

FIRST QUARTER 2019 EXECUTIVE SUMMARY

HOWARD COUNTY RETIREMENT PLANS

May 31, 2019

Margaret Belmondo, CIMA®, Senior Consultant

Will Forde, CFA, CAIA, Senior Consultant

Marisa Gorman, Consulting Analyst















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

MARKET ENVIRONMENT

NEPC, LLC

PERFORMANCE OVERVIEW

Q1 Market Summary

Macro			Equity			Credit			Real Assets		
US Dollar	VIX	US 10-Yr	S&P 500	MSCI EAFE	MSCI EM	US Agg.	High Yield	Dollar EMD	Oil	Gold	REITS
											
1.2%	-11.7	-27 bps	13.6%	10.0%	9.9%	2.9%	7.3%	7.0%	33.3%	0.8%	16.7%

Global equities rallied during the quarter as sentiment improved from easing US-China trade tensions and a dovish pivot by the Fed

The spread between the 10-year Treasury Note and 3-month Treasury Bill temporarily inverted after the Fed held interest rates constant and announced adjustments to their balance sheet normalization process

Spot crude oil prices rose significantly due to geopolitical concerns in major oil-producing regions

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).



MACRO PERFORMANCE OVERVIEW

Q1 Macro Market Summary

The global growth outlook was revised downward – reflecting slowing growth in most major developed economies

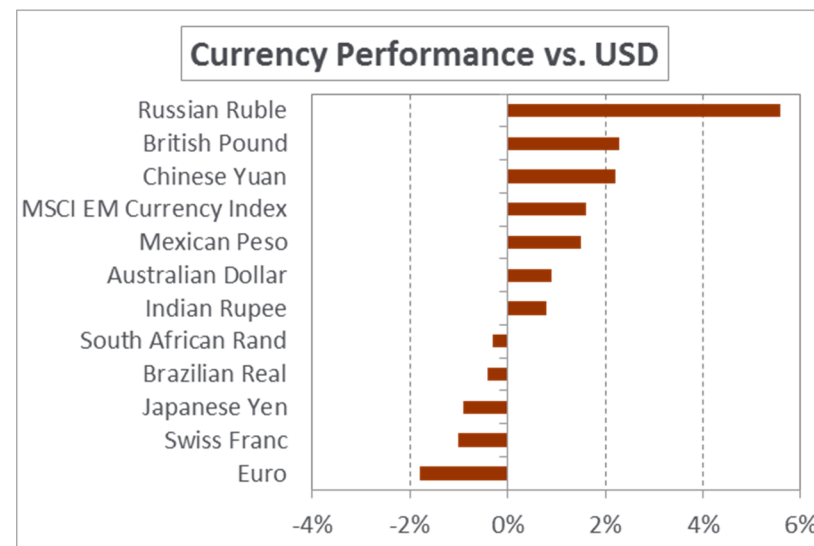
The Fed pivoted toward a more dovish policy stance signaling no additional rate hikes this year

Global bond yields declined with the 10-year German and Japanese yields ending in negative territory

	Yield 12/31/18	Yield 3/31/19	Δ
US 10-Yr	2.68%	2.42%	-0.27%
US 30-Yr	3.01%	2.82%	-0.19%
US Real 10-Yr	0.97%	0.53%	-0.44%
German 10-Yr	0.24%	-0.07%	-0.31%
Japan 10-Yr	-0.01%	-0.09%	-0.09%
China 10-Yr	3.31%	3.07%	-0.24%
EM Local Debt	6.46%	6.16%	-0.30%

Source: Bloomberg

Central Banks	Current Rate	CPI YOY	Notes from the Quarter
Federal Reserve	2.25% - 2.50%	2.2%	The Fed held its benchmark interest rate at 2.25% - 2.50% in March and signaled no additional rate hikes are likely in 2019
European Central Bank	0.0%	1.4%	The ECB maintained its current benchmark interest rate and announced plans to boost commercial lending
Bank of Japan	-0.1%	0.8%	The BoJ will continue its ultra-easy QE program with inflation remaining well below target



Source: Bloomberg



EQUITY PERFORMANCE OVERVIEW

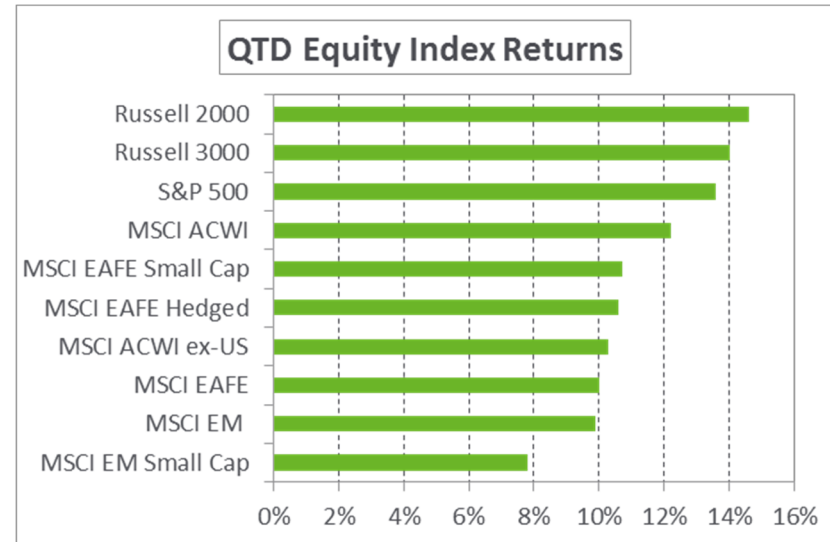
Q1 Equity Market Summary

Global equities made a strong comeback this quarter following a dovish pivot from the Fed

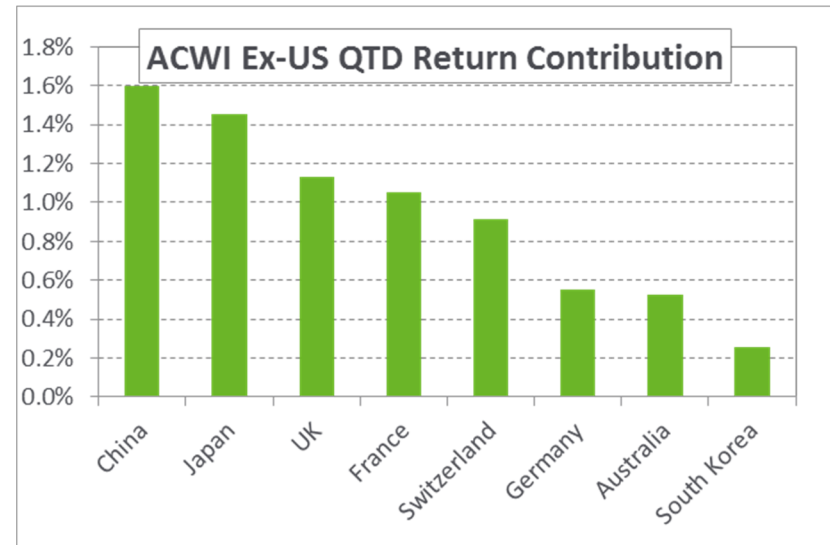
US and Chinese equities led the way as hopes for a trade deal provided a tailwind for local equity markets

Russell 3000 QTD Sector Return Contribution	
Information Technology	3.6%
Consumer Discretionary	2.6%
Financials	1.6%
Industrials	0.8%
Consumer Staples	1.1%
Energy	0.7%
Materials	0.4%
Health Care	1.3%
Real Estate	0.6%
Communication Services	1.9%
Utilities	0.3%

Source: Russell, Bloomberg



Source: MSCI, Russell, S&P, Bloomberg



Source: MSCI, Bloomberg. QTD top country contributors to index return



CREDIT PERFORMANCE OVERVIEW

Q1 Credit Market Summary

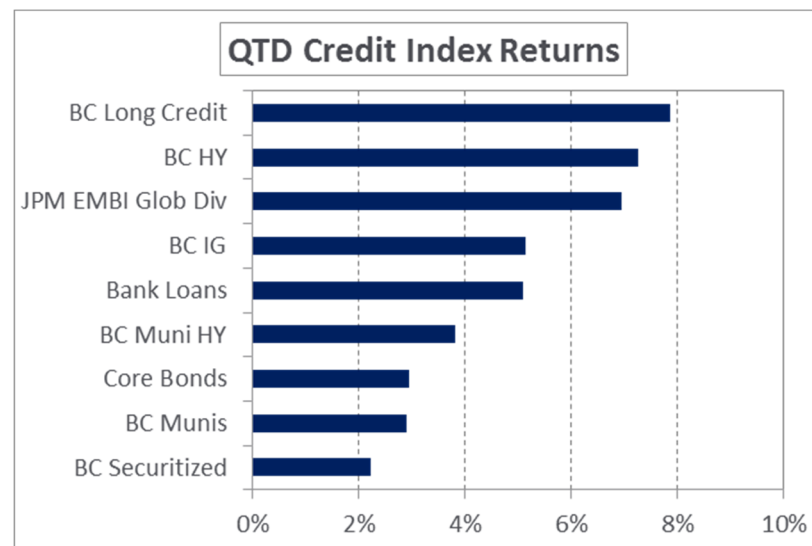
Global yields declined significantly – reflecting concerns over the global growth outlook

Credit spreads broadly declined off of highs at the end of 2018

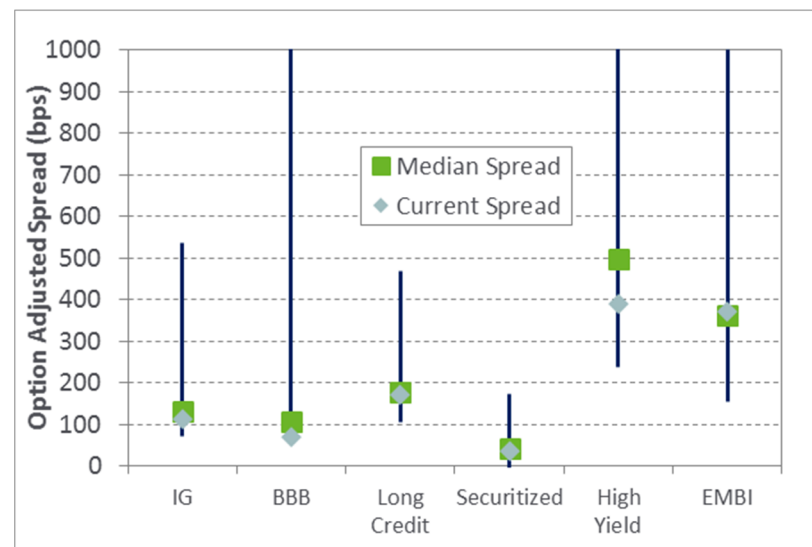
US high yield spreads experienced one of the largest movements – falling 135 basis points, supporting a return of 7.3%

Credit Spread (Basis Points)	12/31/18	3/31/19	Δ
BC IG Credit	153	119	-34
BC Long Credit	200	172	-28
BC Securitized	35	35	0
BC High Yield	526	391	-135
Muni HY	236	230	-6
JPM EMBI	435	373	-62
Bank Loans - Libor	414	354	-60

Source: Barclays, Merrill Lynch, JPM, Bloomberg, NEPC



Source: Barclays, JPM, S&P, Bloomberg



Source: Barclays, JPM, S&P, Bloomberg; Calculated since 01/31/2000



REAL ASSETS PERFORMANCE OVERVIEW

Q1 Real Assets Market Summary

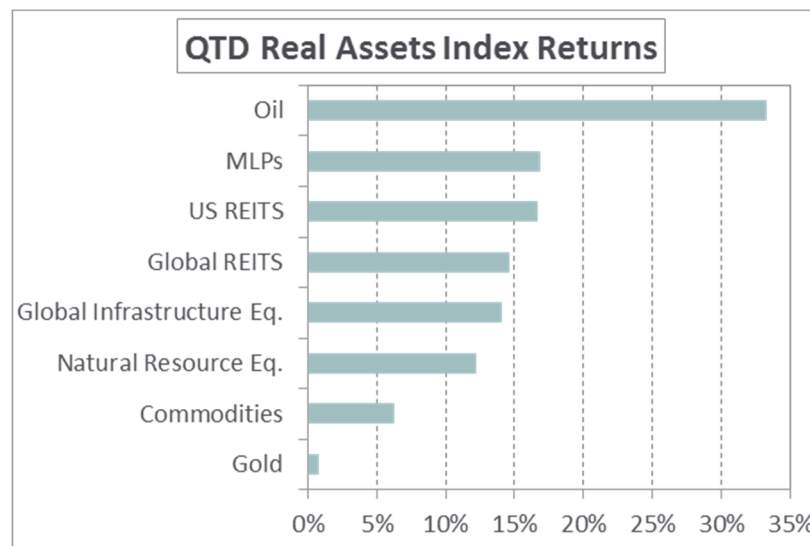
WTI crude oil increased 33.3% as a result of OPEC production cuts and concerns surrounding Venezuela

Midstream energy increased 22.2% following strong earnings and a tailwind from higher oil prices

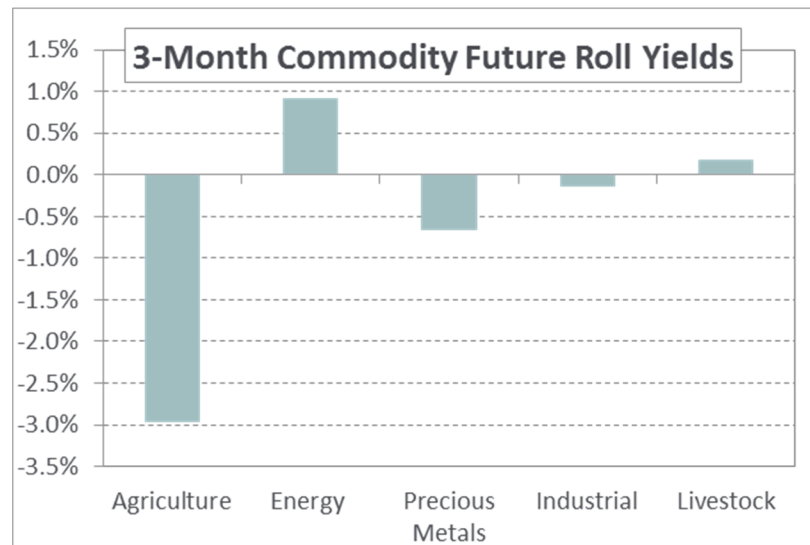
US REITs increased 16.3% during the quarter with the Fed signaling a pause to monetary policy

Real Asset Yields	12/31/18	3/31/19
MLPs	8.9%	8.0%
Core Real Estate	4.5%	4.5%
US REITs	4.6%	4.1%
Global REITs	3.9%	3.4%
Global Infrastructure Equities	4.6%	4.4%
Natural Resource Equities	4.5%	4.2%
US 10-Yr Breakeven Inflation	1.7%	1.9%
Commodity Index Roll Yield	-2.7%	-2.7%

Source: NCREIF, Alerian, NAREIT, S&P, Bloomberg



Source: S&P, NAREIT, Alerian, Bloomberg



Source: Bloomberg, NEPC Calculated as of 09/28/2018



CALENDAR YEAR INDEX PERFORMANCE

	2010	2011	2012	2013	2014	2015	2016	2017	2018	Jan	Feb	Mar	Q1	YTD
US Large Cap	15.1%	2.1%	16.0%	32.4%	13.7%	1.4%	12.0%	21.8%	-4.4%	8.0%	3.2%	1.9%	13.6%	13.6%
US Small/Mid Cap	26.7%	-2.5%	17.9%	36.8%	7.1%	-2.9%	17.6%	16.8%	-10.0%	11.5%	4.7%	-0.8%	15.8%	15.8%
Int'l Developed Equity	7.8%	-12.1%	17.3%	22.8%	-4.9%	-0.8%	1.0%	25.0%	-13.8%	6.6%	2.5%	0.6%	10.0%	10.0%
Emerging Market Equity	18.9%	-18.4%	18.2%	-2.6%	-2.2%	-14.9%	11.2%	37.3%	-14.6%	8.8%	0.2%	0.8%	9.9%	9.9%
US Aggregate	6.5%	7.8%	4.2%	-2.0%	6.0%	0.5%	2.6%	3.5%	0.0%	1.1%	-0.1%	1.9%	2.9%	2.9%
US High Yield	15.1%	5.0%	15.8%	7.4%	2.5%	-4.5%	17.1%	7.5%	-2.1%	4.5%	1.7%	0.9%	7.3%	7.3%
US Long Treasury	9.4%	29.9%	3.6%	-12.7%	25.1%	-1.2%	1.3%	8.5%	-1.8%	0.7%	-1.2%	5.3%	4.7%	4.7%
EM Local Credit	15.7%	-1.8%	16.8%	-9.0%	-5.7%	-14.9%	9.9%	15.2%	-6.2%	5.5%	-1.1%	-1.3%	2.9%	2.9%
Global Credit	-5.3%	-5.3%	-4.1%	2.7%	-0.6%	3.3%	2.1%	7.4%	-1.2%	1.5%	-0.6%	1.3%	2.2%	2.2%
Commodities	16.8%	-13.3%	-1.1%	-9.5%	-17.0%	-24.7%	11.8%	1.7%	-11.2%	5.4%	1.0%	-0.2%	6.3%	6.3%

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

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



RETURNS FOR KEY INDICES RANKED IN ORDER OF PERFORMANCE

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
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
MSCI EAFE 26.34	RUSSELL 1000 GROWTH 11.81	RUSSELL 2000 VALUE -28.92	RUSSELL 1000 GROWTH 37.21	RUSSELL 2000 26.85	RUSSELL 1000 GROWTH 2.64	RUSSELL 2000 VALUE 18.05	RUSSELL 2000 38.82	RUSSELL 1000 VALUE 13.45	S&P 500 1.38	RUSSELL 2000 21.31	RUSSELL 1000 GROWTH 30.21	RUSSELL 1000 GROWTH -1.51
RUSSELL 1000 VALUE 22.25	MSCI EAFE 11.17	RUSSELL 2000 -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 13.24	RUSSELL 1000 0.92	RUSSELL 1000 VALUE 17.34	MSCI EAFE 25.03	S&P 500 -4.38
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 1.50	MSCI EAFE 17.32	RUSSELL 1000 GROWTH 33.48	RUSSELL 1000 GROWTH 13.05	BC AGGREGATE 0.55	RUSSELL 1000 12.05	RUSSELL 2000 GROWTH 22.17	RUSSELL 1000 -4.78
RUSSELL 2000 18.37	BC AGGREGATE 6.97	S&P 500 -37.0	RUSSELL 1000 28.43	RUSSELL 1000 GROWTH 16.71	RUSSELL 1000 VALUE 0.39	RUSSELL 1000 16.42	RUSSELL 1000 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
S&P 500 15.8	RUSSELL 1000 5.77	RUSSELL 1000 -37.6	RUSSELL 2000 27.16	RUSSELL 1000 16.10	RUSSELL 2000 GROWTH -2.91	RUSSELL 2000 16.35	RUSSELL 1000 VALUE 32.53	RUSSELL 2000 GROWTH 5.60	RUSSELL 2000 GROWTH -1.38	RUSSELL 2000 GROWTH 11.32	RUSSELL 1000 21.69	RUSSELL 2000 GROWTH -9.31
RUSSELL 1000 15.46	S&P 500 5.49	RUSSELL 1000 GROWTH -38.44	S&P 500 26.46	RUSSELL 1000 VALUE 15.51	RUSSELL 2000 -4.18	S&P 500 16.00	S&P 500 32.39	RUSSELL 2000 4.89	RUSSELL 1000 VALUE -3.83	MSCI EMERGING MARKETS 11.19	RUSSELL 2000 14.65	RUSSELL 2000 -11.01
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 -4.41	RUSSELL 1000 GROWTH 7.08	RUSSELL 1000 VALUE 13.66	RUSSELL 2000 VALUE -12.86
RUSSELL 1000 GROWTH 9.07	RUSSELL 2000 -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
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

QTD	1 Year	3 year	5 Year	10 Year
RUSSELL 2000 GROWTH 17.14	RUSSELL 1000 GROWTH 12.75	RUSSELL 1000 GROWTH 16.53	RUSSELL 1000 GROWTH 13.50	RUSSELL 1000 GROWTH 17.52
RUSSELL 1000 GROWTH 16.10	S&P 500 9.50	RUSSELL 2000 GROWTH 14.87	S&P 500 10.91	RUSSELL 2000 GROWTH 16.52
RUSSELL 2000 14.58	RUSSELL 1000 9.30	RUSSELL 1000 13.52	RUSSELL 1000 10.63	RUSSELL 1000 16.05
RUSSELL 1000 14.0	RUSSELL 1000 VALUE 5.67	S&P 500 13.51	RUSSELL 2000 GROWTH 8.41	S&P 500 15.92
S&P 500 13.65	BC AGGREGATE 4.48	RUSSELL 2000 12.92	RUSSELL 1000 VALUE 7.72	RUSSELL 2000 15.36
RUSSELL 1000 VALUE 11.93	RUSSELL 2000 GROWTH 3.85	RUSSELL 2000 VALUE 10.86	RUSSELL 2000 7.05	RUSSELL 1000 VALUE 14.52
RUSSELL 2000 VALUE 11.93	RUSSELL 2000 2.05	MSCI EMERGING MARKETS 10.68	RUSSELL 2000 VALUE 5.59	RUSSELL 2000 VALUE 14.12
MSCI EAFE 9.98	RUSSELL 2000 VALUE 0.17	RUSSELL 1000 VALUE 10.45	MSCI EMERGING MARKETS 3.68	MSCI EAFE 8.96
MSCI EMERGING MARKETS 9.93	MSCI EAFE -3.71	MSCI EAFE 7.27	BC AGGREGATE 2.74	MSCI EMERGING MARKETS 8.94
BC AGGREGATE 2.94	MSCI EMERGING MARKETS -7.41	BC AGGREGATE 2.03	MSCI EAFE 2.33	BC AGGREGATE 3.77



TOTAL FUND PERFORMANCE

NEPC, LLC

EXECUTIVE SUMMARY

- **Asset Allocation**

- The assets of the Plan totaled \$1.05 billion as of March 31, 2019. The Plan had an investment gain of \$71.2 million during the quarter and \$3.6 million in net contributions.

- **Performance**

- The Plan gained 6.6% (gross) in the first quarter as the market made a strong comeback from a sharp downturn in Q4 2018
 - The quarterly return ranked in the 79th percentile of the Public DB peer group
 - The Plan's return underperformed the IF Public DB > \$1B Gross Median return of 7.5%
- For the trailing one year, the fund was up 4.3%, which placed it above the IF Public DB > \$1B Gross Median return of 3.7%
- In aggregate, the US Equity Composite was up 14.2% for the quarter, which outperformed both the Russell 3000 benchmark return of 14.0% and the eV All US Equity Gross Median return of 13.9%
 - Large Cap Equity contributed 13.5% for the quarter, outperforming the eV US Large Cap Equity Gross Median by 40 basis points
 - The Small/Mid Cap Equity composite gained 16.8% for the quarter, ranking in the 32nd percentile and outperforming both the Russell 2500 benchmark and eV US Small-Mid Cap Equity Gross Median return by 100 and 160 basis points, respectively
- The International Equity Composite was up 10.7%, which outperformed the MSCI ACWI ex USA return of 10.3%, but underperformed the eV ACWI ex-US All Cap Equity Gross universe median return of 11.0%
 - International Developed Equity was ahead of the median by 80 bps, returning 11.1%
 - International Emerging Equity underperformed the median by 30 bps, returning 10.0%
- The Fixed Income Composite gained 3.2% in the first quarter, outperforming the Barclays Aggregate by 30 basis points, and ahead of the All US Fixed Income Gross Median return of 3.1%



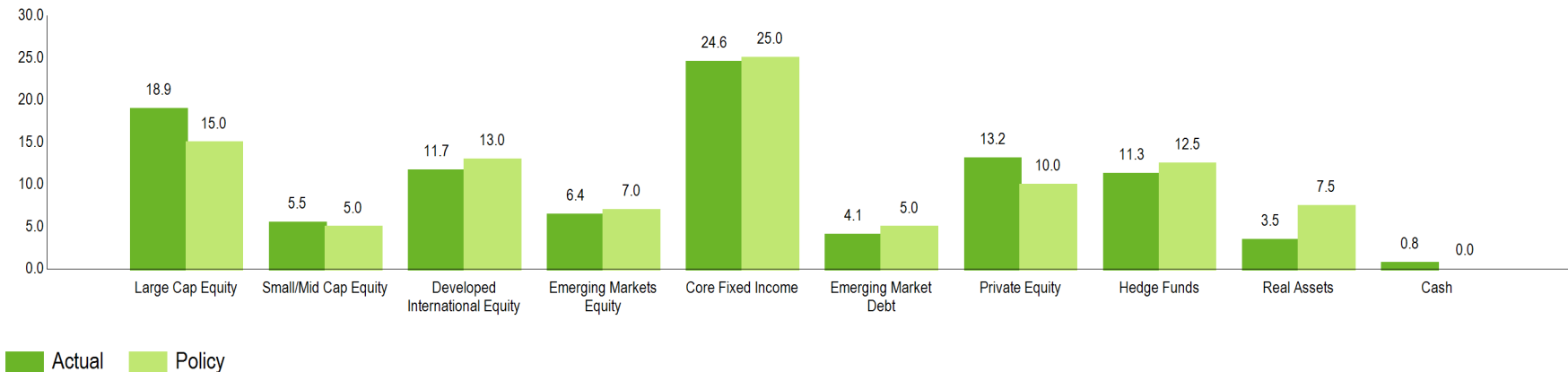
Howard County Retirement Plans

TOTAL FUND PERFORMANCE SUMMARY (GROSS)

Ending March 31, 2019

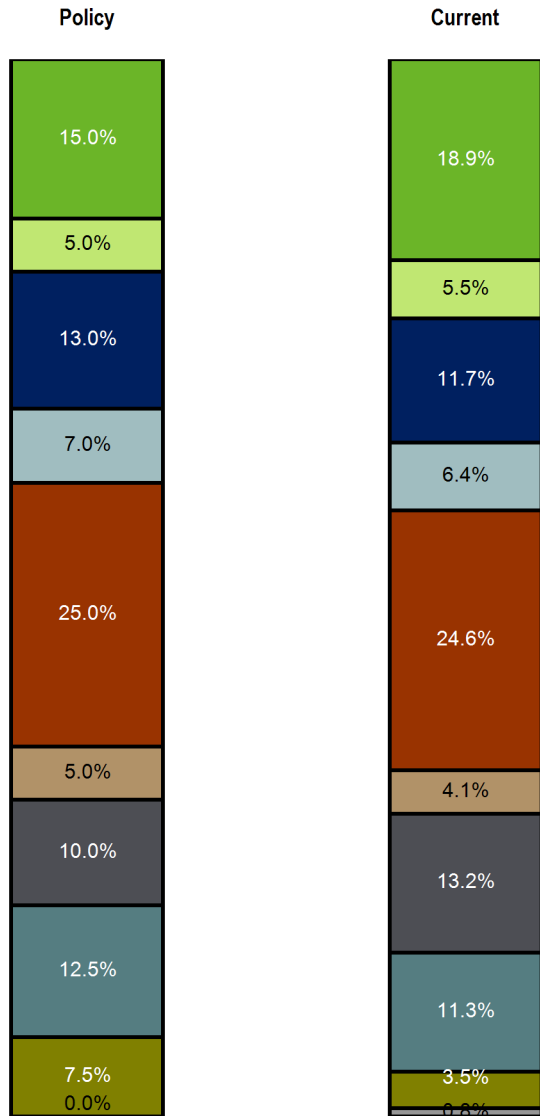
	Market Value	3 Mo	Rank	Fiscal YTD	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	10 Yrs	Rank	Inception	Inception Date
Total Fund Composite	\$1,049,919,702	6.6%	79	3.5%	17	4.3%	26	9.1%	29	6.7%	23	10.5%	37	7.3%	Apr-97
<i>Policy Index</i>		6.4%	87	3.8%	11	4.0%	34	7.8%	92	6.2%	48	9.5%	78	7.2%	Apr-97
<i>InvestorForce Public DB > \$1B Gross Median</i>		7.5%		2.7%		3.7%		8.6%		6.2%		10.2%		7.1%	Apr-97

Actual vs Target Allocation (%)



Howard County Retirement Plans

ASSET ALLOCATION VS. POLICY TARGETS



Asset Allocation vs. Target				
	Current	Policy	Current	Difference*
Large Cap Equity	\$198,955,261	15.0%	18.9%	3.9%
Small/Mid Cap Equity	\$58,035,765	5.0%	5.5%	0.5%
Developed International Equity	\$123,030,769	13.0%	11.7%	-1.3%
Emerging Markets Equity	\$67,618,590	7.0%	6.4%	-0.6%
Core Fixed Income	\$258,091,674	25.0%	24.6%	-0.4%
Emerging Market Debt	\$43,124,239	5.0%	4.1%	-0.9%
Private Equity	\$138,167,872	10.0%	13.2%	3.2%
Hedge Funds	\$118,629,056	12.5%	11.3%	-1.2%
Real Assets	\$36,256,889	7.5%	3.5%	-4.0%
Cash	\$8,009,588	0.0%	0.8%	0.8%
Total	\$1,049,919,702	100.0%	100.0%	

*Difference between Policy and Current Allocation



Howard County Retirement Plans

TOTAL FUND PERFORMANCE SUMMARY (GROSS)

	Ending March 31, 2019										
	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund Composite	1,049,919,702	100.0	100.0	6.6	3.5	4.3	9.1	6.7	10.5	7.3	Apr-97
<i>Policy Index</i>				6.4	3.8	4.0	7.8	6.2	9.5	7.2	Apr-97
Total US Equity Composite	256,991,026	24.5	20.0	14.2	2.4	6.6	14.7	10.7	16.8	8.4	Jul-97
<i>Russell 3000</i>				14.0	4.7	8.8	13.5	10.4	16.0	7.7	Jul-97
<i>US Equity Allocation Index</i>				14.3	3.5	8.0	13.5	10.0	16.3	--	Jul-97
Total International Equity	190,649,359	18.2	20.0	10.7	0.3	-3.3	9.1	3.2	9.5	4.6	Jul-97
<i>MSCI ACWI ex USA</i>				10.3	-1.6	-4.2	8.1	2.6	8.8	--	Jul-97
Total Fixed Income Composite	301,215,913	28.7	30.0	3.2	4.3	2.5	3.7	3.7	6.2	5.4	Jul-97
<i>Fixed Income Policy Index</i>				2.9	4.6	4.5	2.0	2.7	3.8	5.2	Jul-97
Total Real Assets Composite	36,256,889	3.5	7.5	0.7	4.8	10.6	11.7	10.7	4.6	7.6	Jul-03
<i>NCREIF Property Index 1 Qtr. Lag</i>				1.4	4.9	6.7	7.2	9.3	7.5	8.9	Jul-03
Cash Composite	8,009,588	0.8		0.7	1.8	2.1	1.0	0.6	0.3	1.4	Dec-03
<i>91 Day T-Bills</i>				0.6	1.7	2.1	1.2	0.8	0.4	1.3	Dec-03
Hedge Fund Composite	118,629,056	11.3	12.5	2.7	1.1	2.7	4.4	4.2	--	4.6	Jan-11
<i>HFRI FOF: Conservative Index</i>				3.2	0.6	1.7	3.5	2.1	3.4	2.4	Jan-11
Private Equity Composite	138,167,872	13.2	10.0	1.0	11.4	17.1	16.3	16.3	14.7	12.7	Jul-08
<i>Cambridge Associates Global All PE</i>				0.0	2.2	6.7	12.4	10.2	13.5	9.1	Jul-08

Fiscal year end 6/30.

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



Howard County Retirement Plans

TOTAL FUND PERFORMANCE DETAIL (GROSS)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Total Fund Composite	1,049,919,702	100.0	100.0	6.6	79	3.5	17	4.3	26	9.1	29	6.7	23	10.5	37	7.3	Apr-97
<i>Policy Index</i>				6.4	87	3.8	11	4.0	34	7.8	92	6.2	48	9.5	78	7.2	Apr-97
<i>InvestorForce Public DB > \$1B Gross Median</i>				7.5		2.7		3.7		8.6		6.2		10.2		7.1	Apr-97
Total US Equity Composite	256,991,026	24.5	20.0	14.2	45	2.4	52	6.6	49	14.7	27	10.7	30	16.8	37	8.4	Jul-97
<i>Russell 3000</i>				14.0	48	4.7	36	8.8	36	13.5	38	10.4	34	16.0	55	7.7	Jul-97
<i>US Equity Allocation Index</i>				14.3	44	3.5	44	8.0	41	13.5	37	10.0	39	16.3	47	--	Jul-97
<i>eV All US Equity Gross Median</i>				13.9		2.6		6.3		12.4		9.2		16.2		9.5	Jul-97
Large Cap Composite	198,955,261	18.9	15.0	13.5	44	3.5	63	6.4	60	13.8	36	10.3	45	15.7	45	8.4	Apr-01
<i>Russell 1000</i>				14.0	36	5.5	41	9.3	40	13.5	39	10.6	38	16.0	39	7.5	Apr-01
<i>eV US Large Cap Equity Gross Median</i>				13.1		4.7		7.9		12.6		10.0		15.5		8.1	Apr-01
<i>Invesco IQS – US Enhanced 1% Risk SMA</i>	66,229,741	6.3		12.2	64	3.9	59	7.4	55	12.8	48	10.1	48	15.6	48	7.6	Apr-01
<i>S&P 500</i>				13.6	41	5.9	38	9.5	39	13.5	39	10.9	35	15.9	41	7.2	Apr-01
<i>eV US Large Cap Equity Gross Median</i>				13.1		4.7		7.9		12.6		10.0		15.5		8.1	Apr-01
<i>LSV Asset Management SMA</i>	61,189,262	5.8		11.2	61	0.5	72	0.2	85	11.3	43	8.2	50	16.2	15	9.7	May-00
<i>Russell 1000 Value</i>				11.9	43	4.4	35	5.7	36	10.5	65	7.7	60	14.5	55	6.8	May-00
<i>eV US Large Cap Value Equity Gross Median</i>				11.6		2.7		4.4		11.0		8.2		14.7		8.2	May-00
<i>Westfield Capital Management SMA</i>	71,536,258	6.8		16.7	39	5.7	61	11.4	59	17.0	40	12.6	56	--	--	15.8	Jul-10
<i>Russell 1000 Growth</i>				16.1	49	6.6	51	12.7	47	16.5	49	13.5	38	17.5	34	16.5	Jul-10
<i>eV US Large Cap Growth Equity Gross Median</i>				16.1		6.6		12.4		16.4		12.9		17.0		16.0	Jul-10
Small/Mid Cap Composite	58,035,765	5.5	5.0	16.8	32	-1.1	53	7.1	33	17.6	15	12.0	9	18.5	15	12.2	Apr-93
<i>Russell 2500</i>				15.8	42	-1.2	53	4.5	45	12.6	50	7.8	55	16.2	61	10.3	Apr-93
<i>eV US Small-Mid Cap Equity Gross Median</i>				15.2		-0.8		3.7		12.5		8.2		16.6		11.6	Apr-93
<i>William Blair SMA</i>	18,975,799	1.8		17.4	60	4.2	33	10.1	52	18.9	33	13.8	8	19.4	16	12.1	Jun-06
<i>Russell 2500 Growth</i>				19.0	30	1.9	51	7.5	63	15.6	58	9.7	47	17.5	47	9.5	Jun-06
<i>eV US Small-Mid Cap Growth Equity Gross Median</i>				18.0		2.0		10.2		17.0		9.6		17.4		10.4	Jun-06
<i>ICM Small Company - ICSCX</i>	22,178,541	2.1		14.4	23	-7.8	60	0.7	33	13.2	15	8.4	12	16.9	31	11.8	Apr-93
<i>Russell 2000 Value</i>				11.9	69	-7.5	56	0.2	39	10.9	33	5.6	66	14.1	88	9.8	Apr-93
<i>eV US Small Cap Value Equity Gross Median</i>				12.7		-7.1		-1.0		9.7		6.2		16.1		12.1	Apr-93
<i>Brown Capital Small Company Strategy SMA</i>	16,881,425	1.6		19.6	39	3.0	35	13.3	30	23.1	18	15.3	6	--	--	18.7	Aug-11
<i>Russell 2000 Growth</i>				17.1	56	-3.2	78	3.9	82	14.9	75	8.4	77	16.5	83	11.5	Aug-11
<i>eV US Small Cap Growth Equity Gross Median</i>				17.6		1.2		10.2		17.7		9.8		18.1		13.1	Aug-11



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 International Equity	190,649,359	18.2	20.0	10.7	63	0.3	11	-3.3	32	9.1	38	3.2	67	9.5	79	4.6	Jul-97
MSCI ACWI ex USA				10.3	69	-1.6	37	-4.2	42	8.1	60	2.6	80	8.8	84	--	Jul-97
eV ACWI ex-US All Cap Equity Gross Median				11.0		-2.4		-4.8		8.4		3.9		11.4		6.6	Jul-97
International Developed Markets Composite	123,030,769	11.7	13.0	11.1	34	-2.4	35	-2.8	29	6.9	67	2.5	79	9.3	81	2.8	Mar-08
MSCI EAFE				10.0	65	-2.5	37	-3.7	38	7.3	59	2.3	83	9.0	88	2.0	Mar-08
eV All EAFE Equity Gross Median				10.3		-3.8		-5.0		7.6		3.5		10.7		3.7	Mar-08
Mondrian International Equity Fund, L.P.	59,809,403	5.7		9.1	83	0.5	10	-1.5	19	7.1	62	2.6	75	8.9	89	1.7	Dec-07
MSCI EAFE				10.0	65	-2.5	37	-3.7	38	7.3	59	2.3	83	9.0	88	1.0	Dec-07
eV All EAFE Equity Gross Median				10.3		-3.8		-5.0		7.6		3.5		10.7		2.6	Dec-07
Baillie Gifford EAFE Pure K - BGPKX	63,221,366	6.0		13.0	12	-4.8	61	--	--	--	--	--	--	--	--	-3.8	May-18
MSCI EAFE				10.0	65	-2.5	37	-3.7	38	7.3	59	2.3	83	9.0	88	-5.9	May-18
eV All EAFE Equity Gross Median				10.3		-3.8		-5.0		7.6		3.5		10.7		-6.6	May-18
International Emerging Markets Composite	67,618,590	6.4	7.0	10.0	56	5.7	6	-3.9	15	13.6	18	4.8	49	10.2	63	6.1	Feb-06
MSCI Emerging Markets				9.9	56	0.6	49	-7.4	46	10.7	54	3.7	74	8.9	91	4.7	Feb-06
eV Emg Mkts Equity Gross Median				10.3		0.5		-7.7		10.9		4.7		10.6		6.0	Feb-06
DFA Emerging Markets Value Portfolio Institutional - DFEVX	27,795,485	2.6		7.3	89	1.0	44	-8.2	56	11.8	37	3.8	70	9.7	75	5.8	Feb-06
MSCI Emerging Markets				9.9	56	0.6	49	-7.4	46	10.7	54	3.7	74	8.9	91	4.7	Feb-06
eV Emg Mkts Equity Gross Median				10.3		0.5		-7.7		10.9		4.7		10.6		6.0	Feb-06
GQG Partners Emerging Markets Equity Fund	39,823,105	3.8		12.0	30	--	--	--	--	--	--	--	--	--	--	11.7	Dec-18
MSCI Emerging Markets				9.9	56	0.6	49	-7.4	46	10.7	54	3.7	74	8.9	91	7.0	Dec-18
eV Emg Mkts Equity Gross Median				10.3		0.5		-7.7		10.9		4.7		10.6		7.4	Dec-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
Total Fixed Income Composite	301,215,913	28.7	30.0	3.2	48	4.3	51	2.5	95	3.7	36	3.7	35	6.2	33	5.4	Jul-97
BBgBarc US Aggregate TR				2.9	55	4.6	40	4.5	54	2.0	69	2.7	61	3.8	63	5.0	Jul-97
eV All US Fixed Inc Gross Median				3.1		4.3		4.5		2.7		3.1		4.5		5.1	Jul-97
Core Fixed Income Composite	258,091,674	24.6	25.0	--	--	--	--	--	--	--	--	--	--	--	--	1.7	Mar-19
BBgBarc US Aggregate TR				2.9	--	4.6	--	4.5	--	2.0	--	2.7	--	3.8	--	1.9	Mar-19
Dodge & Cox SMA	123,257,249	11.7		3.6	37	4.9	30	4.7	40	4.0	32	3.6	38	--	--	4.4	May-10
BBgBarc US Aggregate TR				2.9	55	4.6	40	4.5	54	2.0	69	2.7	61	3.8	63	3.2	May-10
eV All US Fixed Inc Gross Median				3.1		4.3		4.5		2.7		3.1		4.5		3.7	May-10
PIMCO Total Return	112,920,054	10.8		3.1	52	4.5	44	4.1	67	3.0	43	3.1	50	--	--	3.8	May-10
BBgBarc US Aggregate TR				2.9	55	4.6	40	4.5	54	2.0	69	2.7	61	3.8	63	3.2	May-10
eV All US Fixed Inc Gross Median				3.1		4.3		4.5		2.7		3.1		4.5		3.7	May-10
State Street Global Advisors TIPS	21,914,371	2.1		3.2	68	1.9	61	2.7	67	1.7	81	1.9	61	--	--	3.1	Nov-09
BBgBarc US TIPS TR				3.2	68	1.9	62	2.7	70	1.7	81	1.9	61	3.4	75	3.1	Nov-09
eV US TIPS / Inflation Fixed Inc Gross Median				3.3		2.0		2.8		1.9		2.1		3.6		3.2	Nov-09
Emerging Markets Debt Composite	43,124,239	4.1	5.0	--	--	--	--	--	--	--	--	--	--	--	--	-1.6	Mar-19
JP Morgan GBI EM Global Diversified TR USD				2.9	--	3.2	--	-7.6	--	3.3	--	-0.8	--	4.3	--	-1.3	Mar-19
Colchester Local Markets Debt Fund	43,124,239	4.1		2.7	94	3.5	77	-6.7	80	5.6	54	--	--	--	--	8.2	Oct-15
JP Morgan GBI EM Global Diversified TR USD				2.9	92	3.2	82	-7.6	85	3.3	86	-0.8	91	4.3	93	5.9	Oct-15
eV All Emg Mkts Fixed Inc Gross Median				5.4		6.0		1.1		5.8		4.3		8.5		6.9	Oct-15
Total Real Assets Composite	36,256,889	3.5	7.5	0.7	99	4.8	96	10.6	99	11.7	1	10.7	27	4.6	99	7.6	Jul-03
NCREIF Property Index 1 Qtr. Lag				1.4	99	4.9	95	6.7	99	7.2	31	9.3	69	7.5	99	8.9	Jul-03
eV US REIT Gross Median				16.6		9.8		19.3		6.4		10.0		19.2		11.1	Jul-03
Real Estate Composite	25,643,429	2.4		--	--	--	--	--	--	--	--	--	--	--	--	0.3	Mar-19
NCREIF Property Index 1 Qtr. Lag				1.4	--	4.9	--	6.7	--	7.2	--	9.3	--	7.5	--	1.4	Mar-19
Realty Associates Fund VIII L.P.	25,697	0.0		-8.5	--	0.8	--	4.2	--	5.5	--	9.0	--	2.9	--	1.8	Jul-07
Realty Associates Fund IX L.P.	930	0.0		-5.9	--	-9.6	--	-14.8	--	-1.7	--	4.2	--	--	--	6.2	Apr-10
Partners Group Global RE 2011	5,551,602	0.5		-5.1	--	-11.4	--	-8.6	--	5.8	--	5.7	--	--	--	5.0	Mar-12
Partners Group Global RE 2014	16,976,211	1.6		2.6	--	5.8	--	11.3	--	13.0	--	--	--	--	--	10.1	Dec-14
Partners Group Global RE 2017	3,088,989	0.3		4.3	--	--	--	--	--	--	--	--	--	--	--	4.3	Dec-18
NCREIF Property Index 1 Qtr. Lag				1.4	--	4.9	--	6.7	--	7.2	--	9.3	--	7.5	--	3.1	Dec-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
Real Assets Composite	10,613,460	1.0		--	--	--	--	--	--	--	--	--	--	--	--	-0.1	Mar-19
<i>Cambridge Associates Global Natural Resources (1 Qtr Lag)</i>				-6.9	--	-1.5	--	-0.7	--	7.5	--	-0.4	--	5.1	--	-6.9	Mar-19
Commonfund Natural Resources X	4,731,035	0.5		0.0	--	8.5	--	27.5	--	20.7	--	--	--	--	--	20.7	Apr-16
Commonfund Natural Resources XI	150,000	0.0		0.0	--	--	--	--	--	--	--	--	--	--	--	0.0	Oct-18
Aether Real Assets IV	4,570,897	0.4		-0.2	--	10.7	--	14.2	--	--	--	--	--	--	--	5.1	Jun-16
Aether Real Assets V	1,161,529	0.1		0.0	--	--	--	--	--	--	--	--	--	--	--	79.2	Oct-18
<i>Cambridge Associates Global Natural Resources (1 Qtr Lag)</i>				-6.9	--	-1.5	--	-0.7	--	7.5	--	-0.4	--	5.1	--	-4.9	Oct-18
Cash Composite	8,009,588	0.8	0.0	0.7	--	1.8	--	2.1	--	1.0	--	0.6	--	0.3	--	1.4	Dec-03
<i>91 Day T-Bills</i>				0.6	--	1.7	--	2.1	--	1.2	--	0.8	--	0.4	--	1.3	Dec-03
Cash - General Employees	3,861,185	0.4		0.5	--	1.3	--	1.7	--	0.8	--	0.5	--	0.3	--	1.3	Jan-04
Cash - Police & Fire	4,107,901	0.4		0.4	--	1.3	--	1.6	--	0.8	--	0.5	--	0.3	--	1.3	Dec-04
Non Managed Cash	40,503	0.0		1.1	--	1.3	--	1.3	--	0.5	--	--	--	--	--	0.4	Oct-15
<i>91 Day T-Bills</i>				0.6	--	1.7	--	2.1	--	1.2	--	0.8	--	0.4	--	1.1	Oct-15
Hedge Fund Composite	118,629,056	11.3	12.5	2.7	--	1.1	--	2.7	--	4.4	--	4.2	--	--	--	4.6	Jan-11
<i>HFRI FOF: Conservative Index</i>				3.2	--	0.6	--	1.7	--	3.5	--	2.1	--	3.4	--	2.4	Jan-11
Magnitude International Class A Eligible	58,162,024	5.5		2.4	--	-0.2	--	1.9	--	3.3	--	3.9	--	--	--	4.6	Jan-11
<i>HFRI FOF: Conservative Index</i>				3.2	--	0.6	--	1.7	--	3.5	--	2.1	--	3.4	--	2.4	Jan-11
Blackstone Partners Offshore Fund LTD	60,467,031	5.8		3.1	--	2.4	--	3.4	--	5.5	--	4.4	--	--	--	4.7	Mar-11
<i>HFRI FOF: Conservative Index</i>				3.2	--	0.6	--	1.7	--	3.5	--	2.1	--	3.4	--	2.3	Mar-11
Private Equity Composite	138,167,872	13.2	10.0	1.0	--	11.4	--	17.1	--	16.3	--	16.3	--	14.7	--	12.7	Jul-08
<i>Cambridge Associates Global All PE</i>				0.0	--	2.2	--	6.7	--	12.4	--	10.2	--	13.5	--	9.1	Jul-08

Fiscal year ends 6/30.

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

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

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

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



Howard County Retirement Plans

ASSET ALLOCATION VS. POLICY TARGETS

Allocation vs. Targets and Policy As Of December 31, 2018				
	Current Balance	Current Allocation	Target	Difference
Large Cap Equity	\$175,495,838	17.8%	15.0%	2.8%
Small/Mid Cap Equity	\$49,814,454	5.1%	5.0%	0.1%
Developed International Equity	\$110,954,493	11.3%	13.0%	-1.7%
Emerging Markets Equity	\$61,581,335	6.3%	7.0%	-0.7%
Core Fixed Income	\$249,899,135	25.4%	25.0%	0.4%
Emerging Market Debt	\$40,172,569	4.1%	5.0%	-0.9%
Private Equity	\$136,852,194	13.9%	10.0%	3.9%
Hedge Funds	\$115,456,723	11.7%	12.5%	-0.8%
Real Assets	\$36,544,585	3.7%	7.5%	-3.8%
Cash	\$6,660,965	0.7%	0.0%	0.7%
Total	\$983,432,291	100.0%	100.0%	

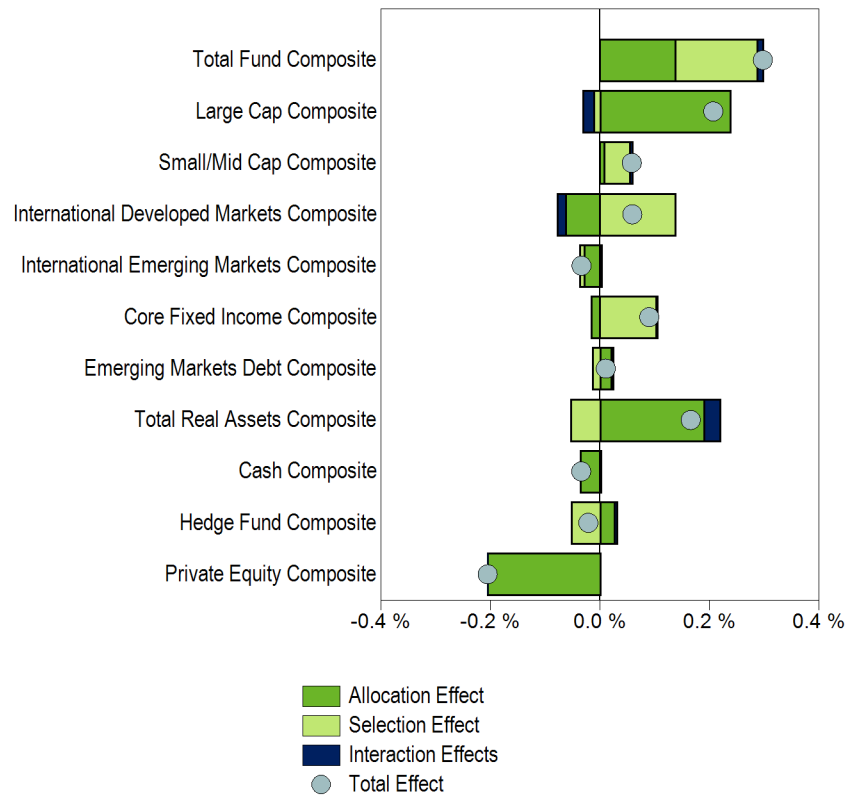
Allocation vs. Targets and Policy As Of March 31, 2019				
	Current Balance	Current Allocation	Target	Difference
Large Cap Equity	\$198,955,261	18.9%	15.0%	3.9%
Small/Mid Cap Equity	\$58,035,765	5.5%	5.0%	0.5%
Developed International Equity	\$123,030,769	11.7%	13.0%	-1.3%
Emerging Markets Equity	\$67,618,590	6.4%	7.0%	-0.6%
Core Fixed Income	\$258,091,674	24.6%	25.0%	-0.4%
Emerging Market Debt	\$43,124,239	4.1%	5.0%	-0.9%
Private Equity	\$138,167,872	13.2%	10.0%	3.2%
Hedge Funds	\$118,629,056	11.3%	12.5%	-1.2%
Real Assets	\$36,256,889	3.5%	7.5%	-4.0%
Cash	\$8,009,588	0.8%	0.0%	0.8%
Total	\$1,049,919,702	100.0%	100.0%	



Howard County Retirement Plans

TOTAL FUND ATTRIBUTION ANALYSIS (GROSS)

Attribution Effects
3 Months Ending March 31, 2019



Attribution Summary
3 Months Ending March 31, 2019

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Large Cap Composite	13.5%	13.6%	-0.2%	0.0%	0.2%	0.0%	0.2%
Small/Mid Cap Composite	16.8%	15.8%	1.0%	0.0%	0.0%	0.0%	0.1%
International Developed Markets Composite	11.1%	10.0%	1.1%	0.1%	-0.1%	0.0%	0.1%
International Emerging Markets Composite	10.0%	9.9%	0.0%	0.0%	0.0%	0.0%	0.0%
Core Fixed Income Composite	3.3%	2.9%	0.4%	0.1%	0.0%	0.0%	0.1%
Emerging Markets Debt Composite	2.7%	2.9%	-0.2%	0.0%	0.0%	0.0%	0.0%
Total Real Assets Composite	0.7%	1.4%	-0.7%	-0.1%	0.2%	0.0%	0.2%
Cash Composite	0.7%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%
Hedge Fund Composite	2.7%	3.2%	-0.4%	-0.1%	0.0%	0.0%	0.0%
Private Equity Composite	1.0%	1.0%	0.0%	0.0%	-0.2%	0.0%	-0.2%
Total	6.6%	6.3%	0.3%	0.1%	0.1%	0.0%	0.3%



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.

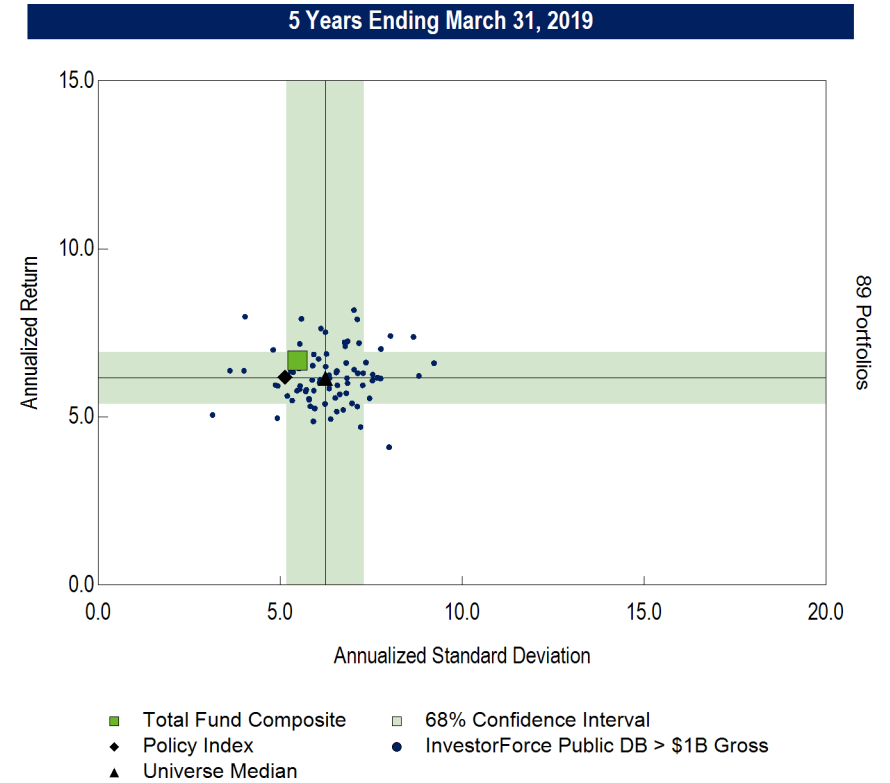
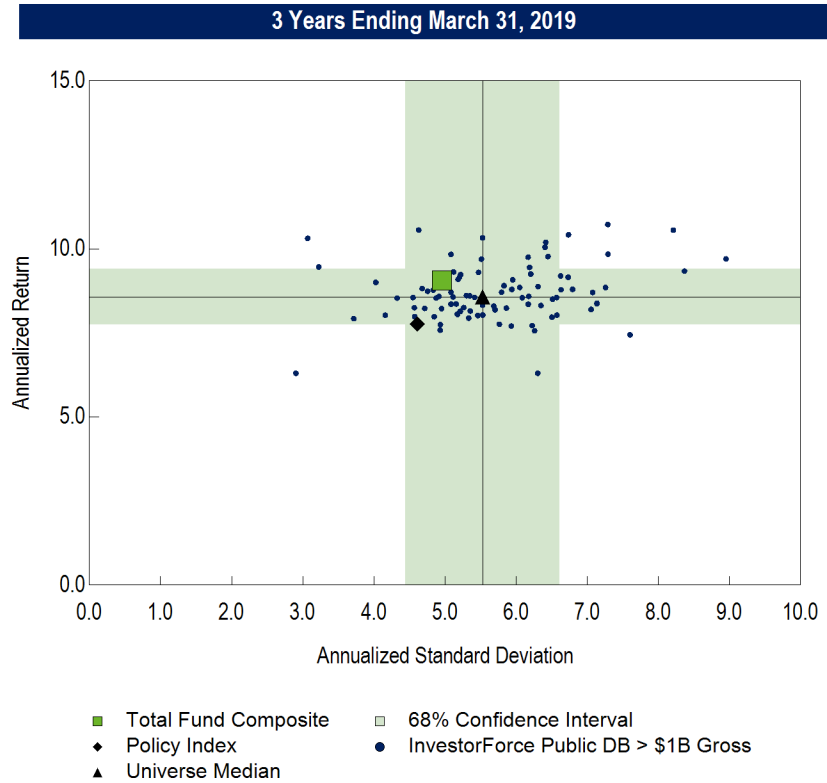
Selection Effect - Measures the ability to select managers within a given asset class relative to a benchmark. The over or underperformance of the portfolio is weighted by the benchmark weight, therefore, selection is not affected by plan's allocation to the asset class. The weight of the manager in 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 RISK/RETURN (GROSS)



3 Years Ending March 31, 2019

	Anlzd Ret	Anlzd Std Dev	Sharpe Ratio	Sortino Ratio
Total Fund Composite	9.07%	4.96%	1.58	1.71
Policy Index	7.77%	4.61%	1.42	1.82

5 Years Ending March 31, 2019

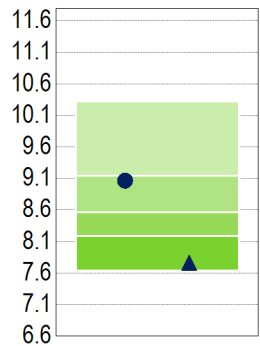
	Anlzd Ret	Anlzd Std Dev	Sharpe Ratio	Sortino Ratio
Total Fund Composite	6.68%	5.47%	1.08	1.64
Policy Index	6.19%	5.13%	1.06	1.70



TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

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

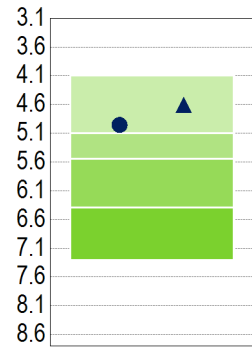
Anlzd Return



● Total Fund Composite
Value 9.07
Rank 29
▲ Policy Index
Value 7.77
Rank 92

Universe
5th %tile 10.32
25th %tile 9.16
Median 8.57
75th %tile 8.19
95th %tile 7.64

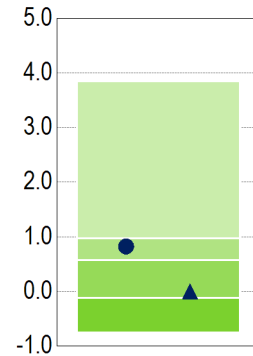
Anlzd Standard Deviation



● Total Fund Composite
Value 4.96
Rank 24
▲ Policy Index
Value 4.61
Rank 11

Universe
5th %tile 4.09
25th %tile 5.08
Median 5.53
75th %tile 6.38
95th %tile 7.29

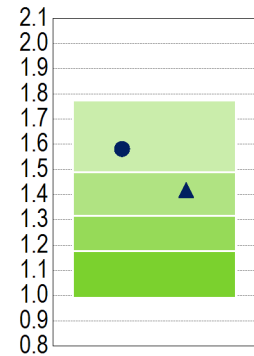
Anlzd Alpha



● Total Fund Composite
Value 0.82
Rank 31
▲ Policy Index
Value 0.00
Rank 71

Universe
5th %tile 3.85
25th %tile 0.99
Median 0.59
75th %tile -0.11
95th %tile -0.74

Sharpe Ratio



● Total Fund Composite
Value 1.58
Rank 15
▲ Policy Index
Value 1.42
Rank 31

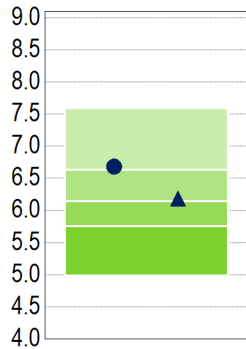
Universe
5th %tile 1.77
25th %tile 1.49
Median 1.32
75th %tile 1.18
95th %tile 0.99



TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

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

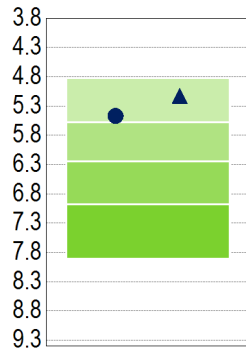
Anlzd Return



● Total Fund Composite	
Value	6.68
Rank	23
▲ Policy Index	
Value	6.19
Rank	48

Universe	
5th %tile	7.59
25th %tile	6.64
Median	6.16
75th %tile	5.76
95th %tile	5.00

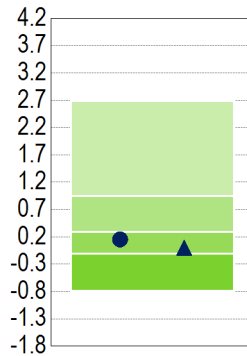
Anlzd Standard Deviation



● Total Fund Composite	
Value	5.47
Rank	18
▲ Policy Index	
Value	5.13
Rank	9

Universe	
5th %tile	4.82
25th %tile	5.56
Median	6.23
75th %tile	6.97
95th %tile	7.90

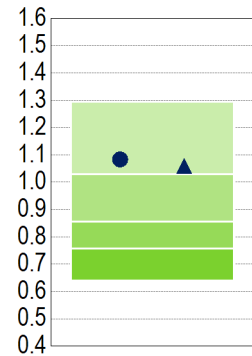
Anlzd Alpha



● Total Fund Composite	
Value	0.15
Rank	57
▲ Policy Index	
Value	0.00
Rank	67

Universe	
5th %tile	2.68
25th %tile	0.95
Median	0.30
75th %tile	-0.09
95th %tile	-0.78

Sharpe Ratio



● Total Fund Composite	
Value	1.08
Rank	13
▲ Policy Index	
Value	1.06
Rank	17

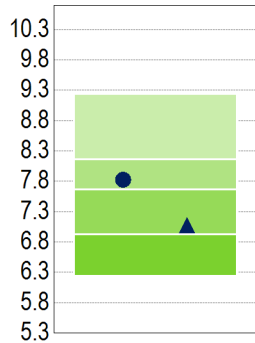
Universe	
5th %tile	1.29
25th %tile	1.03
Median	0.86
75th %tile	0.76
95th %tile	0.64



TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

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

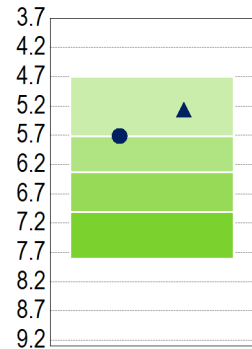
Anlzd Return



● Total Fund Composite	
Value	7.83
Rank	43
▲ Policy Index	
Value	7.08
Rank	71

Universe	
5th %tile	9.24
25th %tile	8.17
Median	7.68
75th %tile	6.93
95th %tile	6.25

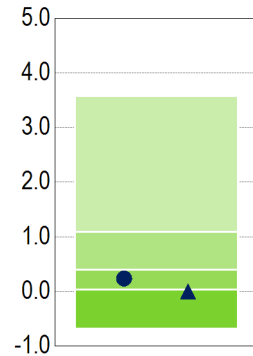
Anlzd Standard Deviation



● Total Fund Composite	
Value	5.71
Rank	26
▲ Policy Index	
Value	5.26
Rank	10

Universe	
5th %tile	4.70
25th %tile	5.71
Median	6.33
75th %tile	7.00
95th %tile	7.80

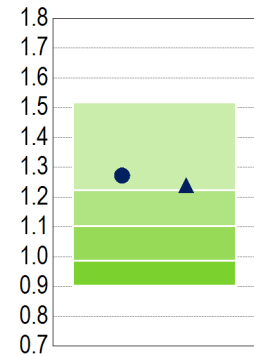
Anlzd Alpha



● Total Fund Composite	
Value	0.24
Rank	57
▲ Policy Index	
Value	0.00
Rank	77

Universe	
5th %tile	3.58
25th %tile	1.11
Median	0.41
75th %tile	0.05
95th %tile	-0.67

Sharpe Ratio



● Total Fund Composite	
Value	1.27
Rank	22
▲ Policy Index	
Value	1.24
Rank	24

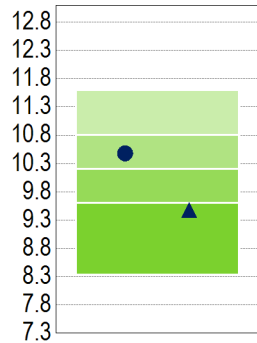
Universe	
5th %tile	1.52
25th %tile	1.22
Median	1.11
75th %tile	0.99
95th %tile	0.91



TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

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

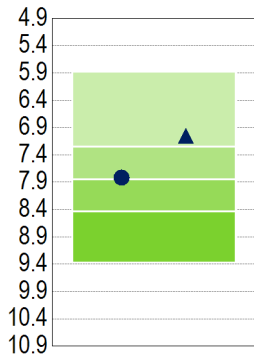
Anlzd Return



● Total Fund Composite
Value 10.48
Rank 37
▲ Policy Index
Value 9.48
Rank 78

Universe
5th %tile 11.60
25th %tile 10.81
Median 10.22
75th %tile 9.61
95th %tile 8.34

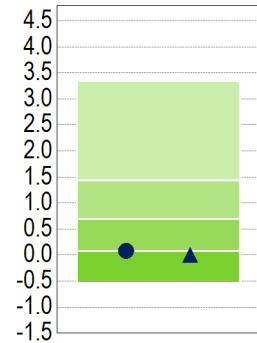
Anlzd Standard Deviation



● Total Fund Composite
Value 7.82
Rank 50
▲ Policy Index
Value 7.05
Rank 21

Universe
5th %tile 5.88
25th %tile 7.24
Median 7.83
75th %tile 8.43
95th %tile 9.37

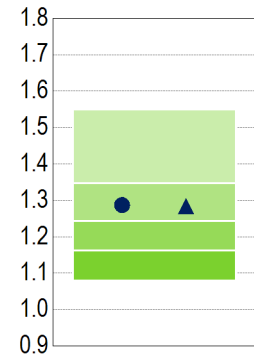
Anlzd Alpha



● Total Fund Composite
Value 0.08
Rank 77
▲ Policy Index
Value 0.00
Rank 77

Universe
5th %tile 3.34
25th %tile 1.45
Median 0.71
75th %tile 0.09
95th %tile -0.53

Sharpe Ratio



● Total Fund Composite
Value 1.29
Rank 35
▲ Policy Index
Value 1.28
Rank 36

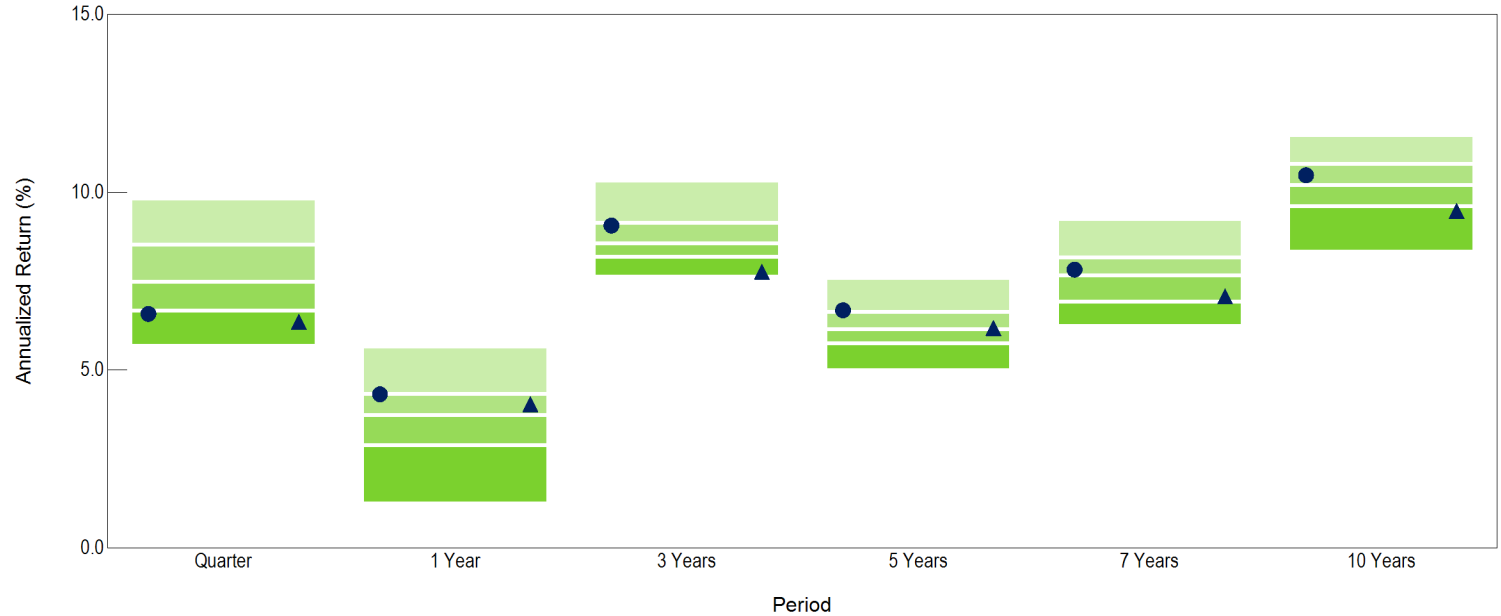
Universe
5th %tile 1.55
25th %tile 1.35
Median 1.24
75th %tile 1.16
95th %tile 1.08



Howard County Retirement Plans

TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE (GROSS)

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



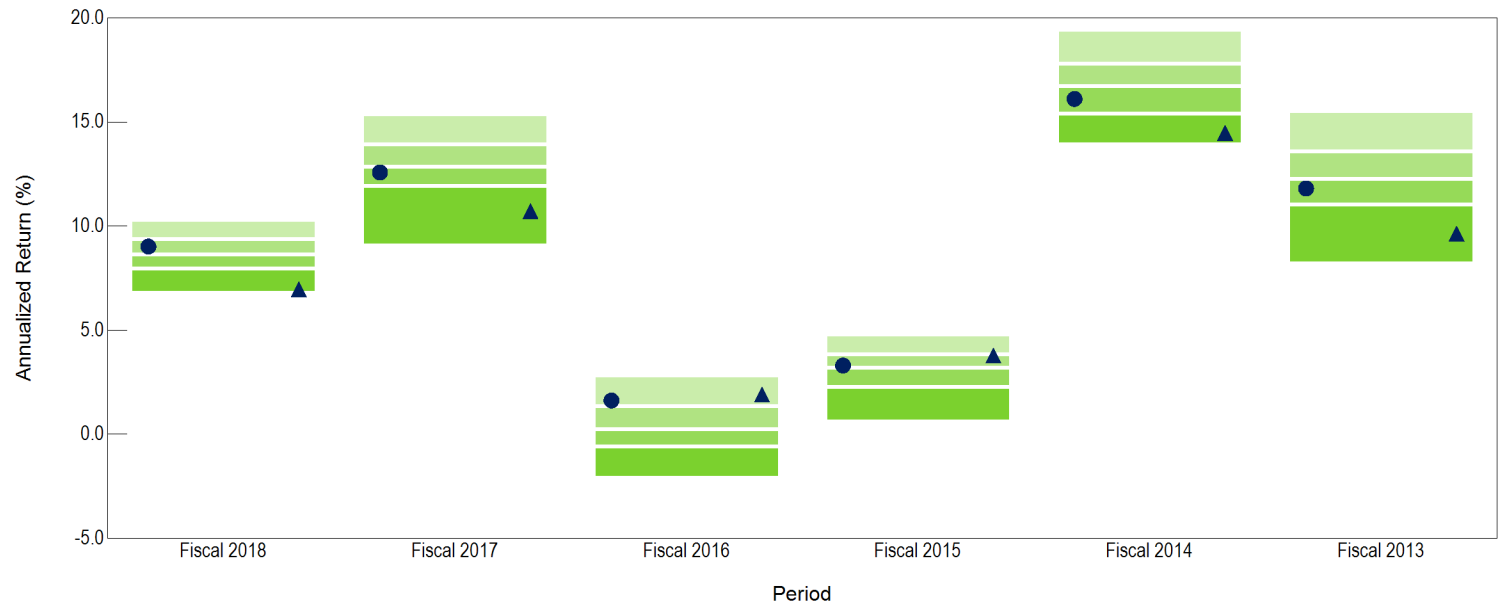
	Quarter		1 Year		3 Years		5 Years		7 Years		10 Years	
	Return	(Rank)	Return	(Rank)	Return	(Rank)	Return	(Rank)	Return	(Rank)	Return	(Rank)
5th Percentile	9.8		5.7		10.3		7.6		9.2		11.6	
25th Percentile	8.5		4.3		9.2		6.6		8.2		10.8	
Median	7.5		3.7		8.6		6.2		7.7		10.2	
75th Percentile	6.7		2.9		8.2		5.8		6.9		9.6	
95th Percentile	5.7		1.3		7.6		5.0		6.3		8.3	
# of Portfolios	92		91		91		89		87		83	
● Total Fund Composite	6.6	(79)	4.3	(26)	9.1	(29)	6.7	(23)	7.8	(43)	10.5	(37)
▲ Policy Index	6.4	(87)	4.0	(34)	7.8	(92)	6.2	(48)	7.1	(71)	9.5	(78)



Howard County Retirement Plans

FISCAL RETURN SUMMARY VS. PEER UNIVERSE (GROSS)

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



	Fiscal 2018		Fiscal 2017		Fiscal 2016		Fiscal 2015		Fiscal 2014		Fiscal 2013	
	Return	(Rank)	Return	(Rank)	Return	(Rank)	Return	(Rank)	Return	(Rank)	Return	(Rank)
5th Percentile	10.3		15.3		2.8		4.8		19.4		15.5	
25th Percentile	9.4		14.0		1.4		3.9		17.8		13.6	
Median	8.7		12.9		0.3		3.2		16.7		12.3	
75th Percentile	8.0		11.9		-0.6		2.3		15.4		11.0	
95th Percentile	6.8		9.1		-2.1		0.6		13.9		8.2	
# of Portfolios	62		108		91		92		65		78	
● Total Fund Composite	9.0	(35)	12.6	(61)	1.6	(22)	3.3	(48)	16.1	(62)	11.8	(58)
▲ Policy Index	7.0	(91)	10.7	(91)	1.9	(15)	3.8	(30)	14.5	(86)	9.6	(88)

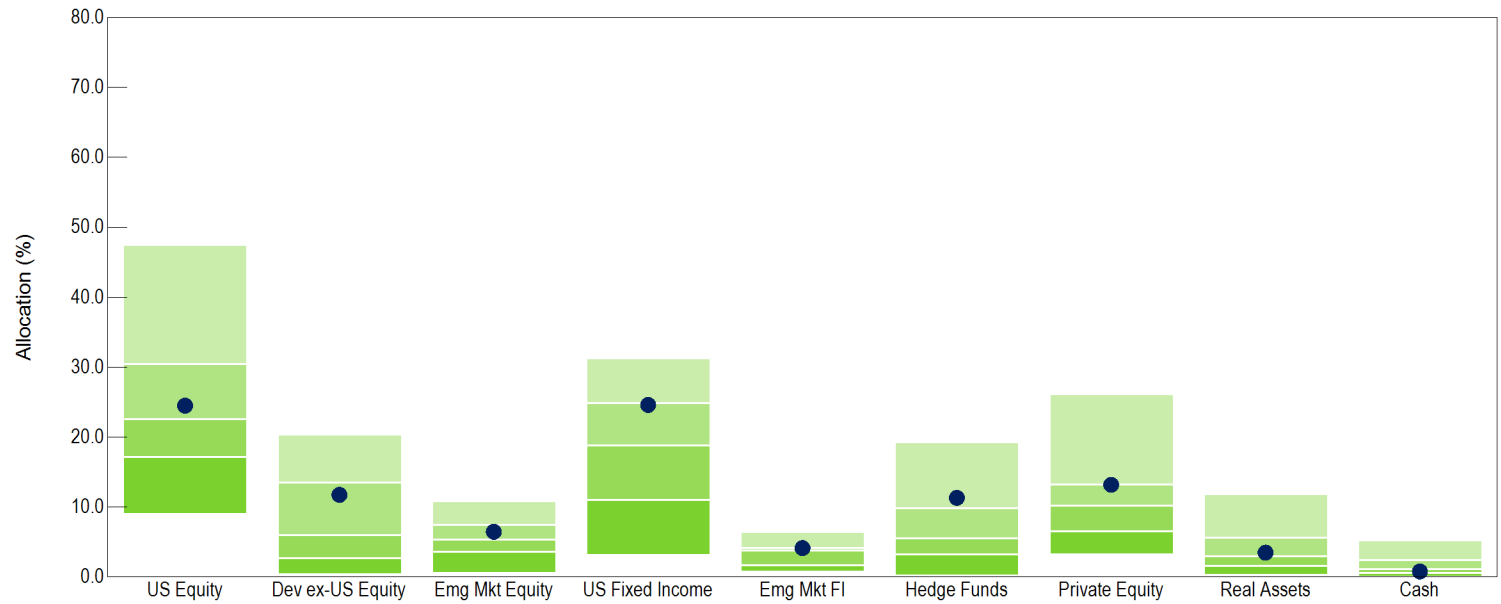
Fiscal year ends 6/30.



Howard County Retirement Plans

TOTAL FUND ALLOCATIONS VS. PEER UNIVERSE

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



	Allocation (Rank)																	
	US Equity		Dev ex-US Equity		Emg Mkt Equity		US Fixed Income		Emg Mkt FI		Hedge Funds		Private Equity		Real Assets		Cash	
5th Percentile	47.5	20.4	10.8	31.3	6.4	19.3	26.1	11.9	5.3									
25th Percentile	30.5	13.5	7.6	24.9	4.2	9.9	13.3	5.7	2.5									
Median	22.7	6.0	5.4	18.9	3.9	5.6	10.2	3.0	1.2									
75th Percentile	17.2	2.7	3.6	11.1	1.7	3.3	6.6	1.7	0.6									
95th Percentile	9.1	0.4	0.7	3.2	0.9	0.3	3.3	0.4	0.1									
# of Portfolios	63	35	48	61	29	45	53	38	68									
● Total Fund Composite	24.5	(43)	11.7	(29)	6.4	(37)	24.6	(26)	4.1	(33)	11.3	(17)	13.2	(27)	3.5	(46)	0.8	(65)



Howard County Retirement Plans

TOTAL EQUITY COMPOSITE

3 Year Risk Return



3 Year Style Analysis



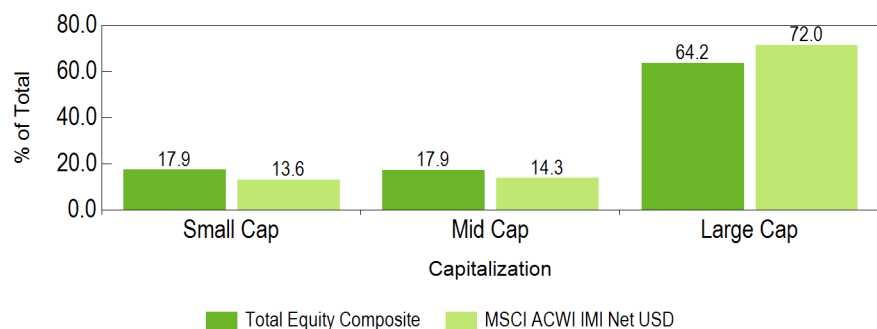
Howard County Retirement Plans

TOTAL EQUITY COMPOSITE

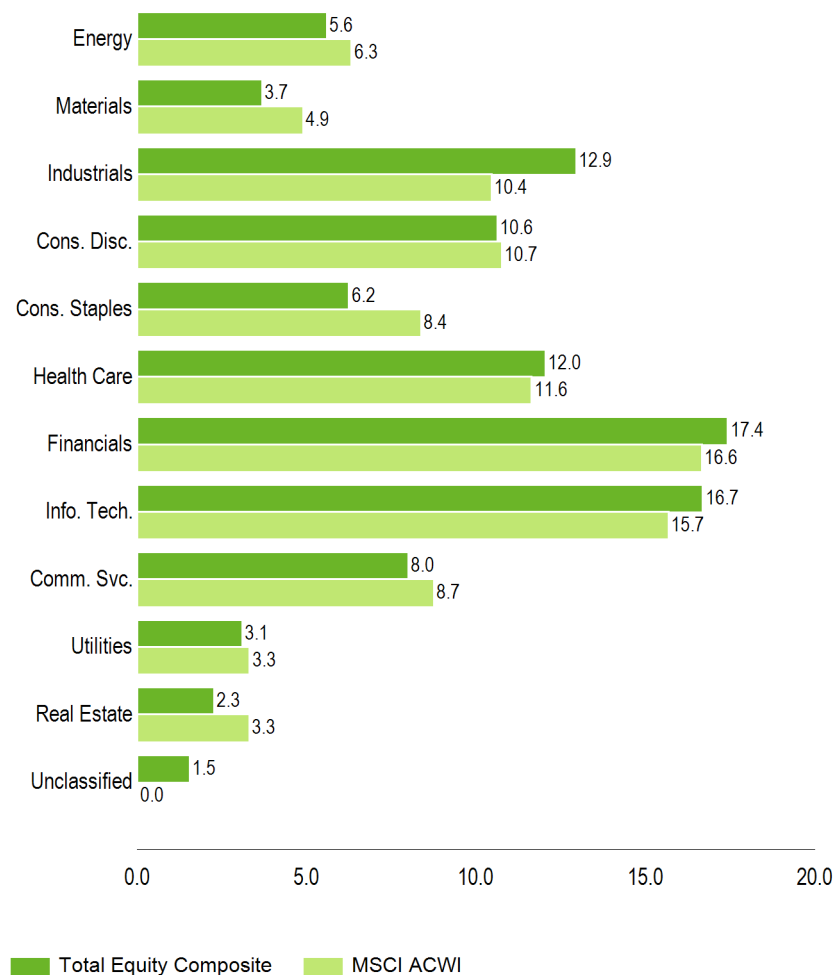
Characteristics		
	Portfolio	MSCI ACWI IMI Net USD
Number of Holdings	3,214	8,659
Weighted Avg. Market Cap. (\$B)	101.9	122.7
Median Market Cap. (\$B)	0.7	1.8
Price To Earnings	16.9	17.1
Price To Book	2.8	2.7
Price To Sales	1.3	1.5
Return on Equity (%)	18.1	18.5
Yield (%)	2.3	2.5
Beta	1.0	1.0
R-Squared	1.0	1.0

	Portfolio Q1-19	Index Q1-19
Region Weighting		
Americas	60.15	59.31
Europe	17.22	19.59
Asia/Pacific	22.11	19.94
Other	0.52	1.15

Market Capitalization As of March 31, 2019



Equity Sector Allocation



Howard County Retirement Plans

TOTAL EQUITY COMPOSITE

Top Ten Holdings	
AMAZON.COM	1.4%
APPLE	1.4%
CASH - USD	1.4%
MICROSOFT	1.2%
AIA GROUP	0.9%
BOEING	0.8%
VISA 'A'	0.8%
METTLER TOLEDO INTL.	0.7%
UNITED OVERSEAS BANK	0.7%
UNITEDHEALTH GROUP	0.7%

Top Positive Contributors		
	Relative Contribution %	Return %
METTLER TOLEDO INTL.	0.2%	27.8%
AIA GROUP	0.1%	19.9%
VEEVA SYSTEMS CL.A	0.1%	42.0%
ZALANDO	0.1%	52.4%
SERVICENOW	0.1%	38.4%
PAYCOM SOFTWARE	0.1%	54.5%
OLYMPUS	0.1%	42.1%
WH GROUP	0.1%	38.9%
SARTORIUS PREF.	0.1%	36.9%
AMETEK	0.1%	22.8%

Top Negative Contributors		
	Relative Contribution %	Return %
FACEBOOK CLASS A	-0.1%	27.2%
MICROSOFT	-0.1%	16.6%
PHILIP MORRIS INTL.	-0.1%	34.1%
APPLE	-0.1%	20.9%
BIOGEN	0.0%	-21.4%
ACCENTURE CLASS A	0.0%	24.8%
PROCTER & GAMBLE	0.0%	14.1%
EXXON MOBIL	0.0%	19.8%
GENERAL ELECTRIC	0.0%	37.4%
ORACLE	0.0%	19.4%

Equity Sector Attribution											
	Total Effects	Selection Effect	Attribution Effects			Returns		Sector Weights			
			Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	-0.2%	-0.1%	-0.1%	0.0%	12.6%	14.6%	5.5%	2.8%			
Materials	-0.2%	-0.1%	-0.1%	-0.1%	9.1%	12.9%	3.8%	2.3%			
Industrials	-0.6%	-0.4%	0.0%	-0.2%	12.8%	17.7%	12.7%	9.1%			
Consumer Discretionary	-0.1%	-0.4%	0.1%	0.1%	12.3%	14.9%	10.0%	16.6%			
Consumer Staples	-0.4%	-0.3%	0.0%	-0.1%	11.6%	18.2%	6.1%	4.4%			
Health Care	0.0%	0.0%	0.0%	0.0%	10.4%	10.2%	12.4%	12.6%			
Financials	-1.1%	-0.1%	-0.6%	-0.3%	9.9%	12.3%	17.8%	3.9%			
Information Technology	-0.8%	-0.3%	-0.6%	0.1%	20.2%	21.4%	16.4%	28.8%			
Communication Services	-0.5%	-0.8%	0.0%	0.3%	11.3%	16.8%	8.5%	14.7%			
Utilities	0.0%	--	--	--	10.3%	--	3.3%	0.0%			
Real Estate	-0.1%	-0.1%	0.0%	0.0%	16.4%	18.2%	2.1%	4.7%			
Cash	-0.2%	0.0%	-0.2%	0.0%	0.6%	--	1.5%	0.0%			
Portfolio	-4.0%	=	-2.5%	+	-1.4%	+	-0.2%	12.6%	16.9%	100.0%	100.0%

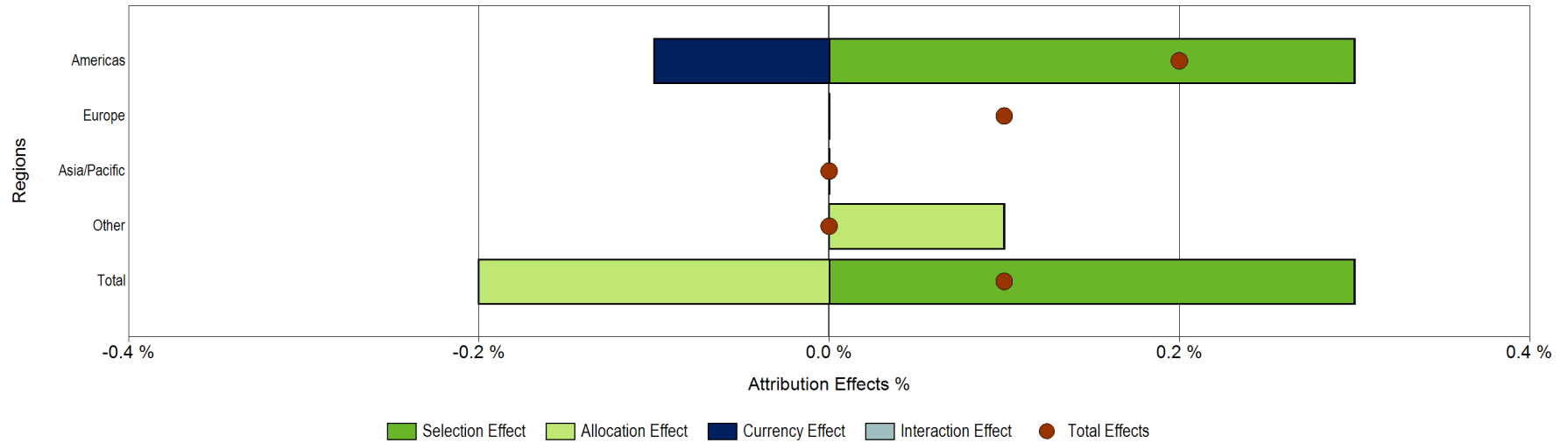
Attribution on manager pages is holdings based, using buy-and-hold assumptions from the beginning of the period portfolio. Results may differ from the flash report.



Howard County Retirement Plans

TOTAL EQUITY COMPOSITE

Total Equity Composite Performance Attribution vs. MSCI ACWI IMI Net USD



	Returns and Weights				Attribution Effects				
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	Total Effects
Totals									
Americas	14.5%	14.1%	58.0%	58.1%	0.3%	0.0%	-0.1%	0.0%	0.2%
Europe	11.3%	11.1%	17.7%	20.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Asia/Pacific	9.7%	9.6%	22.3%	20.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Other	4.0%	4.9%	0.6%	1.3%	0.0%	0.1%	0.0%	0.0%	0.0%
Cash	0.6%	--	1.5%	0.0%	0.0%	-0.2%	0.0%	0.0%	-0.2%
Total	12.6%	12.5%	100.0%	100.0%	0.3%	-0.2%	0.0%	0.0%	0.1%
Totals									
Developed	13.5%	12.9%	86.5%	88.3%	0.6%	0.0%	-0.1%	0.0%	0.6%
Emerging*	7.8%	9.7%	12.1%	11.7%	-0.2%	0.0%	0.0%	0.0%	-0.2%
Cash	0.6%	--	1.5%	0.0%	0.0%	-0.2%	0.0%	0.0%	-0.2%



Howard County Retirement Plans

TOTAL EQUITY COMPOSITE

Country Allocation				
	Manager	Index	Manager	Index
	Allocation (USD)	Allocation (USD)	Return (USD)	Return (USD)
Americas				
Brazil*	1.0%	0.9%	7.7%	8.1%
Canada	0.2%	3.0%	14.7%	15.4%
Chile*	0.1%	0.1%	5.7%	4.6%
Colombia*	0.0%	0.0%	14.1%	25.4%
Mexico*	0.5%	0.3%	5.7%	6.3%
United States	56.2%	53.7%	14.8%	14.2%
Total-Americas	58.0%	58.1%	14.5%	14.1%
Europe				
Czech Republic*	0.0%	0.0%	-1.1%	4.8%
Denmark	0.8%	0.6%	9.1%	12.8%
Finland	0.2%	0.4%	10.1%	9.5%
France	1.1%	3.1%	7.3%	10.8%
Germany	2.4%	2.6%	14.6%	7.7%
Greece*	0.0%	0.0%	28.5%	16.0%
Hungary*	0.0%	0.0%	5.2%	5.7%
Ireland	0.2%	0.2%	9.2%	11.2%
Italy	0.9%	0.8%	13.4%	14.4%
Netherlands	1.0%	1.0%	15.0%	13.3%
Poland*	0.1%	0.1%	-2.2%	-0.1%
Portugal	0.2%	0.1%	24.9%	8.6%
Russia*	0.1%	0.4%	14.8%	12.3%
Spain	1.3%	1.0%	8.8%	6.9%
Sweden	1.7%	1.0%	3.7%	8.2%
Switzerland	1.5%	2.6%	9.1%	13.3%
United Kingdom	5.9%	5.4%	13.1%	12.4%
Total-Europe	17.7%	20.0%	11.3%	11.1%

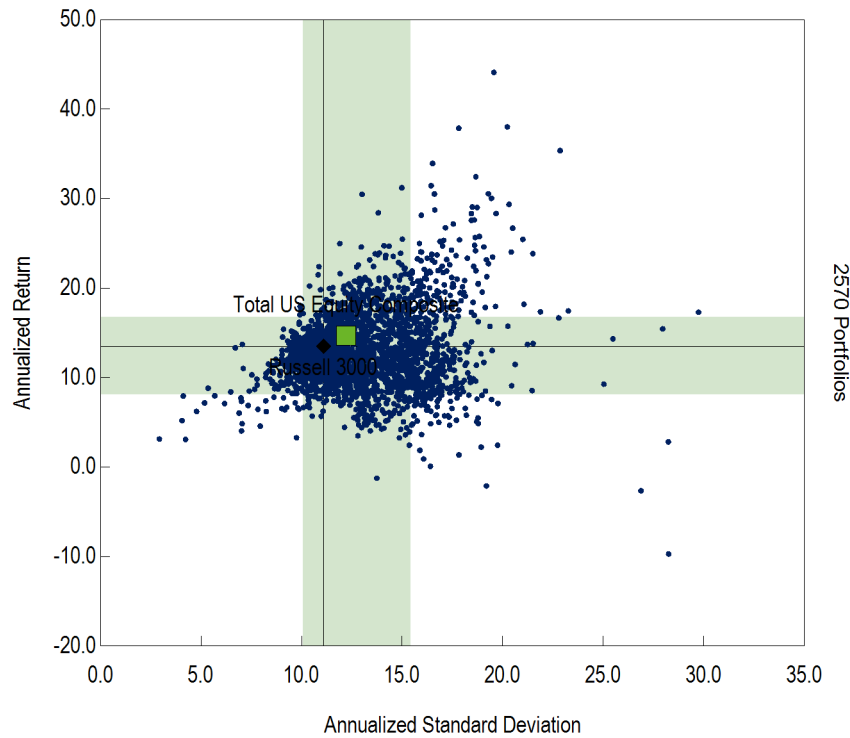
Country Allocation				
	Manager	Index	Manager	Index
	Allocation (USD)	Allocation (USD)	Return (USD)	Return (USD)
AsiaPacific				
Australia	1.0%	2.2%	7.3%	11.8%
China*	1.4%	3.3%	15.2%	17.9%
Hong Kong	3.7%	1.1%	14.1%	15.2%
India*	3.3%	1.2%	9.6%	6.6%
Indonesia*	0.8%	0.3%	9.1%	4.2%
Japan	6.2%	8.1%	11.8%	6.9%
Korea*	1.8%	1.7%	1.3%	4.5%
Malaysia*	0.2%	0.3%	6.8%	2.0%
Philippines*	0.1%	0.1%	12.1%	8.1%
Singapore	1.6%	0.4%	1.5%	8.9%
Taiwan*	1.4%	1.4%	7.7%	9.6%
Thailand*	0.6%	0.3%	5.5%	8.0%
Total-AsiaPacific	22.3%	20.6%	9.7%	9.6%
Other				
Israel	0.0%	0.2%	13.2%	12.1%
South Africa*	0.4%	0.7%	3.8%	4.2%
Turkey*	0.1%	0.1%	-2.1%	-2.6%
Total-Other	0.6%	1.3%	4.0%	4.9%
Totals				
Developed	86.5%	88.3%	13.5%	12.9%
Emerging*	12.1%	11.7%	7.8%	9.7%
Cash	1.5%		0.6%	

Country* = Emerging Markets



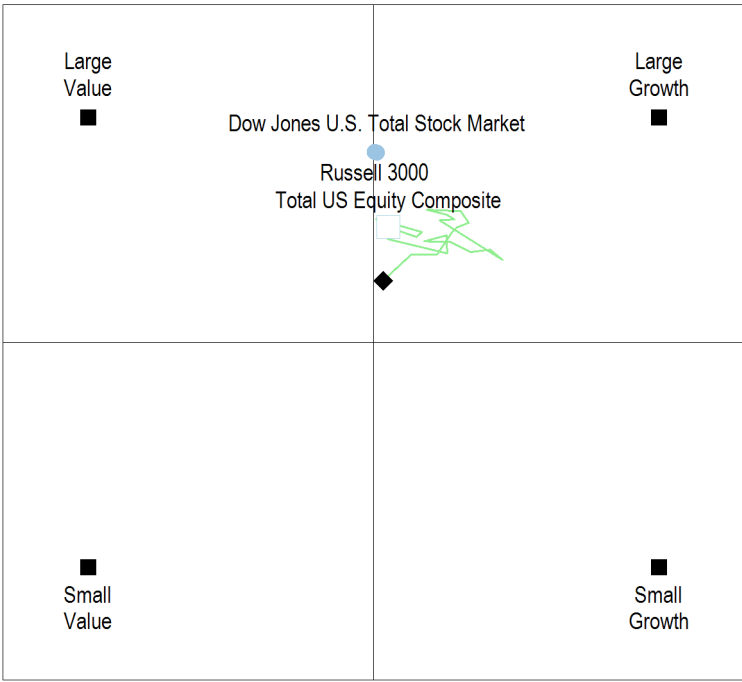
TOTAL US EQUITY COMPOSITE

3 Year Risk Return



- Total US Equity Composite
- ◆ Russell 3000
- 68% Confidence Interval
- eV All US Equity Gross

3 Year Style Analysis



- First Rolling Period
- ◆ Last Rolling Period

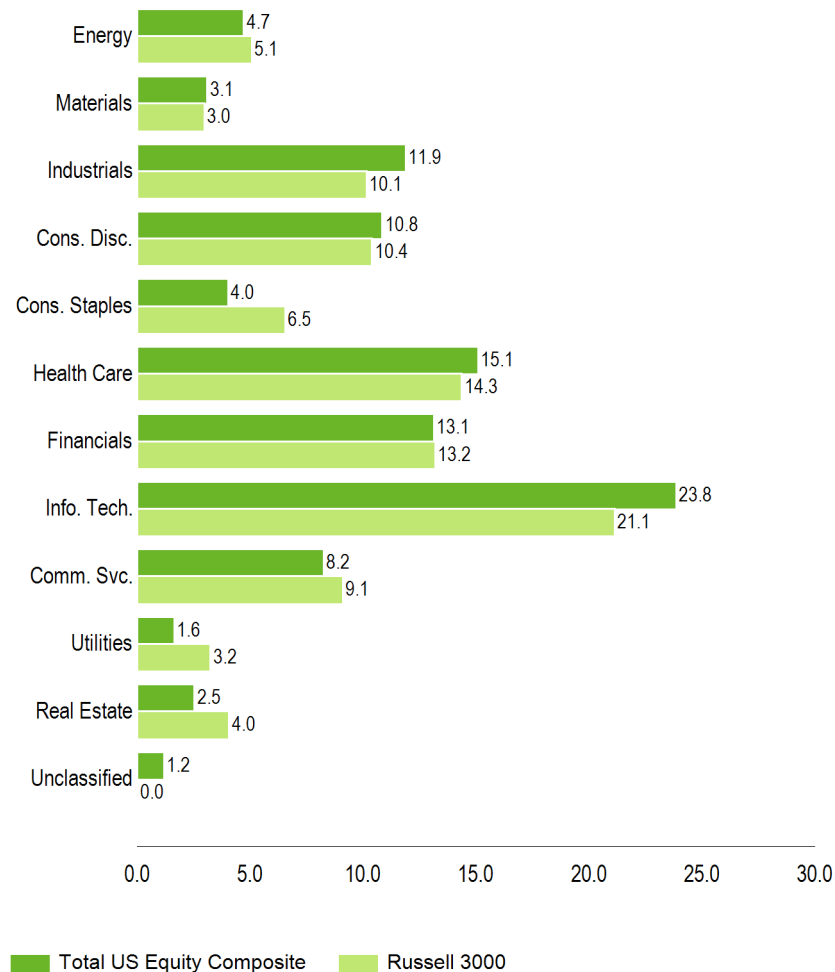


Howard County Retirement Plans

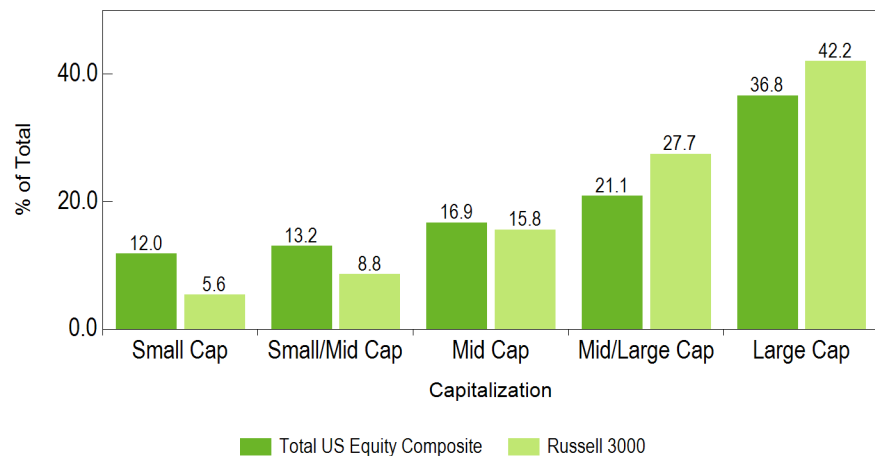
TOTAL US EQUITY COMPOSITE

Characteristics		
	Portfolio	Russell 3000
Number of Holdings	543	2,977
Weighted Avg. Market Cap. (\$B)	146.4	178.6
Median Market Cap. (\$B)	12.5	1.6
Price To Earnings	18.3	20.2
Price To Book	3.2	3.3
Price To Sales	1.6	1.9
Return on Equity (%)	23.8	21.8
Yield (%)	1.8	1.9
Beta	1.1	1.0
R-Squared	1.0	1.0

Equity Sector Allocation



Market Capitalization As of March 31, 2019



Howard County Retirement Plans

TOTAL US EQUITY COMPOSITE

Top Ten Holdings	
AMAZON.COM	2.4%
APPLE	2.4%
MICROSOFT	2.1%
BOEING	1.4%
VISA 'A'	1.3%
UNITEDHEALTH GROUP	1.2%
ALPHABET 'C'	1.2%
BANK OF AMERICA	1.2%
ALPHABET A	1.2%
CASH - USD	1.2%

Top Positive Contributors		
	Relative Contribution %	Return %
VEEVA SYSTEMS CL.A	0.2%	42.0%
PAYCOM SOFTWARE	0.2%	54.5%
SERVICENOW	0.2%	38.4%
METTLER TOLEDO INTL.	0.2%	27.8%
AMETEK	0.1%	22.8%
BOEING	0.1%	18.9%
APPLIED MATS.	0.1%	21.8%
MICRON TECHNOLOGY	0.1%	30.3%
CELGENE	0.1%	47.2%
PROGRESSIVE OHIO	0.1%	24.1%

Top Negative Contributors		
	Relative Contribution %	Return %
MICROSOFT	-0.2%	16.6%
FACEBOOK CLASS A	-0.1%	27.2%
APPLE	-0.1%	20.9%
PHILIP MORRIS INTL.	-0.1%	34.1%
EXXON MOBIL	-0.1%	19.8%
PROCTER & GAMBLE	-0.1%	14.1%
BIOGEN	-0.1%	-21.4%
ACCENTURE CLASS A	-0.1%	24.8%
GENERAL ELECTRIC	-0.1%	37.4%
AMERICAN TOWER	-0.1%	24.6%

	Equity Sector Attribution										
	Total Effects	Selection Effect	Attribution Effects			Returns		Sector Weights			
			Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	-0.2%	-0.2%	0.0%	0.0%	12.8%	16.7%	4.4%	5.0%			
Materials	0.0%	0.0%	0.0%	0.0%	12.2%	11.4%	3.1%	2.7%			
Industrials	0.0%	0.0%	0.0%	0.0%	16.8%	16.7%	11.2%	10.0%			
Consumer Discretionary	-0.2%	-0.2%	0.0%	0.0%	12.6%	14.7%	10.3%	10.4%			
Consumer Staples	0.0%	-0.1%	0.1%	0.0%	10.3%	11.7%	4.5%	6.7%			
Health Care	0.0%	0.1%	-0.1%	0.0%	8.5%	8.1%	16.4%	15.1%			
Financials	0.4%	0.4%	0.0%	0.0%	11.6%	8.8%	13.7%	13.9%			
Information Technology	0.5%	0.3%	0.2%	0.0%	22.3%	20.8%	22.8%	20.0%			
Communication Services	0.0%	0.0%	0.0%	0.0%	14.5%	14.3%	7.9%	8.9%			
Utilities	0.0%	0.0%	0.0%	0.0%	11.4%	11.4%	1.7%	3.3%			
Real Estate	-0.1%	0.0%	0.0%	0.0%	16.9%	17.3%	2.4%	3.9%			
Cash	-0.2%	0.0%	-0.2%	0.0%	0.6%	--	1.6%	0.0%			
Portfolio	0.3%	=	0.3%	+	0.0%	+	0.1%	14.4%	14.1%	100.0%	100.0%

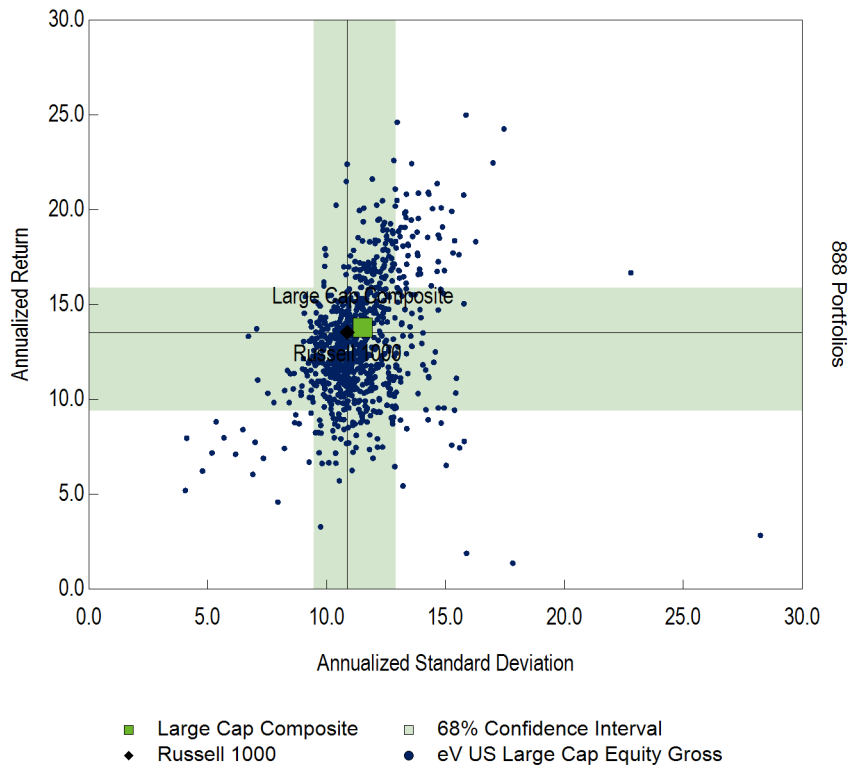
Attribution on manager pages is holdings based, using buy-and-hold assumptions from the beginning of the period portfolio. Results may differ from the flash report.



Howard County Retirement Plans

LARGE CAP COMPOSITE

3 Year Risk Return



3 Year Style Analysis

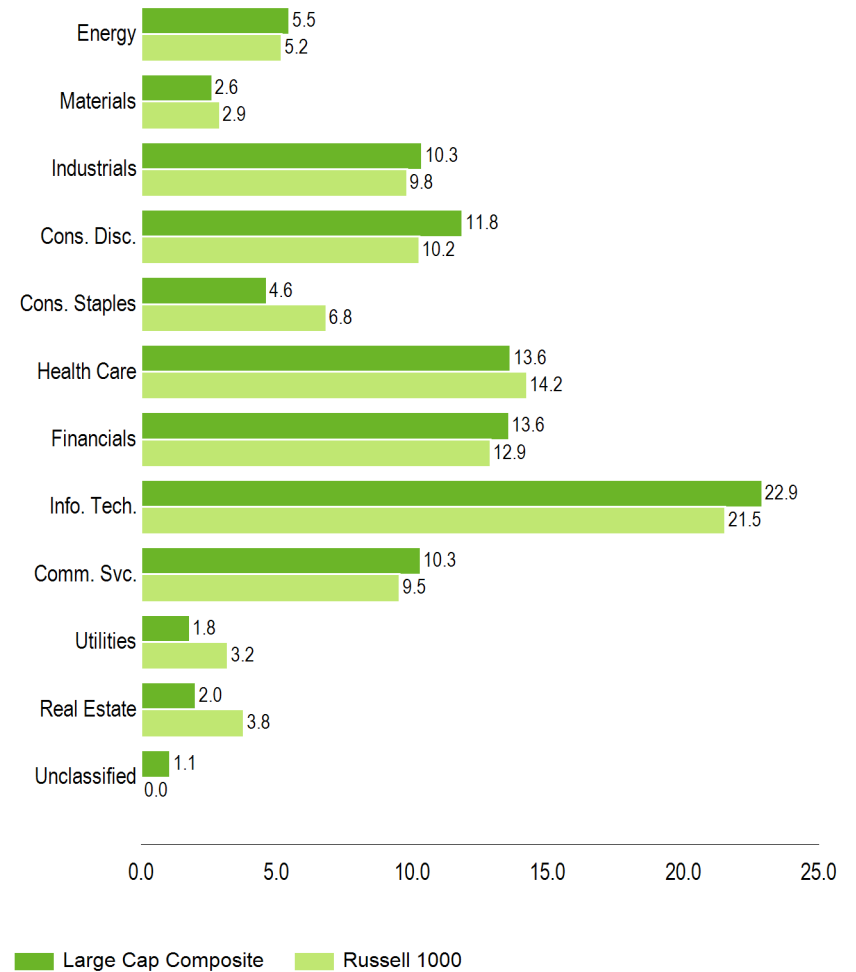


Howard County Retirement Plans

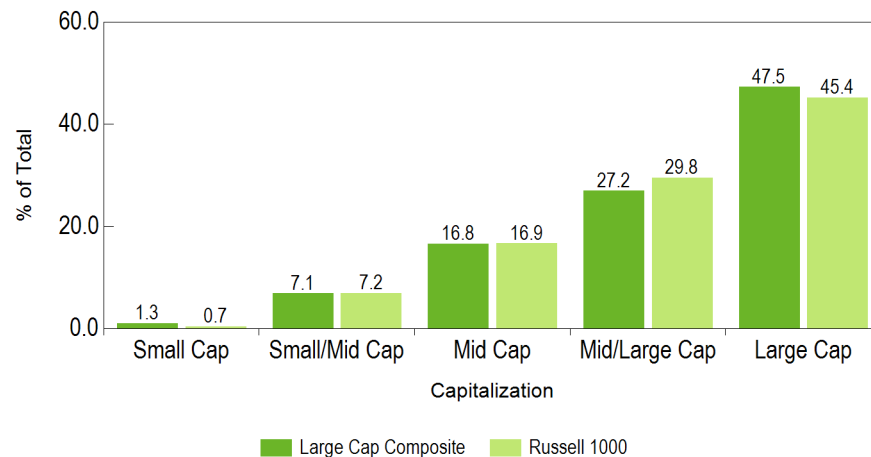
LARGE CAP COMPOSITE

Characteristics		
	Portfolio	Russell 1000
Number of Holdings	344	978
Weighted Avg. Market Cap. (\$B)	187.5	192.0
Median Market Cap. (\$B)	26.1	10.0
Price To Earnings	17.1	20.3
Price To Book	3.2	3.4
Price To Sales	1.5	2.0
Return on Equity (%)	26.8	24.9
Yield (%)	2.0	1.9
Beta	1.0	1.0
R-Squared	1.0	1.0

Equity Sector Allocation



Market Capitalization As of March 31, 2019



Howard County Retirement Plans

LARGE CAP COMPOSITE

Top Ten Holdings	
AMAZON.COM	3.1%
APPLE	3.1%
MICROSOFT	2.7%
BOEING	1.8%
VISA 'A'	1.7%
UNITEDHEALTH GROUP	1.6%
ALPHABET 'C'	1.5%
BANK OF AMERICA	1.5%
ALPHABET A	1.5%
JP MORGAN CHASE & CO.	1.3%

Top Positive Contributors		
	Relative Contribution %	Return %
SERVICENOW	0.2%	38.4%
METTLER TOLEDO INTL.	0.2%	27.8%
BOEING	0.2%	18.9%
AMETEK	0.2%	22.8%
CELGENE	0.2%	47.2%
APPLIED MATS.	0.2%	21.8%
MICRON TECHNOLOGY	0.2%	30.3%
CISCO SYSTEMS	0.1%	25.6%
UNION PACIFIC	0.1%	21.6%
PROGRESSIVE OHIO	0.1%	24.1%

Top Negative Contributors		
	Relative Contribution %	Return %
FACEBOOK CLASS A	-0.1%	27.2%
BIOGEN	-0.1%	-21.4%
MICROSOFT	-0.1%	16.6%
PHILIP MORRIS INTL.	-0.1%	34.1%
ACCENTURE CLASS A	-0.1%	24.8%
GENERAL ELECTRIC	-0.1%	37.4%
PROCTER & GAMBLE	-0.1%	14.1%
AMERICAN TOWER	-0.1%	24.6%
HONEYWELL INTL.	-0.1%	20.9%
EXXON MOBIL	-0.1%	19.8%

	Equity Sector Attribution										
	Total Effects	Selection Effect	Attribution Effects		Returns		Sector Weights				
			Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	-0.2%	-0.2%	0.0%	0.0%	12.0%	16.5%	5.2%	5.1%			
Materials	0.0%	0.0%	0.0%	0.0%	9.8%	10.8%	2.7%	2.6%			
Industrials	0.0%	0.0%	0.0%	0.0%	17.4%	17.2%	9.6%	9.6%			
Consumer Discretionary	-0.1%	-0.1%	0.0%	0.0%	14.0%	14.8%	10.9%	10.2%			
Consumer Staples	-0.1%	-0.1%	0.0%	0.0%	10.1%	11.8%	5.3%	7.0%			
Health Care	-0.2%	-0.2%	0.0%	0.0%	6.4%	7.5%	15.2%	15.1%			
Financials	0.4%	0.5%	0.0%	0.0%	12.2%	8.9%	14.1%	13.6%			
Information Technology	0.0%	-0.1%	0.1%	0.0%	20.3%	20.7%	22.2%	20.4%			
Communication Services	0.0%	0.0%	0.0%	0.0%	14.2%	14.3%	9.9%	9.3%			
Utilities	0.0%	0.0%	0.0%	0.0%	11.1%	11.5%	1.9%	3.2%			
Real Estate	-0.1%	-0.1%	-0.1%	0.0%	14.5%	17.3%	1.9%	3.7%			
Cash	-0.2%	0.0%	-0.2%	0.0%	0.6%	--	1.1%	0.0%			
Portfolio	-0.3%	=	-0.4%	+	0.0%	+	0.1%	13.7%	14.0%	100.0%	100.0%

Attribution on manager pages is holdings based, using buy-and-hold assumptions from the beginning of the period portfolio. Results may differ from the flash report.

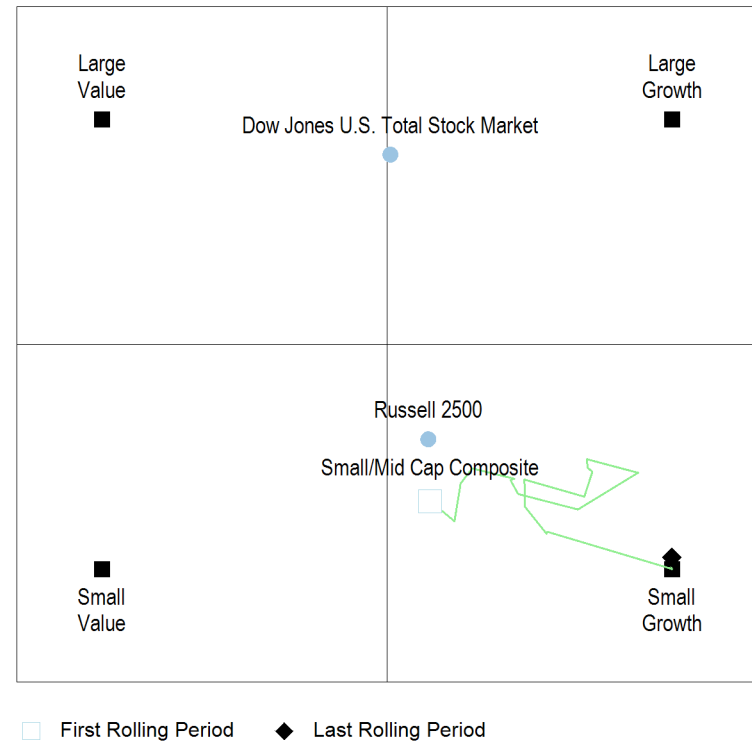


SMALL/MID CAP COMPOSITE

3 Year Risk Return



3 Year Style Analysis

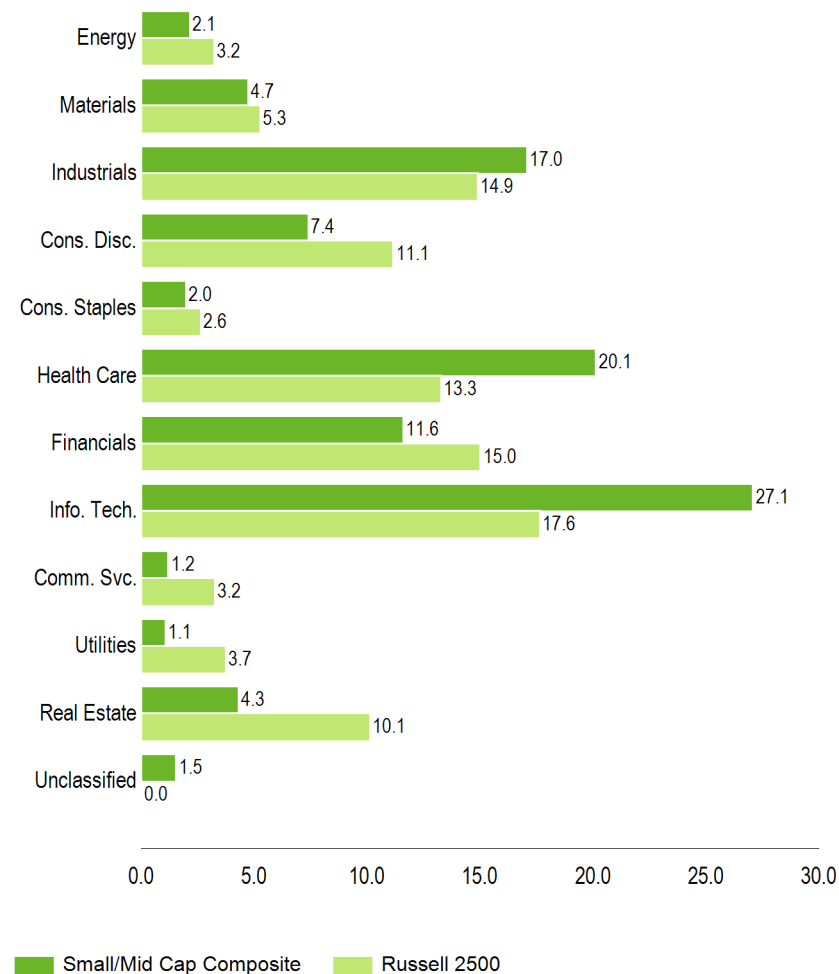


Howard County Retirement Plans

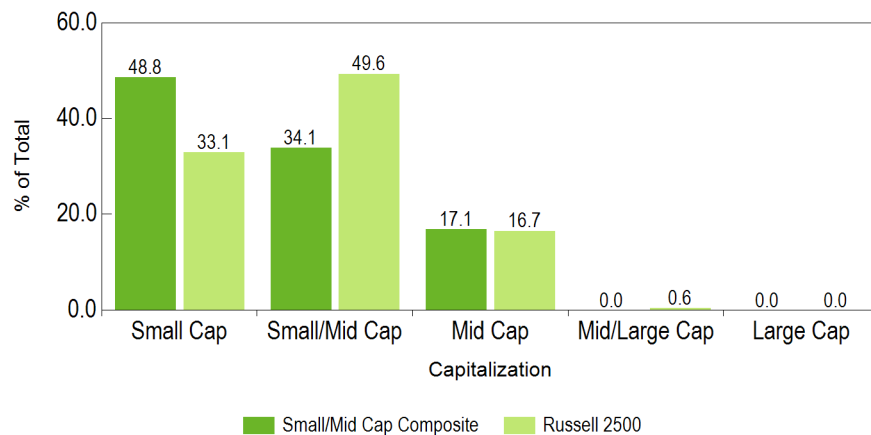
SMALL/MID CAP COMPOSITE

Characteristics		
	Portfolio	Russell 2500
Number of Holdings	206	2,474
Weighted Avg. Market Cap. (\$B)	5.0	5.3
Median Market Cap. (\$B)	2.4	1.1
Price To Earnings	25.2	19.6
Price To Book	3.1	2.6
Price To Sales	1.8	1.3
Return on Equity (%)	13.7	9.6
Yield (%)	0.9	1.6
Beta	1.1	1.0
R-Squared	1.0	1.0

Equity Sector Allocation



Market Capitalization As of March 31, 2019



Howard County Retirement Plans

SMALL/MID CAP COMPOSITE

Top Ten Holdings	
VEEVA SYSTEMS CL.A	2.4%
PAYCOM SOFTWARE	1.6%
CASH - USD	1.5%
TYLER TECHNOLOGIES	1.3%
COGNEX	1.3%
GUIDEWIRE SOFTWARE	1.3%
MANHATTAN ASSOCS.	1.3%
ANSYS	1.2%
PROTO LABS	1.2%
QUIDEL	1.2%

Top Positive Contributors		
	Relative Contribution %	Return %
VEEVA SYSTEMS CL.A	0.8%	42.0%
PAYCOM SOFTWARE	0.7%	54.5%
ELLIE MAE	0.4%	57.1%
GLAUKOS	0.3%	39.5%
COSTAR GP.	0.3%	38.3%
QUIDEL	0.3%	34.1%
COGNEX	0.3%	31.6%
MANHATTAN ASSOCS.	0.3%	30.1%
ANSYS	0.3%	27.8%
ROGERS	0.3%	60.4%

Top Negative Contributors		
	Relative Contribution %	Return %
INOGEN	-0.2%	-23.2%
VOCERA COMMUNICATIONS	-0.2%	-19.6%
ABIOMED	-0.2%	-12.1%
PROTO LABS	-0.1%	-6.8%
CANTEL MED.	-0.1%	-10.0%
WEIGHT WATCHERS INTERNATIONAL	-0.1%	-47.7%
WAYFAIR CL.A	-0.1%	64.8%
HEALTHCARE SVS.GP.	-0.1%	-17.5%
VISTA OUTDOOR	0.0%	-29.4%
STERIS	0.0%	20.2%

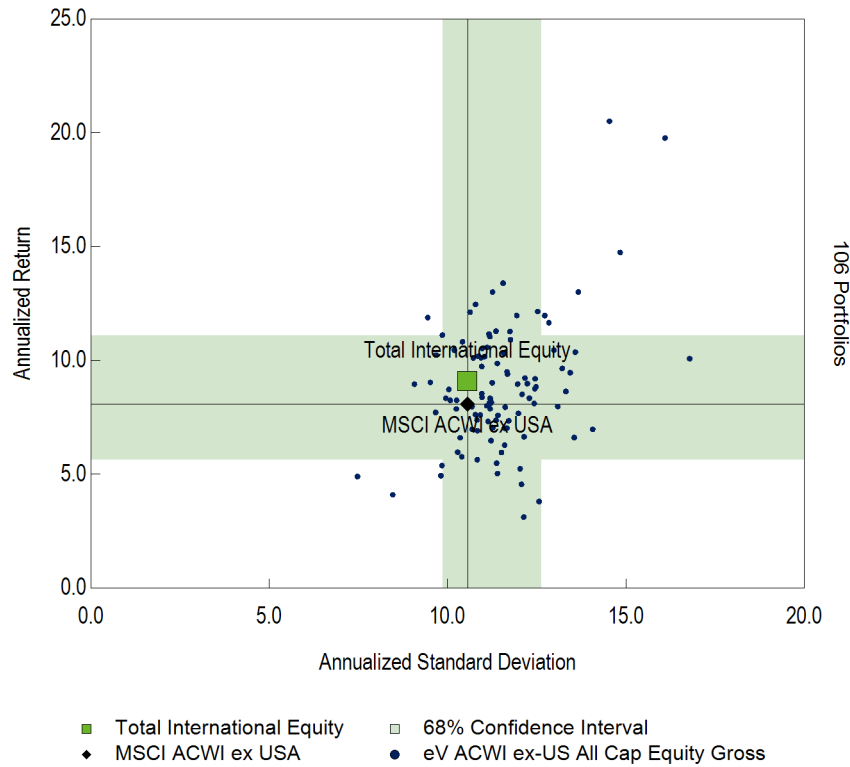
	Equity Sector Attribution										
	Attribution Effects				Returns		Sector Weights				
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.0%	0.1%	0.0%	-0.1%	22.7%	18.2%	1.5%	3.1%			
Materials	0.1%	0.1%	0.0%	0.0%	17.3%	15.9%	4.5%	5.3%			
Industrials	0.1%	0.1%	0.0%	0.0%	15.7%	15.0%	17.1%	15.1%			
Consumer Discretionary	-0.4%	-0.7%	0.1%	0.2%	6.3%	12.3%	8.2%	11.6%			
Consumer Staples	0.2%	0.2%	0.1%	-0.1%	13.1%	6.9%	1.6%	2.8%			
Health Care	-0.7%	-0.6%	0.2%	-0.4%	14.2%	18.9%	20.6%	12.8%			
Financials	0.1%	-0.2%	0.2%	0.0%	9.1%	10.1%	12.2%	15.8%			
Information Technology	1.7%	0.5%	0.8%	0.3%	28.6%	25.2%	24.9%	16.1%			
Communication Services	0.2%	0.4%	0.0%	-0.3%	26.8%	13.9%	0.9%	3.3%			
Utilities	0.2%	0.1%	0.1%	-0.1%	12.9%	10.6%	1.2%	3.9%			
Real Estate	0.1%	0.4%	0.0%	-0.3%	20.9%	16.7%	4.1%	10.1%			
Cash	-0.5%	0.0%	-0.5%	0.0%	0.6%	--	3.1%	0.0%			
Portfolio	1.1%	=	0.5%	+	1.1%	+	-0.6%	17.0%	15.9%	100.0%	100.0%

Attribution on manager pages is holdings based, using buy-and-hold assumptions from the beginning of the period portfolio. Results may differ from the flash report.

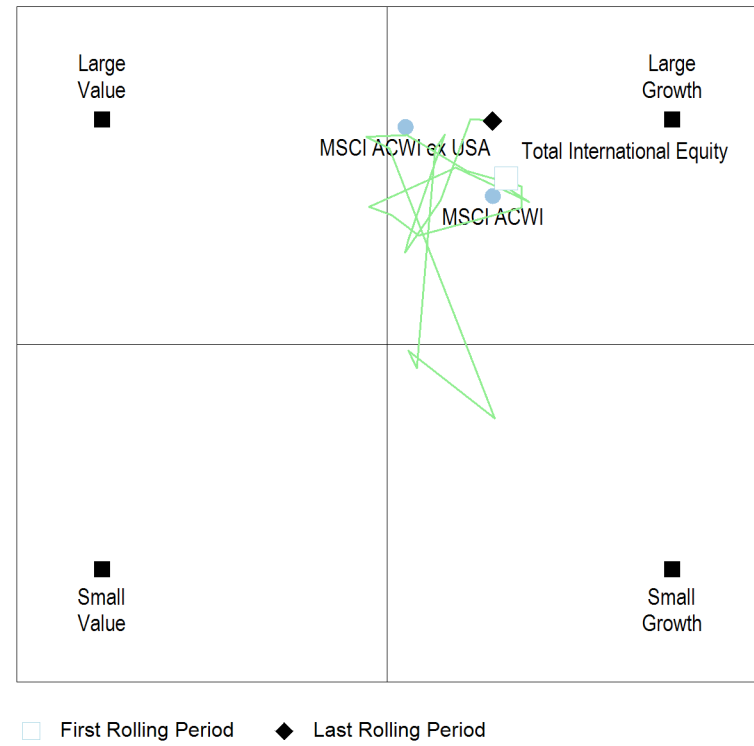


TOTAL INTERNATIONAL EQUITY

3 Year Risk Return



3 Year Style Analysis

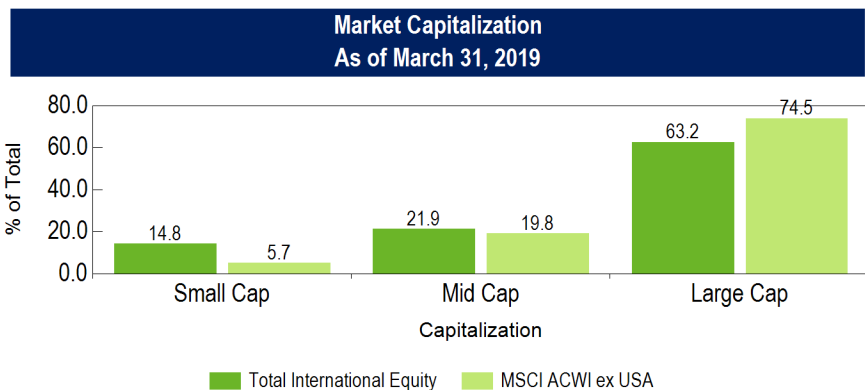


Howard County Retirement Plans

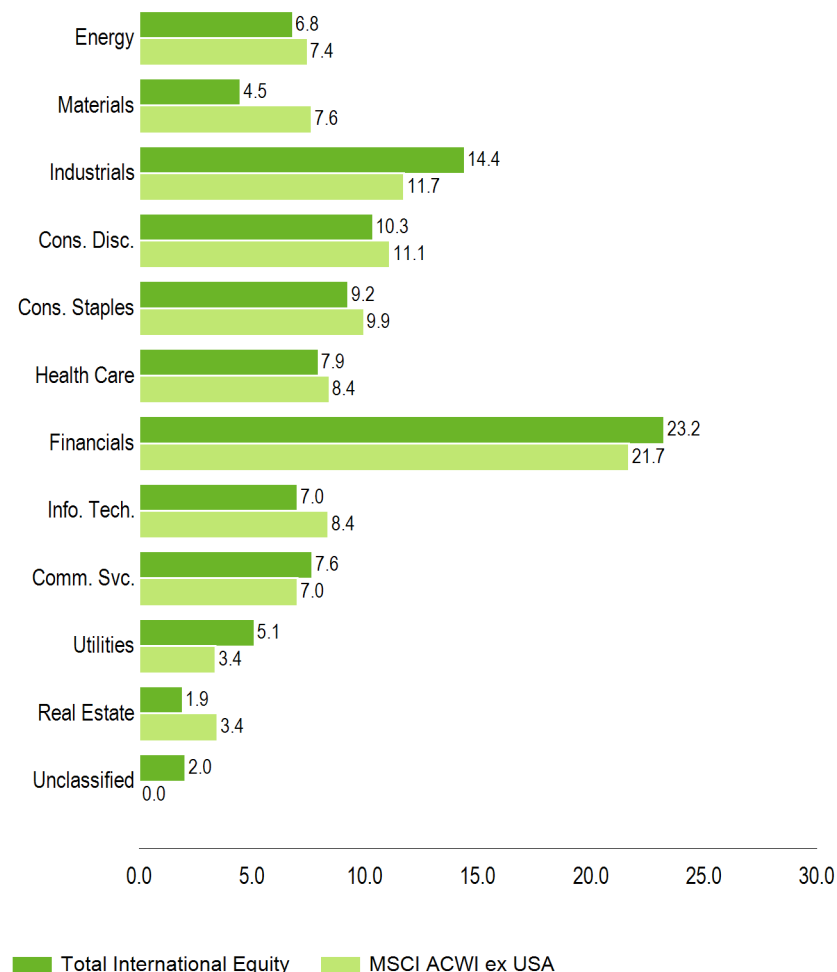
TOTAL INTERNATIONAL EQUITY

Characteristics		
	Portfolio	MSCI ACWI ex USA
Number of Holdings	2,673	2,145
Weighted Avg. Market Cap. (\$B)	40.3	64.4
Median Market Cap. (\$B)	0.4	7.7
Price To Earnings	15.6	14.6
Price To Book	2.3	2.2
Price To Sales	1.0	1.2
Return on Equity (%)	14.1	15.5
Yield (%)	3.0	3.2
Beta	1.0	1.0
R-Squared	1.0	1.0

Region Weighting		
	Portfolio Q1-19	Index Q1-19
Americas	6.51	10.41
Europe	40.37	43.56
Asia/Pacific	52.02	43.62
Other	1.10	2.41



Equity Sector Allocation



Howard County Retirement Plans

TOTAL INTERNATIONAL EQUITY

Top Ten Holdings	
AIA GROUP	2.1%
UNITED OVERSEAS BANK	1.7%
CASH - USD	1.7%
HOUSING DEVELOPMENT FINANCE CORPORATION	1.3%
HDFC BANK ADR 1:3	1.1%
HARGREAVES LANSDOWN	1.1%
RELIANCE INDUSTRIES	1.1%
ENEL	1.0%
METTLER TOLEDO INTL.	1.0%
LLOYDS BANKING GROUP	1.0%

Top Positive Contributors		
	Relative Contribution %	Return %
AIA GROUP	0.3%	19.9%
METTLER TOLEDO INTL.	0.2%	27.8%
ZALANDO	0.2%	52.4%
OLYMPUS	0.2%	42.1%
WH GROUP	0.2%	38.9%
SARTORIUS PREF.	0.2%	36.9%
RIGHTMOVE	0.2%	20.7%
RELIANCE INDUSTRIES	0.2%	22.5%
LLOYDS BANKING GROUP	0.1%	22.6%
TESCO	0.1%	24.9%

Top Negative Contributors		
	Relative Contribution %	Return %
SAMSUNG ELECTRONICS	-0.1%	13.4%
JARDINE MATHESON HDG.	-0.1%	-8.6%
NOVARTIS 'R'	-0.1%	16.4%
DENSO	0.0%	-11.2%
TELIA COMPANY	0.0%	-4.5%
HONG KONG EXS. & CLEAR.	0.0%	21.8%
KT ADR 2:1	0.0%	-12.5%
CTRIIP.COM INTL.ADR 8:1	0.0%	61.5%
SBERBANK OF RUSSIA	0.0%	21.5%
COCA-COLA BOTTLERS JAPAN HOLDINGS	0.0%	-15.2%

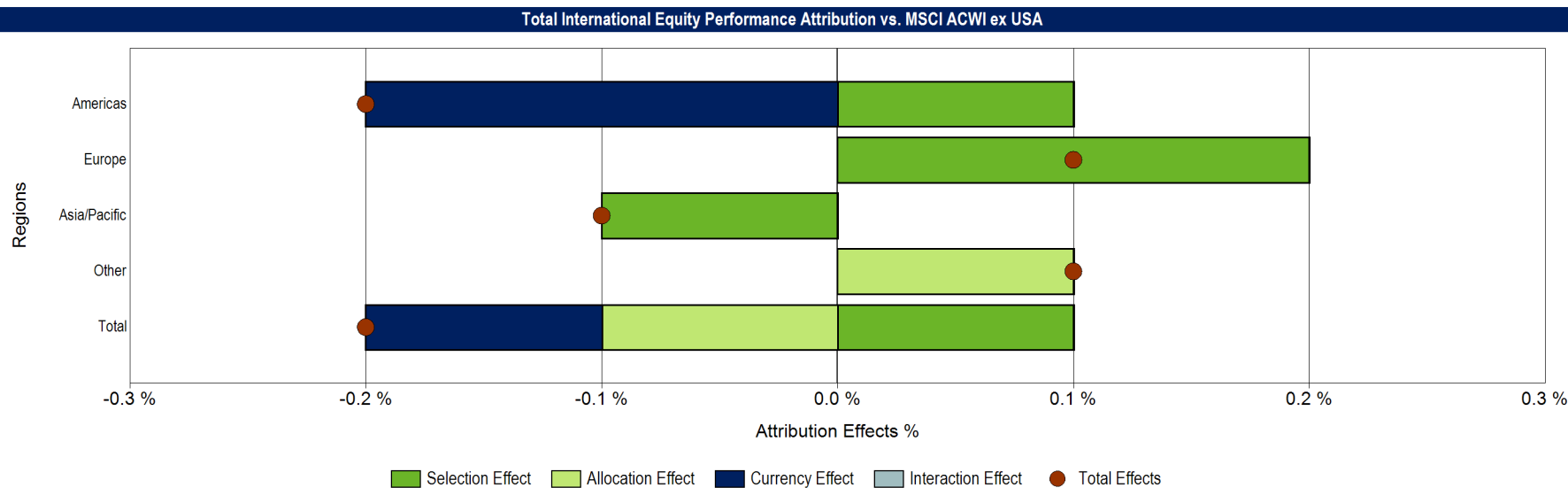
	Equity Sector Attribution										
	Total Effects	Selection Effect	Attribution Effects			Returns		Sector Weights			
			Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.0%	0.0%	0.0%	0.0%	0.0%	12.5%	12.5%	6.9%	7.3%		
Materials	-0.3%	-0.4%	0.0%	0.1%	6.4%	11.5%	4.7%	7.6%			
Industrials	-0.2%	-0.2%	0.0%	-0.1%	8.7%	10.3%	14.6%	11.7%			
Consumer Discretionary	0.0%	0.1%	0.0%	0.0%	11.8%	11.2%	9.5%	11.1%			
Consumer Staples	0.1%	0.1%	0.0%	0.0%	12.5%	11.2%	8.3%	9.8%			
Health Care	0.3%	0.4%	0.0%	0.0%	16.1%	11.4%	7.3%	8.4%			
Financials	0.2%	0.3%	0.0%	-0.1%	8.7%	7.8%	23.3%	22.1%			
Information Technology	-0.2%	-0.2%	0.0%	0.0%	12.2%	14.6%	7.9%	8.0%			
Communication Services	0.0%	0.1%	-0.1%	0.0%	7.8%	6.8%	9.2%	7.1%			
Utilities	0.0%	0.0%	0.0%	0.0%	9.8%	8.4%	5.4%	3.4%			
Real Estate	-0.1%	0.0%	-0.1%	0.0%	15.5%	14.8%	1.6%	3.3%			
Cash	-0.1%	0.0%	-0.1%	0.0%	0.6%	--	1.4%	0.0%			
Portfolio	-0.2%	=	0.3%	+	-0.4%	+	-0.1%	10.2%	10.4%	100.0%	100.0%

Attribution on manager pages is holdings based, using buy-and-hold assumptions from the beginning of the period portfolio. Results may differ from the flash report.



Howard County Retirement Plans

TOTAL INTERNATIONAL EQUITY



	Returns and Weights				Attribution Effects				
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	Total Effects
Totals									
Americas	12.0%	13.1%	5.1%	9.6%	0.1%	0.0%	-0.2%	0.0%	-0.2%
Europe	11.3%	10.9%	40.9%	43.6%	0.2%	0.0%	0.0%	0.0%	0.1%
Asia/Pacific	9.7%	9.8%	51.5%	44.0%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Other	3.1%	4.4%	1.2%	2.7%	0.0%	0.1%	0.0%	0.0%	0.1%
Cash	0.6%	--	1.4%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%
Total	10.2%	10.4%	100.0%	100.0%	0.1%	-0.1%	-0.1%	0.0%	-0.2%
Totals									
Developed	11.4%	10.6%	70.7%	74.0%	0.8%	0.0%	-0.1%	0.0%	0.6%
Emerging*	7.8%	10.0%	27.9%	26.0%	-0.6%	0.0%	0.0%	0.0%	-0.6%
Cash	0.6%	--	1.4%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%



Howard County Retirement Plans

TOTAL INTERNATIONAL EQUITY

Country Allocation				
	Manager	Index	Manager	Index
	Allocation (USD)	Allocation (USD)	Return (USD)	Return (USD)
Americas				
Brazil*	2.3%	1.9%	7.7%	8.2%
Chile*	0.2%	0.3%	5.7%	4.3%
Colombia*	0.0%	0.1%	14.1%	24.8%
Mexico*	1.2%	0.7%	5.7%	5.6%
United States	1.3%	0.0%	25.9%	13.7%
Total-Americas	5.1%	9.6%	12.0%	13.1%
Europe				
Czech Republic*	0.0%	0.0%	-1.1%	3.8%
Denmark	1.9%	1.2%	9.1%	13.2%
Finland	0.5%	0.7%	10.1%	8.4%
France	2.6%	7.5%	7.3%	10.8%
Germany	5.5%	5.9%	14.6%	7.1%
Greece*	0.0%	0.1%	28.5%	12.9%
Hungary*	0.0%	0.1%	5.2%	6.0%
Ireland	0.6%	0.4%	9.2%	11.6%
Italy	2.1%	1.5%	13.4%	14.7%
Netherlands	2.4%	2.3%	15.0%	13.6%
Poland*	0.2%	0.3%	-2.2%	-0.6%
Portugal	0.6%	0.1%	24.9%	10.2%
Russia*	0.3%	0.9%	14.8%	12.5%
Spain	3.0%	2.1%	8.8%	6.8%
Sweden	3.9%	1.8%	3.7%	7.9%
Switzerland	3.6%	5.9%	9.1%	13.6%
United Kingdom	13.6%	11.5%	13.1%	11.9%
Total-Europe	40.9%	43.6%	11.3%	10.9%

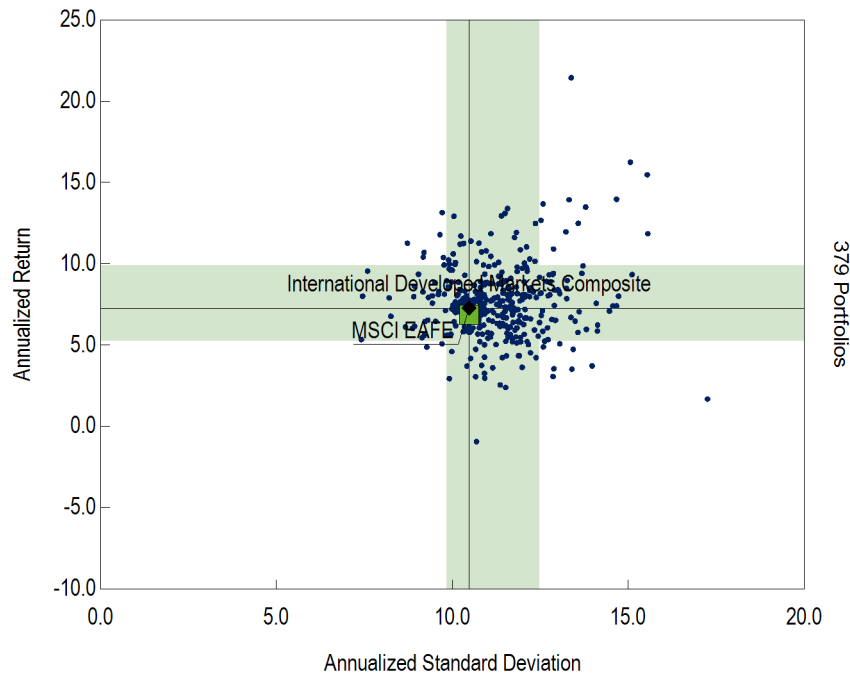
Country Allocation				
	Manager	Index	Manager	Index
	Allocation (USD)	Allocation (USD)	Return (USD)	Return (USD)
AsiaPacific				
Australia	2.4%	4.7%	7.3%	11.5%
China*	3.2%	7.9%	15.2%	18.0%
Hong Kong	8.6%	2.6%	14.1%	15.6%
India*	7.5%	2.4%	9.6%	7.1%
Indonesia*	1.9%	0.6%	9.1%	4.3%
Japan	14.4%	16.6%	11.8%	6.8%
Korea*	4.2%	3.6%	1.3%	4.8%
Malaysia*	0.5%	0.6%	6.8%	0.3%
Philippines*	0.2%	0.3%	12.1%	7.9%
Singapore	3.7%	0.9%	1.5%	6.2%
Taiwan*	3.3%	3.0%	7.7%	9.0%
Thailand*	1.5%	0.6%	5.5%	7.5%
Total-AsiaPacific	51.5%	44.0%	9.7%	9.8%
Other				
South Africa*	1.0%	1.6%	3.8%	4.5%
Turkey*	0.1%	0.2%	-2.1%	-3.0%
Total-Other	1.2%	2.7%	3.1%	4.4%
Totals				
Developed	70.7%	74.0%	11.4%	10.6%
Emerging*	27.9%	26.0%	7.8%	10.0%
Cash	1.4%		0.6%	

Country* = Emerging Markets



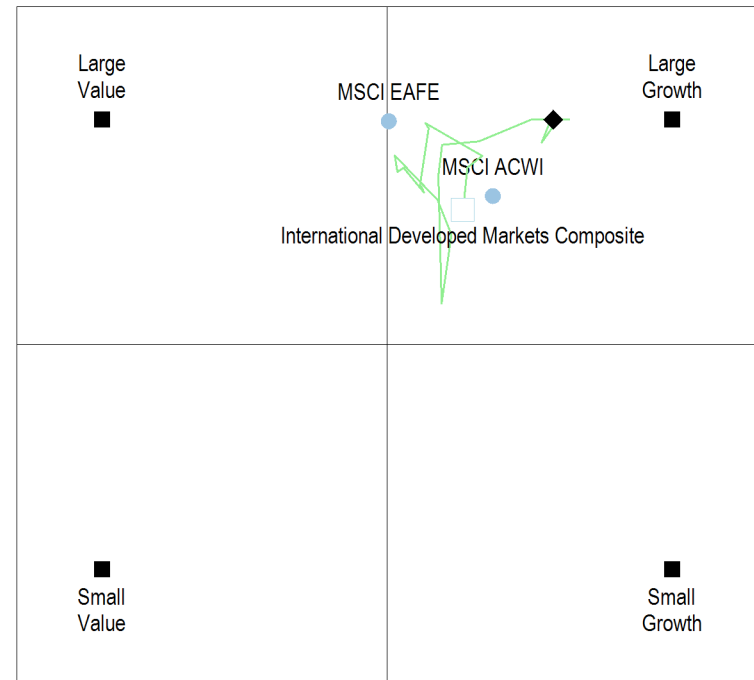
INTERNATIONAL DEVELOPED MARKETS COMPOSITE

3 Year Risk Return



- International Developed Markets Composite
- ◆ MSCI EAFE
- 68% Confidence Interval
- eV All EAFE Equity Gross

3 Year Style Analysis



- First Rolling Period
- ◆ Last Rolling Period

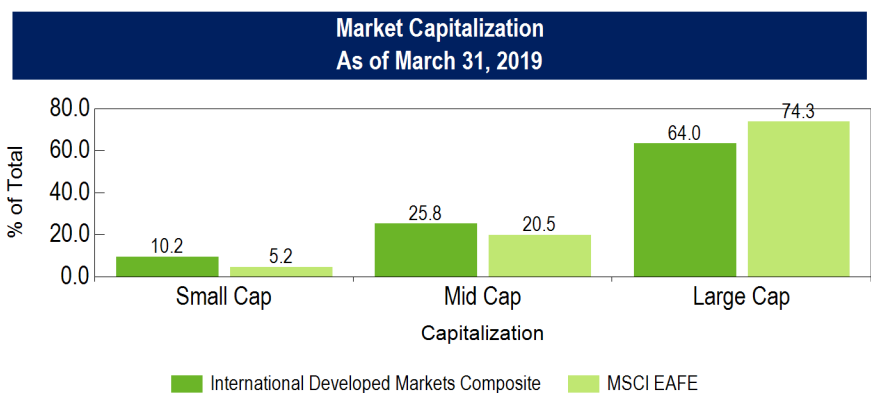


Howard County Retirement Plans

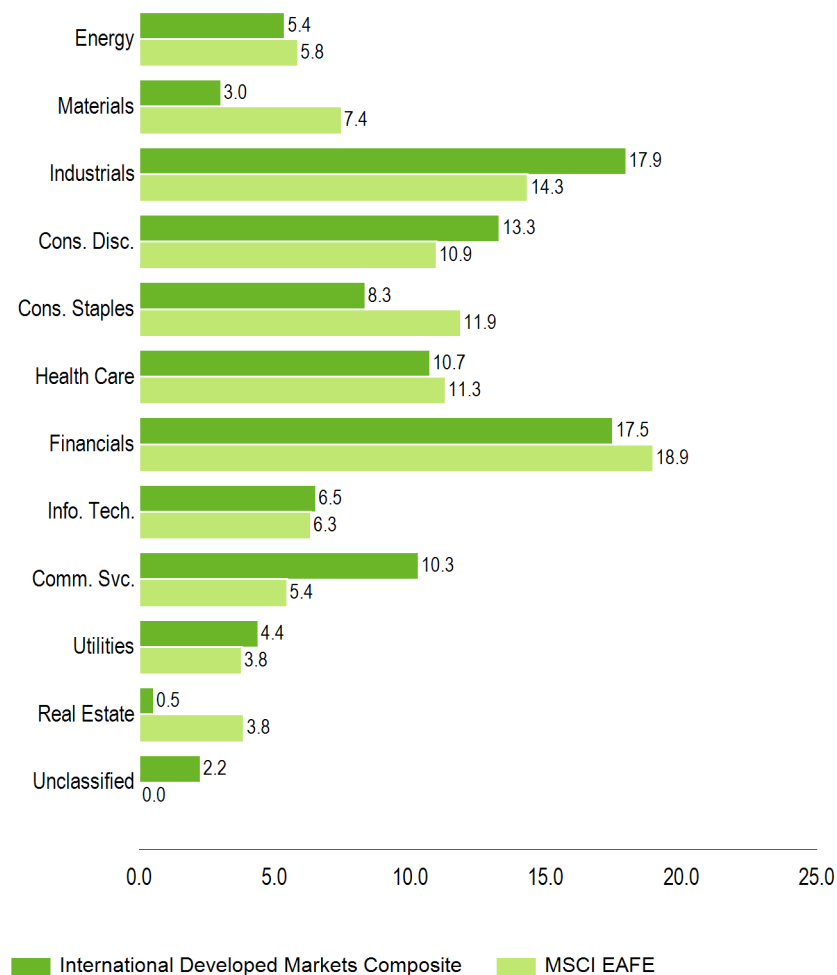
INTERNATIONAL DEVELOPED MARKETS COMPOSITE

Characteristics		
	Portfolio	MSCI EAFE
Number of Holdings	118	920
Weighted Avg. Market Cap. (\$B)	41.0	58.8
Median Market Cap. (\$B)	21.9	10.1
Price To Earnings	17.1	15.1
Price To Book	2.5	2.2
Price To Sales	1.1	1.1
Return on Equity (%)	16.1	14.5
Yield (%)	3.1	3.4
Beta	1.0	1.0
R-Squared	1.0	1.0

	Portfolio Q1-19	Index Q1-19
Region Weighting		
Americas	4.11	0.52
Europe	58.47	62.54
Asia/Pacific	37.42	36.53
Other	--	0.41



Equity Sector Allocation



Howard County Retirement Plans

INTERNATIONAL DEVELOPED MARKETS COMPOSITE

Top Ten Holdings	
UNITED OVERSEAS BANK	2.6%
AIA GROUP	1.8%
HARGREAVES LANSDOWN	1.7%
CASH - USD	1.7%
ENEL	1.6%
METTLER TOLEDO INTL.	1.6%
LLOYDS BANKING GROUP	1.6%
SHISEIDO	1.5%
RIGHTMOVE	1.5%
ENI	1.4%

Top Positive Contributors		
	Relative Contribution %	Return %
METTLER TOLEDO INTL.	0.4%	27.8%
ZALANDO	0.4%	52.4%
OLYMPUS	0.3%	42.1%
WH GROUP	0.3%	38.9%
SARTORIUS PREF.	0.3%	36.9%
RIGHTMOVE	0.3%	20.7%
LLOYDS BANKING GROUP	0.2%	22.6%
TESCO	0.2%	24.9%
SMC	0.2%	23.8%
JERONIMO MARTINS	0.2%	24.9%

Top Negative Contributors		
	Relative Contribution %	Return %
JARDINE MATHESON HDG.	-0.1%	-8.6%
DENSO	-0.1%	-11.2%
NOVARTIS 'R'	-0.1%	16.4%
TELIA COMPANY	-0.1%	-4.5%
COCA-COLA BOTTLERS JAPAN HOLDINGS	0.0%	-15.2%
G4S	0.0%	-4.7%
SOCIETE GENERALE	0.0%	-9.0%
PIGEON	0.0%	-3.8%
KYOCERA	0.0%	18.1%
ISUZU MOTORS	0.0%	-5.8%

	Equity Sector Attribution										
	Attribution Effects				Returns		Sector Weights				
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	-0.1%	-0.1%	0.0%	0.0%	9.6%	10.6%	5.5%	5.9%			
Materials	-0.2%	-0.3%	-0.1%	0.2%	9.2%	13.4%	2.9%	7.4%			
Industrials	-0.4%	-0.4%	0.0%	-0.1%	8.3%	10.6%	18.6%	14.3%			
Consumer Discretionary	0.6%	0.6%	0.0%	0.1%	12.7%	7.4%	13.0%	11.2%			
Consumer Staples	0.0%	0.1%	-0.1%	0.0%	13.5%	12.4%	8.2%	11.6%			
Health Care	0.6%	0.6%	0.0%	0.0%	17.1%	11.6%	10.3%	11.2%			
Financials	0.4%	0.4%	0.1%	-0.1%	9.0%	7.0%	17.5%	19.5%			
Information Technology	-0.1%	-0.1%	0.1%	0.0%	13.4%	15.3%	7.0%	6.0%			
Communication Services	0.2%	0.3%	-0.3%	0.2%	9.7%	4.8%	10.8%	5.6%			
Utilities	0.2%	0.2%	0.0%	0.0%	13.6%	9.2%	4.7%	3.8%			
Real Estate	-0.1%	-0.1%	-0.1%	0.1%	13.9%	14.5%	0.5%	3.7%			
Cash	-0.1%	0.0%	-0.1%	0.0%	0.6%	--	1.0%	0.0%			
Portfolio	1.0%	=	1.2%	+	-0.6%	+	0.4%	11.1%	10.1%	100.0%	100.0%

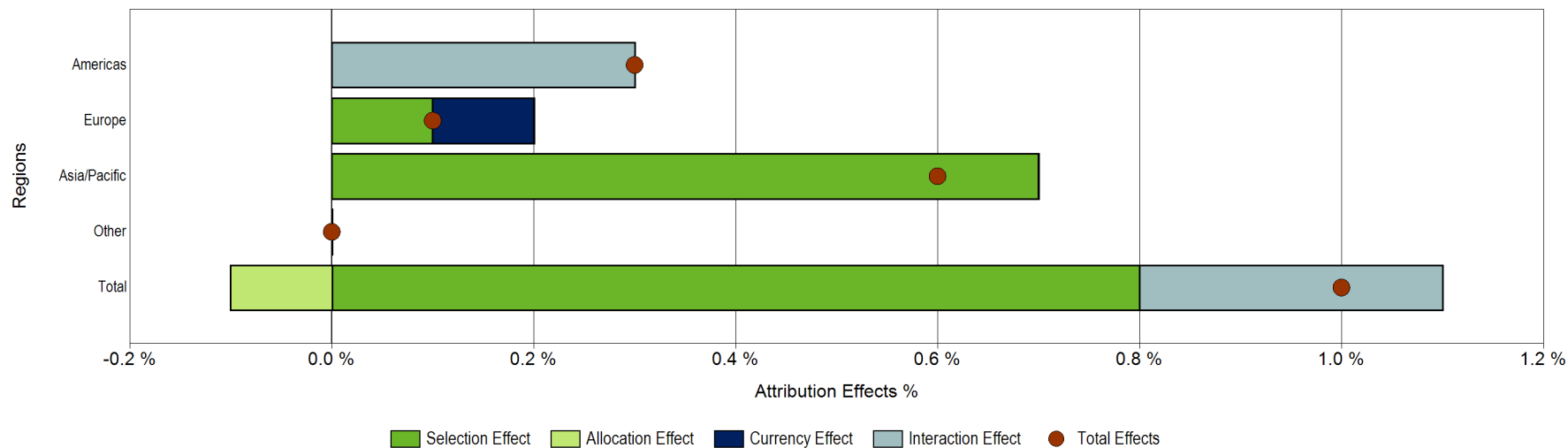
Attribution on manager pages is holdings based, using buy-and-hold assumptions from the beginning of the period portfolio. Results may differ from the flash report.



Howard County Retirement Plans

INTERNATIONAL DEVELOPED MARKETS COMPOSITE

International Developed Markets Composite Performance Attribution vs. MSCI EAFE



	Returns and Weights				Attribution Effects				
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	Total Effects
Totals									
Americas	25.9%	--	2.1%	0.0%	0.0%	0.0%	0.0%	0.3%	0.3%
Europe	11.2%	11.0%	59.6%	62.4%	0.1%	0.0%	0.1%	0.0%	0.1%
Asia/Pacific	10.4%	8.7%	37.4%	37.0%	0.7%	0.0%	0.0%	0.0%	0.6%
Other	--	10.7%	0.0%	0.5%	--	0.0%	0.0%	--	0.0%
Cash	0.6%	--	1.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%
Total	11.1%	10.1%	100.0%	100.0%	0.8%	-0.1%	0.0%	0.3%	1.0%
Totals									
Developed	11.2%	10.1%	98.3%	100.0%	1.1%	0.0%	0.0%	0.0%	1.1%
Emerging*	8.6%	--	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cash	0.6%	--	1.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%



Howard County Retirement Plans

INTERNATIONAL DEVELOPED MARKETS COMPOSITE

Country Allocation				
	Manager	Index	Manager	Index
	Allocation (USD)	Allocation (USD)	Return (USD)	Return (USD)
Americas				
United States	2.1%	0.0%	25.9%	13.7%
Total-Americas	2.1%	0.0%	25.9%	--
Europe				
Denmark	2.9%	1.8%	9.1%	13.2%
Finland	0.8%	1.0%	10.1%	8.4%
France	4.1%	11.0%	7.3%	10.8%
Germany	8.5%	8.8%	14.6%	7.1%
Ireland	0.9%	0.5%	9.2%	11.6%
Italy	3.2%	2.3%	13.4%	14.7%
Netherlands	1.9%	3.4%	13.6%	13.6%
Portugal	0.9%	0.2%	24.9%	10.2%
Spain	4.6%	3.1%	8.8%	6.8%
Sweden	6.1%	2.7%	3.7%	7.9%
Switzerland	5.5%	8.7%	9.1%	13.6%
United Kingdom	20.3%	17.0%	13.3%	11.9%
Total-Europe	59.6%	62.4%	11.2%	11.0%

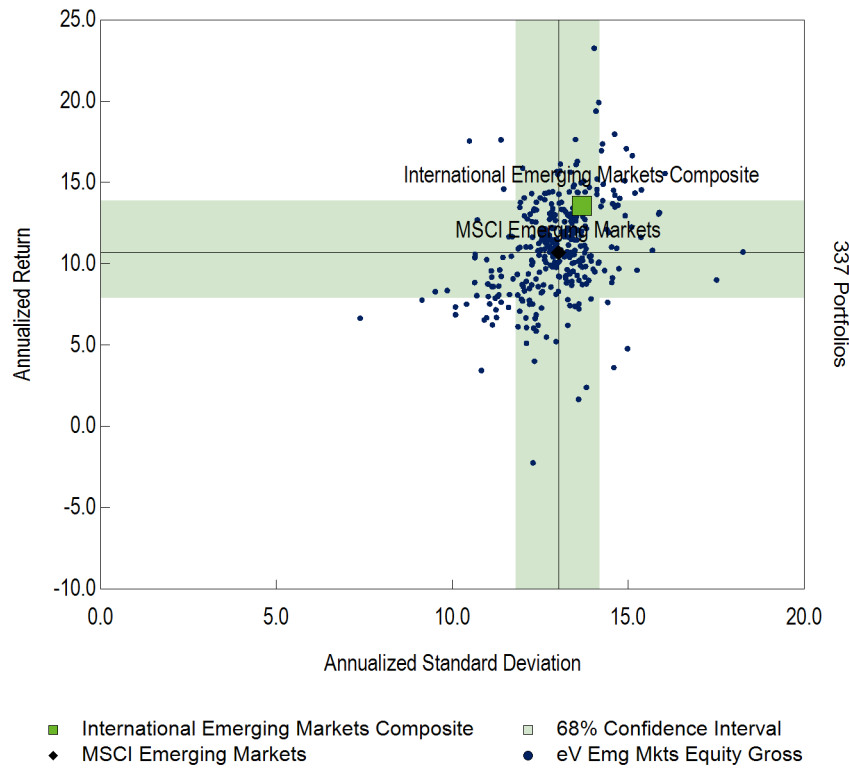
Country Allocation				
	Manager	Index	Manager	Index
	Allocation (USD)	Allocation (USD)	Return (USD)	Return (USD)
AsiaPacific				
Australia	3.7%	7.0%	7.3%	11.5%
Hong Kong	5.0%	3.9%	16.8%	15.6%
Japan	22.3%	24.6%	11.8%	6.8%
Singapore	5.7%	1.4%	1.5%	6.2%
Taiwan*	0.7%	0.0%	8.6%	9.0%
Total-AsiaPacific	37.4%	37.0%	10.4%	8.7%
Totals				
Developed	98.3%	100.0%	11.2%	10.1%
Emerging*	0.7%	0.0%	8.6%	--
Cash	1.0%		0.6%	

Country* = Emerging Markets

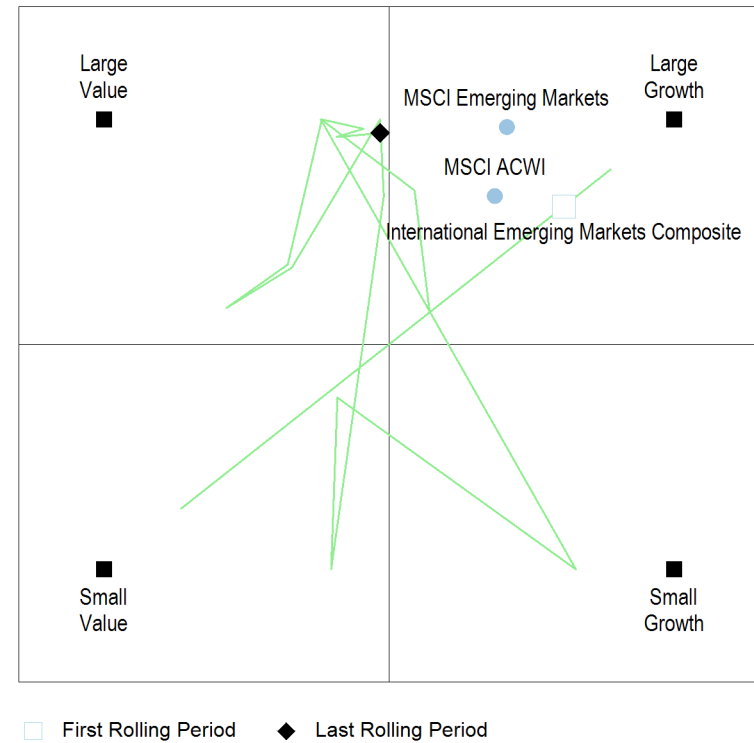


INTERNATIONAL EMERGING MARKETS COMPOSITE

3 Year Risk Return



3 Year Style Analysis

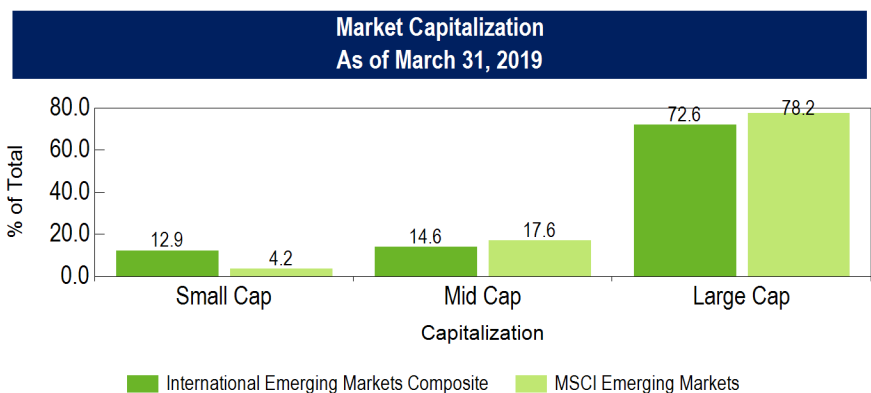


Howard County Retirement Plans

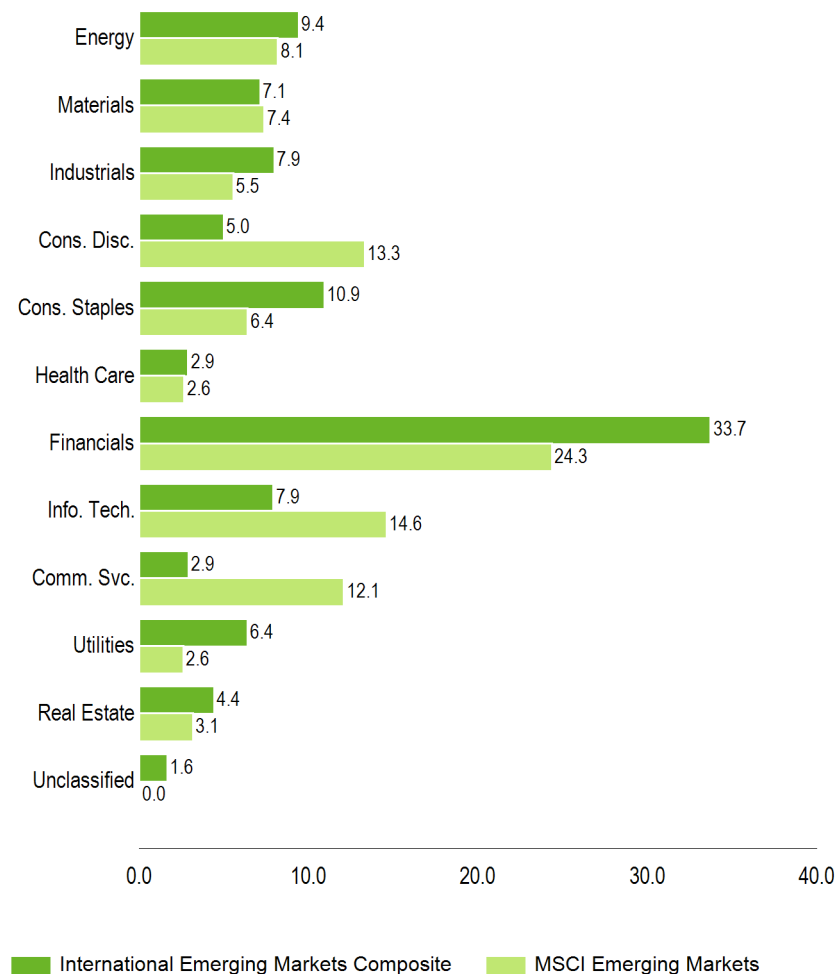
INTERNATIONAL EMERGING MARKETS COMPOSITE

Characteristics		
	Portfolio	MSCI Emerging Markets
Number of Holdings	2,560	1,133
Weighted Avg. Market Cap. (\$B)	38.9	84.9
Median Market Cap. (\$B)	0.4	5.8
Price To Earnings	13.5	13.3
Price To Book	2.2	2.4
Price To Sales	1.1	1.3
Return on Equity (%)	14.4	17.8
Yield (%)	2.7	2.7
Beta	1.0	1.0
R-Squared	0.9	1.0

	Portfolio Q1-19	Index Q1-19
Region Weighting		
Americas	10.86	12.48
Europe	7.53	5.88
Asia/Pacific	78.50	73.42
Other	3.10	8.22



Equity Sector Allocation



Howard County Retirement Plans

INTERNATIONAL EMERGING MARKETS COMPOSITE

Characteristics	MSCI Emerging Markets	
	Portfolio	MSCI Emerging Markets
Number of Holdings	2,560	1,133
Weighted Avg. Market Cap. (\$B)	38.9	84.9
Median Market Cap. (\$B)	0.4	5.8
Price To Earnings	13.5	13.3
Price To Book	2.2	2.4
Price To Sales	1.1	1.3
Return on Equity (%)	14.4	17.8
Yield (%)	2.7	2.7
Beta	1.0	1.0
R-Squared	0.9	1.0

Top Positive Contributors	Relative	
	Contribution %	Return %
HEINEKEN	0.5%	19.7%
AIA GROUP	0.4%	19.9%
RELIANCE INDUSTRIES	0.4%	22.5%
HDFC BANK ADR 1:3	0.4%	11.9%
LINK RL. EST. INV. TST.	0.3%	15.5%
CHINA TOWER 'H'	0.3%	22.7%
PING AN INSURANCE (GROUP) OF CHINA 'H'	0.3%	26.8%
INFOSYS ADR 1:1	0.2%	15.4%
MTR	0.2%	17.7%
BANK CENTRAL ASIA	0.2%	7.8%

Top Negative Contributors	Relative	
	Contribution %	Return %
SAMSUNG ELECTRONICS	-0.3%	13.4%
TAIWAN SEMICON.MNFG.	-0.2%	8.6%
CTRIIP.COM INTL.ADR 8:1	-0.1%	61.5%
SBERBANK OF RUSSIA	-0.1%	21.5%
KT ADR 2:1	-0.1%	-12.5%
PETROLEO BRASILEIRO PN	-0.1%	23.2%
PETROLEO BRASILEIRO ON	-0.1%	22.1%
SK TELECOM	-0.1%	-8.3%
BANCO BRADESCO PN	-0.1%	10.7%
B3 BRASIL BOLSA BALCAO ON	-0.1%	20.1%

	Equity Sector Attribution				Returns		Sector Weights				
	Total Effects	Selection Effect	Attribution Effects		Portfolio	Benchmark	Portfolio	Benchmark			
			Allocation Effect	Interaction Effects							
Energy	0.3%	0.4%	0.0%	0.0%	15.5%	12.3%	9.5%	8.0%			
Materials	-0.2%	-0.2%	0.0%	0.0%	4.4%	6.8%	7.8%	7.6%			
Industrials	0.3%	0.3%	-0.1%	0.1%	10.7%	5.2%	7.3%	5.7%			
Consumer Discretionary	-1.4%	-1.8%	-1.0%	1.4%	5.0%	19.9%	3.0%	12.4%			
Consumer Staples	0.4%	0.4%	-0.1%	0.1%	10.9%	5.4%	8.4%	6.7%			
Health Care	0.1%	0.0%	0.1%	0.0%	4.5%	3.6%	1.7%	2.8%			
Financials	0.1%	0.3%	-0.3%	0.1%	8.4%	7.3%	34.0%	24.7%			
Information Technology	-0.3%	-0.4%	-0.2%	0.2%	10.7%	12.6%	9.7%	14.3%			
Communication Services	-0.4%	-0.9%	0.1%	0.4%	1.7%	8.8%	6.3%	12.1%			
Utilities	-0.2%	0.0%	-0.2%	0.0%	4.7%	4.3%	6.6%	2.7%			
Real Estate	0.1%	0.0%	0.0%	0.0%	15.9%	15.5%	3.7%	3.0%			
Cash	-0.2%	0.0%	-0.2%	0.0%	0.6%	--	2.1%	0.0%			
Portfolio	-1.3%	=	-1.8%	+	-1.8%	+	2.3%	8.6%	10.0%	100.0%	100.0%

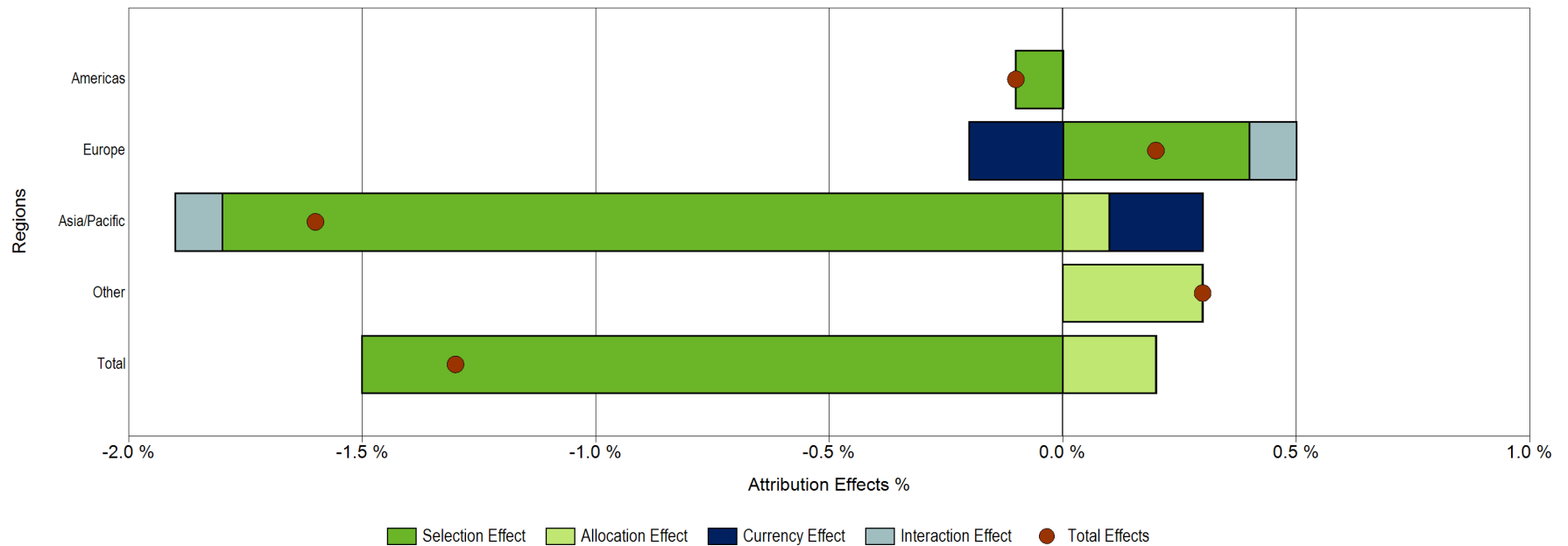
Attribution on manager pages is holdings based, using buy-and-hold assumptions from the beginning of the period portfolio. Results may differ from the flash report.



Howard County Retirement Plans

INTERNATIONAL EMERGING MARKETS COMPOSITE

International Emerging Markets Composite Performance Attribution vs. MSCI Emerging Markets



	Returns and Weights				Attribution Effects				
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	Total Effects
Totals									
Americas	7.0%	7.9%	10.7%	12.2%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Europe	12.3%	8.9%	6.5%	5.6%	0.4%	0.0%	-0.2%	0.1%	0.2%
Asia/Pacific	9.0%	11.2%	77.4%	73.3%	-1.8%	0.1%	0.2%	-0.1%	-1.6%
Other	3.1%	3.4%	3.3%	8.9%	0.0%	0.3%	0.0%	0.0%	0.3%
Cash	0.6%	--	2.1%	0.0%	0.0%	-0.2%	0.0%	0.0%	-0.2%
Total	8.6%	10.0%	100.0%	100.0%	-1.5%	0.2%	0.0%	0.0%	-1.3%
Totals									
Developed	12.9%	--	20.0%	0.0%	0.0%	0.0%	-0.1%	0.7%	0.6%
Emerging*	7.8%	10.0%	77.9%	100.0%	-2.3%	0.0%	0.1%	0.5%	-1.7%
Cash	0.6%	--	2.1%	0.0%	0.0%	-0.2%	0.0%	0.0%	-0.2%



Howard County Retirement Plans

INTERNATIONAL EMERGING MARKETS COMPOSITE

Country Allocation				
	Manager	Index	Manager	Index
	Allocation (USD)	Allocation (USD)	Return (USD)	Return (USD)
Americas				
Brazil*	6.6%	7.5%	7.7%	8.2%
Chile*	0.6%	1.1%	5.7%	4.3%
Colombia*	0.1%	0.4%	14.1%	24.8%
Mexico*	3.3%	2.8%	5.7%	5.6%
United States	0.0%	0.0%	12.6%	13.7%
Total-Americas	10.7%	12.2%	7.0%	7.9%
Europe				
Czech Republic*	0.1%	0.2%	-1.1%	3.8%
Greece*	0.0%	0.2%	28.5%	12.9%
Hungary*	0.1%	0.3%	5.2%	6.0%
Netherlands	3.3%	0.0%	16.4%	13.6%
Poland*	0.7%	1.3%	-2.2%	-0.6%
Russia*	0.9%	3.6%	14.8%	12.5%
United Kingdom	1.3%	0.0%	9.1%	11.9%
Total-Europe	6.5%	5.6%	12.3%	8.9%

Country Allocation				
	Manager	Index	Manager	Index
	Allocation (USD)	Allocation (USD)	Return (USD)	Return (USD)
AsiaPacific				
China*	9.0%	30.4%	15.2%	18.0%
Hong Kong	15.4%	0.0%	12.5%	15.6%
India*	21.4%	9.4%	9.6%	7.1%
Indonesia*	5.3%	2.3%	9.1%	4.3%
Korea*	11.9%	13.7%	1.3%	4.8%
Malaysia*	1.5%	2.4%	6.8%	0.3%
Philippines*	0.5%	1.1%	12.1%	7.9%
Singapore	0.0%	0.0%	2.3%	6.2%
Taiwan*	8.2%	11.5%	7.5%	9.0%
Thailand*	4.2%	2.4%	5.5%	7.5%
Total-AsiaPacific	77.4%	73.3%	9.0%	11.2%
Other				
South Africa*	2.9%	6.3%	3.8%	4.5%
Turkey*	0.4%	0.6%	-2.1%	-3.0%
Total-Other	3.3%	8.9%	3.1%	3.4%
Totals				
Developed	20.0%	0.0%	12.9%	--
Emerging*	77.9%	100.0%	7.8%	10.0%
Cash	2.1%		0.6%	

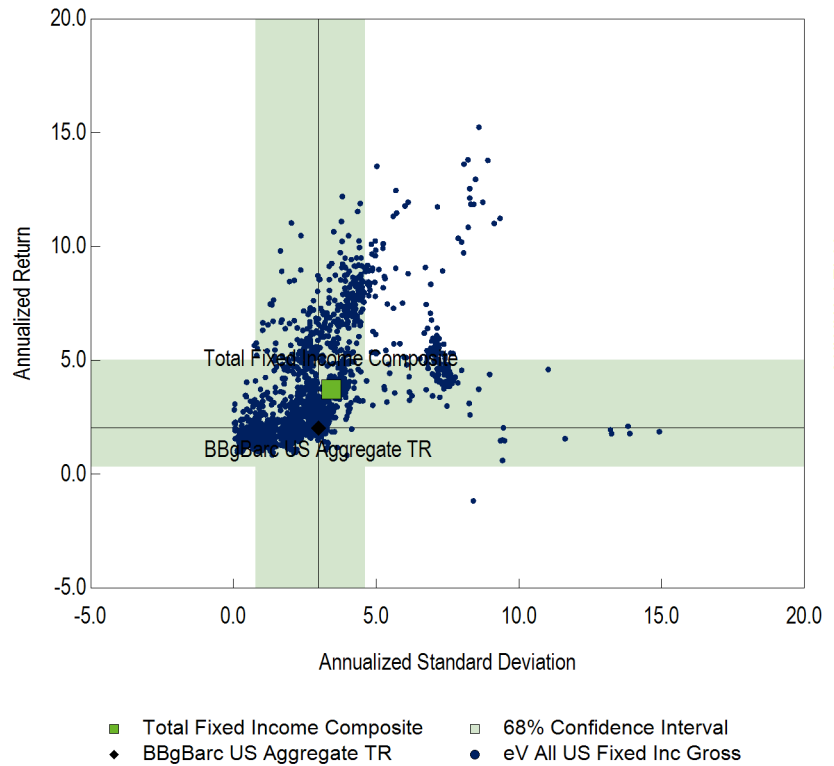
Country* = Emerging Markets



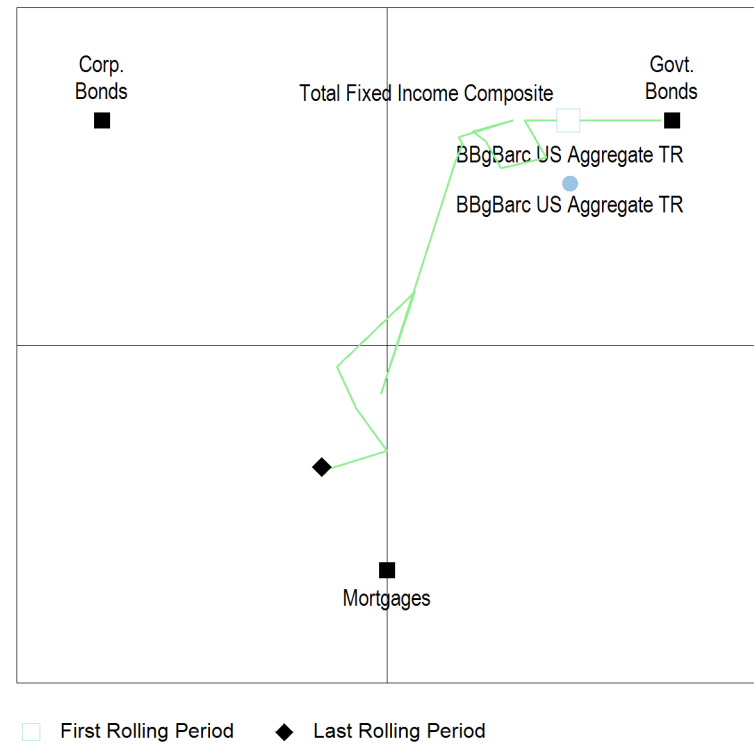
Howard County Retirement Plans

TOTAL FIXED INCOME COMPOSITE

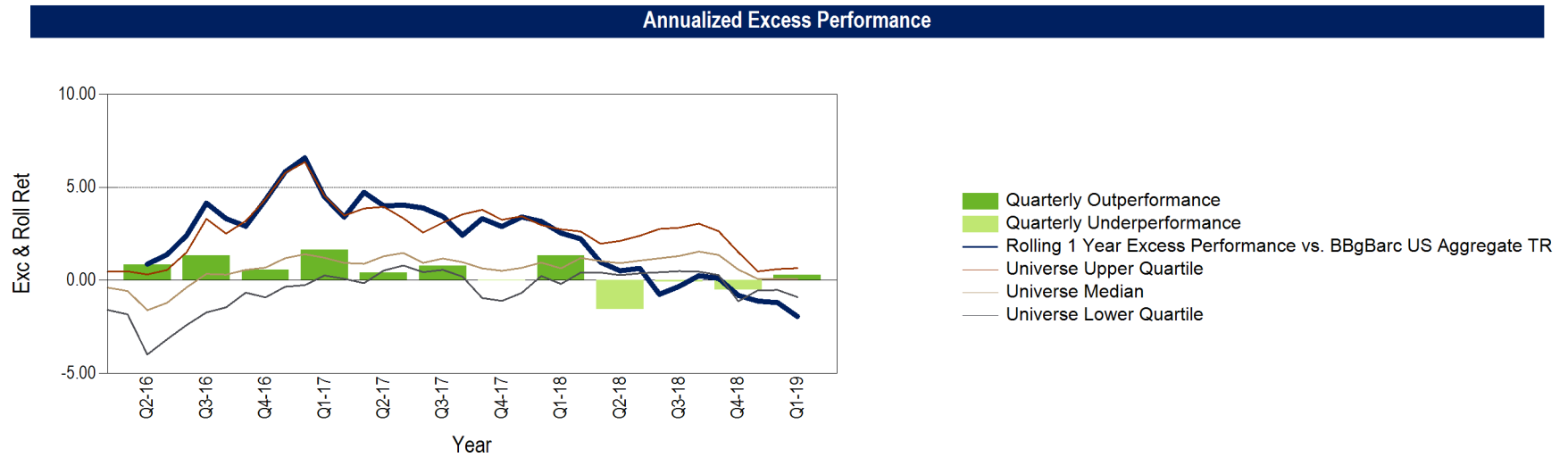
3 Year Risk Return



3 Year Style Analysis



TOTAL FIXED INCOME COMPOSITE



APPENDIX

NEPC, LLC

HIGHLIGHTS OF 2019 FIRST QUARTER HAPPENINGS AT NEPC

NEPC INSIGHTS

- Taking Stock: Munis Offer Sweet Spot and Flattening Yield Curve
- NEPC's 2019 Asset Allocation Letter: Winter is Coming, But When?
- Private Wealth Investment Policy Statements: A Roadmap for Uncertain Times
- 2018 Fourth Quarter Market Thoughts
- 2019 Investment Outlook: Q4 Market Thoughts, Webinar Replay & AA Letter
- Corporate Pension Plans: NEPC's Key Themes for 2019
- Taking Stock: The Importance of De-Risking Pension Plans and Q4 Liability Performance
- Taking Stock: Should Corporate Pensions Go on the Defense?
- Direct Investments (Part I): Trends and Motivations
- Taking Stock: A is for Access, MSCI Ups Local China Shares in Indexes
- Register Now: NEPC's 24th Annual Investment Conference
- Taking Stock: What is the Yield Curve Signaling?
- Taking Stock: Picking the Right Interest Credit Option for Your Cash Balance Plan

WEBINAR REPLAYS

- NEPC's 2019 Market Outlook Webinar

To download NEPC's recent insights and webinar replays, visit: www.NEPC.com/insights

