Mid-Atlantic UFCW and Participating Employers Pension Fund

Master Consulting Services Report

Period Ended
December 31, 2019

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Market Discussion Points 4Q | 2019

Financial Market Performance

Periods Ending December 31, 2019

Strategy	Sector	Index	QTR	YTD	2018	2017	2016	2015	2014	1-Yr	3-Yr	5-Yr	10-Yr	20-Yr
Stocks	**US Large Cap**	S&P 500	9.1	31.5	-4.4	21.8	12.0	1.4	13.7	31.5	15.3	11.7	13.6	6.1
	US Small Cap	Russell 2000	9.9	25.5	-11.0	14.7	21.3	-4.4	4.9	25.5	8.6	8.2	11.8	7.6
	All Country	MSCI All Country World (net)	9.0	26.6	-9.4	24.0	7.9	-2.4	4.2	26.6	12.4	8.4	8.8	-
	Non-US Developed	MSCI EAFE (net)	8.2	22.0	-13.8	25.0	1.0	-0.8	-4.9	22.0	9.6	5.7	5.5	3.3
	Emerging Markets	MSCI EM (net)	11.8	18.4	-14.6	37.3	11.2	-14.9	-2.2	18.4	11.6	5.6	3.7	6.7
	Int'l Small Cap	MSCI EAFE Small Cap (net)	11.5	25.0	-17.9	33.0	2.2	9.6	-5.0	25.0	10.9	8.9	8.7	7.6
Bonds	**Treasury**	Bloomberg Barclays US Govt	-0.8	6.8	0.9	2.3	1.1	0.9	4.9	6.8	3.3	2.4	3.0	4.6
	Broad Market	Bloomberg Barclays Aggregate	0.2	8.7	0.0	3.5	2.7	0.6	6.0	8.7	4.0	3.1	3.8	5.0
	Intermediate	Bloomberg Barclays Gov/Credit Int.	0.4	6.8	0.9	2.1	2.1	1.1	3.1	6.8	3.2	2.6	3.1	4.5
	High Yield	Bloomberg Barclays HY BaB 2% IC	2.5	15.2	-1.9	6.9	14.1	-2.7	3.5	15.2	6.5	6.1	7.4	6.9
	Short Duration HY	BofA ML HY Cash Pay BB 1-3 YR	1.5	8.7	1.4	3.6	8.5	1.2	1.9	8.7	4.5	4.6	5.6	-
	Global Bonds	FTSE WGBI	-0.4	5.9	-0.8	7.5	1.6	-3.6	-0.5	5.9	4.1	2.0	1.9	4.2
GTAA	**Unconstrained**	65% MSCI World /35% FTSE WGBI	5.4	19.8	-5.7	17.0	5.6	-1.6	3.0	19.8	9.8	6.6	7.0	4.8
Real Estate	**Core**	NCREIF ODCE Equal Weighted (net)	1.3	5.2	7.3	6.9	8.4	14.2	11.4	5.2	6.5	8.4	10.5	7.0
Hedge Fund of Funds	**Diversified FOFs**	HFRI FOF Composite	3.0	8.3	-4.0	7.8	0.5	-0.3	3.4	8.3	3.9	2.4	2.8	3.4
	Equity Long-Short	HFRI Equity Hedge	5.7	13.7	-7.1	13.3	5.5	-1.0	1.8	13.7	6.2	4.6	4.7	5.0
Commodities	**Commodities**	Goldman Sachs Commodity	8.3	17.6	-13.8	5.8	11.4	-32.9	-33.1	17.6	2.4	-4.3	-5.4	-0.3

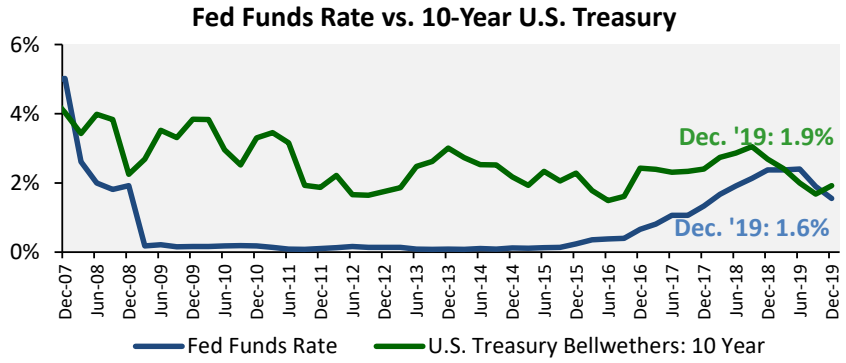
Asset Class Performance "Quilt"

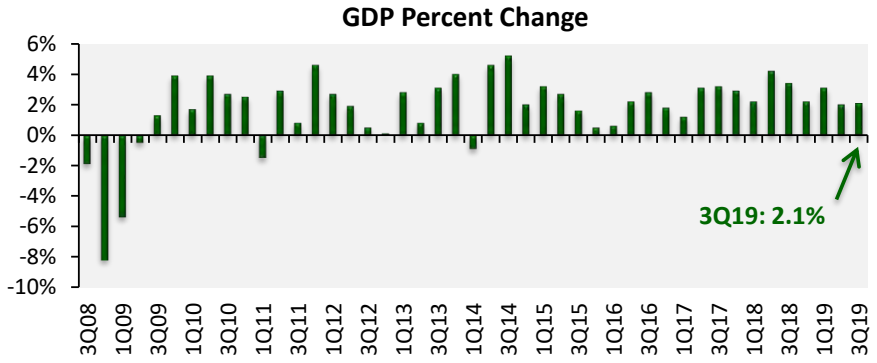
2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
EM Equity 34.0%	EM Equity 32.2%	EM Equity 39.4%	Fx Inc 5.2%	EM Equity 78.5%	Small Cap 26.9%	RE 15.0%	EM Equity 18.2%	Small Cap 38.8%	Large Cap 13.7%	RE 14.2%	Small Cap 21.3%	EM 37.3%	RE 7.3%	Large Cap 31.5%
RE 19.0%	Int'l 26.3%	RE 15.0%	RE -11.1%	HY 57.5%	Mid Cap 25.5%	Fx Inc 7.8%	Int'l 17.3%	Mid Cap 34.8%	Mid Cap 13.2%	Large Cap 1.4%	HY 17.5%	Int'l 25.0%	SD HY 1.4%	Mid Cap 30.5%
Int'l 13.5%	Small Cap 18.4%	Int'l 11.2%	SD HY -14.0%	Mid Cap 40.5%	EM Equity 18.9%	HY 4.4%	Mid Cap 17.3%	Large Cap 32.4%	RE 11.4%	SD HY 1.2%	Mid Cap 13.8%	Large Cap 21.8%	Fx Inc 0.0%	Small Cap 25.5%
Mid Cap 12.6%	Large Cap 15.8%	HFoF 10.3%	HFoF -21.4%	SD HY 36.1%	HY 15.2%	SD HY 4.4%	Small Cap 16.3%	Int'l 22.8%	Fx Inc 6.0%	Fx Inc 0.6%	Large Cap 12.0%	Mid Cap 18.5%	HY -2.3%	Int'l 22.0%
HFoF 7.5%	Mid Cap 15.3%	GTAA 9.9%	GTAA -25.4%	Int'l 31.8%	RE 15.1%	Large Cap 2.1%	Large Cap 16.1%	GTAA 15.3%	Small Cap 4.9%	HFoF -0.3%	EM 11.2%	GTAA 17.0%	HFoF -4.0%	GTAA 19.8%
Large Cap 4.9%	GTAA 15.1%	Fx Inc 7.0%	HY -26.4%	Small Cap 27.2%	Large Cap 15.1%	GTAA -0.9%	HY 15.6%	RE 12.4%	HFoF 3.4%	Int'l -0.8%	SD HY 8.5%	Small Cap 14.7%	Large Cap -4.4%	EM 18.4%
Small Cap 4.6%	RE 15.1%	Mid Cap 5.6%	Small Cap -33.8%	Large Cap 26.5%	SD HY 11.7%	Mid Cap -1.6%	GTAA 10.9%	HFoF 9.0%	GTAA 3.0%	GTAA -1.6%	RE 8.4%	HFoF 7.8%	GTAA -5.7%	HY 14.4%
GTAA 3.6%	HY 11.7%	Large Cap 5.5%	Large Cap -37.0%	GTAA 20.1%	GTAA 9.8%	Small Cap -4.2%	SD HY 10.2%	HY 7.4%	HY 2.5%	Mid Cap -2.4%	GTAA 5.6%	HY 7.5%	Mid Cap -9.1%	Fx Inc 8.7%
HY 2.7%	HFoF 10.4%	SD HY 3.9%	Mid Cap -41.5%	HFoF 11.5%	Int'l 7.8%	HFoF -5.7%	RE 9.9%	SD HY 5.6%	SD HY 1.9%	Small Cap -4.4%	Fx Inc 2.7%	RE 6.9%	Small Cap -11.0%	SD HY 8.7%
Fx Inc 2.4%	SD HY 9.9%	HY 2.2%	Int'l -43.4%	Fx Inc 5.9%	Fx Inc 6.5%	Int'l -12.1%	HFoF 4.8%	Fx Inc -2.0%	EM Equity -2.2%	HY -4.6%	Int'l 1.0%	SD HY 3.6%	Int'l -13.8%	HFoF 8.3%
SD HY 2.4%	Fx Inc 4.3%	Small Cap -1.6%	EM Equity -53.3%	RE -31.3%	HFoF 5.7%	EM Equity -18.4%	Fx Inc 4.2%	EM Equity -2.6%	Int'l -4.9%	EM Equity -14.9%	HFoF 0.5%	Fx Inc 3.5%	EM -14.6%	RE 5.2%

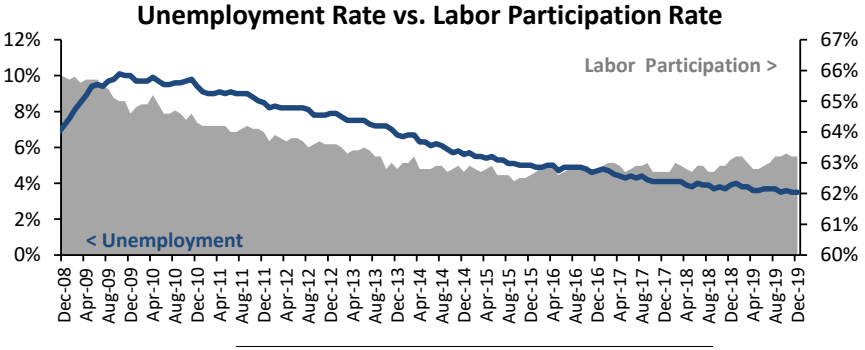
Source: NCREIF, Wilshire. Large Cap Equity: S&P 500 Index, Mid Cap Equity: Russell Midcap Index, Small Cap Equity: Russell 2000 Index, International Equity: MSCI EAFE Index, Emerging Markets: MSCI EM Index, Fixed Income: Barclays Aggregate Index, High Yield Fixed Income: Merrill Lynch High Yield Master II Index, Short Duration High Yield Fixed Income: ML High Yield Cash Pay 1-3 Yr BB Index, Real Estate: NCREIF ODCE Equal Weighted Index, Hedge Fund of Funds: HFRI FOF Index, Global Tactical Asset Allocation: 65%MSCI World Equity/35% Citi World Gov't Bond Index. Inception date for the ML High Yield Cash Pay 1-3 Yr BB Index was January 1, 2005. Past performance is not indicative of future returns.

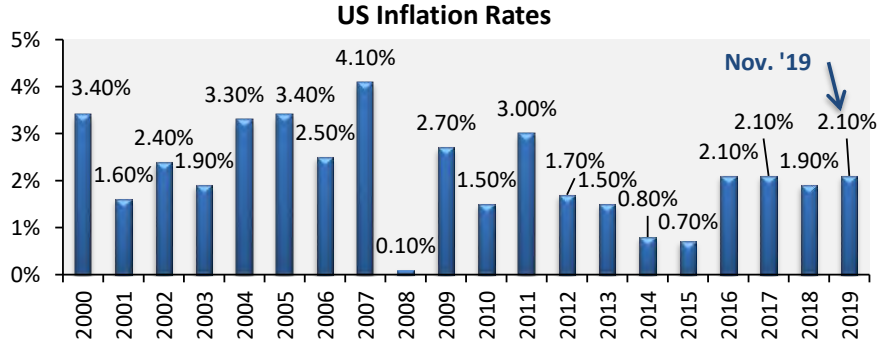
U.S. Economy

The year was characterized by slowing economic growth, accommodative monetary policy, low inflation, and rising asset prices across most geographies and markets. U.S GDP grew at 2.1% in the 3rd quarter, in line with growth from the 2nd quarter and down from 3.1% in the 1st quarter. Current projections for the 4th quarter suggest economic growth will remain close to the 2% level. Despite slowing growth, there have been few signs that a recession in the U.S. is imminent. Nonetheless, the U.S. Federal Reserve (Fed) made three "mid-cycle adjustment" rate cuts in 2019, including one in the 4th quarter. In a further accommodating move, the Fed began expanding its balance sheet for the first time in several years in order to provide necessary short-term liquidity for the repo and money markets. Fed Chairman Powell indicated the Fed is now on hold, unless there is a material change in outlook. Outside the U.S., the European Central Bank also cut rates and instituted a quantitative easing program during 2019. Much of the recent slowdown in investment spending and manufacturing activity is attributable to rising trade tensions between the U.S. and China over the course of 2018 and 2019. Positive developments on the U.S. - China trade front during the 4th quarter, including a "Phase One" agreement, boosted optimism that trade policy uncertainty may be less of a headwind in 2020. This could result in increased business activity and stabilization of economic growth in the U.S. Markets saw the J.P Morgan Global Manufacturing PMI exceed 50 for the first time in several months at year end. In 2019, a healthy U.S. consumer offset slower business activity. The labor market remains robust, marked by the lowest unemployment rate in nearly 50 years, with little translation of wage growth into price inflation. Low unemployment coupled with Fed-induced low interest rates is supporting consumer spending as illustrated by strong housing starts and new home sales. Further, the December reading of the University of Michigan's consumer sentiment index reached its highest level since May.





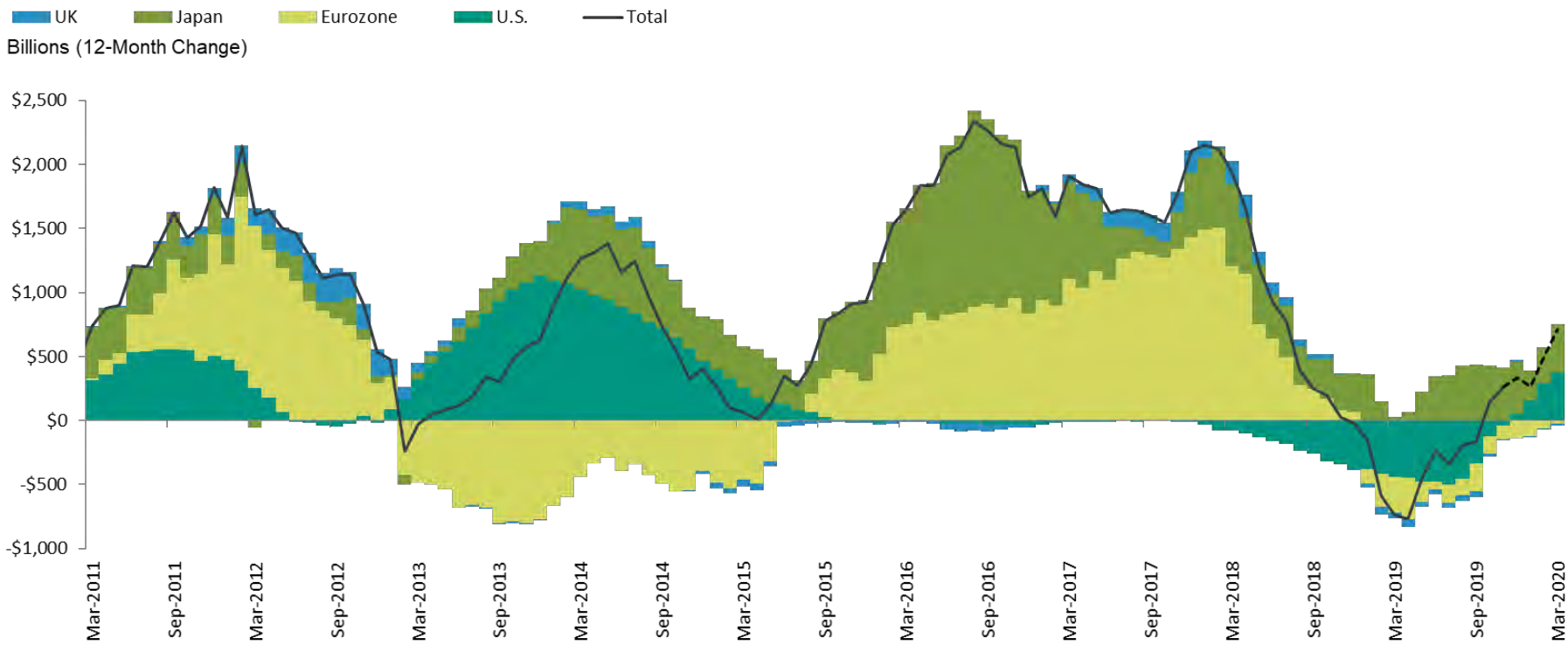




Source: Top Left - The Federal Reserve; Top Right - Bureau of Economics, U.S. Department of Commerce; Bottom Left and Right: Bureau of Labor Statistics

Expansion of Central Bank Balance Sheets Have Supported Asset Prices

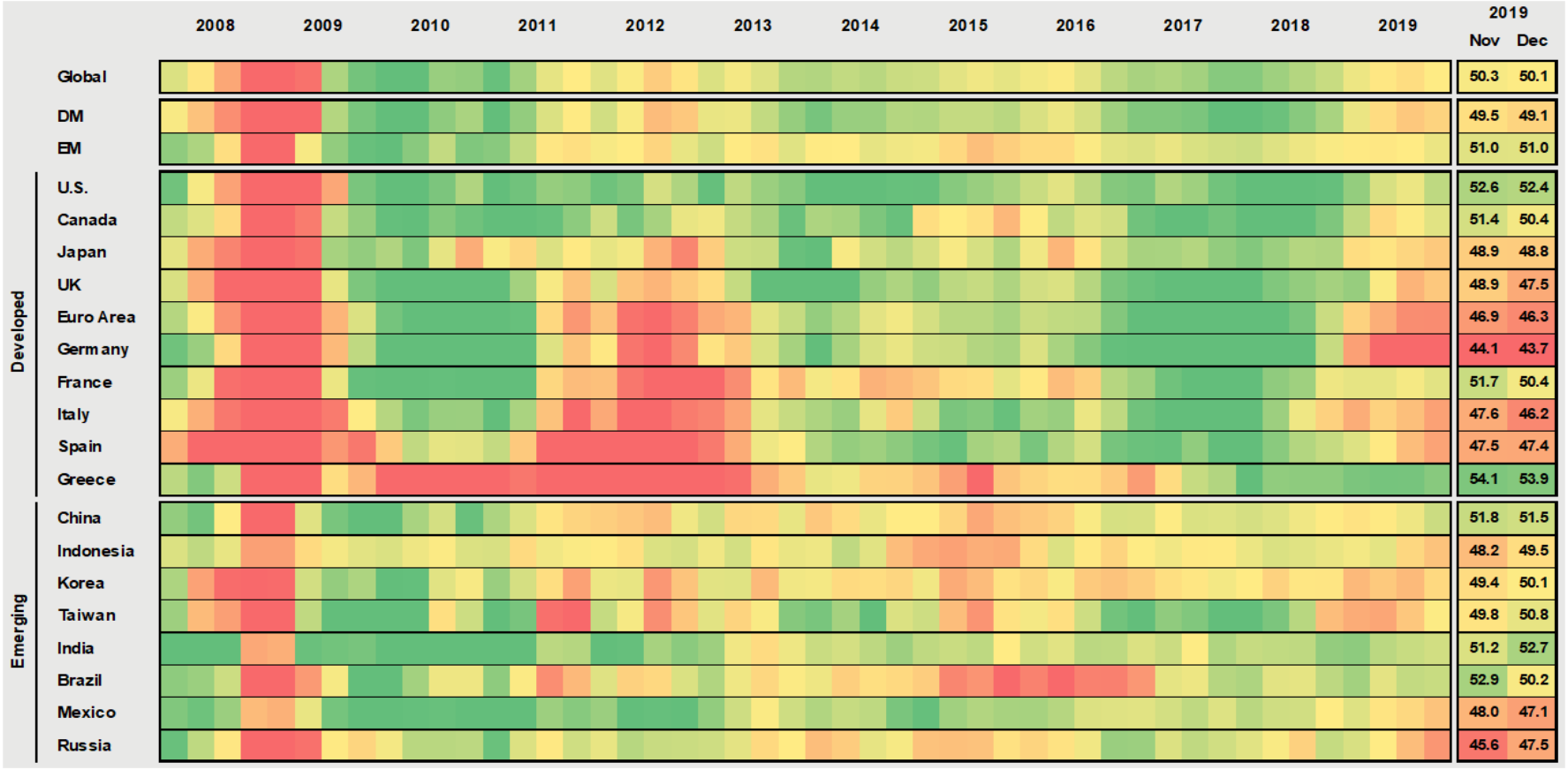
Central Bank Balance Sheets



Source: Dotted line estimates future central bank assets: Federal Reserve to purchase $60B of Treasury bills per month in 2020 Q1, European Central Bank (ECB) to purchase €20B per month in Q1, Bank of England to maintain constant balance sheet, Bank of Japan to purchase at annualized rate of average purchases over last 12 months. Source: Haver Analytics, Fidelity Investments (AART), as of 11/30/19.

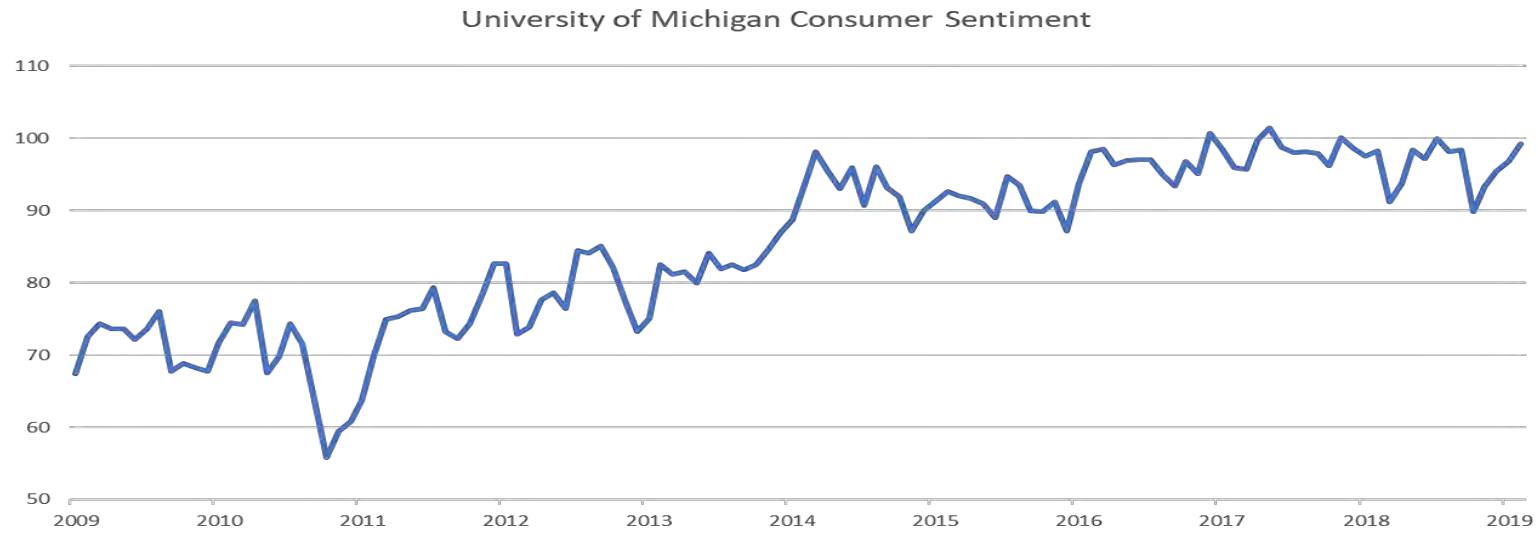
Global PMIs Beginning to Firm

Global Purchasing Manager's Index for manufacturing, quarterly

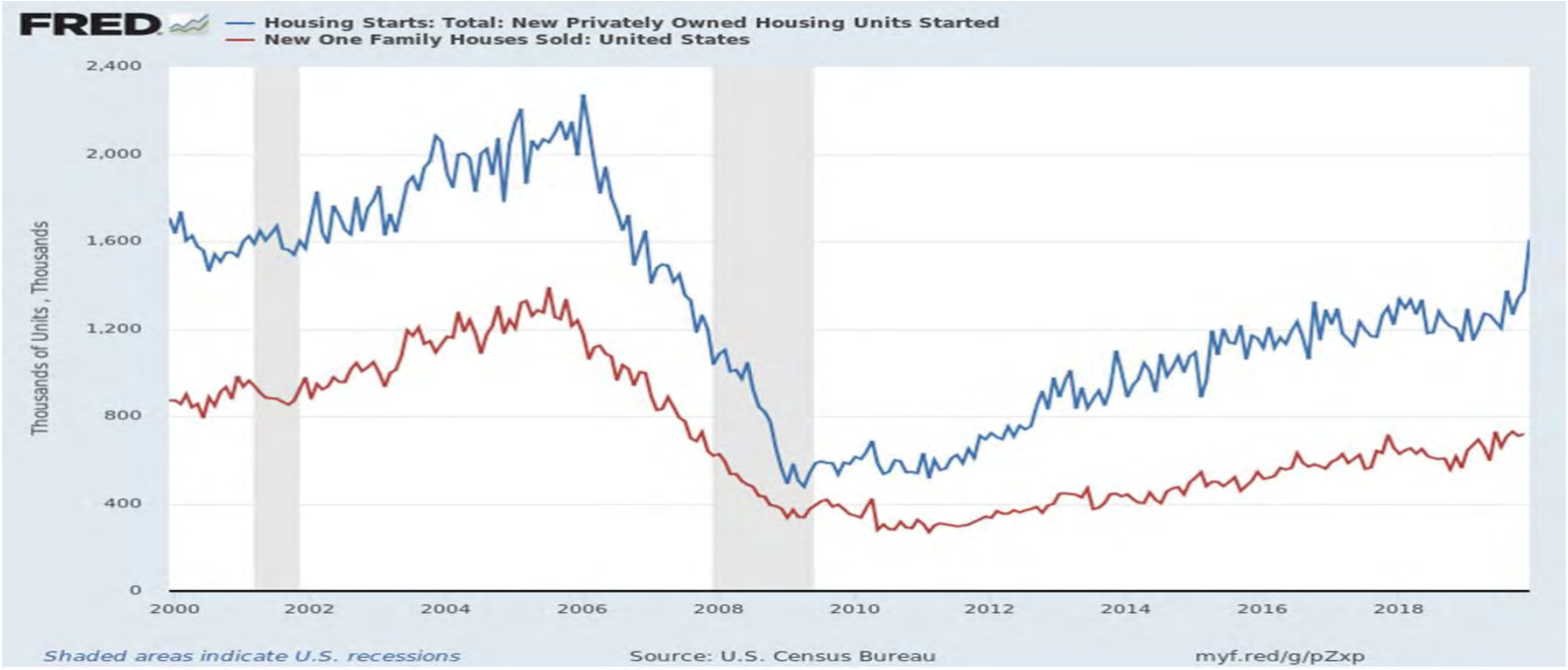


Note: Heatmap colors are based on PMI relative to the 50 level, which indicates acceleration or deceleration of the sector, for the time period shown. Heat map is based on quarterly averages, with the exception of the two most recent figures, which are single month readings. Data for Canada, Indonesia and Mexico are back-tested and filled in from December 2007 to November 2010 for Canada and May 2011 for Indonesia and Mexico due to lack of existing PMI figures for these countries. DM and EM represent developed markets and emerging markets, respectively.
Source: Markit, J.P. Morgan Asset Management., Guide to the Markets – U.S. Data are as of January 22, 2020.

The U.S. Consumer Remains Strong



Source: University of Michigan



Key Policy Issues for 2020 Presidential Election

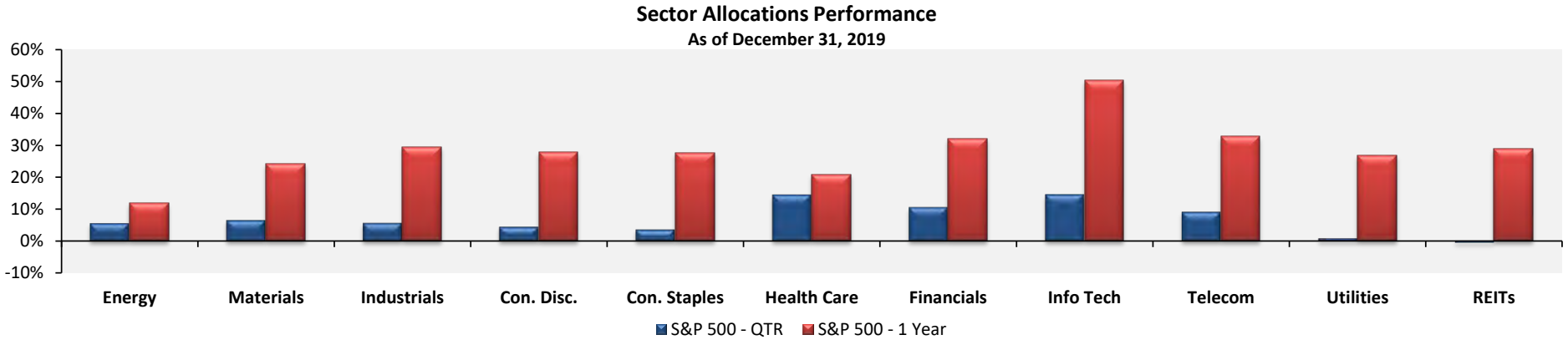
Policy Issue	Progressive Democrat	Moderate Democrat	Trump
Tax Policy	Ultra-Millionaire Tax Real Corporate Profits Tax	Reverse Trumps' tax reform	Status Quo
Trade	Economic Patriotism	Re-write laws with US first	
Healthcare	Medicare for All; Drug Pricing Reforms	Protect & Build on the Affordable Care Act	
Financials	Hold Wall Street accountable	No overt agenda to go after Wall Street	
Energy	Curb emissions and promote clean energy	Clean Energy Revolution	
Technology	Break up Big Tech	Open to investigating breaking up Big Tech	

Source: Neuberger Berman, Cornerstone Macro, The Guardian, elizabethwarren.com, joebiden.com

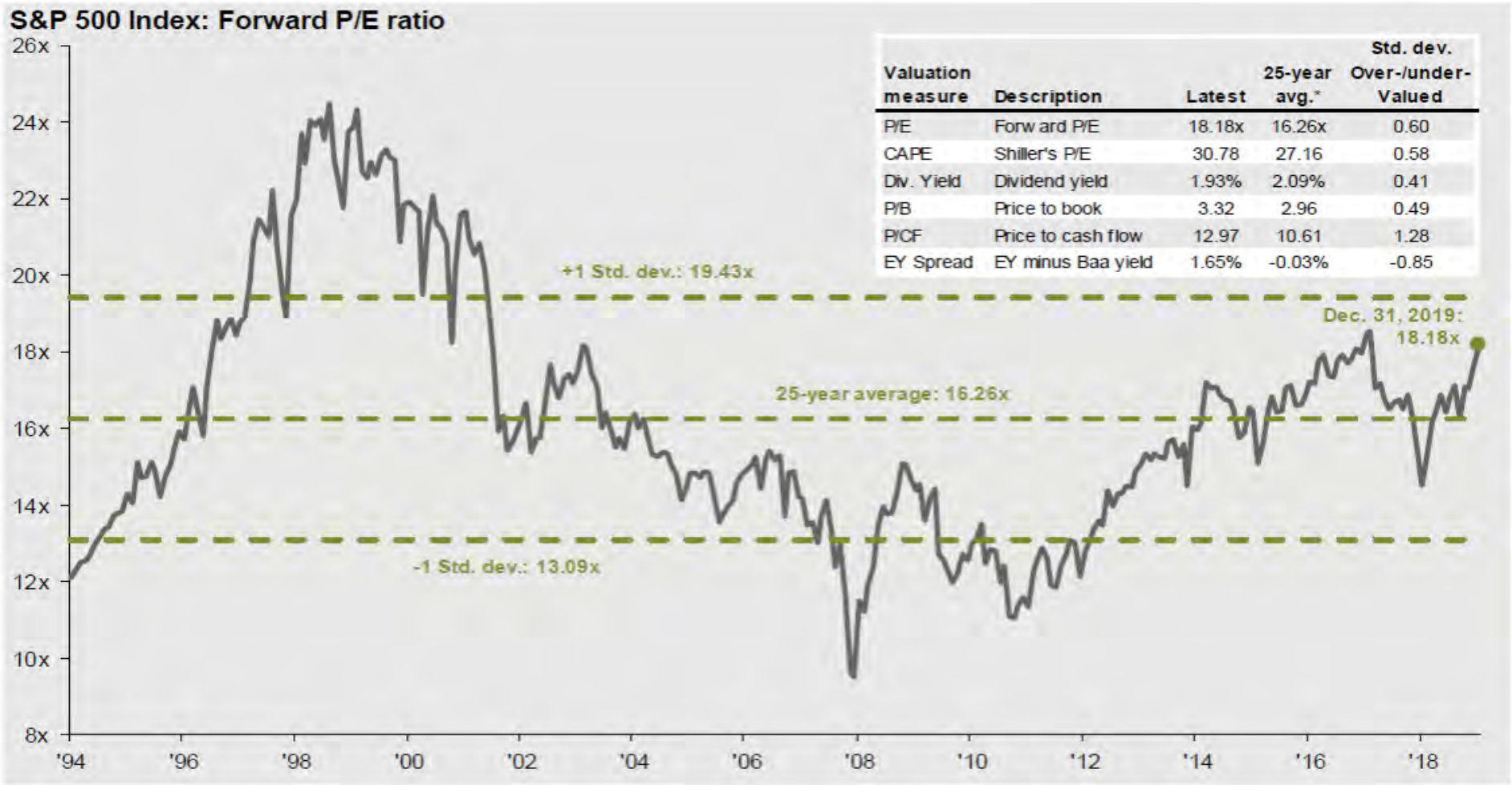
U.S. Equity Market

U.S. equities were undeterred by falling corporate earnings for 2019. The S&P 500 posted another strong quarter, returning 9.1% and finished 2019 with its second-best year (31.5%) of the 2010s. As measured by the Russell 2000, small cap U.S. equities (25.5%) lagged large caps in 2019; however, small companies finished the year strong, with small caps returning 9.9% for the 4th quarter as trade deal optimism grew. Growth stocks continued their domination over value, with the Russell 1000 Growth returning 36.4% while the Russell 1000 Value returned 26.5%. Similar outperformance of growth over value could be seen in mid and small cap stocks for the year. For the quarter, bond proxies such as REITs (-0.5%) and Utilities (0.8%) struggled as the yield curve steepened to its widest point of the year. Information technology was the best performing sector, up 14.4% for the 4th quarter and 50.3% on the year, accounting for nearly a third of the S&P 500's 2019 total return. Two companies, Apple and Microsoft, together accounted for 17% of S&P 500 total return in 2019. For the year, every sector returned in excess of 20% except energy which rose 12%. The majority of U.S. equity gains in 2019 were attributable to multiple expansion as opposed to earnings growth. As a result, the S&P 500 was valued at 18.2x on a forward P/E basis at year-end, up from 14.4x at the start of 2019 and above the 25-year average forward P/E of 16.3x.

Sector	Index	4Q 19	YTD	2018	2017	2016	2015	2014	1-Year	3-Year	5-Year	10-Year
Large Cap	S&P 500	9.1	31.5	-4.4	21.8	12.0	1.4	13.7	31.5	15.3	11.7	13.6
	Russell 1000	9.0	31.4	-4.8	21.7	12.1	0.9	13.3	31.4	15.1	11.5	13.5
	Russell 1000 Value	7.4	26.5	-8.3	13.7	17.3	-3.8	13.5	26.5	9.7	8.3	11.8
	Russell 1000 Growth	10.6	36.4	-1.5	30.2	7.1	5.7	13.1	36.4	20.5	14.6	15.2
Mid Cap	Russell Mid-Cap	7.1	30.5	-9.1	18.5	13.8	-2.4	13.2	30.5	12.1	9.3	13.2
	Russell Mid-Cap Value	6.4	27.1	-12.3	13.3	20.0	-4.8	14.7	27.1	8.1	7.6	12.4
	Russell Mid-Cap Growth	8.2	35.5	-4.8	25.3	7.3	-0.2	11.9	35.5	17.4	11.6	14.2
Small Cap	Russell 2000	9.9	25.5	-11.0	14.7	21.3	-4.4	4.9	25.5	8.6	8.2	11.8
	Russell 2000 Value	8.5	22.4	-12.9	7.8	31.7	-7.5	4.2	22.4	4.8	7.0	10.6
	Russell 2000 Growth	11.4	28.5	-9.3	22.2	11.3	-1.4	5.6	28.5	12.5	9.3	13.0
Total Market	Wilshire 5000	9.1	31.0	-5.3	21.0	13.4	0.7	12.7	31.0	14.5	11.4	13.4
	Russell 3000	9.1	31.0	-5.2	21.1	12.7	0.5	12.6	31.0	14.6	11.2	13.4



U.S. Equity Valuations Above Historical Averages

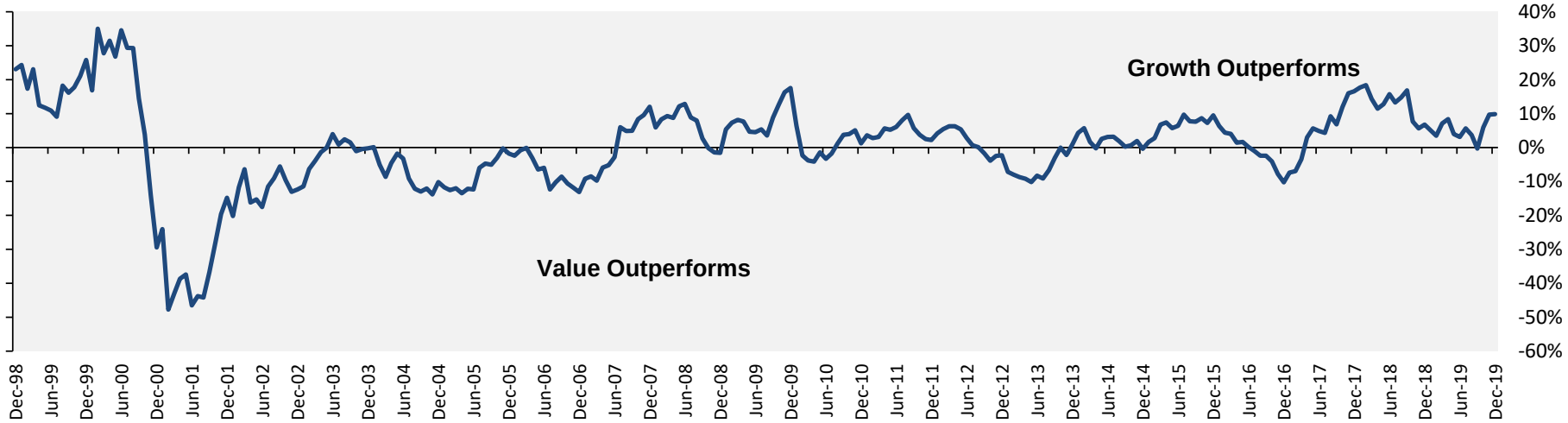


Valuation measure	Description	Latest	25-year avg.*	Std. dev. Over-/under-Valued
P/E	Forward P/E	18.18x	16.26x	0.60
CAPE	Shiller's P/E	30.78	27.16	0.58
Div. Yield	Dividend yield	1.93%	2.09%	0.41
P/B	Price to book	3.32	2.96	0.49
P/CF	Price to cash flow	12.97	10.61	1.28
EY Spread	EY minus Baa yield	1.65%	-0.03%	-0.85

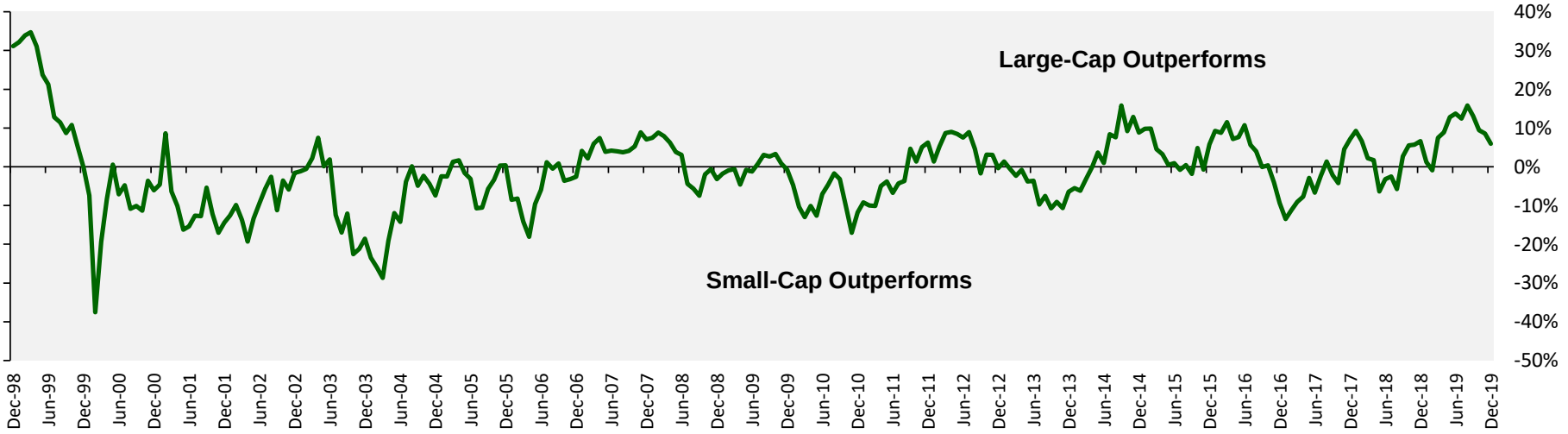
Source: FactSet, FRB, Robert Shiller, Standard & Poor's, Thomson Reuters, J.P. Morgan Asset Management. Data are as of December 31, 2019.

U.S. Equity Market

Russell 1000 Growth vs. Russell 1000 Value
Rolling One-Year Returns



S&P 500 vs. Russell 2000
Rolling One-Year Returns

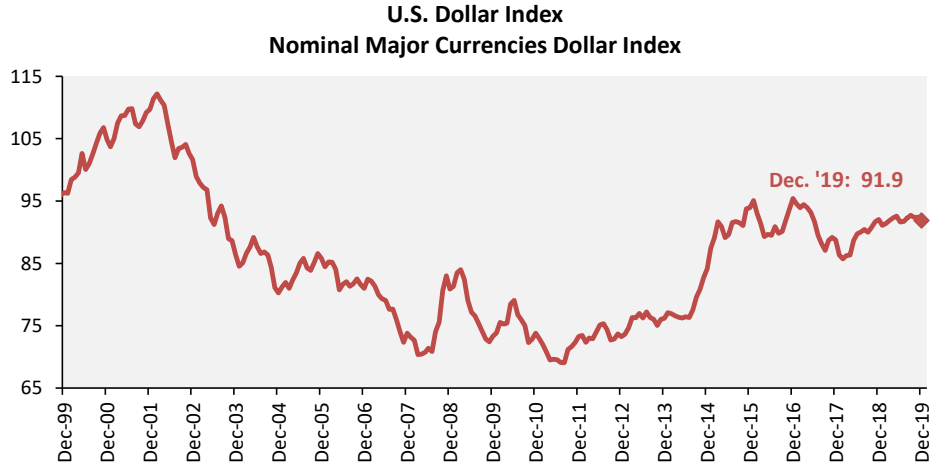


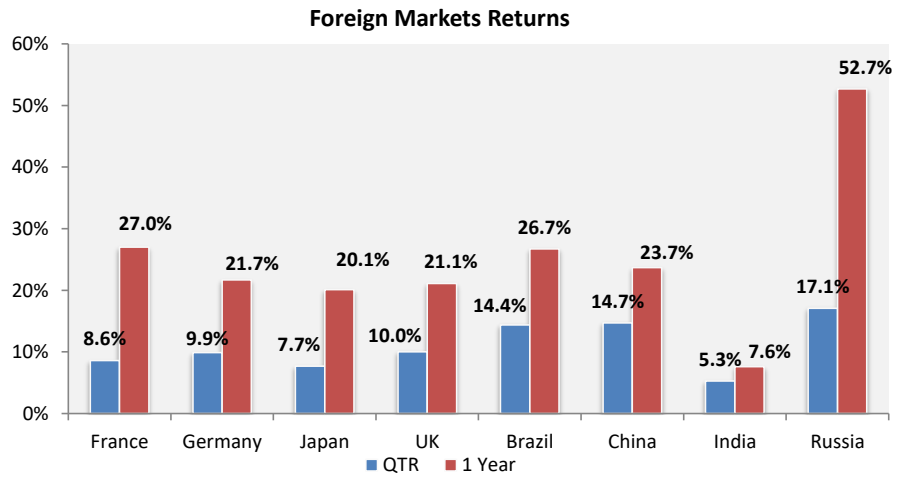
U.S. Equity Market

International Equity Market

While international equity markets kept pace with U.S. equities in the 4th quarter, they lagged for the full year, continuing the decade-long trend of U.S. equity outperformance. Non-U.S. developed markets, as measured by the MSCI EAFE, finished the quarter returning 8.2%, taking the return for 2019 to 22.0%. Within Europe, manufacturing activity is showing signs of possibly bottoming, especially in Germany, which returned 9.9% for the quarter and 21.7% for 2019. Some clarity surrounding the Brexit situation allowed the U.K to return 10.0% for the 4th quarter and 21.1% for the year. Japan lagged most developed markets in the 4th quarter with a return of 7.7% as growth was expected to slow sharply following a tax on private consumption. Given they are more highly leveraged to global growth, emerging markets lagged for most of the year on concerns related to U.S.-China trade negotiations. However, progress on the trade front led to an 11.8% return for emerging markets in the 4th quarter, resulting in an 18.4% gain for 2019. Emerging markets were also supported by rising global liquidity through the Fed and ECB easing and some slight U.S. Dollar weakness. China, the largest emerging market country, ended on a high note, returning 14.7% for the quarter and 23.7% for 2019.

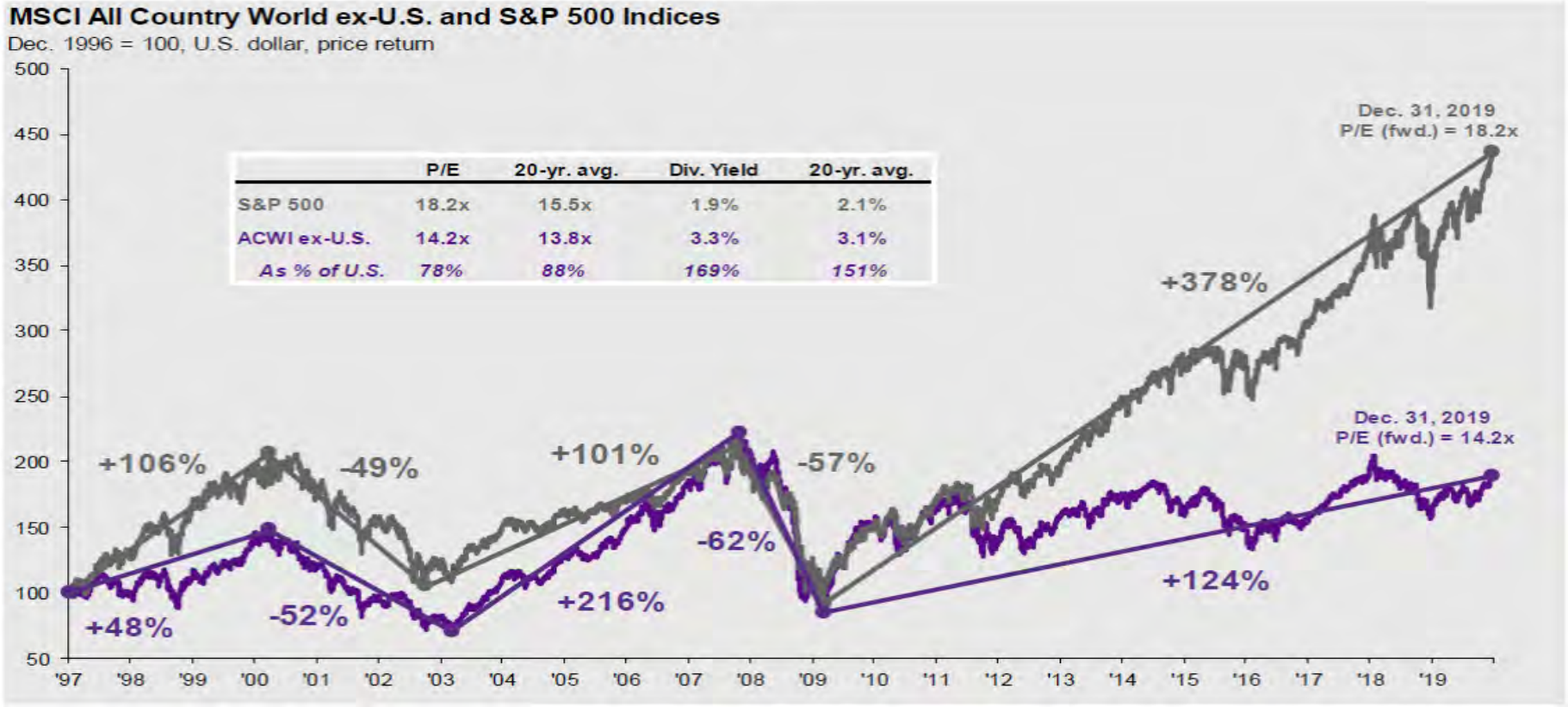
Sector	Index	4Q 19	YTD	2018	2017	2016	2015	2014	1-Year	3-Year	5-Year	10-Year
Global	MSCI AC World Index (net)	9.0	26.6	-9.4	24.0	7.9	-2.4	4.2	26.6	12.4	8.4	8.8
	MSCI World Small Cap (net)	9.7	24.7	-14.4	23.8	11.6	-1.0	1.8	24.7	9.7	7.9	9.7
	MSCI World ex US (net)	8.9	21.5	-14.2	27.2	4.5	-5.7	-3.9	21.5	9.9	5.5	5.0
	MSCI World ex US Small Cap (net)	11.0	22.4	-18.2	31.6	3.9	2.6	-4.0	22.4	9.7	7.0	6.9
Developed ex US	MSCI EAFE (net)	8.2	22.0	-13.8	25.0	1.0	-0.8	-4.9	22.0	9.6	5.7	5.5
	MSCI EAFE Value (net)	7.8	16.1	-14.8	21.4	5.0	-5.7	-5.4	16.1	6.3	3.5	4.0
	MSCI EAFE Growth (net)	8.5	27.9	-12.8	28.9	-3.0	4.1	-4.4	27.9	12.8	7.7	7.0
	MSCI EAFE Small Cap (net)	11.5	25.0	-17.9	33.0	2.2	9.6	-5.0	25.0	10.9	8.9	8.7
Emerging Markets	MSCI Emerging Markets (net)	11.8	18.4	-14.6	37.3	11.2	-14.9	-2.2	18.4	11.6	5.6	3.7

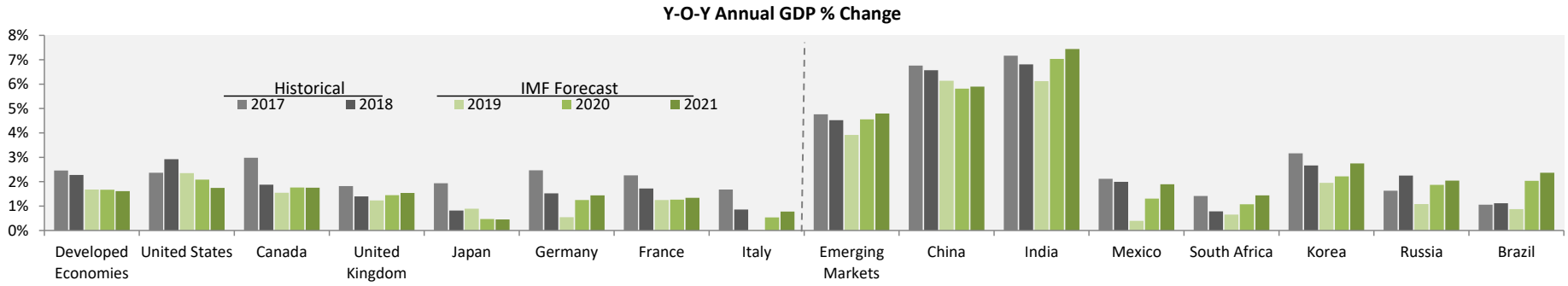




Left chart: The major currencies index is a weighted average of the foreign exchange values of the U.S. dollar against a subset of currencies in the broad index that circulate widely outside the country of issue. The weights are derived from those in the broad index. Source: The Federal Reserve. Right chart: Data as of December 31, 2019.

International Equity Market



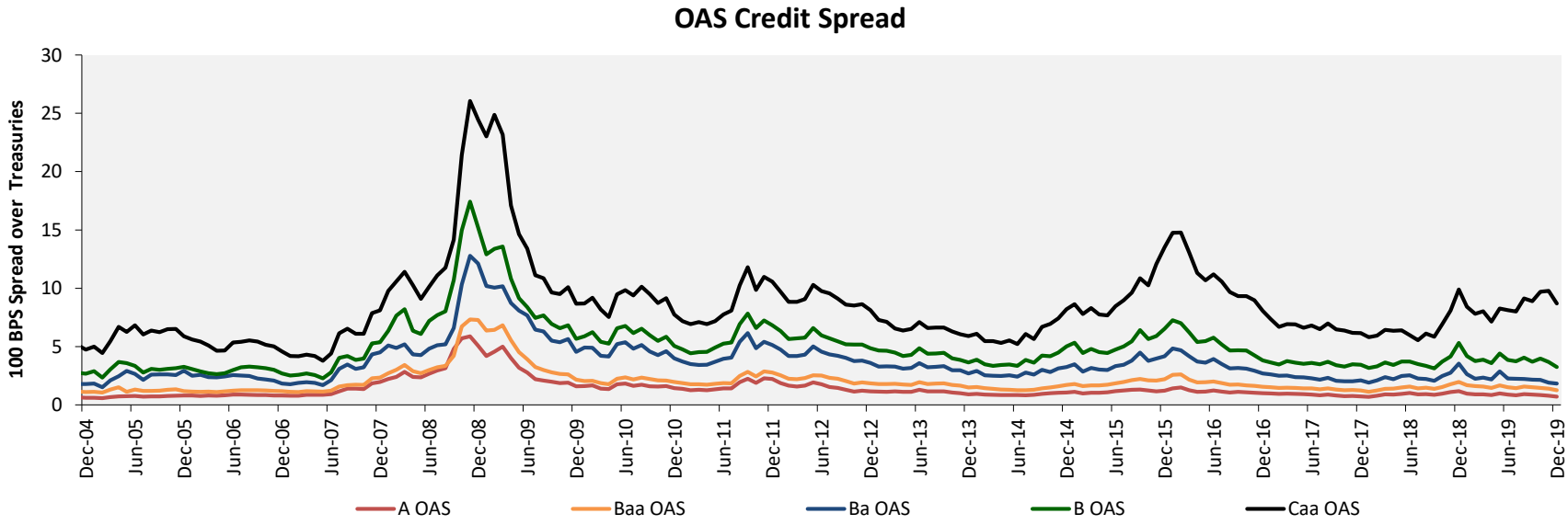


Top chart: Source - MSCI, Standard & Poor's, FactSet, J.P. Morgan Asset Management. Bottom chart: Annual percentages of constant price GDP are year-on-year changes; the base year is country-specific. Source: International Monetary Fund, World Economic Outlook Database, October 2019.

U.S. Bond Market

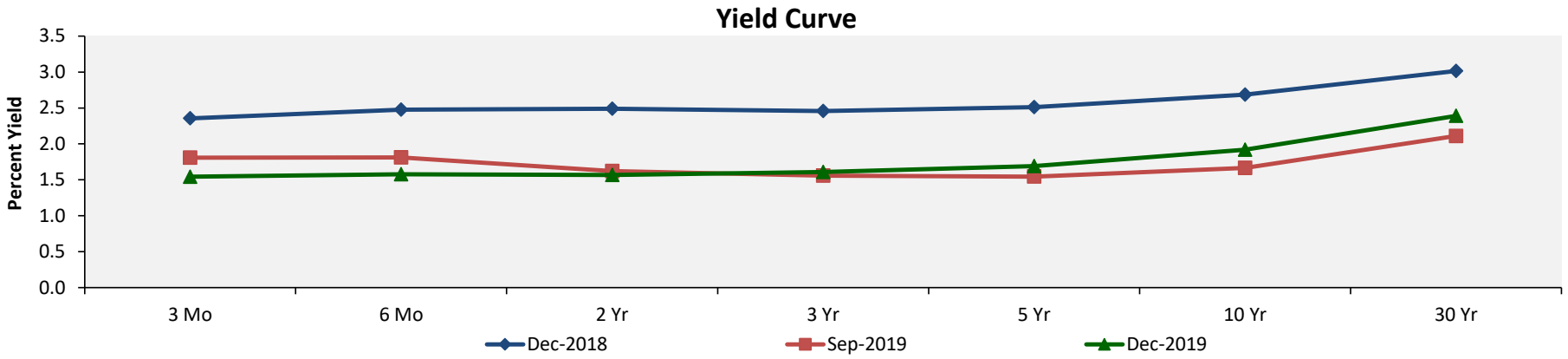
The combination of lower central bank policy rates, low growth and inflation expectations, and scarcity of bond supply pressured yields lower in 2019, resulting in better than expected returns for most segments of the fixed income market. The Fed cut rates at three consecutive meetings between July and October, driving yields on the short end of the curve lower while longer dated maturities drifted slightly higher. This resulted in a steeper yield curve and reversed the inversion between 3-month and 10-year yields seen throughout the 3rd quarter. Rates finished the year lower by approximately 60 to 100 basis points across the curve relative to the start of the year. The Bloomberg Barclays US Aggregate Index returned 0.2% for the 4th quarter and 8.7% for 2019. Longer duration portfolios tended to outperform for the year given the decline in interest rates. High yield was the best performing segment of the market as spreads tightened 190 bps during the year, resulting in a return of 15.2% for the Bloomberg Barclays High Yield Ba/B Index. High yield spreads now sit well below their long-term average. Curiously, overall high yield spreads disguise what has been an interesting dispersion between higher quality high yield (BB/B) and lower quality (CCC). While spreads on higher quality high yield securities declined throughout the year, lower quality issues actually saw spreads widen in the second half of the year as the market became more selective on credit issues.

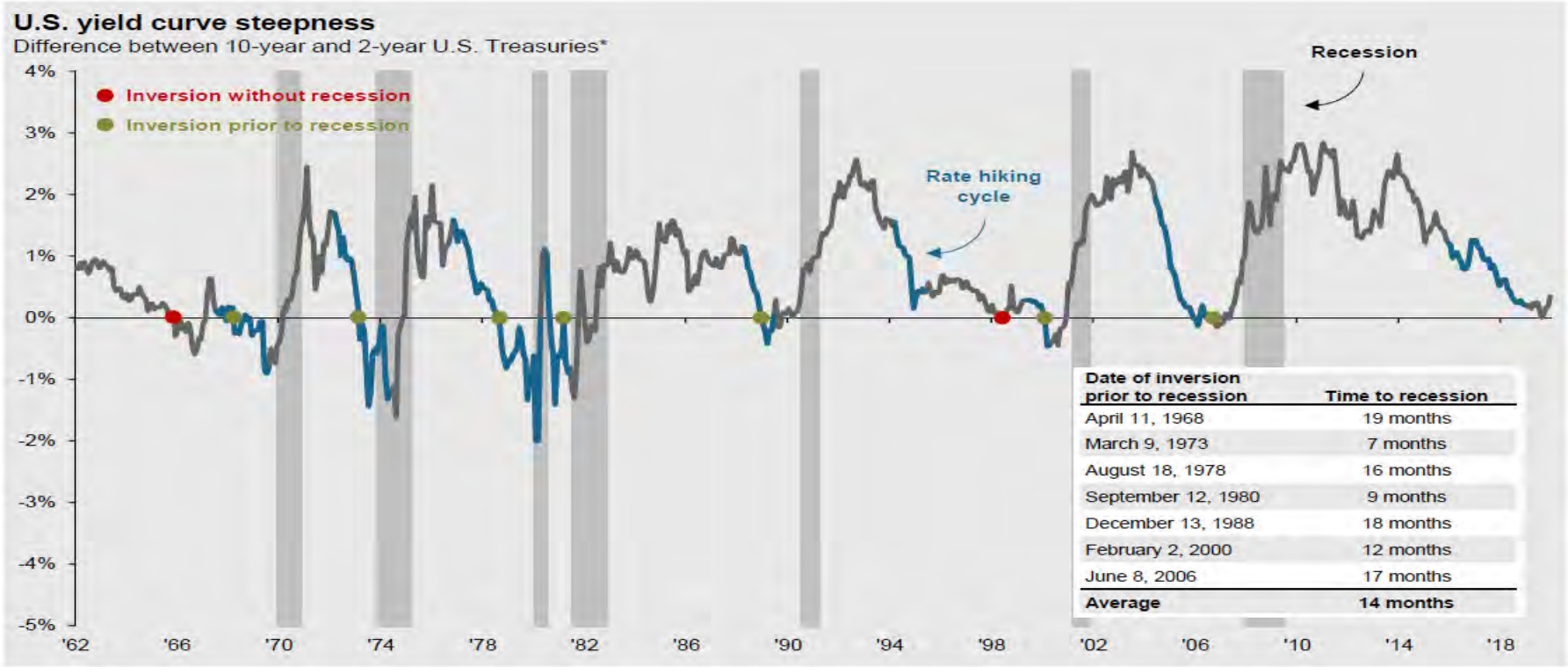
Index	Yield	Duration	4Q 19	YTD	2018	2017	2016	2015	2014	1-Year	3-Year	5-Year	10-Year
Bloomberg Barclays Aggregate	2.31	6.2	0.2	8.7	0.0	3.5	2.7	0.6	6.0	8.7	4.0	3.1	3.8
Bloomberg Barclays Govt/Credit	2.22	6.9	0.0	9.7	-0.4	4.0	3.1	0.2	6.0	9.7	4.4	3.2	4.0
Bloomberg Barclays Int Agg	2.14	4.1	0.5	6.7	0.9	2.3	2.0	1.2	4.1	6.7	3.3	2.6	3.2
Bloomberg Barclays Int Govt/Credit	1.93	3.9	0.4	6.8	0.9	2.1	2.1	1.1	3.1	6.8	3.2	2.6	3.1
Bloomberg Barclays HY Ba/B 2% IC	4.30	3.1	2.5	15.2	-1.9	6.9	14.1	-2.7	3.5	15.2	6.5	6.1	7.4
BofA ML HY Cash Pay BB 1-3 Yr.	4.21	1.4	1.5	8.7	1.4	3.6	8.5	1.2	1.9	8.7	4.5	4.6	5.6
Bloomberg Barclays Mortgage	2.54	4.3	0.7	6.4	1.0	2.5	1.7	1.5	6.1	6.4	3.3	2.6	3.2
Bloomberg Barclays Treasury	1.80	6.5	-0.8	6.9	0.9	2.3	1.0	0.8	5.1	6.9	3.3	2.4	3.1
Bloomberg Barclays US TIPS	1.99	7.4	0.8	8.4	-1.3	3.0	4.7	-1.4	3.6	8.4	3.3	2.6	3.4
BofA ML 91 day T-Bills	1.55	0.3	0.5	2.3	1.9	0.9	0.3	0.1	0.0	2.3	1.7	1.1	0.6



Source: Bloomberg Barclays

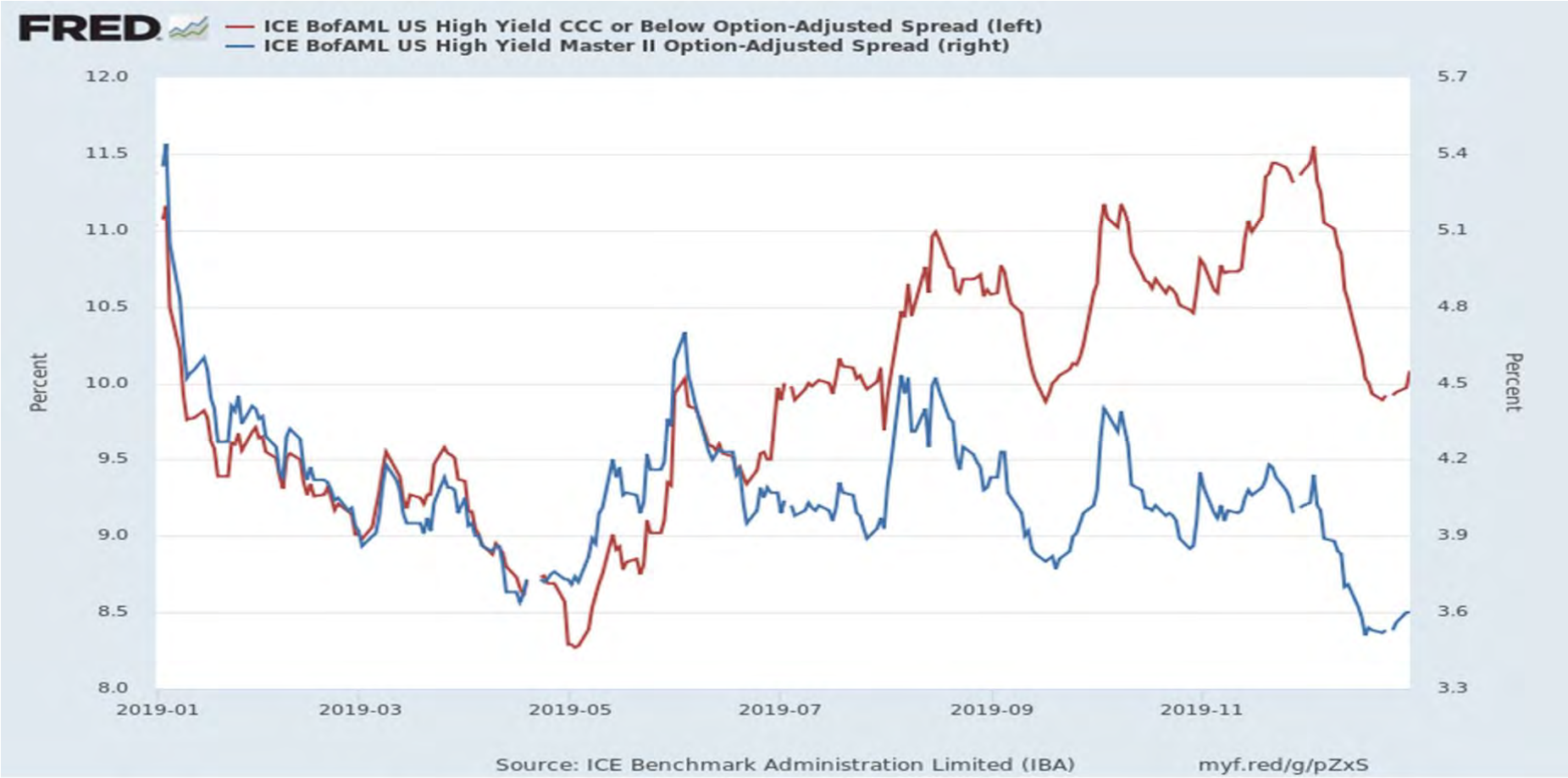
U.S. Yield Curve





Source: Top Chart - Bloomberg Barclays. Bottom Chart - FactSet, Federal Reservse, J.P. Morgan Asset Management. Data are as of December 31, 2019.

Market Favoring Higher Quality



Interest Rate Sensitivity

12 Month Holding Period - Annualized Returns as of 12/31/2019							
Yield Change (bps)	10 Year Treasury	Bloomberg Barclays Aggregate US Aggregate	Bloomberg Barclays Int Govt/Credit US Int Govt/Credit	ML Gov/Corp Master	ML 1-3 yr Gov/Corp	Defensive ML US HY BB/B ND	Short Duration ML US HY BB/B 1-3 yr
-150	15.41	11.55	7.84	12.59	4.52	8.96	6.34
-100	10.91	8.47	5.87	9.14	3.59	7.42	5.63
-50	6.41	5.39	3.90	5.70	2.67	5.89	4.92
-25	4.16	3.85	2.92	3.97	2.20	5.12	4.57
0	1.91	2.31	1.93	2.25	1.74	4.35	4.21
25	-0.34	0.77	0.95	0.53	1.28	3.58	3.86
50	-2.59	-0.77	-0.04	-1.20	0.82	2.82	3.50
100	-7.09	-3.85	-2.01	-4.64	-0.11	1.28	2.79
150	-11.59	-6.93	-3.98	-8.09	-1.04	-0.26	2.08
200	-16.09	-10.01	-5.95	-11.53	-1.96	-1.79	1.37
250	-20.59	-13.09	-7.92	-14.98	-2.89	-3.33	0.66
300	-25.09	-16.17	-9.89	-18.42	-3.81	-4.86	-0.05
350	-29.59	-19.25	-11.86	-21.87	-4.74	-6.40	-0.76
400	-34.09	-22.33	-13.83	-25.31	-5.66	-7.93	-1.47
450	-38.59	-25.41	-15.80	-28.76	-6.59	-9.47	-2.18
500	-43.09	-28.49	-17.77	-32.20	-7.51	-11.00	-2.89
Duration	9.00	6.16	3.94	6.89	1.85	3.07	1.42

FOR ILLUSTRATIVE PURPOSES ONLY: For each index the current yield to worst as of 12/31/2019 was used as the base case annualized return. The annualized return sensitivity to a uniform increase or decrease in the yield curve was calculated by taking the index's Macaulay's (Modified) Duration to Worst as of 12/31/2019 multiplied by the percentage point change in the yield curve (basis point change divided by 100) and then appropriately adding or subtracting this implied percentage change in the value of the index (due to the shift in the yield curve) to the base case annualized return. This is a rough approximation of the annual return sensitivity to parallel shifts in the yield curve. **SOURCE:** PENN Capital Internal Research.

Real Estate Market

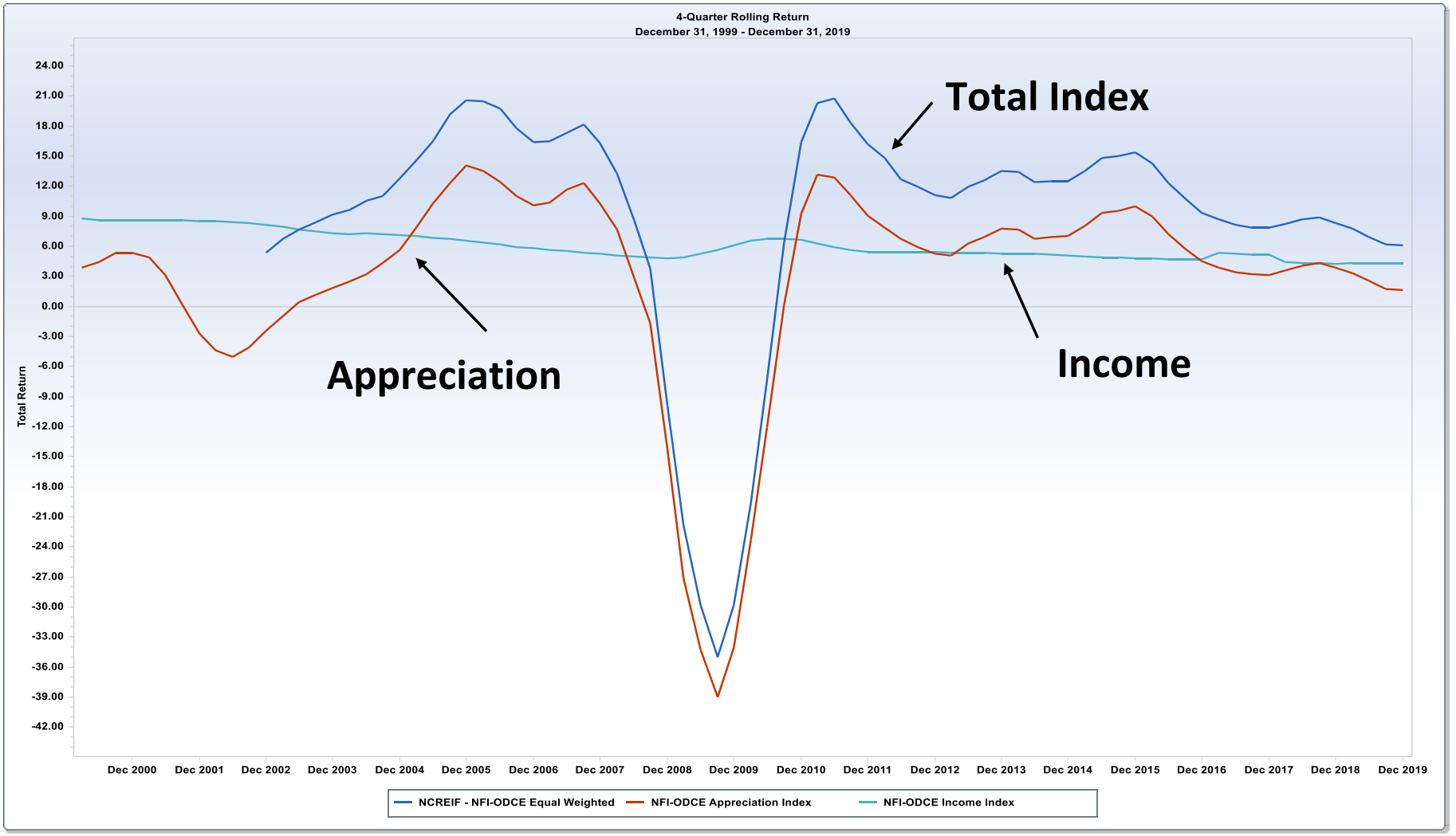
Private real estate, as measured by the NCREIF ODCE Equal Weighted Index, returned 1.5% (1.3% net) in the fourth quarter, consisting of income gains of 1.0% and modest appreciation of 0.5%. Consistent with expectations, income has been the primary driver of return, accounting for 4.3% of the 6.0% total return in 2019. The prospective low interest rates for the foreseeable future should be supportive of real estate valuations going forward, while the income component remains attractive to investors seeking sources of yield in a low rate environment. Additionally, fundamentals such as occupancy, new supply and rent growth all appear healthy. Assuming income of 4-5% per year and appreciation of 1-3%, expectations for total returns of 5%-8% from core real estate appear reasonable.

Sector	Index	4Q 19	YTD	2018	2017	2016	2015	2014	1-Year	3-Year	5-Year	10-Year
US Private	NCREIF ODCE Equal Weighted (net)	1.3	5.2	7.3	6.9	8.4	14.2	11.4	5.2	6.5	8.4	10.5
	NCREIF ODCE Income Index	1.1	4.3	4.3	5.1	4.7	4.8	5.1	4.3	4.6	4.6	5.1
	NCREIF ODCE Appreciation Index	0.5	1.6	3.9	3.1	4.5	10.0	7.0	1.6	2.9	4.6	6.1

	Total return (incl. income) 2019	Total return (incl. income) 2020	Total return (incl. income) 2021	Total return (incl. income) 2019 to 2023 (per year)
National, All Property Types (NPI)	6.4	5.7	4.9	5.6
Office	6.2	5.6	4.4	5.2
Retail	2.5	3.5	4.4	4.1
Industrial	12.5	8.7	6.5	7.9
Apartment	5.6	5.7	5.1	5.6

Source: Average of respondents' forecasts of the NCREIF Property Index (NPI) and sub-indices by property type. **Source:** Pension Real Estate Association Consensus Forecast Survey of the NCREIF Property Index Q4 2019.

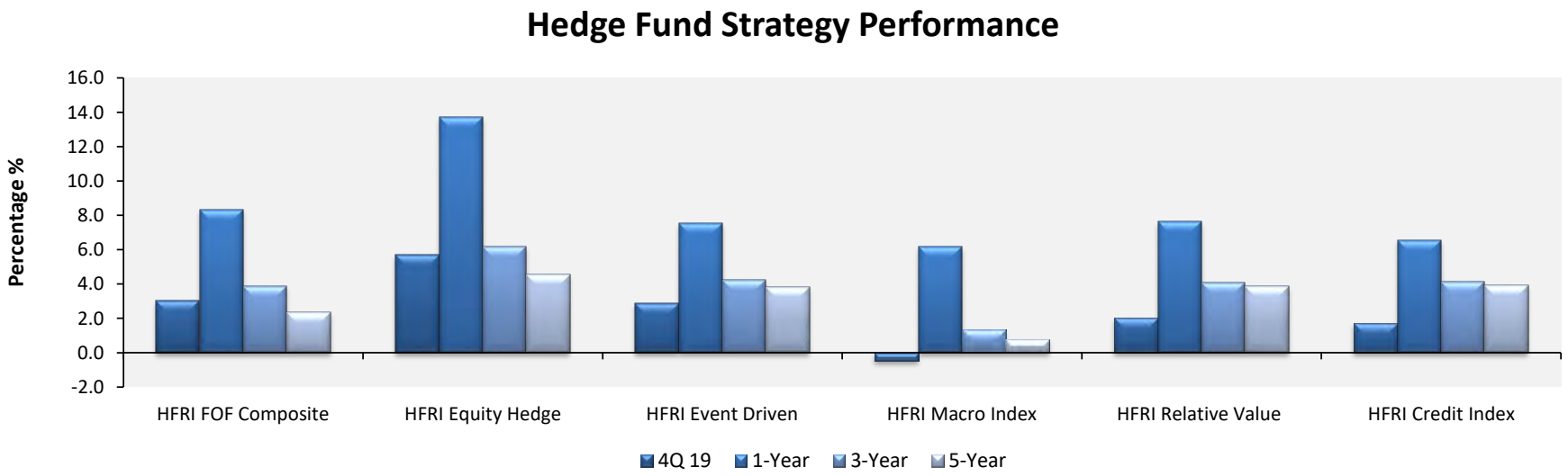
Real Estate Market



Hedge Fund of Funds Market

Hedge fund returns were broadly positive during the fourth quarter and calendar year 2019, benefiting from strong returns across asset classes. The HFRI Fund of Funds Composite rose 8.3% on the year, and the sub-strategy returns shown below were generally range-bound between 6-8%. Equity-oriented strategies were the clear outlier in a year that saw outsized global equity returns, as the HFRI Equity Hedge was up 5.7% during the fourth quarter and 13.7% for the year. Hedge fund of funds manager returns were more dispersed for the year and largely a function of how much directional equity risk they were willing to take, as well as how hedged their portfolios were. Higher levels of equity risk and less hedging generally served managers well in 2019, though many hedge fund of funds managers were more cautious in their positioning given the high level of equity market valuations and the current late stage of economic expansion. Outside of equity strategies, relative value and event driven strategies were the best performers for the year, returning 7.6% and 7.5%, respectively. Credit-oriented strategies, while broadly positive on the year, generally lagged high yield bond indices in a strong year for high yield corporate credit. Managers positioned for rising interest rates coming into 2019 through high levels of loan exposure (floating rate) performed relatively worse than the broader markets, and stressed/distressed credit opportunities remained limited during the year.

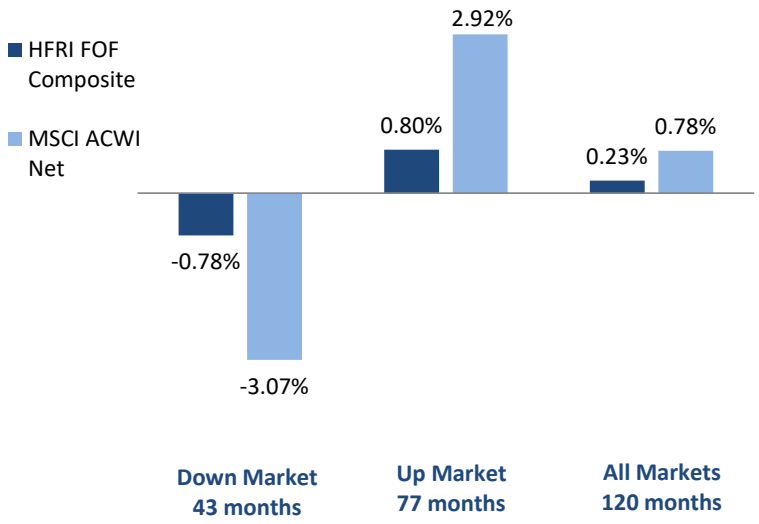
Strategy	Index	4Q 19	YTD	2018	2017	2016	2015	2014	1-Year	3-Year	5-Year	10-Year
Fund of Funds	HFRI FOF Composite	3.0	8.3	-4.0	7.8	0.5	-0.3	3.4	8.3	3.9	2.4	2.8
Equity Long-Short	HFRI Equity Hedge	5.7	13.7	-7.1	13.3	5.5	-1.0	1.8	13.7	6.2	4.6	4.7
Event Driven	HFRI Event Driven	2.9	7.5	-2.1	7.6	10.6	-3.6	1.1	7.5	4.2	3.8	4.9
Global Macro	HFRI Macro Index	-0.5	6.2	-4.1	2.2	1.0	-1.3	5.6	6.2	1.3	0.8	1.2
Relative Value	HFRI Relative Value	2.0	7.6	-0.4	5.1	7.7	-0.3	4.0	7.6	4.1	3.9	5.2
Credit	HFRI Credit Index	1.7	6.5	0.0	6.0	8.6	-1.0	3.0	6.5	4.1	3.9	5.4



Hedge Fund of Funds Market

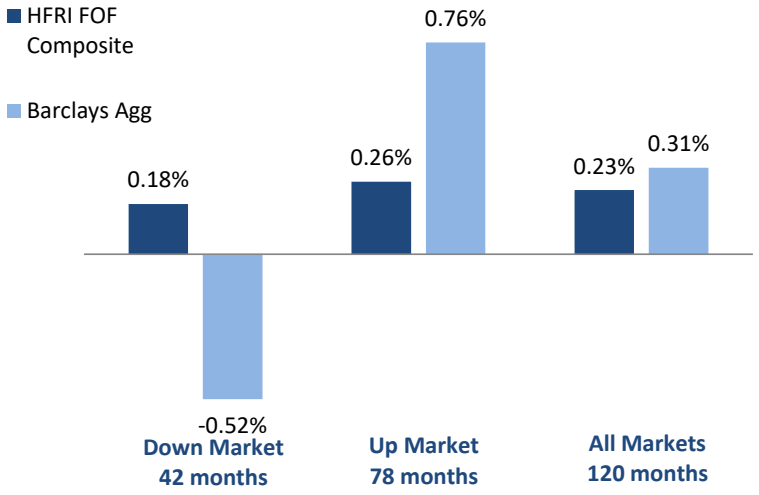
Up/Down Capture vs. Equity

Average Returns
December 2009 - December 2019



Up/Down Capture vs. Bonds

Average Returns
December 2009 - December 2019



Mid-Atlantic UFCW and Participating Employers Pension Fund

Master Consulting Services Report

Period Ended

December 31, 2019

Total Fund Growth of Assets

	Fourth Quarter	Fiscal Year-To-Date	Three Years	Five Years	Inception 3/31/13
Beginning Market Value	$115,335,067	$91,942,000	$59,362,070	$25,171,727	$0
Net Cash Flow	$2,669,057	$13,906,209	$42,028,712	$71,281,628	$95,013,769
Net Investment Change	$5,783,600	$17,939,516	$22,396,942	$27,334,370	$28,773,956
Ending Market Value	$123,787,725	$123,787,725	$123,787,725	$123,787,725	$123,787,725

- The Fund's fiscal year end is December 31st.
- The present assumed actuarial rate as determined by the plan actuary is 8.0%.

Performance Summary (Gross of Fees) - Annualized

	Market Value	% of Portfolio	Ending December 31, 2019						
			2019 Q4	Fiscal YTD	3 Yrs	5 Yrs	7 Yrs	Inception	Inception Date
Total Fund	**$123,787,725**	**100.0%**	**5.1%**	**19.2%**	**9.4%**	**7.8%**	**--**	**6.6%**	**Mar-13**
Total Domestic Large Cap Equity	**$32,572,188**	**26.3%**	**9.0%**	**30.8%**	**14.6%**	**11.3%**	**--**	**11.4%**	**Oct-14**
Total Domestic Small/Mid Cap Equity	**$13,398,798**	**10.8%**	**8.0%**	**24.7%**	**--**	**--**	**--**	**5.6%**	**Dec-17**
Total International Equity	**$3,112,582**	**2.5%**	**--**	**--**	**--**	**--**	**--**	**3.8%**	**Dec-19**
Total Short Duration High Yield Fixed Income	**$13,619,325**	**11.0%**	**1.1%**	**7.9%**	**4.3%**	**3.8%**	**--**	**3.6%**	**Nov-14**
Total Real Estate - Core	**$9,555,301**	**7.7%**	**1.5%**	**6.3%**	**7.7%**	**--**	**--**	**8.2%**	**Jul-15**
Total Real Estate - Value Add	**$4,535,068**	**3.7%**	**3.2%**	**9.5%**	**--**	**--**	**--**	**9.9%**	**Apr-18**
Total Opportunistic Strategies	**$6,058,217**	**4.9%**							
Total Global Tactical Asset Allocation	**$33,781,444**	**27.3%**	**5.1%**	**21.1%**	**8.6%**	**7.4%**	**--**	**6.2%**	**Mar-13**
Total Private Equity	**$2,127,489**	**1.7%**							
Total Cash Equivalents	**$5,027,314**	**4.1%**							

Note: Time-weighted returns are not shown for asset classes for which internal rate of return (IRR) is a more appropriate performance measurement. IRRs can be found on the corresponding manager page.

Current vs. Policy						
	Current	Current	Policy	Policy Range	Difference	Difference
Domestic Large Cap Equity	$32,572,188	26.3%	25.0%	20.0% - 30.0%	1.3%	$1,625,257
Domestic Small/Mid Cap Equity	$13,398,798	10.8%	10.0%	5.0% - 15.0%	0.8%	$1,020,025
International Equity	$3,112,582	2.5%	5.0%	0.0% - 10.0%	-2.5%	-$3,076,804
Investment Grade Fixed Income	--	--	5.0%	0.0% - 10.0%	-5.0%	-$6,189,386
Short Duration High Yield Fixed Income	$13,619,325	11.0%	10.0%	5.0% - 15.0%	1.0%	$1,240,552
Real Estate - Core	$9,555,301	7.7%	10.0%	5.0% - 15.0%	-2.3%	-$2,823,472
Real Estate - Value Add	$4,535,068	3.7%	10.0%	5.0% - 15.0%	-6.3%	-$7,843,705
Opportunistic Strategies	$6,058,217	4.9%	7.5%	2.5% - 12.5%	-2.6%	-$3,225,862
Global Tactical Asset Allocation	$33,781,444	27.3%	10.0%	5.0% - 15.0%	17.3%	$21,402,671
Private Equity	$2,127,489	1.7%	*7.5%	2.5% - 12.5%	-5.8%	-$7,156,590
Cash Equivalents	$5,027,314	4.1%	--	--	4.1%	$5,027,314
Total	**$123,787,725**	**100.0%**	**100.0%**			

- The Policy is effective TBD.
- The 7.5% private equity allocation remains under discussion.

Mid-Atlantic UFCW and Participating Employers Pension Fund - Asset Allocation

- Asset allocation reviews were presented and discussed with the Board of Trustees at the following meetings: April 28, 2014, April 29, 2015, May 31, 2017, July 13, 2017, March 3, 2018, September 25, 2018, July 18, 2019 and September 25, 2019.
- At the March 3, 2018 meeting, the Trustees elected to commit an additional $1.5M to American Realty (real estate) and $1.0M to Corbin Capital (opportunistic). The transfer to Corbin was effective April 1, 2018 and the additional allocation to American Realty funded in several installments on April 2, 2018 ($750k) and July 2, 2018 ($750k).
- At the December 12, 2018 meeting, the Trustees agreed to hear presentations from private equity managers at the next meeting. At the following meeting on July 18, 2019, the Trustees elected to consider a new Policy with focus on increasing the long-term expected return while reducing risk. The Trustees also heard a presentation from Hamilton Lane on the Secondary Feeder Fund V and are considering an allocation to the strategy.
- At the September 25, 2019 meeting, the Trustees elected to retain the following mangers: WEDGE Capital (LCV -$15M), Northern Trust (LCG-$15M), RBC (Int'l - $3M), Hardman Johnston (Int'l - $3M), SBH (Inv Grade Fixed Income -$5.5M). The Trustees also elected to increase allocations to ARA (Core RE -$2M) and Intercontinental (Value Add RE -$7M) and adopt a modified Policy pending further discussion. Contracts for the new managers are under review by counsel and capital calls pending from the real estate managers. Status: Hardman Johnston funded December 1, 2019. Intercontinental funded January 9, 2020, and ARA funding scheduled for April 1, 2020.

Recommendations: Review additional asset allocation scenarios and adopt new Policy.

Mid-Atlantic UFCW and Participating Employers Pension Fund – Recent Portfolio Activity

2019 – 1Q

- On February 20, 2019, excess cash of $4.2M transferred to Vanguard ($2.2M), Rothschild ($1.0M) and Chartwell ($1.0M) for rebalancing.

2019 – 2Q

- On May 23, 2019, excess cash of $4.0M transferred to Vanguard ($1.0M), Rothschild ($1.0M) and Chartwell ($2.0M) for rebalancing.

2019 – 3Q

- None.

2019 – 4Q

- On December 1, 2019, Hardman Johnston (int'l equity) received initial funding of $3.0M from cash reserve.

Commitment and Funding of Private Equity (In Millions) as of December 31, 2019				
Manager	Total Commitment	Called to Date	Amount of Remaining Commitment	Distributions To Date
GCM Grosvenor Secondary Opportunities Fund II, LP*	$8.00	$2.17	$6.19	$0.35
Total	$8.00	$2.17	$6.19	$0.35

*Amount of remaining commitment includes recallable distributions of $351,777.

Commitment and Funding of Opportunistic Investments (In Millions) as of December 31, 2019				
Manager	Total Commitment	Called to Date	Amount of Remaining Commitment	Distributions To Date
EnTrustPermal Special Opportunities Fund IV Ltd.	$2.00	$1.47	$0.53	$0.00
Total	$2.00	$1.47	$0.53	$0.00

Commitment and Funding of Real Estate (In Millions) as of December 31, 2019				
Manager	Total Commitment	Called to Date	Amount of Remaining Commitment	Distributions To Date
American Core Realty Fund, LLC	$9.50	$7.50	$2.00	$0.00
Intercontinental U.S. Real Estate Investment Fund, LLC*	$11.00	$4.00	$7.00	$0.00
Total	$20.50	$11.50	$9.00	$0.00

*The commitment is fully funded as of January 9, 2020.

Performance Detail (Gross of Fees) - Annualized

	Market Value	% of Portfolio	Ending December 31, 2019						
			2019 Q4	Fiscal YTD	3 Yrs	5 Yrs	7 Yrs	Inception	Inception Date
Total Fund	**$123,787,725**	**100.0%**	**5.1%**	**19.2%**	**9.4%**	**7.8%**	**--**	**6.6%**	**Mar-13**
Total Domestic Large Cap Equity	**$32,572,188**	**26.3%**	**9.0%**	**30.8%**	**14.6%**	**11.3%**	**--**	**11.4%**	**Oct-14**
Vanguard Index Trust Total Stk Mkt	$32,572,188	26.3%	9.0%	30.8%	14.6%	11.3%	--	11.4%	Oct-14
CRSP US Total Market TR USD			*9.0%*	*30.8%*	*14.6%*	*11.2%*	--	*11.3%*	*Oct-14*
Total Domestic Small/Mid Cap Equity	**$13,398,798**	**10.8%**	**8.0%**	**24.7%**	**--**	**--**	**--**	**5.6%**	**Dec-17**
Rothschild Asset Management	$13,398,798	10.8%	8.0%	24.7%	--	--	--	5.6%	Dec-17
Russell 2500			*8.5%*	*27.8%*	--	--	--	*7.2%*	*Dec-17*
Total International Equity	**$3,112,582**	**2.5%**	**--**	**--**	**--**	**--**	**--**	**3.8%**	**Dec-19**
Hardman Johnston International Equity Group Trust	$3,112,582	2.5%	--	--	--	--	--	3.8%	Dec-19
MSCI EAFE			--	--	--	--	--	*3.2%*	*Dec-19*
MSCI ACWI ex USA			--	--	--	--	--	*4.3%*	*Dec-19*
Total Short Duration High Yield Fixed Income	**$13,619,325**	**11.0%**	**1.1%**	**7.9%**	**4.3%**	**3.8%**	**--**	**3.6%**	**Nov-14**
Chartwell Investment Partners Short Duration High Yield	$13,619,325	11.0%	1.1%	7.9%	4.3%	3.8%	--	3.6%	Oct-14
BofA ML - U.S. HY Cash Pay 1-3 Yr BB			*1.5%*	*8.7%*	*4.5%*	*4.6%*	--	*4.4%*	*Oct-14*
Total Real Estate - Core	**$9,555,301**	**7.7%**	**1.5%**	**6.3%**	**7.7%**	**--**	**--**	**8.2%**	**Jul-15**
American Core Realty Fund, LLC	$9,555,301	7.7%	1.5%	6.3%	7.7%	--	--	8.2%	Jul-15
NCREIF ODCE Equal Weighted Net			*1.3%*	*5.2%*	*6.5%*	--	--	*7.7%*	*Jul-15*
Total Real Estate - Value Add	**$4,535,068**	**3.7%**	**3.2%**	**9.5%**	**--**	**--**	**--**	**9.9%**	**Apr-18**
Intercontinental U.S. Real Estate Investment Fund, LLC	$4,535,068	3.7%	3.2%	9.5%	--	--	--	9.9%	Apr-18
NCREIF ODCE Equal Weighted Net			*1.3%*	*5.2%*	--	--	--	*6.0%*	*Apr-18*

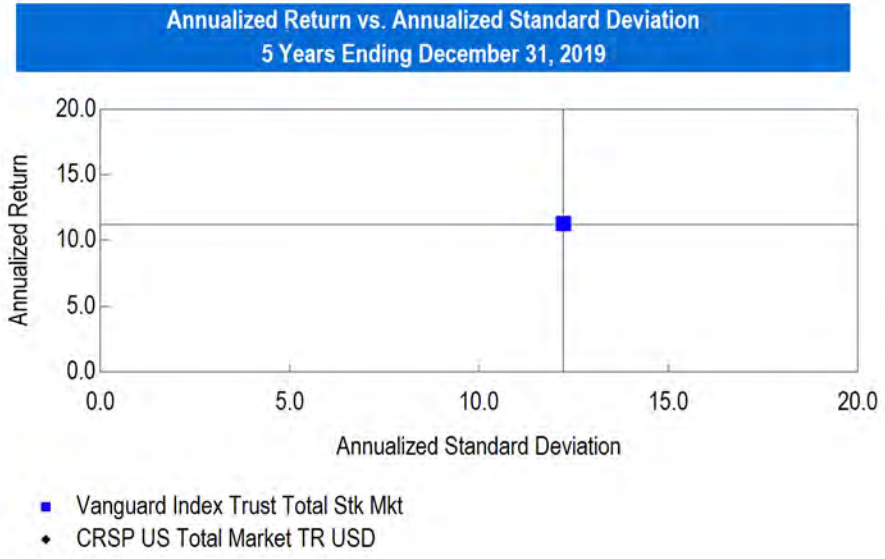
Performance Detail (Gross of Fees) - Annualized

	Market Value	% of Portfolio	Ending December 31, 2019						
			2019 Q4	Fiscal YTD	3 Yrs	5 Yrs	7 Yrs	Inception	Inception Date
Total Opportunistic Strategies	**$6,058,217**	**4.9%**							
Corbin ERISA Opportunity Fund, L.P.	$4,382,326	3.5%	0.7%	6.1%	--	--	--	5.8%	Jan-18
HFRI Credit Index			*1.6%*	*6.5%*	--	--	--	*3.2%*	*Jan-18*
EnTrustPermal Special Opp Fund IV Ltd. - Class A Shares	$1,675,891	1.4%							
Total Global Tactical Asset Allocation	**$33,781,444**	**27.3%**	**5.1%**	**21.1%**	**8.6%**	**7.4%**	**--**	**6.2%**	**Mar-13**
First Eagle Global Value Fund	$33,781,444	27.3%	5.1%	21.1%	8.6%	7.4%	--	6.6%	Jul-14
65% MSCI World Index/35% CitigroupWGBI			*5.4%*	*19.9%*	*9.7%*	*6.5%*	--	*5.8%*	*Jul-14*
Total Private Equity	**$2,127,489**	**1.7%**							
GCM Grosvenor Secondary Opportunities Fund II, L.P.	$2,127,489	1.7%							
Total Cash Equivalents	**$5,027,314**	**4.1%**							
Cash	$5,027,314	4.1%							

Account Information	
Account Name	**Vanguard Index Trust Total Stk Mkt**
Account Structure	**Mutual Fund**
Investment Style	**Passive**
Inception Date	**10/31/14**
Account Type	**Equity**
Benchmark	**CRSP US Total Market TR USD**
Universe	**Large Cap MStar MF**

Vanguard Index Trust Total Stk Mkt
Ending December 31, 2019

	Fourth Quarter	Inception 10/31/14
Beginning Market Value	$29,880,499	$0
Net Cash Flow	$0	$21,349,654
Net Investment Change	$2,691,689	$11,222,534
Ending Market Value	$32,572,188	$32,572,188



3 Years Ending December 31, 2019

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Index Trust Total Stk Mkt	14.6%	12.4%	100.2%	99.8%
CRSP US Total Market TR USD	14.6%	12.4%	100.0%	100.0%

5 Years Ending December 31, 2019

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard Index Trust Total Stk Mkt	11.3%	12.2%	100.2%	99.9%
CRSP US Total Market TR USD	11.2%	12.2%	100.0%	100.0%

Ending December 31, 2019

	2019 Q4	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	2019	Rank	2018	Rank	2017	Rank	2016	Rank	2015	Rank	Inception	Inception Date
Vanguard Index Trust Total Stk Mkt	9.0%	40	30.8%	40	14.6%	44	11.3%	36	30.8%	40	-5.1%	48	21.3%	50	12.7%	31	0.5%	45	11.4%	Oct-14
CRSP US Total Market TR USD	*9.0%*	*42*	*30.8%*	*40*	*14.6%*	*46*	*11.2%*	*38*	*30.8%*	*40*	*-5.2%*	*49*	*21.2%*	*50*	*12.7%*	*31*	*0.4%*	*46*	*11.3%*	*Oct-14*

Note: Returns are gross of fees.

Mid-Atlantic UFCW Unions and Participating Employers Pension Fund - Vanguard Index Trust Total Stk Mkt

Manager Summary

Recommendation: None.

Compliance Summary

This is an index investment in a mutual fund; the Manager will not sign the quarterly compliance questionnaires.

Account Information	
Account Name	**Rothschild Asset Management**
Account Structure	**Separate Account**
Investment Style	**Active**
Inception Date	**12/31/17**
Account Type	**US Stock Small/Mid**
Benchmark	**Russell 2500**
Universe	**eV US Small-Mid Cap Equity Gross**

Rothschild Asset Management Ending December 31, 2019	Fourth Quarter	Inception 12/31/17
Beginning Market Value	$12,402,060	$0
Net Cash Flow	$0	$12,175,000
Net Investment Change	$996,737	$1,223,798
Ending Market Value	$13,398,798	$13,398,798

	Ending December 31, 2019																			
	2019 Q4	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	2019	Rank	2018	Rank	2017	Rank	2016	Rank	2015	Rank	Inception	Inception Date
Rothschild Asset Management	8.0%	48	24.7%	74	--	--	--	--	24.7%	74	-10.6%	58	--	--	--	--	--	--	5.6%	Dec-17
Russell 2500	*8.5%*	*39*	*27.8%*	*58*	--	--	--	--	*27.8%*	*58*	*-10.0%*	*53*	--	--	--	--	--	--	*7.2%*	

Note: Returns are gross of fees.

Mid-Atlantic UFCW Unions and Participating Employers Pension Fund - Rothschild Asset Management

Manager Summary

- IPS conducted due diligence meetings with Rothschild on March 28, 2018, March 20, 2019 and February 24, 2020.
- In July 2019, Rothschild announced the impending departure of Dan Oshinskie, one of the portfolio managers on the Small/Mid Cap Equity strategy, at the end of 2019.

Recommendation: Monitor due to personnel departure.

Compliance Summary

Exceptions: None.

Action to be taken: None.

Items of Interest: None.

Account Information	
Account Name	**Hardman Johnston International Equity Group Trust**
Account Structure	**Commingled Fund**
Investment Style	**Active**
Inception Date	**12/01/19**
Account Type	
Benchmark	**MSCI EAFE**
Universe	**eV All EAFE Equity Gross**

Hardman Johnston International Equity Group Trust Ending December 31, 2019		
	Fourth Quarter	**Inception 12/1/19**
Beginning Market Value	--	--
Net Cash Flow	$3,000,000	--
Net Investment Change	$112,582	--
Ending Market Value	$3,112,582	--

					Ending December 31, 2019						
	2019 Q4	1 Yr	3 Yrs	5 Yrs	2019	2018	2017	2016	2015	Inception	Inception Date
Hardman Johnston International Equity Group Trust	--	--	--	--	--	--	--	--	--	3.8%	Dec-19
MSCI EAFE	--	--	--	--	--	--	--	--	--	*3.2%*	*Dec-19*
MSCI ACWI ex USA	--	--	--	--	--	--	--	--	--	*4.3%*	*Dec-19*

Note: Returns are gross of fees.

Mid-Atlantic UFCW Unions and Participating Employers Pension Fund - Hardman Johnston International Equity Group Trust

Manager Summary

- Johnston Asset Management has changed the name of the firm to Hardman Johnston Global Advisors, LLC, effective September 27, 2017. The name change is intended to reflect Cassandra Hardman's contributions to the firm. No changes to the firm's investment philosophy, process, or investment team are anticipated.
- IPS conducted due diligence meetings with Hardman Johnston on August 30, 2017, April 2, 2018 and April 5, 2019.

Recommendation: None.

Compliance Summary

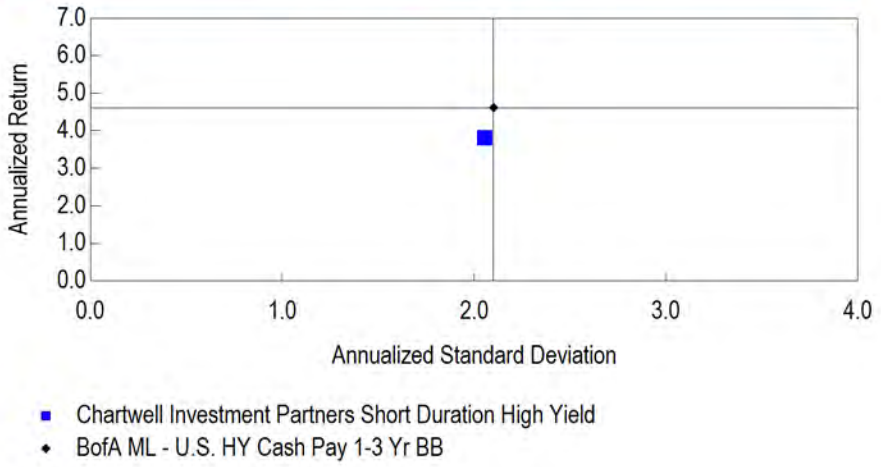
Checklist compliance monitoring will begin when the Investment Policy Statement and Manager Addendum are signed.

Account Information	
Account Name	**Chartwell Investment Partners Short Duration High Yield**
Account Structure	**Separate Account**
Investment Style	**Active**
Inception Date	**10/31/14**
Account Type	**US Fixed Income High Yield**
Benchmark	**BofA ML - U.S. HY Cash Pay 1-3 Yr BB**
Universe	

Chartwell Investment Partners Short Duration High Yield
Ending December 31, 2019

	Fourth Quarter	Inception 10/31/14
Beginning Market Value	$13,466,416	$0
Net Cash Flow	$0	$12,083,867
Net Investment Change	$152,909	$1,535,458
Ending Market Value	$13,619,325	$13,619,325

Annualized Return vs. Annualized Standard Deviation
5 Years Ending December 31, 2019



3 Years Ending December 31, 2019

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Chartwell Investment Partners Short Duration High Yield	4.3%	1.7%	95.1%	103.5%
BofA ML - U.S. HY Cash Pay 1-3 Yr BB	4.5%	1.7%	100.0%	100.0%

5 Years Ending December 31, 2019

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Chartwell Investment Partners Short Duration High Yield	3.8%	2.1%	86.7%	109.7%
BofA ML - U.S. HY Cash Pay 1-3 Yr BB	4.6%	2.1%	100.0%	100.0%

				Ending December 31, 2019						
	2019 Q4	1 Yr	3 Yrs	5 Yrs	2019	2018	2017	2016	2015	Inception	Inception Date
Chartwell Investment Partners Short Duration High Yield	1.1%	7.9%	4.3%	3.8%	7.9%	1.0%	4.0%	6.7%	-0.3%	3.6%	Oct-14
BofA ML - U.S. HY Cash Pay 1-3 Yr BB	*1.5%*	*8.7%*	*4.5%*	*4.6%*	*8.7%*	*1.4%*	*3.6%*	*8.5%*	*1.2%*	*4.4%*	*Oct-14*

Note: Returns are gross of fees.

Mid-Atlantic UFCW Unions and Participating Employers Pension Fund - Chartwell Investment Partners Short Duration High Yield

Manager Summary

- IPS conducted due diligence meetings with Chartwell on March 22, 2017, October 8, 2018, January 7, 2019 and August 29, 2019.
- On January 25, 2018, Chartwell announced their planned acquisition of the public equity and fixed income businesses of Columbia Partners, an investment management firm based in Chevy Chase, MD. While a consent to assignment was required on the part of Columbia Partners' clients, no action is required on the part of Chartwell clients. The transaction closed on April 9, 2018.

Recommendation: None.

Compliance Summary

Exceptions: None.

Action to be taken: None.

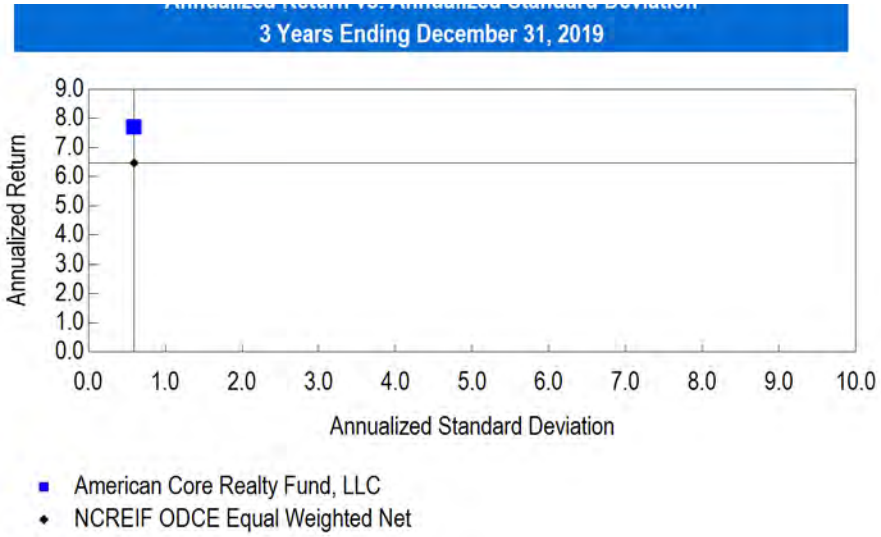
Items of Interest: None.

Account Information	
Account Name	**American Core Realty Fund, LLC**
Account Structure	**Commingled Fund**
Investment Style	**Active**
Inception Date	**7/01/15**
Account Type	**Real Estate**
Benchmark	**NCREIF ODCE Equal Weighted Net**
Universe	

American Core Realty Fund, LLC
Ending December 31, 2019

	Fourth Quarter	Inception 7/1/15
Beginning Market Value	$9,443,648	$0
Net Cash Flow	$0	$7,500,000
Net Investment Change	$111,652	$2,055,301
Ending Market Value	$9,555,301	$9,555,301

Income is reinvested.



3 Years Ending December 31, 2019

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
American Core Realty Fund, LLC	7.7%	0.6%	120.4%	--
NCREIF ODCE Equal Weighted Net	6.5%	0.6%	100.0%	--

Ending December 31, 2019

	2019 Q4	1 Yr	3 Yrs	5 Yrs	2019	2018	2017	2016	2015	Inception	Inception Date
American Core Realty Fund, LLC	1.5%	6.3%	7.7%	--	6.3%	8.7%	8.1%	7.1%	--	8.2%	Jul-15
NCREIF ODCE Equal Weighted Net	*1.3%*	*5.2%*	*6.5%*	*8.3%*	*5.2%*	*7.3%*	*6.9%*	*8.3%*	*14.2%*	*7.7%*	*Jul-15*

Note: Returns are gross of fees.

Mid-Atlantic UFCW Unions and Participating Employers Pension Fund - American Core Realty Fund, LLC

Manager Summary

- IPS conducted due diligence meetings with American Realty Advisors on June 21, 2017, June 4, 2018 and August 19, 2019.

Recommendation: None.

Compliance Summary

Manager verified that the portfolio is currently, and has been during the past quarter, in compliance with the firm's commingled investment vehicle investment guidelines and/or offering document governing the management of the investment. With respect to the portfolio(s) under management, manager acknowledges sole fiduciary responsibility under ERISA for adherence with the commingled investment vehicle and /or offering document guidelines.

Items of Interest: None.

Account Information	
Account Name	**Intercontinental U.S. Real Estate Investment Fund, LLC**
Account Structure	**Commingled Fund**
Investment Style	**Active**
Inception Date	**4/01/18**
Account Type	**Real Estate**
Benchmark	**NCREIF ODCE Equal Weighted Net**
Universe	

Intercontinental U.S. Real Estate Investment Fund, LLC
Ending December 31, 2019

	Fourth Quarter	Inception 4/1/18
Beginning Market Value	$4,419,840	$0
Net Cash Flow	$0	$4,000,000
Net Investment Change	$115,228	$535,068
Ending Market Value	$4,535,068	$4,535,068

Income is reinvested.

					Ending December 31, 2019						
	2019 Q4	1 Yr	3 Yrs	5 Yrs	2019	2018	2017	2016	2015	Inception	Inception Date
Intercontinental U.S. Real Estate Investment Fund, LLC	3.2%	9.5%	--	--	9.5%	--	--	--	--	9.9%	Apr-18
NCREIF ODCE Equal Weighted Net	*1.3%*	*5.2%*	--	--	*5.2%*	--	--	--	--	*6.0%*	*Apr-18*

Note: Returns are gross of fees.

Mid-Atlantic UFCW Unions and Participating Employers Pension Fund - Intercontinental U.S. Real Estate Investment Fund, LLC

Manager Summary

- IPS conducted due diligence meetings with Intercontinental on November 16, 2017, November 14, 2018 and October 29, 2019.

Recommendation: None.

Compliance Summary

Manager verified the portfolio is currently, and has been during the past quarter, in compliance with the firm's commingled investment vehicle guidelines and/or offering document governing the management of the investment. With respect to the portfolio(s) under management, manager stated insofar as Intercontinental Real Estate Corporation, as Manager, has a mandate to operate U.S. Real Estate Investment Fund (U.S. REIF) as a "real estate operating company (REOC)" pursuant to ERISA regulations, the assets of the Fund are not "plan assets" therefore the Manager of the Fund does not act as an ERISA fiduciary. The Manager does however operate the Fund pursuant to the "prudent man rule" which is the same standard applicable to ERISA fiduciaries. Furthermore, in the event that assets of the Fund are deemed "plan assets", then the Manager would undertake operating the Fund as an ERISA fiduciary.

Item of Interest: None.

Account Information	
Account Name	**Corbin ERISA Opportunity Fund, L.P.**
Account Structure	**Commingled Fund**
Investment Style	**Active**
Inception Date	**1/01/18**
Account Type	**Fund of Funds**
Benchmark	**HFRI Credit Index**
Universe	

Corbin ERISA Opportunity Fund, L.P.
Ending December 31, 2019

	Fourth Quarter	Inception 1/1/18
Beginning Market Value	$4,359,794	$0
Net Cash Flow	$0	$4,000,000
Net Investment Change	$22,532	$382,326
Ending Market Value	$4,382,326	$4,382,326

					Ending December 31, 2019						
	2019 Q4	1 Yr	3 Yrs	5 Yrs	2019	2018	2017	2016	2015	Inception	Inception Date
Corbin ERISA Opportunity Fund, L.P.	0.7%	6.1%	--	--	6.1%	5.5%	--	--	--	5.8%	Jan-18
HFRI Credit Index	*1.6%*	*6.5%*	--	--	*6.5%*	*0.0%*	--	--	--	*3.2%*	*Jan-18*

Note: Returns are gross of fees.

Mid-Atlantic UFCW Unions and Participating Employers Pension Fund - Corbin ERISA Opportunity Fund, L.P.

Manager Summary

- IPS conducted due diligence meetings with Corbin Capital on October 19, 2017, April 17, 2018, August 9, 2018, October 23, 2018, January 10, 2019, March 20, 2019, August 5, 2019, October 30, 2019, February 5, 2020 and March 13, 2020.

Recommendation: None.

Compliance Summary

The manager verified the portfolio and individual holdings are currently, and have been during the past quarter, in compliance with the firm's commingled investment vehicle guidelines and/or offering document governing the management of the investment. With respect to the portfolio(s) under management, the manager acknowledges sole fiduciary responsibility under ERISA for adherence with the commingled investment vehicle and/or offering document guidelines.

Items of Interest: Personnel Changes - David Crowe, Director of Operations, left Corbin in December 2019. David's replacement, Justin Kurlanzik, joined the firm in November 2019.

Account Information	
Account Name	**EnTrustPermal Special Opp Fund IV Ltd. - Class A Shares**
Account Structure	**Commingled Fund**
Investment Style	**Active**
Inception Date	**3/01/18**
Account Type	**Fund of Funds**
Benchmark	
Universe	

EnTrustPermal Special Opp Fund IV Ltd. - Class A Shares Ending December 31, 2019		
	Fourth Quarter	**Inception 3/1/18**
Beginning Market Value	$1,456,781	$0
Net Cash Flow	$108,003	$1,468,887
Net Investment Change	$111,107	$207,004
Ending Market Value	$1,675,891	$1,675,891

Note: Investment is valued as of December 31, 2019 plus or minus flows.

EnTrust Capital Special Opportunities Fund IV Ltd. - Class A Shares reported since inception of the fund through December 31, 2019:

- Net Internal Rate of Return is 15.33%

Mid-Atlantic UFCW Unions and Participating Employers Pension Fund - EnTrustPermal Special Opp Fund IV Ltd. - Class A Shares

Manager Summary

- IPS conducted due diligence meetings with EnTrust on February 21, 2017, May 31, 2018, November 19, 2018, May 20, 2019 and November 8, 2019.
- In March 2019, EnTrustPermal rebranded the firm as EnTrust Global.
- On February 18, 2020, Legg Mason (which owns 65% of EnTrust Global) announced they would be acquired by Franklin Templeton. EnTrust subsequently announced that they will be reacquiring Legg Mason's interest in EnTrust, effective upon the consummation of the Franklin Templeton/Legg Mason combination, to once again become an independent, privately-owned firm. The transaction is expected to close no later than the third quarter of 2020.

Investment is illiquid (closed-end, self-liquidating fund).

Compliance Summary

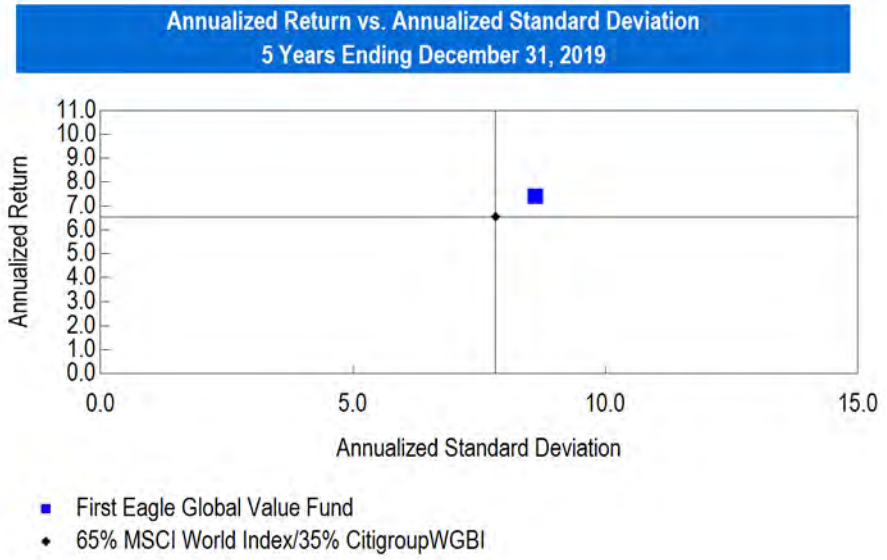
Manager verified the portfolio is currently, and has been during the past quarter, in compliance with the firm's commingled investment vehicle guidelines and/or offering document governing the management of the investment. With respect to the portfolio(s) under management, the manager acknowledges sole fiduciary responsibility under ERISA for adherence with the commingled investment vehicle and/or offering document guidelines.

Items of Interest: Personnel Departure - During the quarter, Tre Weicker, Senior Vice President, Investment Research, left the firm.

Account Information	
Account Name	**First Eagle Global Value Fund**
Account Structure	**Commingled Fund**
Investment Style	**Active**
Inception Date	**7/31/14**
Account Type	**Other**
Benchmark	**65% MSCI World Index/35% CitigroupWGBI**
Universe	

First Eagle Global Value Fund
Ending December 31, 2019

	Fourth Quarter	Inception 7/31/14
Beginning Market Value	$32,209,654	$0
Net Cash Flow	$0	$24,050,000
Net Investment Change	$1,571,790	$9,731,444
Ending Market Value	$33,781,444	$33,781,444



3 Years Ending December 31, 2019

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
First Eagle Global Value Fund	8.6%	8.4%	98.3%	113.5%
65% MSCI World Index/35% CitigroupWGBI	9.7%	7.5%	100.0%	100.0%

5 Years Ending December 31, 2019

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
First Eagle Global Value Fund	7.4%	8.6%	105.3%	97.0%
65% MSCI World Index/35% CitigroupWGBI	6.5%	7.8%	100.0%	100.0%

Ending December 31, 2019

	2019 Q4	1 Yr	3 Yrs	5 Yrs	2019	2018	2017	2016	2015	Inception	Inception Date
First Eagle Global Value Fund	5.1%	21.1%	8.6%	7.4%	21.1%	-7.6%	14.4%	11.4%	0.2%	6.6%	Jul-14
65% MSCI World Index/35% CitigroupWGBI	*5.4%*	*19.9%*	*9.7%*	*6.5%*	*19.9%*	*-5.8%*	*17.0%*	*5.6%*	*-1.6%*	*5.8%*	*Jul-14*

Note: Returns are gross of fees.

Mid-Atlantic UFCW Unions and Participating Employers Pension Fund - First Eagle Global Value Fund

Manager Summary

- IPS conducted due diligence meetings with First Eagle on April 13, 2017, May 11, 2017, July 24, 2017, November 9, 2017, December 13, 2018 and November 12, 2019.

- Effective July 1, 2018, First Eagle lowered the annual expense cap from 87 basis points to 78 basis points for the Global Value commingled fund. The annual management fee remains at 75 basis points. Investors should receive a supplement to the fund's Private Placement Memorandum on or before July 31, and no action is required on the part of investors to receive the reduced expense cap.

Recommendation: None.

Compliance Summary

Manager verified that the portfolio is currently, and has been during the past quarter, in compliance with the firm's commingled investment vehicle guidelines and/or offering document governing the management of the investment. With respect to the portfolio(s) under management, manager acknowledges sole fiduciary responsibility under ERISA for adherence with the commingled investment vehicle and /or offering document guidelines.

Items of Interest: Personnel Departures - The manager stated effective January 2, 2020, Lynn Perkins (Chief Financial Officer of FEIM) left the firm. Effective December 31, 2019, Oanh Nguyen (Senior Analyst) left the firm. **Personnel Change -** The manager stated effective January 2, 2020, Brian Margulies became the Chief Financial Officer of FEIM.

Account Information	
Account Name	**GCM Grosvenor Secondary Opportunities Fund II, L.P.**
Account Structure	**Commingled Fund**
Investment Style	**Active**
Inception Date	**9/01/17**
Account Type	**Private Equity**
Benchmark	
Universe	

GCM Grosvenor Secondary Opportunities Fund II, L.P.

Ending December 31, 2019

	Fourth Quarter	Inception 9/1/17
Beginning Market Value	$2,254,678	$0
Net Cash Flow	$0	$1,782,384
Net Investment Change	-$127,189	$345,105
Ending Market Value	$2,127,489	$2,127,489

Note: Investment is valued as of December 31, 2019.

Grosvenor Secondary Opportunities Fund II, LP reported since inception of the fund through December 31, 2019:

- Net Internal Rate of Return for 1st close investors is 19.37%

Mid-Atlantic UFCW Unions and Participating Employers Pension Fund - GCM Grosvenor Secondary Opportunities Fund II, L.P.

Manager Summary

- IPS conducted due diligence meetings with Grosvenor on January 5, 2017, December 5, 2017, July 25, 2018, October 22, 2018 and February 20, 2019.

Investment is illiquid (closed-end, self-liquidating fund).

Compliance Summary

Manager verified that the portfolio is currently, and has been during the past quarter, in compliance with the commingled investment vehicle guidelines and/or offering document governing the management of the investment. With respect to the portfolio under management, manager acknowledges sole fiduciary responsibility under ERISA for adherence with the commingled investment vehicle and/or offering document guidelines.

Items of Interest: Communication – The manager states they believe the Fund is receiving all reporting it requires or requests or has requested, but as the general partner and a fiduciary to GSF II and its investors, the firm cannot be bound by the terms and conditions of the Fund's investment policy statement. **Form ADV** – 1) Item 4: The language was updated relating to the firm's principal owner. 2) Item 5: The language was updated relating to expenses borne by GCMLP Funds. 3) Item 8: Updated to include the following: language describing the Firm's Global Allocation Policy; language relating to Private Equity, Real Estate, and Infrastructure Investments, and disclosure relating to the Labor Impact Program; the discussion of the risks and conflicts of interest associated with investments in GCMLP Funds was expanded. 4) Item 10: The discussion of Financial Industry Activities and Affiliations was updated. 5) Item 12: The discussion of the Firm's Brokerage Practices was updated. 6) Item 17: The discussion relating to Voting Client Securities was revised. **Personnel Departure –** Jennifer Stack, Head of the Risk Management Team, left the firm at the end of November to pursue other opportunities.

Commission Recapture Provider

- IPS suggests the plan consider retaining a commission recapture provider to enable the plan to potentially recover a portion of brokerage costs incurred from the purchase and sale of equity securities. The recapture revenue can be used to defray expenses associated with the overall administration of the Plan. FELRA and UFCW Pension Fund currently utilizes Cowen and Company, LLC for this service.

Custody Bank

- PNC Bank.

Investment Policy Statement

- Investment policy statement was adopted in August 2014.

Commingled Funds

- Commingled Fund: Due to the commingled fund structure, IPS does not monitor the holdings within the commingled fund for compliance with the client's investment policy statement. The commingled fund is governed by its own investment policy.

Mid-Atlantic UFCW and Participating Employers Pension Fund

Appendix

Performance Detail (Net of Fees) - Annualized

	Market Value	% of Portfolio	Ending December 31, 2019						
			2019 Q4	Fiscal YTD	3 Yrs	5 Yrs	7 Yrs	Inception	Inception Date
Total Fund	**$123,787,725**	**100.0%**	**4.9%**	**18.4%**	**8.6%**	**7.0%**	**--**	**6.0%**	**Mar-13**
Total Domestic Large Cap Equity	**$32,572,188**	**26.3%**	**9.0%**	**30.8%**	**14.5%**	**11.2%**	**--**	**11.3%**	**Oct-14**
Vanguard Index Trust Total Stk Mkt	$32,572,188	26.3%	9.0%	30.8%	14.5%	11.2%	--	11.3%	Oct-14
CRSP US Total Market TR USD			*9.0%*	*30.8%*	*14.6%*	*11.2%*	--	*11.3%*	*Oct-14*
Total Domestic Small/Mid Cap Equity	**$13,398,798**	**10.8%**	**7.8%**	**23.6%**	**--**	**--**	**--**	**4.7%**	**Dec-17**
Rothschild Asset Management	$13,398,798	10.8%	7.8%	23.6%	--	--	--	4.7%	Dec-17
Russell 2500			*8.5%*	*27.8%*	--	--	--	*7.2%*	*Dec-17*
Total International Equity	**$3,112,582**	**2.5%**	**--**	**--**	**--**	**--**	**--**	**3.8%**	**Dec-19**
Hardman Johnston International Equity Group Trust	$3,112,582	2.5%	--	--	--	--	--	3.8%	Dec-19
MSCI EAFE			--	--	--	--	--	*3.2%*	*Dec-19*
MSCI ACWI ex USA			--	--	--	--	--	*4.3%*	*Dec-19*
Total Short Duration High Yield Fixed Income	**$13,619,325**	**11.0%**	**1.0%**	**7.4%**	**3.8%**	**3.3%**	**--**	**3.1%**	**Nov-14**
Chartwell Investment Partners Short Duration High Yield	$13,619,325	11.0%	1.0%	7.4%	3.8%	3.3%	--	3.1%	Oct-14
BofA ML - U.S. HY Cash Pay 1-3 Yr BB			*1.5%*	*8.7%*	*4.5%*	*4.6%*	--	*4.4%*	*Oct-14*
Total Real Estate - Core	**$9,555,301**	**7.7%**	**1.2%**	**5.1%**	**6.5%**	**--**	**--**	**7.0%**	**Jul-15**
American Core Realty Fund, LLC	$9,555,301	7.7%	1.2%	5.1%	6.5%	--	--	7.0%	Jul-15
NCREIF ODCE Equal Weighted Net			*1.3%*	*5.2%*	*6.5%*	--	--	*7.7%*	*Jul-15*
Total Real Estate - Value Add	**$4,535,068**	**3.7%**	**2.6%**	**8.0%**	**--**	**--**	**--**	**8.2%**	**Apr-18**
Intercontinental U.S. Real Estate Investment Fund, LLC	$4,535,068	3.7%	2.6%	8.0%	--	--	--	8.2%	Apr-18
NCREIF ODCE Equal Weighted Net			*1.3%*	*5.2%*	--	--	--	*6.0%*	*Apr-18*

Performance Detail (Net of Fees) - Annualized

	Market Value	% of Portfolio	Ending December 31, 2019						
			2019 Q4	Fiscal YTD	3 Yrs	5 Yrs	7 Yrs	Inception	Inception Date
Total Opportunistic Strategies	**$6,058,217**	**4.9%**							
Corbin ERISA Opportunity Fund, L.P.	$4,382,326	3.5%	0.5%	5.2%	--	--	--	5.0%	Jan-18
HFRI Credit Index			*1.6%*	*6.5%*	--	--	--	*3.2%*	*Jan-18*
EnTrustPermal Special Opp Fund IV Ltd. - Class A Shares	$1,675,891	1.4%							
Total Global Tactical Asset Allocation	**$33,781,444**	**27.3%**	**4.9%**	**20.0%**	**7.6%**	**6.4%**	**--**	**5.5%**	**Mar-13**
First Eagle Global Value Fund	$33,781,444	27.3%	4.9%	20.0%	7.6%	6.4%	--	5.7%	Jul-14
65% MSCI World Index/35% CitigroupWGBI			*5.4%*	*19.9%*	*9.7%*	*6.5%*	--	*5.8%*	*Jul-14*
Total Private Equity	**$2,127,489**	**1.7%**							
GCM Grosvenor Secondary Opportunities Fund II, L.P.	$2,127,489	1.7%							
Total Cash Equivalents	**$5,027,314**	**4.1%**							
Cash	$5,027,314	4.1%							

Index Disclosures

- NCREIF ODCE Equal Weighted Net Index - During 4Q2018 the real estate benchmark was changed from NCREIF ODCE Equal Weighted Index to NCREIF ODCE Equal Weighted Net Index for all historical time periods since inception.
- HFRI Credit Index - During 4Q2019 the opportunistic benchmark was changed from ICE BofAML US High Yield TR to HFRI Credit Index for all historical time periods since inception.
- MSCI ACWI ex USA Index is shown for illustrative purposes.
- HFRI Credit Index is shown for illustrative purposes.

Footnotes

- Separately managed account returns are calculated by IPS using custodian data.
- Values, flows, and returns for all commingled funds, mutual funds, partnerships, and all other alternative assets are provided by the firm managing the assets and cannot be independently verified by IPS.
- The net of fees returns in this report are estimated. Fees do not include: the investment consulting fee paid to IPS, investment manager incentive fees, custodian fees, or other administrative costs.

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EPIC

April 30 - May 3, 2019

The following investment managers and providers attended and helped to defray the cost of IPS' annual conference EPIC. EPIC is an educational conference addressing various issues related to employee benefit plans. IPS does not give preferential treatment to investment managers or any other provider that pays to attend EPIC.

Aberdeen Standard Investments
Amalgamated Bank of Chicago
American Realty Advisors
ASB Real Estate Investments
Atlanta Capital Management
BlackRock Financial Management
BNY Mellon Asset Management (Mellon)
Boyd Watterson Asset Management
Brown Advisory
Capital Institutional Services, Inc. (CAPIS)
Chartwell Investment Partners
Christenson Investment Partners
Corbin Capital Partners
Corry Capital Advisors
Eaton Vance Management
EnTrust Global
First Eagle Investment Mgmt.
Foundry Partners
Fred Alger Management
GAMCO Asset Management
GCM Grosvenor
Gerding Edlen
Glouston Capital Partners
GoldenTree Asset Management
Great Lakes Advisors
Hamilton Lane Advisors
HarbourVest Partners
Hardman Johnston Global Advisors
Intercontinental Real Estate Corp.
Invesco Advisers, Inc.
Janus Henderson Investors
JP Morgan Asset Management
Kearney Capital LLC
Kelson Group
Lazard Asset Management
Loomis, Sayles & Company
Lord Abbett & Co.
LSV Asset Management
MacKay Shields
McMorgan & Company
MEPT/Bentall Kennedy
National Investment Services
Neuberger Berman
Nuveen
Patriot Financial Partners
PENN Capital Management
Piedmont Investment Advisors
PNC Capital Advisors
Post Advisory Group
Quantitative Management Associates
Quest Investment Management
Rothschild Asset Management
Ryan Labs Asset Management
Segall Bryant & Hamill
Sierra Investment Partners
Smith Graham & Co.
Ullico Investment Company
U.S. Bank
Victory Capital Management
Washington Capital Management
WEDGE Capital Management
Wellington Management Company
Westfield Capital Management
William Blair & Company

Glossary of Investment Terminology

Total Return	The annual return on an investment including appreciation, depreciation and income (interest, dividends, net operating income).
Alpha	The excess return (positive or negative) generated by active portfolio management and security selection, relative to a benchmark.
Beta	A historical measure of an investment's volatility relative to the market. The beta of the market is 1.0 (as represented by a benchmark such as the S&P 500 Index). A beta of greater than 1.0 indicates an investment with greater volatility than the benchmark. A beta of less than 1.0 indicates less volatility than the benchmark.
Standard Deviation	Standard deviation is a statistical measurement of the dispersion of a set of data from its mean. The more spread apart the data are, the greater the standard deviation.
Risk	For an investment portfolio, risk is typically defined as the volatility of the returns, as measured by calculating the standard deviation. The risk does not necessarily indicate the risk of loss, but does indicate the risk of inconsistent returns.
Capture Ratio	Calculates how well a manager performs in a rising or falling market as a percentage of a benchmark. In a rising market, a percentage of 100 or better is preferred, and indicates the manager exceeded the benchmark (upside capture ratio). In a falling market, a percentage of less than 100 is preferred, indicating that the manager lost less than the benchmark (downside capture ratio).
Correlation	A statistical measure of how two asset classes perform in relation to each other. Asset classes with a correlation of 1.0 have perfect positive correlation (exactly the same). Assets with perfect negative correlation of -1.0 will perform equally but in opposite directions.
Efficient Frontier	A series of portfolios with the maximum expected return for any level of risk, which is calculated based on assumptions of risk, return and correlation. These portfolios are shown graphically on a risk and return chart, and represent the most efficient tradeoff between risk and return.
Market Cap	The dollar value of a corporation, which is calculated by multiplying the share price and the number of outstanding shares.
Large Cap	Stocks which typically have a market capitalization of $10 billion or higher.
Mid Cap	Stocks which typically have a market capitalization of $2 to $10 billion.
Small Cap	Stocks which typically have a market capitalization of $2 billion or less.
Geometric Calculation	Geometric Calculations are used when determining an annualized investment return and tends to dampen the effect of very high or very low values. The result is a number that is smaller than (or equal to) the arithmetic average of the values.
Compound Annual Returns	Compound annual returns show the annual investment return, assuming the investment grew at a constant rate, and reflects the impact of the time in the calculation of an investment return.
Return/Risk Ratio	The return/risk ratio is the expected return of an investment divided by the expected standard deviation (risk). When comparing return/risk ratios a higher value is presumed to be better than a lower value