

MEETING MATERIALS

HOWARD COUNTY RETIREMENT PLANS

February 25, 2021

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BOSTON | ATLANTA | CHARLOTTE | CHICAGO | DETROIT | LAS VEGAS | PORTLAND | SAN FRANCISCO

TABLE OF CONTENTS

	<u>Page</u>
Q4 2020 Market Environment	4
Q4 2020 Total Fund Performance	13
Q3 Private Markets Performance	39
January 2021 Flash Report	58
Investment Policy Statement	64
Appendix	104



TRAILING ANNUAL INDEX PERFORMANCE

Equity						
	Jan-21	YTD	1 YR	3 YR	5 YR	10 YR
MSCI ACWI	-0.5%	-0.5%	17.0%	7.9%	13.6%	8.9%
S&P 500	-1.0%	-1.0%	17.2%	11.7%	16.2%	13.5%
Russell 1000	-0.8%	-0.8%	19.8%	12.5%	16.7%	13.6%
Russell 2000	5.0%	5.0%	30.2%	11.1%	16.5%	11.8%
Russell 2500	2.5%	2.5%	25.5%	11.1%	16.1%	12.1%
MSCI EAFE	-1.1%	-1.1%	8.9%	2.2%	8.8%	5.2%
MSCI EM	3.1%	3.1%	27.9%	4.4%	15.0%	4.2%
Credit						
	Jan-21	YTD	1 YR	3 YR	5 YR	10 YR
BC Global Agg	-0.9%	-0.9%	6.9%	4.1%	4.4%	2.7%
BC US Agg	-0.7%	-0.7%	4.7%	5.5%	4.0%	3.8%
BC Credit	-1.2%	-1.2%	5.6%	6.7%	6.1%	5.3%
BC US HY	0.3%	0.3%	7.4%	6.1%	9.0%	6.6%
BC Muni	0.6%	0.6%	4.0%	5.3%	3.8%	4.8%
BC Muni HY	2.1%	2.1%	4.5%	7.8%	6.9%	7.2%
BC TIPS	0.3%	0.3%	9.1%	6.3%	4.8%	3.8%
BC 20+ STRIPS	-5.3%	-5.3%	7.3%	12.4%	8.0%	11.9%
BC Long Treasuries	-3.6%	-3.6%	6.2%	9.7%	6.0%	7.6%
BC Long Credit	-2.6%	-2.6%	6.1%	8.7%	9.4%	8.1%
BC Govt/Credit 1-3 Yr	0.0%	0.0%	2.8%	3.1%	2.1%	1.6%
JPM EMBI Glob Div	-1.1%	-1.1%	2.6%	4.7%	6.9%	6.2%
JPM GBI-EM Glob Div	-1.1%	-1.1%	2.9%	1.1%	6.4%	1.5%
Real Assets						
	Jan-21	YTD	1 YR	3 YR	5 YR	10 YR
BBG Commodity	2.6%	2.6%	7.3%	-2.3%	1.9%	-6.4%
Alerian Midstream Index	5.9%	5.4%	-18.0%	-5.8%	4.0%	-
FTSE NAREIT Equity REITs	0.1%	0.1%	-9.0%	4.9%	5.5%	8.0%

Source: S&P, MSCI, Russell, Barclays, JPM, Alerian, FTSE, FactSet



Q4 2020 MARKET ENVIRONMENT

NEPC, LLC

MARKET OVERVIEW

Macro

US Dollar



-4.2%

VIX



-3.6

US 10-Year



23.7 bps

Equity

S&P 500



12.1%

MSCI EAFE



16.0%

MSCI EM



19.7%

Credit

US Agg.



0.7%

High Yield



6.5%

Dollar EMD



5.8%

Real Assets

Oil



20.7%

Gold



0.7%

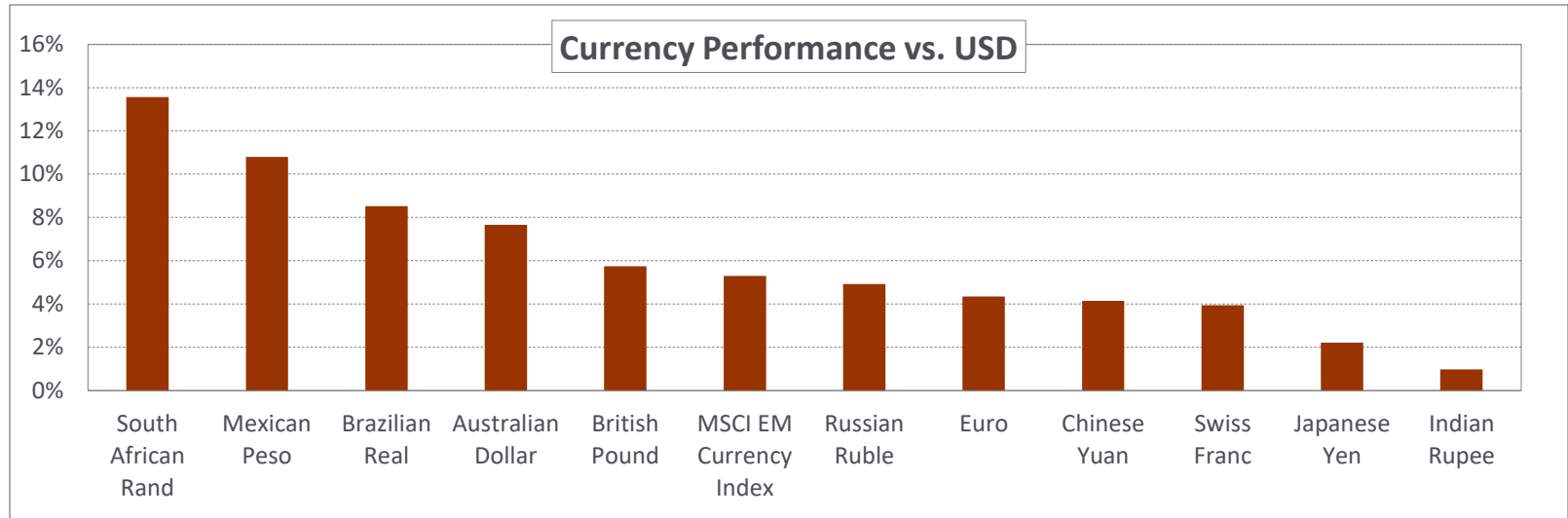
REITS



9.0%

Market segment (index representation) as follows: US Dollar (DXY Index), VIX (CBOE Volatility Index), US 10-Year (US 10-Year Treasury Yield), S&P 500 (US Equity), MSCI EAFE Index (International Developed Equity), MSCI Emerging Markets (Emerging Markets Equity), US Agg (Barclays US Aggregate Bond Index), High Yield (Barclays US High Yield Index), Dollar EMD (JPM EMBI Global Diversified Index), Crude Oil (WTI Crude Oil Spot), Gold (Gold Price Spot), and REITs (NAREIT Composite Index). Source: FactSet

MACRO OVERVIEW

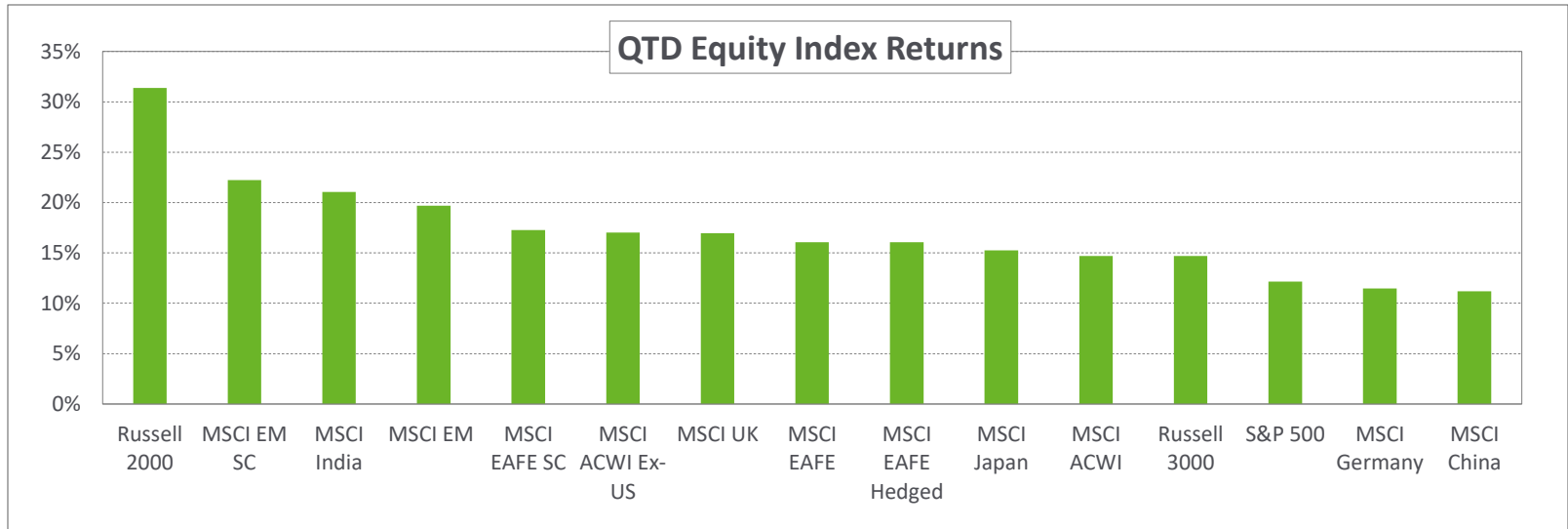


Source: MSCI, FactSet

Central Banks	Current Rate	CPI YOY	Notes from the Quarter
Federal Reserve	0.00% - 0.25%	1.2%	The Fed maintained current levels of monthly asset purchases and indicated that federal funds rate would remain near zero levels for the foreseeable future
European Central Bank	0.00%	-0.3%	The ECB increased its emergency bond-buying program by €500B to €1,850B and extended the program for nine months to the end of March 2022
Bank of Japan	-0.10%	-1.0%	The BoJ extended its pandemic support programs by six months and announced plans to review its current ultra-easy QE program to achieve its inflation target

Source: FactSet

EQUITY OVERVIEW

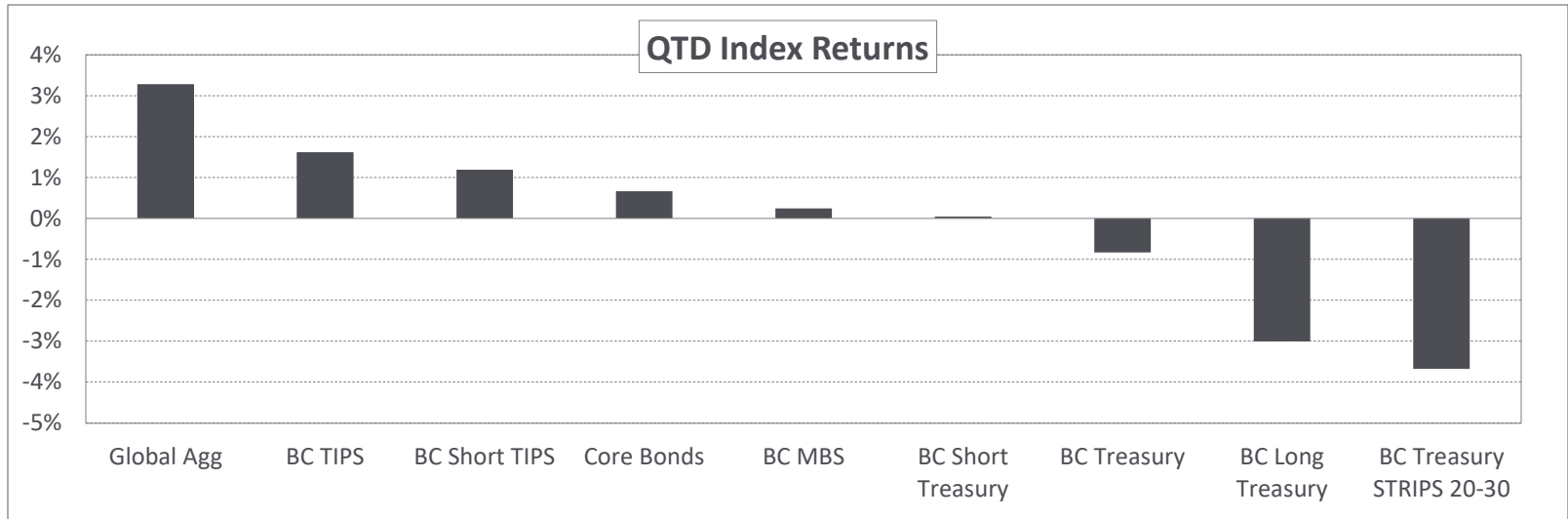


Source: S&P, MSCI, Russell, FactSet

Russell 3000 QTD Sector Returns	QTD	YTD
Technology	13.4%	46.5%
Health Care	10.1%	19.3%
Consumer Discretionary	16.2%	42.1%
Consumer Staples	7.8%	7.8%
Energy	31.9%	-28.9%
Materials & Processing	17.0%	19.2%
Producer Durables	16.9%	11.6%
Financial Services	24.5%	6.6%
Utilities	7.7%	0.3%

Source: FactSet

RATES OVERVIEW



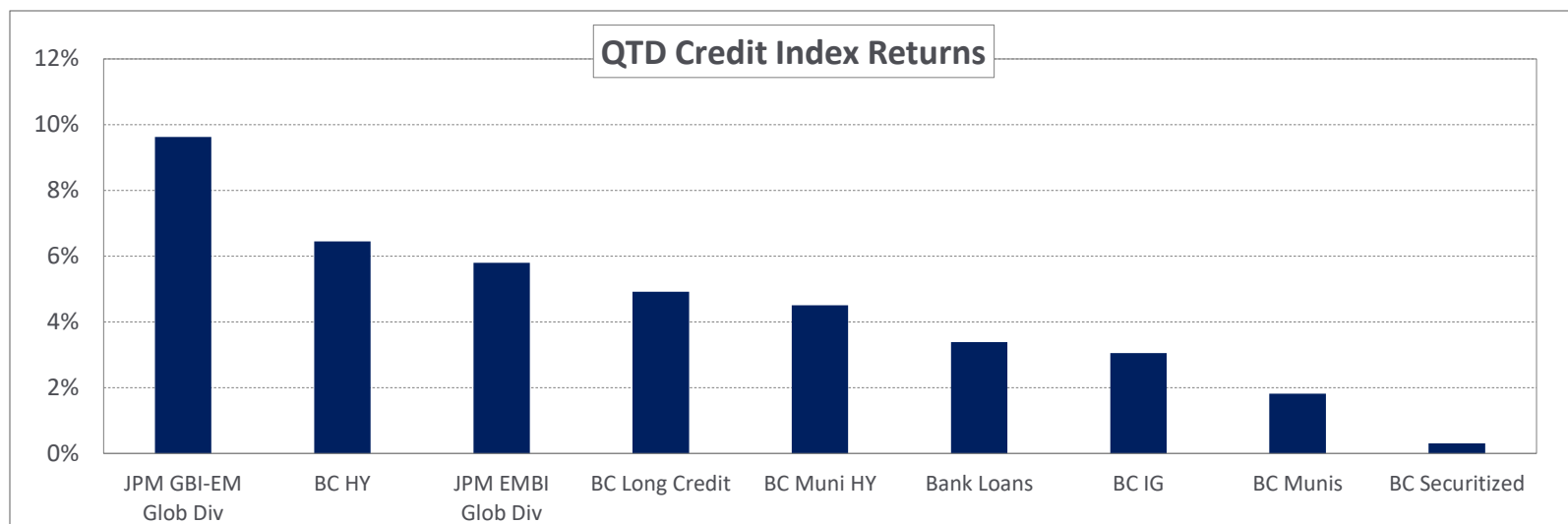
Source: S&P, MSCI, Russell, FactSet

	Previous Quarter Yield	Current Quarter Yield	\Delta
US 10-Year	0.68%	0.92%	0.24%
US 30-Year	1.45%	1.65%	0.20%
US Real 10-Year	-0.94%	-1.06%	-0.12%
German 10-Year	-0.53%	-0.58%	-0.05%
Japan 10-Year	0.03%	0.04%	0.01%
China 10-Year	3.16%	3.19%	0.03%
EM Local Debt	4.48%	4.22%	-0.26%

Source: Barclays, JPM, FactSet



CREDIT OVERVIEW



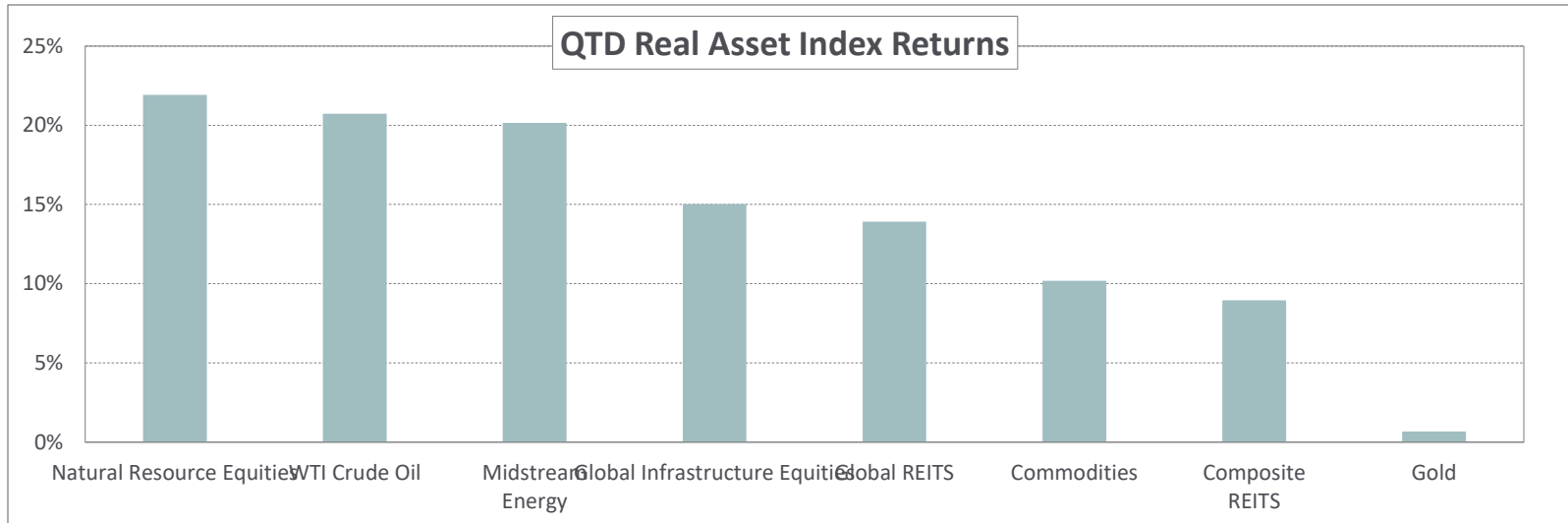
Source: S&P, MSCI, Russell, JPM, FactSet

	Previous Quarter Spread (bps)	Current Quarter Spread (bps)	Δ	Median
BC IG Credit	136	96	-40	137
BC Long Credit	188	141	-47	176
BC Securitized	64	42	-22	49
BC High Yield	517	360	-157	479
Muni HY	454	382	-72	634
JPM EMBI Glob Div	432	352	-80	344
Bank Loans - Libor	469	374	-96	448

Source: Barclays, JPM, FactSet;
Medians calculated since 11/30/2000

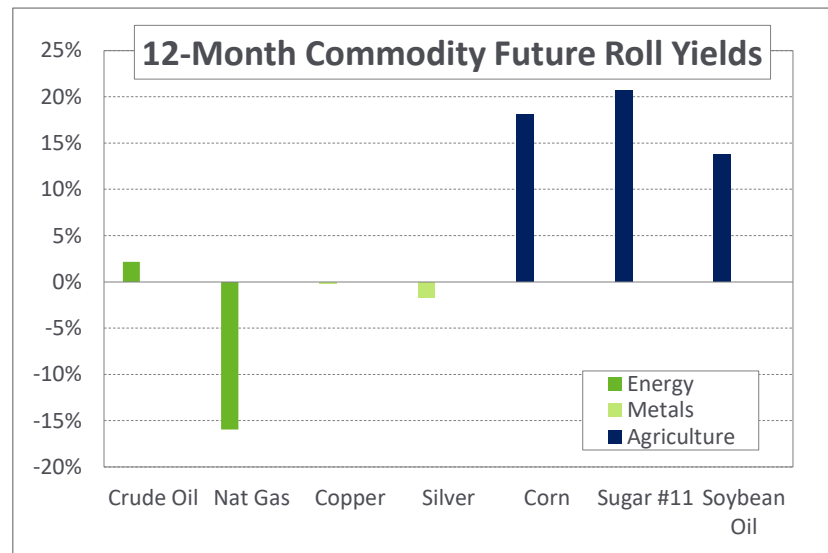


REAL ASSETS OVERVIEW



Source: S&P, MSCI, Russell, FactSet

Real Asset Yields	Previous Quarter	Current Quarter
Midstream Energy	9.9%	7.9%
Core Real Estate*	4.4%	4.3%
Composite REITs	4.1%	3.8%
Global REITs	4.8%	4.3%
Global Infrastructure Equities	4.1%	3.1%
Natural Resource Equities	4.5%	3.5%
Commodity Index Roll Yield	-6.7%	-0.1%



Source: FactSet

Sources: Alerian, NAREIT, Barclays, NEPC, FactSet
Core Real Estate* yields are subject to a one quarter lag



CALENDAR YEAR INDEX PERFORMANCE

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Jan	YTD
S&P 500	2.1%	16.0%	32.4%	13.7%	1.4%	12.0%	21.8%	-4.4%	31.5%	18.4%	-1.0%	-1.0%
Russell 1000	1.5%	16.4%	33.1%	13.2%	0.9%	12.1%	21.7%	-4.8%	31.4%	21.0%	-0.8%	-0.8%
Russell 2000	-4.2%	16.3%	38.8%	4.9%	-4.4%	21.3%	14.6%	-11.0%	25.5%	20.0%	5.0%	5.0%
Russell 2500	-2.5%	17.9%	36.8%	7.1%	-2.9%	17.6%	16.8%	-10.0%	27.8%	20.0%	2.5%	2.5%
MSCI EAFE	-12.1%	17.3%	22.8%	-4.9%	-0.8%	1.0%	25.0%	-13.8%	22.0%	7.8%	-1.1%	-1.1%
MSCI EM	-18.4%	18.2%	-2.6%	-2.2%	-14.9%	11.2%	37.3%	-14.6%	18.4%	18.3%	3.1%	3.1%
MSCI ACWI	-7.3%	16.1%	22.8%	4.2%	-2.4%	7.9%	24.0%	-9.4%	26.6%	16.3%	-0.5%	-0.5%
Private Equity	9.5%	12.6%	22.3%	14.6%	10.4%	10.3%	21.0%	13.1%	17.2%	1.8%*	-	-
BC TIPS	13.6%	7.0%	-8.6%	3.6%	-1.4%	4.7%	3.0%	-1.3%	8.4%	11.0%	0.3%	0.3%
BC Municipal	10.7%	6.8%	-2.6%	9.1%	3.3%	0.2%	5.4%	1.3%	7.5%	5.2%	0.6%	0.6%
BC Muni High Yield	9.2%	18.1%	-5.5%	13.8%	1.8%	3.0%	9.7%	4.8%	10.7%	4.9%	2.1%	2.1%
BC US Corporate HY	5.0%	15.8%	7.4%	2.5%	-4.5%	17.1%	7.5%	-2.1%	14.3%	7.1%	0.3%	0.3%
BC US Agg Bond	7.8%	4.2%	-2.0%	6.0%	0.5%	2.6%	3.5%	0.0%	8.7%	7.5%	-0.7%	-0.7%
BC Global Agg	5.6%	4.3%	-2.6%	0.6%	-3.2%	2.1%	7.4%	-1.2%	6.8%	9.2%	-0.9%	-0.9%
BC Long Treasuries	29.9%	3.6%	-12.7%	25.1%	-1.2%	1.3%	8.5%	-1.8%	14.8%	17.7%	-3.6%	-3.6%
BC US Long Credit	17.1%	12.7%	-6.6%	16.4%	-4.6%	10.2%	12.2%	-6.8%	23.4%	13.3%	-2.6%	-2.6%
BC US STRIPS 20+ Yr	58.5%	3.0%	-21.0%	46.4%	-3.7%	1.4%	13.7%	-4.1%	20.9%	24.0%	-5.3%	-5.3%
JPM GBI-EM Global Div	-1.8%	16.8%	-9.0%	-5.7%	-14.9%	9.9%	15.2%	-6.2%	13.5%	2.7%	-1.1%	-1.1%
JPM EMBI Glob Div	7.3%	17.4%	-5.3%	7.4%	1.2%	10.2%	10.3%	-4.3%	15.0%	5.3%	-1.1%	-1.1%
CS Hedge Fund	-2.5%	7.7%	9.7%	4.1%	-0.7%	1.2%	7.1%	-3.2%	9.3%	6.4%	6.4%	6.4%
BBG Commodity	-13.3%	-1.1%	-9.5%	-17.0%	-24.7%	11.8%	1.7%	-11.2%	7.7%	-3.1%	2.6%	2.6%
Alerian MLP	13.9%	4.8%	27.6%	4.8%	-32.6%	18.3%	-6.5%	-12.4%	6.6%	-28.7%	5.8%	5.8%
FTSE NAREIT Equity REITs	8.3%	18.1%	2.5%	30.1%	3.2%	8.5%	5.2%	-4.6%	26.0%	-8.0%	0.1%	0.1%

Source: FactSet, Barclays, Thomson One

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

RETURNS FOR KEY INDICES RANKED IN ORDER OF PERFORMANCE (AS OF 12/31/2020)

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MSCI EMERGING MARKETS 32.17	MSCI EMERGING MARKETS 39.39	BC AGGREGATE 5.24	MSCI EMERGING MARKETS 78.51	RUSSELL 2000 GROWTH 29.09	BC AGGREGATE 7.84	MSCI EMERGING MARKETS 18.22	RUSSELL 2000 GROWTH 43.30	S&P 500 13.69	RUSSELL 1000 GROWTH 5.67	RUSSELL 2000 VALUE 31.74	MSCI EMERGING MARKETS 37.28	BC AGGREGATE 0.01	RUSSELL 1000 GROWTH 36.39	RUSSELL 1000 GROWTH 38.49
MSCI EAFE 26.34	RUSSELL 1000 GROWTH 11.81	RUSSELL 2000 VALUE -28.92	RUSSELL 1000 GROWTH 37.21	RUSSELL 2000 VALUE 26.85	RUSSELL 1000 GROWTH 2.64	RUSSELL 2000 VALUE 18.05	RUSSELL 2000 VALUE 38.82	RUSSELL 1000 VALUE 13.45	S&P 500 1.38	RUSSELL 2000 VALUE 21.31	RUSSELL 1000 GROWTH 30.21	RUSSELL 1000 GROWTH -1.51	S&P 500 31.49	RUSSELL 2000 GROWTH 34.63
RUSSELL 1000 VALUE 22.25	MSCI EAFE 11.17	RUSSELL 2000 VALUE -33.79	RUSSELL 2000 GROWTH 34.47	RUSSELL 2000 VALUE 24.5	S&P 500 2.11	RUSSELL 1000 VALUE 17.51	RUSSELL 2000 VALUE 34.52	RUSSELL 1000 VALUE 13.24	RUSSELL 1000 VALUE 0.92	RUSSELL 1000 VALUE 17.34	MSCI EAFE 25.03	S&P 500 -4.38	RUSSELL 1000 VALUE 31.43	RUSSELL 2000 VALUE 19.96
RUSSELL 2000 VALUE 23.48	RUSSELL 2000 GROWTH 7.06	RUSSELL 1000 VALUE -36.85	MSCI EAFE 31.78	MSCI EMERGING MARKETS 18.88	RUSSELL 1000 VALUE 1.50	MSCI EAFE 17.32	RUSSELL 1000 GROWTH 33.48	RUSSELL 1000 GROWTH 13.05	BC AGGREGATE 0.55	RUSSELL 1000 VALUE 12.05	RUSSELL 2000 GROWTH 22.17	RUSSELL 1000 GROWTH -4.78	RUSSELL 2000 GROWTH 28.48	RUSSELL 1000 VALUE 20.96
RUSSELL 2000 VALUE 18.37	BC AGGREGATE 6.97	S&P 500 -37.0	RUSSELL 1000 VALUE 28.43	RUSSELL 1000 GROWTH 16.71	RUSSELL 1000 VALUE 0.39	RUSSELL 1000 VALUE 16.42	RUSSELL 1000 VALUE 33.11	BC AGGREGATE 5.97	MSCI EAFE -0.81	S&P 500 11.96	S&P 500 21.83	RUSSELL 1000 VALUE -8.27	RUSSELL 1000 VALUE 26.54	S&P 500 18.40
S&P 500 15.8	RUSSELL 1000 VALUE 5.77	RUSSELL 1000 VALUE -37.6	RUSSELL 2000 VALUE 27.16	RUSSELL 1000 VALUE 16.10	RUSSELL 2000 GROWTH -2.91	RUSSELL 2000 VALUE 16.35	RUSSELL 1000 VALUE 32.53	RUSSELL 2000 GROWTH 5.60	RUSSELL 2000 GROWTH -1.38	RUSSELL 2000 GROWTH 11.32	RUSSELL 1000 VALUE 21.69	RUSSELL 2000 GROWTH -9.31	RUSSELL 2000 VALUE 25.52	MSCI EMERGING MARKETS 18.31
RUSSELL 1000 VALUE 15.46	S&P 500 5.49	RUSSELL 1000 GROWTH -38.44	S&P 500 26.46	RUSSELL 1000 VALUE 15.51	RUSSELL 2000 VALUE -4.18	S&P 500 16.00	S&P 500 32.39	RUSSELL 2000 VALUE 4.89	RUSSELL 1000 VALUE -3.83	MSCI EMERGING MARKETS 11.19	RUSSELL 2000 VALUE 14.65	RUSSELL 2000 VALUE -11.01	RUSSELL 2000 VALUE 22.39	MSCI EAFE 7.82
RUSSELL 2000 GROWTH 13.35	RUSSELL 1000 VALUE -0.17	RUSSELL 2000 GROWTH -38.54	RUSSELL 2000 VALUE 20.58	S&P 500 15.06	RUSSELL 2000 VALUE -5.50	RUSSELL 1000 GROWTH 15.26	MSCI EAFE 22.78	RUSSELL 2000 VALUE 4.22	RUSSELL 2000 VALUE -4.41	RUSSELL 1000 GROWTH 7.08	RUSSELL 1000 VALUE 13.66	RUSSELL 2000 VALUE -12.86	MSCI EAFE 22.01	BC AGGREGATE 7.51
RUSSELL 1000 GROWTH 9.07	RUSSELL 2000 VALUE -1.56	MSCI EAFE -43.38	RUSSELL 1000 VALUE 19.69	MSCI EAFE 7.75	MSCI EAFE -12.14	RUSSELL 2000 GROWTH 14.59	BC AGGREGATE -2.02	MSCI EMERGING MARKETS -2.19	RUSSELL 2000 VALUE -7.46	BC AGGREGATE 2.65	RUSSELL 2000 VALUE 7.84	MSCI EAFE -13.79	MSCI EMERGING MARKETS 18.44	RUSSELL 2000 VALUE 4.63
BC AGGREGATE 4.33	RUSSELL 2000 VALUE -9.78	MSCI EMERGING MARKETS -53.33	BC AGGREGATE 5.93	BC AGGREGATE 6.54	MSCI EMERGING MARKETS -18.42	BC AGGREGATE 4.21	MSCI EMERGING MARKETS -2.60	MSCI EAFE -4.90	MSCI EMERGING MARKETS -14.93	MSCI EAFE 1.00	BC AGGREGATE 3.54	MSCI EMERGING MARKETS -14.58	BC AGGREGATE 8.72	RUSSELL 1000 VALUE 2.79

QTD	3 year	5 Year	10 Year
RUSSELL 2000 VALUE 33.36	RUSSELL 1000 GROWTH 22.99	RUSSELL 1000 GROWTH 21.00	RUSSELL 1000 GROWTH 17.21
RUSSELL 2000 VALUE 31.37	RUSSELL 2000 GROWTH 16.19	RUSSELL 2000 GROWTH 16.36	RUSSELL 1000 VALUE 14.01
RUSSELL 2000 GROWTH 29.61	RUSSELL 1000 VALUE 14.82	RUSSELL 1000 VALUE 15.60	S&P 500 13.88
MSCI EMERGING MARKETS 19.70	S&P 500 14.18	S&P 500 15.22	RUSSELL 2000 GROWTH 13.48
RUSSELL 1000 VALUE 16.25	RUSSELL 2000 VALUE 10.25	RUSSELL 2000 VALUE 13.26	RUSSELL 2000 VALUE 11.20
MSCI EAFE 16.05	MSCI EMERGING MARKETS 6.17	MSCI EMERGING MARKETS 12.81	RUSSELL 1000 VALUE 10.50
RUSSELL 1000 VALUE 13.69	RUSSELL 1000 VALUE 6.07	RUSSELL 1000 VALUE 9.74	RUSSELL 2000 VALUE 8.66
S&P 500 12.15	BC AGGREGATE 5.34	RUSSELL 2000 VALUE 9.65	MSCI EAFE 5.51
RUSSELL 1000 GROWTH 11.39	MSCI EAFE 4.28	MSCI EAFE 7.45	BC AGGREGATE 3.84
BC AGGREGATE 0.67	RUSSELL 2000 VALUE 3.72	BC AGGREGATE 4.44	MSCI EMERGING MARKETS 3.63



Q4 2020 TOTAL FUND PERFORMANCE

NEPC, LLC

EXECUTIVE SUMMARY AS OF 12/31/2020

- **Asset Allocation**

- The assets of the Plan totaled \$1.29 billion as of December 31, 2020 and had an investment gain of \$110.7 million during the quarter.

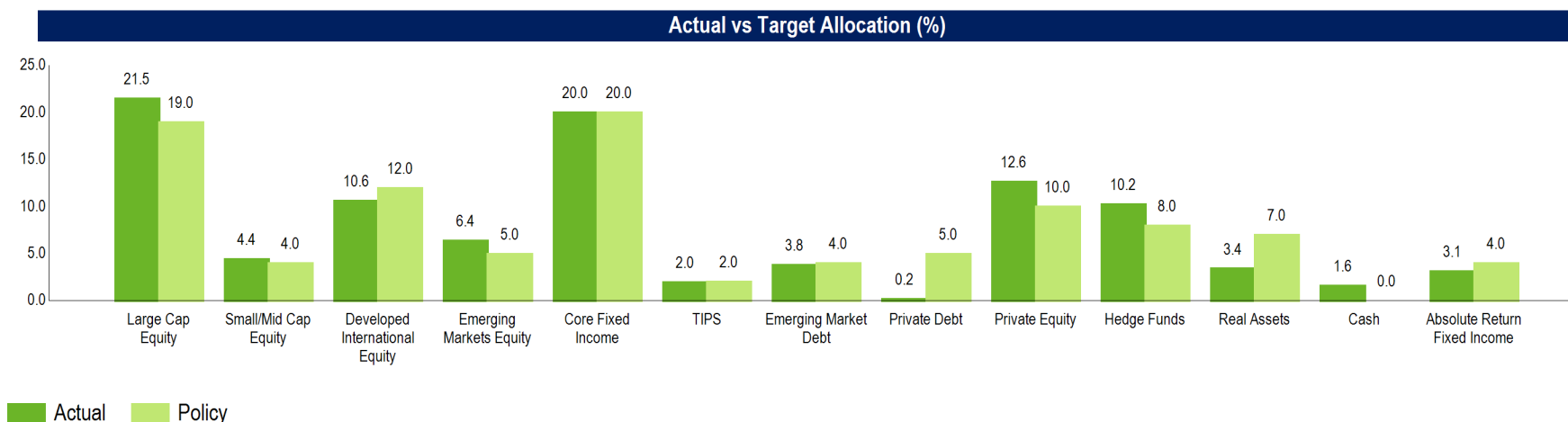
- **Performance**

- The Plan gained 9.1% (gross) in Q4 as the markets continued to rebound with the positive news around vaccines and a fiscal stimulus plan, although uncertainties surrounding the global economy still remain
 - The quarterly return ranked ahead of the median in the 78th percentile of the Public DB peer group
- For the trailing one year, the fund was up 12.8%, which placed it above the IF Public DB > \$1B Gross Median return of 11.1% and ranking in the 28th percentile
- In aggregate, the US Equity Composite was up 15.0% for the quarter, which outperformed the Russell 3000 benchmark return of 14.7% but underperformed the eV All US Equity Gross Median return of 17.6%
 - Large Cap Equity added 13.3% for the quarter, outperforming the eV US Large Cap Equity Gross Median by 70 basis points
 - The Small/Mid Cap Equity composite gained 23.6% for the quarter, ranking in the 62nd percentile but underperformed the eV US Small-Mid Cap Equity Gross Median return by 140 basis points
- The International Equity Composite was up 16.8%, which underperformed the MSCI ACWI ex USA return of 17.0% and outperformed the eV ACWI ex-US All Cap Equity Gross universe median return of 16.6%
 - International Developed Equity was ahead of the median by 110 bps, returning 16.5%
 - International Emerging Equity underperformed the median by 280 bps, returning 17.4%
- The Fixed Income Composite gained 3.3% in the fourth quarter, outperforming the All US Fixed Income Gross Median return of 1.4%

Howard County Retirement Plans

TOTAL FUND PERFORMANCE SUMMARY (GROSS)

		Ending December 31, 2020													
	Market Value	3 Mo	Rank	Fiscal YTD	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	10 Yrs	Rank	Inception	Inception Date
Total Fund Composite	\$1,298,087,548	9.1%	78	15.4%	56	12.8%	28	9.1%	20	10.2%	27	8.3%	43	7.7%	Apr-97
<i>Policy Index</i>		7.8%	95	12.8%	95	10.2%	69	7.8%	51	8.8%	81	7.6%	75	7.5%	Apr-97
<i>Allocation Index</i>		7.8%	95	13.3%	92	10.8%	56	--	--	--	--	--	--	--	Apr-97
<i>InvMetrics Public DB > \$1B Gross Median</i>		10.3%		15.6%		11.1%		7.8%		9.4%		8.2%		7.4%	Apr-97

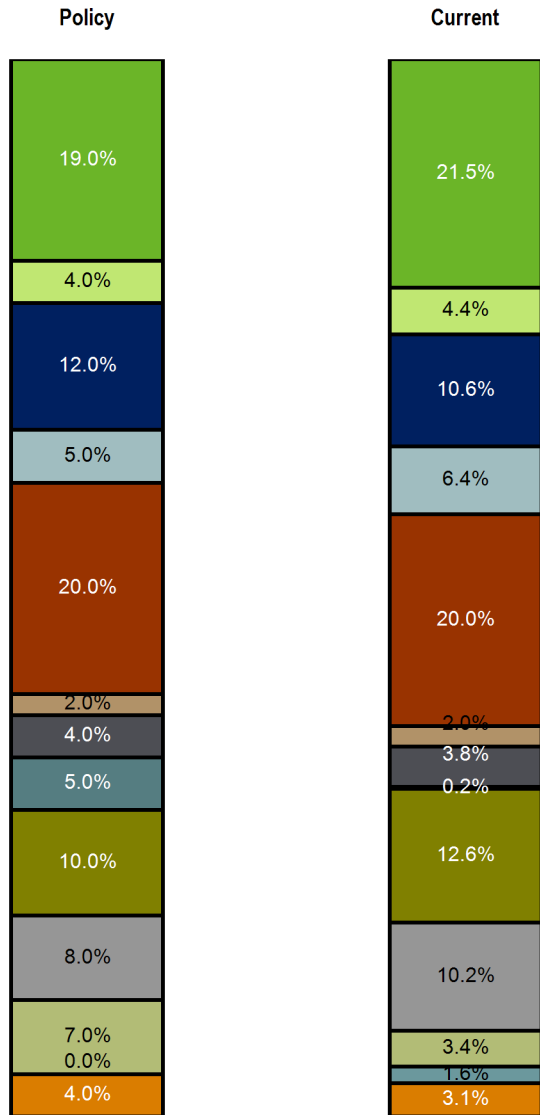


Fiscal year end 6/30.



Howard County Retirement Plans

ASSET ALLOCATION VS. POLICY TARGETS



Asset Allocation vs. Target				
	Current	Policy	Current	Difference*
Large Cap Equity	\$279,244,804	19.0%	21.5%	2.5%
Small/Mid Cap Equity	\$57,496,415	4.0%	4.4%	0.4%
Developed International Equity	\$138,218,803	12.0%	10.6%	-1.4%
Emerging Markets Equity	\$83,309,720	5.0%	6.4%	1.4%
Core Fixed Income	\$259,861,991	20.0%	20.0%	0.0%
TIPS	\$25,528,918	2.0%	2.0%	0.0%
Emerging Market Debt	\$49,572,143	4.0%	3.8%	-0.2%
Private Debt	\$2,536,680	5.0%	0.2%	-4.8%
Private Equity	\$163,964,614	10.0%	12.6%	2.6%
Hedge Funds	\$132,899,714	8.0%	10.2%	2.2%
Real Assets	\$44,279,243	7.0%	3.4%	-3.6%
Cash	\$20,472,639	0.0%	1.6%	1.6%
Absolute Return Fixed Income	\$40,701,865	4.0%	3.1%	-0.9%
Total	\$1,298,087,548	100.0%	100.0%	

*Difference between Policy and Current Allocation



Howard County Retirement Plans

TOTAL FUND PERFORMANCE SUMMARY (GROSS)

	Ending December 31, 2020										
	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund Composite	1,298,087,548	100.0	100.0	9.1	15.4	12.7	9.1	10.2	8.3	7.7	Apr-97
<i>Policy Index</i>				7.8	12.8	10.2	7.8	8.8	7.6	7.5	Apr-97
<i>Allocation Index</i>				7.8	13.3	10.8	--	--	--	--	Apr-97
Total US Equity Composite	336,741,219	25.9	23.0	15.0	25.1	19.8	13.7	15.5	14.0	9.2	Jul-97
<i>Russell 3000</i>				14.7	25.2	20.9	14.5	15.4	13.8	8.6	Jul-97
<i>US Equity Allocation Index</i>				15.4	26.1	21.8	14.4	15.4	13.5	--	Jul-97
Total International Equity	221,528,523	17.1	17.0	16.8	27.7	16.4	8.0	11.3	5.9	5.4	Jul-97
<i>MSCI ACWI ex USA</i>				17.0	24.3	10.7	4.9	8.9	4.9	5.0	Jul-97
Total Fixed Income Composite	375,664,916	28.9	30.0	3.3	5.0	8.8	5.8	6.2	4.9	5.6	Jul-97
<i>Fixed Income Policy Index</i>				0.7	1.3	7.5	5.3	4.4	3.8	5.3	Jul-97
Total Real Assets Composite	44,279,243	3.4	7.0	-0.3	6.3	-5.1	2.8	5.7	6.0	6.4	Jul-03
<i>NCREIF Property Index 1 Qtr. Lag</i>				0.7	-0.3	2.0	5.1	6.3	9.4	8.4	Jul-03
Cash Composite	20,472,639	1.6		0.0	0.0	0.2	1.2	0.8	0.4	1.3	Dec-03
<i>91 Day T-Bills</i>				0.0	0.0	0.5	1.5	1.1	0.6	1.3	Dec-03
Hedge Fund Composite	132,899,714	10.2	8.0	4.9	8.4	8.0	5.5	4.7	5.1	5.1	Jan-11
<i>HFRI FOF: Conservative Index</i>				5.8	8.6	6.4	3.9	3.5	2.9	2.9	Jan-11
Private Equity Composite	164,001,294	12.6	10.0	9.0	18.0	17.4	17.0	16.1	14.6	13.5	Jul-08
<i>CJA US All PE (1 Qtr Lag)</i>				11.0	21.5	13.4	13.1	13.0	13.6	10.7	Jul-08
Private Debt	2,500,000	0.2	5.0	0.0	0.0	--	--	--	--	0.0	Jun-20
<i>S&P/LSTA Leveraged Loan TR</i>				3.8	8.1	3.1	4.0	5.2	4.3	8.1	Jun-20

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 %	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Total Fund Composite	1,298,087,548	100.0	100.0	9.1	78	15.4	56	12.8	28	9.1	20	10.2	27	8.3	43	7.7	Apr-97
<i>Policy Index</i>				7.8	95	12.8	95	10.2	69	7.8	51	8.8	81	7.6	75	7.5	Apr-97
<i>Allocation Index</i>				7.8	95	13.3	92	10.8	56	--	--	--	--	--	--	--	Apr-97
<i>InvMetrics Public DB > \$1B Gross Median</i>				10.3		15.6		11.1		7.8		9.4		8.2		7.4	Apr-97
Total Equity Composite	558,269,742	43.0	40.0	15.7	38	26.2	34	18.2	38	11.2	39	13.6	30	10.6	37	7.9	Apr-00
<i>MSCI ACWI IMI</i>				15.7	38	25.1	40	16.3	46	9.7	49	12.1	46	9.1	66	5.3	Apr-00
<i>eV All Global Equity Gross Median</i>				14.3		23.5		15.3		9.5		11.7		9.9		7.7	Apr-00
Total US Equity Composite	336,741,219	25.9	23.0	15.0	62	25.1	57	19.8	41	13.7	41	15.5	36	14.0	34	9.2	Jul-97
<i>Russell 3000</i>				14.7	63	25.2	56	20.9	37	14.5	36	15.4	37	13.8	38	8.6	Jul-97
<i>US Equity Allocation Index</i>				15.4	60	26.1	51	21.8	35	14.4	38	15.4	37	13.5	41	--	Jul-97
<i>eV All US Equity Gross Median</i>				17.6		26.3		15.8		11.3		13.6		12.8		10.1	Jul-97
Large Cap Composite	279,244,804	21.5	19.0	13.3	43	24.1	36	18.3	44	13.2	48	14.8	43	13.9	41	9.3	Apr-01
<i>Russell 1000</i>				13.7	40	24.5	32	21.0	36	14.8	39	15.6	37	14.0	41	8.6	Apr-01
<i>eV US Large Cap Equity Gross Median</i>				12.6		22.5		15.4		12.4		14.1		13.3		9.1	Apr-01
LSV Asset Management SMA	67,997,892	5.2		20.1	19	25.4	26	-1.5	91	3.3	91	9.1	79	11.4	44	9.4	May-00
<i>Russell 1000 Value</i>				16.3	42	22.8	46	2.8	62	6.1	60	9.7	66	10.5	67	7.0	May-00
<i>eV US Large Cap Value Equity Gross Median</i>				15.8		22.3		4.4		6.9		10.6		11.1		8.3	May-00
Westfield Capital Management SMA	110,595,533	8.5		10.5	65	25.0	40	35.3	49	22.2	48	20.0	42	15.9	63	18.1	Jul-10
<i>Russell 1000 Growth</i>				11.4	50	26.1	30	38.5	34	23.0	41	21.0	28	17.2	27	18.9	Jul-10
<i>eV US Large Cap Growth Equity Gross Median</i>				11.4		23.9		34.9		22.0		19.4		16.3		18.1	Jul-10
BlackRock Equity Index Non-Lendable Fund	100,651,378	7.8		12.1	57	22.2	54	18.4	44	--	--	--	--	--	--	20.1	Dec-19
<i>S&P 500</i>				12.1	57	22.2	54	18.4	44	14.2	43	15.2	41	13.9	42	20.1	Dec-19
<i>eV US Large Cap Equity Gross Median</i>				12.6		22.5		15.4		12.4		14.1		13.3		17.2	Dec-19



Howard County Retirement Plans

TOTAL FUND PERFORMANCE DETAIL (GROSS)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Small/Mid Cap Composite	57,496,415	4.4	4.0	23.6	62	30.7	62	27.0	32	16.0	32	17.9	23	14.9	21	12.8	Apr-93
<i>Russell 2500</i>				27.4	33	34.9	35	20.0	45	11.3	48	13.6	50	12.0	52	10.7	Apr-93
<i>eV US Small-Mid Cap Equity Gross Median</i>				25.0		32.4		17.2		10.8		13.5		12.1		12.3	Apr-93
William Blair SMA	20,653,055	1.6		21.5	72	31.8	67	33.4	66	20.4	58	19.7	49	16.9	30	13.7	Jun-06
<i>Russell 2500 Growth</i>				25.9	32	37.7	37	40.5	54	19.9	63	18.7	56	15.0	59	11.7	Jun-06
<i>eV US Small-Mid Cap Growth Equity Gross Median</i>				23.3		33.9		41.7		22.0		19.4		15.5		13.2	Jun-06
ICM Small Company - ICSCX	15,813,604	1.2		30.1	52	33.1	57	3.8	57	4.7	42	11.6	27	10.5	34	11.6	Apr-93
<i>Russell 2000 Value</i>				33.4	29	36.8	34	4.6	53	3.7	55	9.7	50	8.7	83	9.7	Apr-93
<i>eV US Small Cap Value Equity Gross Median</i>				30.1		33.9		5.3		4.1		9.6		9.9		12.2	Apr-93
Brown Capital Small Company Strategy SMA	21,029,756	1.6		21.0	91	27.9	96	46.3	43	25.0	35	23.1	28	--	--	20.9	Aug-11
<i>Russell 2000 Growth</i>				29.6	28	38.9	47	34.6	66	16.2	77	16.4	77	13.5	86	13.9	Aug-11
<i>eV US Small Cap Growth Equity Gross Median</i>				27.3		38.3		42.2		22.1		19.7		15.8		16.0	Aug-11
Total International Equity	221,528,523	17.1	17.0	16.8	49	27.7	45	16.4	52	8.0	52	11.3	49	5.9	76	5.4	Jul-97
<i>MSCI ACWI ex USA</i>				17.0	47	24.3	73	10.7	66	4.9	70	8.9	74	4.9	91	5.0	Jul-97
<i>eV ACWI ex-US All Cap Equity Gross Median</i>				16.6		27.0		17.4		8.3		11.3		7.9		7.7	Jul-97
International Developed Markets Composite	138,218,803	10.6	12.0	16.5	36	24.8	44	13.1	34	7.5	25	9.1	42	6.9	55	4.5	Mar-08
<i>MSCI EAFE</i>				16.0	42	21.6	69	7.8	60	4.3	58	7.4	66	5.5	85	3.2	Mar-08
<i>eV All EAFE Equity Gross Median</i>				15.4		23.6		8.7		4.8		8.4		7.1		5.0	Mar-08
Mondrian International Equity Fund, L.P.	62,239,304	4.8		17.9	24	19.6	83	-3.7	98	0.9	87	5.5	88	5.0	91	1.9	Dec-07
<i>MSCI EAFE</i>				16.0	42	21.6	69	7.8	60	4.3	58	7.4	66	5.5	85	2.3	Dec-07
<i>eV All EAFE Equity Gross Median</i>				15.4		23.6		8.7		4.8		8.4		7.1		4.1	Dec-07
Baillie Gifford EAFE Pure K - BGPXX	75,979,499	5.9		15.4	50	29.4	17	28.8	6	--	--	--	--	--	--	15.2	May-18
<i>MSCI EAFE</i>				16.0	42	21.6	69	7.8	60	4.3	58	7.4	66	5.5	85	4.6	May-18
<i>eV All EAFE Equity Gross Median</i>				15.4		23.6		8.7		4.8		8.4		7.1		5.1	May-18



Howard County Retirement Plans

TOTAL FUND PERFORMANCE DETAIL (GROSS)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
International Emerging Markets Composite	83,309,720	6.4	5.0	17.4	83	32.7	46	22.0	35	8.7	28	15.8	24	3.7	77	7.2	Feb-06
MSCI Emerging Markets				19.7	56	31.1	58	18.3	50	6.2	54	12.8	57	3.6	79	5.9	Feb-06
eV Emg Mkts Equity Gross Median				20.2		32.1		18.2		6.3		13.0		4.9		7.4	Feb-06
GQG Partners Emerging Markets Equity Fund	58,309,720	4.5		16.1	90	36.3	23	34.9	10	--	--	--	--	--	--	27.5	Dec-18
MSCI Emerging Markets				19.7	56	31.1	58	18.3	50	6.2	54	12.8	57	3.6	79	16.1	Dec-18
eV Emg Mkts Equity Gross Median				20.2		32.1		18.2		6.3		13.0		4.9		17.0	Dec-18
Arga Emerging Markets Equity Fund	25,000,000	1.9		--	--	--	--	--	--	--	--	--	--	--	--	--	Jan-21
MSCI EASEA				16.3	90	21.0	96	5.6	90	3.7	77	7.0	97	5.2	45	--	Jan-21
eV Emg Mkts Equity Gross Median				20.2		32.1		18.2		6.3		13.0		4.9		--	Jan-21
Total Fixed Income Composite	375,664,916	28.9	30.0	3.3	26	5.0	32	8.8	28	5.8	39	6.2	28	4.9	37	5.6	Jul-97
BBgBarc US Aggregate TR				0.7	72	1.3	76	7.5	42	5.3	48	4.4	57	3.8	61	5.2	Jul-97
eV All US Fixed Inc Gross Median				1.4		2.8		6.6		5.2		4.8		4.4		5.3	Jul-97
Core Fixed Income Composite	285,390,909	22.0	22.0	1.9	11	3.7	9	10.0	14	--	--	--	--	--	--	9.5	Mar-19
BBgBarc US Aggregate TR				0.7	81	1.3	87	7.5	86	5.3	90	4.4	91	3.8	93	8.3	Mar-19
eV US Core Fixed Inc Gross Median				1.1		2.2		8.6		5.9		5.0		4.4		9.1	Mar-19
Dodge & Cox SMA	127,516,013	9.8		2.6	33	4.2	38	10.1	19	6.5	22	6.1	28	5.1	34	5.2	May-10
BBgBarc US Aggregate TR				0.7	72	1.3	76	7.5	42	5.3	48	4.4	57	3.8	61	3.9	May-10
eV All US Fixed Inc Gross Median				1.4		2.8		6.6		5.2		4.8		4.4		4.4	May-10
PIMCO Total Return	132,345,978	10.2		1.3	54	3.0	48	9.7	21	5.9	35	5.3	37	4.4	50	4.6	May-10
BBgBarc US Aggregate TR				0.7	72	1.3	76	7.5	42	5.3	48	4.4	57	3.8	61	3.9	May-10
eV All US Fixed Inc Gross Median				1.4		2.8		6.6		5.2		4.8		4.4		4.4	May-10
State Street Global Advisors TIPS	25,528,918	2.0		1.6	67	4.6	66	11.0	50	5.9	61	5.1	68	3.8	65	4.0	Nov-09
BBgBarc US TIPS TR				1.6	67	4.7	59	11.0	49	5.9	59	5.1	67	3.8	63	4.0	Nov-09
eV US TIPS / Inflation Fixed Inc Gross Median				1.6		4.8		10.9		5.9		5.2		3.9		4.1	Nov-09



Howard County Retirement Plans

TOTAL FUND PERFORMANCE DETAIL (GROSS)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Emerging Markets Debt Composite	49,572,143	3.8	4.0	12.6	2	13.6	6	5.0	67	--	--	--	--	--	--	7.7	Mar-19
JP Morgan GBI EM Global Diversified TR USD				9.6	23	10.3	61	2.7	90	3.0	84	6.7	81	1.5	92	6.2	Mar-19
eV All Emg Mkts Fixed Inc Gross Median				7.8		10.8		6.6		5.0		7.7		5.6		8.3	Mar-19
Colchester Local Markets Debt Fund	49,572,143	3.8		12.6	2	13.6	6	5.0	67	4.8	53	9.3	7	--	--	8.5	Oct-15
JP Morgan GBI EM Global Diversified TR USD				9.6	23	10.3	61	2.7	90	3.0	84	6.7	81	1.5	92	6.4	Oct-15
eV All Emg Mkts Fixed Inc Gross Median				7.8		10.8		6.6		5.0		7.7		5.6		7.5	Oct-15
Absolute Return Fixed Income	40,701,865	3.1	4.0	2.4	36	4.2	38	--	--	--	--	--	--	--	--	2.2	Mar-20
3-Month Libor Total Return USD				0.1	96	0.1	98	0.6	98	1.8	99	1.5	98	0.9	99	0.3	Mar-20
eV All US Fixed Inc Gross Median				1.4		2.8		6.6		5.2		4.8		4.4		4.1	Mar-20
Payden Absolute Return Bond Fund PYAIX	40,701,865	3.1		2.4	36	4.2	38	--	--	--	--	--	--	--	--	2.2	Mar-20
3-Month Libor Total Return USD				0.1	96	0.1	98	0.6	98	1.8	99	1.5	98	0.9	99	0.3	Mar-20
eV All US Fixed Inc Gross Median				1.4		2.8		6.6		5.2		4.8		4.4		4.1	Mar-20
Total Real Assets Composite	44,279,243	3.4	7.0	-0.3	--	6.3	--	-5.1	--	2.8	--	5.7	--	6.0	--	6.4	Jul-03
NCREIF Property Index 1 Qtr. Lag				0.7	--	-0.3	--	2.0	--	5.1	--	6.3	--	9.4	--	8.4	Jul-03
Cash Composite	20,472,639	1.6		0.0	--	0.0	--	0.2	--	1.2	--	0.8	--	0.4	--	1.3	Dec-03
91 Day T-Bills				0.0	--	0.0	--	0.5	--	1.5	--	1.1	--	0.6	--	1.3	Dec-03



Howard County Retirement Plans

TOTAL FUND PERFORMANCE DETAIL (GROSS)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Hedge Fund Composite	132,899,714	10.2	8.0	4.9	--	8.4	--	8.0	--	5.5	--	4.7	--	5.1	--	5.1	Jan-11
<i>HFRI FOF: Conservative Index</i>				5.8	--	8.6	--	6.4	--	3.9	--	3.5	--	2.9	--	2.9	Jan-11
Magnitude International Class A Eligible	66,572,311	5.1		4.5	--	8.3	--	9.2	--	5.4	--	4.1	--	5.1	--	5.1	Jan-11
<i>HFRI FOF: Conservative Index</i>				5.8	--	8.6	--	6.4	--	3.9	--	3.5	--	2.9	--	2.9	Jan-11
Blackstone Partners Offshore Fund LTD	66,327,403	5.1		5.4	--	8.6	--	6.8	--	5.4	--	5.2	--	--	--	5.1	Jan-11
<i>HFRI FOF: Conservative Index</i>				5.8	--	8.6	--	6.4	--	3.9	--	3.5	--	2.9	--	2.8	Mar-11
Private Equity Composite	164,001,294	12.6	10.0	9.0	--	18.0	--	17.4	--	17.0	--	16.1	--	14.6	--	13.5	Jul-08
<i>CJA US All PE (1 Qtr Lag)</i>				11.0	--	21.5	--	13.4	--	13.1	--	13.0	--	13.6	--	10.7	Jul-08
Private Debt	2,500,000	0.2	5.0	0.0	--	0.0	--	--	--	--	--	--	--	--	--	0.0	Jun-20
<i>S&P/LSTA Leveraged Loan</i>				3.8	--	8.1	--	3.1	--	4.0	--	5.2	--	4.3	--	8.1	Jun-20

Fiscal year ends 6/30.

Policy index consists of: 19% Russell 1000 / 4% Russell 2500 / 12% MSCI EAFE / 5% MSCI Emerging Markets / 20% BBgBarc US Aggregate TR / 2% BBgBarc US TIPS TR / 4% 3-Month Labor Total Return USD / 4% JP Morgan GBI EM Global Diversified TR USD / 5% S&P/LSTA Leveraged Loan TR / 7.0% NCREIF Property Index 1 Qtr. Lag / 8% 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.

Real Estate, Real Assets and Private Equity investments are valued as of 9/30/2020 and adjusted for capital calls and distributions through 12/31/2020.

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



Howard County Retirement Plans

ASSET ALLOCATION VS. POLICY TARGETS

Allocation vs. Targets and Policy As Of December 31, 2020				
	Current Balance	Current Allocation	Target	Difference
Large Cap Equity	\$279,244,804	21.5%	19.0%	2.5%
Small/Mid Cap Equity	\$57,496,415	4.4%	4.0%	0.4%
Developed International Equity	\$138,218,803	10.6%	12.0%	-1.4%
Emerging Markets Equity	\$83,309,720	6.4%	5.0%	1.4%
Core Fixed Income	\$259,861,991	20.0%	20.0%	0.0%
TIPS	\$25,528,918	2.0%	2.0%	0.0%
Emerging Market Debt	\$49,572,143	3.8%	4.0%	-0.2%
Private Debt	\$2,536,680	0.2%	5.0%	-4.8%
Private Equity	\$163,964,614	12.6%	10.0%	2.6%
Hedge Funds	\$132,899,714	10.2%	8.0%	2.2%
Real Assets	\$44,279,243	3.4%	7.0%	-3.6%
Cash	\$20,472,639	1.6%	0.0%	1.6%
Absolute Return Fixed Income	\$40,701,865	3.1%	4.0%	-0.9%
Total	\$1,298,087,548	100.0%	100.0%	

Allocation vs. Targets and Policy As Of September 30, 2020				
	Current Balance	Current Allocation	Target	Difference
Large Cap Equity	\$246,416,666	20.8%	19.0%	1.8%
Small/Mid Cap Equity	\$46,661,118	3.9%	4.0%	-0.1%
Developed International Equity	\$118,814,473	10.0%	12.0%	-2.0%
Emerging Markets Equity	\$74,478,584	6.3%	5.0%	1.3%
Core Fixed Income	\$246,663,702	20.8%	20.0%	0.8%
TIPS	\$25,122,072	2.1%	2.0%	0.1%
Emerging Market Debt	\$44,088,565	3.7%	4.0%	-0.3%
Private Debt	\$1,421,978	0.1%	5.0%	-4.9%
Private Equity	\$157,051,762	13.2%	10.0%	3.2%
Hedge Funds	\$126,840,293	10.7%	8.0%	2.7%
Real Assets	\$44,202,973	3.7%	7.0%	-3.3%
Cash	\$15,809,718	1.3%	0.0%	1.3%
Absolute Return Fixed Income	\$39,789,447	3.4%	4.0%	-0.6%
Total	\$1,187,361,350	100.0%	100.0%	



Howard County Retirement Plans

ANALYTICS DEFINITIONS

Asset Allocation Effect - Measures the ability to effectively allocate their portfolio's assets to various asset classes. The allocation effect determines whether the overweighting or underweighting of asset classes relative to a benchmark contributes positively or negatively to the overall portfolio return. Positive allocation occurs when the portfolio is overweighted in an asset class that outperforms the benchmark. Negative allocation occurs when the portfolio is overweighted in an asset class that underperforms the benchmark and underweighted in an asset class that outperforms the benchmark.

Selection Effect - Measures the ability to select managers within a given asset class relative to a benchmark. The over or underperformance of the portfolio is weighted by the benchmark weight, therefore, selection is not affected by plan's allocation to the asset class. The weight of the manager in the portfolio determines the size of the effect -- the larger the manager, the larger the effect is, positive or negative.

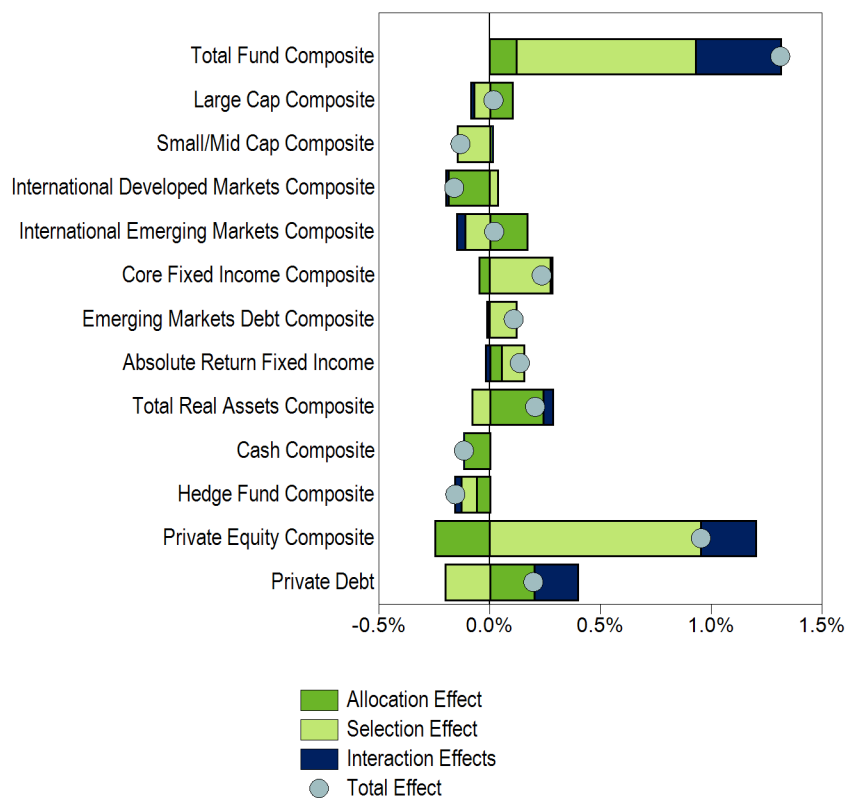
Interaction Effect - The interaction effect measures the combined impact of manager selection and manager allocation decisions within an asset class. For example, if client had superior manager selection and overweighted that particular asset class, the interaction effect is positive. If client had superior manager selection, but underweighted that asset class, the interaction effect is negative. In this case, client did not take advantage of the superior manager selection by allocating more assets to that asset class.



Howard County Retirement Plans

TOTAL FUND ATTRIBUTION ANALYSIS (GROSS)

Attribution Effects
3 Months Ending December 31, 2020



Attribution Summary
3 Months Ending December 31, 2020

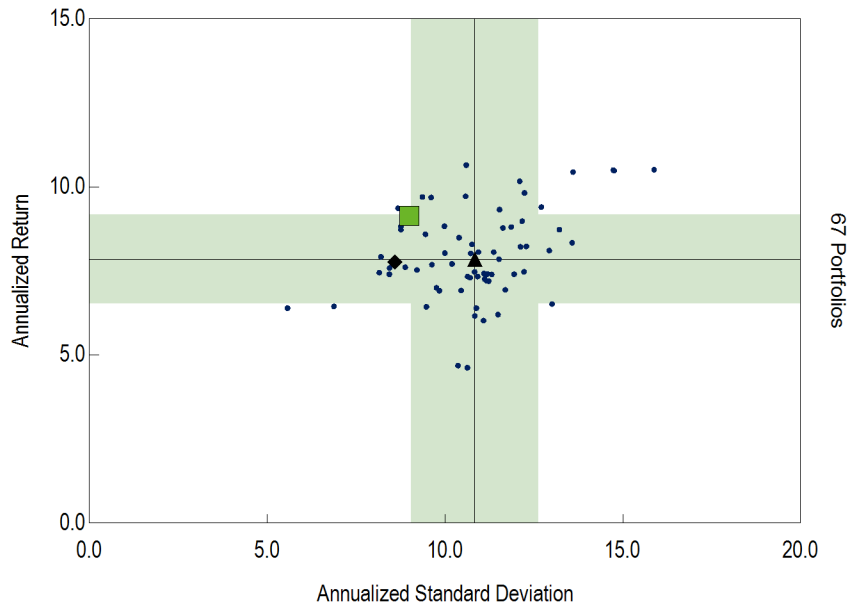
	Policy Weight	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Large Cap Composite	19.0%	13.3%	13.7%	-0.4%	-0.1%	0.1%	0.0%	0.0%
Small/Mid Cap Composite	4.0%	23.6%	27.4%	-3.8%	-0.1%	0.0%	0.0%	-0.1%
International Developed Markets Composite	12.0%	16.5%	16.0%	0.5%	0.0%	-0.2%	0.0%	-0.2%
International Emerging Markets Composite	5.0%	17.4%	19.7%	-2.3%	-0.1%	0.2%	0.0%	0.0%
Core Fixed Income Composite	22.0%	1.9%	0.8%	1.2%	0.3%	0.0%	0.0%	0.2%
Emerging Markets Debt Composite	4.0%	12.6%	9.6%	3.0%	0.1%	0.0%	0.0%	0.1%
Absolute Return Fixed Income	4.0%	2.4%	0.1%	2.4%	0.1%	0.1%	0.0%	0.1%
Total Real Assets Composite	7.0%	-0.3%	0.7%	-1.0%	-0.1%	0.2%	0.0%	0.2%
Cash Composite	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	-0.1%
Hedge Fund Composite	8.0%	4.9%	5.8%	-0.8%	-0.1%	-0.1%	0.0%	-0.2%
Private Equity Composite	10.0%	9.0%	0.0%	9.0%	1.0%	-0.2%	0.2%	0.9%
Private Debt	5.0%	0.0%	3.8%	-3.8%	-0.2%	0.2%	0.2%	0.2%
Total	100.0%	9.1%	7.8%	1.3%	0.8%	0.1%	0.4%	1.3%



Howard County Retirement Plans

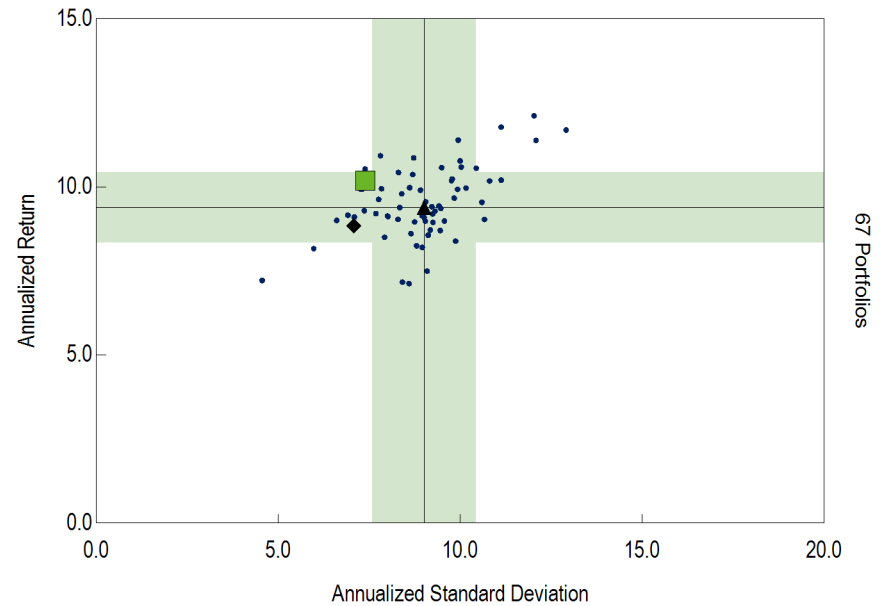
TOTAL FUND RISK/RETURN (GROSS)

3 Years Ending December 31, 2020



- Total Fund Composite
- ◆ Policy Index
- ▲ Universe Median
- 68% Confidence Interval
- InvMetrics Public DB > \$1B Gross

5 Years Ending December 31, 2020



- Total Fund Composite
- ◆ Policy Index
- ▲ Universe Median
- 68% Confidence Interval
- InvMetrics Public DB > \$1B Gross

3 Years Ending December 31, 2020

	Anlzd Ret	Anlzd Std Dev	Sharpe Ratio	Sortino Ratio
Total Fund Composite	9.14%	8.99%	0.85	1.28
Policy Index	7.76%	8.60%	0.73	1.13

5 Years Ending December 31, 2020

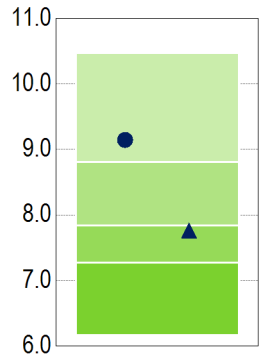
	Anlzd Ret	Anlzd Std Dev	Sharpe Ratio	Sortino Ratio
Total Fund Composite	10.18%	7.39%	1.22	1.54
Policy Index	8.85%	7.07%	1.09	1.41



TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

Total Fund Composite vs. InvMetrics Public DB > \$1B Gross 3 Years

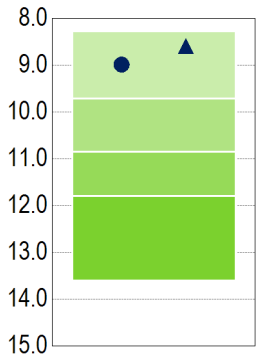
Anlzd Return



● Total Fund Composite
Value 9.14
Rank 20
▲ Policy Index
Value 7.76
Rank 51

Universe
5th %tile 10.47
25th %tile 8.81
Median 7.85
75th %tile 7.28
95th %tile 6.17

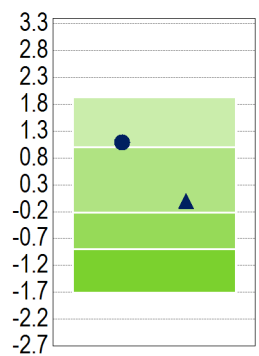
Anlzd Standard Deviation



● Total Fund Composite
Value 8.99
Rank 16
▲ Policy Index
Value 8.60
Rank 9

Universe
5th %tile 8.27
25th %tile 9.70
Median 10.84
75th %tile 11.78
95th %tile 13.59

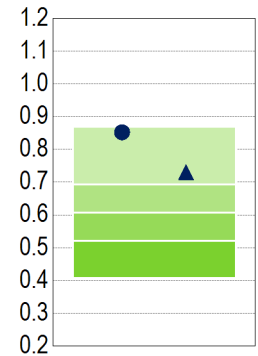
Anlzd Alpha



● Total Fund Composite
Value 1.09
Rank 21
▲ Policy Index
Value 0.00
Rank 43

Universe
5th %tile 1.92
25th %tile 1.01
Median -0.21
75th %tile -0.88
95th %tile -1.70

Sharpe Ratio



● Total Fund Composite
Value 0.85
Rank 8
▲ Policy Index
Value 0.73
Rank 19

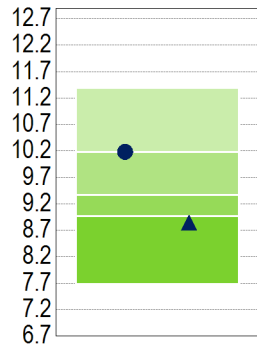
Universe
5th %tile 0.87
25th %tile 0.70
Median 0.61
75th %tile 0.52
95th %tile 0.41



TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

Total Fund Composite vs. InvMetrics Public DB > \$1B Gross 5 Years

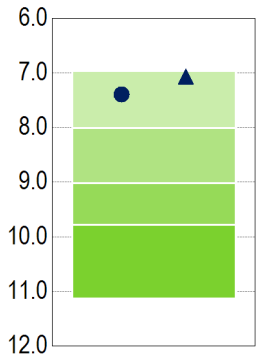
Anlzd Return



● Total Fund Composite	
Value	10.18
Rank	27
▲ Policy Index	
Value	8.85
Rank	81

Universe	
5th %tile	11.39
25th %tile	10.20
Median	9.39
75th %tile	8.99
95th %tile	7.69

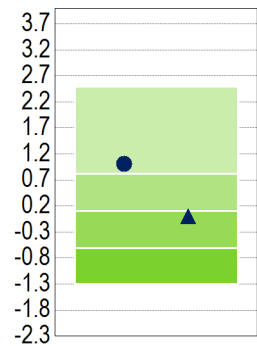
Anlzd Standard Deviation



● Total Fund Composite	
Value	7.39
Rank	16
▲ Policy Index	
Value	7.07
Rank	6

Universe	
5th %tile	6.96
25th %tile	8.00
Median	9.00
75th %tile	9.76
95th %tile	11.12

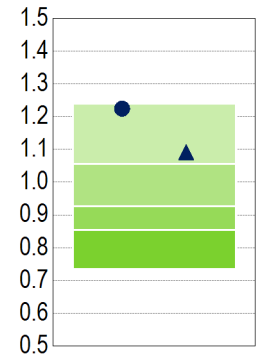
Anlzd Alpha



● Total Fund Composite	
Value	1.01
Rank	19
▲ Policy Index	
Value	0.00
Rank	53

Universe	
5th %tile	2.50
25th %tile	0.83
Median	0.11
75th %tile	-0.60
95th %tile	-1.29

Sharpe Ratio



● Total Fund Composite	
Value	1.22
Rank	6
▲ Policy Index	
Value	1.09
Rank	23

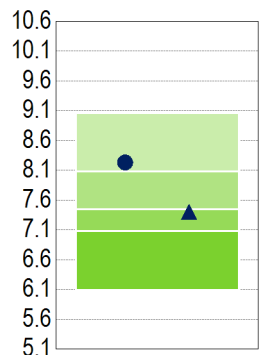
Universe	
5th %tile	1.24
25th %tile	1.06
Median	0.93
75th %tile	0.86
95th %tile	0.74



TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

Total Fund Composite vs. InvMetrics Public DB > \$1B Gross 7 Years

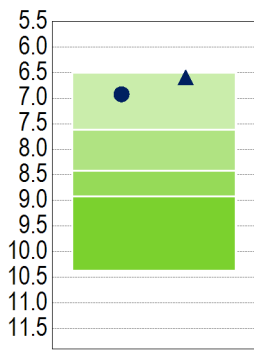
Anlzd Return



● Total Fund Composite	
Value	8.23
Rank	21
▲ Policy Index	
Value	7.40
Rank	53

Universe	
5th %tile	9.06
25th %tile	8.09
Median	7.46
75th %tile	7.09
95th %tile	6.10

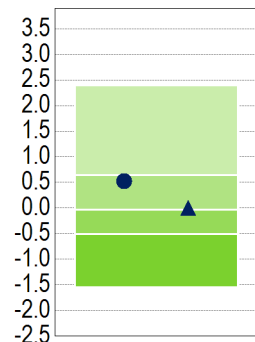
Anlzd Standard Deviation



● Total Fund Composite	
Value	6.93
Rank	13
▲ Policy Index	
Value	6.59
Rank	6

Universe	
5th %tile	6.50
25th %tile	7.61
Median	8.40
75th %tile	8.90
95th %tile	10.36

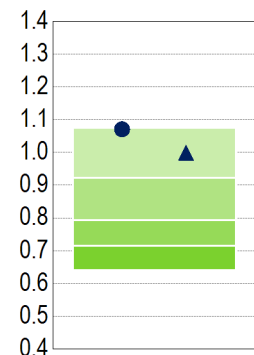
Anlzd Alpha



● Total Fund Composite	
Value	0.52
Rank	27
▲ Policy Index	
Value	0.00
Rank	48

Universe	
5th %tile	2.40
25th %tile	0.65
Median	-0.02
75th %tile	-0.49
95th %tile	-1.53

Sharpe Ratio



● Total Fund Composite	
Value	1.07
Rank	6
▲ Policy Index	
Value	1.00
Rank	17

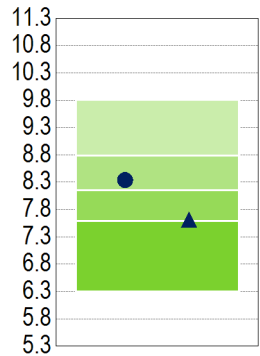
Universe	
5th %tile	1.08
25th %tile	0.92
Median	0.80
75th %tile	0.72
95th %tile	0.64



TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

Total Fund Composite vs. InvMetrics Public DB > \$1B Gross 10 Years

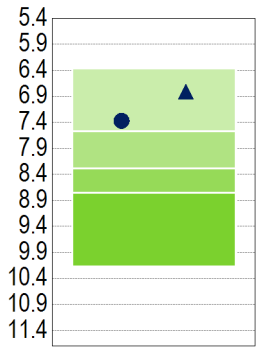
Anlzd Return



● Total Fund Composite	
Value	8.34
Rank	43
▲ Policy Index	
Value	7.61
Rank	75

Universe	
5th %tile	9.81
25th %tile	8.80
Median	8.17
75th %tile	7.60
95th %tile	6.30

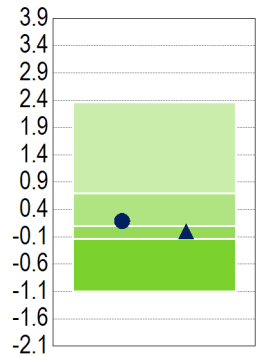
Anlzd Standard Deviation



● Total Fund Composite	
Value	7.37
Rank	21
▲ Policy Index	
Value	6.81
Rank	7

Universe	
5th %tile	6.36
25th %tile	7.57
Median	8.27
75th %tile	8.74
95th %tile	10.16

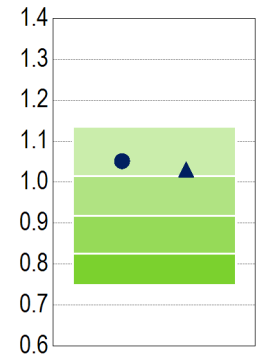
Anlzd Alpha



● Total Fund Composite	
Value	0.19
Rank	41
▲ Policy Index	
Value	0.00
Rank	57

Universe	
5th %tile	2.36
25th %tile	0.71
Median	0.11
75th %tile	-0.13
95th %tile	-1.08

Sharpe Ratio



● Total Fund Composite	
Value	1.05
Rank	19
▲ Policy Index	
Value	1.03
Rank	21

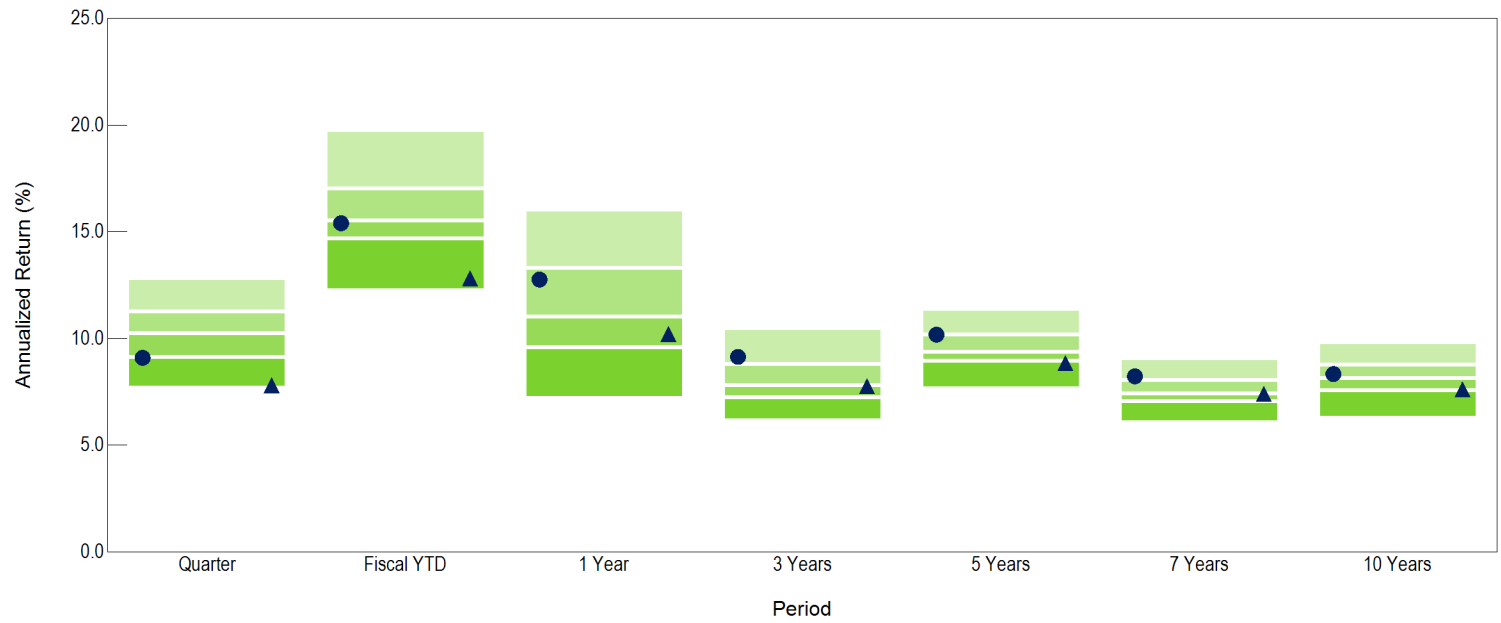
Universe	
5th %tile	1.14
25th %tile	1.02
Median	0.92
75th %tile	0.83
95th %tile	0.75



Howard County Retirement Plans

TOTAL RETURN SUMMARY VS. PEER UNIVERSE (GROSS)

Total Fund Composite vs. InvMetrics Public DB > \$1B Gross



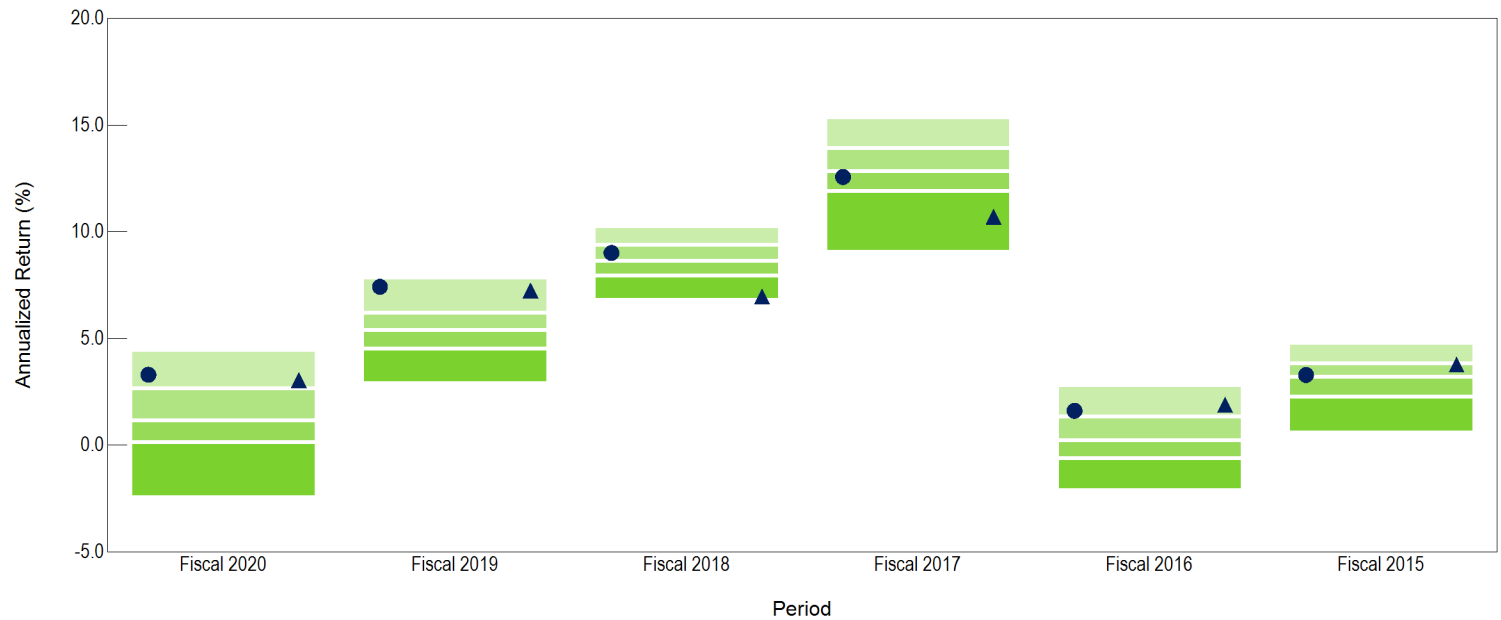
	Quarter		Fiscal YTD		1 Year		3 Years		5 Years		7 Years		10 Years	
	Return	(Rank)	Return	(Rank)	Return	(Rank)	Return	(Rank)	Return	(Rank)	Return	(Rank)	Return	(Rank)
5th Percentile	12.8		19.8		16.0		10.5		11.4		9.1		9.8	
25th Percentile	11.3		17.1		13.3		8.8		10.2		8.1		8.8	
Median	10.3		15.6		11.1		7.8		9.4		7.5		8.2	
75th Percentile	9.2		14.7		9.6		7.3		9.0		7.1		7.6	
95th Percentile	7.7		12.3		7.2		6.2		7.7		6.1		6.3	
# of Portfolios	67		67		67		67		67		65		63	
● Total Fund Composite	9.1	(78)	15.4	(56)	12.8	(28)	9.1	(20)	10.2	(27)	8.2	(21)	8.3	(43)
▲ Policy Index	7.8	(95)	12.8	(95)	10.2	(69)	7.8	(51)	8.8	(81)	7.4	(53)	7.6	(75)



Howard County Retirement Plans

FISCAL RETURN SUMMARY VS. PEER UNIVERSE (GROSS)

Total Fund Composite vs. InvMetrics Public DB > \$1B Gross



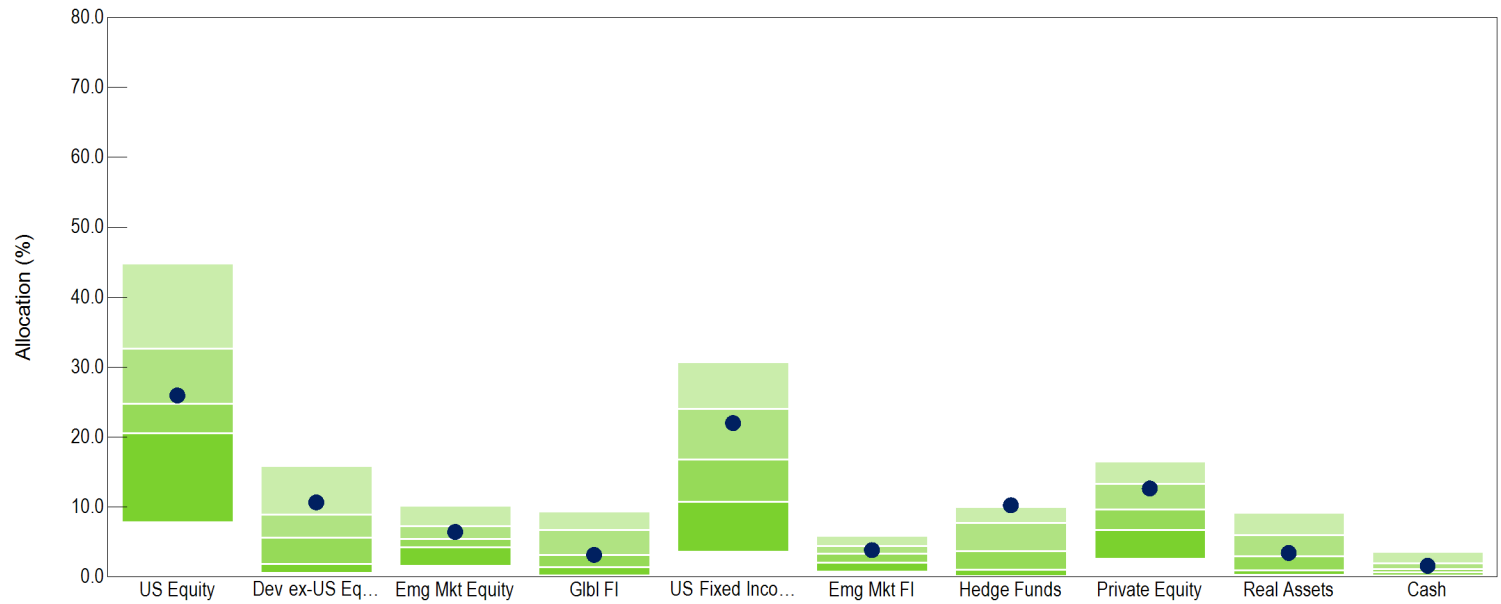
	Fiscal 2020		Fiscal 2019		Fiscal 2018		Fiscal 2017		Fiscal 2016		Fiscal 2015	
Return (Rank)												
5th Percentile	4.5		7.9		10.3		15.3		2.8		4.8	
25th Percentile	2.7		6.2		9.4		14.0		1.4		3.9	
Median	1.2		5.4		8.7		12.9		0.3		3.2	
75th Percentile	0.2		4.5		8.0		11.9		-0.6		2.3	
95th Percentile	-2.4		2.9		6.8		9.1		-2.1		0.6	
# of Portfolios	82		88		62		108		91		92	
● Total Fund Composite	3.3	(16)	7.4	(9)	9.0	(35)	12.6	(61)	1.6	(22)	3.3	(48)
▲ Policy Index	3.0	(17)	7.2	(14)	7.0	(91)	10.7	(91)	1.9	(15)	3.8	(30)

Fiscal year ends 6/30.



TOTAL FUND ALLOCATIONS VS. PEER UNIVERSE

Total Plan Allocation vs. InvMetrics Public DB > \$1B Gross



Allocation (Rank)

5th Percentile	44.8	15.9	10.2	9.4	30.7	5.8	10.0	16.5	9.2	3.5	-
25th Percentile	32.8	9.0	7.3	6.8	24.1	4.5	7.8	13.4	6.1	2.0	-
Median	24.9	5.7	5.5	3.2	16.9	3.4	3.7	9.7	3.1	1.2	-
75th Percentile	20.6	2.0	4.3	1.4	10.9	2.1	1.1	6.7	1.1	0.8	-
95th Percentile	7.9	0.6	1.7	0.3	3.7	0.8	0.2	2.6	0.3	0.3	-
# of Portfolios	41	24	35	18	43	21	30	38	25	51	-
● Total Fund Composite	25.9 (42)	10.6 (20)	6.4 (37)	3.1 (54)	22.0 (36)	3.8 (46)	10.2 (4)	12.6 (31)	3.4 (45)	1.6 (42)	-



NEPC'S DUE DILIGENCE MONITOR

Investment Options	Manager Changes/Announcements	NEPC Due Diligence Committee Recommendations
Blackstone Partners	Loss of Personnel: CIO Gideon Berger Departing, Joe Dowling Hired as Replacement 01/19/21	3. On Hold (No Searches)
Dodge & Cox Core Fixed Income	Loss of Personnel: DD FYI: Chairman/CIO Charles Pohl and Director of Research Bryan Cameron to retire - Dodge & Cox - No Action Recommended 01/25/21	FYI
PIMCO Core Plus - Total Return Full Authority	Litigation: PIMCO Discrimination suit 12/14/20	2. Watch (Searches Ok)
Investor Counselors of Maryland (ICM)	Acquisition: ICM acquired by William Blair	2. Watch

NEPC'S DUE DILIGENCE MONITOR DETAIL

Investment Options	Commentary	NEPC Rating
Blackstone Partners	<p>Blackstone Alternative Assets Management ("BAAM" or the "Firm") announced this week that Chief Investment Officer ("CIO") and Head of Hedge Fund Investments Gideon Berger will be departing the Firm in the spring. Mr. Berger has been at the Firm for 19 years and led the hedge fund business for 10 years. Mr. Berger's responsibilities were solely within BAAM's hedge fund platform and he does not have commitments at the broader Blackstone Firm. Mr. Berger also worked on approximately 10 separately managed account ("SMA") relationships alongside 2-3 managing directors ("MDs") per account. It's assumed that the MDs will absorb that responsibility.</p> <p>BAAM communicated that Mr. Berger stated his intention to leave in the fall of 2020 but due to COVID-19 had agreed to a slow transition to allow time for a replacement to be found. The Firm has now announced that Joe Dowling, former Chief Investment Officer of Brown University's Endowment portfolio will assume Mr. Berger's responsibilities and title of CIO, but will also become co-Chief Executive Officer ("CEO") alongside existing CEO John McCormick. Mr. Dowling officially began his BAAM career on January 12, 2021 and Mr. Berger will assist with the transition before his departure in May, 2021. He has not disclosed any plans after he leaves. NEPC was not informed of Mr. Berger's intentions to leave prior to this week. The Firm also announced the change internally this week, just ahead of a report that was published on the matter by the Wall Street Journal.</p> <p>With regards to Joe Dowling, it seems he was on BAAM's radar for some time. Mr. Dowling has a strong background in hedge fund investing. Before his time at Brown he managed his own hedge fund that reached peak assets of \$1.2 billion. Senior leadership at BAAM felt his complementary background and extensive hedge fund knowledge, both as a direct trader and an allocator, made him the top candidate. His duties as co-CEO will focus on structuring more thematic, forward-thinking investment objectives and overseeing the overall investment team, while Mr. McCormick will remain focused on strategic business objectives and investor functions.</p> <p>Mr. Dowling's investment style and preferences are likely to change the composition of the Blackstone Partners Fund ("Partners" or the "Fund"), which is rated 1 by NEPC. Mr. Dowling has strong conviction in hedge funds as return enhancers. His former endowment portfolio produced strong returns relative to its peers, and invested approximately 37% in alternatives, most of which were hedge funds. Mr. Dowling has experience with seeding and investing in early-stage managers. He also has a preference for long/short equity, particularly sector-focused managers that specialize in technology, and healthcare. This is somewhat contrasting Mr. Berger's views of fund of hedge funds ("FOHF") as a fixed income replacement, with a focus on low volatility and steady returns. Partners had been experiencing a meaningful increase to credit exposure and correlation to credit markets, which was a weakness for the Fund in March, 2020. Partners had begun to lag some peers over the past two years as a result of Mr. Berger's cautious mindset. NEPC now expects the Fund to return to a similar structure to when we originally underwrote it by adding to equity and shifting back to a more traditional core FOHF composition.</p>	1



NEPC'S DUE DILIGENCE MONITOR DETAIL

Investment Options	Commentary	NEPC Rating
Blackstone Partners (cont.)	<p>Overall, NEPC views this event with cautious optimism. Many of BAAM's peers have generated strong returns through higher concentration in niche equity strategies. BAAM also expressed that they do not wish to increase the level of risk materially, but increase the efficiency of returns by aiming to get more "bang for your buck" in terms of risk/reward. NEPC considers this change to be a thoughtful and pro-active adjustment to its leadership and investment mindset and believes it could create innovation and bring fresh ideas that keep the Fund competitive. However, given the seniority of Mr. Berger, we do think this event warrants close monitoring. As it pertains to Mr. Dowling, the transition will be an adjustment from his previous role. The Brown portfolio managed \$4.7 billion, whereas Partners AUM is over \$12 billion. His team at Brown comprised approximately 20 employees while BAAM has around 400. His transition will require a rapid learning curve but we feel the BAAM team has the resources and understanding to guide him through the process, along with Mr. Berger who will work closely with him as he adjusts. Investor reactions so far have been positive, according to BAAM, but the news is still fresh. NEPC is recommending a change to the due diligence status from "No Action" to "HOLD" for the Blackstone Partners Fund as we monitor the transition and gage investor reaction. The Fund's next liquidity window is June, 30 and we will watch for any meaningful outflows at that time. We will also monitor underlying fund changes closely.</p>	1

NEPC'S DUE DILIGENCE MONITOR DETAIL

Investment Options	Commentary	NEPC Rating
Dodge & Cox Core Fixed Income	<p>Dodge & Cox will be announcing on Friday, January 15th, that both Chairman and Chief Investment Officer (CIO) Charles Pohl and Director of Research (DOR) Bryan Cameron plan to retire. Charles Pohl will retire on June 30, 2022. Chief Executive Officer (CEO) and President Dana Emery will assume the Chairperson position in the spring of 2022. At that time she will be CEO, Chairwoman, and President. Current Associate CIO David Hoeft, will assume CIO role effective June 30, 2022. Over the next year and a half Charles will gradually transition responsibilities. The CIO is responsible for the overall investment strategy including philosophy and investment process. He/she provides overall market perspectives to analysts and connects the macro environment to the investment strategy. DOR Bryan Cameron will retire on December 31, 2021. Current Associate DOR Steve Voorhis will assume the DOR role from that date forward. The DOR is responsible for the day to day operations of the research team. He/she is responsible for working with the analysts and filling a mentorship role. The DOR also manages the investment pipeline. Dodge & Cox will make some adjustments to their investment committees with the upcoming retirements. Karim Fakhry (15 years of experience at Dodge & Cox) will join US Equity Investment Committee January 15, 2021, and Bryan and Charles will stay on until their retirement dates. Paritosh Somani (13 years of experience at Dodge & Cox) will join the International Investment Committee on January 15, 2021, and Charles will step down May 1, 2021. Ray Mertens (17 years of experience at Dodge & Cox) will rejoin the Global Equity Investment Committee on May 1, 2021, and Charles will leave the committee on May 1, 2021. In terms of ownership at Dodge & Cox, equity is broadly distributed among employees with no one individual owning more than 15%. Partners are required to start selling back their equity stake at 65 years of age with full unwinding of equity upon retirement.</p>	1
PIMCO Core Plus - Total Return Full Authority	<p>PIMCO has been named in a complaint by two female employees in operations and client service capacities. The complaint alleges gender and disability discrimination. This follows on similar complaints in 2018 and 2019. The NEPC Unfavorable News Committee met on December 7, 2020 and recommends that the Due Diligence Committee place PIMCO on WATCH. NEPC will monitor the suit for resolution and any findings or other information pertaining to the issue. NEPC will engage with PIMCO on their specific efforts relating to diversity equity and inclusion, as well as metrics relating to the topic.</p> <p>NEPC Status Definition: WATCH: Issues have surfaced to be concerned over; manager can participate in future searches, but current and prospective clients must be made aware of the issues. The change in DD Status does not impact the DD Ratings for individual strategies.</p>	1

NEPC'S DUE DILIGENCE MONITOR DETAIL

Investment Options	Commentary	NEPC Rating
Investor Counselors of Maryland (ICM)	<p>William Blair Investment Management and Investment Counselors of Maryland (ICM), along with BrightSphere Investment Group, have signed a definitive agreement for William Blair to acquire ICM. They expect the deal to close in the second quarter of this year. As BrightSphere Investment Group is a publicly traded company, they were not at liberty to discuss the details of the agreement at this time. I also got the sense that they have not fully worked out all the details.</p> <p>ICM is owned 65% by BrightSphere and 35% by current employees of ICM. There are six principals who share in the 35% ownership. The six principals would be paid out over time (4 years) to ensure continuity and to some degree it would be based on the results of the team. None of the team will be joining William Blair as a partner. Once the ownership proceeds have all been distributed, then they will be eligible for the partnership. ICM has 16 employees including eight investment people. All of the investment people will be joining William Blair. ICM will have to lay off some of the current employees (back office) as their jobs will be redundant.</p> <p>ICM's investment team will remain autonomous and will continue operations from Baltimore, MD. The team will retain their trader and their trading will not be combined into the William Blair trading platform in Chicago. William Blair will provide technology, research support, ESG input, marketing, HR, compliance, etc.</p> <p>ICM has \$3.2 billion in firm AUM today with the majority of assets in the Small Cap product. They do have a SMID (AUM \$36 million) and Mid Cap (AUM \$8 million) product that have ten-year track records. These will merge into William Blair as well. William Blair has SMID and Small Value strategies. Their SMID strategy has a smaller asset value of \$1 billion with only William Blair partners invested in it.</p> <p>The William Blair Small Cap Value strategy is mostly separate accounts with only \$60 million in their mutual fund. The strategy's performance has been struggling over the past years. As a result, that team will leave William Blair after a transitional period in mid-2021. The ICM team is being asked to potentially absorb William Blair's \$1 billion in Small Cap Value assets. Although ICM staff mentioned that a very large investor in the William Blair Small Cap Value strategy has already indicated that they will not be moving over to the ICM team. ICM staff believe the amount that ultimately moves over will be a lot less than \$1 billion. ICM has stopped marketing their Small Cap product as they want to pause and reassess where they are. At \$3 billion they are comfortable managing the strategy. Once the strategies merge they will evaluate size, capacity and a potential hard close.</p> <p>The firms will merge their mutual funds in the second quarter of 2021 and the ICM name will change to William Blair. SEI is the administrator of the mutual fund and the team gave the notice to the mutual fund board on February 9, 2021. The proxy requests will be sent out by SEI in the beginning of April. The strategy will use ICM's track record. They will offer N (retail), I (institutional) and R6 share classes. They will also offer CIT and separate account structures. ICM's separate account clients will be grandfathered in with their legacy fee structure. Any new separate account investment in the strategy will have the following tiered fee structure: 85 bps on the first \$50 million; 60 bps on the next \$50 million; 55 bps on the next \$150 million and 50 bps over \$250 million. According to ICM staff the mutual fund fees will remain the same as it is today.</p>	3

Q3 PRIVATE MARKETS PERFORMANCE

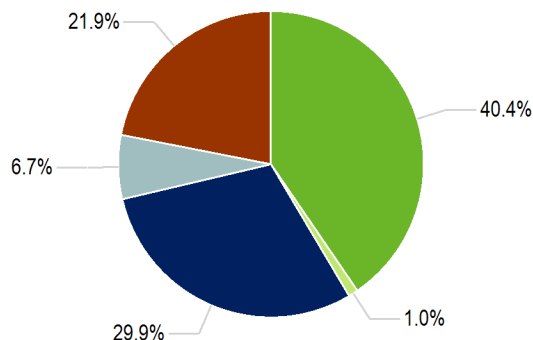
NEPC, LLC

Note: The value, internal rate of return and all other measurements of performance for alternative investments contained in this report are calculated by the investment consultant for Howard County Master Trust and have not been reviewed by the general partner of the alternative investment fund.

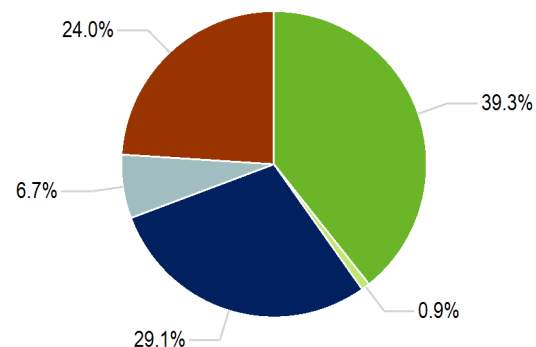
Howard County Retirement Plans

ANALYSIS BY STRATEGY - PRIVATE EQUITY

Private Markets Valuation by Strategy



Private Markets Fund Exposure by Strategy



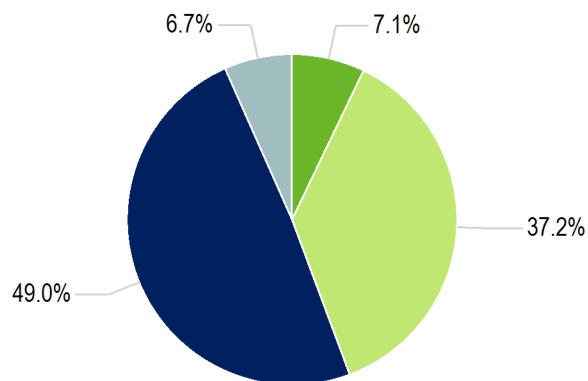
Investments	Commitments			Contributions & Distributions			Valuations				Performance		
	Investment Strategy	Commitment	Unfunded Commitment	Call Ratio	Cumulative Contributions	Additional Fees	Cumulative Distributions	Valuation	Total Value	Net Benefit	Fund Exposure	DPI	TVPI
Total Buyout	\$91,080,176	\$21,279,942	0.77	\$69,800,234	\$115,794	\$43,653,744	\$69,009,822	\$112,663,566	\$42,747,538	\$90,289,764	0.62	1.61	16.29%
Total Distressed	\$10,000,000	\$300,000	0.97	\$9,700,000	\$0	\$14,171,479	\$1,750,269	\$15,921,748	\$6,221,748	\$2,050,269	1.46	1.64	10.57%
Total Fund of Funds	\$53,250,000	\$15,839,310	0.70	\$37,410,690	-\$15,283	\$8,397,000	\$50,950,126	\$59,347,126	\$21,951,719	\$66,789,436	0.22	1.59	13.53%
Total Secondaries	\$15,500,000	\$3,908,000	0.75	\$11,592,000	-\$903	\$11,516,804	\$11,515,938	\$23,032,742	\$11,441,645	\$15,423,938	0.99	1.99	18.94%
Total Venture Capital	\$40,500,000	\$17,690,000	0.56	\$22,810,000	\$21,253	\$18,783,282	\$37,412,455	\$56,195,737	\$33,364,484	\$55,102,455	0.82	2.46	21.65%
Total	\$210,330,176	\$59,017,252	0.72	\$151,312,924	\$120,861	\$96,522,309	\$170,638,610	\$267,160,919	\$115,727,134	\$229,655,862	0.64	1.76	16.23%



Howard County Retirement Plans

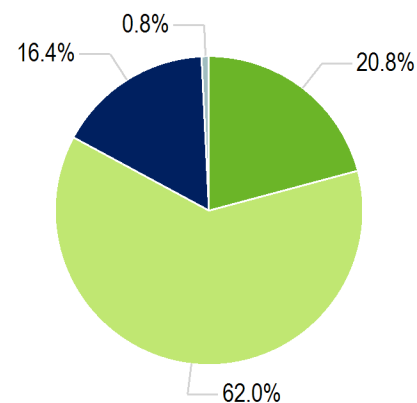
ANALYSIS BY LIFECYCLE - PRIVATE EQUITY

Commitment by Lifecycle



Fundraising Investing Harvesting Liquidating

Unfunded Commitment by Lifecycle



Fundraising Investing Harvesting Liquidating

Investments	Commitments			Contributions & Distributions			Valuations			Performance		
	Commitment	Unfunded Commitment	Call Ratio	Cumulative Contributions	Additional Fees	Cumulative Distributions	Valuation	Total Value	Net Benefit	DPI	TVPI	IRR
Total Fundraising	\$15,000,000	\$12,300,000	0.18	\$2,700,000	\$0	\$0	\$2,915,325	\$2,915,325	\$215,325	0.00	1.08	6.87%
Total Investing	\$78,203,443	\$36,603,128	0.53	\$41,600,315	-\$15,283	\$2,997,061	\$55,769,707	\$58,766,767	\$17,181,736	0.07	1.41	15.06%
Total Harvesting	\$103,126,734	\$9,654,124	0.91	\$93,472,610	\$99,889	\$72,853,737	\$105,982,860	\$178,836,597	\$85,264,099	0.78	1.91	17.76%
Total Liquidating	\$14,000,000	\$460,000	0.97	\$13,540,000	\$36,255	\$20,671,511	\$5,970,719	\$26,642,230	\$13,065,975	1.52	1.96	12.88%
Total	\$210,330,176	\$59,017,252	0.72	\$151,312,924	\$120,861	\$96,522,309	\$170,638,610	\$267,160,919	\$115,727,134	0.64	1.76	16.23%



Howard County Retirement Plans

ANALYSIS BY LIFECYCLE - PRIVATE EQUITY

Investments		Commitments		Contributions & Distributions			Valuations			Performance		
Investment Name	Vintage Year	Commitment	Unfunded Commitment	Paid In Capital	Additional Fees	Cumulative Distributions	Valuation	Total Value	Net Benefit	DPI	TVPI	IRR
Fundraising												
Greenspring Diversity I, L.P.	2020	\$2,500,000	\$2,500,000	\$0	\$0	\$0						
Greenspring Global Partners X, L.P.	2020	\$7,500,000	\$7,500,000	\$0	\$0	\$0						
NB Crossroads Fund XXII, L.P.	2019	\$5,000,000	\$2,300,000	\$2,700,000	\$0	\$0	\$2,915,325	\$2,915,325	\$215,325	0.00	1.08	6.87%
Total Fundraising		\$15,000,000	\$12,300,000	\$2,700,000	\$0	\$0	\$2,915,325	\$2,915,325	\$215,325	0.00	1.08	6.87%
Investing												
57 Stars Global Opportunity Fund 4 (US), L.P.	2015	\$7,000,000	\$2,040,810	\$4,959,190	-\$15,283	\$0	\$7,358,330	\$7,358,330	\$2,414,423	0.00	1.49	12.48%
Aberdeen U.S. Private Equity VII, L.P.	2017	\$5,000,000	\$1,950,000	\$3,050,000	\$0	\$463,232	\$4,236,230	\$4,699,462	\$1,649,462	0.15	1.54	29.01%
Greenspring Global Partners IX-B, L.P.	2019	\$7,250,000	\$4,277,500	\$2,972,500	\$0	\$0	\$3,395,858	\$3,395,858	\$423,358	0.00	1.14	12.41%
Greenspring Global Partners VIII-B, L.P.	2017	\$5,000,000	\$1,250,000	\$3,750,000	\$0	\$0	\$4,438,200	\$4,438,200	\$688,200	0.00	1.18	10.35%
Greenspring Opportunities VI, L.P.	2020	\$7,000,000	\$4,900,000	\$2,100,000	\$0	\$0	\$2,061,272	\$2,061,272	-\$38,728	0.00	0.98	-2.53%
HarbourVest Partners Co-Investment Fund IV AIV, L.P.	2018	\$574,142	\$312,689	\$261,453	\$0	\$0	\$344,879	\$344,879	\$83,426	0.00	1.32	12.32%
HarbourVest Partners Co-Investment Fund IV, L.P.	2017	\$9,425,858	\$1,598,095	\$7,827,763	\$0	\$1,650,450	\$10,342,928	\$11,993,378	\$4,165,615	0.21	1.53	16.22%
NB Crossroads Fund XXI, L.P.	2015	\$15,000,000	\$5,250,000	\$9,750,000	\$0	\$0	\$15,788,097	\$15,788,097	\$6,038,097	0.00	1.62	17.05%
Schroder Adveq Europe Direct II S.C.S.	2018	\$1,039,836	\$543,523	\$496,313	\$0	\$0	\$540,790	\$540,790	\$44,477	0.00	1.09	5.63%
Schroder Adveq Europe VI, L.P.	2015	\$6,853,491	\$1,758,975	\$5,094,516	\$0	\$883,378	\$5,898,622	\$6,782,000	\$1,687,484	0.17	1.33	12.14%
Schroder Adveq Europe VII S.C.S.	2018	\$4,060,116	\$2,893,514	\$1,166,602	\$0	\$0	\$1,327,821	\$1,327,821	\$161,219	0.00	1.14	10.14%
Vista Foundation Fund IV, L.P.	2020	\$10,000,000	\$9,828,022	\$171,978	\$0	\$0	\$36,680	\$36,680	-\$135,298	0.00	0.21	-78.67%
Total Investing		\$78,203,443	\$36,603,128	\$41,600,315	-\$15,283	\$2,997,061	\$55,769,707	\$58,766,767	\$17,181,736	0.07	1.41	15.06%
Harvesting												
Aberdeen U.S. Private Equity V, L.P.	2013	\$15,000,000	\$0	\$15,000,000	\$7,648	\$10,773,981	\$14,592,222	\$25,366,203	\$10,358,555	0.72	1.69	16.73%
Aberdeen U.S. Private Equity VI, L.P.	2014	\$15,000,000	\$975,000	\$14,025,000	\$0	\$6,075,899	\$15,631,301	\$21,707,200	\$7,682,200	0.43	1.55	18.23%
Crown Asia-Pacific Private Equity II PLC	2011	\$14,000,000	\$1,106,000	\$12,894,000	\$0	\$7,602,000	\$14,536,779	\$22,138,779	\$9,244,779	0.59	1.72	11.35%
Crown Asia-Pacific Private Equity III PLC	2014	\$5,000,000	\$865,000	\$4,135,000	\$0	\$795,000	\$6,955,737	\$7,750,737	\$3,615,737	0.19	1.87	22.23%
Crown Global Secondaries III PLC, L.P.	2012	\$10,000,000	\$2,800,000	\$7,200,000	\$0	\$6,890,000	\$3,477,375	\$10,367,375	\$3,167,375	0.96	1.44	11.85%
Greenspring Global Partners V-B, L.P.	2011	\$7,000,000	\$630,000	\$6,370,000	-\$16,154	\$9,789,500	\$11,080,747	\$20,870,247	\$14,516,401	1.54	3.28	24.39%
Greenspring Global Partners VI, L.P.	2014	\$7,500,000	\$750,000	\$6,750,000	\$1,152	\$2,493,750	\$15,611,786	\$18,105,536	\$11,354,384	0.37	2.68	24.82%
Greenspring Secondaries Fund I, L.P.	2014	\$2,500,000	\$100,000	\$2,400,000	-\$903	\$1,945,414	\$7,573,715	\$9,519,129	\$7,120,032	0.81	3.97	35.14%
HarbourVest 2013 Direct Fund, L.P.	2013	\$15,000,000	\$484,349	\$14,515,651	\$108,146	\$18,192,801	\$10,116,171	\$28,308,972	\$13,685,175	1.24	1.94	19.02%
Pantheon Global Secondary Fund IV, L.P.	2010	\$3,000,000	\$1,008,000	\$1,992,000	\$0	\$2,681,390	\$464,848	\$3,146,238	\$1,154,238	1.35	1.58	13.12%



Howard County Retirement Plans

ANALYSIS BY LIFECYCLE - PRIVATE EQUITY

Investments		Commitments		Contributions & Distributions			Valuations			Performance		
Investment Name	Vintage Year	Commitment	Unfunded Commitment	Paid In Capital	Additional Fees	Cumulative Distributions	Valuation	Total Value	Net Benefit	DPI	TVPI	IRR
Schroder Adveq Europe V, L.P.	2012	\$9,126,734	\$935,775	\$8,190,959	\$0	\$5,614,003	\$5,942,179	\$11,556,181	\$3,365,223	0.69	1.41	9.18%
Total Harvesting		\$103,126,734	\$9,654,124	\$93,472,610	\$99,889	\$72,853,737	\$105,982,860	\$178,836,597	\$85,264,099	0.78	1.91	17.76%
Liquidating												
Greenspring Global Partners IV, L.P.	2008	\$4,000,000	\$160,000	\$3,840,000	\$36,255	\$6,500,032	\$4,220,450	\$10,720,482	\$6,844,227	1.68	2.77	17.67%
Siguler Guff Distressed Opportunities Fund III, L.P.	2007	\$10,000,000	\$300,000	\$9,700,000	\$0	\$14,171,479	\$1,750,269	\$15,921,748	\$6,221,748	1.46	1.64	10.57%
Total Liquidating		\$14,000,000	\$460,000	\$13,540,000	\$36,255	\$20,671,511	\$5,970,719	\$26,642,230	\$13,065,975	1.52	1.96	12.88%
Total		\$210,330,176	\$59,017,252	\$151,312,924	\$120,861	\$96,522,309	\$170,638,610	\$267,160,919	\$115,727,134	0.64	1.76	16.23%



Howard County Retirement Plans

ANALYSIS BY VINTAGE YEAR - PRIVATE EQUITY

Investments		Commitments		Contributions & Distributions			Valuations			Performance		
Investment Name	Vintage Year	Commitment	Unfunded Commitment	Paid In Capital	Additional Fees	Cumulative Distributions	Valuation	Total Value	Net Benefit	DPI	TVPI	IRR
2007												
Siguler Guff Distressed Opportunities Fund III, L.P.	2007	\$10,000,000	\$300,000	\$9,700,000	\$0	\$14,171,479	\$1,750,269	\$15,921,748	\$6,221,748	1.46	1.64	10.57%
Total 2007		\$10,000,000	\$300,000	\$9,700,000	\$0	\$14,171,479	\$1,750,269	\$15,921,748	\$6,221,748	1.46	1.64	10.57%
2008												
Greenspring Global Partners IV, L.P.	2008	\$4,000,000	\$160,000	\$3,840,000	\$36,255	\$6,500,032	\$4,220,450	\$10,720,482	\$6,844,227	1.68	2.77	17.67%
Total 2008		\$4,000,000	\$160,000	\$3,840,000	\$36,255	\$6,500,032	\$4,220,450	\$10,720,482	\$6,844,227	1.68	2.77	17.67%
2010												
Pantheon Global Secondary Fund IV, L.P.	2010	\$3,000,000	\$1,008,000	\$1,992,000	\$0	\$2,681,390	\$464,848	\$3,146,238	\$1,154,238	1.35	1.58	13.12%
Total 2010		\$3,000,000	\$1,008,000	\$1,992,000	\$0	\$2,681,390	\$464,848	\$3,146,238	\$1,154,238	1.35	1.58	13.12%
2011												
Crown Asia-Pacific Private Equity II PLC	2011	\$14,000,000	\$1,106,000	\$12,894,000	\$0	\$7,602,000	\$14,536,779	\$22,138,779	\$9,244,779	0.59	1.72	11.35%
Greenspring Global Partners V-B, L.P.	2011	\$7,000,000	\$630,000	\$6,370,000	-\$16,154	\$9,789,500	\$11,080,747	\$20,870,247	\$14,516,401	1.54	3.28	24.39%
Total 2011		\$21,000,000	\$1,736,000	\$19,264,000	-\$16,154	\$17,391,500	\$25,617,526	\$43,009,026	\$23,761,180	0.90	2.23	16.83%
2012												
Crown Global Secondaries III PLC, L.P.	2012	\$10,000,000	\$2,800,000	\$7,200,000	\$0	\$6,890,000	\$3,477,375	\$10,367,375	\$3,167,375	0.96	1.44	11.85%
Schroder Adveq Europe V, L.P.	2012	\$9,126,734	\$935,775	\$8,190,959	\$0	\$5,614,003	\$5,942,179	\$11,556,181	\$3,365,223	0.69	1.41	9.18%
Total 2012		\$19,126,734	\$3,735,775	\$15,390,959	\$0	\$12,504,003	\$9,419,554	\$21,923,556	\$6,532,598	0.81	1.42	10.31%
2013												
Aberdeen U.S. Private Equity V, L.P.	2013	\$15,000,000	\$0	\$15,000,000	\$7,648	\$10,773,981	\$14,592,222	\$25,366,203	\$10,358,555	0.72	1.69	16.73%
HarbourVest 2013 Direct Fund, L.P.	2013	\$15,000,000	\$484,349	\$14,515,651	\$108,146	\$18,192,801	\$10,116,171	\$28,308,972	\$13,685,175	1.24	1.94	19.02%
Total 2013		\$30,000,000	\$484,349	\$29,515,651	\$115,794	\$28,966,782	\$24,708,393	\$53,675,175	\$24,043,730	0.98	1.81	17.98%
2014												
Aberdeen U.S. Private Equity VI, L.P.	2014	\$15,000,000	\$975,000	\$14,025,000	\$0	\$6,075,899	\$15,631,301	\$21,707,200	\$7,682,200	0.43	1.55	18.23%
Crown Asia-Pacific Private Equity III PLC	2014	\$5,000,000	\$865,000	\$4,135,000	\$0	\$795,000	\$6,955,737	\$7,750,737	\$3,615,737	0.19	1.87	22.23%
Greenspring Global Partners VI, L.P.	2014	\$7,500,000	\$750,000	\$6,750,000	\$1,152	\$2,493,750	\$15,611,786	\$18,105,536	\$11,354,384	0.37	2.68	24.82%
Greenspring Secondaries Fund I, L.P.	2014	\$2,500,000	\$100,000	\$2,400,000	-\$903	\$1,945,414	\$7,573,715	\$9,519,129	\$7,120,032	0.81	3.97	35.14%
Total 2014		\$30,000,000	\$2,690,000	\$27,310,000	\$249	\$11,310,063	\$45,772,539	\$57,082,602	\$29,772,353	0.41	2.09	24.16%
2015												
57 Stars Global Opportunity Fund 4 (US), L.P.	2015	\$7,000,000	\$2,040,810	\$4,959,190	-\$15,283	\$0	\$7,358,330	\$7,358,330	\$2,414,423	0.00	1.49	12.48%
NB Crossroads Fund XXI, L.P.	2015	\$15,000,000	\$5,250,000	\$9,750,000	\$0	\$0	\$15,788,097	\$15,788,097	\$6,038,097	0.00	1.62	17.05%
Schroder Adveq Europe VI, L.P.	2015	\$6,853,491	\$1,758,975	\$5,094,516	\$0	\$883,378	\$5,898,622	\$6,782,000	\$1,687,484	0.17	1.33	12.14%
Total 2015		\$28,853,491	\$9,049,785	\$19,803,706	-\$15,283	\$883,378	\$29,045,049	\$29,928,427	\$10,140,004	0.04	1.51	14.76%



Howard County Retirement Plans

ANALYSIS BY VINTAGE YEAR - PRIVATE EQUITY

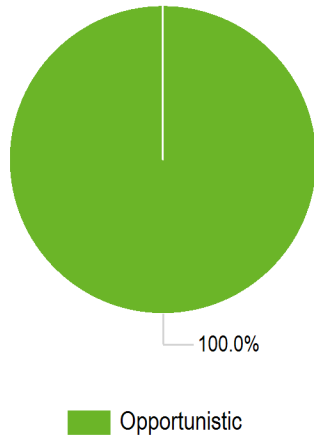
Investments		Commitments		Contributions & Distributions			Valuations			Performance		
Investment Name	Vintage Year	Commitment	Unfunded Commitment	Paid In Capital	Additional Fees	Cumulative Distributions	Valuation	Total Value	Net Benefit	DPI	TVPI	IRR
2017												
Aberdeen U.S. Private Equity VII, L.P.	2017	\$5,000,000	\$1,950,000	\$3,050,000	\$0	\$463,232	\$4,236,230	\$4,699,462	\$1,649,462	0.15	1.54	29.01%
Greenspring Global Partners VIII-B, L.P.	2017	\$5,000,000	\$1,250,000	\$3,750,000	\$0	\$0	\$4,438,200	\$4,438,200	\$688,200	0.00	1.18	10.35%
HarbourVest Partners Co-Investment Fund IV, L.P.	2017	\$9,425,858	\$1,598,095	\$7,827,763	\$0	\$1,650,450	\$10,342,928	\$11,993,378	\$4,165,615	0.21	1.53	16.22%
Total 2017		\$19,425,858	\$4,798,095	\$14,627,763	\$0	\$2,113,682	\$19,017,358	\$21,131,040	\$6,503,277	0.14	1.44	17.06%
2018												
HarbourVest Partners Co-Investment Fund IV AIV, L.P.	2018	\$574,142	\$312,689	\$261,453	\$0	\$0	\$344,879	\$344,879	\$83,426	0.00	1.32	12.32%
Schroder Adveq Europe Direct II S.C.S.	2018	\$1,039,836	\$543,523	\$496,313	\$0	\$0	\$540,790	\$540,790	\$44,477	0.00	1.09	5.63%
Schroder Adveq Europe VII S.C.S.	2018	\$4,060,116	\$2,893,514	\$1,166,602	\$0	\$0	\$1,327,821	\$1,327,821	\$161,219	0.00	1.14	10.14%
Total 2018		\$5,674,094	\$3,749,726	\$1,924,368	\$0	\$0	\$2,213,490	\$2,213,490	\$289,122	0.00	1.15	9.48%
2019												
Greenspring Global Partners IX-B, L.P.	2019	\$7,250,000	\$4,277,500	\$2,972,500	\$0	\$0	\$3,395,858	\$3,395,858	\$423,358	0.00	1.14	12.41%
NB Crossroads Fund XXII, L.P.	2019	\$5,000,000	\$2,300,000	\$2,700,000	\$0	\$0	\$2,915,325	\$2,915,325	\$215,325	0.00	1.08	6.87%
Total 2019		\$12,250,000	\$6,577,500	\$5,672,500	\$0	\$0	\$6,311,183	\$6,311,183	\$638,683	0.00	1.11	9.76%
2020												
Greenspring Diversity I, L.P.	2020	\$2,500,000	\$2,500,000	\$0	\$0	\$0						
Greenspring Global Partners X, L.P.	2020	\$7,500,000	\$7,500,000	\$0	\$0	\$0						
Greenspring Opportunities VI, L.P.	2020	\$7,000,000	\$4,900,000	\$2,100,000	\$0	\$0	\$2,061,272	\$2,061,272	-\$38,728	0.00	0.98	-2.53%
Vista Foundation Fund IV, L.P.	2020	\$10,000,000	\$9,828,022	\$171,978	\$0	\$0	\$36,680	\$36,680	-\$135,298	0.00	0.21	-78.67%
Total 2020		\$27,000,000	\$24,728,022	\$2,271,978	\$0	\$0	\$2,097,952	\$2,097,952	-\$174,026	0.00	0.92	-10.90%
Total		\$210,330,176	\$59,017,252	\$151,312,924	\$120,861	\$96,522,309	\$170,638,610	\$267,160,919	\$115,727,134	0.64	1.76	16.23%



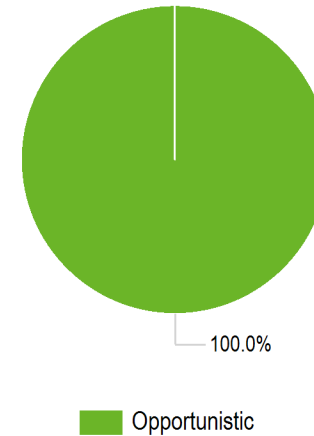
Howard County Retirement Plans

ANALYSIS BY STRATEGY - REAL ESTATE

Private Markets Valuation by Strategy



Private Markets Fund Exposure by Strategy



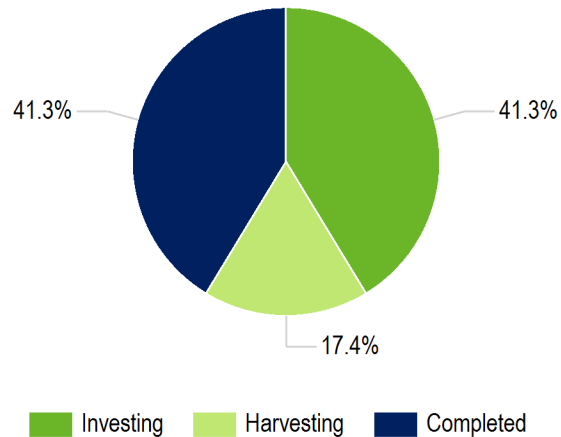
Investments	Commitments			Contributions & Distributions			Valuations				Performance		
	Investment Strategy	Commitment	Unfunded Commitment	Call Ratio	Cumulative Contributions	Additional Fees	Cumulative Distributions	Valuation	Total Value	Net Benefit	Fund Exposure	DPI	TVPI
Total Non Core	\$15,000,000	\$0	1.00	\$15,000,000	\$0	\$15,046,743	\$0	\$15,046,743	\$46,743	\$0	1.00	1.00	0.04%
Total Opportunistic	\$49,740,238	\$12,515,919	0.75	\$37,224,319	\$151,453	\$17,833,956	\$29,613,976	\$47,447,932	\$10,072,160	\$42,129,895	0.48	1.27	6.69%
Total Value Add	\$20,000,000	\$0	1.00	\$20,000,000	\$0	\$31,187,641	\$0	\$31,187,641	\$11,187,641	\$0	1.56	1.56	9.22%
Total	\$84,740,238	\$12,515,919	0.85	\$72,224,319	\$151,453	\$64,068,340	\$29,613,976	\$93,682,316	\$21,306,545	\$42,129,895	0.89	1.29	5.36%



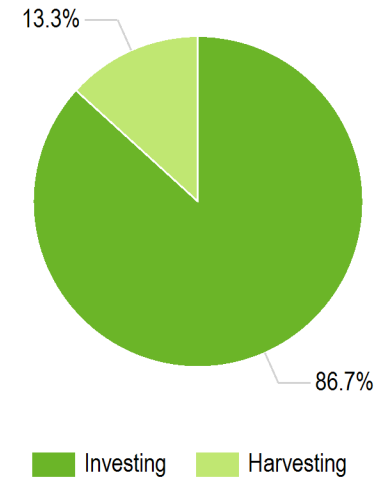
Howard County Retirement Plans

ANALYSIS BY LIFECYCLE - REAL ESTATE

Commitment by Lifecycle



Unfunded Commitment by Lifecycle



Investments	Commitments			Contributions & Distributions			Valuations			Performance		
	Commitment	Unfunded Commitment	Call Ratio	Cumulative Contributions	Additional Fees	Cumulative Distributions	Valuation	Total Value	Net Benefit	DPI	TVPI	IRR
Total Investing	\$35,000,000	\$10,856,968	0.69	\$24,143,032	\$85,580	\$5,258,096	\$26,228,417	\$31,486,513	\$7,257,901	0.22	1.30	8.85%
Total Harvesting	\$14,740,238	\$1,658,951	0.89	\$13,081,287	\$65,873	\$12,575,860	\$3,385,559	\$15,961,419	\$2,814,260	0.96	1.21	4.35%
Total Completed	\$35,000,000	\$0	1.00	\$35,000,000	\$0	\$46,234,384	\$0	\$46,234,384	\$11,234,384	1.32	1.32	4.75%
Total	\$84,740,238	\$12,515,919	0.85	\$72,224,319	\$151,453	\$64,068,340	\$29,613,976	\$93,682,316	\$21,306,545	0.89	1.29	5.36%



Howard County Retirement Plans

ANALYSIS BY LIFECYCLE - REAL ESTATE

Investments		Commitments		Contributions & Distributions			Valuations			Performance		
Investment Name	Vintage Year	Commitment	Unfunded Commitment	Paid In Capital	Additional Fees	Cumulative Distributions	Valuation	Total Value	Net Benefit	DPI	TVPI	IRR
Investing												
Partners Group Global Real Estate 2014 (USD) A, L.P. Inc.	2014	\$25,000,000	\$5,715,342	\$19,284,658	\$35,548	\$5,255,596	\$20,714,739	\$25,970,335	\$6,650,129	0.27	1.34	8.86%
Partners Group Real Estate Secondary 2017 (USD) A, L.P.	2018	\$10,000,000	\$5,141,626	\$4,858,374	\$50,032	\$2,500	\$5,513,678	\$5,516,178	\$607,772	0.00	1.12	8.76%
Total Investing		\$35,000,000	\$10,856,968	\$24,143,032	\$85,580	\$5,258,096	\$26,228,417	\$31,486,513	\$7,257,901	0.22	1.30	8.85%
Harvesting												
Partners Group Global Real Estate 2011, L.P.	2011	\$14,740,238	\$1,658,951	\$13,081,287	\$65,873	\$12,575,860	\$3,385,559	\$15,961,419	\$2,814,260	0.96	1.21	4.35%
Total Harvesting		\$14,740,238	\$1,658,951	\$13,081,287	\$65,873	\$12,575,860	\$3,385,559	\$15,961,419	\$2,814,260	0.96	1.21	4.35%
Completed												
TA Associates Realty Fund IX, L.P.	2008	\$10,000,000	\$0	\$10,000,000	\$0	\$16,015,604	\$0	\$16,015,604	\$6,015,604	1.60	1.60	10.42%
TA Associates Realty Fund VI, L.P.	2002	\$10,000,000	\$0	\$10,000,000	\$0	\$15,172,037	\$0	\$15,172,037	\$5,172,037	1.52	1.52	8.55%
TA Associates Realty Fund VII, L.P.	2005	\$5,000,000	\$0	\$5,000,000	\$0	\$5,119,609	\$0	\$5,119,609	\$119,609	1.02	1.02	0.34%
TA Associates Realty Fund VIII, L.P.	2006	\$10,000,000	\$0	\$10,000,000	\$0	\$9,927,134	\$0	\$9,927,134	-\$72,866	0.99	0.99	-0.08%
Total Completed		\$35,000,000	\$0	\$35,000,000	\$0	\$46,234,384	\$0	\$46,234,384	\$11,234,384	1.32	1.32	4.75%
Total		\$84,740,238	\$12,515,919	\$72,224,319	\$151,453	\$64,068,340	\$29,613,976	\$93,682,316	\$21,306,545	0.89	1.29	5.36%



Howard County Retirement Plans

ANALYSIS BY VINTAGE YEAR - REAL ESTATE

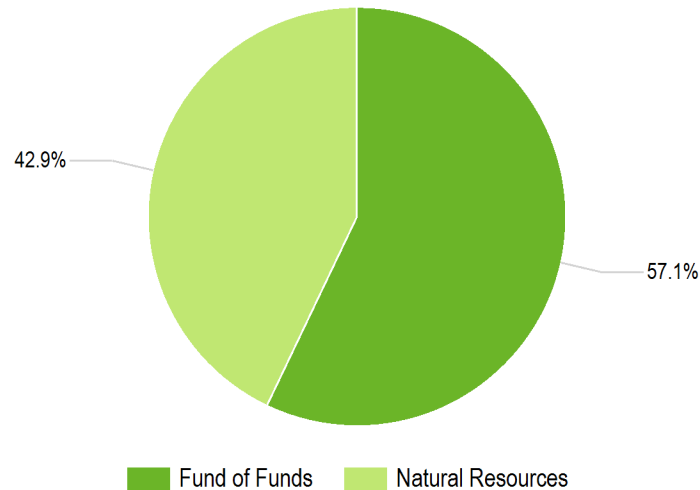
Investments		Commitments		Contributions & Distributions			Valuations			Performance		
Investment Name	Vintage Year	Commitment	Unfunded Commitment	Paid In Capital	Additional Fees	Cumulative Distributions	Valuation	Total Value	Net Benefit	DPI	TVPI	IRR
2002												
TA Associates Realty Fund VI, L.P.	2002	\$10,000,000	\$0	\$10,000,000	\$0	\$15,172,037	\$0	\$15,172,037	\$5,172,037	1.52	1.52	8.55%
Total 2002		\$10,000,000	\$0	\$10,000,000	\$0	\$15,172,037	\$0	\$15,172,037	\$5,172,037	1.52	1.52	8.55%
2005												
TA Associates Realty Fund VII, L.P.	2005	\$5,000,000	\$0	\$5,000,000	\$0	\$5,119,609	\$0	\$5,119,609	\$119,609	1.02	1.02	0.34%
Total 2005		\$5,000,000	\$0	\$5,000,000	\$0	\$5,119,609	\$0	\$5,119,609	\$119,609	1.02	1.02	0.34%
2006												
TA Associates Realty Fund VIII, L.P.	2006	\$10,000,000	\$0	\$10,000,000	\$0	\$9,927,134	\$0	\$9,927,134	-\$72,866	0.99	0.99	-0.08%
Total 2006		\$10,000,000	\$0	\$10,000,000	\$0	\$9,927,134	\$0	\$9,927,134	-\$72,866	0.99	0.99	-0.08%
2008												
TA Associates Realty Fund IX, L.P.	2008	\$10,000,000	\$0	\$10,000,000	\$0	\$16,015,604	\$0	\$16,015,604	\$6,015,604	1.60	1.60	10.42%
Total 2008		\$10,000,000	\$0	\$10,000,000	\$0	\$16,015,604	\$0	\$16,015,604	\$6,015,604	1.60	1.60	10.42%
2011												
Partners Group Global Real Estate 2011, L.P.	2011	\$14,740,238	\$1,658,951	\$13,081,287	\$65,873	\$12,575,860	\$3,385,559	\$15,961,419	\$2,814,260	0.96	1.21	4.35%
Total 2011		\$14,740,238	\$1,658,951	\$13,081,287	\$65,873	\$12,575,860	\$3,385,559	\$15,961,419	\$2,814,260	0.96	1.21	4.35%
2014												
Partners Group Global Real Estate 2014 (USD) A, L.P. Inc.	2014	\$25,000,000	\$5,715,342	\$19,284,658	\$35,548	\$5,255,596	\$20,714,739	\$25,970,335	\$6,650,129	0.27	1.34	8.86%
Total 2014		\$25,000,000	\$5,715,342	\$19,284,658	\$35,548	\$5,255,596	\$20,714,739	\$25,970,335	\$6,650,129	0.27	1.34	8.86%
2018												
Partners Group Real Estate Secondary 2017 (USD) A, L.P.	2018	\$10,000,000	\$5,141,626	\$4,858,374	\$50,032	\$2,500	\$5,513,678	\$5,516,178	\$607,772	0.00	1.12	8.76%
Total 2018		\$10,000,000	\$5,141,626	\$4,858,374	\$50,032	\$2,500	\$5,513,678	\$5,516,178	\$607,772	0.00	1.12	8.76%
Total		\$84,740,238	\$12,515,919	\$72,224,319	\$151,453	\$64,068,340	\$29,613,976	\$93,682,316	\$21,306,545	0.89	1.29	5.36%



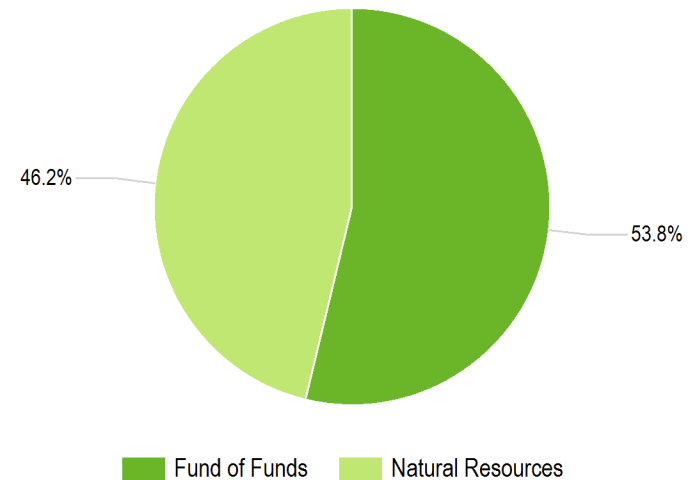
Howard County Retirement Plans

ANALYSIS BY STRATEGY - REAL ASSETS

Private Markets Valuation by Strategy



Private Markets Fund Exposure by Strategy



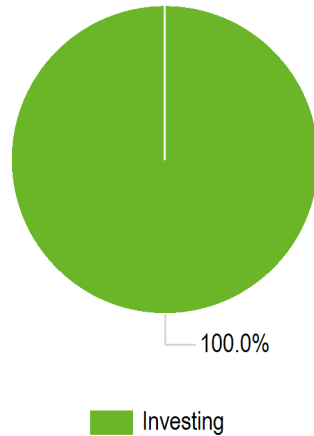
Investments	Commitments			Contributions & Distributions			Valuations				Performance		
	Investment Strategy	Commitment	Unfunded Commitment	Call Ratio	Cumulative Contributions	Additional Fees	Cumulative Distributions	Valuation	Total Value	Net Benefit	Fund Exposure	DPI	TVPI
Total Fund of Funds	\$15,000,000	\$7,259,512	0.52	\$7,740,488	-\$17,052	\$0	\$8,254,155	\$8,254,155	\$530,719	\$15,513,667	0.00	1.07	3.17%
Total Natural Resources	\$15,000,000	\$7,132,500	0.52	\$7,867,500	\$0	\$1,925,017	\$6,202,801	\$8,127,818	\$260,318	\$13,335,301	0.24	1.03	2.20%
Total	\$30,000,000	\$14,392,012	0.52	\$15,607,988	-\$17,052	\$1,925,017	\$14,456,956	\$16,381,973	\$791,037	\$28,848,968	0.12	1.05	2.77%



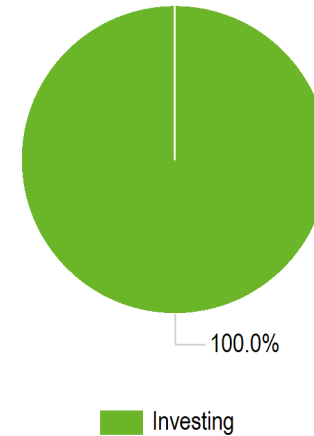
Howard County Retirement Plans

ANALYSIS BY LIFECYCLE - REAL ASSETS

Commitment by Lifecycle



Unfunded Commitment by Lifecycle



Investments	Commitments			Contributions & Distributions			Valuations			Performance		
Lifecycle	Commitment	Unfunded Commitment	Call Ratio	Cumulative Contributions	Additional Fees	Cumulative Distributions	Valuation	Total Value	Net Benefit	DPI	TVPI	IRR
Total Investing	\$30,000,000	\$14,392,012	0.52	\$15,607,988	-\$17,052	\$1,925,017	\$14,456,956	\$16,381,973	\$791,037	0.12	1.05	2.77%
Total	\$30,000,000	\$14,392,012	0.52	\$15,607,988	-\$17,052	\$1,925,017	\$14,456,956	\$16,381,973	\$791,037	0.12	1.05	2.77%



Howard County Retirement Plans

ANALYSIS BY LIFECYCLE - REAL ASSETS

Investments		Commitments		Contributions & Distributions			Valuations			Performance		
Investment Name	Vintage Year	Commitment	Unfunded Commitment	Paid In Capital	Additional Fees	Cumulative Distributions	Valuation	Total Value	Net Benefit	DPI	TVPI	IRR
Investing												
Aether Real Assets IV, L.P.	2015	\$7,500,000	\$1,851,270	\$5,648,730	-\$906	\$0	\$5,857,101	\$5,857,101	\$209,277	0.00	1.04	1.48%
Aether Real Assets V, L.P.	2018	\$7,500,000	\$5,408,242	\$2,091,758	-\$16,146	\$0	\$2,397,054	\$2,397,054	\$321,442	0.00	1.15	13.02%
Commonfund Capital Natural Resources Partners XI, L.P.	2018	\$7,500,000	\$5,156,250	\$2,343,750	\$0	\$0	\$1,893,447	\$1,893,447	-\$450,303	0.00	0.81	-27.13%
Commonfund Capital Natural Resources Partners X, L.P.	2015	\$7,500,000	\$1,976,250	\$5,523,750	\$0	\$1,925,017	\$4,309,354	\$6,234,371	\$710,621	0.35	1.13	6.68%
Total Investing		\$30,000,000	\$14,392,012	\$15,607,988	-\$17,052	\$1,925,017	\$14,456,956	\$16,381,973	\$791,037	0.12	1.05	2.77%
Total		\$30,000,000	\$14,392,012	\$15,607,988	-\$17,052	\$1,925,017	\$14,456,956	\$16,381,973	\$791,037	0.12	1.05	2.77%



Howard County Retirement Plans

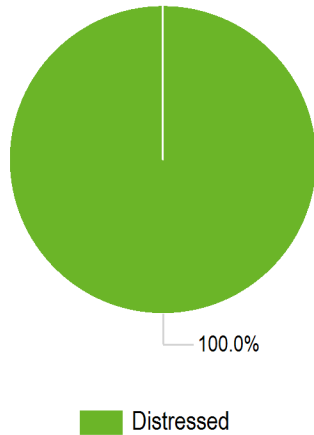
ANALYSIS BY VINTAGE YEAR - REAL ASSETS

Investments		Commitments		Contributions & Distributions			Valuations			Performance		
Investment Name	Vintage Year	Commitment	Unfunded Commitment	Paid In Capital	Additional Fees	Cumulative Distributions	Valuation	Total Value	Net Benefit	DPI	TVPI	IRR
2015												
Aether Real Assets IV, L.P.	2015	\$7,500,000	\$1,851,270	\$5,648,730	-\$906	\$0	\$5,857,101	\$5,857,101	\$209,277	0.00	1.04	1.48%
Commonfund Capital Natural Resources Partners X, L.P.	2015	\$7,500,000	\$1,976,250	\$5,523,750	\$0	\$1,925,017	\$4,309,354	\$6,234,371	\$710,621	0.35	1.13	6.68%
Total 2015		\$15,000,000	\$3,827,520	\$11,172,480	-\$906	\$1,925,017	\$10,166,455	\$12,091,472	\$919,898	0.17	1.08	3.72%
2018												
Aether Real Assets V, L.P.	2018	\$7,500,000	\$5,408,242	\$2,091,758	-\$16,146	\$0	\$2,397,054	\$2,397,054	\$321,442	0.00	1.15	13.02%
Commonfund Capital Natural Resources Partners XI, L.P.	2018	\$7,500,000	\$5,156,250	\$2,343,750	\$0	\$0	\$1,893,447	\$1,893,447	-\$450,303	0.00	0.81	-27.13%
Total 2018		\$15,000,000	\$10,564,492	\$4,435,508	-\$16,146	\$0	\$4,290,501	\$4,290,501	-\$128,861	0.00	0.97	-3.22%
Total		\$30,000,000	\$14,392,012	\$15,607,988	-\$17,052	\$1,925,017	\$14,456,956	\$16,381,973	\$791,037	0.12	1.05	2.77%

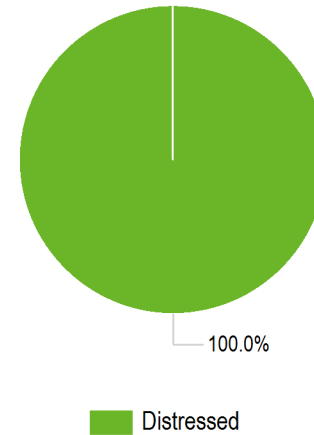


ANALYSIS BY STRATEGY - PRIVATE DEBT

Private Markets Valuation by Strategy



Private Markets Fund Exposure by Strategy

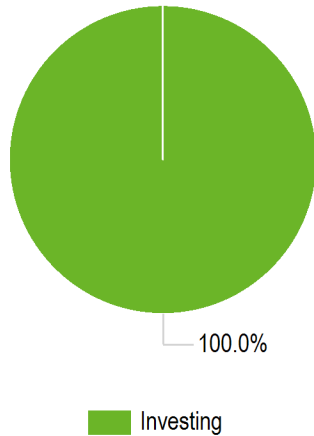


Investments	Commitments			Contributions & Distributions			Valuations				Performance		
Investment Strategy	Commitment	Unfunded Commitment	Call Ratio	Cumulative Contributions	Additional Fees	Cumulative Distributions	Valuation	Total Value	Net Benefit	Fund Exposure	DPI	TVPI	IRR
Total Distressed	\$25,000,000	\$23,750,000	0.05	\$1,250,000	\$4,167	\$0	\$1,250,000	\$1,250,000	-\$4,167	\$25,000,000	0.00	1.00	-0.33%
Total	\$25,000,000	\$23,750,000	0.05	\$1,250,000	\$4,167	\$0	\$1,250,000	\$1,250,000	-\$4,167	\$25,000,000	0.00	1.00	-0.33%

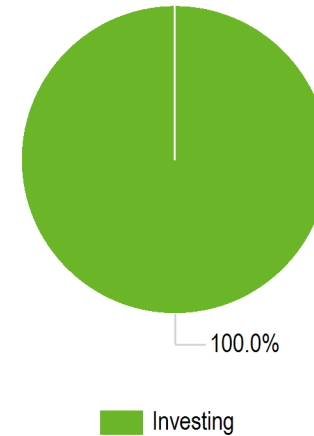


ANALYSIS BY LIFECYCLE - PRIVATE DEBT

Commitment by Lifecycle



Unfunded Commitment by Lifecycle



Investments	Commitments			Contributions & Distributions			Valuations			Performance		
Lifecycle	Commitment	Unfunded Commitment	Call Ratio	Cumulative Contributions	Additional Fees	Cumulative Distributions	Valuation	Total Value	Net Benefit	DPI	TVPI	IRR
Total Investing	\$25,000,000	\$23,750,000	0.05	\$1,250,000	\$4,167	\$0	\$1,250,000	\$1,250,000	-\$4,167	0.00	1.00	-0.33%
Total	\$25,000,000	\$23,750,000	0.05	\$1,250,000	\$4,167	\$0	\$1,250,000	\$1,250,000	-\$4,167	0.00	1.00	-0.33%



Howard County Retirement Plans

ANALYSIS BY LIFECYCLE - PRIVATE DEBT

Investments		Commitments		Contributions & Distributions			Valuations			Performance		
Investment Name	Vintage Year	Commitment	Unfunded Commitment	Paid In Capital	Additional Fees	Cumulative Distributions	Valuation	Total Value	Net Benefit	DPI	TVPI	IRR
Investing												
CVI Credit Value Fund A V, L.P.	2020	\$25,000,000	\$23,750,000	\$1,250,000	\$4,167	\$0	\$1,250,000	\$1,250,000	-\$4,167	0.00	1.00	-0.33%
Total Investing		\$25,000,000	\$23,750,000	\$1,250,000	\$4,167	\$0	\$1,250,000	\$1,250,000	-\$4,167	0.00	1.00	-0.33%
Total		\$25,000,000	\$23,750,000	\$1,250,000	\$4,167	\$0	\$1,250,000	\$1,250,000	-\$4,167	0.00	1.00	-0.33%



Howard County Retirement Plans

ANALYSIS BY VINTAGE YEAR - PRIVATE DEBT

Investments		Commitments		Contributions & Distributions			Valuations			Performance		
Investment Name	Vintage Year	Commitment	Unfunded Commitment	Paid In Capital	Additional Fees	Cumulative Distributions	Valuation	Total Value	Net Benefit	DPI	TVPI	IRR
2020												
CVI Credit Value Fund A V, L.P.	2020	\$25,000,000	\$23,750,000	\$1,250,000	\$4,167	\$0	\$1,250,000	\$1,250,000	-\$4,167	0.00	1.00	-0.33%
Total 2020		\$25,000,000	\$23,750,000	\$1,250,000	\$4,167	\$0	\$1,250,000	\$1,250,000	-\$4,167	0.00	1.00	-0.33%
Total		\$25,000,000	\$23,750,000	\$1,250,000	\$4,167	\$0	\$1,250,000	\$1,250,000	-\$4,167	0.00	1.00	-0.33%



JANUARY 2021 FLASH REPORT

NEPC, LLC

Howard County Retirement Plans

TOTAL FUND PERFORMANCE SUMMARY (GROSS)

	Ending January 31, 2021										
	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund Composite	1,293,876,003	100.0	100.0	-0.3	15.1	12.9	8.0	10.7	8.2	7.6	Apr-97
<i>Policy Index</i>				-0.1	13.9	11.6	7.2	9.6	7.6	7.5	Apr-97
<i>Allocation Index</i>				-0.1	13.2	10.9	--	--	--	--	Apr-97
Total US Equity Composite	335,775,205	26.0	23.0	-0.3	24.8	20.1	11.6	17.0	13.8	9.2	Jul-97
<i>Russell 3000</i>				-0.4	24.7	20.5	12.4	16.7	13.5	8.6	Jul-97
<i>US Equity Allocation Index</i>				0.0	26.1	22.3	12.5	16.9	13.3	--	Jul-97
Total International Equity	221,449,656	17.1	17.0	0.0	27.7	21.8	5.8	12.6	5.8	5.4	Jul-97
<i>MSCI ACWI ex USA</i>				0.2	24.6	14.0	3.1	10.5	4.8	5.0	Jul-97
Total Fixed Income Composite	373,718,471	28.9	30.0	-0.5	4.5	6.5	5.6	5.9	4.8	5.6	Jul-97
<i>Fixed Income Policy Index</i>				-0.7	0.6	4.7	5.5	4.0	3.8	5.3	Jul-97
Total Real Assets Composite	44,748,476	3.5	7.0	0.0	6.0	-5.4	2.7	5.7	5.9	6.4	Jul-03
<i>NCREIF Property Index 1 Qtr. Lag</i>				0.0	-0.3	2.0	5.1	6.3	9.4	8.3	Jul-03
Cash Composite	19,940,348	1.5		0.0	0.0	0.1	1.2	0.8	0.4	1.3	Dec-03
<i>91 Day T-Bills</i>				0.0	0.1	0.3	1.4	1.1	0.6	1.2	Dec-03
Hedge Fund Composite	131,896,920	10.2	8.0	-0.7	7.6	6.9	5.0	4.7	5.0	4.9	Jan-11
<i>HFRI FOF: Conservative Index</i>				0.6	9.4	6.6	3.7	4.0	2.9	3.0	Jan-11
Private Equity Composite	163,846,926	12.7	10.0	0.0	18.0	17.4	16.6	16.0	14.3	13.4	Jul-08
<i>CJA US All PE (1 Qtr Lag)</i>				0.0	21.5	13.4	13.1	13.0	13.6	10.7	Jul-08
Private Debt	2,500,000	0.2	5.0	0.0	0.0	--	--	--	--	0.0	Jun-20
<i>S&P/LSTA Leveraged Loan TR</i>				1.2	9.4	3.8	4.1	5.6	4.2	9.4	Jun-20

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 January 31, 2021										
	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund Composite	1,293,876,003	100.0	100.0	-0.3	15.1	12.9	8.0	10.7	8.2	7.6	Apr-97
Policy Index				-0.1	13.9	11.6	7.2	9.6	7.6	7.5	Apr-97
Allocation Index				-0.1	13.2	10.9	--	--	--	--	Apr-97
Total Equity Composite	557,224,862	43.1	40.0	-0.1	26.0	20.6	9.0	15.0	10.4	7.8	Apr-00
MSCI ACWI IMI				-0.2	24.9	17.6	7.8	13.6	8.9	5.3	Apr-00
Total US Equity Composite	335,775,205	26.0	23.0	-0.3	24.8	20.1	11.6	17.0	13.8	9.2	Jul-97
Russell 3000				-0.4	24.7	20.5	12.4	16.7	13.5	8.6	Jul-97
US Equity Allocation Index				0.0	26.1	22.3	12.5	16.9	13.3	--	Jul-97
Large Cap Composite	277,278,210	21.4	19.0	-0.7	23.2	18.2	10.8	16.2	13.5	9.2	Apr-01
Russell 1000				-0.8	23.4	19.8	12.5	16.7	13.6	8.5	Apr-01
LSV Asset Management SMA	68,860,207	5.3		1.3	26.9	5.1	2.0	10.9	11.2	9.5	May-00
Russell 1000 Value				-0.9	21.6	4.1	4.4	10.7	10.2	6.9	May-00
Westfield Capital Management SMA	108,783,664	8.4		-1.6	23.0	29.4	18.8	21.3	15.4	17.8	Jul-10
Russell 1000 Growth				-0.7	25.2	34.5	19.9	22.2	16.8	18.7	Jul-10
BlackRock Equity Index Non-Lendable Fund	99,634,339	7.7		-1.0	20.9	17.2	--	--	--	17.5	Dec-19
S&P 500				-1.0	20.9	17.2	11.7	16.2	13.5	17.5	Dec-19
Small/Mid Cap Composite	58,496,995	4.5	4.0	1.8	33.1	30.1	15.3	20.3	15.0	12.8	Apr-93
Russell 2500				2.5	38.2	25.5	11.1	16.1	12.1	10.8	Apr-93
William Blair SMA	20,850,493	1.6		1.2	33.3	33.7	18.7	21.9	16.8	13.7	Jun-06
Russell 2500 Growth				2.8	41.5	44.2	19.1	21.8	15.2	11.9	Jun-06
ICM Small Company - ICSCX	16,267,558	1.3		3.0	37.0	12.1	5.2	13.6	10.8	11.7	Apr-93
Russell 2000 Value				5.3	44.0	16.4	5.1	12.3	9.2	9.9	Apr-93
Brown Capital Small Company Strategy SMA	21,378,945	1.7		1.7	30.0	44.4	23.6	26.5	--	20.9	Aug-11
Russell 2000 Growth				4.8	45.6	42.7	16.5	20.2	14.1	14.3	Aug-11



Howard County Retirement Plans

TOTAL FUND PERFORMANCE DETAIL (GROSS)

	Ending January 31, 2021										
	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total International Equity	221,449,656	17.1	17.0	0.0	27.7	21.8	5.8	12.6	5.8	5.4	Jul-97
MSCI ACWI ex USA				0.2	24.6	14.0	3.1	10.5	4.8	5.0	Jul-97
International Developed Markets Composite	138,085,841	10.7	12.0	0.0	24.8	17.3	5.7	10.3	6.6	4.4	Mar-08
MSCI EAFE				-1.1	20.3	8.9	2.2	8.8	5.2	3.1	Mar-08
Mondrian International Equity Fund, L.P.	62,289,316	4.8		0.1	19.8	-0.1	-0.8	6.5	4.6	1.9	Dec-07
MSCI EAFE				-1.1	20.3	8.9	2.2	8.8	5.2	2.2	Dec-07
Baillie Gifford EAFE Pure K - BGPX	75,796,526	5.9		-0.2	29.1	33.5	--	--	--	14.7	May-18
MSCI EAFE				-1.1	20.3	8.9	2.2	8.8	5.2	4.0	May-18
International Emerging Markets Composite	83,363,815	6.4	5.0	0.1	32.8	29.7	5.8	17.2	4.0	7.2	Feb-06
MSCI Emerging Markets				3.1	35.2	27.9	4.4	15.0	4.2	6.1	Feb-06
GQG Partners Emerging Markets Equity Fund	59,255,840	4.6		1.7	38.6	43.4	--	--	--	27.3	Dec-18
MSCI Emerging Markets				3.1	35.2	27.9	4.4	15.0	4.2	17.0	Dec-18
Arga Emerging Markets Equity Fund	24,107,975	1.9		-3.6	--	--	--	--	--	-3.6	Jan-21
MSCI Emerging Markets Value NR USD				0.8	29.7	14.0	-0.8	10.8	1.2	0.8	Jan-21
Total Fixed Income Composite	373,718,471	28.9	30.0	-0.5	4.5	6.5	5.6	5.9	4.8	5.6	Jul-97
BBgBarc US Aggregate TR				-0.7	0.6	4.7	5.5	4.0	3.8	5.1	Jul-97
Core Fixed Income Composite	284,208,084	22.0	22.0	-0.4	3.3	7.4	--	--	--	8.8	Mar-19
BBgBarc US Aggregate TR				-0.7	0.6	4.7	5.5	4.0	3.8	7.5	Mar-19
Dodge & Cox SMA	126,773,871	9.8		-0.6	3.6	7.6	6.5	6.0	5.0	5.1	May-10
BBgBarc US Aggregate TR				-0.7	0.6	4.7	5.5	4.0	3.8	3.8	May-10
PIMCO Total Return	131,819,967	10.2		-0.3	2.7	6.8	6.2	5.1	4.3	4.5	May-10
BBgBarc US Aggregate TR				-0.7	0.6	4.7	5.5	4.0	3.8	3.8	May-10
State Street Global Advisors TIPS	25,614,245	2.0		0.3	5.0	9.0	6.3	4.8	3.8	4.0	Nov-09
BBgBarc US TIPS TR				0.3	5.0	9.1	6.3	4.8	3.8	4.0	Nov-09
Emerging Markets Debt Composite	48,448,255	3.7	4.0	-2.2	11.1	3.5	--	--	--	6.1	Mar-19
JP Morgan GBI EM Global Diversified TR USD				-1.1	9.1	2.9	1.1	6.4	1.5	5.4	Mar-19
Colchester Local Markets Debt Fund	48,448,255	3.7		-2.2	11.1	3.5	2.3	8.8	--	7.9	Oct-15
JP Morgan GBI EM Global Diversified TR USD				-1.1	9.1	2.9	1.1	6.4	1.5	6.1	Oct-15
Absolute Return Fixed Income	41,062,132	3.2	4.0	0.9	5.2	--	--	--	--	3.2	Mar-20
3-Month Libor Total Return USD				0.2	0.3	0.6	1.8	1.5	0.9	0.5	Mar-20
Payden Absolute Return Bond Fund PYAIX	41,062,132	3.2		0.9	5.2	--	--	--	--	3.2	Mar-20
3-Month Libor Total Return USD				0.2	0.3	0.6	1.8	1.5	0.9	0.5	Mar-20



Howard County Retirement Plans

TOTAL FUND PERFORMANCE DETAIL (GROSS)

	Ending January 31, 2021										
	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Real Assets Composite	44,748,476	3.5	7.0	0.0	6.0	-5.4	2.7	5.7	5.9	6.4	Jul-03
<i>NCREIF Property Index 1 Qtr. Lag</i>				0.0	-0.3	2.0	5.1	6.3	9.4	8.3	Jul-03
Cash Composite	19,940,348	1.5		0.0	0.0	0.1	1.2	0.8	0.4	1.3	Dec-03
<i>91 Day T-Bills</i>				0.0	0.1	0.3	1.4	1.1	0.6	1.2	Dec-03
Hedge Fund Composite	131,896,920	10.2	8.0	-0.7	7.6	6.9	5.0	4.7	5.0	4.9	Jan-11
<i>HFRI FOF: Conservative Index</i>				0.6	9.4	6.6	3.7	4.0	2.9	3.0	Jan-11
Magnitude International Class A Eligible	65,733,500	5.1		-1.3	6.9	7.6	5.0	3.9	4.9	4.9	Jan-11
<i>HFRI FOF: Conservative Index</i>				0.6	9.4	6.6	3.7	4.0	2.9	3.0	Jan-11
Blackstone Partners Offshore Fund LTD	66,163,421	5.1		-0.1	8.4	6.2	4.9	5.4	--	5.0	Mar-11
<i>HFRI FOF: Conservative Index</i>				0.6	9.4	6.6	3.7	4.0	2.9	2.9	Mar-11
Private Equity Composite	163,846,926	12.7	10.0	0.0	18.0	17.4	16.6	16.0	14.3	13.4	Jul-08
<i>CJA US All PE (1 Qtr Lag)</i>				0.0	21.5	13.4	13.1	13.0	13.6	10.7	Jul-08
Private Debt	2,500,000	0.2	5.0	0.0	0.0	--	--	--	--	0.0	Jun-20
<i>S&P/LSTA Leveraged Loan</i>				0.0	9.4	3.8	4.1	5.6	4.2	9.4	Jun-20

Magnitude International Class A Eligible is preliminary as of 1/31/2021.



Howard County Retirement Plans

TOTAL FUND PERFORMANCE DETAIL FOOTNOTES

Performance is preliminary for 1/31/2021.

Fiscal year ends 6/30.

Policy index consists of: 19% Russell 1000 / 4% Russell 2500 / 12% MSCI EAFE / 5% MSCI Emerging Markets / 20% BBgBarc US Aggregate TR / 2% BBgBarc US TIPS TR / 4% 3-Month Libor Total Return USD / 4% JP Morgan GBI EM Global Diversified TR USD / 5% S&P/LSTA Leveraged Loan TR / 7.0% NCREIF Property Index 1 Qtr. Lag / 8% 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.

Real Estate, Real Assets, Private Debt and Private Equity investments are valued as of 09/30/2020 and adjusted for capital calls and distributions through 12/31/2020.

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



INVESTMENT POLICY STATEMENT - REDLINE

NEPC, LLC

**HOWARD COUNTY RETIREMENT PLAN
AND
HOWARD COUNTY POLICE AND FIRE EMPLOYEES'
RETIREMENT PLAN
INVESTMENT POLICY STATEMENT**

(Revised ~~April 2019~~ February 2021)

TABLE OF CONTENTS

	<u>PAGE</u>
I. Introduction	3
II. Delegation of Responsibilities	5
III. Investment Objectives	9
IV. Asset Allocation Policy	9
V. Professional Investment Managers and Advisors	11
VI. Performance Objectives.....	16
VII. Review Procedures	18

I. INTRODUCTION

Howard County, Maryland, a body corporate and politic of the State of Maryland (the “County”), has established this Investment Policy Statement to clearly define the long-term investment objectives, risk tolerance and constraints of the Howard County Police and Fire Employees’ Plan (the "Police and Fire Plan") and the Howard County Retirement Plan (the “Employees Plan”). The Police and Fire Plan and the Employees Plan are collectively referred to as the “Plans”. This written policy statement shall assist the County in effectively supervising, managing, and monitoring the investments of the Plans.

The Police and Fire Plan is a single-employer defined benefit public employee retirement system established and administered by the County to provide defined pension benefits to uniformed career police and firefighters that do not participate in the Maryland State Retirement Systems. Pursuant to Council Bill 118-1989, effective March 13, 1990, the Police and Fire Plan, which is presently codified in Sections 1.401A through 1.478A of the Howard County Code, was adopted by the County. The Police and Fire Plan is administered by a Retirement Plan Committee (the “Police and Fire Committee”) comprised of County representatives; the Chief Administrative Officer, the Director of Finance, the Budget Officer and the Human Resources Administrator; and union and fire and police management representatives.

The Employees Plan is a single-employer defined benefit public employee retirement system established and administered by the County to provide defined pension benefits for general County employees that do not participate in the Police and Fire Plan or the Maryland State Retirement Systems. Pursuant to Council Bill 21-1995, effective June 12, 1995, the Employees Plan, which is presently codified in Sections 1.401 through 1.485 of the Howard County Code, was adopted by the

County. The Employees Plan is administered by a Retirement Plan Committee (the “Employees Committee”) comprised of County representatives; the Chief Administrative Officer, the Director of Finance, the Budget Officer and the Human Resources Administrator; and union and employee representatives. The Police and Fire Committee and the Employees Committee will be collectively referred to as the “Retirement Plan Committees”.

The Plans are maintained by the County for eligible employees in accordance with the terms, conditions, and provisions of the Plans, as set forth in each Plan document. The Plans were established and are maintained to provide retirement income and other benefits for certain of its employees and their beneficiaries.

The Retirement Plan Committees shall establish and approve any and all modifications to this Investment Policy Statement. Specific investment goals stated herein shall be reviewed at least annually, and when appropriate, new goals and standards shall be adopted by the Retirement Plan Committees. The Retirement Plan Committees administer the Investment Policy Statement and provide oversight and supervision for the management of the Plans’ assets. To assist the Retirement Plan Committees in this function, they are authorized and permitted to engage the services of an Investment Consultant who possesses the necessary specialized research facilities and skilled manpower to assure its expertise under the governing laws as may now, or in the future, apply to the investments of the Plans.

The Plans and the benefits provided thereunder are funded through a combination of investment earnings on the Plans’ assets and contributions specified in each Plan document. On December 24, 1997 the County established the Howard County Master Trust, an arrangement under which the assets of the Plans are commingled and pooled under common investment management.

II. DELEGATION OF RESPONSIBILITIES

- A. Retirement Plan Committees** - The Retirement Plan Committees and staff have no role and shall not exert any influence in the actual investment process performed by the Investment Managers. Specific oversight responsibilities of the Retirement Plan Committees in the investment process, to be performed with the advice and assistance of appropriate consultants, professional advisors, and staff, include:
1. complying with applicable laws, regulations and rulings appropriate thereto;
 2. developing a sound and consistent investment policy including asset allocation, diversification and quality guidelines;
 3. communicating clearly the major duties and responsibilities of those accountable for achieving investment results and to whom specific responsibilities have been delegated;
 4. selecting and maintaining qualified Investment Managers and Investment Consultants;
 5. monitoring and evaluating results to ensure that policy guidelines are being adhered to and that policy objectives are being met;
 6. taking action under appropriate circumstances to discharge an Investment Manager or Investment Consultant for failing to meet stated expectations or to abide by this Investment Policy Statement; and
 7. undertaking such work and studies as may be necessary to keep the Retirement Plan Committees adequately informed as to the status of the Plans' assets.

B. Responsibilities of the Investment Consultant

1. Evaluate the performance results for each Investment Manager quarterly and in writing.
2. Advise the Retirement Plan Committees as to the continuing appropriateness of each Investment Manager.
3. Recommend to the Retirement Plan Committees modifications of the overall investment structure including objectives, guidelines or performance standards for each asset class.
4. Keep the Retirement Plan Committees informed on current investment trends and issues.
5. Advise the Retirement Plan Committees of significant organizational changes at the Investment Managers' firms including: significant changes in key personnel, principals and other individuals providing advice and investment services to the Retirement Plan Committees.
6. Advise the Retirement Plan Committees of significant organizational changes at the Investment Consultant's firm including: changes in key personnel, principals and other individuals providing advice to the Retirement Plan Committees.
7. Provide a written fiscal year analysis of the performance of the Police and Fire Plan and the Employees Plan.

C. Responsibilities of the Investment Managers

1. Manage the portion of the assets under their control in accordance with;
 - a. the objectives, guidelines and performance standards as stated herein,
 - b. the prudent expert standards required by law, and
 - c. their specific contracts with the County.

2. Exercise full investment discretion within the objectives and guidelines included herein as to buy, hold and sell decisions for all assets under management.
3. Promptly inform the Retirement Plan Committees regarding significant matters pertaining to the investment of the assets under their control. This includes, at a minimum, the following:
 - a. A quarterly, written analysis of portfolio performance.
 - b. Oral and written communication of substantive changes in investment strategy and portfolio structure.
 - c. Oral and written communication of changes in ownership, organizational structure, financial condition of the Investment Manager's firm and changes in professional staffing, which relate to the investment of the assets under their control.
 - d. A statement of brokerage policy and average cents per share commission experience.
 - e. A statement of proxy voting policy and voting records, if requested.
4. Provide input as appropriate regarding progress toward the specific objectives developed herein, as well as suggestions on possible modifications to the investment guidelines.
5. Vote proxies in accordance with the objectives and guidelines included herein and report their proxy voting to the Retirement Plan Committees. The Retirement Plan Committees reserve the right to direct the voting of proxies upon adequate notice.

D. Custodian – The custodian has been delegated the following responsibilities:

1. Perform, participate in and exercise such rights, privileges, duties and responsibilities possessed by any other owner or holder of bonds or other

evidence of indebtedness and common and preferred stock, except for the voting of proxies, which shall be delegated to investment managers;

2. Safekeep all assets including securities, cash and cash equivalents;
3. Receive instructions from Investment Managers to purchase and sell various securities and ensure that transactions are settled according to established settlement procedures;
4. Provide monthly transaction accounting on security holdings with reports provided to the Retirement Plan Committees in a timely manner;
5. Process all benefit distributions to retirees and beneficiaries in a timely manner;
6. Provide annual tax reporting to the Internal Revenue Service and to retirees and beneficiaries in a timely manner; and
7. Forward proxy materials to Investment Managers promptly after receiving them.

E. Legal Counsel - The Retirement Plan Committees' designated legal counsel will advise and represent the Retirement Plan Committees in all matters requiring legal insight and advice.

F. Plan Actuary - The Retirement Plan Committees' designated plan actuary shall have the following responsibilities:

1. Prepare, on a frequency determined by the Retirement Plan Committees, a comprehensive evaluation of the funded status and required contribution levels for the Police and Fire Plan and the Employees Plan and attest to the appropriateness of the assumptions and funding policy for both the Police and Fire Plan and the Employees Plan; and
2. Conduct special experience and actuarial studies as required by the Retirement Plan Committees.

III. INVESTMENT OBJECTIVES

- A. The Plans' objective is to provide benefits as anticipated through a carefully planned and executed investment program that achieves a reasonable long term total return consistent with the level of risk assumed.
- B. The Plans seek to:
 - 1. Achieve an annualized total rate of return of at least 7.35% net of investment expenses, over a full market cycle.
 - 2. Achieve adequate investment growth such that the purchasing power of the principal amount of the Plans' assets is maintained over time.
 - 3. Diversify assets sufficiently and in accordance with modern portfolio theory.
- C. The Plans shall maintain sufficient liquidity levels in order to meet near term obligations and fund current operations.

IV. ASSET ALLOCATION POLICY

In an attempt to construct a portfolio of several different asset classes that will ultimately lower total expected risk (as measured by volatility of returns) and increase total expected return, the Plans' assets will be diversified in accordance with Modern Portfolio Theory. The Retirement Plan Committees have received and reviewed long-term performance expectations while focusing on the risk and rewards of capital market behavior. Based on the Plans' time horizon, risk tolerance, liquidity needs, and investment objectives, an efficient or optimal portfolio was identified.

The asset allocation policy identifies the target allocation to the classes of assets the Plans can utilize and the ranges around the targets that the asset classes can fluctuate. This policy is expected to provide diversification of assets in an effort to maximize investment return to the Plans consistent with prudent market and economic risk. All of the Plans' assets are to remain invested at all times in the asset classes as designated by this policy. The following strategic asset allocation policy was adopted by the Plans on ~~April February 25, 2021~~ January 28, 2021.

Asset Class	Minimum Allocation	Target	Maximum Allocation
Equities	350%	450%	550%
U.S. Equities	22.5 <u>18</u> %	27.5 <u>3</u> %	32.5 <u>28</u> %
International Equities	6 7%	11 2%	16 7%
Emerging Market Equities	1.5 %	6.5 <u>5</u> %	11.5 <u>0</u> %
Alternative Investments	218%	263%	3128%
Private Equity	8 5%	13 0%	18 5%
Private Debt	0%	5%	10%
Hedge Funds	3%	8%	13%
Fixed Income	1320%	2330%	3340%
Core Fixed Income <i>(constrained to US Treasuries and Investment Grade Bonds)</i>	5 <u>1</u> 0%	9 <u>2</u> 0%	19 <u>3</u> 0%
TIPS	0%	2%	7%
Absolute Return Fixed Income	0%	4%	9%
Emerging Market Debt	0%	4%	9 <u>1</u> 0%
<u>High Yield Bonds</u>	0 %	4 %	9 %
Real Assets	2%	67%	112%
Core/Non-Core Real Estate	2%	4 5%	6 7%
Other Real Assets	0%	2%	4%
Cash Equivalents	0%	0%	5%

It is understood that the ranges noted above are targets and that deviations may occur from time to time as a result of capital market fluctuations. However, in the absence of a compelling reason, the Retirement Plan Committees with the advice of the Investment Consultant will rebalance the assets should the allocation to the classes fall outside the stated tactical ranges. Unless the Retirement Plan

Committee with the advice of the Investment Consultant determines that it is unnecessary, rebalancing back to target allocations shall occur at least annually.

A limited review of the asset allocation policy shall be conducted annually to determine whether the level of investment in illiquid assets presents risk to the Fund. A formal review of the asset allocation policy shall be conducted at least every five years to ensure that the current asset mix is consistent with the long-term objectives of the Plans.

If multiple Investment Managers with different investment styles (i.e. growth and value) are used by the Plans within the sub-asset classes noted above then equal target allocations will be made so that there is no distinct style bias within the Plans' overall portfolio.

V. PROFESSIONAL INVESTMENT MANAGERS AND ADVISORS

The Retirement Plan Committees shall employ professional Investment Managers to manage the assets of the Plans. The Retirement Plan Committees may establish separate account structures with Investment Managers or invest in mutual funds, limited partnerships, group trusts, funds of funds and other commingled vehicles ("Pooled Investment Funds"). The Retirement Plan Committees and their staff have no role and shall not exert any influence in the actual investment process performed by the Investment Managers. Unless the prospectus or offering memorandum of a Pooled Investment Fund provides otherwise, Investment Managers must be investment advisors registered under the Investment Advisors Act of 1940, banks or insurance companies. In addition, each Investment Manager must be registered in the State of Maryland and licensed to conduct business in the State if legally required to do so.

New Investment Managers may be added and participation in Pooled Investment Funds may be approved only after a formal search and selection process is conducted by the Retirement Plan Committees. This process shall consider, among other things, the qualitative and quantitative characteristics of potential Investment Managers and Pooled Investment Funds from among a universe of available Investment Managers and Pooled Investment Funds.

It is understood that investing through a Pooled Investment Fund means that the investments will be governed by the Pooled Investment Fund's own set of guidelines and restrictions. While it is the intent to invest in Pooled Investment Funds that meet the general intent of these guidelines, there may, in fact, be instances in which the Pooled Investment Fund's guidelines differ in a number of ways. In such cases, the Pooled Investment Fund's guidelines and restrictions will supersede those outlined herein. For that reason, investments in Pooled Investment Funds may be made by an Investment Manager only with the prior approval of the Retirement Plan Committees. The Investment Manager shall provide the Retirement Plan Committees with a copy of the prospectus or offering memorandum of any Pooled Investment Fund that it proposes to use, and shall specifically identify any guidelines and restrictions that differ from those outlined herein. To the extent that Pooled Investment Funds are implemented by an Investment Manager, the fees imposed should be at no higher cost than that incurred if the securities were separately managed by the Investment Manager.

Investment Managers shall have full discretion over the investment decisions they make pursuant to a separate set of investment guidelines and subject to the following policies:

- A. Investment decisions should be made in accordance with the documents and instruments governing the Plans and with the care, skill, prudence and diligence under the circumstances then prevailing that a prudent individual acting in a like capacity and familiar with such matters would use in the conduct of a like character and with like aims.
- B. Investments should be diversified to minimize the risk of large losses.
- C. Although investments should be made with long-term objectives, assets may be disposed of, without regard to the length of time they have been held, whenever investment considerations make such action desirable. Investment results will be judged on the basis of unrealized and realized gains and losses so there is no accounting incentive to hold or sell a security.
- D. Investment Managers are permitted to invest the Plans' assets in futures, options, swaps and derivatives, but only if the investment guidelines that are incorporated into the Manager's agreement with the County (or the prospectus or offering memorandum in the case of a Pooled Investment Fund) specifically permits such investments.
- E. Periodic asset valuation reports (at least quarterly) shall be furnished to the Plans' Investment Consultant by each of the Plans' Investment Managers.
- F. The County employs a commission recapture program (the "Program"), in which several Investment Managers participate. Each Investment Manager that is separately notified of its participation in the Program shall comply with the following objectives and guidelines:
 - 1. Objectives
 - For those trades that are executed on behalf of the Plans, the Investment Manager shall attempt to direct 25% to 30% of the commission generated to the brokerage firms providing services within the Program, subject to the guidelines set forth below.

- Any commission that is generated through the Program shall solely benefit the participants and beneficiaries of the Plans.

2. Guidelines

- Commission rates shall be negotiable and the Investment Manager must seek best price and execution at all times. The Investment Manager is not required to use a participating brokerage firm if the participating brokerage firm fails to provide best execution.
- The Investment Manager shall pay commissions that are reasonable in relation to the services received. The selection of a broker shall take into account relevant factors such as price, the broker's facilities, reliability, financial responsibility, and research services, and the ability of the broker to effect the transactions, particularly with regard to such aspects as timing, order size and execution of orders.
- In order to satisfy the direction request of the Program, the Investment Manager is encouraged to use "step-out" trades and in no event shall the Investment Manager "sequence" the Plans' trades.
- The County will evaluate the Program and the participating brokerage firms' abilities on an annual basis. This evaluation shall include communication with the Investment Manager regarding the brokerage firms' potential for achieving best execution, an analysis of the brokerage firms' trading skills, the ability of the Investment Manager to satisfy the Program's objectives, the Investment Manager's trading style and liquidity needs.
- The Investment Manager is responsible for ongoing monitoring of the participating brokerage firms' abilities and shall notify the Investment Consultant immediately should any of the brokerage firms fail to meet the Investment Manager's standards for execution quality.

G. This Section G. applies to each Investment Manager unless the prospectus or offering memorandum of a Pooled Investment Fund provides otherwise. The County has delegated its right to vote the proxy solicitations received on the Plans' behalf to the Investment Managers it employs. The Retirement Plan Committees reserve the right to direct the voting of proxies upon adequate notice. In all proxy situations, the Investment Manager has a duty to make independent proxy decisions and to decide with objectivity what is in the best interests of the Plans' participants and beneficiaries. All proxies must be voted.

Proxy voting rights are the Plans' assets and must be exercised in accordance with the fiduciary duties of loyalty and prudence. The duty of loyalty requires that the proxy voting fiduciary exercise its proxy voting authority solely in the interests of participants and beneficiaries of the Plans and for the exclusive purpose of providing the Plans' benefits to participants and beneficiaries of the Plans. The voting fiduciary may not subordinate the interests of participants and beneficiaries of the Plans to unrelated objectives.

In order to meet this fiduciary duty it is expected that each Investment Manager employed by the County will establish policies and procedures to ensure that issues are noted, analyzed and considered before voting. Investment Managers shall consider, but are not limited to, the following guidelines when adopting proxy voting policies and procedures:

1. Develop initial, specific guidelines and institute a regular review process, including review of new or controversial proxy issues.

2. Provide a review mechanism for any unusual proposals, such as an opposition slate of directors, corporate restructuring related to hostile takeovers, or any proposals that appear not to be in the best interests of shareholders.
3. Provide regular reports to the Retirement Plan Committees that effectively exhibit how proxies are voted and why.
4. Maintain adequate records of all proxies that are received and voted.
5. Avoid or minimize conflicts of interest.
6. Develop a system to monitor any delegation of proxy voting responsibility to others.
7. Monitor for the timely receipt of proxies from the Plans' custodian or its agent.
8. Educate and train staff.
9. Provide a copy of the proxy voting policies and procedures to the County when the account is funded and whenever changes or amendments are made thereafter.

VI. PERFORMANCE OBJECTIVES

Investment performance shall be measured on two levels: against objectives for the total Plans and against objectives for the individual Investment Managers. Investment performance shall be measured no less frequently than quarterly and performance relative to objectives shall be judged over a period of three to five years.

The Plans' total performance will be measured against a composite benchmark. The Investment Consultant will set the composite benchmark based on unmanaged benchmark indexes provided below weighted in proportion to the

Plans' target asset allocation (provided in Part IV above) in each of the equivalent asset classes. When the target allocation for any asset class reflects a future goal, a transitional composite benchmark will be used. The performance objective of the total Plans is to provide an annualized total rate of return of at least 7.35% net of investment expenses, and match or outperform the composite benchmark over a full market cycle, net of investment expenses.

Asset Class	Index
Large Cap U.S. Equities	Russell 1000 Index
Small/Mid Cap US Equities	Russell 2500 Index
International Equities	MSCI EAFE Index
Emerging Markets Equity	MSCI EM Index
Core Fixed Income	Bloomberg Barclays U.S. Aggregate
TIPS	Bloomberg Barclays U.S. TIPS
Absolute Return Fixed Income	3-Month Libor Total Return
Emerging Market Debt	JPM GBI EM Global Diversified
<u>High Yield</u>	<u>Bloomberg Barclays US High Yield Total Return</u>
Private Equity	Cambridge Associates US All PE Index
Private Debt	S&P/LSTA Leveraged Loan Index
Hedge Funds	HFRI Fund of Funds Conservative Index
Real Estate/ Real Assets	NCREIF Index

The performance objectives of individual Investment Managers shall be documented within separate investment guidelines. The performance of Pooled Investment Funds shall be measured against the performance the unmanaged market indexes identified above or any appropriate style specific index. In general, Investment Managers and Pooled Investment Funds are expected to outperform an appropriate benchmark over 3 to 5-year periods.

VII. REVIEW PROCEDURES

The Retirement Plan Committees and the Investment Consultant will review the performance of the Investment Managers on a periodic basis, to determine whether or not the Investment Managers selected have performed in accordance with this Investment Policy Statement and the applicable investment guidelines. Failure by an Investment Manager to comply with this Investment Policy Statement and the applicable investment guidelines may be cause for termination.

- A. Each Investment Manager will be expected to meet with the Retirement Plan Committees and/or their representative(s) as requested (generally, once every two years) and to provide:
1. A verbal and written review of their investment performance and portfolio structure.
 2. A synopsis of their key investment decisions, their underlying rationale and expected future implications.
 3. An organizational update.
- B. The Retirement Plan Committees and the Investment Consultant will also review each Investment Manager and Pooled Investment Fund and the overall investment program on a periodic basis, but no less than annually. Key issues will include:
1. Current trends and developments in the capital markets and manager community.
 2. The ongoing appropriateness of the policies included herein.
 3. The continuing diversification of the investment funds as managed by the current Investment Managers. It is the intent of the Retirement Plan

Committees to review this document on an annual basis as future circumstances could require modifications.

This policy was approved by the Retirement Plan Committees of the Howard County Retirement Plan and Howard County Police and Fire Employees' Retirement Plan on ~~April~~ February 25, 2021~~19~~.

Wanda Hutchinson

Chairperson, Retirement Plan Committees

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INVESTMENT POLICY STATEMENT - CLEAN

NEPC, LLC

**HOWARD COUNTY RETIREMENT PLAN
AND
HOWARD COUNTY POLICE AND FIRE EMPLOYEES'
RETIREMENT PLAN
INVESTMENT POLICY STATEMENT**

(Revised February 2021)

TABLE OF CONTENTS

	<u>PAGE</u>
I. Introduction	3
II. Delegation of Responsibilities	5
III. Investment Objectives	9
IV. Asset Allocation Policy	9
V. Professional Investment Managers and Advisors	11
VI. Performance Objectives.....	16
VII. Review Procedures	18

I. INTRODUCTION

Howard County, Maryland, a body corporate and politic of the State of Maryland (the "County"), has established this Investment Policy Statement to clearly define the long-term investment objectives, risk tolerance and constraints of the Howard County Police and Fire Employees' Plan (the "Police and Fire Plan") and the Howard County Retirement Plan (the "Employees Plan"). The Police and Fire Plan and the Employees Plan are collectively referred to as the "Plans". This written policy statement shall assist the County in effectively supervising, managing, and monitoring the investments of the Plans.

The Police and Fire Plan is a single-employer defined benefit public employee retirement system established and administered by the County to provide defined pension benefits to uniformed career police and firefighters that do not participate in the Maryland State Retirement Systems. Pursuant to Council Bill 118-1989, effective March 13, 1990, the Police and Fire Plan, which is presently codified in Sections 1.401A through 1.478A of the Howard County Code, was adopted by the County. The Police and Fire Plan is administered by a Retirement Plan Committee (the "Police and Fire Committee") comprised of County representatives; the Chief Administrative Officer, the Director of Finance, the Budget Officer and the Human Resources Administrator; and union and fire and police management representatives.

The Employees Plan is a single-employer defined benefit public employee retirement system established and administered by the County to provide defined pension benefits for general County employees that do not participate in the Police and Fire Plan or the Maryland State Retirement Systems. Pursuant to Council Bill 21-1995, effective June 12, 1995, the Employees Plan, which is presently codified in Sections 1.401 through 1.485 of the Howard County Code, was adopted by the

County. The Employees Plan is administered by a Retirement Plan Committee (the "Employees Committee") comprised of County representatives; the Chief Administrative Officer, the Director of Finance, the Budget Officer and the Human Resources Administrator; and union and employee representatives. The Police and Fire Committee and the Employees Committee will be collectively referred to as the "Retirement Plan Committees".

The Plans are maintained by the County for eligible employees in accordance with the terms, conditions, and provisions of the Plans, as set forth in each Plan document. The Plans were established and are maintained to provide retirement income and other benefits for certain of its employees and their beneficiaries.

The Retirement Plan Committees shall establish and approve any and all modifications to this Investment Policy Statement. Specific investment goals stated herein shall be reviewed at least annually, and when appropriate, new goals and standards shall be adopted by the Retirement Plan Committees. The Retirement Plan Committees administer the Investment Policy Statement and provide oversight and supervision for the management of the Plans' assets. To assist the Retirement Plan Committees in this function, they are authorized and permitted to engage the services of an Investment Consultant who possesses the necessary specialized research facilities and skilled manpower to assure its expertise under the governing laws as may now, or in the future, apply to the investments of the Plans.

The Plans and the benefits provided thereunder are funded through a combination of investment earnings on the Plans' assets and contributions specified in each Plan document. On December 24, 1997 the County established the Howard County Master Trust, an arrangement under which the assets of the Plans are commingled and pooled under common investment management.

II. DELEGATION OF RESPONSIBILITIES

- A. Retirement Plan Committees** - The Retirement Plan Committees and staff have no role and shall not exert any influence in the actual investment process performed by the Investment Managers. Specific oversight responsibilities of the Retirement Plan Committees in the investment process, to be performed with the advice and assistance of appropriate consultants, professional advisors, and staff, include:
1. complying with applicable laws, regulations and rulings appropriate thereto;
 2. developing a sound and consistent investment policy including asset allocation, diversification and quality guidelines;
 3. communicating clearly the major duties and responsibilities of those accountable for achieving investment results and to whom specific responsibilities have been delegated;
 4. selecting and maintaining qualified Investment Managers and Investment Consultants;
 5. monitoring and evaluating results to ensure that policy guidelines are being adhered to and that policy objectives are being met;
 6. taking action under appropriate circumstances to discharge an Investment Manager or Investment Consultant for failing to meet stated expectations or to abide by this Investment Policy Statement; and
 7. undertaking such work and studies as may be necessary to keep the Retirement Plan Committees adequately informed as to the status of the Plans' assets.

B. Responsibilities of the Investment Consultant

1. Evaluate the performance results for each Investment Manager quarterly and in writing.
2. Advise the Retirement Plan Committees as to the continuing appropriateness of each Investment Manager.
3. Recommend to the Retirement Plan Committees modifications of the overall investment structure including objectives, guidelines or performance standards for each asset class.
4. Keep the Retirement Plan Committees informed on current investment trends and issues.
5. Advise the Retirement Plan Committees of significant organizational changes at the Investment Managers' firms including: significant changes in key personnel, principals and other individuals providing advice and investment services to the Retirement Plan Committees.
6. Advise the Retirement Plan Committees of significant organizational changes at the Investment Consultant's firm including: changes in key personnel, principals and other individuals providing advice to the Retirement Plan Committees.
7. Provide a written fiscal year analysis of the performance of the Police and Fire Plan and the Employees Plan.

C. Responsibilities of the Investment Managers

1. Manage the portion of the assets under their control in accordance with;
 - a. the objectives, guidelines and performance standards as stated herein,
 - b. the prudent expert standards required by law, and
 - c. their specific contracts with the County.

2. Exercise full investment discretion within the objectives and guidelines included herein as to buy, hold and sell decisions for all assets under management.
3. Promptly inform the Retirement Plan Committees regarding significant matters pertaining to the investment of the assets under their control. This includes, at a minimum, the following:
 - a. A quarterly, written analysis of portfolio performance.
 - b. Oral and written communication of substantive changes in investment strategy and portfolio structure.
 - c. Oral and written communication of changes in ownership, organizational structure, financial condition of the Investment Manager's firm and changes in professional staffing, which relate to the investment of the assets under their control.
 - d. A statement of brokerage policy and average cents per share commission experience.
 - e. A statement of proxy voting policy and voting records, if requested.
4. Provide input as appropriate regarding progress toward the specific objectives developed herein, as well as suggestions on possible modifications to the investment guidelines.
5. Vote proxies in accordance with the objectives and guidelines included herein and report their proxy voting to the Retirement Plan Committees. The Retirement Plan Committees reserve the right to direct the voting of proxies upon adequate notice.

D. Custodian – The custodian has been delegated the following responsibilities:

1. Perform, participate in and exercise such rights, privileges, duties and responsibilities possessed by any other owner or holder of bonds or other

evidence of indebtedness and common and preferred stock, except for the voting of proxies, which shall be delegated to investment managers;

2. Safekeep all assets including securities, cash and cash equivalents;
3. Receive instructions from Investment Managers to purchase and sell various securities and ensure that transactions are settled according to established settlement procedures;
4. Provide monthly transaction accounting on security holdings with reports provided to the Retirement Plan Committees in a timely manner;
5. Process all benefit distributions to retirees and beneficiaries in a timely manner;
6. Provide annual tax reporting to the Internal Revenue Service and to retirees and beneficiaries in a timely manner; and
7. Forward proxy materials to Investment Managers promptly after receiving them.

E. Legal Counsel - The Retirement Plan Committees' designated legal counsel will advise and represent the Retirement Plan Committees in all matters requiring legal insight and advice.

F. Plan Actuary - The Retirement Plan Committees' designated plan actuary shall have the following responsibilities:

1. Prepare, on a frequency determined by the Retirement Plan Committees, a comprehensive evaluation of the funded status and required contribution levels for the Police and Fire Plan and the Employees Plan and attest to the appropriateness of the assumptions and funding policy for both the Police and Fire Plan and the Employees Plan; and
2. Conduct special experience and actuarial studies as required by the Retirement Plan Committees.

III. INVESTMENT OBJECTIVES

- A. The Plans' objective is to provide benefits as anticipated through a carefully planned and executed investment program that achieves a reasonable long term total return consistent with the level of risk assumed.
- B. The Plans seek to:
 - 1. Achieve an annualized total rate of return of at least 7.35% net of investment expenses, over a full market cycle.
 - 2. Achieve adequate investment growth such that the purchasing power of the principal amount of the Plans' assets is maintained over time.
 - 3. Diversify assets sufficiently and in accordance with modern portfolio theory.
- C. The Plans shall maintain sufficient liquidity levels in order to meet near term obligations and fund current operations.

IV. ASSET ALLOCATION POLICY

In an attempt to construct a portfolio of several different asset classes that will ultimately lower total expected risk (as measured by volatility of returns) and increase total expected return, the Plans' assets will be diversified in accordance with Modern Portfolio Theory. The Retirement Plan Committees have received and reviewed long-term performance expectations while focusing on the risk and rewards of capital market behavior. Based on the Plans' time horizon, risk tolerance, liquidity needs, and investment objectives, an efficient or optimal portfolio was identified.

The asset allocation policy identifies the target allocation to the classes of assets the Plans can utilize and the ranges around the targets that the asset classes can fluctuate. This policy is expected to provide diversification of assets in an effort to maximize investment return to the Plans consistent with prudent market and economic risk. All of the Plans' assets are to remain invested at all times in the asset classes as designated by this policy. The following strategic asset allocation policy was adopted by the Plans on January 28, 2021.

Asset Class	Minimum Allocation	Target	Maximum Allocation
Equities	35%	45%	55%
U.S. Equities	22.5%	27.5%	32.5%
International Equities	6%	11%	16%
Emerging Market Equities	1.5%	6.5%	11.5%
Alternative Investments	21%	26%	31%
Private Equity	8%	13%	18%
Private Debt	0%	5%	10%
Hedge Funds	3%	8%	13%
Fixed Income	13%	23%	33%
Core Fixed Income (constrained to US Treasuries and Investment Grade Bonds)	5%	9%	19%
TIPS	0%	2%	7%
Absolute Return Fixed Income	0%	4%	9%
Emerging Market Debt	0%	4%	9%
High Yield Bonds	0%	4%	9%
Real Assets	2%	6%	11%
Core/Non-Core Real Estate	2%	4%	6%
Other Real Assets	0%	2%	4%
Cash Equivalents	0%	0%	5%

It is understood that the ranges noted above are targets and that deviations may occur from time to time as a result of capital market fluctuations. However, in the absence of a compelling reason, the Retirement Plan Committees with the advice of the Investment Consultant will rebalance the assets should the allocation to the classes fall outside the stated tactical ranges. Unless the Retirement Plan

Committee with the advice of the Investment Consultant determines that it is unnecessary, rebalancing back to target allocations shall occur at least annually.

A limited review of the asset allocation policy shall be conducted annually to determine whether the level of investment in illiquid assets presents risk to the Fund. A formal review of the asset allocation policy shall be conducted at least every five years to ensure that the current asset mix is consistent with the long-term objectives of the Plans.

If multiple Investment Managers with different investment styles (i.e. growth and value) are used by the Plans within the sub-asset classes noted above then equal target allocations will be made so that there is no distinct style bias within the Plans' overall portfolio.

V. PROFESSIONAL INVESTMENT MANAGERS AND ADVISORS

The Retirement Plan Committees shall employ professional Investment Managers to manage the assets of the Plans. The Retirement Plan Committees may establish separate account structures with Investment Managers or invest in mutual funds, limited partnerships, group trusts, funds of funds and other commingled vehicles ("Pooled Investment Funds"). The Retirement Plan Committees and their staff have no role and shall not exert any influence in the actual investment process performed by the Investment Managers. Unless the prospectus or offering memorandum of a Pooled Investment Fund provides otherwise, Investment Managers must be investment advisors registered under the Investment Advisors Act of 1940, banks or insurance companies. In addition, each Investment Manager must be registered in the State of Maryland and licensed to conduct business in the State if legally required to do so.

New Investment Managers may be added and participation in Pooled Investment Funds may be approved only after a formal search and selection process is conducted by the Retirement Plan Committees. This process shall consider, among other things, the qualitative and quantitative characteristics of potential Investment Managers and Pooled Investment Funds from among a universe of available Investment Managers and Pooled Investment Funds.

It is understood that investing through a Pooled Investment Fund means that the investments will be governed by the Pooled Investment Fund's own set of guidelines and restrictions. While it is the intent to invest in Pooled Investment Funds that meet the general intent of these guidelines, there may, in fact, be instances in which the Pooled Investment Fund's guidelines differ in a number of ways. In such cases, the Pooled Investment Fund's guidelines and restrictions will supersede those outlined herein. For that reason, investments in Pooled Investment Funds may be made by an Investment Manager only with the prior approval of the Retirement Plan Committees. The Investment Manager shall provide the Retirement Plan Committees with a copy of the prospectus or offering memorandum of any Pooled Investment Fund that it proposes to use, and shall specifically identify any guidelines and restrictions that differ from those outlined herein. To the extent that Pooled Investment Funds are implemented by an Investment Manager, the fees imposed should be at no higher cost than that incurred if the securities were separately managed by the Investment Manager.

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- B. Investments should be diversified to minimize the risk of large losses.
- C. Although investments should be made with long-term objectives, assets may be disposed of, without regard to the length of time they have been held, whenever investment considerations make such action desirable. Investment results will be judged on the basis of unrealized and realized gains and losses so there is no accounting incentive to hold or sell a security.
- D. Investment Managers are permitted to invest the Plans' assets in futures, options, swaps and derivatives, but only if the investment guidelines that are incorporated into the Manager's agreement with the County (or the prospectus or offering memorandum in the case of a Pooled Investment Fund) specifically permits such investments.
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- F. The County employs a commission recapture program (the "Program"), in which several Investment Managers participate. Each Investment Manager that is separately notified of its participation in the Program shall comply with the following objectives and guidelines:
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 - For those trades that are executed on behalf of the Plans, the Investment Manager shall attempt to direct 25% to 30% of the commission generated to the brokerage firms providing services within the Program, subject to the guidelines set forth below.

- Any commission that is generated through the Program shall solely benefit the participants and beneficiaries of the Plans.

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- Commission rates shall be negotiable and the Investment Manager must seek best price and execution at all times. The Investment Manager is not required to use a participating brokerage firm if the participating brokerage firm fails to provide best execution.
- The Investment Manager shall pay commissions that are reasonable in relation to the services received. The selection of a broker shall take into account relevant factors such as price, the broker's facilities, reliability, financial responsibility, and research services, and the ability of the broker to effect the transactions, particularly with regard to such aspects as timing, order size and execution of orders.
- In order to satisfy the direction request of the Program, the Investment Manager is encouraged to use "step-out" trades and in no event shall the Investment Manager "sequence" the Plans' trades.
- The County will evaluate the Program and the participating brokerage firms' abilities on an annual basis. This evaluation shall include communication with the Investment Manager regarding the brokerage firms' potential for achieving best execution, an analysis of the brokerage firms' trading skills, the ability of the Investment Manager to satisfy the Program's objectives, the Investment Manager's trading style and liquidity needs.
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G. This Section G. applies to each Investment Manager unless the prospectus or offering memorandum of a Pooled Investment Fund provides otherwise. The County has delegated its right to vote the proxy solicitations received on the Plans' behalf to the Investment Managers it employs. The Retirement Plan Committees reserve the right to direct the voting of proxies upon adequate notice. In all proxy situations, the Investment Manager has a duty to make independent proxy decisions and to decide with objectivity what is in the best interests of the Plans' participants and beneficiaries. All proxies must be voted.

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2. Provide a review mechanism for any unusual proposals, such as an opposition slate of directors, corporate restructuring related to hostile takeovers, or any proposals that appear not to be in the best interests of shareholders.
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Asset Class	Index
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Emerging Markets Equity	MSCI EM Index
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TIPS	Bloomberg Barclays U.S. TIPS
Absolute Return Fixed Income	3-Month Libor Total Return
Emerging Market Debt	JPM GBI EM Global Diversified
High Yield	Bloomberg Barclays US High Yield Total Return
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Committees to review this document on an annual basis as future circumstances could require modifications.

This policy was approved by the Retirement Plan Committees of the Howard County Retirement Plan and Howard County Police and Fire Employees' Retirement Plan on February 25, 2021.

Wanda Hutchinson

Chairperson, Retirement Plan Committees

11658268

APPENDIX

NEPC, LLC

2020 FOURTH QUARTER INSIGHTS AT NEPC

PRIVATE WEALTH

- Your Heirs and Wealth: Fostering Purpose
- The Election and Taxes: An Overview

ENDOWMENTS & FOUNDATIONS

- Market Chatter: Calling Tech Support Fiscal Year 2020 Mega Endowment Returns
- Peer Roundtable Series: The Balancing Act of Community Foundations
- NEPC's 2020 Higher Education COVID-19 Flash Poll

DEFINED BENEFIT

- Taking Stock: Are Pension Plans Leaving Money on the Table?
- NEPC's 2020 Defined Benefit Flash Poll: Managing a DB Plan During a Pandemic
- Taking Stock: NEPC's 2020 Q3 Pension Monitor
- Taking Stock: NEPC's 2020 October Pension Monitor
- Taking Stock: NEPC November 2020 Pension Monitor

GENERAL RESEARCH

- 2020 Third Quarter Market Thoughts
- Taking Stock: NEPC Asset Allocation Roundtable: The COVID-19 Edition
- Taking Stock: Rebalancing: The Cure for Investor Complacency
- NEPC's 2020 Hedge Fund Operational Due Diligence Survey Results
- Here's Why Investing in Fixed Income is Still Worthwhile

HEALTHCARE

- NEPC's 2020 Healthcare Operating Funds Survey Results

IMPACT INVESTING

- Taking Stock: Will the New DOL Rule Curb ESG Momentum?

WEBINAR REPLAYS

- NEPC's US Election Presentation on October 6, 2020
- NEPC's 2020 Q3 Quarterly Markets Outlook Webinar
- NEPC's Post-Election Webinar on November 5, 2020



2020 FOURTH QUARTER UPDATES AT NEPC

We were excited to share the election of three new Partners and the promotion of four new Principals

OUR NEWEST PARTNERS



Margaret Belmondo, CIMA®



Chena Edwards, CPA



Judy Murphy, SPHR

OUR NEWEST PRINCIPALS



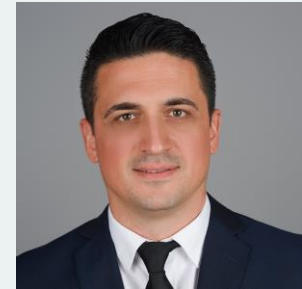
Rick Ciccione



Lynda Dennen Costello, ASA, EA



Will Forde, CFA, CAIA



Elton Thomaj, CAIA

IN CASE YOU MISSED IT



We announced that Scott Harsh, former CEO and president of FEG Investment Advisors, joined NEPC's Endowments and Foundations practice group as a principal and senior consultant

INVESTMENT MANAGER - DUE DILIGENCE KEY

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

NEPC Due Diligence Rating Key	
1	A high conviction investment product. Product has a clear and economically-grounded investment thesis, and is managed by an investment team that is sufficiently resourced and incented to execute on the thesis.
2	NEPC has a positive view of the strategy. Strategy has a compelling and sound investment thesis. The manager is sufficiently resourced and incented to execute on the thesis. Strengths outweigh the weaknesses, but the strategy does not meet all requirements for a 1 rating.
3	A satisfactory investment product. The strategy lacks a compelling investment thesis, however there are no significant concerns around the manager's viability.
4	The strategy may have an unclear or ambiguous investment thesis or the manager may lack the ability to execute on the stated thesis. The strategy likely has strengths and weaknesses and the weaknesses may outweigh the strengths.
5	A strategy that lacks an investment thesis or NEPC has no confidence in the manager's ability to execute on the thesis, and/or the investment firm may not be viable. Serious issues have been identified with an investment manager or product. This rating aligns with a Terminate Due Diligence status for client-owned products.
NR	Due diligence has not been sufficiently completed on the product or manager.

GLOSSARY OF INVESTMENT TERMINOLOGY

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

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

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

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

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

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

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

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

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

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

Formula:
 $\text{Calculation Average } (X-Y) / \text{Downside Deviation } (X-Y) * 2$
Where X=Return Series X Y = Return Series Y which is the risk free return (91 day T-bills)

Standard Deviation - The standard deviation is a statistical term that describes the distribution of results. It is a commonly used measure of volatility of returns of a portfolio, asset class, or security. The higher the standard deviation the more volatile the returns are.

Formula:
 $(\text{Annualized Return of Portfolio} - \text{Annualized Return of Risk Free}) / \text{Annualized Standard Deviation (Portfolio Returns)}$

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

Formula:
 $\text{Tracking Error} = \text{Standard Deviation } (X-Y) * \sqrt{\text{\# of periods per year}}$
Where X = periods portfolio return and Y = the period's benchmark return
For monthly returns, the periods per year = 12
For quarterly returns, the periods per year = 4

Treynor Ratio - A risk-adjusted measure of return based on systematic risk. Similar to the Sharpe ratio with the difference being the Treynor ratio uses beta as the measurement of volatility.

Formula:
 $(\text{Portfolio Average Return} - \text{Average Return of Risk-Free Rate}) / \text{Portfolio Beta}$

Up/Down Capture Ratio - A measure of what percentage of a market's returns is "captured" by a portfolio. For example, if the market declines 10% over some period, and the manager declines only 9%, then his or her capture ratio is 90%. In down markets, it is advantageous for a manager to have as low a capture ratio as possible. For up markets, the higher the capture ratio the better. Looking at capture ratios can provide insight into how a manager achieves excess returns. A value manager might typically have a lower capture ratio in both up and down markets, achieving excess returns by protecting on the downside, whereas a growth manager might fall more than the overall market in down markets, but achieve above-market returns in a rising market.

$\text{Upside Capture} = \text{Total Return}(\text{Fund Returns}) / \text{Total Returns}(\text{BM Return})$ when Period Benchmark Return is $> = 0$

$\text{Downside Capture} = \text{Total Return}(\text{Fund Returns}) / \text{Total Returns}(\text{BM Return})$ when Benchmark < 0

Data Source: InvestorForce



GLOSSARY OF INVESTMENT TERMINOLOGY

Of Portfolios/Observations¹ – The total number of data points that make up a specified universe

Allocation Index³ - The allocation index measures the value added (or subtracted) to each portfolio by active management. It is calculated monthly: The portfolio asset allocation to each category from the prior month-end is multiplied by a specified market index.

Asset Allocation Effect² - Measures an investment manager's ability to effectively allocate their portfolio's assets to various sectors. The allocation effect determines whether the overweighting or underweighting of sectors relative to a benchmark contributes positively or negatively to the overall portfolio return. Positive allocation occurs when the portfolio is over weighted in a sector that outperforms the benchmark and underweighted in a sector that underperforms the benchmark. Negative allocation occurs when the portfolio is over weighted in a sector that underperforms the benchmark and under weighted in a sector that outperforms the benchmark.

Agency Bonds (Agencies)³ - The full faith and credit of the United States government is normally not pledged to payment of principal and interest on the majority of government agencies issuing these bonds, with maturities of up to ten years. Their yields, therefore, are normally higher than government and their marketability is good, thereby qualifying them as a low risk-high liquidity type of investment. They are eligible as security for advances to the member banks by the Federal Reserve, which attests to their standing.

Asset Backed Securities (ABS)³ - Bonds which are similar to mortgage-backed securities but are collateralized by assets other than mortgages; commonly backed by credit card receivables, auto loans, or other types of consumer financing.

Attribution³ - Attribution is an analytical technique that allows us to evaluate the performance of the portfolio relative to the benchmark. A proper attribution tells us where value was added or subtracted as a result of the manager's decisions.

Average Effective Maturity⁴ - For a single bond, it is a measure of maturity that takes into account the possibility that a bond might be called back to the issuer.

For a portfolio of bonds, average effective maturity is the weighted average of the maturities of the underlying bonds. The measure is computed by weighing each bond's maturity by its market value with respect to the portfolio and the likelihood of any of the bonds being called. In a pool of mortgages, this would also account for the likelihood of prepayments on the mortgages.

Batting Average¹ - A measurement representing an investment manager's ability to meet or beat an index.

Formula: Divide the number of days (or months, quarters, etc.) in which the manager beats or matches the index by the total number of days (or months, quarters, etc.) in the period of question and multiply that factor by 100.

Brinson Fachler (BF) Attribution¹ - The BF methodology is a highly accepted industry standard for calculating the allocation, selection, and interaction effects within a portfolio that collectively explains a portfolio's underlying performance. The main advantage of the BF methodology is that rather than using the overall return of the benchmark, it goes a level deeper than BHB and measures whether the benchmark sector, country, etc. outperformed/or underperformed the overall benchmark.

Brinson Hood Beebower (BHB) Attribution¹ - The BHB methodology shows that excess return must be equal to the sum of all other factors (i.e., allocation effect, selection effect, interaction effect, etc.). The advantage to using the BHB methodology is that it is a highly accepted industry standard for calculating the allocation, selection, and interaction effects within a portfolio that collectively explains a portfolio's underlying performance.

Corporate Bond (Corp)⁴ - A debt security issued by a corporation and sold to investors. The backing for the bond is usually the payment ability of the company, which is typically money to be earned from future operations. In some cases, the company's physical assets may be used as collateral for bonds.

Correlation¹ - A range of statistical relationships between two or more random variables or observed data values. A correlation is a single number that describes the degree of relationship between variables.

Data Source: ¹InvestorForce, ²Interaction Effect Performance Attribution, ³NEPC, LLC, ⁴Investopedia, ⁵Hedgeco.net



GLOSSARY OF INVESTMENT TERMINOLOGY

Coupon⁴ – The interest rate stated on a bond when it is issued. The coupon is typically paid semiannually. This is also referred to as the "coupon rate" or "coupon percent rate."

Currency Effect¹ - Is the effect that changes in currency exchange rates over time affect excess performance.

Derivative Instrument³ - A financial obligation that derives its precise value from the value of one or more other instruments (or assets) at the same point of time. For example, the relationship between the value of an S&P 500 futures contract (the derivative instrument in this case) is determined by the value of the S&P 500 Index and the value of a U.S. Treasury bill that matures at the expiration of the futures contract.

Downside Deviation¹ - Equals the standard deviation of negative return or the measure of downside risk focusing on the standard deviation of negative returns.

Formula:

Annualized Standard Deviation (Fund Return - Average Fund Return) where average fund return is greater than individual fund returns, monthly or quarterly.

Duration³ - Duration is a measure of interest rate risk. The greater the duration of a bond, or a portfolio of bonds, the greater its price volatility will be in response to a change in interest rates. A bond's duration is inversely related to interest rates and directly related to time to maturity.

Equity/Debt/Cash Ratio¹ – The percentage of an investment or portfolio that is in Equity, Debt, and/or Cash (i.e. A 7/89/4 ratio represents an investment that is made up of 7% Equity, 89% Debt, and 4% Cash).

Foreign Bond³ - A bond that is issued in a domestic market by a foreign entity, in the domestic market's currency. A foreign bond is most often issued by a foreign firm to raise capital in a domestic market that would be most interested in purchasing the firm's debt. For foreign firms doing a large amount of business in the domestic market, issuing foreign bonds is a common practice.

Hard Hurdle⁵ – is a hurdle rate that once beaten allows a fund manager to charge a performance fee on only the funds above the specified hurdle rate.

High-Water Mark⁴ - The highest peak in value that an investment fund/account has reached. This term is often used in the context of fund manager compensation, which is performance based. Some performance-based fees only get paid when fund performance exceeds the high-water mark. The high-water mark ensures that the manager does not get paid large sums for poor performance.

Hurdle Rate⁴ - The minimum rate of return on an investment required, in order for a manager to collect incentive fees from the investor, which is usually tied to a benchmark.

Interaction Effects² - The interaction effect measures the combined impact of an investment manager's selection and allocation decisions within a sector. For example, if an investment manager had superior selection and over weighted that particular sector, the interaction effect is positive. If an investment manager had superior selection, but underweighted that sector, the interaction effect is negative. In this case, the investment manager did not take advantage of the superior selection by allocating more assets to that sector. Since many investment managers consider the interaction effect to be part of the selection or the allocation, it is often combined with the either effect.

Median³ - The value (rate of return, market sensitivity, etc.) that exceeds one-half of the values in the population and that is exceeded by one-half of the values. The median has a percentile rank of 50.

Modified Duration³ - The percentage change in the price of a fixed income security that results from a change in yield.

Mortgage Backed Securities (MBS)³ - Bonds which are a general obligation of the issuing institution but are also collateralized by a pool of mortgages.

Municipal Bond (Muni)⁴ - A debt security issued by a state, municipality or county to finance its capital expenditures.

Net Investment Change¹ – Is the change in an investment after accounting for all Net Cash Flows.

Performance Fee⁴ - A payment made to a fund manager for generating positive returns. The performance fee is generally calculated as a percentage of investment profits, often both realized and unrealized.

Data Source: ¹InvestorForce, ²Interaction Effect Performance Attribution, ³NEPC, LLC, ⁴Investopedia, ⁵Hedgeco.net



GLOSSARY OF INVESTMENT TERMINOLOGY

Policy Index³ - A custom benchmark designed to indicate the returns that a passive investor would earn by consistently following the asset allocation targets set forth in this investment policy statement.

Price to Book (P/B)⁴ - A ratio used to compare a stock's market value to its book value. It is calculated by dividing the current closing price of the stock by the latest quarter's book value per share, also known as the "price-equity ratio".

Price to Earnings (P/E)³ - The weighted equity P/E is based on current price and trailing 12 months earnings per share (EPS).

Price to Sales (P/S)⁴ - A ratio for valuing a stock relative to its own past performance, other companies, or the market itself. Price to sales is calculated by dividing a stock's current price by its revenue per share for the trailing 12 months.

Return on Equity (ROE)⁴ - The amount of net income returned as a percentage of shareholders equity. Return on equity measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested.

Selection (or Manager) Effect² - Measures the investment manager's ability to select securities within a given sector relative to a benchmark. The over or underperformance of the portfolio is weighted by the benchmark weight, therefore, selection is not affected by the manager's allocation to the sector. The weight of the sector in the portfolio determines the size of the effect—the larger the sector, the larger the effect is, positive or negative.

Soft Hurdle rate⁵ - is a hurdle rate that once beaten allows a fund manager to charge a performance fee based on the entire annualized return.

Tiered Fee¹ - A fee structure that is paid to fund managers based on the size of the investment (i.e. 1.00% fee on the first \$10M invested, 0.90% on the next \$10M, and 0.80% on the remaining balance).

Total Effects² - The active management (total) effect is the sum of the selection, allocation, and interaction effects. It is also the difference between the total portfolio return and the total benchmark return. You can use the active management effect to determine the amount the investment manager has added to a portfolio's return.

Total Return¹ - The actual rate of return of an investment over a specified time period. Total return includes interest, capital gains, dividends, and distributions realized over a defined time period.

Universe³ - The list of all assets eligible for inclusion in a portfolio.

Upside Deviation¹ - Standard Deviation of Positive Returns

Weighted Avg. Market Cap.⁴ - A stock market index weighted by the market capitalization of each stock in the index. In such a weighting scheme, larger companies account for a greater portion of the index. Most indexes are constructed in this manner, with the best example being the S&P 500.

Yield (%)³ - The current yield of a security is the current indicated annual dividend rate divided by current price.

Yield to Maturity³ - The discount rate that equates the present value of cash flows, both principal and interest, to market price.

Data Source: ¹InvestorForce, ²Interaction Effect Performance Attribution, ³NEPC, LLC, ⁴Investopedia, ⁵Hedgeco.net



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.
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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.

