MEETING MATERIALS

HOWARD COUNTY

July 25, 2019

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PASSIVE PROVIDER OVERVIEW

NEPC, LLC

SEARCH CANDIDATES SUMMARY

Firm	Product Rating	Commingled Fund Fees ($65M)	Comments
S&P 500 Index Funds			
BlackRock	1-Rated	2 bps	One of the industry leaders in customization of index funds
RhumbLine Advisers Limited Partnership	1-Rated	2.5 bps (platform fee)	Diverse firm (Female-owned). Dedicated asset-manager, specializing in only passive index-based products
State Street Global Advisors	1-Rated	2 bps	State Street is HC's current custodian and currently manages a US Tips index fund for HC. As a result, we've negotiated a discounted fee.

Firm	NEPC Indexing Summary
BlackRock	BlackRock offers several equity and fixed income index fund options. They have the ability to offer options for portfolio customization. As one of the largest index fund providers, BlackRock leverages its size to help reduce transaction costs through the internal crossing of trades. BlackRock's robust risk management system, Aladdin, is also utilized by other investment firms. Aladdin allows the user to conduct analysis that can be done down to the security level. This is of particular use for fixed income strategies.
RhumbLine Advisers Limited Partnership	Rhumbline has its roots in servicing the public fund markets and has used this strength to expand and diversify its client base over time. Its product offerings are a reflection of meeting client needs. Rhumbline has a strength in meeting custom mandates and, as a minority- and women- owned firm, it can satisfy MWBE requirements.
State Street Global Advisors	State Street offers a wide range of products across equity and fixed income. Notably, in the fixed income space, it has broken core bonds into 10 core segments with fund offerings that have been in existence long enough to be "seasoned" and are now fully replicated. State Street favors full replication as an approach to indexing, but it will utilize sampling or optimized portfolio where it makes sense.

**Platform fee reflects a flat fee for any additional funding of other index funds on the Rhumbline platform moving forward up to $200M*

FIRM COMPARISON SUMMARY

Firm Name	Location	Year Firm Founded	Total Assets Under Mgmt ($MM)	% Employee Owned	% Parent Owned	Parent Company Name	% Publicly Held	% Other Ownership
BlackRock	New York, New York	1988	6,515,345	0	0	NA	79	21
RhumbLine Advisers Limited Partnership	Boston, Massachusetts	1990	56,459	100	0	NA	0	0
State Street Global Advisors	Boston, Massachusetts	1978	2,805,373	0	100	State Street Corporation	0	0

PRODUCT ASSETS BY VEHICLE TYPE

Firm/Product	Separate Account		Commingled Fund		Inst. Mutual Fund	Retail Mutual Fund
	$MM	# of accounts	$MM	# of accounts	$MM	$MM
S&P 500						
BlackRock - Equity Index Fund	281,112	31	118,469	583	0	184,770
Rhumbline - S&P 500 Index	15,726	85	3,131	49	0	0
SSgA - S&P 500 Index	46,177	46	142,571	839	295,020	0

As of March 31, 2019

STANDARD ACCOUNT MINS. & FEE SCHEDULES

Firm/Product	Separate Account Min. ($MM)	Commingled Fund Min. ($MM)	Mutual Fund Min. ($MM)	Separate Account Fee Schedule	Commingled Fund Fee Schedule	Mutual Fund Ticker and Fee
S&P 500						
BlackRock - Equity Index Fund	NA	NA	5	All Assets at 0.02%	All Assets at 0.02%	WFSPX - 0.04%
Rhumbline - S&P 500 Index	10	5	NA	All Assets at 0.06%	All Assets at 0.05%	Not Available
SSgA - S&P 500 Index	Minimum Annual Fee: $175,000	5	10	First $50 million - 0.05% Next $50 million - 0.04% Next $150 million - 0.02%	First $50 million - 0.03% Next $200 million - 0.02%	SSSYX - 0.06%

As of March 31, 2019

TRAILING PERIOD RETURNS - (GROSS OF FEES)

	Benchmark	Qtr	YTD	1 Year	3 Year	5 Year	7 Year	10 Year
S&P 500								
BlackRock - Equity Index Fund	1	13.67%	13.67%	9.55%	13.56%	10.97%	12.90%	16.01%
Rhumbline - S&P 500 Index	1	13.63%	13.63%	9.48%	13.47%	10.89%	12.83%	15.89%
SSgA - S&P 500 Index	1	13.64%	13.64%	9.49%	13.53%	10.94%	12.88%	15.95%

Benchmark Return

1 S&P 500	13.65%	13.65%	9.50%	13.51%	10.91%	12.85%	15.92%

PROFILES

NEPC, LLC

INVESTMENT FIRM/PRODUCT PROFILE

BlackRock
Passive Equity/Fixed Income

Rosann Morello, Manager Search Supervisor
Source: NEPC and eVestment

Firm Description

BlackRock, Inc. is an independent, publicly traded company, with no single majority shareholder and over two-thirds of its Board of Directors consisting of independent directors. BlackRock was founded in 1988 by a group of investment professionals with a unique skill set in securitized bonds. In addition, some of the founders of BlackRock were early developers of CMOs and other mortgage derivatives. The firm has since grown to be one of the largest fixed income managers in the world through a series of mergers and acquisitions and organic growth of existing product lines. Most recently, BlackRock acquired Barclays Global Investors (BGI) and merged the investment management divisions. BGI brought with them a significant presence in ETF markets and model-based strategies. Roughly one third of the firm's total assets under management is equity, one third fixed income, with the remaining portion split among cash, alternatives and multi-asset. The firm is also known for its development of BlackRock Solutions, a widely used analytical and risk management advisory tool.

Equity Process

The process begins with knowledge of the benchmark. Portfolio managers are aware of upcoming index changes, corporate actions, liquidity profiles, and ongoing updates coming from providers. A team of portfolio managers dedicated by region then begin the portfolio construction. Each Beta Portfolio Manager reviews their fund paired between a capital markets perspective and a benchmark specific factor view. The portfolio managers review the capital markets by expected activity of other investors, market sentiment, macroeconomic events (job reports, Fed announcements), local market convention, and company earnings releases. Benchmark-specific factors include corporate actions, ensuring funds are fully invested, develop trading strategies for less liquid positions, and factor-based risk model optimization (Barra). After a portfolio is constructed, the implementation process is initiated. BlackRock's internal market place is utilized before any external trades are purchased. This part is supported by the dedicated trading research team. Performance and oversight are the final part of the process. Daily reviews by portfolio managers, monthly investment review committee meetings, and independent risk and quantitative analysis ensure the lowest tracking error per fund.

INVESTMENT FIRM/PRODUCT PROFILE

BlackRock
Passive Equity/Fixed Income

Fixed Income Process

The process begins with knowledge of the benchmark. Portfolio managers are aware of daily updates from index providers, index methodology changes, and new issues. The portfolio construction/ index replication process then begins via stratified sampling. The stratified sampling methodology is to divide the various indexes into subsets (cells) based upon relative parameters. An example is that a government bond index could consist of Sector/Issue type, Maturity, and call features as the influencing parameters. However, for credit and asset-backed indexes, there will be an additional line for credit rating. After the universe is divided into risk cells, the optimization via risk factors is conducted. Examples of the risk factors are key rate duration, convexity, duration time spread, and T-cost. After portfolio characteristics are determined, the trading is initiated. Finally, performance and risk analyses are conducted via the Aladdin Portfolio risk enterprise system by an investment review committee and an independent compliance committee.

INVESTMENT FIRM/PRODUCT PROFILE

RhumbLine Advisers Limited Partnership
Passive Equity/Fixed Income

Rosann Morello, Manager Search Supervisor
Source: NEPC and eVestment

Firm Description
RhumbLine Advisers is a Boston-based institutional investment firm specializing in the development, management and customization of index-based products. RhumbLine Advisers is 100% employee owned and has no holding companies or affiliates. They qualify as a majority women-minority-owned organization. RhumbLine is dedicated asset-manager, specializing in only passive index-based products.

Equity and Fixed Income Process
Rhumbline uses full replication, optimization, and stratified sampling for client portfolios. The method used depends on the asset size of the mandate and client requirements. They review portfolios daily and monitor tracking and cash. They also monitor index changes and consider the impact of the changes to determine trading strategy. They trade for client cash flows, cash balance maintenance, mergers and acquisitions and index changes when it is appropriate. They have built several systems to monitor the performance of the portfolios. They trade in a portfolio when there is a cash flow, significant change to a benchmark, or cash in a portfolio reaches 30%. They stick to a regular rebalancing schedule of once a month, whether it is necessary or not. Much of the management of portfolios centers around involuntary corporate actions. They have an online portal that they share with clients and consultants. The feeds show exception reporting with these banks. This helps them avoid trading errors and tracking errors. Trading costs are evaluated on an ongoing basis. Fees are negotiated with 12 to 15 different brokers. They trade with several women and minority owned firms. They have ongoing negotiated fee relationships with these brokers, and to keep commission costs and costs for the brokers low, they save trades for the monthly rebalancing whenever possible.

INVESTMENT FIRM/PRODUCT PROFILE

State Street Global Advisors
Passive Equity/Fixed Income

Rosann Morello, Manager Search Supervisor
Source: NEPC and eVestment

Firm Description

State Street Global Advisors is the investment management division of State Street Bank and Trust Company. State Street Bank and Trust Company, founded in 1792, is a wholly-owned subsidiary of State Street Corporation which is a publicly traded bank holding company whose shares are traded on the New York Stock Exchange under the symbol "STT." State Street Asset Management division, subsequently referred to as State Street Global Advisors, was established in 1978 as the investment management division of State Street Bank & Trust Company. In 1995, all of State Street's investment related business units were organized under one umbrella, named State Street Global Advisors. State Street Global Advisors has been managing investments since 1978. SSgA has offices in 26 cities and 11 investment centers around the world.

Equity Process

The process is centered around managing index activity, changes and reconstitutions, and client activity resulting in cash flows in and out of the portfolio. Portfolios are constructed to replicate the desired benchmarks. Full replication is preferred, but sampling is also utilized. For index changes, the current portfolio is compared to pro forma index files to identify and analyze impacts and necessary trades. This also helps gain a better understanding of the size of the changes and helps in estimating supply and demand, expected volatility and liquidity, and recognizing the impact of any upcoming economic and earnings events. Trade strategies are then developed, implemented, and put through an attribution analysis once completed. Post trade performance is reviewed for trade cost analysis and ex-post tracking error. Monthly and quarterly reviews are also conducted by the risk management team. Contributions and withdrawals are also monitored. Finally, a monthly investment committee reviews the performance of the strategies.

Fixed Income Process

The process begins with the selection of an index-specific replication strategy that takes into consideration the adherence to characteristics of the underlying index. Portfolios are constructed neutral to the benchmark for sector, quality, duration, and convexity. Implementation and risk management of the fixed income strategies factor in duration, yield to maturity, option-adjusted spread, and cheapest to delivery for futures contracts on a sector and issue level. Credit rating and issue structures (e.g. structural subordination, capital structures, and coupon structures) are also taken into consideration.

The monitoring and maintenance of the fixed income portfolio begins with a daily exposure reporting that reviews the portfolio holdings for any index deviations. Credit risk is maintained through strategy guidelines to ensure there is an acceptable tolerance or stratified sampling of issuer overweight/underweight positions relative to the benchmark. Monthly and quarterly reviews are also conducted by the risk management team. Contributions and withdrawals are also monitored. Finally, a monthly investment committee reviews the performance of the strategies.

APPENDIX

NEPC, LLC

CONTACT INFORMATION

Manager	Location	U.S. Client Contact	Phone	Email
BlackRock	New York, New York	Conner Hayes	(617) 357-1170	conner.hayes@blackrock.com
RhumbLine Advisers Limited Partnership	Boston, Massachusetts	Denise D'Entremont	(617) 330 7353	dad@indexmngr.com
State Street Global Advisors	Boston, Massachusetts	Dewey Perrella	(617) 664-1786	dewey_perrella@ssga.com

DISCLOSURES

Data Disclosure:

- The results profiled herein reflect the deduction of management fees and other expenses, except where specifically noted.
- Investment fees can have a significant effect on total returns.

NEPC Relationships:

- Ms. Terri Sacramone's brother works at State Street Bank & Trust in their Private Edge team. Mr. Jonathan Homan's wife works at State Street Corp. in accounting and investor services.

DISCLAIMER

- **This report contains summary information regarding the investment management approaches described herein but is not a complete description of the investment objectives, policies or portfolio management and research that supports these approaches. This analysis does not constitute a recommendation to implement any of the aforementioned approaches.**

- **Past performance is no guarantee of future results.**

- **Information on market indices was provided by sources external to NEPC, and other data used to prepare this report was obtained directly from the investment manager(s). While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.**

- **This report may contain confidential or proprietary information and may not be copied or redistributed to any party not legally entitled to receive it.**

JUNE 2019 PERFORMANCE REPORT

NEPC, LLC

TRAILING ANNUAL INDEX PERFORMANCE

Equity						
	1M	YTD	1 YR	3 YR	5 YR	10 YR
MSCI ACWI	6.5%	16.2%	5.7%	11.6%	6.1%	10.1%
S&P 500	7.0%	18.5%	10.4%	14.2%	10.7%	14.7%
Russell 1000	7.0%	18.8%	10.0%	14.1%	10.4%	14.7%
Russell 2000	7.1%	17.0%	-3.3%	12.3%	7.0%	13.4%
Russell 2500	7.1%	19.2%	1.8%	12.3%	7.6%	14.4%
MSCI EAFE	5.9%	14.0%	1.1%	9.1%	2.2%	6.9%
MSCI EM	6.2%	10.6%	1.2%	10.6%	2.5%	5.8%

Credit						
	1M	YTD	1 YR	3 YR	5 YR	10 YR
BC Global Agg	2.2%	5.6%	5.8%	1.6%	1.2%	2.9%
BC US Agg	1.3%	6.1%	7.9%	2.3%	2.9%	3.9%
BC Credit	2.3%	9.4%	10.3%	3.7%	3.9%	5.7%
BC US HY	2.3%	9.9%	7.5%	7.5%	4.7%	9.2%
BC Muni	0.4%	5.1%	6.7%	2.5%	3.6%	4.7%
BC Muni HY	0.5%	6.7%	7.8%	5.3%	6.3%	8.1%
BC TIPS	0.9%	6.2%	4.8%	2.1%	1.7%	3.6%
BC 20+ STRIPS	1.3%	14.7%	14.3%	1.3%	8.0%	9.1%
BC Long Treasuries	1.3%	11.0%	12.3%	1.3%	5.7%	6.5%
BC Long Credit	3.9%	15.4%	15.0%	5.3%	5.8%	8.4%
BC Govt/Credit 1-3 Yr	0.6%	2.7%	4.3%	1.6%	1.5%	1.6%
JPM EMBI Glob Div	3.4%	11.3%	12.4%	5.5%	5.3%	7.8%
JPM GBI-EM Glob Div	5.5%	8.7%	9.0%	4.2%	-0.5%	3.4%

Real Assets						
	1M	YTD	1 YR	3 YR	5 YR	10 YR
BBG Commodity	2.7%	5.1%	-6.8%	-2.2%	-9.1%	-3.7%
Alerian MLP	2.6%	17.0%	3.1%	-0.4%	-7.2%	8.2%
FTSE NAREIT Equity REITs	1.3%	17.8%	11.2%	4.2%	7.9%	15.4%

Source: FactSet

CALENDAR YEAR INDEX PERFORMANCE

	2010	2011	2012	2013	2014	2015	2016	2017	2018	YTD
S&P 500	15.1%	2.1%	16.0%	32.4%	13.7%	1.4%	12.0%	21.8%	-4.4%	18.5%
Russell 1000	16.1%	1.5%	16.4%	33.1%	13.2%	0.9%	12.1%	21.7%	-4.8%	18.8%
Russell 2000	26.9%	-4.2%	16.3%	38.8%	4.9%	-4.4%	21.3%	14.6%	-11.0%	17.0%
Russell 2500	26.7%	-2.5%	17.9%	36.8%	7.1%	-2.9%	17.6%	16.8%	-10.0%	19.2%
MSCI EAFE	7.8%	-12.1%	17.3%	22.8%	-4.9%	-0.8%	1.0%	25.0%	-13.8%	14.0%
MSCI EM	18.9%	-18.4%	18.2%	-2.6%	-2.2%	-14.9%	11.2%	37.3%	-14.6%	10.6%
MSCI ACWI	12.7%	-7.3%	16.1%	22.8%	4.2%	-2.4%	7.9%	24.0%	-9.4%	16.2%
Private Equity*	19.8%	9.5%	12.6%	22.3%	14.6%	10.4%	10.3%	21.0%	13.1%	5.7%
BC TIPS	6.3%	13.6%	7.0%	-8.6%	3.6%	-1.4%	4.7%	3.0%	-1.3%	6.2%
BC Municipal	2.4%	10.7%	6.8%	-2.6%	9.1%	3.3%	0.2%	5.4%	1.3%	5.1%
BC Muni High Yield	7.8%	9.2%	18.1%	-5.5%	13.8%	1.8%	3.0%	9.7%	4.8%	6.7%
BC US Corporate HY	15.1%	5.0%	15.8%	7.4%	2.5%	-4.5%	17.1%	7.5%	-2.1%	9.9%
BC US Agg Bond	6.5%	7.8%	4.2%	-2.0%	6.0%	0.5%	2.6%	3.5%	0.0%	6.1%
BC Global Agg	5.5%	5.6%	4.3%	-2.6%	0.6%	-3.2%	2.1%	7.4%	-1.2%	5.6%
BC Long Treasuries	9.4%	29.9%	3.6%	-12.7%	25.1%	-1.2%	1.3%	8.5%	-1.8%	11.0%
BC US Long Credit	10.7%	17.1%	12.7%	-6.6%	16.4%	-4.6%	10.2%	12.2%	-6.8%	15.4%
BC US STRIPS 20+ Yr	10.9%	58.5%	3.0%	-21.0%	46.4%	-3.7%	1.4%	13.7%	-4.1%	14.7%
JPM GBI-EM Global Div	15.7%	-1.8%	16.8%	-9.0%	-5.7%	-14.9%	9.9%	15.2%	-6.2%	8.7%
JPM EMBI Glob Div	12.2%	7.3%	17.4%	-5.3%	7.4%	1.2%	10.2%	10.3%	-4.3%	11.3%
CS Hedge Fund	10.9%	-2.5%	7.7%	9.7%	4.1%	-0.7%	1.2%	7.1%	-3.2%	4.3%
BBG Commodity	16.8%	-13.3%	-1.1%	-9.5%	-17.0%	-24.7%	11.8%	1.7%	-11.2%	5.1%
Alerian MLP	35.9%	13.9%	4.8%	27.6%	4.8%	-32.6%	18.3%	-6.5%	-12.4%	17.0%
FTSE NAREIT Equity REITs	28.0%	8.3%	18.1%	2.5%	30.1%	3.2%	8.5%	5.2%	-4.6%	17.8%

Source: FactSet, Thomson One

*Private Equity return represents calendar year pooled IRR and is subject to a one quarter lag

Howard County Retirement Plans

TOTAL FUND PERFORMANCE SUMMARY (GROSS)

				Ending June 30, 2019								
	Market Value ($)	% of Portfolio	Policy %	1 Mo (%)	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund Composite	**1,091,884,350**	**100.0**	**100.0**	**3.9**	**3.4**	**10.5**	**7.4**	**9.6**	**6.7**	**9.4**	**7.3**	**Apr-97**
Policy Index				*3.7*	*3.1*	*9.9*	*7.3*	*8.3*	*6.1*	*8.6*	*7.3*	*Apr-97*
Allocation Index				*3.5*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*Apr-97*
Total US Equity Composite	**267,660,335**	**24.5**	**20.0**	**7.4**	**4.2**	**19.0**	**6.7**	**15.5**	**10.7**	**15.3**	**8.5**	**Jul-97**
Russell 3000				*7.0*	*4.1*	*18.7*	*9.0*	*14.0*	*10.2*	*14.7*	*7.8*	*Jul-97*
US Equity Allocation Index				*7.1*	*3.9*	*18.8*	*7.6*	*14.0*	*9.9*	*14.9*	*--*	*Jul-97*
Total International Equity	**198,467,243**	**18.2**	**20.0**	**5.7**	**4.2**	**15.3**	**4.5**	**10.6**	**3.1**	**7.2**	**4.8**	**Jul-97**
MSCI ACWI ex USA				*6.0*	*3.0*	*13.6*	*1.3*	*9.4*	*2.2*	*6.5*	*--*	*Jul-97*
Total Fixed Income Composite	**311,243,221**	**28.5**	**30.0**	**1.9**	**3.4**	**6.7**	**7.8**	**3.8**	**3.9**	**5.8**	**5.5**	**Jul-97**
Fixed Income Policy Index				*1.3*	*3.1*	*6.1*	*7.9*	*2.3*	*2.9*	*3.9*	*5.2*	*Jul-97*
Total Real Assets Composite	**39,845,869**	**3.6**	**7.5**	**1.1**	**1.1**	**-1.1**	**2.9**	**9.9**	**9.3**	**4.2**	**7.3**	**Jul-03**
NCREIF Property Index 1 Qtr. Lag				*1.8*	*1.8*	*3.2*	*6.8*	*7.1*	*9.1*	*8.5*	*8.9*	*Jul-03*
Cash Composite	**9,424,455**	**0.9**		**0.2**	**0.5**	**1.2**	**2.3**	**1.1**	**0.7**	**0.4**	**1.4**	**Dec-03**
91 Day T-Bills				*0.2*	*0.6*	*1.2*	*2.3*	*1.4*	*0.9*	*0.5*	*1.3*	*Dec-03*
Hedge Fund Composite	**121,983,437**	**11.2**	**12.5**	**1.1**	**2.3**	**5.5**	**3.8**	**5.1**	**4.4**	**--**	**4.8**	**Jan-11**
HFRI FOF: Conservative Index				*1.0*	*1.7*	*5.0*	*2.4*	*3.9*	*2.2*	*3.1*	*2.5*	*Jan-11*
Private Equity Composite	**143,259,788**	**13.1**	**10.0**	**2.7**	**2.7**	**6.5**	**17.4**	**16.5**	**15.8**	**14.2**	**13.0**	**Jul-08**
Cambridge Associates Global All PE				*0.0*	*0.0*	*4.8*	*7.0*	*13.2*	*10.2*	*13.3*	*9.4*	*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)

	Market Value ($)	% of Portfolio	Policy %	1 Mo (%)	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
											Ending June 30, 2019	
Total Fund Composite	**1,091,884,350**	**100.0**	**100.0**	**3.9**	**3.4**	**10.5**	**7.4**	**9.6**	**6.7**	**9.4**	**7.3**	**Apr-97**
Policy Index				*3.7*	*3.1*	*9.9*	*7.3*	*8.3*	*6.1*	*8.6*	*7.3*	*Apr-97*
Allocation Index				*3.5*	--	--	--	--	--	--	--	*Apr-97*
Total US Equity Composite	**267,660,335**	**24.5**	**20.0**	**7.4**	**4.2**	**19.0**	**6.7**	**15.5**	**10.7**	**15.3**	**8.5**	**Jul-97**
Russell 3000				*7.0*	*4.1*	*18.7*	*9.0*	*14.0*	*10.2*	*14.7*	*7.8*	*Jul-97*
US Equity Allocation Index				*7.1*	*3.9*	*18.8*	*7.6*	*14.0*	*9.9*	*14.9*	--	*Jul-97*
Large Cap Composite	**206,474,491**	**18.9**	**15.0**	**7.5**	**3.8**	**17.8**	**7.4**	**14.8**	**10.1**	**14.7**	**8.5**	**Apr-01**
Russell 1000				*7.0*	*4.2*	*18.8*	*10.0*	*14.1*	*10.5*	*14.8*	*7.6*	*Apr-01*
Invesco IQS – US Enhanced 1% Risk SMA	68,756,224	6.3		7.2	3.9	16.6	8.0	13.6	9.7	14.4	7.7	Apr-01
S&P 500				*7.0*	*4.3*	*18.5*	*10.4*	*14.2*	*10.7*	*14.7*	*7.3*	*Apr-01*
LSV Asset Management SMA	62,531,824	5.7		8.0	2.2	13.7	2.8	11.4	7.8	14.4	9.7	May-00
Russell 1000 Value				*7.2*	*3.8*	*16.2*	*8.5*	*10.2*	*7.5*	*13.2*	*6.9*	*May-00*
Westfield Capital Management SMA	75,186,443	6.9		7.5	5.2	22.7	11.2	19.1	12.6	--	16.0	Jul-10
Russell 1000 Growth				*6.9*	*4.6*	*21.5*	*11.6*	*18.1*	*13.4*	*16.3*	*16.6*	*Jul-10*
Small/Mid Cap Composite	**61,185,844**	**5.6**	**5.0**	**7.0**	**5.6**	**23.3**	**4.4**	**17.7**	**12.8**	**16.5**	**12.3**	**Apr-93**
Russell 2500				*7.1*	*3.0*	*19.2*	*1.8*	*12.3*	*7.7*	*14.4*	*10.3*	*Apr-93*
William Blair SMA	20,179,695	1.8		6.8	6.6	25.1	11.1	19.7	14.6	17.8	12.4	Jun-06
Russell 2500 Growth				*7.8*	*4.1*	*23.9*	*6.1*	*16.1*	*10.0*	*15.7*	*9.7*	*Jun-06*
ICM Small Company - ICSCX	22,809,550	2.1		7.3	3.1	17.9	-5.0	12.7	8.5	14.4	11.8	Apr-93
Russell 2000 Value				*6.4*	*1.4*	*13.5*	*-6.2*	*9.8*	*5.4*	*12.4*	*9.8*	*Apr-93*
Brown Capital Small Company Strategy SMA	18,196,599	1.7		6.9	7.8	28.9	11.0	22.8	16.9	--	19.2	Aug-11
Russell 2000 Growth				*7.7*	*2.7*	*20.4*	*-0.5*	*14.7*	*8.6*	*14.4*	*11.5*	*Aug-11*

LSV Asset Management SMA market value and performance are estimated.

TOTAL FUND PERFORMANCE DETAIL (GROSS)

	Market Value ($)	% of Portfolio	Policy %	1 Mo (%)	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
											Ending June 30, 2019	
Total International Equity	**198,467,243**	**18.2**	**20.0**	**5.7**	**4.2**	**15.3**	**4.5**	**10.6**	**3.1**	**7.2**	**4.8**	**Jul-97**
MSCI ACWI ex USA				*6.0*	*3.0*	*13.6*	*1.3*	*9.4*	*2.2*	*6.5*	*--*	*Jul-97*
International Developed Markets Composite	**127,922,995**	**11.7**	**13.0**	**5.8**	**4.0**	**15.5**	**1.5**	**8.5**	**2.6**	**7.5**	**3.1**	**Mar-08**
MSCI EAFE				*5.9*	*3.7*	*14.0*	*1.1*	*9.1*	*2.2*	*6.9*	*2.3*	*Mar-08*
Mondrian International Equity Fund, L.P.	60,521,468	5.5		6.2	1.5	10.7	2.0	7.6	1.8	7.0	1.8	Dec-07
MSCI EAFE				*5.9*	*3.7*	*14.0*	*1.1*	*9.1*	*2.2*	*6.9*	*1.3*	*Dec-07*
Baillie Gifford EAFE Pure K - BGPKX	67,401,527	6.2		5.4	6.5	20.3	1.4	--	--	--	2.1	May-18
MSCI EAFE				*5.9*	*3.7*	*14.0*	*1.1*	*9.1*	*2.2*	*6.9*	*-2.1*	*May-18*
International Emerging Markets Composite	**70,544,248**	**6.5**	**7.0**	**5.5**	**4.5**	**14.9**	**10.5**	**14.7**	**4.1**	**6.6**	**6.3**	**Feb-06**
MSCI Emerging Markets				*6.2*	*0.6*	*10.6*	*1.2*	*10.7*	*2.5*	*5.8*	*4.7*	*Feb-06*
DFA Emerging Markets Value Portfolio Institutional - DFEVX	27,874,978	2.6		5.1	0.4	7.8	1.4	11.5	2.4	5.7	5.8	Feb-06
MSCI Emerging Markets				*6.2*	*0.6*	*10.6*	*1.2*	*10.7*	*2.5*	*5.8*	*4.7*	*Feb-06*
GQG Partners Emerging Markets Equity Fund	42,669,270	3.9		5.8	7.4	20.2	--	--	--	--	19.9	Dec-18
MSCI Emerging Markets				*6.2*	*0.6*	*10.6*	*1.2*	*10.7*	*2.5*	*5.8*	*7.7*	*Dec-18*
Total Fixed Income Composite	**311,243,221**	**28.5**	**30.0**	**1.9**	**3.4**	**6.7**	**7.8**	**3.8**	**3.9**	**5.8**	**5.5**	**Jul-97**
BBgBarc US Aggregate TR				*1.3*	*3.1*	*6.1*	*7.9*	*2.3*	*2.9*	*3.9*	*5.1*	*Jul-97*
Core Fixed Income Composite	**265,634,167**	**24.3**	**25.0**	**1.3**	**3.0**	**--**	**--**	**--**	**--**	**--**	**4.7**	**Mar-19**
BBgBarc US Aggregate TR				*1.3*	*3.1*	*6.1*	*7.9*	*2.3*	*2.9*	*3.9*	*5.1*	*Mar-19*
Dodge & Cox SMA	126,807,696	11.6		1.5	2.9	6.6	7.9	4.0	3.7	--	4.6	May-10
BBgBarc US Aggregate TR				*1.3*	*3.1*	*6.1*	*7.9*	*2.3*	*2.9*	*3.9*	*3.5*	*May-10*
PIMCO Total Return	116,290,446	10.7		1.1	3.1	6.2	7.7	3.3	3.2	--	4.0	May-10
BBgBarc US Aggregate TR				*1.3*	*3.1*	*6.1*	*7.9*	*2.3*	*2.9*	*3.9*	*3.5*	*May-10*
State Street Global Advisors TIPS	22,536,026	2.1		0.9	2.8	6.1	4.8	2.1	1.7	--	3.3	Nov-09
BBgBarc US TIPS TR				*0.9*	*2.9*	*6.2*	*4.8*	*2.1*	*1.8*	*3.6*	*3.3*	*Nov-09*
Emerging Markets Debt Composite	**45,609,054**	**4.2**	**5.0**	**5.7**	**5.9**	**--**	**--**	**--**	**--**	**--**	**4.3**	**Mar-19**
JP Morgan GBI EM Global Diversified TR USD				*5.5*	*5.6*	*8.7*	*9.0*	*4.2*	*-0.5*	*3.4*	*4.2*	*Mar-19*
Colchester Local Markets Debt Fund	45,609,054	4.2		5.7	5.9	8.8	9.6	5.9	--	--	9.3	Oct-15
JP Morgan GBI EM Global Diversified TR USD				*5.5*	*5.6*	*8.7*	*9.0*	*4.2*	*-0.5*	*3.4*	*7.1*	*Oct-15*

Howard County Retirement Plans

TOTAL FUND PERFORMANCE DETAIL (GROSS)

	Market Value ($)	% of Portfolio	Policy %	1 Mo (%)	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
											Ending June 30, 2019	
Total Real Assets Composite	**39,845,869**	**3.6**	**7.5**	**1.1**	**1.1**	**-1.1**	**2.9**	**9.9**	**9.3**	**4.2**	**7.3**	**Jul-03**
NCREIF Property Index 1 Qtr. Lag				*1.8*	*1.8*	*3.2*	*6.8*	*7.1*	*9.1*	*8.5*	*8.9*	*Jul-03*
Real Estate Composite	**28,560,399**	**2.6**		**-1.0**	**-1.0**	**--**	**--**	**--**	**--**	**--**	**0.0**	**Mar-19**
NCREIF Property Index 1 Qtr. Lag				*1.8*	*1.8*	*3.2*	*6.8*	*7.1*	*9.1*	*8.5*	*3.2*	*Mar-19*
Realty Associates Fund VIII L.P.	25,689	0.0		0.0	0.0	-15.2	-6.6	2.4	6.7	1.9	1.1	Jul-07
Realty Associates Fund IX L.P.	5,396	0.0		0.0	0.0	-56.8	-58.5	-24.8	-11.3	--	-2.5	Apr-10
Partners Group Global RE 2011	5,460,448	0.5		-6.5	-6.5	-10.8	-16.8	1.7	2.8	--	4.0	Mar-12
Partners Group Global RE 2014	19,416,226	1.8		-0.2	-0.2	1.0	4.1	11.7	--	--	9.1	Dec-14
Partners Group Global RE 2017	3,652,641	0.3		3.5	3.5	18.4	--	--	--	--	18.4	Dec-18
NCREIF Property Index 1 Qtr. Lag				*1.8*	*1.8*	*3.2*	*6.8*	*7.1*	*9.1*	*8.5*	*4.9*	*Dec-18*
Real Assets Composite	**11,285,470**	**1.0**		**7.0**	**7.0**	**--**	**--**	**--**	**--**	**--**	**-7.3**	**Mar-19**
Cambridge Associates Global Natural Resources (1 Qtr Lag)				*1.9*	*1.9*	*-5.1*	*0.5*	*9.0*	*-0.3*	*5.5*	*-5.1*	*Mar-19*
Commonfund Natural Resources X	4,724,988	0.4		0.0	0.0	-2.3	6.0	38.0	--	--	18.1	Apr-16
Commonfund Natural Resources XI	130,408	0.0		0.0	0.0	-13.1	--	--	--	--	-13.1	Oct-18
Aether Real Assets IV	5,295,530	0.5		8.8	8.8	-0.1	10.9	4.9	--	--	4.7	Jun-16
Aether Real Assets V	1,134,544	0.1		36.0	36.0	-69.3	--	--	--	--	-45.0	Aug-18
Cambridge Associates Global Natural Resources (1 Qtr Lag)				*1.9*	*1.9*	*-5.1*	*0.5*	*9.0*	*-0.3*	*5.5*	*0.5*	*Aug-18*
Cash Composite	**9,424,455**	**0.9**	**0.0**	**0.2**	**0.5**	**1.2**	**2.3**	**1.1**	**0.7**	**0.4**	**1.4**	**Dec-03**
91 Day T-Bills				*0.2*	*0.6*	*1.2*	*2.3*	*1.4*	*0.9*	*0.5*	*1.3*	*Dec-03*
Hedge Fund Composite	**121,983,437**	**11.2**	**12.5**	**1.1**	**2.3**	**5.5**	**3.8**	**5.1**	**4.4**	**--**	**4.8**	**Jan-11**
HFRI FOF: Conservative Index				*1.0*	*1.7*	*5.0*	*2.4*	*3.9*	*2.2*	*3.1*	*2.5*	*Jan-11*
Magnitude International Class A Eligible	60,322,851	5.5		0.6	2.4	5.7	3.0	4.2	4.4	--	4.8	Jan-11
HFRI FOF: Conservative Index				*1.0*	*1.7*	*5.0*	*2.4*	*3.9*	*2.2*	*3.1*	*2.5*	*Jan-11*
Blackstone Partners Offshore Fund LTD	61,660,586	5.6		1.6	2.2	5.3	4.7	6.0	4.4	--	4.8	Mar-11
HFRI FOF: Conservative Index				*1.0*	*1.7*	*5.0*	*2.4*	*3.9*	*2.2*	*3.1*	*2.4*	*Mar-11*
Private Equity Composite	**143,259,788**	**13.1**	**10.0**	**2.7**	**2.7**	**6.5**	**17.4**	**16.5**	**15.8**	**14.2**	**13.0**	**Jul-08**
Cambridge Associates Global All PE				*0.0*	*0.0*	*4.8*	*7.0*	*13.2*	*10.2*	*13.3*	*9.4*	*Jul-08*

Realty Associates Fund VIII L.P., Realty Associates Fund IX L.P., Commonfund Natural Resources X, and Commonfund Natural Resources XI are as of 3/31/2019 and adjusted for any cash flows to date.

Magnitude International Class A Eligible market value and performance are estimated.

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, Real Assets Composite and Allocation Index 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.

Information Disclaimer

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- 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.