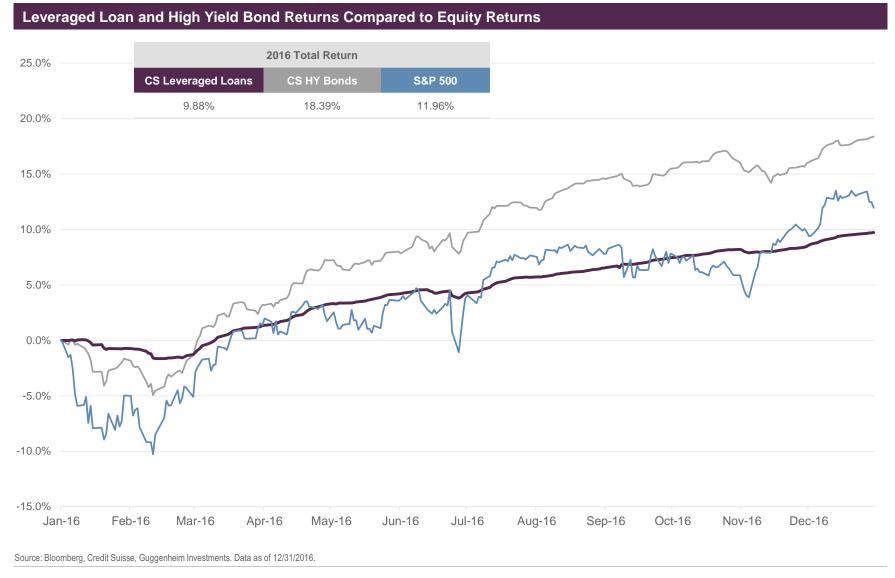
Size (\$million)	Average Rating	Yield to Worst	Market Weight
<300	B3	6.46%	5.28%
300-400	B2	5.94%	9.63%
400-500	B2	5.85%	9.65%
500-750	B1	5.50%	23.94%
750-1000	B1	5.52%	13.23%
>=1000	B1	5.38%	38.28%

### Credit Suisse Leveraged Loan Index

Size (\$million)	Average Rating	Discount Margin to Maturity	Market Weight
<300	В3	746	8.95%
300-400	B2	544	7.93%
400-500	B2	530	6.49%
500-750	B1	467	14.30%
750-1000	Ba3	387	8.46%
>=1000	Ba3	392	53.86%

Source: Data is as of 03/31/2017. Bloomberg Barclays Corporate High Yield Index excludes bonds trading at a price below 80.

# Leveraged Loans Provide Steady Returns Amid Turbulent Markets



### GUGGENHEIM



# Investment Philosophy, Team and Process

# **Investment Philosophy**

Guggenheim's investment philosophy, the fundamental building block of the firm, has remained stable and constant since we started managing corporate credit assets and has been instilled throughout the organization. Our investment philosophy permeates all asset classes within corporate credit and it is built upon six key beliefs:

- We believe that the corporate credit markets are inefficient and that there are ample opportunities in any given market environment to reveal securities whose price is not reflective of their intrinsic value and credit risk profile.
- We believe in a forward looking and disciplined approach to risk management relying on the oversight of multiple layers of control across the firm. Guggenheim aims to achieve downside protection through a proactive approach across every step of the investment process ensuring that portfolios are always optimally positioned to achieve their goals.
- We believe in a rigorous and extensive research process that encompasses a comprehensive review of macro, industry and company fundamentals to reveal attractive investment opportunities in the corporate credit market. Our research team, with over 50 research analysts, is organized by industry verticals with each industry overseen by an experienced and knowledgeable senior analyst.
- We believe that the inclusion of legal credit lawyers in the investment process is a necessity as the documentation associated with corporate credit securities is complex and the terms and covenants must be fully understood and assessed.
- We believe that building and nurturing strong relationships with investment banks and broker-dealers and leveraging our reputation as a serious, anchor investor provide our analysts with early looks into deals which provides us with an edge in researching the issuing companies and negotiating favorable allocation, pricing and deal terms.
- We believe that establishing contact with issuers' senior management is critical to obtaining valuable information that can affect our view on the company's strategy, operations and capital structure. When we combine these factors with our intricate proprietary research models across companies in the same industry, we are able to effectively assess the relative value of these companies and establish a degree of conviction about each potential investment.

# Guggenheim Corporate Credit Differentiators

## **Unified Platform**

Integrated investment team responsible for all corporate credit strategies

Analysts organized by industry and focus on entire capital structure, spanning large cap investment grade debt to middle market high yield

Seek to uncover relative value opportunities

\$74.8 billion credit platform provides influence with primary dealers

Core team has worked together for more than 10 years

## **Deep Resources**

Over 120 member corporate credit investment team is one of the largest in the industry

Expertise across wide range of industries, including our Houston-based analysts focused on E&P opportunities

Dedicated European credit team

Extensive legal resources enable deeper due diligence and negotiation

Broad relationships with management teams, financial sponsors and capital markets professionals create pipeline of unique investment opportunities

## **Deal Structuring Expertise**

Upper middle-market and private debt expertise enables research- and negotiation-intensive approach across investments

Negotiate better economic terms and structural protections

\$9.3 billion in private debt originated since 2002

Deep understanding of underfollowed companies and complex capital structures creates opportunities to drive better investment outcomes

Seek to generate higher yield without taking undue credit risk

Data is as of 03/31/2017. Past performance may not be indicative of future results

# Corporate Credit Investment Team

		Sco	ott Minerd, Chairman of	Investments and Globa				
			Investmen	t Committee				
Jeffrey AbramsKevin Gundersen,Sr. Managing DirectorSr. Managing Director				y Warren jing Director	Thomas Hauser Sr. Managing Director	Matthew Bloom Sr. Managing Director		
Indus	stry and Credit Researc	:h	Origination	Portfolio Management	Trading	Capital Markets		
Matthew Bloom Head of Research	Alastair McKe Team Leader	eever			rigination Kevin Gundersen, CFA John Walsh			
Industries & Analysts Auto, Consumer, Food Gaming & Services Dan Montegari	I, Energy, Powe Peter Guetig Paul Kiernan	r & Chemicals	Los Angeles Russell Parks Tyler Fenelon Edward Sohn	<ul> <li>Zachary Warren</li> <li>Thomas Hauser</li> <li>Richard de Wet</li> <li>Brian DePaulo, CFA</li> <li>Ravi Tamboli</li> </ul>	Stephen Shugart, CFA Peter Sanders Chris Keywork Michael Yoxthimer Michael Baine	Gina Hubbell Karen Gartenberg Bo Wang		
Murphy McCurdy Stephen Marchica Leo Kang	ephen Marchica Sara Desberg	New York Fraser Owen-Smith David Richman	Inv Grade & Privates Jeffrey Carefoot, CFA Kelechi Ogbunamiri	Inichael Baine Inv Grade & Privates Justin Takata Jared Drucker	Stressed / Distressed Credi Christopher Boyle Zeeshan Mirza			
Packaging & Building Products	Industrials & Taylor Barrise	•	Chelsea Aharon Brian Seidman <b>Houston</b>	Relectii Ogbunannin	T.J. Flanagan III	Michael Dussinger Adam Tomar		
Alexander Thomas, CFA Kendall Kyritz	Brian Safstrom		Michael Beman Perry Cunningham			Product Specialists		
Technology & Telecon Peter Kelley	n Healthcare & I Matt Bristol	Education	London Tara Moore			Shawn Bookin Scott Kanouse		
Franklin Reis	Andrew Hilbold	lt, CFA	Special Situations		European Credit <sup>1</sup>			
<b>Media &amp; Retail</b> Craig Jatlow Phil McCauley Kara Shoemaker	Marc Cohen, C	Marc Cohen, CFA Matt Brian Fuller, CFA		Marc Cohen, CFA Matt Settle Brian Fuller, CFA		Adrian Duffy Darragh Mahony Colm O'Donnell Karl Strecker, CFA	Liam Murphy, CFA Myles O'Shaughnessy Paul Brennan Rahul Dewan	Rory Twomey, CFA Danny Dillon Reuben Whelan Sean Healy India Ellis
					Legal			
Junior Analysts Sam Bush Rebecca Curran Cody Dussault Jainif Marediya Branden Morin	Meredith Ott Frank Neill Matthew Netto Haoshi Cheng Alexander Kaminetzky	Evan Cummins Sachin Golvankar Neelraj Jadeja Maulik Shah	Piyush Shukla Gaurav Maheshwari Bhavesh Nath Rushabh Shah	General Counsel Kevin Robinson <i>Team Leaders</i> Julio Quintero John Mulreaney	Sally Acevedo Justin Carroll Oliver Iselin Leo Mensah Timothy Archer Joseph Brandmeyer Mark Connolly	Adam Fassnacht Hayes Schildwachter Owen Alberti Courtney Rosenthal Dylan Glazier Adam Tate Alejandro Galindo		

Data is as of 04/26/2017. Bolded names represent personnel in management positions. <sup>1</sup>Employees of Guggenheim Partners Europe Limited, an affiliate of Guggenheim Partners Investment Management, LLC.

GUGGENHEIM

Please see disclosures and legal notice at end of document. 22

# Investment Team – Objectives and Resources

We believe that rigorous credit research, deep industry expertise and valuation conviction are critical to identifying superior investment opportunities and managing downside risk.

Core Belief	Action
Properly pricing risk and assessing value is a complex process	Employ extensive resources to analyze companies and capital structures in their entirety Regularly meet with a company's competitors, suppliers and customers in order to get a complete view of the company and its position within its industry
Portfolios should be driven by best investment opportunities, not a benchmark	Source investment opportunities from a broad universe Construct well-diversified portfolios that are typically much less exposed to the top issuers in the benchmark
Underfollowed companies can be compelling investment opportunities	Maintain a proprietary database of more than 1,000 companies Leverage Guggenheim's extensive corporate credit platform to seek to uncover value in companies that are often overlooked by other investors
Legal nuances can determine an investment's success or failure	Large in-house legal team plays active role in structuring transactions, covenant analysis and reviewing credit agreements
Proactive relative value decisions contribute to outperformance	Position portfolios to reflect Guggenheim's macro views and relative value analysis Constantly monitor portfolio allocations Seek to ensure individual portfolio holdings remain in line with our original research conclusions

# **Investment Process**



# Identifying Best Opportunities through Rigorous Security Research

## **Security Research**

### **Idea Generation**

Proactive networking with industry participants, banks and management teams Leverage deep industry relationships Resources to screen new issues and secondary relative-value ideas

### **Industry Analysis**

Assess security and industry liquidity Discussion with private equity sponsors, other management teams, and industry experts Engage with competitors, suppliers, servicers, and customers

### **Credit Research**

Unique access to senior management of debt issuers Analyze the full capital structure Consistent and rigorous approach to credit research

### **Covenants and Legal Research**

Dedicated lawyers responsible for legal analysis of terms and covenant protection Embedded in the investment process Allows Guggenheim to negotiate for favorable terms

### **Research Output**

Credit conclusions & recommendations Risk and sensitivity analysis Covenants summary

# Security Evaluation and Approval

		Consiste	nt Process					
Formal meetings every Monday	Review and debate formal credit recommendations	Debate issues, credit worthiness, and risk and return characteristics	ss, and risk and		Budget risk across portfolios			
		Daily <i>i</i>	Activity					
Monday	Т	iesday We	dnesday	Thursday	Friday			
Meeting reviews	: •	Daily 8 a.m. meeting to review announcements and coordinate activities						
Economic Overv		Meet in	vestors and management	t teams				
Corporate Credit Commentary	t		-					
Portfolio Attribut	tion		- Attend conferences -		•			
Private Deal Pipe Credit Reviews	e Deal Pipeline							
Deal Discussion	Portfolio review							
"Real-time" monitoring of news and information								

Consistent Process						
Weekly Announcement report	<b>Monthly</b> Systematic review of positions and weights	Quarterly Performance and attribution review				
Watch list Fund packages	Review of each portfolio	Strategy update and review				

# **Risk Management**

Risk management is a primary focus throughout our entire investment process. We utilize qualitative and quantitative tools<sup>1</sup> to understand portfolio risks and opportunities. Our approach allows us to efficiently centralize and share information across all of our teams.

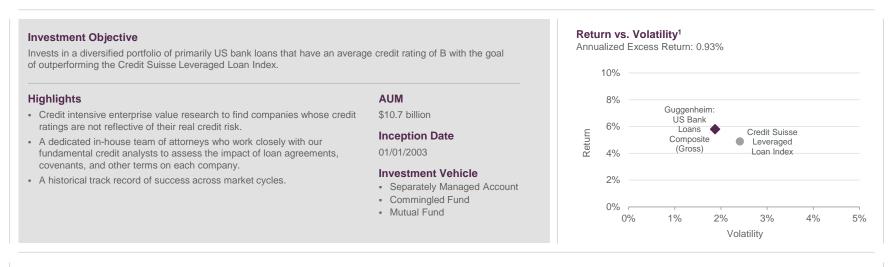
Investment		<b>Operational 8</b>	Compliance
Credit Analysis	Due diligence on each company focuses on the risk related to the investment from cash flow, seniority of payments, covenants, etc.	Trade Settlement	Confirms trades with executing broker and enters trades in portfolio management system.
Legal Analysis	Detailed review of all relevant credit and operating documentation where appropriate.	Custodian Reconciliation	Automated tool used with each client's custodian to capture position and transaction breaks. Any breaks are monitored until cleared and comments are maintained in report.
Investment Committee	Debates issues presented by analysts related to credit worthiness and risk/reward characteristics. This process is highly iterative. We typically discuss investments 4-6x before taking action.	Operations	Responsibilities include: account setup, portfolio monitoring, security setup & pricing, broker monitoring, trade support & settlement, corporate actions, reconciliations, performance reporting, billing & certain
Portfolio Managers	Evaluate each security individually, comparing risk/reward characteristics against individual client guidelines. Credit, liquidity, event & compliance risks are factored into each investment decision.	Legal/ Compliance	administrative functions. Legal and compliance support for our Investment Management and Operations Services.
Chief Investment Officer	Ultimate responsibility for all portfolios, overseeing all risk and performance characteristics.		

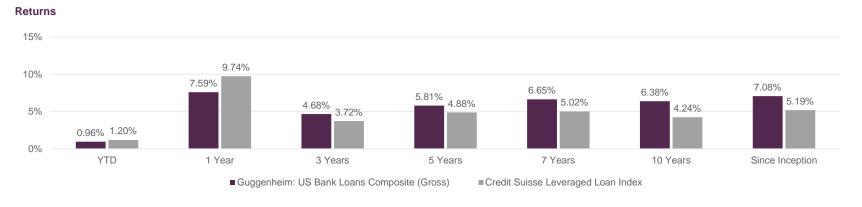
<sup>1</sup>Quantitative tools used: BlackRock Solutions®, BondEdge®, Bloomberg and Yield Book.



# Portfolio Characteristics and Investment Results

# US Bank Loans Composite Performance As of 03/31/2017





Composite performance data as of 03/31/2017 is preliminary. Actual results may vary from the preliminary results shown. <sup>1</sup>Return vs. Volatility is calculated using the shorter period of inception to date and the previous five years. Past performance does not guarantee future returns. The value of any investment may rise or fall over time. Principal is not guaranteed, and investors may receive less than the full amount of principal invested at the time of redemption if asset values have declined. Individual account performance may be greater than or less than the performance presented for this composite. Gross-of-fee ("Gross") returns are presented net of non-reclaimable foreign withholding taxes applicable to US investors and includes the reinvestment of income. Gross returns do not reflect the impact of advisory fees. Performance numbers for time periods greater than one year are annualized. All performance is expressed in US dollars. For comparison purposes the US Bank Loans Composite is measured against the Credit Suisse Leveraged Loan. Source: Credit Suisse Website.

# US Bank Loans Composite: Monthly Return History

	Jan	Feb	Mar	Apr	Мау	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
2003	1.00%	0.67%	0.51%	1.07%	0.94%	0.87%	0.80%	0.68%	0.88%	0.95%	0.73%	0.58%	10.12%
2004	0.82%	0.59%	0.62%	0.58%	0.35%	0.70%	0.68%	0.27%	0.62%	0.70%	0.62%	0.76%	7.56%
2005	0.54%	0.65%	0.47%	0.41%	0.44%	0.78%	0.80%	0.73%	0.44%	0.57%	0.66%	0.65%	7.36%
2006	0.88%	0.71%	0.72%	0.66%	0.72%	0.68%	0.77%	0.85%	0.72%	0.71%	0.57%	0.85%	9.22%
2007	0.95%	0.97%	0.80%	0.35%	1.08%	0.55%	-1.64%	-0.42%	1.72%	1.00%	-0.37%	0.39%	5.46%
2008	-1.45%	-1.86%	-0.15%	1.42%	0.96%	0.67%	-0.18%	0.27%	-2.65%	-10.54%	-4.96%	-4.27%	-21.05%
2009	3.01%	0.60%	1.04%	6.94%	4.78%	4.38%	3.39%	1.32%	3.48%	2.24%	0.07%	2.49%	39.18%
2010	2.62%	0.35%	1.88%	1.68%	-0.90%	0.09%	1.26%	0.47%	1.46%	1.77%	0.90%	1.85%	14.24%
2011	1.59%	0.75%	0.49%	0.69%	0.21%	-0.18%	0.50%	-3.05%	0.08%	2.89%	-0.20%	0.49%	4.23%
2012	2.11%	1.24%	0.84%	0.92%	-0.47%	0.71%	0.95%	0.94%	1.12%	0.68%	0.53%	0.73%	10.79%
2013	1.25%	0.46%	0.91%	0.68%	0.20%	-0.26%	1.09%	0.42%	0.36%	0.83%	0.55%	0.58%	7.30%
2014	0.64%	0.38%	0.37%	0.19%	0.53%	0.54%	0.08%	0.38%	-0.23%	0.54%	0.56%	-0.53%	3.50%
2015	0.39%	1.29%	0.60%	0.76%	0.31%	0.07%	0.42%	-0.25%	-0.05%	0.05%	-0.54%	-0.33%	2.74%
2016	-0.27%	-0.53%	2.47%	1.32%	0.70%	-0.03%	1.38%	0.55%	0.73%	0.51%	0.35%	0.89%	8.33%
2017	0.24%	0.48%	0.24%										0.96%

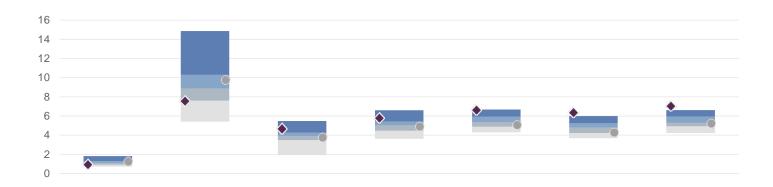
#### **Credit Suisse Leveraged Loan Index**

	g												
	Jan	Feb	Mar	Apr	Мау	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
2003	1.35%	0.52%	0.32%	1.41%	1.34%	1.41%	0.68%	0.21%	1.00%	0.90%	0.73%	0.62%	11.01%
2004	1.04%	0.31%	0.41%	0.46%	0.22%	0.64%	0.34%	0.16%	0.38%	0.50%	0.55%	0.46%	5.60%
2005	0.52%	0.58%	0.51%	0.08%	0.08%	0.67%	0.78%	0.70%	0.47%	0.32%	0.33%	0.50%	5.69%
2006	0.66%	0.70%	0.74%	0.48%	0.39%	0.41%	0.52%	0.68%	0.54%	0.68%	0.54%	0.77%	7.33%
2007	0.84%	0.74%	0.48%	0.55%	0.63%	0.31%	-3.32%	0.25%	1.59%	0.77%	-1.20%	0.30%	1.88%
2008	-3.10%	-2.39%	-0.35%	3.31%	0.74%	0.15%	-0.97%	-0.06%	-4.93%	-13.03%	-7.89%	-3.78%	-28.75
2009	5.78%	0.35%	0.96%	8.01%	5.70%	3.88%	4.15%	2.23%	3.29%	0.65%	0.29%	2.68%	44.87
2010	1.81%	0.32%	2.16%	1.28%	-2.06%	-0.24%	1.43%	0.36%	1.28%	1.46%	0.48%	1.33%	9.979
2011	1.96%	0.53%	0.14%	0.60%	0.06%	-0.33%	0.16%	-4.16%	0.25%	2.59%	-0.38%	0.51%	1.829
2012	2.00%	0.74%	0.70%	0.78%	-0.51%	0.74%	0.97%	1.05%	1.08%	0.37%	0.40%	0.73%	9.439
2013	1.12%	0.39%	0.85%	0.75%	0.23%	-0.55%	1.07%	0.04%	0.29%	0.80%	0.48%	0.53%	6.15
2014	0.71%	0.22%	0.37%	0.23%	0.61%	0.60%	-0.04%	0.23%	-0.52%	0.29%	0.46%	-1.10%	2.06
2015	0.26%	1.41%	0.39%	0.90%	0.20%	-0.31%	0.09%	-0.65%	-0.67%	-0.14%	-0.89%	-0.95%	-0.389
2016	-0.73%	-0.56%	2.64%	1.90%	0.91%	0.03%	1.41%	0.79%	0.87%	0.77%	0.32%	1.15%	9.88
2017	0.53%	0.59%	0.08%										1.20

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# US Bank Loans Composite: Manager Universe Comparison

## Universe: eVestment Alliance US Floating-Rate Bank Loan Fixed Income (Returns %) As of 03/31/2017

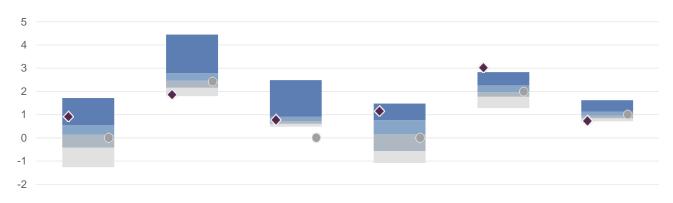


	YTD (%)	1-Year (%)	3-Years (%)	5-Years (%)	7-Years (%)	10-Years (%)	ITD (%) 01/01/2003
<ul> <li>Guggenheim: US Bank Loans Composite (Gross)</li> </ul>	0.96	7.59	4.68	5.81	6.65	6.38	7.08
Percentile Rankings	64	75	13	13	7	3	1
<ul> <li>Index: Credit Suisse Leveraged Loan</li> </ul>	1.20	9.74	3.72	4.88	5.02	4.24	5.19
5th percentile	1.81	14.86	5.48	6.60	6.68	6.00	6.61
25th percentile	1.30	10.29	4.25	5.43	5.95	5.23	5.93
Median	1.10	8.85	3.88	5.02	5.34	4.78	5.28
75th percentile	0.92	7.60	3.48	4.46	4.88	4.23	4.93
95th percentile	0.72	5.42	1.92	3.62	4.30	3.68	4.22
# of Observations	82	82	82	66	53	33	14

Composite performance data as of 03/31/2017 is preliminary. Actual results may vary from the preliminary results shown. Source: Credit Suisse Website, eVestment Alliance. Past performance should not be construed as a guarantee of future performance. Performance numbers for time periods greater than one year are annualized. The peer universe chart displays annualized statistics for the composite's gross performance and the indicated index for the indicated time period and the percentile in which those returns fall within the indicated eVestment Alliance universe (the "Universe"). From top to bottom, each shaded box represents 5th to 25th, 25th to 50th, 50th to 75th and 75th to 95th percentiles of the peer universe respectively. This information is supplemental information only and complements the composite performance presentation and accompanying notes at the end of this presentation. Data taken from eVestment Alliance on 04/20/2017.

# US Bank Loans Composite Risk Statistics: Manager Universe Comparison





	Excess Return (%)	Standard Deviation (%)	Tracking Error (%)	Information Ratio <sup>1</sup>	Sharpe Ratio <sup>2</sup>	Beta <sup>3</sup>
<ul> <li>Guggenheim: US Bank Loans Composite (Gross)</li> </ul>	0.93	1.87	0.79	1.17	3.05	0.75
Percentile Ranking	13	91	38	13	2	91
Index: Credit Suisse Leveraged Loan	0.00	2.41	0.00		1.99	1.00
5th percentile	1.71	4.45	2.49	1.48	2.83	1.62
25th percentile	0.55	2.79	0.91	0.76	2.26	1.13
Median	0.14	2.46	0.72	0.15	1.97	0.96
75th percentile	-0.42	2.16	0.61	-0.56	1.77	0.85
95th percentile	-1.26	1.80	0.48	-1.08	1.29	0.71
# of Observations	66	66	66	66	66	66

Composite performance data as of 03/31/2017 is preliminary. Actual results may vary from the preliminary results shown. <sup>1</sup>Against Credit Suisse Leveraged Loan. Information Ratio (IR) is a measure of the value added per unit of active risk taken by a manager over an index. A positive IR indicates "efficient" use of risk. <sup>2</sup>Against USGG1M, Sharpe Ratio is the measurement of efficiency between annualized risk-free return and standard deviation. The higher the Sharpe Ratio, the greater the efficiency produced by the manager. <sup>3</sup>Against Credit Suisse Leveraged Loan Index. Beta is the measure of a portfolio's volatility. A beta of 1 implies perfect historical correlation of movement with the market. Source: Credit Suisse Website, eVestment Alliance. Past performance does not guarantee future returns. The value of any investment may rise or fall over time. Principal is not guaranteed, and investors may receive less than the full amount of principal invested at the time of redemption if asset values have declined. Individual account performance may be greater than or less than the performance presented for this composite. Gross-of-fee ("Gross") returns are presented net of non-reclaimable foreign withhold parts applicable to US investors and includes the reinvestment of income. Gross returns do not reflect the impact of advisory fees. Performance numbers for time periods greater than one year are annualized. All performance is expressed in US dollars. For comparison purposes the US Bank Loans Composite is measured against the Credit Suisse Leveraged Loan Index. This information is supplemental to the composite performance. Data taken from eVestment Alliance on 04/20/2017.

# US Bank Loans Composite Characteristics

### **Characteristics**

	US Bank Loans Composite	Credit Suisse Leveraged Loan Index
Effective Duration	0.15 years	0.16 years
Average Coupon	4.56%	5.01%
Average Market Price	\$99.60	\$98.90
Average YTM	4.93%	5.70%
Average YTW	2.60%	2.74%
Average Credit Quality <sup>2</sup>	BB-	В
Weighted Average Life	4.62 years	4.62 years
No. of Issuers	209	1174

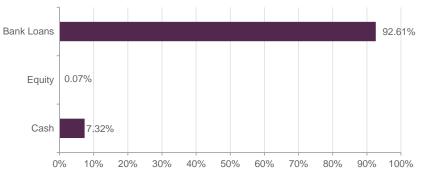
## Performance & Risk Analysis (Since Inception)

	US Bank Loans Composite (Gross)	Credit Suisse Leveraged Loan Index
Annualized Return	7.08%	5.19%
Excess Return	1.89%	-
Standard Deviation	5.11%	6.43%
Correlation	0.97	1
Information Ratio	0.97	-
Sharpe Ratio	1.16	0.63

## Industry Allocation

Guggenheim         Index           Banking         0.00%         0.33           Basic Industry         1.98%         4.93           Brokerage         1.07%         0.33           Capital Goods         11.14%         8.51           Communications         8.94%         13.57           Consumer Cyclical         21.16%         19.93           Consumer Non Cyclical         18.65%         20.10           Electric         3.86%         1.52           Energy         0.17%         3.59           Finance Companies         2.62%         1.92           Insurance         2.57%         1.25           Other Financials         1.90%         3.41           Technology         14.42%         12.32           Transportation         0.83%         2.83           Cash         7.32%         0.00           Other <sup>3</sup> 0.57%         3.61	3%
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### Sector Allocation



Data is as of 03/31/2017. Composite performance data is preliminary. Actual results may vary from the preliminary results shown. Source: Guggenheim Investments. <sup>1</sup>Average price includes defaults. <sup>2</sup>See Disclosures at end of document for Credit Rating Methodology. <sup>3</sup>Others include Energy, Natural Gas, Non-Corporate-Other, Utility-Other. Characteristics are based on the representative account of the US Bank Loans Composite and includes cash. Performance and risk analysis are shown since inception of the composite (01/01/2003). The representative account was chosen since, in our view, it is the account within the composite which most closely reflects the portfolio management style of the composite. Totals may not equal 100% due to rounding. Please note the primary benchmark for the composite is the CS Leveraged Loan Index. Periods greater than one year are annualized. Past performance is not indicative of future results. This information is supplemental information only and complements the composite performance presentation and accompanying notes at the end of this presentation.



### **Senior Management**

#### **B. Scott Minerd**

Managing Partner, Chairman of Guggenheim Investments and Global Chief Investment Officer

As Chairman of Guggenheim Investments and Global Chief Investment Officer, Mr. Minerd guides the Firm's investment strategies and leads its research on global macroeconomics. Previously, Mr. Minerd was a Managing Director with Credit Suisse First Boston in charge of trading and risk management for the Fixed Income Credit Trading Group. In this position, he was responsible for the corporate bond, preferred stock, money markets, US government agency and sovereign debt, derivatives securities, structured debt and interest rate swaps trading business units. Prior to that, Mr. Minerd was Morgan Stanley's London based European Capital Markets Products Trading and Risk Manager responsible for Eurobonds, Euro-MTNs, domestic European Bonds, FRNs, derivative securities and money market products in 12 European currencies and Asian markets. Mr. Minerd has also held capital markets positions with Merrill Lynch and Continental Bank. Prior to that, he was a Certified Public Accountant and worked for the public accounting firm of Price Waterhouse. Mr. Minerd is a member of the Federal Reserve Bank of New York's Investor Advisory Committee on Financial Markets, helping advise the NY Fed President about financial market developments, risks to the financial system and steps that can be taken to understand and mitigate these risks. Mr. Minerd is an advisor to the Organization for Economic Cooperation and Development (OECD) on long-term investments and is a contributing member of the World Economic Forum (WEF) and their Global Agenda Council on the Arctic. He is a regularly featured guest and contributor to leading financial media outlets, including The Wall Street Journal, The Financial Times, Bloomberg, and CNBC where he shares insights on today's financial climate. Mr. Minerd holds a B.S. degree in Economics from the Wharton School, University of Pennsylvania, Philadelphia, and has completed graduate work at the University of Chicago Graduate School of Business and the Wharton School, University of Pennsylvania.

Corporate Credit Investment	Committee
<b>Jeffrey Abrams</b> Senior Managing Director, Portfolio Manager	Mr. Abrams is a Senior Managing Director and portfolio manager in Guggenheim's Corporate Credit Group. He is a member of the Investment Committee overseeing Guggenheim's corporate credit investing activities, and has been with Guggenheim Partners since 2002. Mr. Abrams' prior roles at Guggenheim include covering the retail and consumer sectors as a senior analyst. He led an industry team focused on investing across the leveraged credit markets in a number of industries including financial institutions, retail, food and beverage and consumer products. Mr. Abrams has also focused on sourcing and structuring directly negotiated middle market debt investments. Prior to joining Guggenheim, Mr. Abrams worked in the Leveraged Finance Group at Bear Stearns where he focused on various leveraged debt transactions across multiple industries. Mr. Abrams received his B.A. in History and a BBA in Finance from Emory University.
Kevin H. Gundersen, CFA Senior Managing Director, Portfolio Manager	Mr. Gundersen is a Senior Managing Director and portfolio manager in Guggenheim's Corporate Credit Group. He is a member of the Investment Committee overseeing Guggenheim's corporate credit investing activities, and has been with Guggenheim Partners since 2002. He has over a decade of experience in the high yield and leverage loan asset class. During his career at the firm, Mr. Gundersen has been an analyst covering a variety of sectors, and subsequently led an industry team that focused on investing across the capital structure in the media, telecommunications and technology sectors. In addition, in his capacity as a senior analyst and as a team leader, Mr. Gundersen has sourced and structured directly negotiated middle market debt investments. Prior to joining Guggenheim, Mr. Gundersen worked at GeoTrust, a technology company focused on eCommerce security solutions. Mr. Gundersen received his A.B. from Harvard University. He has earned the right to use the Chartered Financial Analyst® designation and is a member of the CFA Institute.
Zach Warren Senior Managing Director, Portfolio Manager	Mr. Warren is a Senior Managing Director and portfolio manager in Guggenheim's Corporate Credit Group. He is a member of the Investment Committee overseeing Guggenheim's corporate credit investing activities, and has been with Guggenheim Partners since 2004. Mr. Warren has been heavily involved in the growth of Guggenheim's Corporate Credit business. Mr. Warren's prior roles at Guggenheim include leading a credit team which invested in syndicated bank loans, high yield bonds and private debt transactions in a variety of industries. Mr. Warren serves as a Director on the Board of Diamond Resorts International. Prior to Guggenheim, Mr. Warren was a senior research analyst at Centre Pacific, LLC, a Los Angeles-based high yield and bank loan portfolio manager where he focused on the food, retail, restaurant and telecommunication industries. Prior to Centre Pacific, Mr. Warren was a Vice President at Bear Stearns in the equity research group covering specialty retail. Mr. Warren received his B.A. in Economics from the College of William & Mary and his MBA from UCLA Anderson School of Management.

Corporate Credit Investment Committee						
Thomas Hauser	Mr. Hauser is a Senior Managing Director and portfolio manager in Guggenheim's Corporate Credit Group, and has been with					
Senior Managing Director, Portfolio Manager	Guggenheim Partners since 2002. He is also a member of the Investment Committee overseeing Guggenheim's corporate credit investing activities. Prior to his role as a portfolio manager, Mr. Hauser ran a team with Joseph McCurdy covering a variety of sectors including Technology, Media and Telecom, Education, Metals and Mining, Homebuilding, Healthcare, and Energy and Power. He has over 10 years experience in the high yield and leverage loan class. During his career at the firm, Mr. Hauser has been an analyst covering a variety of sectors, including the Energy, Power, Transportation and Chemical sectors. Mr. Hauser received his B.S. in Finance from St. Johns University.					
Matthew Bloom	Mr. Bloom is a Senior Managing Director and Head of Research for Guggenheim's Corporate Credit Group, and has been with					
Senior Managing Director, Head of Research	Guggenheim Partners since 2006. He is also a member of the Investment Committee overseeing Guggenheim's corporate credit investing activities. During his career at the firm, Mr. Bloom has been an analyst covering a variety of sectors, and subsequently led an industry team that focused on investing in the Consumer, Financial, Food, Gaming, Industrials, Retail, Services & Transportation sectors. In addition, in his capacity as a senior analyst and as a team leader, Mr. Bloom has sourced and structured directly negotiated middle market debt investments. Prior to joining Guggenheim, Mr. Bloom worked as an attorney at Skadden, Arps, Slate, Meagher & Flom in the Mergers & Acquisitions and Banking & Institutional Investing groups. Mr. Bloom received his B.S. from University of Florida and his J.D. from Columbia University School of Law.					

Senior Investment Professionals						
Kevin Robinson, JD	Mr. Robinson is a Senior Managing Director of Guggenheim and General Counsel of Guggenheim Investments. Mr. Robinson					
Senior Managing Director	additionally oversees the legal, compliance and governance function for the holding company and the Firm's investment advisory business. Prior to joining Guggenheim, Mr. Robinson held positions at Claymore Group, where he served as General Counsel; NYSE Group, Inc. (f/k/a Archipelago Holdings, Inc.), where he was Associate General Counsel and Assistant Corporate Secretary; and ABN Amro, Inc. where he was Senior Vice President and Associate General Counsel. Mr. Robinson's financial services industry experience began in 1989 as Senior Counsel in the Enforcement Division of the US Securities and Exchange Commission. Mr. Robinson is a graduate of Coe College and The University of Iowa College of Law.					
John Walsh	Mr. Walsh is a Managing Director at Guggenheim Partners and Head of Guggenheim's High Yield and Bank Loan Trading. Prior to					
Managing Director, Head of High Yield & Bank Loan Trading	joining Guggenheim in March 2012, Mr. Walsh was a Managing Director at Knight Capital and senior trader in the Healthcare, Energy, and Services Sectors. Prior to Knight Capital, Mr. Walsh was a Managing Director in High Yield Trading at Banc of America Securities for 10 years focusing on the Healthcare, Industrial, and Steel Sectors. Mr. Walsh has over 25 years experience in the High Yield market and started his career as a Trader for the High Yield/Money Market Funds at First Investors. Mr. Walsh holds a B.S. in Business Management from Cornell University.					
Alastair McKeever	Mr. McKeever joined Guggenheim in 2007. He is a Portfolio Manager and research team leader in the Corporate Credit Group focusing					
Managing Director, Research Team Leader	on opportunistic investments across the capital structure in all industries. In the course of his career, Mr. McKeever has covered a range of industries including Metals & Mining, Building Products & Homebuilding, Industrials, Education and Oil & Gas. Originally from Shrewsbury, England, Mr. McKeever was schooled at Shrewsbury School before attending college in the US He was a Morehead Scholar at the University of North Carolina at Chapel Hill and holds a B.A. in Economics and Classics.					

Senior Investment Professionals						
Tom Stein	Mr. Stein is a Managing Director and Head of Capital Markets of Guggenheim's Corporate Credit Group. He joined Guggenheim					
Managing Director and Head of Capital Markets	Partners in September of 2013, and is responsible for developing and maintaining strategic relationships with sell-side capital market teams, as well as broker-dealers, to enhance the financing opportunity set for Guggenheim Partners. In addition, since his arrival at Guggenheim, Mr. Stein has been elected board member of the LSTA. Prior to joining Guggenheim, Mr. Stein spent eight years at Goldman, Sachs & Co. where he served most of his tenure as Co-Head of leveraged loan and high yield capital markets. In that role, Mr. Stein was responsible for all capital commitments and the distribution of loan and high yield financings in a variety of sectors. In addition, Mr. Stein was responsible for all high-grade bridge loan activity and was a member of Goldman's credit committee where many of Goldman's capital commitments were made. Prior to Goldman, Mr. Stein served in a leveraged finance capital markets or originations role, for Wells Fargo and Bank of America. In total, Mr. Stein has over 20 years of experience in the industry. Mr. Stein received his BS degree in Economics from the University of Santa Clara and his MBA degree from the University of Chicago Booth School of Business.					
Joseph R McCurdy	Mr. McCurdy is a Senior Managing Director and Head of Origination in the Corporate Credit Group. He leads Guggenheim's effort in					
Senior Managing Director and Head of Origination	sourcing and structuring directly negotiated transactions for both middle market private debt investments and larger underwritten co- arranger transactions. Mr. McCurdy was previously Co-Head of Research and has been with Guggenheim Partners since 2004. In the course of his career, he has covered a range of industries including Telecom, Media, Technology, Healthcare and Aerospace & Defense. Mr. McCurdy continues to be active in Guggenheim's European Lending business based in Dublin, Ireland, an office he helped establish from 2007-2009. Mr. McCurdy also coordinates a team in Mumbai, India that augments the group's research efforts. Prior to his time in Dublin, he covered Gaming, Lodging, Leisure and Real Estate in the New York office. Mr. McCurdy received a B.A. in History from Williams College.					



#### Rankings Information and Publishers

eVestment: All rankings as of 03/31/2017. Opportunistic Credit ranking is as of 02/28/2017.

Opportunistic Credit ranking based on gross returns for Guggenheim's Opportunistic Credit Composite versus 21 competitors in the eVestment Alliance Credit–Corporate Universe. For the last 1-, 3-, 5- and 7-year periods, Opportunistic Credit ranked in the top 14%, 9%, 2% and 1%, respectively, versus 98, 78, 59 and 41 competitors, respectively. Data taken from eVestment Alliance on 04/20/2017.

Multi Credit ranking based on gross returns for Guggenheim's Multi Credit Composite versus 44 competitors in the eVestment Alliance Custom Multi Credit universe. For the last 1-, 3-, 5- and 7-year periods, Multi Credit ranked in the top 3%, 6%, 5% and 5%, respectively, versus 109, 99, 81 and 63 competitors, respectively. Data taken from eVestment Alliance on 04/21/2017.

Multi Asset ranking based on gross returns for Guggenheim's Multi-Asset Composite versus 828 competitors in the eVestment Alliance Absolute Return universe. For the last 1-, 3-, 5-and 7-year periods, Multi Asset ranked in the top 21%, 25%, 24% and 16%, respectively, versus 1933, 1706, 1375 and 1136 competitors, respectively. Data taken from eVestment Alliance on 04/21/2017.

Core Fixed Income ranking based on gross returns for Guggenheim's Core Fixed Income Master Composite versus 137 competitors in the eVestment Alliance US Core Fixed Income universe. For the last 1-, 3-, 5-, 7- and 10-year periods, Core Fixed Income ranked in the top 3%, 1%, 1%, 1%, 1% and 1%, respectively, versus 222, 218, 216, 209 and 197 competitors, respectively. Prior to August 2014, the Core Fixed Income Master Composite was known as the Core Fixed Income Composite. Data taken from eVestment Alliance on 04/21/2017.

US Bank Loans ranking based on gross returns for Guggenheim's US Bank Loans Composite versus 14 competitors in the eVestment Alliance US Floating-Rate Bank Loan Fixed Income universe. For the last 1-, 3-, 5-, 7- and 10-year periods, US Bank Loans ranked in the top 75%, 13%, 13%, 7% and 3%, respectively, versus 82, 82, 66, 53 and 33 competitors, respectively. Data taken from eVestment Alliance on 04/20/2017.

High Yield ranking based on gross returns for Guggenheim's High Yield Traditional Composite versus 144 competitors in the eVestment Alliance US High Yield Fixed Income universe. For the last 1-, 3-, 5- and 7-year periods, High Yield ranked in the top 26%, 22%, 17%, and 13%, respectively, versus 197, 188, 174 and 153 competitors, respectively. Data taken from eVestment Alliance on 04/20/2017.

Guggenheim Investments composite peer rankings represent percentile rankings which are based on monthly gross of fee returns and reflect where those returns fall within the indicated eVestment Alliance (EA) universe. EA provides third party databases, including the institutional investment database from which the presented information was extracted. The EA institutional investment database consists of over 1,500 active institutional managers, investment consultants, plan sponsors, and other similar financial institutions actively reporting on over 10,000 products. Only information regarding full year performance and rankings is presented as Guggenheim Investments believes performance for a full year period is an important factor. Additional information regarding EA rankings for year to date and since inception performance of the composites is available on EA's website

**Creditflux:** The Creditflux "CLO" awards are performance-based awards presented to a CLO selected from the CLO universe, which includes US and European CLOs, and where possible differentiates between vintages. In 2011, 293 CLOs were submitted by approximately 50 CLO managers, and in 2012, 300 CLOs were submitted by 66 managers. In 2013, 394 US and 193 European arbitrage CLO transactions were reviewed in the study. Performance is evaluated across the lifetime of a deal up to the end of the year preceding the award year. Through the use of its proprietary ParPlus formula in 2011 and its liquidation IRR in 2012, Creditflux judges the best performing deals to be those that have safeguarded debt investors' principal and interest, while generating excellent returns for equity investors. The awards are calculated using data supplied directly by managers, but all finalists are checked against the performance data in CLO Master. For validation purposes, only CLOs in CLO Master will be eligible for an award.

The Creditflux "Manager of the Year" award measures performance across a manager as a whole. The universe of managers is divided into European and US managers and again into those firms with more than \$2bn of CLOs under management and those with \$2bn or less under management. Managers must submit all of their deals or be penalized. A US CLO is a par-based cash securitization of at least \$100 million of assets of which at least 60% are US corporate credit instruments and a European CLO is a par-based cash securitization of at least \$100 million of assets of which at least \$100 million \$100 milli

The "Best US CLO 2.0" is a category that measures the best CLO with a closing date between 2009 and 2011, based on liquidation IRR. Liquidation IRR is the internal rate of return equity investors would receive if a CLO had been liquidated on 31 December 2012, all its assets sold at market value and all proceeds and remaining cash distributed to investors in accordance with the cash flow waterfall. To achieve a positive liquidation IRR, CLOs must be able to repay all debt liabilities. Market values are based on an average of all managers' marks for that asset. Creditflux applies a haircut for assets that are held by only one manager.

The Creditflux's "Best Called" deal of 2013 is based on a deal's actual achieved final equity IRR. Creditflux's annual CLO awards are based on the liquidation IRR methodology. Liquidation IRR is the internal rate of return equity investors would receive if each competing CLO had been liquidated on 12/31/13 and all assets sold at market value. To calculate the return, all equity distributions up to 12/31/13 were used and a final distribution based on the difference between the market value of the portfolio (inc any cash accounts) and the outstanding liabilities on the liquidation date. To simplify calculations it was assumed that no fees were paid and that all excess cash on liquidation was paid to the equity investors. As part of the process, managers provided their list of marks as of 31<sup>st</sup> December 2013. Then the average (median) was determined and compared with independent pricing sources to calculate the liquidation value of the portfolio, including any cash accounts. More info about these awards can be reviewed on Creditflux's website.

Creditflux 2015: With the exception of two awards voted for by investor attendees at the symposium (the investors' choice awards), all the Creditflux Manager Awards are given according to rigorous, quantifiable and relevant measures of performance. The credit hedge fund awards are based on a methodology that rewards performance weighted by volatility relative to a fund's redemption profile. Funds that promise liquidity need to deliver stable returns; those that lock up investors' capital need to achieve greater absolute performance. CLO performance is measured in terms of liquidation IRR which is the total return equity investors would have received if their CLO had been liquidated on 31 December 2014. This takes account of equity distributions and the net asset value of the portfolio, and rewards calculations is submitted by managers and supported by figures from CLO-i. Manager of the year award is based on average ranking for each manager across all award categories where present. Funds not submitted for the relevant category are assumed to have fourth-quartile performance. Managers must be present in four or more award categories.

Institutional Investor: About Institutional Investor's US Investment Management Awards: As part of the awards process, Institutional Investor's editorial and research teams analyze investment strategies based on factors such as 1-, 3- and 5-year performance, Sharpe ratio, information ratio, standard deviation, and upside market capture. Each category is analyzed based on the factors used by institutional investors in their own searches. From this review, the magazine surveyed 1,000 institutions and used the results of that survey to tabulate the winners. The award is based on returns and risk characteristics for Guggenheim Investments' Multi Credit Fixed Income strategy.

Although the rankings and award information presented herein has been obtained from and is based upon sources Guggenheim Investments believes to be reliable, no representation or warranty, expressed or implied, is made as to the accuracy or completeness of that information.

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The views and strategies described herein may not be suitable for all investors. All investments have inherent risks. The market value of fixed income securities will change in response to interest rate changes and market conditions among other things. In general, bond prices rise when interest rates fall and vice versa. High yield securities present more liquidity and credit risk than investment grade bonds and may be subject to greater volatility. Investments in floating rate senior secured syndicated bank loans and other floating rate securities involve special types of risks, including credit risk, interest rate risk, liquidity risk and prepayment risk. The strategies discussed herein may include the use of derivatives. Derivatives often involve a high degree of financial risk because a relatively small movement in the price of the underlying security or benchmark may result in a disproportionately large movement, unfavorable or favorable in the price of the derivative instrument. The use of leverage will magnify any gains or losses on the leveraged instruments. The use of short selling involves increased risks and costs. You risk paying more for a security than you received from its sale.

Results shown gross of advisory fees assume reinvestment of dividends and income and capital gains, and are net of transaction costs. Advisory fees are deducted quarterly. Client's returns may be reduced by the advisory fees and other expenses that a client may incur in the management of its account. The effect of advisory fees upon performance is illustrated by the following example: A 3% annual fee deducted quarterly (.75%) from an account with a ten year annualized growth rate of 14% will produce a net result of 10.8%. Actual performance will vary from this example. Actual fees may vary depending upon, among other things, the applicable fee schedule and portfolio size. Fees are described in GPIM's Brochure prepared pursuant to Form ADV Part 2.

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#### Index and Other Definitions:

The indices mentioned in this document are unmanaged. Figures for indices reflect the reinvestment of dividends but do not reflect the deduction of fees or expenses which would reduce returns. Investors cannot invest directly in indices.

The Credit Suisse Leveraged Loan Index is designed to mirror the investable universe of the US\$-denominated leveraged loan market. New loans are added to the index on their issuance date if they qualify according to the following criteria: a) Loans must be rated "5B" or lower. The highest Moody's/S&P ratings are Baa1/BB+ or Ba1/BBB+. If not rated the initial spread level must be LIBOR plus 125 bps or higher. b) Only funded term loans are included. c) The tenor must be at least one year. d) Issuers must be domiciled in developed countries; issuers from developing countries are excluded. e) "Fallen Angels" are added to the index subject to the new loan criteria. f) "Rising Stars" are removed from the index when they are upgraded to investment grade. g) Loans are taken out of the index when they exit the market (for example, at maturity, refinancing or workout). GPIM uses the Credit Suisse Leveraged Loan Index Priced over 90. All references to the Credit Suisse Leveraged Loan Index Priced over 90.

The Bloomberg Barclays US Corporate High Yield Index covers the universe of USD-denominated, fixed rate, noninvestment grade debt, taxable corporate debt.

USGG1M represents the generic one-month T-Bill yield (Source: Bloomberg).

**Credit Quality Methodology:** Convert credit quality ratings to the S&P equivalent rating. Use the middle rating of Moody's, S&P, and Fitch. If only two of these ratings are available, use the lower rating. If only one ratings is available, use the sole rating along with the A.M. Best, DBRS, KBRA, Egan-Jones, and Morningstar rating if they are within two ratings of the sole rating. Take the middle value if there are an odd number of ratings. If six ratings are available, take the average of the third and fourth highest rating. If four ratings are available, take the second to lowest value. If only two are available, use the lowest. If only one is available, use that one. If no agency rating is available, use the lowest equivalent NAIC rating. If no NAIC rating, use an internal rating. If no internal rating, the security is unrated.

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# **US Bank Loans Composite**

Schedule of Investment Performance for the Period 01/01/06 - 12/31/15 Inception Date: 01/01/03

	Rates of Return (%)			3-Year Standard Deviation (%)		No. of	Dispersion	Composite	Firm Assets
Period	Composite Gross of Fees	Composite Net of Fees	CS Leveraged Loan Index	Composite	CS Leveraged Loan Index	Accounts	(%)	Assets (\$m)	(\$m)
2015	2.75	2.07	-0.38	1.55	2.10	25	0.57	8,966	166,646
2014	3.50	2.79	2.06	1.75	1.95	19	0.59	5,588	161,282
2013	7.30	6.44	6.15	3.08	3.56	16	0.48	5,696	137,974
2012	10.79	9.83	9.43	3.63	4.13	9	0.63	3,787	113,578
2011	4.23	3.50	1.82	6.18	7.63	8	0.59	3,642	75,748
2010	14.24	13.16	9.97	10.41	13.10	6	N/A	2,333	55,920
2009	39.18	38.04	44.87	10.32	13.12	≤5	N/A	2,133	45,263
2008	-21.05	-21.63	-28.75	7.98	10.24	≤5	N/A	1,657	32,988
2007	5.46	4.69	1.88	1.81	2.59	6	N/A	2,662	30,957
2006	9.22	8.31	7.33	0.49	0.70	≤5	N/A	1,891	27,121

Guggenheim Investments Asset Management (GIAM) is a global investment management firm providing fixed income, equity and alternative investment services primarily to institutional investors and is comprised of the following affiliated entities of Guggenheim Partners, LLC: Guggenheim Partners Investment Management, LLC (GPIM), Guggenheim Partners Europe Limited (GPE), and, as of February 2012, Security Investors, LLC (SI). Historically, Transparent Value Advisors, LLC (TVA) was a separate entity within the firm. Effective July 2016, all TVA assets transitioned to GPIM.

Guggenheim Investments Asset Management (GIAM) claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. GIAM has been independently verified for the periods January 1, 1999 through December 31, 2015.

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 US Bank Loans Composite has been examined for the periods January 1, 2003 - December 31, 2015. The verification and performance examination reports are available upon request. The US Bank Loans Composite ("the Composite") is comprised of accounts that predominantly invest in US-based corporate bank loans. The composite has a minimum asset level of \$10 million. The creation date for this composite is September 1, 2010.

For comparison purposes the Composite is measured against the Credit Suisse Leveraged Loan Index. The Credit Suisse Leveraged Loan Index is designed to mirror the investable universe of the US dollar denominated leveraged loan market. Benchmark returns are not covered by the report of independent verifiers.

All performance is expressed in US Dollars.

Gross returns are presented net of non-reclaimable foreign withholding taxes applicable to the US investors and include the reinvestment of income. Net returns are calculated by reducing gross returns with a model fee that includes 1) the greater of a) the highest management fee charged to an account in the composite or b) the highest tier of the current management fee schedule, and 2) estimated performance fees where applicable. Net returns using actual fees may vary from calculated returns using the model fee depending on, amongst other things, type of client, portfolio size, and performance based fees. For the period 2008, the net returns presented reflect actual fees on a cash basis, not a model fee. Performance based fees are accrued and realized at different time periods, and as such, the net returns for December may be adjusted accordingly.

The following example demonstrates the effect of performance fees on investment returns. Assume an account value of \$1 million on January 1 with a 10% performance fee. If the account value rises by 10% during the year (net of all other applicable fees) to be valued at \$1.1 million, the investor will pay a performance fee of 10% on the \$100 thousand increase (\$10,000), resulting in a balance of \$1.09 million and a 9% net return.

The annual model fee used to calculate net returns for the Composite is 0.60% plus applicable performance fees. However, the proposed fee schedule for prospective clients for the Composite is:

First \$100M: 0.55%

Next \$200M: 0.45%

Above \$300M: 0.40%

The composite dispersion is calculated using the asset-weighted standard deviation of all accounts within the composite. Dispersion will be calculated only if the number of accounts in the composite is greater than five and will only include accounts that have been in the composite for the entire year.

This composite contains carve-outs of accounts that are managed separately with their own cash balances.

The firm's list of composite descriptions, as well as information regarding the firm's policies for valuing investments, calculating performance, and preparing compliant presentations, is available upon request.

Past performance may not be indicative of future returns. The value of any investment may rise or fall over time. Principal is not guaranteed, and investors may receive less than the full amount of principal invested at the time of redemption if asset values have declined. Individual account performance may be greater than or less than the performance presented for this composite.



# AGENDA ITEM SUMMARY

1. NAME OF ITEM: Environmental, Social and Governance Update

- 2. INITIATED BY: Karl W. Turner, Chair
- **3. BOARD INFORMATION:** X **BOARD ACTION:**

## 4. BACKGROUND:

Ms. Kelly Regan and Mr. Jay Roney of NEPC will provide a brief update regarding ESG at the May 15, 2017 Investment Committee meeting.



## ESG Update

## • Recent Items

- Divested from coal securities in all separate account mandates in 2015
- Approved an ESG policy for the MIP in September 2016
- Contracted with MSCI in December 2016 and reviewed first ESG report in March 2017
- Included ESG managers when reviewing new mandates for the MIP
  - Bank loan search includes a manager that incorporates ESG into the investment process

# **Next Steps**

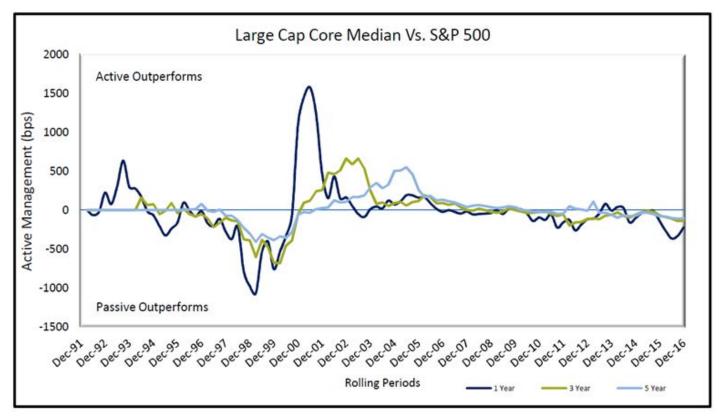
- Q3 2017
  - International Small Cap Equity manager interviews (ESG managers included)

## • Q4 2017

- Determine the next asset class for ESG integration
  - Large cap equity is the largest allocation in the portfolio (16%), followed by international developed (11%)
- Option 1 Large Cap Equity
  - Allocation is currently managed in a passive index fund
  - Incorporating ESG most likely implemented through an active manager
    - Data indicates that alpha potential may be inconsistent for large cap active managers as detailed on the following slides
    - Increased fees
    - Experienced an eight year bull market for large cap equities, active management could have the potential to protect capital in market downturns (i.e. 2008)
- Option 2 Global Equity
  - The Committee could consider a broader solution that combines large cap, international developed and emerging market equity managers into a global equity approach
    - Potential for some alpha and flexibility to invest across asset classes
    - Increased fees, but estimated to be similar to Option 1
    - Reduces number of equity managers from 8 to ~6 (two Global Equity managers may be required based on size of mandate ~30%)



## U.S. Large Cap Core Equity – Rolling Periods



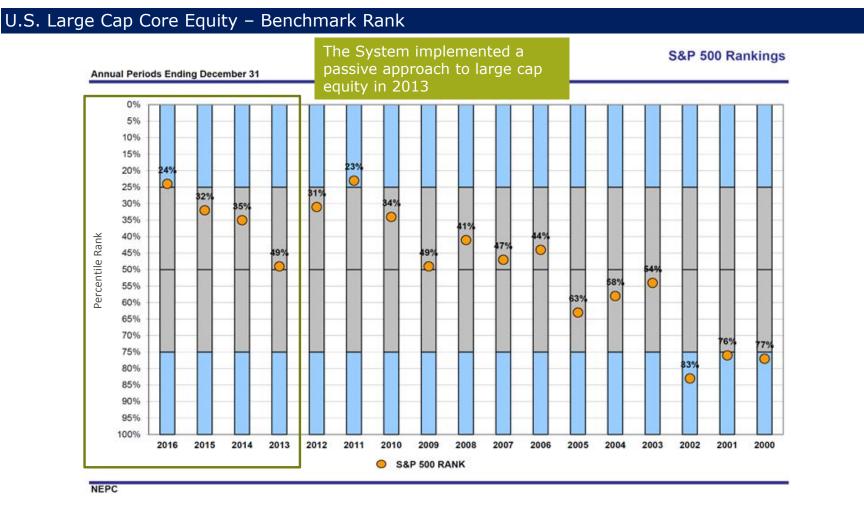
### The median large cap core equity manager has outperformed the S&P 500, net of fees<sup>1</sup>, in:

- 36 of 99 rolling one-year periods (or, 36% of the time)
- 35 of 91 rolling three-year periods (or, 38% of the time)
- 43 of 83 rolling five-year periods (or, 52% of the time)

<sup>1</sup> Annualized net-of-fee results are calculated by subtracting the average manager fee, respective of asset class and style, from the eVestment or ICC gross-offee performance. The average manager fees used prior to 2009 were obtained from the 2008 eVestment Alliance manager fee study. For periods after to 2009, the 2009 eVestment Alliance manager fee study was used.

<sup>2</sup> The universe data shown includes only actively managed portfolios. The minimum sample size used for each time period is 20 portfolios.





## The S&P 500 outperformed the median in 11 out of the last 17 years

<sup>1</sup> eVestment and ICC universes shown. Benchmark rankings are relative to the respective actively managed gross-of-fee universe. Rankings reflect the gross-of-fee results of the benchmark. For periods prior to 2009 results were calculated by adding the respective asset class and style annual fee as obtained from the 2008 eVestment Alliance manager fee study to the annual benchmark return. For periods after to 2009, the 2009 eVestment Alliance manager fee study was used.



## NEPC Views on Global Equities

## General Market Thoughts

## • US Equities:

- Valuations appear stretched; earnings growth needed to sustain rally; consider more targeted approach to broad exposure
- International Equities:
  - Trading at discount to US; slight premium to own history; earnings growth begun to turn; currency devaluation a concern so consider hedged exposure
- Emerging Markets
  - Consumer theme implementation provides more flexibility; small Cap valuations appear slightly expensive relative to short history; bet is on earnings growth and market expansion; Consumer theme implementation provides more flexibility

Equity Implementation Views						
S	Strategy		Commentary			
	Global	++	Implementation tool for International Equity allocations; provide higher alpha potential compared to US Active mandates; need to complement with small cap satellites			
Liquid	US	0	For non core exposure consider concentrated, flexible or defensive strategies; special situations or short exposure			
	International	+	Consider 50% hedged exposure as baseline; small cap complements global implementation; Consider sizing in throughout 2017 to take advantage of volatility			
	Emerging Markets	+	Consumption theme still exists both in liquid and illiquid markets; EM Small is more expensive so betting on growth			

320



## 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: Karl W. Turner, Chair
- **3. BOARD INFORMATION: BOARD ACTION:** X

## 4. BACKGROUND:

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

## 5. TEXT OF PROPOSED RESOLUTION:

That the Investment Committee approves the updated Investment Policy Statement for the Managed Investment Pool, Defined Benefit Pension Fund and the Operating Fund.

University of Maine System Executive Summary - Investment Guidelines and Objectives Managed Investment Pool (Including Endowments) Approved by Investment Committee <mark>September 7, 2016</mark> May 15, 2017							
Minimum Long Term Return	Assumption:	7.50%					
Risk Tolerance:		Moderate					
FY1 <u>7</u> 6 and FY1 <u>8</u> 7 Spending I	Policy	4.50% <sup>1</sup>					
Asset Allocation:		PERMISSIBLE	TARGET				
ASSET CLASS	TARGET %	RANGE %	BENCHMARK				
<b>Equity</b> Domestic Large Cap Domestic Small/Mid Cap International <u>International Small Cap</u> Emerging	<b>45%</b> 16 6 <del>16<u>11</u> 5 7</del>	<b>35 - 55%</b> 11 - 21 09 <del>11 6</del> - <del>2116</del> <u>0 - 10</u> 0 - 10	S&P 500 Russell 2500 MSCI EAFE <u>MSCI EAFE SC</u> MSCI EM				
Fixed Income Domestic Core Global Multi-SectorBank Loans	<b>18%</b> <del>105</del> 5	<b>13 - 23%</b> <del>5 - 15<u>0</u> - 10</del> 0 <u>10</u> 8	Barclays Capital Aggregate <del>Barclays Capital Global Aggregate<u>Credit Suisse</u> Leveraged Loan</del>				
TIPSTIPS	<u>8</u> 3	<u>3 – 13</u> 0 <del>– 6</del>	<u>Barclays US TIPS</u> Barclays US <del>TIPS</del>				
<b>Other</b> Gløbal Asset Allocation	37% <del>20<u>23</u></del>	<b>27 - 47%</b> <del>15-<u>16</u> - <del>25<u>30</u></del></del>	65% MSCI All Country World (net)/ 35% Barclays Capital Global Aggregate				
Real Assets Hedge Funds	3 <del>12</del> 9	06 <del>9</del> - <u>6</u> - <del>15<u>12</u></del>	NCREIF Timberland HFRI Fund of Funds Composite Index				
Private Equity	2	05	Cambridge Private Equity 1 Quarter Lag				
Cash	0%	0 - 10%					

#### **Evaluation Benchmarks:**

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

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).

<sup>1</sup> 4.5% spending rate supported by the Investment Committee for **fiscal year 20187**. 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 <u>FY2018 of \$15.13366 FY2017 of \$14.78338</u> per share was approved by the UMS Board of Trustees at their <u>March 27, 2017 February 22, 2016</u> meeting. The <u>FY17FY16</u> spending rate was also 4.5% equating to a rate per share of <u>\$14.78338\$14.10336</u>.

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

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

### University of Maine System Investment Guidelines and Objectives Managed Investment Pool (Including Endowments) Approved by Investment Committee September 7, 2016 May 15, 2017

### 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:

- 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.

ASSET CLASS	TARGET %	PERMISSIBLE <u>RANGE %</u>	TARGET <u>BENCHMARK</u>
<b>Equity</b> Domestic Large Cap Domestic Small/Mid Cap International <u>International Small Cap</u> Emerging	<b>45%</b> 16 6 1 <u>1</u> 6 5 7	<b>35 - 55%</b> 11 - 21 0 - 9 <u>611</u> - <u>1621</u> <u>0 - 10</u> 0 - 10	S&P 500 Russell 2500 MSCI EAFE <u>MSCI EAFE SC</u> MSCI EM
<b>Fixed Income</b> Domestic Core Global Multi-Sector	<b>18%</b> <del>10<u>5</u> 5</del>	<b>13 - 23%</b> <del>5 - 15<u>0 - 10</u> 0 - <u>10</u>8</del>	Barclays Capital Aggregate <u>Credit Suisse Leveraged</u> <u>Loan</u> Barclays Capital Global Aggregate
TI₽S	<u>38</u>	<del>0 6<u>3 - 13</u></del>	Barclays US TIPS
<b>Other</b> Global Asset Allocation	<b>37%</b> 2 <u>3</u> 0	<b>27 - 47%</b> 1 <u>6</u> 5 - <u>30<del>25</del></u>	65% MSCI All Country World (net)/ 35% Barclays Capital Global Aggregate
Real Assets Hedge Funds	3 <u>9</u> 12	0 - 6 <u>6</u> 9 - 1 <del>5</del> 2	NCREIF Timberland HFRI Fund of Funds
Private Equity	2	0 - <b>-</b> 5	Composite Index Cambridge Private Equity 1 Quarter Lag
Cash	0%	0 - 10%	

### Equities

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

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

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

### Fixed Income

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

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

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

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

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

#### Other Asset Classes, Strategies, and Investment Managers

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

### Hedge Funds

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

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

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

### Hedge Fund Guidelines

- *Diversification* investments should be made through diversified hedge fund programs.
- *Liquidity* initial lock-up periods should not exceed one year; subsequent allowable redemption periods should not be less frequent than annual.
- *Transparency* investments should be made only in funds that provide adequate transparency to the underlying securities/funds held by the fund.

- Leverage funds may employ reasonable amounts of leverage (except for at the fund level as described in the excluded investments section) to the extent they adhere to targeted risk/return objectives.
- Correlation funds added to the Pool in this asset class should exhibit low correlation with traditional stock and bond indices
- *Reporting* investments may only be made in funds that adhere to strict reporting guidelines that fall within that required by the Pool.

### Excluded Investments

Certain investments are ineligible for inclusion within this Pool:

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

 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 September 7, 2016 May 15, 2017 Type of Plan: **Defined Benefit Pension Plan** Minimum Long Term Return Assumption: 6.25% **Risk Tolerance:** Low to Moderate Asset Allocation: PERMISSIBLE TARGET ASSET CLASS TARGET % RANGE % BENCHMARK 22% 12 - 32% Equity Domestic Large Cap 3 - 13 S&P 500 8 Domestic Small/Mid Cap 0 - 6 4 Russell 2000 International 7 2 - 12 MSCI EAFE 3 0 - 5 MSCI EM Emerging **Fixed Income** 32% 22 - 42% Domestic Core 207 15<del>22</del> - <del>32</del>25 Barclays Capital Aggregate **Credit Suisse** Bank LoansGlobal Multi-0 - 10<del>0 - 10</del> 55 Sector Leveraged LoanBarclays Capital Global Aggregate Barclays US TIPS TIPS <u>2 – 12</u> 7 Other 43% 35 - 55% 65% MSCI All **Global Asset Allocation** <del>25</del>27.5 20 - <del>30</del>35 Country World (net)/ 35% Barclays Capital Global Aggregate NCREIF ODCE 0 - 10 Real Estate 8 Hedge Funds <del>10</del>7.5 HFRI Fund of Funds <del>7</del>-5 - <del>13</del>10 **Composite Index** 3% Cash 0 - 10%

### **Evaluation Benchmarks:**

Total return for the Fund shall be regularly compared to the Allocation Index<sup>\*</sup> and the Policy Index<sup>\*\*</sup>. 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 September 7, 2016May 15, 2017

#### 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:

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- 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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ASSET CLASS	TARGET %	PERMISSIBLE <u>RANGE %</u>	TARGET <u>BENCHMARK</u>
Equity	22%	12 - 32%	
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 - 5	MSCI EM
Fixed Income	32%	22 - 42%	
Domestic Core	<del>27<u>20</u></del>	<del>22-<u>15</u>- <u>3225</u></del>	Barclays Capital Aggregate
<u>Bank LoansGlobal Multi-</u>	<u>5</u> 5	<u>0 - 10</u> 0 - 10	Credit Suisse
Sector			Leveraged
			LoanBarclays Capital
TIDE	7	0 10	Global Aggregate
TIPS	<u>7</u>	<u>2 – 12</u>	Barclays US TIPS
Other	43%	35 - 55%	
Global Asset Allocation	<u> <del>25</del>27.5</u>	20 - <del>30<u>35</u></del>	65% MSCI All
			Country World (net)/ 35% Barclays Capital
			Global Aggregate
Real Estate	8	0 - 10	NCREIF ODCE
Hedge Funds	<del>10</del> 7.5	<del>7 - 13<u>5 - 10</u></del>	HFRI Fund of Funds
-			Composite Index
Cash	3%	0 - 10%	
	270	,	

### 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 nonderivative 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.

#### University of Maine System Executive Summary - Investment Guidelines and Objectives Operating Fund Approved by Investment Committee September 7, 2016 May 15, 2017

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Type of Plan: 0			Operating Plan		
Minimum Long Term Return Assumption: 4.00%		6			
Risk Tolerance:			Low to Moderate		
Asset Allocation:	PERMISSIE		TARGET		
	TARGET				
ASSET CLASS	%	RANGE %	BENCHMARK		
Liquidity Pool	25%	5 - 100%	Citi 3Month Treasury Bill		
Income Pool	50%	0 - 60%			
Short-Term Bonds	2 <u>6.6</u> 5	15 - 35	Barclays 1-3 Yr. Govt/Credit		
Bank LoansFloating			Loomis Bank Loans Custom Index*0.25 Dur,		
Income	<u>6.7</u> 5	<u>0 - 10</u> 0 - 10	1/3 JPM EMBIG, 1/3 BC Agg, 1/3 ML HY BB		
Unconstrained Fixed			BOA 3M LIBOR Loomis Bank Loans Custom		
IncomeBank Loans	<u>6.7</u> 5	<u>0 - 10</u> 0 - 10	Index*		
Core					
BondsUnconstrained					
Fixed Income	<u>5</u> 5	<u>0 - 10</u> 0 - 10	Barclays AggregateBOA 3M LIBOR		
<u>TIPS</u>	<u>5</u>	<u>0 - 10</u>	Barclays US TIPS		
Core Bonds	<del>10</del>	<del>5 - 15</del>	Barclays Aggregate		
Total Return Pool	<u>25%</u>	<u>0 - 30%</u>			
<u>Hedge Funds</u> Total					
Return Pool	<u>5</u> 25%	<u>0 - 10<b>0 - 30%</b></u>	HFRI Fund of Funds Composite Index		
Global Asset			GAA Custom Index**HFRI Fund of Funds		
AllocationHedge Funds	<u>12.5</u> 7.5	<u> 7.5 – 17.5<mark>2 - 12</mark> </u>	Composite Index		
<u>Global Equity</u> Global			FTSE Global All Cap IndexGAA Custom		
Asset Allocation	<u>7.5</u> 10	<u>2 - 12</u> 5 - 15	Index**		

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

\*\*GAA Custom Index: 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.

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

#### **Evaluation Benchmarks:**

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

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

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

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

### University of Maine System Operating Funds Statement of Investment Guidelines Approved by Investment Committee September 7, 2016 May 15, 2017

### INTRODUCTION

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

### STATEMENT OF GOALS AND OBJECTIVES

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

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

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

The Fund's primary investment goals are outlined below:

- To enable the UMS to meet its financial obligations
- Provide liquidity
- Preserve capital
- Produce an acceptable yield to meet budget goals

- Provide a total return opportunity set
- Build a Budget Stabilization Fund that enables UMS to smooth the financial impact of adverse markets, economic conditions, and address other financial challenges.

### **INVESTMENT GUIDELINES**

### Asset Allocation

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

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

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

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

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

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

### POOL ALLOCATION

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

### **BUDGET STABILIZATION FUND**

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

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

### Equities

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

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

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

### Fixed Income

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

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

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

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

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

### Hedge Funds

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

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

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

### Hedge Fund Guidelines

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

### **Excluded Investments**

Certain investments are ineligible for inclusion within this Fund:

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

### OTHER ASSET CLASSES, STRATEGIES, AND INVESTMENT MANAGERS

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

### Derivatives

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

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

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

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

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

### Distributions

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

### **Commingled Funds**

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

### BENCHMARKS

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

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

### PERFORMANCE STANDARDS AND EVALUATION

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

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

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

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

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

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

### RESPONSIBILITIES

Internal Staff: Staff duties include:

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

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

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

**Rebalancing:** Rebalance as deemed prudent.

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

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

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

The Investment Committee is responsible for:

Standards: Approve written investment objectives and guidelines.

**Evaluation:** Monitor performance of the Fund.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

### **CONFLICT OF INTEREST**

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

### IMPLEMENTATION

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

### AMENDMENTS

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



## AGENDA ITEM SUMMARY

1. NAME OF ITEM: Defined Contribution Plan Update

- 2. INITIATED BY: Karl W. Turner, Chair
- **3. BOARD INFORMATION:** X **BOARD ACTION:**

### 4. BACKGROUND:

Mr. Mike Pratico, Senior Vice President with CAPTRUST Financial Advisors, will provide an update regarding the Defined Contribution Plan at the May 15, 2017 Investment Committee meeting including: Quarterly Performance Report, CREF Stock Observations and Comparison, and a TIAA Pricing Update

Period Ending 3.31.17 | Q1 17

### UNIVERSITY OF MAINE SYSTEM 1st Quarter, 2017

#### **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

University of Maine System Defined Contribution Plan

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#### University of Maine System Defined Contribution Plan

1st Quarter, 2017 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

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### SECTION 1: RETIREMENT INDUSTRY UPDATES

University of Maine System Defined Contribution Plan

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SECTION 1: RETIREMENT INDUSTRY UPDATES

Industry Updates......

### INSTITUTIONAL MARKETPLACE—INDUSTRY UPDATE

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## COMBATTING DEFINED CONTRIBUTION PLAN LEAKAGE

*Plan leakage* is defined as deterioration of participant savings resulting from significant withdrawals prior to retirement, in many cases, accompanied by insufficient deferrals after such a withdrawal event. This depletion in retirement accumulation harms retirement outcomes for workers participating in workplace plans. Some estimate that leakage can reduce retirement savings by a staggering 25% over a participant's career.<sup>1</sup>

### MOST COMMON CAUSES

- A recent Pension Research Council study noted that 20% of respondents currently have an outstanding loan. Nearly 40% of respondents have borrowed in the last 5 years.<sup>2</sup>
- A lack of short-term savings is a primary reason for participant loans. "Emergency expenditure" accounted for 35% of loan distributions.<sup>4</sup>
- It's not just loans that cause leakage. Almost 57% of respondents reduced their contribution rates during the loan period—further challenging their retirement savings.<sup>4</sup>
- Cash-outs at termination or job change are the biggest contributor to leakage, costing \$74 billion of retirement savings per year.<sup>2</sup>

### WHAT'S A PLAN SPONSOR TO DO?

### PUT A LIMIT ON LOANS

In plans that offer multiple loans, participants are twice as likely to borrow.<sup>1</sup> However, loans are a two-edged sword since plans that allow loans have higher participation and higher deferral rates than plans that do not.

# EDL

# EDUCATE PARTICIPANTS

75% of cash-outs involved accounts under \$20,000, and 86% of participants who terminate with a loan will default. Participants who understand the impact of distributions on retirement savings may be less inclined to make a withdrawal.<sup>4</sup> In a TIAA study, 74% of respondents regretted taking a loan.<sup>3</sup>

### MAKE THE PLAN ACCESSIBLE

One of the primary reasons participants cashed out from a prior employer's plan was because they were unsure or confused by the rollover process. Eliminate barriers, and create a simple and accessible rollover process for participants. Explain the benefits of keeping retirement savings intact.

1 Center for Retirement Research at Boston College, "The Impact of Leakages on 401(k)/IRA Assets", February 2015.

3 TIAA, "Borrowing Against Your Future", June 2014.

<sup>2</sup> Pension Research Council, "Borrowing from the Future; 401(k) Plan Loans and Loan Defaults", February 2014.

<sup>4</sup> Defined Contribution Institutional Investment Association, "Plan Leakage: A Study on the Psychology Behind Leakage of Retirement Plan Assets", February 2016.

### INSTITUTIONAL MARKETPLACE—INDUSTRY UPDATE

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# CYBERSECURITY AND RETIREMENT PLANS

As providers launch new capabilities that make plan information more accessible, they also increase the threat of a cyberattack. Plan and participant data security becomes a higher priority to plan sponsors every day. They should understand the important role they play in safeguarding participant information and retirement assets. There is no magic bullet to eliminate the threat of a cyberattack, but following best practices may reduce the overall risk.

### PLAN SPONSOR OPPORTUNITIES

- Maintain up-to-date and accurate records of authorized individuals at your firm who have access to plan data.
- Understand the sensitivity of data being exchanged with third parties.
- Confirm that your team is aware of all systems—both internally and externally—that transmit data.
- Familiarize yourself with the cybersecurity policies and procedures of your retirement plan providers.
- Request and review independent audits conducted on your providers that address operations, data, and cybersecurity.
- Educate and inform your participants about the importance of protecting their personal retirement accounts and basic cybersecurity preventative measures.

### PLAN PARTICIPANT OPPORTUNITIES

- Know the types of cyberthreats most commonly aimed at gathering private information and how each threatens personal data, including malware, phishing, and social engineering.
- Follow best practices when accessing accounts online, including:
  - Using secure networks,
- Creating strong passwords,
- Logging out before closing browser sessions, and
- Using multi-factor authentication for logins.
- Be aware of all points where online accounts are accessed, including mobile devices.
- Be mindful of information shared on social media.

Like so many other plan sponsor responsibilities, if you don't have the capabilities or knowledge yourself, consult experts, including your internal information technology professionals or seek the help of outside experts.

### INSTITUTIONAL MARKETPLACE—INDUSTRY UPDATE

# ADDRESSING FINANCIAL STRESS IN THE WORKPLACE

Companies have long realized the value of having healthy employees, and programs aimed at increasing wellness have morphed from fad recruiting tools to must-have corporate offerings. However, a key aspect of employee well-being has been largely overlooked. Financial wellness is the new frontier—and a key workplace trend—in getting employees as "fit" as possible.

#### **MEASURING FINANCIAL STRESS**

- 17% of surveyed employees admitted to being less productive at work due to financial stress.<sup>1</sup>
- 28% of employees said financial stress affects their health.<sup>1</sup>
- Only 4% of employees answered that financial stress had "no effect" on their work performance.<sup>2</sup>

#### WORKFORCE CHALLENGES

- Most employers have three or four generations in their workforce.
- Workforces are generally heterogeneous.
- People tend to act only when messaging is relevant or personalized to their needs.

#### BUILDING YOUR WELLNESS SOLUTION

1	Don't think about financial wellness as a set of products or a packaged solution. Build a program designed to lead to financial well-being—"a state of being wherein a person can fully meet current and ongoing financial obligations, can feel secure in their financial future, and is able to make choices that allow them to enjoy life." <sup>3</sup>
2	Recognize the diversity of your workforce, and develop a multi-faceted financial wellness program that considers differences in age, education, job type, gender, and even ethnicity.
3	Determine your level of financial commitment to a financial wellness program. Beyond just the cost to offer the program, consider your willingness to offer employee incentives as you may be doing in other wellness programs.
4	Select a mix of solutions to fulfill your program. Once you've established program goals, consider and select products, services, or solutions available to you through your retirement provider, technology vendors, and other third-party sources, as well as individual advice providers.

To learn more, visit captrustadvisors.com/discover and read "Addressing Financial Stress in the Workplace."

<sup>&</sup>lt;sup>1</sup> PwC, "2016 Employee Financial Wellness Survey", 2016.

<sup>&</sup>lt;sup>2</sup> Society for Human Resource Management, "Financial Wellness in the Workplace", May 2014.

<sup>&</sup>lt;sup>3</sup> Consumer Financial Protection Bureau, "Financial Well-Being: The Goal of Financial Education", January 2015.

# FIDUCIARY UPDATE

Below, we highlight a few of the notable items covered in this quarter's Fiduciary Update.

#### FIDUCIARY RULE DELAY FINALIZED

- On April 4, the Department of Labor (DOL) filed the muchanticipated final rule outlining a 60-day extension of the applicability date of the *conflict of interest rule*—otherwise known as the *fiduciary rule*.
- The rule and accompanying prohibited transaction exemptions (PTEs) will now be applicable on June 9, with certain provisions applicable on January 1, 2018, as previously established.
- With this delay, the DOL introduced a Transition Period from June 9 through January 1, 2018, during which those meeting the updated definition of an ERISA fiduciary, who also need the Best Interest Contract (BIC) Exemption, will get relief from many of the more involved requirements of the exemption—so long as they adhere to the previously defined Impartial Conduct Standards for advice rendered.
- We expect most major plan providers (recordkeepers) to move forward with the planned approaches they had initially rolled out to comply with the rule (and any related PTEs) before this delay.
- The DOL does not intend to issue any further delays to the applicability date beyond June 9, and may use the delay and the sixmonth Transition Period to complete the legal and economic analysis requested by President Trump on February 3.

Any case highlights contained here are provided for general information purposes only and do not, and are not intended to, constitute legal advice. You should contact your ERISA counsel to determine how the laws or cases discussed might apply to your plan(s), plan fiduciaries, and/or plan participants.

#### RMDs GETTING ATTENTION

With the baby boomers reaching age 70, the U.S. Chamber of Commerce has requested repeal of the Required Minimum Distribution (RMD) rule or modification of the triggering age from 70½ to 75.

#### **GUIDANCE ON HARDSHIP DOCUMENTATION**

An internal memo provides some clarity on what IRS auditors will be looking for related to hardship withdrawals:

- Participants may self-certify the need for a hardship distribution.
- The IRS acknowledges that plan sponsors may not always receive detailed original supporting documentation. Rather, they may only have summaries while participants keep originals. In this case, participants must maintain any such records.
- The IRS requires a memo giving notice to participants of their responsibilities for such documentation maintenance and the obligation to produce such documentation, if requested.

#### FEE AND RELATED LITIGATION

Several recent fee litigation cases focus on financial services firms, alleging that they used their own investments or services to the financial detriment of plan participants. Recent suits include AON Hewitt, Franklin Templeton, J.P. Morgan, and TIAA.

For access to the full version of this quarter's Fiduciary Update, visit captrustadvisors.com/discover.

### SECTION 2: MARKET COMMENTARY AND REVIEW

University of Maine System Defined Contribution Plan

#### SECTION 2: MARKET COMMENTARY AND REVIEW

Market Commentary.....

Market Review.....

Asset Class Returns.....

Index Performance.....

### MARKET COMMENTARY

# **ECONOMIC OUTLOOK**

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

#### **TAILWINDS**

#### The global economic backdrop firms up

- The global economic expansion that began before the election continued in the first quarter, leading to the most synchronized upturn in years.
- International and emerging markets were especially strong, led by a pick-up in trade and a nice lift in industrial production as a majority of the world's leading economies showed broad gains.

#### Businesses and consumers remain positive

- Consumer and business confidence measures continue at high levels.
- High confidence in conjunction with nominal growth in 2017 could serve as the bridge to fiscal-policy-led growth in 2018.

#### The great handoff from monetary to fiscal policy fades but is still in play

- Infighting led to a setback with healthcare reform, calling into question the path of the larger legislative agenda.
- There is still a path to business-friendly fiscal policy such as tax reform and infrastructure spending, but the opportunity for transformational policy has diminished.

#### HEADWINDS

#### U.S. short-term momentum faces headwinds

 U.S. stocks have started to move toward premium valuations; they traded at roughly 20 times last year's earnings at the end of Q1, a relatively expensive level.



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• The trajectory of positive U.S. economic data appears to be bumping against historical highs, leaving a higher probability that reports will be weaker from here.

#### High expectations could lead to disappointment

- Many of the most recent consumer and business confidence readings were taken before the healthcare reform failure.
- Confidence may fade if the Trump fiscal agenda begins looking less certain.

#### Geopolitical risk is still the primary overall risk

- In a year with a number of European elections, French elections are clearly Europe's most important, as a populist Le Pen victory would have a material impact on the future of the EU and markets.
- Geopolitical risks and the evolving nature of the administration's "America first" strategy continue to be a source of uncertainty.

Overall, the global economic backdrop has improved. However, stock valuations in the U.S. are moving towards expensive territory. While we remain positive over the longer term, the U.S. stock market may lose momentum over the shorter term.

### MARKET COMMENTARY

12.0%

2016

6.1%

**Q**1

Commodities U.S. Stocks

11.8%

2016

-2.3%

# A GOOD FIRST QUARTER

Most major asset classes are off to a good start in 2017. A combination of growthoriented policy talk from the Trump administration and a foundation of emerging global economic growth drove strong first quarter returns. However, markets reacted with increased volatility late in the quarter as political realities set in.

- U.S. stocks paused in March but notched strong results for the first quarter, thanks to improving corporate earnings and economic data.
- International developed stocks rose steadily through the quarter and are modestly outpacing U.S. stocks for the year due to improving growth in Europe.
- Emerging market stocks were the standout performer in the first quarter, aided by a weaker U.S. dollar and a recovering Chinese economy.
- Bonds are up only slightly for the year on stable interest rates.
- Commodities were hit hard by slumping oil prices in March. Last year's standout performer, it is the only major asset class to post a negative return in the first quarter.
- In March, public real estate gave back some of February's gain and now lags the broader stock market for the year.

International Stocks 7.6% 7.4% 7.6% 01 2016 0.8% 3.2% 2.7% 01 0.8% 01

Emerging Market Stocks

11.6% 11.5%

Q1

2016

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

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### MARKET COMMENTARY

# A BEAR WITHOUT BITE?

In 1940, interest rates began an upward trajectory that lasted into the early 1980s. The 10-year Treasury yielded a mere 2% at the start of the climb (similar to today's yield) and ended near a towering 14% in 1981. Yet, over that 42-year period, there were only a handful of years where bonds had a negative total return. In the worst year, the drop was only about 5%!

For bond investors, it is important to know that as rates go up, bond prices go down. However, despite swings in price brought on by interest rate movements, as long as a bond is not sold and the issuer does not default, the bond will mature at par value.

20% 15% 10% 5% -10% 1940 1950 1950 1960 1970 1970 1980 -10-year Treasury Bond Return -10-year Treasury Rate

Source: Federal Reserve

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As we enter a period where interest rates are anticipated to move higher, here are a few key takeaways:

- Rising rates do not necessarily mean losses in bond investments.
- Maintaining an appropriate asset allocation is critical to meeting one's investment goals and objective.
- Investing in a globally diversified portfolio can help mitigate the risk of any one asset class not performing well.
- Bonds should continue to provide diversification and income in diversified portfolios.



#### Bond Returns vs. Interest Rates

# POLICY IN FOCUS: TAX REFORM, DEREGULATION, AND STIMULUS

Despite a policy agenda that is moving slower than many expected and the healthcare reform bill's failure, the markets still appear to be pricing in the prospect of business-friendly fiscal policy. Where do key policy issues stand? And what is the likelihood of meaningful change?

ΤΟΡΙϹ	OUTLOOK	RATIONALE
TAX REFORM	It is looking less likely that significant tax reform can be accomplished this year.	Disagreements raised in the debate over healthcare reform likely mean the path to meaningful tax reform will be more difficult. The tension between cutting taxes and raising revenue will persist, with a contentious debate likely on the latter. The border adjustable tax (BAT), mortgage interest deduction, and charitable giving deductions are all controversial ways to raise tax revenue.
REGULATORY REFORM	Regulatory reform is likely to accelerate through the second half of the year.	Up until now, many key posts have remained unfilled, hampering progress. With more leadership roles expected to be filled in agencies such as the Securities Exchange Commission in the near future, the administration's priorities to cut back regulation may begin to pick up.
STIMULUS	Mixed signals are leading to questions about future stimulus direction.	While the administration has indicated its desire for \$1 trillion in infrastructure spending, Senate Republicans have made it clear they are not willing to approve spending on a big package.

Source: CAPTRUST Research

## ASSET CLASS RETURNS

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Q1 2017
Mid-Cap Value 23.70%	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 8.91%
Small-Cap Value 22.25%	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%	Internationa Equities 7.39%
nternational Equities 20.70%	Mid-Cap Growth 12.10%	Large-Cap Value 22.25%	Mid-Cap Growth 11.43%	Small-Cap Value -28.91%	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 6.89%
Large-Cap Value 16.49%	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 5.35%
Mid-Cap Growth 15.48%	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%	Mid-Cap Value 3.76%
Small-Cap Growth 14.31%	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%	Large-Cap Value 3.27%
Large-Cap Growth 6.30%	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%	Fixed Income 0.82%
Fixed Income 3.04%	Cash 3.35%	Cash 5.08%	Mid-Cap Value -1.42%	International Equities -43.06%	Fixed Income 5.24%	Fixed Income 5.98%	Small-Cap Value -5.50%	Fixed Income 4.22%	Cash 0.07%	Cash 0.03%	Mid-Cap Value -4.78%	International Equities 1.51%	Cash 0.10%
Cash 1.44%	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%	Small-Cap Value -0.13%

Small-Cap Value Stocks (Russell 2000 Value) Small-Cap Growth Stocks (Russell 2000 Growth) Large-Cap Growth Stocks (Russell 1000 Growth) Large-Cap Value Stocks (Russell 1000 Value) Mid-Cap Growth Stocks (Russell Mid-Cap Growth Index) Mid-Cap Value Stocks (Russell Mid-Cap Value Index) International Equities (MSCI EAFE)

Fixed Income (Bloomberg Barclays U.S. Aggregate Bond Index) Cash (Merrill Lynch 3-Month Treasury Bill)

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

### INDEX PERFORMANCE

INDICES	Q1 2017	2016	2015	2014	2013	2012	1 YEAR	3 YEAR	5 YEAR	10 YEAR
S&P 500	6.07%	11.96%	1.38%	13.69%	32.39%	16.00%	17.17%	10.37%	13.30%	7.51%
Dow Jones Industrial Average	5.19%	16.50%	0.21%	10.04%	29.65%	10.24%	19.91%	10.61%	12.15%	8.10%
NASDAQ Composite	9.83%	7.50%	5.73%	13.40%	38.32%	15.91%	21.41%	12.08%	13.85%	9.34%
Russell 1000	6.03%	12.05%	0.92%	13.24%	33.11%	16.42%	17.43%	9.99%	13.26%	7.58%
Russell 1000 Growth	8.91%	7.08%	5.67%	13.05%	33.48%	15.26%	15.76%	11.27%	13.32%	9.13%
Russell 1000 Value	3.27%	17.34%	-3.83%	13.45%	32.53%	17.51%	19.22%	8.67%	13.13%	5.93%
Russell Mid Cap Index	5.15%	13.80%	-2.44%	13.22%	34.76%	17.28%	17.03%	8.48%	13.09%	7.94%
Russell 2000	2.47%	21.31%	-4.41%	4.89%	38.82%	16.35%	26.22%	7.22%	12.35%	7.12%
Russell 2000 Growth	5.35%	11.32%	-1.38%	5.60%	43.30%	14.59%	23.03%	6.72%	12.10%	8.06%
Russell 2000 Value	-0.13%	31.74%	-7.47%	4.22%	34.52%	18.05%	29.37%	7.62%	12.54%	6.09%
MSCI Europe, Australia, Far East	7.39%	1.51%	-0.39%	-4.48%	23.29%	17.90%	12.25%	0.96%	6.32%	1.53%
Dow Jones US Real Estate Index	3.22%	7.56%	2.14%	27.24%	1.77%	18.93%	5.58%	9.88%	9.53%	3.94%
Bloomberg Barclays Govt Intermediate Bond	0.54%	1.05%	1.18%	2.52%	-1.25%	1.73%	-0.67%	1.55%	1.23%	3.32%
Bloomberg Barclays Corporate IG Bond	1.22%	6.11%	-0.68%	7.46%	-1.53%	9.82%	3.31%	3.65%	3.96%	5.44%
Bloomberg Barclays U.S. Aggregate Bond	0.82%	2.65%	0.55%	5.97%	-2.02%	4.22%	0.44%	2.68%	2.34%	4.27%
Bloomberg Barclays Intermediate Govt/Credit	0.78%	2.08%	1.07%	3.13%	-0.86%	3.89%	0.42%	2.01%	1.88%	3.76%
Bloomberg Barclays High Yield	2.70%	17.13%	-4.47%	2.45%	7.44%	15.81%	16.39%	4.56%	6.82%	7.46%
90-Day US Treasury	0.10%	0.33%	0.05%	0.03%	0.07%	0.11%	0.36%	0.17%	0.14%	0.68%
Consumer Price Index (Inflation)	0.90%	2.07%	0.73%	0.76%	1.50%	1.74%	2.74%	1.24%	1.36%	1.82%
Manager Universe	Q1 2017	2016	2015	2014	2013	2012	1 YEAR	3 YEAR	5 YEAR	10 YEAR
Average Large-Cap Growth Fund	8.64%	3.17%	3.75%	10.08%	34.41%	15.31%	14.82%	8.54%	11.58%	7.74%
Average Large-Cap Blend Fund	5.56%	10.29%	-0.88%	11.25%	31.80%	15.10%	15.96%	8.12%	11.73%	6.59%
Average Large-Cap Value Fund	3.70%	14.71%	-4.03%	10.46%	31.64%	14.70%	17.44%	7.28%	11.51%	5.72%
Average Mid-Cap Blend Fund	4.18%	14.24%	-4.26%	8.64%	34.17%	16.42%	17.15%	6.47%	11.55%	6.80%
Average Small-Cap Value Fund	0.37%	25.65%	-6.65%	3.46%	35.91%	16.04%	23.33%	6.15%	11.53%	6.58%
Average Small-Cap Blend Fund	1.78%	20.55%	-5.08%	4.15%	37.51%	15.35%	22.10%	6.15%	11.47%	6.70%
Average Small-Cap Growth Fund	5.58%	11.26%	-2.36%	2.55%	41.25%	13.54%	22.52%	5.43%	10.69%	7.43%
Average Foreign Fund	8.31%	0.76%	-1.08%	-4.76%	19.27%	18.12%	10.91%	0.67%	5.24%	1.33%
Average Emerging Market Fund	11.68%	8.26%	-13.75%	-2.78%	0.34%	18.93%	16.57%	0.80%	1.46%	2.34%
Average Allocation – 30% to 50%	3.00%	6.57%	-2.50%	4.27%	9.19%	10.22%	8.02%	3.23%	5.14%	4.43%
Average Allocation — 50% to 70%	3.85%	7.45%	-2.01%	6.13%	16.75%	11.92%	10.57%	4.49%	7.06%	5.20%
		7 5 70/	-0.10%	5.26%	-0.97%	7.71%	3.10%	2.51%	2.83%	3.85%
Average Fixed Income Fund	1.46%	3.57%	-0.10%	0.20/0						
Average Fixed Income Fund Average High Yield Bond Fund	1.46% 2.32%	3.57% 13.36%	-4.05%	1.17%	7.03%	14.77%	13.56%	3.20%	5.64%	5.98%
					7.03% 1.79%	14.77% 17.57%	13.56% 2.67%	3.20% 8.99%	5.64% 8.86%	5.98% 4.13%

The opinions expressed in this report are subject to change without notice. This material has been prepared or is distributed solely for informational purposes and is not a solicitation or an offer to buy any security or to participate in any investment strategy. The performance data quoted represents past performance and does not guarantee future results. Index averages are provided for comparison purposes only. The information and statistics in this report are from sources believed to be reliable but are not guaranteed to be accurate or complete. CAPTRUST Financial Advisors is an investment adviser registered under the Investment Advisers Act of 1940. **Sources:** Morningstar Direct, MPI

#### SECTION 3: PLAN INVESTMENT REVIEW

University of Maine System Defined Contribution Plan

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#### SECTION 3: PLAN INVESTMENT REVIEW

Plan Investment Menu Review
Plan Assets
Investment Policy Monitor
Investment Review Select Commentary
Investment Performance Summary
Plan Performance Measurement

## PLAN INVESTMENT REVIEW | PLAN MENU

University of Maine System Defined Contribution Plan

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**EXPECTED RETURN** 

Specialty-Private Real Estate	TIAA Real Estate Account	
Emerging Markets	DFA Emerging Markets Core Equity I	
Small Company Growth	Eagle Small Cap Growth R6	
Small Company Value	Victory Sycamore Small Company Opp I	
Foreign Large Growth	Oppenheimer Intl Growth I Oppenheimer Intl Growth Y	
Foreign Large Blend	Vanguard Total Intl Stock Index Inst	
Foreign Large Value	MFS International Value R6	
Medium Company Growth	Goldman Sachs Growth Opp I Goldman Sachs Growth Opportunities R6	
Medium Company Blend	Vanguard Extended Market Index Inst	
Medium Company Value	RidgeWorth Ceredex Mid-Cap Value Eq I RidgeWorth Ceredex Mid-Cap Value Eq IS	
Large Company Growth	Harbor Capital App Instl Harbor Capital Appreciation Retirement	
Large Company Blend	CREF Stock R3 Vanguard Institutional Index I	
Large Company Value	JHancock Disciplined Value R5 JHancock Disciplined Value R6	
Target Date Funds	Vanguard Target Retirement	
World Allocation	CREF Social Choice R3	
Intermediate Term Bond	Prudential Total Return Bond Q Vanguard Total Bond Market Index Adm	QDIA OPTION:
Inflation Protected Bond	CREF Inflation-Linked Bond R3	Vanguard Target Retirement
Stable Value	TIAA Traditional - Group Retirement Annuity	
sh and Equivalents - Money Market	CREF Money Market R3 Vanguard Federal Money Market	
	EXPECTED RISK	

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### PLAN INVESTMENT REVIEW | EXECUTIVE ASSET SUMMARY

Period Ending 3.31.17 | Q1 17

University of Maine System Defined Contribution Plan

Plan Name	Plan/Contract Number	Plan Assets
University of Maine System Retirement Plan for Faculty and Professionals 403(b) DC	102965	\$1,154,613,618
University of Maine System Retirement Tax Deferred Annuity Plan 403(b) TDA	102966	\$147,414,023
University of Maine System Optional Retirement Savings 403(b)	102967	\$1,432,236
University of Maine System Optional Retirement Savings 401(a)	102968	\$1,175,389
University of Maine System Basic Retirement Plan for Classified Employees 403(b)	102969	\$33,045,343
University of Maine System Basic Retirement Plan for Classified Employees 401(a)	102970	\$62,792,367
University of Maine System Deferred Compensation Plan 457(b)	102971	\$25,849,219
	TOTALS	\$1,426,323,195

University of Maine System \* Alternate Carrier Transfers In Date Range January 1, 2017 - March 31, 2017

Alternate Carrier	i la	Amount			
VALIC	\$	62,660.99			
VOYA	\$	969,043.94			
TIAA	\$	20,433.96			
T ROWE PRICE	\$	148,433.72			
Total	\$	1,200,572.61			

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

Pursuant to your request for information, enclosed you will find data related to the Plan(s) and/or Investments specified. You have solicited this information for fiduciary due diligence and review purposes related to the referenced Plan. This report should not be used for regulatory filings or for benefit statements.

Please be advised that neither TIAA, CREF, nor their affiliates, in their satisfaction of your information request, make any representations or warranties, express or implied, as to the accuracy, completeness, or fitness for any purpose or use of this or other data for the Plan(s) that you may request. Teachers Advisors hc. or its affiliates will not be liable for any direct, indirect, or consequential loss arising from any use of or reliance on the information supplied.

#### These numbers include non-approved assets held at TIAA-CREF that are no longer available for additional investments.

Period Ending 3.31.17 | Q1 17

University of Maine System Retirement Pla	n for Faculty and Professionals 403(b) DC - 102965		_		
		-	- MARKET VALUE -		
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2016	(%)	CURRENT	(%)
Cash and Equivalents - Money Market	CREF Money Market R3	\$14,999,372	1.34%	\$9,876,623	0.86%
Cash and Equivalents - Money Market	Vanguard Federal Money Market	\$267,386	0.02%	\$392,434	0.03%
Stable Value	TIAA Traditional - Group Retirement Annuity	\$432,193,984	38.61%	\$434,005,801	37.59%
Inflation Protected Bond	CREF Inflation-Linked Bond R3	\$13,858,063	1.24%	\$13,732,025	1.19%
Intermediate Term Bond	Prudential Total Return Bond Q	\$14,149,830	1.26%	\$15,288,892	1.32%
Intermediate Term Bond	Vanguard Total Bond Market Index Adm	\$2,605,204	0.23%	\$4,069,418	0.35%
World Allocation	CREF Social Choice R3	\$33,960,321	3.03%	\$34,412,357	2.98%
Target Date Ret Income Moderate	Vanguard Target Retirement Income Inv	\$3,233,146	0.29%	\$3,042,670	0.26%
Target Date 2000-2010 Conservative	Vanguard Target Retirement 2010 Inv	\$3,431,930	0.31%	\$3,466,263	0.30%
Target Date 2015 Moderate	Vanguard Target Retirement 2015 Inv	\$3,060,581	0.27%	\$3,612,985	0.31%
Target Date 2020 Moderate	Vanguard Target Retirement 2020 Inv	\$7,725,120	0.69%	\$8,793,674	0.76%
Target Date 2025 Moderate	Vanguard Target Retirement 2025 Inv	\$6,639,122	0.59%	\$7,533,787	0.65%
Target Date 2030 Conservative	Vanguard Target Retirement 2030 Inv	\$7,033,469	0.63%	\$7,960,708	0.69%
Target Date 2035 Moderate	Vanguard Target Retirement 2035 Inv	\$6,800,551	0.61%	\$7,587,375	0.66%
Target Date 2040 Moderate	Vanguard Target Retirement 2040 Inv	\$6,019,280	0.54%	\$6,845,712	0.59%
Target Date 2045 Moderate	Vanguard Target Retirement 2045 Inv	\$4,515,289	0.40%	\$5,143,980	0.45%
Target Date 2050 Moderate	Vanguard Target Retirement 2050 Inv	\$2,424,692	0.22%	\$2,884,936	0.25%
Target Date 2055 Moderate	Vanguard Target Retirement 2055 Inv	\$835,696	0.07%	\$1,010,456	0.09%

#### CONTINUED...

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Period Ending 3.31.17 | Q1 17

University of Maine System Retiremen	t Plan for Faculty and Professionals 403(b) DC - 102965				
		-	- MARKET VALUE -		
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2016	(%)	CURRENT	(%)
Target Date 2060+ Moderate	Vanguard Target Retirement 2060 Inv	\$67,116	0.01%	\$82,363	0.01%
Large Company Value	JHancock Disciplined Value R5	\$14,181,918	1.27%	\$0	0.00%
Large Company Value	JHancock Disciplined Value R6	\$3,588,201	0.32%	\$20,472,272	1.77%
Large Company Blend	CREF Stock R3	\$185,975,795	16.62%	\$193,140,527	16.73%
Large Company Blend	Vanguard Institutional Index I	\$22,199,733	1.98%	\$26,069,104	2.26%
Large Company Growth	Harbor Capital App Instl	\$8,118,755	0.73%	\$0	0.00%
Large Company Growth	Harbor Capital Appreciation Retirement	\$651,546	0.06%	\$9,678,885	0.84%
Medium Company Value	RidgeWorth Ceredex Mid-Cap Value Eq I	\$8,616,407	0.77%	\$0	0.00%
Medium Company Value	RidgeWorth Ceredex Mid-Cap Value Eq IS	\$3,180,903	0.28%	\$14,550,182	1.26%
Medium Company Blend	Vanguard Extended Market Index Inst	\$10,689,096	0.95%	\$12,508,114	1.08%
Medium Company Growth	Goldman Sachs Growth Opp I	\$4,228,630	0.38%	\$0	0.00%
Medium Company Growth	Goldman Sachs Growth Opportunities R6	\$135,252	0.01%	\$4,445,025	0.38%
Foreign Large Value	MFS International Value R6	\$13,142,498	1.17%	\$15,372,402	1.33%
Foreign Large Blend	Vanguard Total Intl Stock Index Inst	\$7,724,284	0.69%	\$9,162,714	0.79%
Foreign Large Growth	Oppenheimer Intl Growth I	\$269,188	0.02%	\$4,225,697	0.37%
Foreign Large Growth	Oppenheimer Intl Growth Y	\$3,897,730	0.35%	\$0	0.00%
Small Company Value	Victory Sycamore Small Company Opp I	\$9,044,450	0.81%	\$10,523,584	0.91%
Small Company Growth	Eagle Small Cap Growth R6	\$2,178,964	0.19%	\$2,759,410	0.24%

#### CONTINUED...

Period Ending 3.31.17 | Q1 17

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

			-	MARKET	VALUE -	
FUND OPTION	CURRENT INVESTMENT NAME		12.31.2016	(%)	CURRENT	(%)
Emerging Markets	DFA Emerging Markets Core Equity I		\$13,477,365	1.20%	\$15,682,449	1.36%
Specialty-Private Real Estate	TIAA Real Estate Account		\$49,860,728	4.45%	\$50,206,345	4.35%
Other Assets	Non Approved Funds		\$145,269,885	12.98%	\$148,831,676	12.89%
Self-Directed Brokerage	Self Directed Accounts		\$49,046,914	4.38%	\$47,242,773	4.09%
		TOTALS	\$1,119,298,394	100%	\$1,154,613,618	100%

Period Ending 3.31.17 | Q1 17

University of Maine System Retirement Ta	x Deferred Annuity Plan 403(b) TDA- 102966				
		-	- MARKET VALUE -		
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2016	(%)	CURRENT	(%)
Cash and Equivalents - Money Market	CREF Money Market R3	\$1,452,371	1.01%	\$867,283	0.59%
Cash and Equivalents - Money Market	Vanguard Federal Money Market	\$0	0.00%	\$23,501	0.02%
Stable Value	TIAA Traditional - Group Retirement Annuity	\$52,780,394	36.87%	\$52,780,474	35.80%
Inflation Protected Bond	CREF Inflation-Linked Bond R3	\$2,479,783	1.73%	\$2,435,858	1.65%
Intermediate Term Bond	Prudential Total Return Bond Q	\$3,422,343	2.39%	\$3,571,331	2.42%
Intermediate Term Bond	Vanguard Total Bond Market Index Adm	\$603,906	0.42%	\$874,542	0.59%
World Allocation	CREF Social Choice R3	\$5,200,416	3.63%	\$5,371,386	3.64%
Target Date Ret Income Moderate	Vanguard Target Retirement Income Inv	\$1,020,550	0.71%	\$1,180,811	0.80%
Target Date 2000-2010 Conservative	Vanguard Target Retirement 2010 Inv	\$429,313	0.30%	\$745,747	0.51%
Target Date 2015 Moderate	Vanguard Target Retirement 2015 Inv	\$761,117	0.53%	\$722,813	0.49%
Target Date 2020 Moderate	Vanguard Target Retirement 2020 Inv	\$2,149,700	1.50%	\$2,102,460	1.43%
Target Date 2025 Moderate	Vanguard Target Retirement 2025 Inv	\$1,964,333	1.37%	\$2,137,469	1.45%
Target Date 2030 Conservative	Vanguard Target Retirement 2030 Inv	\$1,297,923	0.91%	\$1,425,095	0.97%
Target Date 2035 Moderate	Vanguard Target Retirement 2035 Inv	\$897,317	0.63%	\$895,771	0.61%
Target Date 2040 Moderate	Vanguard Target Retirement 2040 Inv	\$487,981	0.34%	\$656,302	0.45%
Target Date 2045 Moderate	Vanguard Target Retirement 2045 Inv	\$192,167	0.13%	\$241,031	0.16%
Target Date 2050 Moderate	Vanguard Target Retirement 2050 Inv	\$72,627	0.05%	\$111,482	0.08%
Target Date 2055 Moderate	Vanguard Target Retirement 2055 Inv	\$60,979	0.04%	\$64,818	0.04%

#### CONTINUED...

Period Ending 3.31.17 | Q1 17

Jniversity of Maine System Retirement						
	- MARKET		MARKET	VALUE -		
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2016	(%)	CURRENT	(%)	
Target Date 2060+ Moderate	Vanguard Target Retirement 2060 Inv	\$2,819	0.00%	\$3,178	0.00%	
Large Company Value	JHancock Disciplined Value R5	\$1,620,296	1.13%	\$0	0.00%	
Large Company Value	JHancock Disciplined Value R6	\$323,047	0.23%	\$2,053,944	1.39%	
Large Company Blend	CREF Stock R3	\$17,793,531	12.43%	\$17,657,951	11.98%	
Large Company Blend	Vanguard Institutional Index I	\$5,625,224	3.93%	\$6,673,906	4.53%	
Large Company Growth	Harbor Capital App Instl	\$1,141,107	0.80%	\$0	0.00%	
Large Company Growth	Harbor Capital Appreciation Retirement	\$26,628	0.02%	\$1,295,664	0.88%	
Medium Company Value	RidgeWorth Ceredex Mid-Cap Value Eq I	\$890,804	0.62%	\$0	0.00%	
Medium Company Value	RidgeWorth Ceredex Mid-Cap Value Eq IS	\$243,490	0.17%	\$1,363,739	0.93%	
Medium Company Blend	Vanguard Extended Market Index Inst	\$1,497,045	1.05%	\$1,896,735	1.29%	
Medium Company Growth	Goldman Sachs Growth Opp I	\$368,615	0.26%	\$0	0.00%	
Medium Company Growth	Goldman Sachs Growth Opportunities R6	\$820	0.00%	\$276,238	0.19%	
Foreign Large Value	MFS International Value R6	\$1,745,873	1.22%	\$2,219,836	1.51%	
Foreign Large Blend	Vanguard Total Intl Stock Index Inst	\$1,275,052	0.89%	\$1,442,154	0.98%	
Foreign Large Growth	Oppenheimer Intl Growth I	\$24,765	0.02%	\$508,957	0.35%	
Foreign Large Growth	Oppenheimer Intl Growth Y	\$502,139	0.35%	\$0	0.00%	
Small Company Value	Victory Sycamore Small Company Opp I	\$1,395,946	0.98%	\$1,370,217	0.93%	
Small Company Growth	Eagle Small Cap Growth R6	\$109,887	0.08%	\$166,117	0.11%	

#### CONTINUED...

Period Ending 3.31.17 | Q1 17

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

			-	MARKET	VALUE -	
FUND OPTION	CURRENT INVESTMENT NAME		12.31.2016	(%)	CURRENT	(%)
Emerging Markets	DFA Emerging Markets Core Equity I		\$1,274,912	0.89%	\$1,591,973	1.08%
Specialty-Private Real Estate	TIAA Real Estate Account		\$10,406,780	7.27%	\$11,002,556	7.46%
Other Assets	Non Approved Funds		\$19,373,845	13.53%	\$19,262,206	13.07%
Self-Directed Brokerage	Self Directed Accounts		\$2,254,929	1.57%	\$2,420,477	1.64%
		TOTALS	\$143,170,772	100%	\$147,414,023	100%

Period Ending 3.31.17 | Q1 17

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

		- MARKET VALUE -			_	
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2016	(%)	CURRENT	(%)	
Cash and Equivalents - Money Market	CREF Money Market R3	\$9,271	0.66%	\$9,168	0.64%	
Cash and Equivalents - Money Market	Vanguard Federal Money Market	\$0	0.00%	\$0	0.00%	
Stable Value	TIAA Traditional - Group Retirement Annuity	\$619,822	44.12%	\$620,011	43.29%	
Inflation Protected Bond	CREF Inflation-Linked Bond R3	\$32,113	2.29%	\$32,745	2.29%	
Intermediate Term Bond	Prudential Total Return Bond Q	\$2,934	0.21%	\$3,634	0.25%	
Intermediate Term Bond	Vanguard Total Bond Market Index Adm	\$251	0.02%	\$254	0.02%	
World Allocation	CREF Social Choice R3	\$37,727	2.69%	\$36,797	2.57%	
Target Date Ret Income Moderate	Vanguard Target Retirement Income Inv	\$1,011	0.07%	\$1,036	0.07%	
Target Date 2000-2010 Conservative	Vanguard Target Retirement 2010 Inv	\$254	0.02%	\$261	0.02%	
Target Date 2015 Moderate	Vanguard Target Retirement 2015 Inv	\$143	0.01%	\$148	0.01%	
Target Date 2020 Moderate	Vanguard Target Retirement 2020 Inv	\$46,905	3.34%	\$46,310	3.23%	
Target Date 2025 Moderate	Vanguard Target Retirement 2025 Inv	\$2,017	0.14%	\$2,110	0.15%	
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%	

#### CONTINUED...

Period Ending 3.31.17 | Q1 17

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

		-	- MARKET VALUE			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2016	(%)	CURRENT	(%)	
Target Date 2060+ Moderate	Vanguard Target Retirement 2060 Inv	\$0	0.00%	\$0	0.00%	
Large Company Value	JHancock Disciplined Value R5	\$1,605	0.11%	\$0	0.00%	
Large Company Value	JHancock Disciplined Value R6	\$0	0.00%	\$1,659	0.12%	
Large Company Blend	CREF Stock R3	\$212,794	15.15%	\$222,416	15.53%	
Large Company Blend	Vanguard Institutional Index I	\$4,677	0.33%	\$8,619	0.60%	
Large Company Growth	Harbor Capital App Instl	\$741	0.05%	\$0	0.00%	
Large Company Growth	Harbor Capital Appreciation Retirement	\$0	0.00%	\$863	0.06%	
Medium Company Value	RidgeWorth Ceredex Mid-Cap Value Eq I	\$1,436	0.10%	\$0	0.00%	
Medium Company Value	RidgeWorth Ceredex Mid-Cap Value Eq IS	\$50	0.00%	\$1,697	0.12%	
Medium Company Blend	Vanguard Extended Market Index Inst	\$1,724	0.12%	\$2,323	0.16%	
Medium Company Growth	Goldman Sachs Growth Opp I	\$39	0.00%	\$0	0.00%	
Medium Company Growth	Goldman Sachs Growth Opportunities R6	\$0	0.00%	\$42	0.00%	
Foreign Large Value	MFS International Value R6	\$2,304	0.16%	\$2,817	0.20%	
Foreign Large Blend	Vanguard Total Intl Stock Index Inst	\$1,197	0.09%	\$1,776	0.12%	
Foreign Large Growth	Oppenheimer Intl Growth I	\$51	0.00%	\$786	0.05%	
Foreign Large Growth	Oppenheimer Intl Growth Y	\$509	0.04%	\$0	0.00%	
Small Company Value	Victory Sycamore Small Company Opp I	\$1,162	0.08%	\$1,421	0.10%	
Small Company Growth	Eagle Small Cap Growth R6	\$221	0.02%	\$243	0.02%	

#### CONTINUED...

Period Ending 3.31.17 | Q1 17

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

			-	MARKET	VALUE -	
FUND OPTION	CURRENT INVESTMENT NAME		12.31.2016	(%)	CURRENT	(%)
Emerging Markets	DFA Emerging Markets Core Equity I		\$1,202	0.09%	\$1,652	0.12%
Specialty-Private Real Estate	TIAA Real Estate Account		\$45,550	3.24%	\$46,397	3.24%
Other Assets	Non Approved Funds		\$377,155	26.85%	\$387,051	27.02%
Self-Directed Brokerage	Self Directed Accounts		\$0	0.00%	\$0	0.00%
		TOTALS	\$1,404,865	100%	\$1,432,236	100%

Period Ending 3.31.17 | Q1 17

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

		-	MARKET	VALUE -	
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2016	(%)	CURRENT	(%)
Cash and Equivalents - Money Market	CREF Money Market R3	\$3,634	0.32%	\$3,636	0.31%
Cash and Equivalents - Money Market	Vanguard Federal Money Market	\$0	0.00%	\$0	0.00%
Stable Value	TIAA Traditional - Group Retirement Annuity	\$393,666	34.47%	\$395,744	33.67%
Inflation Protected Bond	CREF Inflation-Linked Bond R3	\$20,367	1.78%	\$20,621	1.75%
Intermediate Term Bond	Prudential Total Return Bond Q	\$760	0.07%	\$964	0.08%
Intermediate Term Bond	Vanguard Total Bond Market Index Adm	\$63	0.01%	\$64	0.01%
World Allocation	CREF Social Choice R3	\$24,637	2.16%	\$24,914	2.12%
Target Date Ret Income Moderate	Vanguard Target Retirement Income Inv	\$253	0.02%	\$260	0.02%
Target Date 2000-2010 Conservative	Vanguard Target Retirement 2010 Inv	\$839	0.07%	\$601	0.05%
Target Date 2015 Moderate	Vanguard Target Retirement 2015 Inv	\$0	0.00%	\$0	0.00%
Target Date 2020 Moderate	Vanguard Target Retirement 2020 Inv	\$38,617	3.38%	\$38,078	3.24%
Target Date 2025 Moderate	Vanguard Target Retirement 2025 Inv	\$420	0.04%	\$439	0.04%
Target Date 2030 Conservative	Vanguard Target Retirement 2030 Inv	\$806	0.07%	\$847	0.07%
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%

#### CONTINUED...

Period Ending 3.31.17 | Q1 17

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

			MARKET	VALUE -		
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2016	(%)	CURRENT	(%)	
Target Date 2060+ Moderate	Vanguard Target Retirement 2060 Inv	\$0	0.00%	\$0	0.00%	
Large Company Value	JHancock Disciplined Value R5	\$9,343	0.82%	\$0	0.00%	
Large Company Value	JHancock Disciplined Value R6	\$0	0.00%	\$9,668	0.82%	
Large Company Blend	CREF Stock R3	\$133,881	11.72%	\$142,276	12.10%	
Large Company Blend	Vanguard Institutional Index I	\$1,878	0.16%	\$2,998	0.26%	
Large Company Growth	Harbor Capital App Instl	\$17,742	1.55%	\$0	0.00%	
Large Company Growth	Harbor Capital Appreciation Retirement	\$0	0.00%	\$19,612	1.67%	
Medium Company Value	RidgeWorth Ceredex Mid-Cap Value Eq I	\$642	0.06%	\$0	0.00%	
Medium Company Value	RidgeWorth Ceredex Mid-Cap Value Eq IS	\$12	0.00%	\$727	0.06%	
Medium Company Blend	Vanguard Extended Market Index Inst	\$416	0.04%	\$569	0.05%	
Medium Company Growth	Goldman Sachs Growth Opp I	\$17,421	1.53%	\$18,888	1.61%	
Medium Company Growth	Goldman Sachs Growth Opportunities R6	\$0	0.00%	\$0	0.00%	
Foreign Large Value	MFS International Value R6	\$15,358	1.34%	\$16,558	1.41%	
Foreign Large Blend	Vanguard Total Intl Stock Index Inst	\$338	0.03%	\$520	0.04%	
Foreign Large Growth	Oppenheimer Intl Growth I	\$13	0.00%	\$287	0.02%	
Foreign Large Growth	Oppenheimer Intl Growth Y	\$210	0.02%	\$0	0.00%	
Small Company Value	Victory Sycamore Small Company Opp I	\$271	0.02%	\$338	0.03%	
Small Company Growth	Eagle Small Cap Growth R6	\$397	0.03%	\$437	0.04%	

#### CONTINUED...

Period Ending 3.31.17 | Q1 17

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

			—	MARKET	VALUE -	
FUND OPTION	CURRENT INVESTMENT NAME		12.31.2016	(%)	CURRENT	(%)
Emerging Markets	DFA Emerging Markets Core Equity I		\$15,844	1.39%	\$18,016	1.53%
Specialty-Private Real Estate	TIAA Real Estate Account		\$58,998	5.17%	\$59,430	5.06%
Other Assets	Non Approved Funds		\$261,715	22.92%	\$270,418	23.01%
Self-Directed Brokerage	Self Directed Accounts		\$123,396	10.81%	\$128,480	10.93%
		TOTALS	\$1,141,935	100%	\$1,175,389	100%

Period Ending 3.31.17 | Q1 17

University of Maine System Basic Retireme	ent Plan for Classified Employees 403(b) - 102969				
		-	VALUE -		
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2016	(%)	CURRENT	(%)
Cash and Equivalents - Money Market	CREF Money Market R3	\$618,547	1.95%	\$475,335	1.44%
Cash and Equivalents - Money Market	Vanguard Federal Money Market	\$2	0.00%	\$8,916	0.03%
Stable Value	TIAA Traditional - Group Retirement Annuity	\$6,132,272	19.30%	\$6,125,274	18.54%
Inflation Protected Bond	CREF Inflation-Linked Bond R3	\$552,746	1.74%	\$527,323	1.60%
Intermediate Term Bond	Prudential Total Return Bond Q	\$636,759	2.00%	\$646,994	1.96%
Intermediate Term Bond	Vanguard Total Bond Market Index Adm	\$74,975	0.24%	\$73,439	0.22%
World Allocation	CREF Social Choice R3	\$1,068,820	3.36%	\$1,087,876	3.29%
Target Date Ret Income Moderate	Vanguard Target Retirement Income Inv	\$272,110	0.86%	\$272,344	0.82%
Target Date 2000-2010 Conservative	Vanguard Target Retirement 2010 Inv	\$137,528	0.43%	\$233,021	0.71%
Target Date 2015 Moderate	Vanguard Target Retirement 2015 Inv	\$345,261	1.09%	\$366,933	1.11%
Target Date 2020 Moderate	Vanguard Target Retirement 2020 Inv	\$811,756	2.56%	\$886,799	2.68%
Target Date 2025 Moderate	Vanguard Target Retirement 2025 Inv	\$936,012	2.95%	\$1,050,220	3.18%
Target Date 2030 Conservative	Vanguard Target Retirement 2030 Inv	\$443,884	1.40%	\$476,597	1.44%
Target Date 2035 Moderate	Vanguard Target Retirement 2035 Inv	\$297,787	0.94%	\$434,302	1.31%
Target Date 2040 Moderate	Vanguard Target Retirement 2040 Inv	\$297,390	0.94%	\$341,964	1.03%
Target Date 2045 Moderate	Vanguard Target Retirement 2045 Inv	\$233,350	0.73%	\$261,758	0.79%
Target Date 2050 Moderate	Vanguard Target Retirement 2050 Inv	\$93,358	0.29%	\$106,715	0.32%
Target Date 2055 Moderate	Vanguard Target Retirement 2055 Inv	\$73,838	0.23%	\$89,403	0.27%

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Period Ending 3.31.17 | Q1 17

University of Maine System Basic Retir	rement Plan for Classified Employees 403(b) - 102969				
				IARKET VALUE —	
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2016	(%)	CURRENT	(%)
Target Date 2060+ Moderate	Vanguard Target Retirement 2060 Inv	\$9,780	0.03%	\$13,643	0.04%
Large Company Value	JHancock Disciplined Value R5	\$419,105	1.32%	\$0	0.00%
Large Company Value	JHancock Disciplined Value R6	\$122,491	0.39%	\$713,990	2.16%
Large Company Blend	CREF Stock R3	\$3,212,845	10.11%	\$3,354,568	10.15%
Large Company Blend	Vanguard Institutional Index I	\$748,525	2.36%	\$784,750	2.37%
Large Company Growth	Harbor Capital App Instl	\$527,971	1.66%	\$0	0.00%
Large Company Growth	Harbor Capital Appreciation Retirement	\$3,049	0.01%	\$547,115	1.66%
Medium Company Value	RidgeWorth Ceredex Mid-Cap Value Eq I	\$163,112	0.51%	\$0	0.00%
Medium Company Value	RidgeWorth Ceredex Mid-Cap Value Eq IS	\$127,105	0.40%	\$420,293	1.27%
Medium Company Blend	Vanguard Extended Market Index Inst	\$220,415	0.69%	\$320,931	0.97%
Medium Company Growth	Goldman Sachs Growth Opp I	\$404,887	1.27%	\$0	0.00%
Medium Company Growth	Goldman Sachs Growth Opportunities R6	\$0	0.00%	\$353,846	1.07%
Foreign Large Value	MFS International Value R6	\$685,481	2.16%	\$747,338	2.26%
Foreign Large Blend	Vanguard Total Intl Stock Index Inst	\$188,081	0.59%	\$304,045	0.92%
Foreign Large Growth	Oppenheimer Intl Growth I	\$21,850	0.07%	\$96,791	0.29%
Foreign Large Growth	Oppenheimer Intl Growth Y	\$69,750	0.22%	\$0	0.00%
Small Company Value	Victory Sycamore Small Company Opp I	\$470,488	1.48%	\$448,872	1.36%
Small Company Growth	Eagle Small Cap Growth R6	\$32,674	0.10%	\$96,935	0.29%

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Period Ending 3.31.17 | Q1 17

University of Maine System Basic Retirement Plan for Classifie	d Employees 403(b) - 102969
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			—	MARKET	VALUE -	
FUND OPTION	CURRENT INVESTMENT NAME		12.31.2016	(%)	CURRENT	(%)
Emerging Markets	DFA Emerging Markets Core Equity I		\$687,139	2.16%	\$747,209	2.26%
Specialty-Private Real Estate	TIAA Real Estate Account		\$2,029,933	6.39%	\$2,013,474	6.09%
Other Assets	Non Approved Funds		\$6,035,842	19.00%	\$6,079,706	18.40%
Self-Directed Brokerage	Self Directed Accounts		\$2,563,149	8.07%	\$2,536,624	7.68%
		TOTALS	\$31,770,064	100%	\$33,045,343	100%

Period Ending 3.31.17 | Q1 17

University of Maine System Basic Retireme	nt Plan for Classified Employees 401(a) - 102970								
		-	MARKET	VALUE -					
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2016	(%)	CURRENT	(%)				
Cash and Equivalents - Money Market	CREF Money Market R3	\$1,419,189	2.35%	\$1,267,502	2.02%				
Cash and Equivalents - Money Market	Vanguard Federal Money Market	\$13	0.00%	\$16,139	0.03%				
Stable Value	TIAA Traditional - Group Retirement Annuity	\$14,028,827	23.24%	\$13,928,485	22.18%				
Inflation Protected Bond	CREF Inflation-Linked Bond R3	\$1,045,099	1.73%	\$995,186	1.58%				
Intermediate Term Bond	Prudential Total Return Bond Q	\$1,037,070	1.72%	\$1,048,090	1.67%				
Intermediate Term Bond	Vanguard Total Bond Market Index Adm	\$94,748	0.16%	\$108,041	0.17%				
World Allocation	CREF Social Choice R3	\$2,715,282	4.50%	\$2,756,892	4.39%				
Target Date Ret Income Moderate	Vanguard Target Retirement Income Inv	\$492,158	0.82%	\$496,121	0.79%				
Target Date 2000-2010 Conservative	Vanguard Target Retirement 2010 Inv	\$263,210	0.44%	\$446,857	0.71%				
Target Date 2015 Moderate	Vanguard Target Retirement 2015 Inv	\$583,552	0.97%	\$585,947	0.93%				
Target Date 2020 Moderate	Vanguard Target Retirement 2020 Inv	\$1,177,594	1.95%	\$1,358,951	2.16%				
Target Date 2025 Moderate	Vanguard Target Retirement 2025 Inv	\$1,340,971	2.22%	\$1,473,406	2.35%				
Target Date 2030 Conservative	Vanguard Target Retirement 2030 Inv	\$781,116	1.29%	\$839,768	1.34%				
Target Date 2035 Moderate	Vanguard Target Retirement 2035 Inv	\$601,057	1.00%	\$679,488	1.08%				
Target Date 2040 Moderate	Vanguard Target Retirement 2040 Inv	\$418,897	0.69%	\$495,249	0.79%				
Target Date 2045 Moderate	Vanguard Target Retirement 2045 Inv	\$340,464	0.56%	\$385,303	0.61%				
Target Date 2050 Moderate	Vanguard Target Retirement 2050 Inv	\$160,641	0.27%	\$184,665	0.29%				
Target Date 2055 Moderate	Vanguard Target Retirement 2055 Inv	\$75,237	0.12%	\$82,129	0.13%				

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Period Ending 3.31.17 | Q1 17

University of Maine System Basic Retir	rement Plan for Classified Employees 401(a) - 102970							
		-	MARKET	VALUE —				
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2016	(%)	CURRENT	(%)			
Target Date 2060+ Moderate	Vanguard Target Retirement 2060 Inv	\$9,779	0.02%	\$13,672	0.02%			
Large Company Value	JHancock Disciplined Value R5	\$700,406	1.16%	\$0	0.00%			
Large Company Value	JHancock Disciplined Value R6	\$159,468	0.26%	\$1,048,603	1.67%			
Large Company Blend	CREF Stock R3	\$8,071,198	13.37%	\$8,495,192	13.53%			
Large Company Blend	Vanguard Institutional Index I	\$1,141,971	1.89%	\$1,262,256	2.01%			
Large Company Growth	Harbor Capital App Instl	\$802,234	1.33%	\$0	0.00%			
Large Company Growth	Harbor Capital Appreciation Retirement	\$4,604	0.01%	\$871,629	1.39%			
Medium Company Value	RidgeWorth Ceredex Mid-Cap Value Eq I	\$277,595	0.46%	\$0	0.00%			
Medium Company Value	RidgeWorth Ceredex Mid-Cap Value Eq IS	\$161,465	0.27%	\$581,424	0.93%			
Medium Company Blend	Vanguard Extended Market Index Inst	\$396,264	0.66%	\$515,672	0.82%			
Medium Company Growth	Goldman Sachs Growth Opp I	\$479,334	0.79%	\$0	0.00%			
Medium Company Growth	Goldman Sachs Growth Opportunities R6	\$0	0.00%	\$435,873	0.69%			
Foreign Large Value	MFS International Value R6	\$1,027,422	1.70%	\$1,149,758	1.83%			
Foreign Large Blend	Vanguard Total Intl Stock Index Inst	\$291,281	0.48%	\$402,786	0.64%			
Foreign Large Growth	Oppenheimer Intl Growth I	\$7,483	0.01%	\$149,412	0.24%			
Foreign Large Growth	Oppenheimer Intl Growth Y	\$129,418	0.21%	\$0	0.00%			
Small Company Value	Victory Sycamore Small Company Opp I	\$577,144	0.96%	\$568,250	0.90%			
Small Company Growth	Eagle Small Cap Growth R6	\$54,590	0.09%	\$105,392	0.17%			

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Period Ending 3.31.17 | Q1 17

University of Maine System Basic Retirement Plan for (	Classified Employees 401(a) - 102970
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			—	MARKET	VALUE -	
FUND OPTION	CURRENT INVESTMENT NAME		12.31.2016	(%)	CURRENT	(%)
Emerging Markets	DFA Emerging Markets Core Equity I		\$805,114	1.33%	\$911,938	1.45%
Specialty-Private Real Estate	TIAA Real Estate Account		\$3,543,381	5.87%	\$3,577,479	5.70%
Other Assets	Non Approved Funds		\$13,101,869	21.70%	\$13,450,115	21.42%
Self-Directed Brokerage	Self Directed Accounts		\$2,046,461	3.39%	\$2,104,699	3.35%
		TOTALS	\$60,363,607	100%	\$62,792,367	100%

Period Ending 3.31.17 | Q1 17

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

		- MARKET VALUE -						
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2016	(%)	CURRENT	(%)			
Cash and Equivalents - Money Market	CREF Money Market R3	\$529,498	2.12%	\$426,714	1.65%			
Cash and Equivalents - Money Market	Vanguard Federal Money Market	\$35,492	0.14%	\$41,563	0.16%			
Stable Value	TIAA Traditional - Group Retirement Annuity	\$6,219,922	24.94%	\$6,419,854	24.84%			
Inflation Protected Bond	CREF Inflation-Linked Bond R3	\$586,270	2.35%	\$547,646	2.12%			
Intermediate Term Bond	Prudential Total Return Bond Q	\$895,107	3.59%	\$859,274	3.32%			
Intermediate Term Bond	Vanguard Total Bond Market Index Adm	\$48,594	0.19%	\$56,777	0.22%			
World Allocation	CREF Social Choice R3	\$1,215,718	4.87%	\$1,264,385	4.89%			
Target Date Ret Income Moderate	Vanguard Target Retirement Income Inv	\$128,688	0.52%	\$104,754	0.41%			
Target Date 2000-2010 Conservative	Vanguard Target Retirement 2010 Inv	\$306,473	1.23%	\$347,675	1.35%			
Target Date 2015 Moderate	Vanguard Target Retirement 2015 Inv	\$375,654	1.51%	\$414,831	1.60%			
Target Date 2020 Moderate	Vanguard Target Retirement 2020 Inv	\$601,347	2.41%	\$689,783	2.67%			
Target Date 2025 Moderate	Vanguard Target Retirement 2025 Inv	\$654,453	2.62%	\$721,644	2.79%			
Target Date 2030 Conservative	Vanguard Target Retirement 2030 Inv	\$583,136	2.34%	\$640,238	2.48%			
Target Date 2035 Moderate	Vanguard Target Retirement 2035 Inv	\$144,777	0.58%	\$154,094	0.60%			
Target Date 2040 Moderate	Vanguard Target Retirement 2040 Inv	\$154,953	0.62%	\$164,834	0.64%			
Target Date 2045 Moderate	Vanguard Target Retirement 2045 Inv	\$86,149	0.35%	\$98,224	0.38%			
Target Date 2050 Moderate	Vanguard Target Retirement 2050 Inv	\$30,118	0.12%	\$32,394	0.13%			
Target Date 2055 Moderate	Vanguard Target Retirement 2055 Inv	\$0	0.00%	\$0	0.00%			

#### CONTINUED...

Period Ending 3.31.17 | Q1 17

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

		-	- MARKET VALUE -					
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2016	(%)	CURRENT	(%)			
Target Date 2060+ Moderate	Vanguard Target Retirement 2060 Inv	\$0	0.00%	\$0	0.00%			
Large Company Value	JHancock Disciplined Value R5	\$444,904	1.78%	\$0	0.00%			
Large Company Value	JHancock Disciplined Value R6	\$90,121	0.36%	\$593,027	2.29%			
Large Company Blend	CREF Stock R3	\$1,698,898	6.81%	\$1,757,519	6.80%			
Large Company Blend	Vanguard Institutional Index I	\$884,453	3.55%	\$943,065	3.65%			
Large Company Growth	Harbor Capital App Instl	\$377,020	1.51%	\$0	0.00%			
Large Company Growth	Harbor Capital Appreciation Retirement	\$18,217	0.07%	\$410,857	1.59%			
Medium Company Value	RidgeWorth Ceredex Mid-Cap Value Eq I	\$158,476	0.64%	\$0	0.00%			
Medium Company Value	RidgeWorth Ceredex Mid-Cap Value Eq IS	\$75,372	0.30%	\$310,022	1.20%			
Medium Company Blend	Vanguard Extended Market Index Inst	\$453,350	1.82%	\$518,496	2.01%			
Medium Company Growth	Goldman Sachs Growth Opp I	\$189,485	0.76%	\$0	0.00%			
Medium Company Growth	Goldman Sachs Growth Opportunities R6	\$974	0.00%	\$167,503	0.65%			
Foreign Large Value	MFS International Value R6	\$426,873	1.71%	\$481,035	1.86%			
Foreign Large Blend	Vanguard Total Intl Stock Index Inst	\$227,904	0.91%	\$290,147	1.12%			
Foreign Large Growth	Oppenheimer Intl Growth I	\$8,113	0.03%	\$130,911	0.51%			
Foreign Large Growth	Oppenheimer Intl Growth Y	\$109,479	0.44%	\$0	0.00%			
Small Company Value	Victory Sycamore Small Company Opp I	\$338,886	1.36%	\$331,182	1.28%			
Small Company Growth	Eagle Small Cap Growth R6	\$60,262	0.24%	\$71,682	0.28%			

#### CONTINUED...

Period Ending 3.31.17 | Q1 17

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

			-	MARKET	VALUE -	
FUND OPTION	CURRENT INVESTMENT NAME		12.31.2016	(%)	CURRENT	(%)
Emerging Markets	DFA Emerging Markets Core Equity I		\$487,321	1.95%	\$541,150	2.09%
Specialty-Private Real Estate	TIAA Real Estate Account		\$1,940,406	7.78%	\$1,836,896	7.11%
Other Assets	Non Approved Funds		\$3,433,240	13.77%	\$3,509,766	13.58%
Self-Directed Brokerage	Self Directed Accounts		\$917,770	3.68%	\$971,276	3.76%
		TOTALS	\$24,937,871	100%	\$25,849,219	100%

## PLAN INVESTMENT REVIEW | INVESTMENT POLICY MONITOR

Period Ending 3.31.17 | Q1 17

University of Maine System Defined Contribution Plan

INVESTMENT				QUANTI	TATIVE				QUALIT	QUALITATIVE T		ALS
		djusted mance		Peers mance	St	yle	Confi	dence	Fund	Fund	Overall	Total
	3 Yr	5 Yr	3 Yr	5 Yr	3 Yr	5 Yr	3 Yr	5 Yr	Management	Firm	overall	Score
Inflation Protected Bond CREF Inflation-Linked Bond R3							$\overline{}$			$\checkmark$		87
Intermediate Term Bond Prudential Total Return Bond Q												100
World Allocation CREF Social Choice R3										$\checkmark$		99
Large Company Value JHancock Disciplined Value R5												83
Large Company Value JHancock Disciplined Value R6			$\overline{}$									83
Large Company Growth Harbor Capital App Instl												90
Large Company Growth Harbor Capital Appreciation Retirement												90
Medium Company Value RidgeWorth Ceredex Mid-Cap Value Eq I										$\checkmark$		99

L	Е	G	Е	N	D

IN GOOD STANDING VARKED FOR REVIEW CONSIDER FOR TERMINATION CONTIN
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The CAPTRUST Investment Policy Monitor ("Scorecard") is an illustration of our monitoring system and is designed to assist our Retirement Plan clients in their efforts to provide fiduciary oversight to retirement plan 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 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 plan sponsor use only and is not intended to be shared with plan participants.

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## PLAN INVESTMENT REVIEW | INVESTMENT POLICY MONITOR

Period Ending 3.31.17 | Q1 17

University of Maine System Defined Contribution Plan

INVESTMENT				QUANTI					QUALIT		тот	ALS _
	Risk-Ad Perfori		vs. F Perfor	eers mance	St	yle	Confi	dence	Fund	Fund	Overall	Tota
	3 Yr	5 Yr	3 Yr	5 Yr	3 Yr	5 Yr	3 Yr	5 Yr	Management	Firm		Score
Medium Company Value RidgeWorth Ceredex Mid-Cap Value Eq IS										$\checkmark$		99
Medium Company Growth Goldman Sachs Growth Opp I	$\overline{}$		$\overline{}$	$\overline{}$			$\overline{}$	$\overline{}$			$\overline{}$	73
Medium Company Growth Goldman Sachs Growth Opportunities R6			$\checkmark$								$\checkmark$	73
Foreign Large Value MFS International Value R6					$\overline{}$							99
Foreign Large Growth Oppenheimer Intl Growth I	$\overline{}$						$\overline{}$					90
Foreign Large Growth Oppenheimer Intl Growth Y	$\checkmark$						$\overline{}$					90
Small Company Value Victory Sycamore Small Company Opp I												100
Small Company Growth Eagle Small Cap Growth R6												94

	IN GOOD STANDING	$\overline{}$	MARKED FOR REVIEW	CONSIDER FOR TERMINATION	CONTINUED

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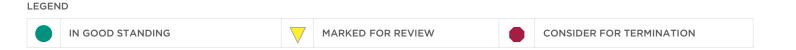
40

## PLAN INVESTMENT REVIEW | INVESTMENT POLICY MONITOR

Period Ending 3.31.17 | Q1 17

University of Maine System Defined Contribution Plan

INVESTMENT	QUANTITATIVE									QUALITATIVE		TOTALS	
		Risk-Adjusted Performance		vs. Peers Performance		Style		Confidence		Fund	Overall	Total	
	3 Yr	5 Yr	3 Yr	5 Yr	3 Yr	5 Yr	3 Yr	5 Yr	Management	Firm	e verain	Score	
Emerging Markets DFA Emerging Markets Core Equity I												95	



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# PLAN INVESTMENT REVIEW | INVESTMENT POLICY MONITOR

University of Maine System Defined Contribution Plan

### TARGET DATE INVESTMENTS

INVESTMENT	QUANTITATIVE							QUALIT	ATIVE		TOTALS	
		djusted mance		Peers mance	Glide	epath	Portfolio	Underlying	Fund	Fund	Overall	Total Score
	3 Yr	5 Yr	3 Yr	5 Yr	% of Equities	Beta to Equities		Inv. Vehicles	Mgmt	Firm		
Vanguard Target Retirement												98

#### **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 Retirement Plan clients in their efforts to provide fiduciary oversight to retirement plan 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 Dever Group; and Glidepath. Qualitative Scoring 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 option's as default, but will be updated, if necessary, after the first quarter of monitoring before including an investment in this report. Investments that have been added to our system lass than 3 months 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 criteria such as: Crediting Parent company. Passively Manage options are evaluated using a comprehensive and quantitative metrics and may include quantitative and quantitative metrics and may include quantitative entries and part options are evaluated using a comprehensive scoring methodology. Distinct investment options are evaluated using a comprehensive scoring methodology. Distinct investment options are evaluated using a comprehensive scoring methodology. Distinct investment options are evaluated using a comprehensive scoring methodology. Distinct investment options are evaluated using a comprehensive to the Investment options are evaluated using a comprehensive scoring methodology. Distinct investment options are evaluated using a comprehensive sco

# PLAN INVESTMENT REVIEW | INVESTMENT POLICY MONITOR

University of Maine System Defined Contribution Plan

### **PASSIVE INVESTMENTS**

INVESTMENT	Overall	Commentary
Vanguard Total Bond Market Index Adm	٠	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	٠	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	٠	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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# PLAN INVESTMENT REVIEW | INVESTMENT POLICY MONITOR

University of Maine System Defined Contribution Plan

### **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 | SELECT COMMENTARY

University of Maine System Defined Contribution Plan

FUND MANAGEMENT ITEMS	COMMENTARY
CREE Inflation-Linked Bond Account	
CKEI IIIIation-Eliiked Bond Account	
	In May 2016, Nicholas Travaglino assumed the role of co-portfolio manager for CREF Inflation-Linked Bond Account. John Cerra continues in his capacity as lead portfolio manager.
	Effective April 1, 2016, the benchmark for CREF Inflation-Linked Bond Account changed from the Barclays U.S. TIPS Index to the Barclays U.S. TIPS 1-10 Year Index.
Goldman Sachs Growth Opp	
	Following a disappointing performance in 2015, the strategy again lagged its peers and the benchmark in 2016. The strategy outperformed in the first half of 2016, but lagged significantly in the second half due to a rally in lower quality stocks. The team also had some missteps in individual positions where their thesis did not work as expected. The strategy has recently face stylistic headwinds and has not navigated the backdrop as well as some of its peers. Execution in the consumer sectors has also been a cause for concern. Thus we have less confidence in the team's ability to outperform its peers and benchmark going forward and have removed the strategy from our recommended list.
MFS International Value	
	The MFS International Value strategy has re-opened to institutional clients, although it will remain soft closed to retail investors.
Vanguard Target Retirement	
	Vanguard has announced it will launch a 2065 vintage for the Target Retirement suite and merge the 2010 vintage with the Target Retirement Income Fund. These adjustments will occur in mid-2017.

# PLAN INVESTMENT REVIEW | SELECT COMMENTARY

University of Maine System Defined Contribution Plan

FUND FIRM ITEMS	COMMENTARY
Eagle Asset Management, Inc.	
Lugie / loser hanagement, mer	
	In early 2016, the senior management succession plan was implemented when Richard Rossi, president and co-COO announced his retirement effective December 31, 2016. Richard stepped down as president on April 4, 2016, but remains as a director of Eagle through the end of 2016. Succeeding Richard in April were Cooper Abbott, co-COO and executive vice president of investments, and Court James, vice president of new business development. This was an administrative change; there were no ownership or investment strategy changes.
John Hancock Funds	
	It was announced on March 6, 2017 that Standard Life, John Hancock's parent company, has agreed to purchase Aberdeen Asset Management. John Hancock does not anticipate any changes to personnel or the objectives associated with any of their strategies.
MFS Family of Funds	
	Effective January 1, 2017, Rob Manning moved out of his role as co-CEO and assumed the position of executive chairman at which time co-CEO Michael Roberge became the sole CEO of the firm. Mike and Rob have served as co-CEOs for the past two years, and during that time, Mike has increasingly taken on more management responsibilities.
OppenheimerFunds	
	On March 17th, 2017, OppenheimerFunds announced that it will acquire SNW Asset Management, an independent fixed income asset manager with around \$2.7 billion in assets under management.
Prudential Investments	
	Jeffrey T. Becker became chairman and chief executive officer of Jennison Associates, effective Oct. 3, 2016. Jennison is an investment manager of PGIM, the global investment management businesses of Prudential Financial.

# PLAN INVESTMENT REVIEW | SELECT COMMENTARY

University of Maine System Defined Contribution Plan

FUND FIRM ITEMS	COMMENTARY
Ridgeworth Capital Management, Inc.	
	In December 2016, Virtus Investment Partners announced that it had reached an agreement to acquire RidgeWorth Investments. As part of the transaction, certain RidgeWorth funds will be reorganized into Virtus funds, pending fund shareholder approval. The acquiring funds' net operating expenses are expected to be the same or lower than the expenses of the acquired RidgeWorth funds for a two-year period from the date of reorganization. This transaction is not expected to have any impact on RidgeWorth's investment teams and its boutique structure will remain intact including Ceredex Value Advisors and Seix Investment Advisors.
TIAA-CREF	
	On January 23, 2017, TIAA announced that it would rebrand TIAA Global Asset Management as Nuveen. Nuveen was purchased by TIAA in 2014 and all of TIAA's money managers, including Nuveen had been placed under the TGAM umbrella.
	TIAA-CREF CIO Bill Riegel, will retired effective April 1, 2017. Bill's team now reports directly to Brad Finkle, President of TIAA Investments.
Victory Capital Management, Inc.	
	The planned acquisition of RS Investments by Victory Capital Management was completed on Friday, July 29, 2016.

### PLAN INVESTMENT REVIEW | TARGET DATE REVIEW

University of Maine System Defined Contribution Plan

### VANGUARD TARGET RETIREMENT

### **MEETING DATE: APRIL 25, 2017**

FOCUS AREA

### Organizational

### COMMENTARY

In January, Vanguard announced they are launching a 2065 vintage for each series within the Target Retirement suite, including the Target Retirement CITs. In addition, Vanguard will merge the 2010 vintage fund with the Income vintage fund. This will also be implemented across the suite and CITs. These adjustments will take place in mid-2017.

Also in Q1, Vanguard made portfolio manager changes to two of Target Retirement's underlying funds. In January, Josh Barrickman was made sole portfolio manager for the Short-Term Inflation-Protected Securities Index fund as former co-PM, Gemma Wright-Casparius, will focus solely on the actively managed Inflation-Protected Securities fund. In March, Christopher Wrazen replaced Yan Pu as co-PM for Total International Bond after Yan was named head of the Vanguard Portfolio Review Department in Asia. Josh Barrickman, head of Vanguard Fixed Income Indexing Americas, remains as co-PM for the fund. These personnel changes will not affect the investment objective, strategy, philosophy, or process of either of the funds.

### Investments

### COMMENTARY

There were no changes made to the underlying investments of the Target Retirement series during the quarter.

### Performance and Positioning

### COMMENTARY

The Target Retirement series did well in the first quarter, outperforming most of its peers especially other passive target date series.

- The primary contributor was the series' equity portfolio as the fixed income allocations were just slightly positive
- Relative to other index series, Target Retirement, benefitted from its larger allocation to international equities which outperformed domestic stocks

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

University of Maine System Defined Contribution Plan

INVESTMENT NAME	Q1 ′17	YTD '17	2016	2015	2014	2013	2012	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
CASH AND EQUIVALENTS - MONEY MARKET											
CREF Money Market R3	0.06%	0.06%	0.13%	0.00%	0.00%	0.00%	0.00%	0.18%	0.07%	0.04%	0.64%
Vanguard Federal Money Market	0.12%	0.12%	0.30%	0.04%	0.01%	0.02%	0.01%	0.36%	0.16%	0.10%	0.72%
BofA ML US Treasury Bill 3 Mon USD	0.10%	0.10%	0.33%	0.05%	0.03%	0.07%	0.11%	0.36%	0.17%	0.14%	0.68%
STABLE VALUE											
TIAA Traditional - Group Retirement Annuity	Current Rate is 4.00%										
BofA ML US Treasury Bill 3 Mon USD	0.10%	0.10%	0.33%	0.05%	0.03%	0.07%	0.11%	0.36%	0.17%	0.14%	0.68%
Hueler Stable Value Index (gross)	0.44%	0.44%	1.77%	1.69%	1.83%	2.25%	2.69%	1.80%	1.76%	1.84%	2.70%
INFLATION PROTECTED BOND											
CREF Inflation-Linked Bond R3	1.10%	1.10%	4.23%	-1.68%	3.34%	-9.01%	6.41%	1.32%	1.66%	0.59%	3.79%
BBgBarc US Treasury US TIPS TR USD	1.26%	1.26%	4.68%	-1.44%	3.64%	-8.61%	6.98%	1.48%	2.03%	0.97%	4.24%
Morningstar Inflation Protected Bond Universe	1.20%	1.20%	4.58%	-2.24%	2.02%	-7.63%	6.35%	2.18%	1.21%	0.39%	3.33%
INTERMEDIATE TERM BOND											
Prudential Total Return Bond Q	1.84%	1.84%	4.83%	0.09%	7.25%	-0.91%	9.96%	3.43%	3.83%	4.06%	5.89%
Vanguard Total Bond Market Index Adm	0.91%	0.91%	2.60%	0.40%	5.89%	-2.15%	4.15%	0.43%	2.60%	2.27%	4.23%
BBgBarc Aggregate Bond Index	0.82%	0.82%	2.65%	0.55%	5.97%	-2.02%	4.21%	0.44%	2.68%	2.34%	4.27%
Morningstar Intermediate Term Bond Universe	1.06%	1.06%	3.21%	-0.24%	5.23%	-1.45%	6.64%	1.75%	2.42%	2.58%	4.16%
WORLD ALLOCATION											
CREF Social Choice R3	3.80%	3.80%	7.40%	-0.87%	6.83%	16.68%	10.99%	9.68%	5.09%	7.41%	5.39%
60% MSCI World 40% BBgBarc Agg Index	4.22%	4.22%	6.09%	0.26%	5.77%	14.83%	11.70%	9.26%	4.88%	7.03%	4.95%
Morningstar World Allocation Universe	4.22%	4.22%	5.97%	-3.95%	1.76%	11.34%	11.71%	9.12%	2.13%	4.79%	3.92%

### CONTINUED...

\*ANNUALIZED

University of Maine System Defined Contribution Plan

INVESTMENT NAME	Q1 '17	YTD '17	2016	2015	2014	2013	2012	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
TARGET DATE RET INCOME MODERATE											
Vanguard Target Retirement Income Inv	2.45%	2.45%	5.25%	-0.17%	5.54%	5.87%	8.23%	5.36%	3.80%	4.61%	4.95%
Morningstar Lifetime Moderate Income Index	2.39%	2.39%	5.98%	-1.30%	4.09%	6.45%	8.78%	5.93%	3.06%	4.19%	4.84%
Retirement Income Moderate	2.70%	2.70%	5.04%	-1.38%	4.58%	6.61%	8.98%	5.98%	3.15%	4.24%	3.99%
TARGET DATE 2000-2010 CONSERVATIVE											
Vanguard Target Retirement 2010 Inv	2.53%	2.53%	5.22%	-0.20%	5.93%	9.10%	10.12%	5.55%	3.90%	5.32%	4.68%
Morningstar Lifetime Conservative 2010 Index	2.12%	2.12%	5.61%	-1.48%	4.62%	3.77%	9.02%	4.68%	2.83%	3.72%	4.92%
2000-2010 Conservative	2.65%	2.65%	4.71%	-0.86%	3.35%	5.17%	6.88%	5.36%	2.95%	3.65%	3.31%
TARGET DATE 2015 MODERATE											
Vanguard Target Retirement 2015 Inv	3.38%	3.38%	6.16%	-0.46%	6.56%	13.00%	11.37%	7.70%	4.58%	6.45%	5.02%
Morningstar Lifetime Moderate 2015 Index	3.03%	3.03%	7.10%	-1.73%	5.55%	10.50%	11.49%	7.56%	3.80%	5.62%	5.25%
2015 Moderate	3.51%	3.51%	6.27%	-1.40%	4.69%	11.76%	11.14%	8.47%	3.81%	5.94%	4.30%
TARGET DATE 2020 MODERATE											
Vanguard Target Retirement 2020 Inv	4.10%	4.10%	6.95%	-0.68%	7.11%	15.85%	12.35%	9.44%	5.17%	7.34%	5.23%
Morningstar Lifetime Moderate 2020 Index	3.39%	3.39%	7.66%	-1.88%	5.87%	12.98%	12.53%	8.60%	4.13%	6.30%	5.29%
2020 Moderate	4.09%	4.09%	6.11%	-1.41%	5.02%	15.48%	12.88%	9.31%	4.09%	6.76%	4.35%
TARGET DATE 2025 MODERATE											
Vanguard Target Retirement 2025 Inv	4.59%	4.59%	7.48%	-0.85%	7.17%	18.14%	13.29%	10.71%	5.48%	7.94%	5.28%
Morningstar Lifetime Moderate 2025 Index	3.87%	3.87%	8.39%	-2.06%	6.04%	16.28%	13.67%	10.09%	4.53%	7.15%	5.38%
2025 Moderate	4.57%	4.57%	6.81%	-1.41%	5.11%	17.80%	13.86%	10.50%	4.43%	7.33%	4.79%

CONTINUED...

\*ANNUALIZED

University of Maine System Defined Contribution Plan

INVESTMENT NAME	Q1 '17	YTD '17	2016	2015	2014	2013	2012	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
TARGET DATE 2030 CONSERVATIVE											
Vanguard Target Retirement 2030 Inv	5.10%	5.10%	7.85%	-1.03%	7.17%	20.49%	14.24%	11.90%	5.72%	8.50%	5.31%
Morningstar Lifetime Conservative 2030 Index	3.47%	3.47%	7.73%	-2.06%	6.09%	12.23%	12.89%	8.42%	4.13%	6.25%	5.39%
2030 Conservative	4.57%	4.57%	7.23%	-2.01%	5.09%	15.23%	13.03%	11.12%	4.51%	6.76%	3.86%
TARGET DATE 2035 MODERATE											
Vanguard Target Retirement 2035 Inv	5.52%	5.52%	8.26%	-1.26%	7.24%	22.82%	15.16%	13.04%	5.95%	9.05%	5.46%
Morningstar Lifetime Moderate 2035 Index	5.00%	5.00%	10.07%	-2.58%	5.80%	22.03%	15.36%	13.71%	5.23%	8.61%	5.66%
2035 Moderate	5.74%	5.74%	7.99%	-1.34%	5.34%	22.06%	15.51%	13.29%	5.37%	8.73%	5.38%
TARGET DATE 2040 MODERATE											
Vanguard Target Retirement 2040 Inv	6.02%	6.02%	8.73%	-1.59%	7.15%	24.37%	15.56%	14.32%	6.14%	9.43%	5.69%
Morningstar Lifetime Moderate 2040 Index	5.37%	5.37%	10.61%	-2.83%	5.51%	23.05%	15.71%	14.90%	5.36%	8.88%	5.74%
2040 Moderate	5.88%	5.88%	7.46%	-1.43%	5.52%	23.50%	15.58%	13.39%	5.28%	8.73%	4.91%
TARGET DATE 2045 MODERATE											
Vanguard Target Retirement 2045 Inv	6.19%	6.19%	8.87%	-1.57%	7.16%	24.37%	15.58%	14.71%	6.24%	9.50%	5.70%
Morningstar Lifetime Moderate 2045 Index	5.54%	5.54%	10.84%	-3.03%	5.25%	23.07%	15.84%	15.40%	5.34%	8.87%	5.71%
2045 Moderate	5.94%	5.94%	7.97%	-1.99%	5.03%	22.01%	15.15%	13.88%	5.15%	8.27%	4.84%
TARGET DATE 2050 MODERATE											
Vanguard Target Retirement 2050 Inv	6.19%	6.19%	8.85%	-1.57%	7.18%	24.34%	15.58%	14.70%	6.24%	9.50%	5.71%
Morningstar Lifetime Moderate 2050 Index	5.61%	5.61%	10.89%	-3.19%	5.00%	22.83%	15.94%	15.53%	5.24%	8.78%	5.65%
2050 Moderate	5.99%	5.99%	7.97%	-1.79%	5.23%	23.75%	15.60%	13.97%	5.28%	8.65%	5.61%

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\*ANNUALIZED

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University of Maine System Defined Contribution Plan

INVESTMENT NAME	Q1 /17	YTD '17	2016	2015	2014	2013	2012	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
TARGET DATE 2055 MODERATE											
Vanguard Target Retirement 2055 Inv	6.17%	6.17%	8.88%	-1.72%	7.19%	24.33%	15.58%	14.70%	6.19%	9.47%	-
Morningstar Lifetime Moderate 2055 Index	5.66%	5.66%	10.90%	-3.34%	4.74%	22.49%	16.00%	15.57%	5.13%	8.65%	5.58%
2055 Moderate	6.00%	6.00%	8.38%	-1.55%	5.95%	23.73%	15.47%	14.34%	5.75%	8.92%	5.91%
TARGET DATE 2060+ MODERATE											
Vanguard Target Retirement 2060 Inv	6.16%	6.16%	8.84%	-1.68%	7.16%	24.35%	-	14.67%	6.19%	9.53%	-
Morningstar Lifetime Moderate 2060 Index	5.70%	5.70%	10.88%	-3.48%	4.53%	-	-	15.55%	5.02%	-	-
2060+ Moderate	6.15%	6.15%	8.72%	-0.89%	7.24%	24.34%	-	14.70%	6.14%	9.60%	-
LARGE COMPANY VALUE											
JHancock Disciplined Value R5	3.92%	3.92%	14.00%	-4.93%	11.03%	36.04%	20.02%	18.88%	6.83%	12.30%	7.37%
JHancock Disciplined Value R6	3.87%	3.87%	14.07%	-4.81%	11.04%	35.97%	20.08%	18.97%	6.87%	12.34%	7.39%
Russell 1000 Value	3.27%	3.27%	17.34%	-3.83%	13.45%	32.53%	17.51%	19.22%	8.67%	13.13%	5.93%
Morningstar Large Value Universe	3.70%	3.70%	14.71%	-4.03%	10.46%	31.64%	14.70%	17.44%	7.28%	11.51%	5.72%
LARGE COMPANY BLEND											
CREF Stock R3	6.75%	6.75%	9.17%	-0.84%	6.41%	27.83%	17.29%	16.44%	6.70%	10.22%	5.48%
Vanguard Institutional Index I	6.05%	6.05%	11.93%	1.37%	13.65%	32.35%	15.98%	17.13%	10.34%	13.27%	7.51%
S&P 500 Index	6.07%	6.07%	11.96%	1.38%	13.69%	32.39%	16.00%	17.17%	10.37%	13.30%	7.51%
Morningstar Large Blend Universe	5.56%	5.56%	10.29%	-0.88%	11.25%	31.80%	15.10%	15.96%	8.12%	11.73%	6.59%

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University of Maine System Defined Contribution Plan

INVESTMENT NAME	Q1 /17	YTD '17	2016	2015	2014	2013	2012	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
LARGE COMPANY GROWTH											
Harbor Capital App Instl	10.64%	10.64%	-1.07%	10.99%	9.93%	37.66%	15.69%	15.83%	10.17%	12.30%	8.98%
Harbor Capital Appreciation Retirement	10.67%	10.67%	-1.04%	10.99%	9.93%	37.66%	15.69%	15.88%	10.19%	12.31%	8.99%
Russell 1000 Growth	8.91%	8.91%	7.08%	5.67%	13.05%	33.48%	15.26%	15.76%	11.27%	13.32%	9.13%
Morningstar Large Growth Universe	8.64%	8.64%	3.17%	3.75%	10.08%	34.41%	15.31%	14.82%	8.54%	11.58%	7.74%
MEDIUM COMPANY VALUE											
RidgeWorth Ceredex Mid-Cap Value Eq I	5.16%	5.16%	20.16%	-6.00%	11.00%	31.21%	21.79%	23.08%	8.44%	13.25%	9.18%
RidgeWorth Ceredex Mid-Cap Value Eq IS	5.23%	5.23%	20.53%	-5.63%	11.05%	31.21%	21.79%	23.34%	8.74%	13.44%	9.27%
Russell Mid Cap Value	3.76%	3.76%	20.00%	-4.78%	14.75%	33.46%	18.51%	19.82%	8.94%	14.07%	7.47%
Morningstar Mid Value Universe	3.54%	3.54%	17.90%	-5.53%	9.56%	34.83%	16.30%	18.90%	6.97%	12.02%	6.81%
MEDIUM COMPANY BLEND											
Vanguard Extended Market Index Inst	4.57%	4.57%	16.15%	-3.24%	7.56%	38.42%	18.50%	22.52%	7.16%	12.62%	8.01%
Russell Mid Cap	5.15%	5.15%	13.80%	-2.44%	13.22%	34.76%	17.28%	17.03%	8.48%	13.09%	7.94%
Morningstar Mid Blend Universe	4.18%	4.18%	14.24%	-4.26%	8.64%	34.17%	16.42%	17.15%	6.47%	11.55%	6.80%
MEDIUM COMPANY GROWTH											
Goldman Sachs Growth Opp I	8.80%	8.80%	1.49%	-5.24%	11.44%	32.38%	19.58%	11.66%	4.63%	9.53%	8.60%
Goldman Sachs Growth Opportunities R6	8.84%	8.84%	1.49%	-5.24%	11.44%	32.38%	19.58%	11.70%	4.64%	9.54%	8.61%
Russell Mid Cap Growth	6.89%	6.89%	7.33%	-0.20%	11.90%	35.74%	15.81%	14.07%	7.88%	11.95%	8.13%
Morningstar Mid Growth Universe	7.34%	7.34%	5.78%	-0.74%	7.16%	35.23%	14.25%	15.57%	6.06%	10.31%	7.28%

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University of Maine System Defined Contribution Plan

INVESTMENT NAME	Q1 '17	YTD '17	2016	2015	2014	2013	2012	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
FOREIGN LARGE VALUE											
MFS International Value R6	7.31%	7.31%	4.31%	6.85%	1.61%	27.80%	16.13%	9.04%	6.36%	10.61%	5.60%
MSCI EAFE	7.39%	7.39%	1.51%	-0.39%	-4.48%	23.29%	17.90%	12.25%	0.96%	6.32%	1.53%
Morningstar Foreign Large Value Universe	7.07%	7.07%	3.08%	-3.22%	-6.27%	20.69%	16.71%	12.20%	-0.42%	4.81%	0.39%
FOREIGN LARGE BLEND											
Vanguard Total Intl Stock Index Inst	8.46%	8.46%	4.70%	-4.24%	-4.15%	15.15%	18.28%	13.73%	1.11%	4.85%	1.37%
MSCI EAFE	7.39%	7.39%	1.51%	-0.39%	-4.48%	23.29%	17.90%	12.25%	0.96%	6.32%	1.53%
Morningstar Foreign Large Blend Universe	7.77%	7.77%	0.83%	-1.61%	-4.96%	19.49%	17.97%	10.91%	0.40%	5.10%	1.04%
FOREIGN LARGE GROWTH											
Oppenheimer Intl Growth I	7.76%	7.76%	-1.88%	3.63%	-6.80%	25.71%	22.12%	4.57%	0.34%	6.68%	3.74%
Oppenheimer Intl Growth Y	7.70%	7.70%	-2.06%	3.44%	-6.99%	25.46%	22.10%	4.38%	0.15%	6.48%	3.90%
MSCI EAFE	7.39%	7.39%	1.51%	-0.39%	-4.48%	23.29%	17.90%	12.25%	0.96%	6.32%	1.53%
Morningstar Foreign Large Growth Universe	9.17%	9.17%	-2.16%	1.00%	-4.03%	19.71%	18.75%	8.64%	1.10%	5.55%	1.99%
SMALL COMPANY VALUE											
Victory Sycamore Small Company Opp I	0.02%	0.02%	30.04%	-0.39%	6.80%	33.39%	12.55%	27.26%	10.28%	13.66%	8.87%
Russell 2000 Value	-0.13%	-0.13%	31.74%	-7.47%	4.22%	34.52%	18.05%	29.37%	7.62%	12.54%	6.09%
Morningstar Small Value Universe	0.37%	0.37%	25.65%	-6.65%	3.46%	35.91%	16.04%	23.33%	6.15%	11.53%	6.58%
SMALL COMPANY GROWTH											
Eagle Small Cap Growth R6	10.01%	10.01%	10.45%	-0.39%	5.59%	34.70%	14.71%	26.13%	8.38%	11.42%	8.76%
Russell 2000 Growth	5.35%	5.35%	11.32%	-1.38%	5.60%	43.30%	14.59%	23.03%	6.72%	12.10%	8.05%
Morningstar Small Growth Universe	5.58%	5.58%	11.26%	-2.36%	2.55%	41.25%	13.54%	22.52%	5.43%	10.69%	7.43%

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University of Maine System Defined Contribution Plan

INVESTMENT NAME	Q1 17	YTD '17	2016	2015	2014	2013	2012	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
EMERGING MARKETS											
DFA Emerging Markets Core Equity I	13.68%	13.68%	12.35%	-14.86%	-0.91%	-2.64%	20.49%	19.08%	2.31%	1.89%	3.93%
MSCI Emerging Markets	11.49%	11.49%	11.60%	-14.60%	-1.82%	-2.27%	18.63%	17.65%	1.55%	1.17%	3.05%
Morningstar Emerging Markets Universe	11.68%	11.68%	8.26%	-13.75%	-2.78%	0.34%	18.93%	16.57%	0.80%	1.46%	2.34%
SPECIALTY-PRIVATE REAL ESTATE											
TIAA Real Estate Account	1.13%	1.13%	5.20%	8.16%	12.22%	9.65%	10.06%	4.42%	8.06%	8.58%	3.09%
NCREIF Property Index	1.55%	1.55%	7.97%	13.33%	11.81%	10.99%	10.54%	7.27%	10.58%	10.69%	6.71%
Morningstar Specialty-Real Estate Universe	0.85%	0.85%	6.52%	2.42%	28.27%	1.79%	17.57%	2.67%	8.99%	8.86%	4.13%

\*ANNUALIZED

### PLAN INVESTMENT REVIEW | PLAN PERFORMANCE MEASUREMENT

University of Maine System Defined Contribution Plan

### Plan Performance Success Rate: Average score of plan investments illustrated below

					70	) or >	80	) or >					
50						į				91		100	
50												100	)
									AV	G SCORE	E		
INVESTMENT NAME	Q2 14	Q3 14	Q4 14	Q1 15	Q2 15	Q3 15	Q4 15	Q1 16	Q2 16	Q3 16	Q4 16	Q1 17	AVERAGE
CREF Inflation-Linked Bond R3	-	-	-	-	90	94	93	93	89	80	89	87	89
Prudential Total Return Bond Q	-	-	-	96	100	100	100	97	98	99	100	100	98
CREF Social Choice R3	-	-	-	-	100	100	100	100	100	100	99	99	99
Vanguard Target Retirement	95	95	95	96	90	90	94	96	96	91	96	98	94
JHancock Disciplined Value R5	97	98	98	97	98	95	95	91	86	90	90	83	93
JHancock Disciplined Value R6	-	-	-	-	-	-	-	-	-	-	90	83	86
Harbor Capital App Instl	91	84	86	91	99	100	100	99	95	90	86	90	92
Harbor Capital Appreciation Retirement	-	-	-	-	-	-	-	-	-	-	86	90	88
RidgeWorth Ceredex Mid-Cap Value Eq I	87	92	90	74	70	64	74	78	81	91	96	99	83
RidgeWorth Ceredex Mid-Cap Value Eq IS	-	-	-	-	-	-	-	-	-	-	96	99	97
Goldman Sachs Growth Opp I	94	89	92	84	81	71	79	84	90	84	76	73	83
Goldman Sachs Growth Opportunities R6	-	-	-	-	-	-	-	-	-	-	76	73	74
MFS International Value R6	100	99	99	100	100	100	100	100	100	100	99	99	99
Oppenheimer Intl Growth Y	99	98	98	97	99	99	99	100	97	97	94	90	97
Oppenheimer Intl Growth I	-	-	-	-	-	-	-	-	-	-	94	90	92
Victory Sycamore Small Company Opp I	92	81	84	88	86	100	100	99	99	100	100	100	94

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### SUMMARY: Over the previous quarters the plan investment options have averaged a score of 91.

Scores are calculated quarterly using the CAPTRUST Investment Policy Monitoring System ("Scorecard"). In the 4Q2013, our methodology changed utilizing different quantitative statistics than the prior system resulting in a re-categorization of some specific funds as either "passive" (funds designed to track a given benchmark) or "distinct" funds with a limited number of comparable funds, or funds with distinct strategies that do not have an appropriate benchmark. These funds (passive and/or distinct) will no longer be included in the Plan Performance Measurement Report but will continue to be included on the Investment Policy Monitor and be scored by CAPTRUST for their ability to achieve stated goals.

### PLAN INVESTMENT REVIEW | PLAN PERFORMANCE MEASUREMENT

University of Maine System Defined Contribution Plan

### Plan Performance Success Rate: Average score of plan investments illustrated below

INVESTMENT NAME	Q2 14	Q3 14	Q4 14	Q1 15	Q2 15	Q3 15	Q4 15	Q1 16	Q2 16	Q3 16	Q4 16	Q1 17	AVERAGE
Eagle Small Cap Growth R6	78	90	86	86	91	86	88	91	91	82	85	94	87
DFA Emerging Markets Core Equity I	93	93	91	91	90	90	89	91	92	92	92	95	91

### SUMMARY: Over the previous quarters the plan investment options have averaged a score of 91.

Scores are calculated quarterly using the CAPTRUST Investment Policy Monitoring System ("Scorecard"). In the 4Q2013, our methodology changed utilizing different quantitative statistics than the prior system resulting in a re-categorization of some specific funds as either "passive" (funds designed to track a given benchmark) or "distinct" funds with a limited number of comparable funds, or funds with distinct strategies that do not have an appropriate benchmark. These funds (passive and/or distinct) will no longer be included in the Plan Performance Measurement Report but will continue to be included on the Investment Policy Monitor and be scored by CAPTRUST for their ability to achieve stated goals.

### SECTION 4: FUND FACT SHEETS

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

SECTION 4: FUND FACT SHEETS

Fund Fact Sheets.....

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Period Ending 3.31.17 | Q1 17

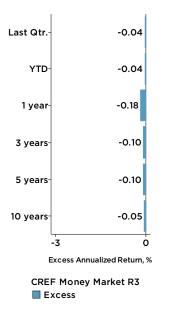
### CREF Money Market R3

#### Period Ending 3.31.17 | Q117

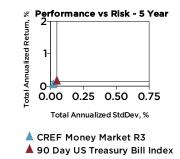
### INDUSTRY ANALYSIS

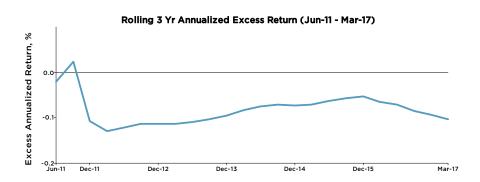
Money market reform passed in 2010 imposed new mandates on 2a-7 managers including shorter average maturities, tighter restrictions on allowable securities, increased liquidity mandates and mandatory stress testing by fund managers. In July 2014, the SEC passed further 2a-7 regulations that mandated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

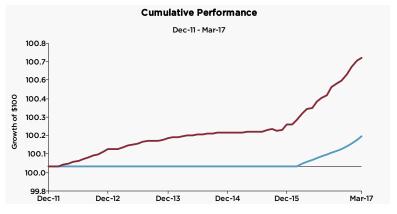
	CREF Money Market R3	90 Day US Treasury Bill Index
TRAILING RETURNS		
Last Qtr.	0.06	0.10
YTD	0.06	0.10
1 Year	0.18	0.36
3 Years	0.07	O.17
5 Years	0.04	0.14
10 Years	0.64	0.68
CALENDAR RETURNS		
2016	0.13	0.33
2015	0.00	0.05
2014	0.00	0.03
2013	0.00	0.07
2012	0.00	O.11
2011	0.00	0.10
KEY MEASURES / 5 YEAR		
Standard Deviation	0.02	0.05











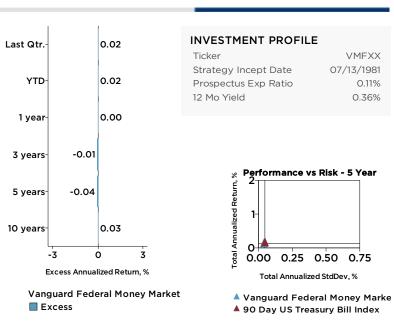
Performance Disclosure: The performance data quoted represents past performance and does not guarantee future results. The investment return and principal value of an investment will fluctuate thus an investor's shares, when redeemed, may be worth more or less than their original cost. Current performance 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.

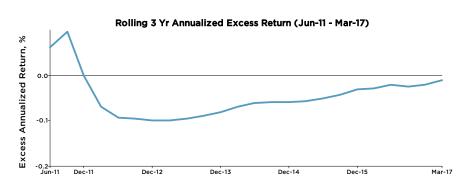
# Vanguard Federal Money Market

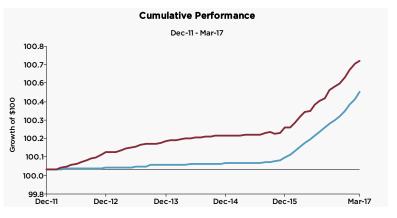
### INDUSTRY ANALYSIS

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

	Vanguard Federal Money Market	90 Day US Treasury Bill Index
TRAILING RETURNS		
Last Qtr.	0.12	0.10
YTD	0.12	0.10
1 Year	0.36	0.36
3 Years	0.16	0.17
5 Years	0.10	0.14
10 Years	0.72	0.68
CALENDAR RETURNS		
2016	0.30	0.33
2015	0.04	0.05
2014	0.01	0.03
2013	0.02	0.07
2012	0.01	O.11
2011	0.01	0.10
KEY MEASURES / 5 YEAR		
Standard Deviation	0.04	0.05





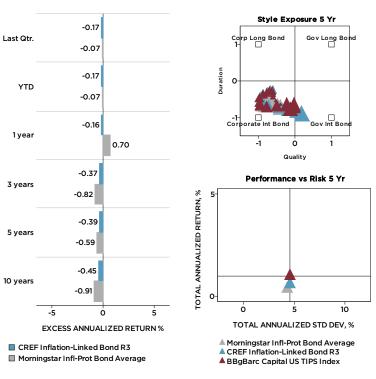


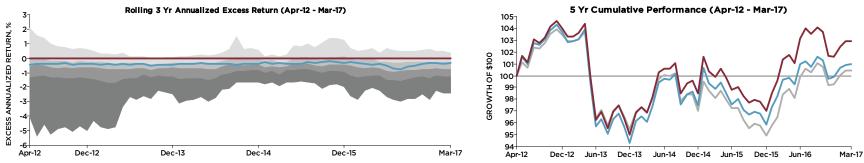
Performance Disclosure: The performance data quoted represents past performance and does not guarantee future results. The investment return and principal value of an investment will fluctuate thus an investor's shares, when redeemed, may be worth more or less than their original cost. Current performance 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 (900) 216-0645. CAPTRUST Financial Advisors.

# CREF INFLATION-LINKED BOND R3

Period Ending 3.31.17 | Q1 17

	CREF Inflation-Linked Bond R3	Peer Group Rank	BBgBarc Capital US TIPS Index	Morningstar Infl-Prot Bond	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	4.55	63%	4.64	4.30	184
Sharpe Ratio	0.10	35%	0.18	0.07	184
Alpha	-0.37	43%	0.00	-0.46	184
Beta	0.97	38%	1.00	0.85	184
R-Squared	98.53	37%	100.00	84.28	184
Up Mkt Capture	92.65	39%	100.00	81.70	184
Down Mkt Capture	98.59	46%	100.00	89.03	184
Information Ratio	-0.69	60%	NA	-0.88	184
TRAILING RETURNS					
Last Qtr.	1.10		1.26	1.20	235
YTD	1.10		1.26	1.20	235
1 Year	1.32	66%	1.48	2.18	235
3 Years	1.66	27%	2.03	1.21	221
5 Years	0.59	36%	0.97	0.39	184
10 Years	3.79	35%	4.24	3.33	142
CALENDAR RETURNS					
2016	4.23	52%	4.68	4.58	233
2015	-1.68	37%	-1.44	-2.24	242
2014	3.34	22%	3.64	2.02	240
2013	-9.01	67%	-8.60	-7.63	240
2012	6.41	51%	6.98	6.35	214
2011	13.18	15%	13.56	10.83	208





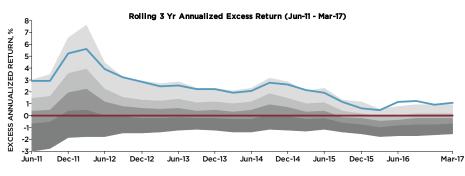
Performance Disclosure: The performance data quoted represents past performance and does not guarantee future results. The investment return and principal value of an investment will fluctuate thus an investor's shares, when redeemed may be worth more or less than their original cost. Current performance 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.

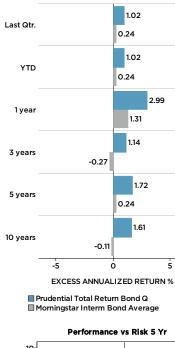
Period Ending 3.31.17 | Q1 17

# **TIAA Traditional Fact Sheet**

## Prudential Total Return Bond Q

#### Prudential Total Peer Group BBgBarc US Agg # of Morningstar Return Bond Q Rank Bond TR USD Interm Bond Funds KEY MEASURES / 5 YEAR Standard Deviation 3.69 96% 2.88 2.93 889 Sharpe Ratio 1.06 18% 0.76 0.84 889 Alpha 1.32 14% 0.00 0.41 889 1.19 1.00 0.92 Beta 2% 889 100.00 84.58 **R-Squared** 85.99 61% 889 Up Mkt Capture 141.81 1% 100.00 100.79 889 Down Mkt Capture 112.88 88% 100.00 92.68 889 Information Ratio 1.14 6% NA 0.03 889 TRAILING RETURNS Last Qtr. 1.84 --0.82 1.06 1011 YTD 1.84 --0.82 1.06 1011 983 1 Year 3.43 14% 0.44 1.75 3.83 4% 2.68 2.42 934 3 Years 2.58 4.06 4% 2.34 889 5 Years 10 Years 5.89 2% 4.27 4.16 793 CALENDAR RETURNS 12% 2016 4.83 2.65 3.21 991 2015 0.09 45% 0.55 -0.24 994 2014 7.25 5% 5.97 5.23 1036 2013 -0.91 27% -2.02 -1.45 1052 9.96 2012 8% 4.21 6.64 1092 2011 7.93 8% 7.84 6.10 1128 %





# 10 TOTAL ANNUALIZED RETURN, 0 ò 5 TOTAL ANNUALIZED STD DEV, % Morningstar Interm Bond Average A Prudential Total Return Bond Q A BBgBarc US Agg Bond TR USD

#### Period Ending 3.31.17 | Q117

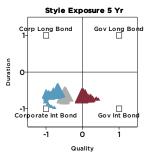
INVESTMENT PROFILE	
Ticker	PTRQX
CUSIP	74440B884
Net Assets \$MM	\$21,742.00
Manager Names	Team Managed
Manager Tenure	14.4 Years
Prospectus Exp Ratio	0.43%
Cat Median Exp Ratio	0.80%
Current 12b-1	N/A
Annlzd Ret Since Incept	4.97%
Inception Date	12/27/2010
Phone Number	800-225-1852
Sub Advisor	PGIM
	Fixed
	Income

#### HOLDINGS OVERVIEW

Total Number of Holdings	2310
% Assets in Top 10 Holdings	91.60%
Avg Mkt Cap \$MM	\$12,985.11
Turnover Ratio	102.00%

### TOP HOLDINGS

US 5 Year Note (CBT) Jun	21.13%
US 10 Year Note (CBT) Jur	12.49%
2 Year US Treasury Note F	10.12%
Payb Fra 2.165 03222017	9.37%
Recv Fra 3.4115 03222017	9.37%

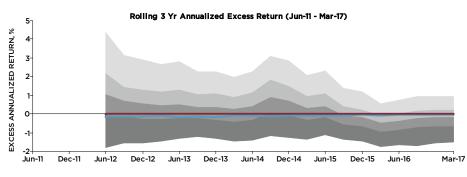


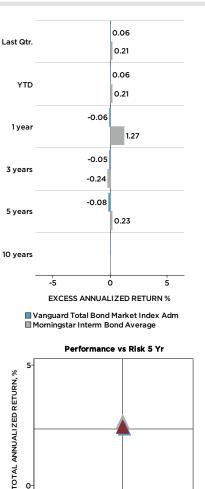
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# VANGUARD TOTAL BOND MARKET INDEX ADM

	Vanguard Total Bond Market Index Adm	Peer Group Rank	BBgBarc US Agg Float Adj TR USD	Morningstar Interm Bond	# of Funds	. L
KEY MEASURES / 5 YEAR						1
Standard Deviation	3.03	66%	2.94	2.93	889	
Sharpe Ratio	0.70	69%	0.75	0.84	889	
Alpha	-0.15	75%	0.00	0.43	889	
Beta	1.03	12%	1.00	0.91	889	
R-Squared	99.41	3%	100.00	84.57	889	
Up Mkt Capture	101.55	47%	100.00	99.24	889	
Down Mkt Capture	105.63	80%	100.00	90.66	889	
Information Ratio	-0.33	74%	NA	0.03	889	
TRAILING RETURNS						
Last Qtr.	0.91		0.85	1.06	1011	
YTD	0.91		0.85	1.06	1011	
1 Year	0.43	79%	0.49	1.75	983	
3 Years	2.60	42%	2.65	2.42	934	
5 Years	2.27	66%	2.35	2.58	889	
10 Years	4.23	53%	NA	4.16	793	10
CALENDAR RETURNS						
2016	2.60	64%	2.75	3.21	991	
2015	0.40	29%	0.44	-0.24	994	
2014	5.89	32%	5.85	5.23	1036	
2013	-2.15	67%	-1.97	-1.45	1052	
2012	4.15	84%	4.32	6.64	1092	
2011	7.68	12%	7.92	6.10	1128	





### Period Ending 3.31.17 | Q1 17

INVESTMENT PROFILE	
Ticker	VBTLX
CUSIP	921937603
Net Assets \$MM	\$177,875.00
Manager Names	Team Managed
Manager Tenure	4.1 Years
Prospectus Exp Ratio	0.06%
Cat Median Exp Ratio	0.80%
Current 12b-1	N/A
Annlzd Ret Since Incept	4.23%
Inception Date	11/12/2001
Phone Number	800-662-7447
Sub Advisor	N/A

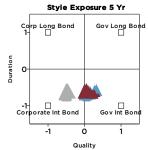
#### HOLDINGS OVERVIEW

Total Number of Holdings	17716
% Assets in Top 10 Holdings	4.38%
Avg Mkt Cap \$MM	N/A
Turnover Ratio	61.00%

### TOP HOLDINGS

5





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TOTAL ANNUALIZED STD DEV, %

Vanguard Total Bond Market Index Adm BBgBarc US Agg Float Adj TR USD

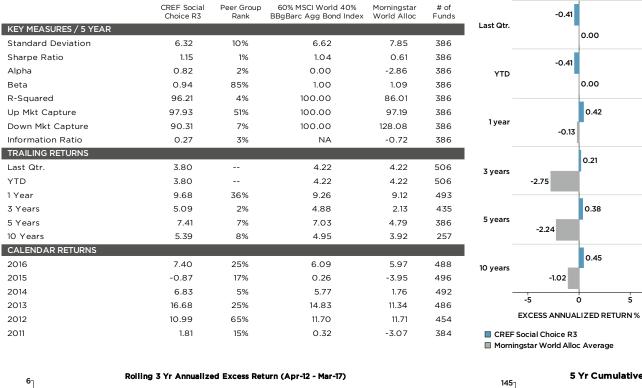
A Morningstar Interm Bond Average

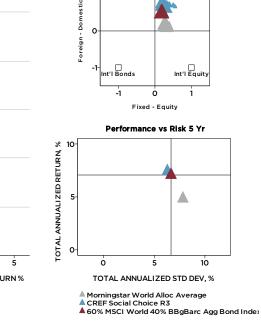
# CREF SOCIAL CHOICE R3

Period Ending 3.31.17 | Q1 17

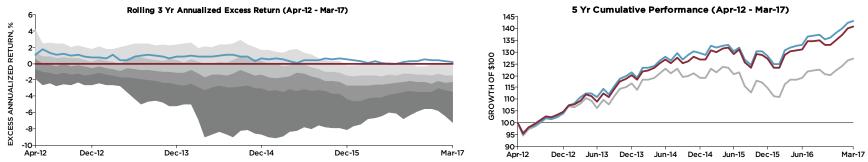
US Equity

Style Exposure 5 Yr





US Bonds



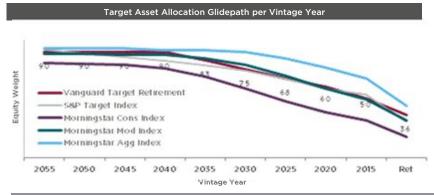
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# VANGUARD TARGET RETIREMENT

#### 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).



#### Investment Profile

Period Ending 3.31.17 | Q117

% Open Architecture:	0%	Active/Passive:	Passive
Inception Date:	10-27-2003	% Active:	0%
Net Assets \$MM:	\$207,631	Manager Tenure:	4.17 years (longest)
Manager Name:	Team	Expense Range:	0.13% - 0.16%
Avg # of Holdings:	5	Investment Structure:	Mutual Fund

#### Dedicated Asset Class Granularity/Diversification

Emerging Market Equities	No
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.

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# VANGUARD TARGET RETIREMENT

Period Ending 3.31.17 | Q117

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#### 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:

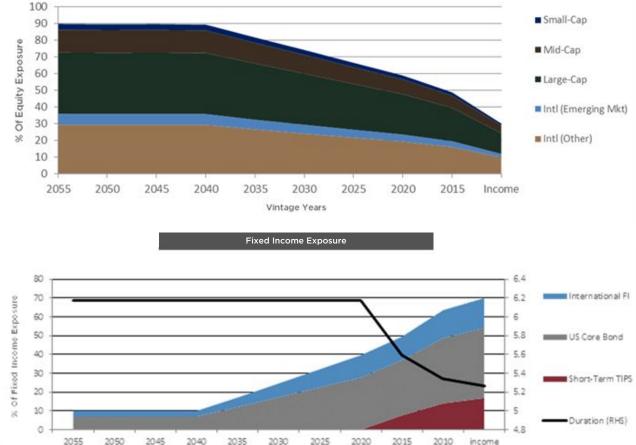
- Replaced the broad TIPs fund with a short-term TIPs allocation
- Eliminated the Prime Money Market fund
- Added a 20% International Bond Index Allocation Rationale:
- Short-Term TIPs provide better inflation exposure with
  lower interest rate risk
- Deemed to be an unnecessary asset class
- Dedicated exposure to move more in line with the Global fixed income Market Cap; better Fl 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



Vintage Years

Equity Exposure

\*All information provided by the asset manager, as of 12/31/15. Asset allocations shown are static in nature and do not incorporate any tactical views implemented by the manager.

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# TARGET DATE ANALYSIS

	3 Year					5 Y	ear	
	Beta	Beta Sharpe Up Capture Down Capture				Sharpe	Up Capture	Down Capture
Vanguard Target Retirement 2015 Inv	0.99	0.83	99.70	97.46	1.00	1.14	101.66	96.60
Morningstar Target Date 2015	0.97	0.67	92.81	103.34	0.95	0.95	91.59	99.33
S&P Target Date 2015 TR	1.00	0.81	100.00	100.00	1.00	1.07	100.00	100.00

	3 Year				5 Year			
	Beta	Beta Sharpe Up Capture Down Capture				Sharpe	Up Capture	Down Capture
Vanguard Target Retirement 2025 Inv	1.03	0.75	104.04	101.97	1.01	1.07	103.41	99.44
Morningstar Target Date 2025	1.00	0.59	95.58	105.28	0.98	0.92	95.07	101.15
S&P Target Date 2025 TR	1.00	0.73	100.00	100.00	1.00	1.02	100.00	100.00

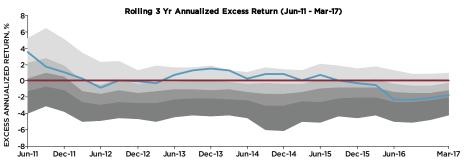
	3 Year				5 Year			
	Beta	Beta Sharpe Up Capture Down Capture				Sharpe	Up Capture	Down Capture
Vanguard Target Retirement 2045 Inv	1.05	0.64	104.28	104.78	1.02	0.98	103.00	101.80
Morningstar Target Date 2045	1.05	0.54	99.36	107.51	1.01	0.88	97.60	103.33
S&P Target Date 2045 TR	1.00	0.67	100.00	100.00	1.00	0.97	100.00	100.00

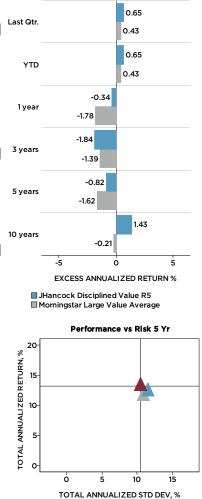
\*Lowest cost share class shown

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# JHANCOCK DISCIPLINED VALUE R5

	JHancock Disciplined Value R5	Peer Group Rank	Russell 1000 Value TR USD	Morningstar Large Value	# of Funds	Last Qtr.	
KEY MEASURES / 5 YEAR						Last Gtr.	
Standard Deviation	11.52	74%	10.53	10.85	1074		
Sharpe Ratio	1.06	54%	1.23	1.06	1074	YTD	
Alpha	-1.59	55%	0.00	-1.40	1074	Ϋ́́́́́́́́	
Beta	1.06	26%	1.00	0.98	1074		
R-Squared	93.75	47%	100.00	91.30	1074		
Up Mkt Capture	99.77	23%	100.00	93.12	1074	1 year	-1.7
Down Mkt Capture	106.99	67%	100.00	100.72	1074		
Information Ratio	-0.25	29%	NA	-0.51	1074		-1.8
TRAILING RETURNS						3 years	-1.
Last Qtr.	3.92		3.27	3.70	1262		
YTD	3.92		3.27	3.70	1262		-
1 Year	18.88	33%	19.22	17.44	1242	5 years	-1.6
3 Years	6.83	65%	8.67	7.28	1161		-1.0
5 Years	12.30	30%	13.13	11.51	1074		
10 Years	7.37	10%	5.93	5.72	936	10 years	
CALENDAR RETURNS						_	
2016	14.00	55%	17.34	14.71	1256		-5
2015	-4.93	69%	-3.83	-4.03	1272		EXCESS A
2014	11.03	47%	13.45	10.46	1276	∏.∏	lancock Dis
2013	36.04	13%	32.53	31.64	1248		orningstar L
2012	20.02	5%	17.51	14.70	1279		
2011	0.32	41%	0.39	-0.56	1331	_	Perf
						20- % N	





A Morningstar Large Value Average

▲ JHancock Disciplined Value R5 A Russell 1000 Value TR USD

#### Period Ending 3.31.17 | Q1 17

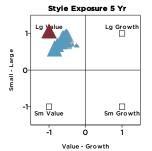
INVESTMENT PROFILE	
Ticker	JDVVX
CUSIP	47803U517
Net Assets \$MM	\$14,371.00
Manager Names	Team Managed
Manager Tenure	20.3 Years
Prospectus Exp Ratio	0.77%
Cat Median Exp Ratio	1.10%
Current 12b-1	0.00%
Annlzd Ret Since Incep	ot 14.69%
Inception Date	05/22/2009
Phone Number	888-972-8696
Sub Advisor	Robeco Investment Management, Inc

#### HOLDINGS OVERVIEW

Total Number of Holdings	89
% Assets in Top 10 Holdings	30.32%
Avg Mkt Cap \$MM	\$61,116.76
Turnover Ratio	61.00%

### TOP HOLDINGS

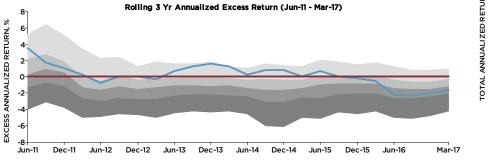
JPMorgan Chase & Co	4.87%
Bank of America Corporat	4.50%
Berkshire Hathaway Inc B	3.77%
Johnson & Johnson	3.34%
Chevron Corp	2.58%

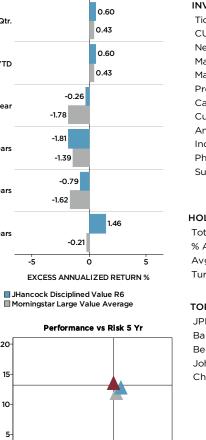


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# JHANCOCK DISCIPLINED VALUE R6

	JHancock Disciplined Value R6	Peer Group Rank	Russell 1000 Value TR USD	Morningstar Large Value	# of Funds	Last Qtr.	
KEY MEASURES / 5 YEAR						Last Gtr.	
Standard Deviation	11.53	75%	10.53	10.85	1074		
Sharpe Ratio	1.06	53%	1.23	1.06	1074	VTD	
Alpha	-1.56	54%	0.00	-1.40	1074	YTD	
Beta	1.06	25%	1.00	0.98	1074		
R-Squared	93.74	47%	100.00	91.30	1074		-0
Up Mkt Capture	99.90	22%	100.00	93.12	1074	1 year	-1.78
Down Mkt Capture	106.94	66%	100.00	100.72	1074		
Information Ratio	-0.24	28%	NA	-0.51	1074		-1.81
TRAILING RETURNS						3 years	-1.39
Last Qtr.	3.87		3.27	3.70	1262		
YTD	3.87		3.27	3.70	1262		-0.3
1 Year	18.97	32%	19.22	17.44	1242	5 years	-1.62
3 Years	6.87	64%	8.67	7.28	1161		-1.02
5 Years	12.34	29%	13.13	11.51	1074		
10 Years	7.39	10%	5.93	5.72	936	10 years	
CALENDAR RETURNS							-
2016	14.07	53%	17.34	14.71	1256		-5
2015	-4.81	67%	-3.83	-4.03	1272		EXCESS AN
2014	11.04	46%	13.45	10.46	1276	🔲 JI	Hancock Discip
2013	35.97	14%	32.53	31.64	1248	ΠM	orningstar Larg
2012	20.08	5%	17.51	14.70	1279		
2011	0.41	40%	0.39	-0.56	1331	-	Perfor
						20- %	
Roll	ing 3 Yr Annualized Exce	ess Return (Ju	n-11 - Mar-17)			RETURN, %	
87 → 6-			·····			БКЕ	





### Period Ending 3.31.17 | Q117

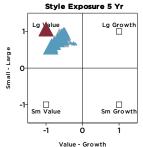
VESTMENT PROFILE	
cker	JDVWX
USIP	47803U418
et Assets \$MM	\$14,371.00
anager Names	Team Managed
anager Tenure	20.3 Years
rospectus Exp Ratio	0.70%
at Median Exp Ratio	1.10%
urrent 12b-1	0.00%
nnlzd Ret Since Incept	14.51%
ception Date	08/31/2011
hone Number	888-972-8696
ub Advisor N	Robeco Investment 1anagement, Inc

#### HOLDINGS OVERVIEW

Total Number of Holdings	89
% Assets in Top 10 Holdings	30.32%
Avg Mkt Cap \$MM	\$61,116.76
Turnover Ratio	61.00%

#### TOP HOLDINGS

JPMorgan Chase & Co	4.87%
Bank of America Corporal	4.50%
Berkshire Hathaway Inc B	3.77%
Johnson & Johnson	3.34%
Chevron Corp	2.58%



70

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A Morningstar Large Value Average

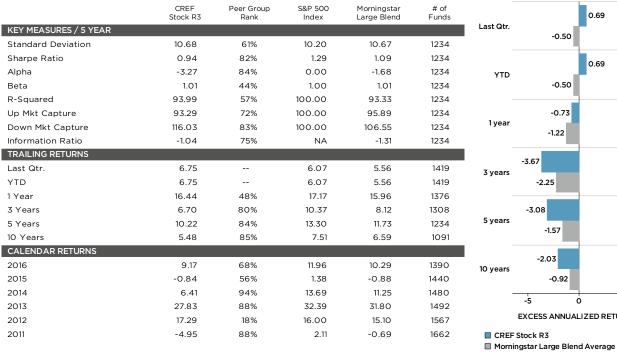
▲ JHancock Disciplined Value R6 ▲ Russell 1000 Value TR USD

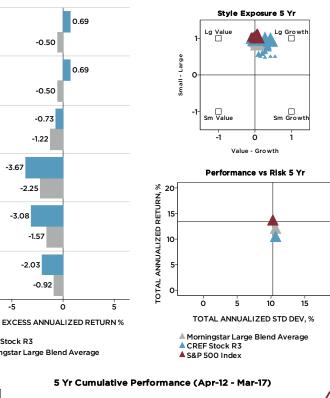
TOTAL ANNUALIZED STD DEV, %

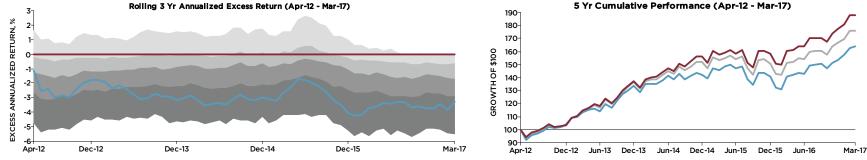
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# CREF STOCK R3

Period Ending 3.31.17 | Q1 17







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# VANGUARD INSTITUTIONAL INDEX I

Jun-11

Dec-11

Jun-12

Dec-12

Jun-13

Dec-13

Jun-14

Dec-14

Jun-15

Dec-15

Jun-16

KEY MEASURES / 5 YEAR	Vanguard Institutional Index I	Peer Group Rank	S&P 500 TR USD	Morningstar Large Blend	# of Funds	Last Qtr.	-0.01	
Standard Deviation	10.20	26%	10.20	10.67	1234	_	-0.50	
Sharpe Ratio	1.29	20 % 5%	10.20	1.09	1234		-0.01	
Alpha	-0.03	10%	0.00	-1.68	1234	YTD		
Beta	-0.03	58%	1.00	-1.68	1234		-0.50	
R-Squared	100.00	58% 1%	100.00	93.33	1234		-0.04	
Up Mkt Capture	99.91	27%	100.00	95.90	1234	1 year		
	100.08	21%	100.00		1234		-1.22	
Down Mkt Capture Information Ratio	-1.99	21% 90%		106.55 -1.31	1234		-0.03	
TRAILING RETURNS	-1.99	90%	NA	-1.31	1234	3 years	-0.03	
Last Qtr.	6.05		6.07	5.56	1419		-2.25	
YTD	6.05		6.07	5.56	1419 1419			
1 Year	17.13	 33%	6.07 17.17	5.56 15.96	1376	5 years	-0.03	
3 Years	17.13	53% 6%	10.37	8.12	1308	-	-1.57	
5 Years	13.27	11%	13.30	11.73	1234			
10 Years	7.51	20%	7.51	6.59	1234	10 years	_	0.00
CALENDAR RETURNS	7.51	20%	7.31	0.59	10.91	,	-0.92	
2016	11.93	26%	11.96	10.29	1390	-	-5	0 5
2015	1.37	20%	1.38	-0.88	1440		EXCESS ANNUAL	IZED RETURN %
2014	13.65	17%	13.69	11.25	1480			
2013	32.35	42%	32.39	31.80	1492		nguard Institutiona mingstar Large Bl	
2012	15.98	37%	16.00	15.10	1567			
2011	2.09	17%	2.11	-0.69	1662		Performanc	e vs Risk 5 Yr
	2.03	17.70	2.0	0.05	1002	20-		
						× 7		
Pa	lling 3 Yr Annualized Exces	Poturn / Jun-1	- Mar-17)			2 15-		
57	anny o fi Annualizea Excea	s Ketain (Sair-I	- Pier - 17 7			E		<b></b>
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-1-						TOTAL ANNUALIZED RETURN,%		
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ZZ -3-							0 5	10 15
-4- D -5-							TOTAL ANNUA	LIZED STD DEV, %

### Period Ending 3.31.17 | Q117

#### NVESTMENT PROFILE Ticker VINIX CUSIP 922040100 \$222,543.00 Net Assets \$MM Manager Names Team Managed Manager Tenure 16.3 Years Prospectus Exp Ratio 0.04% Cat Median Exp Ratio 1.12% Current 12b-1 N/A AnnIzd Ret Since Incept 9.65% Inception Date 07/31/1990 Phone Number 888-809-8102 Sub Advisor N/A

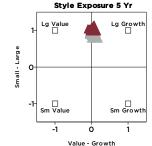
#### OLDINGS OVERVIEW

Total Number of Holdings	516
% Assets in Top 10 Holdings	18.16%
Avg Mkt Cap \$MM	\$85,360.17
Turnover Ratio	5.00%

#### OP HOLDINGS

Apple Inc	3.58%
1icrosoft Corp	2.44%
xxon Mobil Corp	1.65%
Amazon.com Inc	1.63%
ohnson & Johnson	1.63%

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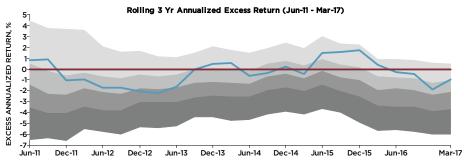
Mar-17

A Morningstar Large Blend Average

Vanguard Institutional Index I

# HARBOR CAPITAL APP INSTL

	Harbor Capital App Instl	Peer Group Rank	Russell 1000 Growth TR USD	Morningstar Large Growth	# of Funds	Last Qtr.	
KEY MEASURES / 5 YEAR						Last Gu.	
Standard Deviation	12.60	86%	10.63	11.61	1366		
Sharpe Ratio	0.97	60%	1.24	1.00	1366	VTD	
Alpha	-2.49	61%	0.00	-2.11	1366	YTD	
Beta	1.11	13%	1.00	1.03	1366		
R-Squared	87.97	68%	100.00	89.15	1366		
Up Mkt Capture	105.58	13%	100.00	97.07	1366	1 year	
Down Mkt Capture	120.39	80%	100.00	109.96	1366		
Information Ratio	-0.20	31%	NA	-0.45	1366		
TRAILING RETURNS						3 years	-2.7
Last Qtr.	10.64		8.91	8.64	1495		2/
YTD	10.64		8.91	8.64	1495		
1 Year	15.83	36%	15.76	14.82	1474	5 years	
3 Years	10.17	24%	11.27	8.54	1430		
5 Years	12.30	37%	13.32	11.58	1366		
10 Years	8.98	17%	9.13	7.74	1153	10 years	
CALENDAR RETURNS						I .	
2016	-1.07	85%	7.08	3.17	1494		-5
2015	10.99	4%	5.67	3.75	1588		EXCES
2014	9.93	54%	13.05	10.08	1643	∎н	arbor Cap
2013	37.66	20%	33.48	34.41	1707		orningsta
2012	15.69	44%	15.26	15.31	1739		
2011	0.61	26%	2.64	-2.23	1764		Pe
						20- × ×	





#### Period Ending 3.31.17 | Q117

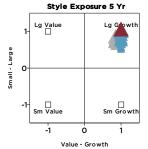
INVESTMENT PROFILE	
Ticker	HACAX
CUSIP	411511504
Net Assets \$MM	\$25,497.00
Manager Names	Team Managed
Manager Tenure	26.9 Years
Prospectus Exp Ratio	0.65%
Cat Median Exp Ratio	1.19%
Current 12b-1	N/A
Annlzd Ret Since Incept	11.28%
Inception Date	12/29/1987
Phone Number	800-422-1050
Sub Advisor	Jennison Associates LLC

#### HOLDINGS OVERVIEW

Total Number of Holdings	58
% Assets in Top 10 Holdings	35.75%
Avg Mkt Cap \$MM	\$94,399.57
Turnover Ratio	34.00%

#### TOP HOLDINGS

Amazon.com Inc	5.65%
Apple Inc	4.73%
Facebook Inc A	3.94%
Microsoft Corp	3.54%
Visa Inc Class A	3.27%



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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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TOTAL ANNUALIZED STD DEV, %

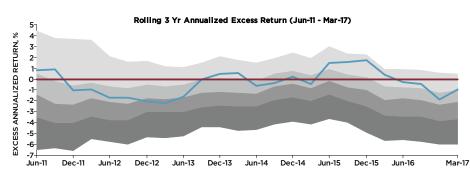
A Morningstar Large Growth Average

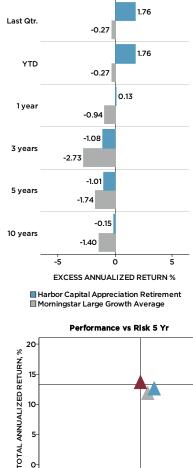
A Harbor Capital App Instl A Russell 1000 Growth TR USD

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## HARBOR CAPITAL APPRECIATION RETIREMENT

#### Harbor Capital Russell 1000 # of Peer Group Morningstar Appreciation Retirement Rank Growth Large Growth Funds Last Qtr. KEY MEASURES / 5 YEAR Standard Deviation 12.60 86% 10.63 11.61 1366 Sharpe Ratio 0.97 60% 1.24 1.00 1366 YTD Alpha -2.48 60% 0.00 -2.11 1366 1.11 13% 1.00 1.03 Beta 1366 89.15 **R-Squared** 87.98 68% 100.00 1366 1 year Up Mkt Capture 105.60 13% 100.00 97.06 1366 Down Mkt Capture 120.31 79% 100.00 109.96 1366 Information Ratio -0.20 31% NA -0.45 1366 3 years TRAILING RETURNS Last Qtr. 10.67 --8.91 8.64 1495 YTD 10.67 ---8.91 8.64 1495 5 years 1474 1 Year 15.88 36% 15.76 14.82 3 Years 10.19 24% 11.27 8.54 1430 5 Years 12.31 37% 13.32 11.58 1366 10 Years 8.99 17% 9.13 7.74 1153 10 years CALENDAR RETURNS -1.04 7.08 3.17 2016 85% 1494 2015 10.99 4% 5.67 1588 3.75 2014 9.93 54% 13.05 10.08 1643 2013 37.66 20% 33.48 34.41 1707 15.31 2012 15.69 44% 15.26 1739 2011 0.61 26% 2.64 -2.23 1764





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A Russell 1000 Growth

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A Morningstar Large Growth Average

TOTAL ANNUALIZED STD DEV, %

Harbor Capital Appreciation Retirement

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#### Period Ending 3.31.17 | Q117

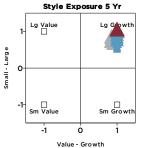
INVESTMENT PROFILE	
Ticker	HNACX
CUSIP	411512528
Net Assets \$MM	\$25,497.00
Manager Names	Team Managed
Manager Tenure	26.9 Years
Prospectus Exp Ratio	0.57%
Cat Median Exp Ratio	1.19%
Current 12b-1	N/A
Annlzd Ret Since Incept	17.79%
Inception Date	03/01/2016
Phone Number	800-422-1050
Sub Advisor	Jennison Associates LLC

#### HOLDINGS OVERVIEW

Total Number of Holdings	58
% Assets in Top 10 Holdings	35.75%
Avg Mkt Cap \$MM	\$94,399.57
Turnover Ratio	34.00%

#### TOP HOLDINGS

Amazon.com Inc	5.65%
Apple Inc	4.73%
Facebook Inc A	3.94%
Microsoft Corp	3.54%
Visa Inc Class A	3.27%

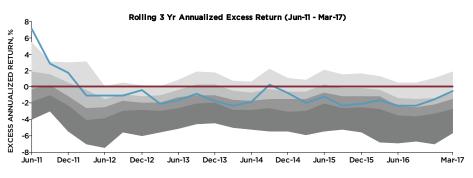


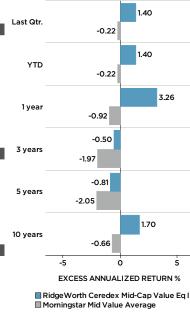
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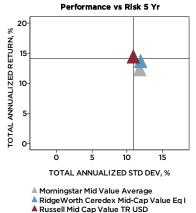
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# RIDGEWORTH CEREDEX MID-CAP VALUE EQ I

	RidgeWorth Ceredex	Peer Group	Russell Mid Cap	Morningstar	# of	
	Mid-Cap Value Eq I	Rank	Value TR USD	Mid Value	Funds	La
KEY MEASURES / 5 YEAR						
Standard Deviation	11.93	62%	10.88	11.77	342	
Sharpe Ratio	1.10	33%	1.28	1.02	342	
Alpha	-1.47	30%	0.00	-2.42	342	
Beta	1.05	40%	1.00	1.03	342	
R-Squared	91.20	59%	100.00	90.52	342	
Up Mkt Capture	100.65	18%	100.00	95.24	342	
Down Mkt Capture	108.72	54%	100.00	108.70	342	
Information Ratio	-0.20	23%	NA	-0.51	342	
TRAILING RETURNS						3
Last Qtr.	5.16		3.76	3.54	389	
YTD	5.16		3.76	3.54	389	
1 Year	23.08	9%	19.82	18.90	388	5
3 Years	8.44	21%	8.94	6.97	358	
5 Years	13.25	23%	14.07	12.02	342	
10 Years	9.18	9%	7.47	6.81	292	10
CALENDAR RETURNS						
2016	20.16	35%	20.00	17.90	389	
2015	-6.00	61%	-4.78	-5.53	401	
2014	11.00	38%	14.75	9.56	386	
2013	31.21	84%	33.46	34.83	386	
2012	21.79	4%	18.51	16.30	397	
2011	-7.31	85%	-1.38	-3.88	388	







### Period Ending 3.31.17 | Q117

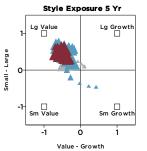
INVESTMENT PROFILE	
Ticker	SMVTX
CUSIP	76628R615
Net Assets \$MM	\$3,433.00
Manager Names	Don Wordell
Manager Tenure	15.3 Years
Prospectus Exp Ratio	1.12%
Cat Median Exp Ratio	1.20%
Current 12b-1	N/A
Annlzd Ret Since Incept	10.04%
Inception Date	11/30/2001
Phone Number	888-784-3863
Sub Advisor	Ceredex Value Advisors LLC

#### HOLDINGS OVERVIEW

Total Number of Holdings	76
% Assets in Top 10 Holdings	20.07%
Avg Mkt Cap \$MM	\$12,031.58
Turnover Ratio	98.00%

### TOP HOLDINGS

Cigna Corp	3.52%
Ralph Lauren Corp Class	2.01%
Analog Devices Inc	1.95%
Weyerhaeuser Co	1.91%
Humana Inc	1.84%

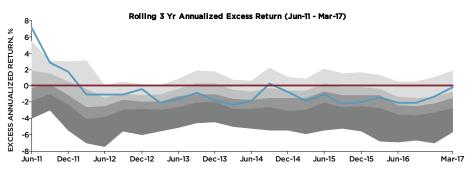


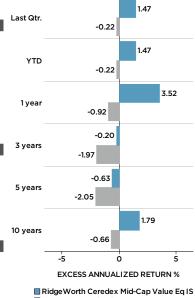
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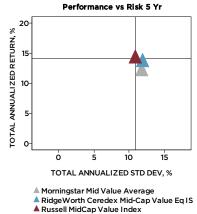
# RIDGEWORTH CEREDEX MID-CAP VALUE EQ IS

	RidgeWorth Ceredex Mid-Cap Value Eq IS	Peer Group Rank	Russell MidCap Value Index	Morningstar Mid Value	# of Funds	. L
KEY MEASURES / 5 YEAR						1
Standard Deviation	11.95	63%	10.88	11.77	342	
Sharpe Ratio	1.11	27%	1.28	1.02	342	
Alpha	-1.31	26%	0.00	-2.42	342	
Beta	1.05	38%	1.00	1.03	342	
R-Squared	91.16	59%	100.00	90.52	342	
Up Mkt Capture	101.12	17%	100.00	95.24	342	
Down Mkt Capture	108.00	52%	100.00	108.70	342	
Information Ratio	-0.16	19%	NA	-0.51	342	
TRAILING RETURNS						
Last Qtr.	5.23		3.76	3.54	389	
YTD	5.23		3.76	3.54	389	
1 Year	23.34	9%	19.82	18.90	388	
3 Years	8.74	18%	8.94	6.97	358	
5 Years	13.44	18%	14.07	12.02	342	
10 Years	9.27	8%	7.47	6.81	292	1
CALENDAR RETURNS						
2016	20.53	32%	20.00	17.90	389	
2015	-5.63	57%	-4.78	-5.53	401	
2014	11.05	37%	14.75	9.56	386	
2013	31.21	84%	33.46	34.83	386	
2012	21.79	4%	18.51	16.30	397	
2011	-7.31	85%	-1.38	-3.88	388	





Morningstar Mid Value Average



Period Ending 3.31.17 | Q117

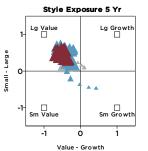
INVESTMENT PROFILE	
Ticker	SMVZX
CUSIP	76628T165
Net Assets \$MM	\$3,433.00
Manager Names	Don Wordell
Manager Tenure	15.3 Years
Prospectus Exp Ratio	0.80%
Cat Median Exp Ratio	1.20%
Current 12b-1	N/A
Annlzd Ret Since Incept	9.34%
Inception Date	08/01/2014
Phone Number	888-784-3863
Sub Advisor	Ceredex Value Advisors LLC

#### HOLDINGS OVERVIEW

Total Number of Holdings	76
% Assets in Top 10 Holdings	20.07%
Avg Mkt Cap \$MM	\$12,031.58
Turnover Ratio	98.00%

#### TOP HOLDINGS

Cigna Corp	3.52%
Ralph Lauren Corp Class	2.01%
Analog Devices Inc	1.95%
Weyerhaeuser Co	1.91%
Humana Inc	1.84%

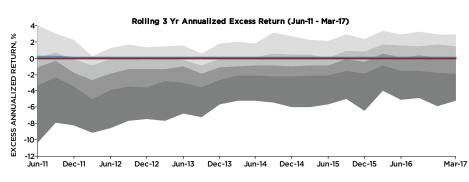


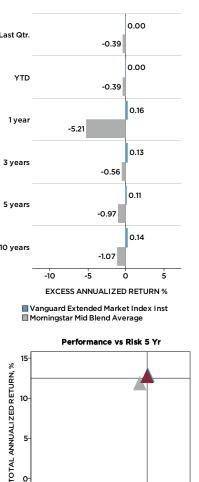
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# VANGUARD EXTENDED MARKET INDEX INST

	Vanguard Extended Market Index Inst	Peer Group Rank	S&P Completion TR USD	Morningstar Mid Blend	# of Funds	La
KEY MEASURES / 5 YEAR						
Standard Deviation	12.75	90%	12.73	11.70	374	
Sharpe Ratio	0.98	51%	0.97	0.99	374	
Alpha	0.09	66%	0.00	0.78	374	
Beta	1.00	6%	1.00	0.86	374	
R-Squared	100.00	1%	100.00	87.69	374	
Up Mkt Capture	100.42	7%	100.00	86.91	374	
Down Mkt Capture	99.93	89%	100.00	84.37	374	
Information Ratio	1.23	1%	NA	-0.16	374	
TRAILING RETURNS						3
Last Qtr.	4.57		4.57	4.18	451	
YTD	4.57		4.57	4.18	451	
1 Year	22.52	7%	22.36	17.15	428	5
3 Years	7.16	46%	7.02	6.47	397	
5 Years	12.62	33%	12.51	11.55	374	
10 Years	8.01	29%	7.87	6.80	314	10
CALENDAR RETURNS						
2016	16.15	40%	15.95	14.24	421	
2015	-3.24	52%	-3.35	-4.26	437	
2014	7.56	67%	7.50	8.64	435	
2013	38.42	20%	38.24	34.17	438	
2012	18.50	27%	18.45	16.42	432	
2011	-3.57	57%	-3.71	-3.50	430	





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A Morningstar Mid Blend Average

TOTAL ANNUALIZED STD DEV, %

Vanguard Extended Market Index Inst S&P Completion TR USD

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#### Period Ending 3.31.17 | Q117

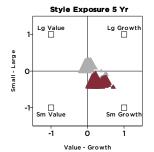
INVESTMENT PROFILE	
Ticker	VIEIX
CUSIP	922908884
Net Assets \$MM	\$55,373.00
Manager Names	Team Managed
Manager Tenure	19.3 Years
Prospectus Exp Ratio	0.07%
Cat Median Exp Ratio	1.21%
Current 12b-1	N/A
Annlzd Ret Since Incept	8.60%
Inception Date	07/07/1997
Phone Number	888-809-8102
Sub Advisor	N/A

#### HOLDINGS OVERVIEW

Total Number of Holdings	3262
% Assets in Top 10 Holdings	3.97%
Avg Mkt Cap \$MM	\$3,743.59
Turnover Ratio	12.00%

### TOP HOLDINGS

Tesla Inc	0.67%
Liberty Global PLC C	0.55%
Las Vegas Sands Corp	0.42%
T-Mobile US Inc	0.39%
Biomarin Pharmaceutical	0.35%



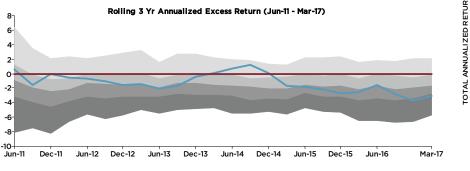
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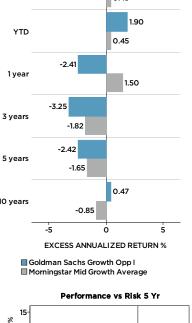
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### GOLDMAN SACHS GROWTH OPP I

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#### Morningstar Goldman Sachs Peer Group Russell Mid Cap # of 1.90 Growth Opp I Rank Growth TR USD Mid Growth Funds Last Qtr. KEY MEASURES / 5 YEAR 0.45 Standard Deviation 11.70 33% 11.56 12.34 572 1.90 Sharpe Ratio 0.80 52% 1.02 0.84 572 YTD Alpha -2.10 53% 0.00 -1.71 572 0.45 0.97 65% 1.00 1.01 572 Beta 92.29 100.00 89.08 572 -2.41 **R-Squared** 40% 1 year Up Mkt Capture 91.70 76% 100.00 96.52 572 1.50 Down Mkt Capture 104.68 41% 100.00 106.93 572 Information Ratio -0.67 72% NA -0.40 572 -3.25 3 years TRAILING RETURNS -1.82 Last Qtr. 8.80 --6.89 7.34 645 YTD 8.80 --6.89 7.34 645 -2.42 5 years 639 1 Year 11.66 84% 14.07 15.57 -1.65 4.63 78% 7.88 6.06 618 3 Years 5 Years 9.53 65% 11.95 10.31 572 0.47 10 Years 8.60 21% 8.13 7.28 535 10 years -0.85 CALENDAR RETURNS 1.49 7.33 5.78 -5 0 2016 80% 649 2015 -5.24 86% -0.20 -0.74 670 15% 11.90 2014 11.44 7.16 691 Goldman Sachs Growth Opp I 2013 32.38 70% 35.74 35.23 670 Morningstar Mid Growth Average 7% 14.25 2012 19.58 15.81 714 2011 -3.70 46% -1.65 -3.92 764 15 % ANNUALI ZED RETURN, Rolling 3 Yr Annualized Excess Return (Jun-11 - Mar-17) 8-10-**RETURN**, % 6 4 2-CESS ANNUALIZED





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A Morningstar Mid Growth Average

Goldman Sachs Growth Opp I Russell Mid Cap Growth TR USD

TOTAL ANNUALIZED STD DEV, %

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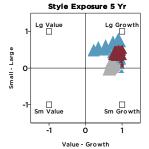
INVESTMENT PROFILE	
Ticker	GGOIX
CUSIP	38142Y401
Net Assets \$MM	\$2,811.00
Manager Names	Team Managed
Manager Tenure	17.8 Years
Prospectus Exp Ratio	0.95%
Cat Median Exp Ratio	1.28%
Current 12b-1	N/A
Annlzd Ret Since Incept	10.82%
Inception Date	05/24/1999
Phone Number	800-526-7384
Sub Advisor	N/A

#### HOLDINGS OVERVIEW

Total Number of Holdings	77
% Assets in Top 10 Holdings	25.39%
Avg Mkt Cap \$MM	\$12,473.88
Turnover Ratio	55.00%

#### TOP HOLDINGS

Amphenol Corp Class A	3.02%
Roper Technologies Inc	2.91%
Xylem Inc	2.71%
Ulta Beauty Inc	2.58%
Panera Bread Co Class A	2.55%



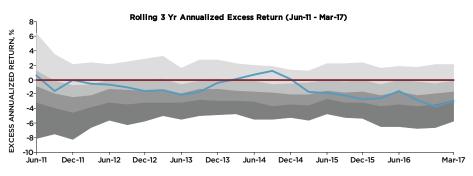
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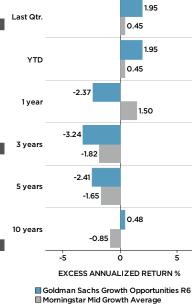
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#### Period Ending 3.31.17 | Q1 17

## GOLDMAN SACHS GROWTH OPPORTUNITIES R6

	Goldman Sachs Growth Opportunities R6	Peer Group Rank	Russell MidCap Growth Index	Morningstar Mid Growth	# of Funds	Last G
KEY MEASURES / 5 YEAR						
Standard Deviation	11.71	33%	11.56	12.34	572	
Sharpe Ratio	0.80	52%	1.02	0.84	572	Y
Alpha	-2.09	53%	0.00	-1.71	572	
Beta	0.97	64%	1.00	1.01	572	
R-Squared	92.31	39%	100.00	89.08	572	1
Up Mkt Capture	91.74	76%	100.00	96.52	572	1ye
Down Mkt Capture	104.67	41%	100.00	106.92	572	
Information Ratio	-0.67	71%	NA	-0.40	572	_
TRAILING RETURNS						3 yea
Last Qtr.	8.84		6.89	7.34	645	
YTD	8.84		6.89	7.34	645	
1 Year	11.70	83%	14.07	15.57	639	5 yea
3 Years	4.64	78%	7.88	6.06	618	
5 Years	9.54	65%	11.95	10.31	572	
10 Years	8.61	21%	8.13	7.28	535	10 yea
CALENDAR RETURNS						
2016	1.49	81%	7.33	5.78	649	
2015	-5.24	86%	-0.20	-0.74	670	
2014	11.44	15%	11.90	7.16	691	
2013	32.38	70%	35.74	35.23	670	
2012	19.58	7%	15.81	14.25	714	
2011	-3.70	46%	-1.65	-3.92	764	
Roll 8 6 4 2 0 -2 -2 -4	ing 3 Yr Annualized Exce	ss Return (Ju	n-11 - Mar-17)			TOTAL ANNUALIZED RETURN, %





Performance vs Risk 5 Yr

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A Morningstar Mid Growth Average

Russell MidCap Growth Index

TOTAL ANNUALIZED STD DEV, %

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15

Period Ending 3.31.17 | Q117

INVESTMENT PROFILE	
Ticker	GGOUX
CUSIP	38148U601
Net Assets \$MM	\$2,811.00
Manager Names	Team Managed
Manager Tenure	17.8 Years
Prospectus Exp Ratio	0.93%
Cat Median Exp Ratio	1.28%
Current 12b-1	N/A
Annlzd Ret Since Incept	1.17%
Inception Date	07/31/2015
Phone Number	800-526-7384
Sub Advisor	N/A

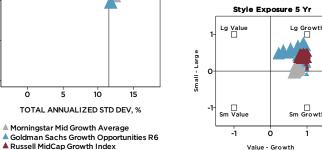
#### HOLDINGS OVERVIEW

Total Number of Holdings	77
% Assets in Top 10 Holdings	25.39%
Avg Mkt Cap \$MM	\$12,473.88
Turnover Ratio	55.00%

#### TOP HOLDINGS

Amphenol Corp Class A	3.02%
Roper Technologies Inc	2.91%
Xylem Inc	2.71%
Ulta Beauty Inc	2.58%
Panera Bread Co Class A	2.55%

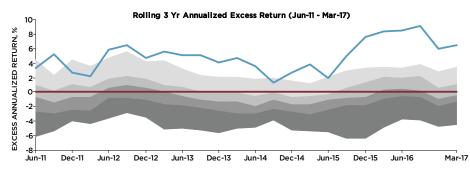
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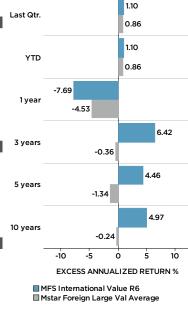


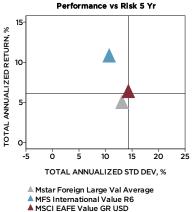
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## MES INTERNATIONAL VALUE R6

#### MFS International Peer Group MSCI EAFE Mstar Foreign # of Value R6 Rank Value GR USD Large Val Funds Last Qtr. KEY MEASURES / 5 YEAR Standard Deviation 10.66 4% 14.34 13.06 271 Sharpe Ratio 0.98 1% 0.42 0.36 271 YTD 1% Alpha 6.62 0.00 -0.52 271 0.64 100% 1.00 271 Beta 0.86 96% 100.00 271 **R-Squared** 74.08 90.30 1 year Up Mkt Capture 75.92 82% 100.00 83.90 271 Down Mkt Capture 47.56 1% 100.00 88.52 271 Information Ratio 0.55 4% NA -0.27 271 3 years TRAILING RETURNS Last Qtr. 7.31 --6.21 7.07 322 YTD 7.31 --6.21 7.07 322 5 years 320 1 Year 9.04 79% 16.73 12.20 3 Years 6.36 1% -0.06 -0.42 291 5 Years 10.61 1% 6.15 4.81 271 10 Years 5.60 1% 0.63 0.39 192 10 years CALENDAR RETURNS 4.31 28% 3.08 324 -10 2016 5.68 2015 6.85 1% -5.22 346 -3.22 1% 2014 1.61 -4.92 -6.27 343 2% 2013 27.80 23.59 20.69 337 16.13 63% 16.71 2012 18.43 365 2011 -1.81 2% -11.65 -12.61 372 15 %







### Period Ending 3.31.17 | Q117

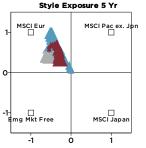
INVESTMENT PROFILE	
Ticker	MINJX
CUSIP	552746349
Net Assets \$MM	\$25,381.00
Manager Names	Team Managed
Manager Tenure	8.4 Years
Prospectus Exp Ratio	0.66%
Cat Median Exp Ratio	1.24%
Current 12b-1	N/A
Annlzd Ret Since Incept	6.25%
Inception Date	05/01/2006
Phone Number	800-225-2606
Sub Advisor	N/A

#### HOLDINGS OVERVIEW

Total Number of Holdings	119
% Assets in Top 10 Holdings	26.89%
Avg Mkt Cap \$MM	\$20,620.76
Turnover Ratio	14.00%

#### TOP HOLDINGS

Nestle SA	4.33%
Neslie SA	4.33%
Reckitt Benckiser Group F	3.51%
Danone SA	2.98%
Compass Group PLC	2.57%
Colgate-Palmolive Co	2.48%

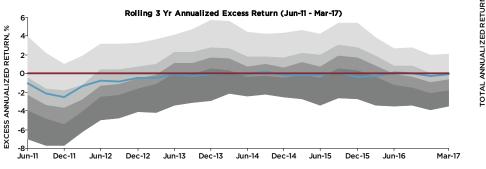


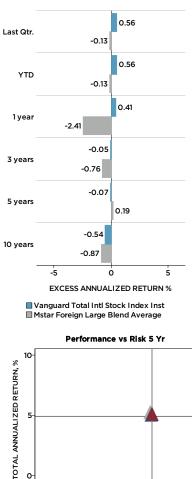
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## VANGUARD TOTAL INTL STOCK INDEX INST

KEY MEASURES / 5 YEAR       Standard Deviation     12.63	5% 12.82	12.53	
Standard Deviation 12.67 F		12.53	
			605
Sharpe Ratio 0.37 6	2% 0.37	0.40	605
Alpha 0.04 6	6% 0.00	0.52	605
Beta 0.98 2	0% 1.00	0.93	605
R-Squared 98.26	2% 100.00	90.75	605
Up Mkt Capture 98.86 3	100.00	95.42	605
Down Mkt Capture 99.13 7	6% 100.00	93.64	605
Information Ratio -0.04 6	4% NA	0.03	605
TRAILING RETURNS			
Last Qtr. 8.46 -	- 7.90	7.77	750
YTD 8.46 -	- 7.90	7.77	750
1 Year 13.73 1	6% 13.32	10.91	718
3 Years 1.11	31% 1.16	0.40	636
5 Years 4.85 6	61% 4.92	5.10	605
10 Years 1.37 3	3% 1.91	1.04	463
CALENDAR RETURNS			
2016 4.70	11% 4.72	0.83	729
2015 -4.24 8	-4.29	-1.61	704
2014 -4.15 3	-3.39	-4.96	715
2013 15.15 8	3% 15.59	19.49	737
2012 18.28 4	4% 17.60	17.97	747
2011 -14.51 6	-14.25	-13.57	755





Period Ending 3.31.17 | Q117

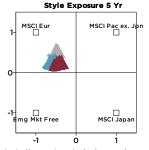
INVESTMENT PROFILE	
Ticker	VTSNX
CUSIP	921909784
Net Assets \$MM	\$262,498.00
Manager Names	Team Managed
Manager Tenure	8.7 Years
Prospectus Exp Ratio	0.09%
Cat Median Exp Ratio	1.20%
Current 12b-1	N/A
Annlzd Ret Since Incept	4.23%
Inception Date	11/29/2010
Phone Number	888-809-8102
Sub Advisor	N/A

#### HOLDINGS OVERVIEW

Total Number of Holdings	6047
% Assets in Top 10 Holdings	7.44%
Avg Mkt Cap \$MM	\$19,861.29
Turnover Ratio	4.29%

#### TOP HOLDINGS

Nestle SA	1.07%
Novartis AG	0.86%
Roche Holding AG Dividen	0.82%
Samsung Electronics Co Lt	0.81%
HSBC Holdings PLC	0.76%



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A Mstar Foreign Large Blend Average

Vanguard Total Intl Stock Index Inst

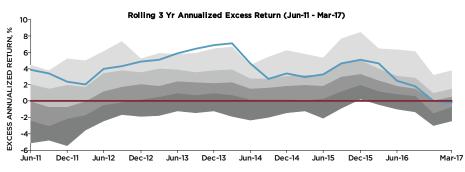
TOTAL ANNUALIZED STD DEV, %

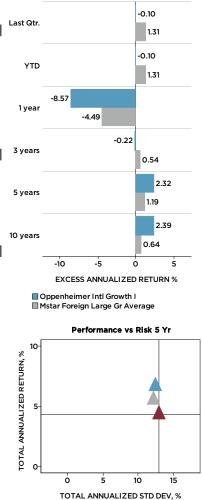
FTSE Global All Cap ex US (USA) NR USD

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## Oppenheimer Intl Growth I

	Oppenheimer Intl Growth I	Peer Group Rank	MSCI ACWI EX USA NR USD	Mstar Foreign Large Gr	# of Funds	Last Qi
KEY MEASURES / 5 YEAR						Last G
Standard Deviation	12.47	75%	12.93	12.17	335	
Sharpe Ratio	0.52	26%	0.33	0.45	335	
Alpha	2.75	25%	0.00	1.74	335	ΥT
Beta	0.90	31%	1.00	0.87	335	
R-Squared	86.69	53%	100.00	85.69	335	
Up Mkt Capture	97.64	8%	100.00	90.90	335	1 yea
Down Mkt Capture	83.94	56%	100.00	83.00	335	
Information Ratio	0.47	22%	NA	0.24	335	
TRAILING RETURNS						3 yea
Last Qtr.	7.76		7.86	9.17	417	
YTD	7.76		7.86	9.17	417	
1 Year	4.57	87%	13.13	8.64	407	5 yea
3 Years	0.34	65%	0.56	1.10	355	
5 Years	6.68	22%	4.36	5.55	335	
10 Years	3.74	5%	1.35	1.99	272	10 yea
CALENDAR RETURNS						
2016	-1.88	49%	4.50	-2.16	404	
2015	3.63	20%	-5.66	1.00	393	
2014	-6.80	83%	-3.87	-4.03	392	(
2013	25.71	12%	15.29	19.71	393	[
2012	22.12	15%	16.83	18.75	385	
2011	-7.71	12%	-13.71	-12.56	402	
						1 % z





A Mstar Foreign Large Gr Average

Oppenheimer Intl Growth I

MSCI ACWI Ex USA NR USD

Period Ending 3.31.17 | Q1 17

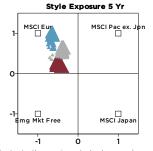
INVESTMENT PROFILE	
Ticker	OIGIX
CUSIP	68380L605
Net Assets \$MM	\$23,675.00
Manager Names	Team Managed
Manager Tenure	21.0 Years
Prospectus Exp Ratio	0.70%
Cat Median Exp Ratio	1.25%
Current 12b-1	N/A
Annlzd Ret Since Incep	ot 6.87%
Inception Date	03/29/2012
Phone Number	800-225-5677
Sub Advisor Op	penheimerFunds Inc

#### HOLDINGS OVERVIEW

Total Number of Holdings	103
% Assets in Top 10 Holdings	17.12%
Avg Mkt Cap \$MM	\$16,972.69
Turnover Ratio	9.00%

#### TOP HOLDINGS

Infineon Technologies AG	2.12%
SAP SE	1.91%
Nippon Telegraph & Telep	1.82%
Dollarama Inc	1.81%
Valeo SA	1.78%

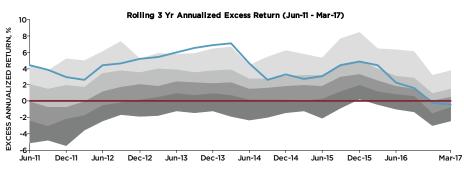


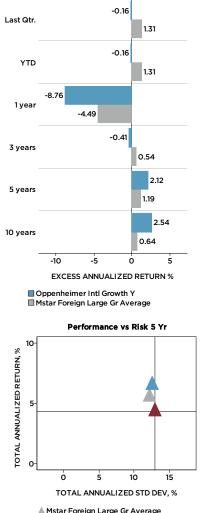
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## **OPPENHEIMER INTL GROWTH Y**

	Oppenheimer Intl Growth Y	Peer Group Rank	MSCI ACWI Ex USA NR USD	Mstar Foreign Large Gr	# of Funds	_ Last Qtr.	
KEY MEASURES / 5 YEAR						Last Gu.	
Standard Deviation	12.49	76%	12.93	12.17	335		
Sharpe Ratio	0.51	30%	0.33	0.45	335	VTD	
Alpha	2.55	29%	0.00	1.74	335	YTD	
Beta	0.90	30%	1.00	0.87	335		
R-Squared	86.69	52%	100.00	85.69	335		-8.
Up Mkt Capture	97.22	10%	100.00	90.90	335	1 year	
Down Mkt Capture	84.63	59%	100.00	83.00	335		
Information Ratio	0.43	29%	NA	0.24	335		
TRAILING RETURNS						3 years	
Last Qtr.	7.70		7.86	9.17	417		
YTD	7.70		7.86	9.17	417		
1 Year	4.38	89%	13.13	8.64	407	5 years	
3 Years	0.15	70%	0.56	1.10	355		
5 Years	6.48	27%	4.36	5.55	335		
10 Years	3.90	3%	1.35	1.99	272	10 years	
CALENDAR RETURNS							
2016	-2.06	50%	4.50	-2.16	404		-1
2015	3.44	22%	-5.66	1.00	393		E
2014	-6.99	85%	-3.87	-4.03	392		Oppe
2013	25.46	13%	15.29	19.71	393		4stai
2012	22.10	15%	16.83	18.75	385		
2011	-7.31	11%	-13.71	-12.56	402		
						10- % z	





A Mstar Foreign Large Gr Average Oppenheimer Intl Growth Y MSCI ACWI Ex USA NR USD

#### Period Ending 3.31.17 | Q1 17

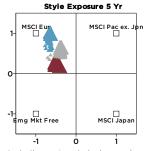
INVESTMENT PROFIL	E
Ticker	OIGYX
CUSIP	68380L407
Net Assets \$MM	\$23,675.00
Manager Names	Team Managed
Manager Tenure	21.0 Years
Prospectus Exp Ratio	0.89%
Cat Median Exp Ratio	0 1.25%
Current 12b-1	N/A
Annlzd Ret Since Ince	ept 6.62%
Inception Date	09/07/2005
Phone Number	800-225-5677
Sub Advisor C	)ppenheimerFunds Inc

#### HOLDINGS OVERVIEW

Total Number of Holdings	103
% Assets in Top 10 Holdings	17.12%
Avg Mkt Cap \$MM	\$16,972.69
Turnover Ratio	9.00%

#### TOP HOLDINGS

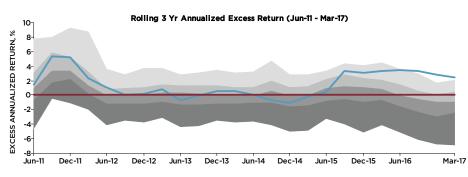
Infineon Technologies AG	2.12%
SAP SE	1.91%
Nippon Telegraph & Telep	1.82%
Dollarama Inc	1.81%
Valeo SA	1.78%



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## VICTORY SYCAMORE SMALL COMPANY OPP I

	Victory Sycamore Small Company Opp I	Peer Group Rank	Russell 2000 Value TR USD	Morningstar Small Value	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	13.13	32%	14.03	13.79	374
Sharpe Ratio	1.03	13%	0.88	0.84	374
Alpha	2.19	14%	0.00	-0.14	374
Beta	0.91	61%	1.00	0.93	374
R-Squared	95.32	26%	100.00	90.14	374
Up Mkt Capture	97.26	32%	100.00	91.71	374
Down Mkt Capture	89.25	33%	100.00	93.05	374
Information Ratio	0.32	6%	NA	-0.18	374
TRAILING RETURNS					
Last Qtr.	0.02		-0.13	0.37	429
YTD	0.02		-0.13	0.37	429
1 Year	27.26	17%	29.37	23.33	420
3 Years	10.28	4%	7.62	6.15	390
5 Years	13.66	11%	12.54	11.53	374
10 Years	8.87	3%	6.09	6.58	296
CALENDAR RETURNS					
2016	30.04	17%	31.74	25.65	423
2015	-0.39	4%	-7.47	-6.65	436
2014	6.80	13%	4.22	3.46	436
2013	33.39	72%	34.52	35.91	440
2012	12.55	79%	18.05	16.04	432
2011	1.52	5%	-5.50	-4.43	416





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TOTAL ANNUALIZED STD DEV, %

Victory Sycamore Small Company Opp I

A Morningstar Small Value Average

#### Period Ending 3.31.17 | Q117

INVESTMENT PROFILE	
Ticker	VSOIX
CUSIP	92646A815
Net Assets \$MM	\$4,334.00
Manager Names	Team Managed
Manager Tenure	18.8 Years
Prospectus Exp Ratio	0.96%
Cat Median Exp Ratio	1.31%
Current 12b-1	0.00%
Annlzd Ret Since Incept	9.38%
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	16.29%
Avg Mkt Cap \$MM	\$1,983.61
Turnover Ratio	59.00%

#### TOP HOLDINGS

25

Anixter International Inc	1.87%
Sanderson Farms Inc	1.78%
Columbia Banking System	1.73%
Sterling Bancorp	1.69%
Andersons Inc	1.68%

84

Style Exposure 5 Yr La Value Lg Growth Large o Small - I Sm Growt -1 ò 1 Value - Growth

A Russell 2000 Value TR USD 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.

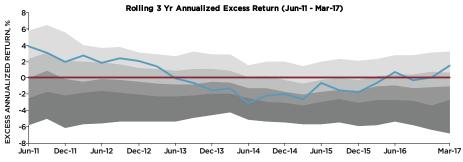
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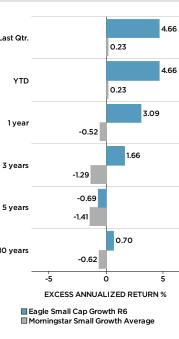
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### EAGLE SMALL CAP GROWTH R6

	Eagle Small Cap Growth R6	Peer Group Rank	Russell 2000 Growth TR USD	Morningstar Small Growth	# of Funds	Last Qtr.		4
KEY MEASURES / 5 YEAR						Last Gtr.		0.23
Standard Deviation	14.55	52%	15.24	14.50	614			-
Sharpe Ratio	0.78	44%	0.79	0.74	614	VTD		4.
Alpha	0.30	44%	0.00	-0.23	614	YTD		0.23
Beta	0.92	47%	1.00	0.90	614			-
R-Squared	92.37	42%	100.00	89.92	614			3.09
Up Mkt Capture	92.34	32%	100.00	88.23	614	1year	-0.52	
Down Mkt Capture	92.86	53%	100.00	90.59	614			
Information Ratio	-0.15	39%	NA	-0.27	614			1.66
TRAILING RETURNS						3 years	-1.29	C
Last Qtr.	10.01		5.35	5.58	698			_
YTD	10.01		5.35	5.58	698		-0.69	
1 Year	26.13	20%	23.03	22.52	689	5 years	-1.41	
3 Years	8.38	17%	6.72	5.43	660		-1.41	_
5 Years	11.42	37%	12.10	10.69	614			0.70
10 Years	8.76	17%	8.05	7.43	542	10 years	-0.62	C
CALENDAR RETURNS						_	-0.82	
2016	10.45	51%	11.32	11.26	698		-5	Ó 5
2015	-0.39	28%	-1.38	-2.36	716		EXCESS ANNUA	LIZED RETURN %
2014	5.59	25%	5.60	2.55	726	🔲 Ea	igle Small Cap Gro	wth R6
2013	34.70	85%	43.30	41.25	727	□ M	orningstar Small G	rowth Average
2012	14.71	39%	14.59	13.54	763			
2011	-1.53	38%	-2.91	-3.26	798	_	Performan	ce vs Risk 5 Yr
8 6 4 2- 0	iling 3 Yr Annualized	Excess Return	(Jun-11 - Mar-17)			TOTAL ANNUALIZED RETURN, %		
-2- NI						Ē o-		





#### Ticker HSRUX CUSIP 269858460 \$4,702.00 Net Assets \$MM Manager Names Team Managed Manager Tenure 21.3 Years Prospectus Exp Ratio 0.68% Cat Median Exp Ratio 1.35% Current 12b-1 0.00% AnnIzd Ret Since Incept 13.10% Inception Date 08/15/2011 Phone Number 800-421-4184 Sub Advisor N/A

#### HOLDINGS OVERVIEW

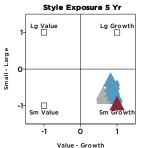
INVESTMENT PROFILE

Total Number of Holdings	115
% Assets in Top 10 Holdings	21.18%
Avg Mkt Cap \$MM	\$3,020.11
Turnover Ratio	32.00%

#### TOP HOLDINGS

25





85

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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TOTAL ANNUALIZED STD DEV, %

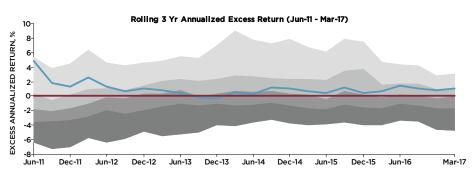
A Morningstar Small Growth Average

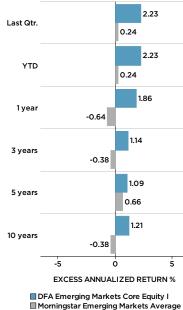
Lagle Small Cap Growth R6 Russell 2000 Growth TR USD

#### Period Ending 3.31.17 | Q117

## DFA Emerging Markets Core Equity I

	DFA Emerging Markets Core Equity I	Peer Group Rank	MSCI EM NR USD	Morningstar Emerging Markets	# of Funds	_ La:
KEY MEASURES / 5 YEAR						Las
Standard Deviation	15.21	66%	15.33	14.56	512	
Sharpe Ratio	0.12	36%	0.04	0.10	512	
Alpha	1.10	35%	0.00	0.73	512	
Beta	0.98	24%	1.00	0.89	512	
R-Squared	97.25	7%	100.00	87.80	512	
Up Mkt Capture	101.38	16%	100.00	90.11	512	
Down Mkt Capture	96.33	60%	100.00	88.12	512	
Information Ratio	0.43	19%	NA	0.08	512	
TRAILING RETURNS						3
Last Qtr.	13.68		11.45	11.68	820	
YTD	13.68		11.45	11.68	820	
1 Year	19.08	32%	17.21	16.57	786	5
3 Years	2.31	25%	1.18	0.80	665	
5 Years	1.89	35%	0.81	1.46	512	
10 Years	3.93	11%	2.72	2.34	266	10
CALENDAR RETURNS						
2016	12.35	20%	11.19	8.26	796	
2015	-14.86	58%	-14.92	-13.75	791	
2014	-0.91	30%	-2.19	-2.78	739	
2013	-2.64	60%	-2.60	0.34	655	
2012	20.49	30%	18.22	18.93	624	
2011	-20.64	61%	-18.42	-19.49	522	





Performance vs Risk 5 Yr

### Period Ending 3.31.17 | **Q117**

INVESTMENT PROFILE	
Ticker	DFCEX
CUSIP	233203421
Net Assets \$MM	\$21,475.00
Manager Names	Team Managed
Manager Tenure	7.1 Years
Prospectus Exp Ratio	0.53%
Cat Median Exp Ratio	1.49%
Current 12b-1	N/A
Annlzd Ret Since Incept	7.89%
Inception Date	04/05/2005
Phone Number	888-576-1167
	ustralia Limited/ Dimensional und Advisors Ltd

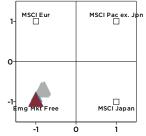
#### HOLDINGS OVERVIEW

Total Number of Holdings	4599
% Assets in Top 10 Holdings	11.06%
Avg Mkt Cap \$MM	\$7,327.30
Turnover Ratio	3.00%

#### TOP HOLDINGS

Samsung Electronics Co Lte	3.44%
Tencent Holdings Ltd	1.36%
Taiwan Semiconductor Mar	1.23%
Taiwan Semiconductor Mar	1.02%
China Construction Bank C	0.95%

#### Style Exposure 5 Yr

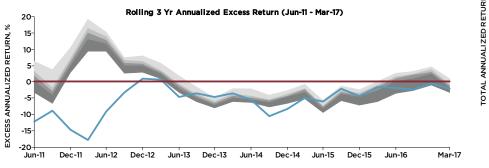


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## TIAA Real Estate Account

	TIAA Real Estate Account	Peer Group Rank	S&P 500 Index	Morningstar Sp-Real Estate	# of Funds		
KEY MEASURES / 5 YEAR						Last Qtr.	
Standard Deviation	1.39	1%	10.20	13.26	226		
Sharpe Ratio	6.07	1%	1.29	0.68	226	YTD	
Alpha	7.94	1%	0.00	0.48	226	110	
Beta	0.04	100%	1.00	0.63	226		
R-Squared	7.61	100%	100.00	24.10	226	1 year	-12.76
Up Mkt Capture	26.01	100%	100.00	58.31	226	iyeai	-14.50
Down Mkt Capture	-27.55	1%	100.00	51.44	226		
Information Ratio	-0.42	88%	NA	-0.33	226	3 years	
TRAILING RETURNS						5 years	
Last Qtr.	1.13		6.07	0.85	250		
YTD	1.13		6.07	0.85	250	5 years	
1 Year	4.42	20%	17.17	2.67	248		
3 Years	8.06	80%	10.37	8.99	244		
5 Years	8.58	59%	13.30	8.86	226	10 years	
10 Years	3.09	87%	7.51	4.13	197	io years	
CALENDAR RETURNS						-	-20 -15 -10
2016	5.20	71%	11.96	6.52	255		
2015	8.16	1%	1.38	2.42	263		EXCESS ANNUALI
2014	12.22	99%	13.69	28.27	265		TIAA Real Estate Acc
2013	9.65	2%	32.39	1.79	259	1 🗆	Morningstar Sp-Real I
2012	10.06	100%	16.00	17.57	264		
2011	13.00	3%	2.11	7.61	250	_	Performance
20	Rolling 3 Yr Annualized Ex	kcess Return (Ju	un-11 - Mar-17)			20- % Na 15-	





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TOTAL ANNUALIZED STD DEV, %

A Morningstar Sp-Real Estate Average

▲ TIAA Real Estate Account ▲ S&P 500 Index

15 20

25

# Period Ending 3.31.17 | **Q1 17**

NVESTMENT PROFI	LE
ID	VAUSA059TL
Cusip	878094200
Net Assets \$	\$24,638,180,593.00
Manager Name	Gerald Casimir
Manager Start Date	2015-08-14
Expense Ratio	0.86%
Cat Median Exp Rat	io 1.29%
Annlzd Ret Since Inc	cept 6.43%
Inception Date	10-02-1995
Sub Advisor	N/A

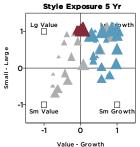
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#### HOLDINGS OVERVIEW

% Assets in Top 10 Holdings	22.00%
Avg Mkt Cap \$MM	\$11,002.39
Turnover Ratio	3.50%

#### TOP HOLDINGS

Fashion Show	3.15%
1001 Pennsylvania Avenu	3.04%
The Florida Mall	2.84%
Colorado Center	2.13%
Ddr Joint Venture	2.07%



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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 (900) 216-0645. CAPTRUST Financial Advisoral.

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### APPENDIX

University of Maine System Defined Contribution Plan

# APPENDIX

Plan Administration Review
Your CAPTRUST Service Team
Glossary of Terms
Evaluation Methodology

### PLAN ADMINISTRATION REVIEW

Period Ending 3.31.17 | Q1 17

University of Maine System Defined Contribution Plan

### Feedback on level of satisfaction with Provider:

AREA OF EVALUATION	FAIR	GOOD	EXCELLENT	
Quality & timeliness of Participant materials				PROVIDER NAME: TIAA-CREF
Quality & timeliness of Plan Sponsor materials				
Accuracy of plan data				RELATIONSHIP MANAGE
Phone/email responsiveness				
Website usability				
Call center representative accessibility				
Ease of participant transactions				
Overall administration service evaluation				

### COMMENTS:

### YOUR CAPTRUST SERVICE TEAM MEMBERS

University of Maine System Defined Contribution Plan

TEAM MEMBERS	RESPONSIBILITIES
Michael S. Pratico Senior Vice President   Financial Advisor michael.pratico@captrustadvisors.com	Account Role: Lead Consultant Our Lead Consultants serve as the primary relationship manager for the fiduciaries of corporate retirement plans. They oversee and ensure quality delivery of comprehensive investment advisory services. They are available to assist with any aspect of clients' accounts, or put them in contact with the appropriate resources here at CAPTRUST.
Barron V. Schmitt Senior Vice President   Financial Advisor barry.schmitt@captrustadvisors.com	Account Role: Consultant Our Consultants have responsibility for client project management, client meetings, report preparation, and presentation. Projects involve the establishment of investment policies and objectives, asset allocation modeling, investment manager analyses and searches, fee analysis, performance evaluation, and other specialized projects. In addition, they will provide comprehensive written investment option and plan reviews, as well as monitor overall results and service delivery to ensure complete satisfaction.
Scott T. Matheson, CFA, CPA Senior Director   Defined Contribution Practice Leader scott.matheson@captrustadvisors.com	Account Role: Research Analyst Our Investment Analysts conduct investment manager research, asset allocation studies, portfolio monitoring and performance measurement. Some of their specific duties include: evaluating fund lineups and investment options, reporting due diligence findings to clients, and researching the various universes for viable investment options. Our team monitors and evaluates mutual funds, separate account managers and alternative investments for use with current and prospective clients.
<b>Che-Che S. McCrimmon</b> Senior Client Management Consultant Che-Che.McCrimmon@captrustadvisors.com	Account Role: Client Management Consultant The Client Management Consultants are focused on overall client management from initial conversion of new plans to CAPTRUST throughout their 'life' at CAPTRUST. As the primary contact for day-to-day client service needs, the main goal of the Client Management Consultant is to deliver exceptional proactive client service. On a daily basis, the Client Management Consultants are available to assist employees with questions related to plan enrollment and education, available investment options, and other areas.

### GLOSSARY

#### ALPHA

Alpha measures a manager's rate of return in excess of that which can be explained by its systematic risk, or Beta. It is a result of regressing a manager's returns against those of a benchmark index. A positive alpha implies that a manager has added value relative to its benchmark on a risk-adjusted basis.

#### 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.

### PLAN INVESTMENT REVIEW | EVALUATION METHODOLOGY

University of Maine System Defined Contribution Plan

#### QUANTITATIVE EVALUATION ITEMS QUALITATIVE EVALUATION ITEMS 3/5 Year Risk- adjusted Performance **Fund Management** The investment option's 3 or 5 Year Annualized Risk A significant disruption to the investment option's MARKED FOR REVIEW Adjusted Performance falls below the 50th percentile management team has been discovered. of the peer group. The following categories of the **Fund Family Investment Policy Monitor appear** 3/5 Year Performance vs. Peers A significant disruption to the investment option's "Marked For Review" when: The investment option's 3 or 5 Year Annualized Peer parent company has been discovered. Relative Performance falls below the 50th percentile of the peer group. **Portfolio Construction** 3/5 Year Style The investment option's combined Portfolio Construction score is 6 or below out of a possible 15 The investment option's 3 or 5 Year R-Squared points. measure falls below the absolute threshold set per asset class. **Underlying Investment Vehicles**

3/5 Year Confidence The investment option's 3 or 5 Year Confidence Rating falls below the 50<sup>th</sup> percentile of the peer group.

#### **Glidepath Assessment**

% of Equity Exposure: The combined percentage of an investment option's equity exposure ranks in the top 20th percentile or bottom 20th percentile of the peer group.

Regression to the Benchmark: The investment option's sensitivity to market risk - as measured by beta relative to a Global Equity Index - is above 0.89. The investment option's combined Underlying Investment Vehicles score is 6 or below out of a possible 15 points.

### STRATEGY OVERVIEW

- **Performance**: Tracking error versus a custom benchmark is targeted between 50-100bps. Over the 3 and 5 yr periods, the fund has underperformed its custom benchmark by ~40bps and lagged the Morningstar Large Blend peer group.
- Investment Exposure: CREF Stock's investment mandate is unique and seeks to provide core, diversified exposure to global equity markets domestic U.S., international developed, and international emerging. The portfolio is 80% actively managed using a mix of fundamental and quantitative investment strategies, and 20% passively managed. Roughly 70% is invested in U.S. Stocks with ~23% in international developed markets and ~7% in international emerging markets.
- **Team:** The investment team is comprised of 70 individuals led by four portfolio managers. The team has been extremely stable since 2007, consisting primarily of "career analysts."

### COMPARISON

- While the fund is classified as Large Blend by Morningstar, given its investment mandate, the portfolio is more similar to World Stock. When compared to World Stock, the fund outperforms both the benchmark and the peer group.
  - Large Blend: portfolios comprised primarily of large cap domestic equities with no discernable growth or value style.
  - World Stock: portfolios with few geographic limitations with roughly 20-60% of assets in U.S. stocks.
- CREF Stock's investment mandate is unique, even within the World Stock category. There are very few comparable options in terms of number of holdings, market cap, and country exposure (no comparable options with both active and passive management were identified):

Name	Ticker	Morningstar Category a	# of Holdings	Average Market Cap (mil)		Market Cap Large % (Net)	Market Cap Mid % (Net)	Cap		Equity Region Emergin g % (Net)	Equity Country United States %	
Dodge & Cox Global Stock	DODWX	US Fund World Stock	92	2 58,79	1 5	1 35	5 7	7 (	D 8:	2 14	4 52	
American Funds New Perspective R6	RNPGX	US Fund World Stock	319	63,01	D 53	3 30	) 7	7 (	) 84	4 7	7 52	
Vanguard Total World Stock Index I	VTWIX	US Fund World Stock	7,732	34,08	1 43	3 30	) 17	7 !	5 90	о 7	7 54	
World Stock Average			179	38,68	5 39	29 29	9 18	3 (	6 88	в е	5 52	
World Stock Median			8	1 38,95	6 43	3 30	) 15	5	2 90	0 5	5 53	
CREF Stock			9,470	97,84	0 43.65	5 23.49	25.77	7 7.0	9 9.	3 2	7 70	2

### CONSIDERATIONS

- **Retirement Income**: CREF Stock provides variable annuity income for those that wish to annuitize in retirement. Between TIAA Traditional and CREF Stock, participants have the ability to create a diversified annuity portfolio.
- **Plan Design**: Does the plan need/want exposure to global stocks, both passive and actively managed? Does overlap exist with other funds in the lineup?
- Administrative: CREF Stock must be offered within GA/GRA/SRA/GSRA contracts and must accept both contributions and transfers.
- Participant Behavior/Disruption: Given its historical significance at TIAA and the mandate that it is offered in all legacy contracts, CREF Stock often holds a significant portion of plan assets. Participants may wish to retain the option to invest.

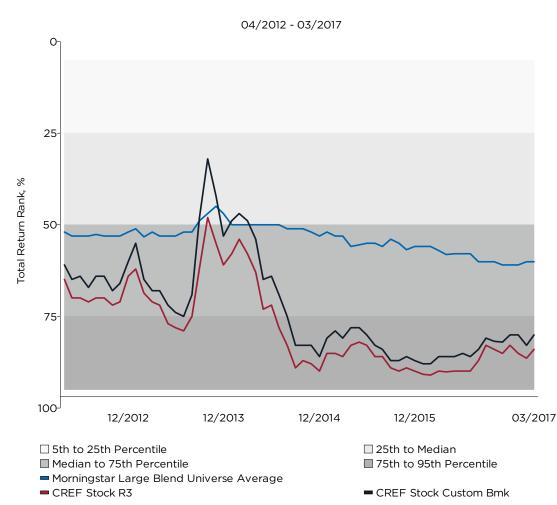
### Investment Analysis - Large Company Blend

#### INVESTMENT SUMMARY March 31, 2017

	CREF Stock R3	CREF Stock Custom Bmk	Morningstar Large Blend Universe Average
Morningstar		-	-
Category Ticker	-	_	-
Manager Name	_	-	-
Manager Tenure			7.0 years
Net Assets (\$MM)	_	_	\$4,224.68
Expense Ratio	-	- -	1.18%
Current 12b-1	-	-	-
PERFORMANCE	-	-	-
Quarter	6.75%	6.42%	5.56%
/TD	6.75%	6.42%	5.56%
Year	16.44%	16.62%	15.96%
3 Year	6.70%	7.07%	8.12%
5 Year	10.22%	10.63%	11.73%
	5.48%	5.81%	6.59%
	9.17%	10.25%	10.00%
2016 2015		10.25%	10.29%
	-0.84%	-1.02%	-0.88%
2014	6.41%	7.41%	11.25%
2013	27.83%	28.07%	31.80%
2012	17.29%	16.69%	15.10%
2011	-4.95%	-3.78%	-0.69%
2010	15.74%	15.75%	14.02%
MPT STATISTICS (5 YR)	10.00		
Standard Deviation	10.68	10.65	10.67
Sharpe Ratio	0.94	0.98	1.09
Alpha	-0.42	-	1.64
Beta	1.00	1.00	0.95
R Squared	99.60	100.00	89.88
PORTFOLIO STATISTICS			
Avg Market Cap	-	-	\$51,594.51
Fotal Holdings	-	-	221
% Assets in Top 10	-	-	33.90%
% Turnover	-	-	70.49%

DISCLAIMER: Fund performance depicts historical performance and is not meant to predict future results. Peer group averages are derived from Morningstar and are provided for comparison purposes only. The information and statistics in this report are from sources believed to be reliable, but are not warranted by CAPTRUST Financial Advisors to be accurate or complete. The opinions expressed in this report are subject to change without notice. This material has been prepared or is distributed solely for informational purposes and is not a solicitation or an offer to buy any security or instrument or to participate in any trading strategy. We believe this information to lide solicitation are RISIA section 408(b)(2).

### Investment Analysis - Large Company Blend



#### PERCENTILE RANK (60 Month Rolling)

#### INVESTMENT SUMMARY

### ABOUT THIS ANALYSIS

#### PERCENTILE RANK

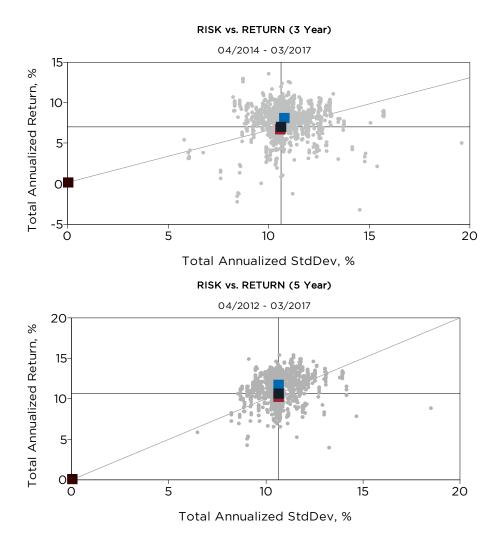
Percentile Rankings are based on an individual fund's performance relative to all other available funds in its universe. Percentiles range from 1, being the best, to 100 being the worst.

#### MEASUREMENT GUIDE

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

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### INVESTMENT ANALYSIS - LARGE COMPANY BLEND



### ABOUT THIS ANALYSIS

#### **RISK/RETURN**

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

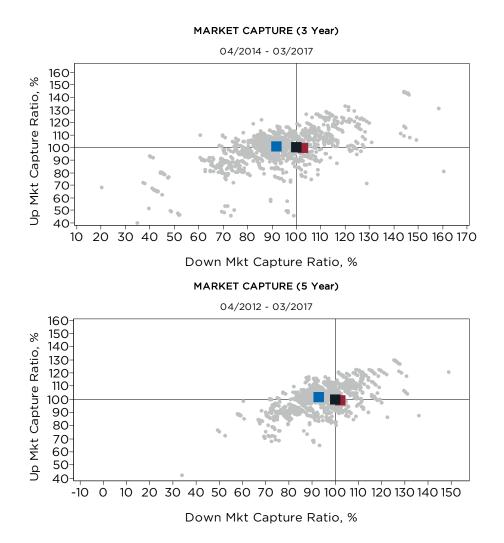
#### MEASUREMENT GUIDE

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

- Morningstar Large Blend Universe
- Morningstar Large Blend Universe Average
- CREF Stock R3
- CREF Stock Custom Bmk

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### INVESTMENT ANALYSIS - LARGE COMPANY BLEND



INVESTMENT SUMMARY

### ABOUT THIS ANALYSIS

### CAPTURE RATIO

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

#### MEASUREMENT GUIDE

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

- Morningstar Large Blend Universe
- Morningstar Large Blend Universe Average
- CREF Stock R3
- CREF Stock Custom Bmk

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### Investment Analysis – World Stock

#### INVESTMENT SUMMARY March 31, 2017

	CREF Stock R2	Vanguard Total World Stock Index I	American Funds New Perspective R6	Dodge & Cox Global Stock	MSCI The World Index USD	Morningstar World \$tock Universe Average
Morningstar Category		World Stock	World Stock	World Stock	-	-
Ticker		VTWIX	RNPGX	DODWX	-	-
Manager Name	-	Christine D. Franquin	Robert W. Lovelace	Lily S. Beischer	-	-
Manager Tenure	-	4.1 years	16.3 years	8.9 years	-	6.1 years
Net Assets (\$MM)	-	\$10,411.00	\$65,090.00	\$7,621.00	-	\$2,767.82
Expense Ratio	-	0.10%	0.45%	0.63%	-	1.41%
Current 12b-1	-	-	-	-	-	-
PERFORMANCE						
Quarter	6.73%	7.10%	9.60%	7.72%	6.53%	7.41%
YTD	6.73%	7.10%	9.60%	7.72%	6.53%	7.41%
1 Year	16.33%	15.97%	14.74%	27.85%	15.43%	13.71%
3 Year	6.63%	5.44%	6.89%	6.14%	6.12%	4.25%
5 Year	10.17%	8.85%	10.66%	11.95%	9.99%	8.36%
10 Year	5.46%	-	6.82%	-	4.81%	4.20%
CALENDAR PERFORMANCE						
2016	9.06%	8.77%	2.19%	17.10%	8.15%	5.30%
2015	-0.91%	-1.87%	5.63%	-8.05%	-0.32%	-0.82%
2014	6.41%	4.00%	3.56%	6.95%	5.50%	2.40%
2013	27.83%	23.00%	27.23%	33.17%	27.36%	25.77%
2012	17.29%	17.35%	21.19%	21.11%	16.54%	16.01%
2011	-4.95%	-7.71%	-7.33%	-11.39%	-5.02%	-8.05%
2010	15.74%	13.08%	13.11%	13.51%	12.34%	14.23%
MPT STATISTICS (5 YR)						
Standard Deviation	10.68	10.95	10.90	13.14	10.95	11.58
Sharpe Ratio	0.94	0.80	0.97	0.90	0.90	0.72
Alpha	0.54	-1.05	1.02	0.57	-	-1.39
Beta	0.96	0.99	0.96	1.14	1.00	0.98
R Squared	97.60	98.21	94.04	90.34	100.00	85.86
PORTFOLIO STATISTICS						
Avg Market Cap	-	\$33,843.55	\$55,365.21	\$54,203.36	-	\$34,451.59
Total Holdings	-	7643	322	125	-	163
% Assets in Top 10	-	8.00%	19.15%	24.31%	-	31.97%
% Turnover	-	15.00%	22.00%	25.00%	-	66.10%

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# 04/2012 - 03/2017 O. 25 Total Return Rank, % 50 75-100<sup>J</sup> 12/2012 12/2013 12/2014 12/2015 03/2017 □ 5th to 25th Percentile 25th to Median 75th to 95th Percentile Median to 75th Percentile Morningstar World Stock Universe Average Vanguard Total World Stock Index I

PERCENTILE RANK (60 Month Rolling)

### CREF Stock R2

- American Funds New Perspective R6
- MSCI The World Index USD

#### INVESTMENT SUMMARY

### **ABOUT THIS ANALYSIS**

#### PERCENTILE RANK

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

#### MEASUREMENT GUIDE

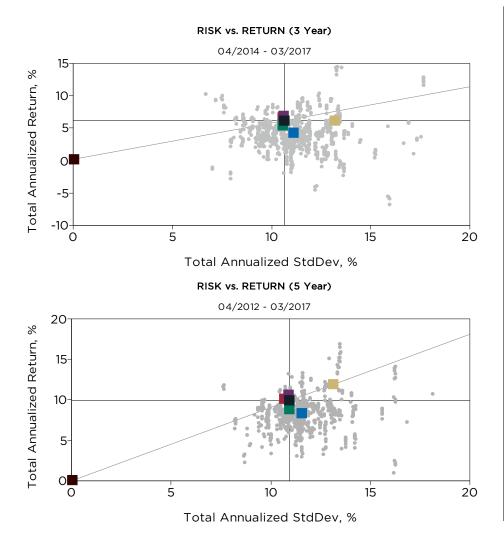
Ideally, managers prefer to be in the 50th percentile or above which demonstrates that they have done better on a relative basis than at least 50% of their peers.

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Dodge & Cox Global Stock



#### INVESTMENT SUMMARY

### ABOUT THIS ANALYSIS

#### **RISK/RETURN**

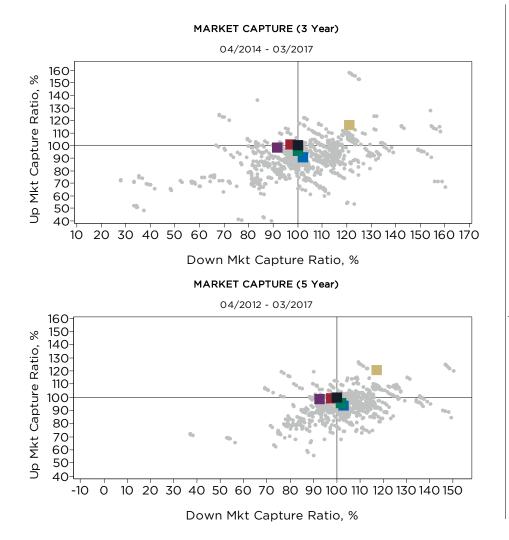
The Risk/Return Graph is highlighted by a straight line connecting the riskless asset, in this case cash, to the risk/return plot of a relevant benchmark index. From Modern Portfolio Theory we know that the slope of this line represents the Sharpe Ratio of the index.

#### MEASUREMENT GUIDE

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

- Morningstar World Stock Universe
- Morningstar World Stock Universe Average
- CREF Stock R2
- Vanguard Total World Stock Index I
- American Funds New Perspective R6
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#### INVESTMENT SUMMARY

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#### MEASUREMENT GUIDE

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- Morningstar World Stock Universe
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### **BENCHMARKS USED**

- Custom Vanguard CREF Stock "Benchmark" is:
- - 70% Vanguard Total Stock Market Index I
- - 23% Vanguard Developed Market Index I
- - 7% Vanguard Emerging Markets Index I
- Average market cap of ~\$40B, giant cap 42%, large cap 29%, mid cap 18%, and small cap 6%, ~11k holdings
- CREF Stock Custom Benchmark is:
- - 70% Russell 3000 Index
- - 30% ACWI ex US IMI Index
- - Not an investable fund

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### Investment Analysis – World Stock

#### INVESTMENT SUMMARY March 31, 2017

	CREF Stock R3	Custom Vanguard CREF Stock Benchmark	CREF Stock Custom Bmk	Morningstar World Stock Universe Average
Morningstar Category		N/A	-	-
Ticker	-	-	-	-
Manager Name	-	-	-	-
Manager Tenure	-	17.1 years	-	6.1 years
Net Assets (\$MM)	-	\$407,470.61	-	\$2,767.82
Expense Ratio	-	0.05%	-	1.41%
Current 12b-1	-	-	-	-
PERFORMANCE				
Quarter	6.75%	6.62%	6.42%	7.41%
YTD	6.75%	6.62%	6.42%	7.41%
1 Year	16.44%	16.91%	16.62%	13.71%
3 Year	6.70%	7.23%	7.07%	4.25%
5 Year	10.22%	10.72%	10.63%	8.36%
10 Year	5.48%	6.00%	5.81%	4.20%
CALENDAR PERFORMANCE				
2016	9.17%	10.28%	10.25%	5.30%
2015	-0.84%	-0.82%	-1.02%	-0.82%
2014	6.41%	7.31%	7.41%	2.40%
2013	27.83%	27.87%	28.07%	25.77%
2012	17.29%	17.22%	16.69%	16.01%
2011	-4.95%	-3.61%	-3.78%	-8.05%
2010	15.74%	15.43%	15.75%	14.23%
MPT STATISTICS (5 YR)				
Standard Deviation	10.68	10.63	10.65	11.58
Sharpe Ratio	0.94	1.00	0.98	0.72
Alpha	-0.42	0.13	-	-2.26
Beta	1.00	1.00	1.00	1.00
R Squared	99.60	99.66	100.00	85.24
PORTFOLIO STATISTICS				
Avg Market Cap	-	\$40,220.68	-	\$34,451.59
Total Holdings	-	3697	_	163
% Assets in Top 10	-	13.37%	-	31.97%
% Turnover	_	6.24%	_	66.10%

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PERCENTILE RANK (60 Month Rolling)

#### INVESTMENT SUMMARY

### ABOUT THIS ANALYSIS

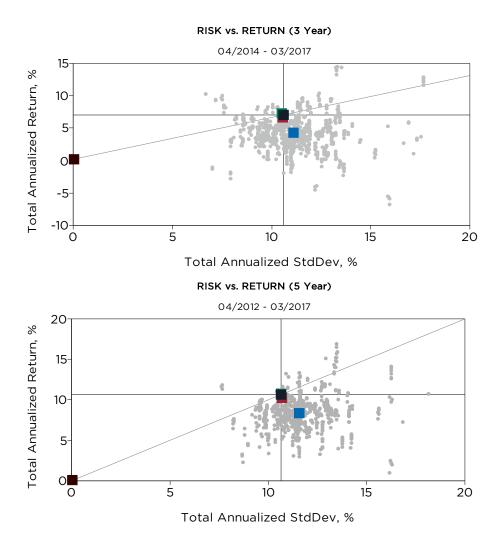
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#### INVESTMENT SUMMARY

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#### **RISK/RETURN**

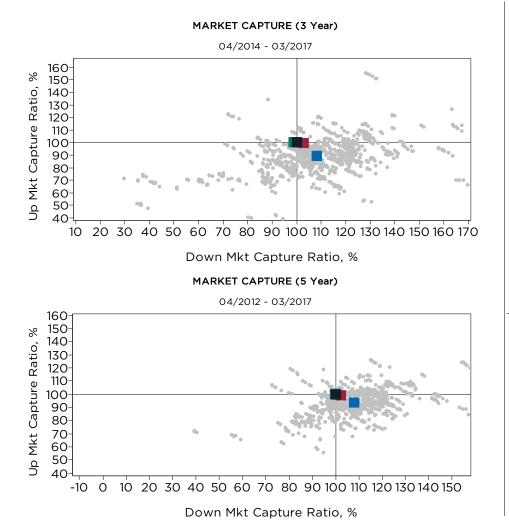
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#### INVESTMENT SUMMARY

### ABOUT THIS ANALYSIS

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**GLOSSARY OF TERMS** 

#### ALPHA

A manager's rate of return in excess of that which can be explained by its systematic risk, or Beta. It is a result of the analysis regressing a manager's returns against those of a benchmark index. A positive alpha implies that a manager has added value relative to its benchmark on a risk-adjusted basis.

#### BETA

A manager's sensitivity to systematic, or market risk. Beta is a result of the analysis regressing a manager's returns against those of a benchmark index. A manager with a Beta of 1 should move perfectly with the benchmark. A Beta of less than 1 implies that a manager's returns are less volatile than the market's. A Beta of greater than 1 similarly implies that a manager exhibits greater volatility than the market.

#### CAPTURE RATIO

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

#### INFORMATION RATIO

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

#### PERCENTILE RANK

Percentile Rank is based on an individual fund's performance relative to all other available funds in its universe. Percentiles range from 1, being the best, to 100 being the worst. Ideally, managers prefer to be in the 50th percentile or above which demonstrates that they have done better on a relative basis than at least 50% of their peers.

#### **R-SQUARED**

The portion of a manager's movements that are explained by movements in a benchmark index. R-squared values range from 0 to 100. An R-squared of 100 means that all movements of a manager are completely explained by movements in the index. Also identified as the coefficient of determination from a regression equation, a high R-squared value supports the validity of the Alpha and Beta measures.

#### SHARPE RATIO

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

#### STANDARD DEVIATION

A measure of the extent to which observations in a series vary from the arithmetic mean of the series. This measure of volatility or risk allows the estimation of a range of values for a manager's returns. The wider the range, the more uncertainty, and therefore the riskier a manager is assumed to be.