



Plumbers & Steamfitters Local 486 Medical Fund

Master Consulting Services Report

**Period Ended
December 31, 2018**

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Market Discussion Points

4Q | 2018



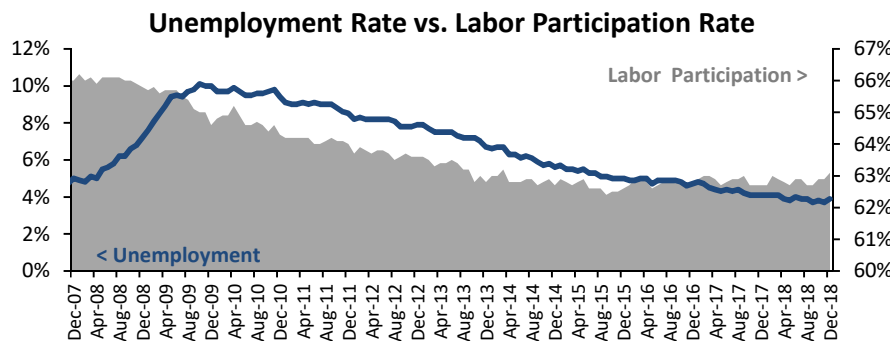
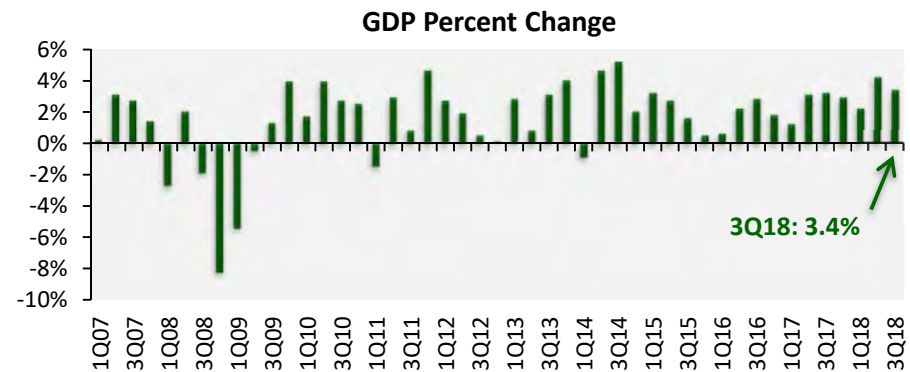
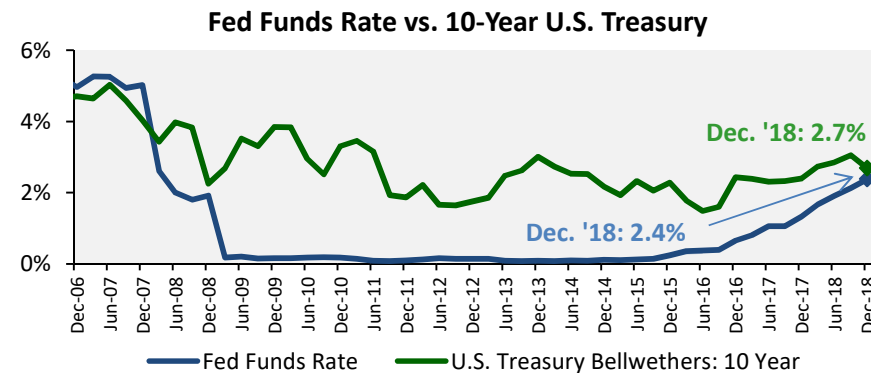
Financial Market Performance

Periods Ending December 31, 2018

Strategy	Sector	Index	QTR	YTD	2017	2016	2015	2014	2013	1-Yr	3-Yr	5-Yr	10-Yr	20-Yr
Stocks	US Large Cap	S&P 500	-13.5	-4.4	21.8	12.0	1.4	13.7	32.4	-4.4	9.3	8.5	13.1	5.6
	US Small Cap	Russell 2000	-20.2	-11.0	14.7	21.3	-4.4	4.9	38.8	-11.0	7.4	4.4	12.0	7.4
	All Country	MSCI All Country World (net)	-12.8	-9.4	24.0	7.9	-2.4	4.2	22.8	-9.4	6.6	4.3	9.5	-
	Non-US Developed	MSCI EAFE (net)	-12.5	-13.8	25.0	1.0	-0.8	-4.9	22.8	-13.8	2.9	0.5	6.3	3.5
	Emerging Markets	MSCI EM (net)	-7.5	-14.6	37.3	11.2	-14.9	-2.2	-2.6	-14.6	9.3	1.7	8.0	8.5
	Int'l Small Cap	MSCI EAFE Small Cap (net)	-16.1	-17.9	33.0	2.2	9.6	-5.0	29.3	-17.9	3.7	3.1	10.5	7.4
Bonds	Treasury	Bloomberg Barclays US Govt	2.5	0.9	2.3	1.1	0.9	4.9	-2.6	0.9	1.4	2.0	2.1	4.1
	Broad Market	Bloomberg Barclays Aggregate	1.6	0.0	3.5	2.7	0.6	6.0	-2.0	0.0	2.1	2.5	3.5	4.6
	Intermediate	Bloomberg Barclays Gov/Credit Int.	1.7	0.9	2.1	2.1	1.1	3.1	-0.9	0.9	1.7	1.9	2.9	4.2
	High Yield	Bloomberg Barclays HY BaB 2% IC	-3.6	-1.9	6.9	14.1	-2.7	3.5	6.2	-1.9	6.2	3.8	10.0	-
	Short Duration HY	BofA ML HY Cash Pay BB 1-3 YR	-0.8	1.4	3.6	8.5	1.2	1.9	5.6	1.4	4.4	3.3	8.1	-
	Global Bonds	FTSE WGBI	1.8	-0.8	7.5	1.6	-3.6	-0.5	-4.0	-0.8	2.7	0.8	1.5	3.7
GTAA	Unconstrained	65% MSCI World /35% FTSE WGBI	-8.1	-5.7	17.0	5.6	-1.6	3.0	15.1	-5.7	5.3	3.4	7.1	4.6
Real Estate	Core	NCREIF ODCE Equal Weighted	1.6	8.2	7.8	9.3	15.2	12.4	13.3	8.2	8.4	10.5	6.8	8.3
Hedge Fund of Funds	Diversified FOFs	HFRI HFOF Composite	-4.9	-3.9	7.8	0.5	-0.3	3.4	9.0	-3.9	1.3	1.4	3.1	4.2
	Equity Long-Short	HFRI Equity Hedge	-8.3	-6.9	13.3	5.5	-1.0	1.8	14.3	-6.9	3.6	2.3	5.7	6.3
Commodities	Commodities	Goldman Sachs Commodity	-22.9	-13.8	5.8	11.4	-32.9	-33.1	-1.2	-13.8	0.5	-14.5	-5.8	0.6

U.S. Economy

It is likely that U.S. GDP growth peaked during the 2nd quarter at 4.2%. For the third quarter, GDP grew at 3.4% and early estimates for fourth quarter growth are below 3.0%. While a recession does not appear imminent, a number of soft data measures of economic activity such as manufacturing surveys have been weaker recently, suggesting the economy may be slowing at a faster pace than anticipated as the effects of tax cuts begin to fade. Given many of these metrics tend to be survey and confidence based, it is likely that the recent partial government shutdown and trade war rhetoric is weighing on soft data measures. Signs of an economic slowdown also appeared in the housing market where rising mortgage rates are impacting home affordability, which has resulted in a sharp drop in new home sales. Conversely, the strength of the U.S. consumer remains a bright spot. Average nonfarm payrolls increased 254,000 for the fourth quarter, the unemployment rate remains below 4% and wage growth is accelerating. Combined with a meaningful decline in oil prices, signs point toward strong consumer spending in 2019. While the strong job market is good for consumers, it could potentially begin to squeeze corporate profit margins as companies are forced to pay more for labor. Meanwhile, despite the tightening labor market, inflation appears to be under control, with recent readings below the Federal Reserve's 2% target.



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

Asset Class Performance "Quilt"

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	15 yrs Cum.
EM Equity 25.6%	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 16.0%	EM Equity 18.2%	Small Cap 38.8%	Large Cap 13.7%	RE 15.2%	Small Cap 21.3%	EM 37.3%	RE 8.2%	Mid Cap 8.9%
Mid Cap 20.2%	RE 21.4%	Int'l 26.3%	RE 16.0%	RE -10.0%	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%	RE 8.0%
Int'l 20.2%	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 12.5%	SD HY 1.2%	Mid Cap 13.8%	Large Cap 21.8%	Fx Inc 0.0%	EM 7.9%
Small Cap 18.3%	Mid Cap 12.6%	RE 16.3%	HFoF 10.3%	HFoF -21.4%	SD HY 36.1%	RE 16.4%	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%	Large Cap 7.8%
GTAA 13.2%	HFoF 7.5%	Large Cap 15.8%	GTAA 9.9%	GTAA -25.4%	Int'l 31.8%	HY 15.2%	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 -3.9%	Small Cap 7.5%
RE 13.0%	Large Cap 4.9%	Mid Cap 15.3%	Fx Inc 7.0%	HY -26.4%	Small Cap 27.2%	Large Cap 15.1%	GTAA -0.9%	HY 15.6%	RE 14.0%	HFoF 3.4%	Int'l -0.8%	RE 9.3%	Small Cap 14.7%	Large Cap -4.4%	HY 6.8%
Large Cap 10.9%	Small Cap 4.6%	GTAA 15.1%	Mid Cap 5.6%	Small Cap -33.8%	Large Cap 26.5%	SD HY 11.7%	Mid Cap -1.6%	RE 10.9%	HFoF 9.0%	GTAA 3.0%	GTAA -1.6%	SD HY 8.5%	HFoF 7.8%	GTAA -5.7%	GTAA 5.3%
HY 10.8%	GTAA 3.6%	HY 11.7%	Large Cap 5.5%	Large Cap -37.0%	GTAA 20.1%	GTAA 9.8%	Small Cap -4.2%	GTAA 10.9%	HY 7.4%	HY 2.5%	Mid Cap -2.4%	GTAA 5.6%	RE 7.8%	Mid Cap -9.1%	Int'l 4.7%
HFoF 6.9%	HY 2.7%	HFoF 10.4%	SD HY 3.9%	Mid Cap -41.5%	HFoF 11.5%	Int'l 7.8%	HFoF -5.7%	SD HY 10.2%	SD HY 5.6%	SD HY 1.9%	Small Cap -4.4%	Fx Inc 2.7%	HY 7.5%	Small Cap -11.0%	Fx Inc 3.9%
Fx Inc 4.3%	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 2.7%
	SD HY 2.4%	Fx Inc 4.3%	Small Cap -1.6%	EM Equity -53.3%	RE -29.8%	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%	

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. Cumulative returns as of 12/31/18.

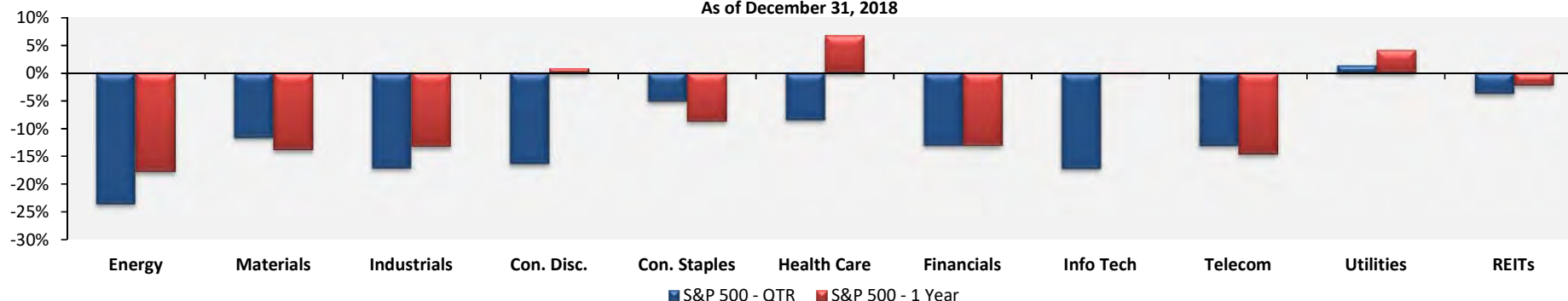
U.S. Equity Market

Despite rebounding in the last week of December (the so called “Santa Claus Rally”), equity investors mostly received coal in their stockings this year. The U.S. equity market experienced their largest December decline since 1931, resulting in the worst year since 2008. Markets experienced extreme volatility over this period, with large intraday swings on low trading volume. A variety of factors appeared to weigh on stocks, including concerns about further increases in interest rates, forecasts for slowing corporate earnings growth in 2019, slowing global growth, and the ongoing trade dispute between the U.S. and China. The S&P 500 index returned -13.5% in the 4th quarter, taking the 2018 return to -4.4%. Small cap stocks entered a bear market (decline of 20% or more), with the Russell 2000 returning -20.2% for the quarter and -11.0% for the year. Value stocks outperformed Growth stocks for the quarter with the Russell 1000 Value returning -11.7% vs. -15.9% for the Russell 1000 Growth Index; however, the growth index still outperformed the value index by over 650 basis points this year. The energy sector was the worst performer for the quarter and the year as oil prices fell to an 18-month low on concerns of reduced demand due to slowing growth and increased supply from U.S. shale producers. Technology, industrials, and consumer discretionary sectors were among the worst performers for the quarter while defensive sectors such as utilities held up best. Utilities were the only sector to produce a gain for the quarter. The equity market sell-off resulted in U.S. equity valuations falling below their long-term average for the first time in several years. As of December 31, 2018, the S&P 500 was valued at 14.4x on a forward P/E basis, down from 16.8x at the start of the quarter. The 25-year average forward P/E for the index is 16.1x.

<u>Sector</u>	<u>Index</u>	<u>4Q 18</u>	<u>YTD</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>1-Year</u>	<u>3-Year</u>	<u>5-Year</u>	<u>10-Year</u>
Large Cap	S&P 500	-13.5	-4.4	21.8	12.0	1.4	13.7	32.4	-4.4	9.3	8.5	13.1
	Russell 1000	-13.8	-4.8	21.7	12.1	0.9	13.3	33.1	-4.8	9.1	8.2	13.3
	Russell 1000 Value	-11.7	-8.3	13.7	17.3	-3.8	13.5	32.5	-8.3	7.0	6.0	11.2
	Russell 1000 Growth	-15.9	-1.5	30.2	7.1	5.7	13.1	33.5	-1.5	11.2	10.4	15.3
Mid Cap	Russell Mid-Cap	-15.4	-9.1	18.5	13.8	-2.4	13.2	34.8	-9.1	7.0	6.3	14.0
	Russell Mid-Cap Value	-15.0	-12.3	13.3	20.0	-4.8	14.7	33.5	-12.3	6.1	5.4	13.0
	Russell Mid-Cap Growth	-16.0	-4.8	25.3	7.3	-0.2	11.9	35.8	-4.8	8.6	7.4	15.1
Small Cap	Russell 2000	-20.2	-11.0	14.7	21.3	-4.4	4.9	38.8	-11.0	7.4	4.4	12.0
	Russell 2000 Value	-18.7	-12.9	7.8	31.7	-7.5	4.2	34.5	-12.9	7.4	3.6	10.4
	Russell 2000 Growth	-21.7	-9.3	22.2	11.3	-1.4	5.6	43.3	-9.3	7.2	5.1	13.5
Total Market	Wilshire 5000	-14.3	-5.3	21.0	13.4	0.7	12.7	33.1	-5.3	9.1	8.1	13.2
	Russell 3000	-14.3	-5.2	21.1	12.7	0.5	12.6	33.6	-5.2	9.0	7.9	13.2

Sector Allocations Performance

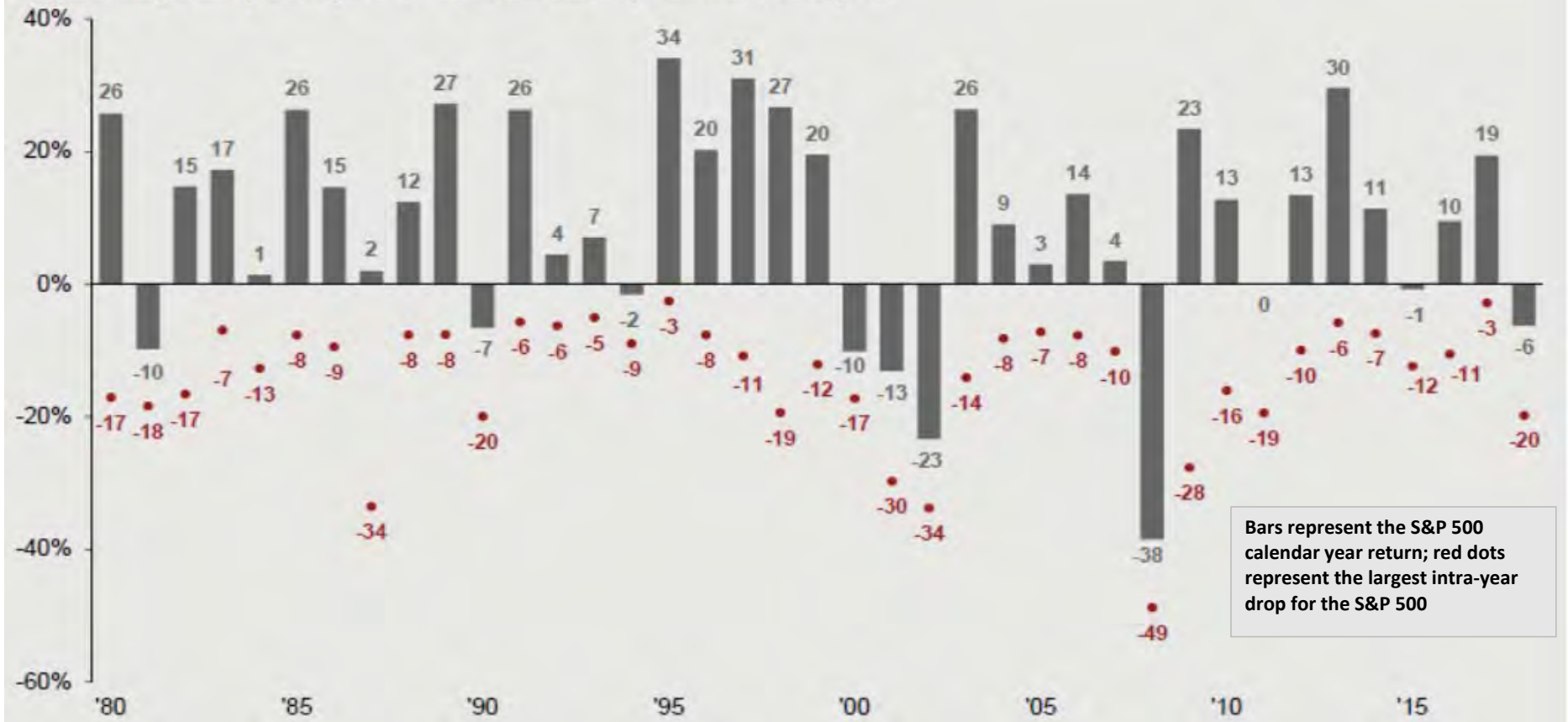
As of December 31, 2018



Declines during calendar years are normal

S&P 500 intra-year declines vs. calendar year returns

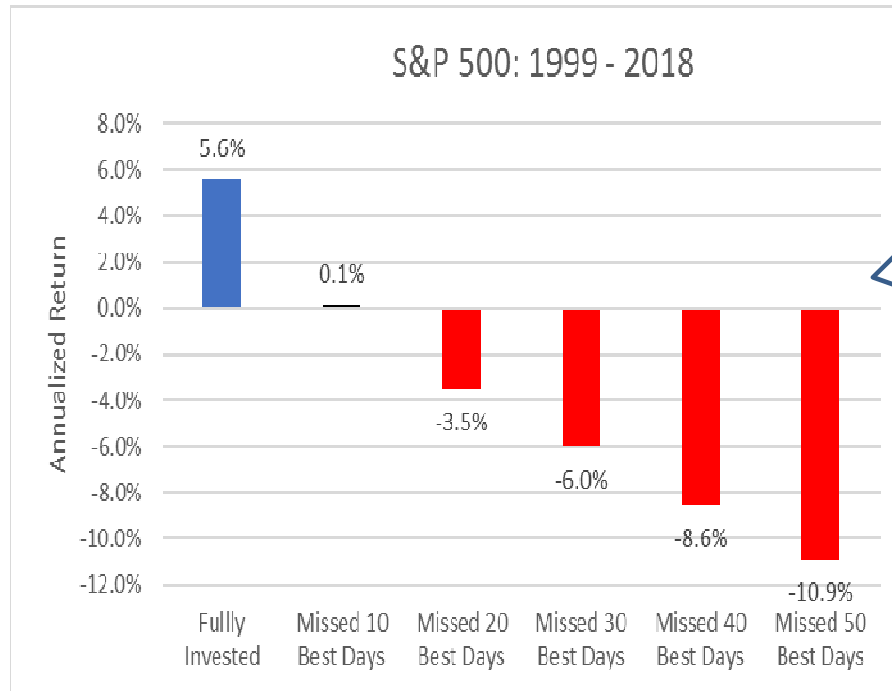
Despite average intra-year drops of 13.9%, annual returns positive in 29 of 39 years



Bars represent the S&P 500 calendar year return; red dots represent the largest intra-year drop for the S&P 500

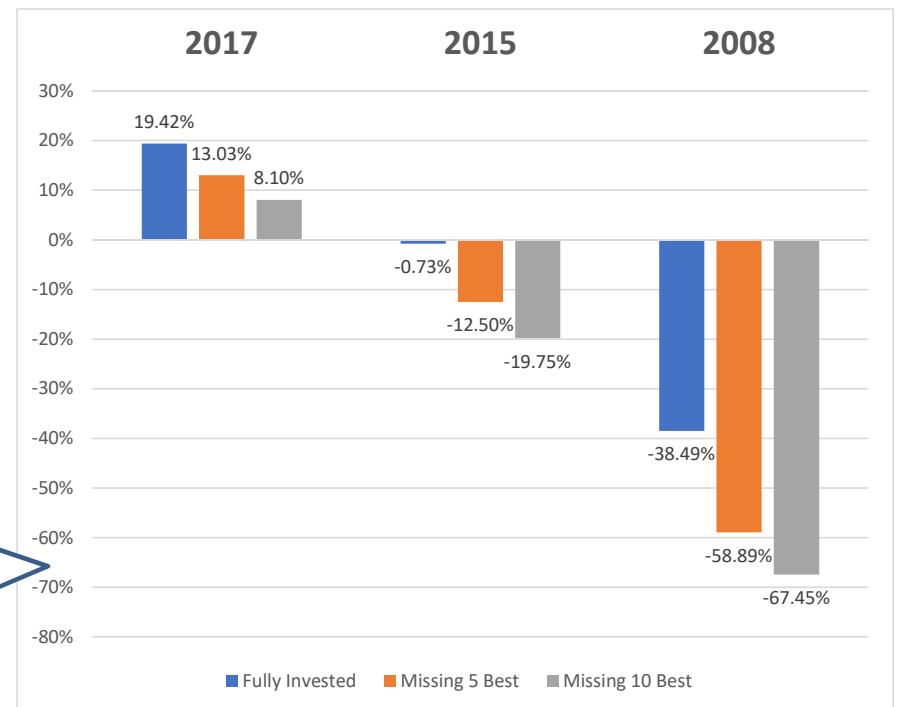
Source: Standard & Poor's, FactSet, J.P. Morgan Asset Management.

Trying to time the market can cost investors significantly



Missing just the 10 best days over the last 20 years would have eliminated most of the positive performance during this period. Missing the 20 best days would have resulted in a negative annualized return for the period.

In up years (2017), flat years (2015), and down years (2008), missing the best days has a meaningfully negative effect on the investor's outcome.



Equity Style Performance "Quilt"

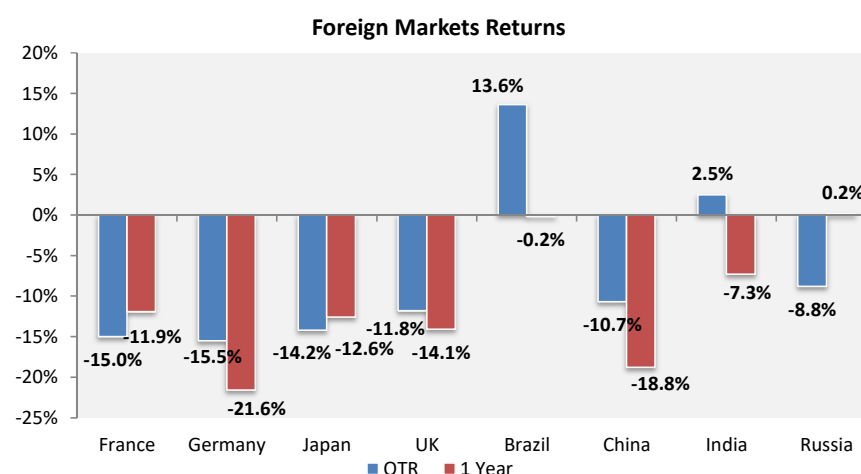
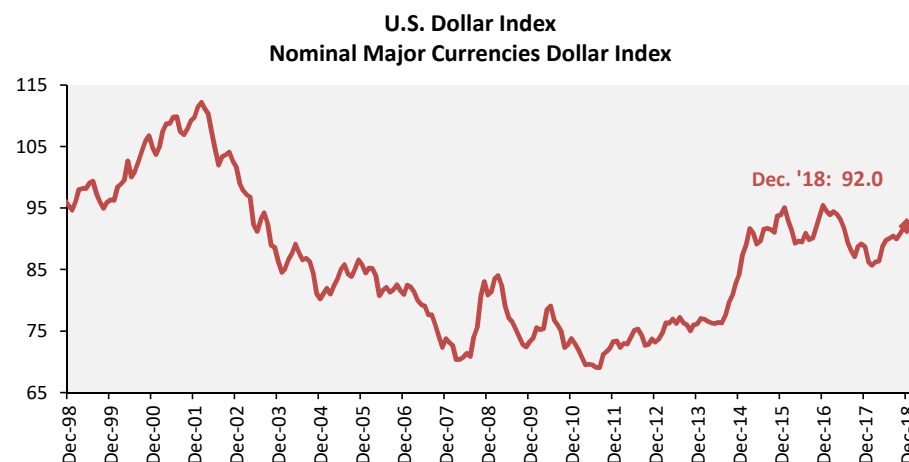
2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	15 yrs Cum.
Mid Value 23.7%	Mid Value 12.6%	Small Value 23.5%	Large Growth 11.8%	Small Value -28.9%	Mid Growth 46.3%	Small Growth 29.1%	Large Growth 2.6%	Mid Value 18.5%	Small Growth 43.3%	Mid Value 14.7%	Large Growth 5.7%	Small Value 31.7%	Large Growth 30.2%	Large Growth -1.5%	Mid Growth 9.0%
Small Value 22.3%	Mid Growth 12.1%	Large Value 22.2%	Mid Growth 11.4%	Large Value -36.8%	Large Growth 37.2%	Mid Growth 26.4%	Large Value 0.4%	Small Value 18.1%	Mid Growth 35.7%	Large Value 13.5%	Mid Growth -0.2%	Mid Value 20.0%	Mid Growth 25.3%	Mid Growth -4.8%	Large Growth 8.7%
Large Value 16.5%	Large Value 7.1%	Mid Value 20.2%	Small Growth 7.0%	Large Growth -38.4%	Small Growth 34.5%	Mid Value 24.8%	Mid Value -1.4%	Large Value 17.5%	Small Value 34.5%	Large Growth 13.0%	Small Growth -1.4%	Large Value 17.3%	Small Growth 22.2%	Large Value -8.3%	Mid Value 8.6%
Mid Growth 15.5%	Large Growth 5.3%	Small Growth 13.3%	Large Value -0.2%	Mid Value -38.4%	Mid Value 34.2%	Small Value 24.5%	Mid Growth -1.7%	Mid Growth 15.8%	Large Growth 33.5%	Mid Growth 11.9%	Large Value -3.8%	Small Growth 11.3%	Large Value 13.7%	Small Growth -9.3%	Small Growth 8.0%
Small Growth 14.3%	Small Value 4.7%	Mid Growth 10.7%	Mid Value -1.4%	Small Growth -38.5%	Small Value 20.6%	Large Growth 16.7%	Small Growth -2.9%	Large Growth 15.3%	Mid Value 33.5%	Small Growth 5.6%	Mid Value -4.8%	Mid Growth 7.3%	Mid Value 13.3%	Mid Value -12.3%	Large Value 7.0%
Large Growth 6.3%	Small Growth 4.2%	Large Growth 9.1%	Small Value -9.8%	Mid Growth -44.3%	Large Value 19.7%	Large Value 15.5%	Small Value -5.5%	Small Growth 14.6%	Large Value 32.5%	Small Value 4.2%	Small Value -7.5%	Large Growth 7.1%	Small Value 7.8%	Small Value -12.9%	Small Value 6.9%

Source: Russell Investment Group, Wilshire. All data are based on Russell Indexes and represent total return for stated period. Each style is representative of corresponding Russell style index. Past performance is not indicative of future returns. Large Value: Russell 1000 Value Index; Large Growth: Russell 1000 Growth Index; Mid Value: Russell Mid Cap Value Index; Mid Growth: Russell Mid Cap Growth Index; Small Value: Russell 2000 Value Index; Small Growth: Russell 2000 Growth Index. Cumulative returns as of 12/31/18.

International Equity Market

Non-U.S. markets also experienced large declines for the fourth quarter and generally fared worse than the U.S. for the year as the MSCI EAFE Index returned -12.5% for the quarter and -13.8% for 2018. A number of economic and political issues continue to weigh on the European market. Despite numerous signs of slowing growth, the European Central Bank ended its quantitative easing program in December based on firming wage growth. Uncertainty over the outcome of Brexit has been a major headwind for both consumer and business confidence in the U.K. The Japanese market was weak for the quarter, falling 14.2%, partially due to an appreciation of the Yen vs. the U.S. Dollar. Emerging markets, which significantly underperformed during the first nine months of the year, held up better during the fourth quarter, with the MSCI Emerging Markets index returning -7.5%. For the full year, emerging markets underperformed developed markets with a return of -14.6%. Over the past 20 years, Non-U.S. markets have traded at a 10% discount to U.S. markets on average. Due to the strong outperformance of the U.S. in recent years, non-U.S. markets closed 2018 at a 20% discount to the U.S. on a valuation basis.

Sector	Index	4Q 18	YTD	2017	2016	2015	2014	2013	1-Year	3-Year	5-Year	10-Year
Global	MSCI AC World Index (net)	-12.8	-9.4	24.0	7.9	-2.4	4.2	22.8	-9.4	6.6	4.3	9.5
	MSCI World Small Cap (net)	-16.8	-14.4	23.8	11.6	-1.0	1.8	28.7	-14.4	5.8	3.6	11.8
	MSCI World ex US (net)	-11.5	-14.2	27.2	4.5	-5.7	-3.9	15.3	-14.2	4.5	0.7	6.6
	MSCI World ex US Small Cap (net)	-14.4	-18.2	31.6	3.9	2.6	-4.0	19.7	-18.2	3.8	2.0	10.0
Developed ex US	MSCI EAFE (net)	-12.5	-13.8	25.0	1.0	-0.8	-4.9	22.8	-13.8	2.9	0.5	6.3
	MSCI EAFE Value (net)	-11.7	-14.8	21.4	5.0	-5.7	-5.4	23.0	-14.8	2.8	-0.6	5.5
	MSCI EAFE Growth (net)	-13.3	-12.8	28.9	-3.0	4.1	-4.4	22.6	-12.8	2.9	1.6	7.1
	MSCI EAFE Small Cap (net)	-16.1	-17.9	33.0	2.2	9.6	-5.0	29.3	-17.9	3.7	3.1	10.5
Emerging Markets	MSCI Emerging Markets (net)	-7.5	-14.6	37.3	11.2	-14.9	-2.2	-2.6	-14.6	9.3	1.7	8.0



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, 2018.

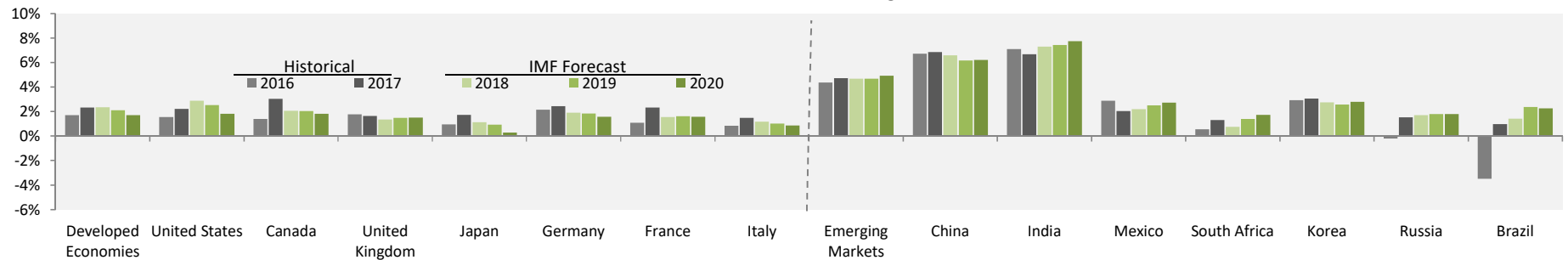
International Equity Market

MSCI All Country World ex-U.S. and S&P 500 Indices

Dec. 1996 = 100, U.S. dollar, price return



Y-O-Y Annual GDP % Change

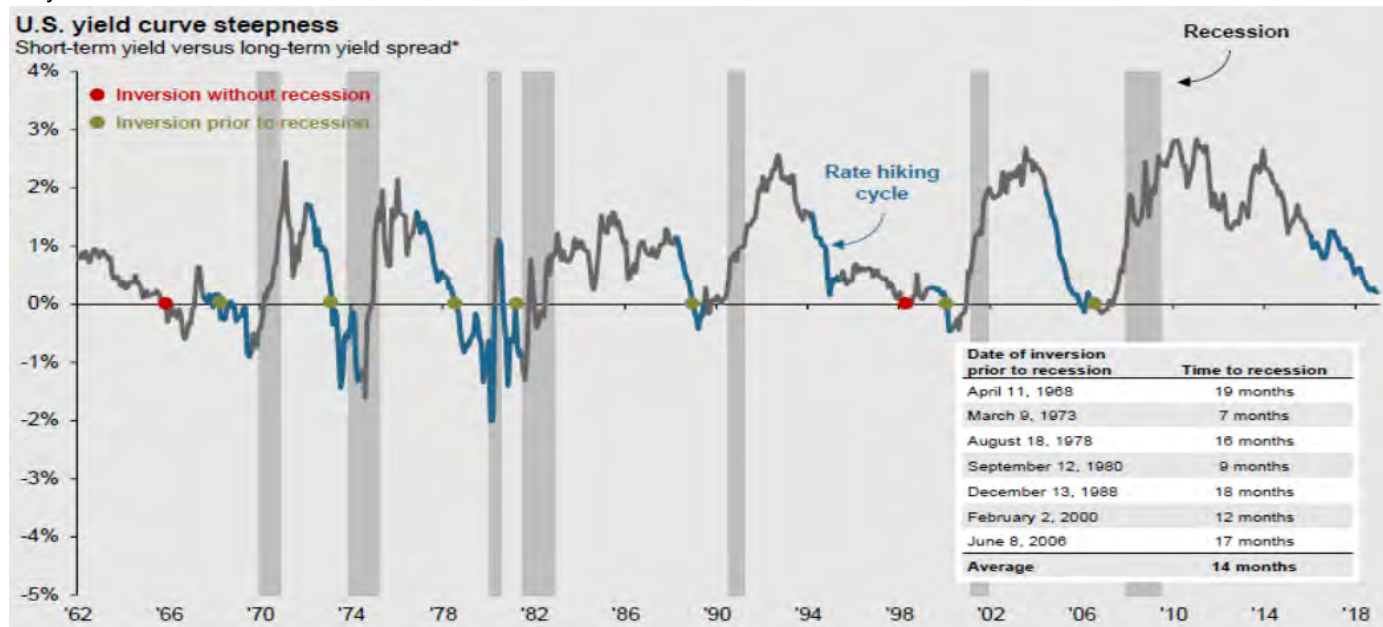


Top chart: Source - MSCI, Standard & Poor's, FactSet, J.P. Morgan Asset Management. Bottom chart: Annual percentages of constant price GDP are year-on-year changes; the base year is country-specific. Source: International Monetary Fund, World Economic Outlook Database, October 2018.

U.S. Bond Market

Fixed income markets were not immune from the volatility that equity markets experienced during the fourth quarter. The yield on the 10-year Treasury reached a seven-year high of 3.2% early in the quarter as Fed Chairman Powell made comments suggesting interest rates were “a long way” from the neutral level. Later in the quarter, Powell commented that rates were “just below” neutral, causing rates to decline with the 10-year Treasury ending the year at 2.69%. The yield curve flattened during the quarter with the yield spread between 2- and 10-year Treasuries narrowing to its tightest level since 2007. An inversion of these two key rates (when the 2-year yields more than the 10-year) is viewed a signal that recession could be on the horizon. The Fed raised rates 0.25% in December, the fourth increase for the year and ninth during this cycle. While Fed officials indicated they expect two additional hikes in 2019, the market is currently pricing in no further increases. Interest rates declined during the quarter which resulted in positive performance for investment grade bonds. For the quarter, the Bloomberg Barclays US Aggregate index returned 1.6% and was flat on the year. Lower credit quality segments of the market fared worse. High yield credit spreads reached their widest levels in more than a year, resulting in -3.6% return for the quarter and -1.9% for the yield for below investment grade bonds. Floating rate bank loans also underperformed as investors adjusted their expectation for future Fed hikes.

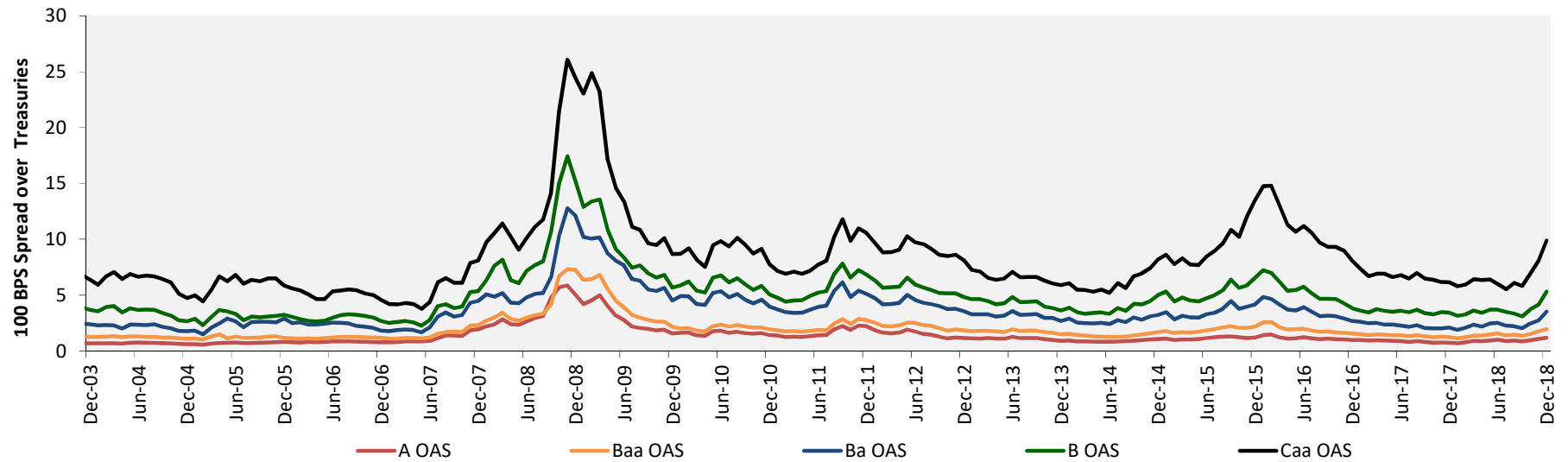
<u>Index</u>	<u>Yield</u>	<u>Duration</u>	<u>4Q 18</u>	<u>YTD</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>1-Year</u>	<u>3-Year</u>	<u>5-Year</u>	<u>10-Year</u>
Bloomberg Barclays Aggregate	3.28	6.1	1.6	0.0	3.5	2.7	0.6	6.0	-2.0	0.0	2.1	2.5	3.5
Bloomberg Barclays Govt/Credit	3.23	6.3	1.5	-0.4	4.0	3.1	0.2	6.0	-2.4	-0.4	2.2	2.5	3.5
Bloomberg Barclays Int Agg	3.13	4.5	1.8	0.9	2.3	2.0	1.2	4.1	-1.0	0.9	1.7	2.1	3.1
Bloomberg Barclays Int Govt/Credit	2.99	3.8	1.7	0.9	2.1	2.1	1.1	3.1	-0.9	0.9	1.7	1.9	2.9
Bloomberg Barclays HY Ba/B 2% IC	7.06	4.4	-3.6	-1.9	6.9	14.1	-2.7	3.5	6.2	-1.9	6.2	3.8	10.0
BofA ML HY Cash Pay BB 1-3 Yr.	6.33	1.8	-0.8	1.4	3.6	8.5	1.2	1.9	5.6	1.4	4.4	3.3	8.1
Bloomberg Barclays Mortgage	3.39	5.7	2.1	1.0	2.5	1.7	1.5	6.1	-1.4	1.0	1.7	2.5	3.1
Bloomberg Barclays Treasury	2.61	6.0	2.6	0.9	2.3	1.0	0.8	5.1	-2.8	0.9	1.4	2.0	2.1
Bloomberg Barclays US TIPS	2.81	7.3	-0.4	-1.3	3.0	4.7	-1.4	3.6	-8.6	-1.3	2.1	1.7	3.6
BofA ML 91 day T-Bills	2.45	0.2	0.6	1.9	0.9	0.3	0.1	0.0	0.1	1.9	1.0	0.6	0.4



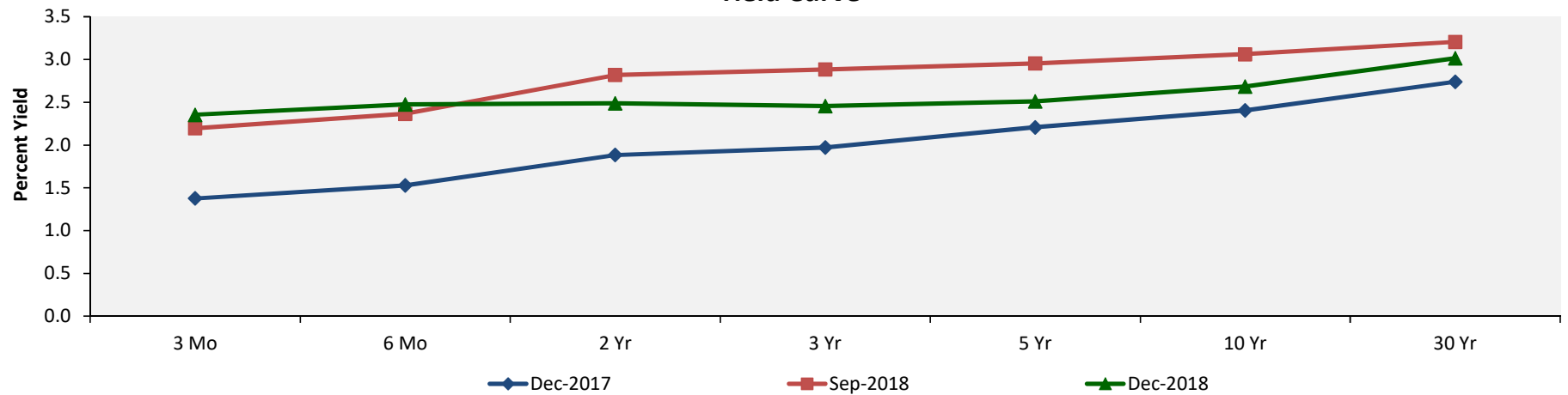
Source: FactSet, Federal Reserve, J.P. Morgan Asset Management. *From January 1962 to May 1976 short-term bond is U.S. 1-year bond. Short-dated bond is 2-year from June 1976. Time to recession is calculated as the time between the final sustained inversion of the yield curve prior recession, and the onset of recession.

Bond Market

OAS Credit Spread



Yield Curve



Source: Bloomberg Barclays

Interest Rate Sensitivity

12 Month Holding Period - Annualized Returns as of 12/31/2018

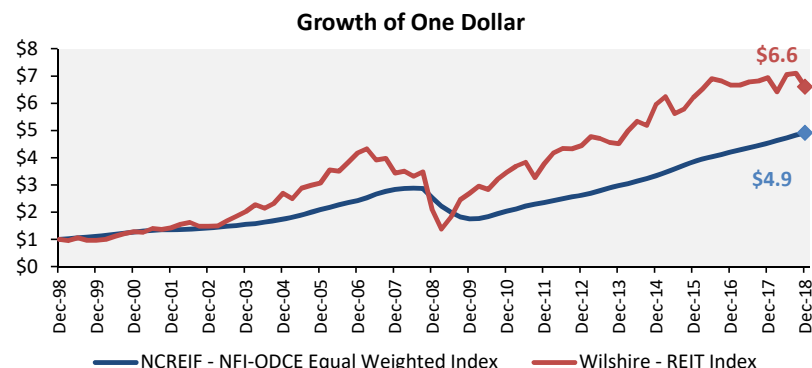
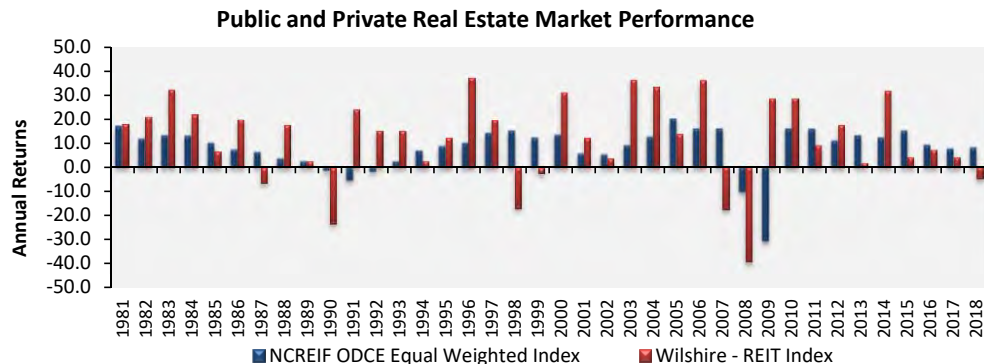
Yield Change (bps)	10 Year Treasury	Bloomberg Barclays Aggregate US Aggregate	Bloomberg Barclays Int Govt/Credit US Int Govt/Credit	ML Gov/Corp Master	ML 1-3 yr Gov/Corp	Defensive ML US HY BB/B ND	Short Duration ML US HY BB/B 1-3 yr
-150	15.37	12.57	8.72	12.83	5.57	13.51	9.00
-100	11.14	9.47	6.81	9.64	4.64	11.31	8.11
-50	6.92	6.38	4.90	6.46	3.71	9.11	7.22
-25	4.80	4.83	3.95	4.86	3.25	8.01	6.78
0	2.69	3.28	2.99	3.27	2.78	6.91	6.33
25	0.58	1.73	2.04	1.68	2.32	5.81	5.89
50	-1.54	0.19	1.08	0.09	1.85	4.71	5.44
100	-5.76	-2.91	-0.83	-3.10	0.92	2.51	4.55
150	-9.99	-6.01	-2.74	-6.29	-0.01	0.31	3.66
200	-14.21	-9.10	-4.65	-9.47	-0.94	-1.89	2.77
250	-18.44	-12.20	-6.56	-12.66	-1.87	-4.09	1.88
300	-22.66	-15.29	-8.47	-15.84	-2.80	-6.29	0.99
350	-26.89	-18.39	-10.38	-19.03	-3.73	-8.49	0.10
400	-31.11	-21.48	-12.29	-22.21	-4.66	-10.69	-0.79
450	-35.34	-24.58	-14.20	-25.40	-5.59	-12.89	-1.68
500	-39.56	-27.67	-16.11	-28.58	-6.52	-15.09	-2.57
Duration	8.45	6.19	3.82	6.37	1.86	4.40	1.78

FOR ILLUSTRATIVE PURPOSES ONLY: For each index the current yield to worst as of 12/31/2018 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 12/31/2018 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

Real estate produced a return in excess of 8% in 2018, making it one of a few assets classes that posted positive returns for the year. Over the last five years, real estate has achieved a 10.5% annual rate of return. In the current quarter, solid fundamentals in the warehouse sector helped to drive returns higher. However, the outlook is not as strong. Supply imbalances in nearly all sectors have been corrected by new construction. Rent growth is slowing in conjunction with lower demand for real estate from institutional investors. Pressure from rising interest rates may also impinge upon capitalization rates, which in turn may put pressure on valuations. Real estate returns will now depend on income of 4-5% and income growth of 3-4% for the majority of total return. Income returns of approximately 4-5% and appreciation of 1-3% indicate a long-term expected total return of 5-8%. Unless interest rates rise substantially, the income component of real estate should continue to be appealing to investors, especially foreign investors, and keep valuations at high levels.

Sector	Index	4Q 18	YTD	2017	2016	2015	2014	2013	1-Year	3-Year	5-Year	10-Year
US Private	NCREIF ODCE Equal Weighted	1.6	8.2	7.8	9.3	15.2	12.4	13.3	8.2	8.4	10.5	6.8
US Public	Wilshire REIT	-6.9	-4.8	4.2	7.2	4.2	31.8	1.9	-4.8	2.1	7.9	12.2



	Total return (incl. income) 2018	Total return (incl. income) 2019	Total return (incl. income) 2020	Total return (incl. income) 2018 to 2022 (per year)
National, All Property Types (NPI)	7.1	5.7	4.4	5.4
Office	6.7	5.3	4.0	5.2
Retail	4.2	4.3	3.8	4.4
Industrial	12.4	8.2	5.7	7.3
Apartment	6.3	5.8	4.8	5.5

Bottom chart: 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 2018.

Hedge Fund of Funds Market

Hedge fund returns declined during the fourth quarter along with most other risk assets, pushing calendar year 2018 returns into negative territory. The HFRI Fund of Funds Composite declined 4.8% during the quarter, finishing the year at -3.9%. Hedge funds materially underperformed investment grade bonds (to which they are historically negatively correlated) during the quarter, as lower rates pushed bond prices higher. While most hedge fund strategies protected capital relatively well compared to broader equity markets, there were few places to hide as most hedge fund strategies declined during the quarter. Unsurprisingly, equity hedge was the worst performing hedge fund strategy during the quarter given the sell-off in equity markets globally, and the HFRI Equity Hedge Index declined 8.3%. Credit-oriented strategies were hurt by widening spreads during the quarter, but overall held up much better than other strategies during the year, as the HFRI Credit Index posted a modest loss of 25 basis points for the year. Managers with long equity volatility exposure (a subset of relative value) were rewarded as volatility spiked during the quarter, helping to soften the blow of losses in other areas of their portfolios.

Strategy	Index	4Q 18	YTD	2017	2016	2015	2014	2013	1-Year	3-Year	5-Year	10-Year
Fund of Funds	HFRI HFOF Composite	-4.8	-3.9	7.8	0.5	-0.3	3.4	9.0	-3.9	1.3	1.4	3.1
Equity Long-Short	HFRI Equity Hedge	-8.3	-6.9	13.3	5.5	-1.0	1.8	14.3	-6.9	3.6	2.3	5.7
Event Driven	HFRI Event Driven	-5.0	-2.4	7.6	10.6	-3.6	1.1	12.5	-2.4	5.1	2.5	6.5
Global Macro	HFRI Macro Index	-1.9	-3.6	2.2	1.0	-1.3	5.6	-0.4	-3.6	-0.2	0.7	1.1
Relative Value	HFRI Relative Value	-3.2	-0.2	5.1	7.7	-0.3	4.0	7.1	-0.2	4.1	3.2	6.9
Credit	HFRI Credit Index	-3.1	-0.3	6.0	8.6	-1.0	3.0	9.0	-0.3	4.7	3.2	7.5

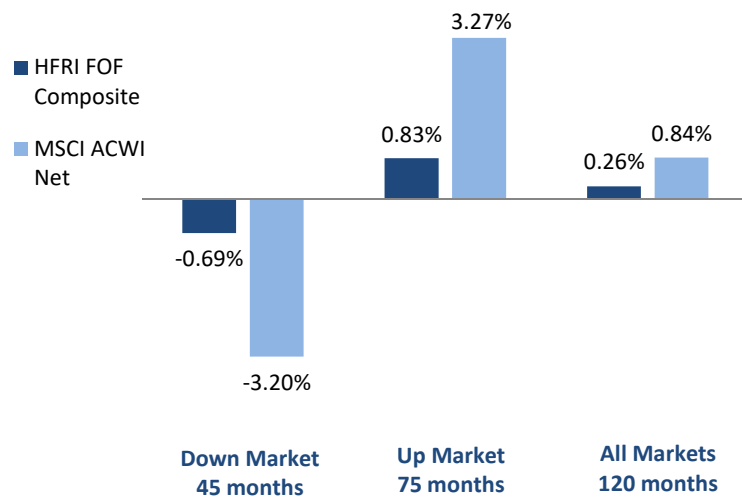
Hedge Fund Strategy Performance



Hedge Fund of Funds Market

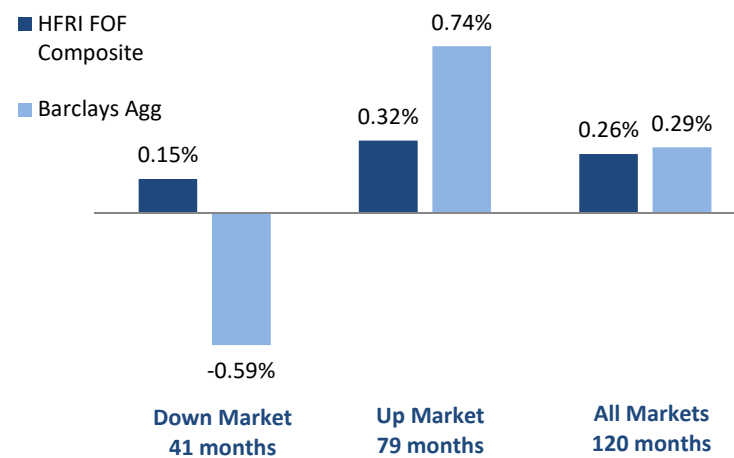
Up/Down Capture vs. Equity

Average Returns
December 2008 - December 2018



Up/Down Capture vs. Bonds

Average Returns
December 2008 - December 2018





Plumbers & Steamfitters Local 486 Medical Fund

Master Consulting Services Report

Period Ended

December 31, 2018

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Plumbers & Steamfitters Local 486 Medical Fund
Master Consulting Services Report as of December 31, 2018

Summary of Cash Flows

	Fourth Quarter	One Year	Three Years	Five Years	Seven Years	Ten Years
Beginning Market Value	\$22,332,774	\$21,386,124	\$14,450,293	\$11,341,492	\$13,154,560	\$13,419,182
Net Cash Flow	\$449,546	\$1,047,573	\$4,709,672	\$7,546,184	\$5,350,015	\$3,736,561
Net Investment Change	\$58,990	\$407,613	\$3,681,345	\$3,953,634	\$4,336,735	\$5,685,567
Ending Market Value	\$22,841,310	\$22,841,310	\$22,841,310	\$22,841,310	\$22,841,310	\$22,841,310

- The Fund's fiscal year end is 12/31.

Plumbers & Steamfitters Local 486 Medical Fund
Master Consulting Services Report as of December 31, 2018

Total Plan Performance (Gross of Fees)

			Ending December 31, 2018							
	Market Value	% of Portfolio	2018 Q4	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs	Inception	Inception Date
Total Fund	\$22,841,310	100.0%	0.3%	2.0%	3.2%	2.4%	2.1%	2.4%	2.5%	Dec-04
Total Investment Grade Fixed Income	\$6,962,768	30.5%	0.9%	0.4%	1.5%	1.7%	1.3%	1.8%	2.1%	Dec-04
BBgBarc US Govt/Credit Int TR			1.7%	0.9%	1.7%	1.9%	1.7%	2.9%	3.4%	Dec-04
Chartwell Investment Partners	\$6,962,768	30.5%	0.9%	--	--	--	--	--	1.9%	Apr-18
BBgBarc US Govt/Credit Int TR			1.7%	--	--	--	--	--	2.4%	Apr-18
Total Short Duration High Yield Fixed Income	\$10,203,752	44.7%	-0.7%	1.2%	3.9%	2.7%	--	--	3.2%	Dec-12
BofA ML - U.S. HY Cash Pay 1-3 Yr BB			-0.7%	1.4%	4.4%	3.3%	--	--	3.7%	Dec-12
Chartwell Investment Partners Short Duration High Yield	\$10,203,752	44.7%	-0.7%	1.2%	3.9%	2.7%	--	--	3.2%	Dec-12
BofA ML - U.S. HY Cash Pay 1-3 Yr BB			-0.7%	1.4%	4.4%	3.3%	--	--	3.7%	Dec-12
Total Real Estate	\$4,561,300	20.0%	1.7%	9.6%	--	--	--	--	9.1%	Apr-17
NCREIF ODCE Equal Weighted Net			1.4%	7.3%	--	--	--	--	7.2%	Apr-17
Boyd Watterson GSA Fund L.P.	\$4,561,300	20.0%	1.7%	9.6%	--	--	--	--	9.1%	Apr-17
NCREIF ODCE Equal Weighted Net			1.4%	7.3%	--	--	--	--	7.2%	Apr-17
Total Cash	\$1,113,489	4.9%	0.5%	1.0%	0.7%	0.4%	0.3%	0.3%	0.3%	Jul-08
91 Day T-Bills			0.6%	1.9%	1.1%	0.6%	0.5%	0.4%	0.4%	Jul-08
PNC Money Market Fund	\$1,113,489	4.9%	0.5%	1.1%	0.7%	0.4%	0.4%	0.3%	0.3%	Jul-08
91 Day T-Bills			0.6%	1.9%	1.1%	0.6%	0.5%	0.4%	0.4%	Jul-08

	Fiscal Year Ends December 31										
	Fiscal YTD	Fiscal 2018	Fiscal 2017	Fiscal 2016	Fiscal 2015	Fiscal 2014	Fiscal 2013	Fiscal 2012	Fiscal 2011	Fiscal 2010	Fiscal 2009
Total Fund	2.0%	2.0%	3.4%	4.0%	0.4%	2.1%	1.9%	1.1%	1.3%	1.9%	6.0%

Plumbers & Steamfitters Local 486 Medical Fund
Master Consulting Services Report as of December 31, 2018

Total Plan Performance (Net of Fees)

	Market Value	% of Portfolio	Ending December 31, 2018				
			2018 Q4	1 Yr	3 Yrs	5 Yrs	Since 1/1/13
Total Fund	\$22,841,310	100.0%	0.2%	1.6%	2.8%	2.0%	1.9%
Total Investment Grade Fixed Income	\$6,962,768	30.5%	0.9%	0.2%	1.3%	1.5%	1.1%
BBgBarc US Govt/Credit Int TR			1.7%	0.9%	1.7%	1.9%	1.4%
Chartwell Investment Partners	\$6,962,768	30.5%	0.9%	--	--	--	--
BBgBarc US Govt/Credit Int TR			1.7%	0.9%	1.7%	1.9%	1.4%
Total Short Duration High Yield Fixed Income	\$10,203,752	44.7%	-0.8%	0.7%	3.4%	2.2%	2.7%
BofA ML - U.S. HY Cash Pay 1-3 Yr BB			-0.7%	1.4%	4.4%	3.3%	3.7%
Chartwell Investment Partners Short Duration High Yield	\$10,203,752	44.7%	-0.8%	0.7%	3.4%	2.2%	2.7%
BofA ML - U.S. HY Cash Pay 1-3 Yr BB			-0.7%	1.4%	4.4%	3.3%	3.7%
Total Real Estate	\$4,561,300	20.0%	1.4%	8.2%	--	--	--
NCREIF ODCE Equal Weighted Net			1.4%	7.3%	7.5%	9.6%	10.1%
Boyd Watterson GSA Fund L.P.	\$4,561,300	20.0%	1.4%	8.2%	--	--	--
NCREIF ODCE Equal Weighted Net			1.4%	7.3%	7.5%	9.6%	10.1%
Total Cash	\$1,113,489	4.9%	0.5%	1.0%	0.7%	0.4%	0.4%
91 Day T-Bills			0.6%	1.9%	1.1%	0.6%	0.5%
PNC Money Market Fund	\$1,113,489	4.9%	0.5%	1.1%	0.7%	0.4%	0.4%
91 Day T-Bills			0.6%	1.9%	1.1%	0.6%	0.5%

Plumbers & Steamfitters Local 486 Medical Fund
Master Consulting Services Report as of December 31, 2018

Current vs. Policy As Of December 31, 2018						
	Current	Current	Policy	Policy Range	Difference	Difference
Investment Grade Fixed Income	\$6,962,768	30.5%	30.0%	25.0% - 35.0%	0.5%	\$110,375
Short Duration High Yield Fixed Income	\$10,203,752	44.7%	45.0%	40.0% - 50.0%	-0.3%	-\$74,837
Real Estate - Core	\$4,561,300	20.0%	20.0%	15.0% - 25.0%	0.0%	-\$6,962
Cash Equivalents	\$1,113,489	4.9%	5.0%	0.0% - 10.0%	-0.1%	-\$28,576
Total	\$22,841,310	100.0%	100.0%			

Asset Allocation

- Asset allocation reviews were presented and discussed at the June 11, 2012, July 9, 2012, January 13, 2014, April 13, 2015, March 7, 2016, October 11, 2016, February 13, 2017, and February 12, 2018 meetings.
- An asset allocation review and a due diligence memo on Boyd Watterson GSA Fund was discussed at the February 13, 2017 meeting. Boyd Watterson also attended the meeting and made a presentation.
- At the December 11, 2017 meeting, the Trustees agreed to rebalance closer to Policy. The following rebalancing was approved from cash: commit an additional \$1.0M to Boyd Watterson GSA Fund, transfer \$250,000 to investment grade fixed income (Columbia Partners), and \$250,000 to SDHY (Chartwell SDHY).
- On December 21, 2017, \$500,000 was withdrawn from the PNC Money Market fund (\$250,000 to Chartwell and \$250,000 to Columbia) to rebalance closer to Policy.
- An asset allocation review was presented at the February 12, 2018 meeting. The Trustees adopted a Policy: 30% investment grade fixed income, 45% SDHY, 20% real estate, and 5% cash.

Recommendation: None.

Account Information	
Account Name	Chartwell Investment Partners
Account Structure	Separate Account
Investment Style	Active
Inception Date	4/30/18
Account Type	US Fixed Income
Benchmark	BBgBarc US Govt/Credit Int TR
Universe	

Chartwell Investment Partners		
Ending December 31, 2018		
	Fourth Quarter	Inception 4/30/18
Beginning Market Value	\$6,899,759	\$0
Contributions	\$0	\$7,980,185
Withdrawals	\$0	-\$1,150,000
Fees	-\$2,592	-\$7,035
Net Cash Flow	\$0	\$6,830,185
Net Investment Change	\$63,009	\$132,583
Ending Market Value	\$6,962,768	\$6,962,768

	Ending December 31, 2018										Inception Date
	2018 Q4	1 Yr	3 Yrs	5 Yrs	2018	2017	2016	2015	2014	Inception	
Chartwell Investment Partners	0.9%	--	--	--	--	--	--	--	--	1.9%	Apr-18
BBgBarc US Govt/Credit Int TR	1.7%	0.9%	1.7%	1.9%	0.9%	2.1%	2.1%	1.1%	3.1%	2.4%	Apr-18

Note: Returns are gross of fees.

Plumbers & Steamfitters 486 Medical Fund - Chartwell Investment Partners

Correspondence/Transfer Summary

- Assets totaling \$6.8M were transferred from Columbia Partners to Chartwell Investment Partners in April 2018.
- In July 2018, \$600,000 was transferred from the PNC Money Market Fund to Chartwell Investment Grade.
- In September 2018, \$575,000 was transferred from Chartwell Short Duration High Yield to Chartwell Investment Grade.
- In September 2018, \$1.15M was transferred from Chartwell Investment Grade to Boyd Watterson for investment in October 2018.

Manager Summary

- IPS conducted due diligence meetings with Chartwell on October 8, 2018 (on-site) and January 7, 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.

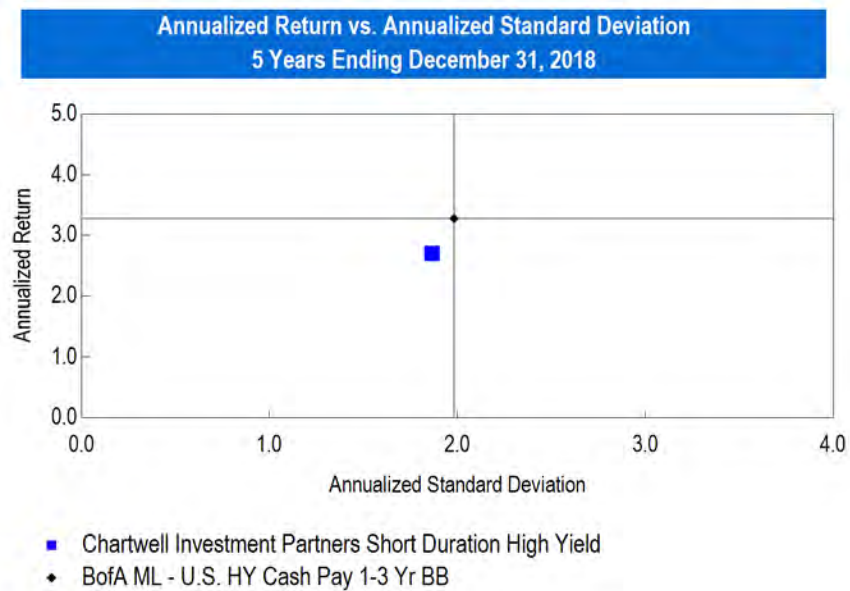
Compliance Summary

Exceptions: None.

Action to be taken: None.

Items of Interest: None.

Account Information	
Account Name	Chartwell Investment Partners Short Duration High Yield
Account Structure	Separate Account
Investment Style	Active
Inception Date	12/31/12
Account Type	US Fixed Income
Benchmark	BofA ML - U.S. HY Cash Pay 1-3 Yr BB
Universe	



Chartwell Investment Partners Short Duration High Yield		
Ending December 31, 2018		
	Fourth Quarter	Inception 12/31/12
Beginning Market Value	\$10,274,701	\$0
Contributions	\$0	\$10,702,700
Withdrawals	\$0	-\$1,875,000
Fees	-\$12,791	-\$229,028
Net Cash Flow	\$0	\$8,827,700
Net Investment Change	-\$70,948	\$1,376,052
Ending Market Value	\$10,203,752	\$10,203,752

3 Years Ending December 31, 2018				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Chartwell Investment Partners Short Duration High Yield	3.9%	1.6%	88.4%	90.4%
BofA ML - U.S. HY Cash Pay 1-3 Yr BB	4.4%	1.8%	100.0%	100.0%

5 Years Ending December 31, 2018				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Chartwell Investment Partners Short Duration High Yield	2.7%	1.9%	87.2%	102.3%
BofA ML - U.S. HY Cash Pay 1-3 Yr BB	3.3%	2.0%	100.0%	100.0%

Ending December 31, 2018											
	2018 Q4	1 Yr	3 Yrs	5 Yrs	2018	2017	2016	2015	2014	Inception	Inception Date
Chartwell Investment Partners Short Duration High Yield	-0.7%	1.2%	3.9%	2.7%	1.2%	3.8%	6.9%	0.0%	1.8%	3.2%	Dec-12
BofA ML - U.S. HY Cash Pay 1-3 Yr BB	-0.7%	1.4%	4.4%	3.3%	1.4%	3.6%	8.5%	1.2%	1.9%	3.7%	Dec-12
BBgBarc US Govt/Credit Int TR	1.7%	0.9%	1.7%	1.9%	0.9%	2.1%	2.1%	1.1%	3.1%	1.4%	Dec-12

Note: Returns are gross of fees.

Plumbers & Steamfitters 486 Medical Fund - Chartwell Short Duration High Yield

Correspondence/Transfer Summary

- On December 10, 2012, manager received \$4.5M from the termination of PCA Short Duration Fund.
- On December 21, 2017, manager received \$250,000 from the cash account to rebalance closer to Policy.
- On February 12, 2018, manager attended the meeting for their annual review.
- In July 2018, \$700,000 was transferred from the PNC Money Market Fund to Chartwell Short Duration High Yield.
- In September 2018, \$575,000 was transferred from Chartwell Short Duration High Yield to Chartwell Investment Grade.

Manager Summary

- IPS conducted due diligence meetings with Chartwell on March 22, 2017, October 8, 2018 (on-site) and January 7, 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	Boyd Watterson GSA Fund L.P.
Account Structure	Commingled Fund
Investment Style	Active
Inception Date	4/01/17
Account Type	Real Estate
Benchmark	NCREIF ODCE Equal Weighted Net
Universe	

Boyd Watterson GSA Fund L.P. Ending December 31, 2018		
	Fourth Quarter	Inception 4/1/17
Beginning Market Value	\$3,350,256	\$2,013,205
Contributions	\$1,150,000	\$2,300,000
Withdrawals	\$0	-\$79,548
Fees	-\$14,204	-\$56,738
Net Cash Flow	\$1,150,000	\$2,220,452
Net Investment Change	\$61,044	\$327,643
Ending Market Value	\$4,561,300	\$4,561,300

	Ending December 31, 2018										
	2018 Q4	1 Yr	3 Yrs	5 Yrs	2018	2017	2016	2015	2014	Inception	Inception Date
Boyd Watterson GSA Fund L.P.	1.7%	9.6%	--	--	9.6%	--	--	--	--	9.1%	Apr-17
NCREIF ODCE Equal Weighted Net	1.4%	7.3%	7.5%	9.6%	7.3%	6.9%	8.3%	14.2%	11.4%	7.2%	Apr-17
Income Objective Return 8%	1.9%	8.0%	8.0%	--	8.0%	8.0%	8.0%	8.0%	--	8.0%	Apr-17

Note: Returns are gross of fees.

Plumbers & Steamfitters 486 Medical Fund - Boyd Watterson GSA Fund L.P.

Correspondence/Transfer Summary

- Income is reinvested.
- Total commitment is \$6.05M; \$1.75M remains to be called.

Manager Summary

- IPS conducted due diligence meetings with Boyd Watterson on March 29, 2016, February 8, 2017, November 30, 2017 and January 30, 2019.
- On June 8, 2018, Boyd Watterson notified IPS that the GSA Fund will be “soft-closed” now that it has reached \$1.5 billion in net assets. Additional capacity will be limited to the clients of investment consulting firms (including IPS) that have clients already invested in the Fund. Boyd Watterson expects to further limit capacity only to existing investors once the net assets of the Fund reach \$2.5 billion (subject to change).

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 Changes – The Manager stated that Sarah Wachtman, Administrative Assistant, and David Freidman, Asset Management, were additions during the fourth quarter. **Personnel Departures** - The Manager stated that Rachel Alexander, Senior Staff Accountant, was a departure during the fourth quarter. **Derivatives** - The Manager stated that they do not hold derivatives.

Account Information	
Account Name	PNC Money Market Fund
Account Structure	Other
Investment Style	Active
Inception Date	7/01/08
Account Type	Cash
Benchmark	91 Day T-Bills
Universe	

PNC Money Market Fund		
Ending December 31, 2018		
	Fourth Quarter	Inception 7/1/08
Beginning Market Value	\$658,058	\$0
Contributions	\$2,820,000	\$105,333,248
Withdrawals	-\$2,370,454	-\$104,329,047
Fees	\$0	\$0
Net Cash Flow	\$449,546	\$1,004,200
Net Investment Change	\$5,885	\$109,289
Ending Market Value	\$1,113,489	\$1,113,489

					Ending December 31, 2018							
	2018 Q4	1 Yr	3 Yrs	5 Yrs	2018	2017	2016	2015	2014	Inception	Inception Date	
PNC Money Market Fund	0.5%	1.1%	0.7%	0.4%	1.1%	0.9%	0.2%	0.0%	0.0%	0.3%	Jul-08	
91 Day T-Bills	0.6%	1.9%	1.1%	0.6%	1.9%	0.9%	0.3%	0.0%	0.0%	0.4%	Jul-08	

Compliance Summary

Cash and money market accounts are not monitored for compliance by IPS.

Investment Policy Statement

- The investment policy statement was adopted and signed on March 12, 2018.

Custody Bank

- PNC Bank.

Footnotes

- 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.
- Separately managed account returns are calculated by IPS using custodian data.
- 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.
- Historical market values, flows and returns were provided by CAPTRUST Financial Advisors through March 31, 2012. Beginning in April 2012, IPS will calculate a gross & net return using statements provided by custodian.
- Alliance Bernstein was a fixed income manager for the plan until they were terminated in September 2010.
- All returns are net of fees prior to 12/1/12.

Index Disclosure

- NCREIF ODCE Equal Weighted Net Index – During 4thQ 2018 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.
- Income Objective Return 8% - The manager's stated objective of an 8% net income return is listed for illustrative purposes.

ERISA Pension Investment Conference

April 24 – 27, 2018

- The following investment managers and providers attended and helped to defray the cost of IPS' annual ERISA Pension Investment 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 who may pay to attend EPIC.

Aberdeen Asset Management
Amalgamated Bank of Chicago
American Realty Advisors
ASB Capital Management
Atlanta Capital Management
BlackRock
Boyd Watterson
Brown Advisory
Chartwell Investment Partners
Christenson Investment Partners
Corbin Capital Partners
Corry Capital Advisors
Earnest Partners
Eaton Vance Management
EnTrustPermal
First Eagle Investment Mgmt.
Foundry Partners
Fred Alger Management
GAMCO Asset Management
GCM Grosvenor

Glouston Capital Partners
GoldenTree Asset Management
Great Lakes Advisors
Hach Rose Schirripa & Cheverie
Hamilton Lane Advisors
Hardman Johnston Global Advisors
HPS Investment Partners
Intercontinental Real Estate Corp.
Invesco Advisers, Inc.
Janus Henderson Investors
JP Morgan Asset Management
Kearney Capital LLC
Lord Abbett & Co.
LSV Asset Management
MacKay Shields
McMorgan & Company
MEPT/Bentall Kennedy
National Investment Services
Neuberger Berman
Patriot Financial Partners

PENN Capital Management
PNC Capital Advisors
Post Advisory Group
Principal Global Investors
Quantitative Management Associates
Rothschild Asset Management
Ryan Labs Asset Management
Schroders Investment Management
Segall Bryant & Hamill
Sierra Investment Partners
Smith Graham & Co.
The Boston Company
BNY Mellon Asset Management
Ullico Investment Company
Vista Underwriting Partners
Victory Capital Management
Washington Capital Management
WEDGE Capital Management
Wellington Management Company
Westfield Capital Management
William Blair & Company

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Plumbers & Steamfitters 486 Medical Fund
Preliminary Monthly Performance Analysis
Period Ended
January 31, 2019

Plumbers & Steamfitters Local 486 Medical Fund
Preliminary Monthly Performance Analysis as of January 31, 2019

Summary of Cash Flows

Ending January 31, 2019

	Last Month
Beginning Market Value	\$22,841,310
Net Cash Flow	\$274,071
Net Investment Change	\$321,889
Ending Market Value	\$23,437,270

Plumbers & Steamfitters Local 486 Medical Fund
Preliminary Monthly Performance Analysis as of January 31, 2019

Current vs. Policy As Of January 31, 2019						
	Current	Current	Policy	Policy Range	Difference	Difference
Investment Grade Fixed Income	\$7,046,119	30.1%	30.0%	25.0% - 35.0%	0.1%	\$14,938
Short Duration High Yield Fixed Income	\$10,414,549	44.4%	45.0%	40.0% - 50.0%	-0.6%	-\$132,222
Real Estate - Core	\$4,585,904	19.6%	20.0%	15.0% - 25.0%	-0.4%	-\$101,550
Cash Equivalents	\$1,390,697	5.9%	5.0%	0.0% - 10.0%	0.9%	\$218,834
Total	\$23,437,270	100.0%	100.0%			

Plumbers & Steamfitters Local 486 Medical Fund
Preliminary Monthly Performance Analysis as of January 31, 2019

Performance Summary (Gross of Fees)

	Market Value	% of Portfolio	Ending January 31, 2019 1 Mo
Total Fund	\$23,437,270	100.0%	1.4%
Total Investment Grade Fixed Income	\$7,046,119	30.1%	1.2%
BBgBarc US Govt/Credit Int TR			0.9%
Chartwell Investment Partners	\$7,046,119	30.1%	1.2%
BBgBarc US Govt/Credit Int TR			0.9%
Total Short Duration High Yield Fixed Income	\$10,414,549	44.4%	2.1%
BofA ML - U.S. HY Cash Pay 1-3 Yr BB			2.2%
Chartwell Investment Partners Short Duration High Yield	\$10,414,549	44.4%	2.1%
BofA ML - U.S. HY Cash Pay 1-3 Yr BB			2.2%
BBgBarc US Govt/Credit Int TR			0.9%
Total Real Estate	\$4,585,904	19.6%	0.6%
Boyd Watterson GSA Fund L.P.	\$4,585,904	19.6%	0.6%
Income Objective Return 8%			0.6%
Total Cash	\$1,390,697	5.9%	0.2%
91 Day T-Bills			0.2%
PNC Money Market Fund	\$1,390,697	5.9%	0.2%
91 Day T-Bills			0.2%

Plumbers & Steamfitters Local 486 Medical Fund
Preliminary Monthly Performance Analysis as of January 31, 2019

Performance Summary (Net of Fees)

	Market Value	% of Portfolio	Ending January 31, 2019 1 Mo
Total Fund	\$23,437,270	100.0%	1.4%
Total Investment Grade Fixed Income	\$7,046,119	30.1%	1.2%
BBgBarc US Govt/Credit Int TR			0.9%
Chartwell Investment Partners	\$7,046,119	30.1%	1.2%
BBgBarc US Govt/Credit Int TR			0.9%
Total Short Duration High Yield Fixed Income	\$10,414,549	44.4%	2.0%
BofA ML - U.S. HY Cash Pay 1-3 Yr BB			2.2%
Chartwell Investment Partners Short Duration High Yield	\$10,414,549	44.4%	2.0%
BofA ML - U.S. HY Cash Pay 1-3 Yr BB			2.2%
BBgBarc US Govt/Credit Int TR			0.9%
Total Real Estate	\$4,585,904	19.6%	0.5%
Boyd Watterson GSA Fund L.P.	\$4,585,904	19.6%	0.5%
Income Objective Return 8%			0.6%
Total Cash	\$1,390,697	5.9%	0.2%
91 Day T-Bills			0.2%
PNC Money Market Fund	\$1,390,697	5.9%	0.2%
91 Day T-Bills			0.2%

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ASSET ALLOCATION REVIEW

Plumbers & Steamfitters Local 486 Medical Fund

March 11, 2019

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Annualized Expected Returns over 10-20 years

Equity Asset Class	Return	Risk
U.S. Large Cap	7.25%	15.50
U.S. Mid Cap	7.50%	17.50
U.S. Smid Cap	7.63%	19.00
U.S. Small Cap	7.75%	21.00
International Large Cap	7.75%	17.00
International Small Cap	8.00%	20.50
Emerging Markets	9.00%	22.00
Global Equity	7.75%	17.50

Fixed Income Asset Class	Return	Risk
Cash Equivalents	2.50%	0.50
Short-term Gov /Credit	3.00%	2.50
Intermediate Investment Grade	3.25%	4.00
Core Investment Grade	3.50%	5.00
Mortgages	4.50%	5.00
Short Duration High Quality High Yield	5.00%	6.50
High Quality High Yield	6.00%	8.50
Opportunistic High Yield	6.25%	8.75
Multi-Sector Fixed Income	5.00%	6.50
Short Duration Global Bonds	4.00%	6.00
Core Plus Bonds	4.00%	6.00

Alternatives Asset Class	Return	Risk
Multi-Strategy Hedge Fund of Funds	4.75%	6.50
Opportunistic Strategies	8.00%	11.00
Long Short Equity Hedge Fund of Funds	5.75%	10.00
Global Tactical Asset Allocation	6.75%	13.00
Core Real Estate	7.00%	10.00
Value-Add Real Estate	8.00%	12.00
Opportunistic Real Estate	10.00%	15.50
REITS	7.00%	21.00
Private Equity FOF	10.00%	20.00
Private Equity Secondaries	10.00%	18.00
Core Infrastructure	6.50%	12.00
Value-Add Infrastructure	9.00%	16.00
Risk Parity	6.25%	16.00
Commodities	3.75%	18.00



- IPS Investment Committee January 2019.
- Inflation expectation 2.00%.
- The above chart represents an annualized return forecast for different asset classes using index returns (net of fees). These forecasts are forward-looking assumptions based on reasonable beliefs of the IPS Investment Committee, but are not a guarantee of future performance. Actual results may differ from the forecast above.
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Health & Welfare Asset Class Constraints

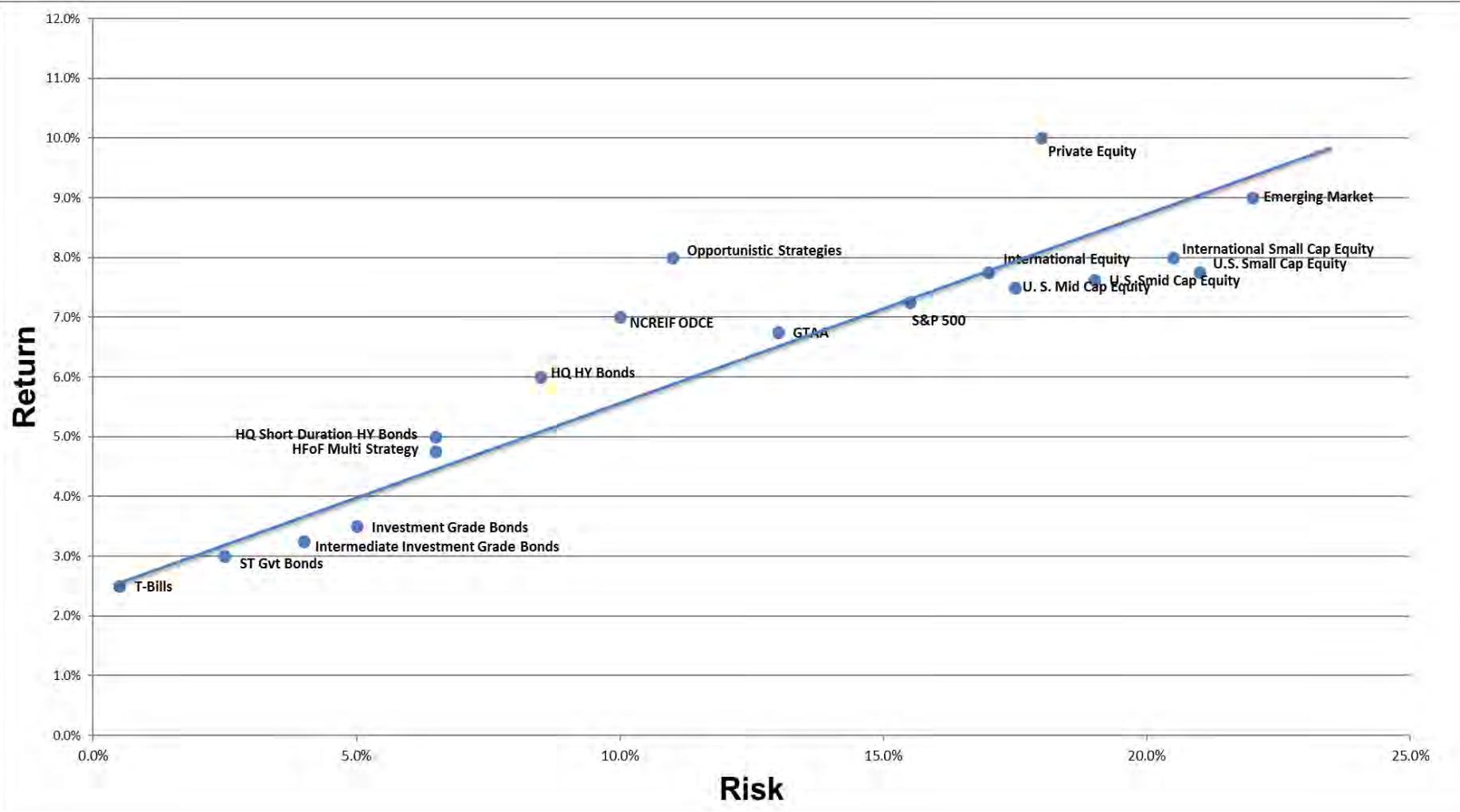


Total Domestic Equity	20%	Max
Cash	5%	Max
Fixed Investment Grade (Includes Short Term & Intermediate)	20%	Min
High Quality High Yield Bonds (Includes Short Duration)	30%	Max
Real Estate – Core	10%	Max
Real Estate – Value Add	5%	Max
Hedge Fund of Funds – Multi Strategy	5%	Max
Opportunistic Strategies	5%	Max

The Asset Allocation modeling requires the mathematical construction of an efficient frontier of various portfolios with distinct asset allocations and risk and return characteristics. The modeling process also requires the imposition of constraints, so that the efficient frontier represents a prudently diversified portfolio with adequate consideration of the liquidity needs and investment time horizon. Unconstrained optimization frequently generates allocations that have superior risk/reward characteristics, but the resulting allocations may not be adequately diversified and/or may have high allocations to illiquid investments.

The constraints shown are used for modeling purposes only. They should not be construed as suggested or recommended allocations, or limits on allocations, to any asset class or investment strategy. Each client fund has different facts, circumstances, time horizon, risk tolerance levels, return objectives, investment preferences, cash flows, and liquidity requirements. As such, each client's investment policy may differ materially from the constraints shown above.

2019 Capital Market Assumptions



Asset Class Correlations



Assumption table:	US Large Cap Equity	US Mid Cap Equity	US Smid Cap Equity	US Small Cap Equity	Int'l Equity	Int'l Small Cap Equity	Emerging Markets Equity	Cash	Short Term Govt / Credit	Interm. Invest. Grade	Core Invest. Grade	Short Duration High Yield	High Yield	Real Estate Core	Real Estate Value Add	Private Equity	HFoF Multi-Strategy	Opp. Strategies	GTAA
US Large Cap Equity	1.00																		
US Mid Cap Equity	0.96	1.00																	
US Smid Cap Equity	0.93	0.98	1.00																
US Small Cap Equity	0.91	0.96	0.98	1.00															
Int'l Equity	0.89	0.86	0.82	0.78	1.00														
Int'l Small Cap Equity	0.85	0.85	0.81	0.77	0.96	1.00													
Emerging Markets Equity	0.80	0.81	0.76	0.72	0.87	0.87	1.00												
Cash	-0.07	-0.11	-0.08	-0.07	-0.08	-0.10	-0.09	1.00											
Short Term Govt / Credit	0.01	0.02	-0.01	-0.05	0.14	0.16	0.21	-0.01	1.00										
Int. Investment Grade	0.04	0.07	0.02	-0.02	0.15	0.18	0.24	-0.11	0.86	1.00									
Core Investment Grade	0.02	0.04	-0.01	-0.05	0.12	0.14	0.20	-0.10	0.79	0.97	1.00								
Short Duration High Yield	0.57	0.66	0.61	0.55	0.63	0.69	0.70	-0.23	0.26	0.33	0.28	1.00							
High Yield	0.65	0.72	0.68	0.63	0.72	0.74	0.76	-0.23	0.21	0.28	0.25	0.93	1.00						
Real Estate Core	0.12	0.08	0.09	0.10	0.03	0.00	-0.08	-0.11	-0.42	-0.20	-0.16	-0.20	-0.10	1.00					
Real Estate Value Add	0.14	0.10	0.10	0.12	0.04	0.01	-0.07	-0.11	-0.40	-0.19	-0.15	-0.20	-0.10	0.99	1.00				
Private Equity	0.91	0.96	0.98	0.99	0.78	0.77	0.72	-0.07	-0.05	-0.02	-0.05	0.55	0.63	0.10	0.12	1.00			
HFoF Multi-Strategy	0.77	0.77	0.74	0.70	0.78	0.81	0.73	-0.11	-0.07	-0.01	-0.04	0.63	0.69	0.09	0.09	0.70	1.00		
Opp. Strategies	0.69	0.76	0.72	0.68	0.75	0.77	0.79	-0.21	0.21	0.27	0.23	0.91	0.98	-0.12	-0.12	0.68	0.69	1.00	
GTAA	0.94	0.91	0.86	0.82	0.96	0.93	0.88	-0.06	0.21	0.24	0.21	0.62	0.70	0.05	0.06	0.82	0.76	0.74	1.00

A Correlation of 1.00 indicates two series move perfectly together while a -1.00 shows they move perfectly opposite one another.

Efficient Frontier Analysis



Efficient Frontier Report

Asset	Portfolio 1	Portfolio 2	Portfolio 3	Portfolio 4	Portfolio 5	Portfolio 6	Portfolio 7	Portfolio 8	Portfolio 9	Portfolio 10
US Large Cap Equity	0.00	0.00	0.00	1.16	2.63	4.16	5.74	9.07	13.61	20.00
US Mid Cap Equity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
US Smid Cap Equity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
US Small Cap Equity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int'l Equity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int'l Small Cap Equity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cash	5.00	5.00	5.00	5.00	0.13	0.00	0.00	0.00	0.00	0.00
Short Term Govt / Credit	77.92	69.19	64.60	54.50	53.05	42.57	29.68	14.79	0.00	0.00
Int. Investment Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Core Investment Grade	0.00	0.00	0.00	0.00	0.00	4.45	11.50	21.14	31.39	25.00
Short Duration High Yield	1.33	6.81	5.40	10.28	7.00	3.47	0.39	0.00	0.00	0.00
High Yield	0.00	0.00	0.00	4.06	12.19	20.35	27.70	30.00	30.00	30.00
Real Estate Core	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Real Estate Value Add	0.75	4.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Private Equity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HFoF Multi-Strategy	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Opp. Strategies	0.00	0.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
GTAA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Return	3.60	3.90	4.20	4.49	4.78	5.06	5.34	5.61	5.88	6.14
Risk	1.84	1.92	2.13	2.55	3.10	3.69	4.32	4.96	5.64	6.38
Return/Risk	1.96	2.04	1.97	1.76	1.54	1.37	1.24	1.13	1.04	0.96

* Compound annual return.

* Returns based on a geometric calculation.

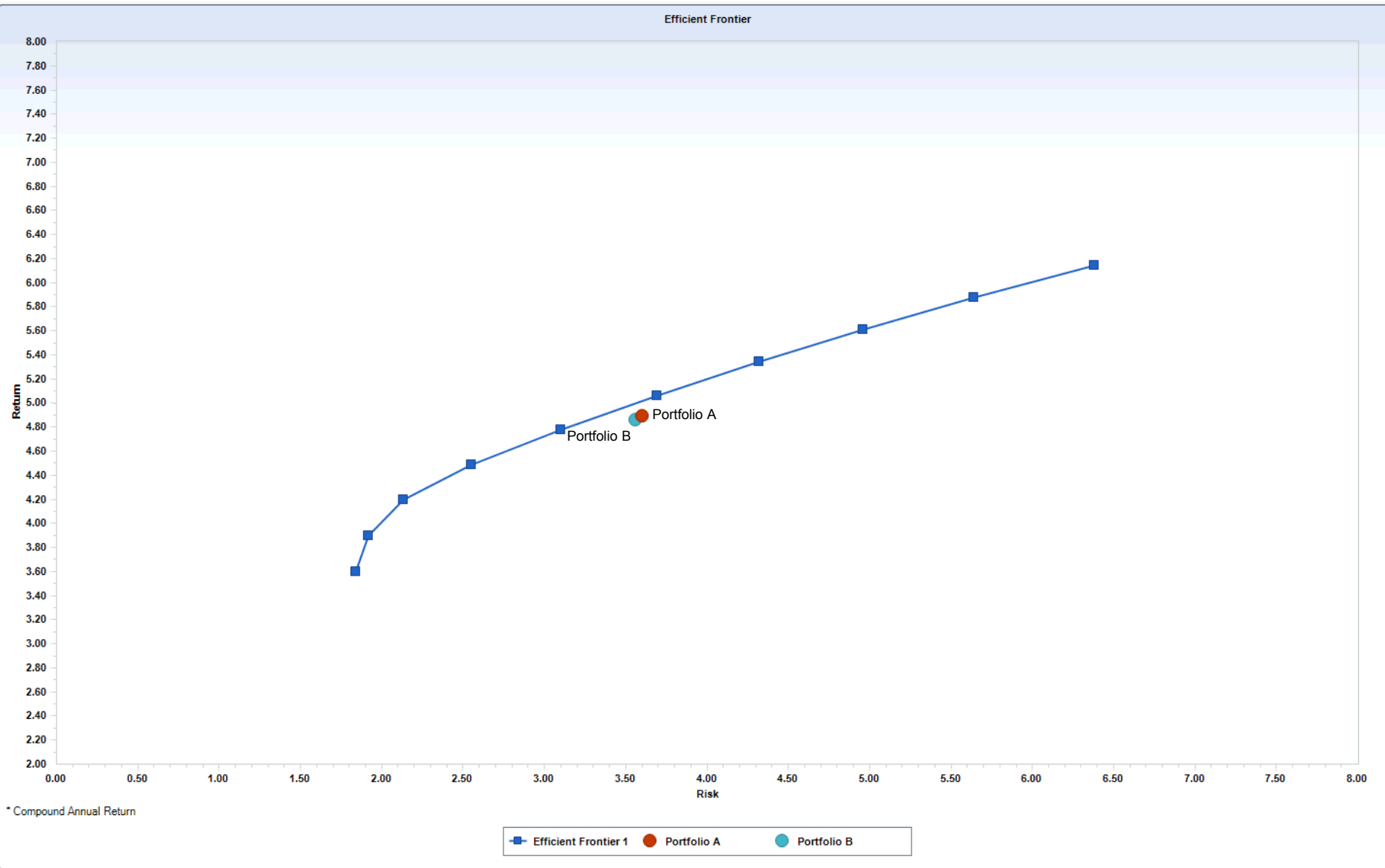
Current Policy Comparison



	% Asset Class						
	Fixed Income Interm	SDHY	Real Estate	Cash	Expected Return	Risk	Comments
Plumbers & Steamfitters Local 486 Medical Fund Portfolio A	30.0	45.0	20.0	5.0	4.89%	3.60	Policy
Actual Portfolio B	30.1	44.4	19.6	5.9	4.86%	3.56	Allocation as of January 31, 2019

Green	Increase allocation
Red	Decrease allocation
Blue	New asset class

Efficient Frontier Comparison



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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
