Agenda
Village of Glen Ellyn
Police Pension Board
Special Meeting
Monday, October 30, 2017
7:30 PM
Police Department Community Room

A. Call to Order

B. Public Comment (Non Agenda Items)

C. Approval of Minutes

1. Police Pension Board - Regular Meeting - Jul 19, 2017 7:30 PM

D. Quarterly Investment Consultant Report and Recommendations

1. Christopher Caparelli from Marquette Associates will present the Third Quarter 2017 Report as well as recommendations for the investment portfolio

E. Approval of Expenses

1. Approve the Expense Vouchers in the amount of $13,280.55 and Pension Expenses in the amount of $514,225.71 for a total of $527,506.26

F. Approval of Membership Changes / Contribution Refunds / Transfers / Other

1. Motion to accept Ryan Rader into the Police Pension Fund.

2. Motion to approve the contribution refund to Andrew Hibschman in the amount of $2,023.62.

G. Pension Funding and Annual Report to the Village Board

1. Motion to recommend to the Village Board an Investment Return Assumption of 6.5% for Fiscal Year 2018

2. Motion to Approve the Annual Report to the Village Board

H. Other Business

1. Meeting Schedule for 2018: January 17, April 18, July 18, October 17

I. Adjournment

1. Motion to Adjourn

Minutes
Village of Glen Ellyn
Police Pension Board
Regular Meeting
Wednesday, July 19, 2017
7:30 PM
Glen Ellyn Civic Center, Room 301

A. Call to Order

Attendee Name	Title	Status
Bill Housey	Trustee	Present
John Adduci	President	Present
Jim Monson	Trustee	Present
Anthony Terranova	Trustee	Present
James King	Trustee	Present

Also Present: Finance Director Coyle, Investment Consultant Chris Caparelli (Marquette Associates) and Recording Secretary Elisa Pollina.

B. Pension Board Transition Activities

President Adduci administered the Oath of Office to Pension Board Trustee James King. King accepted the Oath of Office to serve on the Police Pension Board.

Election of Pension Board Officers: President Adduci requests to elect new Pension Board officers. Trustee Monson motions to keep officers as they currently stand. Trustee Terranova seconded the motion.

1. Election of Pension Board Officers

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Jim Monson, Trustee
SECONDER:	Anthony Terranova, Trustee
AYES:	Housey, Adduci, Monson, Terranova, King

C. Public Comment (Non Agenda Items)

None.

D. Approval of Minutes

1. Police Pension Board - Regular Meeting - Apr 19, 2017 7:30 PM

RESULT:	**ACCEPTED [UNANIMOUS]**
MOVER:	Jim Monson, Trustee
SECONDER:	Anthony Terranova, Trustee
AYES:	Housey, Adduci, Monson, Terranova, King

E. Investment Consultant Report & Recommendations

1. Second Quarter Investment Report - Christopher Caparelli - Marquette & Associates.

Mr. Caparelli reported that all asset classes for 2017 are positive. The S&P, Dow & NASDAQ all have good fundamental growth. Inflation remains below target and the bond markets are holding up well. U.S added 222K jobs in June with unemployment at 4.4%. Overall the portfolio has strong metrics for the first half of the year and is up 3% for the quarter and 7% growth YTD.

2. Motion to hire Goldman Sacks as International Small Cap Fund Manager

Mr. Caparelli presented six different International Small Cap fund managers for the Pension Board to consider. The managers suggested were Brandes, Copper Rock, DFA, Goldman Sachs, SBH and T. Rowe Price. Caparelli presented information on historical returns, risk and fees for the six firms. Based on the information provided, there was a consensus of the Board to select Goldman Sachs.

Trustee Housey motions to hire Goldman Sachs as International Small Cap Fund Manager., Trustee Monson seconded the motion.

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Bill Housey, Trustee
SECONDER:	Jim Monson, Trustee
AYES:	Housey, Adduci, Monson, Terranova, King

3. Motion to hire DFA as Emerging Markets Manager.

Mr. Caparelli presented six different Emerging Markets fund managers for the Pension Board to consider. The managers suggested were Causeway, DFA, Goldman Sachs, Neuberger Berman, Vanguard, and William Blair. Mr. Caparelli presented information on historical returns, risk and fees for the six firms. Based on the information provided, there was a consensus of the Board to select DFA.

Trustee Housey motions to hire DFA as Emerging Markets Fund Manager., Trustee Monson seconded the motion.

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Bill Housey, Trustee
SECONDER:	Anthony Terranova, Trustee
AYES:	Housey, Adduci, Monson, Terranova, King

4. Motion to approve amendments to the investment policy.

Mr. Caparelli outlined the investment policy changes, the asset allocations and ranges, benchmarks and operational guidelines for each asset manager.

Trustee Housey motions to approve the recommended Police Pension Investment Policy changes submitted by Marquette and Associates. Trustee Terranova seconded the motion.

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Bill Housey, Trustee
SECONDER:	Anthony Terranova, Trustee
AYES:	Housey, Adduci, Monson, Terranova, King

F. 2016 Actuary Report

1. Police Pension Actuarial Report - December 31, 2016

Jason Franken from Foster & Foster Actuaries and Consultants explained the actuarial report and plan changes since prior valuation for Police Pension Board to review. Trustee Monson motions to accept Actuary Report.

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Jim Monson, Trustee
SECONDER:	Anthony Terranova, Trustee
AYES:	Housey, Adduci, Monson, Terranova, King

G. Approval of Expenses

1. Approve the Expense Vouchers in the amount of $49,785.66 and Pension Expenses in the amount of $515,564.63 for a total of $565,350.29

President Adduci asked if there were any questions on the vouchers. Seeing none, Trustee Terranova moved and Trustee King seconded the approval of expense vouchers in the amount of $49,785.66, and pension expenditures in the amount of $515,564.63 for a total of $565,350.29.

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Anthony Terranova, Trustee
SECONDER:	James King, Trustee
AYES:	Housey, Adduci, Monson, Terranova, King

H. Approval of Membership Changes / Contribution Refunds / Transfers

1. Approve a contribution refund to Mallory Bryant in the amount of $10,972.58.

Motion to approve a contribution refund to Mallory Bryant in the amount of $10,972.58. Trustee Monson moved and Trustee King seconded the approval.

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Jim Monson, Trustee
SECONDER:	Anthony Terranova, Trustee
AYES:	Housey, Adduci, Monson, Terranova, King

I. Other Business

Next Meeting: Wednesday, October 18, 2017 at 7:30 PM at the Police Department.

J. Adjournment

1. Motion to Adjourn

The meeting was adjourned at 9:34 PM

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Anthony Terranova, Trustee
SECONDER:	James King, Trustee
AYES:	Housey, Adduci, Monson, Terranova, King

Police Pension Board
535 Duane Street
Glen Ellyn, IL 60137

Meeting: 10/30/17 07:30 PM
Department: Police Pension Board
Department Head: Christina Coyle
Category: Report
Prepared By: Christina Coyle

SCHEDULED

AGENDA ITEM (ID # 2941) DOC ID: 2941

Christopher Caparelli from Marquette Associates will present the Third Quarter 2017 Report as well as recommendations for the investment portfolio

Please see the attached reports.

ATTACHMENTS:

- 3Q17 Market Environment (PDF)
- 3Q17 Glen Ellyn Police (PDF)
- Transition Update (PDF)
- Glen Ellyn Police SCV (PDF)
- GTAA Education (PDF)
- Glen Ellyn Police GTAA Search (PDF)

Investment Stewardship Guidance

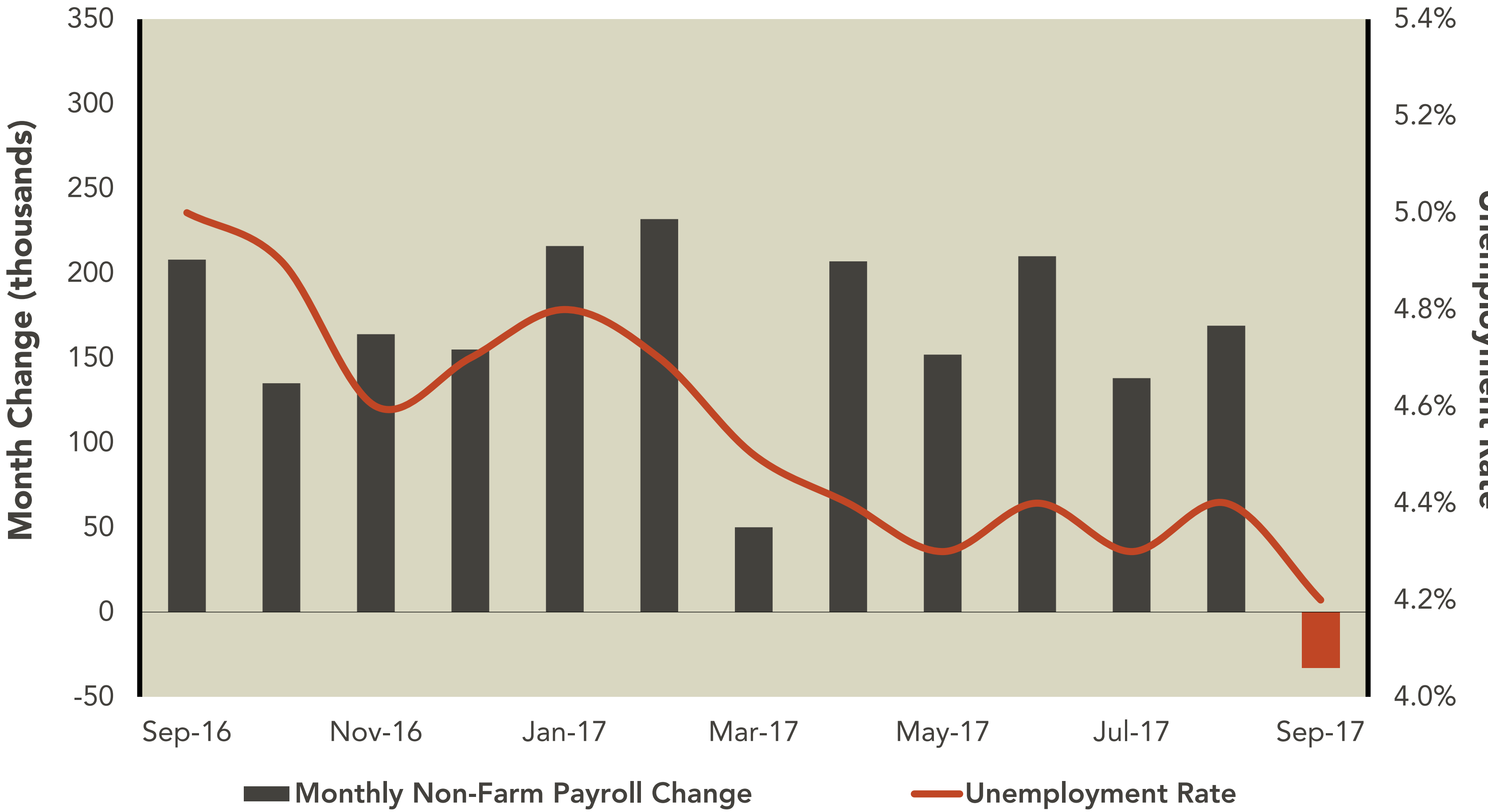
Marquette Associates

3Q17 Market Environment

U.S. Economy

U.S. Loses Jobs in September

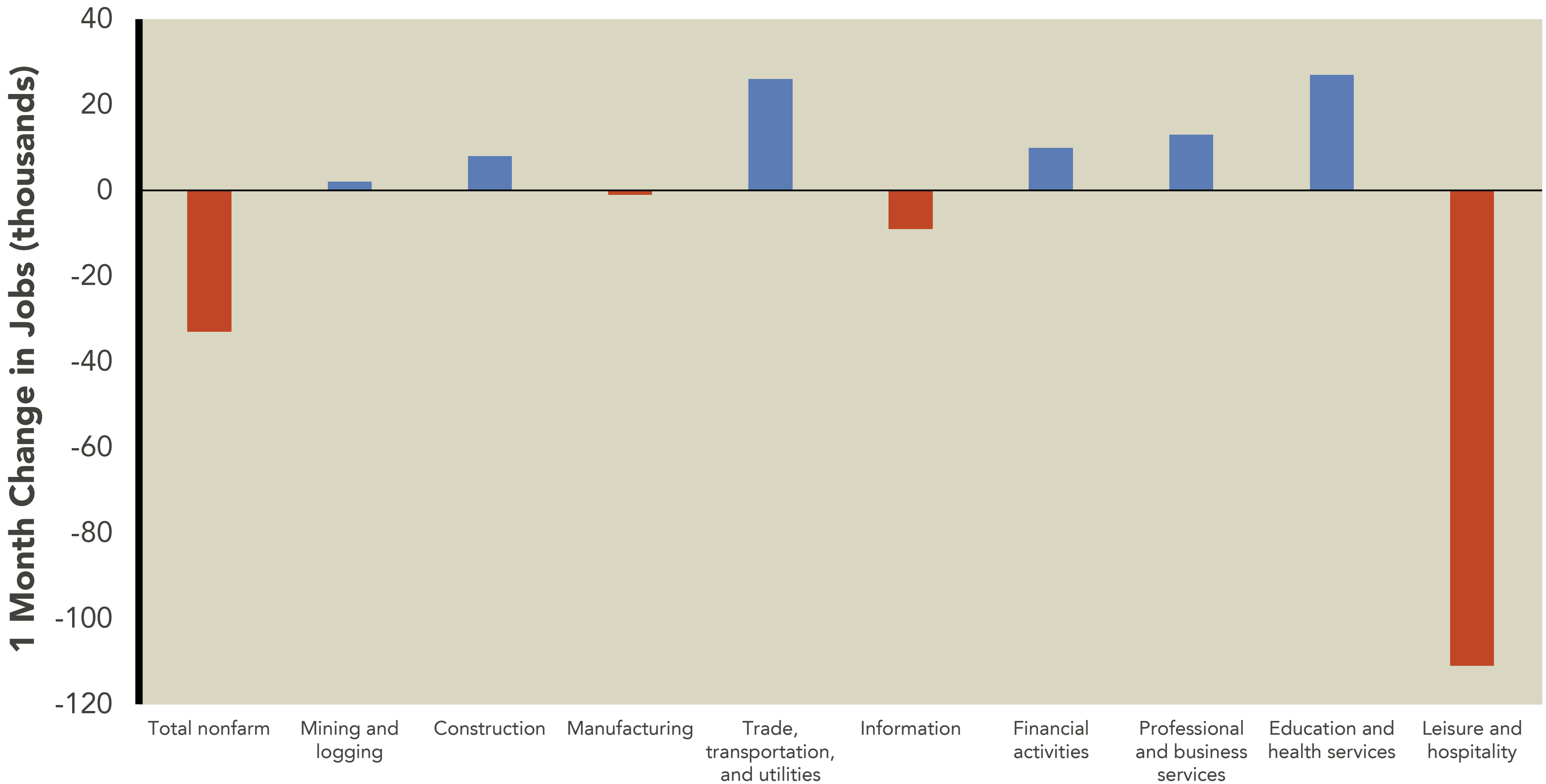
Unemployment rate falls to 4.2% despite negative weather effects



Source: Bureau of Labor Statistics

Job Losses are Concentrated in Food and Drink Services

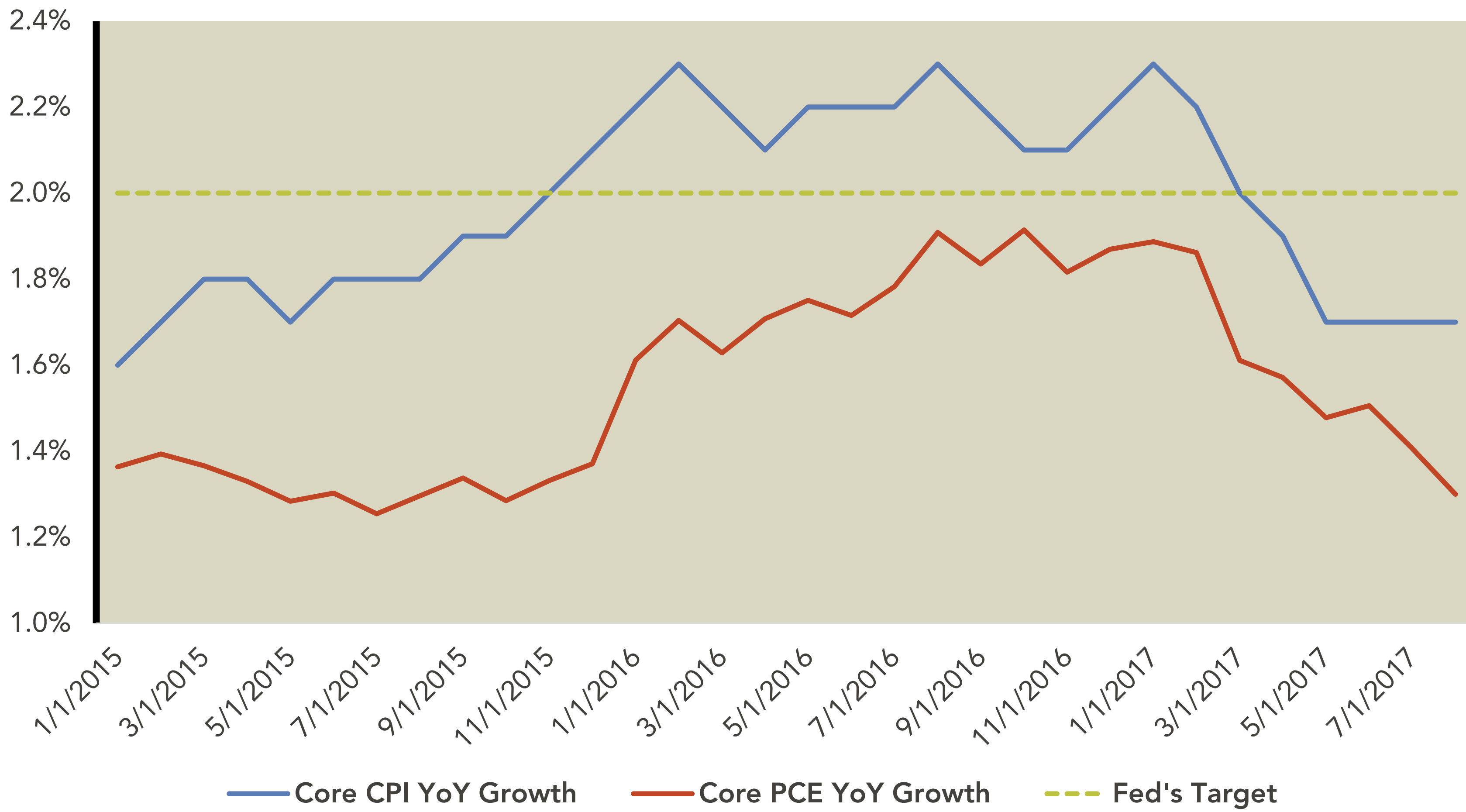
Surveys suggest 1.5 million people couldn't show up for work due to bad weather



Source: Bureau of Labor Statistics

Inflation Remains Below Target

PCE Core growth falls below 1.5%



Source: BLS; BEA

Fixed Income

The Trump Trade Makes a Comeback!

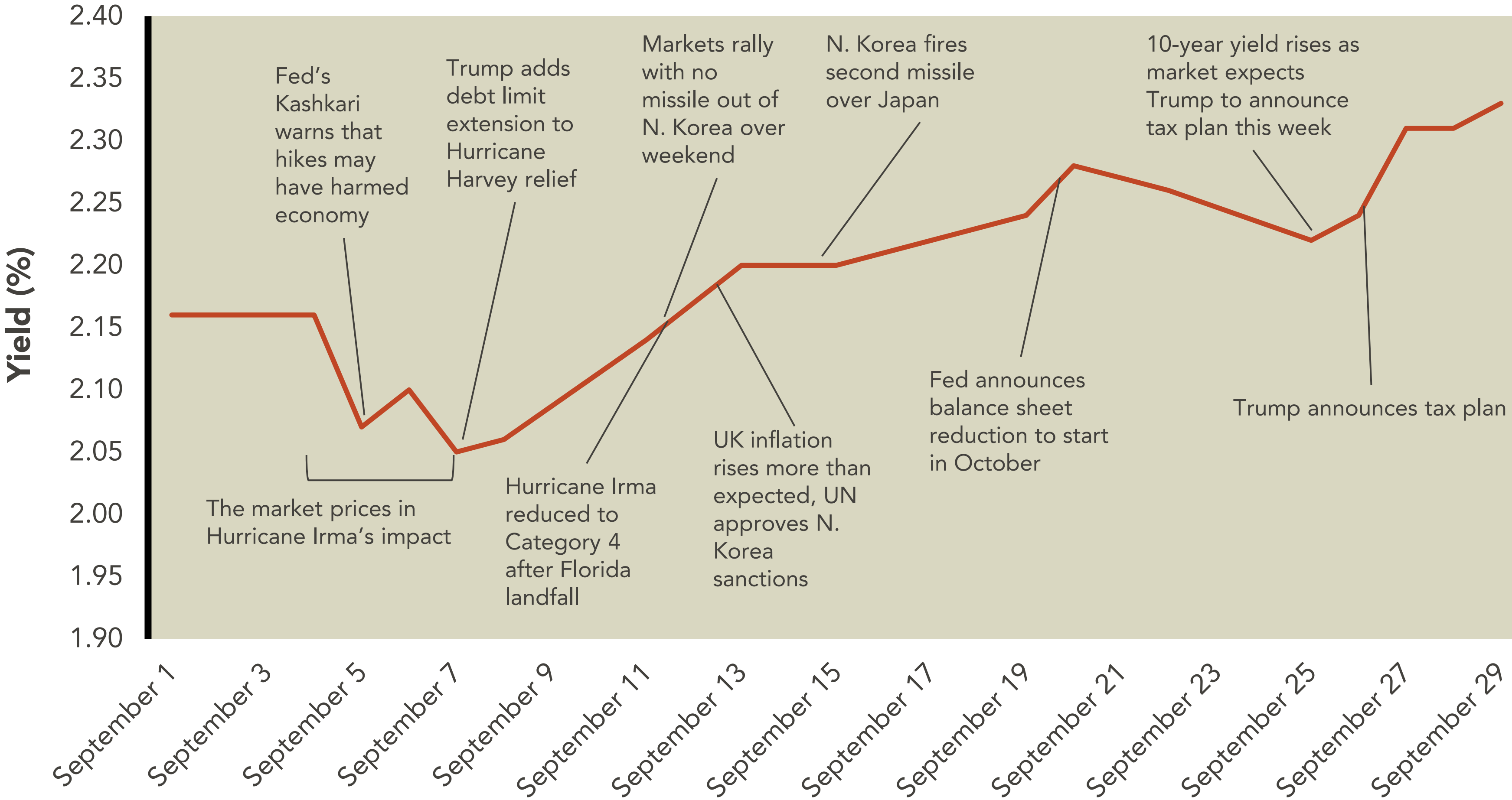
Risk credit rallied and safe havens fell as market risks were less severe than expected

	Month (%)	3-Month (%)	YTD (%)	1 Year (%)	3 Year (%)	5 Year (%)	10 Year (%)
Broad Market Indices							
Blm BC Aggregate	-0.5	0.8	3.1	0.1	2.7	2.1	4.3
Intermediate Indices							
Blm BC Int. Gov./Credit	-0.5	0.6	2.3	0.2	2.1	1.6	3.6
Government Only Indices							
Blm BC Long Gov.	-2.1	0.6	6.1	-6.1	4.8	2.9	6.8
Blm BC Int. Gov.	-0.6	0.3	1.5	-0.7	1.6	1.0	3.1
Blm BC 1-3 Year Gov.	-0.2	0.2	0.7	0.3	0.8	0.6	1.8
Blm BC U.S. TIPS	-0.6	0.9	1.7	-0.7	1.6	0.0	3.9
Credit Indices							
Blm BC U.S. Long Credit	-0.2	2.2	8.7	2.9	6.0	4.7	7.6
Blm BC High Yield	0.9	2.0	7.0	8.9	5.8	6.4	7.8
CS Leveraged Loan Index	0.4	1.1	3.0	5.4	4.0	4.4	4.4
Securitized Bond Indices							
Blm BC MBS	-0.2	1.0	2.3	0.3	2.4	2.0	4.1
Blm BC ABS	-0.2	0.4	1.6	0.9	1.8	1.3	2.9
Blm BC CMBS	-1.0	0.8	3.1	0.1	3.0	2.6	4.8
Non-US Indices							
Blm BC Global Aggregate Hedged	-0.5	0.8	2.2	-0.2	3.1	3.1	4.3
JPM EMBI Global Diversified	0.0	2.6	9.0	4.6	6.5	4.9	7.5
JPM GBI-EM Global Diversified	0.8	2.2	8.0	6.5	7.6	6.4	8.3
Municipal							
Blm BC Municipal	-0.2	0.4	1.6	0.9	1.8	1.3	2.9
Blm BC HY Municipal	-1.0	0.8	3.1	0.1	3.0	2.6	4.8

Source: Bloomberg Barclays, Credit Suisse, JPMorgan as of September 30, 2017

September: Could it Be, a Rising 10-Year?

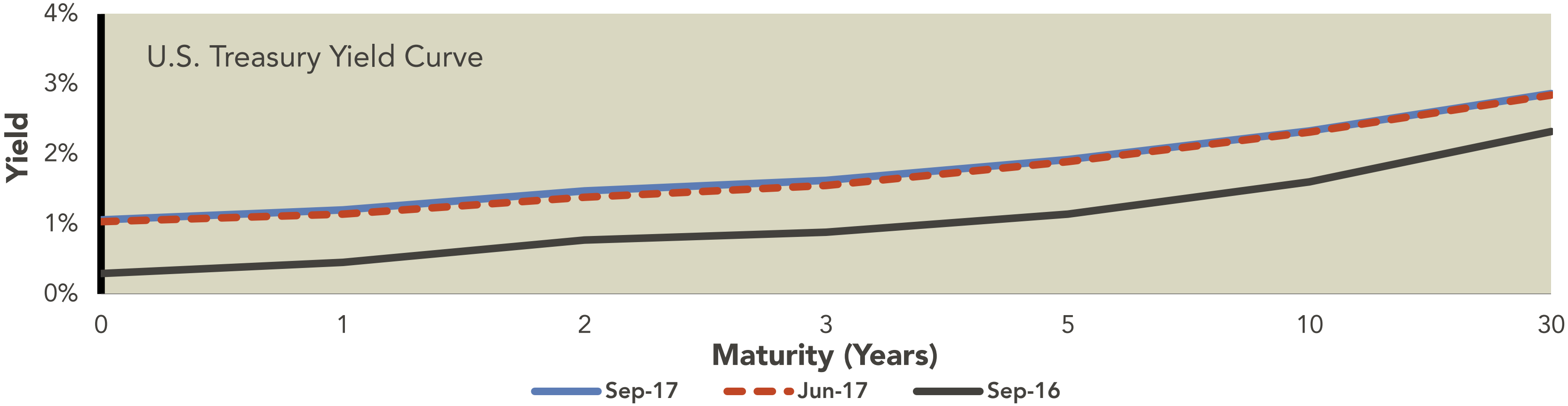
10-year Treasury yield rises with Trump's tax plan, less-severe Irma, N. Korea and UK risks

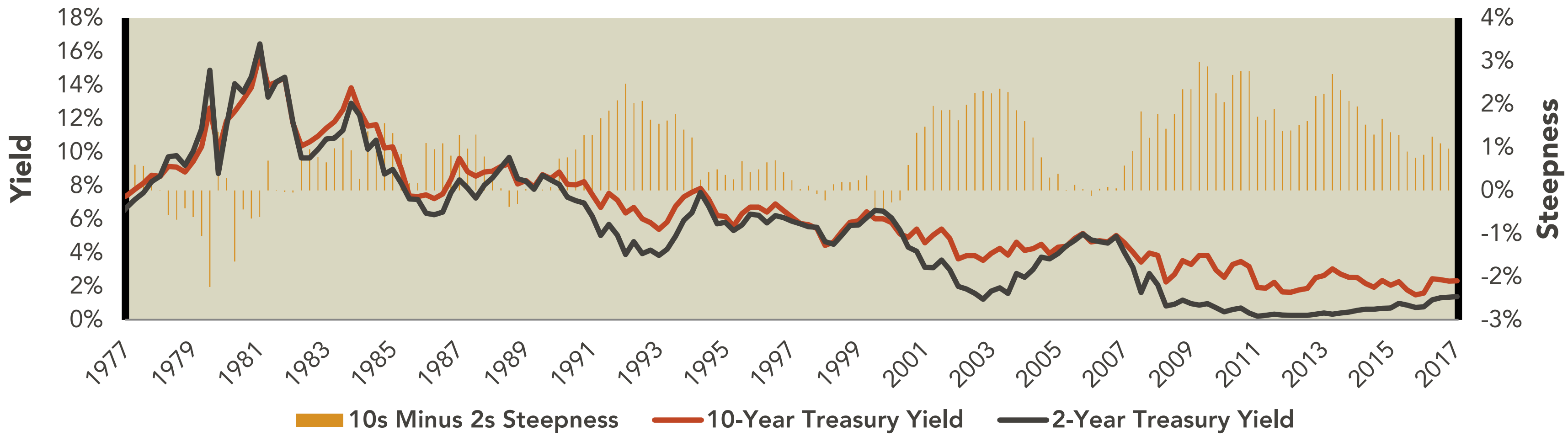


Source: Federal Reserve as of September 30, 2017

Yield Curve and Steepness: A Parallel Rise

Yield curve rose as bonds gave ground across the curve due to less-severe risks in the month

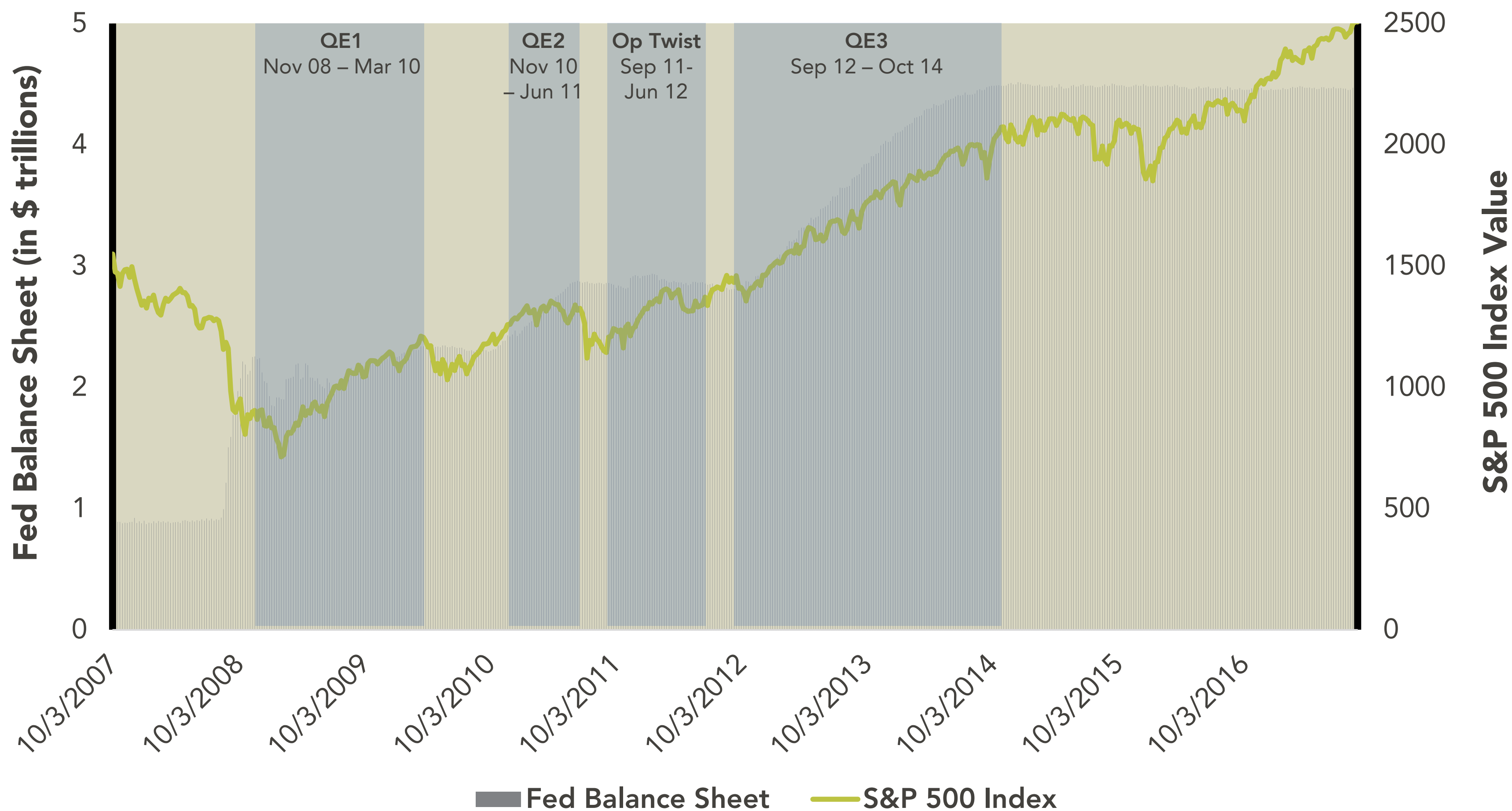




Source: Federal Reserve as of September 30, 2017

Tapped out on Policy Support

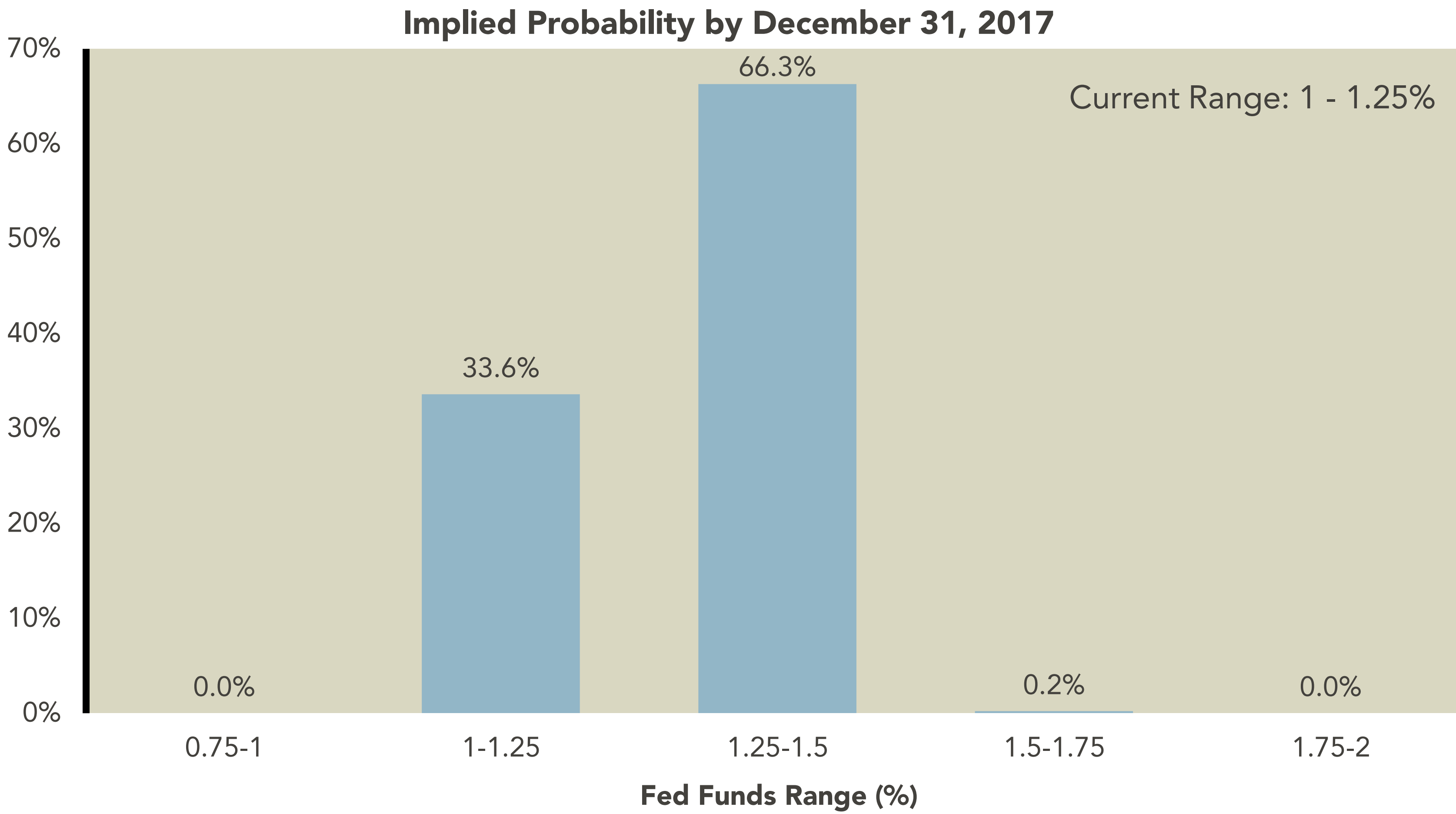
Fed balance sheet growth mirrors S&P 500 performance



Source: John Hancock, Bloomberg

Next Probable Rate Hike: December 2017

Fed announced balance sheet trimming, futures point to third hike this year in December

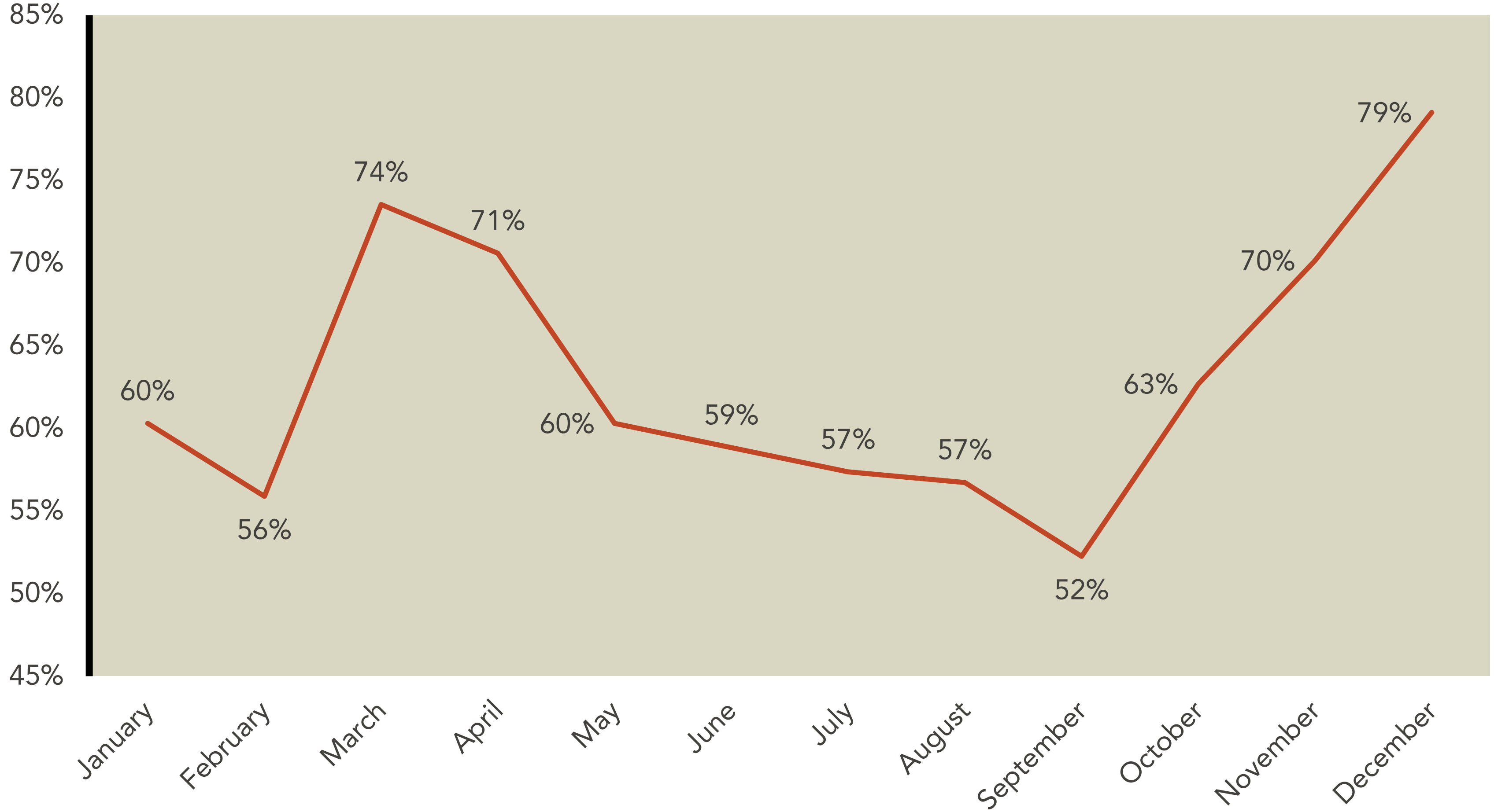


Source: Bloomberg, latest as of October 3, 2017

U.S. Equity

Will the Historical Trend Continue?

S&P 500: historical percentage of positive monthly returns since 1950



Source: Bloomberg

Attachment: 3Q17 Market Environment (2941 : Investment Consultant Report 3Q20107)

Small Caps Roar Back!

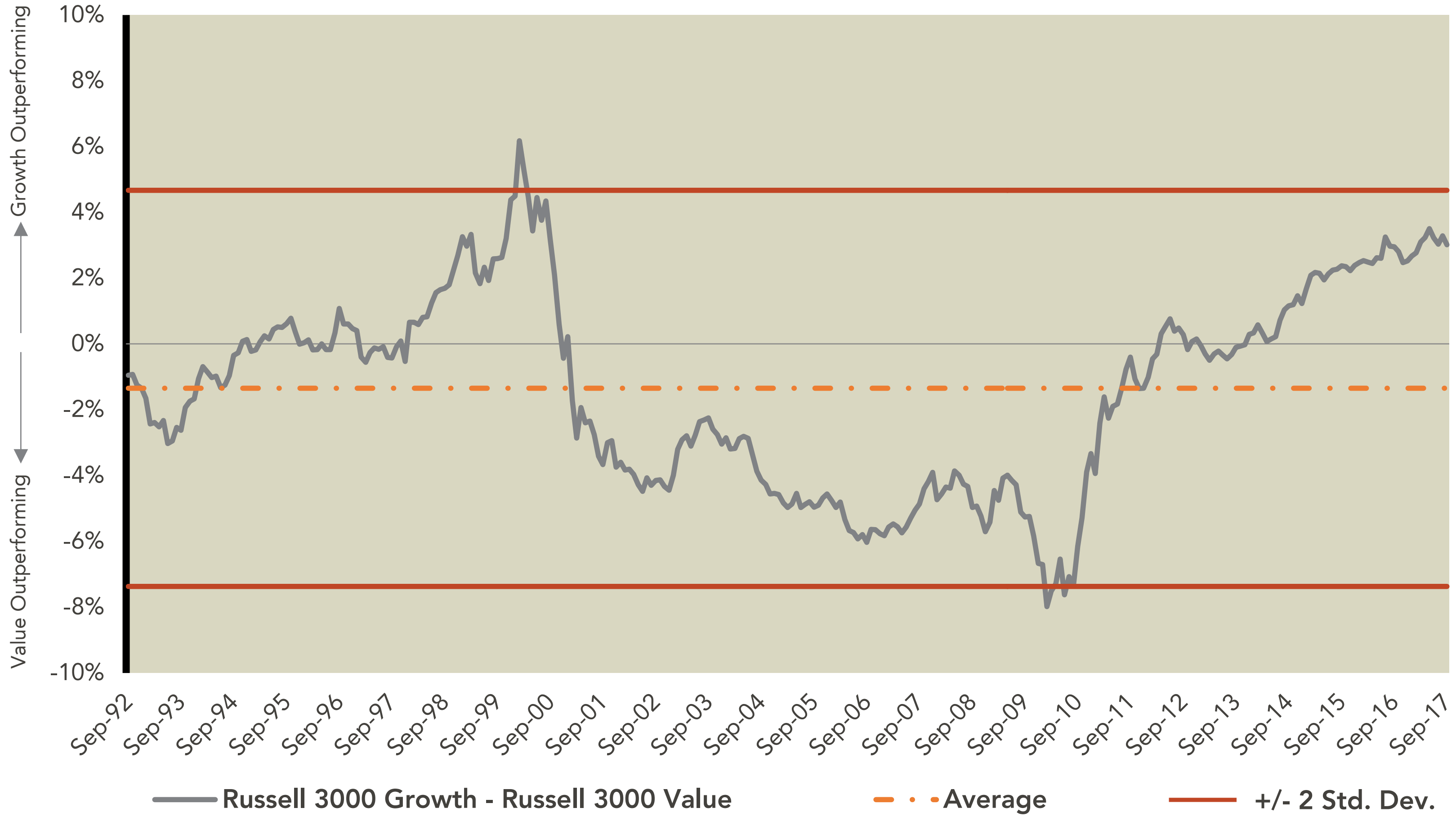
U.S. equity index returns

	Month (%)	3-Month (%)	YTD (%)	1 Year (%)	3 Year (%)	5 Year (%)	10 Year (%)
Broad Market Indices							
Dow Jones	2.2	5.6	15.5	25.5	12.3	13.6	7.7
Wilshire 5000	2.4	4.6	13.7	18.9	11.0	14.3	7.6
Russell 3000	2.4	4.6	13.9	18.7	10.7	14.2	7.6
Large-Cap Market Indices							
S&P 500	2.1	4.5	14.2	18.6	10.8	14.2	7.4
Russell 1000	2.1	4.5	14.2	18.5	10.6	14.3	7.5
Russell 1000 Value	3.0	3.1	7.9	15.1	8.5	13.2	5.9
Russell 1000 Growth	1.3	5.9	20.7	21.9	12.7	15.3	9.1
Mid-Cap Market Indices							
Russell MidCap	2.8	3.5	11.7	15.3	9.5	14.3	8.1
Russell MidCap Value	2.7	2.1	7.4	13.4	9.2	14.3	7.9
Russell MidCap Growth	2.8	5.3	17.3	17.8	10.0	14.2	8.2
Small-Cap Market Indices							
Russell 2000	6.2	5.7	10.9	20.7	12.2	13.8	7.8
Russell 2000 Value	7.1	5.1	5.7	20.5	12.1	13.3	7.1
Russell 2000 Growth	5.4	6.2	16.8	21.0	12.2	14.3	8.5

Source: Morningstar Direct

Growth's Outperformance Takes a Reprieve

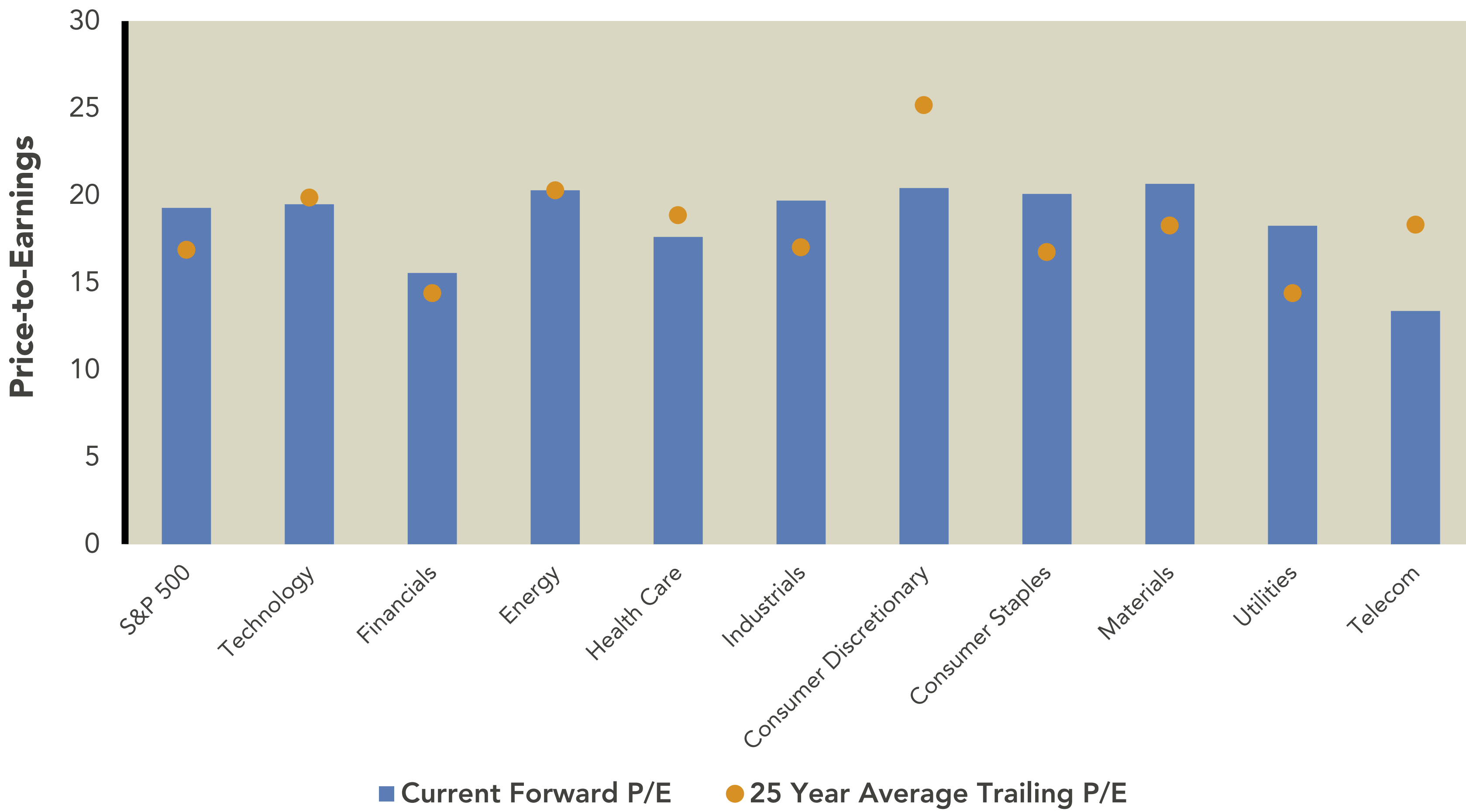
Rolling 10-year trailing performance of growth minus value



Source: Evestment

Fewer Bargains to Go Around

Valuations relative to historical averages



Source: Bloomberg

U.S. Equity Takeaways

- Ongoing fiscal policy debates and proposed reforms may whipsaw certain sectors of the market
- Fewer opportunities exist from a valuation perspective in equity markets
- Sustained earnings growth will be necessary to support equity valuations

Non-U.S. Equity

Non-U.S. Equities: Another Strong Quarter

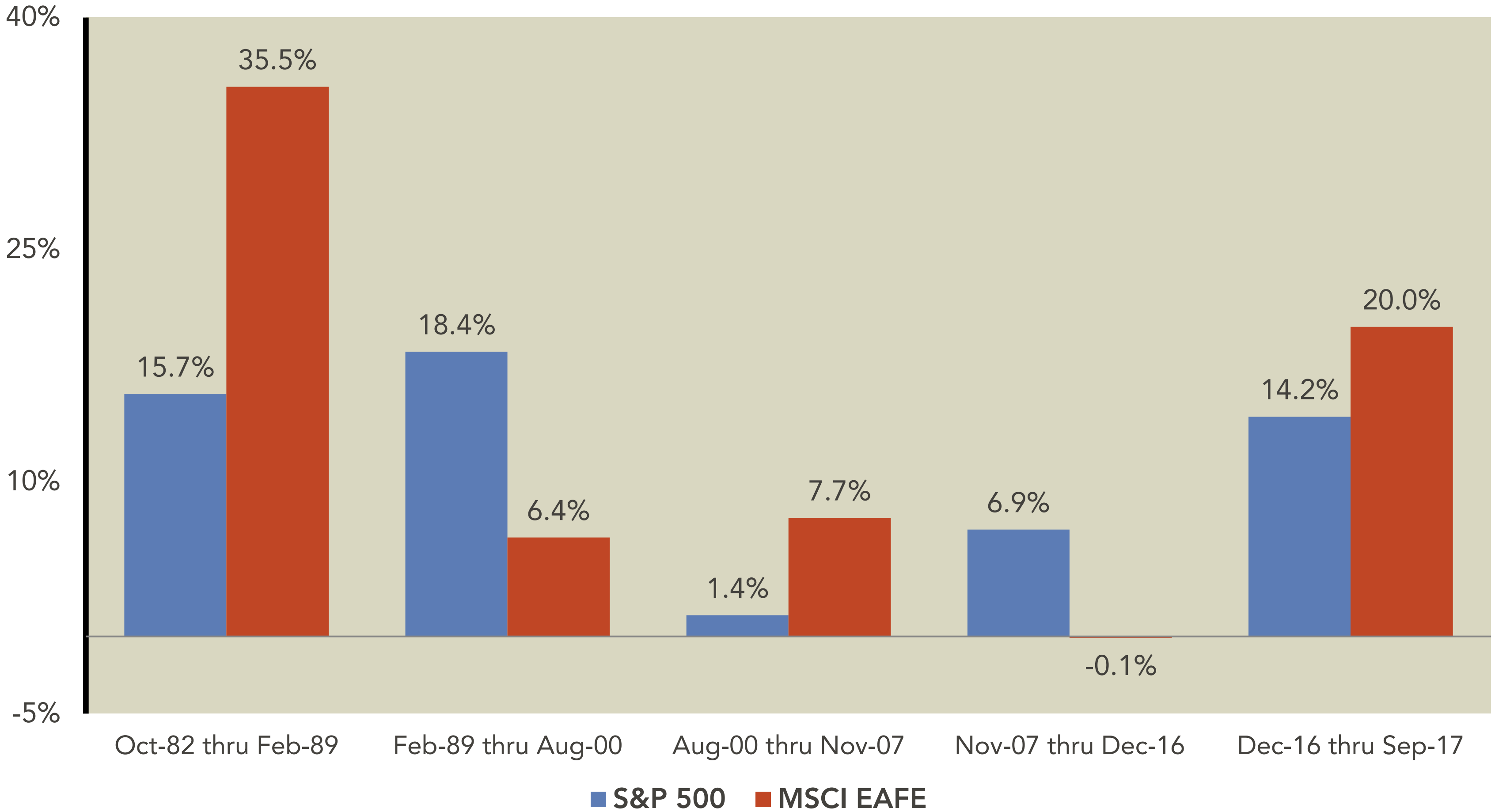
Year-to-date returns are above 20% across all major indices

	Month (%)	3-Month (%)	YTD (%)	1 Year (%)	3 Year (%)	5 Year (%)	10 Year (%)
MSCI ACWI ex. U.S.	1.9	6.2	21.1	19.6	4.7	7.0	1.3
MSCI EAFE	2.5	5.4	20.0	19.1	5.0	8.4	1.3
MSCI EAFE Local	2.7	3.4	11.2	19.0	7.9	12.3	2.6
MSCI Emerging Markets	-0.4	7.9	27.8	22.5	4.9	4.0	1.3
MSCI EM Local	0.4	7.6	23.5	21.8	8.5	7.9	3.9
MSCI EAFE Small-Cap	2.9	7.5	25.4	21.8	11.1	12.9	4.6
MSCI EM Small-Cap	0.0	5.6	22.5	14.9	3.1	4.6	1.7
MSCI Frontier	2.0	8.0	24.9	25.5	-1.4	8.7	-1.1

Source: Bloomberg

The Start of a Longer Term Trend?

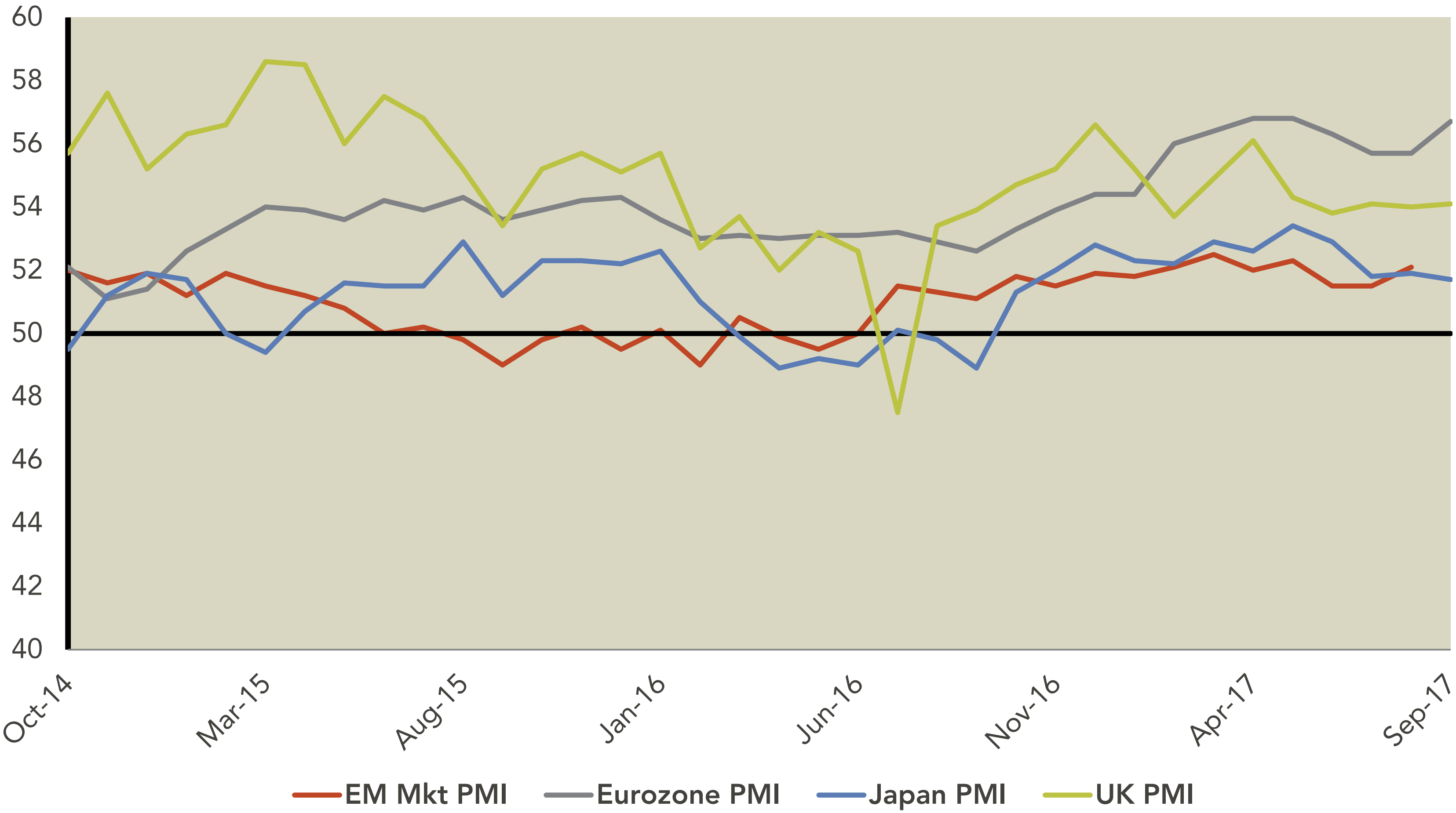
Economic and earnings momentum has helped lift investor confidence



Source: Bloomberg

Global Economy Continues Momentum

Europe and Japan report better than expected 2Q GDP growth



Source: Bloomberg

Intl. Equities: Not Cheap, but Less Expensive

All equities trade above their long-term averages

	S&P 500		MSCI EAFE	
Valuation Metrics	Current	Historical Percentile (%)	Current	Historical Percentile (%)
P/E	21.1	79	17.7	71
Forward P/E	19.3	100	15.5	84
P/B	3.2	77	1.7	49
P/CF	14.2	76	9.1	47
EV/EBITDA	13.1	92	10.0	59
Average		85		62

Source: Bloomberg. P/E is adjusted for negative earnings, percentiles are based on last 20-years except for FP/E which goes back to 2005. Data as of 3Q17

About Marquette Associates

Marquette Associates is an independent investment consulting firm that guides institutional investment programs with a focused client service approach and careful research. For over 30 years Marquette has served this mission in close collaboration with clients – enabling institutions to be more effective investment stewards. Marquette is a completely independent and 100% employee-owned consultancy founded with the sole purpose of advising institutions. For more information, please visit www.marquetteassociates.com.

MarquetteAssociates

Pension Fund

Glen Ellyn Police

Pension Fund

Executive Summary

September 30, 2017

Total Fund Composite

Manager Status

Market Value: $30.2 Million and 100.0% of Fund

Investment Manager	Asset Class	Status	Reason
Great Lakes Advisors	Core Fixed Income	In Compliance	---
PIMCO Corporate & Income Fund	Opportunistic Fixed Income	In Compliance	---
PIMCO Income Opportunity Fund	Opportunistic Fixed Income	In Compliance	---
PIMCO Income Strategy Fund II	Opportunistic Fixed Income	In Compliance	---
Vanguard Total Stock Market	All-Cap Core	In Compliance	---
Vanguard Value Index	Large-Cap Value	In Compliance	---
Vanguard 500 Index	Large-Cap Core	In Compliance	---
Vanguard Mid-Cap Growth ETF	Mid-Cap Growth	In Compliance	---
Vanguard Developed Markets	Non-U.S. Large-Cap Core	In Compliance	---
Goldman Sachs International Small Cap Insights	Non-U.S. Small-Cap Core	In Compliance	---
DFA Emerging Markets Core Equity Fund	Emerging Markets	In Compliance	---

Open-End Investment Manager Evaluation Terminology

The following terminology has been developed by Marquette Associates to facilitate efficient communication among the Investment Manager, Investment Consultant, and the Plan Sponsor. Each term signifies a particular status with the Fund and any conditions that may require improvement. In each case, communication is made only after consultation with the Trustees and/or the Investment Committee of the Plan.

In Compliance – The investment manager states it is acting in accordance with the Investment Policy Guidelines.

Alert – The investment manager is notified of a problem in performance (usually related to a benchmark or volatility measure), a change in investment characteristics, an alteration in management style or key investment professionals, and/or any other irregularities.

On Notice – The investment manager is notified of continued concern with one or more Alert issues. Failure to improve upon stated issues within a specific time frame justifies termination.

Termination – The Trustees have decided to terminate the investment manager. The investment manager is notified and transition plans are in place.

Total Fund Composite

Market Value: $30.2 Million and 100.0% of Fund

Ending September 30, 2017

	Asset Class	Market Value ($)	3 Mo Net Cash Flows ($)	% of Portfolio	Policy %	Policy Difference ($)
Total Fund Composite		**30,163,379**	**350,630**	**100.0**	**100.0**	**0**
U.S. Fixed Income Composite		**14,514,872**	**-1,660,355**	**48.1**	**35.0**	**3,957,689**
Great Lakes Advisors	Core Fixed Income	10,370,334	10,357,250	34.4		
Certificates of Deposit	CD	1,254,694	-250,000	4.2		
PIMCO Corporate & Income Fund	Opportunistic Fixed Income	1,008,994	-19,406	3.3		
PIMCO Income Opportunity Fund	Opportunistic Fixed Income	889,090	-19,095	2.9		
PIMCO Income Strategy Fund II	Opportunistic Fixed Income	991,760	-22,080	3.3		
U.S. Equity Composite		**9,240,848**	**607,106**	**30.6**	**30.0**	**191,834**
Vanguard Total Stock Market	All-Cap Core	2,072,320	-8,848	6.9	0.0	2,072,320
Vanguard Value Index	Large-Cap Value	2,732,074	0	9.1	9.0	17,370
Vanguard 500 Index	Large-Cap Core	2,731,953	620,000	9.1	9.0	17,249
Vanguard Mid-Cap Growth ETF	Mid-Cap Growth	1,704,500	-4,046	5.7	6.0	-105,303
Non U.S. Equity Composite		**4,882,437**	**1,170,000**	**16.2**	**20.0**	**-1,150,239**
Vanguard Developed Markets	Non-U.S. Large-Cap Core	3,694,698	0	12.2	10.0	678,360
Goldman Sachs International Small Cap Insights	Non-U.S. Small-Cap Core	596,745	585,000	2.0	5.0	-911,424
DFA Emerging Markets Core Equity Fund	Emerging Markets	590,994	585,000	2.0	5.0	-917,175
Cash Composite		**1,525,222**	**233,879**	**5.1**	**0.0**	**1,525,222**
Fidelity Gov't Money Market	Cash & Equivalents	1,525,222	233,879	5.1	0.0	1,525,222

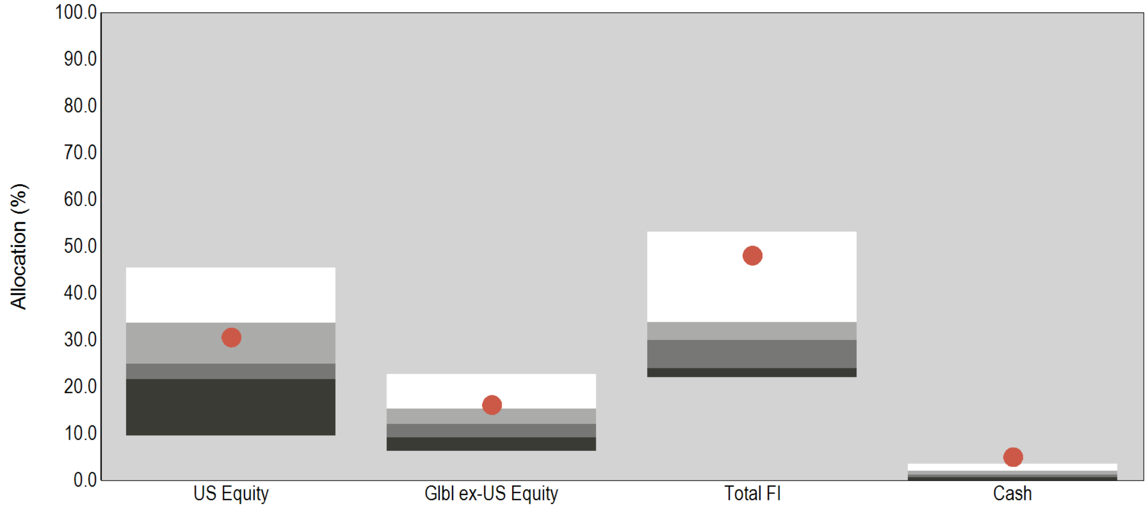
The policy allocations shown above exlude a 10% allocation to Core Real Estate, a 5% allocation to GTAA, and a 6% allocation to U.S. Small-Cap, as these asset classes have not yet been funded.

Total Fund Composite

Asset Allocation

Market Value: $30.2 Million and 100.0% of Fund

Total Plan Allocation vs. InvestorForce Public DB < $50mm Net
As of September 30, 2017

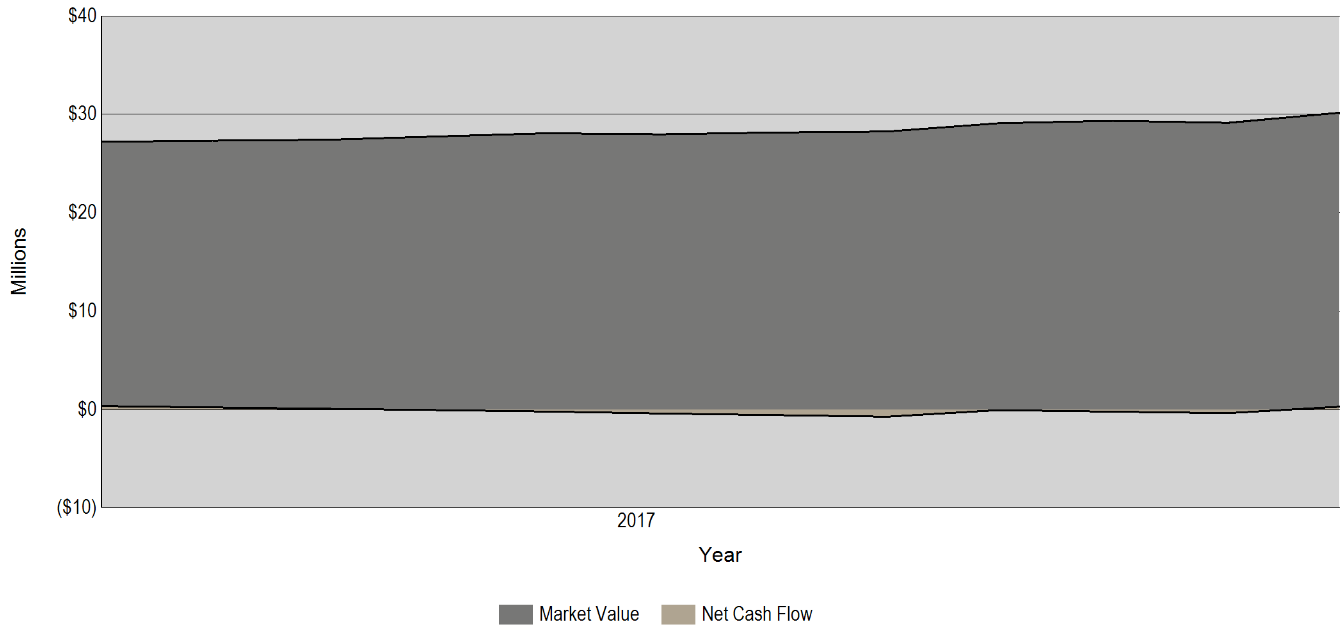


	Allocation (Rank)							
5th Percentile	45.5		22.8		53.2		3.6	
25th Percentile	33.8		15.4		33.9		2.0	
Median	25.0		12.1		30.1		1.2	
75th Percentile	21.7		9.2		24.0		0.7	
95th Percentile	9.6		6.3		22.1		0.1	
# of Portfolios	13		23		25		24	
● Total Fund Composite	30.6	(38)	16.2	(23)	48.1	(18)	5.1	(4)

Total Fund Composite

Market Value History

Market Value: $30.2 Million and 100.0% of Fund



Summary of Cash Flows

	Third Quarter	Year-To-Date	One Year
Beginning Market Value	**$29,095,266**	**$27,417,815**	**$27,655,745**
Net Cash Flow	$350,630	$210,135	-$214,641
Net Investment Change	$717,483	$2,535,429	$2,722,275
Ending Market Value	**$30,163,379**	**$30,163,379**	**$30,163,379**

Total Fund Composite

Annualized Performance (Net of Fees)

Market Value: $30.2 Million and 100.0% of Fund

Ending September 30, 2017

	1 Mo	3 Mo	YTD	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs
Total Fund Composite	**1.3**	**2.5**	**9.4**	**10.1**	**8.9**	**6.0**	**6.3**	**6.1**	**6.3**	**5.4**
60/40 S&P 500/BBgBarc US Aggregate	*1.0*	*3.0*	*9.7*	*10.9*	*11.2*	*7.6*	*9.0*	*9.3*	*9.8*	*6.5*
U.S. Fixed Income Composite	**0.3**	**0.8**	**5.7**	**5.4**	**6.2**	**4.2**	**4.0**	**2.9**	**4.1**	**5.1**
BBgBarc US Aggregate TR	*-0.5*	*0.8*	*3.1*	*0.1*	*2.6*	*2.7*	*3.0*	*2.1*	*3.0*	*4.3*
U.S. Equity Composite	**2.4**	**4.3**	**16.6**	**19.7**	**15.3**	**10.3**	**11.2**	**13.3**	**13.4**	**7.6**
Russell 3000	*2.4*	*4.6*	*13.9*	*18.7*	*16.8*	*10.7*	*12.5*	*14.2*	*14.3*	*7.6*
Non U.S. Equity Composite	**2.8**	**5.9**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
FTSE Developed ex US All Cap	*2.6*	*5.6*	*20.1*	*19.1*	*13.5*	*5.2*	*5.1*	*--*	*--*	*--*

Investment Manager

Annualized Performance (Net of Fees)

Market Value: $30.2 Million and 100.0% of Fund

Ending September 30, 2017

	1 Mo	3 Mo	YTD	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs
Total Fund Composite	**1.3**	**2.5**	**9.4**	**10.1**	**8.9**	**6.0**	**6.3**	**6.1**	**6.3**	**5.4**
60/40 S&P 500/BBgBarc US Aggregate	*1.0*	*3.0*	*9.7*	*10.9*	*11.2*	*7.6*	*9.0*	*9.3*	*9.8*	*6.5*
U.S. Fixed Income Composite	**0.3**	**0.8**	**5.7**	**5.4**	**6.2**	**4.2**	**4.0**	**2.9**	**4.1**	**5.1**
BBgBarc US Aggregate TR	*-0.5*	*0.8*	*3.1*	*0.1*	*2.6*	*2.7*	*3.0*	*2.1*	*3.0*	*4.3*
Great Lakes Advisors	--	--	--	--	--	--	--	--	--	--
BBgBarc US Govt/Credit Int TR	*-0.5*	*0.6*	*2.3*	*0.2*	*1.9*	*2.1*	*2.1*	*1.6*	*2.3*	*3.6*
eA US Core Fixed Inc Net Rank	--	--	--	--	--	--	--	--	--	--
Certificates of Deposit	0.2	0.1	-0.2	--	--	--	--	--	--	--
91 Day T-Bills	*0.1*	*0.3*	*0.6*	*0.7*	*0.5*	*0.3*	*0.2*	*0.2*	*0.2*	*0.4*
eA US Cash Management Net Rank	*1*	*99*	*99*	--	--	--	--	--	--	--
PIMCO Corporate & Income Fund	4.4	2.6	25.5	27.2	--	--	--	--	--	--
BBgBarc US Aggregate TR	*-0.5*	*0.8*	*3.1*	*0.1*	*2.6*	*2.7*	*3.0*	*2.1*	*3.0*	*4.3*
PIMCO Income Opportunity Fund	1.8	0.3	21.7	26.6	--	--	--	--	--	--
BBgBarc US Aggregate TR	*-0.5*	*0.8*	*3.1*	*0.1*	*2.6*	*2.7*	*3.0*	*2.1*	*3.0*	*4.3*
PIMCO Income Strategy Fund II	1.2	4.8	21.0	23.6	--	--	--	--	--	--
BBgBarc US Aggregate TR	*-0.5*	*0.8*	*3.1*	*0.1*	*2.6*	*2.7*	*3.0*	*2.1*	*3.0*	*4.3*
U.S. Equity Composite	**2.4**	**4.3**	**16.6**	**19.7**	**15.3**	**10.3**	**11.2**	**13.3**	**13.4**	**7.6**
Russell 3000	*2.4*	*4.6*	*13.9*	*18.7*	*16.8*	*10.7*	*12.5*	*14.2*	*14.3*	*7.6*
Vanguard Total Stock Market	2.5	4.6	13.9	18.7	--	--	--	--	--	--
CRSP US Total Market TR USD	*2.5*	*4.5*	*14.0*	*18.6*	*16.8*	*10.7*	*12.4*	*14.2*	*14.2*	*7.7*
All Cap Blend MStar MF Rank	*64*	*45*	*29*	*41*	--	--	--	--	--	--
Vanguard Value Index	3.0	4.2	--	--	--	--	--	--	--	--
CRSP US Large Cap Value TR USD	*3.0*	*4.1*	*9.5*	*17.8*	*17.0*	*10.0*	*12.2*	*14.0*	*14.0*	*6.6*
Large Value MStar MF Rank	*61*	*38*	--	--	--	--	--	--	--	--
Vanguard 500 Index	2.1	4.5	--	--	--	--	--	--	--	--
S&P 500	*2.1*	*4.5*	*14.2*	*18.6*	*17.0*	*10.8*	*13.0*	*14.2*	*14.4*	*7.4*
Large Blend MStar MF Rank	*59*	*43*	--	--	--	--	--	--	--	--
Vanguard Mid-Cap Growth ETF	1.7	3.7	15.9	15.5	--	--	--	--	--	--
Russell MidCap Growth	*2.8*	*5.3*	*17.3*	*17.8*	*14.5*	*10.0*	*11.1*	*14.2*	*13.8*	*8.2*
Mid-Cap Growth MStar MF Rank	*90*	*73*	*58*	*80*	--	--	--	--	--	--
Non U.S. Equity Composite	**2.8**	**5.9**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
FTSE Developed ex US All Cap	*2.6*	*5.6*	*20.1*	*19.1*	*13.5*	*5.2*	*5.1*	--	--	--
Vanguard Developed Markets	2.4	5.5	--	--	--	--	--	--	--	--
FTSE Developed ex US All Cap	*2.6*	*5.6*	*20.1*	*19.1*	*13.5*	*5.2*	*5.1*	--	--	--
Foreign Large Blend MStar MF Rank	*31*	*53*	--	--	--	--	--	--	--	--

Investment Manager

Calendar Performance (Net of Fees)

Market Value: $30.2 Million and 100.0% of Fund

Calendar Year

	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)	2008 (%)	2007 (%)	2006 (%)
Total Fund Composite	6.1	0.4	6.7	8.1	6.5	4.1	10.1	10.0	-7.5	7.2	6.7
60/40 S&P 500/BBgBarc US Aggregate	8.3	1.3	10.6	17.6	11.3	4.7	12.1	18.4	-22.1	6.2	11.1
U.S. Fixed Income Composite	6.4	0.6	3.8	-1.7	5.0	11.9	6.8	4.1	6.3	7.8	4.4
BBgBarc US Aggregate TR	2.6	0.5	6.0	-2.0	4.2	7.8	6.5	5.9	5.2	7.0	4.3
Great Lakes Advisors	--	--	--	--	--	--	--	--	--	--	--
BBgBarc US Govt/Credit Int TR	2.1	1.1	3.1	-0.9	3.9	5.8	5.9	5.2	5.1	7.4	4.1
eA US Core Fixed Inc Net Rank	--	--	--	--	--	--	--	--	--	--	--
Certificates of Deposit	--	--	--	--	--	--	--	--	--	--	--
91 Day T-Bills	0.3	0.0	0.0	0.0	0.1	0.0	0.1	0.1	1.3	4.4	5.0
eA US Cash Management Net Rank	--	--	--	--	--	--	--	--	--	--	--
PIMCO Corporate & Income Fund	24.5	--	--	--	--	--	--	--	--	--	--
BBgBarc US Aggregate TR	2.6	0.5	6.0	-2.0	4.2	7.8	6.5	5.9	5.2	7.0	4.3
PIMCO Income Opportunity Fund	23.1	--	--	--	--	--	--	--	--	--	--
BBgBarc US Aggregate TR	2.6	0.5	6.0	-2.0	4.2	7.8	6.5	5.9	5.2	7.0	4.3
PIMCO Income Strategy Fund II	20.4	--	--	--	--	--	--	--	--	--	--
BBgBarc US Aggregate TR	2.6	0.5	6.0	-2.0	4.2	7.8	6.5	5.9	5.2	7.0	4.3
U.S. Equity Composite	8.7	-0.2	11.3	32.7	14.7	-1.3	21.1	34.1	-38.2	11.0	16.2
Russell 3000	12.7	0.5	12.6	33.6	16.4	1.0	16.9	28.3	-37.3	5.1	15.7
Vanguard Total Stock Market	12.8	--	--	--	--	--	--	--	--	--	--
CRSP US Total Market TR USD	12.7	0.4	12.6	33.6	16.2	0.7	17.9	28.9	-37.0	5.8	15.9
All Cap Blend MStar MF Rank	50	--	--	--	--	--	--	--	--	--	--
Vanguard Value Index	--	--	--	--	--	--	--	--	--	--	--
CRSP US Large Cap Value TR USD	16.9	-0.9	13.3	33.3	16.7	1.4	16.1	18.4	-35.3	-0.6	21.1
Large Value MStar MF Rank	--	--	--	--	--	--	--	--	--	--	--
Vanguard 500 Index	--	--	--	--	--	--	--	--	--	--	--
S&P 500	12.0	1.4	13.7	32.4	16.0	2.1	15.1	26.5	-37.0	5.5	15.8
Large Blend MStar MF Rank	--	--	--	--	--	--	--	--	--	--	--
Vanguard Mid-Cap Growth ETF	6.9	--	--	--	--	--	--	--	--	--	--
Russell MidCap Growth	7.3	-0.2	11.9	35.7	15.8	-1.7	26.4	46.3	-44.3	11.4	10.7
Mid-Cap Growth MStar MF Rank	45	--	--	--	--	--	--	--	--	--	--
Non U.S. Equity Composite	--	--	--	--	--	--	--	--	--	--	--
FTSE Developed ex US All Cap	2.9	-2.0	-4.6	20.3	--	--	--	--	--	--	--
Vanguard Developed Markets	--	--	--	--	--	--	--	--	--	--	--
FTSE Developed ex US All Cap	2.9	-2.0	-4.6	20.3	--	--	--	--	--	--	--
Foreign Large Blend MStar MF Rank	--	--	--	--	--	--	--	--	--	--	--

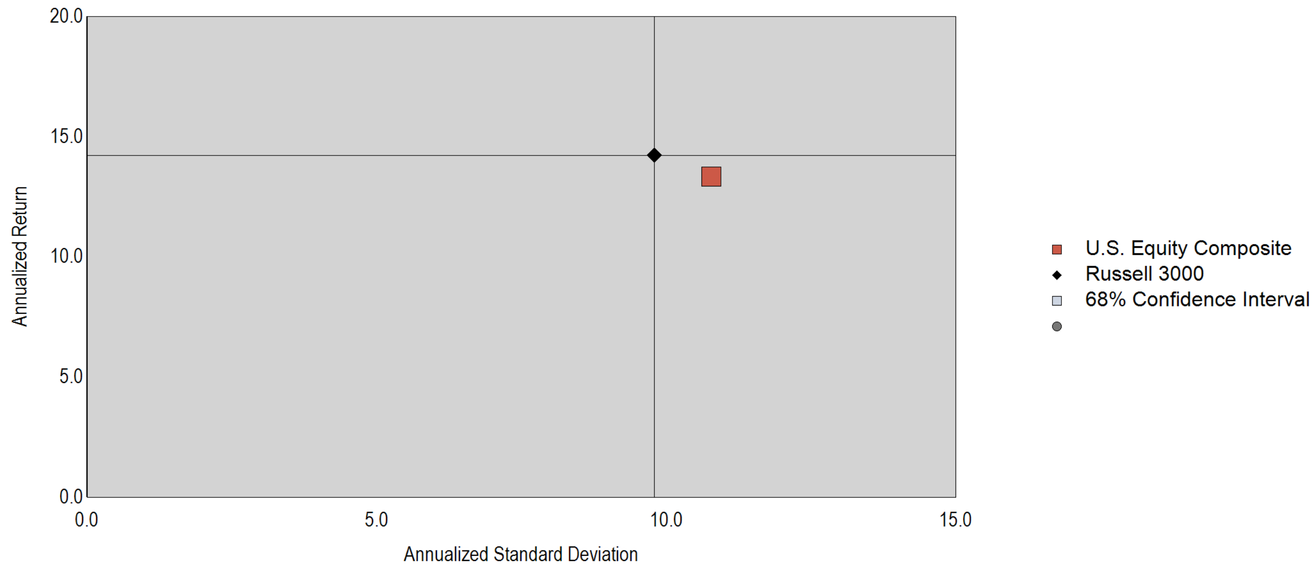
U.S. Equity Composite

Characteristics

As of September 30, 2017

Market Value: $9.2 Million and 30.6% of Fund

Risk / Return - 5 Years



Characteristics

	Portfolio	Dow Jones U.S. Total Stock Market
Number of Holdings	3,603	3,811
Weighted Avg. Market Cap. ($B)	127.8	135.1
Median Market Cap. ($B)	2.1	0.9
Price To Earnings	25.4	25.5
Price To Book	4.7	4.3
Price To Sales	3.5	3.6
Return on Equity (%)	19.5	17.1
Yield (%)	1.9	1.8
Beta	1.0	1.0
R-Squared	1.0	1.0

Largest Holdings

	End Weight	Return
MICROSOFT	2.8	8.6
APPLE	1.7	7.4
JOHNSON & JOHNSON	1.7	-1.1
BERKSHIRE HATHAWAY 'B'	1.7	8.2
EXXON MOBIL	1.7	2.5

Top Contributors

	Beg Wgt	Return	Contribution
MICROSOFT	2.6	8.6	0.2
CHEVRON	1.0	13.8	0.1
BOEING	0.4	29.3	0.1
APPLE	1.5	7.4	0.1
VERIZON COMMUNICATIONS	0.9	12.3	0.1

Characteristics

	Portfolio	Dow Jones U.S. Total Stock Market
INDUSTRY SECTOR DISTRIBUTION (% Equity)		
Energy	6.5	5.8
Materials	3.4	2.8
Industrials	12.2	10.9
Consumer Discretionary	10.5	12.4
Consumer Staples	7.1	7.4
Health Care	14.0	14.1
Financials	16.4	15.2
Information Technology	19.9	22.4
Telecommunication Services	2.5	2.0
Utilities	3.4	3.2
Real Estate	3.9	4.0
Unclassified	0.0	0.0

Bottom Contributors

	Beg Wgt	Return	Contribution
GENERAL ELECTRIC	1.2	-9.6	-0.1
ALTRIA GROUP	0.5	-13.9	-0.1
EQUIFAX	0.2	-22.7	-0.1
ULTA BEAUTY	0.2	-21.3	-0.1
CHIPOTLE MEXN.GRILL	0.2	-26.0	0.0

Market Capitalization

	Small Cap	Small/ Mid	Mid Cap	Mid/ Large	Large Cap
U.S. Equity Composite	1.4%	5.0%	27.4%	26.9%	39.3%
Dow Jones U.S. Total Stock Market	6.9%	9.5%	16.1%	27.5%	40.0%
Weight Over/Under	*-5.4%*	*-4.5%*	*11.2%*	*-0.7%*	*-0.7%*

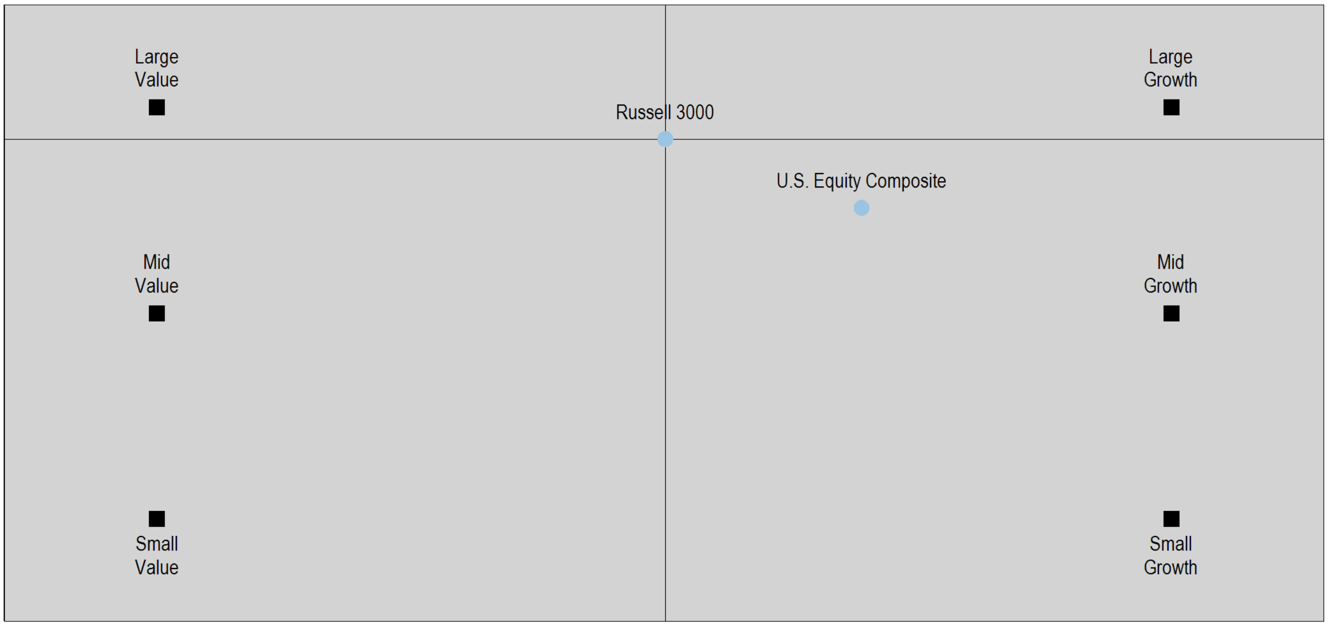
U.S. Equity Composite

Style

As of September 30, 2017

Market Value: $9.2 Million and 30.6% of Fund

U.S. Equity Style Map



Common Holdings Matrix

	Vanguard Total Stock Market #	Vanguard Total Stock Market %	Vanguard Value Index #	Vanguard Value Index %	Vanguard 500 Index #	Vanguard 500 Index %	Vanguard Mid-Cap Growth ETF #	Vanguard Mid-Cap Growth ETF %
Vanguard Total Stock Market	--	--	328	100	504	100	139	98
Vanguard Value Index	328	47	--	--	278	56	10	3
Vanguard 500 Index	504	82	278	97	--	--	98	77
Vanguard Mid-Cap Growth ETF	139	6	10	0	98	6	--	--

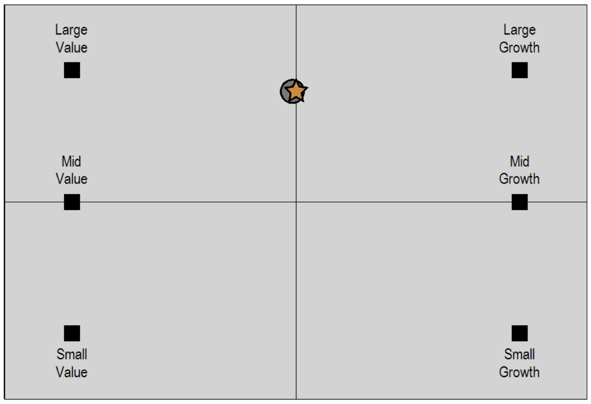
Vanguard Total Stock Market

Characteristics

As of September 30, 2017

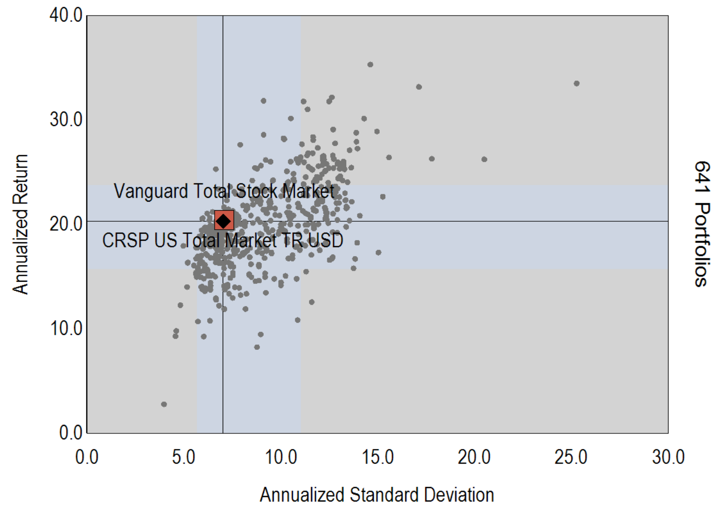
Market Value: $2.1 Million and 6.9% of Fund

Style Drift - 1 Year



Vanguard Total Stock Market
CRSP US Total Market TR USD

Annualized Return vs. Annualized Standard Deviation



Characteristics

	Portfolio	CRSP US Total Market TR USD
Number of Holdings	3,596	3,591
Weighted Avg. Market Cap. ($B)	134.0	133.8
Median Market Cap. ($B)	1.1	1.1
Price To Earnings	25.6	25.4
Price To Book	5.1	4.3
Price To Sales	3.7	3.6
Return on Equity (%)	19.9	17.1
Yield (%)	1.9	1.8
Beta		1.0
R-Squared		1.0

Largest Holdings

	End Weight	Return
APPLE	2.7	7.4
MICROSOFT	2.2	8.6
FACEBOOK CLASS A	1.5	13.2
AMAZON.COM	1.5	-0.7
JOHNSON & JOHNSON	1.3	-1.1

Top Contributors

	Beg Wgt	Return	Contribution
APPLE	2.7	7.4	0.2
FACEBOOK CLASS A	1.4	13.2	0.2
MICROSOFT	2.1	8.6	0.2
BOEING	0.5	29.3	0.1
ABBVIE	0.5	23.6	0.1

Characteristics

	Portfolio	CRSP US Total Market TR USD
INDUSTRY SECTOR DISTRIBUTION (% Equity)		
Energy	5.7	5.8
Materials	3.4	2.8
Industrials	10.9	11.0
Consumer Discretionary	12.0	12.2
Consumer Staples	7.3	7.4
Health Care	13.9	14.2
Financials	14.9	15.2
Information Technology	21.9	22.3
Telecommunication Services	2.0	2.0
Utilities	3.1	3.2
Real Estate	4.0	4.0
Unclassified	0.0	0.0

Bottom Contributors

	Beg Wgt	Return	Contribution
GENERAL ELECTRIC	0.9	-9.6	-0.1
ALTRIA GROUP	0.6	-13.9	-0.1
MEDTRONIC	0.5	-11.4	-0.1
ALLERGAN	0.3	-15.4	-0.1
WALT DISNEY	0.6	-6.5	0.0

Market Capitalization

	Small Cap	Small/ Mid	Mid Cap	Mid/ Large	Large Cap
Vanguard Total Stock Market	10.3%	7.3%	5.5%	11.9%	65.0%
CRSP US Total Market TR USD	10.9%	7.3%	5.5%	11.9%	64.3%
Weight Over/Under	*-0.6%*	*0.0%*	*0.0%*	*0.0%*	*0.6%*

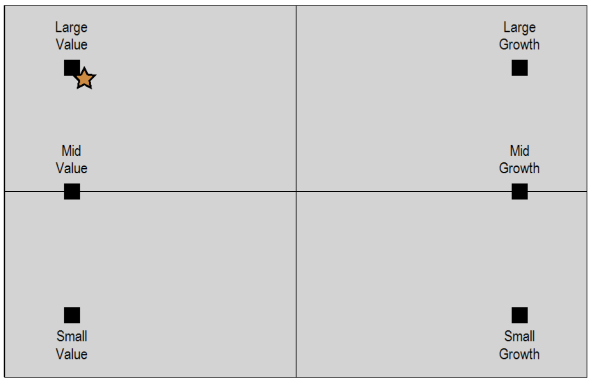
Vanguard Value Index

Characteristics

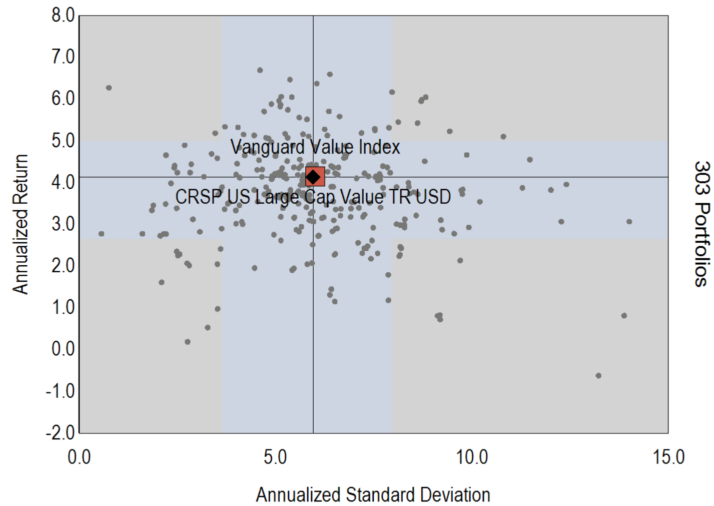
As of September 30, 2017

Market Value: $2.7 Million and 9.1% of Fund

Style Drift - 1 Year



Annualized Return vs. Annualized Standard Deviation



Characteristics

	Portfolio	CRSP US Large Cap Value TR USD
Number of Holdings	328	327
Weighted Avg. Market Cap. ($B)	150.1	149.7
Median Market Cap. ($B)	17.9	17.9
Price To Earnings	21.8	20.5
Price To Book	3.5	3.3
Price To Sales	2.5	2.5
Return on Equity (%)	18.2	15.8
Yield (%)	2.5	2.5
Beta		1.0
R-Squared		1.0

Largest Holdings

	End Weight	Return
MICROSOFT	4.9	8.6
BERKSHIRE HATHAWAY 'B'	3.1	8.2
JOHNSON & JOHNSON	3.0	-1.1
EXXON MOBIL	3.0	2.5
JP MORGAN CHASE & CO.	2.9	5.1

Top Contributors

	Beg Wgt	Return	Contribution
MICROSOFT	4.7	8.6	0.4
CHEVRON	1.7	13.8	0.2
BERKSHIRE HATHAWAY 'B'	2.9	8.2	0.2
VERIZON COMMUNICATIONS	1.6	12.3	0.2
INTEL	1.4	13.7	0.2

Characteristics

	Portfolio	CRSP US Large Cap Value TR USD
INDUSTRY SECTOR DISTRIBUTION (% Equity)		
Energy	8.2	8.3
Materials	3.9	2.5
Industrials	12.2	12.4
Consumer Discretionary	5.1	5.2
Consumer Staples	8.4	8.5
Health Care	13.7	13.9
Financials	24.7	25.0
Information Technology	13.3	13.4
Telecommunication Services	3.9	4.0
Utilities	5.8	5.9
Real Estate	0.8	0.9
Unclassified	0.0	0.0

Bottom Contributors

	Beg Wgt	Return	Contribution
GENERAL ELECTRIC	2.1	-9.6	-0.2
ALTRIA GROUP	0.6	-13.9	-0.1
INTERNATIONAL BUS.MCHS.	1.2	-4.7	-0.1
PEPSICO	1.5	-2.8	0.0
QUALCOMM	0.7	-5.1	0.0

Market Capitalization

	Small Cap	Small/ Mid	Mid Cap	Mid/ Large	Large Cap
Vanguard Value Index	0.1%	3.8%	5.2%	14.3%	76.6%
CRSP US Large Cap Value TR USD	1.5%	3.8%	5.2%	14.3%	75.2%
Weight Over/Under	*-1.4%*	*0.0%*	*0.0%*	*0.0%*	*1.4%*

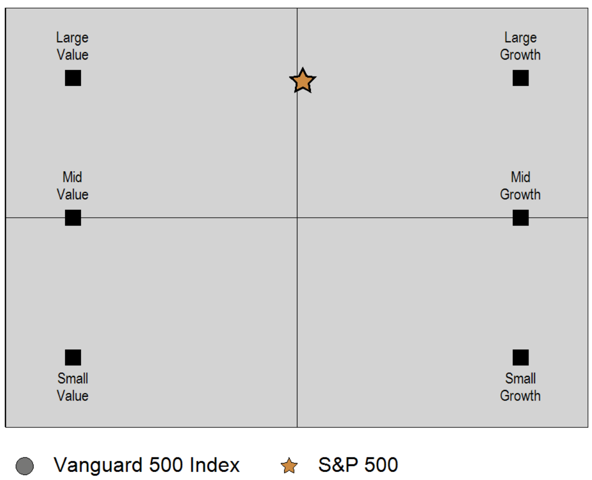
Vanguard 500 Index

Characteristics

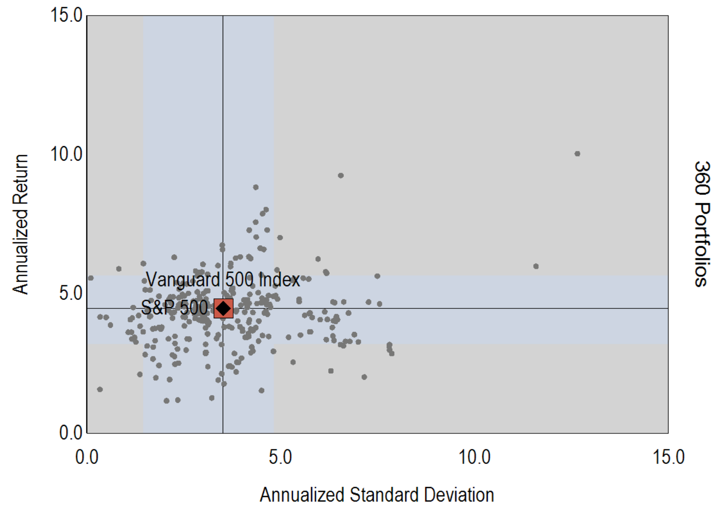
As of September 30, 2017

Market Value: $2.7 Million and 9.1% of Fund

Style Drift - 1 Year



Annualized Return vs. Annualized Standard Deviation



Characteristics

	Portfolio	S&P 500
Number of Holdings	509	505
Weighted Avg. Market Cap. ($B)	163.1	163.1
Median Market Cap. ($B)	20.7	20.7
Price To Earnings	25.2	24.6
Price To Book	5.3	4.8
Price To Sales	3.6	3.4
Return on Equity (%)	21.1	20.0
Yield (%)	2.0	2.0
Beta		1.0
R-Squared		1.0

Largest Holdings

	End Weight	Return
APPLE	3.7	7.4
MICROSOFT	2.7	8.6
FACEBOOK CLASS A	1.9	13.2
AMAZON.COM	1.8	-0.7
JOHNSON & JOHNSON	1.6	-1.1

Top Contributors

	Beg Wgt	Return	Contribution
APPLE	3.7	7.4	0.3
FACEBOOK CLASS A	1.7	13.2	0.2
MICROSOFT	2.6	8.6	0.2
BOEING	0.5	29.3	0.2
ABBVIE	0.6	23.6	0.1

Characteristics

	Portfolio	S&P 500
INDUSTRY SECTOR DISTRIBUTION (% Equity)		
Energy	6.1	6.1
Materials	3.0	2.2
Industrials	10.2	10.3
Consumer Discretionary	11.8	11.9
Consumer Staples	8.2	8.3
Health Care	14.5	14.6
Financials	14.6	14.7
Information Technology	23.2	23.4
Telecommunication Services	2.2	2.2
Utilities	3.1	3.1
Real Estate	3.0	3.0
Unclassified	0.0	0.0

Bottom Contributors

	Beg Wgt	Return	Contribution
GENERAL ELECTRIC	1.1	-9.6	-0.1
ALTRIA GROUP	0.7	-13.9	-0.1
MEDTRONIC	0.6	-11.4	-0.1
ALLERGAN	0.4	-15.4	-0.1
WALT DISNEY	0.8	-6.5	0.0

Market Capitalization

	Small Cap	Small/ Mid	Mid Cap	Mid/ Large	Large Cap
Vanguard 500 Index	0.0%	1.5%	16.2%	32.9%	49.4%
S&P 500	0.7%	1.5%	16.2%	32.9%	48.7%
Weight Over/Under	*-0.7%*	*0.0%*	*0.0%*	*0.0%*	*0.7%*

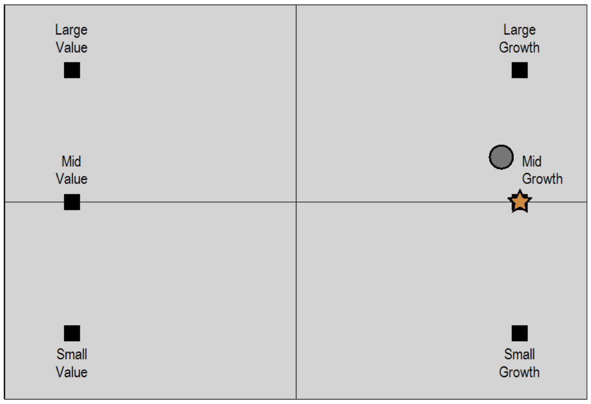
Vanguard Mid-Cap Growth ETF

Characteristics

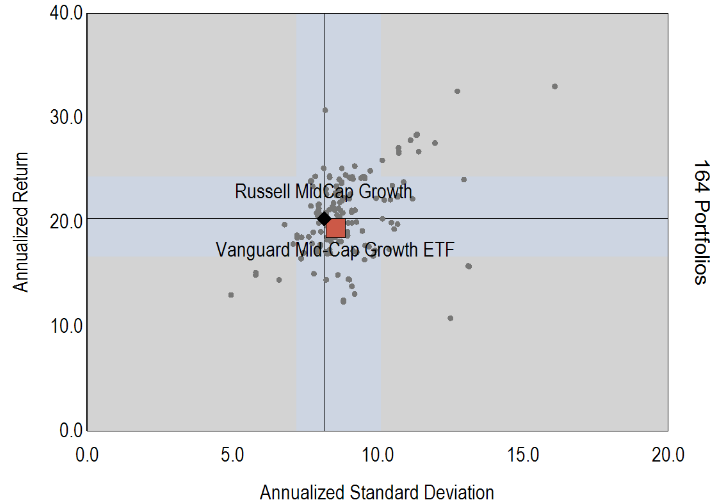
As of September 30, 2017

Market Value: $1.7 Million and 5.7% of Fund

Style Drift - 1 Year



Annualized Return vs. Annualized Standard Deviation



Characteristics

	Portfolio	Russell MidCap Growth
Number of Holdings	143	420
Weighted Avg. Market Cap. ($B)	14.8	14.5
Median Market Cap. ($B)	11.4	8.1
Price To Earnings	33.2	31.4
Price To Book	5.5	7.0
Price To Sales	4.7	3.7
Return on Equity (%)	18.4	24.6
Yield (%)	0.9	1.0
Beta		1.0
R-Squared		1.0

Largest Holdings

	End Weight	Return
LAM RESEARCH	2.0	31.2
FISERV	1.8	5.4
ROPER TECHNOLOGIES	1.7	5.3
DIGITAL REALTY TST.	1.6	5.6
MOODY'S	1.5	14.7

Top Contributors

	Beg Wgt	Return	Contribution
LAM RESEARCH	1.4	31.2	0.4
DOLLAR TREE	1.0	24.2	0.2
AMPHENOL 'A'	1.4	14.9	0.2
MOODY'S	1.2	14.7	0.2
MICROCHIP TECH.	1.0	16.8	0.2

Characteristics

	Portfolio	Russell MidCap Growth
INDUSTRY SECTOR DISTRIBUTION (% Equity)		
Energy	5.0	2.6
Materials	3.1	6.5
Industrials	17.4	16.7
Consumer Discretionary	15.7	17.4
Consumer Staples	2.2	4.1
Health Care	13.9	14.2
Financials	6.6	7.1
Information Technology	23.2	27.8
Telecommunication Services	1.4	0.2
Utilities	0.0	0.1
Real Estate	10.9	3.3
Unclassified	0.0	0.0

Bottom Contributors

	Beg Wgt	Return	Contribution
EQUIFAX	1.0	-22.7	-0.2
ULTA BEAUTY	1.0	-21.3	-0.2
CHIPOTLE MEXN.GRILL	0.7	-26.0	-0.2
EDWARDS LIFESCIENCES	1.5	-7.6	-0.1
ALLIANCE DATA SYSTEMS	0.8	-13.5	-0.1

Market Capitalization

	Small Cap	Small/ Mid	Mid Cap	Mid/ Large	Large Cap
Vanguard Mid-Cap Growth ETF	0.3%	10.0%	81.8%	7.8%	0.0%
Russell MidCap Growth	0.7%	26.0%	60.9%	12.4%	0.0%
Weight Over/Under	*-0.4%*	*-15.9%*	*21.0%*	*-4.6%*	*0.0%*

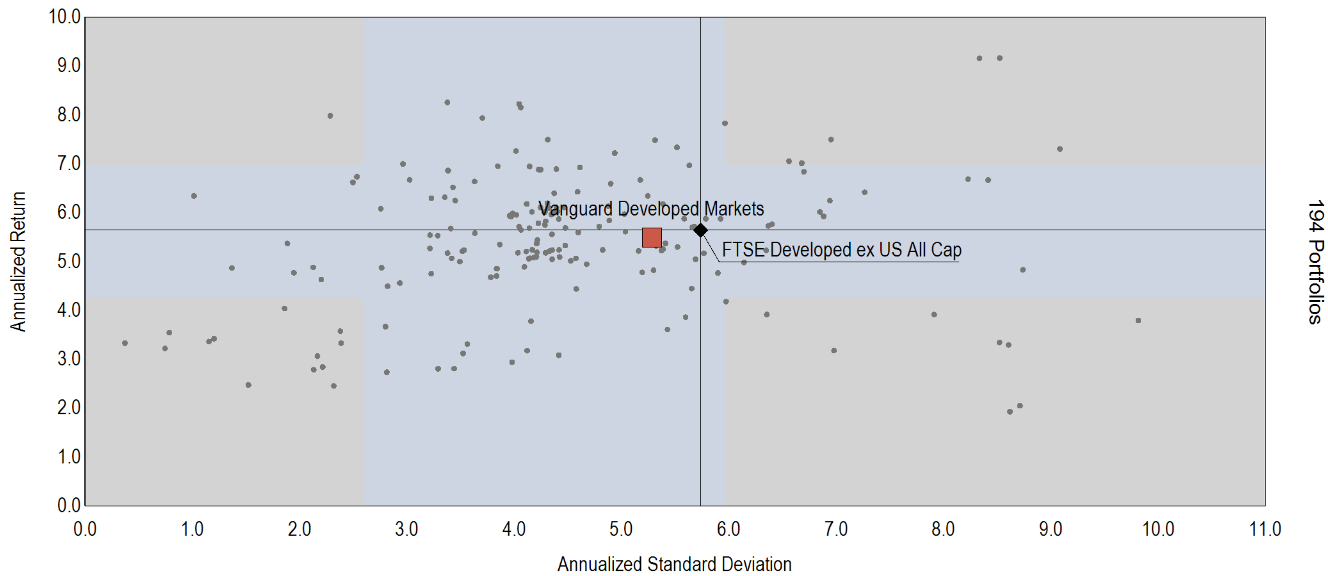
Vanguard Developed Markets

Characteristics

As of September 30, 2017

Market Value: $3.7 Million and 12.2% of Fund

Annualized Return vs. Annualized Standard Deviation



Characteristics

	Portfolio	FTSE Developed ex North America
Number of Holdings	3,857	1,449
Weighted Avg. Market Cap. ($B)	51.1	57.8
Median Market Cap. ($B)	1.8	6.7
Price To Earnings	21.9	20.6
Price To Book	3.0	2.5
Price To Sales	2.4	2.0
Return on Equity (%)	15.2	13.5
Yield (%)	2.8	2.9
Beta		1.0
R-Squared		1.0

Region	% of Total	% of Bench
North America ex U.S.	8.5%	0.0%
United States	0.1%	0.0%
Europe Ex U.K.	40.1%	35.1%
United Kingdom	14.8%	19.5%
Pacific Basin Ex Japan	10.6%	13.2%
Japan	21.1%	26.3%
Emerging Markets	4.4%	5.4%
Other	0.5%	0.5%
Total	**100.0%**	**100.0%**

Characteristics

	Portfolio	FTSE Developed ex North America
INDUSTRY SECTOR DISTRIBUTION (% Equity)		
Energy	6.1	4.8
Materials	8.4	8.1
Industrials	14.9	14.5
Consumer Discretionary	12.1	12.3
Consumer Staples	9.8	10.9
Health Care	9.2	10.1
Financials	21.5	21.0
Information Technology	7.8	8.0
Telecommunication Services	3.4	3.7
Utilities	3.0	3.2
Real Estate	3.7	3.3

Market Capitalization

	Small Cap	Mid Cap	Large Cap
Vanguard Developed Markets	27.5%	23.5%	49.0%
FTSE Developed ex North America	19.9%	25.8%	54.4%
Weight Over/Under	*7.6%*	*-2.2%*	*-5.4%*

Total Fund Composite

Fee Schedule

Market Value: $30.2 Million and 100.0% of Fund

Asset Class	Investment Manager	Fee Schedule	Expense Ratio & Estimated Annual Fee [1]	Industry Average [2]
Core Fixed Income	Great Lakes Advisors	0.30% on the first $10 million 0.20% on the balance	0.30% $30,741	0.30%
Opportunistic Fixed Income	PIMCO Corporate & Income Fund	1.10% on the balance	1.10% $11,099	0.50%
Opportunistic Fixed Income	PIMCO Income Opportunity Fund	2.63% on the balance	2.63% $23,383	0.50%
Opportunistic Fixed Income	PIMCO Income Strategy Fund II	1.14% on the balance	1.14% $11,306	0.50%
All-Cap Core	Vanguard Total Stock Market	0.05% on the balance	0.05% $1,036	0.14%
Large-Cap Value	Vanguard Value Index	0.06% on the balance	0.06% $1,639	0.13%
Large-Cap Core	Vanguard 500 Index	0.04% on the balance	0.04% $1,093	0.13%
Mid-Cap Growth	Vanguard Mid-Cap Growth ETF	0.08% on the balance	0.08% $1,364	0.22%
Non-U.S. Large-Cap Core	Vanguard Developed Markets	0.07% on the balance	0.07% $2,586	0.26%
Non-U.S. Small-Cap Core	Goldman Sachs International Small Cap Insigh	0.88% on the balance	0.88% $5,251	1.14%
Emerging Markets	DFA Emerging Markets Core Equity Fund	0.53% on the balance	0.53% $3,132	1.27%
Total Investment Management Fees			**0.31%** **$92,630**	**0.28%**
Investment Consultant	Marquette Associates, Inc.	$50,000 Annual Fee	0.17% $50,000	N/A
Custodian	US Bank	0.02% on the balance $7,500 annual minimum	0.02% $7,500	
Total Fund			**0.50%** **$150,130**	

[1] Expense Ratio & Estimated Annual Fee are Based on Market Value at Quarter End.
[2] Source: 2016 Marquette Associates Investment Management Fee Study.

MarquetteAssociates

Glen Ellyn Police

Transition Update

September 2017

Implementation Timeline

▶ April Meeting

- Adopt "Portfolio E"
- Hire an Intermediate Govt./Credit fixed income manager
- Approve an investment in the Principal US Property Fund
- Approve custody transition
  - Conduct custody transition
  - Transition fixed income asset in-kind to new fixed income manager
  - Restructure portfolio to fit "transition portfolio"
  - Revise IPS to reflect "Portfolio E"

▶ July Meeting

- Approve revised IPS reflecting "Portfolio E"
- Select Non-US Small-Cap equity manager
- Select Emerging Markets equity manager
  - Transition assets to non-US small-cap equity manager
  - Transition assets to emerging markets equity manager

▶ October Meeting

- Select US Small-Cap equity manager
- Conduct GTAA education
- Select GTAA manager
  - Transition assets to US small-cap equity manager
  - Transition assets to GTAA manager as CD portfolio matures

"Portfolio E" fully implemented - December 1, 2017

Beginning Total Fund Market Values

as of March 31, 2017

As of March 31, 2017	Asset Class	Market Value	Current % of Portfolio	Policy Target
Total Fund		$ 27,969,213	100.0%	100.0%
Fixed Income		17,489,811	62.5%	50.0%
Certificates of Deposit	Short-Term Fixed Income	1,507,412	5.4%	
Government Bond Portfolio	Intermediate Fixed Income	11,473,627	41.0%	
PIMCO Income Strategy (PFL)	Multisector Bond	933,750	3.3%	
PIMCO Income Strategy II (PFN)	Multisector Bond	931,960	3.3%	
PIMCO Corporate & Income (PCN)	Multisector Bond	924,744	3.3%	
PIMCO Corp. & Income Opportunity (PTY)	Multisector Bond	880,148	3.1%	
PIMCO Income Opportunity (PKO)	Multisector Bond	838,170	3.0%	
US Equity		8,891,920	31.8%	45.0%
Vanguard Total Stock Market Index (VTI)	US All-Cap Core Equity	1,941,120	6.9%	
Vanguard Mid-Cap Growth Index (VOT)	US Mid-Cap Growth Equity	1,581,300	5.7%	
iShares Russell Mid-Cap Growth Index (IWP)	US Mid-Cap Growth Equity	1,037,600	3.7%	
SPDR Consumer Discretionary (XLY)	US Sector Focused Fund	879,500	3.1%	
iShares Financial Services (IYG)	US Sector Focused Fund	763,700	2.7%	
SPDR Healthcare (XLV)	US Sector Focused Fund	817,960	2.9%	
iShares Healthcare Providers (IHF)	US Sub-Sector Focused Fund	804,540	2.9%	
SPDR Technology (XLK)	US Sector Focused Fund	1,066,200	3.8%	
Cash & Equivalents		1,587,482	5.7%	5.0%
MB Financial Money Market	Cash & Equivalents	1,587,482	5.7%	

Current & Projected Market Values

as of October 25, 2017

As of 10/25/2017	Asset Class	Market Value	Current % of Portfolio	Policy Target
Total Fund		$ 30,071,659	100.0%	
Fixed Income		15,263,542	50.8%	35.0%
Certificates of Deposit	Short-Term Fixed Income	1,253,732	4.2%	
Great Lakes Advisors	Int Govt./Credit Fixed Income	11,226,586	37.3%	
PIMCO Corporate Income (PCN)	Opportunistic Credit	971,750	3.2%	
PIMCO Income Opportunity (PKO)	Opportunistic Credit	868,320	2.9%	
PIMCO Income Strategy (PFN)	Opportunistic Credit	943,154	3.1%	
US Equity		9,388,795	31.2%	30.0%
Vanguard Total Stock Index (VTI)	US All-Cap Core Equity	2,102,400	7.0%	
Vanguard S&P 500 Index (VFIAX)	US Large-Cap Core Equity	2,775,651	9.2%	
Vanguard Large-Cap Value Index (VVIAX)	US Large-Cap Value Equity	2,785,383	9.3%	
Vanguard Mid-Cap Growth Index (VOT)	US Mid-Cap Growth Equity	1,725,360	5.7%	
Non-U.S. Equity		4,935,583	16.4%	20.0%
Vanguard Dev. Mkts. Index (VTMGX)	Developed Large-Cap Non-US	3,726,526	12.4%	
Goldman Sachs (GICUX)	Developed Small-Cap Non-US	601,714	2.0%	
Dimensional Fund Advisors (DFCEX)	Emerging Markets	607,343	2.0%	
Cash & Equivalents		483,740	1.6%	0.0%
Money Market	Cash & Equivalents	483,740	1.6%	0.0%

As of 12/01/2017	Asset Class	Market Value	Current % of Portfolio	Policy Target
Total Fund		$ 30,071,658	100.0%	100.0%
Fixed Income		13,341,799	44.4%	35.0%
Certificates of Deposit	Short-Term Fixed Income	1,253,732	4.2%	0.0%
Great Lakes Advisors	Int Govt./Credit Fixed Income	12,088,067	40.2%	35.0%
~~PIMCO Corporate Income (PCN)~~	~~Opportunistic Credit~~		~~0.0%~~	~~0.0%~~
~~PIMCO Income Opportunity (PKO)~~	~~Opportunistic Credit~~		~~0.0%~~	~~0.0%~~
~~PIMCO Income Strategy (PFN)~~	~~Opportunistic Credit~~		~~0.0%~~	~~0.0%~~
US Equity		9,090,694	30.2%	30.0%
~~Vanguard Total Stock Index (VTI)~~	~~US All-Cap Core Equity~~		~~0.0%~~	~~0.0%~~
Vanguard S&P 500 Index (VFIAX)	US Large-Cap Core Equity	2,775,651	9.2%	9.0%
Vanguard Large-Cap Value Index (VVIAX)	US Large-Cap Value Equity	2,785,383	9.3%	9.0%
Vanguard Mid-Cap Growth Index (VOT)	US Mid-Cap Growth Equity	1,725,360	5.7%	6.0%
Small Cap Value Manager (TBD)	US Small-Cap Value Equity	1,804,300	6.0%	6.0%
Non-U.S. Equity		4,935,583	16.4%	20.0%
Vanguard Dev. Mkts. Index (VTMGX)	Developed Large-Cap Non-US	3,726,526	12.4%	10.0%
Goldman Sachs (GICUX)	Developed Small-Cap Non-US	601,714	2.0%	5.0%
Dimensional Fund Advisors (DFCEX)	Emerging Markets	607,343	2.0%	5.0%
Real Estate		1,000,000	3.3%	10.0%
Principal US Property	Core Private Real Estate	1,000,000	3.3%	10.0%
Alternative Investments		1,503,583	5.0%	5.0%
GTAA Manager (TBD)	Global Tactical	1,503,583	5.0%	5.0%
Cash & Equivalents		200,000	0.7%	0.0%
Money Market	Cash & Equivalents	200,000	0.7%	0.0%

About Marquette Associates

Marquette Associates is an independent investment consulting firm that helps institutions guide investment programs with a focused three-point approach and carefully researched advice. For more than 30 years Marquette has served this mission in close collaboration with clients – enabling institutions to be more effective investment stewards. Marquette is a completely independent and 100% employee-owned consultancy founded with the sole purpose of advising institutions. For more information, please visit www.marquetteassociates.com.

Marquette Associates

Small-Cap Value Search

Glen Ellyn Police

Glen Ellyn Police Pension Fund
Searchbook

Table of Contents

Appendix

Search Background

Glen Ellyn Police (the Fund) has retained Marquette Associates to conduct, among other things, an investment manager search to manage a small-cap value portfolio. The search is to emphasize a complementary investment style to the existing manager roster and to further diversify the portfolio to improve the overall efficiency of the investment program. Marquette Associates has prepared this search utilizing data from various sources. The sources of information are believed to be reliable. Marquette has not independently verified all of the information contained herein. Past performance is no guarantee of future results.

NOTE: All performance is as of September 30, 2017. Characteristics are as of June 30, 2017.

NOTE: Approximate amount of assets in consideration: $1,700,000

NOTE: Performance data is net of fees.

NOTE: Glossary of definitions enclosed

Benchmark: Russell 2000 Value

Candidate Lineup

American Beacon: American Beacon Small Cap Value
Harbor: Harbor Small Cap Value Fund
ICM: Small Cap Value
Kayne: Small Cap Quality Value
Nuveen : Small-Cap-Value
Wasatch: Small Cap Value

The information below may help make distinctions between investment managers. This information is intended to make reference to general areas Marquette Associates believes are important to consider when evaluating small-cap value managers.

1. Risk and Return Statistics:

Total return should always be considered within the context of total risk. The ideal investment manager will outperform the benchmark while maintaining an acceptable level of risk.

2. Style Analysis:

Returns-based style analysis can both indicate whether a manager is generating alpha, and explain beta components of the manager's returns. Factor weights can be viewed across managers to compare different risk exposures. Equity factors considered include market, size and value. Fixed income factors considered include credit, duration, and MBS. A higher number indicates a higher exposure to a given risk factor, and a lower number indicates a lower exposure.

3. Rolling Three Year Risk and Returns:

Rolling returns are useful in reviewing historical performance over longer term investment cycles. Outperformance of the rolling three year returns of a manager over the benchmark is an indication of consistency. Likewise, rolling three year risk below the benchmark is an indication of managers with below market risk.

4. Three and Five Year Statistics:

Information Ratio and Sharpe Ratio help determine how much value a manager is contributing to performance, relative to risk. The best case scenario is a manager with historically strong returns without assuming too much market risk. As a result, high Information and Sharpe Ratios are signals of strong outperformance at reasonable risk levels. These two statistics become more accurate the higher the R-Squared Coefficient. Typically, an R-Squared Coefficient greater than 0.85 coincides with accurate Information and Sharpe Ratio statistics.

5. Up and Down Market Capture:

The greater the up-market capture ratio of a manager, the better they have performed when the market was positive. The lower the down-market capture ratio of a manager, the better they have preserved capital when the stock market is negative. Up-market capture ratios at or above 100% (indicating the manager performed at or above the index during periods of positive index performance), and the down-market capture ratios below 100% (indicating the manager outperformed during periods of negative index returns) are signals of strong managers.

Candidate Summary

Firm Name	Firm Assets ($MM)	Product ($MM)	Vehicle	Product Style	E&O Ins. Policy Limit ($MM)
American Beacon	$57,014.0	$6,813.0	Mutual Fund	Deep Value	$45.0
Harbor	$69,238.0	$997.0	Mutual Fund	Relative Value	$60.0
ICM	$1,979.6	$1,897.0	Mutual Fund	Relative Value	$5.0
Kayne	$15,339.0	$2,647.0	Mutual Fund	Core Value	$25.0
Nuveen	$167,413.0	$1,961.0	Mutual Fund	Relative Value	$50.0
Wasatch	$15,467.0	$567.0	Mutual Fund	Core Value	$25.0

General Information Summary

Firm Name	Location	Phone	Contact Name
American Beacon	Irving, TX	(312) 933-0679	Beth Frazier
Harbor	Chicago, IL	(312) 443-4615	Ed Leedom
ICM	Baltimore, MD	(410) 539-3838	Barbara Elways
Kayne	Los Angeles, CA	(800) 231-7414	Daniela Bailly
Nuveen	Chicago, IL	(312) 917-7700	JP Farrar
Wasatch	Salt Lake City, UT	(801) 533-0777	Dustin McCarty

Firm Ownership

Firm Name	% Employee Owned	# Employee Owners	% Parent Owned	% Owned by Other*	% Minority Owned	% Female Owned
American Beacon	2.0%	n/a	97.0%	1.0%	0.0%	0.0%
Harbor	0.0%	0	100.0%	0.0%	0.0%	0.0%
ICM	35.0%	6	65.0%	0.0%	0.0%	0.0%
Kayne	0.0%	0	100.0%	0.0%	0.0%	0.0%
Nuveen	0.0%	0	100.0%	0.0%	0.0%	0.0%
Wasatch	100.0%	27	0.0%	0.0%	6.3%	3.8%

*See Other Manager Notes in Appendix

The following represents Marquette Associates' first take on each investment manager, serving as a brief introduction to each manager's strategy.

American Beacon Advisors, Inc.

The American Beacon Small-Cap Value fund is a multi-manager mutual fund composed of six underlying asset managers with complimentary investment styles. The multi-manager approach enhances portfolio diversification and helps lessen the tracking error associated with any particular sub-advisor investment style over time. Barrow Hanley, Brandywine Global, Foundry Partners, Hotchkis and Wiley, Hillcrest Asset Management, and The Boston Company are the six fund sub-advisors. Underlying investment managers have remained largely static over time with just one sub-advisor termination in the history of the fund.

Harbor Capital Advisors, Inc.

The Harbor Small Cap Value Fund is sub-advised by EARNEST Partners and utilizes a fundamental, bottom-up investment approach. The investment methodology used for the firms initial screen is based on valuation, growth, and profitability measures. In addition, operating, industry, and macro tends are taken into account. Further analysis is then performed on companies emerging from this proprietary screen, coined return pattern recognition, which are operating in growing industries and possess healthy fundamentals. EARNEST Partners has served as the sole sub-advisor on this fund since December 2001.

Investment Counselors of Maryland

The Investment Counselors of Maryland ("ICM") Small-Cap Value strategy follows a fundamental, bottom-up, relative value investment approach where companies with attractive valuations, strong balance sheets, and the ability to generate consistent cash flows are sought. The small-cap value strategy is benchmark-aware and seeks to outperform through superior stock selection over the long-term. The portfolio is well diversified with 100-130 holdings, average long-term turnover of 30%, and sector weighting parameters of +/- 15% relative to the Russell 2000 Value index. Bill Heaphy took over lead PM duties in 2010. He joined the firm in 1994 as an analyst and served as co-PM on the small-cap value strategy from 2004-2010. ICM is 35% employee-owned with the majority of investment professionals having an ownership stake in the firm. The firm is an affiliate of Old Mutual, which holds a 65% ownership position in ICM.

Kayne Anderson Rudnik Investment Management

The KAR Small Cap Quality Value strategy follows a fundamental, bottom-up research process. The portfolio is concentrated with 25-35 holdings, offers high active share, and invests with a typical holding period of 3-5 years. Companies with consistent and profitable growth, high returns on capital, strong free cash flows, low organic need for external financing, and that trade at attractive valuations are sought. Despite the concentrated approach, the strategy aims to be diversified across economic sectors and has exhibited strong downside protection over time by investing in companies with minimal business, balance sheet, and profit risk. The strategy typically invests in the upper end of small-cap given their emphasis on established and durable business models and will look more core from a sector standpoint, but does employ a value discipline at purchase. Julie Kutasov and Craig Stone are co-PMs for Small Cap Quality Value. Julie and Craig also have sector specific coverage and portfolio management duties across various firm equity offerings.

Nuveen

Nuveen Small-Cap Value is a fundamental, bottom-up investment strategy which invests across the value spectrum. The strategy seeks to have exposure to deep value, relative value, and GARP styles. Relative value makes up the majority of the portfolio with typically at least 2/3 invested in this style segment. Deep value and GARP each typically occupy 10% of the portfolio. As a result, the portfolio has a more balanced profile given that different investment styles work better at various points in a market cycle. The strategy is diversified with 80-90 holdings, has turnover of 45-60% historically, and emphasizes stock selection for value-add.

Wasatch Advisors

Wasatch Small Cap Value uses a fundamental, bottom-up approach to seek out companies exhibiting value characteristics, yet also possess healthy balance sheets, stable business models, and have the potential to grow earnings for sustained periods of time. The portfolio invests in three types of companies: Fallen Angels (former growth stocks that have experienced a near-term earnings issue, but are expected to resume earnings growth within 9-18 months), Undiscovered Gems (companies that have both earnings growth and low valuation), and Quality Value (typical value stocks which may be attractive based on cash flows, low valuation, or hidden assets unrecognized by the market). The strategy is diversified with 60-90 securities and the majority of alpha expected to be derived from stock selection. The strategy has an advantage in sourcing fallen angel names given its placement inside of a small cap growth boutique. Analysts support both growth and value strategies at the firm and will leverage existing work within the firm's growth offerings. Jim Larkins, portfolio manager, has served as sole PM on the strategy since 2008.

Compliance and Composite Information

Firm Compliance

Firm Name	Registered Investment Advisor?	GIPS Verified?	Last Year of Verification	Verification Firm	Soft Dollars?	Firmwide Soft Dollars Last Year $MM	Own Broker / Dealer?
American Beacon	Yes	No	--	--	No	--	No
Harbor	Yes	No	--	--	No	--	No
ICM	Yes	Yes	2016	ACA Performance	Yes	$0.48	No
Kayne	Yes	Yes	2015	ACA Performance	Yes	$0.62	No
Nuveen	Yes	Yes	2015	ACA Performance	Yes	--	No
Wasatch	Yes	Yes	2017	Ashland Partners	Yes	$3.60	No

Product Composite Characteristics

Firm Name	Calendar Year	# of Portfolios	Composite Dispersion	Total Composite Assets (End of Period) ($MM)	% of Firm Assets	Total Firm Assets (End of Period) ($MM)
American Beacon	2013	--	--	--	--	--
	2014	--	--	--	--	--
	2015	--	--	--	--	--
	2016	--	--	--	--	--
Harbor	2013	--	--	--	--	--
	2014	--	--	--	--	--
	2015	--	--	--	--	--
	2016	--	--	--	--	--
ICM	2013	3	n/m	$969.0	38.1%	$2,543.0
	2014	3	n/m	$979.0	45.7%	$2,141.0
	2015	3	n/m	$743.0	41.5%	$1,789.0
	2016	4	n/m	$1,086.0	55.1%	$1,970.0
Kayne	2013	142	1.2%	$646.0	8.2%	$7,841.0
	2014	149	0.5%	$581.0	7.3%	$7,989.0
	2015	151	0.2%	$535.0	6.6%	$8,095.0
	2016	141	1.1%	$711.0	7.3%	$9,751.0
Nuveen	2013	1	n/m	$112.4	0.1%	$116,991.0
	2014	1	n/m	$132.0	0.1%	$134,598.0
	2015	1	n/m	$208.4	0.1%	$142,177.0
	2016	2	n/m	$907.5	0.6%	$156,526.0
Wasatch	2013	17	0.4%	$160.3	0.8%	$19,277.5
	2014	21	0.3%	$71.9	0.4%	$18,848.7
	2015	21	0.1%	$155.9	0.9%	$17,180.6
	2016	20	0.2%	$135.2	0.9%	$15,071.5

Firm Client Breakdown

	American Beacon	Harbor	ICM	Kayne	Nuveen	Wasatch
Corporate	15.1%	0.0%	4.8%	5.3%	2.0%	7.1%
E & F	0.0%	0.0%	0.8%	1.9%	1.0%	3.6%
Healthcare	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
HNW/Family	0.0%	0.0%	2.8%	19.9%	1.0%	1.7%
Ins/Fin	0.0%	0.0%	0.0%	1.2%	1.0%	0.0%
Mutual Fund	51.1%	100.0%	36.2%	0.0%	69.0%	53.5%
Public	12.5%	0.0%	44.6%	1.3%	1.0%	22.1%
Religious	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Taft-Hartley	0.0%	0.0%	10.8%	2.0%	0.5%	0.5%
Sub-Advisory	0.0%	0.0%	0.0%	26.9%	6.5%	6.7%
Wrap	0.0%	0.0%	0.0%	41.1%	18.0%	0.0%
Other	21.3%	0.0%	0.0%	0.4%	0.0%	4.8%

Notes on Other

American Beacon - Pooled/Commingled Assets and Separate Account Retirement monies

Kayne - Collective Investment Trust

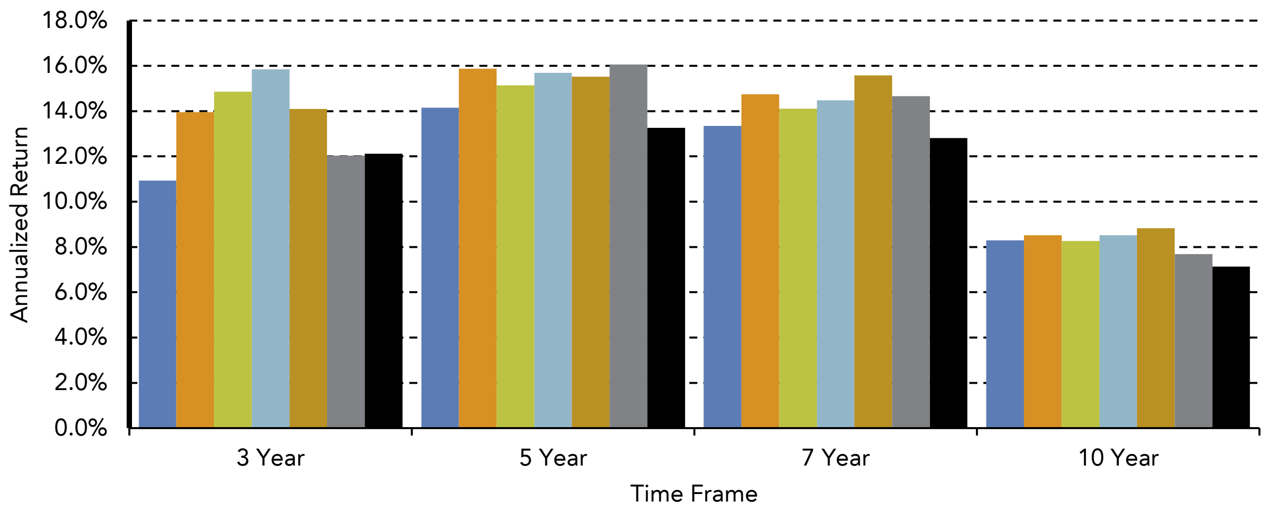
Wasatch - Collective Investment Trusts, Superannuation

Product Client Breakdown

	American Beacon	Harbor	ICM	Kayne	Nuveen	Wasatch
Corporate	0.0%	0.0%	4.3%	0.8%	1.0%	9.3%
E & F	0.0%	0.0%	0.0%	0.4%	0.0%	1.7%
Healthcare	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
HNW/Family	0.0%	0.0%	0.0%	6.7%	0.0%	10.6%
Ins/Fin	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%
Mutual Fund	100.0%	0.0%	37.7%	0.0%	83.0%	61.1%
Public	0.0%	0.0%	46.8%	1.4%	0.0%	17.3%
Religious	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Taft-Hartley	0.0%	0.0%	11.2%	0.0%	0.0%	0.0%
Sub-Advisory	0.0%	100.0%	0.0%	22.5%	10.0%	0.0%
Wrap	0.0%	0.0%	0.0%	67.8%	6.0%	0.0%
Other	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Performance Comparison

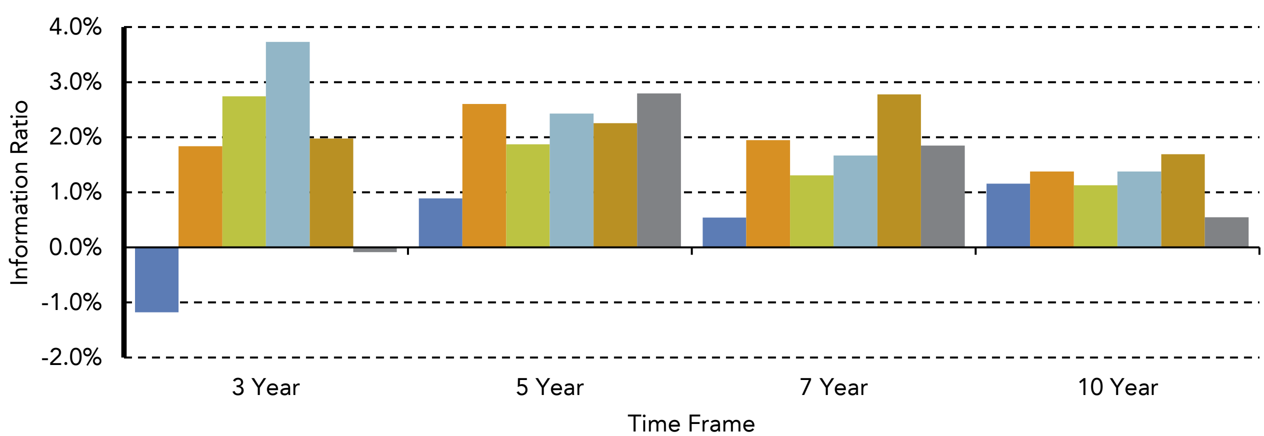
Trailing Returns



Trailing Returns and Risk

	3 Year		5 Year		7 Year		10 Year	
	Ret.	StDev	Ret.	StDev	Ret.	StDev	Ret.	StDev
American Beacon	10.9%	14.3%	14.2%	13.9%	13.3%	15.8%	8.3%	20.6%
Harbor	14.0%	13.4%	15.9%	12.9%	14.8%	14.4%	8.5%	19.6%
ICM	14.9%	14.5%	15.1%	14.1%	14.1%	15.8%	8.3%	21.2%
Kayne	15.8%	12.8%	15.7%	13.0%	14.5%	13.7%	8.5%	17.9%
Nuveen	14.1%	15.0%	15.5%	14.0%	15.6%	16.0%	8.8%	19.9%
Wasatch	12.0%	12.5%	16.1%	12.1%	14.7%	13.5%	7.7%	19.7%
Russell 2000 Value	12.1%	14.6%	13.3%	13.9%	12.8%	15.3%	7.1%	20.2%

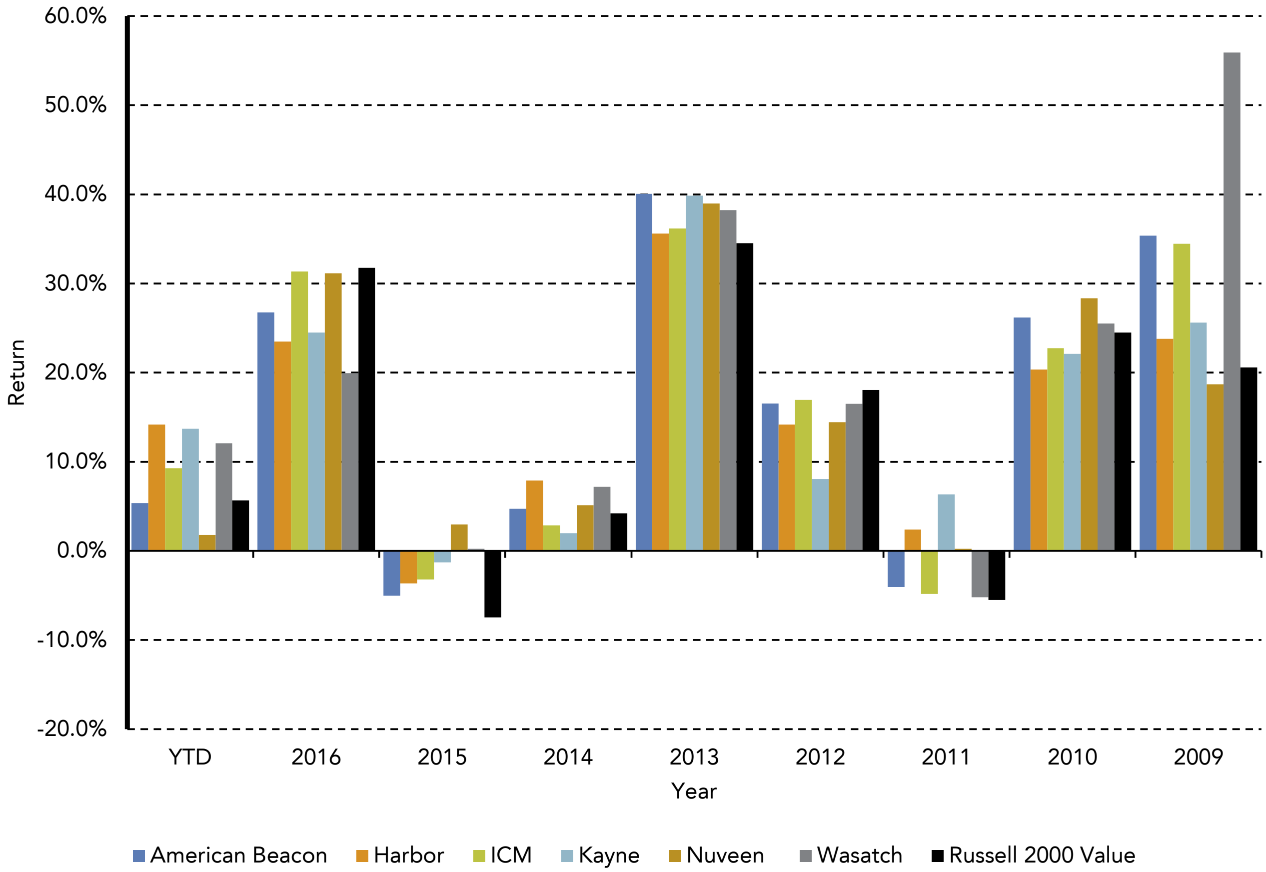
Trailing Information Ratios



Attachment: Glen Ellyn Police SCV (2941 : Investment Consultant Report 3Q20107)

MarquetteAssociates

Calendar Returns - Net of Fees

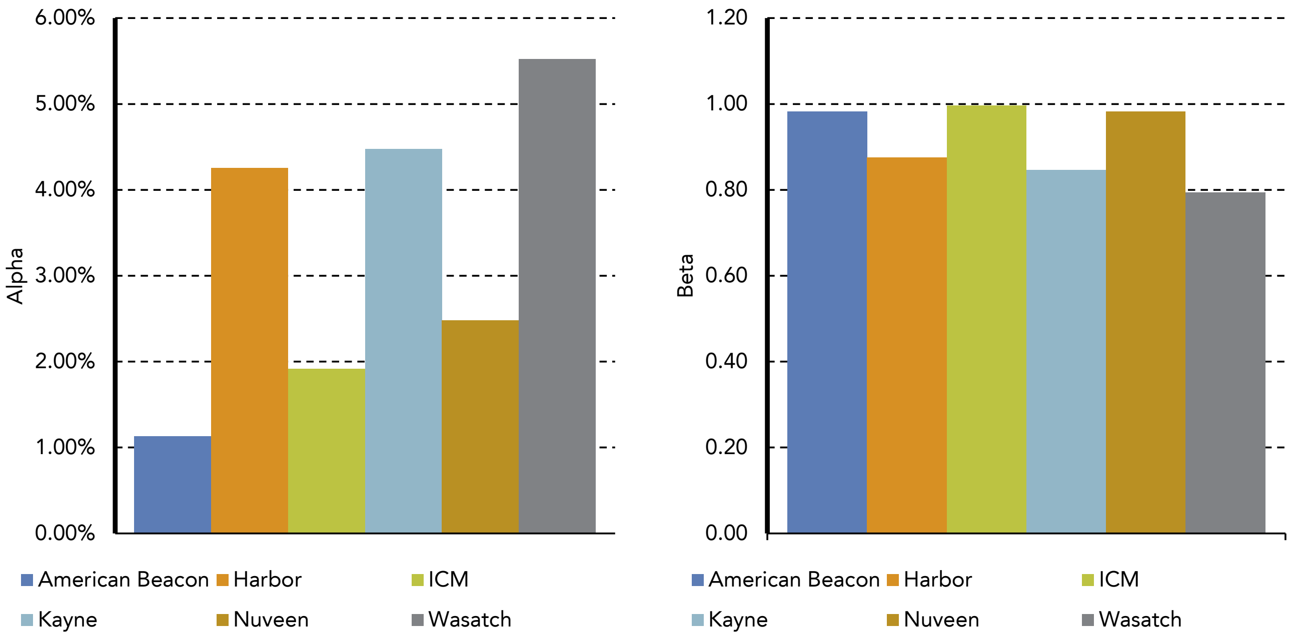


Calendar Year Returns Data - Net of Fees

	YTD	2016	2015	2014	2013	2012	2011	2010	2009
American Beacon	5.4%	26.8%	-5.0%	4.7%	40.1%	16.5%	-4.0%	26.2%	35.4%
Harbor	14.2%	23.5%	-3.7%	7.9%	35.6%	14.2%	2.4%	20.3%	23.8%
ICM	9.3%	31.4%	-3.2%	2.9%	36.2%	16.9%	-4.8%	22.7%	34.5%
Kayne	13.7%	24.5%	-1.3%	2.0%	39.8%	8.1%	6.3%	22.1%	25.6%
Nuveen	1.8%	31.2%	3.0%	5.1%	39.0%	14.4%	0.2%	28.3%	18.7%
Wasatch	12.1%	19.9%	0.2%	7.2%	38.2%	16.5%	-5.2%	25.5%	55.9%
Russell 2000 Value	5.7%	31.7%	-7.5%	4.2%	34.5%	18.0%	-5.5%	24.5%	20.6%

Performance Comparison

5 Year Benchmark Based Alpha (left), Beta (right)



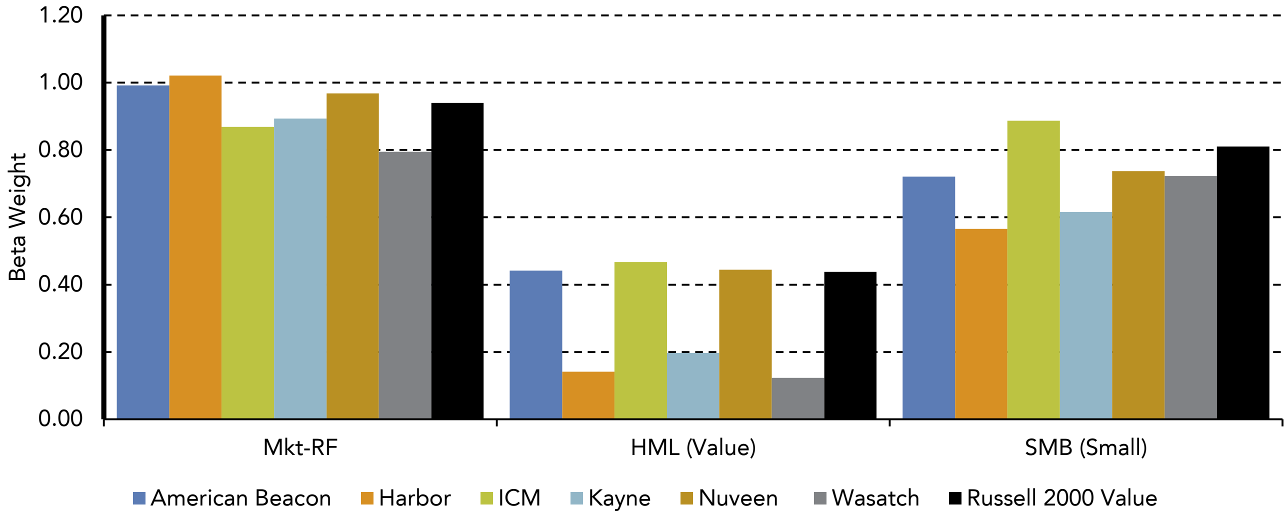
Return Statistics

	Alpha	Beta	R^2
American Beacon	1.13%	0.98	96.7%
Harbor	4.26%	0.88	89.3%
ICM	1.92%	1.00	96.9%
Kayne	4.48%	0.85	81.9%
Nuveen	2.48%	0.98	95.0%
Wasatch	5.52%	0.79	84.1%
Russell 2000 Value	0.00%	1.00	100.0%

Modern Portfolio Theory (Alpha & Beta) Explanation

The above calculations are based on the Capital Asset Pricing Model (CAPM). Developed in the 1960's, CAPM is a widely used method of understanding the relationship between risk and return. Under the CAPM, expected return is a function of risk. Assuming all security specific risk (the risk related to individual holdings and not to general market movements) is diversifiable, portfolios are then only exposed to market risk. Using a benchmark index as a proxy for "the market", past returns can be estimated as a function of market risk (beta), and unexplainable variance (alpha). By determining which segment of returns is derived from beta (market risk) or alpha (manager skill), investors can evaluate a product's performance record more accurately.

5 Year Returns Based Factor Analysis



Factor Based Return Statistics

	Mkt-RF	HML (Value)	SMB (Small)			Alpha	R²
American Beacon	0.99	0.44	0.72	--	--	0.8%	91.5%
Harbor	1.02	0.14	0.57	--	--	2.0%	90.0%
ICM	0.87	0.47	0.89	--	--	3.2%	88.7%
Kayne	0.89	0.20	0.62	--	--	3.5%	76.7%
Nuveen	0.97	0.44	0.74	--	--	2.3%	88.1%
Wasatch	0.79	0.12	0.72	--	--	5.0%	83.3%
Russell 2000 Value	1.00	0.44	0.81	--	--	0.0%	91.7%

Factor Analysis Explanation

Returns based factor analysis attempts to take into account the fact that, in reality, there are multiple market risk factors that influence returns. Instead of one benchmark "market" factor, returns based style analysis uses multiple benchmarks as proxies for multiple sources of risk. The above calculations are based on a multiple linear regression using several benchmark returns to explain manager returns. Returns based factor analysis is useful to identify which risk factors different managers are exposed to relative to each other and to the benchmark, and to identify outperformance while controlling for multiple measures of risk.

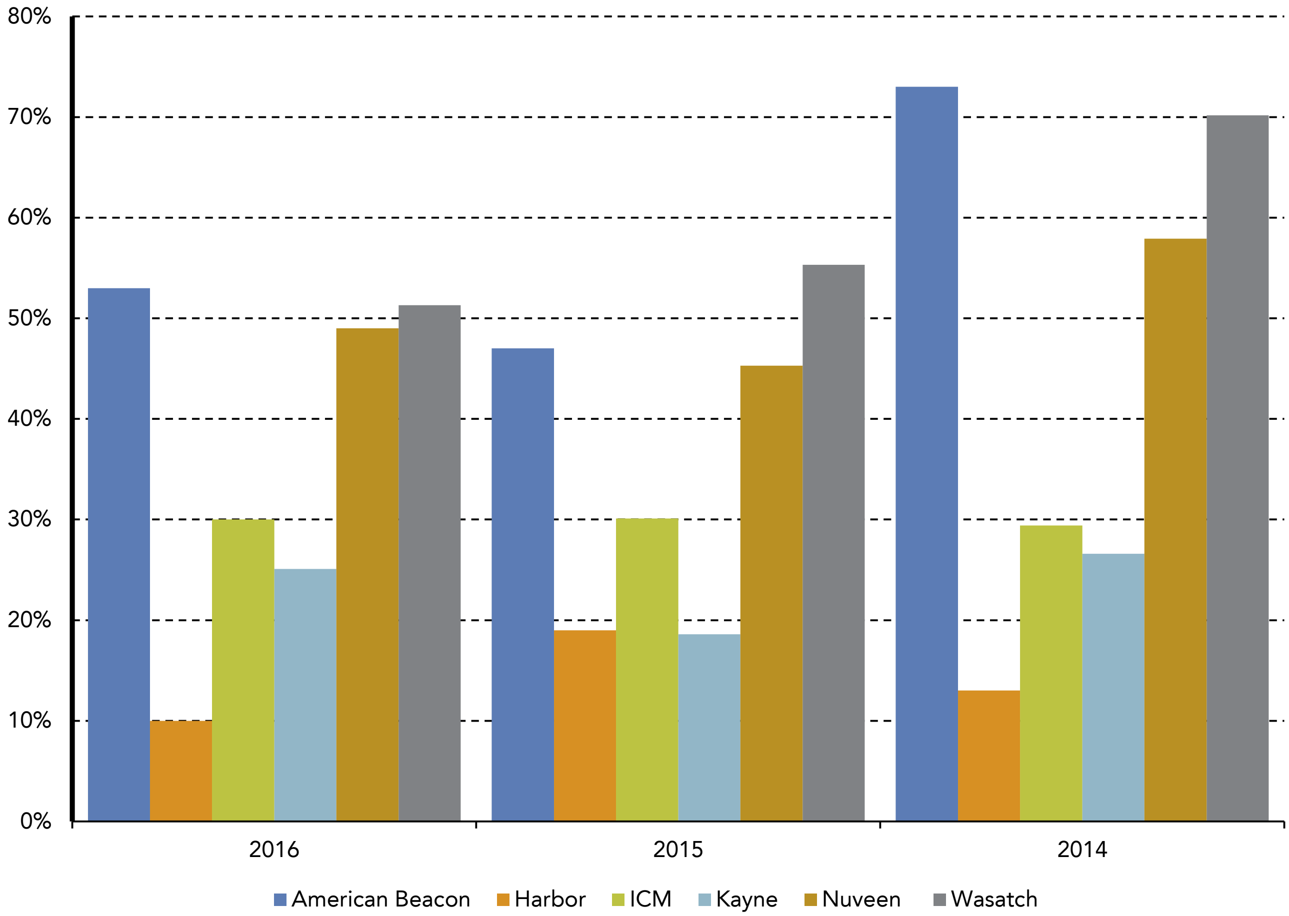
Factor Weights represent manager exposure to benchmark risk factors, holding other factors constant. For example, a manager with a higher value factor likely invests in more value stocks. If the value factor is negative, this indicates a more growth oriented manager. Factor analysis can help determine a manager's historical style, such as small value. It can also help determine if excess returns over the benchmark are generated through security selection alpha, or simply by taking different small and value exposures than the benchmark.

R^2 in the multi-factor model has the same interpretation under the CAPM model (goodness of fit). If R^2 is higher with a multi-factor model, manager returns are better explained by taking into account additional risk factors. Therefore, a higher R^2 is desirable because it indicates a more useful model, and more confidence in the beta and alpha calculation results.

Alpha in the multi-factor model has the same interpretation under the CAPM. A lower alpha term under multi-factor analysis indicates that some manager alpha compared to a single benchmark may be generated by taking out-of-benchmark risks. Alpha is not a static number, and varies based on the time period of the regression. Therefore, a positive alpha number, indicating that a manager has outperformed in the past controlling for risk, may be more important than the size of the alpha term.

Trading Statistics

Portfolio Turnover



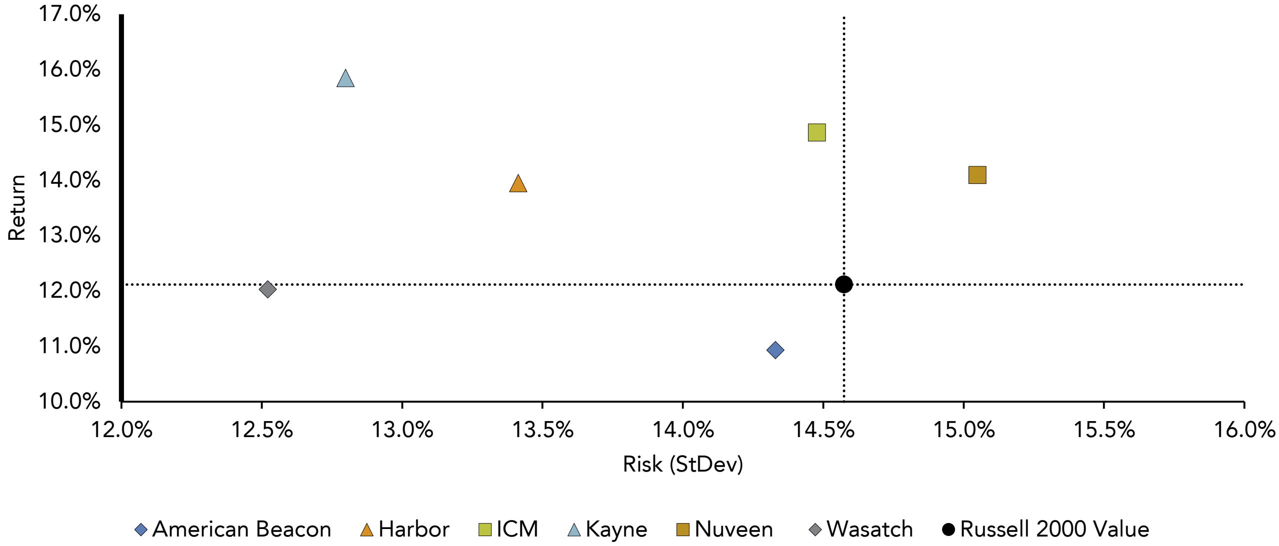
Product Trading Characteristics

	Average Cost Per Trade			Turnover in Product			# Added In	# Subtracted in
Firm Name	**2016**	**2015**	**2014**	**2016**	**2015**	**2014**	**2016**	**2016**
American Beacon	--	--	--	53.0%	47.0%	73.0%	--	--
Harbor	--	--	--	10.0%	19.0%	13.0%	--	--
ICM	$0.03	$0.03	$0.04	30.0%	30.1%	29.4%	25	35
Kayne	$0.04	$0.04	$0.04	25.1%	18.6%	26.6%	5	7
Nuveen	--	--	--	49.0%	45.3%	57.9%	32	32
Wasatch	$0.02	$0.02	$0.02	51.3%	55.3%	70.2%	22	22

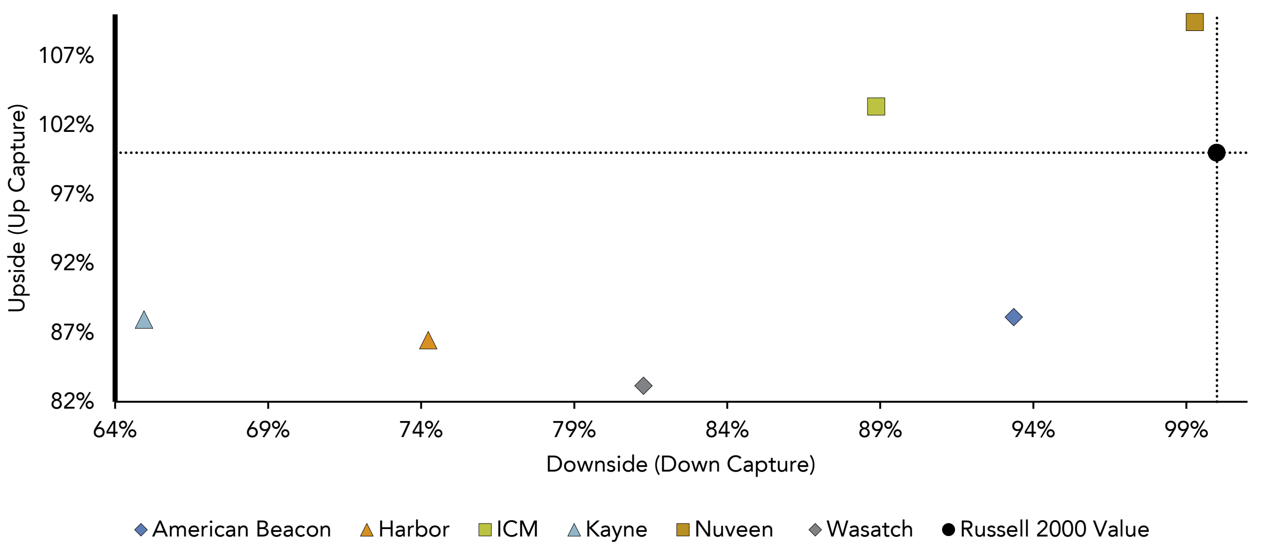
This Page Intentionally Left Blank

Risk / Return Profile

3 Year Risk/Return



3 Year Upside and Downside Capture

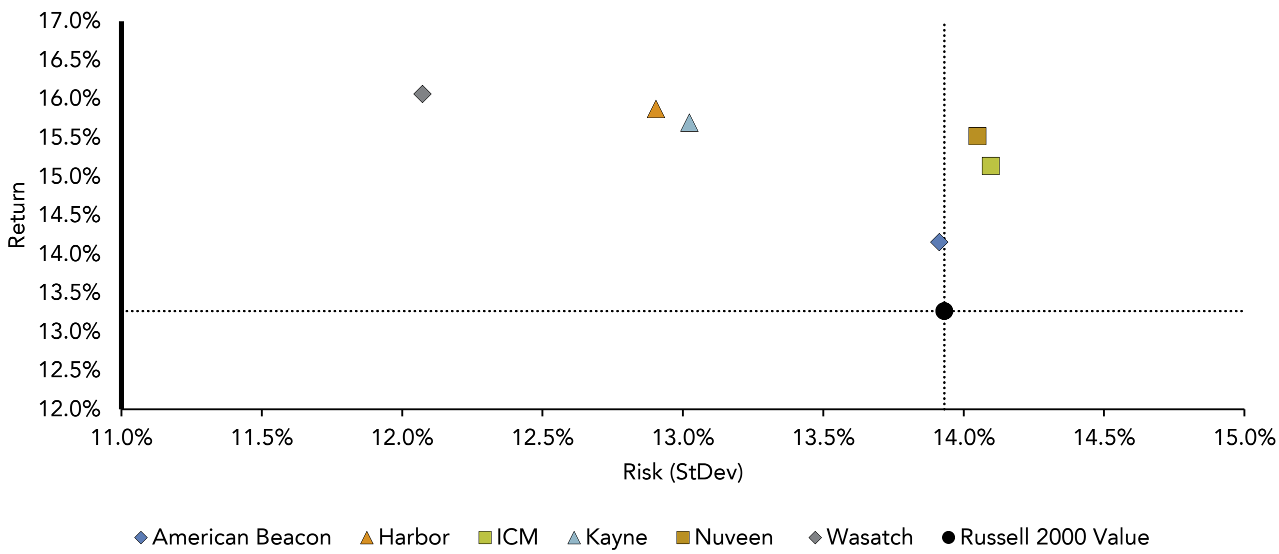


3 Year Return Statistics

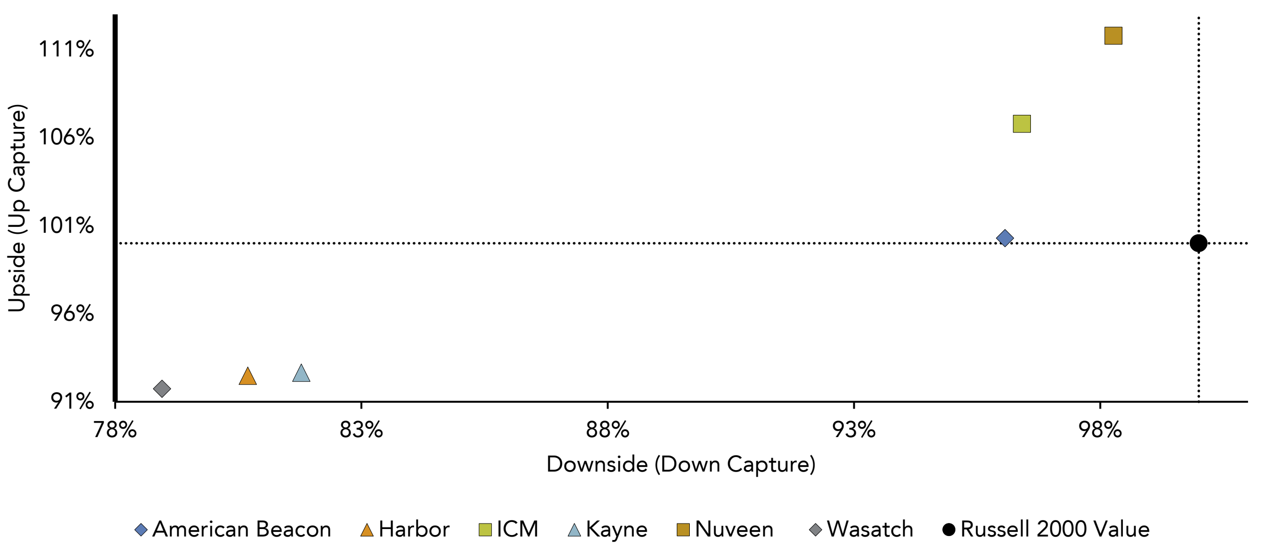
	Return	StDev	Sharpe	Up Capture	Down Capture
American Beacon	10.93%	14.33%	0.74	88.12%	93.36%
Harbor	13.95%	13.41%	1.02	86.44%	74.24%
ICM	14.86%	14.48%	1.00	103.32%	88.87%
Kayne	15.85%	12.80%	1.21	87.95%	64.95%
Nuveen	14.09%	15.05%	0.92	109.44%	99.28%
Wasatch	12.03%	12.52%	0.94	83.16%	81.26%
Russell 2000 Value	12.12%	14.57%	0.81	100.00%	100.00%

MarquetteAssociates

5 Year Risk/Return



5 Year Upside and Downside Capture

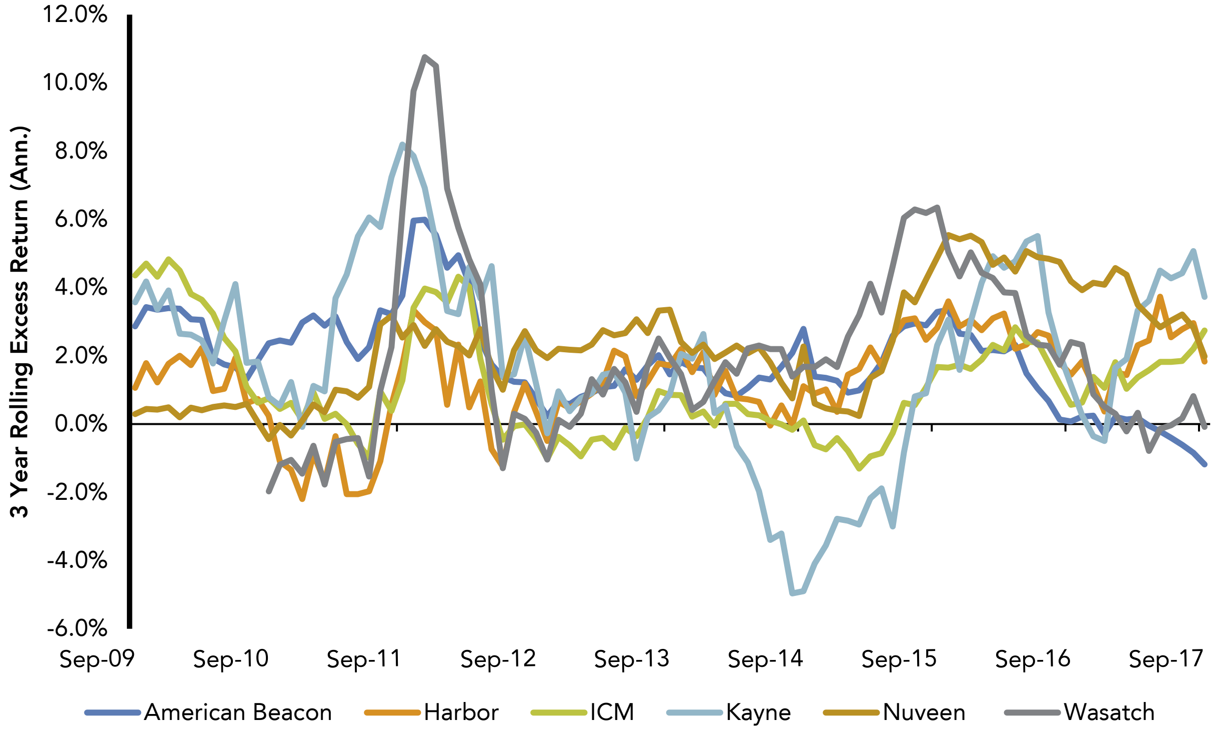


5 Year Return Statistics

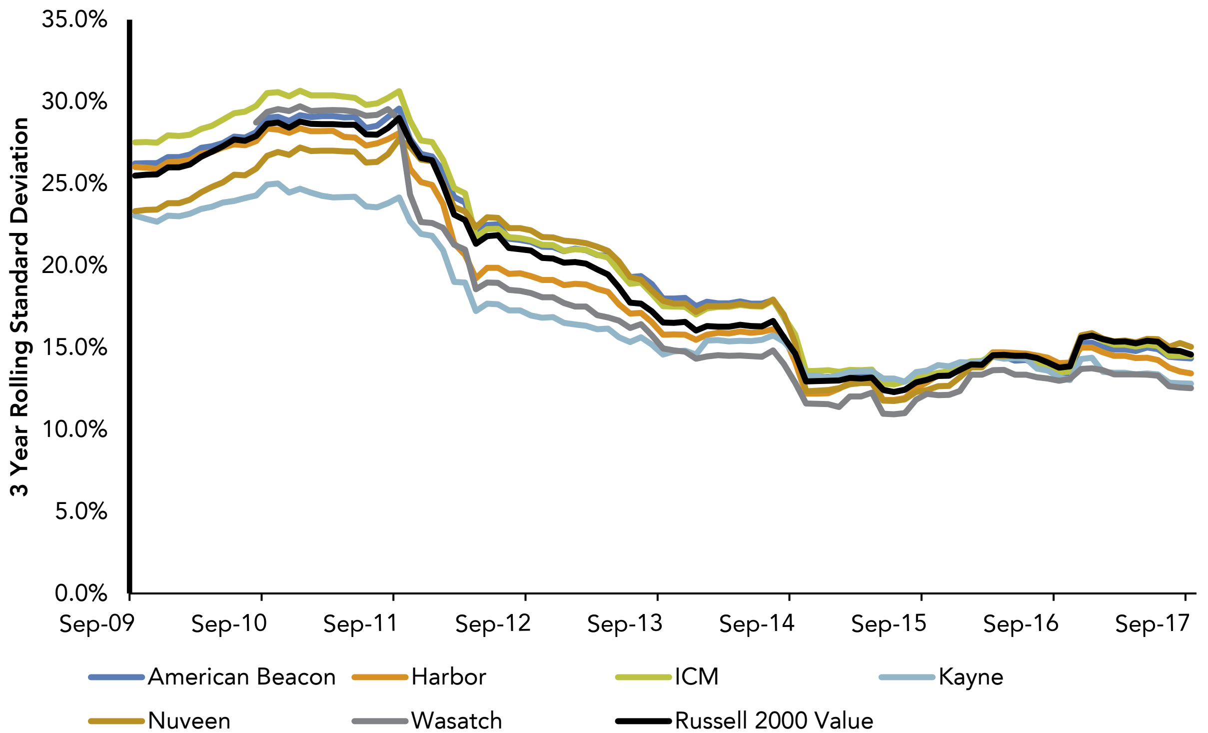
	Return	StDev	Sharpe	Up Capture	Down Capture
American Beacon	14.15%	13.91%	1.00	100.28%	96.06%
Harbor	15.87%	12.90%	1.21	92.48%	80.69%
ICM	15.14%	14.10%	1.06	106.78%	96.41%
Kayne	15.70%	13.02%	1.19	92.66%	81.78%
Nuveen	15.52%	14.05%	1.09	111.78%	98.27%
Wasatch	16.06%	12.07%	1.31	91.74%	78.95%
Russell 2000 Value	13.27%	13.93%	0.94	100.00%	100.00%

Risk / Return Profile

Rolling 3 Year Excess Returns over Russell 2000 Value

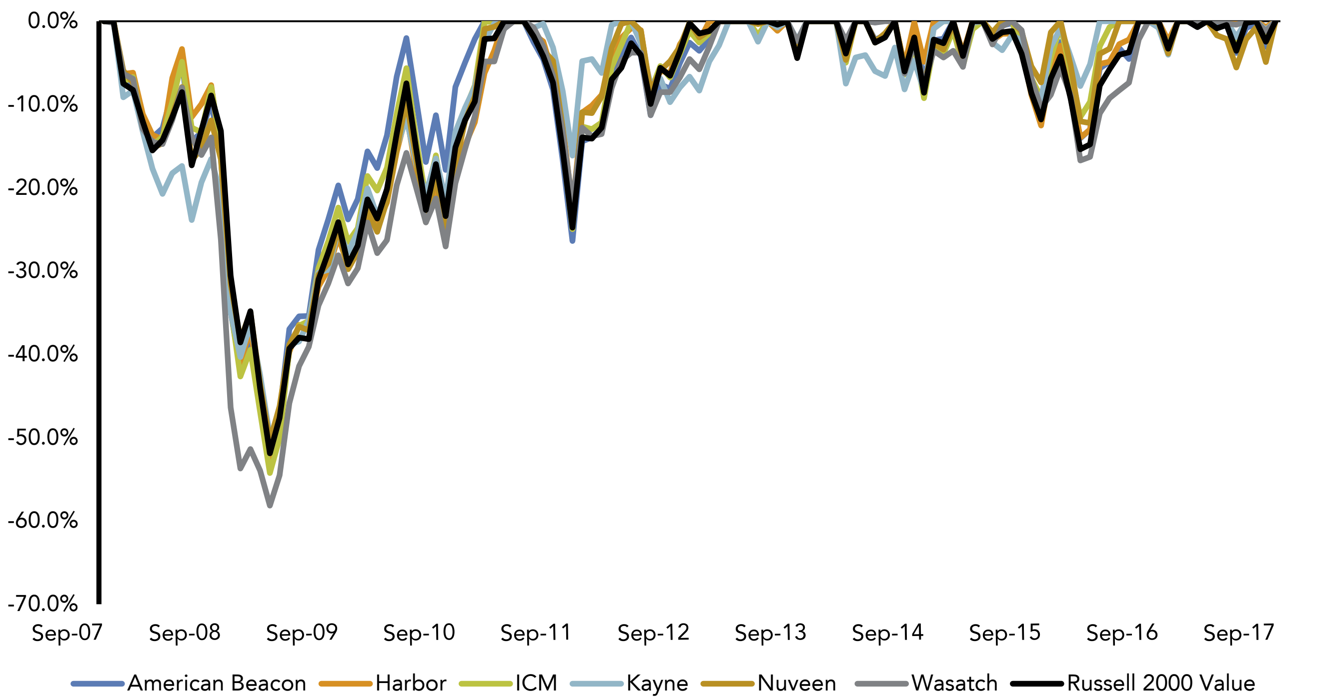


Rolling 3 Year Standard Deviation



MarquetteAssociates

Drawdown (10 Years)



Crisis Performance

	Financial Crisis May '07 - Feb '09	Euro Crisis April '11 - Sept '11	High Yield Crash May '15 - Jan '16	Taper Tantrum April '13 - Aug '13
American Beacon	-55.7%	-26.4%	-13.6%	7.8%
Harbor	-53.5%	-22.5%	-12.7%	4.5%
ICM	-54.7%	-25.0%	-10.7%	7.2%
Kayne	-47.7%	-16.2%	-4.5%	8.6%
Nuveen	-52.6%	-24.2%	-9.0%	5.3%
Wasatch	--	-21.8%	-14.9%	11.3%
Russell 2000 Value	-55.5%	-24.8%	-14.2%	4.3%

Manager Correlations

5 Year Manager Correlations

	American Beacon	Harbor	ICM	Kayne	Nuveen	Wasatch	Russell 2000 Value
American Beacon	1.00						
Harbor	0.95	1.00					
ICM	0.98	0.93	1.00				
Kayne	0.92	0.92	0.92	1.00			
Nuveen	0.97	0.92	0.96	0.90	1.00		
Wasatch	0.92	0.91	0.91	0.83	0.90	1.00	
Russell 2000 Value	0.98	0.95	0.98	0.90	0.97	0.92	1.00

5 Year Correlations with other Asset Classes

	S&P 500	Russell 2000	MSCI EAFE	Barclays Aggregate	Barclays High Yield	CS Leveraged Loans	HFRI Fund of Funds	HFRI Equity Hedge
American Beacon	0.77	0.97	0.49	-0.31	0.50	0.45	0.58	0.77
Harbor	0.85	0.96	0.61	-0.18	0.59	0.48	0.65	0.82
ICM	0.70	0.96	0.44	-0.28	0.46	0.37	0.50	0.71
Kayne	0.75	0.89	0.46	-0.24	0.40	0.31	0.49	0.67
Nuveen	0.75	0.95	0.46	-0.29	0.47	0.43	0.54	0.72
Wasatch	0.74	0.94	0.54	-0.25	0.53	0.48	0.63	0.78

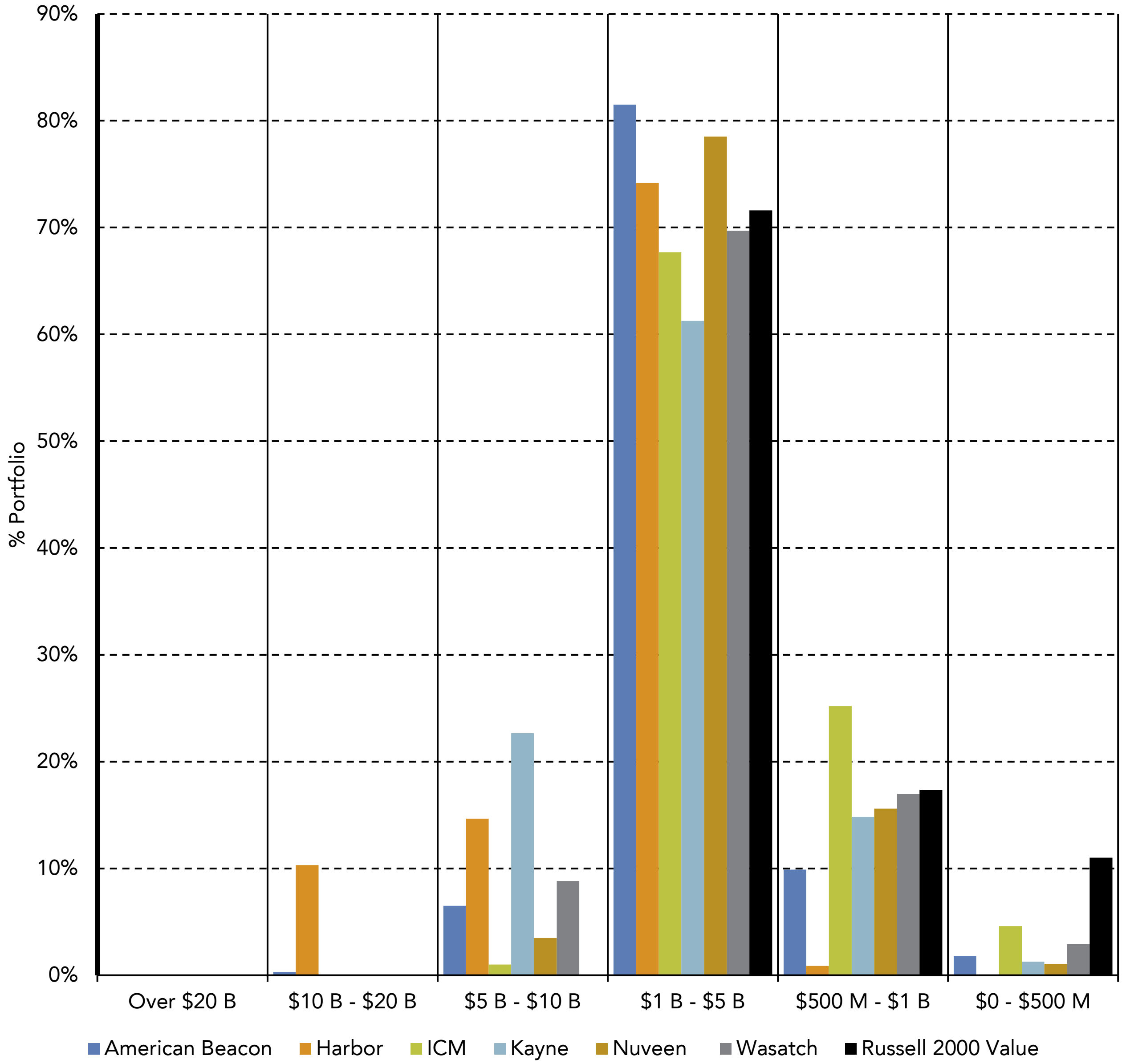
Top 10 Holdings

American Beacon		Harbor		ICM		Kayne		Nuveen		Wasatch	
1%	Vishay Intertechnology, Inc.	4%	Coherent Inc.	2%	Rogers Corporation	5%	National Beverage	2%	Invesco Mortgage Capital Inc	3%	Ensign Group
1%	UMB Financial Corp.	3%	Global Payments Inc.	2%	Novanta Inc.	5%	RE/MAX Holdings	2%	Renasant Corp	3%	Fabrinet
1%	Associated Banc-Corp.	3%	Hexcel Corp.	1%	McDermott International	4%	Bank of Hawaii	2%	Plantronics Inc	3%	Arbor Realty Trust Inc.
1%	ARRIS International PLC	3%	Entegris Inc.	1%	Sterling Bancorp	4%	SiteOne Landscape Supply	2%	Banner Corp	3%	LGI Homes Inc.
1%	Fulton Financial Corp.	3%	Monolithic Power Systems Inc.	1%	U.S. Concrete Inc.	4%	Thor Industries	2%	Webster Financial Corp	3%	Webster Financial Corp.
1%	Hancock Holding Co.	3%	Advanced Energy Industries Inc.	1%	Bryn Mawr Bank Corporation	4%	Scotts Miracle-Gro	2%	Sterling Bancorp	3%	Heico Corp.
1%	Portland General Electric Co.	3%	Snap-on Inc.	1%	Ameris Bancorp	4%	Cinemark Holdings	2%	Radian Group Inc	3%	LHC Group Inc.
1%	Brooks Automation, Inc.	2%	Raymond James Financial Inc.	1%	Heritage Financial Corporation	4%	RBC Bearings	2%	Summit Hotel Properties Inc	3%	Altra Industrial Motion Corp.
1%	Prosperity Bancshares, Inc.	2%	EnerSys	1%	Quanex Building Products Corporation	4%	Cass Information Systems	2%	STAG Industrial Inc	2%	First of Long Island Corp.
1%	Barnes Group, Inc.	2%	Littelfuse Inc.	1%	Dycom Industries Inc.	4%	Anika Therapeutics	2%	Preferred Bank	2%	Select Comfort Corp.

% In Top 10

American Beacon	Harbor	ICM	Kayne	Nuveen	Wasatch
7.2%	28.7%	13.9%	41.6%	19.5%	27.5%

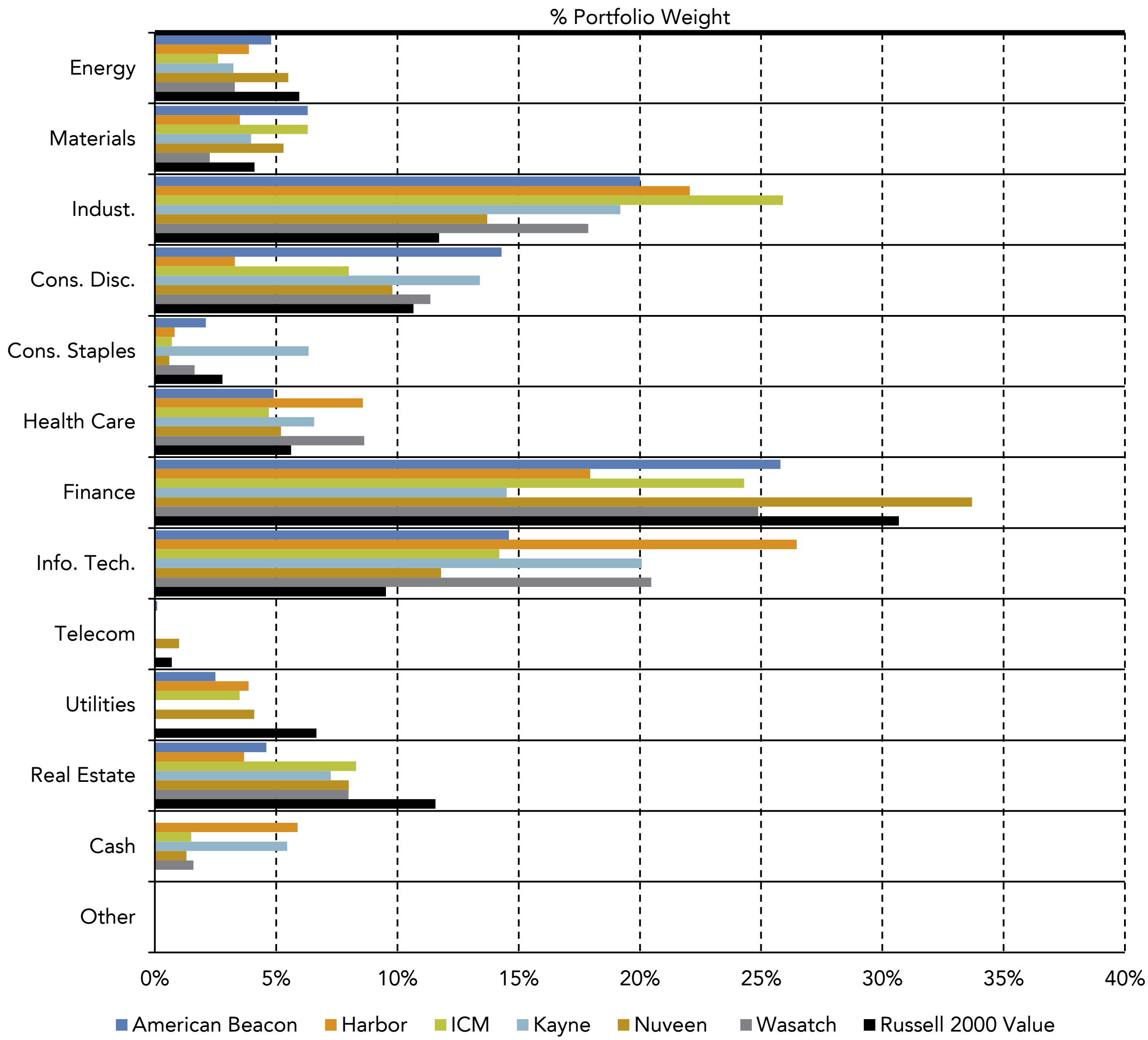
Market Cap Comparison



Portfolio Characteristics

Firm	# of Holdings	% In Top Ten	Med. Cap ($MM)	Avg. Cap ($MM)	Trailing P/E	P/B Ratio	Dividend Yield
American Beacon	620	7.2%	$1,692	$2,542	23.1	1.8	1.5%
Harbor	54	28.7%	$2,994	$4,519	23.4	2.8	1.1%
ICM	106	13.9%	$1,493	$1,783	23.1	1.9	1.3%
Kayne	31	41.6%	$2,923	$3,350	29.5	4.7	1.5%
Nuveen	84	19.5%	$1,827	$2,200	17.3	1.7	1.7%
Wasatch	53	27.5%	$1,712	$2,450	20.0	2.3	1.5%
Russell 2000 Value	1399	4.3%	$687	$1,862	33.8	1.5	1.8%

Sector Comparison



Current Weights (Other category not displayed)

Firm	Energy	Mat	Ind	Cons Disc	Cons Stpl	HC	Fin	IT	Telco	Util	RE
American Beacon	5%	6%	20%	14%	2%	5%	26%	15%	0%	3%	5%
Harbor	4%	4%	22%	3%	1%	9%	18%	26%	0%	4%	4%
ICM	3%	6%	26%	8%	1%	5%	24%	14%	0%	4%	8%
Kayne	3%	4%	19%	13%	6%	7%	15%	20%	0%	0%	7%
Nuveen	6%	5%	14%	10%	1%	5%	34%	12%	1%	4%	8%
Wasatch	3%	2%	18%	11%	2%	9%	25%	20%	0%	0%	8%
Russell 2000 Value	6%	4%	12%	11%	3%	6%	31%	10%	1%	7%	12%

Fee Schedule and Expense Ratios

Firm	Fee Schedule	Other Fees	Expense Ratio	Industry Avg.*	Fee For $1,700,000
American Beacon AVFIX	83 bps on the Balance	--	0.83%	1.05%***	$14,110
Harbor HASCX	86 bps on the Balance	--	0.86%	1.05%***	$14,620
ICM ICSCX	95 bps on the Balance	--	0.95%	1.05%***	$16,150
Kayne PXQSX	107 bps on the Balance	--	1.07%	1.05%***	$18,190
Nuveen FSCCX	105 bps on the Balance	--	1.05%	1.05%***	$17,850
Wasatch WICVX	105 bps on the Balance	--	1.05%	1.05%***	$17,850

*Industry Average Separate Account Fee.

**eVestment Commingled Fund - average does not include operating/admin fees. These typically range from 5-15 bps.

***Industry Average Mutual Fund Fee.

Appendix

Current Team Key Employees

Name	Role on Product	Years Experience	Years with Firm	Years on Product	Education
Steven M. Tonkovich, Brandywine	Portfolio Manager	29	29	20	BS
James S. McClure, BHMS	Portfolio Manager	44	23	15	MBA
John P. Harloe, BHMS	Portfolio Manager	40	23	15	MBA
Henry F. Otto, Brandywine	Portfolio Manager	34	23	15	MBA
Cynthia Thatcher, American Beacon	Portfolio Manager	17	19	19	CFA,MBA
Mark Roach, Foundry Partners	Portfolio Manager	24	12	8	MBA
Mario Tufano, Foundry Partners	Portfolio Manager	14	11	8	BS
Brian R. Bruce, Hillcrest	Portfolio Manager	36	11	4	MBA
Brandon Troegle, Hillcrest	Portfolio Manager	14	11	4	CFA,MBA
Douglas Stark, Hillcrest	Portfolio Manager	26	10	4	CFA,MBA

Product Turnover

	2014	2015	2016	YTD
Total Clients	--	--	--	--
Total Assets $MM	$5,546.0	$5,719.0	$5,319.0	$6,813.0
Asset Inflow $MM	$1,554.0	$1,511.0	$1,061.0	$868.0
Asset Outflow $MM	$1,607.0	$1,577.0	$1,026.0	$913.0

Employee Turnover (5 Years)	
Hired	59
Terminated	9
Retired	3
Resigned	22
Total Firm Employees	109

Five Largest Clients

Client Type	Assets ($MM)	% of Assets
Mutual Fund	$2,872.0	42.2%
Mutual Fund	$964.8	14.2%
Mutual Fund	$277.5	4.1%
Mutual Fund	$270.4	4.0%
Mutual Fund	$256.6	3.8%

Client Averages ($MM)	
Average Client Size	--
Smallest Client Size	--

Harbor Product Profile

Current Team Key Employees

Name	Role on Product	Years Experience	Years with Firm	Years on Product	Education
Paul Viera	Portfolio Manager	36	19	19	BA,MBA

Product Turnover

	2014	2015	2016	YTD
Total Clients	--	--	--	--
Total Assets $MM	$738.0	$817.0	$857.0	$997.0
Asset Inflow $MM	$302.0	$335.0	$222.0	$241.0
Asset Outflow $MM	$176.0	$215.0	$352.0	$157.0

Employee Turnover (5 Years)	
Hired	--
Terminated	--
Retired	--
Resigned	--
Total Firm Employees	132

Five Largest Clients

Client Type	Assets ($MM)	% of Assets
--	--	--
--	--	--
--	--	--
--	--	--
--	--	--

Client Averages ($MM)	
Average Client Size	--
Smallest Client Size	--

Current Team Key Employees

Name	Role on Product	Years Experience	Years with Firm	Years on Product	Education
William V. Heaphy	Portfolio Manager/Analyst	23	24	19	CFA
Andrew Gilchrist	Analyst	41	22	22	Masters
Gary J. Merwitz	Analyst	20	14	14	MBA
Joshua S. Overholt	Analyst	14	10	10	MBA
Matthew E. Fleming	Analyst	20	10	10	CFA
James F. Shurtleff	Analyst	19	7	7	Masters
David J. Brenia	Analyst	13	4	4	MBA
Jesse Fink	Analyst	7	2	2	CFA,MBA

Product Turnover

	2014	2015	2016	YTD
Total Clients	4	4	6	6
Total Assets $MM	$2,032.0	$1,694.0	$1,882.0	$1,897.0
Asset Inflow $MM	$0.0	$0.0	$178.0	$0.0
Asset Outflow $MM	$0.0	$0.0	$0.0	$0.0

Employee Turnover (5 Years)	
Hired	6
Terminated	2
Retired	2
Resigned	4
Total Firm Employees	16

Five Largest Clients

Client Type	Assets ($MM)	% of Assets
Public	$725.0	38.2%
Mutual Fund	$716.0	37.7%
Public	$162.0	8.5%
Taft-Hartley	$118.0	6.2%
Taft-Hartley	$95.0	5.0%

Client Averages ($MM)	
Average Client Size	$316.0
Smallest Client Size	$81.0

Current Team Key Employees

Name	Role on Product	Years Experience	Years with Firm	Years on Product	Education
Craig Stone	Portfolio Manager/Analyst	28	18	18	BS,MBA
Jon Christensen	Analyst	22	17	17	BS,CFA,MBA
Julie Kutasov	Portfolio Manager/Analyst	16	16	16	BA,MBA
Todd Beiley	Analyst	18	16	16	BS,CFA,MBA
Douglas S. Foreman	Due Dilligence	31	7	7	BS,CFA,MBA
Chris Wright	Analyst	7	6	6	BS,CFA,MBA
Julie Biel	Analyst	9	5	5	BA,CFA,MBA
Chris Benway	Analyst	7	4	4	BA,CFA,MBA

Product Turnover

	2014	2015	2016	YTD
Total Clients	256	242	226	245
Total Assets $MM	$1,833.0	$1,676.0	$2,286.0	$2,647.0
Asset Inflow $MM	$14.0	$8.0	$19.0	$9.0
Asset Outflow $MM	$17.0	$29.0	$9.0	$7.0

Employee Turnover (5 Years)	
Hired	7
Terminated	0
Retired	1
Resigned	4
Total Firm Employees	90

Five Largest Clients

Client Type	Assets ($MM)	% of Assets
Wrap	$507.7	19.2%
Sub-Advisory	$368.2	13.9%
Wrap	$281.0	10.6%
Wrap	$270.0	10.2%
Wrap	$156.2	5.9%

Client Averages ($MM)	
Average Client Size	$10.5
Smallest Client Size	$0.1

Current Team Key Employees

Name	Role on Product	Years Experience	Years with Firm	Years on Product	Education
David Johnson	Portfolio Manager/Analyst	27	20	17	BA,CFA,MBA
Karen Bowie	Portfolio Manager	33	19	12	BA,BS,CFA,MBA
Andrew Rem	Portfolio Manager/Analyst	20	11	11	BS,CFA,MBA

Product Turnover

	2014	2015	2016	YTD
Total Clients	1	1	3	5
Total Assets $MM	$132.0	$208.0	$917.0	$1,961.0
Asset Inflow $MM	$48.0	$105.0	$667.0	$1,309.0
Asset Outflow $MM	$35.0	$31.0	$141.0	$252.0

Employee Turnover (5 Years)	
Hired	29
Terminated	0
Retired	3
Resigned	22
Total Firm Employees	199

Five Largest Clients

Client Type	Assets ($MM)	% of Assets
Mutual Fund	$1,621.0	82.7%
Sub-Advisory	$198.0	10.1%
Wrap	$118.0	6.0%
Corporate	$18.0	0.9%
Wrap	$5.0	0.3%

Client Averages ($MM)	
Average Client Size	$392.0
Smallest Client Size	$5.0

Wasatch Product Profile

Current Team Key Employees

Name	Role on Product	Years Experience	Years with Firm	Years on Product	Education
Jeff Cardon	Analyst	--	37	20	CFA
Jim Larkins	Portfolio Manager	--	22	20	MBA
JB Taylor	Analyst	--	22	20	--
John Malooly	Analyst	--	20	20	CFA
Ryan Snow	Analyst	--	18	18	--
Paul Lambert	Analyst	--	18	18	--
Dan Chace	Analyst	--	16	16	CFA,MBA
Brian Bythrow	Analyst	--	15	15	CFA,MBA
Jill Wahleithner	Analyst	--	4	4	Ph.D
Jagjit Sahota	Analyst	--	4	4	MBA

Product Turnover

	2014	2015	2016	YTD
Total Clients	25	26	26	27
Total Assets $MM	$459.0	$450.0	$559.0	$567.0
Asset Inflow $MM	$124.0	$58.0	$65.0	$35.0
Asset Outflow $MM	$95.0	$67.0	$66.0	$56.0

Employee Turnover (5 Years)	
Hired	16
Terminated	0
Retired	2
Resigned	5
Total Firm Employees	81

Five Largest Clients

Client Type	Assets ($MM)	% of Assets
Public	$73.8	13.0%
Corporate	$49.1	8.7%
Public	$18.6	3.3%
High Net Worth	$13.0	2.3%
High Net Worth	$6.9	1.2%

Client Averages ($MM)	
Average Client Size	$8.2
Smallest Client Size	$0.5

Notes on % Owned by Parent or Other

Firm Name	Notes
American Beacon	American Beacon is a wholly owned asset management subsidiary of Resolute Investment Managers, Inc., which is indirectly owned by investment funds affiliated with Kelso & Company and Estancia Capital Management, two leading private equity firms.
Harbor	Harbor Capital is indirectly wholly-owned by Robeco Groep N.V. ("Robeco"), a financial holding company located in the Netherlands. Robeco is in turn wholly-owned by ORIX Corporation ("ORIX"), a global leasing and financial services company based in Japan.
ICM	Old Mutual Asset Management is the parent owner.
Kayne	Wholly owned subsidiary of Virtus Investment Partners, Inc.
Nuveen	Nuveen Investments, Inc. is the parent owner.
Wasatch	--

Phase Process Overview

Marquette Manager Search Phase Process

Bottom-up Evaluation Process: We use a bottom-up process to vet investment ideas. As an idea passes through multiple evaluation phases, the idea is provided with additional resources (i.e. time, attention, and money) and will be placed at a higher level of scrutiny. While the traditional and alternative research efforts utilize the same general approach, there are differences due to the specifics of each asset class. There is a product Set-Up and five levels of due diligence. Phase I and Phase II are the initial evaluation phases, Phase III is the documentation phase, Phase IV is the validation phase, and the last phase is the final recommendation and on-going due diligence. During every stage of the process, the lead analyst presents information at the weekly Investment Manager Search Committee ("IMC") meetings. The lead analyst or the IMC may "fail" an idea at any step in the process. In order to pass Phase III and IV, an idea must receive unanimous support from the IMC. Note: Managers included in Marquette searches may not be fully through all five phases of the evaluation process at the time the search is published.

Manager Products		Set Up	Phase I	Phase II	Phase III	Phase IV	Recommendation / Ongoing
	Traditional		Collect Basic Information	Quantitative Screen	Asset-Class/Account Specific RFI		
	Open Alternatives	Enter Product into proprietary MAI database	Collect Basic Information	Qualitative /Quantitative Screen	Asset-Class/Account Specific RFI	Full Due Diligence Check/Data Verification	Final Recommendations and Ongoing Due Diligence
	Closed Alternatives		Collect Basic Information	Qualitative /Quantitative Screen	Asset-Class/Account Specific RFI		

Set Up	Phase I	Phase II	Phase III	Phase IV	Recommendation / Ongoing
Initial Product Discovery	Determine Viability of Product	Determine whether product is attractive	Develop clear understanding of necessary info, including potential shortfalls	Includes: 1.On-site visit 2.Reference check 3.Technology evaluation 4.Culture evaluation 5.Compliance evaluation 6.Peer comparisons 7.IMC follow-up review	Ongoing due diligence

Definitions

Alpha measures nonsystematic return, or the return of the manager that cannot be attributed to the market. It can be thought of as how the manager performed if the market has no gain or loss. Marquette calculates alpha as the annualized y-intercept of the best fit line based on the ordinary least squares regression, using the market's monthly return less the risk-free rate as the independent variable and the manager's monthly return less the risk-free rate as the dependent variable. Marquette uses the one month T-Bill returns as the risk-free rate.

Average Coupon is the arithmetic average of the coupon rates of all of the bonds in a portfolio. The Coupon Rate of a bond is the interest the bond issuer agrees to pay annually.

Average Time to Maturity is the arithmetic average of the maturities of all of the bonds in a portfolio. The Time to Maturity of a bond is the number of years remaining prior to final principal payment.

Average Yield to Worst is the arithmetic average of yield to worst of all of the bonds in a portfolio. The Yield to Worst of a bond is the lowest possible yield of a bond, represented by the lower of either the yield to maturity or the yield to call. Yield is defined as the interest earned on a bond, calculated as coupon rate divided by current price. Yield to Maturity or Yield to Call refers the yield an investor will earn if the bond is held from purchase date to redeem date.

Batting Average is a measure of a manager's ability to beat a benchmark consistently. It is calculated by dividing the number of months in which the manager beat or matched the benchmark by the total number of months in the period. For example, a manager who meets or outperforms the market every month in a given period would have a batting average of 100. A manager who beats the market half of the time would have a batting average of 50. Marquette calculates batting average on five years of monthly returns.

Beta measures the risk level of the manager. It is a measure of systematic risk, or the manager return attributable to market movements. A beta equal to 1.0 indicates a risk level equivalent to the market. Higher betas are associated with higher risk levels, while lower betas are associated with lower risk levels. Marquette calculates beta as the covariance (correlation of two assets multiplied by their standard deviation) divided by the variance (standard deviation squared) of the market.

Composite Dispersion measures the variability of returns amongst all of the underlying portfolios representing a composite. The higher the dispersion, the larger the differences between the various manager portfolios in the product.

Correlation measures the variation between two sets of historical returns and is a useful tool in portfolio diversification. The correlation between two sets of returns is a number between -1.0 and +1.0. A +1.0 means that the two sets of returns move in the exact same manner, while a -1.0 means the returns move exactly opposite. The lower the correlation number, the stronger the diversification between two products.

Dividend Yield measures the annual return of the portfolio attributable to dividends. It is determined by dividing the total amount of annual dividends per total shares by the average market price of the total stocks in the portfolio.

Down-Market Capture Ratio is a measure of a manager's performance relative to the benchmark when the benchmark's monthly return is less than zero. The lower the manager's down-market capture ratio, the better the manager protected capital during a market decline. For instance, a value of 90.0 suggests that the manager's losses were only 90% of the benchmark's losses when the benchmark declined. A negative down-market capture ratio indicates that the manager's returns were actually positive when the benchmark declined.

Duration is a measure of the approximate price sensitivity of a bond to interest rate changes. Rule of thumb: duration is the approximate percentage change in the price of a bond for a 1% change in interest rates.

Factor Analysis is based multi-variate regression. R-squared represents the percentage of manager returns explained by the underlying factors, and each factor weight can be interpreted as the manager's sensitivity to the underlying factor.

Global Investment Performance Standards ® (GIPS) is a set of standards developed by the CFA Institute to provide a common methodology of calculating and presenting historical performance. These standards provide uniformity for comparing investment returns and ensure accurate, accountant verified data.

GIPS Soft Dollar Standards is a voluntary set of standards developed by the CFA Institute that managers may choose to comply with in relation to their firm's soft dollar trading practices. The standards are primarily made up of four ethical principles applying to seven major areas of firm practice. They were developed to guide managers toward ethical practices in the use and application of soft dollar client brokerage.

Definitions

Information Ratio is a measure of risk-adjusted value added by a manager. It is the ratio of a manager's excess return over the benchmark over the tracking error (residual risk).

Kurtosis, or excess kurtosis as used in this report, measures peakedness of the distribution of manager returns. A value greater than zero indicates a more peaked distribution than a normal distribution, with more returns clustered around the mean and more extreme values.

Minority Status is defined by Marquette Associates as Female, African American, Hispanic, Asian, and/or Native American.

R-Squared measures how closely the manager's returns track the benchmark. The closer the R-squared statistic is to 1.0, the more closely related the manager's returns are to the benchmark. A higher R-squared also increases the reliability of alpha and beta.

Sharpe Ratio measures the excess return per unit of risk. The higher the ratio, the more efficient the manager. It is the average return of the manager minus the risk-free rate, divided by the standard deviation of the differences of the two return streams.

Skew measures the symmetry of the distribution of manager returns relative to a normal distribution. A negative skew implies more extreme negative return values, a positive skew implies more extreme positive return values.

Soft Dollars refer to non-cash revenue on commissions, spreads, and discounts generated by trades that the manager may use to pay for proprietary and third-party research, which provide lawful and appropriate assistance to the manager in the investment decision making process. The manager must use its best judgment as a fiduciary to justify the use of client brokerage to pay for a product or service. The CFA Institute has developed a set of Standards to aid GIPS members in their determination process.

Sub-Advisory relationships are where the manager oversees another investment firm's product.

Turnover measures the trading activity of a portfolio during a given time period. It is the percentage of the portfolio's assets that have changed over the course of the time period. Turnover is calculated by dividing the average market value during the time period by the lesser value of the value of purchases or sales during the same period.

Tracking Error, also known as residual risk, is a measure of how closely a manager's returns track the returns of the benchmark. It can also be viewed as a measure of consistency of excess returns. It is computed as the annualized standard deviation of the difference between a portfolio's return and the benchmark.

Up-Market Capture Ratio is a measure of a manager's performance relative to the benchmark when the benchmark's monthly return is greater than or equal to zero. The higher the manager's up-market capture ratio, the better the manager performed during a market rise. For instance, a value of 110.0 suggests that the manager's returns were 110% of the benchmark's returns when the benchmark rose. An up-market capture ratio under 100.0 indicates that the manager's returns were less than the benchmark's returns in a positive market.

Wrap Relationships are negotiated relationships between the manager and a brokerage firm(s), whereby the brokerage firm(s) provide their clients access to the manager's product through a sub account.

PREPARED BY MARQUETTE ASSOCIATES

180 North LaSalle St, Ste 3500, Chicago, Illinois 60601 PHONE 312-527-5500 WEB marquetteassociates.com

The sources of information used in this report are believed to be reliable. Marquette Associates, Inc. has not independently verified all of the information and its accuracy cannot be guaranteed. Opinions, estimates, projections and comments on financial market trends constitute our judgment and are subject to change without notice. References to specific securities are for illustrative purposes only and do not constitute recommendations. Past performance does not guarantee future results.

About Marquette Associates

Marquette Associates is an independent investment consulting firm that helps institutions guide investment programs with a focused three-point approach and carefully researched advice. For more than 30 years, Marquette has served this mission in close collaboration with clients – enabling institutions to be more effective investment stewards. Marquette is a completely independent and 100% employee-owned consultancy founded with the sole purpose of advising institutions. For more information, please visit www.marquetteassociates.com.

Investment Stewardship Guidance

Marquette Associates

Global Tactical Asset Allocation ("GTAA")

Global Tactical Asset Allocation (GTAA)

- GTAA managers seek to take advantage of relative pricing or valuation anomalies over various time periods across multiple asset classes
- Tend to be flexible, go-anywhere strategies that invest globally across a range of traditional and non-traditional asset classes such as equities (U.S., EM, Non-U.S. developed), fixed income (credit, interest rate, etc.), currencies, commodities, and listed real estate

Global Tactical Asset Allocation (GTAA)

Characteristics of GTAA strategies include:

- Diverse global universe of investible asset classes
- Flexible mandates with few portfolio constraints
- Process involves tactical shifts in portfolio holdings to take advantage of short to intermediate-term opportunities
- Liquid investment vehicles (include mutual funds that comply with 40 Act rules)
- Lower correlations to "traditional" asset classes such as equities and bonds
- Favorable fee structure without performance fee

Global Tactical Asset Allocation (GTAA)

GTAA universe

	eVestment Analytics Universe	GTAA Screen
Total Number of Products	263	170
Total AUM	$880 billion	$630 billion
Minimum Fund Size	None	$100 million
Median Fund Size	$697 million	$935 million
Product w/10 yr track record	90	72

- Managers with $100 million in assets represent institutional quality

Source: eVestment

Global Tactical Asset Allocation (GTAA)

Common types of alternative (non-traditional) strategies used in GTAA

- Currency – designed to provide exposure to foreign currencies in both developed and EM markets based on macroeconomic vies and valuation analyses
- Commodity and real estate-linked – tied to the performance of "real assets" and provide inflation protection
- Nontraditional fixed income – invest across all global fixed income markets often using a broad range of instruments and strategies i.e. credit risk, credit spreads, duration, interest rates, etc.
- Relative value – trading spreads that are non-directional in nature by identifying irrational pricing between related securities
- Long/short equity – designed to provide equity exposure with downside risk mitigation
- Directional – long or short positions which are viewed independently
- Volatility arbitrage – involves buying and selling options which are perceived to be mispriced

Global Tactical Asset Allocation (GTAA)

Implementation

- Derivatives – a financial instrument whose price is dependent upon or derived from an underlying asset
- Swaps – a type of over-the-counter derivative contract between two parties typically consisting of one type of cash flow (fixed) for another (variable)
- Options – financial derivative which offers the buyer the right, but not the obligation, to buy (call) or sell (put) a security or other financial asset at an agreed upon price (strike)
- Futures – a financial derivative contract which the buyer is obligated to purchase an asset at a specified date. Typically used to hedge or speculate on the price movement of an underlying asset
- Currency futures – a futures contract that specifies the price at which a currency can be bought or sold at a future date. Typically used to hedge against foreign exchange risk
- Forex "FX" – the market in which currencies are traded
- Physical securities – stocks and bonds

Global Tactical Asset Allocation (GTAA)

Five year manager correlations

	BlackRock	GMO	PIMCO	William Blair	Global 60/40 Portfolio	Russell 3000	BarCap Agg
Blackrock	1.00						
GMO	0.91	1.00					
PIMCO	0.83	0.87	1.00				
William Blair	0.68	0.72	0.64	1.00			
Global 60/40 Portfollio	0.92	0.93	0.87	0.63	1.00		
Russell 3000	0.84	0.79	0.59	0.56	0.84	1.00	
BarCap Agg	0.29	0.20	0.42	0.12	0.26	-0.08	1.00

The sources of information used in this report are believed to be reliable. Marquette Associates, Inc. has not independently verified all of the information and its accuracy cannot be guaranteed. Opinions, estimates, projections and comments on financial market trends constitute our **judgment** and are subject to change without notice. References to specific securities are for illustrative purposes only and do not constitute recommendations. Past performance does not guarantee future results.

About Marquette Associates

Marquette Associates is an independent investment consulting firm that guides institutional investment programs with a focused three-point approach and careful research. For more than 25 years Marquette has served this mission in close collaboration with clients – enabling institutions to be more effective investment stewards. Marquette is a completely independent and 100% employee-owned consultancy founded with the sole purpose of advising institutions. For more information, please visit www.marquetteassociates.com.

MarquetteAssociates

Global Tactical Asset Allocation Search

Glen Ellyn Police

Searchbook

September 30, 2017

Search Background

Glen Ellyn Police (the Fund) has retained Marquette Associates to conduct, among other things, an investment manager search to manage a Global Tactical Asset Allocation portfolio. The search is to emphasize a complementary investment style to the existing manager roster and to further diversify the portfolio to improve the overall efficiency of the investment program. Marquette Associates has prepared this search utilizing data from various sources. The sources of information are believed to be reliable. Marquette has not independently verified all of the information contained herein. Past performance is no guarantee of future results.

NOTE: All Data is as of Sep 30, 2017

NOTE: Approx. amount of assets in consideration $1,400,000

NOTE: All Performance Data is Net of Fees

NOTE: Glossary of Definitions Enclosed

Methodology

The following highlights provide a summary of our general impressions of the various investment managers and recommendations we think should be implemented to govern the future management of the Fund's Global Tactical Asset Allocation assets. All of the included managers met the following criteria:

Benchmark: Global 60/40 Portfolio

Search Criteria

1. All firms claim compliance with the Global Investment Performance Standards (GIPS®).

1. Over $100 million in assets in the product.

2. Over $500 million in total firm assets.

3. Over 3 years of history in the product.

Search Process:

1. World Allocation Universe: 629
2. Open to New Investors: 607
3. Expense Ratio Below Category Average: 351
4. Institutional Share Class: 96
5. Over $100 million in product assets: 58
6. Qualitative Review: 6

MarquetteAssociates

Product Summary

Firm	Product	Strategy AUM ($M)	Product Type	Ticker
BlackRock	Multi-Asset Income	$16,058	Mutual Fund	BIICX
GMO	Benchmark-Free Allocation	$23,244	Mutual Fund	GBMFX
PIMCO	All Asset	$28,012	Mutual Fund	PAAIX
William Blair	Macro Allocation	$1,916	Mutual Fund	WMCJX

Firm	Minimum	Subscriptions	Redemptions	Fee (%)	Fee ($)
BlackRock	$2,000,000	Daily	Daily	0.59%	$8,260
GMO	$10,000,000	Daily	Daily	0.94%	$13,160
PIMCO	$1,000,000	Daily	Daily	0.87%	$12,180
William Blair	$5,000,000	Daily	Daily	1.04%	$14,560

BlackRock Multi-Asset Income Fund

The BlackRock Multi-Asset Income Fund seeks to maximize current income with consideration for capital appreciation. The Fund's unconstrained strategy seeks out the risk-adjusted best income opportunities around the world and across asset classes. In addition to stocks and bonds, the Fund typically has a significant allocation to non-traditional sources of income. Along with higher yields, they believe non-traditional sources of income provide meaningful diversification and potentially higher sources of income.

GMO Benchmark Free Allocation Fund

The GMO Benchmark-Free Allocation Fund is an unconstrained portfolio that allocates capital across asset classes unconstrained by target allocations or concerns over tracking error. This product often takes a contrarian approach to investing, allocating capital to out of favor asset classes that look attractive based on GMO's long-term asset class return forecasts. Because of their contrarian approach, the Benchmark-Free Allocation Fund may at times look dramatically different than peers. The product invests in both underlying securities (stocks and bonds) and GMO funds.

PIMCO All Asset Fund

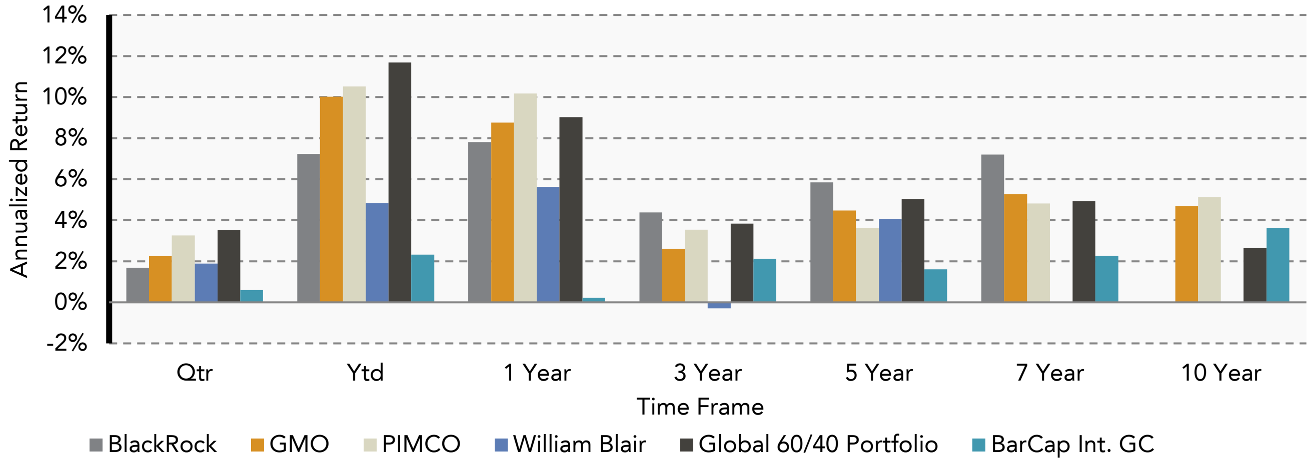
The PIMCO All Asset Fund seeks attractive risk-adjusted real returns while diversifying away from equity risk. The fund makes allocation to underlying PIMCO funds, attempting to benefit from both tactical asset allocation decisions and active management within asset classes. The strategy is broken into three main buckets: developed market equities, core bonds and diversifiers. Research Affiliates works with PIMCO to make the asset allocation decisions and the underlying funds are managed by PIMCO.

William Blair Macro Allocation

The Macro Allocation Fund is a global macro strategy that seeks to exploit market inefficiencies by taking long and short positions in various asset classes in order to profit from relative movements across and within such asset classes. The strategy typically invests across a wide range of asset classes including equity, fixed income, currencies, commodities, and real estate and will gain exposure through investing in swaps, options, foreign exchange contracts, ETFs, and future contracts. The team's investment universe encompasses more than 70 equity and fixed income markets, countries, and sectors and more than 30 currencies, which it actively manages.

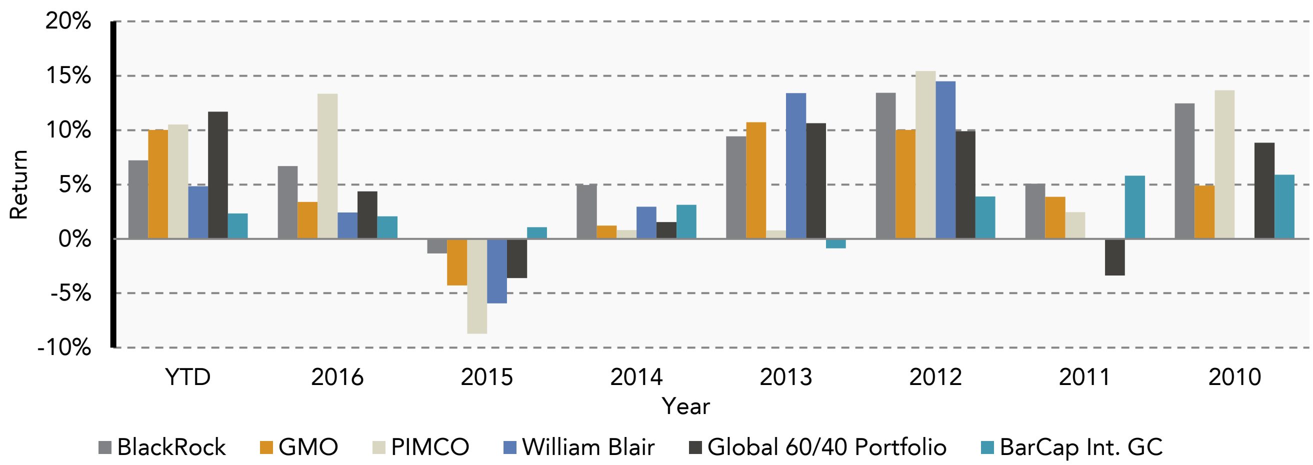
Performance Comparison

Trailing Returns (Net of Fees)



	Qtr	Ytd	1 Year	3 Year	5 Year	7 Year	10 Year
BlackRock	1.69%	7.23%	7.80%	4.38%	5.84%	7.20%	--
GMO	2.25%	10.02%	8.75%	2.60%	4.48%	5.27%	4.69%
PIMCO	3.25%	10.52%	10.18%	3.55%	3.61%	4.81%	5.12%
William Blair	1.89%	4.84%	5.63%	-0.30%	4.08%	--	--
Global 60/40 Portfolio	3.52%	11.68%	9.02%	3.83%	5.04%	4.92%	2.63%
BarCap Int. GC	0.60%	2.33%	0.22%	2.13%	1.61%	2.26%	3.64%

Calendar Year Returns (Net of Fees)

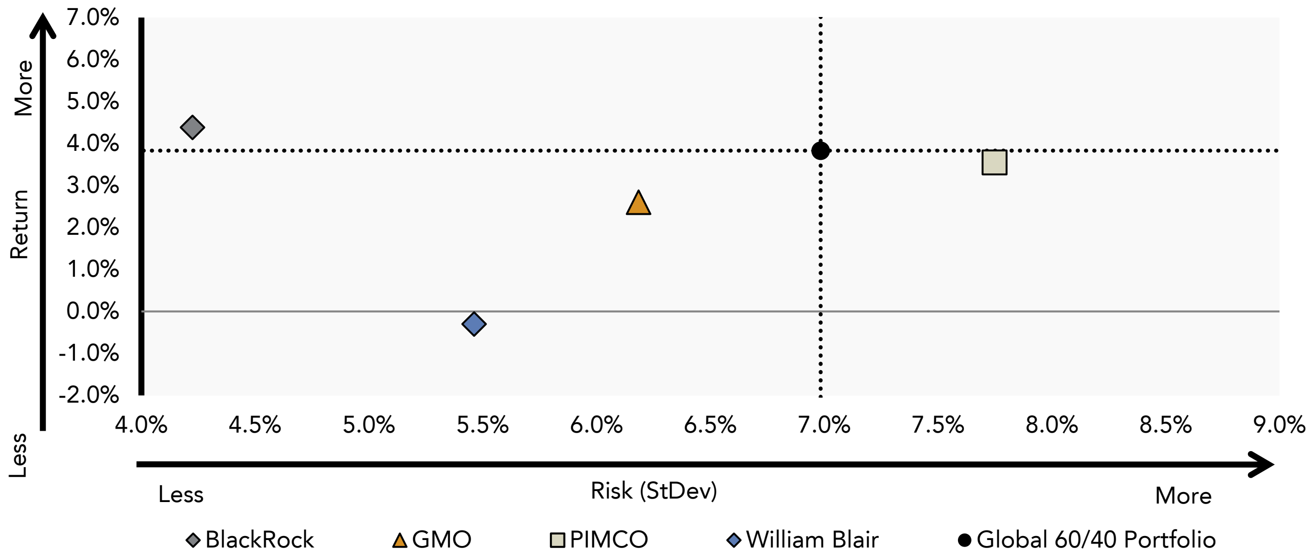


	YTD	2016	2015	2014	2013	2012	2011	2010
BlackRock	7.23%	6.70%	-1.35%	4.95%	9.44%	13.44%	5.06%	12.47%
GMO	10.02%	3.40%	-4.28%	1.21%	10.73%	10.01%	3.86%	4.91%
PIMCO	10.52%	13.34%	-8.72%	0.80%	0.77%	15.44%	2.44%	13.68%
William Blair	4.84%	2.44%	-5.92%	2.94%	13.42%	14.49%	--	--
Global 60/40 Portfolio	11.68%	4.37%	-3.61%	1.55%	10.64%	9.90%	-3.37%	8.83%
BarCap Int. GC	2.33%	2.08%	1.07%	3.13%	-0.86%	3.89%	5.80%	5.89%

Attachment: Glen Ellyn Police GTAA Search (2941 : Investment Consultant Report 3Q20107)

Risk Return Profile

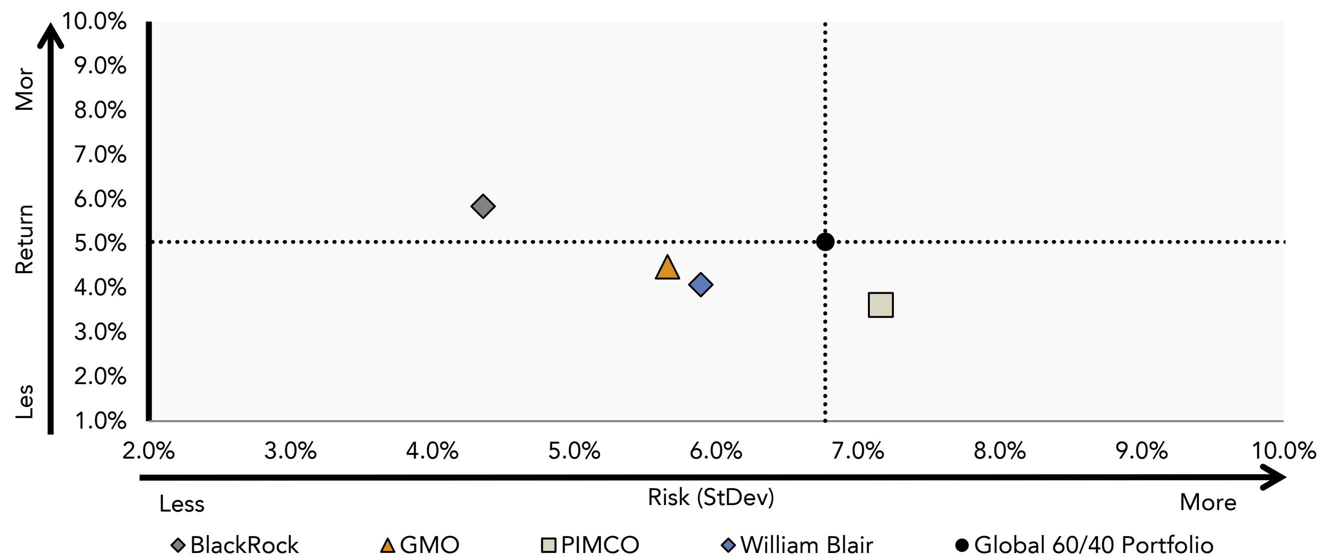
3 Year Risk/Return



3 Year Return Statistics

	3 Year Return	3 Year StDev	3 Year Sharpe	3 Year Correlation
BlackRock	4.38%	4.23%	0.99	0.93
GMO	2.60%	6.18%	0.39	0.93
PIMCO	3.55%	7.75%	0.43	0.86
William Blair	-0.30%	5.46%	-0.09	0.67

5 Year Risk/Return

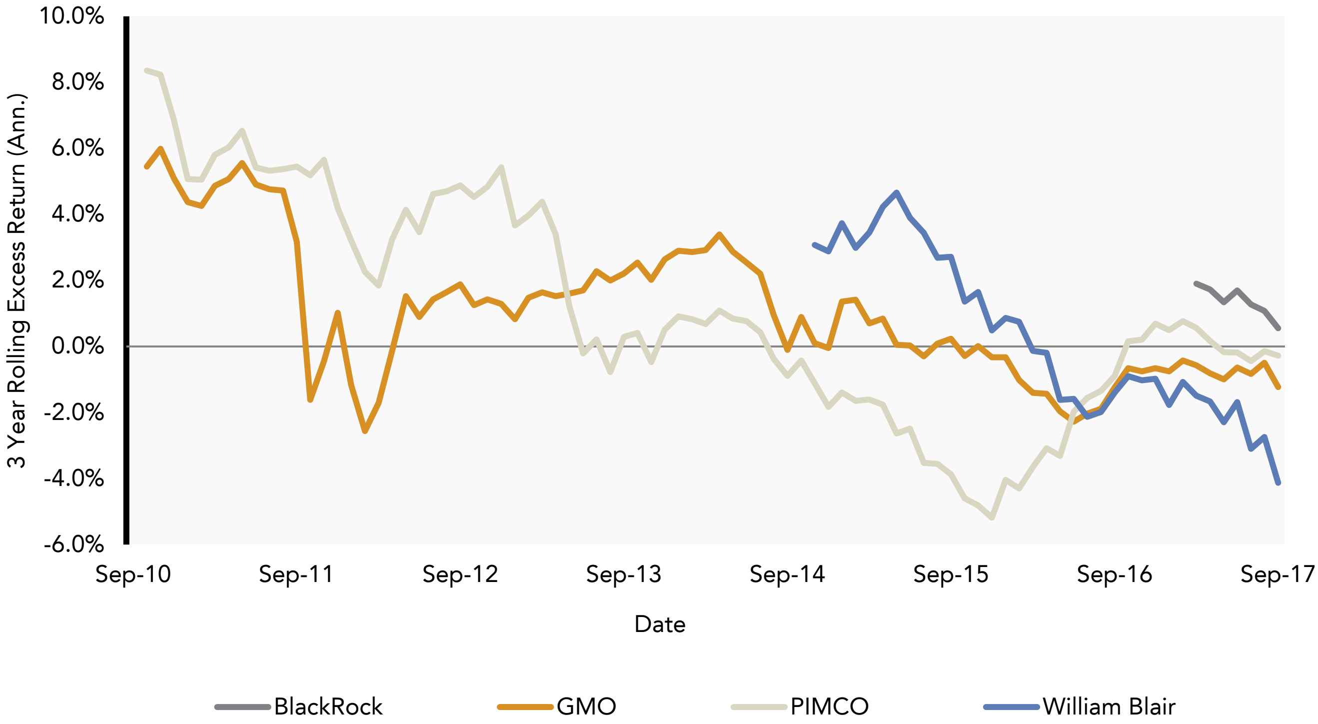


5 Year Return Statistics

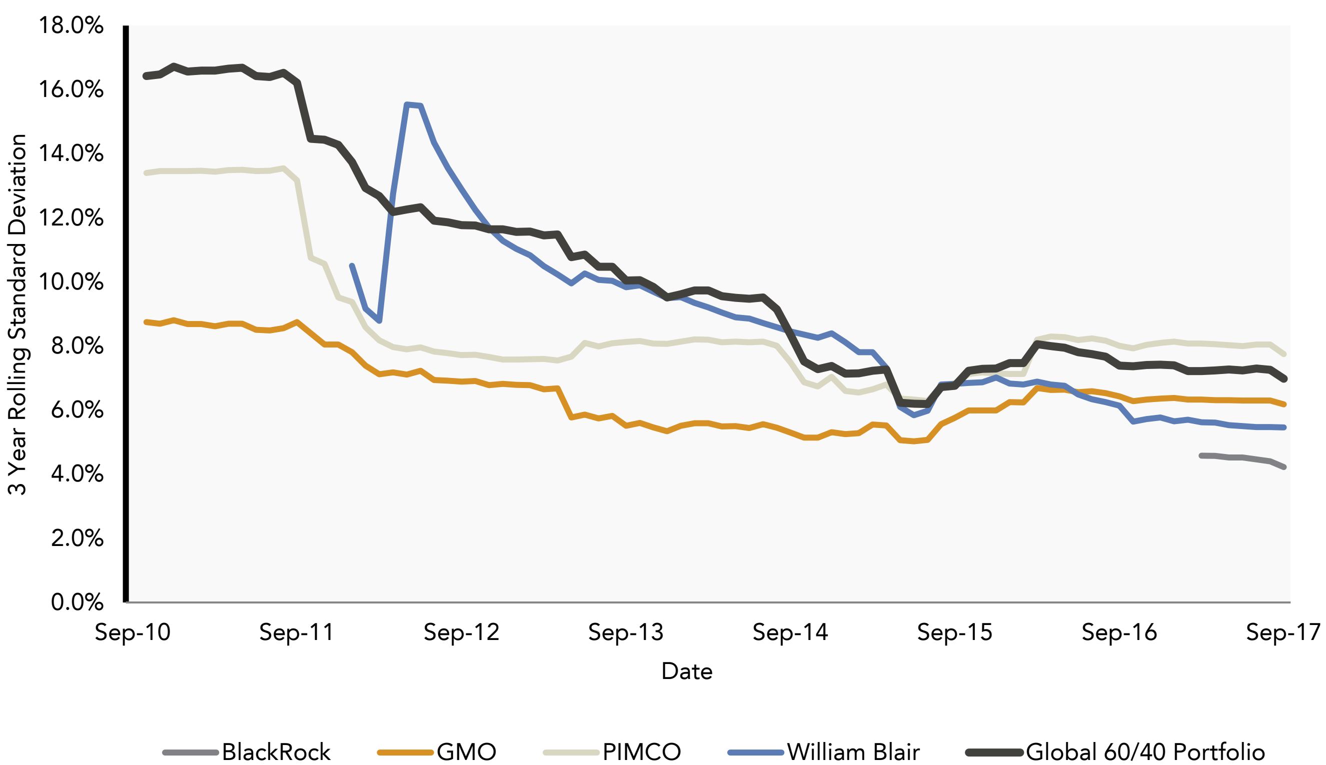
	5 Year Return	5 Year StDev	5 Year Sharpe	5 Year Correlation
BlackRock	5.84%	4.36%	1.31	0.92
GMO	4.48%	5.66%	0.77	0.93
PIMCO	3.61%	7.16%	0.49	0.87
William Blair	4.08%	5.89%	0.67	0.63

Rolling 3 Year Return and Risk

Rolling 3 Year Excess Returns Over Global 60/40 Portfolio



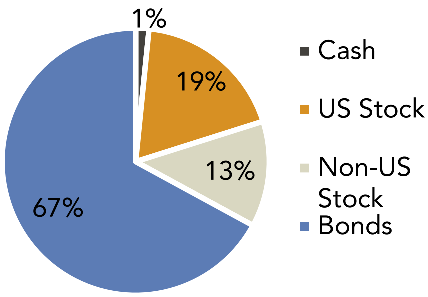
Rolling 3 Year Standard Deviation



Asset Allocation

BlackRock Multi-Asset Income Fund

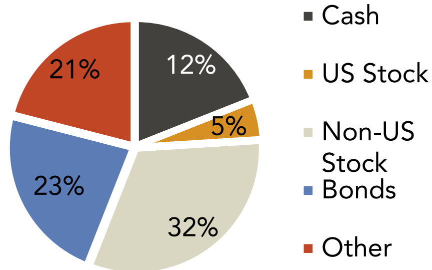
Allocation	%
Cash	1%
US Stock	19%
Non-US Stock	13%
Bonds	67%
Other	0%
Total	**100%**



Fixed income exposure includes corporate investment grade, high yield, bank loans, CMBS, CLOs and non-agency mortgages. Equity exposure includes global equities, MLPs, global REITs and covered call writing

GMO Benchmark-Free Allocation Fund

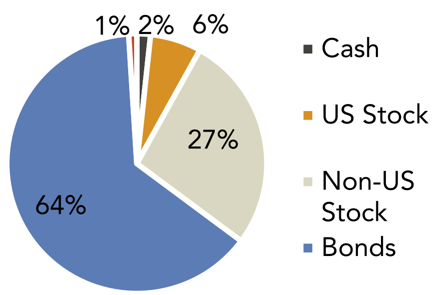
Allocation	%
Cash	19%
US Stock	5%
Non-US Stock	32%
Bonds	23%
Other	21%
Total	**100%**



Other includes GMO's non-directional "alternative" (merger arb, global macro, relative value &FX) strategies which can hedge. Fixed income exposure is distressed, emerging market debt & ABS/structured products. Equity exposure is tilted towards emerging markets and international.

PIMCO All Asset

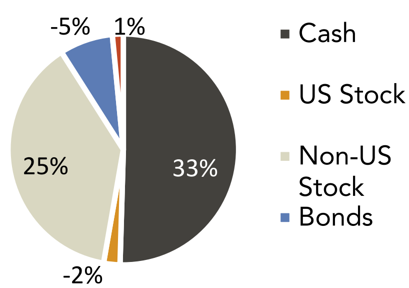
Allocation	%
Cash	2%
US Stock	6%
Non-US Stock	27%
Bonds	64%
Other	1%
Total	**100%**



Other includes inflation-linked strategies which include commodities, REITS and TIPS. It also includes PIMCO non-directional "alternative" strategies. Bonds are primarily emerging market debt and credit. Equities are primarily EM and DM ex U.S.

William Blair Macro Allocation*

Allocation	%
Cash	33%
US Stock	-2%
Non-US Stock	25%
Bonds	-5%
Other	1%
Total	**53%**



Long equity exposure is primarily Europe and Emerging Markets. Long fixed income primarily in Emerging Markets. Short fixed income is primarily developed (Non-U.S). Active currency bets are long the YEN, Yuan and Pound.

*William Blair's asset allocation exposure represents their net exposure which includes both long and short positions.

Correlation Matrix

Three Year Manager Correlations

	BlackRock	GMO	PIMCO	William Blair	Global 60/40 Portfolio	Russell 3000	BarCap Agg
BlackRock	1.00						
GMO	0.92	1.00					
PIMCO	0.81	0.87	1.00				
William Blair	0.74	0.75	0.74	1.00			
Global 60/40 Portfolio	0.93	0.93	0.86	0.67	1.00		
Russell 3000	0.87	0.76	0.58	0.56	0.84	1.00	
BarCap Agg	0.13	0.13	0.30	0.19	0.14	(0.18)	1.00

Five Year Manager Correlations

	BlackRock	GMO	PIMCO	William Blair	Global 60/40 Portfolio	Russell 3000	BarCap Agg
BlackRock	1.00						
GMO	0.91	1.00					
PIMCO	0.83	0.87	1.00				
William Blair	0.68	0.72	0.64	1.00			
Global 60/40 Portfolio	0.92	0.93	0.87	0.63	1.00		
Russell 3000	0.84	0.79	0.59	0.56	0.84	1.00	
BarCap Agg	0.29	0.20	0.42	0.12	0.26	(0.08)	1.00

PREPARED BY MARQUETTE ASSOCIATES

180 North LaSalle St, Ste 3500, Chicago, Illinois 60601 PHONE 312-527-5500 WEB marquetteassociates.com

About Marquette Associates

Marquette Associates is an independent investment consulting firm that helps institutions guide investment programs with a focused three-point approach and carefully researched advice. For more than 30 years, Marquette has served this mission in close collaboration with clients – enabling institutions to be more effective investment stewards. Marquette is a completely independent and 100% employee-owned consultancy founded with the sole purpose of advising institutions. For more information, please visit www.marquetteassociates.com.

Police Pension Board
535 Duane Street
Glen Ellyn, IL 60137

Meeting: 10/30/17 07:30 PM
Department: Police Pension Board
Department Head: Christina Coyle
Category: Vouchers
Prepared By: Christina Coyle

SCHEDULED

AGENDA ITEM (ID # 2938) DOC ID: 2938

Approve the Expense Vouchers in the amount of $13,280.55 and Pension Expenses in the amount of $514,225.71 for a total of $527,506.26

Please see the information attached.

ATTACHMENTS:

- Vouchers, October 2017 (PDF)

POLICE PENSION FUND
APPROVAL OF VOUCHERS
For the meeting in October 2017

Expenses	Check Date:	Paid amount	
IPPFA (Conference, Terranova)	8/18/2017	$ 375.00	
IPPFA (Membership Dues)	10/20/2017	$ 795.00	
Lauterbach & Amen (DOI Report)	8/4/2017	$ 600.00	
Village of Glen Ellyn (Reimburse Foster & Foster Inv)	9/30/2017	$ 3,000.00	
MB Financial (Custodial Account Fees)	7/12/2017	$ 4,767.67	
MB Financial (Custodial Account Fees)	9/11/2017	$ 825.00	
MB Financial (Custodial Account Fees)	9/11/2017	$ 2,917.88	
		$ 13,280.55	
			$ 13,280.55

Pension Expenses	**July**	**August**	**September**	
Service Pensions	$ 149,499.73	$ 149,499.73	$ 149,499.73	
Duty Disability Pensions	$ 11,216.25	$ 11,216.25	$ 11,216.25	
Non-Duty Disability Pensions	$ -	$ -	$ -	
Surviving Spouse Pension	$ 10,692.59	$ 10,692.59	$ 10,692.59	
Total Payroll:	**$ 171,408.57**	**$ 171,408.57**	**$ 171,408.57**	
				$ 514,225.71
			Grand Total	**$ 527,506.26**

Glen Ellyn Police Pension Fund

Invoice Date	Invoice Number	Invoice Description	Net Invoice Amount
08/04/17	81517	CONFERENCE-TERRANOVA	375.00

Vendor No.	Vendor Name	Check No.	Check Date	Check Amount
450	IPPFA	006926	08/18/2017	$375.00

Glen Ellyn
POLICE PENSION FUND
535 Duane St.
Glen Ellyn, Illinois 60137

The ILLINOIS Funds
Money Market Fund
Payable Through
First National Bank of Central Illinois Affiliate
Farmers & Merchants bank, Carlinville, IL

2-173/710

Check Number 006926

Check Date	Check Amount
08/18/2017	375.00

VOID AFTER 180 DAYS

Pay To The Order Of

IPPFA
2587 MILLENNIUM DR
UNIT C
ELGIN IL 60124

FILE COPY
NON - NEGOTIABLE

APPPF

Glen Ellyn
POLICE PENSION FUND
535 Duane St.
Glen Ellyn, Illinois 60137

FORWARDING SERVICE REQUESTED

006926

IPPFA
2587 MILLENNIUM DR
UNIT C
ELGIN IL 60124

Welcome, Dale Fabianski. You are currently logged in as an administrator.

2017 IPPFA MidAmerican Pension Conference

View Confirmation for: Anthony Terranova

General Options

Name:
Anthony Terranova

Title:
Trustee

Address:
65 S Park Blvd

Glen Ellyn, Illinois 60137

USA

450-2

Number of People Registered:
1

Confirmation Number:
QYNBHTW43XC (needed to modify your registration)

Event Title:
2017 IPPFA MidAmerican Pension Conference

90000

CODE	AMOUNT	APPROVAL	DATE
520600	375.00	DF	8-2-17 8/11/17

Location:
St. Louis Union Station Hotel

1820 Market St.

St. Louis, Missouri 63103

USA

Phone:
(314) 621-5262

Date:
10/03/2017

Time:
8:00 AM

Police Pension

900 110155
cash

Current Registration Details

Anthony Terranova

Agenda Items

Registration Item	Cost
IPPFA Member	$375.00

Order Summaries

Order

Date	Type	Invoice #	Amt Ordered	Amt Paid	Amt Due
08/02/2017 10:47 AM CT	offline order	2017MA-201708-1255-1312	$375.00	$0.00	$375.00
Total:			**$375.00**	**$0.00**	**$375.00**

Payment Details

Dale Fabianski

From: Ken Sarni <ken@ippfa.org>
Sent: Wednesday, August 02, 2017 10:47 AM
To: Dale Fabianski
Subject: Registration Confirmed - 2017 IPPFA MidAmerican Pension Conference

Dear Anthony:

Your registration has been confirmed. Please save this email for future reference.

Event: 2017 IPPFA MidAmerican Pension Conference
Attending: Anthony Terranova
Number in Party: 1
Time: 8:00 AM
Date: Tuesday, October 3, 2017
Confirmation Number: QYNBHTW43XC
Current Registration:

Registration Information:

Registration Items	
Anthony Terranova	IPPFA Member

Additional Information	
Anthony Terranova	Will you be attending the Trustee Workshop on Tuesday, October 3rd? Yes Will you be attending the Welcome Reception on Tuesday, October 3rd at 7:00 PM? Yes Are you a first time attendee? No

Click here to view the event summary

We look forward to seeing you there.

Sincerely,
Ken Sarni
IPPFA
ken@ippfa.org

If you no longer want to receive emails from Ken Sarni, please Opt-Out

Glen Ellyn Police Pension Fund

Invoice Date	Invoice Number	Invoice Description	Net Invoice Amount
01/01/18	1257	MEMBERSHIP DUES	795.00

Vendor No.	Vendor Name	Check No.	Check Date	Check Amount
450	IPPFA	006927	10/20/2017	$795.00

Glen Ellyn
POLICE PENSION FUND
535 Duane St.
Glen Ellyn, Illinois 60137

The ILLINOIS Funds
Money Market Fund
Payable Through
First National Bank of Central Illinois Affiliate
Farmers & Merchants bank, Carlinville, IL
2-173/710

Check Number 006927

Check Date	Check Amount
10/20/2017	795.00

VOID AFTER 180 DAYS

FILE COPY
NON - NEGOTIABLE

Pay To The Order Of

IPPFA
2587 MILLENNIUM DR
UNIT C
ELGIN IL 60124

APPPF

Glen Ellyn
POLICE PENSION FUND
535 Duane St.
Glen Ellyn, Illinois 60137

FORWARDING SERVICE REQUESTED

006927

IPPFA
2587 MILLENNIUM DR
UNIT C
ELGIN IL 60124

w/roster

Invoice

IPPFA
2587 Millennium Drive, Unit C
Elgin, IL 60124

Date	Invoice #
1/1/2018	1257

450-2

Bill To

Glen Ellyn Police Pension Fund
535 Duane Street
Glen Ellyn, IL 60137

Description	Amount
2018 IPPFA Membership Dues	795.(

CODE	AMOUNT	APPROVAL	DATE
90000 - 520600	$795.00	@	10/11/17

If you questions regarding this invoice please call 630-784-0406 x106 or email julie.guy@ippfa.org

Total $795.(

Glen Ellyn Police Pension Fund

Invoice Date	Invoice Number	Invoice Description	Net Invoice Amount
08/03/17	23233	POLICE PENSION DOI REPORT	600.00

Vendor No.	Vendor Name	Check No.	Check Date	Check Amount
9595	LAUTERBACH & AMEN, LLC	006925	08/04/2017	$600.00

Glen Ellyn
POLICE PENSION FUND
535 Duane St.
Glen Ellyn, Illinois 60137

The ILLINOIS Funds
Money Market Fund
Payable Through
First National Bank of Central Illinois Affiliate
Farmers & Merchants bank, Carlinville, IL

2-173/710

Check Number 006925

Check Date	Check Amount
08/04/2017	600.00

VOID AFTER 180 DAYS

Pay To The Order Of

LAUTERBACH & AMEN, LLC
27W457 WARRNVILLE RD
WARRENVILLE IL 60555

FILE COPY
NON - NEGOTIABLE

APPPF

Glen Ellyn
POLICE PENSION FUND
535 Duane St.
Glen Ellyn, Illinois 60137

FORWARDING SERVICE REQUESTED

006925

LAUTERBACH & AMEN, LLC
27W457 WARRNVILLE RD
WARRENVILLE IL 60555

Lauterbach & Amen, LLP

CERTIFIED PUBLIC ACCOUNTANTS

~~9266~~

CLOSE 20170028

Village of Glen Ellyn
535 Duane Street
Glen Ellyn, IL 60137

9595

Invoice No: *23233*
Date: *07/24/2017*
Client No: *GLENELLYN*

SERVICE	AMOUNT
For professional services rendered in connection with:	
The audit of the financial statements for the fiscal year ended December 31, 2016 - Final Billing	2,000.00
The preparation of the Illinois Department of Insurance report for the Police Pension Fund for the fiscal year ended December 31, 2016	600.00
TIF Compliance Opinion Letter - December 31, 2016	340.00
Current Amount Due $	2,940.00

2340 + 600

pd on PPck →

CODE	AMOUNT	APPROVAL	DATE
122100 520825	2,000	@	8/2/17
90000 - 520830	600		
25000 - 520825	340		

PO 20170028

* Please close PO after pmt

27W457 WARRENVILLE RD. * WARRENVILLE, ILLINOIS 60555
PHONE 630.393.1483 * FAX 630.393.2516
www.lauterbachamen.com

VILLAGE OF GLEN ELLYN

Invoice Date	Invoice Number	P.O. No.	Voucher	Invoice Description	Net Invoice Amount
06/12/17	10621			1/2 POLICE PENSION VALUAT	3,000.00
06/09/17	10601			OPEB ACTUARY REPORT	4,500.00

Vendor No.	Vendor Name	Check No.	Check Date	Check Amount
10787	FOSTER & FOSTER CONSULTING ACTUARIE	227844	09/22/2017	$7,500.00

VILLAGE OF GLEN ELLYN
535 DUANE STREET
GLEN ELLYN, ILLINOIS 60137

Check Number 227844

Vendor No.	Check Date	Check Amount
10787	09/22/2017	$7,500.00

******7,500 DOLLARS AND NO CENTS

Pay To The Order Of
FOSTER & FOSTER CONSULTING ACTUARIE
ONE OAKBROOK TERRACE
SUITE 720
OAKBROOK TERRACE IL 60181

FILE COPY
NON - NEGOTIABLE

AP

VILLAGE OF GLEN ELLYN
535 DUANE STREET
GLEN ELLYN, ILLINOIS 60137

FORWARDING SERVICE REQUESTED

227844

FOSTER & FOSTER CONSULTING ACTUARIE
ONE OAKBROOK TERRACE
SUITE 720
OAKBROOK TERRACE IL 60181

FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

Invoice

Date	Invoice #
6/12/2017	10621

Phone: (630) 620-0200
Fax: (239) 481-0634
Website: www.foster-foster.com

Bill To

Village of Glen Ellyn
535 Duane St.
Glen Ellyn, IL 60137

VILLAGE OF GLEN ELLYN
POLICE PENSION FUND

10787

Description	Amount
January 1, 2017 Police pension valuation, including GASB 67/68 disclosure information.	6,000.00

Half Police Pension Fund
Half Village Police Dept

CODE	AMOUNT	APPROVAL	DATE
90000-52082	$3,000	@	9/8/17
34100-521055	$3,000		

Thank you for your business!

Please make all checks payable to:
Foster & Foster, Inc.
One Oakbrook Terrace, Ste.720
Oakbrook Terrace, IL 60181

Balance Due **$6,000.00**

July 01, 2017 To July 31, 2017

Account Name : Glen Ellyn Police

Account No :

Account Transactions

Date	Description				Income	Principal
	Payments					
07/12/2017	Market Fee					-4,767.67
	Market Value: 29,051,341.45					
	Fee Date: 06/30/2017					
	Frequency: Quarterly					
	Schedule : CUSTODY FEE B					
	0.1000 %	On The First	5,000,000.00	5,000.00		
	0.0750 %	On The Next	5,000,000.00	3,750.00		
	0.0500 %	On The Next	19,051,341.45	9,525.67		
		Total Fee		18,275.67		
	TOTAL FEE - Adjusted (Quarterly)			4,568.92		
	Base Fee - Adjusted (Quarterly)			198.75		
	Minimum Fee			250.00		
	TOTAL DUE - Adjusted (Quarterly)			4,767.67		
	100.00000000 % From Principal, 0.00000000 % From Income					
07/14/2017	Scheduled Cash Disbursement					-155,000.00
	Ach Transfer					
	Paid To : Glen Ellyn Police Pension Fund					
	Monthly Pension Payroll - Illinois Funds					
				Sub Total	0.00	-159,767.67
	Miscellaneous					
07/17/2017	Accretion - Adjust Cost on Taxlots					
	Federal National Mtg Assoc 0.0000% 07/15/18					
	Adjust Cost Of $18,850.85					
	[Bond Disc Acrt]					
				Sub Total	0.00	0.00

MONEY MARKET ACTIVITY

1	Purchases (s) For	253,285.27
3	Sale (s) For	751,129.66

	Income	Principal
Ending Balances	$ 0.00	$ 0.00

September 01, 2017 To September 30, 2017

Account Name : Glen Ellyn Police

Account No :

Account Transactions

Date	Description	Income	Principal
09/11/2017	Transfer Between Accounts - Disbursement Termination Fees Paid To : Acct # 99TERMIN - Fees For Termination Of Accounts One time closing/termination fee for ac 66376580		-825.00
09/15/2017	Cash Disbursement Wire Transfer Paid To : U.S. Bank Account Transfers To close account.		-695,809.02
	Sub Total	0.00	-699,551.90

Free Delivery of Assets

Date	Description
09/05/2017	Free Deliver Federal Home Loan Bank 1.0000% 03/23/18 500000 PV @ Distribution Value of $ 498,839.00 Delivered to USBank Trust acct 001050998900
09/05/2017	Free Deliver Federal Home Loan Bank 1.0500% 10/26/18 500000 PV @ Distribution Value of $ 496,538.00 Delivered to USBank Trust acct 001050998900
09/05/2017	Free Deliver Federal Farm Credit Bank 1.3000% 05/15/20 600000 PV @ Distribution Value of $ 593,919.00 Delivered to USBank Trust acct 001050998900
09/05/2017	Free Deliver Federal Farm Credit Bank 1.3200% 08/24/20 500000 PV @ Distribution Value of $ 494,897.50 Delivered to USBank Trust acct 001050998900
09/05/2017	Free Deliver Freddie Mac Cpn Strip 09/15/2017 400000 PV @ Distribution Value of $ 399,826.00 Delivered to USBank Trust acct 001050998900
09/05/2017	Free Deliver Federal Home Loan Mortgage C 0.00% 09/15/18 400000 PV @ Distribution Value of $ 393,726.80 Delivered to USBank Trust acct 001050998900

Attachment: Vouchers, October 2017 (2938 : Vouchers October 2017)

September 01, 2017 To September 30, 2017

Account Name : Glen Ellyn Police

Account No :

Account Transactions

Date	Description	Income	Principal
	Starting Balances	$ 0.00	$ 0.00
	Dividends and Interest		
09/01/2017	Dividend Pimco Corp Income Fund Mfc 57500 Shares Of @ $0.1125		6,468.75
09/01/2017	Dividend Pimco Corporate Opportunity Fund ETF 55600 Shares Of @ $0.13		7,228.00
09/01/2017	Dividend Pimco Income Opportunity Fund ETF		6,365.00
09/01/2017	Dividend Pimco Income Strategy Fd II		7,360.00
09/01/2017	Daily Factor - Interest Fidelity Govt Cash Portfolio Fnd 57 Interest From 08/01/2017 To 08/31/2017		551.19
	Sub Total	0.00	27,972.94
	Payments		
09/11/2017	Market Fee Market Value: 28,946,727.75 Fee Date: 08/25/2017 Frequency: Quarterly Schedule : CUSTODY FEE B		-2,917.88

0.1000	%	On The First	5,000,000.00	5,000.00
0.0750	%	On The Next	5,000,000.00	3,750.00
0.0500	%	On The Next	18,946,727.75	9,473.36
		Total Fee		18,223.36
TOTAL FEE - Adjusted (Quarterly)				4,555.84
Base Fee - Adjusted (Quarterly)				121.97
Net Fee Payable				4,677.81
Minimum Fee				153.42
TOTAL DUE - Adjusted (Quarterly)				2,917.88

100.00000000 % From Principal, 0.00000000 % From Income

Police Pension Board
535 Duane Street
Glen Ellyn, IL 60137

Meeting: 10/30/17 07:30 PM
Department: Police Pension Board
Department Head: Christina Coyle
Category: Personnel
Prepared By: Christina Coyle

SCHEDULED

AGENDA ITEM (ID # 2939) DOC ID: 2939

1. Motion to accept Ryan Rader into the Police Pension Fund. 2. Motion to approve the contribution refund to Andrew Hibschman in the amount of $2,023.62.

Membership Changes

No police officers separated in the second quarter. Ryan Rader was hired on August 9, 2017.

Contribution Refunds

One former officer is requesting a contribution refund. Andrew Hibschman is requesting a contribution refund of $2,023.62. He is requesting the payment be paid to himself, so the entire refund will be taxed.

Transfers

None.

Action Requested

1. Motion to accept Ryan Rader into the Police Pension Fund.
2. Motion to approve the contribution refund to Andrew Hibschman in the amount of $2,023.62.

Police Pension Board
535 Duane Street
Glen Ellyn, IL 60137

Meeting: 10/30/17 07:30 PM
Department: Police Pension Board
Department Head: Christina Coyle
Category: Report
Prepared By: Christina Coyle

SCHEDULED

AGENDA ITEM (ID # 2940) DOC ID: 2940

1. Motion to recommend to the Village Board an Investment Return Assumption of 6.5% for Fiscal Year 2018 2. Motion to Approve the Annual Report to the Village Board

Background

Over the past few years, the Police Pension Board, Finance Commission and Village Board have been reviewing the funding of the Police Pension Fund. Particular attention has been paid to the investment return assumption which has been being moved downwards over the past few years. Attached to this agenda item is a history of the investment return assumption and the resulting contribution into the Police Pension Fund. This change in investment return assumptions has not been without consequences for the Village as the required contribution to the Police Pension Fund has almost doubled over the past 8 fiscal periods. The contribution to the Police Pension Fund is now approximately 10% of the General Fund budget.

For Fiscal Year 2017, the assumed rate of return was 6.5%. In 2017, the Police Pension Board engaged a new investment consultant, who has recommended changes to the investment portfolio. The Fund is currently targeting an approximate 6.5% return. Based upon the portfolio suggested by Marquette, the 10 year annualized return is 6.44%.

Issues

In 2017, the Police Pension Board also engaged a new actuary, Foster & Foster. This brings fresh eyes to the Police Pension Fund actuarial model. Mr. Franken from Foster & Foster was at the previous Pension Board meeting and was very helpful in answering questions that the Police Pension Board has had. Staff has also requested some additional information from Foster & Foster in regards to modeling the Police Pension Fund.

Some information requested of the Police Pension Fund is as follows:

1. Discussion of reasonable investment return assumptions in light of information provided in the actuarial report.

   The original actuary report listed on page 34 (see report attached) a real long term expected rate of return. Staff had questioned why this was different from the 6.75% return that was assumed in the model. The answer is that the information on page 34 is absent an inflation factor. When this inflation factor is added, the long term expected rate of return supports a 6.93% expected rate of return. Please see #1 in the assumptions and methods study provided by Foster & Foster.

3. Provide information on liabilities and contribution requirements at a 6.5% and 6.25% rate of return.

This information is included in #2 of the assumptions and methods study provided by Foster & Foster.

4. <u>Provide some other actuarial model recommendations which may be an alternative model than we are currently using.</u>

   This information is included in #3 of the assumptions and methods study provided by Foster & Foster. Specifically this discusses the option of a closed versus an open methodology. The State of Illinois statues require a minimum actuarial contribution based upon a closed methodology to 2040. However, the IMRF model is transitioning to an open model. The Pension Fund could transition to an open model, so long as if the contribution required by the State was higher than the open model, then the state contribution is what the Village would contribute. In an open model, as shown in the study, the contributions would be more level, but would be at a higher level than our current contributions. It is also possible to transition gradually to an open model rather than completely change at one point in time.

5. <u>Provide information on the payroll growth assumption.</u>

   This information is included in #4 of the assumptions and methods provided by Foster & Foster. Payroll growth is not necessarily tied to salary increases, although it is related. This is an assumption in the model which we have not focused on in the past. Our focus has traditionally been on the salary increase assumption rather than the payroll growth assumption.

<u>2018 Draft Village Budget</u>

As shown in the attached summary of investment return assumptions and contributions, the 2018 draft budget does not include ratcheting down the investment return assumption another 25 basis points. The stress put on the General Fund by the state of Illinois and the pension fund contribution increasing is more than can be absorbed by our current revenue sources. The General Fund budget is currently at a deficit, and the Village Board will need to decide how to fund the difference, whether through new revenues, increases to existing revenues service cuts, use of reserves, or a combination of these factors. At this point for 2018, any change in the actuarial model which would increase the police pension contribution would need additional dollars through either service cuts or additional revenues.

<u>Annual Report</u>

Attached to this item is also the Annual Report to the Village Board that is required to be approved by the Pension Board and submitted to the Village Board along with any recommendation on the change in assumptions.

Staff Request

Ultimately, staff is looking for the Pension Board's recommendation on funding the Police Pension Fund so that the Board's position can be relayed to the Village Board. Staff is recommending to continue with the 6.5% investment return and current model for FY2018 and work towards any further modifications to the funding structure in the future.

Staff also requests that the Pension Board approve the annual report to be provided to the Village Board.

ATTACHMENTS:

- Summary of Pension Contributions and Investment Return Rate (PDF)
- Assumptions and Methods Study v2 2017-10-11 (PDF)
- VOGE Police Pension Municipal Compliance Report - December 31 2016 (PDF)

Village of Glen Ellyn Police Pension Fund
Summary of Interest Rate Assumptions and Annual Contributions

Fiscal Year	FY12	FY13	FY14	SY14	FY15	FY16	FY17	FY18 BUD
Interest Rate	7.50%	7.25%	7.25%	7.00%	7.00%	6.75%	6.50%	6.50%
Contribution	$ 1,036,000.00	$ 969,000.00	$ 980,000.00	$ 981,000.00	$ 1,153,000.00	$ 1,292,000.00	$ 1,613,000.00	$ 1,958,109.00
% Inc in Contrib		-6.5%	1.1%	0.1%	17.5%	12.1%	24.8%	21.4%
Extra Contribution						$ 400,000.00		
Funded Status	63.7%	67.5%	65.2%	64.0%	55.7%	57.5%	Not Avail.	Not Avail.

FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

October 11, 2017

Ms. Christina Coyle, CPA
Finance Director
Village of Glen Ellyn
535 Duane Street
Glen Ellyn, Il 60137

Re: Valuation Assumptions and Methods – Glen Ellyn Police Pension Fund

Dear Ms. Christina Coyle:

We are pleased to present to this study of the valuation assumptions and methods for the Glen Ellyn Police Pension Fund. As requested, we have provided the following:

1. Discussion of reasonable investment return assumptions and GASB long-term rate of return assumption.
2. Calculation of liabilities and contribution requirement using a 6.25% interest rate.
3. Discussion and calculation of the contribution requirement using an alternative funding model.
4. Discussion and calculation contribution requirement under various payroll growth assumptions.

The study was performed to discuss various assumptions and methods and illustrate the impact on the contribution requirement. Please note that this study may not be applicable for any other purposes.

This study has been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board, and reflects laws and regulations issued to date pursuant to the provisions of Article 3, Illinois Pension Code, as well as applicable federal laws and regulations. Future actuarial measurements may differ significantly from the current measurements presented in this report for a variety of reasons including: changes in applicable laws, changes in plan provisions, changes in assumptions, or plan experience differing from expectations.

In conducting the study, we have relied on personnel, plan design, asset information and the actuarial assumptions and methods reflected and described in the Actuarial Assumptions section of the January 1, 2017 Actuarial Valuation Report.

The undersigned is familiar with the immediate and long-term aspects of pension valuations and meets the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the actuarial opinions.

One Oakbrook Terrace, Suite 720 Oakbrook Terrace, IL 60181 · (630) 620-0200 · Fax (239) 481-0634 · www.foster-foster.com

To our knowledge, no associate of Foster & Foster, Inc. working on valuations of the program has any direct financial interest or indirect material interest in the Glen Ellyn Police Pension Fund, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Village of Glen Ellyn. Thus, there is no relationship existing that might affect our capacity to prepare this study.

If there are any questions, concerns, or comments about any of the items contained in this report, please contact us at 630-620-0200.

Respectfully submitted,

Foster & Foster, Inc.

By: Jason L. Franken

Jason L. Franken
Enrolled Actuary #17-6888

JLF/lke
Enclosures

1. Discussion of reasonable investment return assumptions and GASB long-term rate of return assumption.

As part of the GASB reporting requirements, funds must include a summary of the plan's target asset allocation and expected long-term rates of return for each asset class, as provided by the plan's investment consultant. These rates of return, as reported on page 41 of the January 1, 2017 actuarial valuation report and summarized below, are reported net of inflation. Based on these rates and the target allocation, the long-term rate of return before inflation would be 4.43%. The valuation of assets and liabilities must also incorporate an inflation component. The January 1, 2017 actuarial valuation reflects assumed inflation of 2.50%. The applicable expected long-term rate of return including the inflation component would be 6.93%. Therefore, the current asset allocation and expected returns would support the current 6.75% discount rate.

Asset Class	Target Allocation	Long Term Expected Rate of Return	Weighted Average Returns
Equity Funds	40%	6.50%	2.600%
Corporate Fixed Income	15%	4.50%	0.675%
GSE Bonds	40%	3.00%	1.200%
Money Funds, CD's	5%	-1.00%	-0.050%
Total	100%		
Expected Rate of Return, Net of Inflation	100%		4.43%
Inflation			2.50%
Total Expected Rate of Return			6.93%

2. Calculation of liabilities and contribution requirement at 6.50% and 6.25%.

Exhibits 1 and 2 on the following pages show liabilities and contribution requirements using interest rates of 6.50% and 6.25%. The liabilities are shown in Exhibit 1 and corresponding contribution requirements are shown in Exhibit 2. A change to 6.50% increases liability about 3.6%. This corresponds to a decrease in the funding ratio by 2.1%. A change to 6.25% increases liability approximately 7.5% and decreases the funded ratio by 4.2%. The contribution requirements increases from $1,817,304 in the current valuation to $1,958,109 with an interest rate of 6.50% and to $2,105,900 under the 6.25% scenario (See Scenarios 1 and 2; increases of 7.7% and 15.9%, respectively).

Exhibit 1 – Summary of Accrued Liability at Multiple Interest Rates

	Current Valuation	Scenario 1 d=6.50%	Scenario 2 d=6.25%
Valuation Date	1/1/2017	1/1/2017	1/1/2017
Interest Rate	6.75%	6.50%	6.25%
Total Annual Payroll	3,500,618	3,500,618	3,500,618
Payroll Under Assumed Ret. Age	3,500,618	3,500,618	3,500,618
Actuarial Value	28,704,932	28,704,932	28,704,932
Market Value	27,402,987	27,402,987	27,402,987
Total Normal Cost	915,826	984,027	1,058,163
Increase in Normal Cost		68,201	142,337
Total Actuarial Accrued Liability	48,188,078	49,939,337	51,793,377
Increase in Liability		1,751,259	3,605,299
Unfunded Actuarial Accrued Liability (UAAL)	19,483,146	21,234,405	23,088,445
Funded Ratio (AVA / AL)	59.6%	57.5%	55.4%

Exhibit 2 – Summary of Contribution Requirements Under Various Assumptions and Methods

	Current Valuation	Scenario 1 d=6.50%	Scenario 2 d=6.25%	Scenario 3 15-Year Open Amortization	Scenario 4 Payroll Growth = 0%	Scenario 5 Payroll Growth = 2%
Valuation Date	1/1/2017	1/1/2017	1/1/2017	1/1/2017	1/1/2017	1/1/2017
Applicable to Fiscal Year Ending	12/31/2018	12/31/2018	12/31/2018	12/31/2018	12/31/2018	12/31/2018
Interest Rate	6.75%	6.50%	6.25%	6.75%	6.75%	6.75%
Amortization Years	24	24	24	15	24	24
Payroll Growth Assumption	4.00%	4.00%	4.00%	4.00%	0.00%	2.00%
Pension Cost						
Normal Cost (with interest)	$977,644	$1,047,989	$1,124,298	$977,644	$977,644	$977,644
% of Total Annual Payroll	27.9	29.9	32.1	27.9	27.9	27.9
Administrative Expenses (with interest)	35,509	35,343	35,343	35,509	35,509	35,509
% of Total Annual Payroll	1.0	1.0	1.0	1.0	1.0	1.0
Payment Required to Amortize Unfunded Actuarial Accrued Liability (as of 1/1/2017, with interest)	1,151,062	1,221,688	1,293,170	1,653,942	1,661,610	1,392,510
% of Total Annual Payroll	32.9	34.9	36.9	47.2	47.5	39.8
Total Required Contribution	2,164,215	2,305,020	2,452,811	2,667,095	2,674,763	2,405,663
% of Total Annual Payroll	61.8	65.8	70.0	76.1	76.4	68.7
Expected Member Contributions	346,911	346,911	346,911	346,911	346,911	346,911
% of Total Annual Payroll	9.9	9.9	9.9	9.9	9.9	9.9
Expected Village Contribution	1,817,304	1,958,109	2,105,900	2,320,184	2,327,852	2,058,752
% of Total Annual Payroll	51.9	55.9	60.1	66.2	66.5	58.8
Dollar Change from Current Valuation:		140,805	288,596	502,880	510,548	241,448

3. Discussion and calculation of contribution requirement using alternative funding methodology.

The contribution requirement generally consists of the normal cost, plus an amortization of the unfunded actuarial accrued liability. The funding methodology includes the actuarial funding method used to determine the normal cost and actuarial accrued liability and the assumed amortization period. Currently, the normal cost and actuarial accrued liability for the Glen Ellyn Police Pension Fund reflects the Entry Age Normal cost method. This method creates a level, predictable contribution pattern over a member's career and is the method used by over 90% of public pension funds.

The current valuation reflects the closed amortization period ending in 2040 per Statute. As of January 1, 2017, the fund has 24 years remaining. With a closed amortization, the funding period decreases with each successive valuation. As a result, the contribution requirement increases dramatically, with more volatility as the target funding year is reached.

Alternatively, a 15- year open, or rolling, amortization period would produce a more stable contribution pattern. With an open period, the amortization payment would be determined based on the same number of years each year.

The effect of the amortization period on contribution requirements is shown in Scenario 3 in Exhibit 2. Scenario 3 reflects a 15-year open amortization period. The change from the current methodology increases the required contribution by $502,880 (27.7%).

Note, because the determination of the contribution requirements reflects a one-year period, the impact is simply the result of changing from a 24-year amortization to a 15-year amortization. The impact of the change from a closed period to an open period will be borne through a more stable contribution pattern and a steady pay-down of the unfunded accrued liability.

The graphs below illustrate the general patterns of amortization payments and unfunded liability using the current amortization method (closed period ending in 2040) and the alternate 15-year open amortization period. The different trend lines represent different payroll growth assumptions. Note, the graphs are for illustrative purposes only and do not represent projections specific to the Glen Ellyn Police plan.

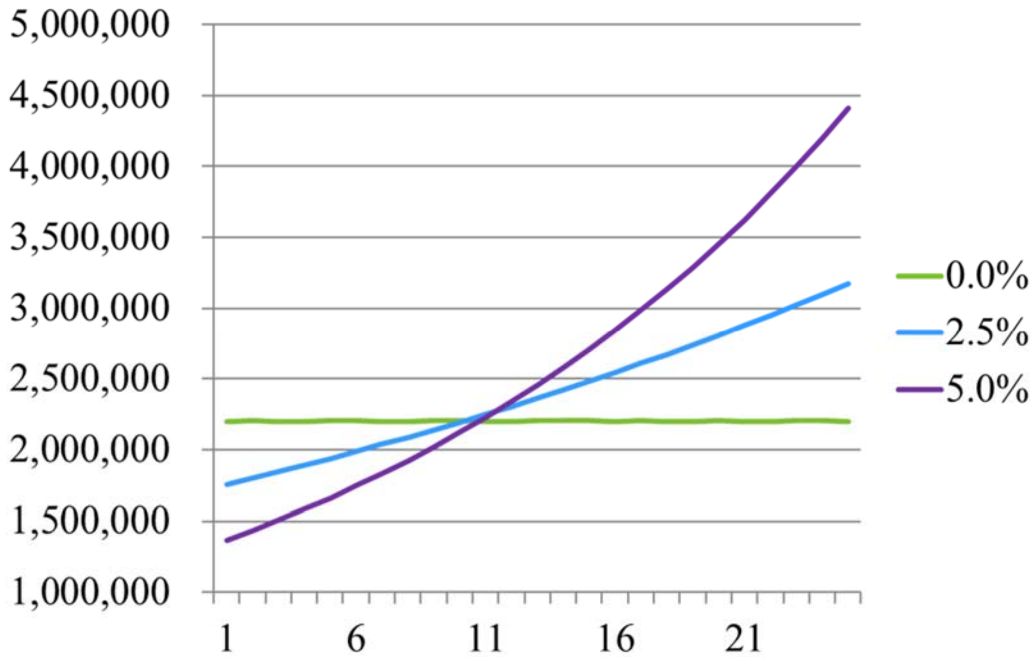
Notes regarding amortization payments (Graphs 1 and 2):

- Graph 1: Closed Amortization
  - The amortization payment amounts increase steadily over a 24-year period for all payroll growth scenarios except 0%.
  - Also note the higher variance of contribution amounts for a 5% payroll growth assumption vs. a 0% payroll growth assumption.
- Graph 2: Open Amortization
  - The amortization payment amounts over the same period decrease for all payroll growth scenarios.
  - For the open amortization, the 0% payroll growth assumption produces amortization payments that vary more significantly over the projected period.

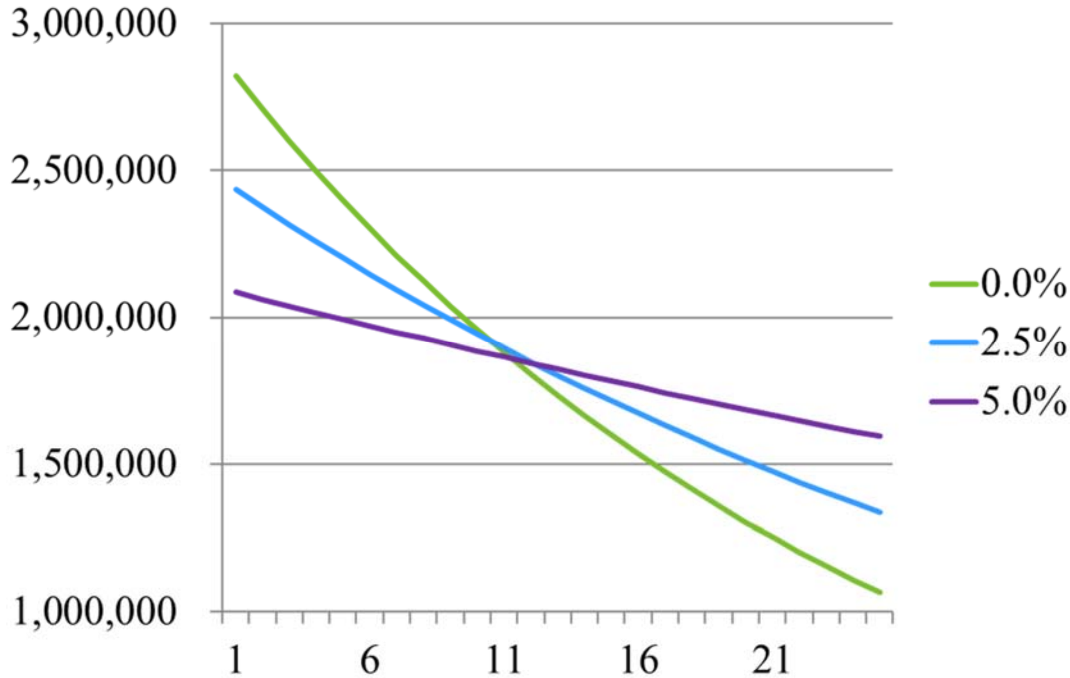
Notes regarding unfunded liabilities (Graphs 3 and 4):

- Graph 3: Closed Amortization - The unfunded liabilities increase for a time before beginning to be paid down when using higher payroll growth assumptions.
- Graph 4: Open Amortization - The unfunded liabilities begin to be paid down immediately under all payroll growth assumptions.

Graph 1: Amortization Payments - 24-Year Closed

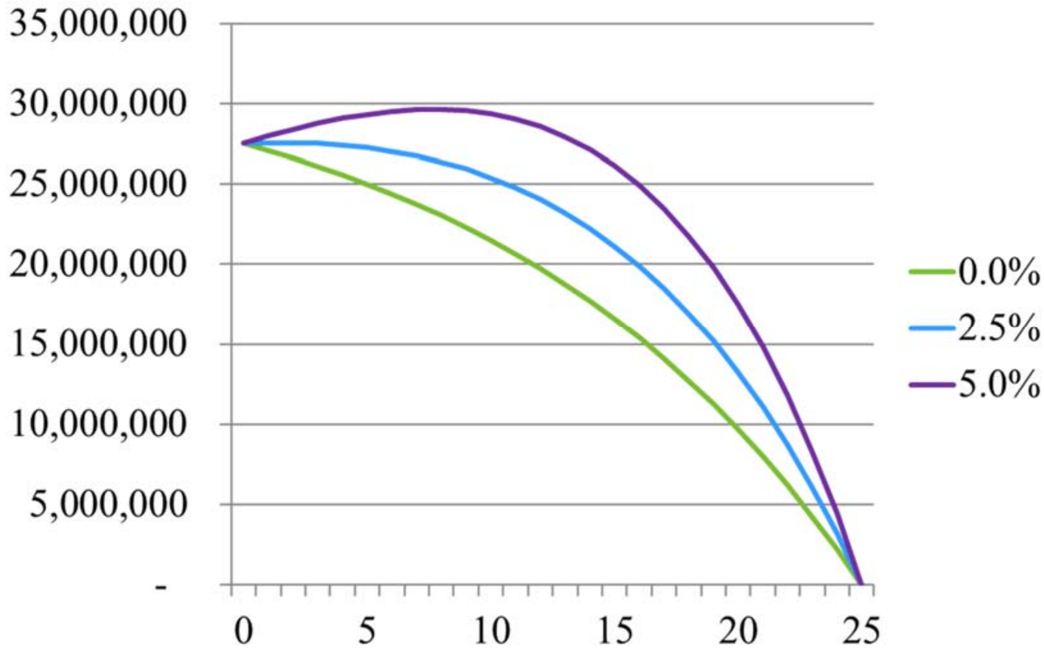


Graph 2: Amortization Payments – 15-Year Open

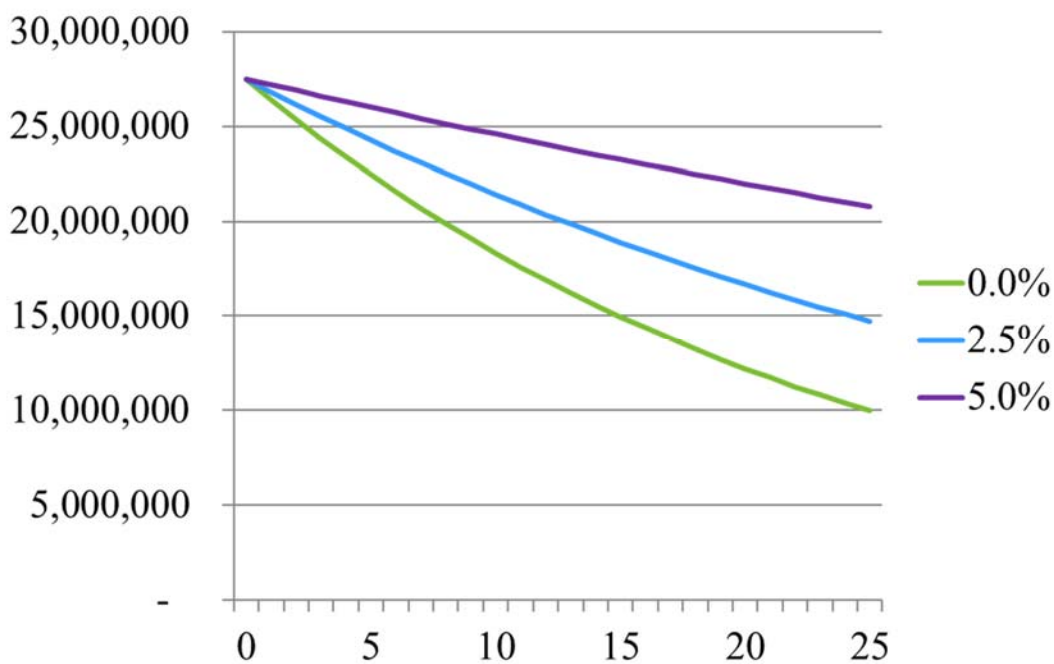


Note: graphs are for illustrative purposes only and do not represent actual values for the Village of Glen Ellyn Police Pension Fund.

Graph 3: Unfunded Liabilities – 24-Year Closed



Graph 4: Unfunded Liabilities – 15-Year Open



Note: graphs are for illustrative purposes only and do not represent actual values for the Village of Glen Ellyn Police Pension Fund.

4. Discussion and calculation contribution requirement under various payroll growth assumptions.

The payroll growth assumption reflects a prediction about how the total payroll of the fund will increase. This includes the effects of salary increases as well as any changes in the payroll due to changes in the active population through terminations, retirements and hiring. It is a distinct assumption from the salary scale assumption. The salary scale assumption reflects assumed patterns of salary increases for each individual member currently active in the valuation.

The payroll growth assumption is used in the calculation of the amortization payment.

The valuation currently reflects a payroll growth assumption of 4.00%. Scenarios 4 and 5 of Exhibit 2 show contribution requirements using a 0.00% and 2.00%, respectively. Changing from a 4.00% payroll growth assumption to a 0.00% assumption would increase the January 1, 2017 contribution requirement $510,548 (28.1%). Whereas changing from a 4.00% payroll growth assumption to a 2.00% assumption would increase the January 1, 2017 contribution requirement $241,448 (13.3%).

Additional observations regarding how the amortization payment and unfunded liabilities would generally change over time under various payroll growth assumptions can be seen in Graphs 1 through 4 on the previous pages:

- 24-Year Closed Amortization Period
  - The amortization amount with a 0.0% payroll growth assumption is a level dollar amount over the course of the projection.
  - The amortization amounts with a non-zero payroll growth assumption start out smaller than under the 0.0% assumption and increase over time. The higher the assumption, the more the payment will increase overtime.
  - The higher the payroll growth assumption the longer it takes to begin paying down the unfunded liability.
- 15-Year Open Amortization Period
  - The higher 5.0% payroll growth assumption produces the more stable amortization payment and decreases slightly over time. However, it also provides for a slower paying down of the unfunded liability.
  - The 0.0% payroll growth assumption produces higher initial amortization payments that decrease steadily over time. With the higher initial payments, the unfunded liability gets paid down faster and results in a lower unfunded liability at the end of the projection period.

VILLAGE OF GLEN ELLYN, ILLINOIS
POLICE PENSION FUND

Municipal Compliance Report (40 ILCS 5/3-143, report by pension board)
For the Year Ended December 31, 2016

The Glen Ellyn Police Pension Board certifies to the Village Board on the condition of the Pension Fund at the end of its most recently completed fiscal year the following information:

1. The total assets of the fund in its custody at the end of the fiscal year and the current market value of those assets:

Total Assets	$27,402,987
Market Value	$27,402,987

2. The estimated receipts during the next succeeding fiscal year from deductions from the salaries of police officers and from other sources:

Estimated Receipts - Employee Contributions	$346,911
Estimated Receipts - All Other Sources	
Investment Earnings	N/A
Municipal Contributions	$1,817,304

3. The estimated amount required during the next succeeding fiscal year to (a) pay all pensions and other obligations provided in Article 3 of the Illinois Pension Code, and (b) to meet the annual requirements of the fund as provided in Sections 3-125 and 3-127:

(a) Pay all Pensions and Other Obligations	$1,817,304
(b) Annual Requirement of the Fund as Determined by:	
Illinois Department of Insurance	N/A
Private Actuary - Report Dated June 12, 2017 (Entry Age Normal)	$1,817,304
Private Actuary - Report Dated June 12, 2017 (PA096-1495)	$1,516,090

VILLAGE OF GLEN ELLYN, ILLINOIS
POLICE PENSION FUND

Municipal Compliance Report (40 ILCS 5/3-143, report by pension board)
For the Year Ended December 31, 2016

4. The total net income received from investment of assets along with the assumed investment return and actual investment return received by the fund during its most recently completed fiscal year compared to the total net income, assumed investment return, and actual investment return received during the preceding fiscal year:

	Current Fiscal Year	Preceding Fiscal Year
Net Income Received from Investment of Assets	$1,549,325	$(11,813)
Assumed Investment Return		
Illinois Department of Insurance - Actuarial Report	N/A	N/A
Private Actuary - Report Dated June 12, 2017	6.75%	6.75%
Actual Investment Return	4.62%	-0.05%

5. The total number of active employees who are financially contributing to the fund:

Number of Active Members	40

6. The total amount that was disbursed in benefits during the fiscal year, including the number of and total amount disbursed to (i) annuitants in receipt of a regular retirement pension, (ii) recipients being paid a disability pension, and (iii) survivors and children in receipt of benefits:

	Number of	Total Amount Disbursed
(i) Regular Retirement Pension	28	$1,749,065
(ii) Disability Pension	3	$ 132,240
(iii) Survivors and Child Benefits	4	$ 144,378

7. The funded ratio of the fund:

Illinois Division of Insurance - Actuarial Report	N/A	N/A
Private Actuary - Report Dated June 12, 2017	59.6%	59.1%

VILLAGE OF GLEN ELLYN, ILLINOIS
POLICE PENSION FUND

Municipal Compliance Report (40 ILCS 5/3-143, report by pension board)
For the Year Ended December 31, 2016

8. The unfunded liability carried by the fund, along with an actuarial explanation of the unfunded liability:

Unfunded Liability:	
Illinois Department of Insurance - Actuarial Report	N/A
Private Actuary - Report Dated June 12, 2017	$19,483,146

The accrued liability is the actuarial present value of the portion of the projected benefits that has been accrued as of the valuation date based upon the actuarial valuation method and the actuarial assumptions employed in the valuation. The unfunded accrued liability is the excess of the accrued liability over the actuarial value of assets.

9. The investment policy of the Pension Board under the statutory investment restrictions imposed on the fund.

Investment Policy - See Attached

CERTIFICATION OF MUNICIPAL POLICE
PENSION FUND COMPLIANCE REPORT

We, the undersigned Trustees of the Glen Ellyn Police Pension Fund, based upon information and belief, and to the best of our knowledge, certify pursuant to §5/3-134 of the Illinois Pension Code, that the preceding report is true and accurate.

______________________________ President

______________________________ Secretary

Dated: ______________________