

FUND EVALUATION REPORT

Plymouth County Retirement Association

Investment Review
February 26, 2019



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Estimated Retirement Association Performance

Estimated Aggregate Performance¹

	January Estimate (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
Total Retirement Association	4.8	-5.4	7.9	5.2	9.2
<i>60% MSCI ACWI/40% Barclays Global Aggregate</i>	5.3	-4.7	8.2	4.6	8.1

Benchmark Returns

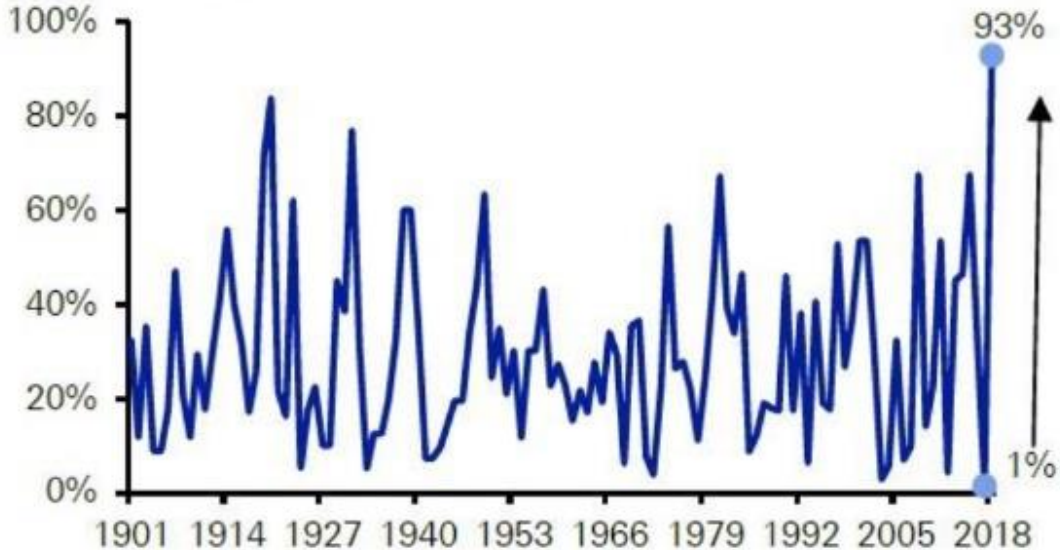
	January (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
<i>Russell 3000</i>	8.6	-2.3	14.2	10.4	15.1
<i>MSCI EAFE</i>	6.6	-12.5	7.7	2.7	8.1
<i>MSCI Emerging Markets</i>	8.8	-14.2	14.9	4.8	9.7
<i>Barclays Aggregate</i>	1.1	2.3	2.0	2.4	3.7
<i>Barclays TIPS</i>	1.4	0.9	2.1	1.6	3.6
<i>Barclays High Yield</i>	4.5	1.7	9.4	4.6	11.0
<i>JPM GBI-EM Global Diversified</i>	5.5	-5.3	7.7	1.1	4.6
<i>S&P Global Natural Resources</i>	9.6	-8.9	18.7	2.5	4.6

¹ The January performance estimates are calculated using index returns as of January 31, 2019 for each asset class. No performance estimate was included for private equity, real estate, infrastructure, and private natural resources asset classes.

The Case for Diversification

2018 Was a Rough Year with Few Places to Hide

Percentage of Assets with a Negative Total Return in USD terms¹

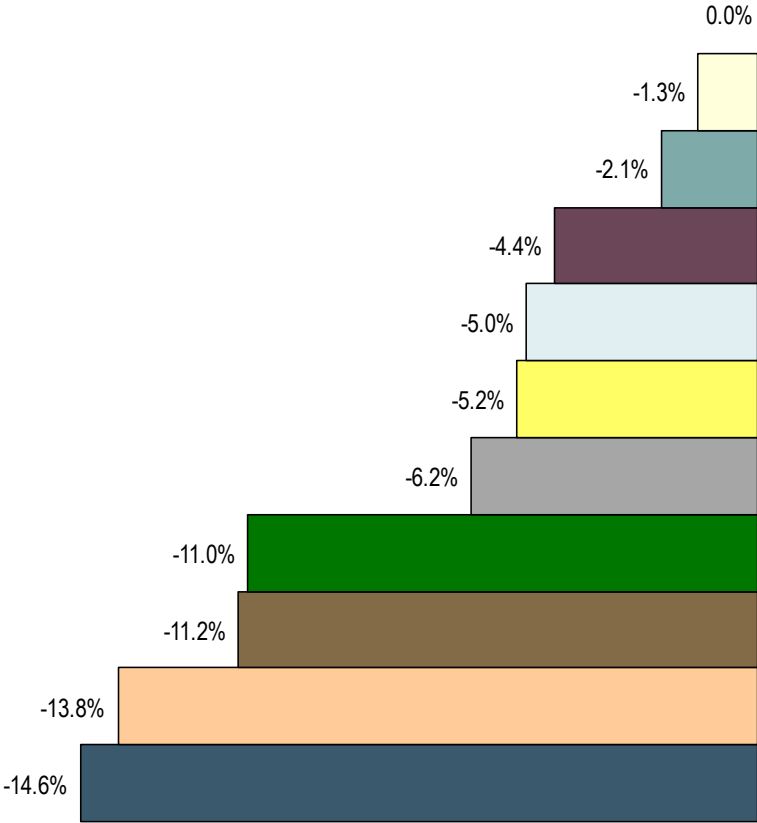


¹ Source: Deutsche Bank, Bloomberg Finance LP, GFD. Note, returns YTD are until December 20.



The 2018 World Markets¹

- Bloomberg Barclays Aggregate
- Bloomberg Barclays U.S. TIPS
- Bloomberg Barclays High Yield
- S&P 500
- NAREIT Equity
- Russell 3000
- JPM GBI-EM Global Diversified
- Russell 2000
- Bloomberg Commodity Index
- MSCI EAFE
- MSCI Emerging Markets



¹ Source: InvestorForce.



Index Returns¹

	4Q18 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
Domestic Equity					
Russell 3000	-14.3	-5.2	9.0	7.9	13.2
Russell 1000	-13.8	-4.8	9.1	8.2	13.3
Russell 1000 Growth	-15.9	-1.5	11.1	10.4	15.3
Russell 1000 Value	-11.7	-8.3	7.0	5.9	11.2
Russell MidCap	-15.4	-9.1	7.0	6.3	14.0
Russell MidCap Growth	-16.0	-4.8	8.6	7.4	15.1
Russell MidCap Value	-15.0	-12.3	6.1	5.4	13.0
Russell 2000	-20.2	-11.0	7.4	4.4	12.0
Russell 2000 Growth	-21.7	-9.3	7.2	5.1	13.5
Russell 2000 Value	-18.7	-12.9	7.4	3.6	10.4
Foreign Equity					
MSCI ACWI (ex. U.S.)	-11.5	-14.2	4.5	0.7	6.6
MSCI EAFE	-12.5	-13.8	2.9	0.5	6.3
MSCI EAFE (Local Currency)	-12.2	-11.0	2.6	3.8	7.5
MSCI EAFE Small Cap	-16.0	-17.9	3.7	3.1	10.5
MSCI Emerging Markets	-7.5	-14.6	9.2	1.6	8.0
MSCI Emerging Markets (Local Currency)	-7.4	-10.1	8.8	5.0	9.6
Fixed Income					
Bloomberg Barclays Universal	1.2	-0.3	2.6	2.7	4.1
Bloomberg Barclays Aggregate	1.6	0.0	2.1	2.5	3.5
Bloomberg Barclays U.S. TIPS	-0.4	-1.3	2.1	1.7	3.6
Bloomberg Barclays High Yield	-4.5	-2.1	7.2	3.8	11.1
JPM GBI-EM Global Diversified	2.1	-6.2	5.9	-1.0	3.4
Other					
NAREIT Equity	-6.7	-5.0	2.7	7.8	12.1
Bloomberg Commodity Index	-9.4	-11.2	0.3	-8.8	-3.8
HFRI Fund of Funds	-4.4	-3.5	1.5	1.5	3.2

¹ Source: Investorforce

Periodic Table of Returns

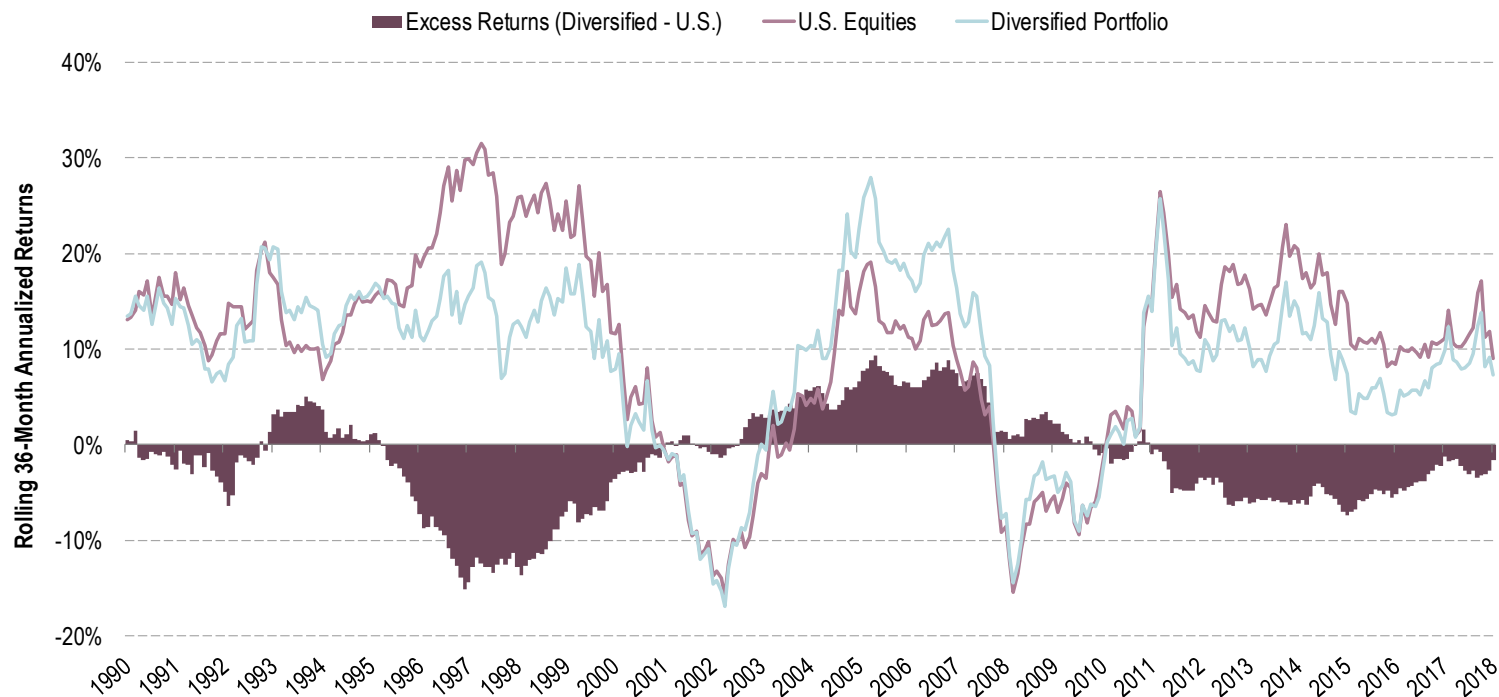
- No single asset class consistently outperforms from one year to the next.

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Trailing 10 Year	MIG 10Yr CME
Emerging Equity 25.6%	Emerging Equity 34.0%	Emerging Equity 32.2%	Emerging Equity 39.4%	Bonds 5.2%	Emerging Equity 78.5%	Emerging Equity 18.9%	Real Estate 14.3%	Emerging Equity 18.2%	US Equity 32.4%	Private Equity 19.8%	Real Estate 13.3%	High Yield 17.1%	Emerging Equity 37.3%	Private Equity 17.6%	Private Equity 13.9%	Emerging Equity 10.5%
EAFE Equity 20.2%	Commodities 21.4%	EAFE Equity 26.3%	Private Equity 21.8%	Cash 1.3%	High Yield 58.2%	Private Equity 17.8%	TIPS 13.6%	EAFE Equity 17.3%	Private Equity 25.7%	US Equity 13.7%	Private Equity 12.3%	US Equity 12.0%	EAFE Equity 25.0%	Real Estate 5.3%	US Equity 13.1%	Private Equity 9.3%
Emerging Markets Debt 17.2%	Real Estate 20.2%	Private Equity 19.9%	Commodities 16.2%	TIPS -2.4%	EAFE Equity 31.8%	Commodities 16.8%	Private Equity 10.4%	Emerging Markets Debt 17.2%	EAFE Equity 22.8%	Real Estate 11.8%	US Equity 1.4%	Commodities 11.8%	US Equity 21.8%	Cash 1.9%	High Yield 11.1%	EAFE Equity 8.6%
Private Equity 15.0%	EAFE Equity 13.5%	Real Estate 16.8%	Real Estate 15.8%	Real Estate -6.5%	US Equity 26.5%	US Equity 15.1%	Bonds 7.8%	US Equity 16.0%	Real Estate 11.0%	Bonds 6.0%	Bonds 0.5%	Emerging Equity 11.2%	Private Equity 16.8%	Bonds 0.0%	Emerging Equity 8.0%	Real Estate 6.4%
Real Estate 14.7%	Private Equity 11.4%	US Equity 15.8%	Emerging Markets Debt 12.0%	Emerging Markets Debt -8.6%	Emerging Markets Debt 26.0%	High Yield 15.1%	High Yield 5.0%	High Yield 15.8%	Hedge Funds 9.1%	TIPS 3.6%	Cash 0.0%	Emerging Markets Debt 10.2%	Emerging Markets Debt 12.7%	TIPS -1.3%	Real Estate 7.3%	US Equity 6.3%
High Yield 11.1%	Hedge Funds 9.3%	Hedge Funds 12.9%	TIPS 11.6%	Hedge Funds -19.0%	Hedge Funds 20.0%	Emerging Markets Debt 13.8%	Emerging Markets Debt 2.8%	Real Estate 10.7%	High Yield 7.4%	Hedge Funds 3.0%	EAFE Equity -0.8%	Real Estate 8.0%	Hedge Funds 8.6%	High Yield -2.1%	EAFE Equity 6.3%	High Yield 6.0%
US Equity 10.9%	Emerging Markets Debt 8.3%	Emerging Markets Debt 12.6%	EAFE Equity 11.2%	Private Equity -19.3%	Commodities 18.9%	Real Estate 13.1%	US Equity 2.1%	Private Equity 9.2%	Cash 0.0%	High Yield 2.5%	Hedge Funds -1.1%	Hedge Funds 5.4%	High Yield 7.5%	US Equity -4.4%	Emerging Markets Debt 5.9%	Commodities 5.8%
Commodities 9.1%	US Equity 4.9%	High Yield 11.8%	Hedge Funds 10.0%	High Yield -26.2%	TIPS 11.4%	Hedge Funds 10.2%	Cash 0.0%	TIPS 7.0%	Bonds -2.0%	Emerging Markets Debt 0.7%	TIPS -1.4%	TIPS 4.7%	Real Estate 7.0%	Hedge Funds -4.5%	Hedge Funds 4.9%	Emerging Markets Debt 5.1%
Hedge Funds 9.0%	Cash 3.2%	Cash 5.0%	Bonds 7.0%	Commodities -35.6%	Private Equity 7.8%	EAFE Equity 7.8%	Hedge Funds -5.3%	Hedge Funds 6.4%	Emerging Equity -2.6%	Cash 0.0%	High Yield -4.5%	Private Equity 3.7%	Bonds 3.5%	Emerging Markets Debt -5.2%	TIPS 3.6%	Hedge Funds 4.5%
TIPS 8.5%	TIPS 2.8%	Bonds 4.3%	US Equity 5.5%	US Equity -37.0%	Bonds 5.9%	Bonds 6.5%	EAFE Equity -12.1%	Bonds 4.2%	Emerging Markets Debt -7.1%	Emerging Equity -2.2%	Emerging Markets Debt -7.1%	Bonds 2.6%	TIPS 3.0%	Commodities -11.2%	Bonds 3.5%	Bonds 3.3%
Bonds 4.3%	High Yield 2.7%	Commodities 2.1%	Cash 4.4%	EAFE Equity -43.4%	Cash 0.1%	TIPS 6.3%	Commodities -13.3%	Cash 0.1%	TIPS -8.6%	EAFE Equity -4.9%	Emerging Equity -14.9%	EAFE Equity 1.0%	Commodities 1.7%	EAFE Equity -13.8%	Cash 0.4%	TIPS 3.2%
Cash 1.4%	Bonds 2.4%	TIPS 0.4%	High Yield 1.9%	Emerging Equity -53.3%	Real Estate -17.0%	Cash 0.1%	Emerging Equity -18.4%	Commodities -1.1%	Commodities -9.5%	Commodities -17.0%	Commodities -24.7%	Cash 0.3%	Cash 0.9%	Emerging Equity -14.6%	Commodities -3.8%	Cash 2.5%



Returns are Cyclical

Rolling 36-month Annualized Returns of U.S. Equities vs Diversified Equities Portfolio¹
 January 1988 – December 2018



- U.S. equities outperformed² a diversified equities portfolio by as much as 15.1% and 6.5% on November 1997 and August 2013 respectively. However, U.S. Equities trailed by 9.3% and 5.0% on April 2006 and August 1994 respectively.

¹ U.S. Equities represented by Russell 3000 Index. Diversified Equities Portfolio composition: 50% Russell 3000, 30% MSCI EAFE Index and 20% MSCI EM Index.

² On a Rolling 36 month Annualized basis.



Relative Price Performance: US vs. World Equities

Chart 49: US vs. World ex-US equities



Monthly data
Source: BofA Merrill Lynch Global Investment Strategy. Global Financial Data



Performance Chasing Detracts Value¹

Trailing 10-years as of March 31st, 2018	Asset Weighted Investor Return (%)	Asset Weighted Total Return (%)	Gap (%)	Number of Funds
Alternative	0.09	1.26	-1.17	198
Balanced	5.93	6.42	-0.49	1,609
International Stock	2.95	4.17	-1.22	1,105
Municipal Bond	2.23	3.77	-1.54	864
Sector Stock	6.42	7.75	-1.33	590
Taxable Bond	3.01	4.62	-1.61	1,564
U.S. Stock	8.32	9.68	-1.36	2,631
U.S. Stock & Sector Stock	8.15	9.50	-1.35	3,221
All Funds	5.53	6.90	-1.37	7,381

- Investors' performance lags actual fund performance due to performance chasing, a practice that effectively translates into buying high and selling low.

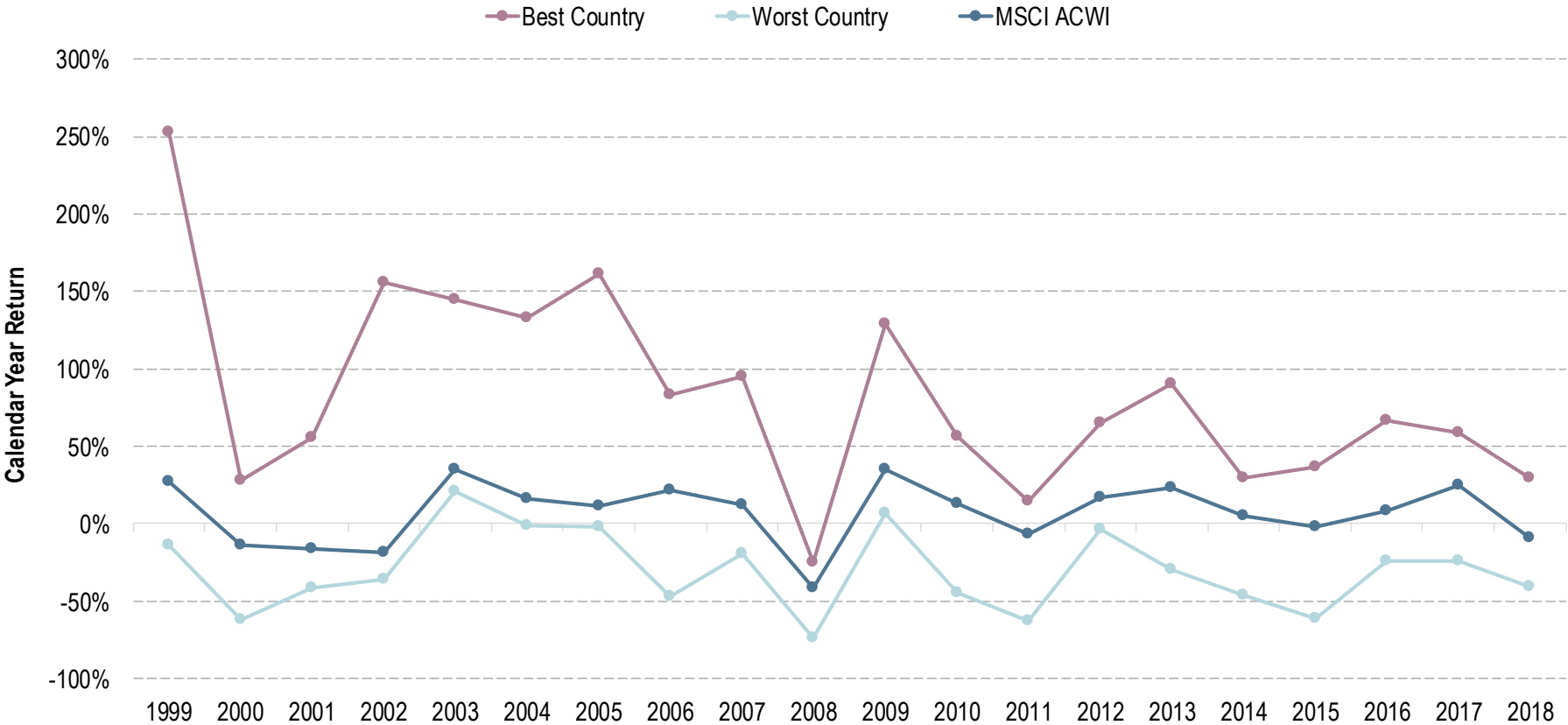
¹ Source: Morningstar. Kinnel, Russel. "Mind the Gap 2018". June, 2018. https://www.morningstar.com/lp/mind-the-gap?cid=RED_RES0002



Diversification Reduces Volatility

MSCI ACWI

January 1999 – December 2018

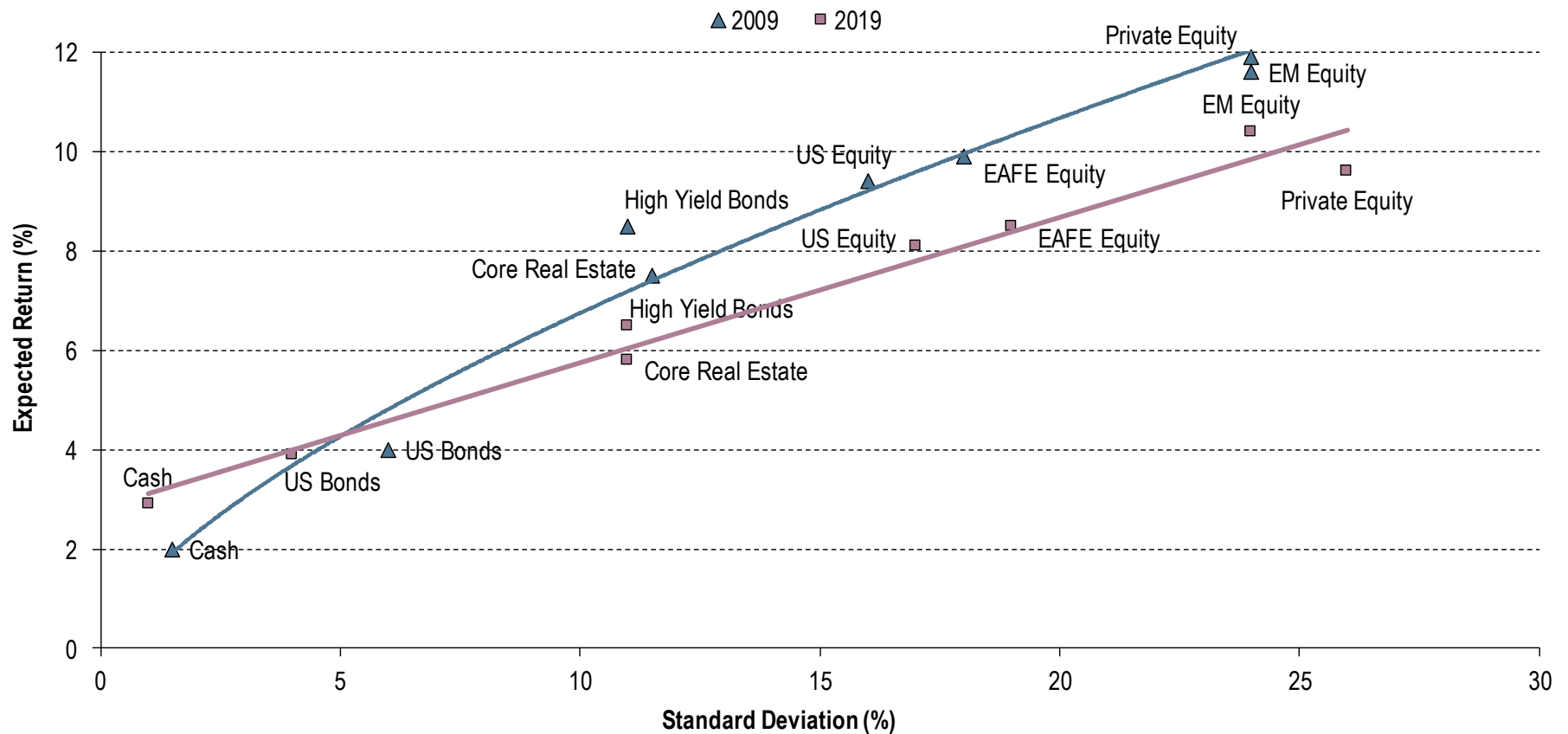


- Taken together, the MSCI ACWI index is far less volatile than its constituents¹.

¹ Best and worst country change from year to year.



Less Return for the Same or More Risk¹



- Expected returns for most major asset classes have continued to decline. Hence investors need to accept greater risk to target the same returns they could have achieved historically for less risk.

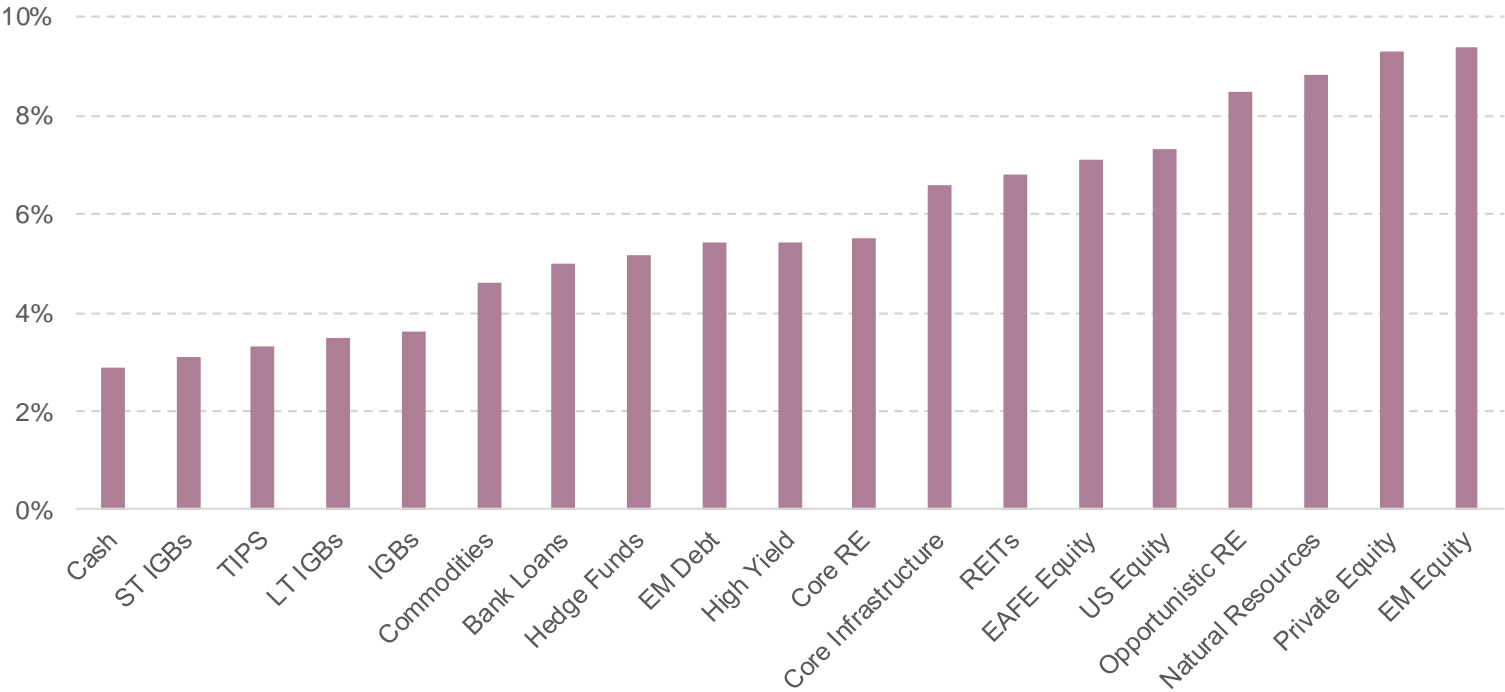
¹ Based on Meketa Investment Group 2019 Asset Study. Lines represent "line of best fit" for each year.



Maintain a Long-Term Time Horizon

- Markets are difficult to predict over the short term. As a Fund with long-term goals, it is important to remain focused on a longer-time horizon.
- Some of the most volatile asset classes in the short-term are the ones that are priced to produce the highest returns in the long run.

Long-Term Outlook (20 Years)¹



¹ Twenty-year expected returns based upon Meketa Investment Group's 2018 Annual Asset Study.



Infrastructure Manager Finalist Overview

Background

- At last month's meeting, Meketa Investment Group reviewed a number of proposals from infrastructure managers for consideration within the Retirement Association's real assets allocation.
 - For real assets, Meketa Investment Group recommends one investment per year with an approximate commitment of \$10 million to each manager.
- Of the respondents, two managers were ranked as "highly advantageous" and are evaluated in the pages that follow. These include:
 - Brookfield Asset Management
 - Global Infrastructure Partners

Brookfield Infrastructure Partners Fund IV Overview

Brookfield Asset Management	
Firm Location (Headquarters)	New York, NY
Firm Inception	1899
Strategy Inception	2006
Firm AUM (As of 9/30/2018)	\$345B
Strategy AUM	\$108B
Ownership Structure	Public Company; Directors and Senior Management own 20%

- Brookfield Asset Management is a leading global alternative asset manager, focused on investing in long-life, high-quality assets across infrastructure, real estate and private equity. The Firm has approximately \$345 billion of AUM, more than 750 investment professionals and over 80,000 operating employees in over 30 countries.
- The Brookfield Infrastructure Funds seek to invest in high-quality infrastructure assets, acquired on a value basis, and diversified across target sectors and geographies where Brookfield has a local presence. Brookfield launched its first flagship private infrastructure fund, BIF I, in 2009. BIF I held its final closing in September 2010 with \$2.7 billion in commitments, followed by BIF II, which held its final closing in October 2013 with \$7 billion in commitments. The most recent flagship fund, BIF III, closed in 2016 with \$14 billion in commitments.

Brookfield Infrastructure Partners Fund IV

Investment Team

- Brookfield's infrastructure group is made up of over 200 professionals and 31,000 operating employees on five continents.
- Three Senior Managing Partners, a Vice Chairman, four Managing Partners, three Managing Directors and one Senior Vice President lead the Infrastructure Senior Management Team. The senior management team averages 20 years of industry experience and 13 years with Brookfield.
- The Investment Committee ("IC") is comprised of Bruce Flatt (CEO), Jeff Blidner, Barry Blattman, Brian Kingston, Sam Pollock, and Sachin Shah.
- The team has a Chief Investment Officer in each sector (Renewable Power, Utilities & Data, Energy and Transportation), as well as regional investment heads in North America, South America, Europe, and Asia-Pacific.

Brookfield Infrastructure Partners Fund IV Investment Terms

Brookfield Infrastructure Partners Fund IV	
Partnership Name	Brookfield Infrastructure Partners Fund IV
Partnership Type	Limited Partnership
Investment Strategy/Focus	Infrastructure
Geographic Focus	North America, South America, Europe, and Asia
Vintage Year	2019
Fund Size	\$17.0 billion
Final Closing	Q4 2019
Total Term	12 years subject to two additional one year extensions
Fees / Expenses:	
Management Fee ¹	1.50% on committed/invested for investors committing up to \$75 million; discount (1.35%) for first close investors committing at least \$10 million
Preferred Return	8%
Carried Interest / Performance Fee	Performance fee is 20% above the preferred return, calculated on whole-fund basis, with an 80/20 catch-up
Estimated Impact on Performance Assuming 10% Gross Return	-435 bps gross to net IRR spread

¹ If Meketa's clients commit \$75m to \$150m to the Fund in aggregate, management fees are discounted to 1.4%



Brookfield Infrastructure Partners Fund IV

Investment Strategy

- Brookfield's infrastructure group seeks to acquire high quality infrastructure assets that are essential to local economies and markets where Brookfield has an established presence - including North America, Europe, South America, and Asia.
- Brookfield Infrastructure Partners Fund IV will seek to make 20 to 25 investments primarily in sectors where Brookfield has extensive operating expertise - including transportation, renewable energy, power generation, utilities, and data infrastructure.
- The Fund will target control or co-control investments of \$500 million to \$1.5 billion on essential services with inelastic demand, assets in markets with strong barriers to entry, and investments that possess the potential to achieve sustainable, long-term, inflation-linked cash flows.
- Brookfield will seek to generate attractive risk-adjusted returns by acquiring high-quality assets and leveraging an operations-oriented approach to create value post-acquisition.
- The Fund is targeting a gross IRR of over 13% (over 10% net IRR).

Brookfield Infrastructure Partners Fund IV
Historical Track Record
(As of September 30, 2018)

	Year of First Investment	Number of Investments	Invested Capital (\$ mm)	Realized Value (\$ mm)	Unrealized Value (\$ mm)	Total Value (\$ mm)	Gross IRR (%)	Net IRR (%)	Gross MOIC (x)
BIF I	2009	9	2,540	1,447	3,704	5,151	14.4	11.4	2.0
BIF II	2013	10	6,201	1,521	8,056	9,577	14.1	10.5	1.5
BIF III	2016	10	5,467	890	6,329	7,219	19.4	13.5	1.3
Total			14,208	3,858	18,089	21,947	15.0	11.3	1.5

Brookfield Infrastructure Partners Fund IV

Status Update

- Brookfield Infrastructure Partners IV launched in October 2018 and is targeting a first close for the end of Q1 2019 with an anticipated final close in Q4 2019.

Brookfield Infrastructure Partners Fund IV

Brookfield Asset Management	
Relative Strengths	<ul style="list-style-type: none"> • Brookfield is an established institutional investment firm with substantial resources and a strong global presence. The Infrastructure team includes more than 200 professionals and is led by an experienced management group with a long tenure at the firm. • Historical performance is consistent across prior BIP vehicles raised and returns generally exceed respective targets. • Brookfield’s core-plus/value-add infrastructure strategy has been in place since the platform’s inception and has continuously provided diversified global exposure to a wide range of industries and regions.
Potential Weaknesses	<ul style="list-style-type: none"> • Brookfield’s target size of \$17.0 billion for Fund IV represents a notable increase relative to Fund III. • Fund IV will pursue large-market transactions (\$500 million to \$1.5 billion) with elevated valuations, increasing the impact of unfavorable pricing conditions and environments on overall returns. • Even at the scale of deal Brookfield is pursuing, they will face competition from other funds seeking large equity opportunities and large pension plans that can make direct investments.

Global Infrastructure Partner IV Fund Overview

Global Infrastructure Management	
Firm Location (Headquarters)	New York, NY (U.S.)
Firm Inception	2006
Strategy Inception	2006
Firm AUM (As of 6/30/2018)	\$51.0B
Strategy AUM	\$30.0B
Ownership Structure	Delaware Partnership

- Global Infrastructure Partners (“GIP”) is an independent infrastructure fund manager founded in 2006 by a team of former senior executives from Credit Suisse (“CS”) and General Electric (“GE”). Seven of the 18 Partners have been with GIP since inception.
- Across the three prior flagship funds—GIP I, II, and III—between 2006 and 2018, GIP raised \$30 billion, invested \$24 billion, realized \$18 billion, and is managing \$27 billion in unrealized asset value. GIP has made 30 investments, 11 of which have been realized.
- The firm has other investment strategies and products that focus on infrastructure credit, Australian assets, Indian assets, and public securities. Collectively, these assets under management total just over \$20 billion. GIP is also developing a new core/core plus strategy that is expected to only be offered in separately managed accounts (“SMAs”) of several hundred million dollars each.

Global Infrastructure Partners Fund IV

Investment Team

- GIP currently employs 79 investment professionals, including 65 professionals dedicated to the firm's flagship value-added strategy, with additional support provided by operational, risk management, compliance, and administrative personnel. The team maintains a global presence with offices in New York, Stamford, London, and Sydney.
- Senior professionals have a long history working together as seven of GIP's 18 Partners have been at the firm since its formation. The investment team has experienced very low turnover at the senior level and continues to value promotion from within as three Principals were promoted to Partner in the past year.
- The GIP team also receives support from a group of 14 Senior Advisors with significant executive and management experience in each of the firm's target sectors and geographies.

Global Infrastructure Partners Fund IV Investment Terms

Global Infrastructure Partners Fund IV	
Partnership Name	Global Infrastructure Partners IV
Partnership Type	Limited Partnership (Closed-Ended)
Investment Strategy/Focus	Infrastructure
Geographic Focus	North America, Western Europe, Australasia
Vintage Year	TBD
Fund Size	\$17.5 billion, hard cap \$20 billion
Initial Closing	Q4 2018
Total Term	Ten years from initial closing date
Fees / Expenses:	
Management Fee	1.75% per annum on commitments up to \$75 million during investment period, calculated on invested capital thereafter. Fees are lower at incrementally larger commitment tiers. The minimum fee is 1.3%.
Preferred Return	8%
Carried Interest / Performance Fee	Performance fee is 20% on returns above the preferred return, with an 80/20 catch-up.
Estimated Impact on Performance Assuming 10% Gross Return (assumption of 1.75% annual management fee)	-430 bps gross to net IRR spread

Global Infrastructure Partners Fund IV

Investment Strategy

- GIP IV will pursue a global value-added strategy focused primarily on investments in energy, power, and transportation assets located throughout North America, Western Europe, and Australasia.
- The firm primarily considers opportunities where it can acquire assets at attractive pricing and implement industrial management best practices and operational improvements to drive growth and value creation. GIP seeks to add value to portfolio investments through operational improvements, cost reduction, optimization of business processes, and strategic initiatives designed to increase efficiency.
- GIP generally invests in full, majority, or joint control positions alongside institutional asset owners and industrial partners with capabilities to execute large, complex deals.
- Fund IV will make between 10 and 15 investments, while targeting gross returns of 15% to 20% and mid-single digit annual cash yields.

**Global Infrastructure Partners Fund IV
Historical Track Record
(As of September 30, 2018)**

	Year of First Investment	Number of Investments	Invested Capital ¹ (\$ mm)	Realized Value (\$ mm)	Unrealized Value (\$ mm)	Total Value (\$ mm)	Gross IRR (%)	Net IRR (%)	Gross MOIC
GIP I	2006	12	5,306	11,947	3,787	15,734	23.1	17.1	3.0x
GIP II	2012	11	8,246	5,724	10,676	16,400	31.5	21.9	2.0x
GIP III	2016	7	10,421	241	12,617	12,858	26.1	16.3	1.2x
Total			23,973	17,912	27,080	44,992	24.8	18.1	1.9x

¹ Net of post-closing equity syndications.



Global Infrastructure Partners Fund IV

Status Update

- GIP held a two-part first close for Fund IV in December 2018 and January 2019, and reports that they have closed on over \$8.75 billion as of mid-February. The firm will have subsequent, approximately monthly rolling closes through H1 2019 and hopes to hold a final close by June 2019.

Global Infrastructure Partners Fund IV

Global Infrastructure Partners

Global Infrastructure Partners	
Relative Strengths	<ul style="list-style-type: none"> • The firm’s senior investment team is experienced and has remained relatively stable over time with only two Partner-level departures occurring throughout GIP’s 12-year history. • Historical performance is strong with returns exceeding respective targets across previous funds with a limited number of realized losses to date. Prior vehicles have also achieved broad diversification across the firm’s target sectors and geographies. • GIP’s operating team, which includes 29 professionals with a diverse range of expertise, serves as a main competitive advantage for the firm with respect to value creation capabilities.
Potential Weaknesses	<ul style="list-style-type: none"> • The firm anticipates reaching its hard cap of \$20.0 billion for GIP IV, which would represent a meaningful increase in size relative to Fund III. • Larger deals may prove more difficult to exit at targeted multiples, as GIP’s growth strategy may face limitations at greater scale and fewer buyers will likely exist for assets valued in the \$5 billion to \$10 billion range. • GIP continues to expand its existing products while also launching new business initiatives, including a second Australia-focused vehicle and an increased number of core/core-plus SMA offerings.

Other Investment Issues

Bank Loan Manager RFP Respondent Review

Background

- On December 5, 2018, Meketa Investment Group issued a \$35 million bank loan RFP on behalf of the Plymouth County Retirement Association.
 - Subsequently, the search was posted to Meketa’s website, sent to PERAC and picked up by a variety of news sources.
- Meketa requested that all respondents submit the RFP by December 21, 2018.
- Meketa received 18 respondents to the RFP.
- The following pages review 17 respondents.
 - One strategy was eliminated due to lack of strategy track record and team turnover.

RFP Respondents

Manager	Headquarters	Strategy	Overall Rating
Loomis, Sayles & Company	Boston, Massachusetts	Senior Floating Rate and Fixed Income	Highly Advantageous
Octagon Credit Investors	New York, New York	Senior Secured Credit Fund	Highly Advantageous
Pacific Asset Management	Newport Beach, CA	Corporate Loan Strategy	Highly Advantageous
THL Credit Advisors	Chicago, Illinois	Bank Loan Select Strategy	Highly Advantageous
Ares Management	Los Angeles, California	Ares Institutional Loan Fund	Advantageous
Credit Suisse Asset Management	New York, New York	Credit Suisse Dollar Senior Loan Fund	Advantageous
Crescent Capital Group	Los Angeles, California	Crescent Bank Loans	Advantageous
Fidelity Asset Management	Smithfield, Rhode Island	FIAM Leveraged Loan	Advantageous
Invesco Advisers	Atlanta, Georgia	Invesco Gemini US Loan Fund	Advantageous
Lord Abbett & Co.	Jersey City, New Jersey	Bank Loans	Advantageous
Marathon Asset Management	New York, New York	Bank Loans	Advantageous
PineBridge Investments	New York, New York	PineBridge U.S. Senior Secured Loans Strategy	Advantageous
Seix Investment Advisor	Park Ridge, New Jersey	Seix Leveraged Loan Strategy	Advantageous
Shenkman Capital Management.	New York, New York	Shenkman Capital Bank Loan Strategy	Advantageous
Stone Harbor Investment Partners	New York, New York	Leveraged Loan	Advantageous
Voya Investment Management	New York, New York	Voya Senior Loan Strategy	Advantageous
CVC Credit Partners	New York, New York	CVC Global Yield Fund	Not Advantageous

Loomis, Sayles & Company, L.P.

Rating Criteria	Rating	Rationale
Overall	Highly Advantageous	
Organization	Advantageous	<ul style="list-style-type: none"> Loomis Sayles & Company was established in 1926 as an investment management company in Boston, MA. The firm is a wholly owned subsidiary of Natixis, a large French financial services company. As of September 30, 2018 total firm Assets under management are \$267.3 billion of which \$10.5 billion are in the Bank Loans strategy, incepted in October 2011.
Team	Advantageous	<ul style="list-style-type: none"> There are currently three senior portfolio managers that support the strategy, including Kevin Perry, John Bell, and Michael Klawitter. Mr. Perry will retire from the firm in 2019. There are additional analytical resources dedicated to the bank loan strategies. The dedicated bank loan team is able to draw on the other research resources at Loomis including credit, macroeconomic and risk research groups.
Investment Philosophy	Highly Advantageous	<ul style="list-style-type: none"> The investment philosophy is reliant on the belief that credit markets do not properly asses credit risk and often overreact to various events. The strategy invests a minimum of 65% in floating rate loans and the remaining 35% can be allocated to other types of fixed income securities. The team assesses relative value between all available credit sectors and optimizes the asset allocation based on the target risk and return.
Investment Process	Advantageous	<ul style="list-style-type: none"> The process starts with individual security research by the sector-focused research teams. These individuals try to identify stable or improving companies with attractively priced securities and will recommend them to the heads of their teams and eventually strategy portfolio managers. The portfolio managers will take recommendations from the sector teams and incorporate them into the asset allocation framework that is developed by the quantitative and risk management groups.
Performance	Highly Advantageous	<ul style="list-style-type: none"> The strategy has produced very strong absolute returns, however with a relatively high risk profile.
Fees	Advantageous	<ul style="list-style-type: none"> Commingled Fund: Effective Fee of 0.50%, operating expenses were 0.10%. Ranks in the 2nd quartile of respondents.

Octagon Credit Investors, LLC

Rating Criteria	Rating	Rationale
Overall	Highly Advantageous	
Organization	Advantageous	<ul style="list-style-type: none"> Octagon Credit Investors was founded in 1994 in New York and it is 82% owned by Conning Investment Products, Inc. with the remaining 18% held by employees. Total firm assets as of September 30, 2018 were \$20.3 billion and the strategy assets were \$1.1 billion.
Team	Highly Advantageous	<ul style="list-style-type: none"> Co-Chief Investment Officer Michael Nechamkin is the lead portfolio manager for the strategy but he works with three other portfolio managers who oversee other credit strategies. Supporting the portfolio managers are nine analysts and junior associates that are organized into industry sectors and responsible for conducting credit research and analysis.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> Octagon seeks to build a portfolio that will outperform the bank loan market in most market environments. They are focused on capital preservation, relative value analysis and active portfolio management. At least 90% of the portfolio must be invested in first lien bank loans while the remainder can be invested in a mix of second lien loans and high yield bonds.
Investment Process	Highly Advantageous	<ul style="list-style-type: none"> Octagon's investment process is very collaborative and involves constant interaction between portfolio managers and analysts. The team frequently discusses opportunities in the market and the research analysts are responsible for the credit analysis of the issuers in their areas of coverage. A credit committee must approve all loans for purchase, and Michael Nechamkin is responsible for building the portfolio and managing risk by using the approved list of credits. The team is constantly evaluating relative value in the market and the portfolio and will frequently trade positions. Portfolio turnover tends to be over 150% per annum.
Performance	Highly Advantageous	<ul style="list-style-type: none"> The bank loan strategy has produced very strong and consistent absolute returns. Risk-adjusted returns have also been very strong with a lower risk profile than the market.
Fees	Advantageous	<ul style="list-style-type: none"> Commingled Fund: Effective fee of 0.55%, operating expenses are capped at 0.15%. Ranks in the 2th quartile of respondents.

Pacific Asset Management

Rating Criteria	Rating	Rationale
Overall	Highly Advantageous	
Organization	Advantageous	<ul style="list-style-type: none"> Pacific Asset Management (“PAM”) is a subsidiary of Pacific Life Insurance Company. While the firm is 100% owned by Pacific Life, certain senior employees have phantom equity in PAM. PAM has over \$10 billion in assets under management with approximately \$3.8 billion in bank loan assets. The bank loan strategy inception was in 2007.
Team	Advantageous	<ul style="list-style-type: none"> The bank loan team is led by JP Leasure and Michael Marzouk. Mr. Leasure was a founding member of PAM in 2007 and Mr. Marzouk also joined in 2007 as an analyst, but was promoted to portfolio manager in 2010. The remainder of the investment team consists of six senior analysts/portfolio managers and six other analysts.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> PAM focuses on the largest and most liquid loans in the asset class but takes a full market approach to constructing the portfolio in that they do not have a credit quality bias. They seek to outperform the index through individual credit selection, industry selection, and opportunistically allocating to return enhancing high yield bonds and second lien loans. The non-bank loan allocation is capped at 10%. The investment team seeks to take a slightly more selective approach when building the portfolio by typically investing in just 100 to 150 issuers.
Investment Process	Highly Advantageous	<ul style="list-style-type: none"> The process starts with an initial screen that eliminates the smaller and less liquid loan issuers. Next they evaluate their investible universe based on various credit metrics. Analysts will perform in-depth credit research, as well as a review of the loan structure and covenants. There is constant interaction between analysts and portfolio managers to challenge the credit theses, and also to assess relative value between loans that appear attractive from a credit perspective. The two portfolio managers have ultimate decision-making authority.
Performance	Highly Advantageous	<ul style="list-style-type: none"> PAM’s bank loan strategy has performed at or better than the top quartile over various time periods and on both an absolute and risk-adjusted basis.
Fees	Highly Advantageous	<ul style="list-style-type: none"> Private Fund: Effective fee of 0.40%, all inclusive. Ranks in the 1st quartile of respondents.

THL Credit Advisors LLC

Rating Criteria	Rating	Rationale
Overall	Highly Advantageous	
Organization	Advantageous	<ul style="list-style-type: none"> • THL Credit is an affiliate of THL Partners, a large private equity firm. THL credit is majority owned by THL Partners and minority owned by its employees. THL Credit has two separate businesses, public and private credit, which manage \$14.5 billion and \$1.7 billion respectively. The bank loan strategy sits in the public credit space. • THL Credit was formed in 2012, and shortly after they acquired the bank loan group from McDonnell Investment Management. The bank loan group has worked together for over 20 years at THL Credit, McDonnell, and other prior organizations.
Team	Highly Advantageous	<ul style="list-style-type: none"> • Jim Fellows and Brian Good oversee the bank loan group and all of the portfolios and strategies. There are additionally three other portfolio managers and four senior sector portfolio managers. Most members of this portfolio management group have worked together for more than 15 years, and the entire group averages more than 23 years of investment experience. • There are 18 additional credit analysts, associates and traders on the investment team.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> • THL's investment approach focuses on identifying investment opportunities through deep fundamental research, but they also incorporate a value-driven portfolio management style that is constantly reassessing the current portfolio positioning versus alternative securities or industry weights. • The portfolio will be very diversified with more than 250 loan issuers, however they team attempts to display high conviction in their investment ideas by having a higher weight in the top 25 names than most other managers.
Investment Process	Highly Advantageous	<ul style="list-style-type: none"> • The sector portfolio managers are responsible for covering all issuers in their areas of coverage and will also look at the entire debt capital structure. These individuals are frequently assessing credit quality but also relative value within their industries, and have a constant dialogue with the portfolio managers to ensure the portfolios are accurately reflecting the research team's views. • Mr. Good and Mr. Fellows manage the bank loan portfolios and are the final decision-makers. The portfolio will opportunistically invest in second lien loans and high yield bonds in an effort to enhance returns.
Performance	Highly Advantageous	<ul style="list-style-type: none"> • The strategy has a long-term track record of producing top quartile returns on both an absolute and risk-adjusted basis.
Fees	Highly Advantageous	<ul style="list-style-type: none"> • Loan Fund: Effective fee of 0.40%, operating expenses capped at 0.05%. Ranks in the 1st quartile of respondents.

Ares Management LLC

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	<ul style="list-style-type: none"> Ares Management is public company located in in Los Angeles California. It is owned approximately 69% by senior management team members and 31% by the public. Firm assets as of September 30, 2018 were \$125 billion and total bank loan assets were \$18 billion. Ares started managing the Institutional Loan Fund in 2008 and the fund has approximately \$140 million in assets.
Team	Advantageous	<ul style="list-style-type: none"> The portfolio managers for the strategy are Seth Brufsky, Jason Duko and Samantha Milner. Portfolio managers are supported by a research team of 24 analysts covering various industries and monitoring all loan and high yield issuers.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> Ares employs a value-oriented philosophy that emphasizes principal preservation, disciplined risk management and differentiated market insight that provide advantages in identifying and assessing risks and opportunities across the high yield universe. The team believes that the majority of value added comes from security selection and sector/industry allocation. Another thing that adds a potential source of alpha is the tactical use of high yield bonds.
Investment Process	Not Advantageous	<ul style="list-style-type: none"> The investment process begins with idea generation which is sourced from screening attractive opportunities in the high yield and bank loan universes. Then research team members complete an internally developed checklist to determine upside and downside risks to a company's credit profile and include conversations with management, assessment of competitive positioning, credit metrics, growth profile and earnings quality among many other things. The due diligence process culminates with a presentation to the investment committee. The team also conducts tactical market assessments by taking the pulse on the Street over various issues. Investment decisions are formally subject to approval by a majority of the members in the investment committee.
Performance	Advantageous	<ul style="list-style-type: none"> Performance has been average.
Fees	Not Advantageous	<ul style="list-style-type: none"> Commingled Fund: Effective fee of 0.70%, operating expenses are 0.20%. Ranks in the 4th quartile of respondents.

Credit Suisse Asset Management, LLC

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	<ul style="list-style-type: none"> • Credit Suisse Asset Management is located in New York, New York and it is 100% indirectly privately-held by Credit Suisse. Credit Suisse is a publicly-traded company. • Total firm assets as of September 30, 2018 were \$413.2 billion of which \$50.9 billion were in the bank Loans assets. The bank loan commingled fund inception was September 2008.
Team	Highly Advantageous	<ul style="list-style-type: none"> • The strategy is managed by the Credit Investment Group (“CIG”) Credit Committee which is made up of seven senior portfolio managers including John G. Popp, Andrew Marshak, Thomas Flannery, Lou Farano, Wing Chan, David Mechlin, and Jakob von Kalckreuth. Members in the Credit Committee have an average of 21 years of experience and have worked together for many years. • There are 19 research analysts in the CIG team organized by industry.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> • Credit Suisse Asset management employs a fundamental, bottom-up driven investment philosophy. They have a history of managing bank loans for the past 21 years and have used the same disciplined investment approach ever since. • The investment team seeks to generate excess returns primarily through security selection and industry rotation, but will also opportunistically allocate to high yield bonds and other credit securities, as well as build cash.
Investment Process	Not Advantageous	<ul style="list-style-type: none"> • There are five main steps in the investment process including origination, preliminary screening, credit analysis, security selection and monitoring. Initial ideas are reviewed by analysts and go into the next phase of the investment process if it seems attractive through a variety of factors. Then credit analysis is conducted and further due diligence is performed on the security’s fundamentals to establish relative value. • All investment decisions, such as buying a security and the appropriate amount to purchase, needs to be approved by the CIG Credit Committee.
Performance	Advantageous	<ul style="list-style-type: none"> • Recent returns have been slightly above average, though longer-term results have been very strong.
Fees	Advantageous	<ul style="list-style-type: none"> • Fund: Effective Fee of 0.60%, operating expenses were 0.10%. Ranks in the 2nd quartile of respondents.

Crescent Capital Group LP

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	<ul style="list-style-type: none"> • Crescent Capital is based out of Los Angeles, California and has additional offices New York, Boston and London. Mark Attanasio and Jean-Marc Chapus are the co-founders and controlling owners of the company with Fairfax Financial, a Canadian casualty insurance and reinsurance provider, having a minority stake. • The firm manages over \$20 billion in various public and private credit strategies. The Bank Loans strategy dates back to 1993 and it had \$5.2 billion assets under management as of September 30, 2018.
Team	Advantageous	<ul style="list-style-type: none"> • Conrad Chen and Wayne Hosang are the portfolio a managers for the strategy and they have 21 and 27 years of experience respectively. The bank loan strategies were previously led by another individual from inception but he recently took on other responsibilities at the firm. • Analysts are organized by sector and usually cover four to five sectors each across the issuers capital structure.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> • The investment philosophy blends bottom-up security selection and top-down analysis in order to construct portfolios. The team seeks to focus the portfolio within sectors that offer attractive total returns and whose individual securities have strong credit profiles or catalysts for credit improvement to achieve total return. • The bank loan strategy tends to favor the highest rated loans (BB and B) and avoid loans rated CCC and below.
Investment Process	Advantageous	<ul style="list-style-type: none"> • Analysts conduct due diligence on new ideas by combining a variety of qualitative and quantitative factors, such as management meetings and financial data among many other things. Once the review process is completed, the analysts present their work to portfolio managers and together they discuss potential risks and rewards of including the security in the portfolio. • Investment decisions are taken collaboratively between Conrad Chen and Wayne Hosang. They have the latitude to override an analyst's research recommendations.
Performance	Advantageous	<ul style="list-style-type: none"> • Returns have been average.
Fees	Highly Advantageous	<ul style="list-style-type: none"> • Commingled Fund: Effective fee of 0.40%. Operating expenses are capped at 0.05%. Ranks in the 1st quartile of respondents.

Fidelity Institutional Asset Management Trust Company

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	<ul style="list-style-type: none"> Fidelity is privately owned by the Johnson Family and Chairman and CEO Abigail Johnson. As of September 30, 2018 firm assets under management were \$163.9 billion and total bank loan assets were \$19.0 billion across several separate loan strategies.
Team	Advantageous	<ul style="list-style-type: none"> Eric Mollenhauer and Kevin Nielsen serve as co-portfolio managers for the strategy and have been involved with the product since 2007 and 2013 respectively. These two individuals are supported by a large team of other strategy portfolio managers, analysts and traders.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> The bank loan strategy seeks to outperform the broad bank loan index through a strategic overweight to the single-B loan segment and underweight to BB and CCCs. The objective is to build a portfolio with a slightly higher credit risk profile as this should lead to a higher yield than the index and greater opportunity for index outperformance if they are able to mitigate volatility and credit losses. The strategy focuses on the largest most liquid loans in the universe.
Investment Process	Advantageous	<ul style="list-style-type: none"> Analysts are focused buy industry and responsible for covering all bank loan issuers in their area of coverage. The analysts will analyze each company's outlook and anticipated creditworthiness over the short and medium term. Relative value across capital structures and industries will be assessed prior to making recommendations to portfolio managers. Mr. Mollenhauer and Mr. Nielson have final decision-making authority for the bank loan portfolio. They will opportunistically invest up to 10% of the portfolio in high yield bonds.
Performance	Advantageous	<ul style="list-style-type: none"> The strategy has consistently achieved returns in the top half of the peer group.
Fees	Advantageous	<ul style="list-style-type: none"> Commingled Fund: Effective fee of 0.54%, operating expenses were 0.04%. Ranks in the 2nd quartile of respondents.

Invesco Advisers, Inc.

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	<ul style="list-style-type: none"> Invesco Advisers is located in Atlanta, Georgia and it a wholly-owned subsidiary of Invesco Ltd. a public company listed in the New York Stock Exchange and is a constituent of the S&P 500 index. Employees hold approximately 7% of Invesco Ltd. Stock. Invesco Ltd. assets under management as of September 30, 2018 were \$980.9 of which \$41.4 billion were invested in the strategy.
Team	Advantageous	<ul style="list-style-type: none"> Scott Baskind AND Kevin Egan are the lead portfolio managers for the strategy and they are also part of the Investment Committee. The Investment Committee oversees the portfolio management process and is overseen by the strategy's portfolio managers, Tom Ewald and Joseph Rotondo. Kevin Eagan is responsible for institutional mandates, and Scott Baskind has portfolio management responsibilities across all strategies.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> The investment philosophy is grounded on a fundamental bottom-up approach within a top-down macroeconomic positioning based on broader economic trends. The team seeks to provide a high level of current income and capital preservation by investing in adjustable rate senior loans. They seek to outperform the benchmark through security selection and weighting, along with sector rotation and an active trading approach.
Investment Process	Advantageous	<ul style="list-style-type: none"> The investment universe includes both primary and secondary bank loan markets with a preference for larger and more liquid bank loans. Initial screens are conducted and any potential ideas are discussed with the respective team leader and at morning meetings, after much discussion the analyst, team leader and Investment Committee decide if further due diligence. Then fundamental credit analysis to asses major risk factors, default probabilities, and ESG/SRI Consideration which are put in a memorandum to present to the Investment Committee. Then the Investment Committee sets exposure limits based on portfolio strategy. The Investment Committee is the ultimate decision-making authority for the strategy and it reviews and approves all credit recommendations.
Performance	Advantageous	<ul style="list-style-type: none"> The strategy has consistently produced above average returns.
Fees	Not Advantageous	<ul style="list-style-type: none"> Commingled Fund: Effective fee of 0.78%, operating expenses were 0.23%. Ranks in the 4th quartile of respondents.

Lord Abbett & Co. LLC

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Highly Advantageous	<ul style="list-style-type: none"> Lord Abbett is located in Jersey City, New Jersey and is 100% employee owned, with no single person owning more than 25%. The firm was founded in 1929 and as of September 30, 2018 it manages \$169.3 billion in total assets and \$15.7 billion in the Bank Loans strategy, which was instituted in September 2007.
Team	Highly Advantageous	<ul style="list-style-type: none"> Jeffrey Lapin has been the lead portfolio manager for the strategy since 2012. Mr. Lapin is supported by Associate Portfolio Manager Kearney Posner who was named portfolio manager in 2017. The 24 research analysts are sector specialists, each having a dedicated set of industries across investment grade and high yield issuers.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> The team believes that a flexible and opportunistic strategy can deliver consistent results across various market environments when risk management is taken into consideration. The dominant source of alpha for the strategy has been security selection and to a lesser extent sector and credit allocations.
Investment Process	Highly Advantageous	<ul style="list-style-type: none"> The investment process is guided by top-down analysis which lays the framework for the portfolio's credit quality distribution, industry positioning and risk profile. Once top-down views are established analysts aim to delve deeper into industry dynamics, and the company's financials. Then proprietary models integrate quantitative relative value with analysts' fundamental credit research and quantitative risk reporting. Senior portfolio managers meet on a weekly basis to discuss investment decisions and they all have final decision making authority over the strategy.
Performance	Advantageous	<ul style="list-style-type: none"> The strategy's returns have consistently been near the peer group average.
Fees	Advantageous	<ul style="list-style-type: none"> Commingled Fund: Effective Fee of 0.60%, operating expenses were 0.10%. Ranks in the 2nd quartile of respondents.

Marathon Asset Management, LP

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	<ul style="list-style-type: none"> Marathon Asset Management was established in 1998 by Bruce Richard and Louis Hanover in New York, New York. Currently the firm is organized into a partnership of seven partners along with Blackstone Strategic Capital Holding Fund which has a minority interest in the firm. As of September 30, 2018 total firm assets were \$14.7 billion and bank loans assets were \$5.6 billion.
Team	Advantageous	<ul style="list-style-type: none"> Andrew Brady, Co-Head of Corporate Credit, is the lead portfolio manager for the strategy. Mr. Brady joined the firm in 2004 and has 22 years of industry experience. The strategy is also supported by six dedicated leveraged investment professionals and by a corporate credit team of 32 analysts that have an average of 7 years at the firm and 18 years of industry experience.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> The investment philosophy employs a capital preservation and yield oriented strategy with a focus on avoiding default losses while earning attractive risk-adjusted returns. According to the investment team returns are driven by individual credit selection and appropriate risk management. The strategy invests predominantly in first lien secured loans but may opportunistically invest in second lien loans and high yield bonds.
Investment Process	Advantageous	<ul style="list-style-type: none"> Research analysts are responsible for proposing new investment ideas to portfolio managers. If portfolio managers deem the idea worthwhile the analyst will go ahead and conduct the full diligence process. The investment analysis process seeks to evaluate several factors including macroeconomic, industry, financial, structural, trading and downside scenarios. After the company-specific process is completed analysts send a memorandum to portfolio managers with their finalized analysis and it is reviewed by the Oversight Committee. Portfolio managers have the flexibility to make investment decisions, however ultimate decision making authority is the responsibility of the Oversight Committee.
Performance	Not Advantageous	<ul style="list-style-type: none"> Although Marathon has managed bank loans in other vehicles for several years, the proposed fund inception is in 2017.
Fees	Advantageous	<ul style="list-style-type: none"> Commingled Fund: Effective Fee of 0.60%, operating expenses are capped at 0.15%. Ranks in the 2nd quartile of respondents.

PineBridge Investments LLC

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	<ul style="list-style-type: none"> PineBridge is based in New York, NY but has offices in 21 cities in 17 countries across the globe. The credit team has members in Houston, TX, Los Angeles, CA, San Francisco, CA, New York, NY and London, UK. PineBridge is majority owned by Pacific Century Group, an Asian-based private investment firm. PineBridge employees own a majority interest in the firm. Total firm assets are approximately \$90 billion with approximately \$13.8 billion in high yield assets across various strategies, funds and accounts.
Team	Advantageous	<ul style="list-style-type: none"> Steven Oh is Global Head of Credit and lead bank loan portfolio manager. There are six additional bank loan portfolio managers that are focused by strategy type. The bank loan portfolio managers are supported by a large group of fourteen industry analysts that support both the high yield and bank loan strategies.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> The core believes of the investment team at PineBridge is that through a research driven credit process they have the ability to produce superior investment results. Over time excess returns have predominantly been derived from security selection. The team estimates that 80% of alpha has come through security selection and the remaining 20% from sector selection
Investment Process	Advantageous	<ul style="list-style-type: none"> The process begins with idea generation sourced from the high yield, bank loan and investment grade universes. Attractive ideas then are researched in-depth using proprietary bottom-up credit analysis. Analysts conduct a significant amount of original research and provide a thorough review of issuers and their respective sectors. Members of the bank loan portfolio management team oversee all individual credit selection decisions and portfolio management and construction.
Performance	Advantageous	<ul style="list-style-type: none"> The bank loan strategy has produced slightly above average returns, though with greater risk than the index.
Fees	Not Advantageous	<ul style="list-style-type: none"> Commingled Fund: Effective fee of 0.60%, operating expenses were 0.20%. Ranks in the 4th quartile of respondents.

Seix Investment Advisors LLC

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	<ul style="list-style-type: none"> Seix was founded in 1992 by Christina Seix and is based in Park Ridge, NJ. The firm has undergone three major ownership changes in the past 10 years with the most recent being the 2017 purchase by Virtus Investment Partners, a publically traded firm. As of September 30, 2018 total firm assets were \$23 billion and bank loan assets were \$11 billion.
Team	Advantageous	<ul style="list-style-type: none"> The bank loan strategy is led by Portfolio Managers George Goudelias and Vince Flanagan. Mr. Goudelias started the started in 2006 and Mr. Flanagan became a portfolio manager in 2010. Eight research analysts that are industry specialists cover both high yield bonds and bank loans and support the portfolio managers.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> The investment strategy focuses on individual credit research and selection, as well as emphasizing industry rotation, and a strict sell discipline. The strategy is focused on maintaining a low loan default rate.
Investment Process	Advantageous	<ul style="list-style-type: none"> The investment process begins by screening the bank loan universe for higher rated issuers, usually those rated BB and B, and avoiding the lowest quality issuers. Seix's analysts tend to have significant experience covering their respective industries, and they will use this experience to assess the overall health and direction of the industry as well as the business fundamentals of the companies that operate within it. An investment committee reviews all loans under consideration for the portfolio and must receive a unanimous vote to be purchased. The two loan portfolio managers have final say on portfolio construction.
Performance	Advantageous	<ul style="list-style-type: none"> Seix has produced near peer average absolute returns with slightly below average risk-adjusted results.
Fees	Highly Advantageous	<ul style="list-style-type: none"> Mutual Fund – SFRZX: Effective fee of 0.52%, operating expenses of 0.11%. Ranks in the 1st quartile of respondents.

Shenkman Capital Management, Inc.

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	<ul style="list-style-type: none"> Shenkman was founded in 1986 and continues to be 100% employee owned. The firm manages credit strategies with a focus on high yield bonds, bank loans and convertibles. Total firm assets as of September 30, 2018 were \$26.5 billion with total bank loan assets of \$7 billion.
Team	Advantageous	<ul style="list-style-type: none"> David Lerner is the head of bank loans and oversees all portfolios. He works closely with Jeffrey Gallo to manage the bank loan strategy. Shenkman has built out a bank loan-focused investment team, but they also leverage the firm's large pool of 24 industry-focused credit analysts.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> Shenkman takes a conservative approach to all credit strategies. Within bank loans they have historically emphasized higher quality loans that are expected to experience less volatility. The portfolio will be well diversified across over 250 bank loan issuers.
Investment Process	Advantageous	<ul style="list-style-type: none"> Shenkman's investment process is centered on their credit analysis and the use of a proprietary credit scoring model. This model evaluates an issuers business fundamentals, financial and cash flow strength, and their liquidity and access to capital. Analysts prepare a thorough report on each issuer that is being considered for the portfolio. Mr. Lerner has final decision-making authority on the bank loan portfolios.
Performance	Advantageous	<ul style="list-style-type: none"> The bank loan strategy has had average returns over all trailing periods.
Fees	Advantageous	<ul style="list-style-type: none"> Commingled Fund: Effective fee of 0.51%, operating expenses are 0.06%. Ranks in the 2nd quartile of respondents.

Stone Harbor Investment Partners LP

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	<ul style="list-style-type: none"> Stone Harbor was founded in 2006 by several members of Solomon Smith Barney's asset management team. The firm is based in New York, NY but has additional offices in the U.S. Asia, and Europe. The firm remains 100% employee owned. Total assets under management firm wide are approximately \$29 billion and bank loan assets are \$900 million.
Team	Advantageous	<ul style="list-style-type: none"> Portfolio managers are supported by seven credit analysts who are specialized by industry. They are responsible for evaluating companies within their respective industries and for giving buy and sell recommendations.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> Stone Harbor characterizes itself as a value oriented active manager that seeks to invest in companies with seasoned management, strong financials, good liquidity and appropriate levels of leverage. The investment team believes that fundamental credit analysis is the key driver of alpha generation. Additional sources of alpha also include industry/sector rotation, improve insights from covering the full capital structure spectrum, the 100% employee-ownership structure and dedicated relationship management.
Investment Process	Advantageous	<ul style="list-style-type: none"> The process begins by searching for attractive high yield, bank loans and convertible securities. Once ideas are generated, global credit analysts conduct in-depth credit analysis which is based on various qualitative and quantitative factors. Stress testing models and asset valuations are constructed to determine the risks of the team's assumptions and downside exposure. Portfolio decisions are made collectively by portfolio managers and credit analysts. Portfolio managers have responsibility for portfolio positioning and overall risk for the portfolio.
Performance	Advantageous	<ul style="list-style-type: none"> Stone Harbor's bank loan strategy has produced average results since inception in 2014.
Fees	Advantageous	<ul style="list-style-type: none"> Loan Fund – Class A: Effective fee of 0.60%, operating expenses are capped at 0.10%. Ranks in the 2nd quartile of respondents.

Voya Investment Management

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	<ul style="list-style-type: none"> • Voya Investment Management is wholly owned by Voya Financial, a large U.S. financial services company that is publically traded. • The firm manages more than \$200 billion across many different asset classes and strategies. The bank loan team is based in Scottsdale, AZ and is separate from other teams. This group oversees more than \$25 billion in loan assets across several strategies.
Team	Highly Advantageous	<ul style="list-style-type: none"> • Voya's bank loan team is led by Jeff Bakalar and Dan Norman who have worked together for more than 20 years. Mark Haak has been the senior portfolio manager for the Senior Loan Fund since 2008. • The remainder of the bank loan team consists of five additional portfolio managers and eighteen sector analysts.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> • The Senior Loan Fund seeks to be a "pure play" loan strategy that focuses mostly on first lien bank loans. • The loan portfolios will be very diversified with more than 300 individual issues. The team also emphasizes more liquid loan issues.
Investment Process	Advantageous	<ul style="list-style-type: none"> • The research team reviews all loan investment opportunities from a credit and also risk-adjusted return perspective. The analyst group is focused on loss avoidance and maintaining a low loan default rate. • The Senior Loan Investment Committee maintains decision-making authority for the strategy and Mark Haak oversees portfolio construction and trading on a day-to-day basis.
Performance	Advantageous	<ul style="list-style-type: none"> • Voya has achieved stable returns that have been above average versus the bank loan universe.
Fees	Highly Advantageous	<ul style="list-style-type: none"> • Collective Trust: Effective fee of 0.49%, operating expenses were 0.04%. Ranks in the 1st quartile of respondents.

CVC Credit Partners, LLC

Rating Criteria	Rating	Rationale
Overall	Not Advantageous	
Organization	Advantageous	<ul style="list-style-type: none"> CVC Credit Partners was formed in 2012 when private equity firm CVC combined their credit platform with Resource America's credit platform. The firm is partially owned by CVC, employees and some smaller minority investors. Firm assets as of September 30, 2018 totaled \$20.2 billion of which \$15.3 billion are managed in the global performing credit platform. The Global Yield Fund is one of two commingled funds managed by CVC with total assets of \$250 million.
Team	Not Advantageous	<ul style="list-style-type: none"> Gretchen Bergstresser and Andrew Davies have managed the product since inception in June 2017. Philip Raciti, Senior Managing Director, Head of U.S. Performing Credit and Portfolio Manager, resigned from the firm in September 2018. He was also in charge of supporting management from its inception.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> The strategy relies on incorporating top-down industry research and themes with bottom-up fundamental credit research that is conducted by the analyst team. CVC seeks to construct a diversified portfolio of North American and European corporate issuers. First lien secured loans will be between 80% - 100% of the portfolio, second lien secured loans and high yield bonds are 0% - 15%, and CLO liabilities are 0% -5%.
Investment Process	Not Advantageous	<ul style="list-style-type: none"> The team initiates by identifying high conviction investment opportunities and conducting various screens to determine the most attractive investment opportunities to pursue. Following the screening process, analysts delve deeply into the fundamentals by conducting management and corporate governance assessments, transaction evaluation, and recovery analysis, among other things. Then a recommendation is given to buy, sell or hold a security. The investment decision body is made up of the U.S. and European Credit Investment Committees, which are comprised of eight Senior Portfolio Managers.
Performance	Not Advantageous	<ul style="list-style-type: none"> The Global Yield Fund has a relatively short track record that is less than 2 years.
Fees	Not Advantageous	<ul style="list-style-type: none"> Commingled Fund: Effective fee of 0.70%, operating expenses were 0.20%. Ranks in the 4th quartile of respondents.

**Manager Trailing Performance (Net of Fees)
As of September 30, 2018**

Manager	Inception Date	1 Year (%)	3 Year (%)	5 Year (%)	10 Year (%)
Loomis, Sayles & Company	9/2011	5.3	5.6	4.3	-
Octagon Credit Investors	2/2012	6.7	6.3	5.3	-
Pacific Asset Management	1/2007	5.4	5.6	4.3	6.5
THL Credit Advisors	10/2009	4.5	5.8	4.9	-
Ares Management	12/2008	4.3	5.0	4.0	-
Credit Suisse Asset Management	9/2008	4.4	5.3	4.2	7.7
Crescent Capital Group	12/1993	4.5	3.8	3.4	5.1
Fidelity Asset Management	5/2007	4.9	5.1	4.0	6.9
Invesco Advisers	9/2016	4.9	5.3	3.8	6.1
Lord Abbett & Co.	12/2007	5.4	5.6	4.4	5.6
Marathon Asset Management	3/2017	6.0	-	-	-
PineBridge Investments	1/2001	4.2	4.7	4.0	-
Seix Investment Advisor	7/2006	4.7	5.3	4.0	5.2
Shenkman Capital Management.	1/1998	5.0	4.5	3.7	4.6
Stone Harbor Investment Partners	8/2013	4.9	4.9	3.8	-
Voya Investment Management	4/2001	4.9	4.5	3.9	6.0
CVC Credit Partners	6/2017	6.3	-	-	-
<i>Credit Suisse Leveraged Loan</i>	<i>N/A</i>	5.6	5.4	4.4	5.8

**Excess Returns (Net of Fees)
As of September 30, 2018**

Manager	Inception Date	1 Year (%)	3 Year (%)	5 Year (%)	10 Year (%)
Loomis, Sayles & Company	9/2011	-0.3	0.2	-0.1	
Octagon Credit Investors	2/2012	1.1	0.9	0.9	-
Pacific Asset Management	1/2007	-0.2	0.2	-0.1	0.7
THL Credit Advisors	10/2009	-1.1	0.4	0.5	-
Ares Management	12/2008	-1.3	-0.4	-0.4	-
Credit Suisse Asset Management	9/2008	-1.2	-0.1	-0.2	1.9
Crescent Capital Group	12/1993	-1.1	-1.6	-1.0	-0.7
Fidelity Asset Management	5/2007	-0.7	-0.3	-0.4	1.1
Invesco Advisers	9/2016	-0.7	-0.1	-0.6	0.3
Lord Abbett & Co.	12/2007	-0.2	0.2	0.0	-0.2
Marathon Asset Management	3/2017	0.4	-	-	-
PineBridge Investments	1/2001	-1.4	-0.7	-0.4	-
Seix Investment Advisor	7/2006	-0.9	-0.1	-0.4	-0.6
Shenkman Capital Management.	1/1998	-0.6	-0.9	-0.7	-1.2
Stone Harbor Investment Partners	8/2013	-0.7	-0.5	-0.6	-
Voya Investment Management	4/2001	-0.7	-0.9	-0.5	0.2
CVC Credit Partners	6/2017	0.7	-	-	-

Proposed Fees

Manager	Vehicle Type	Estimated Effective Fee (%) ¹	Rank (Quartile)
Loomis, Sayles & Company	Commingled Fund	0.60	2 nd
Octagon Credit Investors	Commingled Fund	0.62	4 th
Pacific Asset Management	Private Fund	0.40	1 st
THL Credit Advisors	Loan Fund	0.40	1 st
Ares Management	Commingled Fund	0.70	4 th
Credit Suisse Asset Management	Cayman Fund	0.60	2 nd
Crescent Capital Group	Commingled Fund	0.40	1 st
Fidelity Asset Management	Commingled Fund	0.54	2 nd
Invesco Advisers	Commingled Fund	0.78	4 th
Lord Abnett & Co.	Commingled Fund	0.60	2 nd
Marathon Asset Management	Separate Account	0.60	2 nd
PineBridge Investments	Commingled Fund	0.62	4 th
Seix Investment Advisor	Mutual Fund	0.52	1 st
Shenkman Capital Management.	Commingled Fund	0.51	1 st
Stone Harbor Investment Partners	Loan Fund	0.60	2 nd
Voya Investment Management	Collective Trust	0.49	1 st
CVC Credit Partners	Commingled Fund	0.70	4 th

¹ Assumes a mandate size of \$30 million. In certain cases operating expenses for commingled fund/collective investment trust vehicles were unspecified. Operating expenses for separate accounts are subject to price proposals from the custodian bank. In some instances operating expenses were left unspecified.

Summary

- A total of 18 managers submitted responses to this search. Based upon our review and evaluation of each respondent, Meketa Investment Group has rated four managers as “Highly Advantageous”. Thirteen strategies were rated as “Advantageous”, and one strategy was “Not Advantageous” due to a lack of strategy track record and team turnover.
- Meketa Investment Group Recommends that the Board chooses two of the “Highly Advantageous” managers to interview at a subsequent meeting.

High Yield Fixed Income RFP Respondent Review

Background

- On December 5, 2018, Meketa Investment Group issued a \$35 million High Yield Fixed Income RFP on behalf of the Plymouth County Retirement Association.
 - Subsequently, the search was posted to Meketa’s website, sent to PERAC and picked up by a variety of news sources.
- Meketa requested that all respondents submit the RFP by December 21, 2018.
- Meketa received 23 respondents to the RFP.
- The following pages review all respondents.

RFP Respondents

Manager	Headquarters	Strategy	Overall Rating
American Century/Nomura	Kansas City, Missouri	High Income Mutual Fund	Highly Advantageous
DDJ Capital Management	Waltham, Massachusetts	DDJ U.S. Opportunistic High Yield Strategy	Highly Advantageous
Eaton Vance Management	Boston, Massachusetts	High Yield Bond	Highly Advantageous
Loomis, Sayles & Company	Boston, Massachusetts	U.S. High Yield	Highly Advantageous
Lord Abbett & Co.	Jersey City, New Jersey	High Yield Core	Highly Advantageous
SKY Harbor Capital Management	Greenwich, Connecticut	Broad High Yield Market	Highly Advantageous
Advent Capital Management,	New York, New York	Advent High Yield Strategy	Advantageous
Aegon Asset Management	Cedar Rapids, Iowa	High Yield Fixed Income	Advantageous
Ares Management	Los Angeles, California	Ares Institutional High Yield Fund	Advantageous
Artisan Partners	Milwaukee, Wisconsin	Artisan High Income Fund/ Artisan High Income Trust	Advantageous
BNY Mellon Asset Management	Boston, Massachusetts	High Yield Beta Strategy	Advantageous
Fidelity Asset Management Company	Smithfield, Rhode Island	FIAM High Yield Core	Advantageous
Legal & General Investment Management	Chicago, Illinois	U.S. High Yield	Advantageous
Mesirow Financial Investment Management	Chicago, Illinois	Mesirow Financial High Yield Fixed Income	Advantageous
Morgan Stanley Investment Management	New York, New York	U.S. High Yield	Advantageous
PIMCO	Newport Beach, California	PIMCO High Yield Spectrum Fund	Advantageous
PineBridge Investments	New York, New York	PineBridge High Yield Bond	Advantageous
Seix Investment Advisors	Park Ridge, New Jersey	Seix Full Market High Yield Strategy	Advantageous
Strategic Income Management	Seattle, Washington	SiM High Yield Strategy	Advantageous
Stone Harbor Investment Partners	New York, New York	High Yield Core	Advantageous
T. Rowe Price Associates.	Baltimore, Maryland	U.S. High Yield Bond Strategy	Advantageous
Wells Fargo Asset Management	San Francisco, California	U.S. High Yield Bond Strategy	Advantageous
Western Asset Management Company	Pasadena, California	U.S. High Yield	Advantageous

American Century Investment Management, Inc. / Nomura Asset Management

Rating Criteria	Rating	Rationale
Overall	Highly Advantageous	
Organization	Advantageous	<ul style="list-style-type: none"> The high yield mutual fund is managed by American Century but is entirely subadvised by the high yield team at Nomura Asset Management. American Century Investment Management is a wholly owned subsidiary of American Century Companies, Inc. a privately held company that is part family-owned, employee-owned and also 41% owned by Nomura Holdings. American Century assets were \$171.6 billion as of September 30, 2018. Nomura's high yield team oversees over \$20 billion in high yield strategies and the mutual fund assets are approximately \$200 million.
Team	Highly Advantageous	<ul style="list-style-type: none"> The portfolio manager for the High Yield Total Return Strategy is Steve Kotsen. Mr. Kotsen joined the firm in 1998 and has been portfolio manager for the strategy since 2000. Steve Kosten is in turn supported by other three portfolio managers including David Crall, Amy Yu Chang, and Steven Rosenthal. There are 12 dedicated High Yield analysts that perform detailed fundamental credit and relative value analysis.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> The investment team focuses on its "Strong Horse" investment philosophy, focusing on identifying companies that they believe will be able to carry their debt loads over an entire economic cycle. Nomura is comfortable investing in the lowest-rated companies in the high yield universe if they believe the issuer fits this categorization. Typically the portfolio has an overweight to bonds rated CCC and below. The firm believes that a significant amount of alpha can be found by avoiding defaults through the cycle. Additional excess return may also be derived from investing in off-benchmark securities such as investment grade bank loans and distressed debt.
Investment Process	Highly Advantageous	<ul style="list-style-type: none"> There are three integral steps that the team follows to implement a repeatable investment decision making process. The first step is idea generation which is primarily fueled by portfolio managers and analysts at research meetings. The ideas are thoroughly researched by credit analysts who share their findings at credit and sector meetings. There is also a top-down layer which involves the assessment of the capital markets, monetary and fiscal policy as well as default rate expectations. Lastly portfolio managers integrate the top-down and bottom-up analysis to construct portfolios and determine issuer and industry diversification. Investment decisions will be made by collectively by the portfolio management team, with Mr. Kotsen having the day-to-day portfolio management responsibilities.
Performance	Highly Advantageous	<ul style="list-style-type: none"> Long-term returns have consistently been in the top quartile, and risk-adjusted returns have been very strong.
Fees	Advantageous	<ul style="list-style-type: none"> Mutual Fund – R6: Effective fee of 0.54%, operating expenses were not specified. Ranks in the 2nd quartile of respondents.

DDJ Capital Management, LLC

Rating Criteria	Rating	Rationale
Overall	Highly Advantageous	
Organization	Highly Advantageous	<ul style="list-style-type: none"> DDJ was founded in 1996 and based in Waltham, Massachusetts. DDJ is a privately held, employee owned company. Co-founder David Breazzano is the largest equity owner, and the remainder of the firm equity is broadly distributed to several other current employees of the firm. The firm focuses on managing high yield and bank loan strategies. Total assets under management as of September 30, 2018 were \$8.4 billion and the strategy's assets were \$6.4 billion.
Team	Advantageous	<ul style="list-style-type: none"> David Breazzano, Benjamin Santonelli and John Sherman are co-portfolio managers for the U.S. Opportunistic High Yield strategy. There are nine analysts that support all of DDJ's strategies. Analysts are organized as industry specialists and usually cover between two to four industries each.
Investment Philosophy	Highly Advantageous	<ul style="list-style-type: none"> DDJ believes that the most inefficient part of the high yield market is in the smaller, lower quality issues. They believe these issues are neglected by the broad high yield market and there is very little research available on them. Also, they feel that the ability to drive the legal guidelines, covenants, and capital structure allows provides downside protection. DDJ's high yield strategy is very opportunistic in that it tends to have approximately 30% of the portfolio allocated to bank loans. Further the portfolio will be fairly concentrated relative to their peer portfolios.
Investment Process	Highly Advantageous	<ul style="list-style-type: none"> Investment ideas are sourced by both portfolio managers and analysts through regular industry reviews. The credit underwriting process is very thorough and includes deep industry research, a competitive analysis, company conference calls and meetings, and a financial model. DDJ also seeks to differentiate their credit evaluation through detailed credit document, covenant, and legal structure review with one of their two in-house legal professionals. David Breazzano, Benjamin Santonelli and John Sherman collectively make all portfolio decisions.
Performance	Highly Advantageous	<ul style="list-style-type: none"> The Opportunistic High Yield strategy has produced top quartile returns over all trailing time periods. Despite the overweight to lower quality bonds, the returns have also been less volatile than the index.
Fees	Advantageous	<ul style="list-style-type: none"> Commingled Fund: Effective fee of 0.63%, operating expenses are variable but capped at 0.08%. Ranks in the 3rd quartile of respondents.

Eaton Vance Management

Rating Criteria	Rating	Rationale
Overall	Highly Advantageous	
Organization	Advantageous	<ul style="list-style-type: none"> Eaton Vance was established in 1924 and the firm is based in Boston, MA. The firm is publically traded. Eaton Vance and affiliates managed approximately \$500 billion in assets as of September 30, 2018. The high yield strategy was started in 1997 and product assets were approximately \$12 billion.
Team	Highly Advantageous	<ul style="list-style-type: none"> Michael Weilheimer oversees the high yield investment team and several high yield strategies. The U.S. High Yield strategy is managed on a day-to-day basis by Stephen Concannon. Mr. Concannon joined Eaton Vance in 2000 and has worked on the strategy since joining. The portfolio managers are supported by ten credit analysts, four associate analysts and two dedicated traders. The team averages 19 years of industry experience and 10 years at the firm.
Investment Philosophy	Highly Advantageous	<ul style="list-style-type: none"> Eaton Vance seeks to employ a flexible investment strategy that adapts to changing market conditions and opportunities. They will adjust the overall portfolio risk positioning based on their outlook for credit markets. At the security level, the investment team seeks to identify catalysts that will drive returns exceeding those of the index. The team expects that 75% of excess returns will be generated through security selection, 7.5% through country allocation, 10% from currency allocation and 7.5% from duration and yield curve positioning.
Investment Process	Advantageous	<ul style="list-style-type: none"> The process begins with an evaluation of the high yield universe by conducting various screens to identify attractive opportunities. Next fundamental credit research is conducted to assess qualitative, quantitative and structural opportunities and as well as to evaluate relative value. Following the fundamental analysis the portfolio is built by incorporating analyst recommendations and by using tactical levers to set positioning. Mr. Concannon is the day-to-day portfolio manager of the strategy, but works closely with Mr. Weilheimer when setting overall portfolio strategy and allocation.
Performance	Highly Advantageous	<ul style="list-style-type: none"> Recent returns have been near the peer group average, however longer-term results have been more attractive.
Fees	Advantageous	<ul style="list-style-type: none"> Separate Account or commingled fund, both with effective Fee of 0.50%. Ranks in the 2nd quartile of respondents.

Loomis, Sayles & Company, L.P.

Rating Criteria	Rating	Rationale
Overall	Highly Advantageous	
Organization	Advantageous	<ul style="list-style-type: none"> Loomis Sayles & Company was established by Robert H. Loomis in 1926 as an investment management company in Boston, Massachusetts. The firm is a wholly owned subsidiary of Natixis, a large French-based financial services company. As of September 30, 2018 total firm assets under management were \$267.3 billion. The firm manages over \$20 billion in high yield assets across many different accounts and strategies. The U.S. High Yield strategy was inceptioned in 2009 and has approximately \$3.5 billion in total assets.
Team	Highly Advantageous	<ul style="list-style-type: none"> The U.S. High Yield product is managed by a four-member portfolio management team that consists of Matthew Eagan, Elaine Stokes, Thomas Stolberg, and Todd Vandam. These individuals collectively manage all high yield strategies at the firm. The portfolio managers are supported by product-focused strategist and portfolio specialists, as well as large research teams focused on macroeconomic research, risk management, and credit research.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> The U.S. High Yield strategy seeks to outperform the broad high yield universe through security selection based on fundamental research and rigorous relative value analysis. Loomis will augment the high yield credit selection process with robust risk management and portfolio construction analysis. They will also selectively invest in non-benchmark credit sectors such as high yield bonds.
Investment Process	Highly advantageous	<ul style="list-style-type: none"> Because of their large size, Loomis is able to leverage significant research resources that covers nearly all corporate fixed income securities. The analyst teams conduct thorough credit analysis and assign their own proprietary rating to each security that is evaluated. Analysts discuss this credit assessments with portfolios managers in the context of an issue's relative value in the market. Portfolio managers will incorporate the analyst recommendations with the macro outlook of the firm to build the portfolio. Product teams oversee the portfolio management to ensure that portfolios are being constructed in a way that is consistent with their strategy and guidelines.
Performance	Highly Advantageous	<ul style="list-style-type: none"> The U.S. High Yield strategy has produced attractive and consistent absolute returns, though returns have had an index-like risk profile.
Fees	Advantageous	<ul style="list-style-type: none"> Commingled Trust: Effective fee of 0.50%, operating expenses are included. Ranks in the 2nd quartile of respondents.

Lord Abbett & Co. LLC

Rating Criteria	Rating	Rationale
Overall	Highly Advantageous	
Organization	Advantageous	<ul style="list-style-type: none"> Lord Abbett is located in Jersey City, New Jersey and is 100% employee owned, with no single person owning more than 25%. The firm was founded in 1929 and as of September 30, 2018 it managed \$169.3 billion in total assets and \$3.7 billion in the High Yield Core strategy, which was instituted in September 2004.
Team	Advantageous	<ul style="list-style-type: none"> Steven Rocco has been the lead portfolio manager on the strategy since 2010. Christopher Gizzo was recently promoted to portfolio in 2017. These portfolio managers are supported by 24 analysts who are organized by industry and look across the ratings spectrum from investment grade to high yield.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> The team believes that a flexible and opportunistic strategy can deliver consistent results across various market environments when risk management is taken into consideration. The team seeks to generate excess returns through security selection, sector and credit risk allocations.
Investment Process	Highly Advantageous	<ul style="list-style-type: none"> The investment process is guided by top-down analysis which lays the framework for the portfolio's credit quality distribution, industry positioning and risk profile. Once top-down views are established analysts aim to delve deeper into industry dynamics, and the company's financials. Proprietary models integrate quantitative relative value analysis with analysts' fundamental credit research and quantitative risk reporting. Senior portfolio managers meet on a weekly basis to discuss investment decisions and determine longer-term portfolio strategy.
Performance	Highly Advantageous	<ul style="list-style-type: none"> The strategy has a long, consistent track record delivering attractive absolute and risk-adjusted returns.
Fees	Highly Advantageous	<ul style="list-style-type: none"> Collective Investment Trust: Effective Fee of 0.44%, operating expenses were 0.08%. Ranks in the 1st quartile of respondents.

SKY Harbor Capital Management, LLC

Rating Criteria	Rating	Rationale
Overall	Highly Advantageous	
Organization	Highly Advantageous	<ul style="list-style-type: none"> • SKY Harbor was formed in August 2011 by the three senior portfolio managers from AXA's high yield bond team. The individuals received financial backing from Stone Point Capital, a private equity firm, and launched SKY Harbor to be an independently owned high yield investment management boutique. Today Stone Point owns a slight majority of firm equity with the remaining equity owned by SKY Harbor's senior staff. • Total firm assets as of September 30, 2018 were \$5.3 billion assets, of which \$1.4 billion were in the Broad High Yield Market strategy.
Team	Advantageous	<ul style="list-style-type: none"> • Hannah Strasser is the lead portfolio manager for the Broad High Yield Market strategy since SKY Harbor's inception and has managed High Yield portfolios with Anne Yobage, the lead portfolio manager of the Short Duration High Yield strategy, for over 20 years • The portfolio managers are supported by an investment team that consists of thirteen other analysts, portfolio managers and traders.
Investment Philosophy	Highly Advantageous	<ul style="list-style-type: none"> • The Broad High Yield strategy seeks to outperform the broad high yield market in most time periods and market environments through both top-down positioning and bottom up bond selection. The investment team seeks to be aware of the market composition and will make conscious active weights to the high yield market by credit rating, yield segment and industry. Further they seek to rotate overall portfolio credit risk as their macro view changes.
Investment Process	Advantageous	<ul style="list-style-type: none"> • The research process is fairly flat and collaborative between analysts and portfolio managers. Ms. Strasser will use the firm's top-down market and credit risk analysis to determine overall portfolio positioning and work with analysts to focus on certain parts of the market and securities so they can achieve their risk objectives. The portfolio is built from the bottom up based on the analysts' fundamental credit research. • Analysts seek to identify companies with improving fundamentals whose bonds will likely outperform their rating or yield cohort. They will work closely with Ms. Strasser to assess relative value within the market, and Ms. Strasser is tasked with making all final portfolio decisions with respect to risk positioning and individual credit selection.
Performance	Advantageous	<ul style="list-style-type: none"> • The strategy has produced average results over shorter time periods, though longer term results remain very strong.
Fees	Highly Advantageous	<ul style="list-style-type: none"> • Commingled Fund: Effective fee of 0.39%, there are no additional operational expenses. Ranks in the 1st quartile of respondents.

Advent Capital Management, LLC

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	<ul style="list-style-type: none"> Advent is based in New York, New York Advent's employees have a 100% voting control and own 80% of the firm's economic interest while the remaining 20% is owned by limited partners that helped fund the firm As of Sep 30, 2018 firm assets were \$9.2 billion and the High Yield Strategy had \$419 million.
Team	Advantageous	<ul style="list-style-type: none"> Michael Brown and Marc Aylett are the high yield portfolio managers and are focused on overseeing the strategy. Mr. Brown and Mr. Aylett average 25 years of high yield experience. Portfolio managers are supported by eight analysts, six of whom are sector focused and two generalists. These investment professionals average 22 years of experience covering their respective sectors and regions
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> The investment philosophy is based on the premise that a fundamental research approach can consistently provide outperformance in the high yield market. The strategy employs the investment strategy using fundamental research, scenario analysis and proprietary models to facilitate decision making and potentially earn alpha. Historically the most important source of outperformance for the life of the strategy has been credit selection.
Investment Process	Advantageous	<ul style="list-style-type: none"> The first step in the investment process is idea generation, which is driven from portfolio managers, traders and analysts. The majority of portfolio will be U.S. high yield bonds, but the investable universe can include investment grade, bank loans and convertible bonds. New investment ideas go through fundamental and scenario analyses and will be included in the portfolio if they offer attractive relative value. Some of the tools used for the credit analysis include management interviews, scenario modeling, earning forecasting, capital structure analysis as well as covenant analysis. Once relative value is determined the portfolio is constructed with the most attractive securities. Mike Brown and Marc Aylett are responsible for day-to-day activities, including portfolio structure, directing analysts, trading decisions and trading implementation.
Performance	Advantageous	<ul style="list-style-type: none"> Long-term returns have been near the peer group average.
Fees	Highly Advantageous	<ul style="list-style-type: none"> Separate Account: Effective fee of 0.45%, operating expenses were not specified. Ranks in the 1st quartile of respondents.

Aegon Asset Management US

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	<ul style="list-style-type: none"> Aegon is based in Cedar Rapids, Iowa and is a wholly-owned subsidiary of Aegon N.V. a publicly listed company. Total firm assets under management as of September 30, 2018 were \$99.3 billion and high yield assets were \$7.7 billion. The high yield inception was June 1, 1997
Team	Advantageous	<ul style="list-style-type: none"> The strategy is managed by a portfolio management team that consists of Jim Schaeffer, Deputy CIO and Co-Head of Public Fixed Income, as well as Ben Miller and Kevin Bakker who are co-heads of High Yield and Derek Thoms. They have an average of 9 years with the strategy and an average of 18 years of industry experience. The portfolio management team is supported by 33 research analysts.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> The investment team believes: 1) security selection is typically the primary driver of returns, 2) unexpected changes in the business cycle can produce market opportunities, and 3) diversification can be used to mitigate risk and manage liquidity. Aegon seeks to deliver consistent relative long-term performance through the implementation of a credit-intensive process. The team believes that the primary source of alpha within the high yield strategies is security selection.
Investment Process	Advantageous	<ul style="list-style-type: none"> The investment process consists of five steps including idea generation, bottom-up credit research, top-down macroeconomic analysis, portfolio construction and monitoring. Idea generation is done through a variety of methods and it typically involves starting with the entire high yield universe. The fundamental research process is conducted by analysts who cover companies across the credit quality spectrum. Macroeconomic analysis comes into play when developing investment themes and providing insight into the macro environment used by portfolio managers to determine duration, yield curve positioning, credit quality and asset allocation. Lastly, portfolio managers integrate analysts' recommendations and ESG factors into the portfolio construction process. The team strives to reach consensus when making investment decisions, but when an agreement is not possible the team defers the decision making authority to the portfolio manager with the most experience in a particular market segment.
Performance	Advantageous	<ul style="list-style-type: none"> Recent results have been near the peer median, however longer-term results have been very strong though with an index-like risk profile.
Fees	Advantageous	<ul style="list-style-type: none"> Separate Account: Effective fee of 0.50%, operating expenses were not specified. Ranks in the 2nd quartile of respondents.

Ares Management LLC

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	<ul style="list-style-type: none"> Ares is based in Los Angeles, California. The firm is publically traded but remains majority owned by senior management. Total firm assets under management are over \$125 billion which includes private equity, public and private credit and real estate strategies The high yield strategy has over \$4 billion in assets under management.
Team	Highly Advantageous	<ul style="list-style-type: none"> The Ares Institutional High Yield Fund is managed by Seth Brufsky, Kapil Singh and Chris Mathewson. Together they are responsible for portfolio construction, risk management and trading decisions. The research team consists of 24 analysts that cover various industries and monitor all loan and high yield issuers within their respective areas of responsibility.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> Ares employs a value-oriented philosophy that emphasizes principal preservation, disciplined risk management and differentiated market insight when seeking to identifying and assessing risks and opportunities across the high yield universe. The team believes that the majority of value added comes from security selection and sector/industry allocation. Another potential driver of returns will be an opportunistic allocation to bank loans.
Investment Process	Advantageous	<ul style="list-style-type: none"> The investment process begins by the investment team screening attractive opportunities in the high yield and bank loan universes. Then research team members complete an internally developed checklist to determine upside and downside risks to a company's credit profile. To assess this they speak conduct assessment of competitive positioning, credit metrics, and growth profile and earnings quality among many other things. The due diligence process culminates with a presentation to the investment committee. The team also conducts tactical market assessments by evaluating macro factors that could impact the portfolio and asset class. Investment decisions are formally subject to approval by a majority of the members in the investment committee.
Performance	Not Advantageous	<ul style="list-style-type: none"> The commingled fund has a short track record. The longer high yield composite track record has been average.
Fees	Advantageous	<ul style="list-style-type: none"> Commingled Fund: Effective Fee of 0.65%, operating expenses were 0.20%. Ranks in the third quartile of respondent.

Artisan Partners

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	<ul style="list-style-type: none"> Artisan was founded in 1994 and currently has over \$90 billion in assets under management. The firm is a collection of separate investment management boutiques that operate autonomously from each other but rely on the Artisan organization for operational, legal, distribution and financial support. The high yield strategy was formed in 2013 when Bryan Krug joined the firm to build the firm's first credit business. While Artisan is based in Milwaukee, WI, the high yield team is in Denver, CO. The firm is majority publically traded but current employees continue to own a large portion of the firm's private equity. As of September 30, 2018 total firm assets were over \$100 billion and High yield assets under management were \$3.2 billion.
Team	Advantageous	<ul style="list-style-type: none"> Bryan Krug joined Artisan Partners in 2013 and he founded the High Yield strategy in 2014. Mr. Krug is supported by five analysts and a dedicated trader. The team has a collaborative decision making process but final decisions making responsibilities lies with Bryan Krug.
Investment Philosophy	Highly Advantageous	<ul style="list-style-type: none"> The core of the investment philosophy is the belief that the non-investment grade market goes through dislocations that can be exploited. Secondly, attractive risk-adjusted return opportunities can be identified across the capital structure through fundamental credit analysis. They also believe that a repeatable and high-conviction investment process can achieve attractive risk-adjusted returns over a full credit cycle. The investment team seeks to build a more focused portfolio of non-investment securities that have the potential to add value over the long term. The strategy will opportunistically allocated to non-high yield securities such as convertible bonds, equities, and bank loans
Investment Process	Advantageous	<ul style="list-style-type: none"> The investment process begins with idea generation, and although the team is not geographically constrained the focus is on US issuers and occasionally Canada and Europe. The output of the idea generation process is a list of candidates that the team looks more deeply when conducting credit analysis. Fundamental credit analysis is where the investment team spends most of their time and where they believe that they can add the most value. The team focuses on four key areas including business quality, financial strength and flexibility, downside analysis and value identification. Portfolio managers segment the portfolio into core, spread tightening and opportunistic categories, which allows them to be selective in the risks they take. Investment decisions are made collaboratively, however Bryan Krug is the final decision maker and has full discretion over portfolio construction.
Performance	Advantageous	<ul style="list-style-type: none"> The strategy has produced very strong returns over its relatively short track record. The strategy that tends to overweight the segment of the market with the most credit risk is untested through a broad market downturn.
Fees	Not Advantageous	<ul style="list-style-type: none"> Mutual Fund: APHFX: Effective Fee of 0.74%, operating expenses were not specified. Ranks in the 4th quartile of respondents.

BNY Mellon Asset Management

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	<ul style="list-style-type: none"> • BNY Mellon Asset Management is majority owned by The Bank of New York Mellon Corporation and minority owned by employees. Total firm assets under management as of September 30, 2018 were \$568.7 billion and high yield strategy assets were \$1.4 billion. • BNY manages many active and passive strategies across many asset classes The High Yield Beta strategy was started in September 30, 2012
Team	Not Advantageous	<ul style="list-style-type: none"> • Paul Benson, Managing Director, Head of Multi-Factor and Index Fixed Income Portfolio Management is the lead portfolio manager for the strategy. He is supported by 10 portfolio managers averaging 19 years of industry experience and 15 years at the firm. • The team has worked together in its current form since September 2015 when Mr. Benson was hired to his current role.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> • The investment philosophy emphasizes a systematic and disciplined approach that relaxes the constraints of a pure index methodology, while following a rules-based approach to portfolio construction. • The team seeks to provide targeted beta exposure to the U.S. high yield market while delivering competitive performance. Individual high yield bonds comprise between 80% - 100% of assets, high yield ETFs may comprise up to 10% of the portfolio and high yield credit default swaps may also rise to 10% of the portfolio.
Investment Process	Advantageous	<ul style="list-style-type: none"> • The investment process begins by sourcing bonds that match the major risk characteristics of the benchmark. The team sources their investment opportunities from the high yield ETF and the OTC bond markets. Then the team completes their market exposure to the benchmark by utilizing high yield credit default swaps or by holding a high yield ETF to provide the missing beta. Then portfolio managers integrate the sampling process with the quantitative credit models to build the portfolio. • No single individual dominates the investment decision process, instead decisions are taken by the portfolio management group, headed by Paul Benson.
Performance	Advantageous	<ul style="list-style-type: none"> • Long-term returns have been near the peer group average.
Fees	Highly Advantageous	<ul style="list-style-type: none"> • Collective Investment Trust: Effective fee of 0.24%, operating expenses were 0.02%. Ranks in the 1st quartile of respondents.

Fidelity Institutional Asset Management Trust Company

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	<ul style="list-style-type: none"> Fidelity is privately owned by the Johnson Family and Chairman and CEO Abigail Johnson. As of September 30, 2018 firm assets under management were \$163.9 billion and strategy assets were \$16.2 billion. The high yield strategy inception date is September 30, 1996.
Team	Not Advantageous	<ul style="list-style-type: none"> Institutional High Yield Core portfolios are managed by portfolio managers Michael Weaver and Alexandre Karam. Matt Conti retired from the firm after 23 years in December 2018. Another portfolio manager left the firm in 2016. Fidelity manages several high yield strategies. The team that oversees high yield strategies includes ten portfolio managers, 18 research analysts/traders and six traders.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> The High Yield Core strategy seeks to build a portfolio of in-index high yield bonds and maintain a risk positioning near the index with a beta near 1.00. Fidelity will focus on the BB and B-rated segments while being very selective when purchasing bonds rated CCC and below. The team believes that approximately 80% of the excess return will be derived from security selection and the remainder will come from sector allocation.
Investment Process	Advantageous	<ul style="list-style-type: none"> The investment process is driven by bottom-up fundamental credit research conducted by the industry-focused investment analysts. The analysts seek to model companies' financial strength and evaluate their ability to service debt over the next 1 to 5 years. Portfolio construction is led by portfolio managers and seeks to identify the analysts best ideas in each industry.
Performance	Not Advantageous	<ul style="list-style-type: none"> Most trailing period returns are in the bottom half of the peer group.
Fees	Advantageous	<ul style="list-style-type: none"> Commingled Fund: Effective fee of 0.52%, operating expenses were 0.02%. Ranks in the third quartile of respondents.

Legal & General Investment Management America Inc.

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	<ul style="list-style-type: none"> Legal & General is based in Chicago, Illinois but also has offices in Boston, MA and London, UK. The firm is a wholly-owned subsidiary of Legal & General Group which is a UK-based publically traded company. As of September 30, 2018 Legal & General Investment Management America Inc. had \$185 billion in assets of which \$2.4 billion were in the High Yield strategy.
Team	Advantageous	<ul style="list-style-type: none"> Tom Huggins is the lead portfolio manager for the strategy, he is Head of US High Yield and has managed the strategy since inception in 2013. Mr. Huggins is supported by a co-portfolio manager, three senior high yield analysts and one junior high yield analyst.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> The investment philosophy is based on the belief that the macroeconomic environment drives returns, security selection enhances returns and that investors should guard against behavioral biases. The investment team seeks to translate their macro views into portfolio themes that will lead to excess returns. The portfolio focuses on the highest quality segments of the market and rarely has any allocation to bonds rated CCC and below. The strategy index is a BB/B high yield index. The team expects that roughly two-thirds of the excess returns will be derived from these themes and portfolio positioning decisions, and the remaining one-third will come from security selection.
Investment Process	Advantageous	<ul style="list-style-type: none"> Macroeconomic analysis is the cornerstone of the investment process and it will determine portfolio positioning and how much risk the investment team is willing to take. Broad global economic views are formed through a variety of meetings in which economists share their views on the global growth outlook. From here strategic themes, economic outlook, beta positioning, country selection and industry selections are determined through their investment analysis process. The analysts conduct fundamental analysis within the guidelines set by the top-down analysis.
Performance	Advantageous	<ul style="list-style-type: none"> Returns have been strong however the track record is just 5-years and strategy untested through a market downturn.
Fees	Highly Advantageous	<ul style="list-style-type: none"> Separate Account: Effective fee of 0.35%, operating expenses were not specified. Ranks in the 1st quartile of respondents.

Mesirow Financial Investment Management, Inc.

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	<ul style="list-style-type: none"> The Chicago, Illinois-based firm, founded in 1937, now has \$111 billion in assets under management. Mesirow's high yield effort began in 2016 when they purchased the high yield group from Pacific Income Advisors. The team overseeing the strategy has managed it since 1999 and it currently has \$700 million in assets under management.
Team	Advantageous	<ul style="list-style-type: none"> While the group is relatively new to Mesirow, the senior members of the investment team have worked together for over 20 years. The portfolio management team consists of Bob Sydow, Kevin Buckle and James Lisko. The portfolio managers are supported by a team of three analysts, two of which joined in the past year.
Investment Philosophy	Highly Advantageous	<ul style="list-style-type: none"> Mesirow Financial investment philosophy emphasizes a value-oriented approach that focuses on selecting higher yielding securities and maintaining a low default rates. For the latter, they attempt to completely avoid industries that will experience a secular decline. The investment team believes that smaller high yield issuers are less followed and misunderstood by other high yield participants and thus their bonds tend to be inefficiently priced. The Mesirow strategy tends to be overweight smaller issue bonds.
Investment Process	Advantageous	<ul style="list-style-type: none"> The investment process is led by the portfolio managers who communicate investment ideas to analysts. The three portfolio managers tend to each focus on select industries and drive the portfolio allocation within them. The final portfolio tends to be relatively concentrated in 75-125 issuers with a 2.5% maximum position size. While the portfolio managers collaborate frequently when making portfolio decisions, Bob Sydow is the final decision maker.
Performance	Advantageous	<ul style="list-style-type: none"> The team has produced very strong results relative to the peer group, though results have come on a relatively small asset base.
Fees	Highly Advantageous	<ul style="list-style-type: none"> Collective Investment Trust: Effective Fee of 0.40% inclusive of operating expenses. Ranks in the 1st quartile of respondents.

Morgan Stanley Investment Management

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	<ul style="list-style-type: none"> Morgan Stanley Investment Management is an indirectly wholly-owned subsidiary of Morgan Stanley a public financial services company that was established in 1935. The firm is based in New York, NY. As of September 30, 2018 Morgan Stanley Investment Management had \$471 billion assets under management. The U.S. High Yield strategy was started in February 2012 and had \$1.5 billion assets under management.
Team	Advantageous	<ul style="list-style-type: none"> Richard Lindquist is Morgan Stanley's head of high yield and has had that role since 2012. He oversees the U.S., European, and Global High Yield strategies. Mr. Lindquist is supported by high yield portfolio manager Jack Cimarosa and the broader Morgan Stanley credit team that consists of eight portfolio managers, nineteen analysts and five traders.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> The investment team employs a value-oriented strategy that focuses on the middle market segment of the high yield market that they believe typically has a yield premium to the larger issue segment. The high yield portfolio managers seek to leverage the broader research resources of the firm to gain unique perspectives on the high yield market and opportunities and risks relative to other credit sectors. Finally the team believes that minimizing defaults will be another driver of performance over longer time periods.
Investment Process	Advantageous	<ul style="list-style-type: none"> The process begins with a top-down macroeconomic assessment of the credit market dynamics and relative valuations. Next the industry analysts perform bottom-up analysis on companies within each high yield industry. Analysts focus on the sustainability of cash flows and their ability to service debt. The investment team takes a relative value approach seeking to buy bonds that are undervalued relative to bonds with similar ratings or in similar industries. They will actively adjust portfolio positioning as this relative value relationship changes. Portfolio manager Richard Lindquist is the final decision-maker for the strategy.
Performance	Advantageous	<ul style="list-style-type: none"> The historical absolute returns have been strong, while risk-adjusted returns have been average.
Fees	Not Advantageous	<ul style="list-style-type: none"> Mutual Fund – MSYIX : Effective Fee of 0.65%. Ranks in the 4th quartile of respondents.

PIMCO

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Not Advantageous	<ul style="list-style-type: none"> PIMCO is headquartered in Newport Beach, California and has 13 other offices around the world. Allianz Asset Management (“AAM”) is the majority shareholder with minority interests held by AAM affiliates and by former and current PIMCO employees. The firm was established in 1971 and it has \$1.7 trillion in assets under management. The High Yield Spectrum Fund started in September 2010 and it has close to \$38.6 billion assets.
Team	Advantageous	<ul style="list-style-type: none"> Andrew Jessop and Hozef Arif are the lead portfolio managers for the strategy with ultimate decision making authority. PIMCO’s High Yield Portfolio Management Team consists 12 portfolio managers. The portfolio managers are supported by the Global Credit Research Team that consists of 65 analysts. These analysts are primarily organized by industry with a secondary focus on regions. The investment team has experienced a high level of turnover.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> PIMCO seeks to build high yield portfolios while balancing a focus on both relative value and risk-adjusted returns. PIMCO will leverage their global resources with coverage across credit sectors when managing the portfolio, and they will also incorporate non-benchmark exposures such as sovereign debt (emerging and developed), bank loans and convertible bonds, in addition to opportunistically raising cash. PIMCO will incorporate top-down analysis to take long-term views on various market segments and industries seeking to be a provider of liquidity during turbulent periods.
Investment Process	Advantageous	<ul style="list-style-type: none"> Similar to all other strategies at PIMCO, the first step in the process is incorporating the firm’s “house views” from their regular “Secular Outlooks.” These are three to five year views formed by the senior-most members of the PIMCO investment teams. Next is an analysis on the cyclical outlook for business cycle or other cyclical trends that will affect industries and issuers. From here the investment committee will evaluate issuers and positioning when determining portfolio construction with the strategy portfolio managers. The high yield portfolio will be diversified by industry and individual credit as most portfolios tend to have exposure to over 500 individual positions. Further, likely due to their large size, portfolio turnover has averaged about 30% and is fairly low relative to peers.
Performance	Advantageous	<ul style="list-style-type: none"> Historical returns have been slightly above average.
Fees	Not Advantageous	<ul style="list-style-type: none"> Mutual Fund – PHSIX: Effective fee of 0.62%, operating expenses were 0.02%. Ranks in the 4th quartile of respondents

PineBridge Investments LLC

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	<ul style="list-style-type: none"> PineBridge is based in New York, NY but has offices in 21 cities in 17 countries across the globe. The credit team has members in Houston, TX, Los Angeles, CA, San Francisco, CA, New York, NY and London, UK. PineBridge is majority owned by Pacific Century Group, an Asian-based private investment firm. PineBridge employees own a majority interest in the firm. Total firm assets are approximately \$90 billion with \$4.5 billion in high yield assets. The firm inception was in 1996 and the high yield inception was in 2000.
Team	Advantageous	<ul style="list-style-type: none"> John Yovanovic and Jeremy Burton are the portfolio managers for the PineBridge High Yield Bond strategy. Mr. Yovanovic and Mr. Burton have 27 and 16 years of industry experience, respectively, and an average of 15 years at the firm. The high yield portfolio managers are supported by a large group of fourteen industry analysts that support both the high yield and bank loan strategies.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> PineBridge's investment strategy is designed to be nimble and flexible to take advantage of short term market opportunities driven by changes in sentiment or liquidity. While Pinebridge is aware of the high yield index's characteristics when building the portfolio to be conscious of tracking error potential, portfolio construction is bottom-up driven and could result in meaningful industry, quality and issuer active weights. The strategy will also opportunistically invest in bank loans and investment grade credit when they identify attractive risk-adjusted return opportunities.
Investment Process	Highly Advantageous	<ul style="list-style-type: none"> The investment process revolves around a four part credit evaluation which includes 1) the analyst risk rating, 2) assessment on the directionality of the credit, 3) setting credit impairment triggers that force a credit review and 4) the analyst relative value rating. This process is designed to create an investment process that is very proactive and will lead to a portfolio that is frequently updated as either their views or relative value changes. There is a High Yield Investment Committee that oversees all investment decisions, but John Yovanovic is the key decision-maker.
Performance	Advantageous	<ul style="list-style-type: none"> The strategy has produced very strong returns with beta and volatility greater than the index.
Fees	Highly Advantageous	<ul style="list-style-type: none"> Separate Account: Effective fee of 0.38%, operational expenses were not specified. Ranks in the 1st quartile of respondents.

Seix Investment Advisors LLC

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Not Advantageous	<ul style="list-style-type: none"> Seix was founded in 1992 by Christina Seix and is based in Park Ridge, NJ. The firm has undergone three major ownership changes in the past 10 years with the most recent being the 2017 purchase by Virtus Investment Partners, a publically traded firm. As of September 30, 2018 total firm assets were \$23 billion and the Full Market High Yield strategy had \$1.4 billion in assets.
Team	Advantageous	<ul style="list-style-type: none"> The Full Market High Yield strategy is led by Portfolio Managers Mike Kirkpatrick and James FitzPatrick who have been portfolio managers on the strategy since 2011 and 2013, respectively. The two have worked together at Seix for over 15 years. Eight research analysts that are industry specialists cover both high yield bonds and bank loans and support the portfolio managers.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> The Full Market High Yield strategy invests across the credit ratings spectrum in an effort to outperform the broad high yield market. This strategy has significant overlap with Seix's larger High Quality High Yield strategy. Seix leverages their industry-focused investment team to make industry-specific weighting recommendations. The strategy is designed to outperform if they are able to opportunistically rotate industries.
Investment Process	Advantageous	<ul style="list-style-type: none"> The investment process begins by searching the high yield universe for attractive opportunities. The credit analysis focuses on five "key tenets" which include 1) asset protection, 2) cash flow/deleveraging profile, 3) management team quality, 4) liquidity sources, and 5) competitive positioning. For a security to make it into the portfolio it has to have a unanimous affirmative vote from portfolio managers and analyst. These individuals discuss both the credit-worthiness of the issuer as well as the relative value and target price/yield.
Performance	Advantageous	<ul style="list-style-type: none"> The strategy has produced very strong returns with beta and volatility greater than the index.
Fees	Highly Advantageous	<ul style="list-style-type: none"> Separate Account: Effective fee of 0.45%, operating fees were not specified. Ranks in the 1st quartile of respondents.

Strategic Income Management, LLC

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Not Advantageous	<ul style="list-style-type: none"> Strategic Income Management was formed in 2010 and is 100% employee owned. As of September 30, 2018 the firm managed \$1.4 billion in total assets, nearly all of which are in the high yield strategy. The firm is based in Seattle, WA. The firm has a partnership with Nikko Asset Management, a large Japanese financial services company, to provide client service, compliance and risk management support.
Team	Advantageous	<ul style="list-style-type: none"> The investment team consists of two portfolio managers a junior portfolio manager and an analyst/trader. Gary Pokrzywinski is the lead Portfolio Manager and he has worked co-portfolio manager Brian Placzek for nearly 20 years.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> The investment philosophy is based on the belief that alpha can be generated through both security selection and sector allocation. The investment team seeks to identify long-term trends and which specific industries will benefit or suffer from changing industry dynamics. The strategy takes a full market approach, allocating across the credit ratings spectrum. The investment team will also consider non-benchmark credit sectors such as convertible bonds, equities and other securities.
Investment Process	Advantageous	<ul style="list-style-type: none"> The investment team are generalists and seek to be opportunistic when sourcing investment ideas. They will leverage the small asset base to consider many smaller high yield issuers that are ignored by larger managers. The credit review process seeks to analyze a company's cash flows and volatility of the business and industry. The investment team also evaluates the competitive positioning and liquidity profile of the business. The top-down industry views will guide the team's bottom-up analysis. The portfolio will be built by the entire investment team. The portfolio will be more focused than most high yield peers with a portfolio of 70 to 100 issuers.
Performance	Highly Advantageous	<ul style="list-style-type: none"> While returns since inception have been very strong the strategy is untested through a market downturn.
Fees	Advantageous	<ul style="list-style-type: none"> Separate Account: Effective fee of 0.50%, operating expenses were not specified. Ranks in the 2nd quartile of respondents.

Stone Harbor Investment Partners LP

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	<ul style="list-style-type: none"> Stone Harbor was founded in 2006 by several members of Solomon Smith Barney's asset management team. The firm is based in New York, NY but has additional offices in the U.S. Asia, and Europe. The firm remains 100% employee owned. Total assets under management firm wide are approximately \$29 billion and the High Yield Strategy has \$1.4 billion in assets. The strategy was founded in August 2007.
Team	Advantageous	<ul style="list-style-type: none"> The Co-Heads of High Yield are Marianne Rossi and William Perry, who have been supporting the strategy since 2010 and 2012, respectively. The remainder of the investment team consists of other strategy portfolio managers and seven industry credit analysts.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> Stone Harbor characterizes itself as a value oriented active manager that seeks to invest in bonds issued by companies with seasoned management, strong financials, good liquidity and appropriate levels of leverage. The investment team believes that fundamental credit analysis is the key driver of alpha generation. They attempted to gain an analytical edge through industry analysis and evaluating the full capital structure spectrum.
Investment Process	Advantageous	<ul style="list-style-type: none"> The process begins by searching for attractive high yield, bank loans and convertible securities. Once ideas are generated, global credit analysts conduct in-depth credit analysis which is based on various qualitative and quantitative factors. Stress testing models and asset valuations are constructed to determine the risks of the team's assumptions and downside exposure. Portfolio decisions are made collectively by portfolio managers and credit analysts. Portfolio managers have responsibility for portfolio positioning and overall risk for the portfolio. Historically the portfolio has had a 5% to 10% allocation to bank loans.
Performance	Advantageous	<ul style="list-style-type: none"> The strategy has struggled to consistently achieve its performance objective and it has underperformed most peers.
Fees	Not Advantageous	<ul style="list-style-type: none"> Mutual Fund – SHHYX: Effective fee of 0.66%. Ranks in the 4th quartile of respondents.

T. Rowe Price Associates, Inc.

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	<ul style="list-style-type: none"> T. Rowe Price is headquartered in Baltimore, Maryland but has additional offices in the U.S., Europe, Asia and Australia. The firm is publically traded, but has significant current employee ownership. Total firm assets are approximately \$1 trillion. The firm manages several high yield strategies. The U.S. High Yield Bond strategy has \$820 million in assets under management and was inceptioned in 2013.
Team	Advantageous	<ul style="list-style-type: none"> Lead portfolio manager Kevin Loomer is the ultimate decision making authority, he has managed the strategy since inception. Mr. Loomer worked for T. Rowe earlier in his career before managing high yield portfolios at Delaware Investments and Henderson. T. Rowe acquired the strategy from Henderson in 2017. As part of the acquisition five research analysts and one trader joined T. Rowe with Mr. Loomer from Henderson.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> The investment philosophy is self-described as having a total return style that is implemented with a value-oriented focus. The strategy has historically had a significant overweight to bonds rated CCC and below. The team will actively adjust portfolio exposures based on market opportunities and their outlook. Portfolio turnover over the past five years has averaged more than 175%, a much higher level of activity than most other high yield managers.
Investment Process	Advantageous	<ul style="list-style-type: none"> There are five steps that comprise the investment process, including idea generation, credit research, portfolio construction, execution and monitoring. Both analysts and portfolio managers monitor industry trends, attend company meetings and conferences, conduct capital structure analysis and look at third party research to generate new ideas. Credit research is then conducted on the most attractive ideas where ratings are determined as well as relative value across the yield curve The portfolio will be fairly concentrated in 75 to 125 bond issues, and historically more than 35% of the portfolio has been invested in the top 25 holdings. Lead portfolio manager Kevin Loomer has ultimate decision-making authority.
Performance	Highly Advantageous	<ul style="list-style-type: none"> The strategy has produced very strong returns, though the track record is not as robust as many other managers.
Fees	Advantageous	<ul style="list-style-type: none"> Separate Account: Effective fee of 0.50%, operating expenses were not specified. Ranks in the 2nd quartile of respondents.

Wells Fargo Asset Management

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	<ul style="list-style-type: none"> Wells Fargo Asset Management is headquartered in San Francisco, California. The asset management company is wholly owned by the parent Wells Fargo & Company. The asset management company and its affiliates oversees more than \$450 billion in assets. The U.S. High Yield strategy has \$3.9 billion in assets under management.
Team	Advantageous	<ul style="list-style-type: none"> Philip Susser and Niklas Nordenfelt are the Co-Heads of High Yield and lead portfolio managers. They have each supported the high yield strategy for over 15 years. The remainder of the investment team consists of eighteen other strategy portfolio managers, research analysts and traders.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> The investment philosophy is reliant on a bottom up driven process that applies rigorous credit standards. Wells Fargo Asset management seeks to outperform with less volatility over a market cycle, emphasizing the avoidance of defaults. The team seeks to generate excess returns by taking advantage of both longer-term industry trends as well as shorter term relative value opportunities.
Investment Process	Advantageous	<ul style="list-style-type: none"> The team starts by searching for investment ideas in new issues and primarily in the secondary market where the team believes that there is a higher probability of overlooked securities. The majority of ideas are generated by analysts who monitor credit fundamentals and they also conduct diligent bottom-up research to come up with an internal rating score for every investment opportunity they analyze. Portfolio construction then takes place by incorporating top-down views with best perceived risk/reward opportunities within each sector. Portfolio managers have final decision-making authority but they rely on the input from research analysts.
Performance	Highly Advantageous	<ul style="list-style-type: none"> The strategy has produced above average relative returns with an attractive risk profile
Fees	Advantageous	<ul style="list-style-type: none"> Commingled Fund: Effective fee of 0.46%, operating expenses were 0.11%. Ranks in the 2nd quartile of respondents.

Western Asset Management Company, LLC

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	<ul style="list-style-type: none"> Western Asset Management Company was established in 1971 and later acquired by Legg Mason In 1986. Currently, Western Asset is a wholly owned subsidiary of Legg Mason, a publicly traded firm (NYSE:LM). The firm is based in Pasadena, California and it has \$421.1 billion assets under management. The U.S. High Yield strategy launched in February 1994, and has \$10.6 billion in assets under management.
Team	Advantageous	<ul style="list-style-type: none"> Lead portfolio manager is Walter Kilcullen, he is supported by Michael Buchanan. Mr. Kilcullen and Mr. Buchanan have 21 and 28 years of experience respectively. Supported by 31 analysts of which eight are high-yield credit analysts. The high yield efforts also has two dedicated trading and a dedicated risk manager. The High Yield Credit Team has an average industry experience of 21 years.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> Western Assets philosophy is reliant on long-term fundamental value. It is based on the believe that Markets misprice securities, Western Asset can systematically identify mispricings and Western Asset's portfolios emphasize its highest convictions. The firm seeks to add value across interest rate duration, yield curve sector allocation, security selection
Investment Process	Advantageous	<ul style="list-style-type: none"> Portfolio construction starts when the U.S Broad Strategy Committee determines top-down strategies for broad market portfolios. Those views are then incorporated into the Global Credit Committee which meets monthly to discuss value across credit asset classes. These committees provide the foundation of how the portfolios will be positioned and they provide a framework for bottom-up analysis. Once fundamental research is conducted analysts them make relative value recommendations. Portfolio managers take both bottom-up and top-down analysis to construct portfolios. Final decision-making is the responsibility of portfolio managers.
Performance	Not Advantageous	<ul style="list-style-type: none"> The strategy has struggled to produce attractive risk-adjusted returns.
Fees	Advantageous	<ul style="list-style-type: none"> Commingled Fund: Effective fee of 0.46%, operational expenses were 0.06%. Ranks in the 2nd quartile of respondents.

**Manager Trailing Performance (Net of Fees)
As of September 30, 2018**

Manager	Inception Date	1 Year (%)	3 Year (%)	5 Year (%)	10 Year (%)
American Century/Nomura	10/1991	4.1	9.3	6.5	11.1
DDJ Capital Management	12/1997	6.4	9.8	7.2	10.2
Eaton Vance Management	05/1997	2.0	6.9	5.3	8.6
Loomis, Sayles & Company	10/2009	2.6	7.6	5.8	-
Lord Abbett & Co.	09/2004	2.3	7.7	5.9	9.3
SKY Harbor Capital Management	09/2011	3.1	7.7	5.2	-
Advent Capital Management,	01/2011	2.6	7.1	4.7	-
Aegon Asset Management	06/1997	2.4	7.4	5.5	9.7
Ares Management	03/2017	1.5	-	-	-
Artisan Partners	10/2016	4.8	8.9	-	-
BNY Mellon Asset Management	09/2012	3.2	4.9	3.1	-
Fidelity Asset Management Company	09/1996	2.2	6.6	4.8	7.9
Legal & General Investment Management	09/2013	2.7	7.3	6.1	-
Mesirow Financial Investment Management	03/1999	3.9	7.9	6.0	8.7
Morgan Stanley Investment Management	02/2012	5.0	7.7	6.0	-
PIMCO	09/2010	2.8	8.0	5.6	-
PineBridge Investments	09/2000	2.6	8.9	5.8	8.2
Seix Investment Advisors	10/2004	4.0	8.2	5.5	9.2
Strategic Income Management	03/2011	4.9	8.1	6.4	-
Stone Harbor Investment Partners	08/2007	2.2	6.4	3.8	7.3
T. Rowe Price Associates.	04/2013	3.0	8.8	6.9	-
Wells Fargo Asset Management	06/1996	2.9	7.4	5.6	8.2
Western Asset Management Company	02/1994	3.2	7.5	4.5	8.7
<i>Bloomberg Barclays High Yield Index</i>	<i>N/A</i>	<i>3.0</i>	<i>8.1</i>	<i>5.5</i>	<i>9.5</i>

Manager Trailing Performance (Net of Fees)¹ As of September 30, 2018

Manager	Inception Date	1 Year Excess Return (%)	3 Year Excess Return (%)	5 Year Excess Return (%)	10 Year Excess Return (%)
American Century/Nomura	10/1991	1.1	1.2	1.0	1.6
DDJ Capital Management	12/1997	3.4	1.7	1.7	0.7
Eaton Vance Management	05/1997	-1.0	-1.2	-0.2	-0.9
Loomis, Sayles & Company	10/2009	-0.4	-0.5	0.3	-
Lord Abbett & Co.	09/2004	-0.7	-0.4	0.4	-0.2
SKY Harbor Capital Management	09/2011	0.1	-0.4	-0.3	0.0
Advent Capital Management,	01/2011	-0.4	-1.0	-0.8	-
Aegon Asset Management	06/1997	-0.6	-0.7	0.0	0.2
Ares Management	03/2017	-1.5	-	-	-
Artisan Partners	10/2016	1.8	0.8	-	-
BNY Mellon Asset Management	09/2012	0.2	-3.2	-2.4	-
Fidelity Asset Management Company	09/1996	-0.8	-1.5	-0.7	-1.6
Legal & General Investment Management	09/2013	-0.3	-0.8	0.6	-
Mesirow Financial Investment Management	03/1999	0.9	-0.2	0.5	-0.8
Morgan Stanley Investment Management	02/2012	2.0	-0.4	0.5	-
PIMCO	09/2010	-0.2	-0.1	0.1	-
PineBridge Investments	09/2000	-0.4	0.8	0.3	-1.3
Seix Investment Advisors	10/2004	1.0	0.1	0.0	-0.3
Strategic Income Management	03/2011	1.9	0.0	0.9	-
Stone Harbor Investment Partners	08/2007	-0.8	-1.7	-1.7	-2.2
T. Rowe Price Associates.	04/2013	0.0	0.7	1.4	-
Wells Fargo Asset Management	06/1996	-0.1	-0.7	0.1	-1.3
Western Asset Management Company	02/1994	0.2	-0.6	-1	-0.8

¹ Benchmark is the Barclays 1-3 Year Credit Index.



Proposed Fees

Manager	Proposed Vehicle	Estimated Effective Fee (%) ¹	Rank (Quartile)
American Century/Nomura	Mutual Fund – R6	0.54	3 rd
DDJ Capital Management	Commingled Fund	0.63	4 th
Eaton Vance Management	Sep. Acc. / Commingled Fund	0.50	2 nd
Loomis, Sayles & Company	Commingled Trust	0.50	2 nd
Lord Abbett & Co.	Collective Investment Trust	0.44	1 st
SKY Harbor Capital Management	Commingled Private Fund*	0.39	1 st
Advent Capital Management,	Separate Account	0.45	1 st
Aegon Asset Management	Separate Account	0.50	2 nd
Ares Management	Commingled Fund	0.65	4 th
Artisan Partners	Mutual Fund: APHFX	0.74	4 th
BNY Mellon Asset Management	Collective Investment Trust	0.24	1 st
Fidelity Asset Management Company	Commingled Fund	0.52	3 rd
Legal & General Investment Management	Separate Account	0.35	1 st
Mesirow Financial Investment Management	Collective Investment Trust	0.40	1 st
Morgan Stanley Investment Management	Mutual Fund: MSYIX	0.65	4 th
PIMCO	Mutual Fund: PHSIX	0.62	3 rd
PineBridge Investments	Separate Account	0.38	1 st
Seix Investment Advisors	Separate Account	0.50	2 nd
Strategic Income Management	Separate Account	0.50	2 nd
Stone Harbor Investment Partners	Mutual Fund: SHHYX	0.66	4 th
T. Rowe Price Associates.	Separate Account	0.50	2 nd
Wells Fargo Asset Management	Commingled Fund	0.46	2 st
Western Asset Management Company	Private Commingled Fund	0.46	2 nd

¹ Assumes a mandate size of \$30 million. In certain cases operating expenses for commingled fund/collective investment trust vehicles were unspecified so no additional expense was added to the Estimated Effective Fee.

Summary

- A total of 23 managers submitted responses to this search. Based upon our review and evaluation of each respondent, Meketa Investment Group has rated six strategies as “Highly Advantageous” with the remaining seventeen rated as “Advantageous.”
- We recommend that the Board chooses at least two of the six “Highly Advantageous” managers to interview at a subsequent meeting.

Appendix

Fourth Quarter Investment Review

As of December 31, 2018

Asset Class Performance Summary

	Market Value (\$)	% of Portfolio	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	15 Yrs (%)	Inception (%)	Inception Date
Total Retirement Association	933,885,959	100.0	-8.9	-7.3	4.8	3.9	8.1	5.8	7.5	Nov-89
60% MSCI ACWI / 40% Barclays Global Aggregate			-7.3	-6.0	5.2	3.1	6.8	5.3	--	Nov-89
Custom Benchmark - Policy Benchmark (Net)			-7.8	-4.0	6.3	4.8	8.6	--	--	Nov-89
Domestic Equity Assets	205,182,066	22.0	-18.2	-7.7	8.5	--	--	--	8.5	Jan-16
Russell 3000			-14.3	-5.2	9.0	7.9	13.2	7.9	9.0	Jan-16
International Developed Market Equity Assets	126,241,503	13.5	-13.7	-17.7	2.2	--	--	--	2.2	Jan-16
MSCI EAFE			-12.5	-13.8	2.9	0.5	6.3	4.7	2.9	Jan-16
International Emerging Market Equity Assets	79,337,201	8.5	-9.9	-17.5	6.7	--	--	--	6.7	Jan-16
MSCI Emerging Markets			-7.5	-14.6	9.2	1.6	8.0	7.9	9.2	Jan-16
Global Equity Assets	88,678,810	9.5	-10.1	--	--	--	--	--	-12.4	Feb-18
MSCI ACWI			-12.8	-9.4	6.6	4.3	9.5	6.2	-14.3	Feb-18
Core Fixed Income	78,387,483	8.4	1.0	-0.3	2.3	--	--	--	2.3	Jan-16
75% Bbg Barclays Aggregate/25% Bbg Barclays US TIPs 1-10 year			1.2	-0.1	2.0	2.2	3.4	--	2.0	Jan-16
Value Added Fixed Income	103,841,187	11.1	-2.3	-0.9	6.0	--	--	--	6.0	Jan-16
33% BBgBarc US High Yield/ 33% Credit Suisse Leveraged Loans/ 33% JP Morgan EMBI Global Diversified			-2.9	-1.7	5.8	--	--	--	5.8	Jan-16
Hedge Funds	46,379,952	5.0	-9.4	-7.4	1.4	2.1	--	--	3.7	Feb-10
HFRI Fund of Funds Composite Index			-5.0	-4.1	1.3	1.4	3.1	2.7	2.3	Feb-10
Real Estate*	99,911,090	10.7	0.9	3.5	4.1	--	--	--	4.1	Jan-16
80% NCREIF ODCE / 20% Wilshire REIT			-2.5	1.9	5.3	--	--	--	5.3	Jan-16
Private Equity*	45,200,084	4.8	-2.2	1.8	4.0	--	--	--	4.0	Jan-16
Cambridge Associates Fund of Funds Composite 1-Quarter Lag			2.6	15.3	10.6	11.9	9.2	11.5	10.6	Jan-16
Real Assets*	45,718,474	4.9	-1.4	-1.6	-3.0	--	--	--	-3.0	Jan-16
CPI+3%			1.0	4.9	5.0	4.5	4.8	5.1	5.0	Jan-16
Cash and Cash Equivalent	15,008,109	1.6								

* The market value and performance is one quarter lagged.



As of December 31, 2018

Trailing Net Performance

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Retirement Association	933,885,959	100.0	--	-4.5	-8.9	-7.3	4.8	3.9	8.1	7.5	Nov-89
<i>60% MSCI ACWI / 40% Barclays Global Aggregate</i>				-3.4	-7.3	-6.0	5.2	3.1	6.8	--	Nov-89
Domestic Equity Assets	205,182,066	22.0	22.0	-10.8	-18.2	-7.7	8.5	--	--	8.5	Jan-16
<i>Russell 3000</i>				-9.3	-14.3	-5.2	9.0	7.9	13.2	9.0	Jan-16
Rhumblin Russell 1000 Value	30,683,016	3.3	15.0	-9.6	-11.7	-8.2	6.8	5.8	--	7.9	Apr-13
<i>Russell 1000 Value</i>				-9.6	-11.7	-8.3	7.0	5.9	11.2	8.1	Apr-13
Rhumblin Russell 1000 Growth	30,984,630	3.3	15.1	-8.6	-15.9	-1.5	11.0	10.3	--	14.0	Jul-09
<i>Russell 1000 Growth</i>				-8.6	-15.9	-1.5	11.1	10.4	15.3	14.1	Jul-09
Fisher Midcap Value	38,452,124	4.1	18.7	-11.0	-18.6	-12.9	7.0	5.0	13.3	6.2	Apr-07
<i>Russell MidCap Value</i>				-10.5	-15.0	-12.3	6.1	5.4	13.0	5.7	Apr-07
Boston Company Small Cap Growth	42,977,209	4.6	20.9	-11.1	-22.1	-1.5	12.0	7.6	--	13.0	Aug-09
<i>Russell 2000 Growth</i>				-11.7	-21.7	-9.3	7.2	5.1	13.5	12.2	Aug-09
LMCG Small Cap Value	61,705,476	6.6	30.1	-12.1	-19.1	-15.4	5.0	3.7	--	6.3	Mar-11
<i>Russell 2000 Value</i>				-12.1	-18.7	-12.9	7.4	3.6	10.4	6.9	Mar-11
International Developed Market Equity Assets	126,241,503	13.5	13.5	-5.2	-13.7	-17.7	2.2	--	--	2.2	Jan-16
<i>MSCI EAFE</i>				-4.9	-12.5	-13.8	2.9	0.5	6.3	2.9	Jan-16
KBI Master Account	59,477,609	6.4	47.1	-4.5	-12.5	-16.3	1.7	-0.8	5.2	2.9	Jul-05
<i>MSCI EAFE</i>				-4.9	-12.5	-13.8	2.9	0.5	6.3	3.7	Jul-05
HGK TS International Equity	36,125,296	3.9	28.6	-4.8	-11.6	-15.3	4.0	0.8	--	4.7	Feb-11
<i>MSCI EAFE</i>				-4.9	-12.5	-13.8	2.9	0.5	6.3	2.7	Feb-11
Copper Rock International Small Cap	30,638,599	3.3	24.3	-6.9	-18.4	-22.9	--	--	--	-20.1	Nov-17
<i>MSCI EAFE Small Cap</i>				-6.4	-16.0	-17.9	3.7	3.1	10.5	-14.6	Nov-17

Total Retirement Association

As of December 31, 2018

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
International Emerging Market Equity Assets	79,337,201	8.5	8.5	-3.9	-9.9	-17.5	6.7	--	--	6.7	Jan-16
<i>MSCI Emerging Markets</i>				-2.7	-7.5	-14.6	9.2	1.6	8.0	9.2	Jan-16
LMCG Emerging Markets	53,290,344	5.7	67.2	-3.9	-9.9	-17.5	6.7	0.0	--	0.0	Sep-13
<i>MSCI Emerging Markets</i>				-2.7	-7.5	-14.6	9.2	1.6	8.0	1.9	Sep-13
ABS Emerging Markets	20,000,000	2.1	25.2	0.0	--	--	--	--	--	0.0	Dec-18
<i>MSCI Emerging Markets</i>				-2.7	-7.5	-14.6	9.2	1.6	8.0	-2.7	Dec-18
Copper Rock Emerging Markets Small Cap	6,046,857	0.6	7.6	0.0	--	--	--	--	--	0.0	Dec-18
<i>MSCI Emerging Markets</i>				-2.7	-7.5	-14.6	9.2	1.6	8.0	-2.7	Dec-18
Global Equity Assets	88,678,810	9.5	9.5	-6.2	-10.1	--	--	--	--	-12.4	Feb-18
<i>MSCI ACWI</i>				-7.0	-12.8	-9.4	6.6	4.3	9.5	-14.3	Feb-18
First Eagle Global Value Fund	17,665,019	1.9	19.9	-4.7	-8.4	--	--	--	--	-11.7	Feb-18
<i>MSCI ACWI</i>				-7.0	-12.8	-9.4	6.6	4.3	9.5	-14.3	Feb-18
Kopernik Global All Cap Fund	17,266,137	1.8	19.5	-0.9	-1.6	--	--	--	--	-13.7	Feb-18
<i>MSCI ACWI</i>				-7.0	-12.8	-9.4	6.6	4.3	9.5	-14.3	Feb-18
Lee Munder Global Multi-Cap Strategy	25,214,877	2.7	28.4	-8.2	-14.3	--	--	--	--	-11.6	Mar-18
<i>MSCI ACWI</i>				-7.0	-12.8	-9.4	6.6	4.3	9.5	-10.5	Mar-18
Wellington Durable Enterprises, L.P.	28,532,778	3.1	32.2	-8.3	-11.9	--	--	--	--	-4.9	Mar-18
<i>MSCI ACWI</i>				-7.0	-12.8	-9.4	6.6	4.3	9.5	-10.5	Mar-18

Total Retirement Association

As of December 31, 2018

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Core Fixed Income	78,387,483	8.4	8.4	1.3	1.0	-0.3	2.3	--	--	2.3	Jan-16
<i>75% Bbg Barclays Aggregate/25% Bbg Barclays US TIPs 1-10 year</i>				1.5	1.2	-0.1	2.0	2.2	3.4	2.0	Jan-16
IR&M Core Bonds	78,387,483	8.4	100.0	1.3	1.0	-0.3	2.2	2.3	4.3	3.9	Nov-04
<i>75% Bbg Barclays Aggregate/25% Bbg Barclays US TIPs 1-10 year</i>				1.5	1.2	-0.1	2.0	2.2	3.4	3.7	Nov-04
Value Added Fixed Income	103,841,187	11.1	11.1	-1.2	-2.3	-0.9	6.0	--	--	6.0	Jan-16
<i>33% BBgBarc US High Yield/ 33% Credit Suisse Leveraged Loans/ 33% JP Morgan EMBI Global Diversified</i>				-1.0	-2.9	-1.7	5.8	--	--	5.8	Jan-16
Eaton Vance High Yield	32,883,450	3.5	31.7	-2.0	-4.1	-2.2	5.6	3.8	10.8	6.5	Apr-06
<i>ICE BofAML US High Yield TR</i>				-2.2	-4.6	-2.2	7.3	3.8	11.0	6.8	Apr-06
THL Bank Loan Select Fund	34,552,344	3.7	33.3	-2.2	-3.0	0.7	4.8	3.7	--	5.1	Sep-10
<i>Credit Suisse Leveraged Loans</i>				-2.3	-3.1	1.1	5.0	3.3	8.3	4.5	Sep-10
Franklin Templeton Emerging Market Bonds	36,405,393	3.9	35.1	0.4	0.0	-1.2	7.4	3.7	10.0	6.7	May-06
<i>JP Morgan EMBI Global Diversified</i>				1.3	-1.3	-4.3	5.2	4.8	8.2	6.7	May-06
Hedge Funds	46,379,952	5.0	5.0	-4.7	-9.4	-7.4	1.4	2.1	--	3.7	Feb-10
<i>HFRI Fund of Funds Composite Index</i>				-1.7	-5.0	-4.1	1.3	1.4	3.1	2.3	Feb-10
ABS Offshore SPC - Global Segregated Portfolio	19,949,138	2.1	43.0	-2.7	-8.0	-6.4	0.3	1.9	--	4.4	Aug-10
<i>HFRI Fund of Funds Composite Index</i>				-1.7	-5.0	-4.1	1.3	1.4	3.1	2.4	Aug-10
Entrust Special Opportunities Fund III, Ltd.	21,738,040	2.3	46.9	-7.0	-11.2	-9.3	--	--	--	10.5	Oct-16
<i>HFRI Fund of Funds Composite Index</i>				-1.7	-5.0	-4.1	1.3	1.4	3.1	1.9	Oct-16
Old Farm Partners Master Fund, L.P.	4,692,774	0.5	10.1	-1.8	-6.1	--	--	--	--	-6.1	Oct-18
<i>HFRI Fund of Funds Composite Index</i>				-1.7	-5.0	-4.1	1.3	1.4	3.1	-5.0	Oct-18

Note: Entrust Special Opportunities Fund III has an estimated market value.



Total Retirement Association

As of December 31, 2018

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Real Estate	99,911,090	10.7	10.7	0.7	0.9	3.5	4.1	--	--	4.1	Jan-16
80% NCREIF ODCE / 20% Wilshire REIT				-3.3	-2.5	1.9	5.3	--	--	5.3	Jan-16
Core Real Estate	76,442,328	8.2	76.5	-0.1	0.1	4.7	6.7	--	--	6.7	Jan-16
NCREIF ODCE (lagged one qtr., net)				1.9	1.9	7.7	7.8	9.7	4.6	7.8	Jan-16
PRISA I	40,542,422	4.3	53.0	2.2	2.2	7.8	7.9	10.2	4.0	6.8	Sep-04
NCREIF ODCE				1.8	1.8	8.3	8.2	10.4	7.0	8.0	Sep-04
Invesco Equity Real Estate Securities Trust	15,335,003	1.6	20.1	-7.5	-6.2	-5.1	3.2	7.6	11.6	10.5	Dec-02
Wilshire REIT				-8.4	-6.9	-4.8	2.1	7.9	12.2	9.8	Dec-02
TA Realty Core Property Fund, L.P.	20,564,904	2.2	26.9	1.5	1.5	--	--	--	--	10.1	Apr-18
NCREIF ODCE				1.8	1.8	8.3	8.2	10.4	7.0	6.0	Apr-18
Non-Core Real Estate	23,468,762	2.5	23.5	3.9	3.9	-0.3	-3.8	--	--	-3.8	Jan-16
Private Equity	45,200,084	4.8	4.8	-2.2	-2.2	1.8	4.0	--	--	4.0	Jan-16
Cambridge Associates Fund of Funds Composite 1-Quarter Lag				2.6	2.6	15.3	10.6	11.9	9.2	10.6	Jan-16
Private Equity	37,166,351	4.0	82.2	-3.4	-3.4	0.6	--	--	--	1.8	Jan-16
Venture Capital	8,033,733	0.9	17.8	3.3	3.3	6.4	--	--	--	11.6	Jan-16
Real Assets	45,718,474	4.9	4.9	-1.4	-1.4	-1.6	-3.0	--	--	-3.0	Jan-16
CPI+3%				0.2	1.0	4.9	5.0	4.5	4.8	5.0	Jan-16
Cash and Cash Equivalent	15,008,109	1.6	1.6								
Cash	15,008,109	1.6	100.0								

Total Retirement Association

As of December 31, 2018

Allocation vs. Target

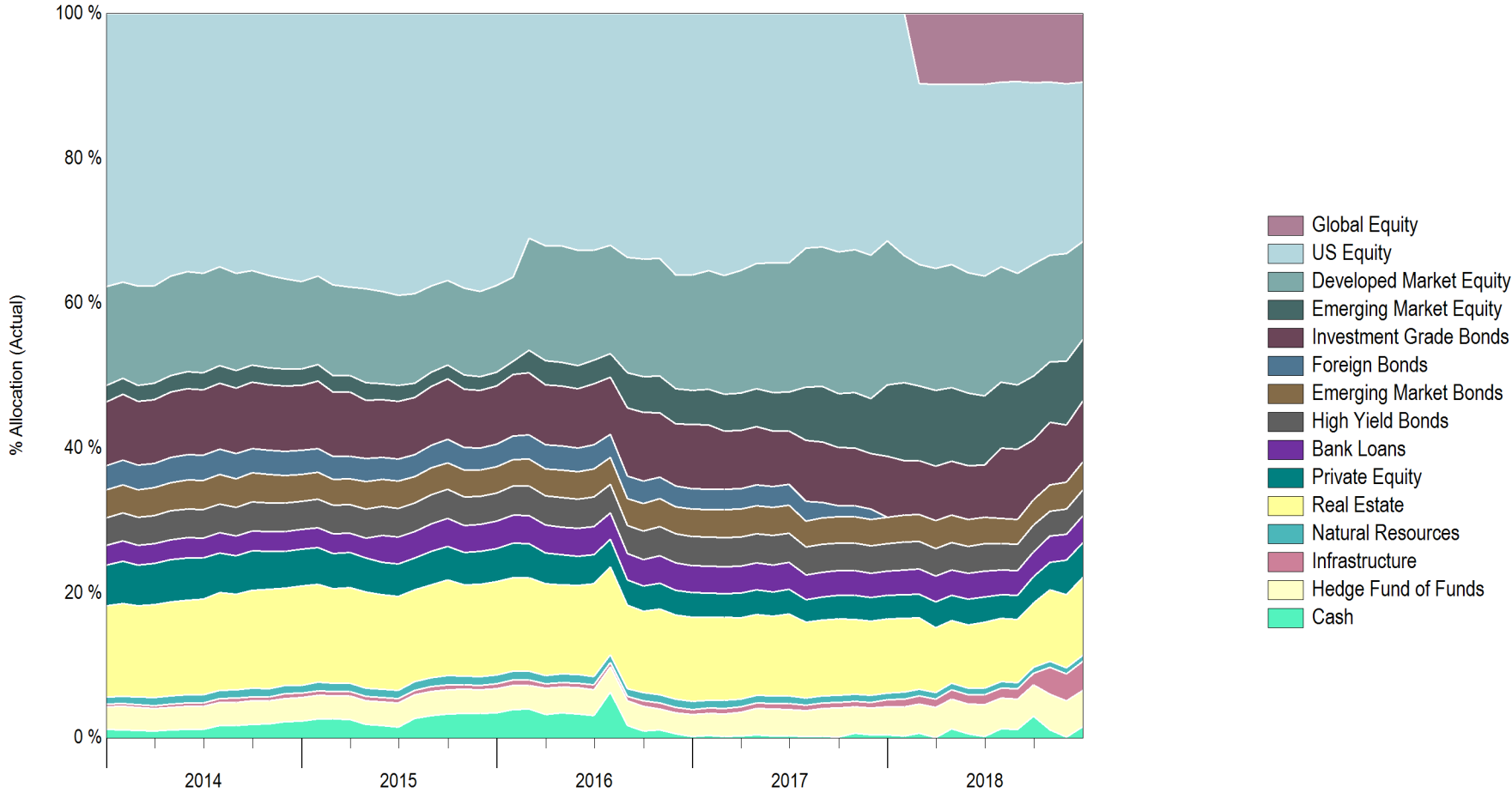
	Current Balance	Current Allocation	Policy	Policy Range	Within IPS Range?
Domestic Equity	\$205,182,053	22%	26%	21% - 36%	Yes
International Developed Market Equity	\$126,241,503	14%	6%	1% - 16%	Yes
International Emerging Market Equity	\$79,337,201	8%	10%	5% - 20%	Yes
Global Equity	\$88,678,810	9%	10%	5% - 20%	Yes
Core Bonds	\$78,387,483	8%	9%	4% - 14%	Yes
Value-Added Fixed Income	\$103,841,187	11%	6%	2% - 12%	Yes
Private Equity	\$45,198,994	5%	13%	4% - 18%	Yes
Real Estate	\$99,922,595	11%	10%	5% - 15%	Yes
Real Assets	\$45,718,474	5%	6%	2% - 10%	Yes
Hedge Fund of Funds	\$46,379,952	5%	4%	2% - 6%	Yes
Cash	\$15,008,109	2%	0%	0% - 3%	Yes
Total	\$933,896,374	100%	100%		

	Current Balance	Current Allocation	Policy	Policy Range	Within IPS Range?
Total Equity	\$591,019,603	63%	69%	60% - 80%	Yes
Total Fixed Income	\$182,228,670	20%	15%	5% - 25%	Yes
Total Real Assets and Real Estate	\$145,629,564	16%	16%	13% - 19%	Yes
Cash	\$15,008,109	2%	0%	0% - 3%	Yes

Plymouth County Retirement Association adopted a new asset allocation as of December 2018.



Asset Allocation History
5 Years Ending December 31, 2018



As of December 31, 2018

Statistics Summary

5 Years Ending December 31, 2018

	Anlzd Return	Anlzd Standard Deviation	Information Ratio	Beta	Sharpe Ratio	Tracking Error
Total Retirement Association	3.9%	6.5%	0.2	0.8	0.5	3.0%
60% MSCI ACWI / 40% Barclays Global Aggregate	3.1%	7.1%	--	1.0	0.3	0.0%
Domestic Equity Assets	--	--	--	--	--	--
Russell 3000	7.9%	11.2%	--	1.0	0.7	0.0%
Rhumblin Russell 1000 Value	5.8%	10.8%	-1.3	1.0	0.5	0.1%
Russell 1000 Value	5.9%	10.9%	--	1.0	0.5	0.0%
Rhumblin Russell 1000 Growth	10.3%	11.9%	-1.6	1.0	0.8	0.1%
Russell 1000 Growth	10.4%	12.0%	--	1.0	0.8	0.0%
Fisher Midcap Value	5.0%	13.4%	-0.1	1.1	0.3	4.5%
Russell MidCap Value	5.4%	11.4%	--	1.0	0.4	0.0%
Boston Company Small Cap Growth	7.6%	17.2%	0.5	1.0	0.4	4.9%
Russell 2000 Growth	5.1%	16.3%	--	1.0	0.3	0.0%
LMCG Small Cap Value	3.7%	14.4%	0.0	0.9	0.2	3.0%
Russell 2000 Value	3.6%	15.2%	--	1.0	0.2	0.0%
International Equity	--	--	--	--	--	--
International Equity Custom Benchmark	1.4%	11.9%	--	1.0	0.1	0.0%
International Developed Market Equity Assets	--	--	--	--	--	--
MSCI EAFE	0.5%	11.8%	--	1.0	0.0	0.0%
KBI Master Account	-0.8%	11.7%	-0.6	1.0	-0.1	2.2%
MSCI EAFE	0.5%	11.8%	--	1.0	0.0	0.0%



As of December 31, 2018

	Anlzd Return	Anlzd Standard Deviation	Information Ratio	Beta	Sharpe Ratio	Tracking Error
HGK TS International Equity	0.8%	12.8%	0.1	1.0	0.0	4.6%
MSCI EAFE	0.5%	11.8%	--	1.0	0.0	0.0%
Copper Rock International Small Cap	--	--	--	--	--	--
MSCI EAFE Small Cap	3.1%	12.0%	--	1.0	0.2	0.0%
International Emerging Market Equity Assets	--	--	--	--	--	--
MSCI Emerging Markets	1.6%	15.2%	--	1.0	0.1	0.0%
LMCG Emerging Markets	0.0%	14.4%	-0.6	0.9	0.0	2.7%
MSCI Emerging Markets	1.6%	15.2%	--	1.0	0.1	0.0%
ABS Emerging Markets	--	--	--	--	--	--
MSCI Emerging Markets	1.6%	15.2%	--	1.0	0.1	0.0%
Copper Rock Emerging Markets Small Cap	--	--	--	--	--	--
MSCI Emerging Markets	1.6%	15.2%	--	1.0	0.1	0.0%
Global Equity Assets	--	--	--	--	--	--
MSCI ACWI	4.3%	10.9%	--	1.0	0.3	0.0%
First Eagle Global Value Fund	--	--	--	--	--	--
MSCI ACWI	4.3%	10.9%	--	1.0	0.3	0.0%
Kopernik Global All Cap Fund	--	--	--	--	--	--
MSCI ACWI	4.3%	10.9%	--	1.0	0.3	0.0%
Lee Munder Global Multi-Cap Strategy	--	--	--	--	--	--
MSCI ACWI	4.3%	10.9%	--	1.0	0.3	0.0%
Wellington Durable Enterprises, L.P.	--	--	--	--	--	--
MSCI ACWI	4.3%	10.9%	--	1.0	0.3	0.0%
Fixed Income Assets	2.8%	2.8%	0.0	0.7	0.8	2.1%
BBgBarc US Universal TR	2.7%	2.6%	--	1.0	0.8	0.0%

As of December 31, 2018

	Anlzd Return	Anlzd Standard Deviation	Information Ratio	Beta	Sharpe Ratio	Tracking Error
Core Fixed Income	--	--	--	--	--	--
75% Bbg Barclays Aggregate/25% Bbg Barclays US TIPs 1-10 year	2.2%	2.7%	--	1.0	0.6	0.0%
IR&M Core Bonds	2.3%	2.6%	0.5	1.0	0.7	0.3%
75% Bbg Barclays Aggregate/25% Bbg Barclays US TIPs 1-10 year	2.2%	2.7%	--	1.0	0.6	0.0%
Value Added Fixed Income	--	--	--	--	--	--
33% BBgBarc US High Yield/ 33% Credit Suisse Leveraged Loans/ 33% JP Morgan EMBI Global Diversified	--	--	--	--	--	--
Eaton Vance High Yield	3.8%	4.2%	0.0	0.8	0.7	1.5%
ICE BofAML US High Yield TR	3.8%	5.1%	--	1.0	0.6	0.0%
THL Bank Loan Select Fund	3.7%	2.4%	0.5	0.9	1.3	0.7%
Credit Suisse Leveraged Loans	3.3%	2.6%	--	1.0	1.0	0.0%
Franklin Templeton Emerging Market Bonds	3.7%	6.2%	-0.3	0.9	0.5	3.6%
JP Morgan EMBI Global Diversified	4.8%	5.4%	--	1.0	0.8	0.0%
Hedge Funds	2.1%	5.3%	0.3	1.3	0.3	2.9%
HFRI Fund of Funds Composite Index	1.4%	3.6%	--	1.0	0.2	0.0%
ABS Offshore SPC - Global Segregated Portfolio	1.9%	6.1%	0.1	1.5	0.2	3.2%
HFRI Fund of Funds Composite Index	1.4%	3.6%	--	1.0	0.2	0.0%
Entrust Special Opportunities Fund III, Ltd.	--	--	--	--	--	--
HFRI Fund of Funds Composite Index	1.4%	3.6%	--	1.0	0.2	0.0%
Old Farm Partners Master Fund, L.P.	--	--	--	--	--	--
HFRI Fund of Funds Composite Index	1.4%	3.6%	--	1.0	0.2	0.0%

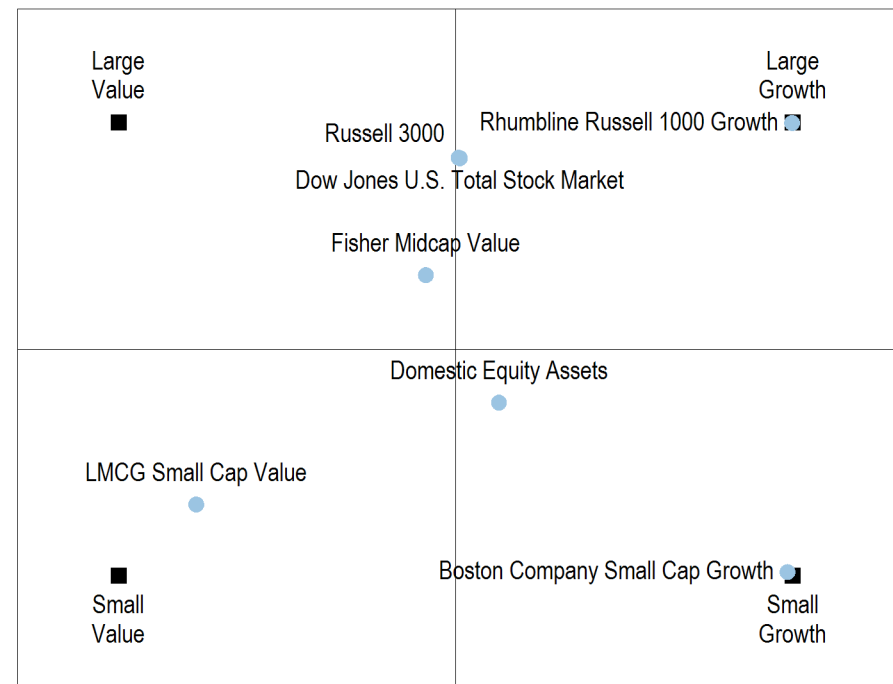
As of December 31, 2018

	Anlzd Return	Anlzd Standard Deviation	Information Ratio	Beta	Sharpe Ratio	Tracking Error
Real Estate	--	--	--	--	--	--
80% NCREIF ODCE / 20% Wilshire REIT	--	--	--	--	--	--
Core Real Estate	--	--	--	--	--	--
NCREIF ODCE (lagged one qtr., net)	9.7%	4.1%	--	1.0	2.2	0.0%
PRISA I	10.2%	4.4%	-0.2	1.0	2.2	1.1%
NCREIF ODCE	10.4%	4.4%	--	1.0	2.2	0.0%
Invesco Equity Real Estate Securities Trust	7.6%	12.8%	-0.1	0.9	0.5	2.4%
Wilshire REIT	7.9%	14.0%	--	1.0	0.5	0.0%
TA Realty Core Property Fund, L.P.	--	--	--	--	--	--
NCREIF ODCE	10.4%	4.4%	--	1.0	2.2	0.0%
Private Equity	--	--	--	--	--	--
Cambridge Associates Fund of Funds Composite 1-Quarter Lag	11.9%	6.3%	--	1.0	1.8	0.0%
Real Assets	--	--	--	--	--	--
CPI+3%	4.5%	0.7%	--	1.0	5.7	0.0%

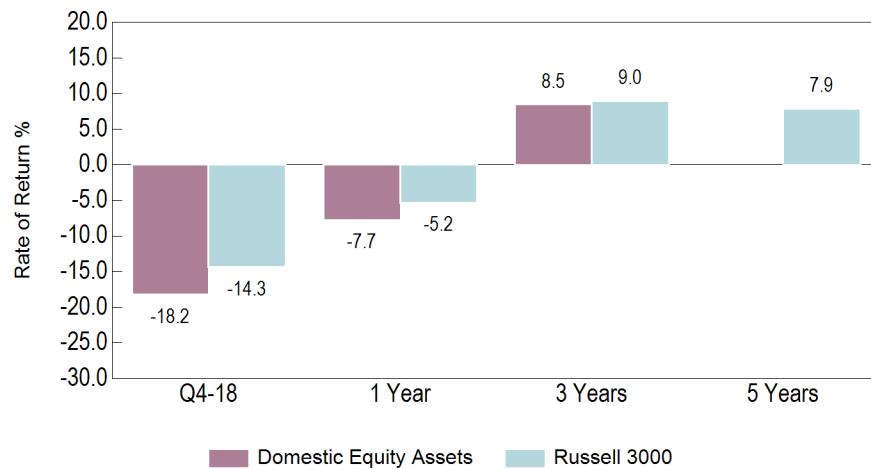
Asset Allocation on December 31, 2018

	Actual	Actual
Boston Company Small Cap Growth	\$42,977,209	20.9%
Fisher Midcap Value	\$38,452,124	18.7%
LMCG Small Cap Value	\$61,705,476	30.1%
Rhumblin Russell 1000 Growth	\$30,984,630	15.1%
Rhumblin Russell 1000 Value	\$30,683,016	15.0%
Total	\$205,182,053	100.0%

Domestic Equity Assets Style Map
3 Years Ending December 31, 2018



Return Summary
Ending December 31, 2018



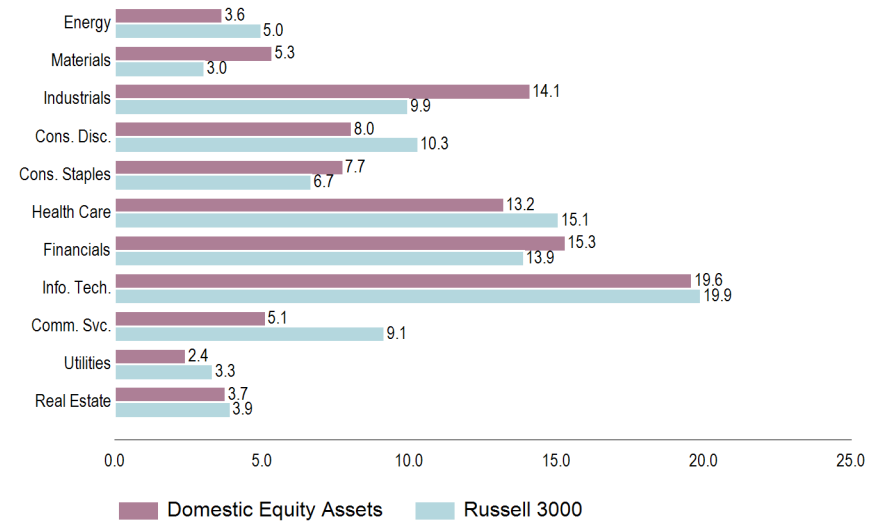
Domestic Equity Assets Equity Characteristics

	Portfolio Q4-18	Index Q4-18
Market Value		
Market Value (\$M)	205.18	--
Number Of Holdings	1127	3015
Characteristics		
Weighted Avg. Market Cap. (\$B)	54.77	154.67
Median Market Cap (\$B)	7.45	1.38
P/E Ratio	15.43	22.28
Yield	1.53	2.09
EPS Growth - 5 Yrs.	9.12	9.04
Price to Book	4.72	4.21
Beta (holdings; domestic)	1.13	1.02

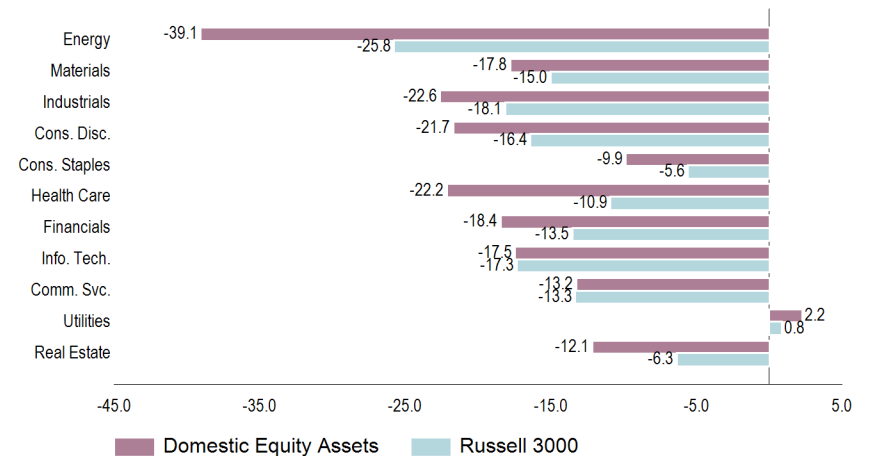
Top 10 Holdings

MICROSOFT	1.0%
APPLE	1.0%
PLANET FITNESS CL.A	0.9%
HUBSPOT	0.8%
TWILIO 'A'	0.8%
AMAZON.COM	0.8%
CHAS.RVR.LABS.INTL.	0.8%
MACOM TECH.SLTN.HDG.	0.7%
TREEHOUSE FOODS	0.7%
AUTODESK	0.7%
Total	8.3%

Sector Allocation (%) vs Russell 3000



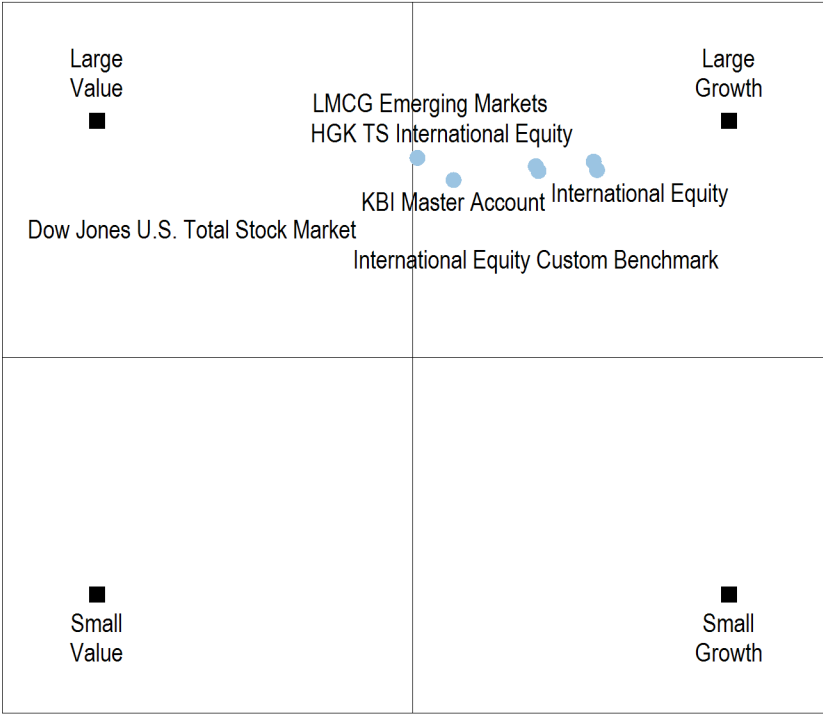
Sector Returns (%) vs Russell 3000



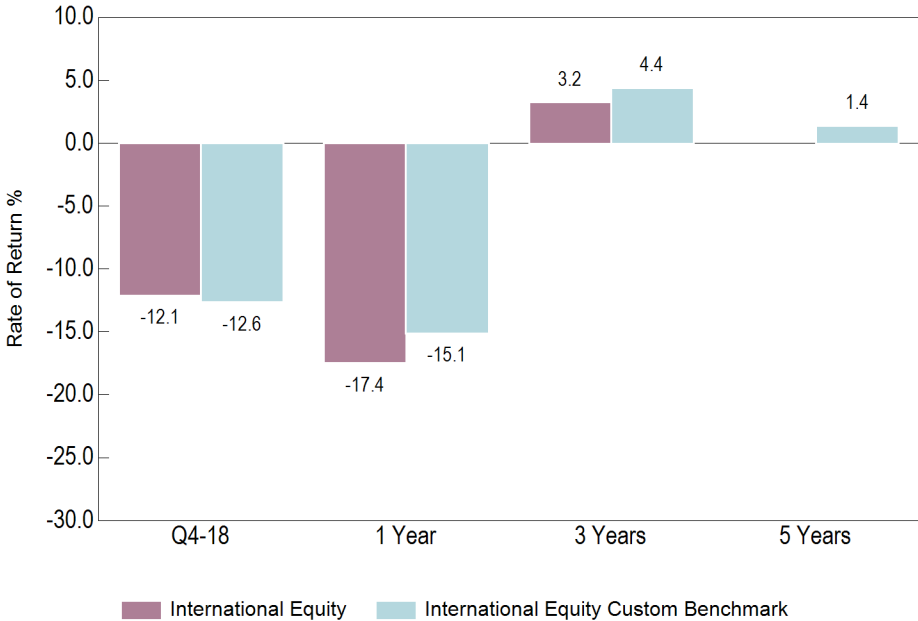
Asset Allocation on December 31, 2018

	Actual	Actual
ABS Emerging Markets	\$20,000,000	9.7%
Copper Rock Emerging Markets Small Cap	\$6,046,857	2.9%
Copper Rock International Small Cap	\$30,638,599	14.9%
HGK TS International Equity	\$36,125,296	17.6%
KBI Master Account	\$59,477,609	28.9%
LMCG Emerging Markets	\$53,290,344	25.9%
Total	\$205,578,705	100.0%

International Equity Style Map



**Return Summary
Ending December 31, 2018**



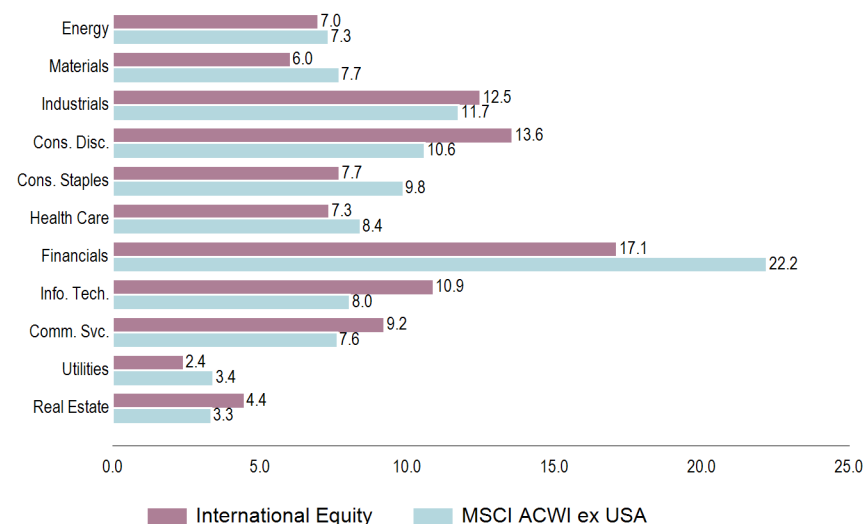
International Equity Equity Characteristics

	Portfolio Q4-18	Index Q4-18
Market Value		
Market Value (\$M)	205.58	--
Number Of Holdings	441	2136
Characteristics		
Weighted Avg. Market Cap. (\$B)	40.32	56.13
Median Market Cap (\$B)	7.11	7.02
P/E Ratio	15.84	16.43
Yield	3.80	3.44
EPS Growth - 5 Yrs.	10.45	9.47
Price to Book	2.61	2.36
Beta (holdings; domestic)	0.99	1.05

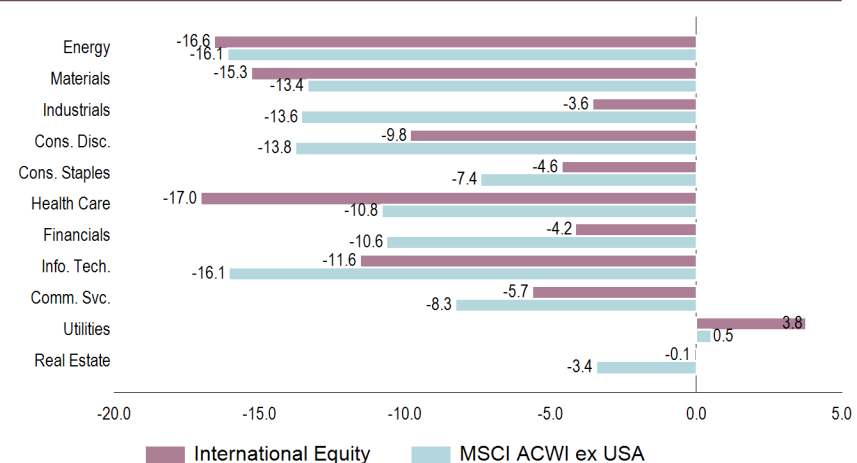
Top 10 Holdings

ROCHE HOLDING	1.8%
TAIWAN SEMICON.MNFG.	1.6%
TENCENT HOLDINGS	1.4%
SAMSUNG ELECTRONICS	1.3%
FERROVIAL	0.9%
MOWI	0.9%
RIO TINTO	0.8%
ISHARES MSCI EMRG.MKTS. IDX.FD.	0.8%
RHEINMETALL	0.8%
ROYAL DUTCH SHELL B	0.8%
Total	11.1%

Sector Allocation (%) vs MSCI ACWI ex USA



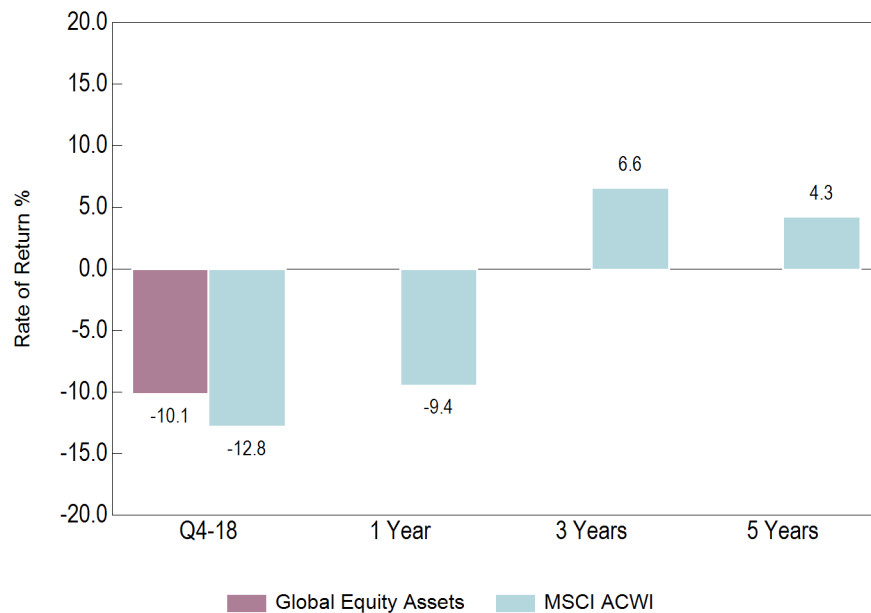
Sector Returns (%) vs MSCI ACWI ex USA



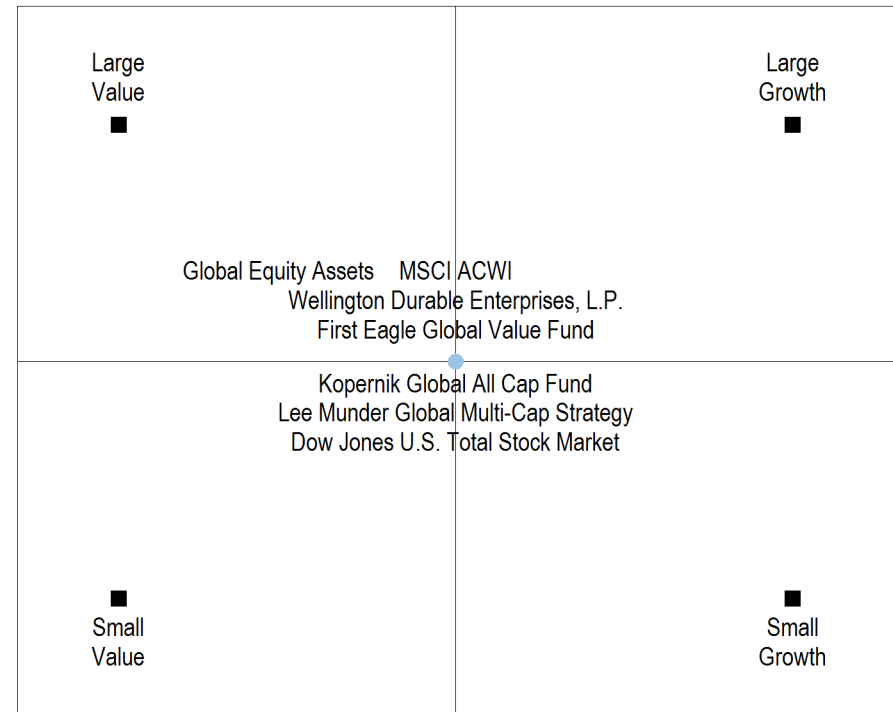
Asset Allocation on December 31, 2018

	Actual	Actual
First Eagle Global Value Fund	\$17,665,019	19.9%
Kopernik Global All Cap Fund	\$17,266,137	19.5%
Lee Munder Global Multi-Cap Strategy	\$25,214,877	28.4%
Wellington Durable Enterprises, L.P.	\$28,532,778	32.2%
Total	\$88,678,810	100.0%

**Return Summary
Ending December 31, 2018**



Global Equity Assets Style Map



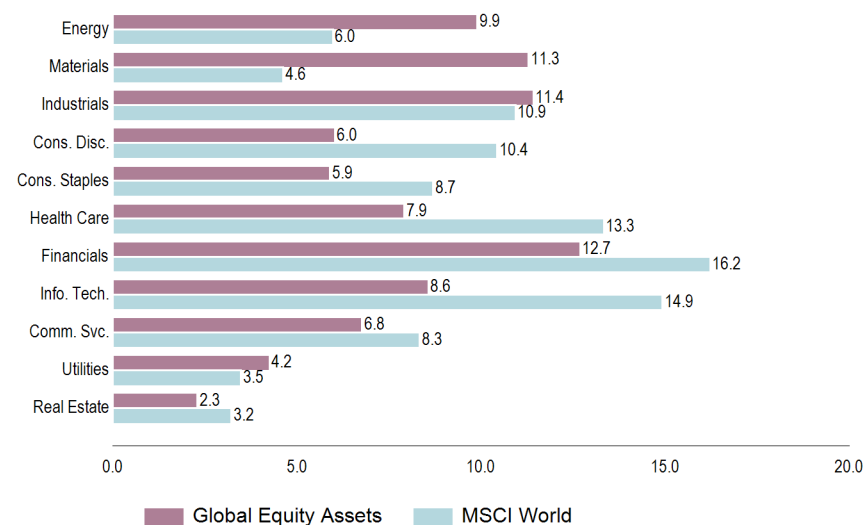
Global Equity Assets Equity Characteristics

	Portfolio Q4-18	Index Q4-18
Market Value		
Market Value (\$M)	88.68	--
Number Of Holdings	306	1633
Characteristics		
Weighted Avg. Market Cap. (\$B)	72.09	127.48
Median Market Cap (\$B)	9.85	11.17
P/E Ratio	14.98	18.78
Yield	2.40	2.73
EPS Growth - 5 Yrs.	7.10	8.74
Price to Book	3.12	3.56
Beta (holdings; domestic)	1.09	1.02

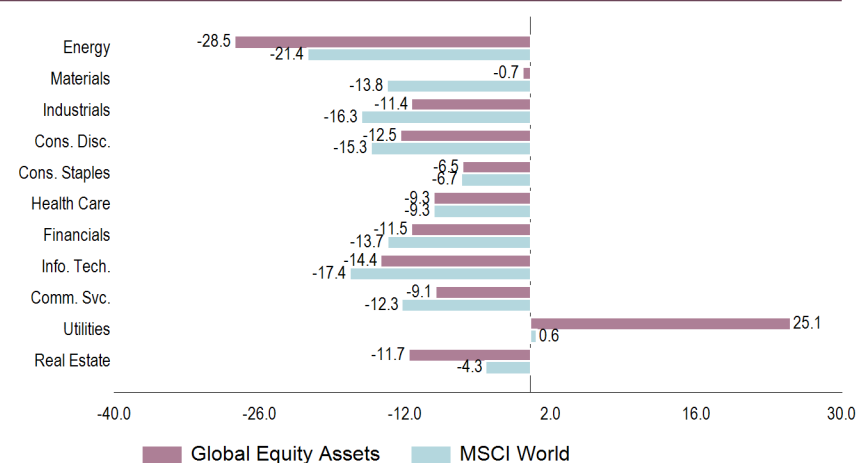
Top 10 Holdings

ISHARES CORE MSCI EMM. ETF	5.6%
NEWCREST MINING	1.7%
CAMECO (NYS)	1.5%
APPLE	1.4%
KT	1.3%
GAZPROM ORD	1.3%
AMAZON.COM	1.2%
ALPHABET A	1.2%
COMCAST A	1.1%
EDF	1.0%
Total	17.3%

Sector Allocation (%) vs MSCI World



Sector Returns (%) vs MSCI World



Fixed Income Assets

As of December 31, 2018

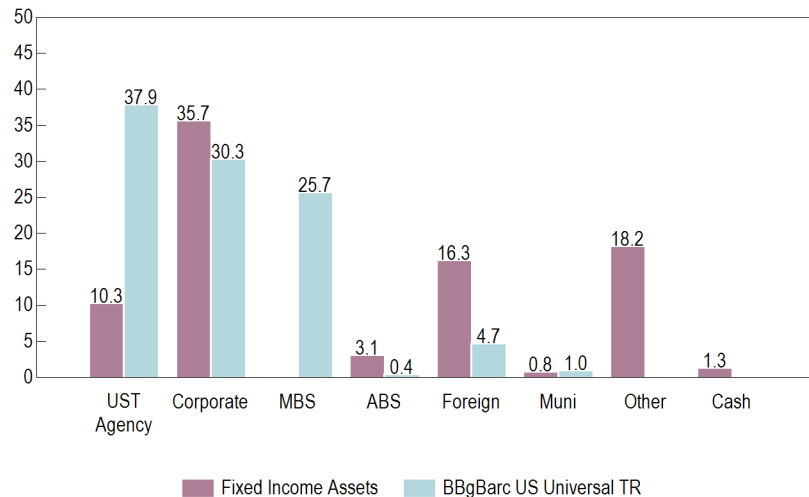
Asset Allocation on December 31, 2018

	Actual	Actual
Eaton Vance High Yield	\$32,883,450	18.0%
Franklin Templeton Emerging Market Bonds	\$36,405,393	20.0%
IR&M Core Bonds	\$78,387,483	43.0%
THL Bank Loan Select Fund	\$34,552,344	19.0%
Total	\$182,228,670	100.0%

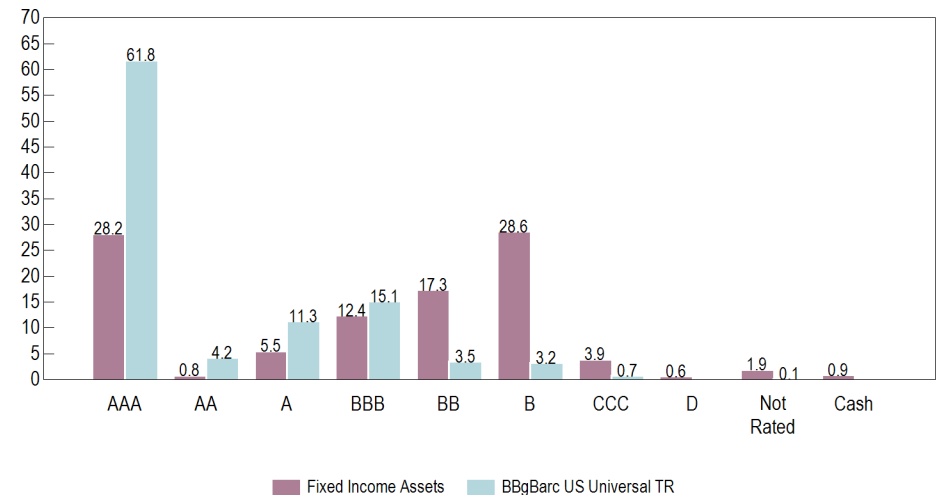
Fixed Income Assets Characteristics
vs. BBgBarc US Universal TR

	Portfolio Q4-18	Index Q4-18	Portfolio Q3-18
Fixed Income Characteristics			
Yield to Maturity	6.4	3.7	5.6
Average Duration	4.0	5.7	4.2
Average Quality	BBB	AA	BBB
Weighted Average Maturity	6.9	12.0	7.0

Sector Allocation



Credit Quality Allocation



As of December 31, 2018

Account Information

Account Name	Rhumbline Russell 1000 Value
Account Structure	Commingled Fund
Investment Style	Passive
Inception Date	4/30/13
Account Type	US Equity
Benchmark	Russell 1000 Value
Universe	eV US Large Cap Value Equity Net

Portfolio Performance Summary

	QTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	Inception	Inception
	(%)	(%)	(%)	(%)	(%)	(%)	Date
Rhumbline Russell 1000 Value	-11.7	-8.2	6.8	5.8	--	7.9	Apr-13
<i>Russell 1000 Value</i>	-11.7	-8.3	7.0	5.9	11.2	8.1	Apr-13
<i>eV US Large Cap Value Equity Net Median</i>	-13.5	-9.0	6.8	5.6	11.1	8.0	Apr-13
<i>eV US Large Cap Value Equity Net Rank</i>	28	42	50	43	--	51	Apr-13

Top 10 Holdings

BERKSHIRE HATHAWAY 'B'	2.9%
JP MORGAN CHASE & CO.	2.7%
EXXON MOBIL	2.4%
JOHNSON & JOHNSON	2.4%
PFIZER	2.1%
VERIZON COMMUNICATIONS	2.0%
PROCTER & GAMBLE	1.9%
BANK OF AMERICA	1.9%
INTEL	1.8%
AT&T	1.7%
Total	21.9%

Rhumbline Russell 1000 Value Characteristics

	Portfolio	Index	Portfolio
	Q4-18	Q4-18	Q3-18
Market Value			
Market Value (\$M)	30.7	--	34.7
Number Of Holdings	724	725	727

Characteristics

Weighted Avg. Market Cap. (\$B)	110.9	111.5	118.6
Median Market Cap (\$B)	8.2	8.2	9.7
P/E Ratio	17.7	18.1	22.2
Yield	2.9	2.8	2.5
EPS Growth - 5 Yrs.	5.6	4.5	5.6
Price to Book	2.6	2.6	2.7
Beta (holdings; domestic)	0.9	0.9	1.0

Sector Distribution

Energy	9.1	9.3	10.6
Materials	4.0	4.1	3.8
Industrials	7.2	7.4	7.9
Consumer Discretionary	5.1	5.2	5.1
Consumer Staples	9.0	7.8	9.0
Health Care	15.5	15.7	15.0
Financials	22.1	22.5	22.4
Information Technology	9.2	9.3	9.6
Communication Services	7.1	7.3	6.6
Utilities	6.3	6.5	5.4
Real Estate	4.8	4.9	4.5



As of December 31, 2018

Account Information

Account Name	Rhumblin Russell 1000 Growth
Account Structure	Commingled Fund
Investment Style	Passive
Inception Date	7/31/09
Account Type	US Equity
Benchmark	Russell 1000 Growth
Universe	eV US Large Cap Growth Equity Net

Portfolio Performance Summary

	QTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	Inception	Inception
	(%)	(%)	(%)	(%)	(%)	(%)	Date
Rhumblin Russell 1000 Growth	-15.9	-1.5	11.0	10.3	--	14.0	Jul-09
<i>Russell 1000 Growth</i>	-15.9	-1.5	11.1	10.4	15.3	14.1	Jul-09
<i>eV US Large Cap Growth Equity Net Median</i>	-15.5	-1.3	9.5	8.8	14.0	13.0	Jul-09
<i>eV US Large Cap Growth Equity Net Rank</i>	56	52	21	14	--	24	Jul-09

Top 10 Holdings

APPLE	6.5%
MICROSOFT	6.3%
AMAZON.COM	5.3%
ALPHABET 'C'	2.7%
ALPHABET A	2.7%
FACEBOOK CLASS A	2.7%
UNITEDHEALTH GROUP	2.1%
VISA 'A'	2.0%
HOME DEPOT	1.7%
MASTERCARD	1.5%
Total	33.3%

Rhumble Russell 1000 Growth Characteristics

	Portfolio	Index	Portfolio
	Q4-18	Q4-18	Q3-18
Market Value			
Market Value (\$M)	31.0	--	46.7
Number Of Holdings	544	546	542
Characteristics			
Weighted Avg. Market Cap. (\$B)	222.0	222.1	291.6
Median Market Cap (\$B)	10.3	10.3	12.7
P/E Ratio	27.5	23.3	40.4
Yield	1.4	1.5	1.2
EPS Growth - 5 Yrs.	13.1	12.9	13.1
Price to Book	9.7	8.6	10.9
Beta (holdings; domestic)	1.1	1.1	1.1
Sector Distribution			
Energy	0.8	0.8	0.9
Materials	1.8	1.8	1.6
Industrials	11.8	11.8	12.0
Consumer Discretionary	15.1	15.1	15.4
Consumer Staples	6.0	6.0	5.4
Health Care	14.2	14.3	13.8
Financials	4.4	4.4	4.2
Information Technology	31.3	31.5	32.6
Communication Services	11.9	11.9	12.0
Utilities	0.0	0.0	0.0
Real Estate	2.3	2.3	2.0

Fisher Midcap Value

As of December 31, 2018

Account Information

Account Name	Fisher Midcap Value
Account Structure	Commingled Fund
Investment Style	Active
Inception Date	4/30/07
Account Type	US Equity
Benchmark	Russell MidCap Value
Universe	eV US Mid Cap Value Equity Net

Portfolio Performance Summary

	QTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	Inception	Inception
	(%)	(%)	(%)	(%)	(%)	(%)	Date
Fisher Midcap Value	-18.6	-12.9	7.0	5.0	13.3	6.2	Apr-07
<i>Russell MidCap Value</i>	-15.0	-12.3	6.1	5.4	13.0	5.7	Apr-07
<i>eV US Mid Cap Value Equity Net Median</i>	-16.7	-14.0	5.4	4.6	12.3	5.8	Apr-07
<i>eV US Mid Cap Value Equity Net Rank</i>	84	35	21	39	26	38	Apr-07

Top 10 Holdings

AUTODESK	3.5%
TOTAL SYSTEM SERVICES	3.0%
PERKINELMER	2.8%
RAYMOND JAMES FINL.	2.7%
ASPEN TECHNOLOGY	2.6%
FIDELITY NAT.INFO.SVS.	2.6%
E*TRADE FINANCIAL	2.5%
COOPER COS.	2.5%
ROSS STORES	2.4%
CHAS.RVR.LABS.INTL.	2.4%
Total	27.2%

Fisher Midcap Value Characteristics

	Portfolio	Index	Portfolio
	Q4-18	Q4-18	Q3-18
Market Value			
Market Value (\$M)	38.5	--	47.3
Number Of Holdings	78	592	79

Characteristics

Weighted Avg. Market Cap. (\$B)	12.9	12.8	15.4
Median Market Cap (\$B)	8.2	6.2	9.7
P/E Ratio	17.5	18.7	23.0
Yield	1.3	2.6	1.0
EPS Growth - 5 Yrs.	11.5	4.8	9.9
Price to Book	3.6	2.2	4.3
Beta (holdings; domestic)	1.1	1.0	1.1

Sector Distribution

Energy	6.3	5.7	7.9
Materials	3.4	6.2	3.8
Industrials	14.6	11.9	14.5
Consumer Discretionary	5.8	8.8	5.4
Consumer Staples	3.9	5.2	3.5
Health Care	15.9	6.8	14.9
Financials	19.6	17.5	20.1
Information Technology	22.7	8.4	22.2
Communication Services	1.8	3.3	1.9
Utilities	0.0	12.0	0.0
Real Estate	5.5	14.2	5.0



As of December 31, 2018

Account Information

Account Name	Boston Company Small Cap Growth
Account Structure	Separate Account
Investment Style	Active
Inception Date	8/31/09
Account Type	US Equity
Benchmark	Russell 2000 Growth
Universe	eV US Small Cap Growth Equity Net

Portfolio Performance Summary

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Boston Company Small Cap Growth	-22.1	-1.5	12.0	7.6	--	13.0	Aug-09
Russell 2000 Growth	-21.7	-9.3	7.2	5.1	13.5	12.2	Aug-09
eV US Small Cap Growth Equity Net Median	-21.0	-4.4	8.9	6.0	14.3	13.1	Aug-09
eV US Small Cap Growth Equity Net Rank	67	35	23	25	--	51	Aug-09

Top 10 Holdings

PLANET FITNESS CL.A	4.1%
HUBSPOT	4.1%
TWILIO 'A'	3.9%
BANDWIDTH A	3.4%
FRESHPET	2.8%
SHOPIFY 'A' (NYS)	2.7%
EVERBRIDGE	2.3%
MERCURY SYSTEMS	2.3%
RAPID7	2.2%
CALAVO GROWERS	2.1%
Total	29.8%

Boston Company Small Cap Growth Characteristics

	Portfolio Q4-18	Index Q4-18	Portfolio Q3-18
Market Value			
Market Value (\$M)	43.0	--	55.1
Number Of Holdings	80	1257	80
Characteristics			
Weighted Avg. Market Cap. (\$B)	2.7	2.2	3.0
Median Market Cap (\$B)	1.7	0.8	1.8
P/E Ratio	5.2	14.6	4.6
Yield	0.2	0.6	0.2
EPS Growth - 5 Yrs.	14.6	11.6	13.4
Price to Book	8.0	4.9	9.2
Beta (holdings; domestic)	1.3	1.3	1.3
Sector Distribution			
Energy	1.5	1.7	4.2
Materials	1.8	3.4	3.2
Industrials	10.8	17.7	12.4
Consumer Discretionary	9.6	14.8	8.1
Consumer Staples	7.7	3.1	7.3
Health Care	22.3	26.3	23.9
Financials	5.0	7.5	4.7
Information Technology	31.8	18.5	26.4
Communication Services	3.3	3.5	4.4
Utilities	0.0	0.5	0.0
Real Estate	2.7	3.0	2.5

LMCG Small Cap Value

As of December 31, 2018

Account Information

Account Name	LMCG Small Cap Value
Account Structure	Separate Account
Investment Style	Active
Inception Date	3/31/11
Account Type	US Equity
Benchmark	Russell 2000 Value
Universe	eV US Small Cap Value Equity Net

Portfolio Performance Summary

	QTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	Inception	Inception
	(%)	(%)	(%)	(%)	(%)	(%)	Date
LMCG Small Cap Value	-19.1	-15.4	5.0	3.7	--	6.3	Mar-11
Russell 2000 Value	-18.7	-12.9	7.4	3.6	10.4	6.9	Mar-11
eV US Small Cap Value Equity Net Median	-19.2	-15.0	5.5	3.1	11.9	7.0	Mar-11
eV US Small Cap Value Equity Net Rank	50	55	58	38	--	69	Mar-11

Top 10 Holdings

MACOM TECH.SLTN.HDG.	2.5%
TREEHOUSE FOODS	2.4%
NATIONAL GENERAL HDG.	2.3%
BLACKSTONE MGE.TST.CL.A	2.2%
STERLING BANCORP	2.1%
DARLING INGREDIENTS	2.0%
IBERIABANK	2.0%
NEXSTAR MEDIA GROUP CL.A	2.0%
PORTLAND GEN.ELEC.	2.0%
BANKUNITED	1.7%
Total	20.9%

LMCG Small Cap Value Characteristics

	Portfolio	Index	Portfolio
	Q4-18	Q4-18	Q3-18
Market Value			
Market Value (\$M)	61.7	--	76.1
Number Of Holdings	93	1387	96
Characteristics			
Weighted Avg. Market Cap. (\$B)	2.7	1.8	3.2
Median Market Cap (\$B)	2.3	0.6	2.9
P/E Ratio	13.1	13.2	15.6
Yield	1.9	2.2	1.5
EPS Growth - 5 Yrs.	7.0	5.1	7.4
Price to Book	1.7	1.5	2.4
Beta (holdings; domestic)	1.2	1.1	1.1

Sector Distribution

Energy	2.2	5.1	3.3
Materials	11.5	4.1	10.2
Industrials	20.7	11.8	22.2
Consumer Discretionary	6.2	9.5	7.0
Consumer Staples	10.4	2.6	9.3
Health Care	3.5	4.3	4.7
Financials	21.8	29.7	22.0
Information Technology	8.3	10.8	8.2
Communication Services	4.0	3.1	3.4
Utilities	4.8	7.3	3.9
Real Estate	3.6	11.7	3.5

As of December 31, 2018

Account Information

Account Name	KBI Master Account
Account Structure	Commingled Fund
Investment Style	Active
Inception Date	7/31/05
Account Type	Non-US Stock Developed
Benchmark	MSCI EAFE
Universe	eV EAFE Core Equity Net

Portfolio Performance Summary

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
KBI Master Account	-12.5	-16.3	1.7	-0.8	5.2	2.9	Jul-05
MSCI EAFE	-12.5	-13.8	2.9	0.5	6.3	3.7	Jul-05
eV EAFE Core Equity Net Median	-14.2	-16.0	2.3	1.1	7.1	4.3	Jul-05
eV EAFE Core Equity Net Rank	21	54	64	89	94	94	Jul-05

Top 10 Holdings

RIO TINTO	2.4%
ROYAL DUTCH SHELL B	2.4%
ROCHE HOLDING	2.3%
NOVO NORDISK 'B'	2.2%
ASSICURAZIONI GENERALI	2.1%
SIEMENS	2.1%
REPSOL YPF	2.1%
IMPERIAL BRANDS	1.9%
ABN AMRO GROUP	1.8%
IBERDROLA	1.5%
Total	20.9%

KBI Master Account Characteristics

	Portfolio Q4-18	Index Q4-18	Portfolio Q3-18
Market Value			
Market Value (\$M)	59.5	--	75.8
Number Of Holdings	233	920	223

Characteristics

Weighted Avg. Market Cap. (\$B)	43.4	52.6	47.1
Median Market Cap (\$B)	12.1	9.1	11.3
P/E Ratio	13.6	16.7	15.3
Yield	4.8	3.6	4.1
EPS Growth - 5 Yrs.	9.4	8.6	11.5
Price to Book	2.1	2.3	2.4
Beta (holdings; domestic)	1.0	1.0	1.0

Sector Distribution

Energy	7.6	5.9	7.9
Materials	8.5	7.4	8.7
Industrials	11.4	14.3	11.5
Consumer Discretionary	9.9	11.2	9.3
Consumer Staples	8.7	11.6	8.4
Health Care	8.4	11.2	6.4
Financials	22.1	19.5	21.8
Information Technology	7.8	6.0	11.8
Communication Services	6.2	5.6	6.2
Utilities	3.4	3.8	2.5
Real Estate	3.8	3.7	2.9



As of December 31, 2018

Account Information

Account Name	HGK TS International Equity
Account Structure	Commingled Fund
Investment Style	Active
Inception Date	2/28/11
Account Type	Non-US Stock Developed
Benchmark	MSCI EAFE
Universe	eV EAFE All Cap Equity Net

Portfolio Performance Summary

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
HGK TS International Equity	-11.6	-15.3	4.0	0.8	--	4.7	Feb-11
MSCI EAFE	-12.5	-13.8	2.9	0.5	6.3	2.7	Feb-11
eV EAFE All Cap Equity Net Median	-14.1	-14.6	2.8	1.1	6.8	3.7	Feb-11
eV EAFE All Cap Equity Net Rank	27	54	30	57	--	32	Feb-11

Top 10 Holdings

ROCHE HOLDING	6.3%
FERROVIAL	5.5%
MOWI	5.5%
KPN KON	4.9%
SAMSUNG ELECTRONICS GDS	4.9%
MURATA MANUFACTURING	4.7%
SHIMANO	4.7%
SVENSKA HANDBKN.'A'	4.6%
HENDERSON LD.DEV.	4.5%
TOYOTA MOTOR	4.3%
Total	49.8%

HGK TS International Equity Characteristics

	Portfolio Q4-18	Index Q4-18	Portfolio Q3-18
Market Value			
Market Value (\$M)	36.1	--	46.2
Number Of Holdings	27	920	23
Characteristics			
Weighted Avg. Market Cap. (\$B)	54.4	52.6	70.8
Median Market Cap (\$B)	14.9	9.1	20.3
P/E Ratio	22.0	16.7	24.3
Yield	3.1	3.6	2.5
EPS Growth - 5 Yrs.	8.3	8.6	7.7
Price to Book	3.2	2.3	3.8
Beta (holdings; domestic)	1.0	1.0	1.0
Sector Distribution			
Energy	6.9	5.9	5.2
Materials	0.0	7.4	0.0
Industrials	20.4	14.3	21.9
Consumer Discretionary	34.5	11.2	32.6
Consumer Staples	5.2	11.6	0.0
Health Care	6.0	11.2	5.8
Financials	4.3	19.5	4.8
Information Technology	9.1	6.0	10.3
Communication Services	8.7	5.6	7.5
Utilities	0.0	3.8	0.0
Real Estate	4.3	3.7	4.2

As of December 31, 2018

Account Information

Account Name	Copper Rock International Small Cap
Account Structure	Commingled Fund
Investment Style	Active
Inception Date	11/30/17
Account Type	Non-US Stock Developed
Benchmark	MSCI EAFE Small Cap
Universe	eV EAFE Small Cap Equity Net

Portfolio Performance Summary

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Copper Rock International Small Cap	-18.4	-22.9	--	--	--	-20.1	Nov-17
MSCI EAFE Small Cap	-16.0	-17.9	3.7	3.1	10.5	-14.6	Nov-17
eV EAFE Small Cap Equity Net Median	-17.2	-20.2	3.1	2.9	11.5	-16.8	Nov-17
eV EAFE Small Cap Equity Net Rank	76	82	--	--	--	86	Nov-17

Top 10 Holdings

CHARTER HALL GROUP STAPLED UNITS	2.0%
NIPPON SUISAN KAISHA	1.8%
MARUI GROUP	1.6%
SUNRISE COMMUNICATIONS	1.6%
SPARK NEW ZEALAND	1.6%
NIHON UNISYS	1.5%
TAKARA BIO	1.5%
LION	1.5%
KANDENKO	1.5%
ASR NEDERLAND	1.5%
Total	16.2%

Copper Rock International Small Cap Characteristics

	Portfolio Q4-18	Index Q4-18	Portfolio Q3-18
Market Value			
Market Value (\$M)	30.6	--	37.6
Number Of Holdings	91	2348	88
Characteristics			
Weighted Avg. Market Cap. (\$B)	3.0	2.3	3.6
Median Market Cap (\$B)	2.7	0.9	3.4
P/E Ratio	16.6	16.4	19.8
Yield	2.5	2.8	2.1
EPS Growth - 5 Yrs.	16.1	12.1	14.0
Price to Book	2.8	2.1	3.4
Beta (holdings; domestic)	0.9	0.9	0.9
Sector Distribution			
Energy	6.5	2.4	10.3
Materials	3.9	8.5	7.6
Industrials	20.1	21.4	17.9
Consumer Discretionary	10.4	13.1	8.9
Consumer Staples	9.4	6.9	8.1
Health Care	13.2	7.5	12.1
Financials	8.8	11.7	10.9
Information Technology	10.1	9.2	10.6
Communication Services	6.6	4.7	4.5
Utilities	4.3	2.4	1.7
Real Estate	6.2	12.2	7.0



LMCG Emerging Markets

As of December 31, 2018

Account Information

Account Name	LMCG Emerging Markets
Account Structure	Commingled Fund
Investment Style	Active
Inception Date	9/30/13
Account Type	Non-US Stock Emerging
Benchmark	MSCI Emerging Markets
Universe	eV Emg Mkts Equity Net

Portfolio Performance Summary

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
LMCG Emerging Markets	-9.9	-17.5	6.7	0.0	--	0.0	Sep-13
MSCI Emerging Markets	-7.5	-14.6	9.2	1.6	8.0	1.9	Sep-13
eV Emg Mkts Equity Net Median	-7.6	-16.2	7.7	1.4	8.9	1.8	Sep-13
eV Emg Mkts Equity Net Rank	84	65	63	86	--	89	Sep-13

Top 10 Holdings

TENCENT HOLDINGS	4.6%
TAIWAN SEMICON.MNFG.	3.5%
SAMSUNG ELECTRONICS	3.2%
ISHARES MSCI EMRG.MKTS. IDX.FD.	2.7%
58 COM CL.A ADR 1:2	2.4%
HOUSING DEVELOPMENT FINANCE CORPORATION	1.7%
NASPERS	1.6%
CHINA CON.BANK 'H'	1.4%
LUKOIL OAO SPN.ADR 1:1	1.4%
SK HYNIX	1.2%
Total	23.7%

LMCG Emerging Markets Characteristics

	Portfolio Q4-18	Index Q4-18	Portfolio Q3-18
Market Value			
Market Value (\$M)	53.3	--	91.6
Number Of Holdings	121	1125	120
Characteristics			
Weighted Avg. Market Cap. (\$B)	51.8	70.0	71.2
Median Market Cap (\$B)	7.4	4.9	9.5
P/E Ratio	15.1	16.6	18.1
Yield	3.8	2.9	3.2
EPS Growth - 5 Yrs.	11.0	11.7	11.8
Price to Book	2.2	2.9	3.4
Beta (holdings; domestic)	1.0	1.1	1.0
Sector Distribution			
Energy	6.6	8.0	8.0
Materials	7.6	7.7	9.3
Industrials	5.0	5.6	3.6
Consumer Discretionary	8.7	10.5	11.5
Consumer Staples	6.8	6.7	5.3
Health Care	3.4	2.8	3.5
Financials	23.0	24.8	21.4
Information Technology	15.8	14.3	17.4
Communication Services	14.4	14.0	13.5
Utilities	1.3	2.7	1.7
Real Estate	4.3	3.0	2.7

First Eagle Global Value Fund

As of December 31, 2018

Account Information

Account Name	First Eagle Global Value Fund
Account Structure	Commingled Fund
Investment Style	Active
Inception Date	2/01/18
Account Type	Equity
Benchmark	MSCI ACWI
Universe	

Portfolio Performance Summary

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
First Eagle Global Value Fund	-8.4	--	--	--	--	-11.7	Feb-18
MSCI ACWI	-12.8	-9.4	6.6	4.3	9.5	-14.3	Feb-18

Top 10 Holdings

ORACLE	3.1%
COMCAST A	2.2%
EXXON MOBIL	2.2%
SCHLUMBERGER	2.1%
FANUC	2.0%
KDDI	2.0%
SECOM	1.9%
BANK OF NEW YORK MELLON	1.8%
DANONE	1.8%
BRITISH AMERICAN TOBACCO	1.7%
Total	20.9%

First Eagle Global Value Fund Characteristics

	Portfolio Q4-18	Index Q4-18	Portfolio Q3-18
Market Value			
Market Value (\$M)	17.7	--	19.3
Number Of Holdings	147	2758	139
Characteristics			
Weighted Avg. Market Cap. (\$B)	66.5	120.6	79.4
Median Market Cap (\$B)	16.4	8.5	18.8
P/E Ratio	16.6	18.6	17.7
Yield	2.9	2.8	2.3
EPS Growth - 5 Yrs.	7.7	9.1	7.7
Price to Book	2.8	3.4	3.2
Beta (holdings; domestic)	1.0	1.0	1.0

Sector Distribution

Energy	7.0	6.2	10.2
Materials	8.0	5.0	10.2
Industrials	12.9	10.3	14.3
Consumer Discretionary	4.9	10.4	4.7
Consumer Staples	8.6	8.4	7.9
Health Care	4.9	12.1	5.6
Financials	15.5	17.2	17.6
Information Technology	8.8	14.8	11.3
Communication Services	7.5	9.0	8.9
Utilities	0.3	3.4	0.6
Real Estate	3.7	3.2	4.5



As of December 31, 2018

Account Information

Account Name	Kopernik Global All Cap Fund
Account Structure	Commingled Fund
Investment Style	Active
Inception Date	2/01/18
Account Type	Equity
Benchmark	MSCI ACWI
Universe	

Portfolio Performance Summary

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Kopernik Global All Cap Fund	-1.6	--	--	--	--	-13.7	Feb-18
MSCI ACWI	-12.8	-9.4	6.6	4.3	9.5	-14.3	Feb-18

Top 10 Holdings

CAMECO (NYS)	5.1%
NEWCREST MINING	5.1%
KT	4.5%
GAZPROM ORD	4.4%
EDF	3.3%
HYUNDAI MOTOR	3.3%
CENTRAIS ELETR BRAS- ELETROBRAS ON	3.2%
MITSUI	3.2%
RUSGIDRO ORD	3.2%
RANGE RES.	3.2%
Total	38.3%

Kopernik Global All Cap Fund Characteristics

	Portfolio Q4-18	Index Q4-18	Portfolio Q3-18
Market Value			
Market Value (\$M)	17.3	--	17.6
Number Of Holdings	76	2758	71
Characteristics			
Weighted Avg. Market Cap. (\$B)	12.9	120.6	12.3
Median Market Cap (\$B)	1.1	8.5	1.2
P/E Ratio	1.3	18.6	-0.1
Yield	2.1	2.8	1.9
EPS Growth - 5 Yrs.	-7.9	9.1	-5.3
Price to Book	0.9	3.4	0.9
Beta (holdings; domestic)	1.0	1.0	1.1

Sector Distribution

Energy	17.8	6.2	19.7
Materials	26.2	5.0	23.3
Industrials	12.5	10.3	10.2
Consumer Discretionary	3.1	10.4	2.2
Consumer Staples	6.8	8.4	6.8
Health Care	0.5	12.1	0.0
Financials	6.8	17.2	7.1
Information Technology	1.4	14.8	2.1
Communication Services	6.4	9.0	7.2
Utilities	11.7	3.4	11.3
Real Estate	2.2	3.2	2.3

Lee Munder Global Multi-Cap Strategy

As of December 31, 2018

Account Information

Account Name	Lee Munder Global Multi-Cap Strategy
Account Structure	Commingled Fund
Investment Style	Active
Inception Date	3/01/18
Account Type	Equity
Benchmark	MSCI ACWI
Universe	

Portfolio Performance Summary

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Lee Munder Global Multi-Cap Strategy	-14.3	--	--	--	--	-11.6	Mar-18
MSCI ACWI	-12.8	-9.4	6.6	4.3	9.5	-10.5	Mar-18

Top 10 Holdings

ISHARES CORE MSCI EMM. ETF	12.4%
APPLE	3.1%
AMAZON.COM	2.6%
ALPHABET A	2.3%
ISHARES MSCI EAFE	1.8%
JP MORGAN CHASE & CO.	1.7%
CAPITAL ONE FINL.	1.6%
MICROSOFT	1.4%
SVB FINANCIAL GROUP	1.4%
DEVON ENERGY	1.3%
Total	29.6%

Lee Munder Global Multi-Cap Strategy Characteristics

	Portfolio Q4-18	Index Q4-18	Portfolio Q3-18
Market Value			
Market Value (\$M)	25.2	--	29.4
Number Of Holdings	92	2758	92
Characteristics			
Weighted Avg. Market Cap. (\$B)	107.6	120.6	131.1
Median Market Cap (\$B)	9.8	8.5	11.4
P/E Ratio	22.9	18.6	35.6
Yield	2.3	2.8	1.8
EPS Growth - 5 Yrs.	10.3	9.1	10.3
Price to Book	4.2	3.4	4.6
Beta (holdings; domestic)	1.2	1.0	1.2

Sector Distribution

Energy	6.4	6.2	6.4
Materials	3.1	5.0	3.1
Industrials	9.6	10.3	9.6
Consumer Discretionary	8.8	10.4	8.8
Consumer Staples	3.5	8.4	3.5
Health Care	15.0	12.1	15.0
Financials	14.9	17.2	14.9
Information Technology	13.3	14.8	13.3
Communication Services	6.5	9.0	6.5
Utilities	1.8	3.4	1.8
Real Estate	1.4	3.2	1.4



Account Information

Account Name	IR&M Core Bonds
Account Structure	Commingled Fund
Investment Style	Passive
Inception Date	11/30/04
Account Type	US Fixed Income Investment Grade
Benchmark	75% Bbg Barclays Aggregate/25% Bbg Barclays US TIPs 1-10 year
Universe	eV US Core Fixed Inc Gross

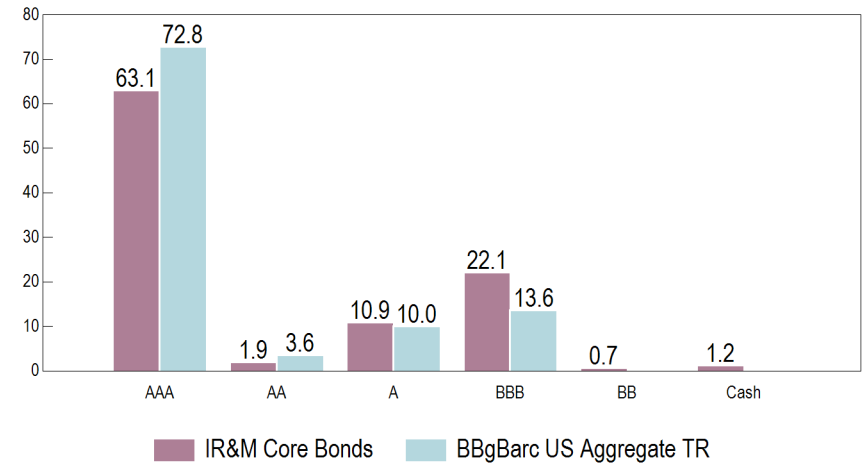
Portfolio Performance Summary

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
IR&M Core Bonds	1.0	-0.3	2.2	2.3	4.3	3.9	Nov-04
75% Bbg Barclays Aggregate/25% Bbg Barclays US TIPs 1-10 year	1.2	-0.1	2.0	2.2	3.4	3.7	Nov-04
eV US Core Fixed Inc Gross Median	1.4	0.0	2.4	2.8	4.3	4.3	Nov-04
eV US Core Fixed Inc Gross Rank	80	79	73	96	55	90	Nov-04

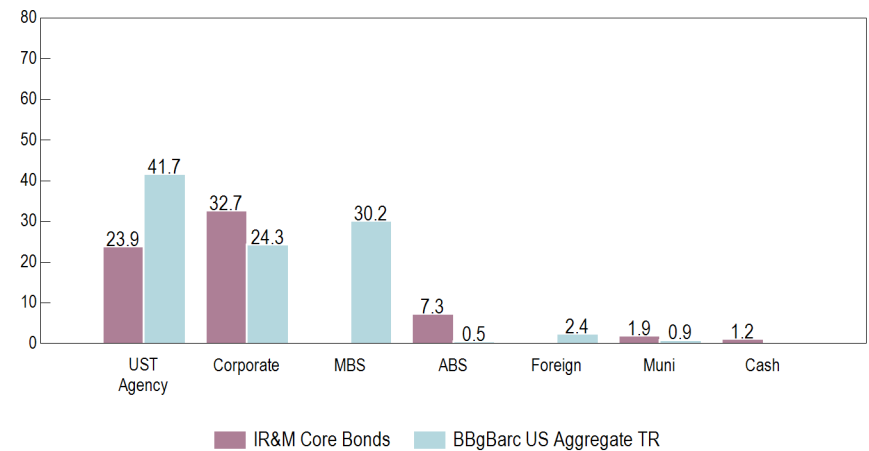
IR&M Core Bonds Characteristics vs. BBgBarc US Aggregate TR

	Portfolio Q4-18	Index Q4-18	Portfolio Q3-18
Fixed Income Characteristics			
Yield to Maturity	3.6	3.3	3.6
Average Duration	5.7	5.9	5.9
Average Quality	AA	AA	AA
Weighted Average Maturity	8.5	12.9	8.1

Credit Quality Allocation



Sector Allocation



Account Information

Account Name	Eaton Vance High Yield
Account Structure	Commingled Fund
Investment Style	Active
Inception Date	4/30/06
Account Type	US Fixed Income High Yield
Benchmark	ICE BofAML US High Yield TR
Universe	eV US High Yield Fixed Inc Net

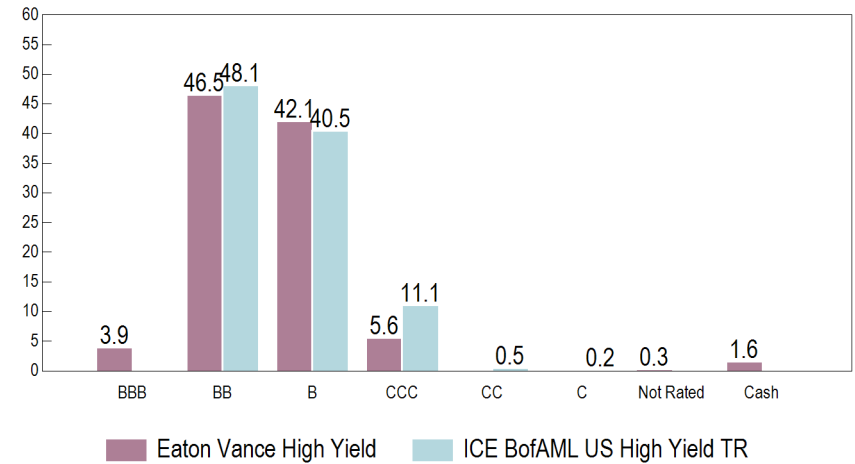
Portfolio Performance Summary

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Eaton Vance High Yield	-4.1	-2.2	5.6	3.8	10.8	6.5	Apr-06
ICE BofAML US High Yield TR	-4.6	-2.2	7.3	3.8	11.0	6.8	Apr-06
eV US High Yield Fixed Inc Net Median	-4.1	-2.3	6.0	3.3	9.6	6.2	Apr-06
eV US High Yield Fixed Inc Net Rank	46	49	59	30	12	29	Apr-06

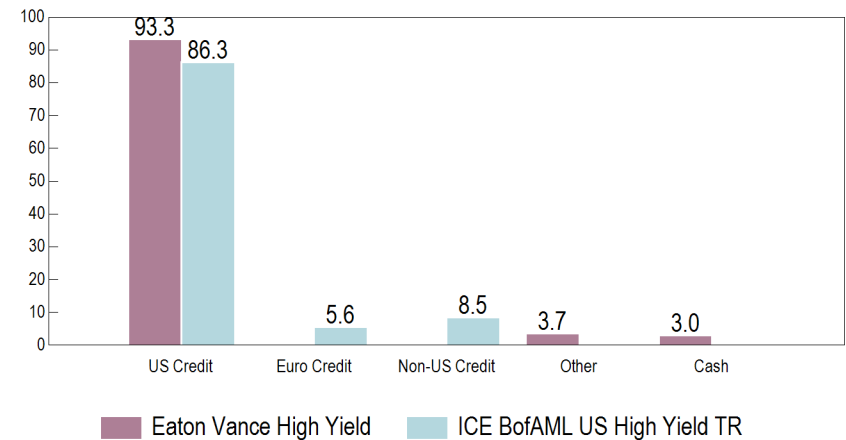
Eaton Vance High Yield Characteristics vs. ICE BofAML US High Yield TR

	Portfolio Q4-18	Index Q4-18	Portfolio Q3-18
Fixed Income Characteristics			
Yield to Maturity	7.2	8.1	6.1
Average Duration	4.0	4.4	3.7
Average Quality	BB	B	BB
Weighted Average Maturity	6.0	5.8	6.1

Credit Quality Allocation



Sector Allocation



Account Information

Account Name	THL Bank Loan Select Fund
Account Structure	Commingled Fund
Investment Style	Passive
Inception Date	9/30/10
Account Type	US Fixed Income High Yield
Benchmark	Credit Suisse Leveraged Loans
Universe	Bank Loan MStar MF

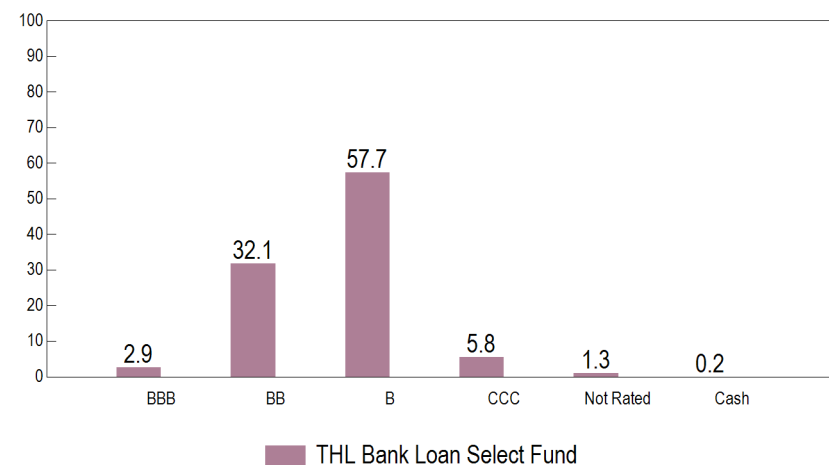
Portfolio Performance Summary

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
THL Bank Loan Select Fund	-3.0	0.7	4.8	3.7	--	5.1	Sep-10
Credit Suisse Leveraged Loans	-3.1	1.1	5.0	3.3	8.3	4.5	Sep-10
Bank Loan MStar MF Median	-3.4	0.0	4.3	2.7	7.6	4.0	Sep-10
Bank Loan MStar MF Rank	25	13	33	4	--	1	Sep-10

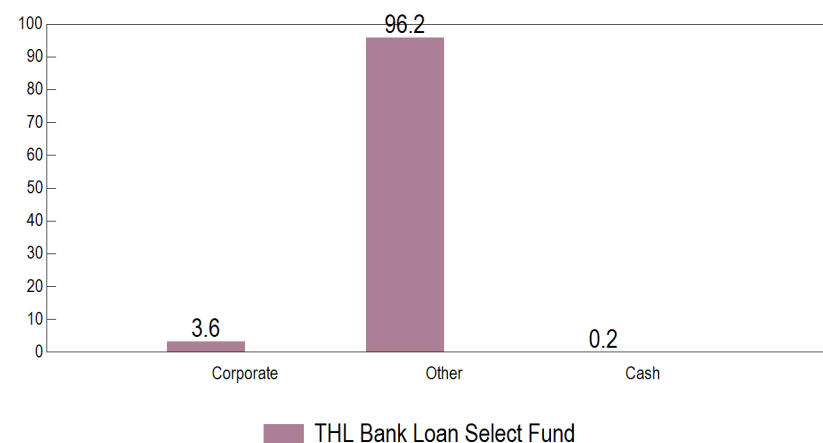
THL Bank Loan Select Fund Characteristics

	Portfolio Q4-18	Portfolio Q3-18
Fixed Income Characteristics		
Yield to Maturity	7.6	5.9
Average Duration	0.3	0.4
Average Quality	B	B
Weighted Average Maturity	5.4	5.1

Credit Quality Allocation



Sector Allocation



Account Information

Account Name	Franklin Templeton Emerging Market Bonds
Account Structure	Commingled Fund
Investment Style	Active
Inception Date	5/31/06
Account Type	Non-US Fixed Income
Benchmark	JP Morgan EMBI Global Diversified
Universe	eV Emg Mkt Fixed Inc Unhedged Net

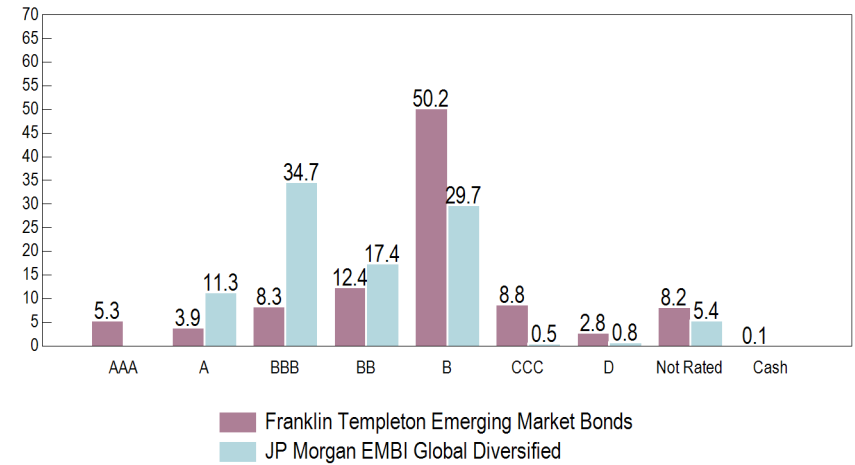
Portfolio Performance Summary

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Franklin Templeton Emerging Market Bonds	0.0	-1.2	7.4	3.7	10.0	6.7	May-06
JP Morgan EMBI Global Diversified	-1.3	-4.3	5.2	4.8	8.2	6.7	May-06
eV Emg Mkt Fixed Inc Unhedged Net Median	-0.5	-5.8	5.1	2.3	6.8	6.2	May-06
eV Emg Mkt Fixed Inc Unhedged Net Rank	41	6	2	30	3	33	May-06

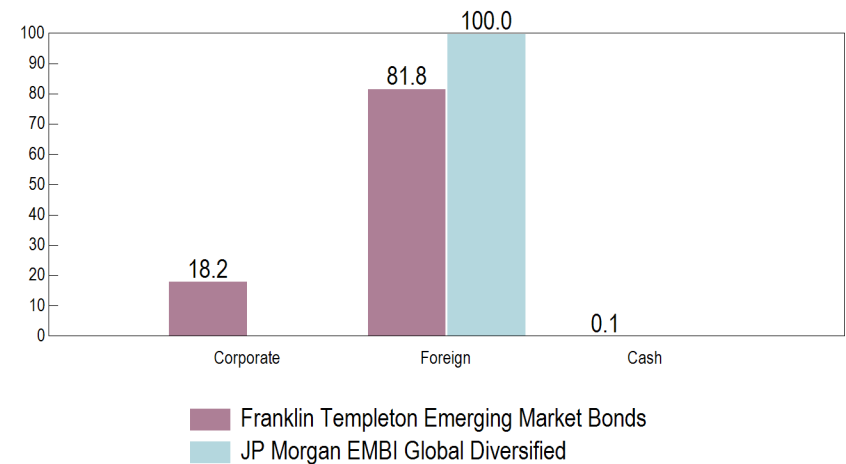
Franklin Templeton Emerging Market Bonds Characteristics vs. JP Morgan EMBI Global Diversified

	Portfolio Q4-18	Index Q4-18	Portfolio Q3-18
Fixed Income Characteristics			
Yield to Maturity	10.7	6.6	9.6
Average Duration	3.8	6.6	4.2
Average Quality	B	BB	B
Weighted Average Maturity	5.8	10.8	7.3

Credit Quality Allocation



Sector Allocation



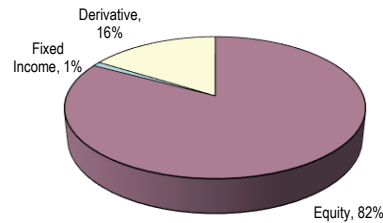
Plymouth County Retirement Association
ABS Offshore SPC - Global Segregated Portfolio

As of December 31, 2018

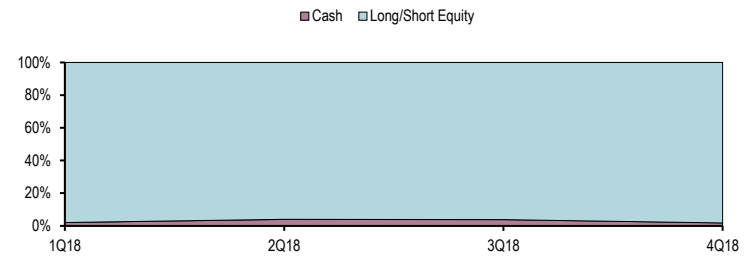
Account Information

Mandate: Hedge Fund Fund of Funds
Market Value: \$19.9 M
Portfolio Manager: Team
Location: Greenwich, CT
Inception Date: 8/31/2010
Account Type: Limited Partnership
of Investments: 26
Fee Schedule: 1.00% management fee;
 5.0% performance fee
Liquidity Constraints: Quarterly with 45 days' notice

Instrument Allocation



Historical Strategy Allocations



Strategy:

ABS uses a qualitative, bottom-up process to select and invest with managers, and relies upon research performed in house. ABS believes that equity long/short strategies' combination of net long exposure to the equity markets (market beta), active exposure management (flexible beta), and stock selection (alpha), provide an attractive risk/reward opportunity over a full market cycle.

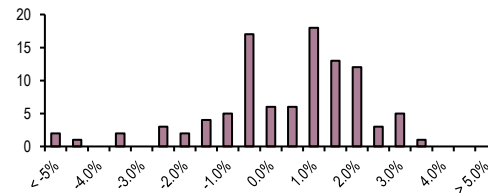
Geographic Exposure Allocation (%)

	12/31/2018	9/30/2018	6/30/2018	3/31/2018
North America	58	57	56	53
Developed Europe	24	24	21	23
Developed Asia	9	9	11	13
Emerging Markets	9	10	12	12
Domestic	0	0	0	0

Exposure Report (%)

	12/31/2018	9/30/2018	6/30/2018	3/31/2018
Total Gross Exposure	150	156	153	160
Gross Long Exposure	95	99	100	108
Gross Short Exposure	55	57	53	52
Net Exposure	40	42	47	56

Return Distribution



Portfolio Performance Summary

	4Q18 (%)	1 YR (%)	3 YR (%)	5 YR (%)	Since 8/2010 (%)
ABS Offshore SPC - Global Segregated Portfolio	-8.0	-6.4	0.3	1.9	4.6
HFRI Fund of Funds Composite	-5.0	-4.1	1.3	1.4	2.4

Risk

	Standard Deviation (%)	Max Drawdown (%)	Max Drawdown Length	Kurtosis	Skew
ABS Offshore SPC - Global Segregated Portfolio	6.2	-8.3	27	1.6	-1.0
HFRI Fund of Funds Composite	3.6	-5.2	9	1.1	-0.9

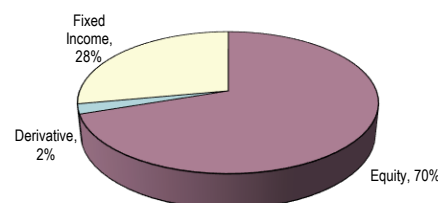


As of December 31, 2018

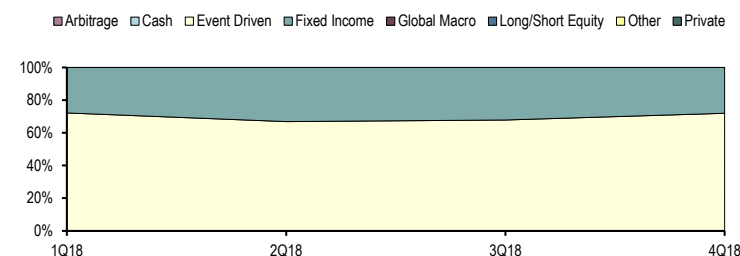
Account Information

Mandate: Hedge Fund, Fund of Funds
Market Value: \$21.7 M
Portfolio Manager: Team
Location: New York, NY
Inception Date: 10/1/2016
Account Type: Limited Partnership
of Investments: 26
Fee Schedule: 1.25% management fee;
 10% performance fee;
 7.5% hurdle
Liquidity Constraints: 3 Year Lockup (4 years max) then quarterly with 95 days' notice

Instrument Allocation



Historical Strategy Allocations



Strategy:

EnTrustPermal's Special Opportunities Funds focus on thematic high conviction ideas that arise due to market dislocations or event driven investments. They structure the funds as committed capital and drawdown vehicles in order to quickly take advantage of co-investment opportunities. Fund III takes advantage of a similar portion of the liquidity spectrum as the previous funds. The strategy targets investments with 2 to 5 year investment horizons, seeking to exploit the period that is generally too short for private market investments, but too long for most hedge fund structures.

Portfolio Performance Summary

	4Q18 (%)	1 YR (%)	3 YR (%)	5 YR (%)	Since 10/2016 (%)
EnTrust Special Opportunities Fund III, Ltd.	-11.2	-9.3	NA	NA	10.5
HFRI Fund of Funds Composite	-5.0	-4.1	1.3	1.4	1.9

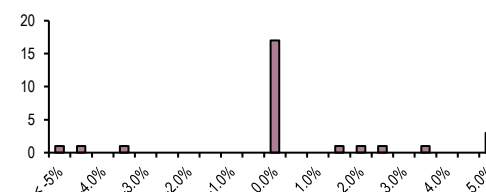
Geographic Exposure Allocation (%)

	12/31/2018	9/30/2018	6/30/2018	3/31/2018
North America	44	38	55	59
Developed Europe	38	41	26	18
Developed Asia	4	2	5	5
Emerging Markets	14	18	14	17

Exposure Report (%)

	12/31/2018	9/30/2018	6/30/2018	3/31/2018
Total Gross Exposure	101	103	98	92
Gross Long Exposure	101	101	95	95
Gross Short Exposure	1	2	3	3
Net Exposure	100	99	92	98

Return Distribution



As of December 31, 2018

Annual Investment Expense Analysis

As Of December 31, 2018

Name	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
Domestic Equity Assets		\$205,182,066		
Rhumblin Russell 1000 Value	0.05% of First 25.0 Mil, 0.04% of Next 25.0 Mil, 0.03% Thereafter	\$30,683,016	\$14,773	0.05%
Rhumblin Russell 1000 Growth	0.05% of First 25.0 Mil, 0.04% of Next 25.0 Mil, 0.03% Thereafter	\$30,984,630	\$14,894	0.05%
Fisher Midcap Value	0.80% of First 25.0 Mil, 0.75% of Next 25.0 Mil, 0.67% Thereafter	\$38,452,124	\$300,891	0.78%
Boston Company Small Cap Growth	0.45% of Assets	\$42,977,209	\$193,397	0.45%
LMCG Small Cap Value	0.90% of Assets	\$61,705,476	\$555,349	0.90%
International Developed Market Equity Assets		\$126,241,503		
KBI Master Account	0.65% of Assets	\$59,477,609	\$386,604	0.65%
HGK TS International Equity	1.00% of Assets	\$36,125,296	\$361,253	1.00%
Copper Rock International Small Cap	0.85% of Assets	\$30,638,599	\$260,428	0.85%
International Emerging Market Equity Assets		\$79,337,201		
LMCG Emerging Markets	0.75% of Assets	\$53,290,344	\$399,678	0.75%
ABS Emerging Markets	0.35% Management Fee and 10% Performance/Incentive Fee.	\$20,000,000		
Copper Rock Emerging Markets Small Cap	0.85% of Assets	\$6,046,857	\$51,398	0.85%
Global Equity Assets		\$88,678,810		
First Eagle Global Value Fund	0.75% of Assets	\$17,665,019	\$132,488	0.75%
Kopernik Global All Cap Fund	0.80% of First 50.0 Mil, 0.75% of Next 150.0 Mil, 0.70% of Next 250.0 Mil, 0.65% of Next 350.0 Mil	\$17,266,137	\$138,129	0.80%
Lee Munder Global Multi-Cap Strategy	0.45% of Assets	\$25,214,877	\$113,467	0.45%
Wellington Durable Enterprises, L.P.	0.60% of Assets	\$28,532,778	\$171,197	0.60%
Core Fixed Income		\$78,387,483		
IR&M Core Bonds	0.25% of First 50.0 Mil, 0.20% of Next 50.0 Mil, 0.15% Thereafter	\$78,387,483	\$181,775	0.23%
Value Added Fixed Income		\$103,841,187		
Eaton Vance High Yield	0.50% of Assets	\$32,883,450	\$164,417	0.50%
THL Bank Loan Select Fund	0.40% of Assets	\$34,552,344	\$138,209	0.40%
Franklin Templeton Emerging Market Bonds	0.99% of Assets	\$36,405,393	\$360,413	0.99%



As of December 31, 2018

Note: The Adjusted Value is based on September 30, 2018 fair market values adjusted for subsequent cash flows.

Private Equity	Commitment	Total Contributions	Total Distributions	Adjusted Value
Ascend Ventures II, L.P.	2,500,000	2,324,355	925,962	69,137
Ascent Venture Partners IV, L.P.	2,500,000	2,502,219	388,970	176,916
Ascent Venture Partners V, L.P.	5,000,000	5,004,731	3,432,862	4,369,916
Audax Mezzanine Fund IV, L.P.	10,000,000	3,570,409	1,042,071	2,693,546
Charles River Partnership XI, L.P.	1,839,000	1,820,323	1,996,788	140,604
DN Partners II, L.P.	5,000,000	2,351,918	0	898,745
Euro Choice II, L.P.	5,544,472	5,513,805	8,038,110	0
Euro Choice V, L.P.	6,088,074	5,688,459	1,504,116	5,499,684
Globespan Capital Partners V, L.P.	5,000,000	4,852,500	7,149,100	3,417,764
HarbourVest Partners Co-Investment Fund V, L.P.	12,000,000	0	0	0
Ironsides Direct Investment Fund V, L.P.	12,000,000	7,228,489	0	7,228,489
Landmark Equity Partners XIV, L.P.	6,000,000	6,288,437	6,417,555	1,226,237
Leeds Equity Partners IV, L.P.	5,000,000	5,089,327	6,224,435	29,820
Leeds Equity Partners V, L.P.	2,500,000	3,570,815	3,511,052	2,195,328
Lexington Capital Partners VII, L.P.	10,000,000	10,472,973	12,384,254	3,017,697
LLR Equity Partners V, L.P.	12,000,000	3,360,000	433,003	2,877,993
Mesirow Financial Capital Partners IX, L.P.	4,000,000	3,840,731	1,897,056	234,287
Ridgemont Equity Partners III, L.P.	12,000,000	0	0	0
Rimco Production Company, Inc	2,000,000	2,000,000	7,486,401	1
Siguler Guff Distressed Opportunities Fund III, L.	6,000,000	5,820,000	8,077,618	1,063,406
Summit Partners Growth Equity Fund IX, L.P.	10,000,000	6,400,000	997,650	6,270,492
Summit Partners Growth Equity Fund X, L.P.	12,000,000	0	0	0
TRG Growth Partnership II, L.P.	7,500,000	7,450,399	7,463,445	1,237,053
Trilantic Capital Partners VI (North America), L.P	12,000,000	194,243	0	2,199,300
Wellspring Capital Partners VI, L.P.	12,000,000	611,767	0	353,670
Total Plymouth County - PE	180,471,545	95,955,901	79,370,449	45,200,084

Total Retirement Association

As of December 31, 2018

Note: The Adjusted Value is based on September 30, 2018 fair market values adjusted for subsequent cash flows.

Real Assets	Commitment	Total Contributions	Total Distributions	Adjusted Value
Basalt Infrastructure Partners II	10,000,000	3,133,699	49,561	2,798,525
BTG Pactual Global Timberland Resources Fund, LLC	5,406,477	5,043,536	229,998	2,835,576
Global Infrastructure Partners III, L.P.	10,000,000	7,267,721	348,970	8,241,142
IFM Global Infrastructure (US), L.P.	20,000,000	20,000,000	0	20,000,000
JPMorgan Global Maritime Investment	10,000,000	9,186,014	938,504	6,614,939
Timbervest Partners III, L.P.	5,000,000	5,000,000	1,041,500	5,228,292
Total Plymouth County - RA	60,406,477	49,630,970	2,608,534	45,718,474

Real Estate	Commitment	Total Contributions	Total Distributions	Adjusted Value
1921 Realty, Inc.	5,000,000	5,378,194	0	933,768
AEW Partners Real Estate Fund VIII, L.P.	25,000,000	8,476,455	1,410,695	6,703,992
Berkshire Multifamily Value Fund II, L.P.	10,000,000	11,258,620	17,922,285	0
Carlyle Realty Partners VIII, L.P.	18,000,000	1,319,110	487	978,400
DSF Capital Partners IV, L.P.	5,000,000	5,000,000	5,997,885	81,181
DSF Multi-Family Real Estate Fund III, L.P.	15,000,000	11,425,148	824,248	11,277,938
Hunt Redevelopment and Renovation Fund, LLC	10,000,000	8,971,078	11,708,016	0
Invesco Equity Real Estate Securities Trust	22,000,000	23,908,825	27,000,000	15,335,002.6*
JPMorgan Strategic Property Fund	27,000,000	0	0	0
New Boston Institutional Fund, L.P. VII	5,000,000	3,012,998	3,747,492	317,543
PRISA I	14,995,000	17,227,013	0	40,542,422
Real Estate International Partnership Fund I, L.P.	15,000,000	12,674,617	9,197,754	3,175,939
TA Realty Core Property Fund, L.P.	25,000,000	19,111,546	0	20,564,904
Total Plymouth County - RE	196,995,000	127,763,605	77,808,862	99,922,595

*The value for Invesco Equity Real Estate Securities Trust is as of December 31, 2018.



Disclaimer, Glossary, and Notes

WE HAVE PREPARED THIS REPORT (THIS "REPORT") FOR THE SOLE BENEFIT OF THE INTENDED RECIPIENT (THE "RECIPIENT").

SIGNIFICANT EVENTS MAY OCCUR (OR HAVE OCCURRED) AFTER THE DATE OF THIS REPORT AND THAT IT IS NOT OUR FUNCTION OR RESPONSIBILITY TO UPDATE THIS REPORT. ANY OPINIONS OR RECOMMENDATIONS PRESENTED HEREIN REPRESENT OUR GOOD FAITH VIEWS AS OF THE DATE OF THIS REPORT AND ARE SUBJECT TO CHANGE AT ANY TIME. ALL INVESTMENTS INVOLVE RISK. THERE CAN BE NO GUARANTEE THAT THE STRATEGIES, TACTICS, AND METHODS DISCUSSED HERE WILL BE SUCCESSFUL.

INFORMATION USED TO PREPARE THIS REPORT WAS OBTAINED FROM INVESTMENT MANAGERS, CUSTODIANS, AND OTHER EXTERNAL SOURCES. WHILE WE HAVE EXERCISED REASONABLE CARE IN PREPARING THIS REPORT, WE CANNOT GUARANTEE THE ACCURACY OF ALL SOURCE INFORMATION CONTAINED HEREIN.

CERTAIN INFORMATION CONTAINED IN THIS REPORT MAY CONSTITUTE "FORWARD - LOOKING STATEMENTS," WHICH CAN BE IDENTIFIED BY THE USE OF TERMINOLOGY SUCH AS "MAY," "WILL," "SHOULD," "EXPECT," "AIM," "ANTICIPATE," "TARGET," "PROJECT," "ESTIMATE," "INTEND," "CONTINUE" OR "BELIEVE," OR THE NEGATIVES THEREOF OR OTHER VARIATIONS THEREON OR COMPARABLE TERMINOLOGY. ANY FORWARD - LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION ARE BASED UPON CURRENT ASSUMPTIONS. CHANGES TO ANY ASSUMPTIONS MAY HAVE A MATERIAL IMPACT ON FORWARD - LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS. ACTUAL RESULTS MAY THEREFORE BE MATERIALLY DIFFERENT FROM ANY FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION.

PERFORMANCE DATA CONTAINED HEREIN REPRESENT PAST PERFORMANCE. PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS.

Credit Risk: Refers to the risk that the issuer of a fixed income security may default (i.e., the issuer will be unable to make timely principal and/or interest payments on the security.)

Duration: Measure of the sensitivity of the price of a bond to a change in its yield to maturity. Duration summarizes, in a single number, the characteristics that cause bond prices to change in response to a change in interest rates. For example, the price of a bond with a duration of three years will rise by approximately 3% for each 1% decrease in its yield to maturity. Conversely, the price will decrease 3% for each 1% increase in the bond's yield. Price changes for two different bonds can be compared using duration. A bond with a duration of six years will exhibit twice the percentage price change of a bond with a three-year duration. The actual calculation of a bond's duration is somewhat complicated, but the idea behind the calculation is straightforward. The first step is to measure the time interval until receipt for each cash flow (coupon and principal payments) from a bond. The second step is to compute a weighted average of these time intervals. Each time interval is measured by the present value of that cash flow. This weighted average is the duration of the bond measured in years.

Information Ratio: This statistic is a measure of the consistency of a portfolio's performance relative to a benchmark. It is calculated by subtracting the benchmark return from the portfolio return (excess return), and dividing the resulting excess return by the standard deviation (volatility) of this excess return. A positive information ratio indicates outperformance versus the benchmark, and the higher the information ratio, the more consistent the outperformance.

Jensen's Alpha: A measure of the average return of a portfolio or investment in excess of what is predicted by its beta or "market" risk. $\text{Portfolio Return} - [\text{Risk Free Rate} + \text{Beta} * (\text{market return} - \text{Risk Free Rate})]$.

Market Capitalization: For a firm, market capitalization is the total market value of outstanding common stock. For a portfolio, market capitalization is the sum of the capitalization of each company weighted by the ratio of holdings in that company to total portfolio holdings; thus it is a weighted-average capitalization. Meketa Investment Group considers the largest 65% of the broad domestic equity market as large capitalization, the next 25% of the market as medium capitalization, and the smallest 10% of stocks as small capitalization.

Market Weighted: Stocks in many indices are weighted based on the total market capitalization of the issue. Thus, the individual returns of higher market-capitalization issues will more heavily influence an index's return than the returns of the smaller market-capitalization issues in the index.

Maturity: The date on which a loan, bond, mortgage, or other debt/security becomes due and is to be paid off.

Prepayment Risk: The risk that prepayments will increase (homeowners will prepay all or part of their mortgage) when mortgage interest rates decline; hence, investors' monies will be returned to them in a lower interest rate environment. Also, the risk that prepayments will slow down when mortgage interest rates rise; hence, investors will not have as much money as previously anticipated in a higher interest rate environment. A prepayment is any payment in excess of the scheduled mortgage payment.

Price-Book Value (P/B) Ratio: The current market price of a stock divided by its book value per share. Meketa Investment Group calculates P/B as the current price divided by Compustat's quarterly common equity. Common equity includes common stock, capital surplus, retained earnings, and treasury stock adjusted for both common and nonredeemable preferred stock. Similar to high P/E stocks, stocks with high P/B's tend to be riskier investments.

Price-Earnings (P/E) Ratio: A stock's market price divided by its current or estimated future earnings. Lower P/E ratios often characterize stocks in low growth or mature industries, stocks in groups that have fallen out of favor, or stocks of established blue chip companies with long records of stable earnings and regular dividends. Sometimes a company that has good fundamentals may be viewed unfavorably by the market if it is an industry that is temporarily out of favor. Or a business may have experienced financial problems causing investors to be skeptical about its future. Either of these situations would result in lower relative P/E ratios. Some stocks exhibit above-average sales and earnings growth or expectations for above average growth. Consequently, investors are willing to pay more for these companies' earnings, which results in elevated P/E ratios. In other words, investors will pay more for shares of companies whose profits, in their opinion, are expected to increase faster than average. Because future events are in no way assured, high P/E stocks tend to be riskier and more volatile investments. Meketa Investment Group calculates P/E as the current price divided by the I/B/E/S consensus of twelve-month forecast earnings per share.

Quality Rating: The rank assigned a security by such rating services as Fitch, Moody's, and Standard & Poor's. The rating may be determined by such factors as (1) the likelihood of fulfillment of dividend, income, and principal payment of obligations; (2) the nature and provisions of the issue; and (3) the security's relative position in the event of liquidation of the company. Bonds assigned the top four grades (AAA, AA, A, BBB) are considered investment grade because they are eligible bank investments as determined by the controller of the currency.

Sharpe Ratio: A commonly used measure of risk-adjusted return. It is calculated by subtracting the risk free return (usually three-month Treasury bill) from the portfolio return and dividing the resulting excess return by the portfolio's total risk level (standard deviation). The result is a measure of return per unit of total risk taken. The higher the Sharpe ratio, the better the fund's historical risk adjusted performance.

Standard Deviation: A measure of the total risk of an asset or a portfolio. Standard deviation measures the dispersion of a set of numbers around a central point (e.g., the average return). If the standard deviation is small, the distribution is concentrated within a narrow range of values. For a normal distribution, about two thirds of the observations will fall within one standard deviation of the mean, and 95% of the observations will fall within two standard deviations of the mean.

STIF Account: Short-term investment fund at a custodian bank that invests in cash-equivalent instruments. It is generally used to safely invest the excess cash held by portfolio managers.

Style: The description of the type of approach and strategy utilized by an investment manager to manage funds. For example, the style for equities is determined by portfolio characteristics such as price-to-book value, price-to-earnings ratio, and dividend yield. Equity styles include growth, value, and core.

Yield to Maturity: The yield, or return, provided by a bond to its maturity date; determined by a mathematical process, usually requiring the use of a “basis book.” For example, a 5% bond pays \$5 a year interest on each \$100 par value. To figure its current yield, divide \$5 by \$95—the market price of the bond—and you get 5.26%. Assume that the same bond is due to mature in five years. On the maturity date, the issuer is pledged to pay \$100 for the bond that can be bought now for \$95. In other words, the bond is selling at a discount of 5% below par value. To figure yield to maturity, a simple and approximate method is to divide 5% by the five years to maturity, which equals 1% pro rata yearly. Add that 1% to the 5.26% current yield, and the yield to maturity is roughly 6.26%.

$$\frac{5\% \text{ (discount)}}{5 \text{ (yrs. to maturity)}} = 1\% \text{ pro rata, plus } 5.26\% \text{ (current yield)} = 6.26\% \text{ (yield to maturity)}$$

Sources: [Investment Terminology](#), International Foundation of Employee Benefit Plans, 1999.
[The Handbook of Fixed Income Securities](#), Fabozzi, Frank J., 1991.

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Throughout this report, numbers may not sum due to rounding.

Returns for periods greater than one year are annualized throughout this report.

Values shown are in millions of dollars, unless noted otherwise.