

Q4

Fourth Quarter 2019 Performance Report

Adams County Retirement Plan
February 4, 2020

Dale A. Connors, CFA
Senior Consultant

ELLWOOD
ADVICE. ALIGNED.

CONTENTS

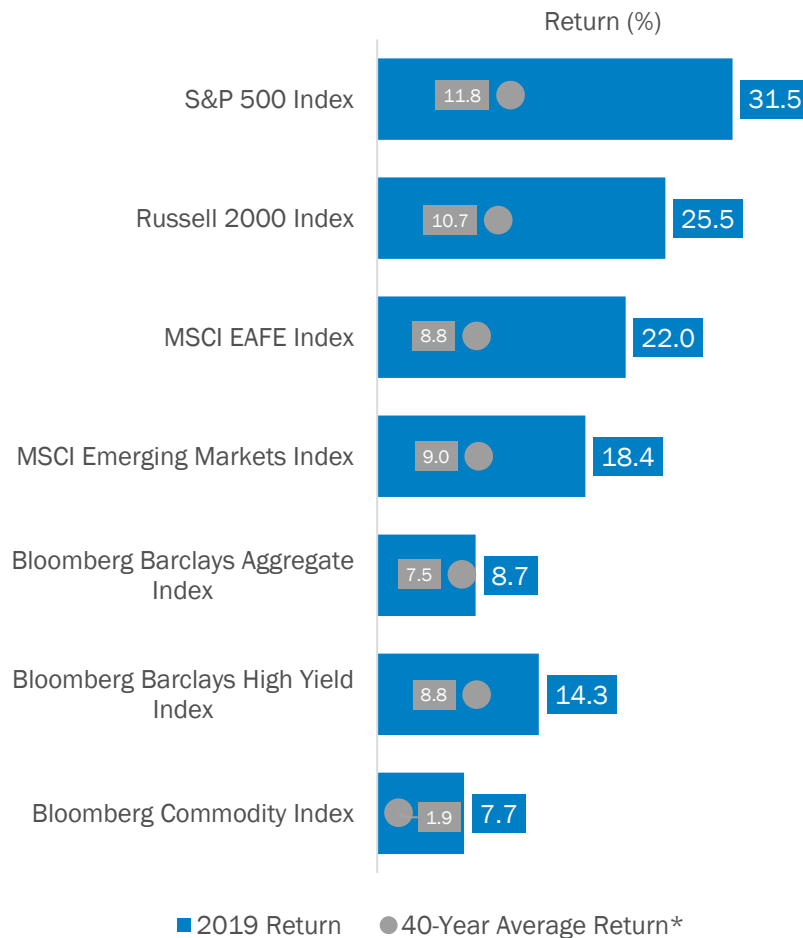
1	Capital Markets Exhibits
15	Pension Plan Analysis
39	Benchmark History
40	Manager Roster
41	Fee Schedule
42	Endnotes

4th Quarter 2019

Capital Markets Exhibits

All Asset Classes Rally in 2019

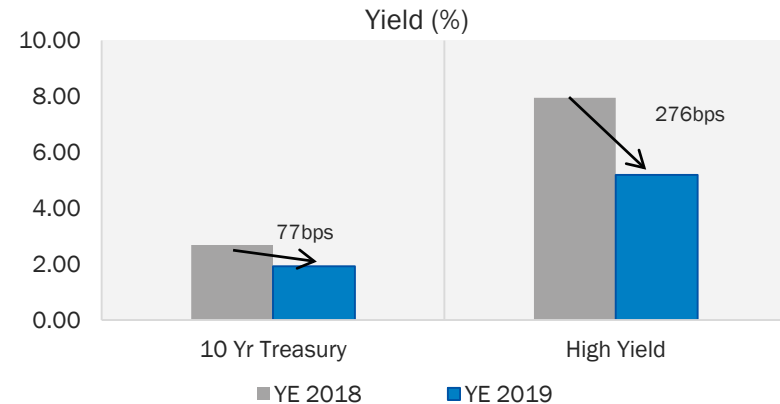
Major Capital Market Returns vs. Long-Term Average Returns



*Note: If an index does not have 40 years of historical data the since inception return of the index is shown. This includes the MSCI Emerging Markets Index (inception July 1989), Bloomberg Barclays High Yield (inception July 1983), and Bloomberg Commodity Index (inception January 1991).

Source: Morningstar Direct, S&P Dow Jones Indices LLC, a division of S&P Global, FTSE Russell, MSCI, Bloomberg Finance, LP

Yields Compress



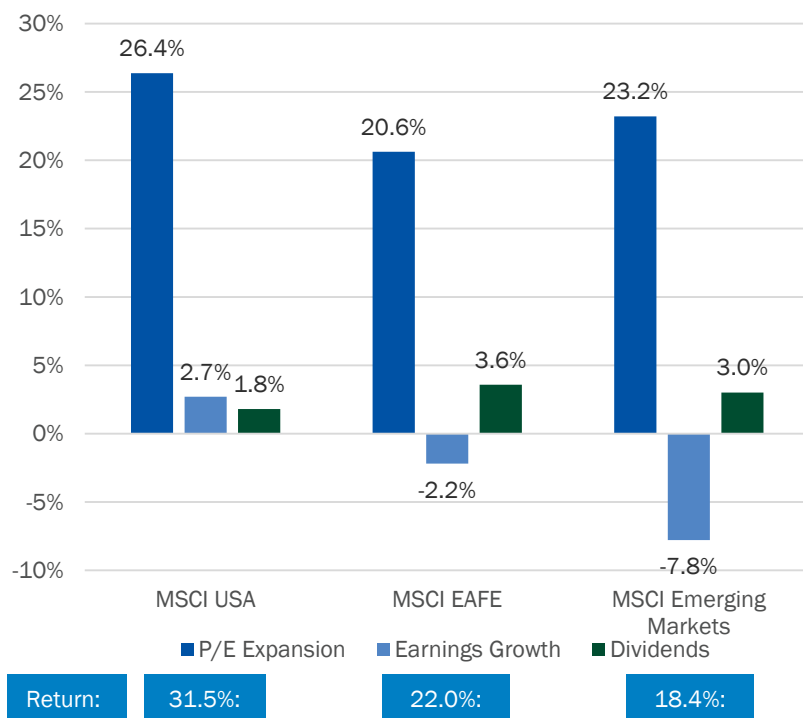
Source: Bloomberg Finance, LP

Synchronized Capital Market Gains

- All major asset classes generated returns above their long-term average returns.
- 2019 marks the first time in last 50 years the S&P 500, bonds, and gold posted positive returns of at least 30%, 5%, and 10%, respectively.
- The S&P 500 had the best return since 2013. Non-US equities had strong positive performance but lagged domestic equities.
- Both interest rates and credit spreads compressed within the fixed income market. The Bloomberg Barclays Aggregate Bond Index posted its best return since 2002.
- Volatility declined during the year. The VIX Index fell by 45%, the largest single year decrease since 2009.

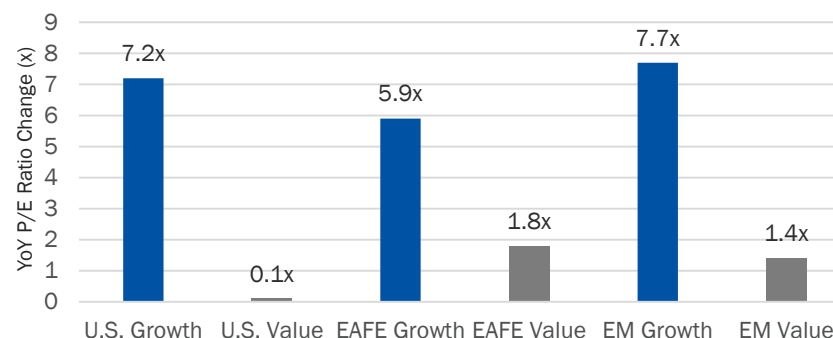
Improving Sentiment Drives Equity Returns

2019 Contribution to Returns



Source: MSCI

Year-Over-Year Price/Earnings Ratio Expansion



Trailing 12 Month Price/Earnings Ratio, Source: MSCI,

Year-End P/E Ratios

	2018 P/E	2019 P/E	20 Year Average
MSCI U.S. Growth	25.3	32.5	28.0
MSCI U.S. Value	17.9	18.0	18.8
MSCI EAFE Growth	18.1	24.0	23.0
MSCI EAFE Value	10.8	12.6	16.0
MSCI EM Growth	17.0	24.7	17.4
MSCI EM Value	9.3	10.7	12.1

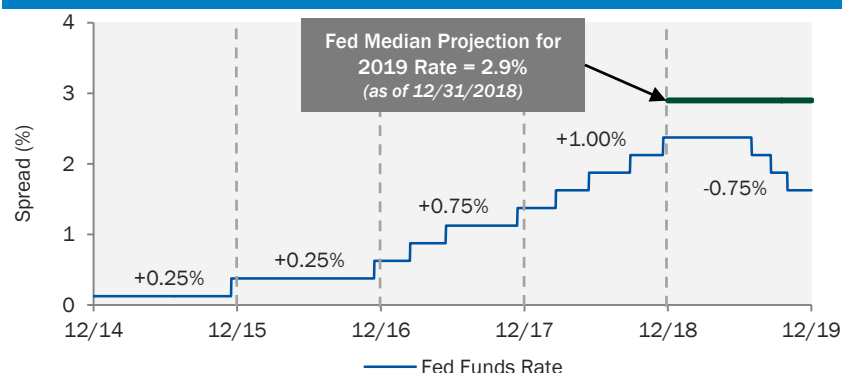
Trailing 12 Month Price/Earnings Ratio, Source: MSCI,

Observations

- Supported by accommodative global central banks, easing monetary policy in the U.S. and moderating concerns about a global trade war, global risk assets posted some of the strongest returns in recent history.
- Investor risk appetite increased throughout 2019 as the bulk of equity returns were generated from price/earnings ratio expansion as opposed to actual earnings growth and dividend payouts.
- Growth stocks continued their 10+ year rally over value stocks as multiple expansion in growth sectors like technology, which returned over 50% in the U.S., in 2019, expanded at a much faster pace than their value counterparts.

Fed Activity also Supports Defensive Assets

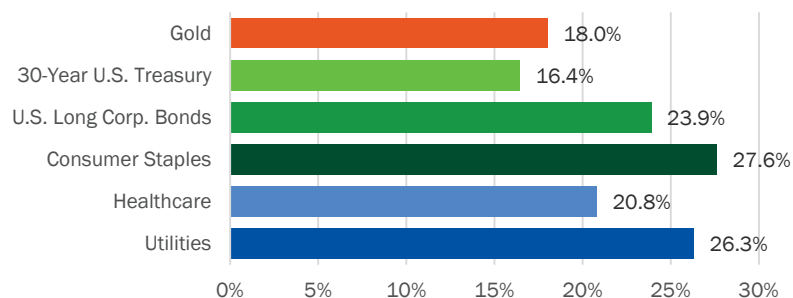
Fed Funds Rates



Source: Federal Reserve Bank of New York

- Similarly, after initiating quantitative tightening to reduce balance sheet assets in 2018, the Fed again switched strategy in October with additional Treasury bill purchases. This increased liquidity helped boost financial markets.

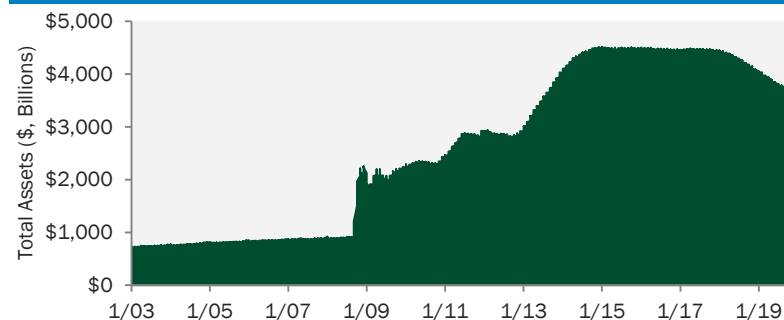
Defensive Assets – 2019 Returns



Source: Bloomberg Finance, LP, Morningstar Direct, S&P Dow Jones Indices LLC, a division of S&P Global.

- After undertaking a significant interest rate hiking path in 2018, the Federal Open Market Committee reversed course and cut the fed funds rate three times throughout the year.
- These actions pushed yields lower, which results in higher bond prices, leading to the best calendar year return (+8.7%) for U.S. Fixed Income since 2002.

Fed Balance Sheet (Total Assets)

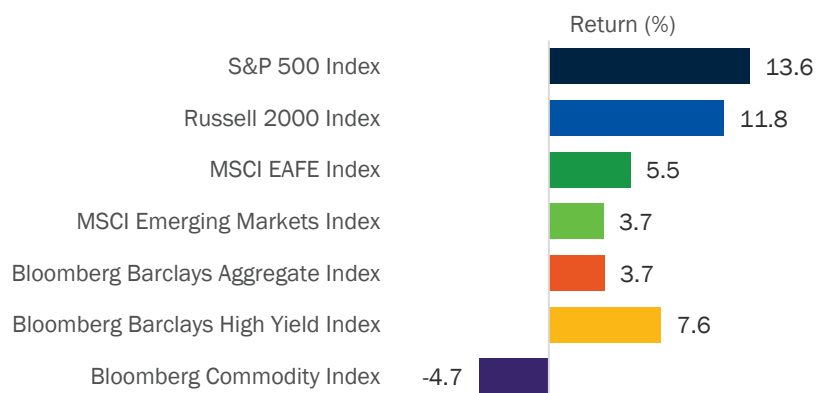


Source: Federal Reserve; As of 12/31/2019.

- However, it was not just central bank activity that drove returns as traditionally safer assets, such as gold (+18.0%), also rose. Fears of a global manufacturing slowdown, aggravated by trade conflicts, helped push up these defensive assets.
- Within equities, defensive sectors including consumer staples (+27.6%), healthcare (+20.8%), and utilities (+26.3%) all posted banner years.

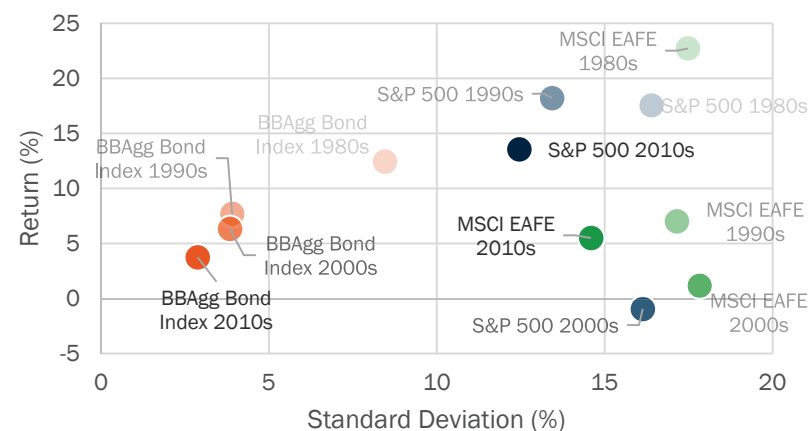
2010 to 2019 Decade in Review

10-Year Returns Ending December 31, 2019



Source: Morningstar Direct, S&P Dow Jones Indices LLC, a division of S&P Global, FTSE Russell, MSCI, Bloomberg Finance, LP

Stock and Bond Risk vs. Return Through the Decades 1980s to 2010s



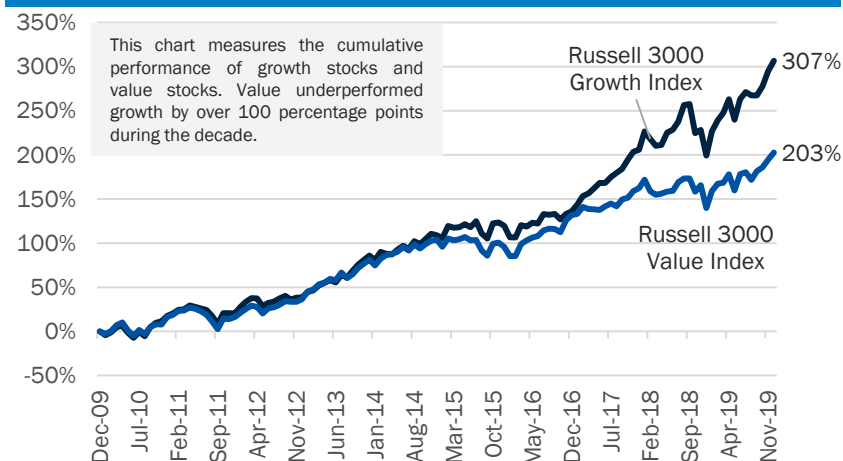
Source: Morningstar Direct, S&P Dow Jones Indices LLC, a division of S&P Global, MSCI, Bloomberg Finance, LP.

Comparison of Key Market Indicators

Indicator	December 31, 2009	December 31, 2019
S&P 500 Price Level	1,115.10	3,230.78
S&P 500 P/E Ratio	16.8x	22.9x
Russell 3000 Index Market Capitalization	\$12.0 trillion	\$31.7 trillion
10-Year Treasury Yield	3.84%	1.92%
Bloomberg Barclays High Yield Bond Index Average OAS	617 bps	336 bps

Source: Bloomberg Finance, LP, Morningstar Direct, S&P Dow Jones Indices LLC, a division of S&P Global, FTSE Russell,.

Key Trend of the Decade: Growth Outperforms Value

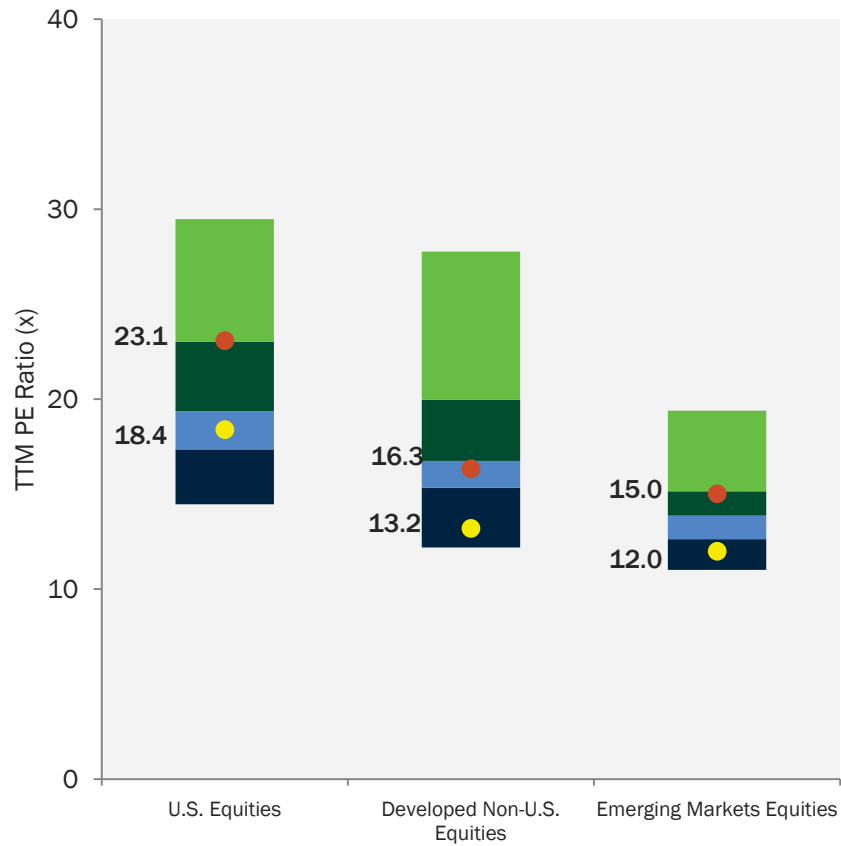


Source: Morningstar Direct, FTSE Russell

Equity Valuations

Trailing Price to Earnings Ratio (Last 20 Years)

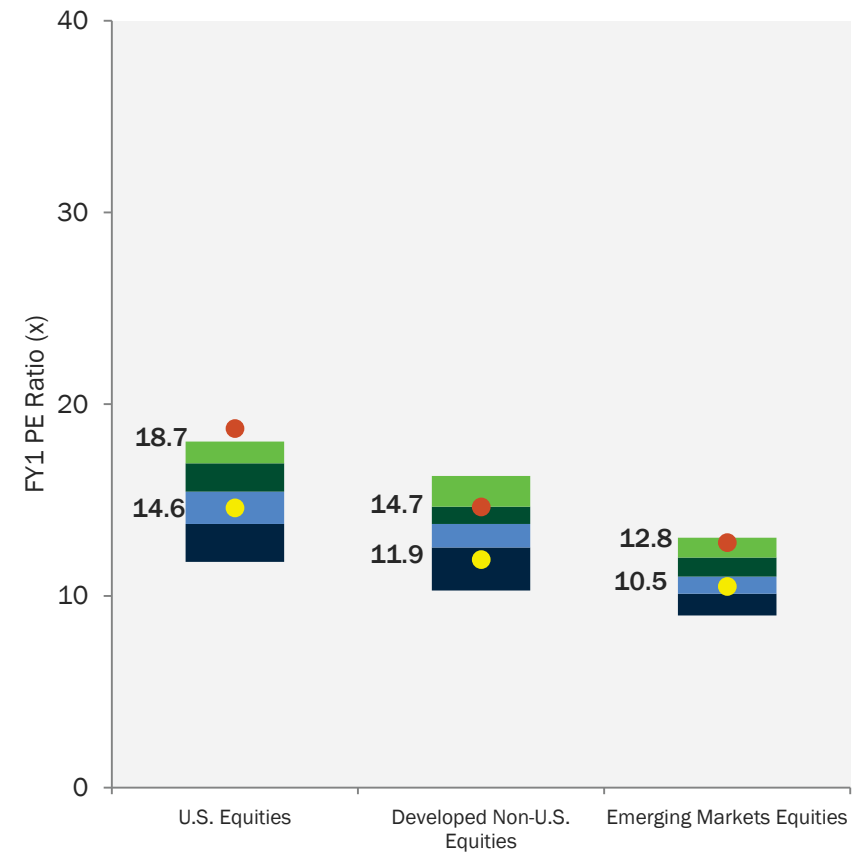
■ 5th - 25th ■ 25th - 50th ■ 50th - 75th ■ 75th - 95th ● Current ● 12/31/2018



Source: MSCI, As of 12/31/2019

Forward Price to Earnings Ratio (Last 16.5 Years)

■ 5th - 25th ■ 25th - 50th ■ 50th - 75th ■ 75th - 95th ● Current ● 12/31/2018



Source: MSCI, As of 12/31/2019

S&P 500 Scorecard

Sector Returns

	<i>Div. Yield⁽¹⁾</i>	<i>P/E Ratio⁽²⁾</i>	<i>15-Yr Avg.⁽³⁾</i>		
Technology	1.2%	27.9x	20.2x	14.4%	50.3%
Communication Services	1.3%	23.4x	19.8x	9.0%	32.7%
Financials	2.0%	14.7x	14.6x	10.5%	32.1%
S&P 500	1.8%	22.9x	17.5x	9.1%	31.5%
Industrials	1.8%	22.2x	17.9x	5.5%	29.4%
Real Estate	3.1%	34.9x	39.5x	-0.5%	29.0%
Consumer Discretionary	1.3%	27.1x	19.4x	4.5%	27.9%
Consumer Staples	2.7%	26.4x	19.4x	3.5%	27.6%
Utilities	3.1%	23.6x	17.3x	0.8%	26.3%
Materials	2.0%	20.6x	18.2x	6.4%	24.6%
Healthcare	1.6%	25.7x	20.8x	14.4%	20.8%
Energy	3.8%	16.6x	15.5x	5.5%	11.8%

■ 4th Quarter 2019 ■ 2019

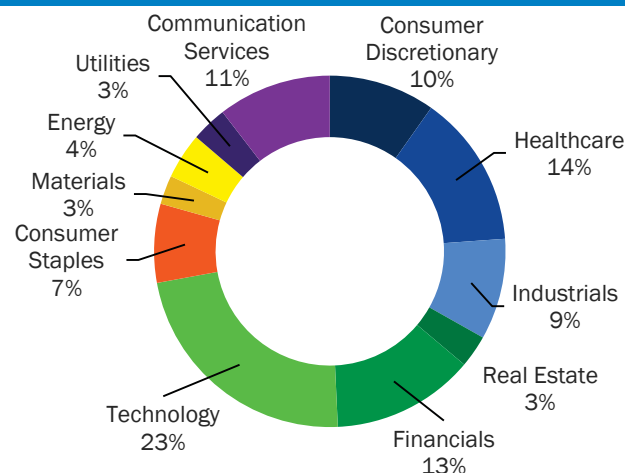
Source: Morningstar Direct, S&P Dow Jones Indices LLC, a division of S&P Global

⁽¹⁾Trailing 12 month Dividend Yield as of 12/31/2019.

⁽²⁾Trailing 12 month P/E as of 12/31/2019.

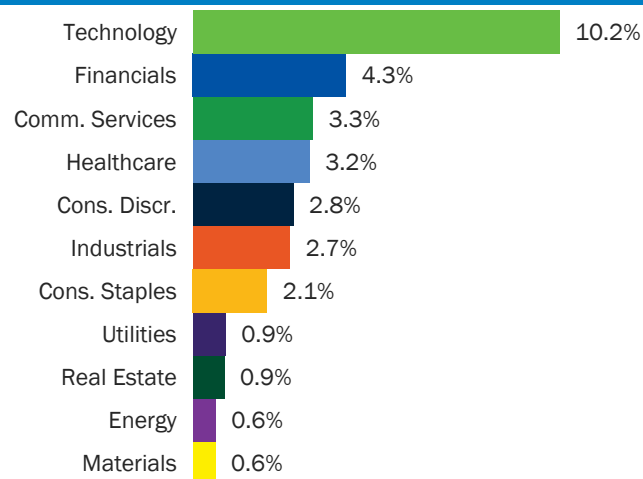
⁽³⁾15-year average trailing 12 month P/E as of 12/31/2019.

Sector Weights



Source: Morningstar Direct, S&P Dow Jones Indices LLC, a division of S&P Global

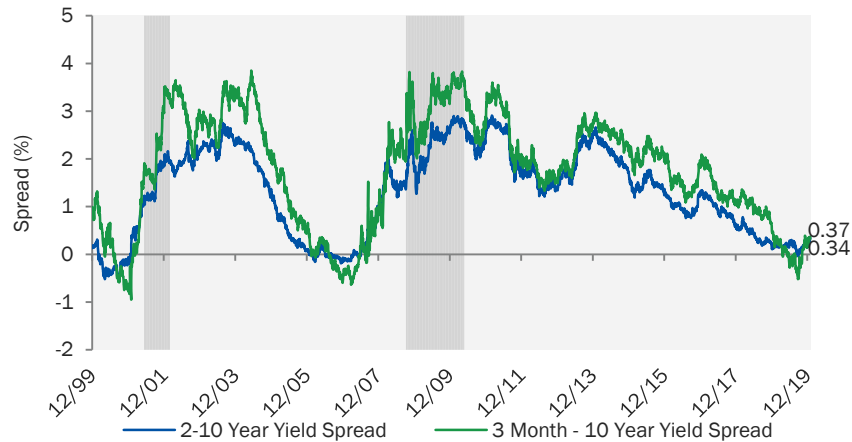
2019 Sector Contribution



Source: Morningstar Direct, S&P Dow Jones Indices LLC, a division of S&P Global, GICS

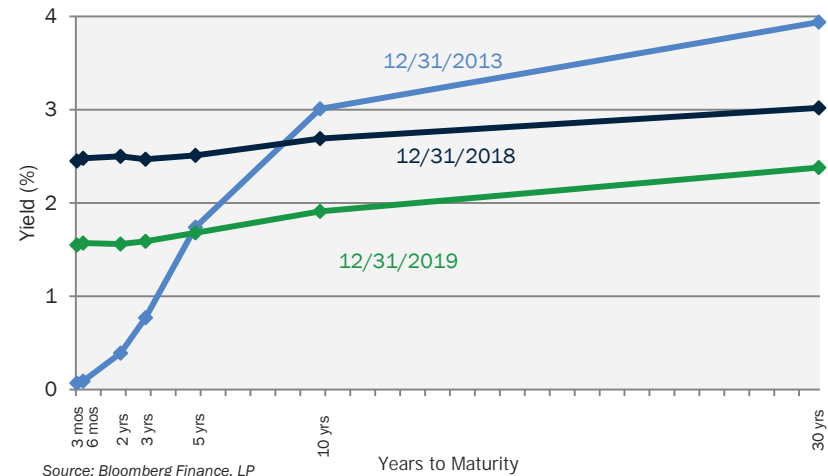
Rates and Spreads

U.S. Treasury Spreads



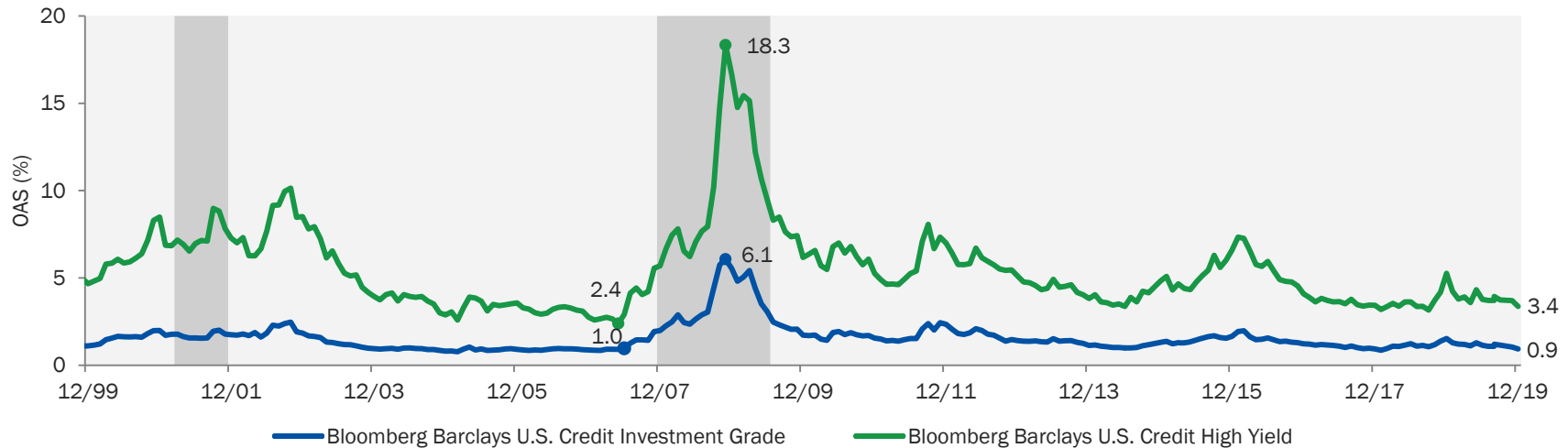
Source: Federal Reserve Bank of St. Louis, 10-Year Treasury Constant Maturity Minus 3-Month Treasury Constant Maturity & 10-Year Treasury Constant Maturity Minus 2-Year Treasury Constant Maturity, Grey bars represent U.S. recessions.

U.S. Treasury Yield Curve



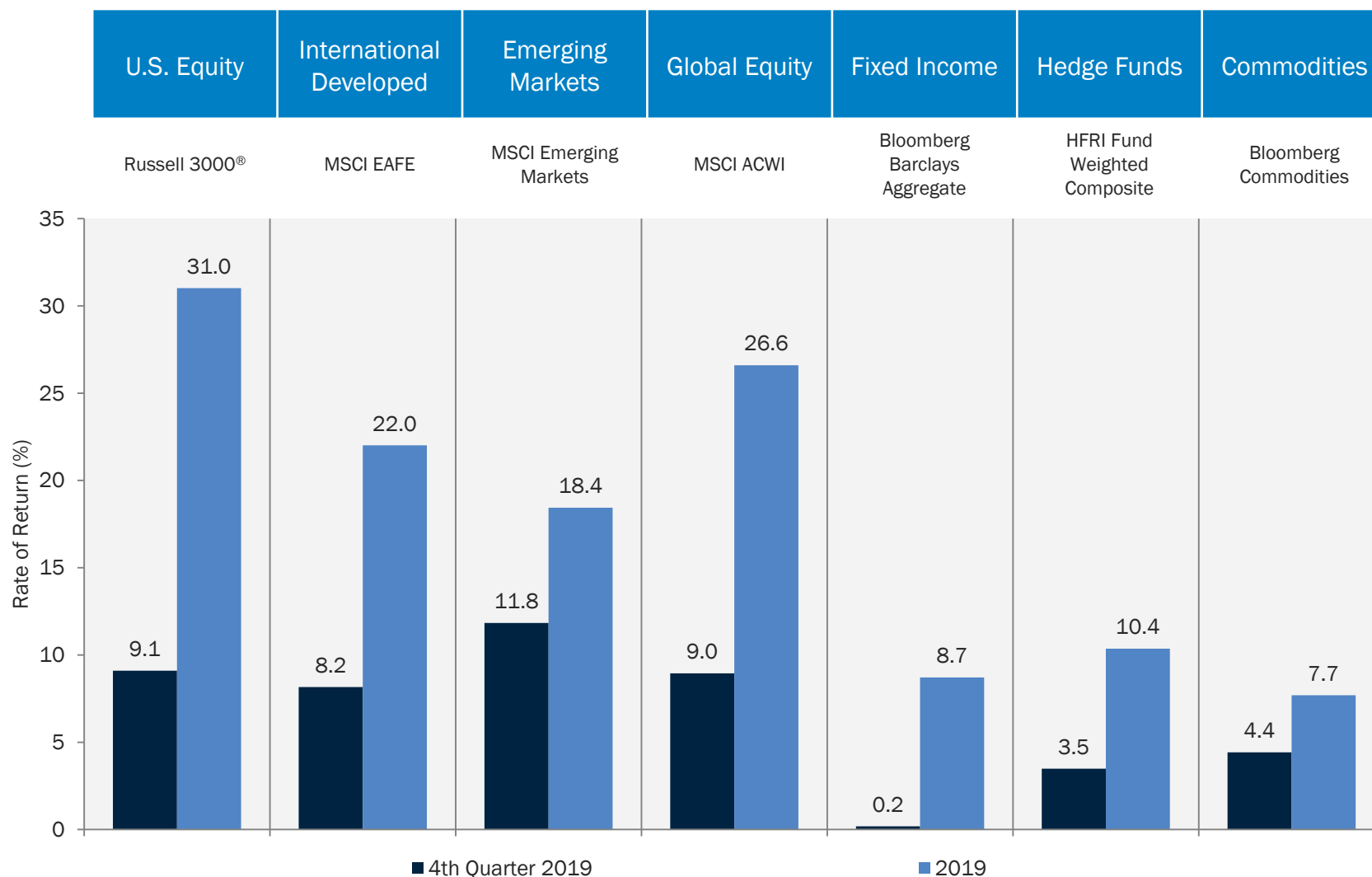
Source: Bloomberg Finance, LP

Fixed Income Credit Spreads Relative to Treasuries



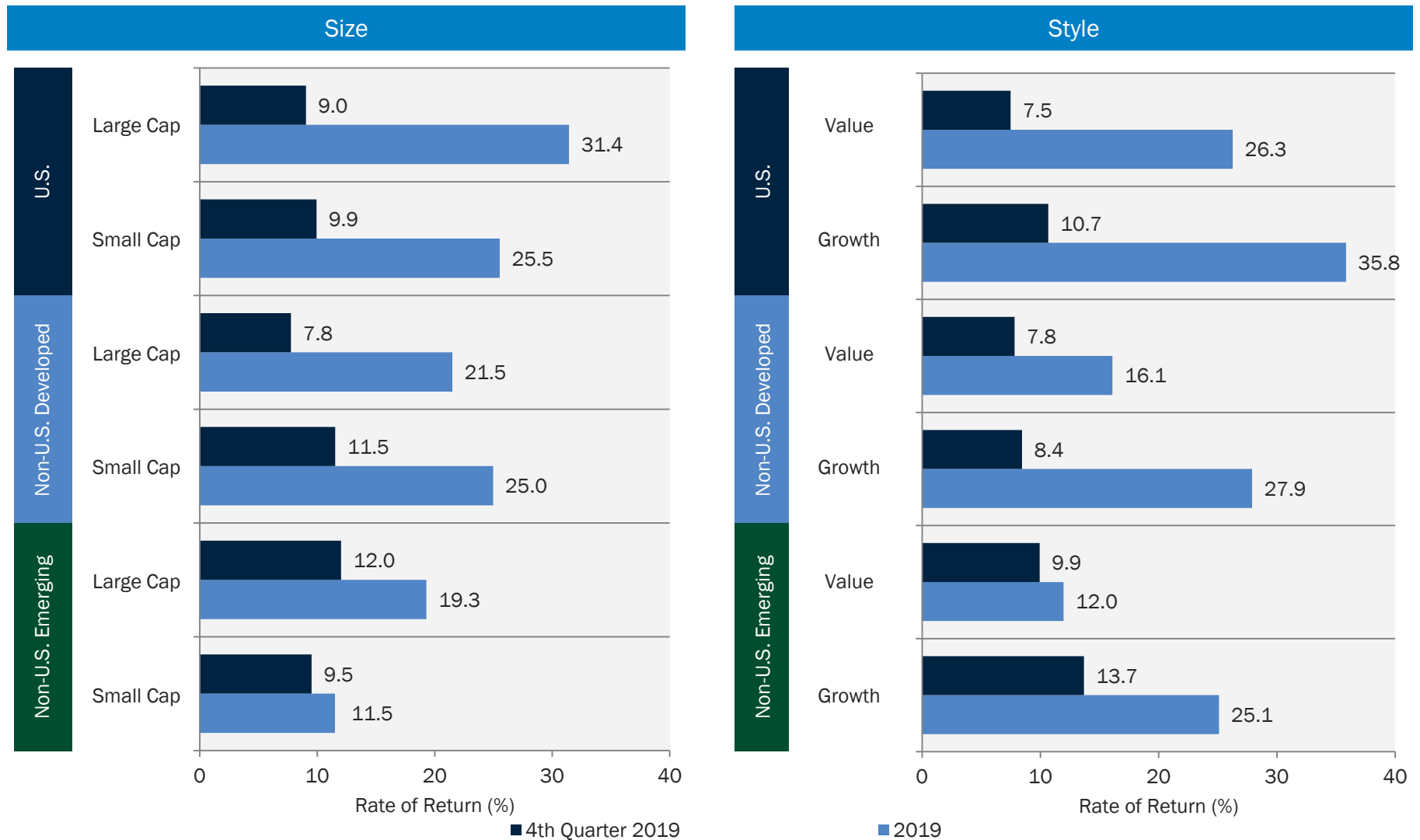
Source: Bloomberg Finance, LP, Grey bars represent U.S. recessions; As of 12/31/2019

Market Overview



Source: Morningstar Direct, S&P Dow Jones Indices LLC, a division of S&P Global, Russell, MSCI, Hedge Fund Research, Inc., Bloomberg Finance, LP

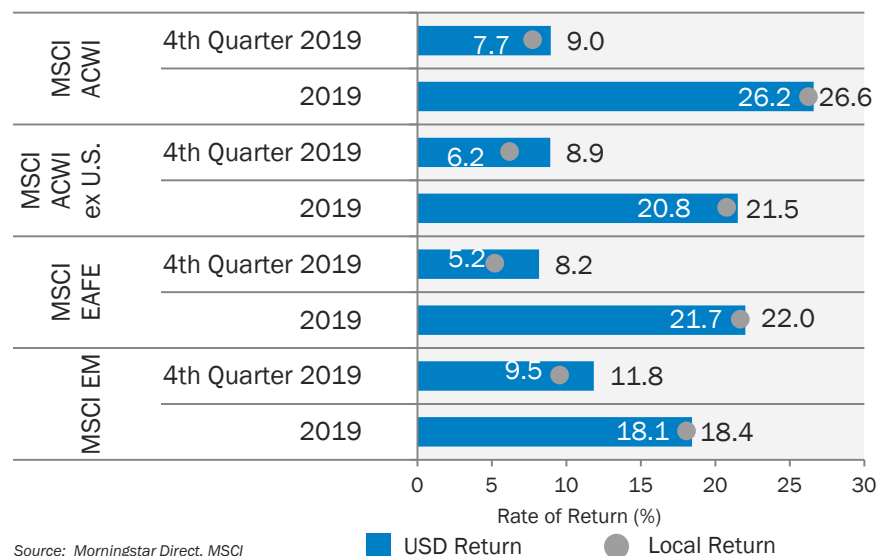
Global Equity Factor Performance



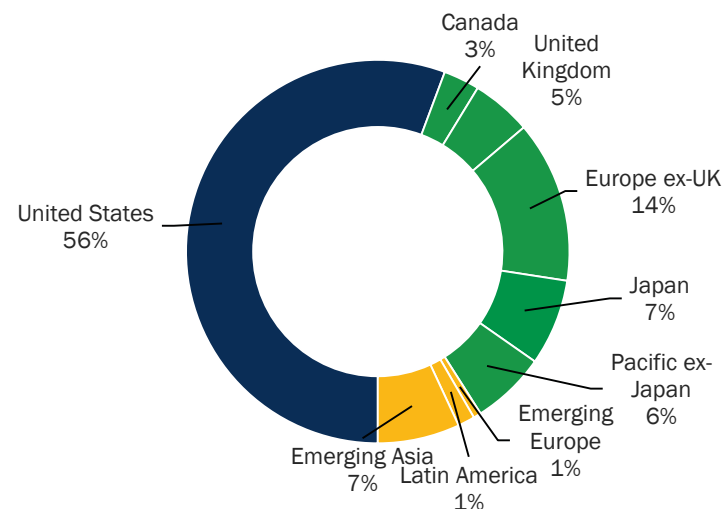
Note: Indices above are the respective size and style sub-indices of Russell and MSCI.
Source: Morningstar Direct, Russell, and MSCI.

Non-U.S. / Global Equity Markets

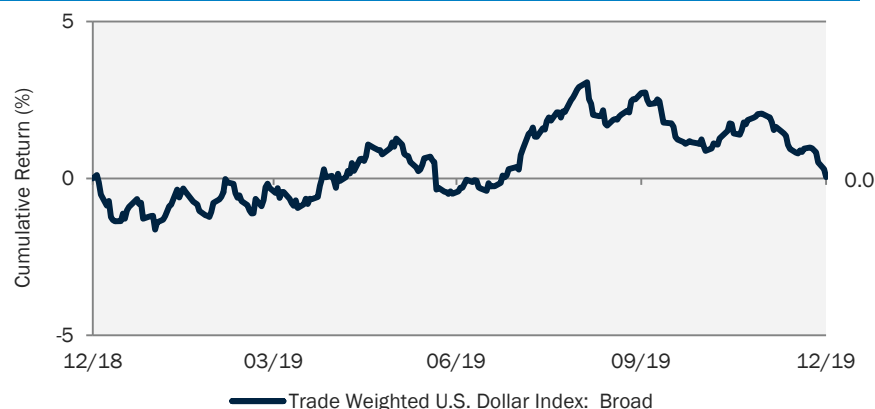
Market Returns



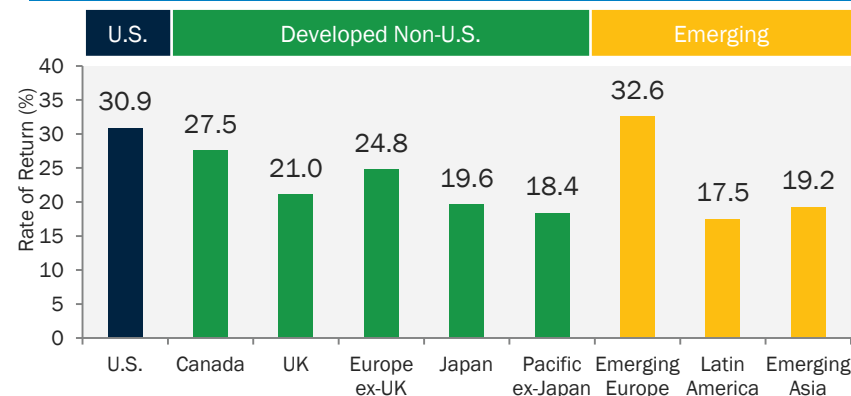
MSCI ACWI Equity Weights



U.S. Dollar vs. Foreign Currencies



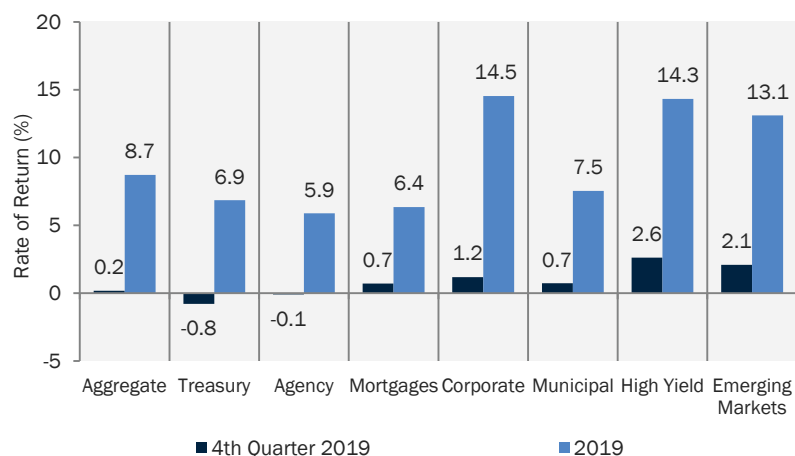
2019 Regional Market Returns (USD)



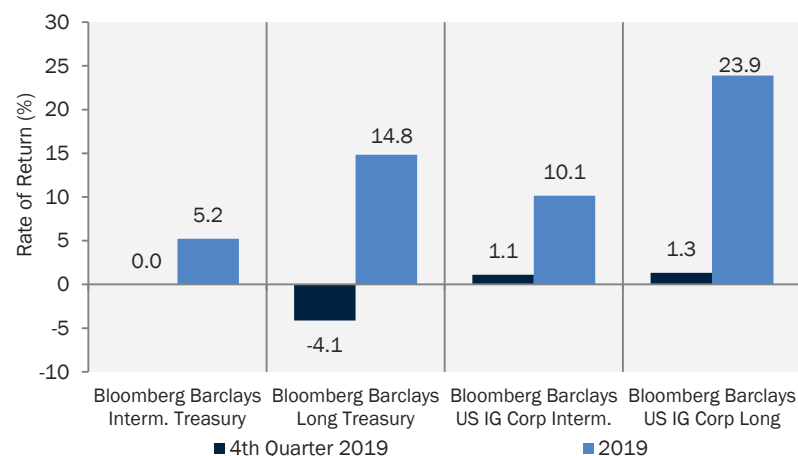
Fixed Income Markets

Bond Market Returns

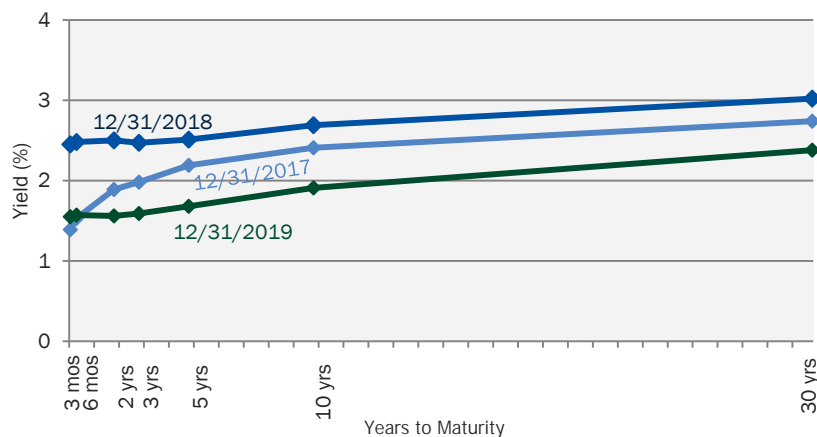
Returns by Sector



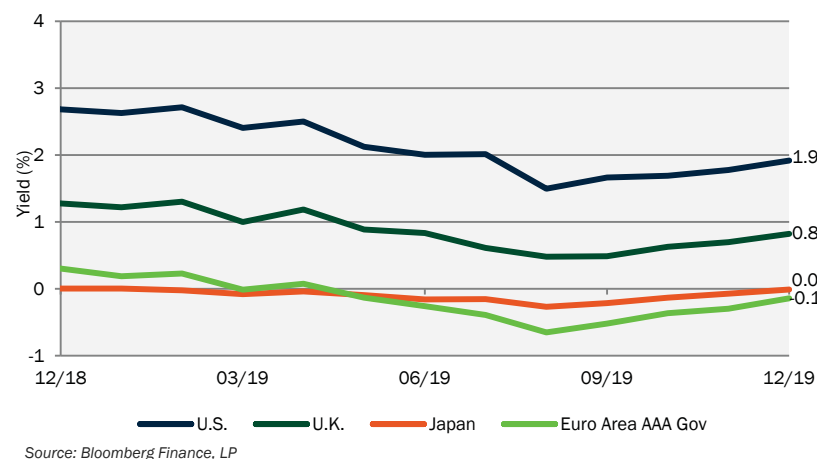
Returns by Duration



U.S. Treasury Yield Curve

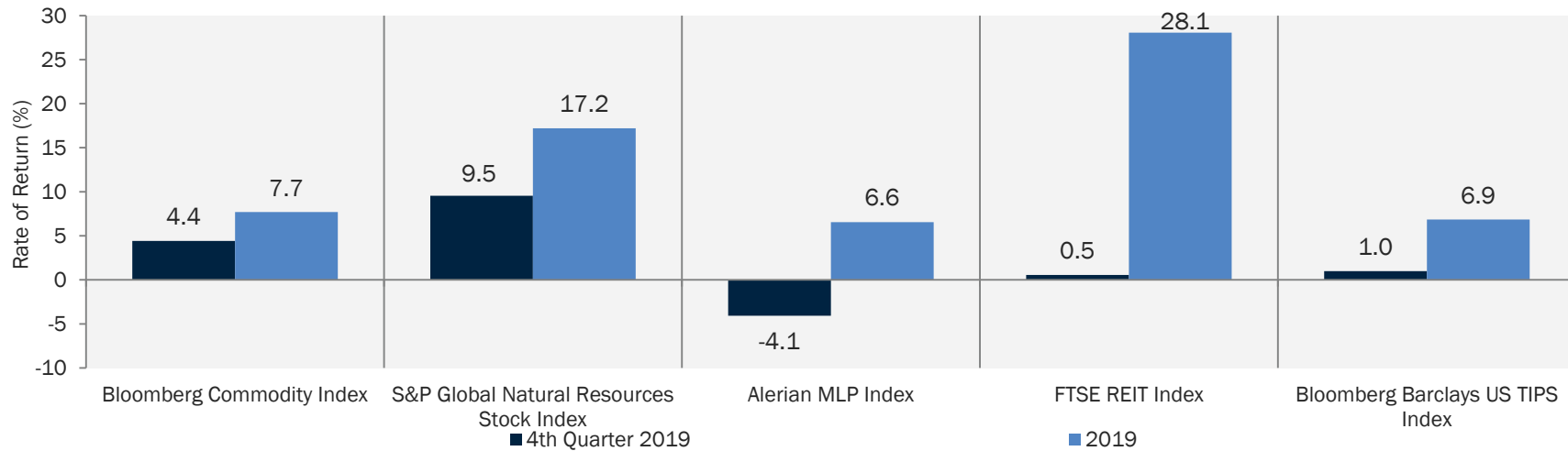


Global Ten Year Government Spot Yields



Real Assets

Asset Class Performance

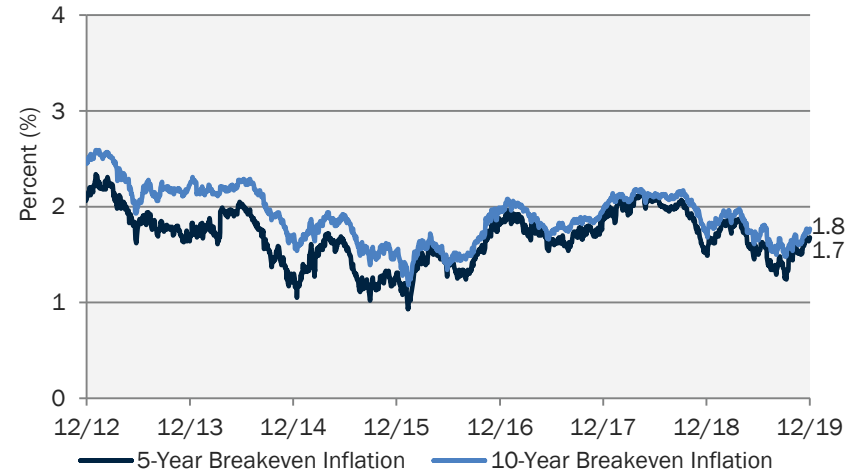


WTI Crude Oil Prices



Source: U.S. Energy Information Administration, Crude Oil Prices: West Texas Intermediate (WTI) - Cushing, Oklahoma, retrieved from FRED, Federal Reserve Bank of St. Louis; As of 12/31/2019.

United States Breakeven Inflation



Source: Federal Reserve Bank of St. Louis, 5-Year & 10-Year Breakeven Inflation Rate; As of 12/31/2019.

World Markets Heat Map

	Calendar Year Returns									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
U.S. Equity										
S&P 100 Index	12.5%	3.2%	16.1%	30.4%	12.7%	2.6%	11.4%	22.0%	-3.9%	32.2%
S&P 500 Index	15.1%	2.1%	16.0%	32.4%	13.7%	1.4%	12.0%	21.8%	-4.4%	31.5%
Russell 1000 Value Index	15.5%	0.4%	17.5%	32.5%	13.5%	-3.8%	17.3%	13.7%	-8.3%	26.5%
Russell 1000 Growth Index	16.7%	2.6%	15.3%	33.5%	13.0%	5.7%	7.1%	30.2%	-1.5%	36.4%
Russell 2000 Index	26.8%	-4.2%	16.4%	38.8%	4.9%	-4.4%	21.3%	14.6%	-11.0%	25.5%
Russell 2000 Value Index	24.5%	-5.5%	18.1%	34.5%	4.2%	-7.5%	31.7%	7.8%	-12.9%	22.4%
Russell 2000 Growth Index	29.1%	-2.9%	14.6%	43.3%	5.6%	-1.4%	11.3%	22.2%	-9.3%	28.5%
Russell Micro Cap Index	28.9%	-9.3%	19.7%	45.6%	3.6%	-5.2%	20.4%	13.2%	-13.1%	22.4%
Non U.S. Equity										
MSCI ACWI ex U.S. Index	11.2%	-13.7%	16.8%	15.3%	-3.9%	-5.7%	4.5%	27.2%	-14.2%	21.5%
MSCI EAFE Index	7.7%	-12.1%	17.3%	22.8%	-4.9%	-0.8%	1.0%	25.0%	-13.8%	22.0%
MSCI EAFE Small Cap Index	22.0%	-15.9%	20.0%	29.3%	-4.9%	9.6%	2.2%	33.0%	-17.9%	25.0%
MSCI Emerging Markets Index	18.9%	-18.4%	18.2%	-2.6%	-2.2%	-14.9%	11.2%	37.3%	-14.6%	18.4%
MSCI Emerging Mkts. Small Cap Index	27.2%	-27.2%	22.2%	1.0%	1.0%	-6.8%	2.3%	33.8%	-18.6%	11.5%
MSCI Frontier Markets Index	23.8%	-18.7%	8.9%	25.9%	6.8%	-14.5%	2.7%	31.9%	-16.4%	18.0%
Global										
MSCI ACWI Index	12.7%	-7.4%	16.1%	22.8%	4.2%	-2.4%	7.9%	24.0%	-9.4%	26.6%
Fixed Income										
Barclays US Aggregate Index	6.5%	7.8%	4.2%	-2.0%	6.0%	0.5%	2.6%	3.5%	0.0%	8.7%
Barclays US Inv. Grade. Corp. Index	9.0%	8.1%	9.8%	-1.5%	7.4%	-0.7%	6.1%	6.4%	-2.5%	14.5%
Barclays High Yield Index	15.1%	5.0%	15.8%	7.4%	2.5%	-4.5%	17.1%	7.5%	-2.1%	14.3%
Barclays US Corp Long AA+ Index	10.1%	19.1%	9.9%	-7.8%	18.7%	-1.1%	6.9%	10.8%	-3.4%	18.2%
Barclays US Treasury Long Index	9.4%	29.9%	3.6%	-12.7%	25.1%	-1.2%	1.3%	8.5%	-1.8%	14.8%
Barclays U.S. Municipal Bond Index	2.4%	10.7%	6.8%	-2.6%	9.1%	3.3%	0.2%	5.4%	1.3%	7.5%
Barclays Global Agg. ex. U.S. Index	4.9%	4.4%	4.1%	-3.1%	-3.1%	-6.0%	1.5%	10.5%	-2.1%	5.1%
Barclays EM Debt (Local) Gov't Index	12.5%	0.3%	13.9%	-4.3%	-1.9%	-10.4%	5.9%	14.3%	-3.4%	9.5%
Alternatives										
Bloomberg Commodity Index	16.8%	-13.3%	-1.1%	-9.5%	-17.0%	-24.7%	11.8%	1.7%	-11.2%	7.7%
Bloomberg Commodity – Gold	28.7%	9.6%	6.1%	-28.7%	-1.7%	-10.9%	7.7%	12.8%	-2.8%	18.0%
Bloomberg Commodity – WTI Crude Oil	3.8%	-3.6%	-11.8%	6.8%	-41.7%	-44.3%	7.1%	5.1%	-20.5%	34.4%
Bloomberg Commodity – Agriculture	38.5%	-14.4%	4.0%	-14.3%	-9.2%	-15.6%	2.1%	-11.0%	-10.8%	1.7%
FTSE REIT Index	27.6%	7.3%	20.1%	3.2%	27.1%	2.3%	9.3%	9.3%	-4.1%	28.1%

Source: Morningstar Direct, Bloomberg Finance, LP, Russell, S&P Dow Jones Indices LLC, a division of S&P, MSCI, FTSE; As of 12/31/2019

	Annualized Returns					TTM P/E	Div. Yield
	YTD	1-Yr	3-Yr	5-Yr	10-Yr		
U.S. Equity							
S&P 100 Index	32.2%	32.2%	15.7%	12.1%	13.4%	22.6x	1.9%
S&P 500 Index	31.5%	31.5%	15.3%	11.7%	13.6%	22.6x	1.9%
Russell 1000 Value Index	26.5%	26.5%	9.7%	8.3%	11.8%	18.2x	2.5%
Russell 1000 Growth Index	36.4%	36.4%	20.5%	14.6%	15.2%	28.6x	1.2%
Russell 2000 Index	25.5%	25.5%	8.6%	8.2%	11.8%	18.4x	1.5%
Russell 2000 Value Index	22.4%	22.4%	4.8%	7.0%	10.6%	14.9x	2.3%
Russell 2000 Growth Index	28.5%	28.5%	12.5%	9.3%	13.0%	25.0x	0.8%
Russell Micro Cap Index	22.4%	22.4%	6.4%	6.6%	11.3%	14.6x	1.4%
Non U.S. Equity							
MSCI ACWI ex U.S. Index	21.5%	21.5%	9.9%	5.5%	5.0%	16.2x	3.3%
MSCI EAFE Index	22.0%	22.0%	9.6%	5.7%	5.5%	17.4x	3.4%
MSCI EAFE Small Cap Index	25.0%	25.0%	10.9%	8.9%	8.7%	16.4x	2.9%
MSCI Emerging Markets Index	18.4%	18.4%	11.6%	5.6%	3.7%	14.4x	3.1%
MSCI Emerging Mkts. Small Cap Index	11.5%	11.5%	6.7%	3.0%	2.9%	15.1x	3.2%
MSCI Frontier Markets Index	18.0%	18.0%	9.2%	2.7%	5.3%	13.4x	3.7%
Global							
MSCI ACWI Index	26.6%	26.6%	12.4%	8.4%	8.8%	19.3x	2.5%
Fixed Income						Duration	YTW
Barclays US Aggregate Index	8.7%	8.7%	4.0%	3.0%	3.7%	5.9	2.3%
Barclays US Inv. Grade. Corp. Index	14.5%	14.5%	5.9%	4.6%	5.5%	7.9	2.8%
Barclays High Yield Index	14.3%	14.3%	6.4%	6.1%	7.6%	3.0	5.2%
Barclays US Corp Long AA+ Index	18.2%	18.2%	8.1%	6.0%	7.7%	16.0	3.1%
Barclays US Treasury Long Index	14.8%	14.8%	6.9%	4.1%	7.0%	18.1	2.3%
Barclays U.S. Municipal Bond Index	7.5%	7.5%	4.7%	3.5%	4.3%	5.3	1.8%
Barclays Global Agg. ex. U.S. Index	5.1%	5.1%	4.4%	1.6%	1.5%	8.2	0.7%
Barclays EM Debt (Local) Gov't Index	9.5%	9.5%	6.5%	2.8%	3.3%	6.8	3.7%
Alternatives							
Bloomberg Commodity Index	7.7%	7.7%	-0.9%	-3.9%	-4.7%	--	--
Bloomberg Commodity – Gold	18.0%	18.0%	9.0%	4.4%	2.7%	--	--
Bloomberg Commodity – WTI Crude Oil	34.4%	34.4%	4.0%	-7.7%	-9.5%	--	--
Bloomberg Commodity – Agriculture	1.7%	1.7%	-6.9%	-7.0%	-4.0%	--	--
FTSE REIT Index	28.1%	28.1%	10.3%	8.4%	12.5%	--	--

Source: Morningstar Direct, Bloomberg Finance, LP, Russell, S&P Dow Jones Indices LLC, a division of S&P, MSCI, FTSE; As of 12/31/2019

Adams County Retirement Plan

Total Fund

Total Fund Allocation

As of December 31, 2019

Asset Allocation vs. Target

	Policy Range	Policy	%	Current	%	Difference*	%
Public Equity	35.0% - 45.0%	\$126,753,811	45.0%	\$130,901,825	46.5%	\$4,148,014	1.5%
Vanguard Institutional Index		\$56,335,027	20.0%	\$59,368,502	21.1%	\$3,033,475	1.1%
Vanguard Total International Stock Index		\$28,167,514	10.0%	\$24,269,361	8.6%	-\$3,898,153	-1.4%
American New Perspective Fd R6		\$14,083,757	5.0%	\$16,540,741	5.9%	\$2,456,984	0.9%
Dodge & Cox Global Equity Fd		\$14,083,757	5.0%	\$14,326,849	5.1%	\$243,092	0.1%
FIAM SMID Cap Core		\$14,083,757	5.0%	\$16,396,372	5.8%	\$2,312,615	0.8%
Private Equity	0.0% - 10.0%	\$14,083,757	5.0%	\$14,411,633	5.1%	\$327,876	0.1%
Adams Street 2012 Global Fund				\$3,544,117	1.3%		
Greenspring Global Partners IX-B				\$2,100,044	0.7%		
Mesirow Private Equity III				\$572,091	0.2%		
Mesirow Private Equity IV				\$1,733,400	0.6%		
NGP Natural Resources XI				\$1,679,461	0.6%		
RCP Fund XI				\$2,902,169	1.0%		
Strategic Value Special Situations III				\$1,880,351	0.7%		
Fixed Rate Debt	5.0% - 15.0%	\$42,251,270	15.0%	\$41,339,562	14.7%	-\$911,708	-0.3%
Segall Bryant & Hamill		\$21,125,635	7.5%	\$20,630,113	7.3%	-\$495,522	-0.2%
Metropolitan West Total Return		\$21,125,635	7.5%	\$20,709,449	7.4%	-\$416,186	-0.1%
Floating Rate Debt	10.0% - 20.0%	\$28,167,514	10.0%	\$15,044,276	5.3%	-\$13,123,238	-4.7%
Golub Capital Partners 11				\$7,159,955	2.5%		
Principal Real Estate Debt Fund				\$316,270	0.1%		
Principal Real Estate Debt Fund II				\$7,568,050	2.7%		
Low Volatility	5.0% - 15.0%	\$28,167,514	10.0%	\$27,480,802	9.8%	-\$686,712	-0.2%
Grosvenor Institutional Partners		\$14,083,757	5.0%	\$13,090,545	4.6%	-\$993,212	-0.4%
Parametric Defensive Equity Fund		\$14,083,757	5.0%	\$14,390,257	5.1%	\$306,500	0.1%
Liquid Real Assets	0.0% - 10.0%	\$0	0.0%	\$0	0.0%	\$0	0.0%
zTortoise MLP Account		\$0	0.0%	\$0	0.0%	\$0	0.0%
Real Estate	10.0% - 20.0%	\$42,251,270	15.0%	\$45,720,031	16.2%	\$3,468,761	1.2%
Principal US Property Account		\$28,167,514	10.0%	\$26,653,779	9.5%	-\$1,513,734	-0.5%
Harbert US Real Estate Fund V				\$3,793,970	1.3%		
Harbert US Real Estate Fund VI				\$11,054,719	3.9%		
Harbert US Real Estate Fund VII				\$4,217,563	1.5%		
Cash	--	--	--	\$6,777,007	2.4%	\$6,777,007	2.4%
Operating Account				\$6,491,961	2.3%		
Mill Levy Operating Account				\$285,046	0.1%		
Total		\$281,675,135	100.0%	\$281,675,135	100.0%		

*Difference between Policy and Current Allocation

Adams County Retirement Plan

Total Fund

Total Fund Cash Flow Summary

As of December 31, 2019

Cash Flow Summary

	Beginning Market Value	Quarter Ending December 31, 2019		Ending Market Value
		Net Cash Flow	Net Investment Change	
Vanguard Institutional Index	\$55,356,528	-\$1,000,000	\$5,011,974	\$59,368,502
Vanguard Total International Stock Index	\$11,682,264	\$11,042,540	\$1,544,558	\$24,269,361
American New Perspective Fd R6	\$15,016,690	\$0	\$1,524,051	\$16,540,741
Dodge & Cox Global Equity Fd	\$12,931,710	\$0	\$1,395,139	\$14,326,849
FIAM SMID Cap Core	\$15,204,035	\$25,914	\$1,166,423	\$16,396,372
Adams Street 2012 Global Fund	\$3,752,030	-\$207,913	\$0	\$3,544,117
Greenspring Global Partners IX-B	\$1,410,044	\$690,000	\$0	\$2,100,044
Mesirow Private Equity III	\$612,091	-\$40,000	\$0	\$572,091
Mesirow Private Equity IV	\$1,868,400	-\$135,000	\$0	\$1,733,400
NGP Natural Resources XI	\$1,719,635	-\$40,174	\$0	\$1,679,461
RCP Fund XI	\$2,602,169	\$300,000	\$0	\$2,902,169
Strategic Value Special Situations III	\$1,920,046	-\$39,695	\$0	\$1,880,351
Segall Bryant & Hamill	\$22,619,771	-\$1,983,035	-\$6,623	\$20,630,113
Metropolitan West Total Return	\$22,649,466	-\$2,000,000	\$59,983	\$20,709,449
Golub Capital Partners 11	\$5,519,833	\$1,480,167	\$159,955	\$7,159,955
Principal Real Estate Debt Fund	\$765,691	-\$448,241	-\$1,180	\$316,270
Principal Real Estate Debt Fund II	\$7,239,368	\$343,674	-\$14,992	\$7,568,050
Grosvenor Institutional Partners	\$12,712,191	\$0	\$378,354	\$13,090,545
Parametric Defensive Equity Fund	\$13,742,585	\$0	\$647,672	\$14,390,257
zTortoise MLP Account	\$11,956,815	-\$11,168,106	-\$788,709	\$0
Principal US Property Account	\$28,310,566	-\$2,000,000	\$343,213	\$26,653,779
Harbert US Real Estate Fund V	\$5,728,231	-\$1,934,261	\$0	\$3,793,970
Harbert US Real Estate Fund VI	\$10,279,114	\$775,605	\$0	\$11,054,719
Harbert US Real Estate Fund VII	\$0	\$4,217,563	\$0	\$4,217,563
Operating Account	\$3,390,553	\$3,086,590	\$14,817	\$6,491,961
Mill Levy Operating Account	\$1,043,440	-\$760,859	\$2,465	\$285,046
Total	\$270,033,265	\$204,770	\$11,437,100	\$281,675,135

Adams County Retirement Plan

Total Fund

Total Fund Cash Flow Summary

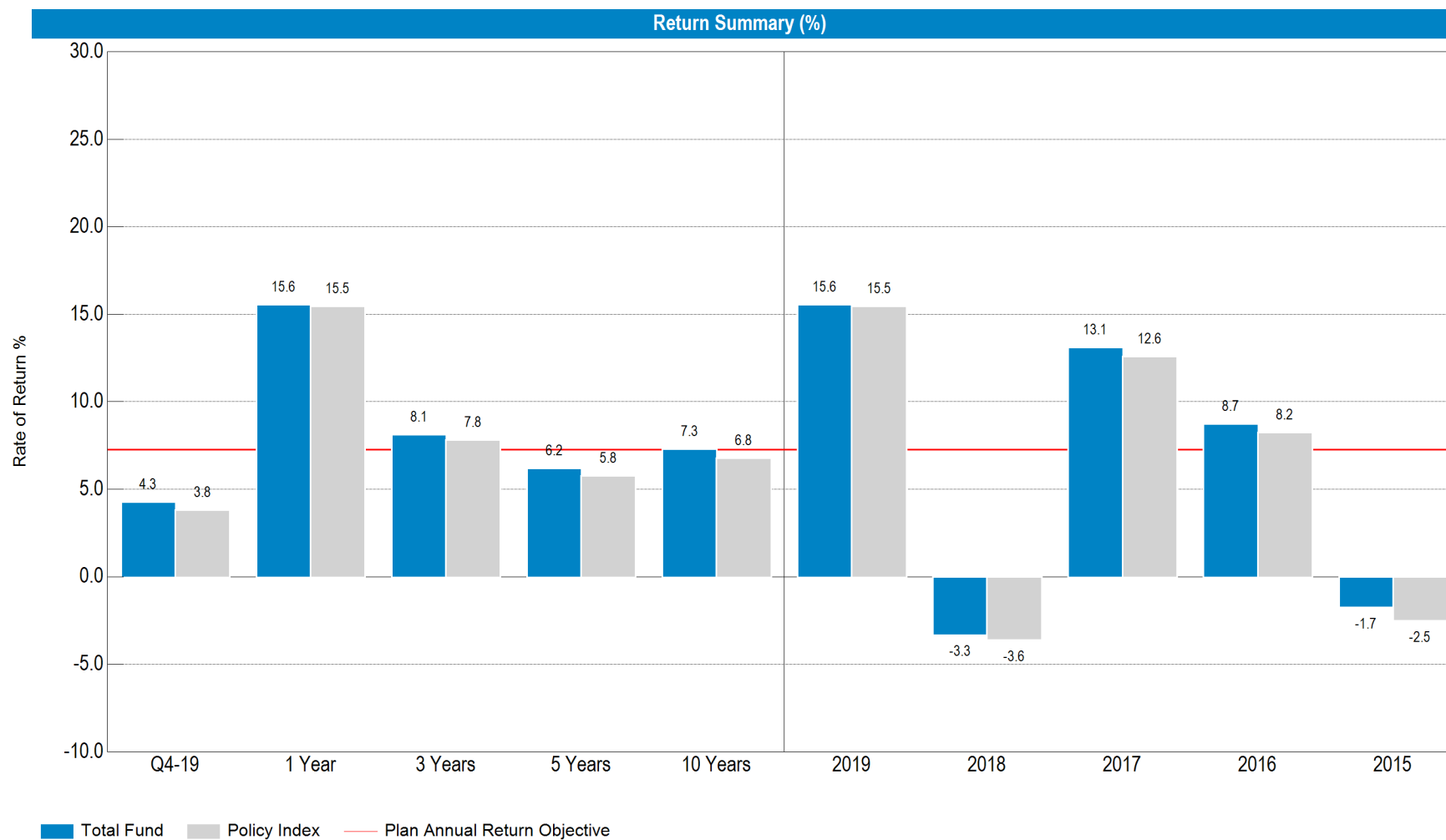
As of December 31, 2019

Cash Flow Summary

	Beginning Market Value	YTD Ending December 31, 2019		Ending Market Value
		Net Cash Flow	Net Investment Change	
Vanguard Institutional Index	\$34,416,644	\$12,000,000	\$12,951,859	\$59,368,502
Vanguard Total International Stock Index	\$22,544,233	-\$1,957,460	\$3,682,588	\$24,269,361
American New Perspective Fd R6	\$12,677,170	\$0	\$3,863,571	\$16,540,741
Dodge & Cox Global Equity Fd	\$11,568,269	\$0	\$2,758,580	\$14,326,849
FIAM SMID Cap Core	\$12,296,121	\$97,818	\$4,002,433	\$16,396,372
Adams Street 2012 Global Fund	\$3,640,496	-\$352,482	\$256,103	\$3,544,117
Greenspring Global Partners IX-B	--	\$2,070,000	\$30,044	\$2,100,044
Mesirow Private Equity III	\$763,466	-\$220,000	\$28,625	\$572,091
Mesirow Private Equity IV	\$2,162,909	-\$589,500	\$159,991	\$1,733,400
NGP Natural Resources XI	\$1,944,959	-\$138,987	-\$126,511	\$1,679,461
RCP Fund XI	\$1,494,954	\$1,200,000	\$207,215	\$2,902,169
Strategic Value Special Situations III	\$2,232,127	-\$369,467	\$17,691	\$1,880,351
Segall Bryant & Hamill	\$16,211,146	\$3,082,387	\$1,336,580	\$20,630,113
Metropolitan West Total Return	\$13,466,124	\$6,000,000	\$1,243,325	\$20,709,449
Golub Capital Partners 11	\$2,811,935	\$3,838,076	\$509,944	\$7,159,955
Principal Real Estate Debt Fund	\$1,609,878	-\$1,366,955	\$73,347	\$316,270
Principal Real Estate Debt Fund II	\$5,965,496	\$1,153,558	\$448,996	\$7,568,050
zBarings Global Floating Rate Fund	\$18,264,423	-\$19,237,917	\$973,494	--
Grosvenor Institutional Partners	\$12,351,504	\$0	\$739,041	\$13,090,545
Parametric Defensive Equity Fund	\$12,379,352	\$0	\$2,010,905	\$14,390,257
zTortoise MLP Account	\$10,818,017	-\$11,097,818	\$279,801	\$0
Principal US Property Account	\$27,051,375	-\$2,000,000	\$1,602,404	\$26,653,779
Harbert US Real Estate Fund V	\$7,562,954	-\$3,918,382	\$149,399	\$3,793,970
Harbert US Real Estate Fund VI	\$9,343,146	\$963,555	\$748,018	\$11,054,719
Harbert US Real Estate Fund VII	--	\$4,217,563	\$0	\$4,217,563
Operating Account	\$5,257,754	\$1,162,958	\$71,249	\$6,491,961
Mill Levy Operating Account	\$176,803	\$94,256	\$13,987	\$285,046
Total	\$249,011,254	-\$5,368,798	\$38,032,680	\$281,675,135

Total Fund Performance

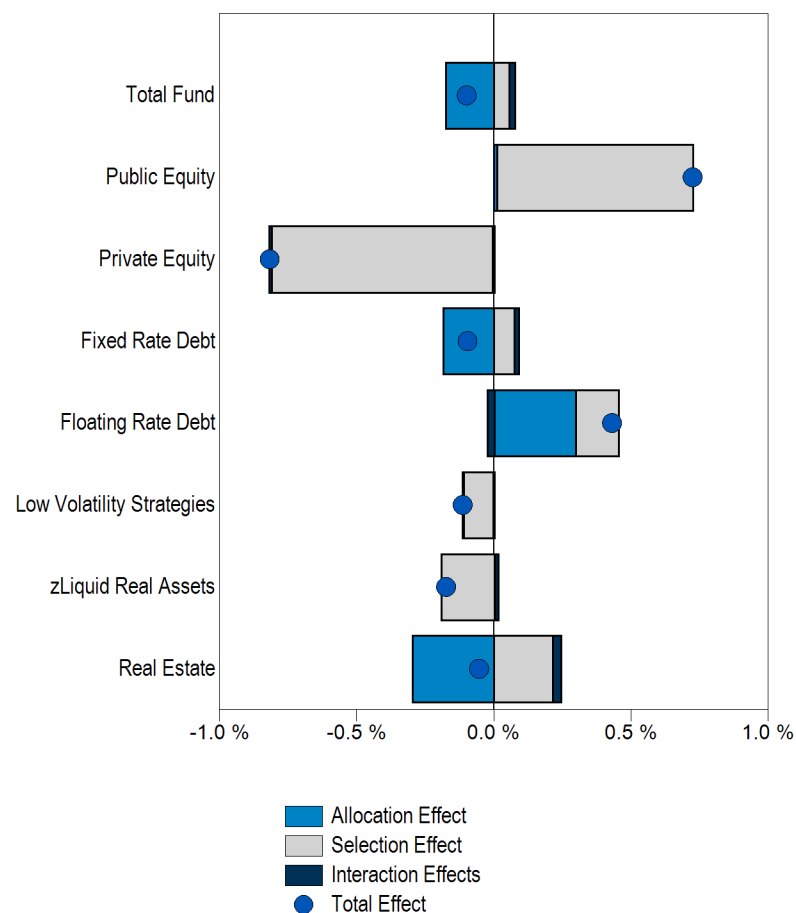
As of December 31, 2019



Total Fund Attribution Analysis

As of December 31, 2019

Attribution Effects 1 Year Ending December 31, 2019



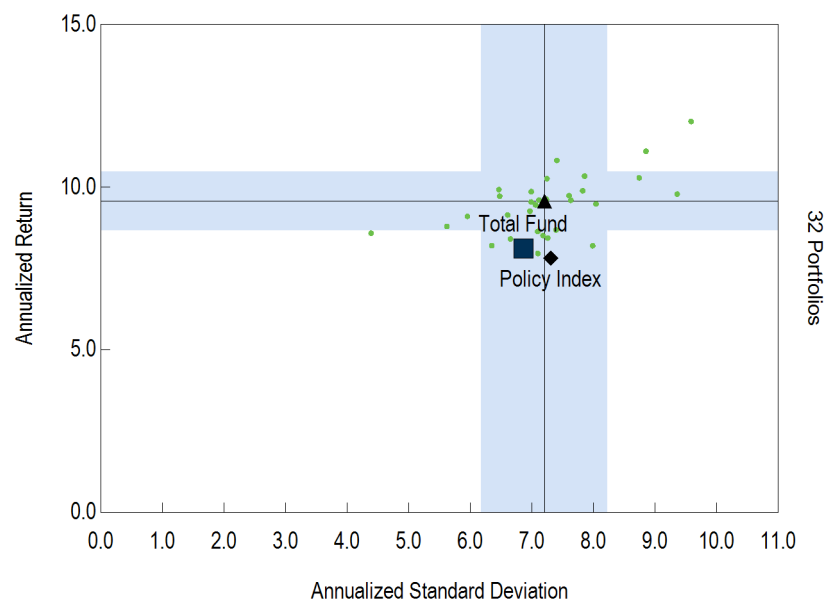
Attribution Summary 1 Year Ending December 31, 2019

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Public Equity	28.5%	26.6%	1.9%	0.7%	0.1%	0.0%	0.8%
Private Equity	4.5%	20.1%	-15.6%	-0.8%	0.0%	0.0%	-0.9%
Fixed Rate Debt	9.5%	8.7%	0.8%	0.1%	-0.3%	0.0%	-0.2%
Floating Rate Debt	8.8%	8.2%	0.7%	0.1%	0.3%	-0.2%	0.3%
Low Volatility Strategies	11.1%	12.2%	-1.1%	-0.1%	0.0%	0.0%	-0.1%
zLiquid Real Assets	2.7%	6.6%	-3.9%	0.3%	0.3%	-0.2%	0.3%
Real Estate	5.9%	4.5%	1.3%	0.2%	-0.3%	0.0%	0.0%
Total	15.8%	15.5%	0.3%	0.5%	0.1%	-0.3%	0.3%

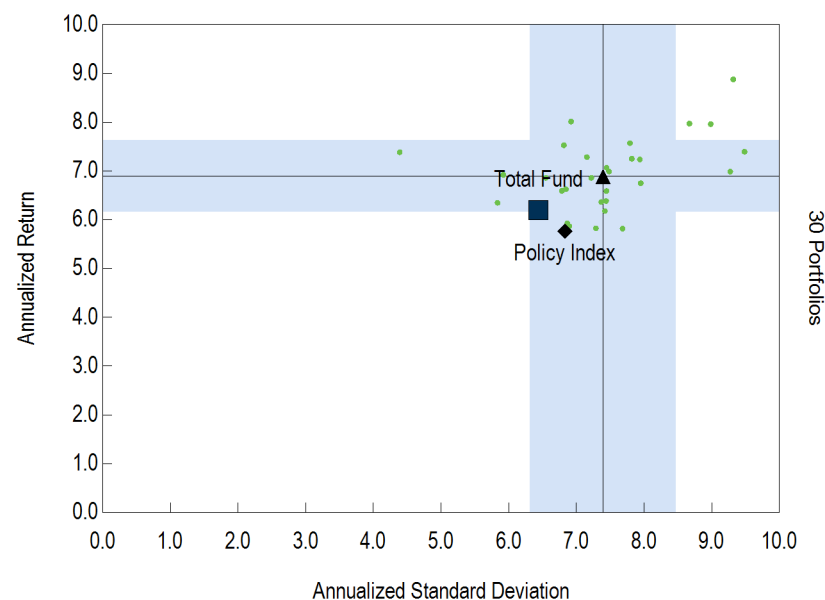
Quarterly Total Managed Investment Funds Risk/Return

As of December 31, 2019

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



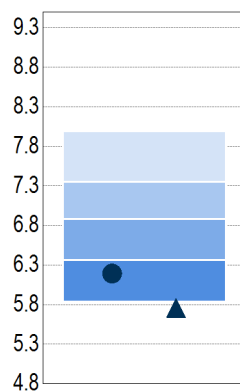
Annualized Return vs. Annualized Standard Deviation
5 Years Ending December 31, 2019



5 Year Risk Statistics vs IF Public DB \$250mm-\$1B Net

As of December 31, 2019

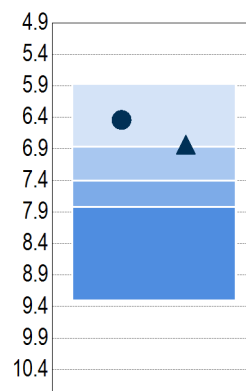
Return



● Total Fund	
Value	6.2
Rank	83
▲ Policy Index	
Value	5.8
Rank	99

Universe	
5th %tile	8.0
25th %tile	7.4
Median	6.9
75th %tile	6.4
95th %tile	5.8

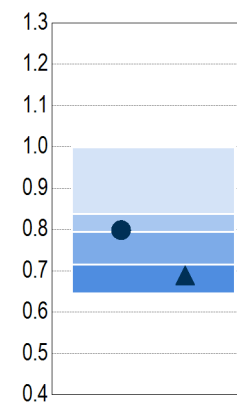
Standard Deviation



● Total Fund	
Value	6.4
Rank	12
▲ Policy Index	
Value	6.8
Rank	23

Universe	
5th %tile	5.9
25th %tile	6.8
Median	7.4
75th %tile	7.8
95th %tile	9.3

Sharpe Ratio



● Total Fund	
Value	0.8
Rank	48
▲ Policy Index	
Value	0.7
Rank	87

Universe	
5th %tile	1.0
25th %tile	0.8
Median	0.8
75th %tile	0.7
95th %tile	0.6

Adams County Retirement Plan

Total Fund

Total Fund Performance

As of December 31, 2019

Performance Summary

Ending December 31, 2019

	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)
Total Fund	281,675,135	100.0	4.3	15.6	15.6	8.1	6.2	7.3	15.6	-3.3	13.1	8.7	-1.7
Policy Index			3.8	15.5	15.5	7.8	5.8	6.8	15.5	-3.6	12.6	8.2	-2.5
InvMetrics Public DB \$250mm-\$1B Net Median			5.6	18.7	18.7	9.6	6.9	8.3	18.7	-4.4	15.5	7.4	-0.4
Equity													
Public Equity	130,901,825	46.5	9.1	28.5	28.5	12.2	8.1	--	28.5	-11.2	23.7	8.1	-3.2
MSCI ACWI			9.0	26.6	26.6	12.4	8.4	8.8	26.6	-9.4	24.0	7.9	-2.4
InvMetrics Public DB Total Eq Net Median			8.4	27.1	27.1	12.5	9.2	10.4	27.1	-8.4	22.6	9.2	-1.4
Private Equity	14,411,633	5.1	0.0	4.5	4.5	9.4	8.7	11.7	4.5	8.4	15.5	10.7	4.6
Russell 3000 Less Current Qtr			0.0	20.1	20.1	11.3	9.3	12.4	20.1	-5.2	21.1	12.7	0.5
Russell 3000			9.1	31.0	31.0	14.6	11.2	13.4	31.0	-5.2	21.1	12.7	0.5
Debt													
Fixed Rate Debt	41,339,562	14.7	0.1	9.5	9.5	4.5	3.3	--	9.5	-0.1	4.3	3.3	0.1
BBgBarc US Aggregate TR			0.2	8.7	8.7	4.0	3.0	3.7	8.7	0.0	3.5	2.6	0.6
Intermediate Core Bond MStar MF Median			0.1	8.5	8.5	3.9	3.0	3.8	8.5	-0.3	3.9	3.2	0.2
Floating Rate Debt	15,044,276	5.3	1.0	8.8	8.8	6.3	6.1	--	8.8	3.9	6.3	8.5	3.3
Credit Suisse Leveraged Loans			1.7	8.2	8.2	4.5	4.5	5.2	8.2	1.1	4.2	9.9	-0.4
Alternatives													
Low Volatility Strategies	27,480,802	9.8	3.9	11.1	11.1	5.0	4.1	4.0	11.1	-2.2	6.5	5.2	0.3
Low Volatility Custom Index			3.9	12.2	12.2	6.0	3.6	3.4	12.2	-2.5	8.8	0.5	-0.3
Real Estate	45,720,031	16.2	0.8	5.9	5.9	8.6	9.7	--	5.9	9.3	10.6	9.7	13.1
Real Estate Custom Index			0.9	4.5	4.5	6.1	8.0	--	4.5	7.1	6.8	7.8	13.7

Adams County Retirement Plan

Public Equity

As of December 31, 2019

Ending December 31, 2019										
	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Public Equity	130,901,825	100.0	9.1	28.5	28.5	12.2	8.1	--	7.5	Jul-14
MSCI ACWI			9.0	26.6	26.6	12.4	8.4	8.8	7.2	Jul-14
InvMetrics Public DB Total Eq Net Rank			21	17	17	73	87	--	83	Jul-14
InvMetrics Public DB Total Eq Net Median			8.4	27.1	27.1	12.5	9.2	10.4	8.7	Jul-14
Vanguard Institutional Index	59,368,502	45.4	9.1	31.5	31.5	--	--	--	14.0	Jul-17
S&P 500			9.1	31.5	31.5	15.3	11.7	13.6	14.0	Jul-17
Large Blend MStar MF Rank			33	26	26	--	--	--	16	Jul-17
Large Blend MStar MF Median			8.7	30.2	30.2	14.3	10.5	12.7	12.6	Jul-17
Vanguard Total International Stock Index	24,269,361	18.5	9.0	21.6	21.6	--	--	--	4.7	Jul-17
FTSE Global All Cap ex US			9.3	22.2	22.2	10.2	6.2	5.7	5.2	Jul-17
Foreign Large Blend MStar MF Rank			38	58	58	--	--	--	14	Jul-17
Foreign Large Blend MStar MF Median			8.9	21.8	21.8	9.3	5.6	5.4	3.3	Jul-17
American New Perspective Fd R6	16,540,741	12.6	10.1	30.5	30.5	--	--	--	12.1	Jul-17
MSCI ACWI			9.0	26.6	26.6	12.4	8.4	8.8	9.3	Jul-17
MSCI ACWI Growth NR USD			10.2	32.7	32.7	16.6	10.7	10.4	12.7	Jul-17
World Large Stock Mstar MF Rank			21	28	28	--	--	--	21	Jul-17
World Large Stock Mstar MF Median			8.5	26.8	26.8	11.9	8.3	9.5	8.5	Jul-17
Dodge & Cox Global Equity Fd	14,326,849	10.9	10.8	23.8	23.8	--	--	--	5.8	Jul-17
MSCI ACWI			9.0	26.6	26.6	12.4	8.4	8.8	9.3	Jul-17
MSCI ACWI Value NR USD			7.6	20.6	20.6	8.4	6.1	7.2	5.9	Jul-17
World Large Stock Mstar MF Rank			15	72	72	--	--	--	83	Jul-17
World Large Stock Mstar MF Median			8.5	26.8	26.8	11.9	8.3	9.5	8.5	Jul-17

Public Equity Performance

As of December 31, 2019

	Market Value (\$)	% of Portfolio	Ending December 31, 2019						Inception (%)	Inception Date
			3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)		
FIAM SMID Cap Core	16,396,372	12.5	7.7	32.5	32.5	10.1	9.1	--	11.6	Apr-13
<i>Russell 2500</i>			8.5	27.8	27.8	10.3	8.9	12.6	10.7	Apr-13
<i>SMID Blend MStar MF Rank</i>			54	6	6	21	17	--	9	Apr-13
<i>SMID Blend MStar MF Median</i>			7.8	25.5	25.5	8.1	7.7	11.6	9.8	Apr-13

Adams County Retirement Plan

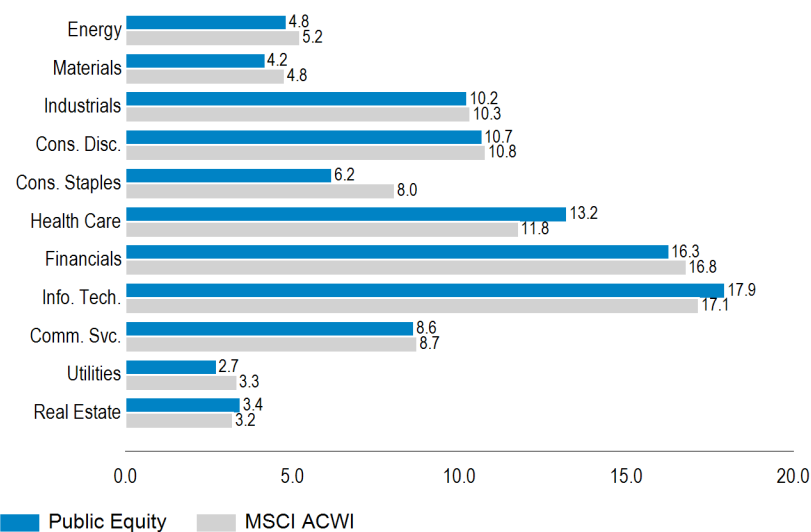
Public Equity

As of December 31, 2019

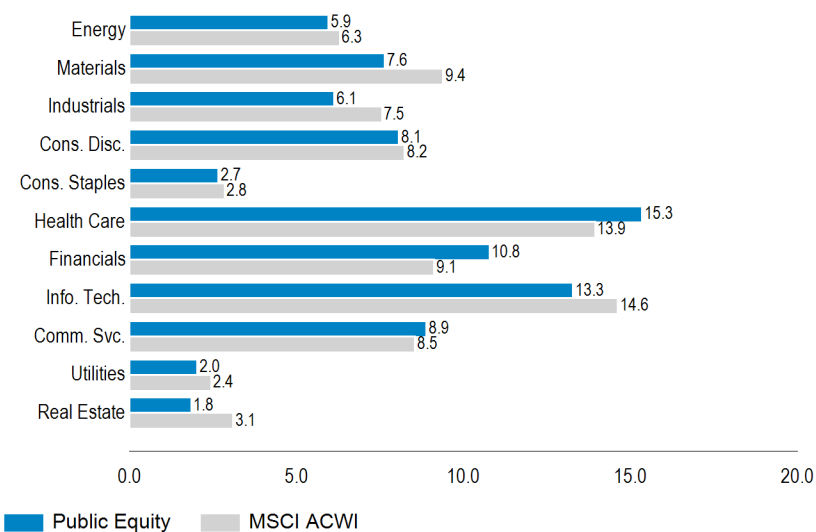
Public Equity Performance Attribution vs. MSCI ACWI

	Attribution Effects		
	Total Effects	Selection Effect	Allocation Effect
Energy	-0.06%	-0.03%	-0.03%
Materials	-0.17%	-0.09%	-0.08%
Industrials	-0.17%	-0.15%	-0.02%
Consumer Discretionary	-0.02%	-0.02%	0.00%
Consumer Staples	-0.07%	-0.05%	-0.02%
Health Care	0.44%	0.20%	0.24%
Financials	0.19%	0.25%	-0.06%
Information Technology	0.05%	-0.23%	0.29%
Communication Services	0.03%	0.03%	0.00%
Utilities	-0.02%	-0.02%	-0.01%
Real Estate	-0.03%	-0.04%	0.01%
Cash	0.01%	0.00%	0.01%
Portfolio	0.17%	-0.15%	0.32%

Sector Allocation (%)



Sector Returns (%)



As of December 31, 2019

Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
Europe		
Austria	0.0%	0.1%
Belgium	0.2%	0.3%
Croatia**	0.0%	0.0%
Czech Republic*	0.0%	0.0%
Denmark	0.5%	0.5%
Estonia**	0.0%	0.0%
Finland	0.1%	0.3%
France	2.9%	3.3%
Germany	1.4%	2.5%
Greece*	0.0%	0.0%
Hungary*	0.0%	0.0%
Ireland	0.3%	0.2%
Italy	0.6%	0.7%
Lithuania**	0.0%	0.0%
Luxembourg	0.1%	0.0%
Netherlands	1.1%	1.2%
Norway	0.2%	0.2%
Poland*	0.0%	0.1%
Portugal	0.0%	0.0%
Romania**	0.0%	0.0%
Russia*	0.3%	0.5%
Serbia**	0.0%	0.0%
Slovenia**	0.0%	0.0%
Spain	0.6%	0.8%
Sweden	0.5%	0.8%
Switzerland	2.3%	2.7%
United Kingdom	3.3%	4.8%
Total-Europe	14.6%	19.1%

Country Allocation

Versus MSCI ACWI - Quarter Ending December 31, 2019

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
Totals		
Developed	91.6%	87.9%
Emerging*	6.7%	12.1%
Frontier**	0.0%	0.0%
Other	0.0%	
Cash	1.7%	

Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
Americas		
Argentina*	0.0%	0.0%
Brazil*	0.7%	0.9%
Canada	1.7%	3.0%
Chile*	0.0%	0.1%
Colombia*	0.0%	0.0%
Mexico*	0.4%	0.3%
Peru*	0.0%	0.0%
United States	69.2%	55.7%
Total-Americas	72.0%	60.0%

Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
AsiaPacific		
Australia	0.9%	2.0%
Bangladesh**	0.0%	0.0%
China*	1.4%	4.1%
Hong Kong	1.2%	1.0%
India*	0.9%	1.1%
Indonesia*	0.1%	0.2%
Japan	4.1%	7.2%
Korea*	0.8%	1.4%
Malaysia*	0.1%	0.2%
New Zealand	0.1%	0.1%
Pakistan*	0.0%	0.0%
Philippines*	0.1%	0.1%
Singapore	0.2%	0.4%
Sri Lanka**	0.0%	0.0%
Taiwan*	1.0%	1.4%
Thailand*	0.2%	0.3%
Vietnam**	0.0%	0.0%
Total-AsiaPacific	10.9%	19.6%

Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
Other		
Bahrain**	0.0%	0.0%
Egypt*	0.0%	0.0%
Israel	0.1%	0.2%
Jordan**	0.0%	0.0%
Kazakhstan**	0.0%	0.0%
Kenya**	0.0%	0.0%
Kuwait**	0.0%	0.0%
Lebanon**	0.0%	0.0%
Mauritius**	0.0%	0.0%
Morocco**	0.0%	0.0%
Nigeria**	0.0%	0.0%
Oman**	0.0%	0.0%
Other Countries	0.0%	0.0%
Qatar*	0.0%	0.1%
Saudi Arabia*	0.1%	0.3%
South Africa*	0.4%	0.6%
Tunisia**	0.0%	0.0%
Turkey*	0.0%	0.1%
United Arab Emirates*	0.0%	0.1%
Total-Other	0.8%	1.3%

Adams County Retirement Plan

Private Equity

As of December 31, 2019

Non-Marketable Securities Overview

As of December 31, 2019

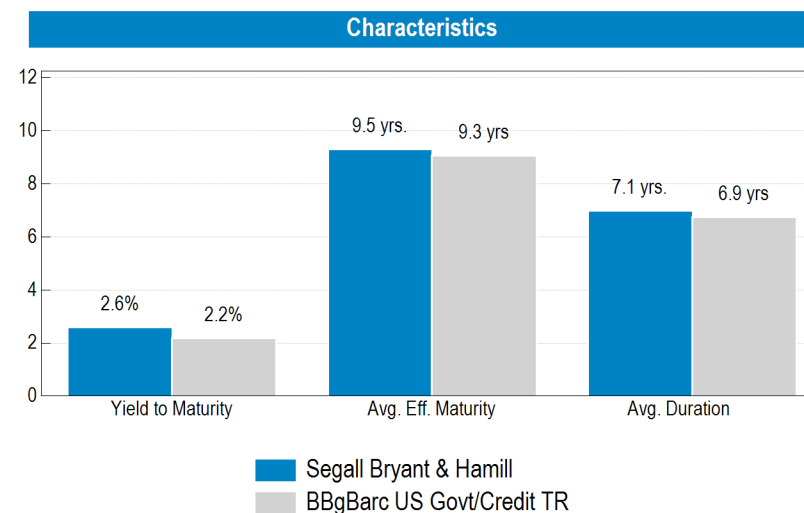
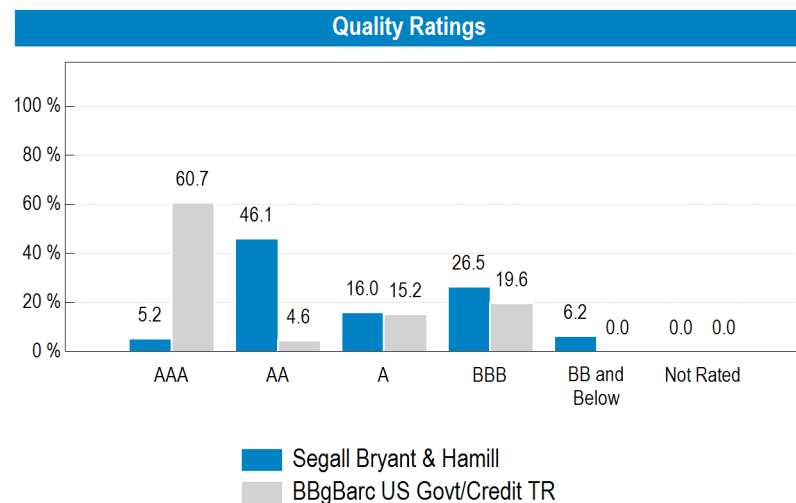
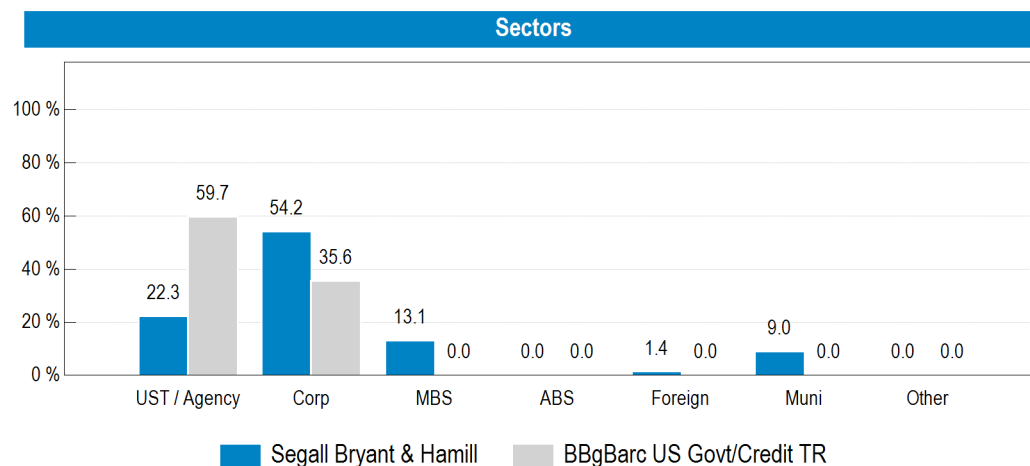
Account Type	Account	Vintage Year	Commitment	Cumulative Takedown	Cumulative Distributions	Value (RV)	Total Value (RV + Dist)	Unfunded Commitment	DPI (dist / takedowns)	RVPI (RV / takedowns)	TVPI (TV / takedown)	Takedown (takedowns / commit)	IRR
Private Equity	Adams Street 2012 Global Fund	2012	\$4,000,000	\$3,427,600	\$1,492,358	\$3,544,117	\$5,036,475	\$572,400	43.54%	103.40%	146.94%	85.69%	10.43
	Greenspring Global Partners IX-B	2019	\$5,750,000	\$2,070,000	\$0	\$2,100,044	\$2,100,044	\$3,680,000	0.00%	101.45%	101.45%	36.00%	2.71
	Mesirow Private Equity III	2005	\$4,000,000	\$3,840,000	\$5,821,787	\$572,091	\$6,393,878	\$160,000	151.61%	14.90%	166.51%	96.00%	8.06
	Mesirow Private Equity IV	2006	\$4,500,000	\$4,275,000	\$5,716,975	\$1,733,400	\$7,450,375	\$225,000	133.73%	40.55%	174.28%	95.00%	10.03
	NGP Natural Resources XI	2014	\$2,000,000	\$1,731,205	\$405,869	\$1,679,461	\$2,085,330	\$268,795	23.44%	97.01%	120.46%	86.56%	7.51
	RCP Fund XI	2016	\$6,000,000	\$2,940,000	\$0	\$2,902,169	\$2,902,169	\$3,060,000	0.00%	98.71%	98.71%	49.00%	-1.11
	Strategic Value Special Situations III	2013	\$2,000,000	\$1,820,000	\$1,004,582	\$1,880,351	\$2,884,933	\$180,000	55.20%	103.32%	158.51%	91.00%	12.03
	Total Account		\$28,250,000	\$20,103,805	\$14,441,571	\$14,411,633	\$28,853,204	\$8,146,195	71.84%	71.69%	143.52%	71.16%	9.04

Adams County Retirement Plan

Fixed Rate Debt

As of December 31, 2019

Ending December 31, 2019										
	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Fixed Rate Debt	41,339,562	100.0	0.1	9.5	9.5	4.5	3.3	--	3.3	Jul-14
<i>BBgBarc US Aggregate TR</i>			0.2	8.7	8.7	4.0	3.0	3.7	3.1	Jul-14
<i>Intermediate Core Bond MStar MF Rank</i>			49	21	21	11	18	--	19	Jul-14
<i>Intermediate Core Bond MStar MF Median</i>			0.1	8.5	8.5	3.9	3.0	3.8	3.0	Jul-14
Segall Bryant & Hamill	20,630,113	49.9	-0.1	9.7	9.7	4.8	3.6	4.4	6.1	Dec-89
<i>BBgBarc US Govt/Credit TR</i>			0.0	9.7	9.7	4.3	3.2	4.0	6.0	Dec-89
<i>Intermediate Core Bond MStar MF Rank</i>			81	14	14	2	3	15	4	Dec-89
<i>Intermediate Core Bond MStar MF Median</i>			0.1	8.5	8.5	3.9	3.0	3.8	5.7	Dec-89
Metropolitan West Total Return	20,709,449	50.1	0.3	9.3	9.3	4.2	--	--	3.0	Sep-16
<i>BBgBarc US Aggregate TR</i>			0.2	8.7	8.7	4.0	3.0	3.7	2.8	Sep-16
<i>Intermediate Core Bond MStar MF Rank</i>			25	24	24	23	--	--	21	Sep-16
<i>Intermediate Core Bond MStar MF Median</i>			0.1	8.5	8.5	3.9	3.0	3.8	2.7	Sep-16

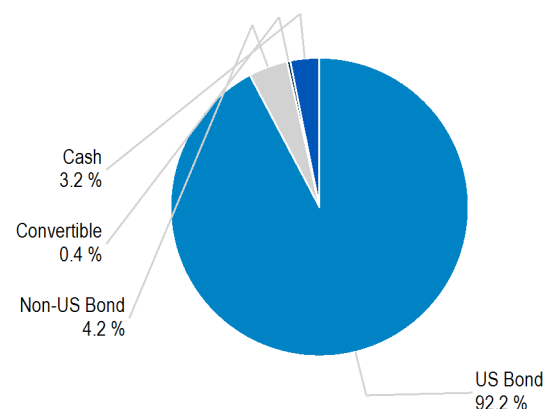


Adams County Retirement Plan

Metropolitan West Total Return

As of December 31, 2019

Mutual Fund Allocation as of December 31, 2019



Fund Information as of December 31, 2019

Fund Name	METROPOLITAN WEST TOTAL RETURN BD PLAN
Ticker	MWTSX
Morningstar Category	Intermediate Core-Plus Bond
Benchmark	BBgBarc US Aggregate TR
Expense Ratio	0.37%
Fund Assets (\$mm)	23,877.85
Share Class Inception Date	7/29/2011
Manager Tenure	23

Top Holdings as of December 31, 2019

UNITED STATES TREASURY NOTES 1.5%	6.95%
UNITED STATES TREASURY NOTES 1.5%	6.88%
UNITED STATES TREASURY BONDS 2.38%	3.75%
UNITED STATES TREASURY NOTES 1.5%	3.73%
UNITED STATES TREASURY NOTES 1.5%	2.02%
UNITED STATES TREASURY NOTES 1.75%	1.27%
FEDERAL NATIONAL MORTGAGE ASSOCIATION 3%	1.22%
UNITED STATES TREASURY BONDS 1%	1.17%
UNITED STATES TREASURY NOTES 0.25%	1.11%
UNITED STATES TREASURY NOTES 1.25%	1.05%

Fund Characteristics as of December 31, 2019

Sharpe Ratio (3 Year)	0.95
Average Duration	5.92
Average Coupon	2.99%
Average Effective Maturity	7.46
R-Squared (3 Year)	0.99
Alpha (3 Year)	0.04%
Beta (3 Year)	1.01

Maturities as of December 31, 2019

1 to 3 Years	10.34%
3 to 5 Years	21.12%
5 to 7 Years	3.98%
7 to 10 Years	9.01%
10 to 15 Years	4.46%
15 to 20 Years	8.09%
20 to 30 Years	35.72%
Greater than 30 Years	5.90%

Credit Quality as of December 31, 2019

AAA	70.23%
AA	1.57%
A	5.77%
BBB	17.07%
BB	1.59%
B	0.62%
Below B	3.15%
Not Rated	0.01%

Fixed Income Sectors as of December 31, 2019

GOVERNMENT	30.55%
MUNICIPAL	0.53%
CORPORATE	20.39%
SECURITIZED	45.37%
CASH & EQUIVALENTS	1.70%
DERIVATIVE	1.47%

Adams County Retirement Plan

Floating Rate Debt

As of December 31, 2019

			Ending December 31, 2019									
	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date		
Floating Rate Debt	15,044,276	100.0	1.0	8.8	8.8	6.3	6.1	--	5.6	Jul-14		
Credit Suisse Leveraged Loans			1.7	8.2	8.2	4.5	4.5	5.2	4.0	Jul-14		
Golub Capital Partners 11	7,159,955	47.6	2.3	10.1	10.1	--	--	--	9.9	Jul-17		
Principal Real Estate Debt Fund	316,270	2.1	-0.4	5.7	5.7	7.4	7.8	--	8.1	May-14		
Principal Real Estate Debt Fund II	7,568,050	50.3	-0.2	6.4	6.4	--	--	--	10.0	Aug-17		

As of December 31, 2019

Non-Marketable Securities Overview

As of December 31, 2019

Account Type	Account	Vintage Year	Commitment	Cumulative Takedown	Cumulative Distributions	Value (RV)	Total Value (RV + Dist)	Unfunded Commitment	DPI (dist / takedowns)	RVPI (RV / takedowns)	TVPI (TV / takedown)	Takedown (takedowns / commit)	IRR
Other	Golub Capital Partners 11	2017	\$8,000,000	\$6,600,000	\$289,971	\$7,159,955	\$7,449,926	\$1,400,000	4.39%	108.48%	112.88%	82.50%	10.33
	Principal Real Estate Debt Fund	2014	\$10,500,000	\$8,090,646	\$9,774,510	\$316,270	\$10,090,781	\$2,409,354	120.81%	3.91%	124.72%	77.05%	8.47
	Principal Real Estate Debt Fund II	2017	\$12,000,000	\$10,618,023	\$3,953,255	\$7,568,050	\$11,521,306	\$1,381,977	37.23%	71.28%	108.51%	88.48%	8.34
Total Account			\$30,500,000	\$25,308,668	\$14,017,736	\$15,044,276	\$29,062,012	\$5,191,332	55.39%	59.44%	114.83%	82.98%	8.77

Adams County Retirement Plan

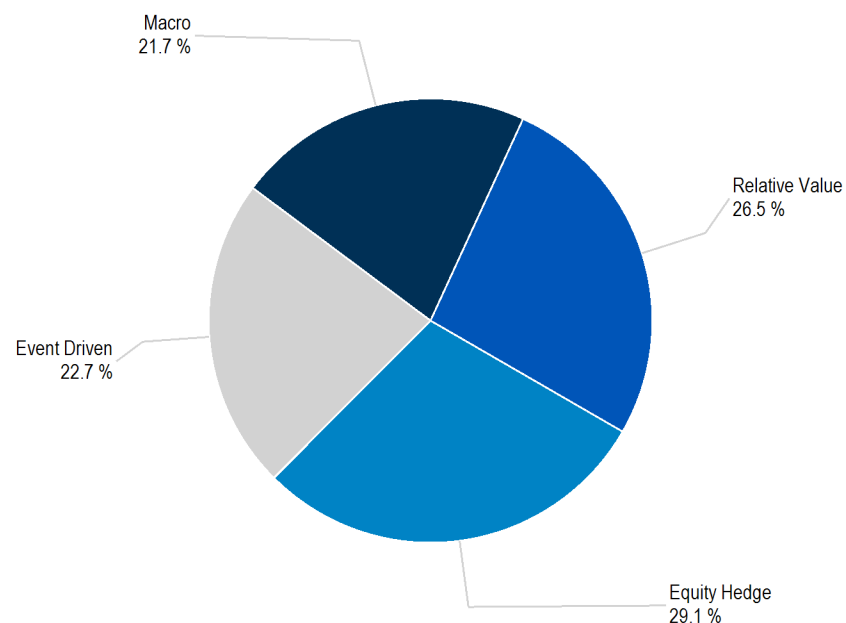
Low Volatility Strategies

As of December 31, 2019

Ending December 31, 2019										
	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Low Volatility Strategies	27,480,802	100.0	3.9	11.1	11.1	5.0	4.1	4.0	4.0	Sep-04
<i>Low Volatility Custom Index</i>			3.9	12.2	12.2	6.0	3.6	3.4	3.5	Sep-04
Grosvenor Institutional Partners	13,090,545	47.6	3.0	6.0	6.0	3.4	2.4	4.0	4.0	Sep-04
<i>HFRI Fund of Funds Composite Index</i>			3.0	8.3	8.3	3.9	2.4	2.8	3.1	Sep-04
<i>InvMetrics Public DB Hedge Funds Net Rank</i>			27	54	54	50	48	12	--	Sep-04
<i>InvMetrics Public DB Hedge Funds Net Median</i>			2.1	6.3	6.3	3.4	2.1	2.5	--	Sep-04
Parametric Defensive Equity Fund	14,390,257	52.4	4.7	16.2	16.2	--	--	--	7.1	Aug-17
<i>50% S&P500/50%T-Bills</i>			4.7	16.1	16.1	8.5	6.4	--	8.2	Aug-17

As of December 31, 2019

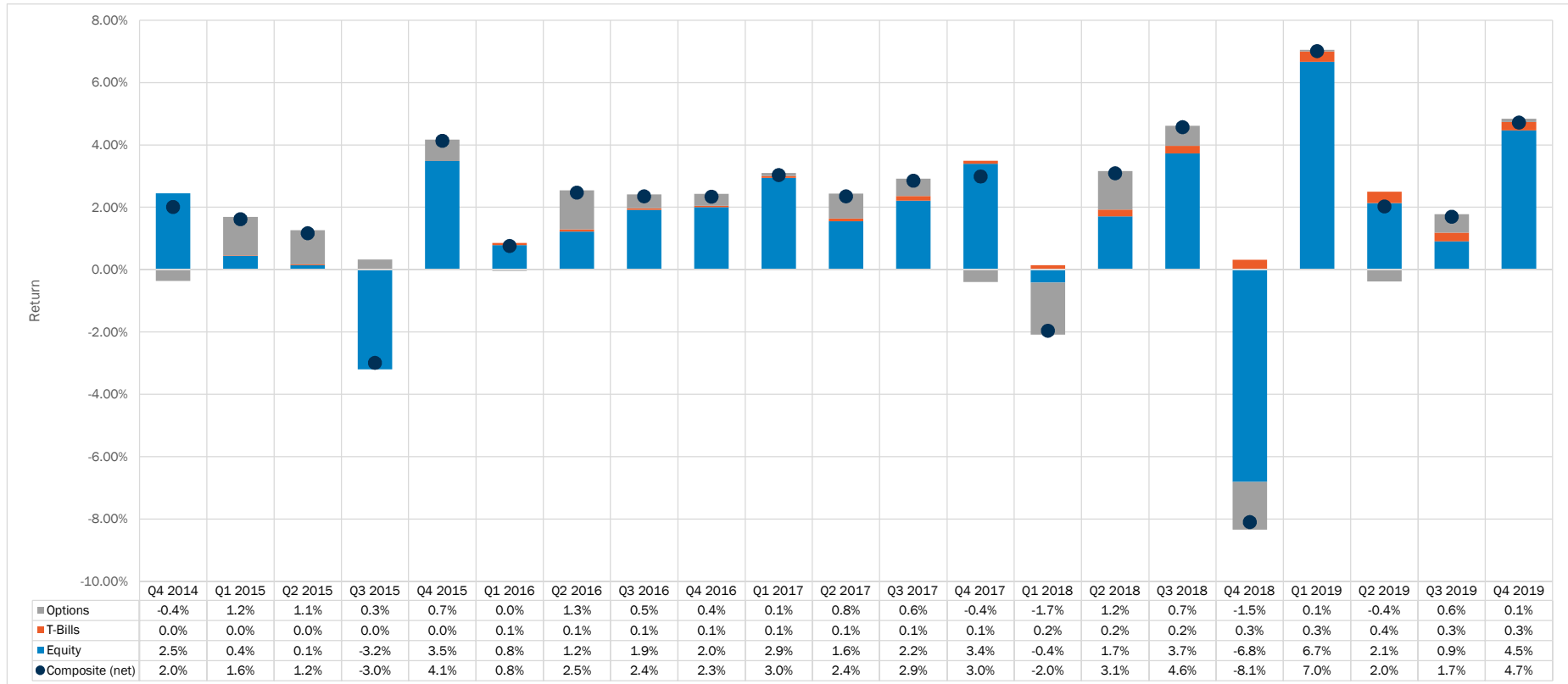
Hedge Fund Allocation: Strategies
As of December 31, 2019



Total Hedge Fund Strategy Allocation
As of December 31, 2019

Strategy	Market Value	Percent
Equity Hedge	\$3,814,584.81	29.14%
Event Driven	\$2,974,171.82	22.72%
Macro	\$2,835,412.05	21.66%
Relative Value	\$3,466,376.32	26.48%
TOTALS	\$13,090,545.00	100.00%

Quarterly Return Attribution



Adams County Retirement Plan

Real Estate

As of December 31, 2019

	Market Value (\$)	% of Portfolio	Ending December 31, 2019						Inception (%)	Inception Date
			3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)		
Real Estate	45,720,031	100.0	0.8	5.9	5.9	8.6	9.7	--	10.4	Jul-14
<i>Real Estate Custom Index</i>			0.9	4.5	4.5	6.1	8.0	--	8.4	Jul-14
Principal US Property Account	26,653,779	58.3	1.3	6.0	6.0	7.4	8.9	11.4	7.2	Sep-04
<i>NCREIF-ODCE Net</i>			1.3	4.4	4.4	6.1	8.0	10.4	7.0	Sep-04
Harbert US Real Estate Fund V	3,793,970	8.3	0.0	2.3	2.3	8.2	9.7	--	12.2	Jul-14
<i>NCREIF Property Index</i>			0.0	4.8	4.8	6.2	7.9	10.0	8.3	Jul-14
Harbert US Real Estate Fund VI	11,054,719	24.2	0.0	7.9	7.9	12.3	--	--	7.6	Apr-16
<i>NCREIF Property Index</i>			0.0	4.8	4.8	6.2	7.9	10.0	6.4	Apr-16
Harbert US Real Estate Fund VII	4,217,563	9.2	0.0	--	--	--	--	--	0.0	Oct-19
<i>NCREIF Property Index</i>			0.0	4.8	4.8	6.2	7.9	10.0	0.0	Oct-19

Adams County Retirement Plan

Real Estate

As of December 31, 2019

Non-Marketable Securities Overview

As of December 31, 2019

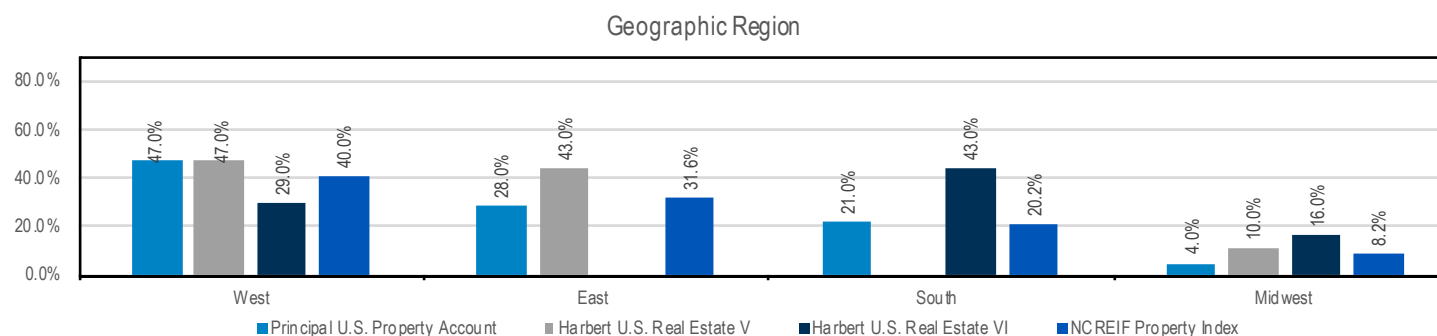
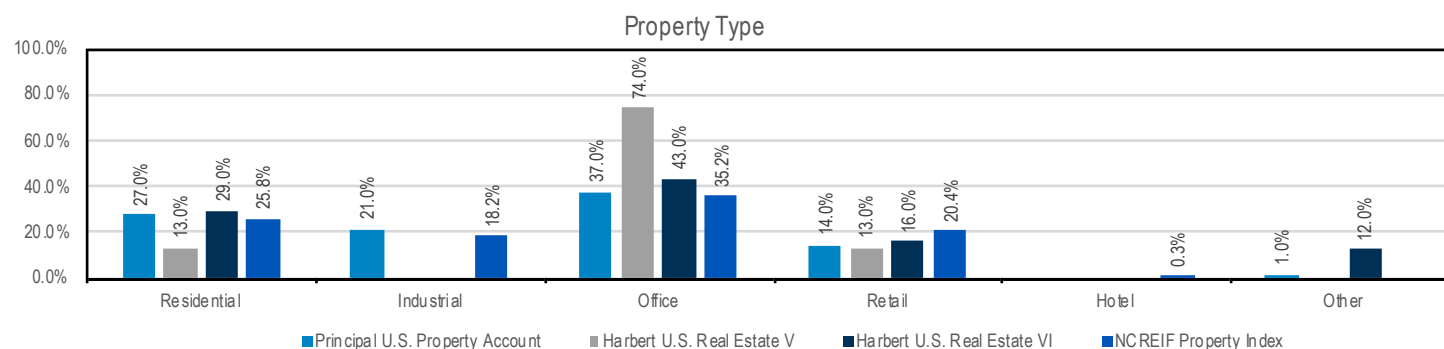
Account Type	Account	Vintage Year	Commitment	Cumulative Takedown	Cumulative Distributions	Value (RV)	Total Value (RV + Dist)	Unfunded Commitment	DPI (dist / takedowns)	RVPI (RV / takedowns)	TVPI (TV / takedown)	Takedown (takedowns / commit)	IRR
Real Estate	Harbert US Real Estate Fund V	2012	\$11,300,000	\$9,159,759	\$9,880,197	\$3,793,970	\$13,674,167	\$2,140,241	107.87%	41.42%	149.29%	81.06%	12.54
	Harbert US Real Estate Fund VI	2016	\$10,000,000	\$9,019,562	\$800,231	\$11,054,719	\$11,854,951	\$980,438	8.87%	122.56%	131.44%	90.20%	11.11
	Harbert US Real Estate Fund VII	2019	\$11,600,000	\$4,217,563	\$0	\$4,217,563	\$4,217,563	\$7,382,437	0.00%	100.00%	100.00%	36.36%	0.00
	Total Account		\$32,900,000	\$22,396,884	\$10,680,428	\$19,066,252	\$29,746,680	\$10,503,116	47.69%	85.13%	132.82%	68.08%	11.96

As of December 31, 2019

Private Equity Real Estate Portfolio Characteristics

As of December 31, 2019

	Principal U.S. Property Account	*Harbert U.S. Real Estate Fund V, LP	*Harbert U.S. Real Estate Fund VI, LP
Gross Asset Value	\$10.73 Billion	N/A	N/A
Net Asset Value	\$8.42 Billion	\$247.99 Million	\$487.30 Million
Leverage Ratio	18.8%	64.0%	63.0%
Number of Investments	133	15	30
Number of Markets	43	6	12
Portfolio Occupancy	93.4%	79.0%	87.0%



*Information as of 09/30/2019

Adams County Retirement Plan

Benchmark History

As of December 31, 2019

Benchmark History As of December 31, 2019

Total Fund		
12/1/2019	Present	MSCI ACWI 45% / Russell 3000 Less Current Qtr 5% / BBgBarc US Aggregate TR 15% / Credit Suisse Leveraged Loans 10% / 50% S&P500/50%T-Bills 5% / HFRI Fund of Funds Composite Index 5% / NCREIF-ODCE Net 10% / NCREIF Property Index 5%
9/1/2019	11/30/2019	MSCI ACWI 40% / Russell 3000 Less Current Qtr 5% / BBgBarc US Aggregate TR 15% / Credit Suisse Leveraged Loans 10% / Alerian MLP TR USD 5% / 50% S&P500/50%T-Bills 5% / HFRI Fund of Funds Composite Index 5% / NCREIF-ODCE Net 10% / NCREIF Property Index 5%
8/1/2017	8/31/2019	MSCI ACWI 40% / Russell 3000 Less Current Qtr 5% / BBgBarc US Aggregate TR 10% / Credit Suisse Leveraged Loans 15% / Alerian MLP TR USD 5% / 50% S&P500/50%T-Bills 5% / HFRI Fund of Funds Composite Index 5% / NCREIF-ODCE Net 10% / NCREIF Property Index 5%
10/1/2014	7/31/2017	MSCI ACWI 40% / Russell 3000 5% / BBgBarc US Aggregate TR 10% / Credit Suisse Leveraged Loans 10% / Alerian MLP TR USD 10% / HFRI Fund of Funds Composite Index 10% / NCREIF-ODCE Net 10% / NCREIF Property Index 5%
7/1/2014	9/30/2014	MSCI ACWI 40% / Russell 3000 5% / BBgBarc US Aggregate TR 15% / Credit Suisse Leveraged Loans 10% / Alerian MLP TR USD 5% / HFRI Fund of Funds Composite Index 10% / NCREIF-ODCE Net 10% / NCREIF Property Index 5%
10/1/2013	6/30/2014	MSCI ACWI 40% / Russell 3000 5% / BBgBarc US Aggregate TR 25% / Credit Suisse Leveraged Loans 5% / Alerian MLP TR USD 5% / HFRI Fund of Funds Composite Index 10% / NCREIF-ODCE Net 10%
1/1/2012	9/30/2013	MSCI ACWI 40% / Russell 3000 5% / BBgBarc US Aggregate TR 25% / Alerian MLP TR USD 5% / HFRI Fund of Funds Composite Index 15% / NCREIF-ODCE Net 10%
10/1/2010	12/31/2011	MSCI ACWI 45% / Russell 3000 5% / BBgBarc US Aggregate TR 25% / HFRI Fund of Funds Composite Index 15% / NCREIF-ODCE Net 10%
9/1/2009	9/30/2010	MSCI ACWI 55% / Russell 3000 5% / BBgBarc US Aggregate TR 20% / HFRI Fund of Funds Composite Index 10% / NCREIF-ODCE Net 10%
7/1/2007	8/31/2009	Russell 3000 40% / MSCI ACWI ex USA 20% / BBgBarc US Aggregate TR 20% / HFRI Fund of Funds Composite Index 10% / NCREIF-ODCE Net 10%
7/1/2005	6/30/2007	Russell 3000 45% / MSCI EAFE 15% / BBgBarc US Aggregate TR 20% / HFRI Fund of Funds Composite Index 10% / NCREIF-ODCE Net 10%
10/1/2004	6/30/2005	S&P 500 38% / Russell 2000 12% / MSCI EAFE 10% / BBgBarc US Aggregate TR 10% / BBgBarc US Govt/Credit TR 10% / HFRI Fund of Funds Composite Index 10% / NCREIF-ODCE Net 10%
1/1/2004	9/30/2004	S&P 500 38% / Russell 2000 12% / MSCI EAFE 10% / BBgBarc US Aggregate TR 20% / BBgBarc US Govt/Credit TR 20%
7/1/2001	12/31/2003	S&P 500 40% / Russell 2000 Growth 10% / MSCI EAFE 10% / BBgBarc US Aggregate TR 20% / BBgBarc US Govt/Credit TR 20%
4/1/2000	6/30/2001	S&P 500 40% / Russell 2000 Growth 10% / MSCI EAFE 10% / BBgBarc US Govt/Credit Int TR 30% / BBgBarc US Govt/Credit TR 10%
1/1/1998	3/31/2000	S&P 500 40% / Russell 2000 10% / MSCI EAFE 10% / BBgBarc US Govt/Credit Int TR 30% / BBgBarc US Govt/Credit TR 10%
1/1/1995	12/31/1997	S&P 500 35% / MSCI EAFE 10% / BBgBarc US Govt/Credit Int TR 41% / BBgBarc US Govt/Credit TR 14%
1/1/1992	12/31/1994	S&P 500 40% / BBgBarc US Govt/Credit Int TR 45% / BBgBarc US Govt/Credit TR 15%
1/1/1990	12/31/1991	S&P 500 40% / BBgBarc US Govt/Credit Int TR 60%

Low Volatility Strategies

9/1/2017	Present	HFRI Fund of Funds Composite Index 50% / 50% S&P500/50%T-Bills 50%
9/1/2004	8/31/2017	HFRI Fund of Funds Composite Index 100%

Real Estate

7/1/2014	Present	NCREIF-ODCE Net 67% / NCREIF Property Index 33%
----------	---------	---

Adams County Retirement Plan

Manager Roster

As of December 31, 2019

Manager Roster As of December 31, 2019

	Account Type	Benchmark	Universe	Market Value	Allocation	Inception
Adams Street 2012 Global Fund	Private Equity			\$3,544,117	1.3%	2/1/2012
American New Perspective Fd R6	Public Equity	MSCI ACWI	World Large Stock MStar MF	\$16,540,741	5.9%	7/31/2017
Dodge & Cox Global Equity Fd	Public Equity	MSCI ACWI	World Large Stock MStar MF	\$14,326,849	5.1%	7/31/2017
FIAM SMID Cap Core	Public Equity	Russell 2500	SMID Blend MStar MF	\$16,396,372	5.8%	4/1/2013
Golub Capital Partners 11	Floating Rate Debt			\$7,159,955	2.5%	7/1/2017
Greenspring Global Partners IX-B	Private Equity			\$2,100,044	0.7%	2/1/2019
Grosvenor Institutional Partners	Low Volatility	HFRI Fund of Funds Composite Index	InvMetrics Public DB Hedge Funds Net	\$13,090,545	4.6%	9/1/2004
Harbert US Real Estate Fund V	Real Estate	NCREIF Property Index		\$3,793,970	1.3%	7/1/2014
Harbert US Real Estate Fund VI	Real Estate	NCREIF Property Index		\$11,054,719	3.9%	4/1/2016
Harbert US Real Estate Fund VII	Real Estate	NCREIF Property Index		\$4,217,563	1.5%	10/1/2019
Mesirow Private Equity III	Private Equity			\$572,091	0.2%	9/1/2005
Mesirow Private Equity IV	Private Equity			\$1,733,400	0.6%	3/1/2007
Metropolitan West Total Return	Fixed Rate Debt	BBgBarc US Aggregate TR	Intermediate Core Bond MStar MF	\$20,709,449	7.4%	9/30/2016
Mill Levy Operating Account	Cash			\$285,046	0.1%	2/28/2018
NGP Natural Resources XI	Private Equity			\$1,679,461	0.6%	11/1/2014
Operating Account	Cash			\$6,491,961	2.3%	10/1/1998
Parametric Defensive Equity Fund	Low Volatility	50% S&P500/50%T-Bills		\$14,390,257	5.1%	8/31/2017
Principal Real Estate Debt Fund	Floating Rate Debt			\$316,270	0.1%	5/1/2014
Principal Real Estate Debt Fund II	Floating Rate Debt			\$7,568,050	2.7%	8/1/2017
Principal US Property Account	Real Estate	NCREIF-ODCE Net		\$26,653,779	9.5%	9/1/2004
RCP Fund XI	Private Equity			\$2,902,169	1.0%	12/1/2016
Segall Bryant & Hamill	Fixed Rate Debt	BBgBarc US Govt/Credit TR	Intermediate Core Bond MStar MF	\$20,630,113	7.3%	12/31/1989
Strategic Value Special Situations III	Private Equity			\$1,880,351	0.7%	10/1/2014
Vanguard Institutional Index	Public Equity	S&P 500	Large Blend MStar MF	\$59,368,502	21.1%	7/31/2017
Vanguard Total International Stock Index	Public Equity	FTSE Global All Cap ex US	Foreign Large Blend MStar MF	\$24,269,361	8.6%	7/31/2017
Total		Policy Index	InvMetrics Public DB \$250mm-\$1B Net	\$281,675,135	100.0%	1/1/1990

Adams County Retirement Plan

Fee Schedule

As of December 31, 2019

Account	Fee Schedule	Market Value As of 12/31/2019	% of Portfolio	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
Vanguard Institutional Index	0.04% of Assets	\$59,368,502	21.1%	\$23,747	0.04%
Vanguard Total International Stock Index	0.09% of Assets	\$24,269,361	8.6%	\$21,842	0.09%
American New Perspective Fd R6	0.45% of Assets	\$16,540,741	5.9%	\$74,433	0.45%
Dodge & Cox Global Equity Fd	0.63% of Assets	\$14,326,849	5.1%	\$90,259	0.63%
FIAM SMID Cap Core	0.65% of Assets	\$16,396,372	5.8%	\$106,576	0.65%
Adams Street 2012 Global Fund	1.00% of Assets	\$3,544,117	1.3%	\$35,441	1.00%
Greenspring Global Partners IX-B	14,375 Quarterly	\$2,100,044	0.7%	\$57,500	--
Mesirow Private Equity III	1.00% of Assets	\$572,091	0.2%	\$5,721	1.00%
Mesirow Private Equity IV	1.00% of Assets	\$1,733,400	0.6%	\$17,334	1.00%
NGP Natural Resources XI	7,500 Quarterly	\$1,679,461	0.6%	\$30,000	--
RCP Fund XI	15,000 Quarterly	\$2,902,169	1.0%	\$60,000	--
Strategic Value Special Situations III	8,750 Quarterly	\$1,880,351	0.7%	\$35,000	--
Segall Bryant & Hamill	0.30% of First 25.0 Mil, 0.25% Thereafter	\$20,630,113	7.3%	\$61,890	0.30%
Metropolitan West Total Return	0.44% of Assets	\$20,709,449	7.4%	\$91,122	0.44%
Golub Capital Partners 11	1.00% of Assets	\$7,159,955	2.5%	\$71,600	1.00%
Principal Real Estate Debt Fund	0.65% of Assets	\$316,270	0.1%	\$2,056	0.65%
Principal Real Estate Debt Fund II	0.85% of Assets	\$7,568,050	2.7%	\$64,328	0.85%
Grosvenor Institutional Partners	1.25% of First 25.0 Mil, 1.00% of Next 25.0 Mil	\$13,090,545	4.6%	\$163,632	1.25%
Parametric Defensive Equity Fund	0.35% of Assets	\$14,390,257	5.1%	\$50,366	0.35%
Principal US Property Account	1.00% of Assets	\$26,653,779	9.5%	\$266,538	1.00%
Harbert US Real Estate Fund V	1.50% of Assets	\$3,793,970	1.3%	\$56,910	1.50%
Harbert US Real Estate Fund VI	31,250 Quarterly	\$11,054,719	3.9%	\$125,000	--
Harbert US Real Estate Fund VII	39,150 Quarterly	\$4,217,563	1.5%	\$156,600	--
Operating Account	0.18% of Assets	\$6,491,961	2.3%	\$11,686	0.18%
Mill Levy Operating Account	0.18% of Assets	\$285,046	0.1%	\$513	0.18%
Investment Management Fee		\$281,675,135	100.0%	\$1,680,094	0.60%

Endnotes

- As a service to clients, Ellwood may provide reporting information on all assets held in your account, including assets for which it does not provide advisory services. Such assets may include legacy assets, assets for which you have engaged other advisors and, with respect to retirement plans, (i) self-directed brokerage, mutual fund window and similar options, (ii) employer securities, and (iii) real property. While Ellwood seeks to identify such assets as “excluded assets” in your reports and/or in your Consulting Services Agreement, Ellwood shall not be liable or responsible in any respect for the supervision or oversight of such assets.
- The historical information included herein regarding the performance by various funds and managers is historical only and is not a guarantee of future performance.
- Included in this report are various indices and market information as well as, in some cases, prior investment manager data regarding your plan ("Third Party Data"). Such information may include, but is not limited to, information that Ellwood purchases from commercial sources and information that is provided to Ellwood at no cost. Ellwood Associates has no duty to investigate or inquire into the accuracy or reliability of Third Party Data, and Ellwood may rely fully and completely on any and all such information.
- Regarding asset allocations, Ellwood obtains information from multiple sources believed to be reliable as of the date of publication; Ellwood, however, makes no representations as to the accuracy or completeness of such third party information. Ellwood has no obligation to update, modify or amend this information or to otherwise notify a reader thereof in the event that any such information becomes outdated, inaccurate, or incomplete. Specific needs of a client must be reviewed and assessed before determining the proper allocation for a client and must be adjusted to market circumstances. Any opinions herein reflect our judgment as of this date and are subject to change.
- Hypothetical performance results have many inherent limitations. No representation is being made that any performance will or is likely to achieve profits or losses similar to those shown. In fact, there are frequently sharp differences between hypothetical performance results and the actual results subsequently achieved by any particular trading program. One of the limitations of a hypothetical performance record is that decisions relating to the selection of managers and the allocation of assets among those managers were made with the benefit of hindsight based upon the historical rates of return of the selected trading advisors. Therefore, performance records invariably show positive rates of return. Another inherent limitation of these results is that the allocation decisions reflected in the performance record were not made under actual market conditions and, therefore, cannot completely account for the impact of financial risk in actual trading.
- Ellwood’s calculations and liability output may differ from the client’s actuary’s calculations and liability output. This information is not to be used for client financial reporting and is intended for investment analysis purposes only.
- Russell Investment Group is the source and owner of the Russell Index data contained or reflected in this material and all trademarks and copyrights related thereto. The material may contain confidential information and unauthorized use, disclosure, copying, dissemination or redistribution is strictly prohibited. This is an Ellwood presentation of the data. Russell Investment Group is not responsible for the formatting or configuration of this material or for any inaccuracy in presentation thereof.
- Manager and universe returns are shown net of investment management expenses. Index returns are shown gross of investment management expenses. All figures shown are gross the fees and expenses of Ellwood.
- Performance for the Ellwood direct hedge fund Platforms is illustrative prior to client investment. Illustrative performance is provided solely to demonstrate Ellwood’s investment process and performance of the underlying asset class, and does not represent client’s actual investment results. Illustrative performance is derived from applying the stated allocation during the period shown to actual historical performance data of the underlying hedge funds. Actual allocations and underlying funds selected may differ based on the circumstances of individual clients. Illustrative performance information is not meant to be a historical description of results or a prediction of future performance. Actual results may vary from the results illustrated herein and such variations may be material.
- In presenting the information of a private fund (e.g., hedge fund, private equity fund, venture capital fund or real estate fund), Ellwood will generally rely on information obtained directly from the private fund’s manager, including valuation, performance, capital call and distribution information. Such information typically lags at least one quarter but not more than two quarters due to time necessary to complete the valuation process; however valuations presented in this report may be adjusted by Ellwood to reflect capital calls and distributions made by a private fund through the reporting date shown. Valuation and performance information of private funds are subject to a number of assumptions and judgments, and are highly subjective in nature. Ellwood makes no representations or warranties as to the information included herein and is under no obligation to update this report for subsequent changes in such information.
- Confidentiality: All information contained herein is the confidential and proprietary information of Ellwood and/or the underlying investment managers. Such information may be used only for your investment purposes and may not be disseminated to third parties without the written consent of Ellwood Associates.

Updated 11/11/19

Endnotes

- Indices (and associated data) published, administered and/or owned and/or controlled by S&P Dow Jones Indices LLC, its affiliates, and/or their third party licensors and used in this publication have been licensed for use by J.H. Ellwood & Associates, Inc. Copyright © 2019 S&P Dow Jones Indices LLC, its affiliates and/or third party licensors. All rights reserved. Redistribution or reproduction in whole or in part are prohibited without written permission of S&P Dow Jones Indices LLC. For more information on any of S&P Dow Jones Indices LLC's indices please visit www.spdji.com. S&P® is a registered trademark of S&P Global and Dow Jones® is a registered trademark of Dow Jones Trademark Holdings LLC. Neither S&P Dow Jones Indices LLC, Dow Jones Trademark Holdings LLC, their affiliates nor their third party licensors make any representation or warranty, express or implied, as to the ability of any index to accurately represent the asset class or market sector that it purports to represent and neither S&P Dow Jones Indices LLC, Dow Jones Trademark Holdings LLC, their affiliates nor their third party licensors shall have any liability for any errors, omissions, or interruptions of any index or the data included therein.
- Copyright ©2019 MSCI. Unpublished. All Rights Reserved. This information may only be used for your internal use, may not be reproduced or disseminated in any form and may not be used to create any financial instruments or products or any indices. This information is provided on an "as is" basis and the user of this information assumes the entire risk of any use it may make or permit to be made of this information. Neither MSCI, any of its affiliates or any other person involved in or related to compiling, computing or creating this information makes any express or implied warranties or representations with respect to such information or the results to be obtained by the use thereof, and MSCI, its affiliates and each such other person hereby expressly disclaim all warranties (including, without limitation, all warranties of originality, accuracy, completeness, timeliness, non-infringement, merchantability and fitness for a particular purpose) with respect to this information. Without limiting any of the foregoing, in no event shall MSCI, any of its affiliates or any other person involved in or related to compiling, computing or creating this information have any liability for any direct, indirect, special, incidental, punitive, consequential or any other damages (including, without limitation, lost profits) even if notified of, or if it might otherwise have anticipated, the possibility of such damages.
- CRSP: Calculated/Derived based upon data from CRSP® Indexes Data Center for Research in Security Prices (CRSP®), The University of Chicago Booth School of Business.
- FTSE International Limited ("FTSE") © FTSE 2019. FTSE® is a trade mark of the London Stock Exchange Group companies and is used by FTSE under license. All rights in the FTSE indices and / or FTSE ratings vest in FTSE and/or its licensors. Neither FTSE nor its licensors accept any liability for any errors or omissions in the FTSE indices and / or FTSE ratings or underlying data. No further distribution of FTSE Data is permitted without FTSE's express written consent. FTSE does not promote, sponsor nor endorse the research report.
- Copyright © 2019 PitchBook Data, Inc. All rights reserved. PitchBook Data, Inc. makes no representation or warranty, express or implied, regarding any data it provides, and PitchBook Data, Inc. shall have no liability for any errors, omissions, or interruptions of any data so provided, directly or indirectly, by PitchBook Data, Inc.
- NCREIF (National Council of Real Estate Investment Fiduciaries)
- The HFRI index(es) listed in this report is being used under license from Hedge Fund Research, Inc., which does not approve of or endorse the contents of this report. www.hedgefundresearch.com
- "Alerian MLP Index", "Alerian MLP Total Return Index", "AMZ", and "AMZX" are trademarks of GKD Index Partners d/b/a Alerian ("Alerian") and their use is granted under a license from Alerian. Alerian does not guarantee the accuracy and/or completeness of the Alerian MLP Index or any data included therein and Alerian shall have no liability for any errors, omissions, interruptions or defects therein. Alerian makes no warranty, express or implied, representations or promises, as to results to be obtained by Licensee, or any other person or entity from the use of the Alerian MLP Index or any data included therein. Alerian makes no express or implied warranties, representations or promises, regarding the originality, merchantability, suitability, or fitness for a particular purpose or use with respect to the Alerian MLP Index or any data included therein. Without limiting any of the foregoing, in no event shall Alerian have any liability for any direct, indirect, special, incidental, punitive, consequential, or other damages (including lost profits), even if notified of the possibility of such damages.
- Source ICE Data Indices, LLC ("ICE DATA"), is used with permission. ICE DATA, its affiliates and their respective third party suppliers disclaim any and all warranties and representations, express and/or implied, including any warranties of merchant ability or fitness for a particular purpose or use, including the indices, index data and any data included in, related to, or derived therefrom. Nether ICE DATA, its affiliates nor their respective third party providers shall be subject to any damages or liability with respect to the adequacy, accuracy, timeliness or completeness of the indices or the index data or any component thereof, and the indices and index data and all components thereof are provided on an "as is" basis and your use is at your own risk. ICE DATA, its affiliates and their respective third party suppliers do not sponsor, endorse, or recommend Ellwood, or any of its products or services.

Updated 11/11/19