

MEETING MATERIALS

HOWARD COUNTY

June 27, 2019



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MANAGER FEE REVIEW

NEPC, LLC

EXECUTIVE SUMMARY

NEPC, LLC

EXECUTIVE SUMMARY

NEPC believes there are several goals for today's meeting as we evaluate the fee study

- (1) Inform the Board on what they are paying in fees to their traditional managers
- (2) Identify managers that may be charging fees in excess of what is reasonable/expected
- (3) Use analysis to guide changes that could help lower fees where appropriate

The results of the analysis show that each of Howard County's managers are in line with peers and expectations

However, there may still be opportunities to lower fees in certain areas:

- **Equities:** Consider indexing your US Large Cap Core exposure
- **Fixed Income:** Evaluate the Core Fixed income allocation between Dodge & Cox (lower fee/ traditional core) and PIMCO Total Return (higher fee/core plus)

As we work towards the newly approved asset allocation the fees paid will evolve

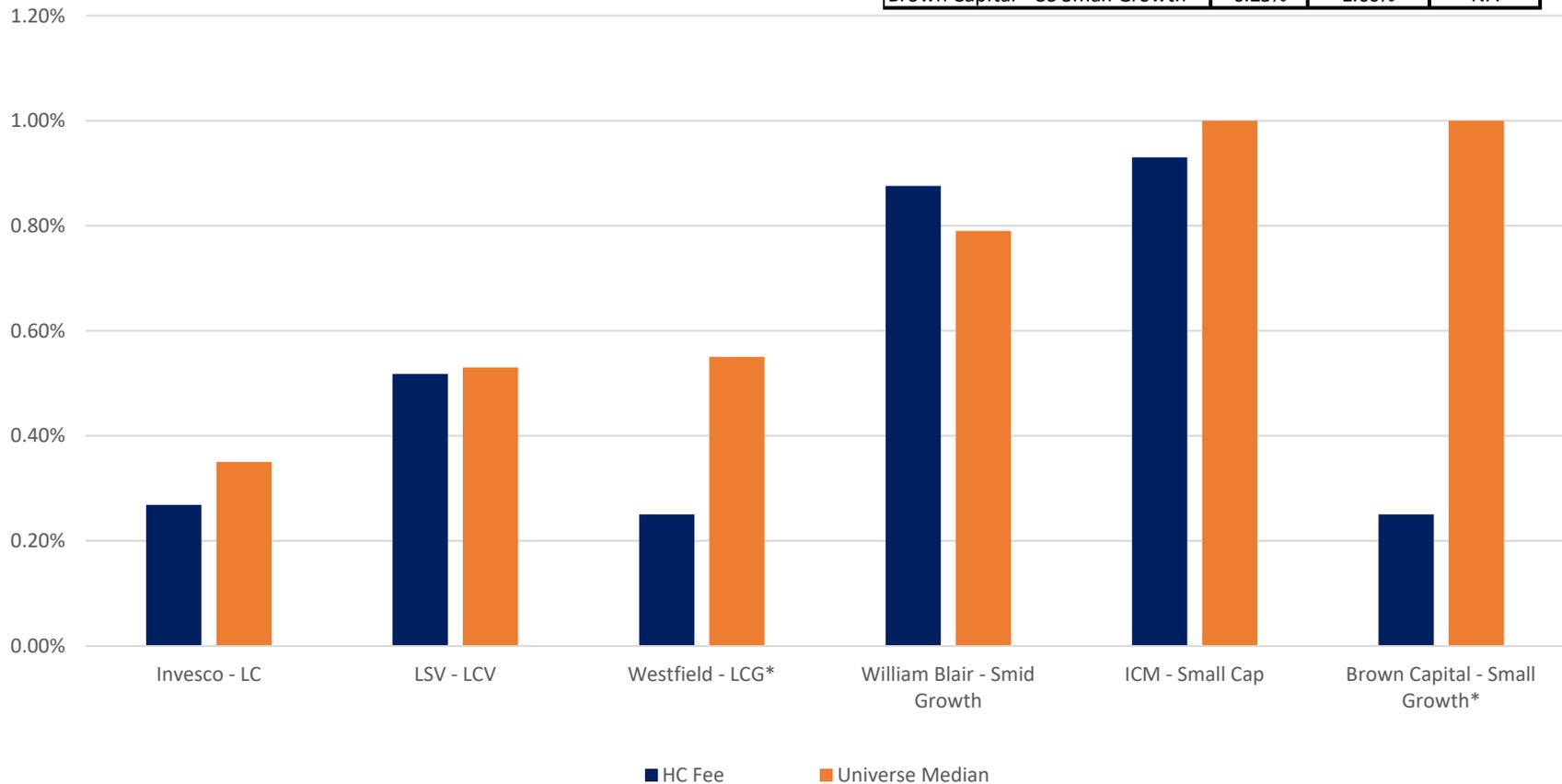


MANAGER FEES

NEPC, LLC

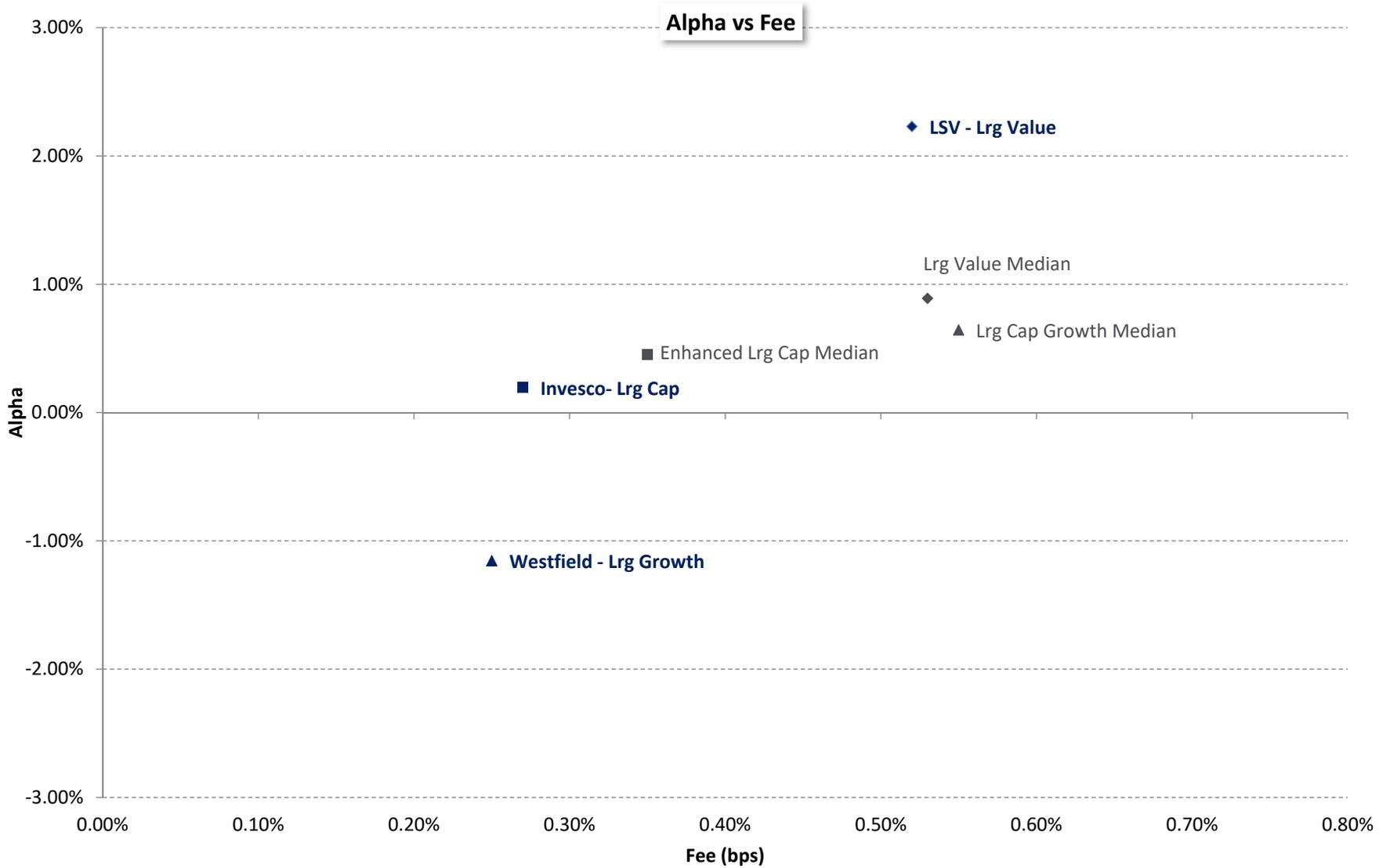
HOWARD COUNTY FEES VS. MEDIAN: US EQUITIES

Domestic Equity	HC Fee	Universe Median	Universe Ranking
Invesco - US Lrg Cap	0.27%	0.35%	19
LSV - US Lrg Cap Value	0.52%	0.53%	43
Westfield - US Lrg Cap Growth*	0.25%	0.55%	NA
William Blair - US Smid Growth	0.88%	0.79%	75
ICM - US Small Cap	0.93%	1.00%	34
Brown Capital - US Small Growth*	0.25%	1.00%	NA



*Westfield and Brown Capital use a performance based fee structure; The above analysis is based only on management fees and excludes incentive fees charged

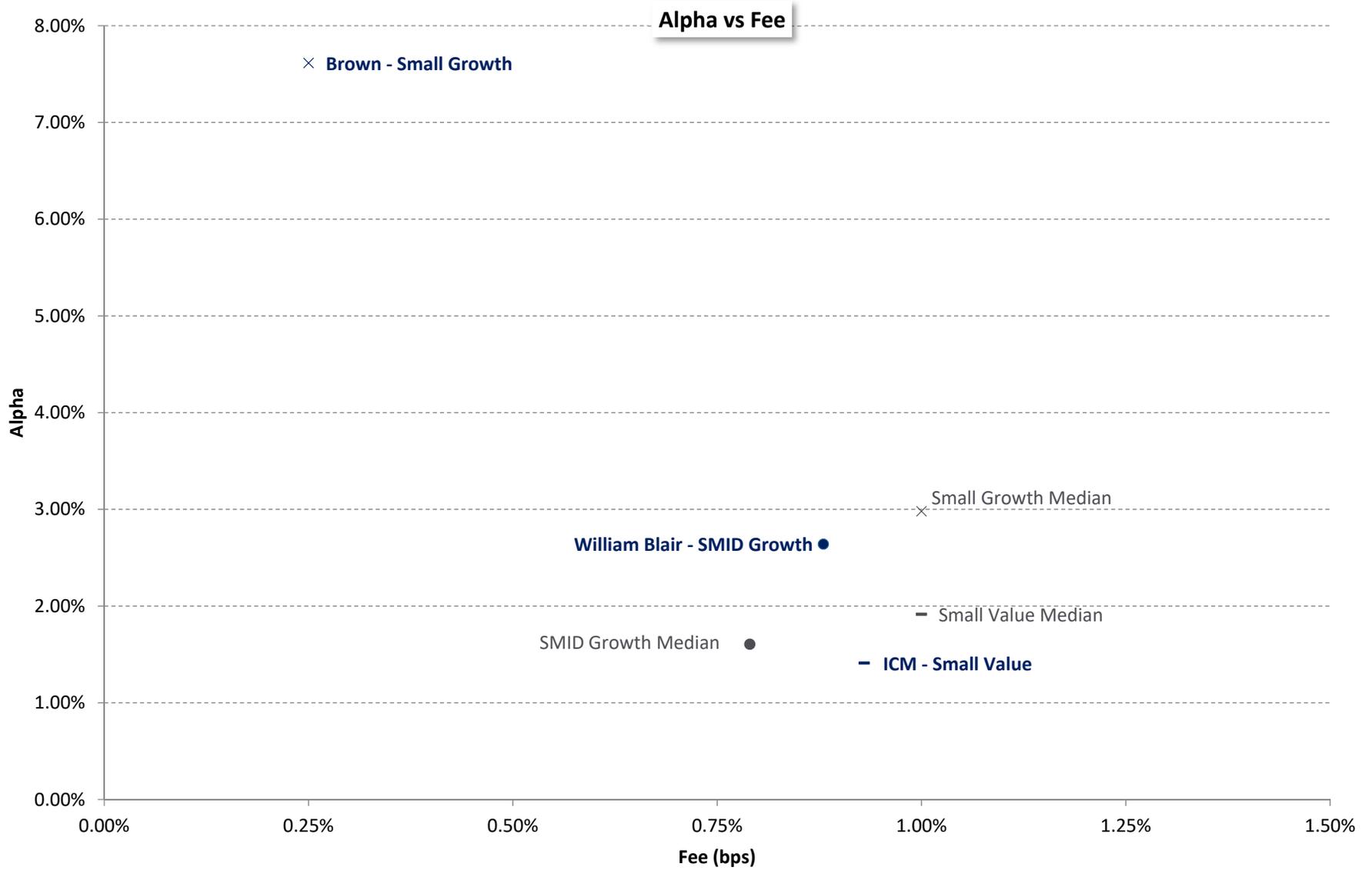
ALPHA VS. FEES COMPARISON: US LARGE CAP EQUITIES



*Westfield and Brown Capital use a performance based fee structure; The above analysis is based only on management fees and excludes incentive fees charged

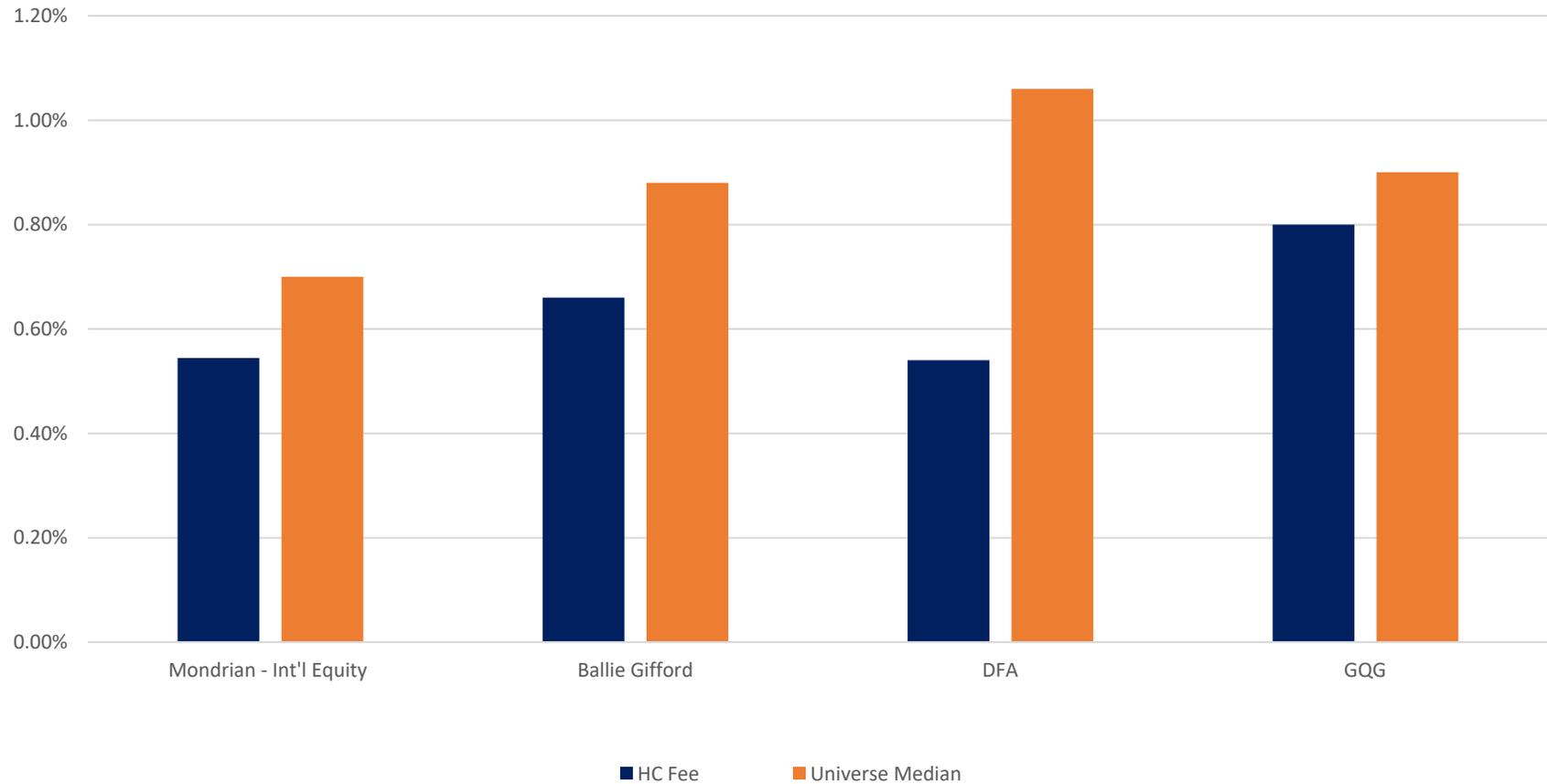


ALPHA VS. FEES COMPARISON: US SMALL CAP EQUITIES

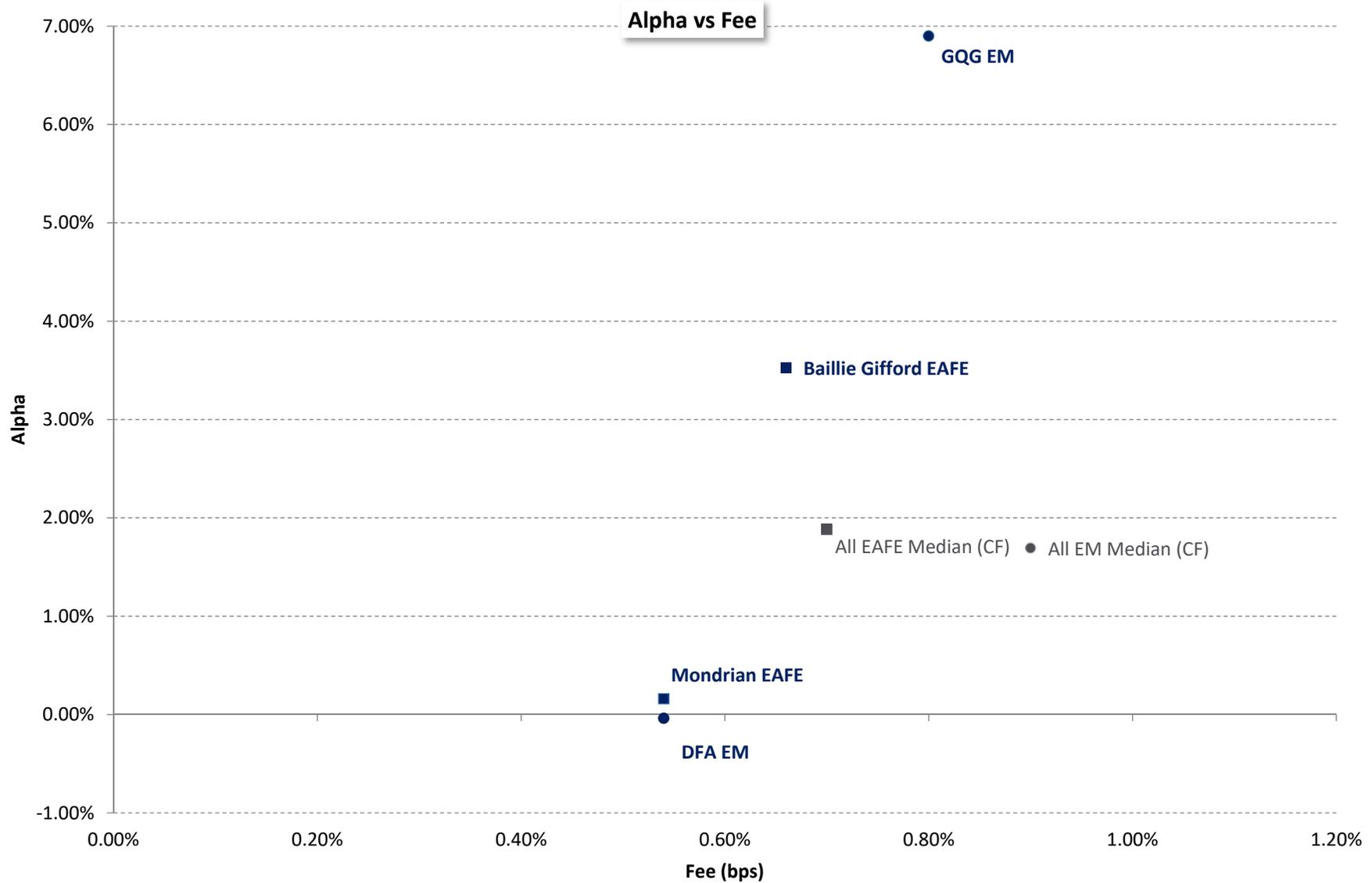


HOWARD COUNTY FEES VS. MEDIAN: NON-US EQUITIES

International Equity	HC Fee	Universe Median	Universe Ranking
Mondrian - Int'l Equity	0.54%	0.70%	25
Ballie Gifford	0.66%	0.88%	25
DFA	0.54%	1.06%	8
GQG	0.80%	0.90%	38



ALPHA VS. FEES COMPARISON: NON-US EQUITIES

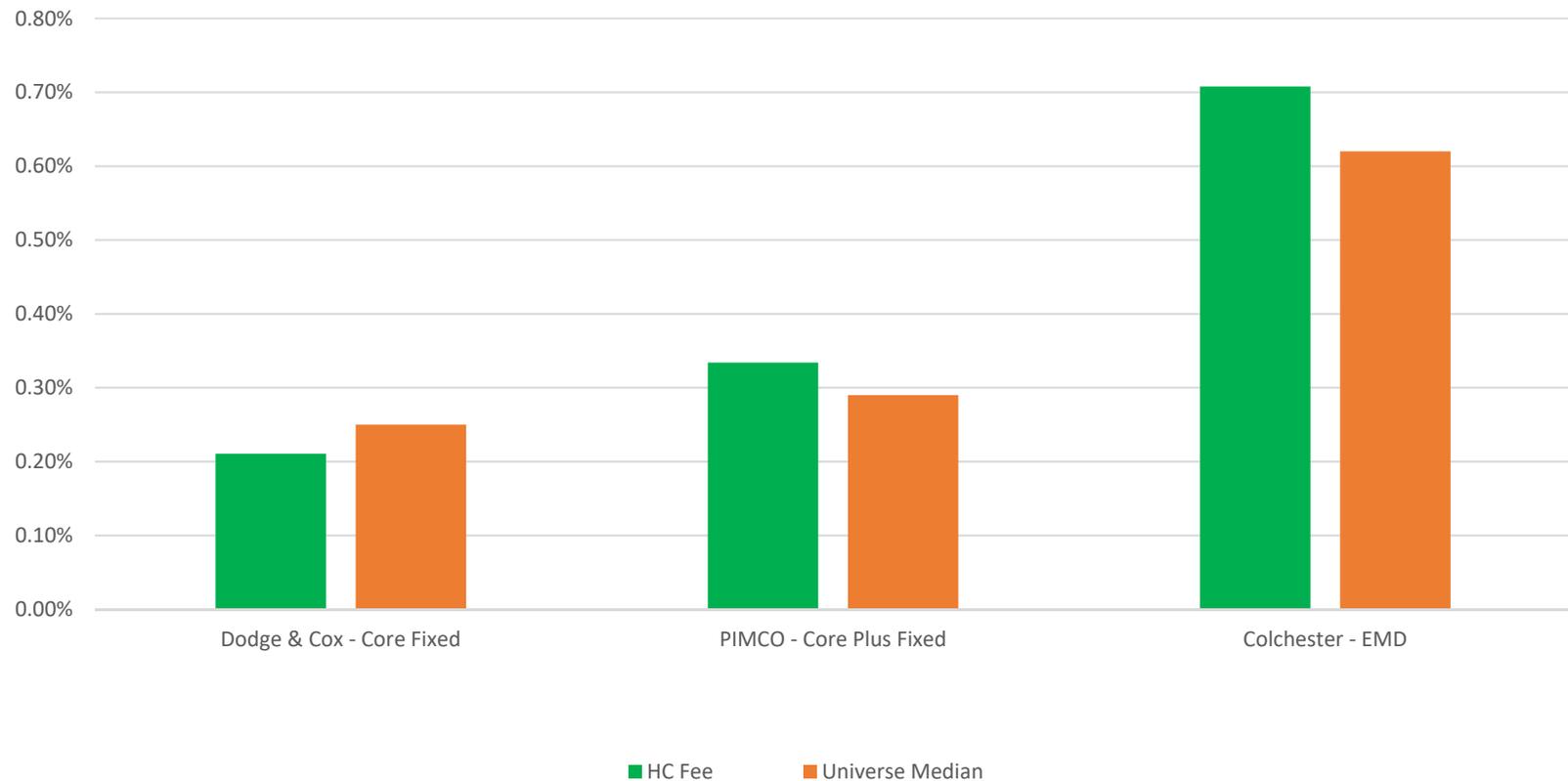


*The above analysis for All EAFE Median and All EM Median uses the commingled fund management fee

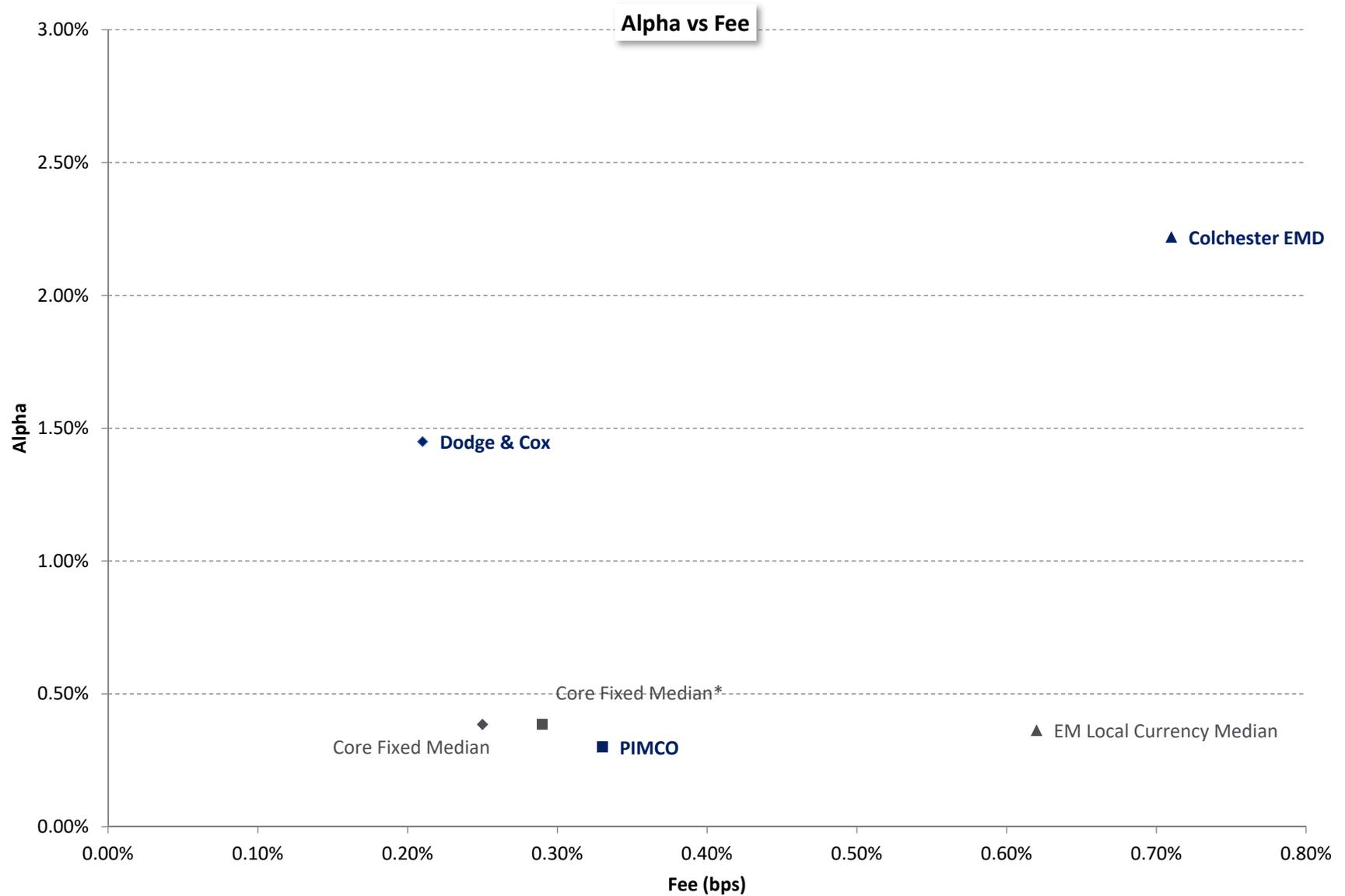


HOWARD COUNTY FEES VS. MEDIAN: **FIXED INCOME**

Fixed Income	HC Fee	Universe Median	Universe Ranking
Dodge & Cox - Core Fixed	0.21%	0.25%	55
PIMCO - Core Plus Fixed	0.33%	0.29%	84
Colchester - EMD	0.71%	0.62%	65



ALPHA VS. FEES COMPARISON: **FIXED INCOME**



The above analysis for Core Fixed Median* fee is based on US Core Plus Fixed Income universe



APPENDIX

NEPC, LLC

FEE SCHEDULES: EQUITIES

Invesco - US Lrg Cap				
Fee Schedule		HC Acct. Size	Fee (bps)	Fee (\$)
First \$25M	0.30%	\$ 25,000,000	0.30%	\$ 75,000
Next \$50M	0.25%	\$ 43,935,638	0.25%	\$ 109,839
Next \$125M	0.20%	\$ -	0.20%	\$ -
Total		\$ 68,935,638	0.27%	\$ 184,839

LSV - US Lrg Cap Value				
Fee Schedule		HC Acct. Size	Fee (bps)	Fee (\$)
First \$25M	0.60%	\$ 25,000,000	0.60%	\$ 150,000
Next \$25M	0.50%	\$ 25,000,000	0.50%	\$ 125,000
Next \$50M	0.40%	\$ 13,654,085	0.40%	\$ 54,616
Thereafter	0.30%	\$ -	0.30%	\$ -
Total		\$ 63,654,085	0.52%	\$ 329,616

Westfield - US Lrg Cap Growth*				
Fee Schedule		HC Acct. Size	Fee (bps)	Fee (\$)
All Assets	0.25%	\$ 75,260,272	0.25%	\$ 188,151
Total		\$ 75,260,272	0.25%	\$ 188,151

William Blair - US Smid Growth				
Fee Schedule		HC Acct. Size	Fee (bps)	Fee (\$)
First \$10M	0.95%	\$ 10,000,000	0.95%	\$ 95,000.0
Next \$20M	0.80%	\$ 9,807,961	0.80%	\$ 78,463.7
Next \$20M	0.75%	\$ -	0.75%	\$ -
Total		\$ 19,807,961	0.88%	\$ 173,463.7

ICM - US Small Cap				
Fee Schedule		HC Acct. Size	Fee (bps)	Fee (\$)
All Assets	0.93%	\$ 23,188,860	0.93%	\$ 215,656
Total		\$ 23,188,860	0.93%	\$ 215,656

Brown Capital - US Small Growth*				
Fee Schedule		HC Acct. Size	Fee (bps)	Fee (\$)
All Assets	0.25%	\$ 17,979,565	0.25%	\$ 44,949
Total		\$ 17,979,565	0.25%	\$ 44,949

Mondrian - Int'l Equity				
Fee Schedule		HC Acct. Size	Fee (bps)	Fee (\$)
First \$30M	0.63%	\$ 30,000,000	0.63%	\$ 189,000.0
Next \$20M	0.50%	\$ 20,000,000	0.50%	\$ 100,000.0
Next \$50M	0.40%	\$ 11,665,405	0.40%	\$ 46,661.6
Thereafter	0.35%	\$ -	0.35%	\$ -
Total		\$ 61,665,405	0.54%	\$ 335,661.6

Ballie Gifford				
Fee Schedule		HC Acct. Size	Fee (bps)	Fee (\$)
All Assets	0.66%	\$ 64,887,067	0.66%	\$ 428,255
Total		\$ 64,887,067	0.66%	\$ 428,255

DFA				
Fee Schedule		HC Acct. Size	Fee (bps)	Fee (\$)
All Assets	0.54%	\$ 28,008,033	0.54%	\$ 151,243
Total		\$ 28,008,033	0.54%	\$ 151,243

GQG				
Fee Schedule		HC Acct. Size	Fee (bps)	Fee (\$)
All Assets	0.80%	\$ 40,878,460	0.80%	\$ 327,028
Total		\$ 40,878,460	0.80%	\$ 327,028



FEE SCHEDULES: FIXED INCOME

Dodge & Cox - Core Fixed				
Fee Schedule		HC Acct. Size	Fee (bps)	Fee (\$)
First \$10M	0.40%	\$ 10,000,000	0.40%	\$ 40,000
Next \$25M	0.30%	\$ 25,000,000	0.30%	\$ 75,000
Next \$25M	0.20%	\$ 25,000,000	0.20%	\$ 50,000
Next \$65M	0.15%	\$ 63,915,580	0.15%	\$ 95,873
Next \$575M	0.12%	\$ -	0.12%	\$ -
Total		\$ 123,915,580	0.21%	\$ 260,873

PIMCO - Core Plus Fixed				
Fee Schedule		HC Acct. Size	Fee (bps)	Fee (\$)
First \$25M	0.50%	\$ 25,000,000	0.50%	\$ 125,000
Next \$25M	0.38%	\$ 25,000,000	0.38%	\$ 95,000
Thereafter	0.25%	\$ 63,072,884.0	0.25%	\$ 157,682
Total		\$ 113,072,884	0.33%	\$ 377,682

Colchester - EMD				
Fee Schedule		HC Acct. Size	Fee (bps)	Fee (\$)
First \$25M	0.75%	\$ 25,000,000	0.75%	\$ 187,500
Next \$25M	0.65%	\$ 18,152,262	0.65%	\$ 117,990
Thereafter	0.40%	\$ -	0.40%	\$ -
Total		\$ 43,152,262	0.71%	\$ 305,490



FEE SCHEDULES: EQUITIES

Domestic Equity	HC Fee	Universe Median	Universe Ranking	# of Observations	Universe	Vehicle
Invesco - LC	0.27%	0.35%	19	42	US Enhanced Equity (S&P 500)	SA
LSV - LCV	0.52%	0.53%	43	341	US LC Value	SA
Westfield - LCG*	0.25%	0.55%	NA	262	US LC Growth	SA
William Blair - Smid Growth	0.88%	0.79%	75	67	US Smid Growth	CF
ICM - Small Cap	0.93%	1.00%	34	129	US Small Value	MF
Brown Capital - Small Growth*	0.25%	1.00%	NA	109	US Small Growth	MF

International Equity	HC Fee	Universe Median	Universe Ranking	# of Observations	Universe	Vehicle
Mondrian - Int'l Equity	0.54%	0.70%	25	189	All EAFE Equity	CF
Ballie Gifford	0.66%	0.88%	25	198	All EAFE Equity	MF
DFA	0.54%	1.06%	8	268	All EM Equity	MF
GQG	0.80%	0.90%	38	264	All EM Equity	CF



FEE SCHEDULES: **FIXED INCOME**

Fixed Income	HC Fee	Universe Median	Universe Ranking	# of Observations	Universe	Vehicle
Dodge & Cox - Core Fixed	0.21%	0.25%	55	227	US Core Fixed Income	SA
PIMCO - Core Plus Fixed	0.33%	0.29%	84	119	US Core Plus Fixed Income	SA
Colchester - EMD	0.71%	0.62%	65	268	EM Debt - Local Currency	CF

ASSET ALLOCATION CHANGES: OLD TARGET VS. NEW TARGET

	Previous Target	Newly Approved Target
Large Cap Equities	15%	19%
Small/Mid Cap Equities	5%	4%
Int'l Equities (Unhedged)	13%	12%
Emerging Int'l Equities	7%	5%
Private Equity	10%	10%
Total Equity	50%	50%
TIPS	0%	2%
Core Bonds	25%	20%
EMD (Local Currency)	5%	4%
Absolute Return Fixed Income	0%	4%
Private Debt	0%	5%
Total Fixed Income	30%	35%
Core/Non-Core Real Estate	5%	5%
Private Infrastructure/Land	2.5%	2%
Total Real Assets	7.5%	7%
Hedge Funds	12.5%	8%
Total Multi Asset	12.5%	8%
<i>Expected Return 5-7 yrs</i>	6.57%	6.57%
<i>Expected Return 30 yrs</i>	7.67%	7.66%
<i>Standard Deviation</i>	11.66%	11.51%
<i>Sharpe Ratio (5-7 years)</i>	0.35	0.35



ASSET ALLOCATION CHANGES: CURRENT ALLOCATION VS. NEW TARGET

	Current Allocation	Newly Approved Target
Large Cap Equities	19%	19%
Small/Mid Cap Equities	6%	4%
Int'l Equities (Unhedged)	12%	12%
Emerging Int'l Equities	6%	5%
Private Equity	13%	10%
Total Equity	57%	50%
TIPS	2%	2%
Core Bonds	22%	20%
EMD (Local Currency)	4%	4%
Absolute Return Fixed Income	0%	4%
Private Debt	0%	5%
Total Fixed Income	28%	35%
Core/Non-Core Real Estate	2%	5%
Private Infrastructure/Land	1%	2%
Total Real Assets	4%	7%
Hedge Funds	11%	8%
Total Multi Asset	11%	8%
Expected Return 5-7 yrs	6.62%	6.57%
Expected Return 30 yrs	7.78%	7.66%
Standard Deviation	12.3%	11.51%
Sharpe Ratio (5-7 years)	0.33	0.35



HEDGE FUND PORTFOLIO REVIEW

NEPC, LLC

HEDGE FUNDS OVERVIEW

NEPC, LLC

WHAT IS A HEDGE FUND?

- **Definition:** An alternative investment vehicle accessed by accredited investors that invests across a broad range of securities using leverage, shorting, and locked-up capital to earn active return.
- **NEPC groups hedge funds across four primary sub-strategies: equity-linked, credit-linked, event-driven and global macro.**
 - Sector vs. generalist
 - Geographic specialists
 - Quantitative vs. fundamental strategies
- **Typically owned and managed by private partnerships, hedge funds are generally less transparent and have fewer regulations than traditional investments.**
- **Compensation structure: managers are generally paid a management fee (1.0% to 2.0% of the Fund NAV annually) and a performance fee (usually 10% to 20% of profits). Typically, hedge fund managers report returns net of fees.**



WHY INVEST IN HEDGE FUNDS?

- **Diversification:**
 - Hedge funds can provide diversification benefits to a total portfolio through historically low correlations to traditional asset classes
- **Risk-adjusted returns:**
 - May provide investors with better risk-adjusted returns and a “smoother ride” through historically lower volatility and smaller drawdowns relative to other risk assets
- **Access to non-traditional strategies:**
 - Hedge funds utilize strategies and implementation tools less available to traditional investment vehicles
 - Broad flexible mandates or specialized niche strategies
 - Use of shorting and leverage
 - Illiquid investments



Past performance is no guarantee of future results

BENEFITS & RISKS

- **Pros:**
 - Incentive structure focused on performance during all market environments
 - Potential for uncorrelated returns to traditional asset classes
 - Strategies often reduce overall portfolio volatility and drawdowns
 - Potentially superior capital preservation vehicles
 - Strong alignment of interests between manager and investor

- **Cons:**
 - Complicated entities, more challenging to evaluate managers
 - Liquidity constraints
 - Less transparent
 - Higher fees
 - Can be difficult to access top managers
 - Potential for higher “headline risk”
 - Regulatory environment in flux



MULTI-STRATEGY FUNDS OF FUNDS: DEFINITION

- **Key Characteristics:**
 - A portfolio consisting of allocations to direct hedge funds across a variety of strategies
 - Does not display one dominant sub-strategy, but is instead well-diversified
 - Can include co-investments alongside direct funds

- **Value-add is through different portfolio construction methodologies:**
 - Combining various manager skills, styles and sub-strategy convictions
 - Targeting various return objectives, risk tolerances and liquidity preferences
 - Customizing to client objectives

- **Based on various portfolio construction styles, Multi-Strategy FOHFs can be classified into four broad categories:**
 - Low Volatility
 - Core
 - Enhanced Core
 - Return Seeking



MULTI-STRATEGY FUND OF FUNDS SUMMARY

Magnitude & Blackstone

Low Volatility	Core	Enhanced Core	Return Seeking
<ul style="list-style-type: none"> • Focus on provided low volatility in return stream • Can often be viewed as a fixed-income substitute 	<ul style="list-style-type: none"> • Aim to provide steady modest returns • Aim to protect capital in down markets • Focused on reducing volatility 	<ul style="list-style-type: none"> • Aim to provide above average returns capturing diversified return-streams • Look at beta as a whole and manage both inputs (volatility and correlation) • Aim to outperform in up markets but protect capital well in down markets 	<ul style="list-style-type: none"> • Aim to generate superior returns • Focus more on correlation • Higher risk tolerance with an aim to mitigate drawdowns



SUB-STRATEGIES EXPLAINED

Strategy	Definition
Equity-Linked	<ul style="list-style-type: none"> • Managers combine a long portfolio with the short sale of stocks • Portfolios range from net short to net long, depending on market conditions • Aggressive funds may capture returns by exceeding 100% exposure while conservative funds mitigate market risk by maintaining net exposures of between 0-50%
Credit-Linked	<ul style="list-style-type: none"> • Managers seek to profit from the mispricing of related securities; returns are not dependent on the general direction of market movements • Strategy utilizes quantitative and qualitative analysis to identify securities or spreads between securities that deviate from their fair value and/or historical norms • Examples include convertible arbitrage, fixed arbitrage, statistical arbitrage and select global macro strategies
Event-Driven	<ul style="list-style-type: none"> • Managers invest in situations with the expectation that a near term event will act as a catalyst changing the market's perception of a company, thereby increasing or decreasing the value of its equity or debt • Events include, bankruptcies, financial restructurings, mergers, acquisitions and spin-offs • Three types of event disciplines: merger arbitrage, distressed securities and special situations
Global Macro	<ul style="list-style-type: none"> • Trade highly liquid instruments, long and short, including currencies, commodities, fixed income instruments and equity indices • Low correlation to traditional and alternative asset classes • Discretionary strategies employ broad analysis of economic, financial and political data to identify themes • Systematic strategies use algorithmic models to analyze historical data, both technical and fundamental
Multi-Strategy	<ul style="list-style-type: none"> • Managers employ a diversified portfolio with various investment approaches • Strategies may include convertible arbitrage, merger arbitrage, and fixed income arbitrage positions • Managers can over or under-weight different strategies to capitalize best on current investment opportunities



HOWARD COUNTY HEDGE FUND EXPOSURE

As of March 31, 2019	\$	% of portfolio
Magnitude International Class A	581,620.24	5.5%
Blackstone Partners Offshore Fund	604,670.31	5.8%
Total	1,186,290.55	11.3%

Performance as of March 31, 2019	3 month	1 Year	3 years	5 years	Inception (Jan 2011)
Magnitude International Class A	2.4%	1.9%	3.3%	3.9%	4.6%
HFRI FOF: Conservative Index	3.2%	1.7%	3.5%	2.1%	2.4%
Over/Under	-0.8%	0.2%	-0.2%	1.8%	2.2%
Blackstone Partners Offshore Fund	3.1%	3.4%	5.5%	4.4%	4.7%
HFRI FOF: Conservative Index	3.2%	1.7%	3.5%	2.1%	2.3%
Over/Under	-0.1%	1.7%	2.0%	2.3%	2.4%



**MAGNITUDE
INTERNATIONAL
CLASS A ELIGIBLE**

NEPC, LLC

MAGNITUDE FIRM OVERVIEW

- Founded in 2001 by James Hall and Benjamin Appen; launched flagship fund in October 2002
- Run today by seven partners, all required to hold meaningful personal investments in Magnitude funds
- Company of 42 people with varied hedge-fund experience
- \$4.1 billion of assets under management (AUM)
- 78% of firm AUM from institutions
- 73% North America, 27% ex-North America



MAGNITUDE CAPITAL

General Fund Information			
Product Name	Magnitude International		
Firm Name	Magnitude Capital		
Firm HQ	New York, NY		
Firm AUM	\$4.1 billion	Strategy	Multi-Strategy
Strategy AUM	\$2.1 billion	Fund Type	RV/Quant
Portfolio Manager(s)	Investment Committee	Direct or FOF	FOF

Terms	
Share Class	Multiple share classes – selection at client
Min. Invest.	\$5 million
Mgmt. Fee	1.0%
Incentive Fee	10%
Hurdle Rate	None
High Water Mark	Yes
Subscription	Monthly
Redemption	Quarterly, 65 day notice
Gate	15% Master-Fund level

General Investment Strategy
<p>Magnitude International ("Fund") is the flagship commingled multi-strategy fund of hedge funds for Magnitude Capital ("Firm"). The Fund seeks tangible sources of alpha through its manager selection process. Using top-down and bottom-up research to find opportunities and managers with a unique "edge" or niche where proven skill is measurable. A majority of the portfolio is allocated to relative value, quantitative or systematic strategies; statistical arbitrage, equity volatility relative value, fixed income arbitrage, credit relative value, commodities relative value, and trading. The Fund also invests in long/short equity and distressed credit.</p> <p>The portfolio concentrates risk in "best idea" managers that display manager skill within strategies that are typically less volatile and less correlated to traditional equity markets. The Fund targets a 6% annualized return and a 0.8 to 1.0 Sharpe ratio. The Fund expects to deliver consistent, positive returns with volatility lower than the HFRI FOFs Index.</p>

NEPC Opinion
<p>Positives</p> <ul style="list-style-type: none"> • Team – The investment team comprises professionals with strong, relevant backgrounds. A majority have previous experience managing direct hedge fund strategies, similar to those the Fund invests in. • Performance– Returns have been strong since inception. The Fund is less correlated to traditional markets and peers than a typical FOF, due to its preference for relative value and quantitative strategies. • Exposures – The Fund is concentrated and focuses on managers with an "edge" and proven alpha generation. Exposures heavily favor relative value and quantitative strategies that offer absolute return alpha, downside protection, and uncorrelated upside. • Access– Many underlying funds are closed but many reserve capacity for Magnitude given their industry connections from working at D.E. Shaw. • Business focus – Commingled funds are driving a majority of business growth, and continue to be the main focus. The team believes managing capacity and access to top tier managers is best achieved via commingled structures.
<p>Negatives</p> <ul style="list-style-type: none"> • Capacity – Many underlying funds are closed, which may present a capacity challenge as AUM in the Fund grows. The Fund has not had an issue to date but it is something that should be closely monitored, particularly if it could effect performance or portfolio construction. • Key person risk – Ben Appen and James Hall are the founding partners of the Firm and are key to the portfolio team. The departure of either would be a material event and may effect NEPC's opinion. We do not anticipate them leaving any time soon. • Transparency – Magnitude rarely lists underlying managers in general marketing distributions. Special requests often have to be made to view the portfolio and sometimes only show top 10 holdings. NEPC signed a non disclosure agreement for access to the complete list of holdings. • M&A risk – The Firm was founded by ex-D.E. Shaw employees who spun out to run their own business. It's unlikely they would want to merge or sell. However, the FOF industry is becoming increasingly competitive and Magnitude is likely to be a target for larger firms.
<p>Investor Suitability</p> <p>Magnitude International is a multi-strategy, diversified fund of hedge funds and may be implemented as a core hedge fund exposure to complement a traditional investment program. Due to its relative value tilt, the Fund may also be used as a more targeted diversifier. The Fund generally pairs well with other fund of hedge funds as it typically has a lower correlation to the FOF universe than its peers (0.5 vs 0.8+).</p>

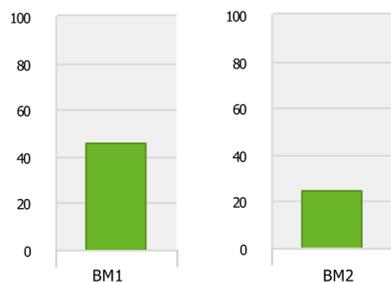




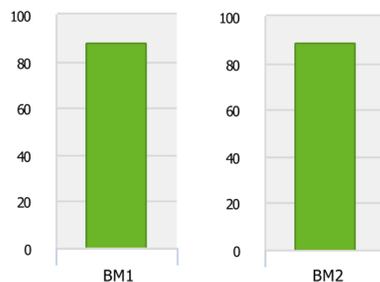
Monthly Performance														
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	
2019	1.0	0.5	1.3	---	---	---	---	---	---	---	---	---	2.8	
2018	1.4	-0.1	1.2	-0.3	1.1	-0.3	-0.6	1.5	0.0	-1.6	-1.6	0.9	1.7	
2017	1.0	0.3	1.3	0.3	0.5	-0.4	0.7	0.9	0.6	1.4	0.5	-0.1	7.4	
2016	-1.6	-0.6	0.2	0.4	-0.1	-1.6	0.7	0.6	0.3	0.6	-0.9	-0.7	-2.8	
2015	0.8	1.0	0.7	0.2	0.9	-0.4	1.0	-0.1	0.0	0.8	1.0	-0.1	6.0	
2014	0.9	0.9	0.0	-0.6	1.2	0.3	0.7	0.6	0.7	0.1	1.5	1.6	8.2	
2013	1.4	0.7	0.0	0.2	0.9	-0.7	-0.3	-0.3	0.7	1.3	0.6	0.2	4.7	
2012	1.4	1.1	0.4	0.2	-0.2	0.1	0.5	1.2	1.0	0.5	0.7	0.8	7.8	
2011	1.3	1.0	0.7	1.3	0.5	0.2	0.5	-0.9	-0.6	0.6	-0.2	0.2	4.6	
2010	0.3	0.3	1.0	1.2	-1.2	-0.4	0.5	0.9	1.2	1.1	0.1	1.6	6.9	
2009	1.6	0.9	0.6	2.4	4.2	1.9	3.0	2.3	2.6	1.8	0.3	1.7	25.7	
2008	-1.0	1.0	-2.3	2.1	1.7	-0.4	-1.7	-1.9	-6.3	-6.8	-6.0	-2.0	-21.6	
2007	1.4	0.4	1.2	1.3	2.6	1.2	0.0	-1.2	1.5	2.9	0.3	1.2	13.5	
2006	2.7	1.0	1.8	1.3	-0.3	0.2	-0.2	0.7	1.3	1.1	2.1	1.8	14.3	

Performance Analysis			
	Magnitude International	HFRI Fund of Funds Composite Index	60% S&P 500/40% Barclays Agg.
Since Inception Return	6.2	3.5	7.9
1 Yr Return	1.9	0.2	7.8
3 Yr Return	3.7	3.9	8.9
5 Yr Return	4.2	2.2	7.7
Returns YTD 03/2019	2.8	4.6	9.3
Returns 2018	1.7	-4.0	-2.3
Returns 2017	7.4	7.8	14.2
Returns 2016	-2.8	0.5	8.3
Returns 2015	6.0	-0.3	1.3
Best Month	4.2	3.3	6.6
Worst Month	-6.8	-6.5	-11.0

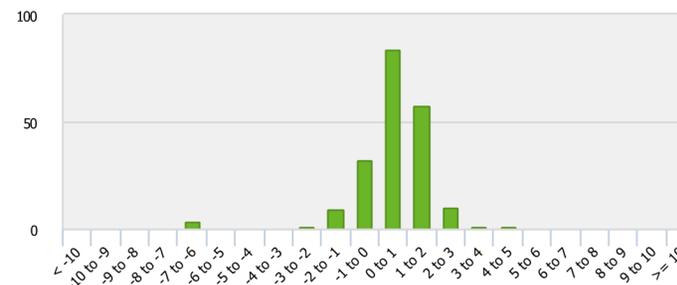
Outperform BM in Up Markets



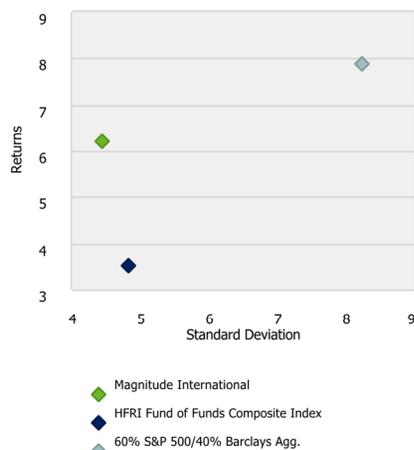
Outperform BM in Down Markets



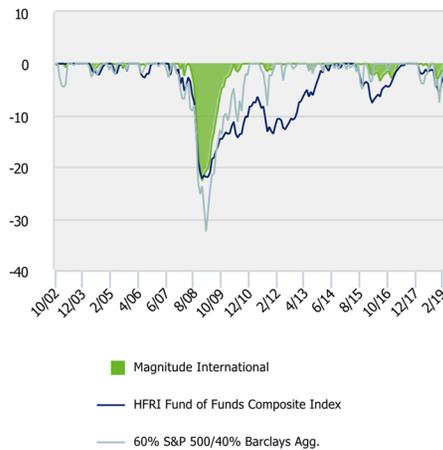
Distribution of Returns



Risk/Return Profile



Underwater Drawdown



Risk Analysis

Since Inception Standard Deviation	4.4	4.8	8.3
3 Yr Standard Deviation	3.0	3.5	6.5
5 Yr Standard Deviation	2.8	3.7	6.8
Sharpe Ratio	1.1	0.5	0.8
Sortino Ratio	1.5	0.6	1.2
Loss Deviation	3.2	3.6	5.5
Max Drawdown	22.7	22.2	32.5
Max Drawdown Length	7	14	16
Max Drawdown Recovery Length	21	66	22

Latest Returns

Last Month	1.3	0.9	1.9
Last 3 Months	2.8	4.6	9.3
Last Year	1.9	0.2	7.8
Last 2 Year	4.6	2.8	8.3
Last 3 Year	3.7	3.9	8.9

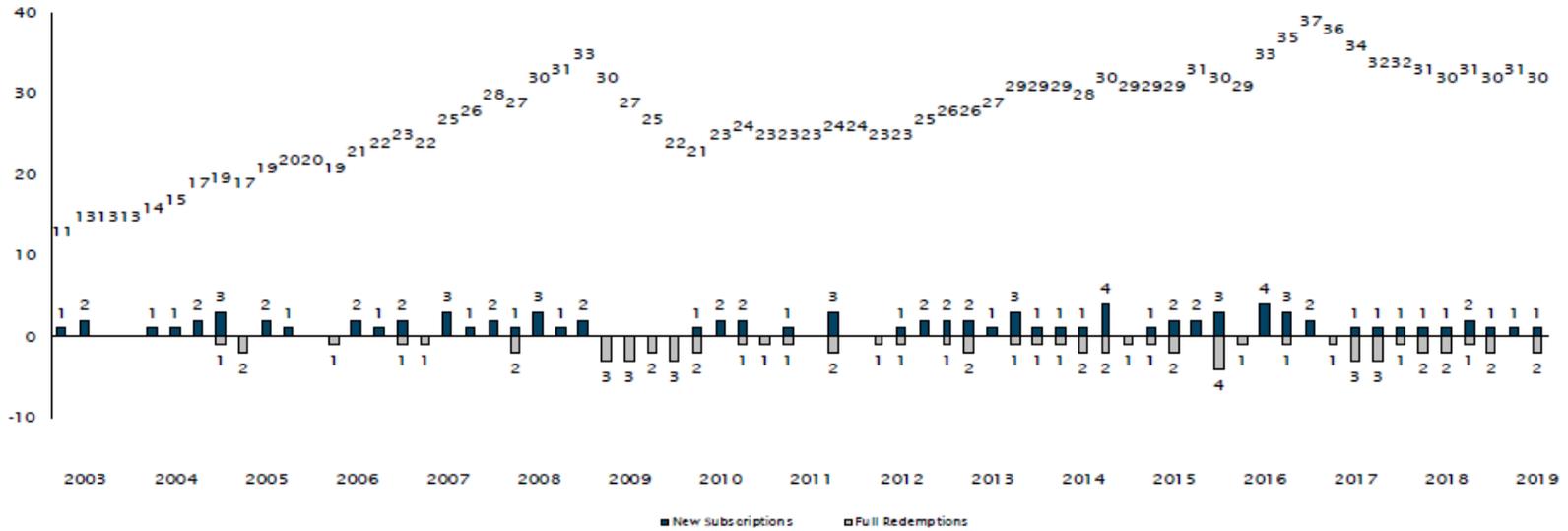
Latest Returns

Annualized Alpha		3.5	4.1
Beta		0.7	0.3
Correlation Coefficient		0.8	0.5
R-Squared		0.7	0.2

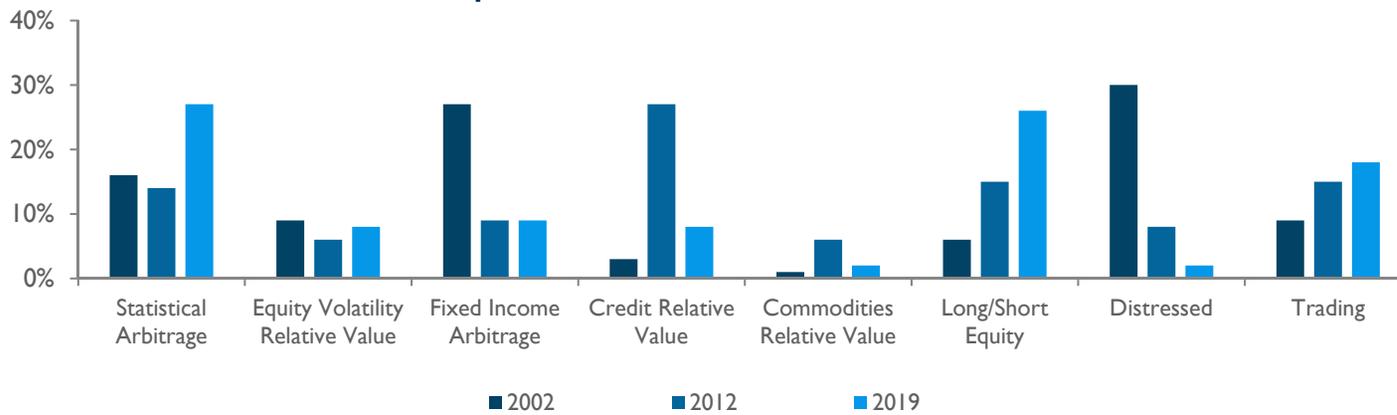
Past Performance is not indicative of future results. Ratios are calculated based on a risk-free rate of Citi Group 3 month T-Bill. Actual ratios may vary depending on the actual risk-free rate and life of the fund

PORTFOLIO ANALYSIS

Number of managers (underlying funds) overtime



Capital allocation overtime



Magnitude Terms

Magnitude International Standard-Fee Terms (\leq \$75mm)

Management Fee	1% annually, payable monthly
Performance Fee	Class A: 10% of profits, payable quarterly Class D: 10% of profits above the greater of 2% per annum or 3-month USD LIBOR, payable quarterly

Magnitude International Modified-Fee Terms ($>$ \$75mm)

Management Fee	Class A Series X: 1.3% annually, payable monthly	Class A Series Y: None
	Class D Series X: 1% annually, payable monthly	Class D Series Y: None
Performance Fee	Class A Series X: None	Class A Series Y: 20% of profits above 3-month USD LIBOR, payable quarterly
	Class D Series X: None	Class D Series Y: 20% of profits above the greater of 2% per annum or 3-month USD LIBOR, payable quarterly

Magnitude International Additional Terms

Subscriptions	Monthly
Redemptions	Class A: Quarterly with 65 days' notice, subject to 15% fund-level gate triggered by 15% redemptions at the master-fund-level Class D: Quarterly with 12 months' notice, subject to 15% fund-level gate triggered by 15% redemptions at the master-fund-level



BLACKSTONE PARTNERS OFFSHORE FUND LTD

NEPC, LLC

BLACKSTONE FIRM OVERVIEW

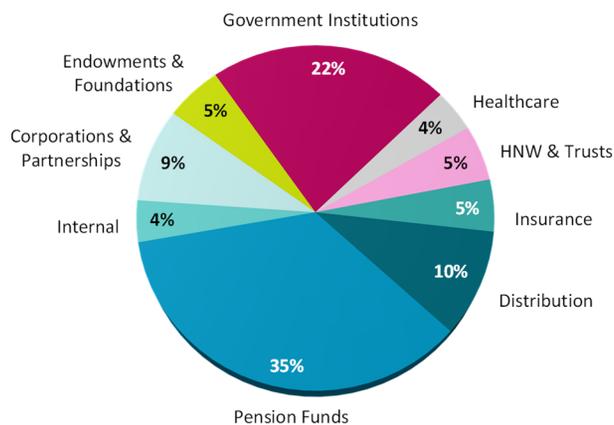
Blackstone

- Founded in 1985, went public in 2007
- 2,500 employees in 23 offices, globally
- \$511 billion of assets under management (AUM)

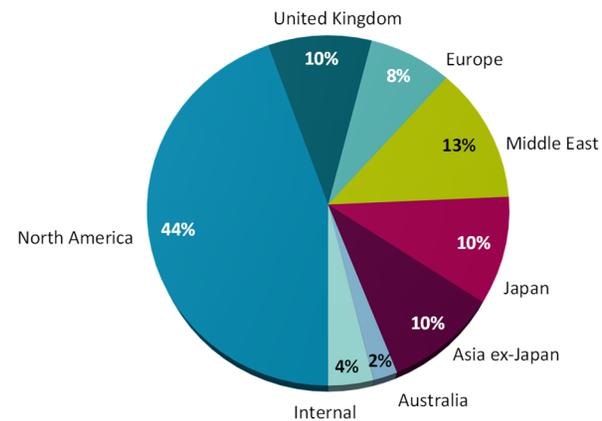
Blackstone Alternative Asset Management (BAAM)

- \$80 billion AUM
- 241 BAAM professionals, including 92 investment professionals

BAAM Client Breakdown by Investor⁽²⁾



BAAM Client Breakdown by Geography⁽²⁾



(1) Number shown as a percentage of total flows from external investors for the period 2008 – 2018.
 (2) Based on assets under management, as of 4/1/2019.

BLACKSTONE PARTNERS FUND

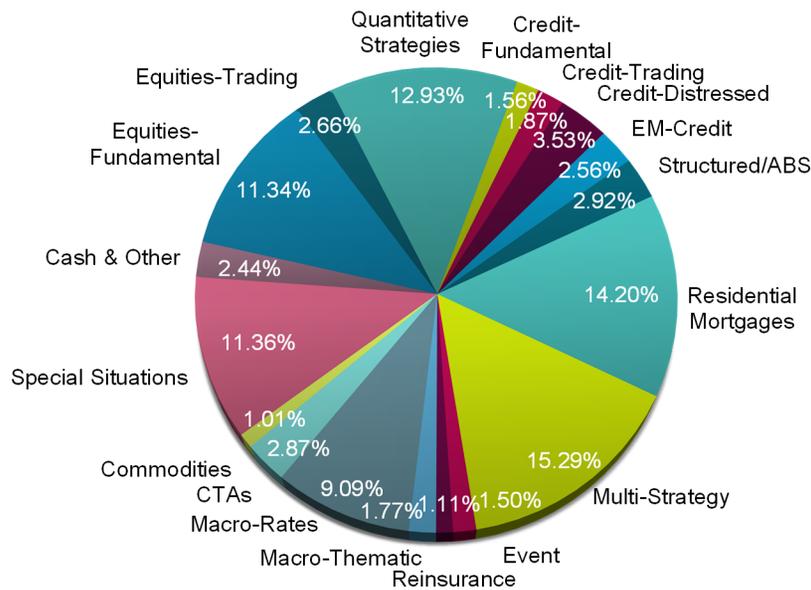
General Fund Information			
Fund Name	Blackstone Partners Fund		
Firm Name	Blackstone Alternative Asset Management		
Location	New York		
Firm AUM	\$80 billion	Strategy	Multi-Strategy
Strategy AUM	\$11.6 billion	Sub-Strategy	Core
Portfolio Manager	Investment Committee	Direct or FOF	FOF
Terms			
Share Class	Onshore, Offshore, ERISA		
Minimum Investment	\$5 million		
Management Fee	Option 1: 1.25% for <\$100mm; 1.10% for \$100mm-\$200mm; 0.95% for >\$200mm Option 2: 0.95% for <\$100mm; 0.85% for \$100mm-\$200mm; 0.75% for >\$200mm		
Performance Fee	Option 1: None Option 2: 10% for <\$100mm; 8.5% for \$100mm-\$200mm; 7.5% for >\$200mm *No incentive fee on outperformance in excess of 15%		
Hurdle Rate	90-day US T-Bills		
High Water Mark	Yes		
Subscription	Monthly		
Redemption	Semi-annual (6/30, 12/31); 95 days' prior written notice		
Lock-Up	None		
Gate	25% Quarterly		
General Investment Strategy			
<p>Blackstone manages one of the largest multi-strategy fund of hedge funds (FOF) in the world. The Partners Fund ("Fund") is its flagship commingled fund that invests in 100 underlying managers. The Fund weights the portfolio strategically with 85% of capital allocation concentrated within its highest conviction (10-20) managers. The Fund utilizes co-investments through its Blackstone Strategic Opportunities Fund (BSOF). The Fund can invest 10-15% in BSOF. Due to the Firm's size and scale, BAAM is able to attract top tier industry talent and has a larger research team than most competitors. BAAM's resources also enable it to invest in technology, and maintain an internal infrastructure that supports its expanded network of investment professionals and back-office employees. Blackstone also uses its size and scale to negotiate favorable terms and fees with underlying managers.</p>			

NEPC Opinion	
Positives	
<ul style="list-style-type: none"> • Organizational Stability, Depth and Breadth: Blackstone's size, scale and market leadership across various complementary businesses provides organizational stability, depth and breadth of resources to the benefit of investors in Partners and custom solutions. • Innovation – Breadth of Investment Solutions: Deep resources and scale allow innovation of new investment platforms (BSOF, for example) to capture idiosyncratic investment ideas. • Enhanced Fee and Capacity Benefits: Dominant market position allows strong bargaining power to negotiate substantial fee discounts and capacity from both large, small and hard-closed managers. • Forward-Looking Portfolio Construction (with a focus on downside protection): BAAM's forward-looking approach to portfolio construction attempts to reduce dependence on historical analysis and construct portfolios that aim to withstand any anticipated market stress. 	
Negatives	
<ul style="list-style-type: none"> • Organizational Complexity: Notwithstanding the inherent synergies of complementary businesses, Blackstone (and BAAM) present a complex organization susceptible to cross-contamination and headline risk. sized peers) in response to rapidly changing markets in a macro driven environment • Over-Diversification: The Partners Fund, which currently has over 80 underlying managers, runs contrary to present-day best practices of concentrated high-conviction portfolios. However, ever-increasing inflows of AUM creates capacity issues, which Partners has addressed by hiring more managers while still pursuing smaller managers without taking on undue manager concentration risk. Custom portfolios are more concentrated in high-conviction best ideas. • Premium Pricing: In an environment with increasing pressures for fee concessions, BAAM's pricing positions Partners as a premium product (though with a strong value proposition – including fee savings on internal and external managers) 	
Investor Suitability	
<p>The commingled Blackstone Partners Fund can serve as a "core" allocation in investors' hedge fund portfolios given its broadly diversified mandate. While Partners is quite a diversified fund across 80 plus underlying investments, it still represents a potent combination of manager selection, asset allocation, idiosyncratic ideas and fee savings for an investor seeking an all-encompassing "core" hedge fund allocation.</p>	



PORTFOLIO ANALYSIS

Portfolio Composition as of May 1, 2019
 Master Fund AUM: \$12,603 million⁽²⁾⁽³⁾



Diversity Profile⁽³⁾

18 strategies

43%

of fund represented by top 10 manager allocations

47

manager vehicles on a full-look through basis

- (1) Portfolio allocations represent the assets of Blackstone Partners OS Master Fund ICAV (the "Master"). Partners OS invests substantially all of its assets into the Master. The Master is an actively managed portfolio and strategy allocations are subject to ongoing revision. There can be no assurance that the Fund, or any underlying manager, will achieve its objective or avoid significant losses.
- (2) Fund AUM of \$12,603 million represents the assets of the Master. The AUM of Partners OS USD was \$7,354 million as of 5/1/2019.
- (3) Data as of 5/1/2019. Manager count includes only those with an allocation over 0.5%. Manager count is represented by the number of underlying vehicles in the Fund.



Blackstone Partners Offshore Fund (Partners OS)
Blackstone

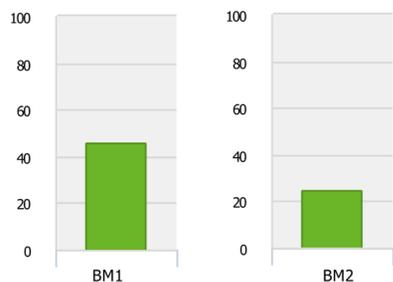
Benchmarks: HFRI Fund of Funds Composite Index, 60% S&P 500/40% Barclays Agg.
As of: March 2019



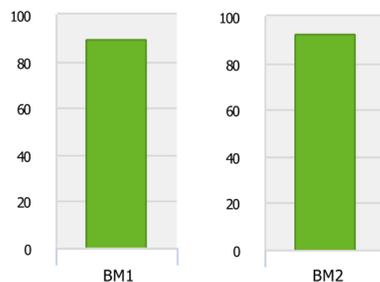
Monthly Performance													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
2019	2.1	0.5	0.5	---	---	---	---	---	---	---	---	---	3.1
2018	1.5	-0.2	0.0	0.4	0.7	-0.2	0.5	0.2	0.7	-0.6	-0.5	-0.8	1.6
2017	1.0	0.8	0.5	0.5	0.7	-0.3	0.6	0.9	0.6	1.2	-0.1	0.3	6.9
2016	-1.1	-1.2	0.2	0.8	1.1	-1.0	0.8	1.0	0.4	0.1	0.9	0.8	2.8
2015	-0.3	1.6	0.9	-0.1	1.3	-0.7	1.1	-0.8	-0.8	0.6	0.4	0.0	3.4
2014	0.5	1.4	-0.2	0.1	1.2	0.8	0.3	0.6	0.5	-0.8	1.1	0.5	5.9
2013	2.0	0.6	1.2	0.7	1.2	-0.8	1.0	0.0	0.9	1.1	1.0	0.8	10.1
2012	1.7	1.2	0.3	0.2	-0.8	-0.1	1.1	1.1	1.1	0.2	0.9	0.9	7.9
2011	0.6	1.0	0.2	1.2	-0.5	-1.0	0.2	-1.6	-2.2	1.5	-0.4	-0.2	-1.2
2010	0.7	0.5	1.5	0.7	-1.6	-0.3	0.8	0.5	1.3	1.2	0.2	1.7	7.4
2009	1.3	0.2	-0.1	1.8	3.3	0.6	1.7	1.5	2.0	0.6	1.2	0.6	15.6
2008	-1.1	0.7	-2.6	0.5	1.3	-0.1	-1.9	-0.6	-4.9	-4.1	-2.7	-1.2	-15.5
2007	1.6	0.9	1.3	1.6	2.0	0.9	1.9	-1.6	1.5	2.0	-0.5	0.6	12.6
2006	2.6	0.6	1.5	1.7	-1.5	0.1	0.0	0.5	0.9	1.1	1.9	1.7	11.7

Performance Analysis			
	Blackstone Partners Offshore Fund (Partners OS)	HFRI Fund of Funds Composite Index	60% S&P 500/40% Barclays Agg.
Since Inception Return	5.4	2.7	7.1
1 Yr Return	3.5	0.1	7.8
3 Yr Return	5.6	3.9	8.9
5 Yr Return	4.4	2.2	7.7
Returns YTD 03/2019	3.1	4.6	9.3
Returns 2018	1.6	-4.0	-2.3
Returns 2017	6.9	7.8	14.2
Returns 2016	2.8	0.5	8.3
Returns 2015	3.4	-0.3	1.3
Best Month	3.3	3.3	6.6
Worst Month	-4.9	-6.5	-11.0

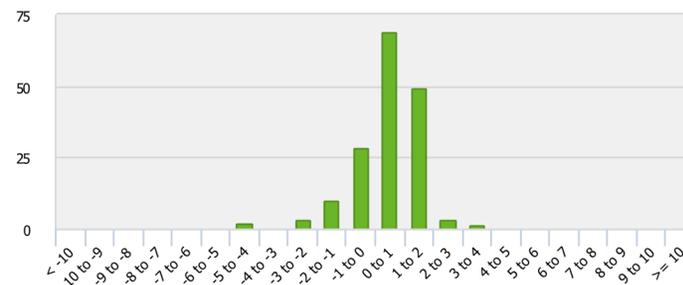
Outperform BM in Up Markets



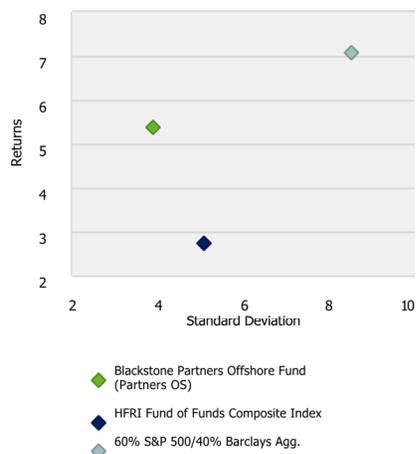
Outperform BM in Down Markets



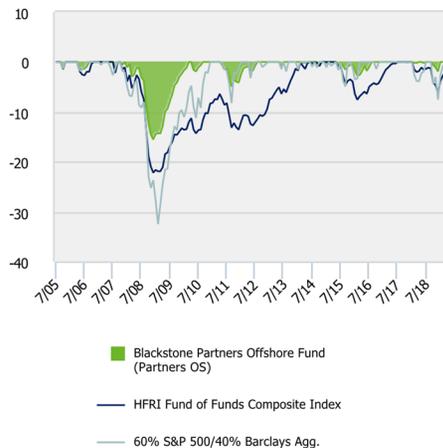
Distribution of Returns



Risk/Return Profile



Underwater Drawdown



Risk Analysis

Since Inception Standard Deviation	3.9	5.1	8.5
3 Yr Standard Deviation	2.2	3.5	6.5
5 Yr Standard Deviation	2.5	3.7	6.8
Sharpe Ratio	1.1	0.3	0.7
Sortino Ratio	1.5	0.4	1.0
Loss Deviation	2.7	3.9	5.8
Max Drawdown	15.5	22.2	32.5
Max Drawdown Length	12	14	16
Max Drawdown Recovery Length	15	66	22

Latest Returns

Last Month	0.5	0.9	1.9
Last 3 Months	3.1	4.6	9.3
Last Year	3.5	0.1	7.8
Last 2 Year	4.6	2.8	8.3
Last 3 Year	5.6	3.9	8.9

Latest Returns

Annualized Alpha	3.3	3.3
Beta	0.7	0.3
Correlation Coefficient	0.9	0.6
R-Squared	0.9	0.4

Past Performance is not indicative of future results. Ratios are calculated based on a risk-free rate of Citi Group 3 month T-Bill. Actual ratios may vary depending on the actual risk-free rate and life of the fund

Blackstone Partners Terms

Fund Inception	July 1, 2005
Structure	Cayman Islands Exempted Company
Minimum Initial Investment	\$5,000,000
Contributions	Monthly
Withdrawals⁽²⁾	
Frequency	Semi Annual (June 30 th and December 31 st) subject to 95 days' prior written notice; no lock-up
Gate	The Board of Directors has discretion to apply a 25% fund-level gate
Fee Options	
Flat Management Fee	<ul style="list-style-type: none"> • 1.25% flat management fee • 1.10% flat management fee for investors with at least \$100 million invested in the Partners strategy • 0.95% flat management fee for investors with at least \$200 million invested across BAAM • 0.85% flat management fee for investors with at least \$400 million invested in the Partners strategy (subject to a 50% investor-level gate)
Management & Incentive Fee	<ul style="list-style-type: none"> • 0.95% management fee with a 10% incentive • 0.85% management fee with a 8.50% incentive fee for investors with at least \$100 million invested in the Partners strategy • 0.75% management fee with a 7.50% incentive fee for investors with at least \$200 million invested across BAAM • Incentive fees subject to standard high water mark; no incentive fee on outperformance amounts in excess of 15%
Hurdle	90-day US Treasury Bill

- (1) The foregoing terms are not intended to be complete or final and are qualified in their entirety by reference to the Offering Memorandum (copies of which will be furnished to any prospective investors upon request and must be received and reviewed by all investors). In the event that the description or terms described herein are inconsistent with or contrary to the descriptions in or terms of the Offering Memorandum, the Offering Memorandum shall control.
- (2) Redemption terms pertain to class F shares.



MAY 2019 PERFORMANCE REPORT

NEPC, LLC

CALENDAR YEAR INDEX PERFORMANCE

	2010	2011	2012	2013	2014	2015	2016	2017	2018	Q1	Apr	May	YTD
US Large Cap	15.1%	2.1%	16.0%	32.4%	13.7%	1.4%	12.0%	21.8%	-4.4%	13.6%	4.0%	-6.4%	10.7%
US Small/Mid Cap	26.7%	-2.5%	17.9%	36.8%	7.1%	-2.9%	17.6%	16.8%	-10.0%	15.8%	3.5%	-7.1%	11.3%
Int'l Developed Equity	7.8%	-12.1%	17.3%	22.8%	-4.9%	-0.8%	1.0%	25.0%	-13.8%	10.0%	2.8%	-4.8%	7.6%
Emerging Market Equity	18.9%	-18.4%	18.2%	-2.6%	-2.2%	-14.9%	11.2%	37.3%	-14.6%	9.9%	2.1%	-7.3%	4.1%
US Aggregate	6.5%	7.8%	4.2%	-2.0%	6.0%	0.5%	2.6%	3.5%	0.0%	2.9%	0.0%	1.8%	4.8%
US High Yield	15.1%	5.0%	15.8%	7.4%	2.5%	-4.5%	17.1%	7.5%	-2.1%	7.3%	1.4%	-1.2%	7.5%
US Long Treasury	9.4%	29.9%	3.6%	-12.7%	25.1%	-1.2%	1.3%	8.5%	-1.8%	4.7%	-1.8%	6.5%	9.5%
EM Local Credit	15.7%	-1.8%	16.8%	-9.0%	-5.7%	-14.9%	9.9%	15.2%	-6.2%	2.9%	-0.2%	0.3%	3.0%
Global Credit	-5.3%	-5.3%	-4.1%	2.7%	-0.6%	3.3%	2.1%	7.4%	-1.2%	2.2%	-0.3%	1.4%	3.3%
Commodities	16.8%	-13.3%	-1.1%	-9.5%	-17.0%	-24.7%	11.8%	1.7%	-11.2%	6.3%	-0.4%	-3.4%	2.3%

Source: Bloomberg, Barclays, S&P, Russell, MSCI, JP Morgan, Credit Suisse

S&P 500 = US Large Cap
 Russell 2500 = US Small/Mid Cap
 MSCI EAFE = International Developed Equity
 MSCI EM = Emerging Market Equity
 Bloomberg Barclays Aggregate = US Aggregate
 Bloomberg Barclays High Yield = US HY
 Bloomberg Barclays Long Treasury = US Long Treasury
 GBI-EM Global Diversified = EM Local Credit
 Barclays Global Aggregate = Global Credit
 Bloomberg Commodity = Commodities



Howard County Retirement Plans

TOTAL FUND PERFORMANCE SUMMARY (GROSS)

Ending May 31, 2019												
	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund Composite	1,051,436,464	100.0	100.0	-2.4	6.4	3.4	2.9	8.5	6.2	9.1	7.2	Apr-97
<i>Policy Index</i>				-2.0	6.0	3.4	2.9	7.2	5.6	8.2	7.2	Apr-97
<i>Allocation Index</i>				-2.2	--	--	--	--	--	--	--	Apr-97
Total US Equity Composite	249,200,783	23.7	20.0	-7.2	10.8	-0.6	-0.6	12.5	9.8	14.6	8.2	Jul-97
<i>Russell 3000</i>				-6.5	10.9	1.8	2.5	11.5	9.2	13.9	7.5	Jul-97
<i>US Equity Allocation Index</i>				-6.6	11.0	0.5	1.2	11.5	9.0	14.2	--	Jul-97
Total International Equity	185,355,425	17.6	20.0	-5.1	9.1	-1.1	-3.4	8.6	2.3	6.5	4.5	Jul-97
<i>MSCI ACWI ex USA</i>				-5.4	7.2	-4.5	-6.3	6.7	1.3	5.8	--	Jul-97
Total Fixed Income Composite	305,502,006	29.1	30.0	1.1	4.7	5.8	5.5	4.1	3.6	5.8	5.4	Jul-97
<i>Fixed Income Policy Index</i>				1.8	4.8	6.5	6.4	2.5	2.7	3.8	5.2	Jul-97
Total Real Assets Composite	39,435,864	3.8	7.5	0.0	-2.2	1.8	2.2	9.5	9.1	4.2	7.3	Jul-03
<i>NCREIF Property Index 1 Qtr. Lag</i>				0.0	1.4	4.9	6.7	7.2	9.3	7.5	8.8	Jul-03
Cash Composite	7,166,989	0.7		0.2	1.0	2.1	2.2	1.1	0.7	0.4	1.4	Dec-03
<i>91 Day T-Bills</i>				0.2	1.0	2.1	2.2	1.3	0.8	0.5	1.3	Dec-03
Hedge Fund Composite	120,688,105	11.5	12.5	0.3	4.3	2.6	3.1	4.5	4.4	--	4.7	Jan-11
<i>HFRI FOF: Conservative Index</i>				0.1	4.2	1.6	1.7	3.5	2.2	3.1	2.5	Jan-11
Private Equity Composite	144,087,292	13.7	10.0	0.0	3.7	14.4	13.7	15.6	15.8	15.0	12.8	Jul-08
<i>Cambridge Associates Global All PE</i>				0.0	0.0	2.2	6.7	12.4	10.2	13.5	9.0	Jul-08

Fiscal year end 6/30.

All history prior to 3/1/2019 was provided by AndCo.



Howard County Retirement Plans

TOTAL FUND PERFORMANCE DETAIL (GROSS)

	Ending May 31, 2019											
	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund Composite	1,051,436,464	100.0	100.0	-2.4	6.4	3.4	2.9	8.5	6.2	9.1	7.2	Apr-97
Policy Index				-2.0	6.0	3.4	2.9	7.2	5.6	8.2	7.2	Apr-97
Allocation Index				-2.2	--	--	--	--	--	--	--	Apr-97
Total US Equity Composite	249,200,783	23.7	20.0	-7.2	10.8	-0.6	-0.6	12.5	9.8	14.6	8.2	Jul-97
Russell 3000				-6.5	10.9	1.8	2.5	11.5	9.2	13.9	7.5	Jul-97
US Equity Allocation Index				-6.6	11.0	0.5	1.2	11.5	9.0	14.2	--	Jul-97
Large Cap Composite	192,007,802	18.3	15.0	-7.6	9.5	-0.1	-0.4	11.7	9.0	13.8	8.1	Apr-01
Russell 1000				-6.4	11.0	2.8	3.5	11.7	9.5	14.0	7.2	Apr-01
Invesco IQS – US Enhanced 1% Risk SMA	64,165,013	6.1		-6.9	8.8	0.7	0.8	11.1	8.7	13.7	7.3	Apr-01
S&P 500				-6.4	10.7	3.1	3.8	11.7	9.7	13.9	7.0	Apr-01
LSV Asset Management SMA	57,902,159	5.5		-9.0	5.3	-4.9	-5.9	8.3	6.6	13.4	9.3	May-00
Russell 1000 Value				-6.4	8.5	1.2	1.4	8.0	6.5	12.3	6.6	May-00
Westfield Capital Management SMA	69,940,630	6.7		-7.1	14.1	3.3	3.6	15.3	11.5	--	15.2	Jul-10
Russell 1000 Growth				-6.3	13.7	4.4	5.4	15.3	12.3	15.6	15.9	Jul-10
Small/Mid Cap Composite	57,192,981	5.4	5.0	-6.0	15.4	-2.3	-1.1	15.3	12.3	16.0	12.1	Apr-93
Russell 2500				-7.1	11.3	-5.0	-4.3	9.8	7.2	13.8	10.1	Apr-93
William Blair SMA	18,898,281	1.8		-4.4	17.2	4.0	5.7	17.0	13.9	17.6	11.9	Jun-06
Russell 2500 Growth				-6.6	15.0	-1.5	-0.7	13.0	9.5	15.1	9.1	Jun-06
ICM Small Company - ICSCX	21,273,294	2.0		-8.2	9.9	-11.5	-10.8	10.2	7.9	13.7	11.6	Apr-93
Russell 2000 Value				-8.2	6.7	-11.8	-11.3	7.7	5.0	11.7	9.5	Apr-93
Brown Capital Small Company Strategy SMA	17,021,406	1.6		-4.9	21.1	4.2	5.7	21.1	17.3	--	18.5	Aug-11
Russell 2000 Growth				-7.4	11.8	-7.6	-6.9	11.7	8.3	13.9	10.5	Aug-11



Howard County Retirement Plans

TOTAL FUND PERFORMANCE DETAIL (GROSS)

													Ending May 31, 2019
	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date	
Total International Equity	185,355,425	17.6	20.0	-5.1	9.1	-1.1	-3.4	8.6	2.3	6.5	4.5	Jul-97	
MSCI ACWI ex USA				-5.4	7.2	-4.5	-6.3	6.7	1.3	5.8	--	Jul-97	
International Developed Markets Composite	118,473,666	11.3	13.0	-6.3	9.2	-4.1	-4.6	5.6	1.7	6.8	2.6	Mar-08	
MSCI EAFE				-4.8	7.6	-4.6	-5.7	5.8	1.3	6.2	1.8	Mar-08	
Mondrian International Equity Fund, L.P.	57,080,931	5.4		-7.4	4.2	-4.0	-5.2	4.9	0.9	6.3	1.3	Dec-07	
MSCI EAFE				-4.8	7.6	-4.6	-5.7	5.8	1.3	6.2	0.8	Dec-07	
Baillie Gifford EAFE Pure K - BGPKX	61,392,735	5.8		-5.3	14.2	-3.8	-3.8	--	--	--	-2.6	May-18	
MSCI EAFE				-4.8	7.6	-4.6	-5.7	5.8	1.3	6.2	-7.3	May-18	
International Emerging Markets Composite	66,881,759	6.4	7.0	-2.9	8.9	4.7	-1.0	14.7	3.6	5.9	5.9	Feb-06	
MSCI Emerging Markets				-7.3	4.1	-4.7	-8.7	9.9	1.8	5.0	4.2	Feb-06	
DFA Emerging Markets Value Portfolio Institutional - DFEVX	26,529,858	2.5		-5.2	2.5	-3.5	-8.8	11.6	1.9	5.1	5.4	Feb-06	
MSCI Emerging Markets				-7.3	4.1	-4.7	-8.7	9.9	1.8	5.0	4.2	Feb-06	
GQG Partners Emerging Markets Equity Fund	40,351,901	3.8		-1.2	13.6	--	--	--	--	--	13.3	Dec-18	
MSCI Emerging Markets				-7.3	4.1	-4.7	-8.7	9.9	1.8	5.0	1.3	Dec-18	
Total Fixed Income Composite	305,502,006	29.1	30.0	1.1	4.7	5.8	5.5	4.1	3.6	5.8	5.4	Jul-97	
BBgBarc US Aggregate TR				1.8	4.8	6.5	6.4	2.5	2.7	3.8	5.1	Jul-97	
Core Fixed Income Composite	262,339,139	25.0	25.0	1.3	--	--	--	--	--	--	3.4	Mar-19	
BBgBarc US Aggregate TR				1.8	4.8	6.5	6.4	2.5	2.7	3.8	3.8	Mar-19	
Dodge & Cox SMA	124,918,592	11.9		0.8	5.0	6.3	6.2	4.1	3.5	--	4.5	May-10	
BBgBarc US Aggregate TR				1.8	4.8	6.5	6.4	2.5	2.7	3.8	3.4	May-10	
PIMCO Total Return	115,075,619	10.9		1.8	5.1	6.6	6.6	3.4	3.0	--	3.9	May-10	
BBgBarc US Aggregate TR				1.8	4.8	6.5	6.4	2.5	2.7	3.8	3.4	May-10	
State Street Global Advisors TIPS	22,344,928	2.1		1.6	5.2	3.9	4.3	2.5	1.6	--	3.2	Nov-09	
BBgBarc US TIPS TR				1.7	5.3	3.9	4.4	2.5	1.6	3.6	3.2	Nov-09	
Emerging Markets Debt Composite	43,162,867	4.1	5.0	0.1	--	--	--	--	--	--	-1.4	Mar-19	
JP Morgan GBI EM Global Diversified TR USD				0.3	3.0	3.3	0.3	4.4	-1.3	2.9	-1.2	Mar-19	
Colchester Local Markets Debt Fund	43,162,867	4.1		0.1	2.9	3.7	1.4	6.5	--	--	7.9	Oct-15	
JP Morgan GBI EM Global Diversified TR USD				0.3	3.0	3.3	0.3	4.4	-1.3	2.9	5.7	Oct-15	



Howard County Retirement Plans

TOTAL FUND PERFORMANCE DETAIL (GROSS)

													Ending May 31, 2019
	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date	
Total Real Assets Composite	39,435,864	3.8	7.5	0.0	-2.2	1.8	2.2	9.5	9.1	4.2	7.3	Jul-03	
<i>NCREIF Property Index 1 Qtr. Lag</i>				0.0	1.4	4.9	6.7	7.2	9.3	7.5	8.8	Jul-03	
Real Estate Composite	28,983,121	2.8		0.0	--	--	--	--	--	--	1.0	Mar-19	
<i>NCREIF Property Index 1 Qtr. Lag</i>				0.0	1.4	4.9	6.7	7.2	9.3	7.5	1.4	Mar-19	
Realty Associates Fund VIII L.P.	25,697	0.0		0.0	-15.2	-6.6	-6.6	2.4	6.7	2.1	1.1	Jul-07	
Realty Associates Fund IX L.P.	5,396	0.0		0.0	-56.8	-58.5	-58.5	-24.8	-11.1	--	-2.5	Apr-10	
Partners Group Global RE 2011	5,967,034	0.6		0.0	-4.6	-11.0	-11.0	4.0	4.2	--	5.0	Mar-12	
Partners Group Global RE 2014	19,455,410	1.9		0.0	1.2	4.3	4.3	11.8	--	--	9.4	Dec-14	
Partners Group Global RE 2017	3,529,583	0.3		0.0	14.4	--	--	--	--	--	14.4	Dec-18	
<i>NCREIF Property Index 1 Qtr. Lag</i>				0.0	1.4	4.9	6.7	7.2	9.3	7.5	3.1	Dec-18	
Real Assets Composite	10,452,743	1.0		0.0	--	--	--	--	--	--	-13.3	Mar-19	
<i>Cambridge Associates Global Natural Resources (1 Qtr Lag)</i>				0.0	-6.9	-1.5	-0.7	7.5	-0.4	5.1	-6.9	Mar-19	
Commonfund Natural Resources X	4,622,382	0.4		0.0	-2.3	6.0	10.9	19.7	--	--	18.6	Apr-16	
Commonfund Natural Resources XI	130,408	0.0		0.0	-13.1	--	--	--	--	--	-13.1	Oct-18	
Aether Real Assets IV	4,865,921	0.5		0.0	-8.2	1.9	1.9	1.9	--	--	1.9	Jun-16	
Aether Real Assets V	834,032	0.1		0.0	-77.4	--	--	--	--	--	-59.6	Aug-18	
<i>Cambridge Associates Global Natural Resources (1 Qtr Lag)</i>				0.0	-6.9	-1.5	-0.7	7.5	-0.4	5.1	-1.5	Aug-18	
Cash Composite	7,166,989	0.7	0.0	0.2	1.0	2.1	2.2	1.1	0.7	0.4	1.4	Dec-03	
<i>91 Day T-Bills</i>				0.2	1.0	2.1	2.2	1.3	0.8	0.5	1.3	Dec-03	
Hedge Fund Composite	120,688,105	11.5	12.5	0.3	4.3	2.6	3.1	4.5	4.4	--	4.7	Jan-11	
<i>HFRI FOF: Conservative Index</i>				0.1	4.2	1.6	1.7	3.5	2.2	3.1	2.5	Jan-11	
Magnitude International Class A Eligible	59,935,424	5.7		0.9	5.0	2.3	3.5	4.0	4.5	--	4.8	Jan-11	
<i>HFRI FOF: Conservative Index</i>				0.1	4.2	1.6	1.7	3.5	2.2	3.1	2.5	Jan-11	
Blackstone Partners Offshore Fund LTD	60,752,682	5.8		-0.3	3.5	2.9	2.7	5.1	4.3	--	4.7	Mar-11	
<i>HFRI FOF: Conservative Index</i>				0.1	4.2	1.6	1.7	3.5	2.2	3.1	2.3	Mar-11	
Private Equity Composite	144,087,292	13.7	10.0	0.0	3.7	14.4	13.7	15.6	15.8	15.0	12.8	Jul-08	
<i>Cambridge Associates Global All PE</i>				0.0	0.0	2.2	6.7	12.4	10.2	13.5	9.0	Jul-08	

Magnitude International Class A Eligible and Blackstone Partners Offshore Fund LTD market values and performance are estimated.



Howard County Retirement Plans

TOTAL FUND PERFORMANCE DETAIL FOOTNOTES

Fiscal year ends 6/30.

Policy index consists of: 15% S&P 500 / 5% Russell 2500 / 13% MSCI EAFE / 7% MSCI Emerging Markets / 25% BBgBarc US Aggregate TR / 5% JP Morgan GBI EM Global Diversified TR USD / 7.5% NCREIF Property Index 1 Qtr. Lag / 12.5% HFRI FOF: Conservative Index / 10% Private Equity Composite.

Allocation index consists of: Weighted index of underlying managers to their respective benchmark.

Fixed Income Policy index consists of: 100% BBgBarc US Aggregate TR.

Core Fixed Income Composite, Emerging Markets Debt, Real Estate Composite, and Real Assets Composite performance is calculated by NEPC as of 3/31/2019.

Real Estate, Real Assets and Private Equity investments are valued quarterly and stated as of the prior quarter and adjusted for capital calls and distributions.

All history prior to 3/1/2019 was provided by AndCo.



APPENDIX

NEPC, LLC

Information Disclaimer

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

Reporting Methodology

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



INFORMATION DISCLAIMER

Past performance is no guarantee of future results.

The goal of this report is to provide a basis for substantiating asset allocation recommendations. The opinions presented herein represent the good faith views of NEPC as of the date of this report and are subject to change at any time.

Information on market indices was provided by sources external to NEPC. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.

All investments carry some level of risk. Diversification and other asset allocation techniques do not ensure profit or protect against losses.

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ALTERNATIVE INVESTMENT DISCLOSURES

It is important that investors understand the following characteristics of non-traditional investment strategies including hedge funds and private equity:

1. Performance can be volatile and investors could lose all or a substantial portion of their investment
2. Leverage and other speculative practices may increase the risk of loss
3. Past performance may be revised due to the revaluation of investments
4. These investments can be illiquid, and investors may be subject to lock-ups or lengthy redemption terms
5. A secondary market may not be available for all funds, and any sales that occur may take place at a discount to value
6. These funds are not subject to the same regulatory requirements as registered investment vehicles
7. Managers may not be required to provide periodic pricing or valuation information to investors
8. These funds may have complex tax structures and delays in distributing important tax information
9. These funds often charge high fees
10. Investment agreements often give the manager authority to trade in securities, markets or currencies that are not within the manager's realm of expertise or contemplated investment strategy

