MONTHLY PERFORMANCE REPORT

HOWARD COUNTY RETIREMENT PLAN

SEPTEMBER 30, 2022

Margaret Belmondo, CIMA, Partner
Kevin Leonard, Partner, Head of Public Funds
Francesca LoVerde, Sr. Consulting Analyst

Howard County Retirement Plan

September 30, 2022

TOTAL FUND PERFORMANCE SUMMARY (GROSS)

	Allocation			Performance (%)								
	Market Value ($)	% of Portfolio	Policy (%)	1 Mo (%)	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund Composite	**1,276,351,506**	**100.0**	**100.0**	**-4.9**	**-3.3**	**-14.5**	**-11.6**	**5.3**	**5.8**	**7.3**	**7.1**	**Apr-97**
Policy Index				*-5.6*	*-3.7*	*-13.9*	*-10.7*	*4.4*	*5.0*	*6.4*	*6.9*	
Allocation Index Howard				*-5.6*	*-4.0*	*-14.6*	*-11.4*	*4.9*				
Total US Equity Composite	**328,491,272**	**25.7**	**27.5**	**-9.9**	**-5.5**	**-25.9**	**-20.1**	**6.2**	**7.4**	**11.6**		**Jul-97**
Russell 3000 Index				*-9.3*	*-4.5*	*-24.6*	*-17.6*	*7.7*	*8.6*	*11.4*	*7.8*	
US Equity Allocation Index				*-9.3*	*-4.2*	*-24.9*	*-18.3*	*7.5*	*8.2*	*11.1*		
Total International Equity	**185,027,729**	**14.5**	**17.5**	**-10.0**	**-10.5**	**-27.9**	**-27.1**	**0.1**	**0.7**	**3.9**	**4.0**	**Jul-97**
MSCI AC World ex USA (Net)				*-10.0*	*-9.9*	*-26.5*	*-25.2*	*-1.5*	*-0.8*	*3.0*	*3.7*	
Total Fixed Income Composite	**318,923,655**	**25.0**	**23.0**	**-2.5**	**-1.7**	**-12.5**	**-13.1**	**-1.6**	**0.5**	**2.0**	**4.6**	**Jul-97**
Blmbg. U.S. Aggregate Index				*-4.3*	*-4.8*	*-14.6*	*-14.6*	*-3.3*	*-0.3*	*0.9*	*4.1*	
Total Real Assets Composite	**58,263,395**	**4.6**	**6.0**	**0.0**	**-1.2**	**11.0**	**16.1**	**7.1**	**8.2**	**7.8**	**7.2**	**Jul-03**
NCREIF Property Index 1 Qtr. Lag				*3.2*	*3.2*	*15.4*	*21.5*	*10.2*	*8.9*	*9.7*	*9.0*	
Cash Composite	**29,799,211**	**2.3**	**0.0**	**0.1**	**0.4**	**0.5**	**0.5**	**0.3**	**0.9**	**0.5**	**1.2**	**Dec-03**
90 Day U.S. Treasury Bill				*0.2*	*0.5*	*0.6*	*0.6*	*0.6*	*1.1*	*0.7*	*1.2*	
Hedge Fund Composite	**128,585,562**	**10.1**	**8.0**	**0.0**	**1.9**	**4.4**	**5.7**	**7.7**	**6.4**	**5.8**	**5.4**	**Jan-11**
HFRI FOF: Conservative Index				*-0.5*	*0.2*	*-1.4*	*-0.7*	*4.7*	*3.8*	*3.6*	*3.0*	
Private Equity Composite	**215,916,662**	**16.9**	**13.0**	**0.0**	**-6.6**	**-3.4**	**2.5**	**21.9**	**20.2**	**17.8**	**14.9**	**Jul-08**
C|A US All PE (1 Qtr Lag)				*-3.4*	*-3.4*	*2.9*	*8.8*	*19.9*	*17.7*	*15.5*	*12.5*	
Private Debt	**11,344,020**	**0.9**	**5.0**	**0.0**	**0.0**	**-3.5**	**-3.0**				**4.7**	**Jul-20**
Morningstar LSTA US Leveraged Loan				*-2.3*	*1.4*	*-3.3*	*-2.5*	*2.2*	*3.0*	*3.5*	*4.3*	

- Fiscal year end 6/30.
- All history prior to 2/1/2019 was provided by AndCo.
- Policy index consists of: 22% Russell 1000 / 5.5% Russell 2500 / 11% MSCI EAFE / 6.5% MSCI Emerging Markets / 9% Bloomberg US Aggregate TR / 2% Bloomberg US TIPS TR / 4% 90 Day U.S. Treasury Bill / 4% Bloomberg US High Yield TR / 4% JP Morgan GBI EM Global Diversified TR USD / 5% S&P/LSTA Leveraged Loan TR /6.0% NCREIF Property Index 1 Qtr. Lag / 8% HFRI FOF: Conservative Index / 13% Private Equity Composite. Allocation index consists of: Weighted index of underlying managers to their respective benchmark.
- The following managers market values are carried over from August: Payden, Blackstone, and Magnitude
- Report is preliminary.
- Real Estate, Real Assets and Private Equity investments are valued as of 3/31/2022 and adjusted for capital calls and distributions through 9/30/2022.

TOTAL FUND PERFORMANCE DETAIL (GROSS)

	Allocation			Performance (%)								
	Market Value ($)	% of Portfolio	Policy (%)	1 Mo (%)	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund Composite	**1,276,351,506**	**100.0**	**100.0**	**-4.9**	**-3.3**	**-14.5**	**-11.6**	**5.3**	**5.8**	**7.3**	**7.1**	**Apr-97**
Policy Index				*-5.6*	*-3.7*	*-13.9*	*-10.7*	*4.4*	*5.0*	*6.4*	*6.9*	
Allocation Index Howard				*-5.6*	*-4.0*	*-14.6*	*-11.4*	*4.9*				
Total Equity Composite	**513,519,001**	**40.2**	**45.0**	**-9.9**	**-7.3**	**-26.6**	**-22.7**	**3.8**	**4.6**	**8.3**	**6.5**	**Apr-00**
MSCI ACWI IMI				*-9.7*	*-6.6*	*-25.7*	*-21.2*	*3.6*	*4.2*	*7.2*	*4.3*	
Total US Equity Composite	**328,491,272**	**25.7**	**27.5**	**-9.9**	**-5.5**	**-25.9**	**-20.1**	**6.2**	**7.4**	**11.6**		**Jul-97**
Russell 3000 Index				*-9.3*	*-4.5*	*-24.6*	*-17.6*	*7.7*	*8.6*	*11.4*	*7.8*	
US Equity Allocation Index				*-9.3*	*-4.2*	*-24.9*	*-18.3*	*7.5*	*8.2*	*11.1*		
Large Cap Composite	**269,775,449**	**21.1**	**22.0**	**-10.2**	**-6.0**	**-25.7**	**-19.1**	**7.1**	**7.8**	**11.6**	**8.2**	**Apr-01**
Russell 1000 Index				*-9.3*	*-4.6*	*-24.6*	*-17.2*	*7.9*	*9.0*	*11.6*	*7.6*	
LSV Asset Management SMA	85,625,473	6.7		-12.1	-10.3	-21.7	-16.2	2.9	3.5	9.8	8.7	May-00
Russell 1000 Value Index				*-8.8*	*-5.6*	*-17.8*	*-11.4*	*4.4*	*5.3*	*9.2*	*6.5*	
Westfield Capital Management SMA	95,160,905	7.5		-9.3	-3.0	-30.6	-24.8	9.5	10.8	13.2	13.9	Jul-10
Russell 1000 Growth Index				*-9.7*	*-3.6*	*-30.7*	*-22.6*	*10.7*	*12.2*	*13.7*	*14.9*	
BlackRock Equity Index Non-Lendable Fund	88,989,071	7.0		-9.2	-4.9	-23.9	-15.5				6.5	Dec-19
S&P 500 Index				*-9.2*	*-4.9*	*-23.9*	*-15.5*	*8.2*	*9.2*	*11.7*	*6.5*	
Small/Mid Cap Composite	**58,715,823**	**4.6**	**5.5**	**-8.7**	**-3.1**	**-27.3**	**-24.9**	**2.2**	**5.4**	**11.2**	**11.1**	**Apr-93**
Russell 2500 Index				*-9.5*	*-2.8*	*-24.0*	*-21.1*	*5.4*	*5.5*	*9.6*	*9.7*	
William Blair SMA	19,977,528	1.6		-8.3	-1.0	-28.6	-27.4	2.0	7.0	12.3	10.3	Jun-06
Russell 2500 Growth Index				*-8.6*	*-0.1*	*-29.5*	*-29.4*	*4.8*	*6.3*	*10.3*	*8.4*	
William Blair S/C Value R6	20,644,494	1.6		-10.0	-5.1	-19.2	-13.7	5.4	4.6	10.2	11.1	Apr-93
Russell 2000 Value Index				*-10.2*	*-4.6*	*-21.1*	*-17.7*	*4.7*	*2.9*	*7.9*	*9.1*	
Brown Capital Small Company Strategy SMA	18,093,801	1.4		-7.6	-2.8	-34.1	-33.2	-0.9	5.5	12.5	12.7	Aug-11
Russell 2000 Growth Index				*-9.0*	*0.2*	*-29.3*	*-29.3*	*2.9*	*3.6*	*8.8*	*8.4*	

ICM Small Company - ICSCX was renamed to William Blair S/C Value I in 7/2021 and changed share class in 9/2021 to share class R6.

TOTAL FUND PERFORMANCE DETAIL (GROSS)

	Allocation			Performance (%)								
	Market Value ($)	% of Portfolio	Policy (%)	1 Mo (%)	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total International Equity	**185,027,729**	**14.5**	**17.5**	**-10.0**	**-10.5**	**-27.9**	**-27.1**	**0.1**	**0.7**	**3.9**	**4.0**	**Jul-97**
MSCI AC World ex USA (Net)				*-10.0*	*-9.9*	*-26.5*	*-25.2*	*-1.5*	*-0.8*	*3.0*	*3.7*	
International Developed Markets Composite	**112,820,507**	**8.8**	**11.0**	**-11.1**	**-11.9**	**-32.7**	**-31.3**	**-2.1**	**-0.9**	**3.8**	**1.8**	**Mar-08**
MSCI EAFE (Net)				*-9.4*	*-9.4*	*-27.1*	*-25.1*	*-1.8*	*-0.8*	*3.7*	*1.3*	
Mondrian International Equity Fund, L.P.	58,882,935	4.6		-9.8	-14.2	-23.3	-22.6	-2.6	-1.6	3.3	0.7	Dec-07
MSCI EAFE (Net)				*-9.4*	*-9.4*	*-27.1*	*-25.1*	*-1.8*	*-0.8*	*3.7*	*0.6*	
Baillie Gifford EAFE Pure K - BGPKX	53,937,572	4.2		-12.3	-9.3	-41.4	-39.5	-2.8			-1.7	May-18
MSCI EAFE (Net)				*-9.4*	*-9.4*	*-27.1*	*-25.1*	*-1.8*	*-0.8*	*3.7*	*-2.0*	
International Emerging Markets Composite	**72,207,222**	**5.7**	**6.5**	**-8.4**	**-8.0**	**-18.9**	**-19.5**	**3.8**	**3.4**	**3.7**	**5.4**	**Feb-06**
MSCI Emerging Markets (Net)				*-11.7*	*-11.6*	*-27.2*	*-28.1*	*-2.1*	*-1.8*	*1.0*	*3.1*	
GQG Partners Emerging Markets Equity Fund	35,352,038	2.8		-7.2	-6.5	-23.3	-23.3	3.0			6.3	Dec-18
MSCI Emerging Markets (Net)				*-11.7*	*-11.6*	*-27.2*	*-28.1*	*-2.1*	*-1.8*	*1.0*	*-0.8*	
Arga Emerging Markets Equity Fund	36,855,184	2.9		-9.5	-9.5	-14.5	-15.6				-3.1	Jan-21
MSCI Emerging Markets Value NR USD				*-10.2*	*-11.0*	*-23.3*	*-23.6*	*-2.6*	*-2.1*	*-0.4*	*-12.1*	
Total Fixed Income Composite	**318,923,655**	**25.0**	**23.0**	**-2.5**	**-1.7**	**-12.5**	**-13.1**	**-1.6**	**0.5**	**2.0**	**4.6**	**Jul-97**
Blmbg. U.S. Aggregate Index				*-4.3*	*-4.8*	*-14.6*	*-14.6*	*-3.3*	*-0.3*	*0.9*	*4.1*	
Core Fixed Income Composite	**168,981,104**	**13.2**	**11.0**	**-2.6**	**-2.6**	**-14.0**	**-14.8**	**-2.0**			**0.1**	**Mar-19**
Blmbg. U.S. Aggregate Index				*-4.3*	*-4.8*	*-14.6*	*-14.6*	*-3.3*	*-0.3*	*0.9*	*-0.8*	
Core Fixed Income	**145,635,181**	**11.4**	**9.0**	**-1.9**	**-2.2**	**-14.0**	**-15.1**	**-2.3**			**-0.1**	**Mar-19**
Blmbg. U.S. Aggregate Index				*-4.3*	*-4.8*	*-14.6*	*-14.6*	*-3.3*	*-0.3*	*0.9*	*-0.8*	
Dodge & Cox SMA	76,044,769	6.0		0.9	0.9	-10.1	-10.1	-0.3	1.7	2.7	3.5	May-10
Blmbg. U.S. Aggregate Index				*-4.3*	*-4.8*	*-14.6*	*-14.6*	*-3.3*	*-0.3*	*0.9*	*1.9*	
PIMCO 10 Year Treasury SMA	69,590,412	5.5		-4.8	-5.4	-15.3	-14.8	-2.6	0.0	1.3	2.5	May-10
PIMCO Blended Benchmark				*-5.0*	*-5.8*	*-16.9*	*-16.3*	*-4.2*	*-0.9*	*0.6*	*1.7*	
State Street Global Advisors TIPS	23,345,923	1.8		-6.6	-5.1	-13.6	-11.6	0.7	1.9	1.0	2.7	Nov-09
Blmbg. U.S. TIPS				*-6.6*	*-5.1*	*-13.6*	*-11.6*	*0.8*	*2.0*	*1.0*	*2.8*	

- The PIMCO Blended Benchmark consists of Bloomberg US Aggregate Index through 8/31/2021 and Bloomberg U.S. Treasury Bellwethers: 10 Year thereafter.

Howard County Retirement Plan

September 30, 2022

TOTAL FUND PERFORMANCE DETAIL (GROSS)

	Allocation			Performance (%)								
	Market Value ($)	% of Portfolio	Policy (%)	1 Mo (%)	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Emerging Markets Debt Composite	**48,749,885**	**3.8**	**4.0**	**-2.9**	**-2.4**	**-15.8**	**-17.2**	**-4.7**			**-3.2**	**Mar-19**
JPM GBI-EM Global Diversified				*-4.9*	*-4.7*	*-18.6*	*-20.6*	*-7.1*	*-3.9*	*-2.4*	*-5.1*	
Colchester Local Markets Debt Fund	48,749,885	3.8		-2.9	-2.4	-15.8	-17.2	-4.7	-2.1		2.6	Oct-15
JPM GBI-EM Global Diversified				*-4.9*	*-4.7*	*-18.6*	*-20.6*	*-7.1*	*-3.9*	*-2.4*	*0.4*	
Absolute Return Fixed Income	**52,598,916**	**4.1**	**4.0**	**0.0**	**1.6**	**-2.9**	**-3.2**				**0.4**	**Mar-20**
90 Day U.S. Treasury Bill				*0.2*	*0.5*	*0.6*	*0.6*	*0.6*	*1.1*	*0.7*	*0.4*	
Payden Absolute Return Bond Fund PYAIX	52,598,916	4.1		0.0	1.6	-2.9	-3.2				0.4	Mar-20
90 Day U.S. Treasury Bill				*0.2*	*0.5*	*0.6*	*0.6*	*0.6*	*1.1*	*0.7*	*0.4*	
High Yield	**48,593,750**	**3.8**	**4.0**	**-4.1**	**-1.4**	**-12.5**	**-12.0**				**-10.1**	**Aug-21**
Blmbg. U.S. Corp: High Yield Index				*-4.0*	*-0.6*	*-14.7*	*-14.1*	*-0.5*	*1.6*	*3.9*	*-11.8*	
Artisan High Income Trust	48,593,750	3.8		-4.1	-1.4	-12.5	-12.0				-10.1	Aug-21
ICE BofA US High Yield Master II Constrained				*-4.0*	*-0.7*	*-14.6*	*-14.1*	*-0.7*	*1.4*	*3.9*	*-11.7*	
Total Real Assets Composite	**58,263,395**	**4.6**	**6.0**	**0.0**	**-1.2**	**11.0**	**16.1**	**7.1**	**8.2**	**7.8**	**7.2**	**Jul-03**
NCREIF Property Index 1 Qtr. Lag				*3.2*	*3.2*	*15.4*	*21.5*	*10.2*	*8.9*	*9.7*	*9.0*	
Cash Composite	**29,799,211**	**2.3**	**0.0**	**0.1**	**0.4**	**0.5**	**0.5**	**0.3**	**0.9**	**0.5**	**1.2**	**Dec-03**
90 Day U.S. Treasury Bill				*0.2*	*0.5*	*0.6*	*0.6*	*0.6*	*1.1*	*0.7*	*1.2*	
Hedge Fund Composite	**128,585,562**	**10.1**	**8.0**	**0.0**	**1.9**	**4.4**	**5.7**	**7.7**	**6.4**	**5.8**	**5.4**	**Jan-11**
HFRI FOF: Conservative Index				*-0.5*	*0.2*	*-1.4*	*-0.7*	*4.7*	*3.8*	*3.6*	*3.0*	
Magnitude International Class A Eligible	66,600,226	5.2		0.0	2.3	6.2	8.3	8.8	6.9	5.8	5.6	Jan-11
HFRI FOF: Conservative Index				*-0.5*	*0.2*	*-1.4*	*-0.7*	*4.7*	*3.8*	*3.6*	*3.0*	
Blackstone Partners Offshore Fund LTD	61,985,337	4.9		0.0	1.6	2.7	3.2	6.5	5.7	5.8	5.2	Mar-11
HFRI FOF: Conservative Index				*-0.5*	*0.2*	*-1.4*	*-0.7*	*4.7*	*3.8*	*3.6*	*2.9*	
Private Equity Composite	**215,916,662**	**16.9**	**13.0**	**0.0**	**-6.6**	**-3.4**	**2.5**	**21.9**	**20.2**	**17.8**	**14.9**	**Jul-08**
C|A US All PE (1 Qtr Lag)				*-3.4*	*-3.4*	*2.9*	*8.8*	*19.9*	*17.7*	*15.5*	*12.5*	
Private Debt	**11,344,020**	**0.9**	**5.0**	**0.0**	**0.0**	**-3.5**	**-3.0**				**4.7**	**Jul-20**
Morningstar LSTA US Leveraged Loan				*-2.3*	*1.4*	*-3.3*	*-2.5*	*2.2*	*3.0*	*3.5*	*4.3*	

DISCLAIMERS & DISCLOSURES

Past performance is no guarantee of future results.

Returns for pooled funds, e.g. mutual funds and collective investment trusts, are collected from third parties; they are not generally calculated by NEPC. Returns for separate accounts, with some exceptions, are calculated by NEPC. Returns are reported net of manager fees unless otherwise noted.

A "since inception" return, if reported, begins with the first full month after funding, although actual inception dates (e.g. the middle of a month) and the timing of cash flows are taken into account in Composite return calculations.

NEPC's preferred data source is the plan's custodian bank or record-keeper. If data cannot be obtained from one of the preferred data sources, data provided by investment managers may be used. Information on market indices and security characteristics is received from additional providers. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within. In addition, some index returns displayed in this report or used in calculation of a policy index, allocation index or other custom benchmark may be preliminary and subject to change.

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

The opinions presented herein represent the good faith views of NEPC as of the date of this presentation and are subject to change at any time. Neither fund performance nor universe rankings contained in this report should be considered a recommendation by NEPC.

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

Source of private fund performance benchmark data: Cambridge Associates, via Refinitiv