



**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**



PERIOD ENDING: SEPTEMBER 30, 2018

Investment Performance Review for

San Mateo County Employees' Retirement Association

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SEATTLE 206-622-3700

LOS ANGELES 310-297-1777

SAN FRANCISCO 415-362-3484

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THE ECONOMIC CLIMATE

- The U.S., Mexico, and Canada reached a new trade agreement. The new deal, USMCA, involves few changes to NAFTA, but may create mildly more favorable terms for U.S. businesses.
- The U.S. continued to outshine other developed economies in Q2 with its strongest quarterly growth since 2014. A few smaller emerging market economies experienced idiosyncratic weakness that led to concerns of economic contagion, but fundamentals in most countries still appear strong.

PORTFOLIO IMPACTS

- Emerging market equities delivered slight losses in Q3, but seem to have stabilized as currency depreciation recently subsided (MSCI Emerging Markets Index -1.1%, JP Morgan EM Currency Index -1.6%). We maintain a positive outlook on emerging market equities.
- The Fed raised the target range for the fed funds rate by 0.25% to a range of 2.00%-2.25%. The probability of a December rate hike was 78%, as of October 8th.
- U.S. trade discussions have narrowed in on China. Negotiations between the two countries in recent months do not appear to have produced tangible results.

THE INVESTMENT CLIMATE

- Another strong quarter of U.S. corporate earnings is expected in Q3 on both an absolute and relative basis. S&P 500 earnings and revenue growth are forecast to be 19.3% and 6.9% YoY, respectively.
- Fixed income yields around the world rose slightly. The U.S. Treasury yield hit a 7-year high of 3.23%, reigniting investor concerns over rising interest rates.
- The Italian coalition government sparred with the European Commission over its fiscal spending plans. Fading ECB stimulus will likely lift interest rates on European bonds, which is creating doubts around the sustainability of Italy's debt.

ASSET ALLOCATION ISSUES

- Capital market returns have been largely flat-to-negative in 2018, with U.S. equities being the exception. Diversification remains important, but has been painful for investors in this environment.
- Trade conflicts between the U.S. and its trading partners appear to be mostly resolved. All eyes are on negotiations between U.S. and Chinese representatives, though it increasingly appears that these negotiations are broader in nature than trade alone.

A neutral to mild risk overweight may be warranted in today's environment

U.S. economics summary

- Real GDP growth was 2.9% year-over-year in the second quarter. Expectations for third quarter growth have risen alongside recently strengthening U.S. economic data.
- U.S. inflation fell slightly to 2.3% YoY, moving closer to the U.S. Core CPI rate of 2.2% YoY.
- Non-farm payrolls added 134,000 jobs in September, missing the consensus estimate of 185,000. Hurricane Florence likely contributed to the miss, as leisure and hospitality employment fell by 17,000, the largest drop in a year.
- The U3 unemployment rate fell from 3.9% to 3.7% in September, the lowest rate since 1969. The U6 unemployment increased from 7.4% to 7.5%.
- The United States, Mexico, and Canada reached an agreement on a new trade deal to replace NAFTA.

The new deal, USMCA, included provisions aimed towards protecting the business interests of North American auto manufacturers as well as workers' wages. The deal also partially opened the Canadian dairy market to U.S. farmers.

- The U.S. imposed 10% tariffs on \$200 billion of Chinese goods on September 24th. The White House claimed that the tariff rate will advance from 10% to 25% at year-end if no progress is made through negotiations in the meantime. China retaliated with tariffs of 10% on \$60 billion of U.S. imports.
- As expected, the Federal Open Market Committee raised the target range for the fed funds rate by 0.25%, moving the new range to 2.00%-2.25%. The market implied odds for an additional December rate hike were 78%, as of October 8th.

	Most Recent	12 Months Prior
GDP (YoY)	2.9% <i>6/30/18</i>	2.1% <i>6/30/17</i>
Inflation (CPI YoY, Core)	2.2% <i>9/30/18</i>	1.7% <i>9/30/17</i>
Expected Inflation (5yr-5yr forward)	2.2% <i>9/30/18</i>	2.0% <i>9/30/17</i>
Fed Funds Target Range	2.00 – 2.25% <i>9/30/18</i>	1.00 – 1.25% <i>9/30/17</i>
10 Year Rate	3.1% <i>9/30/18</i>	2.3% <i>9/30/17</i>
U-3 Unemployment	3.7% <i>9/30/18</i>	4.2% <i>9/30/17</i>
U-6 Unemployment	7.5% <i>9/30/18</i>	8.3% <i>9/30/17</i>

International economics summary

- The U.S., Mexico, and Canada reached an agreement on a trade deal to replace NAFTA. The new U.S.-Mexico-Canada Agreement (USMCA) involves few material changes to NAFTA, but the terms appear mildly more favorable for U.S. businesses.
- U.S. negotiations with China, its largest trading partner, continued with little apparent progress. The U.S. imposed 10% tariffs on \$200 billion of Chinese goods on September 24th. The White House claimed that the tariff rate will advance from 10% to 25% at year-end if no progress is made in the meantime. China responded with retaliatory tariffs of 10% on \$60 billion of U.S. imports.
- Trade negotiations with other trading partners appear to be mostly resolved, easing concerns of a global trade war.
- Developed market economies are expected to grow less quickly in the coming years, while emerging economy growth rates are expected to rise.
- PMI readings around the globe have weakened during 2018, led by the Eurozone. U.S. PMIs remain very high, indicating expansion in the manufacturing and services sectors.
- The Italian coalition government sparred with the European Commission over its fiscal spending plans. Fading ECB stimulus will likely lift interest rates on European bonds, creating doubts around the sustainability of Italy's debt.
- The U.S. dollar appreciated by 1% during the quarter. A stable dollar would help dampen the volatility of unhedged equity investments, particularly in emerging markets where currency moves have been larger.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	2.9% <i>6/30/18</i>	2.7% <i>8/31/18</i>	3.8% <i>9/30/18</i>
Eurozone	2.1% <i>6/30/18</i>	2.1% <i>9/30/18</i>	8.3% <i>6/30/18</i>
Japan	1.3% <i>6/30/18</i>	1.3% <i>8/31/18</i>	2.4% <i>6/30/18</i>
BRICS Nations	5.8% <i>6/30/18</i>	2.5% <i>6/30/18</i>	5.5% <i>6/30/18</i>
Brazil	1.0% <i>6/30/18</i>	4.5% <i>9/30/18</i>	12.2% <i>9/30/18</i>
Russia	1.9% <i>6/30/18</i>	3.4% <i>9/30/18</i>	4.6% <i>8/31/18</i>
India	8.2% <i>6/30/18</i>	3.7% <i>8/31/18</i>	8.8% <i>12/31/17</i>
China	6.7% <i>6/30/18</i>	2.3% <i>8/31/18</i>	3.8% <i>6/30/18</i>

Equity environment

- U.S. equities delivered strong returns during the quarter (S&P 500 +7.7%), and have outperformed year-to-date. We remain concerned about the large valuation difference between U.S. and international equities, though the relatively positive outlook for the domestic economy should justify some of the valuation difference.
- Emerging market equities delivered slight losses in Q3, but seem to have stabilized as currency depreciation subsided (MSCI Emerging Markets Index -1.1%, JP Morgan EM Currency Index -1.6%). Many emerging market currencies have rebounded from their lows. We maintain a positive outlook on emerging market equities.
- Developed non-U.S. equities have remained range bound following the selloff in the first quarter. International equity performance outside of emerging markets has been flat (MSCI EAFE +1.4% unhedged, +2.9% hedged).
- Another strong quarter of U.S. corporate earnings is expected in Q3 on both an absolute and relative basis. S&P 500 earnings and revenue growth is expected to be 19.3% and 6.9% YoY, respectively. Earnings growth in 2019 is expected to be 10.2% YoY.
- Large cap equities (Russell 1000 7.4%) outperformed small cap (Russell 2000 3.6%) during the quarter. Value stocks lagged growth by a similar margin (Russell 1000 Value 5.7% vs. Russell 1000 Growth 9.2%).
- The performance gap between growth and value equities widened further in Q3. The differential continued to be driven by strong returns generated by large names in the tech sector.

	QTD TOTAL RETURN		YTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)	(unhedged)	(hedged)
US Large Cap (Russell 1000)	7.4%		10.5%		17.8%	
US Small Cap (Russell 2000)	3.6%		11.5%		15.2%	
US Large Value (Russell 1000 Value)	5.7%		3.9%		9.5%	
US Large Growth (Russell 1000 Growth)	9.2%		17.1%		26.3%	
International Large (MSCI EAFE)	1.4%	2.9%	0.1%	2.9%	2.7%	7.1%
Eurozone (Euro Stoxx 50)	(0.2%)	1.2%	(2.5%)	1.6%	(4.6%)	(0.3%)
U.K. (FTSE 100)	(1.8%)	(0.2%)	(2.7%)	2.0%	3.2%	7.4%
Japan (NIKKEI 225)	6.2%	8.7%	6.8%	7.4%	19.7%	20.7%
Emerging Markets (MSCI Emerging Markets)	(1.1%)	(0.2%)	(7.7%)	(3.8%)	(0.8%)	1.9%

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 9/30/18

Domestic equity

U.S. equities delivered strong returns during the quarter (S&P 500 +7.7%), and have outperformed year-to-date. Fears of trade conflict crowded the headlines, with the focus nearly all on China as the U.S. successfully concluded negotiations with other trading partners. Equity markets on both sides have generally rallied on news of potential resolution, though the performance gap between U.S. and Chinese equities has trended wider. Trade frictions will likely remain a headwind to performance.

Another strong quarter of U.S. corporate earnings is expected in Q3 on both an absolute and relative basis. S&P 500 earnings and revenue growth are expected to be 19.3% and 6.9% YoY, respectively. Earnings growth in 2019 is expected to be 10.2% YoY. If analyst forecasts are as overly optimistic as they typically are, this would put 2019 earnings growth at a more average rate of 5-6%. While average earnings growth can be conducive to moderate positive equity returns, current relatively high valuations could case concerns once growth rates decelerate.

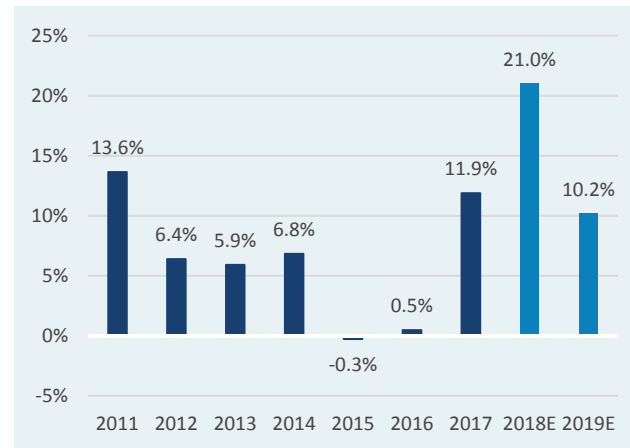
U.S. equities have risen with earnings growth and strong fundamentals, despite trade concerns

U.S. EQUITIES



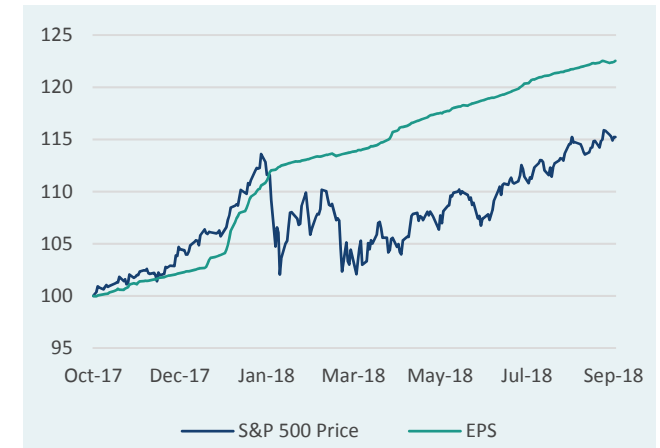
Source: Russell Investments, as of 9/30/18

CALENDAR YEAR EARNINGS GROWTH



Source: FactSet, as of 10/12/18

S&P 500 PRICE & EARNINGS



Source: Bloomberg, as of 9/30/18

Domestic equity size & style

Large cap equities (Russell 1000 7.4%) outperformed small cap equities (Russell 2000 3.6%) during the quarter.

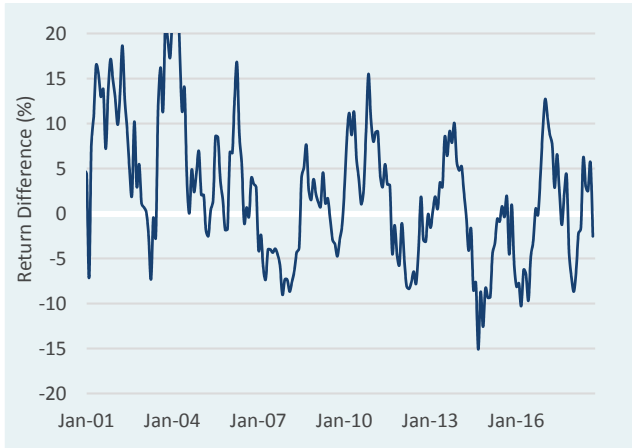
Growth stocks outpaced value stocks by a similar margin (Russell 1000 Growth 9.2% vs. Russell 1000 Value 5.7%).

Differences between sector composition in large-cap style benchmarks have explained much of the recent growth outperformance. Nearly 50% of the Russell 1000 Growth Index is in the more cyclical Information Technology and Consumer Discretionary sectors, which have been by far

and away the best performing sectors over the past year.

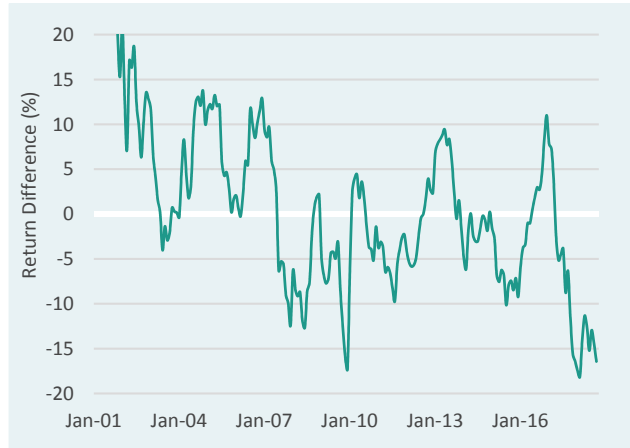
Size and value factor performance continues to frustrate investors. While the extent of underperformance is not anomalous, it may be testament to the long-term nature of factor investing. Unless an investor believes that these risk premia no longer exist, maintaining exposure and avoiding capitulation should be the primary goal.

SMALL CAP VS LARGE CAP (YOY)



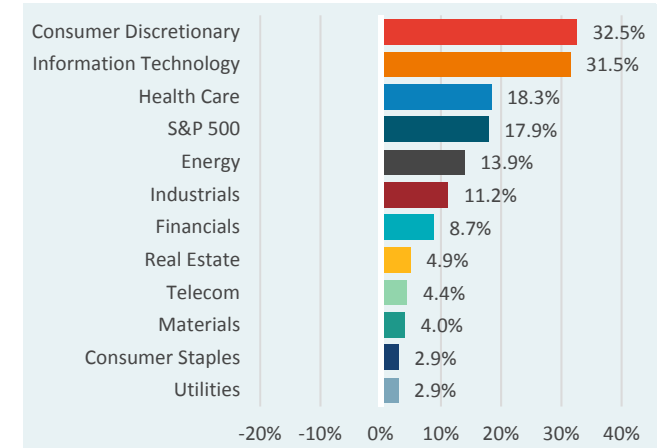
Source: FTSE, as of 9/30/18

VALUE VS GROWTH (YOY)



Source: FTSE, as of 9/30/18

1-YEAR S&P 500 SECTOR RETURNS



Source: Morningstar, as of 9/30/18

International developed equity

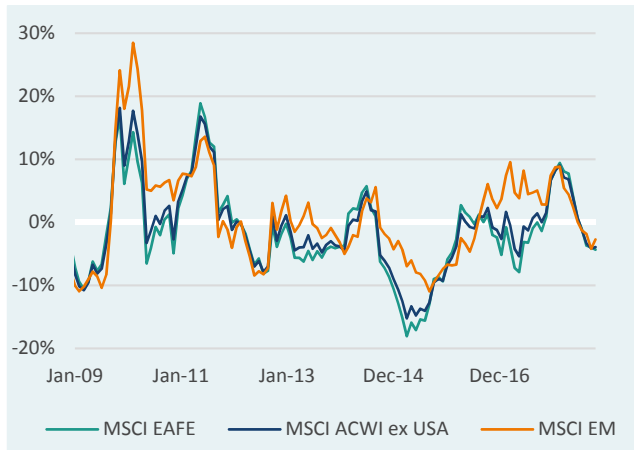
Unhedged international equities underperformed U.S. equities during Q3 (MSCI EAFE +1.4% vs. S&P 500 +7.7%). On a currency hedged basis, international equities delivered returns of 2.9%.

Currency movement continued to create losses for unhedged equity investors. U.S. investors that hedged their international equity exposure outperformed their unhedged peers by approximately 5% year-to-date (MSCI EAFE Index).

Regional divergence in earnings remained a story in Q3. Year-over-year growth in forward earnings reached 23% for U.S. equities, while estimates fell from 14% to 9% in emerging markets and from 12% to 10% in international developed markets, according to MSCI estimates.

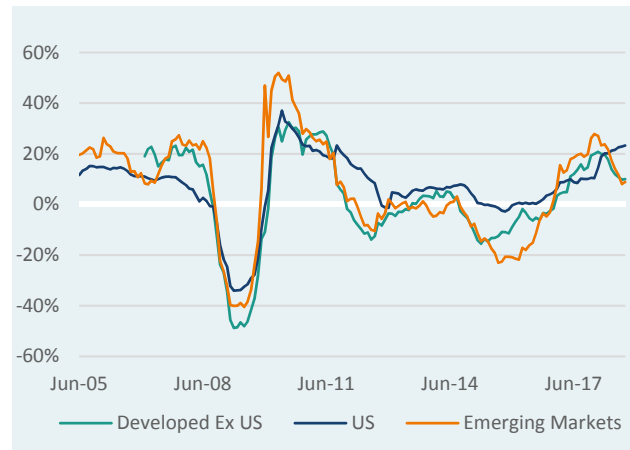
Differences in forward P/E multiples between U.S. and non-U.S. equities remained high. At quarter-end, this valuation gap relative to international developed equity ranked in the 96th percentile since 2005. The U.S.-EM valuation gap ranked in the 89th percentile over the same period.

EFFECT OF CURRENCY (1-YEAR ROLLING)



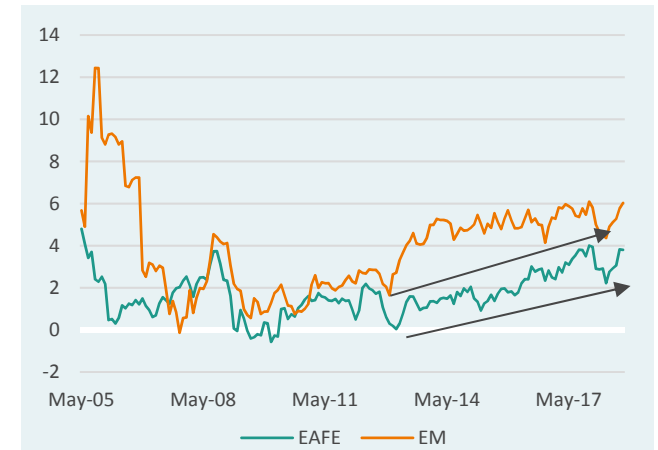
Source: MSCI, as of 9/30/18

EARNINGS GROWTH (YOY)



Source: MSCI, as of 9/30/18 – YoY growth in forward earnings

FORWARD P/E SPREADS RELATIVE TO U.S.



Source: MSCI, as of 9/30/18

Emerging market equity

Emerging market equities delivered a slight loss in Q3 but seem to have stabilized as currency depreciation subsided (MSCI Emerging Markets Index -1.1%, JP Morgan EM Currency Index -1.6%). Many of these currencies have rebounded from their lows.

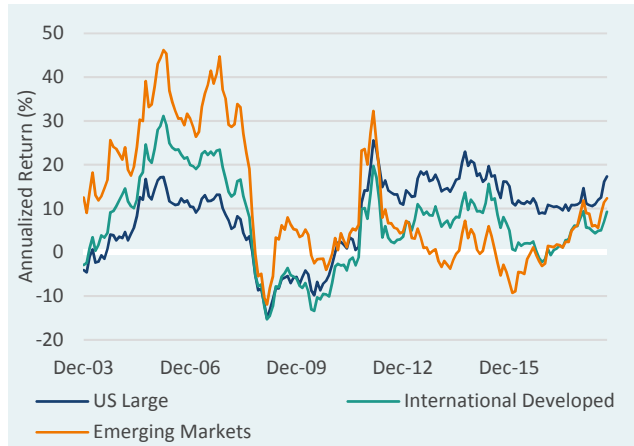
Developed markets are expected to grow less quickly in the coming years while emerging economic growth is expected to rise. A positive growth premium of emerging economies relative to developed economies has

historically acted as a tailwind for EM outperformance.

We believe positive emerging economy growth trends, attractive valuations, a strong earnings environment, and depressed currencies should provide an environment of strong relative equity performance across these markets.

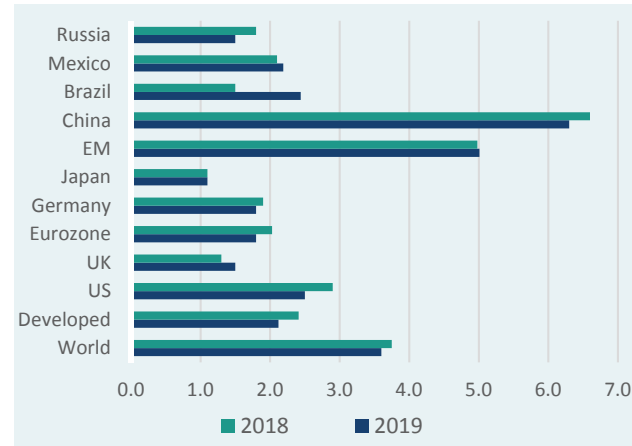
Conditions remain positive for medium-term EM equity performance, though volatility may persist

EQUITY PERFORMANCE (3YR ROLLING)



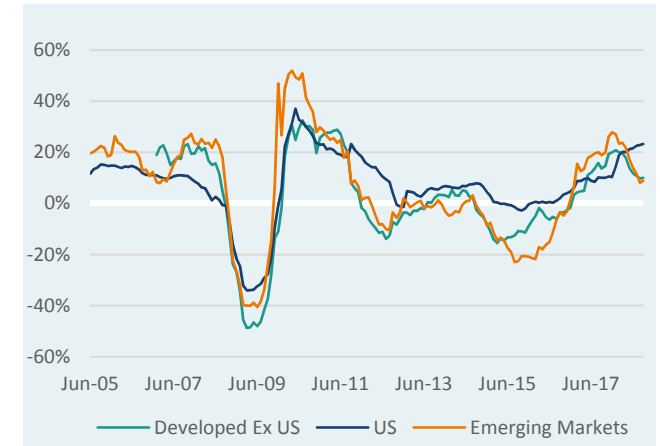
Source: Standard & Poor's, MSCI, as of 9/30/18

GDP GROWTH EXPECTATIONS (%)



Source: Bloomberg, as of 9/30/18

EARNINGS GROWTH (YOY)



Source: MSCI, as of 9/30/18 – YoY growth in forward earnings

Interest rate environment

- The Federal Reserve raised the target range for the fed funds rate by 0.25%, to a range of 2.00%-2.25%. The odds for a December rate hike were 78%, as of October 8th.
- Fixed income yields around the world moved slightly higher during the quarter. The U.S. Treasury yield rose to a 7-year high of 3.23%, reigniting investor concerns over rising interest rates. The spread between 2- and 10-year yields has remained steady at around 30 bps.
- In September, the European Central Bank left interest rates unchanged, and confirmed its intent to leave rates at current levels “at least through the summer of 2019, and in any case for as long as necessary to ensure the continued sustained convergence of inflation to levels that are below, but close to, 2% over the medium term.” The ECB

also stated that bond purchases of \$30 billion euros per month would be cut in half beginning in October, and would stop altogether at the end of the year.

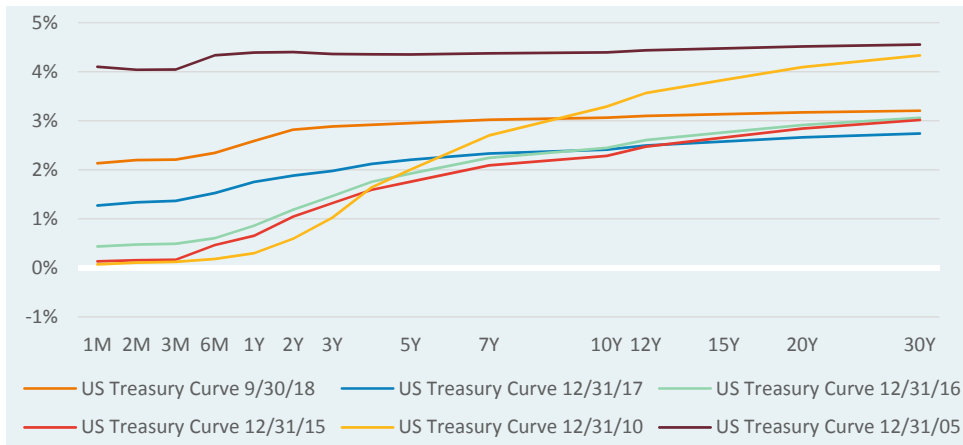
- The yield spread between Italian and German 10-year bonds has exhibited significant volatility following Italy’s political shakeup in the second quarter. Discussions around compliance with European Union budget rules, and the general fear that Italy may push either for structural monetary policy changes, or to leave the Eurozone, contributed to a tumultuous quarter.
- Emerging market local and hard yields were rangebound in Q3, but remained elevated due to continued idiosyncratic risks in countries such as Turkey and Argentina.

Area	Short Term (3M)	10 Year
United States	2.19%	3.06%
Germany	(0.56%)	0.47%
France	(0.56%)	0.80%
Spain	(0.39%)	1.50%
Italy	0.01%	3.15%
Greece	1.12%	4.18%
U.K.	0.77%	1.57%
Japan	(0.13%)	0.13%
Australia	1.89%	2.67%
China	2.97%	3.63%
Brazil	6.58%	11.76%
Russia	7.02%	8.69%

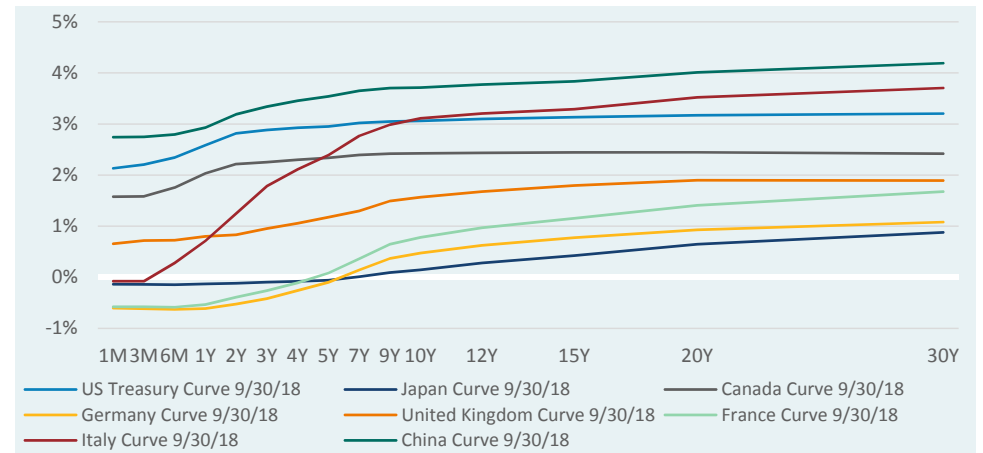
Source: Bloomberg, as of 9/30/18

Yield environment

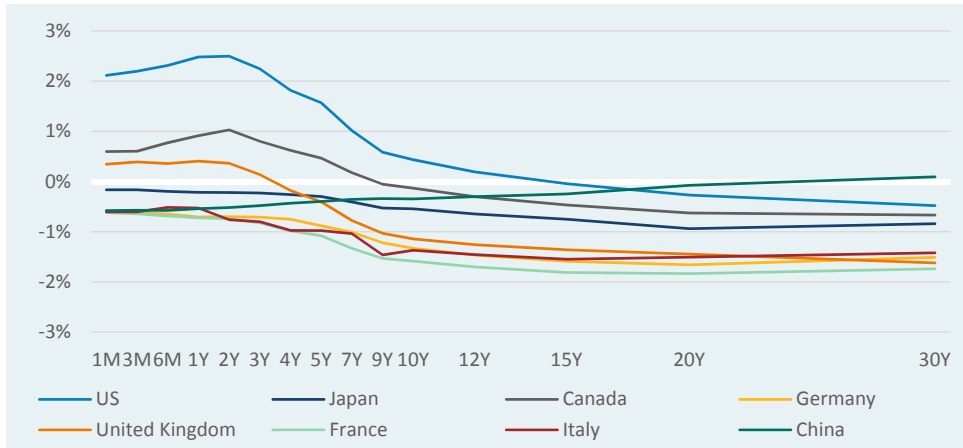
U.S. YIELD CURVE



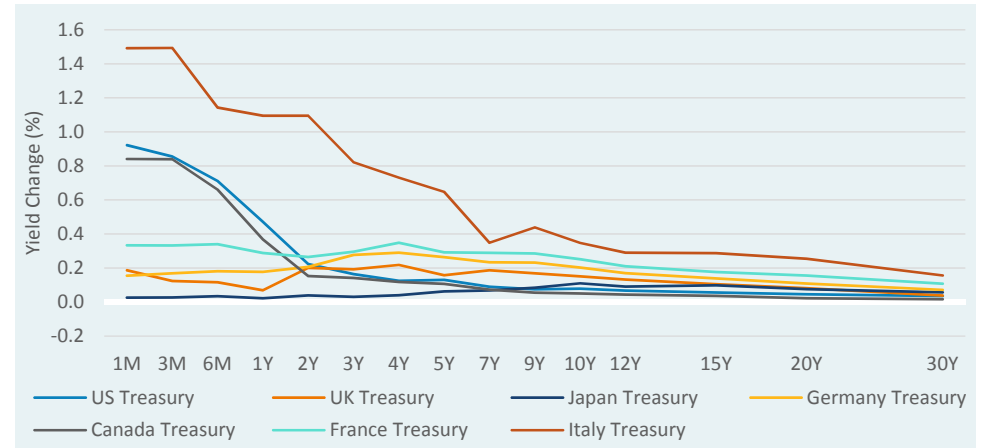
GLOBAL GOVERNMENT YIELD CURVES



YIELD CURVE CHANGES OVER LAST FIVE YEARS



IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 9/30/18

Currency

The U.S. dollar appreciated 1% during the quarter on a trade-weighted dollar basis. A stable dollar going forward would help dampen the volatility of unhedged equity investments, particularly in emerging markets where currency moves have been larger. Some of the worst performing emerging market currencies have partially recovered from 2nd quarter losses.

Major currencies have fluctuated widely relative to the U.S. dollar in 2018. Most currencies strengthened through the first quarter, but this trend reversed when international economic growth began to show weakness, which helped

push up the value of the dollar. Because foreign currencies have been positively correlated with equity markets, these movements have added to total volatility.

Wide short-term interest rate differentials between the U.S. and the rest of the world have created a tailwind for those hedging U.S. dollar exposures. For example, based on current FX forward pricing, an investor would lock in an annualized gain of 3.3% when hedging the euro, which is typically the biggest foreign currency exposure in portfolios.

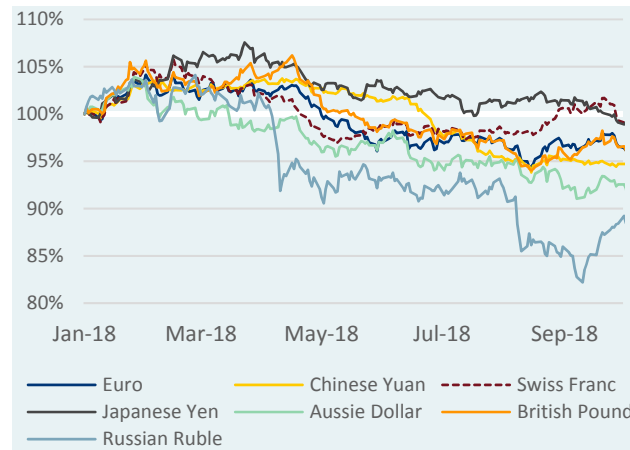
The U.S. dollar materially appreciated, reversing a multi-year downtrend

U.S. DOLLAR TRADE WEIGHTED INDEX



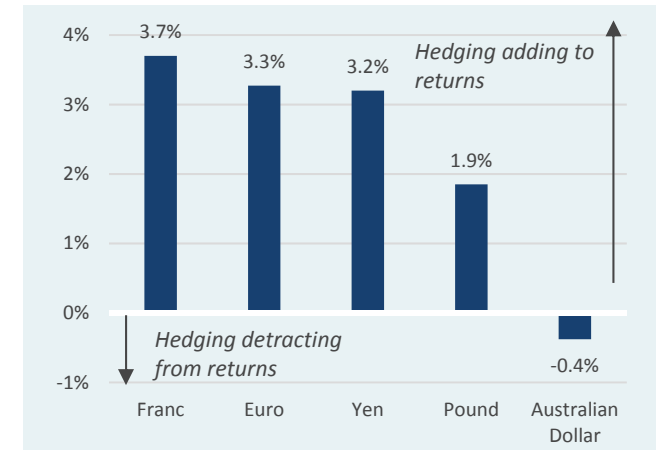
Source: Federal Reserve, as of 9/30/18

USD MOVES VS MAJOR CURRENCIES



Source: Verus, Bloomberg, as of 9/30/18

ANNUALIZED FX HEDGING COSTS (GAINS)



Source: Bloomberg, as of 9/30/18, based on 3-month FX forwards

- The Total Fund, net of manager fees, returned 2.0% in the third quarter of 2018 and ranked in the 63rd percentile among other public plans greater than \$1 billion (median of 2.1%). It lagged the policy index return of 2.5%. The Total Fund ex Overlay returned 2.0% for the quarter. The Total Fund one-year return of 5.4% lagged the policy index return of 6.5% and ranked in the 89th percentile of its peer universe. The three-year return of 9.2% (58th percentile) lagged the median large public plan (9.3%) and the policy index (10.0%).

- Third quarter results were hindered by the following factors:
 1. PanAgora lost -2.1% for the quarter. The majority of underperformance came from commodities. The energy sector has gained over 17% YTD while the remaining 5 sectors have had negative returns. The large dispersion among returns isn't favorable for a diversified approach and provided headwinds for PanAgora.
 2. Baillie Gifford lost -1.3% in the quarter, underperforming the MSCI ACWI ex US (+0.8%). The portfolio's holdings in Chinese internet stocks hurt the portfolio. This was both a function of general weakness in the Chinese market (following a period of strong performance), and the prospect of a trade war raised fears for the domestic economy.

Total Fund
Performance Summary (Net of Fees)

Period Ending: September 30, 2018

	3 Mo (%)	Rank *	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Total Fund**	2.0	63	2.1	84	5.4	89	8.6	81	9.2	58	7.4	41	7.4	47
<i>Policy Index¹</i>	2.5	25	2.6	65	6.5	53	9.5	50	10.0	24	7.6	37	8.0	21
<i>InvestorForce Public DB > \$1B Net Median</i>	2.1		2.9		6.5		9.5		9.3		7.1		7.3	
Total Fund ex Overlay	2.0	59	2.1	81	5.4	87	8.6	81	9.1	65	7.3	43	7.3	48
<i>Policy Index¹</i>	2.5	25	2.6	65	6.5	53	9.5	50	10.0	24	7.6	37	8.0	21
<i>InvestorForce Public DB > \$1B Net Median</i>	2.1		2.9		6.5		9.5		9.3		7.1		7.3	
Public Equity	4.0	58	4.2	65	9.7	69	14.1	72	13.6	65	9.5	58	8.9	68
<i>Blended Public Equity Index¹</i>	4.1	53	4.4	64	10.5	59	15.0	42	14.3	35	9.8	50	9.6	40
<i>InvestorForce All DB Total Eq Net Median</i>	4.2		5.3		11.1		14.8		14.0		9.7		9.3	
US Equity	6.9	28	10.5	43	17.0	48	18.1	42	16.5	47	12.6	54	11.3	60
<i>Blended US Equity Index¹</i>	7.1	16	10.6	36	17.6	31	18.1	34	17.0	27	13.1	31	11.9	30
<i>Russell 3000</i>	7.1	16	10.6	36	17.6	31	18.1	34	17.1	23	13.5	14	12.0	22
<i>InvestorForce All DB US Eq Net Median</i>	6.6		10.2		17.0		17.7		16.4		12.7		11.5	
Large Cap Equity	7.4	35	10.6	35	17.8	37	19.1	31	17.4	24	13.8	29	11.6	43
<i>Russell 1000</i>	7.4	34	10.5	36	17.8	37	18.2	38	17.1	27	13.7	31	12.1	34
<i>eV US Large Cap Equity Net Median</i>	6.7		8.3		15.3		16.5		15.1		12.2		11.2	
<i>BlackRock Russell 1000</i>	7.4	34	10.5	25	17.7	32	--	--	--	--	--	--	--	--
<i>DE Shaw</i>	7.1	41	11.0	21	18.0	27	19.8	14	18.7	5	14.9	6	--	--
<i>Russell 1000</i>	7.4	34	10.5	25	17.8	31	18.2	32	17.1	18	13.7	24	12.1	23
<i>eV US Large Cap Core Equity Net Median</i>	6.9		8.7		15.7		16.5		15.1		12.5		11.1	
Small Cap Equity	3.4	52	9.6	48	12.1	56	16.8	51	14.6	65	8.7	81	10.5	74
<i>Russell 2000</i>	3.6	50	11.5	42	15.2	44	18.0	43	17.1	41	11.1	44	11.1	65
<i>eV US Small Cap Equity Net Median</i>	3.5		9.2		13.4		17.0		16.0		10.7		11.8	

* Total Fund and asset class aggregates are ranked in InvestorForce universes. Managers are ranked in eVest (eA) manager universes.

** Includes Parametric Minneapolis manager funded in August 2013.

1. See Appendix for Benchmark History.

Total Fund
Performance Summary (Net of Fees)

Period Ending: September 30, 2018

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
QMA US Small Cap	3.4	54	9.6	52	12.1	62	16.9	56	--	--	--	--	--	--
<i>Russell 2000</i>	3.6	53	11.5	42	15.2	43	18.0	43	17.1	37	11.1	50	11.1	66
<i>eV US Small Cap Core Equity Net Median</i>	3.8		9.7		13.8		17.3		16.5		11.1		11.6	
International Equity	0.5	38	-2.7	30	1.6	38	9.1	73	9.9	42	4.8	34	4.5	76
<i>MSCI ACWI ex US IMI¹</i>	0.4	41	-3.3	45	1.8	31	10.6	33	10.5	25	4.8	36	5.8	39
<i>MSCI EAFE Gross</i>	1.4	11	-1.0	12	3.2	14	11.1	17	9.8	47	4.9	29	5.9	35
<i>InvestorForce All DB ex-US Eq Net Median</i>	0.1		-3.7		0.8		10.0		9.7		4.4		5.4	
Developed Markets	0.5	57	-2.1	47	2.2	53	9.4	72	10.0	46	5.1	49	4.8	78
<i>MSCI ACWI ex USA Gross</i>	0.8	48	-2.7	59	2.3	52	10.8	49	10.5	31	4.6	64	5.7	53
<i>InvestorForce All DB Dev Mkt ex-US Eq Net Median</i>	0.7		-2.5		2.3		10.8		9.9		5.1		5.8	
Baillie Gifford	-1.3	65	-1.7	70	3.1	77	9.7	85	11.9	58	6.2	60	--	--
<i>MSCI ACWI ex US¹</i>	0.8	29	-2.7	82	2.3	85	10.8	75	10.5	69	4.8	93	--	--
<i>MSCI ACWI ex US Growth¹</i>	-0.2	51	-2.2	78	3.5	72	10.5	78	11.0	64	5.8	74	--	--
<i>eV ACWI ex-US Growth Equity Net Median</i>	-0.2		0.2		5.8		12.7		12.3		6.7		8.1	
BlackRock EAFE Index	1.4	32	-1.1	40	3.1	42	11.0	48	9.6	50	--	--	--	--
<i>MSCI EAFE</i>	1.4	33	-1.4	43	2.7	47	10.6	52	9.2	59	4.4	79	5.4	85
<i>MSCI EAFE Gross</i>	1.4	31	-1.0	40	3.2	41	11.1	47	9.8	48	4.9	70	5.9	72
<i>eV EAFE Core Equity Net Median</i>	0.8		-1.8		2.4		10.8		9.6		5.7		6.5	
Mondrian	1.4	23	-3.4	34	0.4	34	8.3	57	8.3	51	4.1	54	4.9	63
<i>MSCI ACWI ex USA Value Gross</i>	1.8	11	-3.1	27	1.0	26	11.1	28	9.9	33	3.5	60	5.1	55
<i>MSCI ACWI ex USA Gross</i>	0.8	35	-2.7	15	2.3	18	10.8	30	10.5	27	4.6	39	5.7	51
<i>eV ACWI ex-US Value Equity Net Median</i>	0.1		-4.3		-0.5		9.6		8.4		4.1		5.8	
Emerging Markets	-0.2	13	-8.4	27	-3.7	48	6.9	63	9.5	67	1.9	77	--	--
<i>MSCI Emerging Markets Gross</i>	-0.9	22	-7.4	16	-0.4	11	10.6	19	12.8	20	4.0	18	5.8	14
<i>InvestorForce All DB Emg Mkt Eq Net Median</i>	-1.7		-9.2		-3.8		7.3		10.5		2.8		4.5	

1. See Appendix for Benchmark History.

Total Fund
Performance Summary (Net of Fees)

Period Ending: September 30, 2018

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Parametric Core	-0.2	20	-8.4	37	-3.7	54	6.9	69	9.5	72	--	--	--	--
<i>MSCI Emerging Markets Gross</i>	-0.9	27	-7.4	23	-0.4	23	10.6	26	12.8	29	4.0	40	5.8	55
<i>eV Emg Mkts Equity Net Median</i>	-2.8		-9.5		-3.2		8.7		11.2		3.7		6.0	
Parametric Currency Overlay*	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fixed Income	0.6	26	0.0	22	0.5	21	3.2	9	4.3	12	3.6	28	5.8	25
<i>Blended Fixed Income Index¹</i>	0.8	19	-0.8	47	-0.5	48	0.7	55	3.0	50	2.6	52	4.1	77
<i>InvestorForce All DB Total Fix Inc Net Median</i>	0.3		-0.9		-0.5		0.9		2.9		2.7		4.9	
Core Fixed	0.1	--	-1.6	--	-1.2	--	0.6	--	2.5	--	2.8	--	5.0	--
<i>BBgBarc US Aggregate TR</i>	0.0	--	-1.6	--	-1.2	--	-0.6	--	1.3	--	2.2	--	3.8	--
BlackRock Intermediate Govt	-0.1	5	-0.6	6	-1.0	23	--	--	--	--	--	--	--	--
<i>BBgBarc US Govt Int TR</i>	-0.1	16	-0.8	13	-1.2	65	-0.9	22	0.2	68	0.9	70	2.2	79
<i>eV US Government Fixed Inc Net Median</i>	-0.3		-1.1		-1.1		-1.0		0.5		1.3		2.7	
FIAM Bond	0.1	58	-1.2	26	-0.8	29	0.0	25	2.3	13	2.8	19	5.0	17
<i>BBgBarc US Aggregate TR</i>	0.0	77	-1.6	64	-1.2	67	-0.6	72	1.3	69	2.2	67	3.8	80
Western TRU	0.1	62	-3.7	99	-2.4	99	2.8	1	3.6	3	--	--	--	--
<i>3-Month Libor Total Return USD</i>	0.6	5	1.7	1	2.1	1	1.6	3	1.3	73	0.9	99	0.7	99
<i>BBgBarc US Aggregate TR</i>	0.0	77	-1.6	64	-1.2	67	-0.6	72	1.3	69	2.2	67	3.8	80
<i>eV US Core Fixed Inc Net Median</i>	0.1		-1.5		-1.1		-0.3		1.6		2.3		4.3	
Opportunistic Credit	1.8	--	3.3	--	4.2	--	7.4	--	7.8	--	6.6	--	--	--
<i>BBgBarc BA Intermediate HY¹</i>	2.3	--	0.8	--	0.9	--	3.8	--	6.2	--	4.7	--	--	--
Angelo Gordon Opportunistic**	5.3	--	21.4	--	32.1	--	20.9	--	15.0	--	--	--	--	--
Angelo Gordon STAR	6.6	--	18.9	--	22.3	--	19.9	--	14.0	--	13.4	--	--	--
<i>BBgBarc US Aggregate TR</i>	0.0	--	-1.6	--	-1.2	--	-0.6	--	1.3	--	2.2	--	3.8	--

* Funded September 2018.

** Preliminary return as of 09/30/2018.

1. See Appendix for Benchmark History.

Total Fund
Performance Summary (Net of Fees)

Period Ending: September 30, 2018

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Beach Point Select	1.8	81	5.0	4	6.9	4	8.6	5	9.2	6	--	--	--	--
BBgBarc BA Intermediate HY ¹	2.3	36	0.8	93	0.9	94	3.8	91	6.2	71	4.7	56	--	--
eV US High Yield Fixed Inc Net Median	2.1		2.0		2.6		5.3		6.8		4.8		8.3	
Brigade Capital	2.3	34	4.9	5	5.3	8	7.6	10	9.0	7	4.9	49	--	--
BBgBarc BA Intermediate HY ¹	2.3	36	0.8	93	0.9	94	3.8	91	6.2	71	4.7	56	--	--
50% Barclays HY/ 50% Bank Loan	2.2	46	3.5	12	4.3	13	5.7	37	6.8	50	5.0	46	--	--
eV US High Yield Fixed Inc Net Median	2.1		2.0		2.6		5.3		6.8		4.8		8.3	
PIMCO Diversified**	1.7	85	0.3	96	1.1	92	--	--	--	--	--	--	--	--
Blended PIMCO Diversified Index ¹	1.6	86	-0.8	99	0.0	99	2.3	99	5.5	86	4.7	59	7.4	86
BBgBarc BA Intermediate HY	2.3	36	0.8	93	0.9	94	3.8	91	6.2	71	4.7	56	--	--
eV US High Yield Fixed Inc Net Median	2.1		2.0		2.6		5.3		6.8		4.8		8.3	
Franklin Templeton	0.3	56	-2.1	63	-3.4	88	4.2	26	3.9	46	1.8	67	--	--
BBgBarc Multiverse TR	-0.8	80	-2.4	67	-1.3	63	-0.9	82	2.3	73	0.9	79	3.1	80
eV All Global Fixed Inc Net Median	0.5		-1.2		-0.5		1.5		3.7		2.7		4.7	
Private Credit	1.7	--	5.8	--	7.6	--	6.6	--	--	--	--	--	--	--
Cliffwater Direct Lending Index ¹	2.4	--	7.2	--	9.4	--	9.3	--	8.9	--	9.1	--	10.0	--
TCP Direct Lending VIII*	3.4	1	6.3	2	7.8	2	7.2	12	--	--	--	--	--	--
White Oak Yield*	0.0	98	5.6	3	6.9	4	--	--	--	--	--	--	--	--
Cliffwater Direct Lending Index ¹	2.4	19	7.2	1	9.4	1	9.3	4	8.9	7	9.1	1	10.0	4
eV US High Yield Fixed Inc Net Median	2.1		2.0		2.6		5.3		6.8		4.8		8.3	
Risk Parity	-0.9	--	-2.5	--	1.9	--	3.7	--	7.2	--	5.8	--	--	--
Blended Risk Parity Index ¹	3.0	--	3.3	--	7.1	--	9.4	--	10.0	--	8.6	--	--	--
AQR GRP, 10% Volatility	0.3	--	-1.4	--	3.3	--	5.7	--	7.1	--	4.7	--	--	--
PanAgora	-2.1	--	-3.6	--	0.6	--	1.9	--	7.3	--	--	--	--	--
Blended Risk Parity Index ¹	3.0	--	3.3	--	7.1	--	9.4	--	10.0	--	8.6	--	--	--
Blended RP Secondary Index ¹	4.2	--	5.6	--	9.8	--	9.7	--	9.7	--	7.3	--	--	--

* Preliminary return as of 09/30/2018.

** Funded August 2017.

1. See Appendix for Benchmark History.

Total Fund
Performance Summary (Net of Fees)

Period Ending: September 30, 2018

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Alternatives	2.1	--	1.6	--	3.1	--	7.5	--	6.5	--	7.2	--	--	--
<i>Blended Alternatives Index¹</i>	2.8	--	4.5	--	9.1	--	11.5	--	10.6	--	7.8	--	--	--
Private Equity**	4.9	27	12.3	34	13.9	53	15.8	34	13.7	20	17.7	7	--	--
<i>Blended Private Equity Index¹</i>	3.9	39	4.4	82	11.7	64	16.6	29	17.1	9	14.7	24	14.2	4
<i>InvestorForce All DB Private Eq Net Median</i>	3.3		10.7		14.5		13.9		10.8		11.2		9.1	
Hedge Fund/Absolute Return	-1.0	93	-8.5	98	-7.1	98	-0.9	94	-0.3	89	4.2	32	--	--
<i>Libor 1 month +4%</i>	1.6	29	4.4	25	5.8	36	5.4	51	5.1	24	4.7	23	--	--
<i>InvestorForce All DB Hedge Funds Net Median</i>	0.6		2.9		4.6		5.4		3.7		3.6		3.8	
AQR DELTA XN	-1.9	83	-11.5	92	-10.3	93	-2.2	84	-0.9	85	3.9	58	--	--
Aberdeen Standard GARS	0.5	57	-3.5	74	-1.7	77	0.9	74	--	--	--	--	--	--
<i>Libor 1 month +4%</i>	1.6	37	4.4	30	5.8	34	5.4	46	5.1	48	4.7	51	--	--
<i>eV Alt All Multi-Strategy Median</i>	0.8		1.2		3.3		4.8		4.6		4.9		6.9	
Inflation Hedge	0.5	--	2.0	--	4.7	--	5.8	--	--	--	--	--	--	--
<i>Blended Inflation Hedge Index¹</i>	0.8	--	1.7	--	4.7	--	5.8	--	--	--	--	--	--	--
Real Estate	2.4	10	6.3	20	8.7	12	8.4	15	8.8	14	10.7	6	5.2	23
NCREIF ODCE	2.1	27	6.5	15	8.7	12	8.2	18	8.8	15	10.7	6	5.9	10
<i>InvestorForce All DB Real Estate Pub Net Median</i>	1.9		5.5		7.3		6.5		7.5		9.2		4.6	
Invesco	2.5	--	6.7	--	9.1	--	8.5	--	8.8	--	10.7	--	5.2	--
<i>NCREIF ODCE</i>	2.1	--	6.5	--	8.7	--	8.2	--	8.8	--	10.7	--	5.9	--
Invesco US Val IV	2.7	--	7.0	--	9.0	--	10.0	--	--	--	--	--	--	--
<i>NCREIF ODCE</i>	2.1	--	6.5	--	8.7	--	8.2	--	8.8	--	10.7	--	5.9	--
<i>NCREIF CEVA 1Q Lag - NET</i>	3.0	--	8.7	--	12.0	--	10.8	--	11.7	--	--	--	--	--
PGIM RE US Debt Fund***	1.9	--	4.2	--	6.7	--	--	--	--	--	--	--	--	--
<i>NCREIF ODCE</i>	2.1	--	6.5	--	8.7	--	8.2	--	8.8	--	10.7	--	5.9	--

* Excludes EnCap Energy Capital Fund and Sheridan Production Partners.

** Returns are one-quarter lag.

*** Funded July 2017.

1. See Appendix for Benchmark History.

Total Fund
Performance Summary (Net of Fees)

Period Ending: September 30, 2018

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Private Real Asset**	0.6	--	0.3	--	-2.2	--	-1.3	--	10.1	--	--	--	--	--
<i>Blended Private Real Asset Index¹</i>	4.4	--	-3.0	--	1.2	--	5.0	--	5.6	--	--	--	--	--
<i>Blended Secondary CA Private RA Index¹</i>	2.2	--	7.9	--	11.2	--	12.2	--	7.9	--	--	--	--	--
Liquid Real Asset	-1.5	--	-1.7	--	2.8	--	--	--	--	--	--	--	--	--
<i>Blended Liquid Real Asset Index¹</i>	-1.5	--	-2.3	--	1.9	--	5.3	--	5.8	--	--	--	--	--
Cushing MLP Alpha TR***	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>50% BBgBarc US TIPS/ 50% Blended LRA Index</i>	-1.2	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Alerian MLP TR USD</i>	6.6	--	5.9	--	4.9	--	0.5	--	4.4	--	-2.7	--	9.2	--
SSgA Custom Real Asset	-1.1	--	-1.3	--	3.2	--	--	--	--	--	--	--	--	--
<i>Blended Liquid Real Asset Index¹</i>	-1.5	--	-2.3	--	1.9	--	5.3	--	5.8	--	--	--	--	--
TIPS	-0.3	--	0.1	--	1.3	--	1.0	--	2.4	--	1.1	--	--	--
<i>BBgBarc US TIPS TR</i>	-0.8	--	-0.8	--	0.4	--	-0.2	--	2.0	--	1.4	--	3.3	--
Brown Brothers Harriman	-0.3	7	0.1	8	1.3	10	1.0	13	2.4	26	1.1	65	--	--
<i>BBgBarc US TIPS TR</i>	-0.8	63	-0.8	45	0.4	40	-0.2	41	2.0	47	1.4	37	3.3	52
<i>eV US TIPS / Inflation Fixed Inc Net Median</i>	-0.7		-0.9		0.4		-0.2		2.0		1.2		3.4	
Cash	0.1	--	0.6	--	0.9	--	0.9	--	1.1	--	0.8	--	0.9	--
<i>91 Day T-Bills</i>	0.5	--	1.3	--	1.6	--	1.2	--	0.9	--	0.5	--	0.3	--
General Account	0.8	--	2.3	--	3.1	--	2.2	--	2.2	--	1.5	--	0.9	--
Treasury & LAIF	1.3	--	4.0	--	4.2	--	2.5	--	1.9	--	1.6	--	1.3	--
<i>91 Day T-Bills</i>	0.5	--	1.3	--	1.6	--	1.2	--	0.9	--	0.5	--	0.3	--

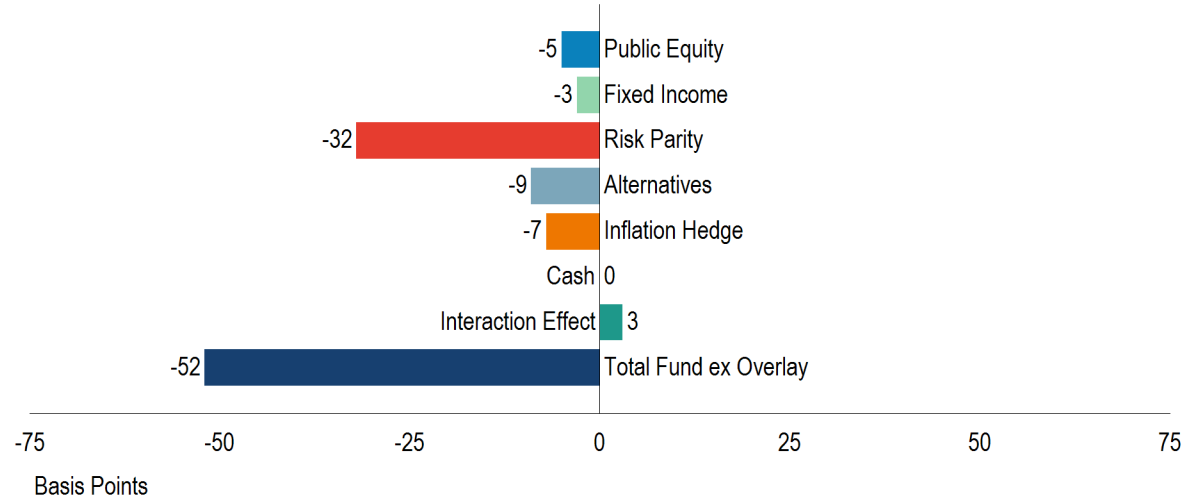
** Returns are one-quarter lag.

***Funded July 2018

1. See Appendix for Benchmark History.

Total Fund ex Overlay
Performance Attribution

Period Ending: September 30, 2018

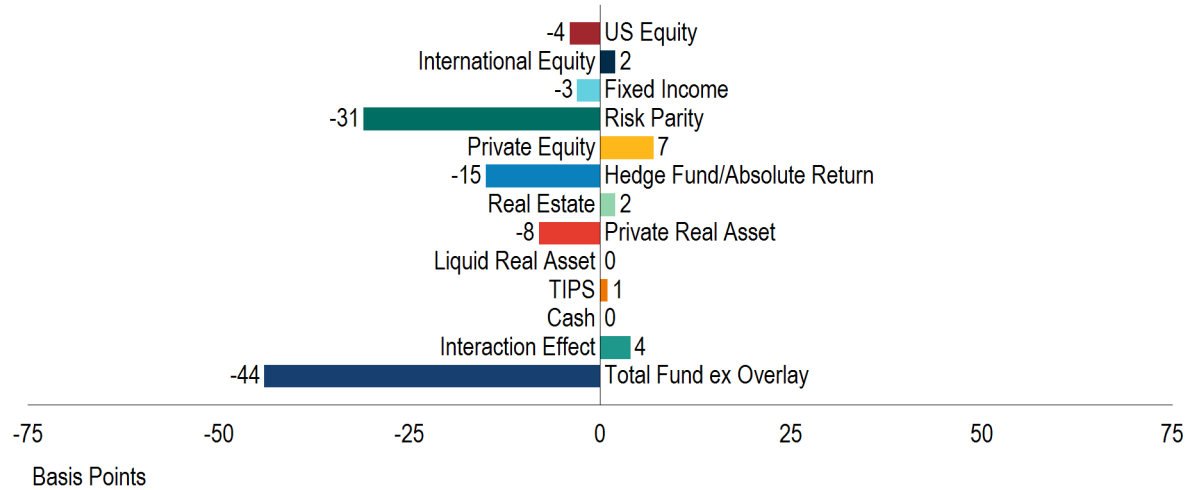


	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction*	Total Effects
Public Equity	3.97%	4.11%	-0.14%	-0.05%	0.03%	0.00%	-0.03%
Fixed Income	0.63%	0.76%	-0.13%	-0.03%	0.01%	0.00%	-0.02%
Risk Parity	-0.94%	2.95%	-3.89%	-0.32%	0.00%	0.02%	-0.30%
Alternatives	2.10%	2.82%	-0.72%	-0.09%	-0.01%	0.01%	-0.08%
Inflation Hedge	0.45%	0.82%	-0.37%	-0.07%	0.01%	0.00%	-0.06%
Cash	0.14%	0.49%	-0.35%	0.00%	-0.03%	0.00%	-0.03%
Total	2.04%	2.55%	-0.52%	-0.56%	0.01%	0.03%	-0.52%

Attribution does not include the impact of the Parametric Minneapolis strategy.
* Interaction Effects include Residual Effects.

Total Fund ex Overlay
Performance Attribution

Period Ending: September 30, 2018

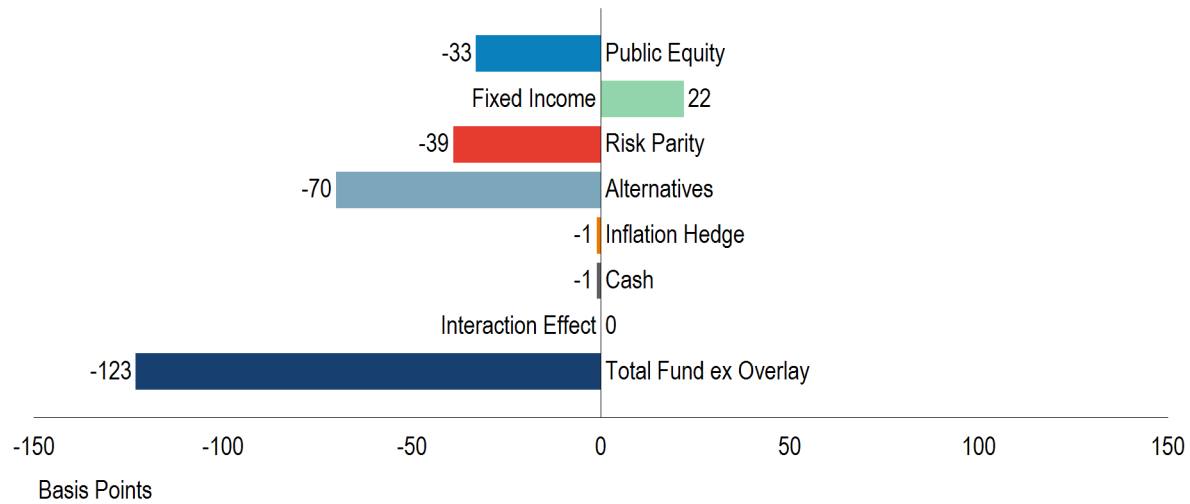


	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction* Effects	Total Effects
US Equity	6.93%	7.12%	-0.19%	-0.04%	0.07%	0.00%	0.03%
International Equity	0.47%	0.39%	0.08%	0.02%	0.00%	0.00%	0.02%
Fixed Income	0.63%	0.76%	-0.13%	-0.03%	0.01%	0.00%	-0.02%
Risk Parity	-0.94%	2.95%	-3.89%	-0.31%	0.00%	0.02%	-0.30%
Private Equity	4.93%	3.91%	1.02%	0.07%	-0.01%	-0.01%	0.05%
Hedge Fund/Absolute Return	-0.98%	1.55%	-2.54%	-0.15%	0.00%	0.01%	-0.14%
Real Estate	2.38%	2.09%	0.29%	0.02%	0.00%	0.00%	0.02%
Private Real Asset	0.60%	4.42%	-3.82%	-0.08%	-0.01%	0.02%	-0.07%
Liquid Real Asset	-1.49%	-1.53%	0.03%	0.00%	-0.04%	0.00%	-0.03%
TIPS	-0.33%	-0.82%	0.49%	0.01%	0.01%	0.00%	0.02%
Cash	0.14%	0.49%	-0.35%	0.00%	-0.02%	0.00%	-0.03%
Total	2.04%	2.48%	-0.44%	-0.49%	0.01%	0.04%	-0.44%

Attribution does not include the impact of the Parametric Minneapolis strategy.
* Interaction Effects include Residual Effects.

Total Fund ex Overlay
Performance Attribution (1 Year)

Period Ending: September 30, 2018

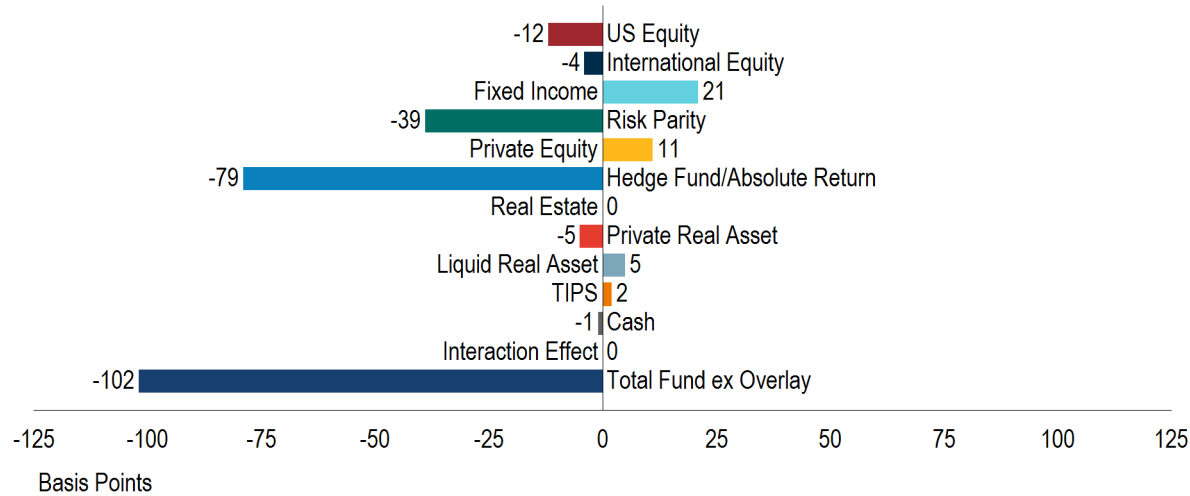


	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction *	Total Effects
Public Equity	9.70%	10.48%	-0.78%	-0.33%	0.00%	0.00%	-0.33%
Fixed Income	0.50%	-0.50%	1.00%	0.22%	0.00%	0.00%	0.22%
Risk Parity	1.89%	7.05%	-5.16%	-0.39%	0.00%	0.00%	-0.39%
Alternatives	3.06%	9.11%	-6.05%	-0.70%	0.00%	0.00%	-0.70%
Inflation Hedge	4.69%	4.72%	-0.03%	-0.01%	0.00%	0.00%	-0.01%
Cash	0.90%	1.64%	-0.74%	-0.01%	0.00%	0.00%	-0.01%
Total	5.48%	6.71%	-1.23%	-1.23%	0.00%	0.00%	-1.23%

Attribution does not include the impact of the Parametric Minneapolis strategy.
* Interaction Effects include Residual Effects.

Total Fund ex Overlay
Performance Attribution (1 Year)

Period Ending: September 30, 2018



	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction *	Total Effects
US Equity	17.05%	17.58%	-0.53%	-0.12%	0.00%	0.00%	-0.12%
International Equity	1.58%	1.79%	-0.20%	-0.04%	0.00%	0.00%	-0.04%
Fixed Income	0.50%	-0.50%	1.00%	0.21%	0.00%	0.00%	0.21%
Risk Parity	1.89%	7.05%	-5.16%	-0.39%	0.00%	0.00%	-0.39%
Private Equity	13.94%	11.74%	2.19%	0.11%	0.00%	0.00%	0.11%
Hedge Fund/Absolute Return	-7.15%	5.83%	-12.97%	-0.79%	0.00%	0.00%	-0.79%
Real Estate	8.67%	8.68%	-0.01%	0.00%	0.00%	0.00%	0.00%
Private Real Asset	-2.18%	1.23%	-3.42%	-0.05%	0.00%	0.00%	-0.05%
Liquid Real Asset	2.77%	1.95%	0.82%	0.05%	0.00%	0.00%	0.05%
TIPS	1.34%	0.41%	0.93%	0.02%	0.00%	0.00%	0.02%
Cash	0.90%	1.64%	-0.74%	-0.01%	0.00%	0.00%	-0.01%
Total	5.48%	6.50%	-1.02%	-1.02%	0.00%	0.00%	-1.02%

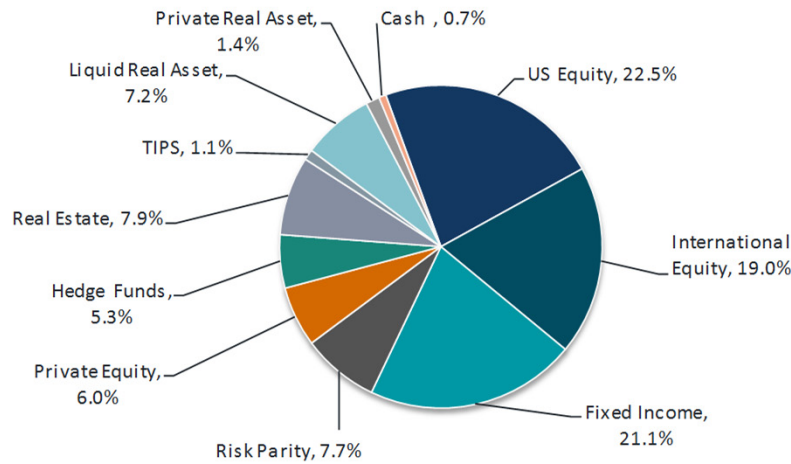
Attribution does not include the impact of the Parametric Minneapolis strategy.
* Interaction Effects include Residual Effects.

Total Fund

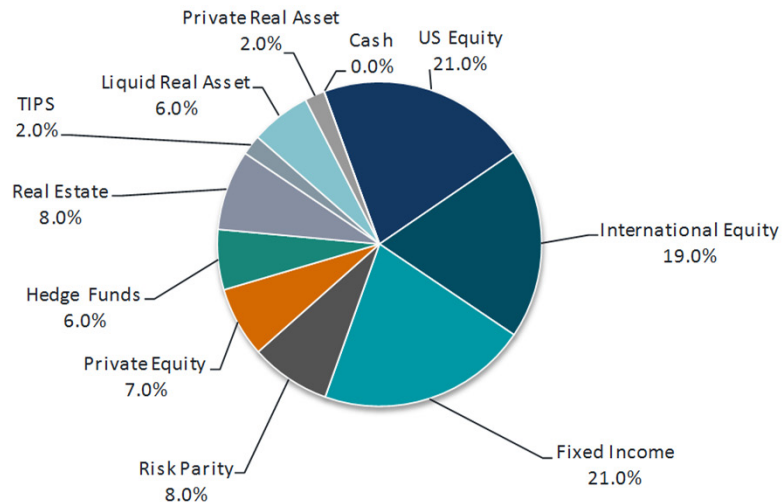
Asset Allocation Analysis

Period Ending: September 30, 2018

Current w/Overlay



Target

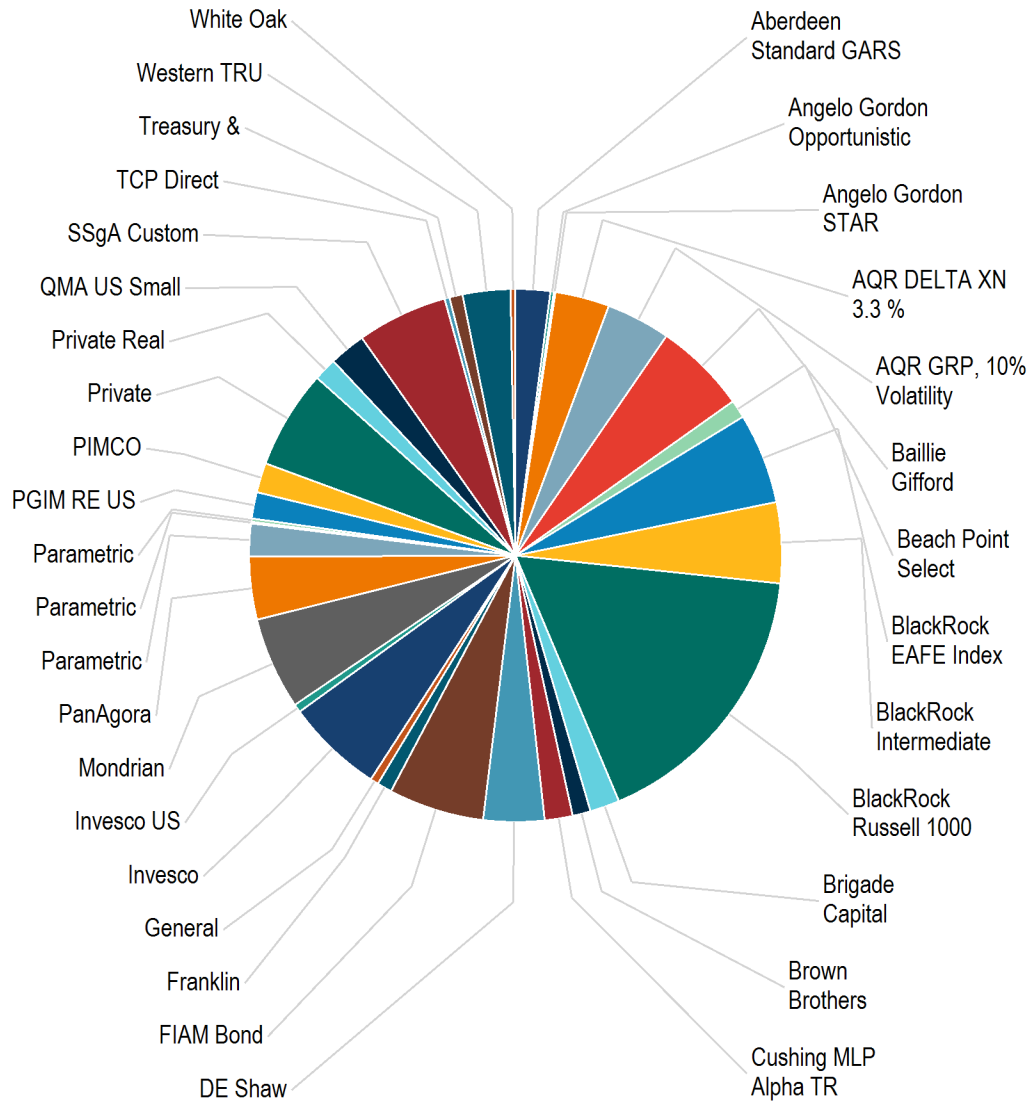


ASSET ALLOCATION	MARKET VALUE		
	W/OVERLAY	W/OVERLAY	W/O OVERLAY
US Equity	1,014,443,683	22.5%	23.0%
International Equity	854,262,582	19.0%	18.7%
Fixed Income	949,352,274	21.1%	20.1%
Risk Parity	347,795,044	7.7%	7.7%
Private Equity	272,007,450	6.0%	6.0%
Hedge Funds	240,100,668	5.3%	5.3%
Real Estate	356,338,019	7.9%	7.9%
TIPS	47,585,201	1.1%	1.1%
Liquid Real Asset	323,169,064	7.2%	7.2%
Private Real Asset	62,171,795	1.4%	1.4%
Cash	31,907,671	0.7%	1.5%
TOTAL	4,499,133,451	100.0%	100.0%

ASSET ALLOCATION	W/OVERLAY	TARGET	DIFF
US Equity	22.5%	21.0%	1.5%
International Equity	19.0%	19.0%	0.0%
Fixed Income	21.1%	21.0%	0.1%
Risk Parity	7.7%	8.0%	-0.3%
Private Equity	6.0%	7.0%	-1.0%
Hedge Funds	5.3%	6.0%	-0.7%
Real Estate	7.9%	8.0%	-0.1%
TIPS	1.1%	2.0%	-0.9%
Liquid Real Asset	7.2%	6.0%	1.2%
Private Real Asset	1.4%	2.0%	-0.6%
Cash	0.7%	0.0%	0.7%
TOTAL	100.0%	100.0%	0.0%

Total Fund Manager Allocation Analysis

Period Ending: September 30, 2018



	Actual	Actual
Aberdeen Standard GARS	\$93,660,279	2%
Angelo Gordon Opportunistic	\$7,215,000	0%
Angelo Gordon STAR	\$6,594,100	0%
AQR DELTA XN	\$146,440,389	3%
AQR GRP, 10% Volatility	\$176,834,984	4%
Baillie Gifford	\$251,983,073	6%
Beach Point Select	\$50,850,522	1%
BlackRock EAFE Index	\$245,311,092	5%
BlackRock Intermediate Govt	\$219,692,433	5%
BlackRock Russell 1000	\$767,050,962	17%
Brigade Capital	\$79,075,925	2%
Brown Brothers Harriman	\$47,585,201	1%
Cushing MLP Alpha TR	\$77,645,181	2%
DE Shaw	\$168,048,065	4%
FIAM Bond	\$260,531,458	6%
Franklin Templeton	\$40,180,366	1%
General Account	\$20,540,684	0%
Invesco	\$264,554,452	6%
Invesco US Val IV	\$21,644,473	0%
Mondrian	\$249,756,983	6%
PanAgora	\$170,960,060	4%
Parametric Core	\$88,032,448	2%
Parametric Currency Overlay	\$6,510,585	0%
Parametric Minneapolis Overlay	\$11,066,366	0%
PGIM RE US Debt Fund	\$70,139,094	2%
PIMCO Diversified	\$81,104,876	2%
Private Equity	\$272,007,450	6%
Private Real Asset	\$62,171,795	1%
QMA US Small Cap	\$100,394,672	2%
SSgA Custom Real Asset	\$245,523,883	5%
TCP Direct Lending VIII	\$14,893,759	0%
Transition 3	\$99	0%
Treasury & LAIF	\$36,699,221	1%
Western TRU	\$128,715,909	3%
White Oak Yield	\$15,717,612	0%
Total	\$4,499,133,451	100%

Statistics Summary

3 Years

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Information Ratio	Information Ratio Rank	Tracking Error	Tracking Error Rank
Total Fund	9.2%	58	5.3%	61	1.6	74	-0.8	87	1.1%	54
Policy Index	10.0%	24	5.7%	83	1.6	64	--	--	0.0%	1
InvestorForce Public DB > \$1B Net Median	9.3%	--	5.0%	--	1.7	--	-0.1	--	1.0%	--

Statistics Summary

5 Years

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Information Ratio	Information Ratio Rank	Tracking Error	Tracking Error Rank
Total Fund	7.4%	41	5.7%	68	1.2	51	-0.2	65	1.0%	40
Policy Index	7.6%	37	6.1%	82	1.2	58	--	--	0.0%	1
InvestorForce Public DB > \$1B Net Median	7.1%	--	5.4%	--	1.2	--	0.0	--	1.1%	--

Statistics Summary

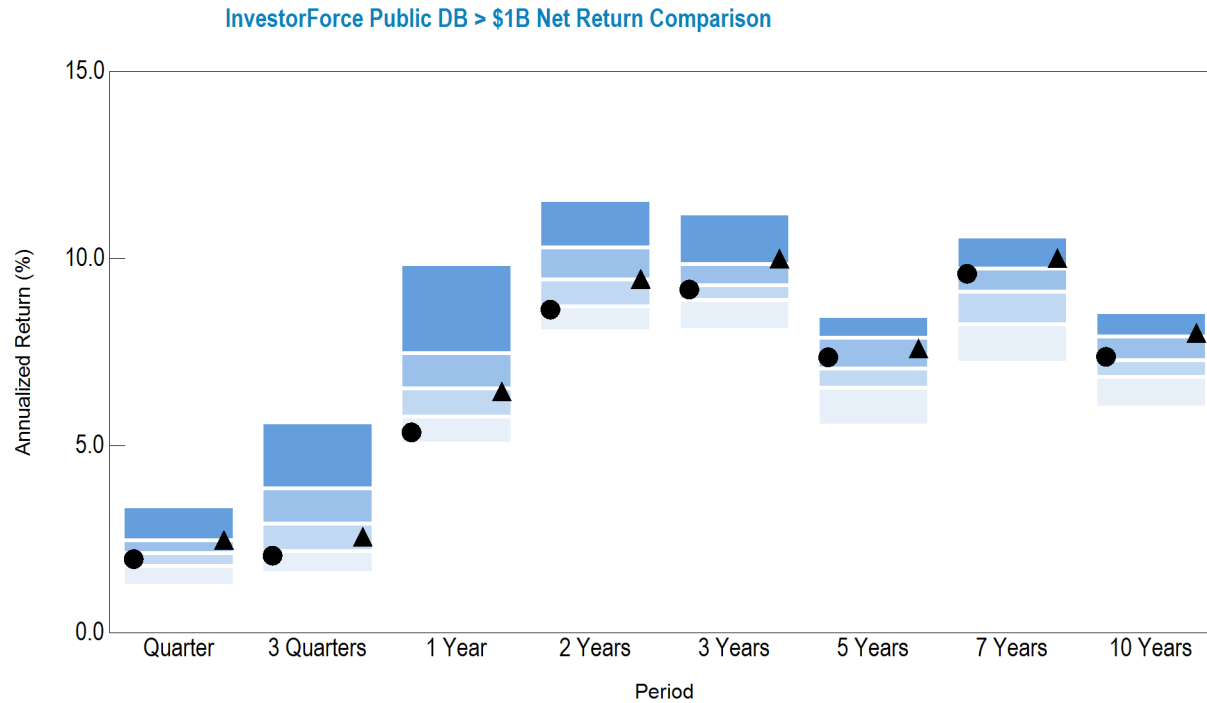
3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Cash	1.1%	0.4%	0.5	0.5	0.4%
91 Day T-Bills	0.9%	0.2%	0.0	--	0.0%
General Account	2.2%	0.7%	2.0	2.0	0.6%
91 Day T-Bills	0.9%	0.2%	0.0	--	0.0%
Treasury & LAIF	1.9%	1.0%	1.0	1.1	1.0%
91 Day T-Bills	0.9%	0.2%	0.0	--	0.0%

Statistics Summary

5 Years

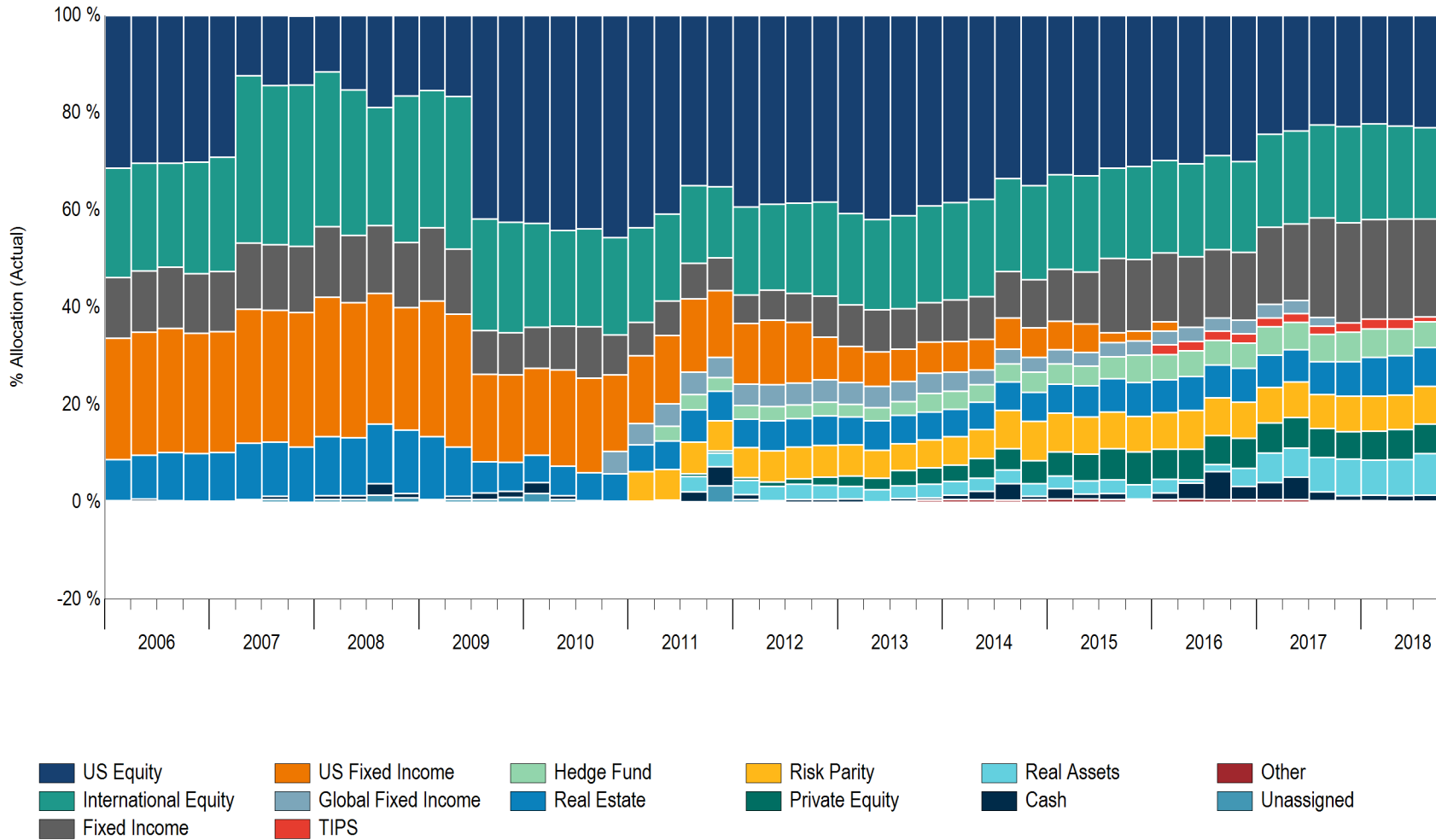
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Cash	0.8%	0.3%	1.0	0.9	0.3%
91 Day T-Bills	0.5%	0.2%	0.0	--	0.0%
General Account	1.5%	0.6%	1.8	1.9	0.5%
91 Day T-Bills	0.5%	0.2%	0.0	--	0.0%
Treasury & LAIF	1.6%	0.9%	1.2	1.2	0.8%
91 Day T-Bills	0.5%	0.2%	0.0	--	0.0%

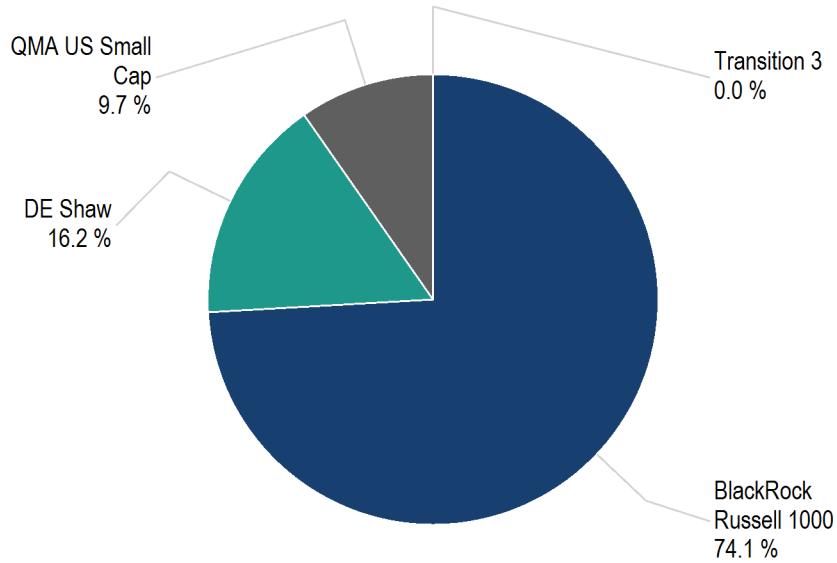


	Quarter	3 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
Return (Rank)								
5th Percentile	3.4	5.6	9.8	11.6	11.2	8.5	10.6	8.6
25th Percentile	2.5	3.9	7.5	10.3	9.9	7.9	9.7	7.9
Median	2.1	2.9	6.5	9.5	9.3	7.1	9.1	7.3
75th Percentile	1.8	2.2	5.8	8.7	8.9	6.6	8.2	6.9
95th Percentile	1.3	1.6	5.1	8.1	8.1	5.5	7.2	6.0
# of Portfolios	63	62	62	62	62	60	58	53
● Total Fund	2.0 (63)	2.1 (84)	5.4 (89)	8.6 (81)	9.2 (58)	7.4 (41)	9.6 (30)	7.4 (47)
▲ Policy Index	2.5 (25)	2.6 (65)	6.5 (53)	9.5 (50)	10.0 (24)	7.6 (37)	10.0 (19)	8.0 (21)

Total Fund
Asset Allocation History

Period Ending: September 30, 2018





	Actual \$	Actual %	Manager Contribution to Excess Return %
BlackRock Russell 1000	\$767,050,962	74.1%	0.0%
DE Shaw	\$168,048,065	16.2%	0.0%
QMA US Small Cap	\$100,394,672	9.7%	0.0%
Transition Account	\$99	0.0%	0.0%
Actual vs. Policy Weight Difference			-0.1%
Total	\$1,035,493,798	100.0%	-0.2%

Statistics Summary

3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
US Equity	16.5%	9.2%	1.7	-0.7	0.7%
Blended US Equity Index	17.0%	9.4%	1.7	--	0.0%
Russell 3000	17.1%	9.3%	1.7	0.2	0.4%

Statistics Summary

3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Large Cap Equity	17.4%	9.2%	1.8	0.3	1.1%
Russell 1000	17.1%	9.2%	1.8	--	0.0%
DE Shaw	18.7%	9.4%	1.9	0.7	2.2%
Russell 1000	17.1%	9.2%	1.8	--	0.0%
Small Cap Equity	14.6%	12.8%	1.1	-1.0	2.6%
Russell 2000	17.1%	13.1%	1.2	--	0.0%

Statistics Summary

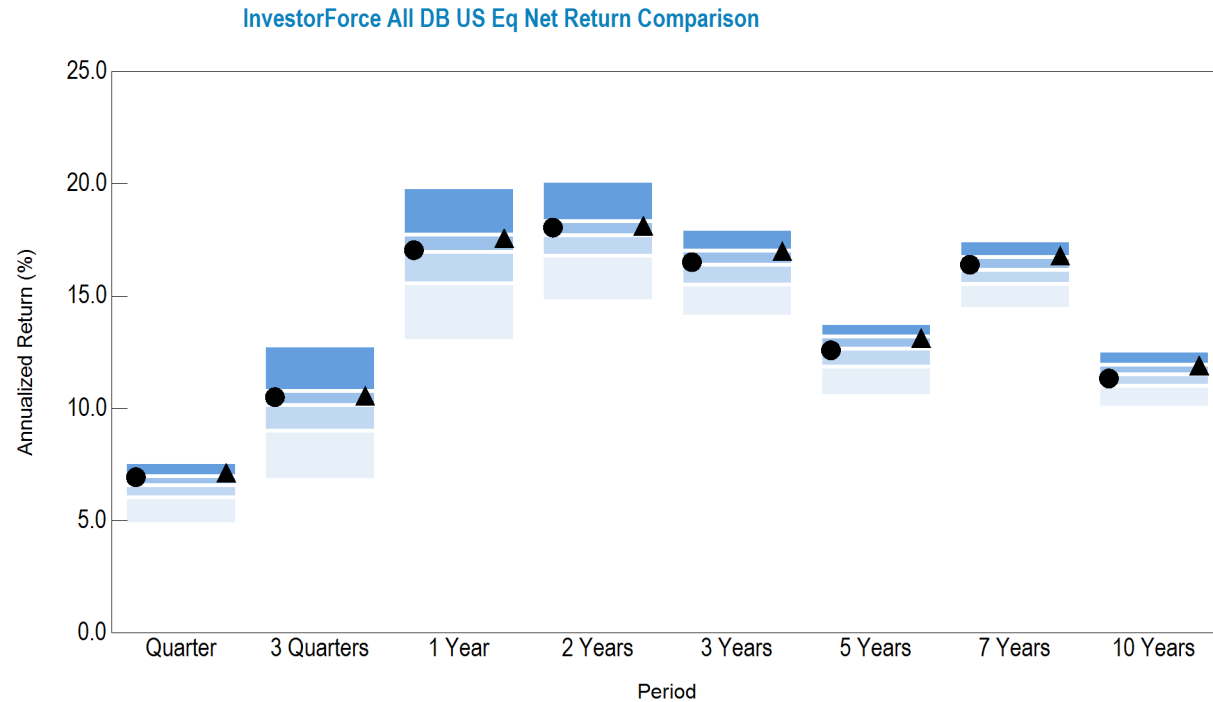
5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
US Equity	12.6%	9.6%	1.3	-0.8	0.7%
Blended US Equity Index	13.1%	9.8%	1.3	--	0.0%
Russell 3000	13.5%	9.7%	1.3	0.4	0.7%

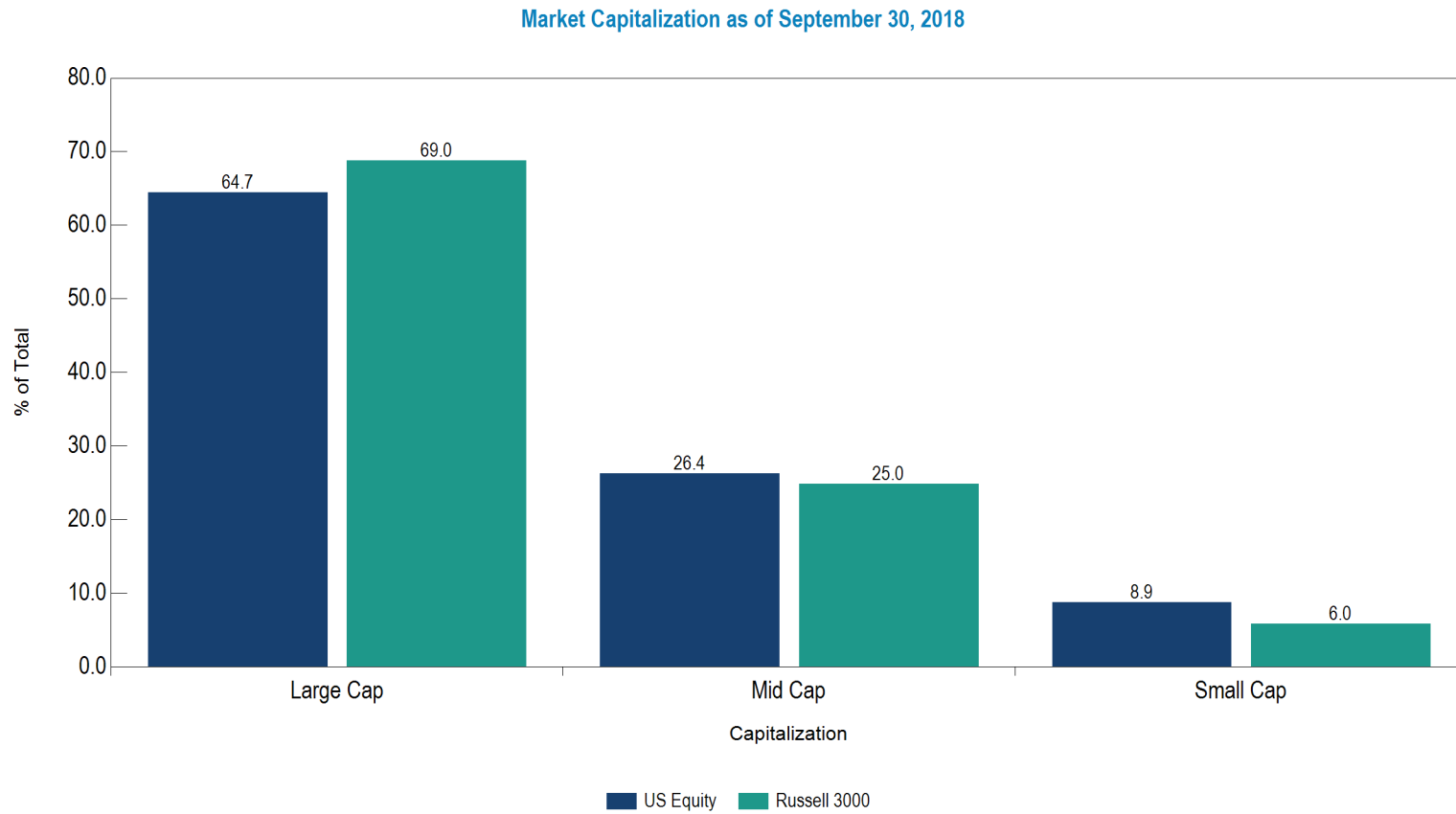
Statistics Summary

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Large Cap Equity	13.8%	9.5%	1.4	0.1	1.0%
Russell 1000	13.7%	9.6%	1.4	--	0.0%
DE Shaw	14.9%	9.7%	1.5	0.6	2.2%
Russell 1000	13.7%	9.6%	1.4	--	0.0%
Small Cap Equity	8.7%	12.9%	0.6	-1.0	2.5%
Russell 2000	11.1%	13.5%	0.8	--	0.0%



	Return (Rank)							
	Quarter	3 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	7.6	12.8	19.9	20.1	18.0	13.8	17.5	12.6
25th Percentile	7.0	10.8	17.7	18.3	17.0	13.2	16.7	12.0
Median	6.6	10.2	17.0	17.7	16.4	12.7	16.2	11.5
75th Percentile	6.0	9.0	15.6	16.8	15.5	11.9	15.6	11.0
95th Percentile	4.9	6.8	13.0	14.8	14.1	10.6	14.5	10.1
# of Portfolios	619	616	612	597	590	538	452	346
● US Equity	6.9 (28)	10.5 (43)	17.0 (48)	18.1 (42)	16.5 (47)	12.6 (54)	16.4 (42)	11.3 (60)
▲ Blended US Equity Index	7.1 (16)	10.6 (36)	17.6 (31)	18.1 (34)	17.0 (27)	13.1 (31)	16.8 (23)	11.9 (30)



See appendix for the market capitalization breakpoints.

Characteristics

	Portfolio	Russell 3000
Number of Holdings	2,667	3,024
Weighted Avg. Market Cap. (\$B)	178.0	191.0
Median Market Cap. (\$B)	3.0	1.8
Price To Earnings	30.9	24.1
Price To Book	6.4	4.9
Price To Sales	4.1	4.1
Return on Equity (%)	23.0	20.2
Yield (%)	1.7	1.8
Beta (holdings; domestic)	1.1	1.1

Top Holdings

APPLE	3.7%
AMAZON.COM	2.8%
MICROSOFT	2.4%
ALPHABET A	1.2%
BERKSHIRE HATHAWAY 'B'	1.1%
FACEBOOK CLASS A	1.1%
JP MORGAN CHASE & CO.	1.0%
JOHNSON & JOHNSON	1.0%
ALPHABET 'C'	1.0%
EXXON MOBIL	1.0%

Best Performers

	Return %
AFFIMED (AFMD)	163.6%
CAREDX (CDNA)	135.7%
RADISYS (RSYS)	133.2%
AEGEAN MARINE PETROLEUM NETWORK (ANWWQ)	115.8%
ADVANCED MICRO DEVICES (AMD)	106.1%
RIGNET (RNET)	97.6%
AVID BIOSERVICES (CDMO)	96.0%
TANDEM DIABETES CARE (TNDM)	94.6%
INSEEGO (INSG)	91.5%
LSB INDUSTRIES (LXU)	84.5%

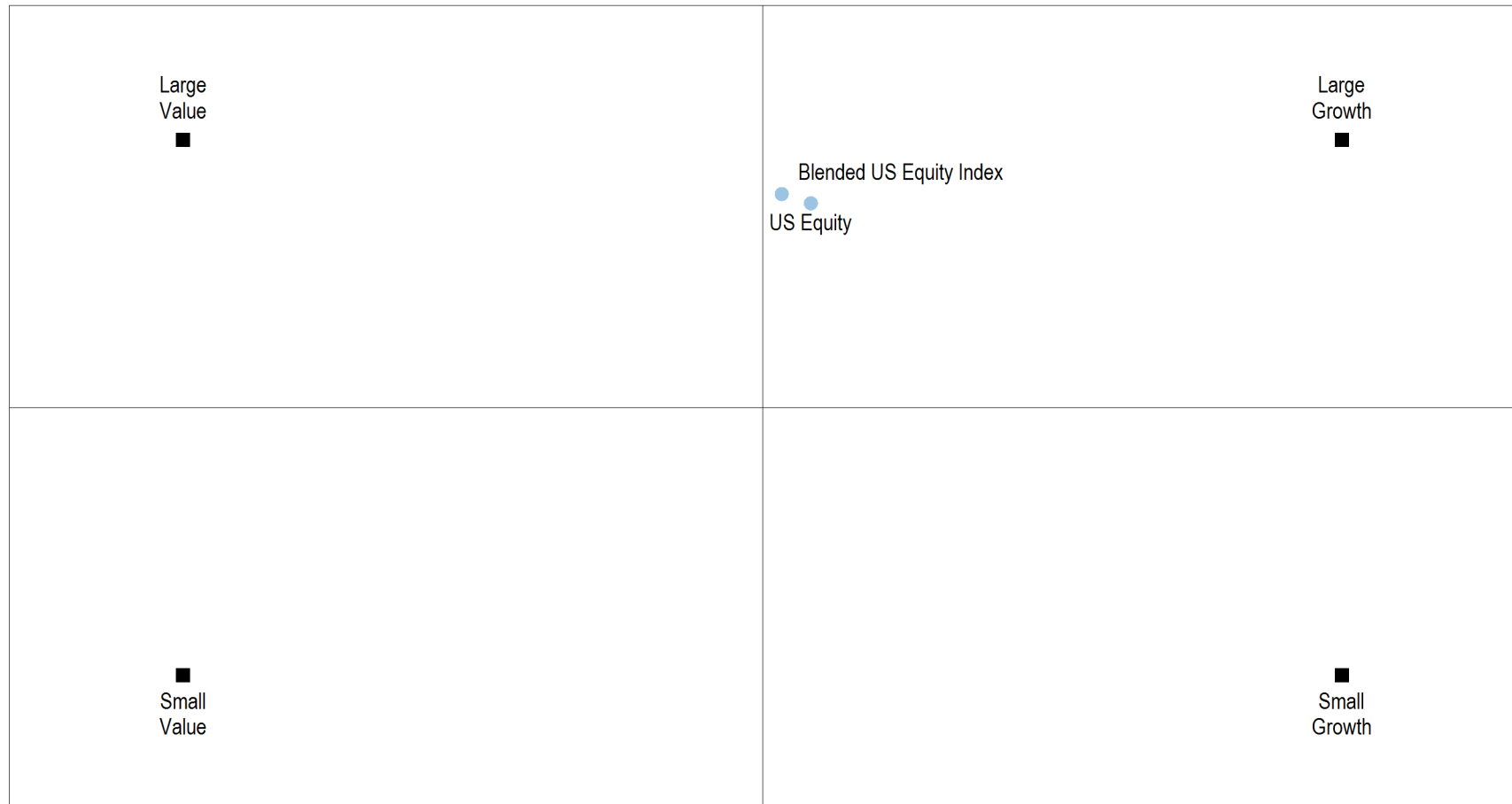
Worst Performers

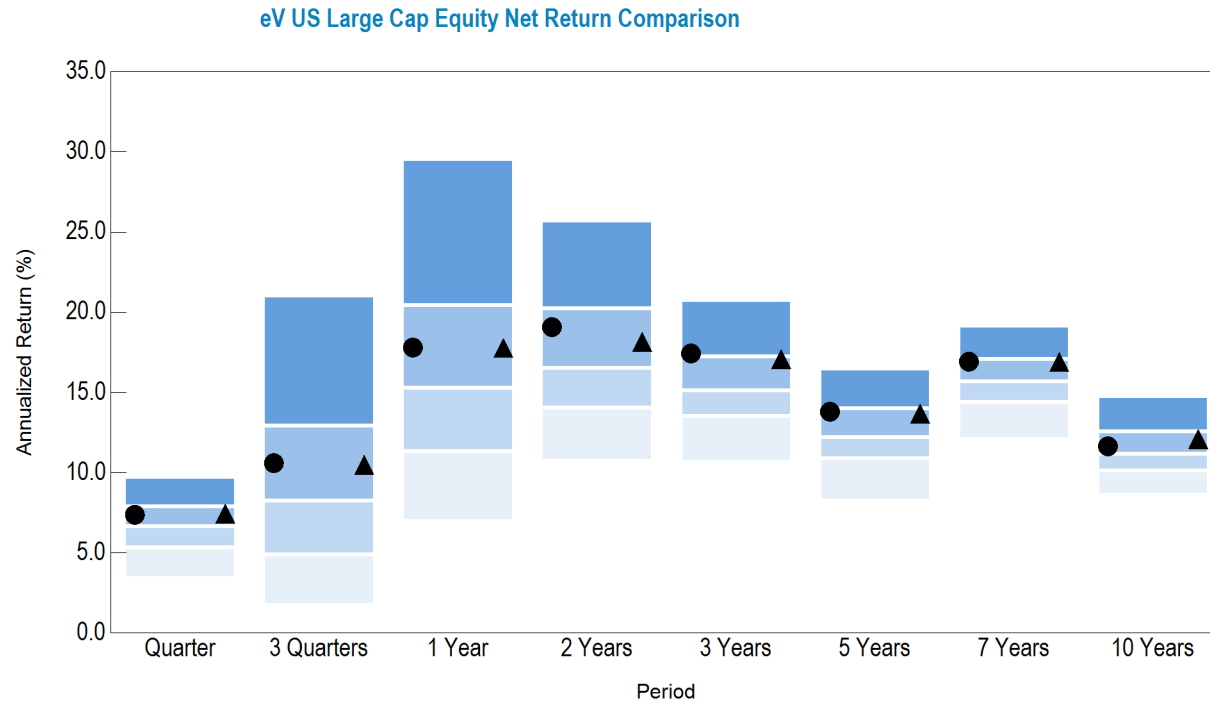
	Return %
GTX (GTXI)	-89.7%
GASTAR EXPLORATION (GSTCQ)	-86.3%
EGALET (EGLTQ)	-70.6%
REGULUS THERAPEUTICS (RGLS)	-70.0%
ENDOLOGIX (ELGX)	-66.3%
LANNETT (LCI)	-65.1%
MAIDEN HOLDINGS (MHLD)	-62.6%
NEW GOLD (C:NGD)	-62.1%
PERNIX THERP.HDG. (PTX)	-60.4%
ROADRUNNER TRSP.SYSTEMS (RRTS)	-60.0%

US Equity Performance Attribution vs. Russell 3000

	Attribution Effects				Returns		Sector Weights				
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.0%	0.0%	0.0%	0.0%	1.1%	0.6%	6.1%	5.9%			
Materials	0.0%	0.0%	0.0%	0.0%	0.4%	0.1%	3.2%	3.1%			
Industrials	0.0%	0.0%	0.0%	0.0%	9.0%	9.1%	10.7%	10.3%			
Consumer Discretionary	-0.1%	-0.1%	0.0%	0.0%	5.6%	6.6%	13.3%	13.1%			
Consumer Staples	0.0%	0.0%	0.0%	0.0%	5.3%	5.3%	5.9%	6.2%			
Health Care	0.0%	0.0%	0.0%	0.0%	13.8%	13.7%	13.7%	13.8%			
Financials	0.0%	-0.1%	0.0%	0.0%	3.3%	3.7%	13.7%	14.2%			
Information Technology	0.1%	0.0%	0.0%	0.0%	9.5%	9.3%	25.5%	24.8%			
Communication Services	0.0%	0.0%	0.0%	0.0%	8.6%	7.9%	1.5%	1.8%			
Utilities	0.0%	0.0%	0.0%	0.0%	3.2%	2.5%	2.5%	2.9%			
Real Estate	0.0%	0.0%	0.0%	0.0%	0.2%	0.4%	3.8%	3.8%			
Cash	0.0%	0.0%	0.0%	0.0%	0.5%	--	0.0%	0.0%			
Unclassified	0.0%	0.0%	0.0%	0.0%	7.7%	--	0.1%	0.0%			
Portfolio	-0.1%	=	-0.1%	+	0.0%	+	0.0%	7.1%	7.1%	100.0%	100.0%

U.S. Effective Style Map





	Quarter	3 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
Return (Rank)								
5th Percentile	9.7	21.0	29.5	25.7	20.8	16.5	19.1	14.7
25th Percentile	7.9	13.0	20.5	20.3	17.3	14.0	17.1	12.6
Median	6.7	8.3	15.3	16.5	15.1	12.2	15.7	11.2
75th Percentile	5.3	4.9	11.3	14.1	13.5	10.9	14.4	10.1
95th Percentile	3.4	1.7	7.0	10.7	10.7	8.2	12.1	8.6
# of Portfolios	584	583	582	575	562	537	476	428
● Large Cap Equity	7.4 (35)	10.6 (35)	17.8 (37)	19.1 (31)	17.4 (24)	13.8 (29)	16.9 (29)	11.6 (43)
▲ Russell 1000	7.4 (34)	10.5 (36)	17.8 (37)	18.2 (38)	17.1 (27)	13.7 (31)	16.9 (30)	12.1 (34)

Characteristics

	Portfolio	Russell 1000
Number of Holdings	2,587	984
Weighted Avg. Market Cap. (\$B)	196.6	206.5
Median Market Cap. (\$B)	3.6	10.6
Price To Earnings	31.6	24.6
Price To Book	6.7	5.2
Price To Sales	4.2	4.3
Return on Equity (%)	23.8	21.6
Yield (%)	1.8	1.8
Beta (holdings; domestic)	1.0	1.0

Top Holdings

APPLE	4.1%
AMAZON.COM	3.1%
MICROSOFT	2.7%
ALPHABET A	1.3%
BERKSHIRE HATHAWAY 'B'	1.2%
FACEBOOK CLASS A	1.2%
JP MORGAN CHASE & CO.	1.1%
JOHNSON & JOHNSON	1.1%
ALPHABET 'C'	1.1%
EXXON MOBIL	1.1%

Best Performers

	Return %
AFFIMED (AFMD)	163.6%
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RIGNET (RNET)	97.6%
AVID BIOSERVICES (CDMO)	96.0%
TANDEM DIABETES CARE (TNDM)	94.6%
INSEEGO (INSG)	91.5%
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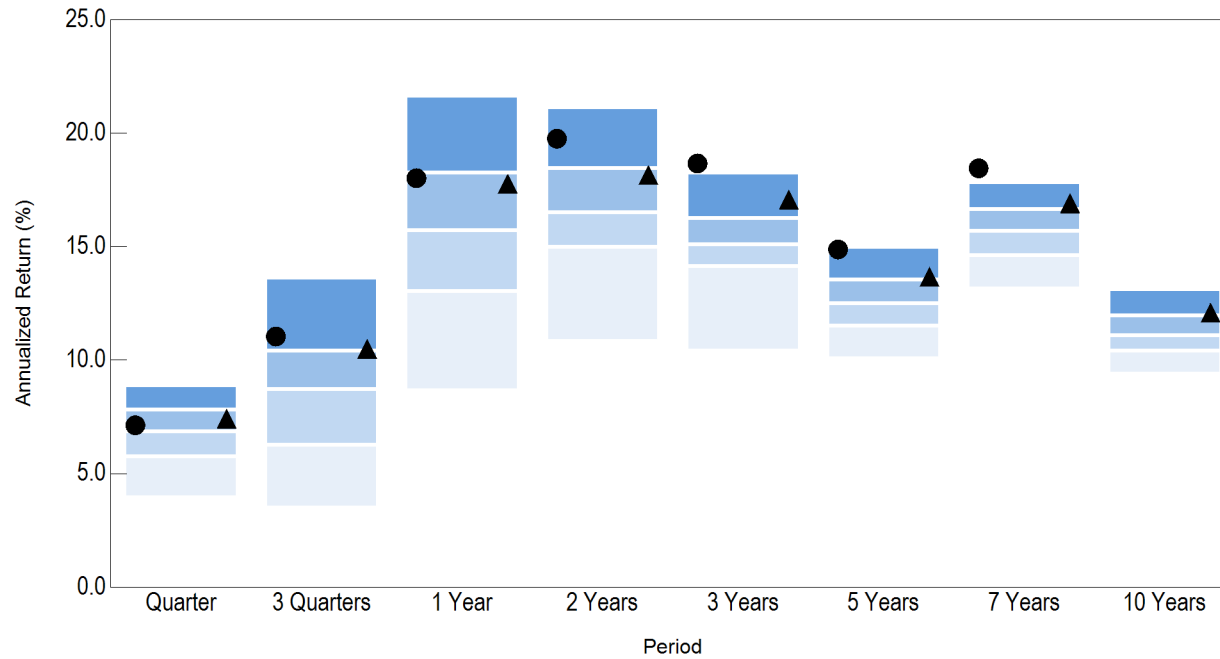
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	Return %
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GASTAR EXPLORATION (GSTCQ)	-86.3%
EGALET (EGLTQ)	-70.6%
REGULUS THERAPEUTICS (RGLS)	-70.0%
ENDOLOGIX (ELGX)	-66.3%
LANNETT (LCI)	-65.1%
MAIDEN HOLDINGS (MHLD)	-62.6%
NEW GOLD (C:NGD)	-62.1%
PERNIX THERP.HDG. (PTX)	-60.4%
ROADRUNNER TRSP.SYSTEMS (RRTS)	-60.0%

Large Cap Equity Performance Attribution vs. Russell 1000

	Attribution Effects				Returns		Sector Weights				
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.0%	0.0%	0.0%	0.0%	1.3%	0.8%	6.2%	6.0%			
Materials	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	3.0%	3.0%			
Industrials	0.0%	0.0%	0.0%	0.0%	9.4%	9.7%	10.1%	9.9%			
Consumer Discretionary	0.0%	0.0%	0.0%	0.0%	6.5%	6.8%	13.3%	13.1%			
Consumer Staples	0.0%	0.0%	0.0%	0.0%	5.2%	5.6%	6.3%	6.5%			
Health Care	0.0%	0.0%	0.0%	0.0%	14.2%	14.3%	13.4%	13.6%			
Financials	-0.1%	-0.1%	0.0%	0.0%	3.5%	4.0%	13.3%	13.9%			
Information Technology	0.2%	0.1%	0.0%	0.0%	10.0%	9.5%	26.6%	25.6%			
Communication Services	0.0%	0.0%	0.0%	0.0%	8.4%	7.5%	1.6%	1.9%			
Utilities	0.0%	0.0%	0.0%	0.0%	3.1%	2.4%	2.5%	2.9%			
Real Estate	0.0%	0.0%	0.0%	0.0%	0.3%	0.6%	3.4%	3.5%			
Cash	0.0%	0.0%	0.0%	0.0%	0.5%	--	0.0%	0.0%			
Unclassified	0.0%	0.0%	0.0%	0.0%	7.7%	--	0.1%	0.0%			
Portfolio	0.1%	=	0.0%	+	0.0%	+	0.0%	7.5%	7.4%	100.0%	100.0%

eV US Large Cap Core Equity Net Return Comparison



	Quarter	3 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
Return (Rank)								
5th Percentile	8.9	13.6	21.6	21.1	18.2	15.0	17.8	13.1
25th Percentile	7.8	10.4	18.3	18.5	16.3	13.6	16.7	12.0
Median	6.9	8.7	15.7	16.5	15.1	12.5	15.7	11.1
75th Percentile	5.8	6.3	13.1	15.0	14.2	11.5	14.6	10.4
95th Percentile	4.0	3.5	8.7	10.9	10.4	10.1	13.2	9.4
# of Portfolios	174	174	174	171	165	157	136	117
● DE Shaw	7.1 (41)	11.0 (21)	18.0 (27)	19.8 (14)	18.7 (5)	14.9 (6)	18.4 (4)	-- (--)
▲ Russell 1000	7.4 (34)	10.5 (25)	17.8 (31)	18.2 (32)	17.1 (18)	13.7 (24)	16.9 (20)	12.1 (23)

Characteristics

	Portfolio	Russell 1000
Number of Holdings	983	984
Weighted Avg. Market Cap. (\$B)	206.4	206.5
Median Market Cap. (\$B)	10.6	10.6
Price To Earnings	31.4	24.6
Price To Book	6.7	5.2
Price To Sales	4.3	4.3
Return on Equity (%)	23.3	21.6
Yield (%)	1.8	1.8
Beta (holdings; domestic)	1.0	1.0

Top Holdings

APPLE	4.0%
MICROSOFT	3.2%
AMAZON.COM	3.0%
BERKSHIRE HATHAWAY 'B'	1.5%
FACEBOOK CLASS A	1.4%
JP MORGAN CHASE & CO.	1.4%
JOHNSON & JOHNSON	1.4%
ALPHABET 'C'	1.3%
ALPHABET A	1.3%
EXXON MOBIL	1.3%

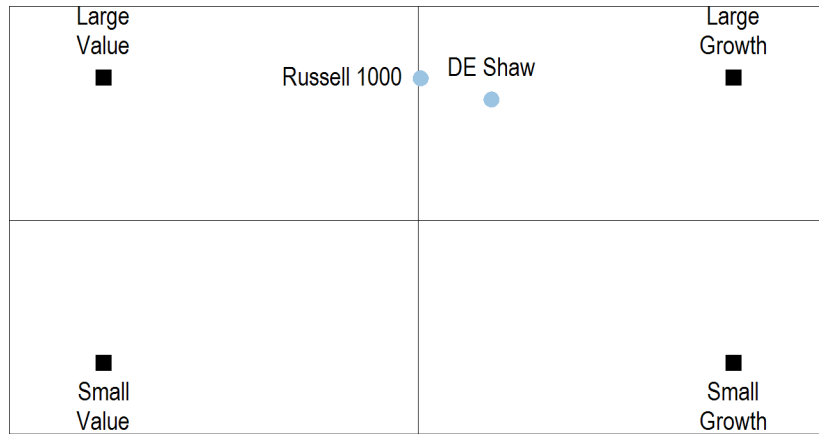
Best Performers

	Return %
ADVANCED MICRO DEVICES (AMD)	106.1%
SQUARE CL.A (SQ)	60.6%
PAYCOM SOFTWARE (PAYC)	57.2%
TWILIO 'A' (TWLO)	54.0%
ATLASSIAN 'A' (TEAM)	53.8%
MOLINA HEALTHCARE (MOH)	51.8%
DEXCOM (DXCM)	50.6%
MATCH GROUP (MTCH)	49.5%
FORTINET (FTNT)	47.8%
IAC/INTERACTIVECORP (IAC)	42.1%

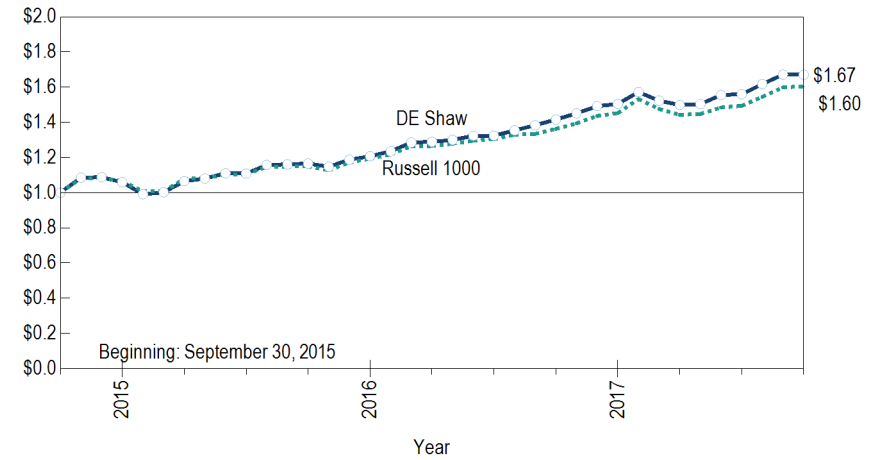
Worst Performers

	Return %
FLOOR & DECOR HOLDINGS 'A' (FND)	-38.8%
TWITTER (TWTR)	-34.8%
IPG PHOTONICS (IPGP)	-29.3%
VISTEON (VC)	-28.1%
ZILLOW GROUP CLASS A (ZG)	-26.0%
ZILLOW GROUP CLASS C (Z)	-25.1%
WESTERN DIGITAL (WDC)	-23.7%
WYNN RESORTS (WYNN)	-23.7%
EXTRACTION OIL & GAS (XOG)	-23.1%
TESLA (TSLA)	-22.8%

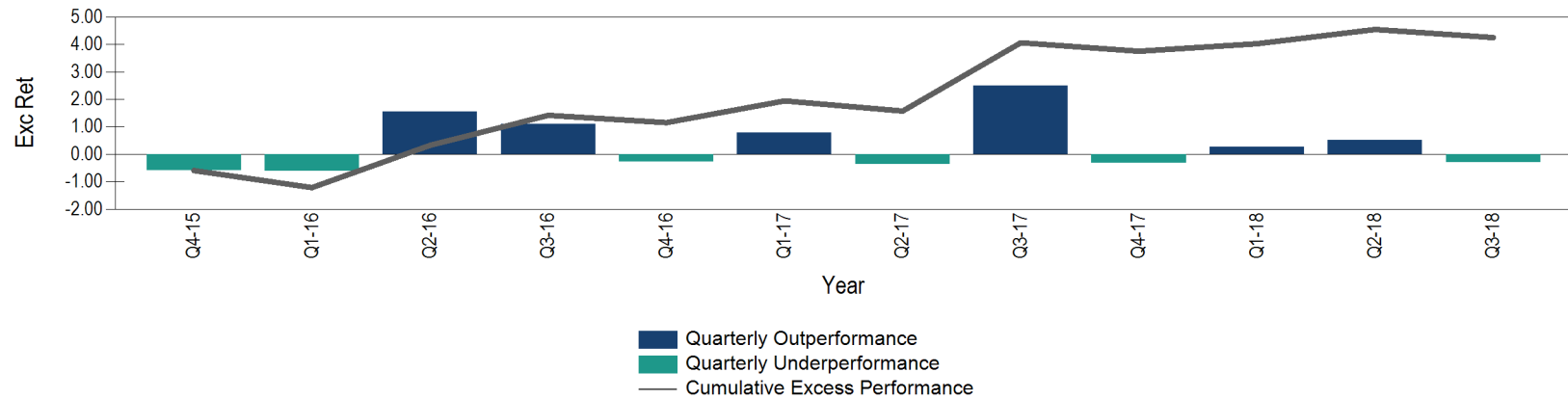
U.S. Effective Style Map



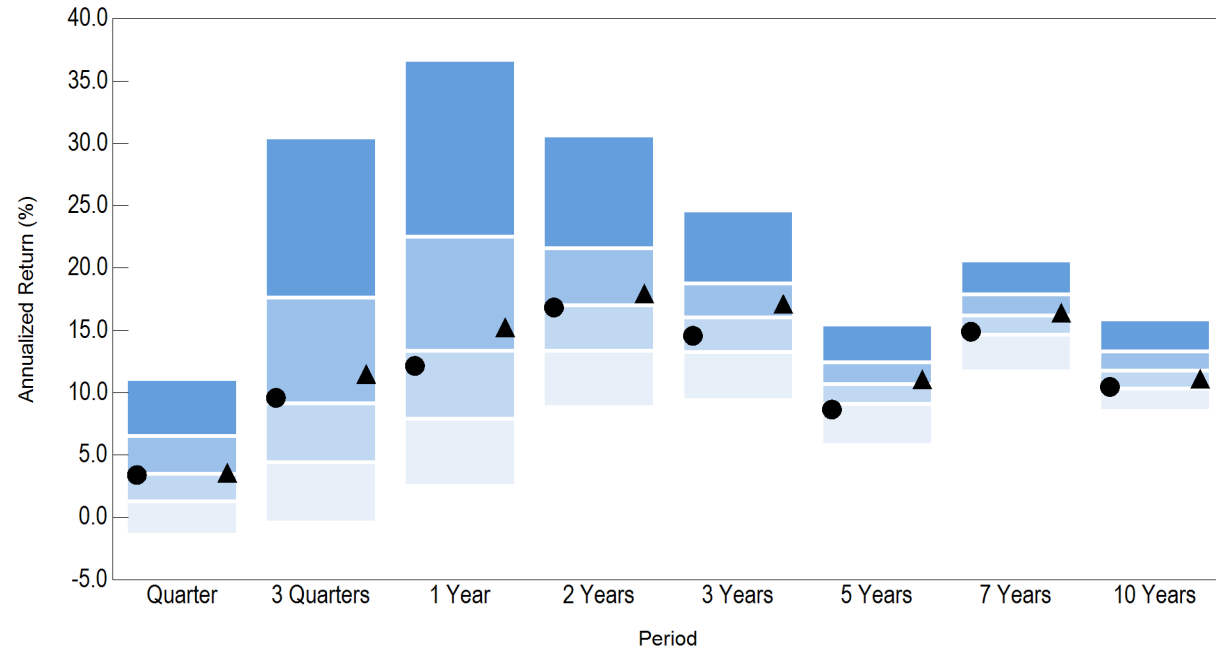
Growth of a Dollar



Quarterly and Cumulative Excess Performance



eV US Small Cap Equity Net Return Comparison



	Quarter	3 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
Return (Rank)								
5th Percentile	11.1	30.5	36.7	30.6	24.6	15.4	20.6	15.8
25th Percentile	6.6	17.7	22.6	21.6	18.8	12.5	17.9	13.4
Median	3.5	9.2	13.4	17.0	16.0	10.7	16.2	11.8
75th Percentile	1.3	4.5	7.9	13.4	13.3	9.1	14.7	10.4
95th Percentile	-1.4	-0.4	2.5	8.9	9.4	5.9	11.7	8.6
# of Portfolios	400	400	399	394	384	361	333	296
● Small Cap Equity	3.4 (52)	9.6 (48)	12.1 (56)	16.8 (51)	14.6 (65)	8.7 (81)	14.9 (73)	10.5 (74)
▲ Russell 2000	3.6 (50)	11.5 (42)	15.2 (44)	18.0 (43)	17.1 (41)	11.1 (44)	16.4 (48)	11.1 (65)

Characteristics

	Portfolio	Russell 2000
Number of Holdings	356	2,040
Weighted Avg. Market Cap. (\$B)	2.3	2.4
Median Market Cap. (\$B)	1.3	0.9
Price To Earnings	24.6	15.8
Price To Book	3.9	3.2
Price To Sales	2.5	3.1
Return on Equity (%)	16.1	8.8
Yield (%)	1.2	1.0
Beta (holdings; domestic)	1.2	1.2

Top Holdings

HAEMONETICS	1.0%
INSPERITY	1.0%
GREEN DOT CLASS A	0.9%
INOGEN	0.9%
LIGAND PHARMS.'B'	0.9%
SPS COMMERCE	0.8%
INTEGER HOLDINGS	0.8%
GENOMIC HEALTH	0.8%
HORIZON PHARMA	0.8%
VANDA PHARMACEUTICALS	0.8%

Best Performers

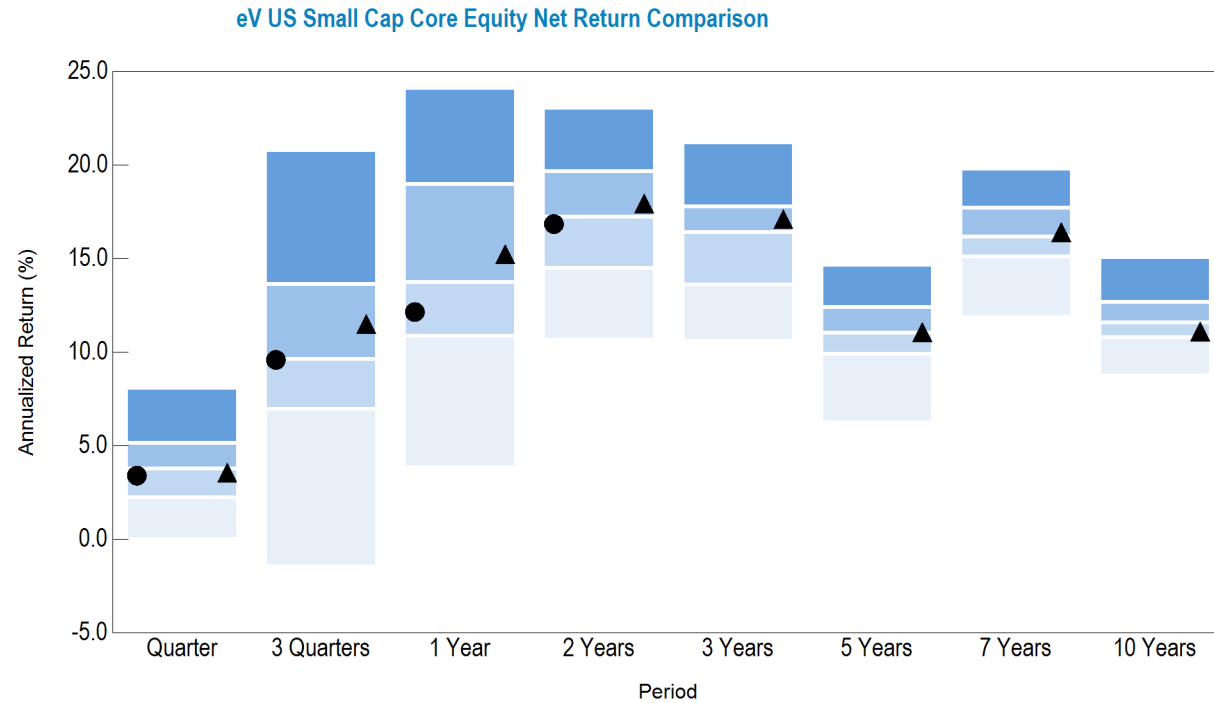
	Return %
RENEWABLE ENERGY GROUP (REGI)	61.3%
PAYCOM SOFTWARE (PAYC)	57.2%
MALLINCKRODT (MNK)	57.1%
STAAR SURGICAL (STAA)	54.8%
PACIRA PHARMACEUTICALS (PCRX)	53.4%
PROTAGONIST THERAPEUTICS (PTGX)	53.1%
HMS HOLDINGS (HMSY)	51.8%
CORE MARK HOLDING (CORE)	50.0%
MEDPACE HOLDINGS (MEDP)	39.3%
GENOMIC HEALTH (GHDX)	39.3%

Worst Performers

	Return %
EGAIN (EGAN)	-46.4%
FTD COMPANIES (FTD)	-43.3%
MIDSTATES PETROLEUM (MPO)	-34.5%
DEL FRISCO'S RESTAURANT GP. (DFRG)	-34.1%
J JILL (JILL)	-33.8%
TECHTARGET (TTGT)	-31.6%
ACORDA THERAPEUTICS (ACOR)	-31.5%
WILLIAM LYON HOMES (WLH)	-31.5%
TITAN INTL.ILLINOIS (TWI)	-30.8%
TRAVELZOO (TZOO)	-30.7%

Small Cap Equity Performance Attribution vs. Russell 2000

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.1%	0.1%	0.0%	0.0%	-0.3%	-2.1%	5.0%	4.9%			
Materials	0.1%	0.1%	0.0%	0.0%	2.5%	1.1%	4.6%	4.4%			
Industrials	0.3%	0.3%	0.0%	0.0%	6.4%	4.4%	15.7%	15.2%			
Consumer Discretionary	-0.7%	-0.8%	0.0%	0.0%	-1.7%	3.9%	13.0%	13.4%			
Consumer Staples	0.3%	0.3%	0.0%	0.0%	10.2%	-1.7%	2.6%	2.8%			
Health Care	0.4%	0.3%	0.0%	0.0%	9.9%	7.7%	15.7%	15.6%			
Financials	0.2%	0.2%	0.0%	0.0%	2.0%	1.0%	17.3%	17.9%			
Information Technology	-0.7%	-0.6%	0.0%	0.0%	2.1%	6.5%	15.5%	14.9%			
Communication Services	-0.1%	-0.1%	0.0%	0.0%	11.2%	21.2%	0.8%	0.7%			
Utilities	0.0%	0.0%	0.0%	0.0%	4.3%	3.7%	2.6%	3.2%			
Real Estate	0.0%	0.0%	0.0%	0.0%	0.1%	-0.4%	7.2%	7.2%			
Cash	0.0%	0.0%	0.0%	0.0%	0.5%	--	0.1%	0.0%			
Portfolio	-0.1%	=	-0.1%	+	0.1%	+	-0.1%	3.6%	3.7%	100.0%	100.0%



	Quarter	3 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	8.1	20.8	24.1	23.0	21.2	14.7	19.8	15.1
25th Percentile	5.2	13.7	19.0	19.7	17.8	12.4	17.8	12.7
Median	3.8	9.7	13.8	17.3	16.5	11.1	16.2	11.6
75th Percentile	2.3	7.0	10.9	14.5	13.6	10.0	15.1	10.8
95th Percentile	0.0	-1.5	3.9	10.7	10.6	6.3	11.9	8.8
# of Portfolios	107	107	106	103	103	99	89	76
● QMA US Small Cap	3.4 (54)	9.6 (52)	12.1 (62)	16.9 (56)	-- (--)	-- (--)	-- (--)	-- (--)
▲ Russell 2000	3.6 (53)	11.5 (42)	15.2 (43)	18.0 (43)	17.1 (37)	11.1 (50)	16.4 (50)	11.1 (66)

Characteristics

	Portfolio	Russell 2000
Number of Holdings	356	2,040
Weighted Avg. Market Cap. (\$B)	2.3	2.4
Median Market Cap. (\$B)	1.3	0.9
Price To Earnings	24.6	15.8
Price To Book	3.9	3.2
Price To Sales	2.5	3.1
Return on Equity (%)	16.1	8.8
Yield (%)	1.2	1.0
Beta (holdings; domestic)	1.2	1.2

Top Holdings

HAEMONETICS	1.0%
INSPERITY	1.0%
GREEN DOT CLASS A	0.9%
INOGEN	0.9%
LIGAND PHARMS.'B'	0.9%
SPS COMMERCE	0.8%
INTEGER HOLDINGS	0.8%
GENOMIC HEALTH	0.8%
HORIZON PHARMA	0.8%
VANDA PHARMACEUTICALS	0.8%

Best Performers

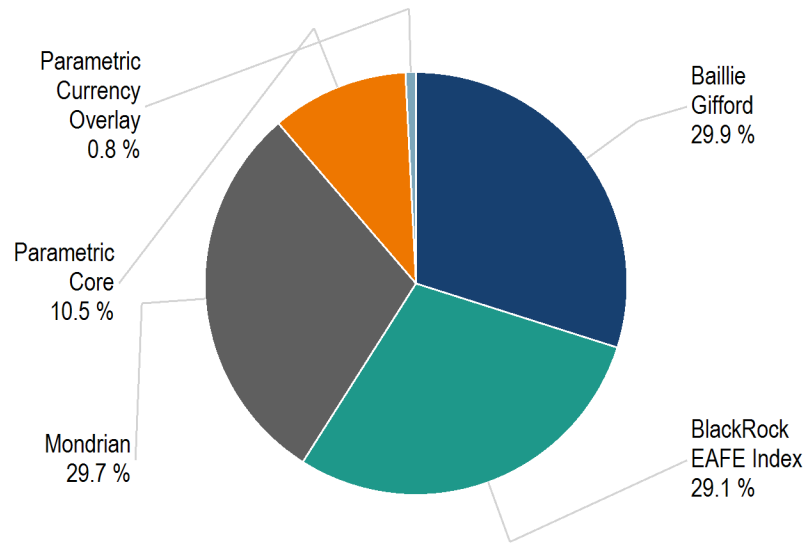
	Return %
RENEWABLE ENERGY GROUP (REGI)	61.3%
PAYCOM SOFTWARE (PAYC)	57.2%
MALLINCKRODT (MNK)	57.1%
STAAR SURGICAL (STAA)	54.8%
PACIRA PHARMACEUTICALS (PCRX)	53.4%
PROTAGONIST THERAPEUTICS (PTGX)	53.1%
HMS HOLDINGS (HMSY)	51.8%
CORE MARK HOLDING (CORE)	50.0%
MEDPACE HOLDINGS (MEDP)	39.3%
GENOMIC HEALTH (GHDX)	39.3%

Worst Performers

	Return %
EGAIN (EGAN)	-46.4%
FTD COMPANIES (FTD)	-43.3%
MIDSTATES PETROLEUM (MPO)	-34.5%
DEL FRISCO'S RESTAURANT GP. (DFRG)	-34.1%
J JILL (JILL)	-33.8%
TECHTARGET (TTGT)	-31.6%
ACORDA THERAPEUTICS (ACOR)	-31.5%
WILLIAM LYON HOMES (WLH)	-31.5%
TITAN INTL.ILLINOIS (TWI)	-30.8%
TRAVELZOO (TZOO)	-30.7%

QMA US Small Cap Performance Attribution vs. Russell 2000

	Total Effects	Attribution Effects				Returns		Sector Weights			
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.1%	0.1%	0.0%	0.0%	-0.3%	-2.1%	5.0%	4.9%			
Materials	0.1%	0.1%	0.0%	0.0%	2.5%	1.1%	4.6%	4.4%			
Industrials	0.3%	0.3%	0.0%	0.0%	6.4%	4.4%	15.7%	15.2%			
Consumer Discretionary	-0.7%	-0.8%	0.0%	0.0%	-1.7%	3.9%	13.0%	13.4%			
Consumer Staples	0.3%	0.3%	0.0%	0.0%	10.2%	-1.7%	2.6%	2.8%			
Health Care	0.4%	0.3%	0.0%	0.0%	9.9%	7.7%	15.7%	15.6%			
Financials	0.2%	0.2%	0.0%	0.0%	2.0%	1.0%	17.3%	17.9%			
Information Technology	-0.7%	-0.6%	0.0%	0.0%	2.1%	6.5%	15.5%	14.9%			
Communication Services	-0.1%	-0.1%	0.0%	0.0%	11.2%	21.2%	0.8%	0.7%			
Utilities	0.0%	0.0%	0.0%	0.0%	4.3%	3.7%	2.6%	3.2%			
Real Estate	0.0%	0.0%	0.0%	0.0%	0.1%	-0.4%	7.2%	7.2%			
Cash	0.0%	0.0%	0.0%	0.0%	0.5%	--	0.1%	0.0%			
Portfolio	-0.1%	=	-0.1%	+	0.1%	+	-0.1%	3.6%	3.7%	100.0%	100.0%



	Actual \$	Actual %	Manager Contribution to Excess Return %
Baillie Gifford	\$251,983,073	29.9%	-0.6%
BlackRock EAFE Index	\$245,311,092	29.1%	0.0%
Mondrian	\$249,756,983	29.7%	-0.1%
Parametric Core	\$88,032,448	10.5%	0.1%
Parametric Currency Overlay	\$6,510,585	0.8%	0.0%
Actual vs. Policy Weight Difference			0.8%
Total	\$841,594,181	100.0%	0.1%

Statistics Summary

3 Years

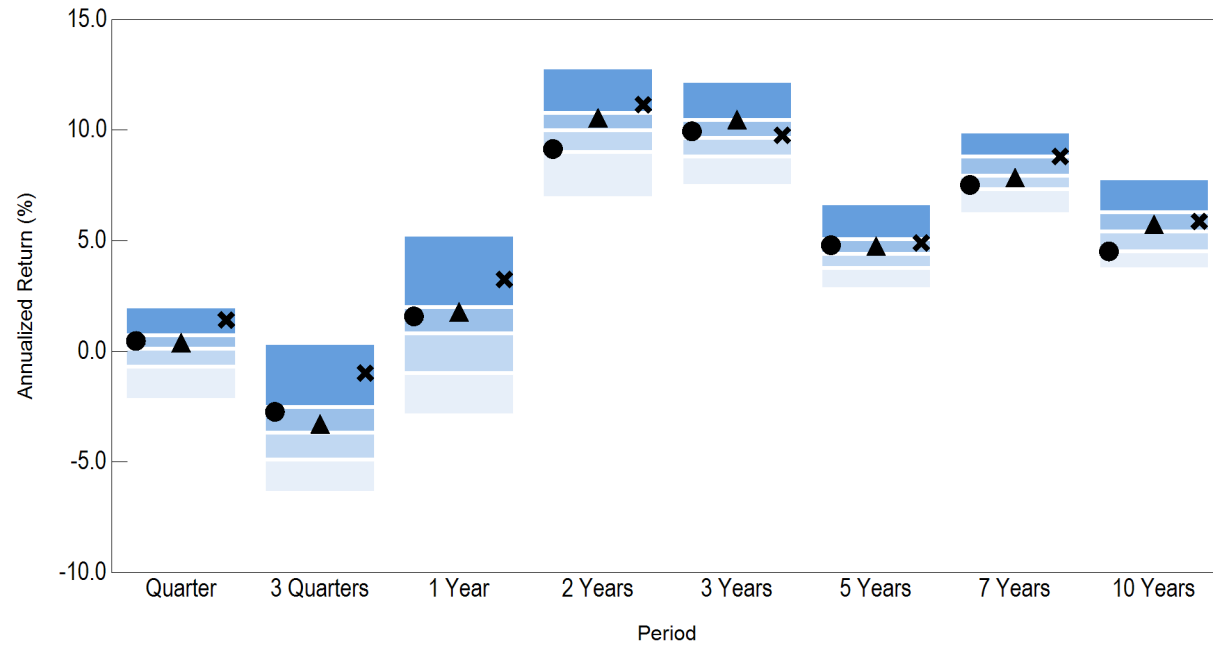
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
International Equity	9.9%	10.7%	0.8	-0.3	1.7%
MSCI ACWI ex US IMI	10.5%	10.8%	0.9	--	0.0%
Developed Markets	10.0%	10.7%	0.9	-0.2	2.0%
MSCI ACWI ex USA Gross	10.5%	10.9%	0.9	--	0.0%
Baillie Gifford	11.9%	12.0%	0.9	0.3	4.5%
MSCI ACWI ex US	10.5%	10.9%	0.9	--	0.0%
BlackRock EAFE Index	9.6%	10.8%	0.8	1.9	0.2%
MSCI EAFE	9.2%	10.8%	0.8	--	0.0%
Mondrian	8.3%	10.5%	0.7	-0.3	4.7%
MSCI ACWI ex USA Value Gross	9.9%	11.9%	0.8	--	0.0%
Emerging Markets	9.5%	13.6%	0.6	-0.9	3.7%
MSCI Emerging Markets Gross	12.8%	14.3%	0.8	--	0.0%
Parametric Core	9.5%	13.6%	0.6	-0.9	3.7%
MSCI Emerging Markets Gross	12.8%	14.3%	0.8	--	0.0%

Statistics Summary

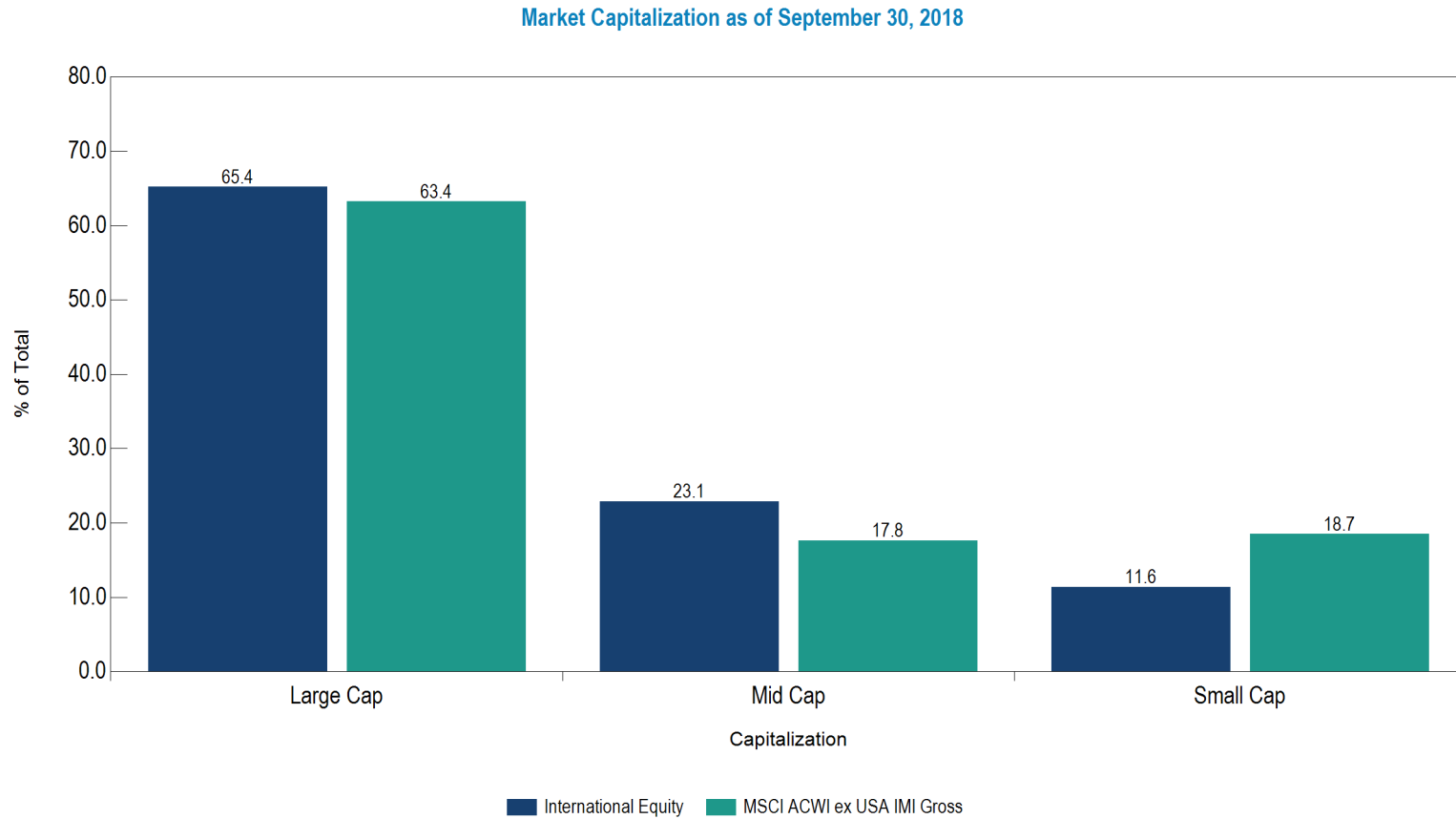
5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
International Equity	4.8%	11.0%	0.4	0.0	1.6%
MSCI ACWI ex US IMI	4.8%	11.1%	0.4	--	0.0%
Developed Markets	5.1%	11.0%	0.4	0.3	2.0%
MSCI ACWI ex USA Gross	4.6%	11.2%	0.4	--	0.0%
Baillie Gifford	6.2%	12.0%	0.5	0.3	4.1%
MSCI ACWI ex US	4.8%	11.2%	0.4	--	0.0%
Mondrian	4.1%	11.1%	0.3	0.1	4.4%
MSCI ACWI ex USA Value Gross	3.5%	12.1%	0.2	--	0.0%
Emerging Markets	1.9%	13.4%	0.1	-0.5	3.9%
MSCI Emerging Markets Gross	4.0%	14.7%	0.2	--	0.0%

InvestorForce All DB ex-US Eq Net Return Comparison



	Quarter	3 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	2.0	0.4	5.3	12.8	12.2	6.7	9.9	7.8
25th Percentile	0.8	-2.5	2.0	10.8	10.5	5.1	8.8	6.3
Median	0.1	-3.7	0.8	10.0	9.7	4.4	8.0	5.4
75th Percentile	-0.7	-4.9	-1.0	9.0	8.8	3.8	7.3	4.5
95th Percentile	-2.2	-6.4	-2.9	7.0	7.5	2.8	6.2	3.7
# of Portfolios	413	405	405	393	388	348	293	232
● International Equity	0.5 (38)	-2.7 (30)	1.6 (38)	9.1 (73)	9.9 (42)	4.8 (34)	7.5 (69)	4.5 (76)
▲ MSCI ACWI ex US IMI	0.4 (41)	-3.3 (45)	1.8 (31)	10.6 (33)	10.5 (25)	4.8 (36)	7.9 (55)	5.8 (39)
✕ MSCI EAFE Gross	1.4 (11)	-1.0 (12)	3.2 (14)	11.1 (17)	9.8 (47)	4.9 (29)	8.8 (26)	5.9 (35)



See appendix for the market capitalization breakpoints.

Characteristics

	Portfolio	MSCI ACWI ex USA IMI Gross
Number of Holdings	2,161	6,456
Weighted Avg. Market Cap. (\$B)	49.3	53.9
Median Market Cap. (\$B)	6.6	1.5
Price To Earnings	21.4	18.8
Price To Book	3.6	2.6
Price To Sales	3.2	2.4
Return on Equity (%)	17.9	15.3
Yield (%)	2.9	2.9
Beta (holdings; global)	1.0	1.0

Top Holdings

UNITED OVERSEAS BANK	1.3%
SANOFI	1.1%
BP	1.0%
HARGREAVES LANSDOWN	1.0%
TAIWAN SEMICON.SPN.ADR 1:5	0.9%
NOVARTIS 'R'	0.9%
WOOD GROUP (JOHN)	0.9%
ENI	0.8%
GLAXOSMITHKLINE	0.8%
NASPERS	0.8%

Best Performers

	Return %
MY EG SERVICES (L:MYEG)	77.0%
GRUPO ELEKTRA (MX:ELP)	65.6%
TPG TELECOM (A:TPMX)	61.8%
IDEMITSU KOSAN (J:IDKO)	49.6%
TATUNG (TW:TAT)	48.5%
CHIN.COMMS.SVS.'H' (K:CHCM)	47.2%
CONTROLADORA VUELA COMPANIA DE AVIACION (MX:VOA)	46.3%
CHABIOTECH (KO:DTH)	46.2%
GLOBE TELECOM (PH:GLA)	42.7%
BANGKOK DUSIT MED.SVS.FB (Q:BDMF)	42.6%

Worst Performers

	Return %
BLUE LABEL TELECOMS (R:BLUJ)	-51.2%
INDIABULLS REAL ESTATE (IN:IBR)	-46.9%
PALM HILLS DEVS.SAE (EG:PAL)	-46.3%
SILAM INTL.HOSPS. (ID:SIO)	-46.3%
TURK TELEKOMUNIKASYON (TK:TUT)	-44.4%
SURUGA BANK (J:SURB)	-43.1%
VIPSHOP HOLDINGS ADR 5:1 (VIPS)	-42.5%
YAPI VE KREDI BANKASI (TK:YKB)	-42.2%
TURKIYE IS BANKASI 'C' (TK:ISC)	-40.9%
DOGUS OTO SERVIS VTC. (TK:DOA)	-40.8%

International Equity Performance Attribution vs. MSCI ACWI ex USA IMI Gross

	Attribution Effects				Returns		Sector Weights				
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.1%	0.2%	0.0%	0.0%	7.2%	4.5%	6.1%	6.9%			
Materials	0.1%	0.2%	0.0%	-0.1%	1.4%	-0.2%	6.0%	8.5%			
Industrials	-0.2%	-0.2%	0.0%	0.0%	0.7%	2.2%	13.3%	12.7%			
Consumer Discretionary	-0.5%	-0.3%	-0.1%	-0.1%	-5.3%	-2.7%	14.4%	11.8%			
Consumer Staples	-0.1%	-0.1%	0.0%	-0.1%	-1.8%	-0.8%	10.3%	9.3%			
Health Care	0.0%	0.0%	0.0%	0.0%	4.0%	4.3%	8.8%	8.0%			
Financials	0.2%	0.3%	0.0%	-0.1%	2.5%	1.4%	17.6%	20.3%			
Information Technology	0.4%	0.4%	0.0%	0.0%	0.8%	-2.6%	11.3%	11.9%			
Communication Services	0.1%	0.0%	0.0%	0.0%	4.7%	3.6%	4.5%	3.4%			
Utilities	-0.1%	-0.1%	0.0%	0.0%	-3.8%	-1.0%	4.1%	3.0%			
Real Estate	0.1%	0.0%	0.1%	0.0%	-2.6%	-2.5%	2.4%	4.2%			
Cash	0.0%	0.0%	0.0%	0.0%	0.5%	--	1.3%	0.0%			
Unclassified	0.0%	0.0%	0.0%	0.0%	1.6%	--	0.0%	0.0%			
Portfolio	0.1%	=	0.5%	+	0.0%	+	-0.4%	0.6%	0.5%	100.0%	100.0%

Int'l Equity Performance Attribution vs. MSCI ACWI ex USA IMI Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
Europe									
Austria	0.4%	0.8%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Belgium	-5.2%	-4.1%	0.3%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
Czech Republic*	3.2%	3.5%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Denmark	4.3%	1.5%	1.8%	1.2%	0.0%	0.0%	0.0%	0.0%	0.1%
Finland	4.1%	2.0%	0.7%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
France	3.3%	2.5%	5.0%	6.8%	0.1%	0.0%	0.0%	0.0%	0.0%
Germany	-1.4%	-0.6%	7.0%	6.1%	0.0%	0.0%	0.0%	0.0%	-0.1%
Greece*	-7.1%	-12.5%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Hungary*	4.9%	4.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Ireland	-5.8%	-5.1%	0.3%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Italy	-1.6%	-3.4%	2.2%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%
Luxembourg	-0.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Netherlands	-1.6%	-1.5%	2.8%	2.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Norway	6.9%	6.3%	0.2%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Poland*	5.9%	9.6%	0.3%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Portugal	1.8%	-1.6%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Russia*	7.8%	6.6%	1.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
Spain	-5.6%	-2.2%	2.7%	2.1%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Sweden	7.2%	6.1%	3.0%	1.9%	0.0%	0.0%	0.0%	0.0%	0.1%
Switzerland	7.0%	6.4%	4.7%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%
United Kingdom	-1.9%	-2.0%	14.7%	12.5%	0.0%	0.0%	0.0%	0.0%	-0.1%

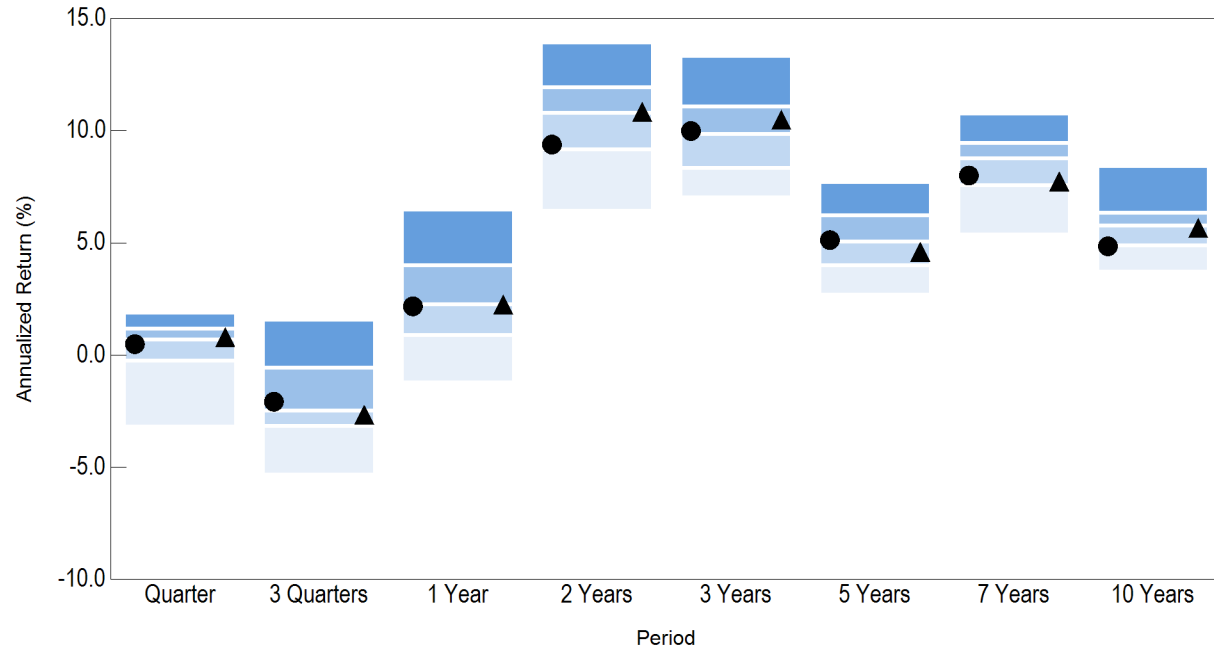
Int'l Equity Performance Attribution vs. MSCI ACWI ex USA IMI Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
AsiaPacific									
Australia	-0.3%	-0.9%	3.8%	4.9%	0.0%	0.0%	0.0%	0.0%	0.0%
China*	-10.1%	-7.4%	4.2%	7.4%	-0.2%	0.3%	0.0%	0.1%	0.2%
Hong Kong	-0.7%	-1.4%	4.0%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%
India*	-7.0%	-4.3%	3.0%	2.3%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Indonesia*	0.9%	0.6%	0.4%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Japan	3.8%	3.0%	16.1%	17.6%	0.1%	-0.1%	0.0%	0.0%	0.1%
Korea*	4.9%	0.5%	2.5%	3.7%	0.2%	0.0%	0.0%	0.0%	0.1%
Malaysia*	4.7%	3.2%	0.9%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
New Zealand	2.5%	2.2%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Pakistan*	-6.0%	-4.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Philippines*	0.6%	0.2%	0.5%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Singapore	2.3%	2.0%	2.8%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%
Taiwan*	12.6%	5.0%	2.4%	3.0%	0.2%	0.0%	0.0%	-0.1%	0.2%
Thailand*	8.7%	15.0%	0.5%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Americas									
Brazil*	-1.0%	5.2%	2.0%	1.4%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Canada	4.2%	0.8%	1.0%	6.7%	0.3%	0.1%	-0.1%	-0.2%	0.1%
Chile*	-1.8%	-1.5%	0.3%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Colombia*	-3.6%	-3.6%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Mexico*	7.5%	7.5%	1.1%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%
Peru*	-1.2%	-2.2%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
United States	-0.1%	7.4%	1.3%	0.0%	0.0%	0.1%	0.0%	-0.1%	0.0%

Int'l Equity Performance Attribution vs. MSCI ACWI ex USA IMI Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
Other									
Egypt*	-14.5%	-11.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Israel	1.9%	8.5%	0.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Kuwait**	6.3%	8.6%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Qatar*	6.9%	10.4%	0.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Romania**	8.5%	6.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
South Africa*	-11.5%	-6.7%	2.2%	1.5%	-0.1%	0.0%	0.0%	0.0%	-0.2%
Turkey*	-23.8%	-20.9%	0.5%	0.2%	0.0%	0.0%	-0.1%	0.0%	-0.1%
United Arab Emirates*	8.8%	0.6%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Totals									
Americas	1.4%	1.8%	6.1%	9.3%	0.1%	0.0%	-0.1%	0.0%	0.0%
Europe	0.6%	0.6%	47.6%	43.9%	0.0%	0.0%	0.0%	0.0%	0.0%
Asia/Pacific	1.2%	0.3%	41.4%	44.2%	0.4%	0.0%	0.0%	0.0%	0.4%
Other	-9.1%	-3.2%	3.7%	2.6%	-0.1%	0.0%	-0.1%	0.0%	-0.3%
Cash	0.5%	--	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	0.6%	0.5%	100.0%	100.0%	0.4%	0.0%	-0.2%	-0.1%	0.1%
Totals									
Developed	1.2%	1.0%	75.1%	75.9%	0.2%	0.0%	-0.1%	0.0%	0.1%
Emerging*	-1.5%	-1.3%	23.4%	24.1%	0.1%	0.0%	-0.1%	0.0%	0.0%
Frontier**	6.6%	--	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cash	0.5%	--	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

InvestorForce All DB Dev Mkt ex-US Eq Net Return Comparison



	Quarter	3 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
Return (Rank)	1.9	1.5	6.5	13.9	13.3	7.7	10.7	8.4
5th Percentile	1.2	-0.5	4.0	11.9	11.1	6.2	9.5	6.4
25th Percentile	0.7	-2.5	2.3	10.8	9.9	5.1	8.8	5.8
Median	-0.2	-3.1	0.9	9.2	8.4	4.0	7.6	4.9
75th Percentile	-3.2	-5.3	-1.2	6.5	7.1	2.7	5.4	3.7
95th Percentile	168	165	163	157	154	136	112	78
# of Portfolios	0.5 (57)	-2.1 (47)	2.2 (53)	9.4 (72)	10.0 (46)	5.1 (49)	8.0 (67)	4.8 (78)
● Developed Markets	0.8 (48)	-2.7 (59)	2.3 (52)	10.8 (49)	10.5 (31)	4.6 (64)	7.7 (73)	5.7 (53)
▲ MSCI ACWI ex USA Gross								

Characteristics

	Portfolio	MSCI ACWI ex USA Gross
Number of Holdings	1,048	2,166
Weighted Avg. Market Cap. (\$B)	52.3	62.2
Median Market Cap. (\$B)	11.4	7.7
Price To Earnings	21.7	18.8
Price To Book	3.7	2.6
Price To Sales	3.2	2.4
Return on Equity (%)	18.0	15.6
Yield (%)	2.9	3.0
Beta (holdings: global)	1.1	1.0

Top Holdings

UNITED OVERSEAS BANK	1.5%
SANOFI	1.2%
BP	1.1%
HARGREAVES LANSDOWN	1.1%
TAIWAN SEMICON.SPN.ADR 1:5	1.0%
NOVARTIS 'R'	1.0%
WOOD GROUP (JOHN)	1.0%
ENI	0.9%
GLAXOSMITHKLINE	0.9%
ENEL	0.9%

Best Performers

	Return %
TPG TELECOM (A:TPMX)	61.8%
IDEMITSU KOSAN (J:IDKO)	49.6%
SHOWA SHELL SEKIYU (J:SHSS)	42.0%
SOFTBANK GROUP (J:SFTB)	40.6%
ORION B (M:ORNB)	40.5%
EISAI (J:ES@N)	39.1%
YANGZIJIANG SHIPBUILDING (HOLDINGS) (T:YSHL)	36.7%
WIRECARD (D:WDI)	35.8%
ICL (IS:ICL)	34.5%
LONZA GROUP (S:LONN)	29.2%

Worst Performers

	Return %
SURUGA BANK (J:SURB)	-43.1%
LI & FUNG (K:FUNG)	-38.2%
RENASAS ELECTRONICS (J:RENE)	-36.2%
JD.COM 'A' ADR 1:2 (JD)	-33.0%
COCA-COLA BOTTLERS JAPAN HOLDINGS (J:KITK)	-33.0%
CYBERDYNE (J:DYNE)	-32.6%
MGM CHINA HOLDINGS (K:MCHL)	-31.4%
ZALANDO (D:ZAL)	-30.5%
TKI.GARANTI BKSI. (TK:GAR)	-29.8%
ATLANTIA (I:ATL)	-29.8%

Developed Markets Performance Attribution vs. MSCI ACWI ex USA Gross

	Attribution Effects				Returns		Sector Weights				
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.0%	0.1%	-0.1%	0.0%	6.2%	4.5%	5.7%	7.4%			
Materials	0.1%	0.1%	0.0%	0.0%	1.3%	0.5%	5.4%	8.2%			
Industrials	-0.3%	-0.3%	0.0%	0.0%	0.7%	2.8%	13.7%	11.6%			
Consumer Discretionary	-0.6%	-0.3%	-0.1%	-0.2%	-5.2%	-2.6%	15.1%	11.3%			
Consumer Staples	-0.1%	-0.1%	0.0%	-0.1%	-1.7%	-0.5%	10.4%	9.7%			
Health Care	0.1%	0.1%	0.0%	0.0%	4.7%	4.4%	9.2%	8.1%			
Financials	0.2%	0.3%	0.0%	-0.1%	2.6%	1.6%	18.0%	21.8%			
Information Technology	0.4%	0.4%	0.0%	0.0%	0.9%	-2.4%	11.8%	11.9%			
Communication Services	0.1%	0.1%	0.0%	0.0%	6.3%	3.6%	4.0%	3.7%			
Utilities	-0.1%	-0.1%	0.0%	0.0%	-4.1%	-0.9%	3.8%	3.0%			
Real Estate	0.1%	0.0%	0.1%	0.0%	-1.4%	-3.5%	1.9%	3.2%			
Cash	0.0%	0.0%	0.0%	0.0%	0.5%	--	1.0%	0.0%			
Unclassified	0.0%	0.0%	0.0%	0.0%	-0.6%	--	0.0%	0.0%			
Portfolio	-0.1%	=	0.4%	+	-0.1%	+	-0.4%	0.6%	0.8%	100.0%	100.0%

Developed Markets Performance Attribution vs. MSCI ACWI ex USA Gross

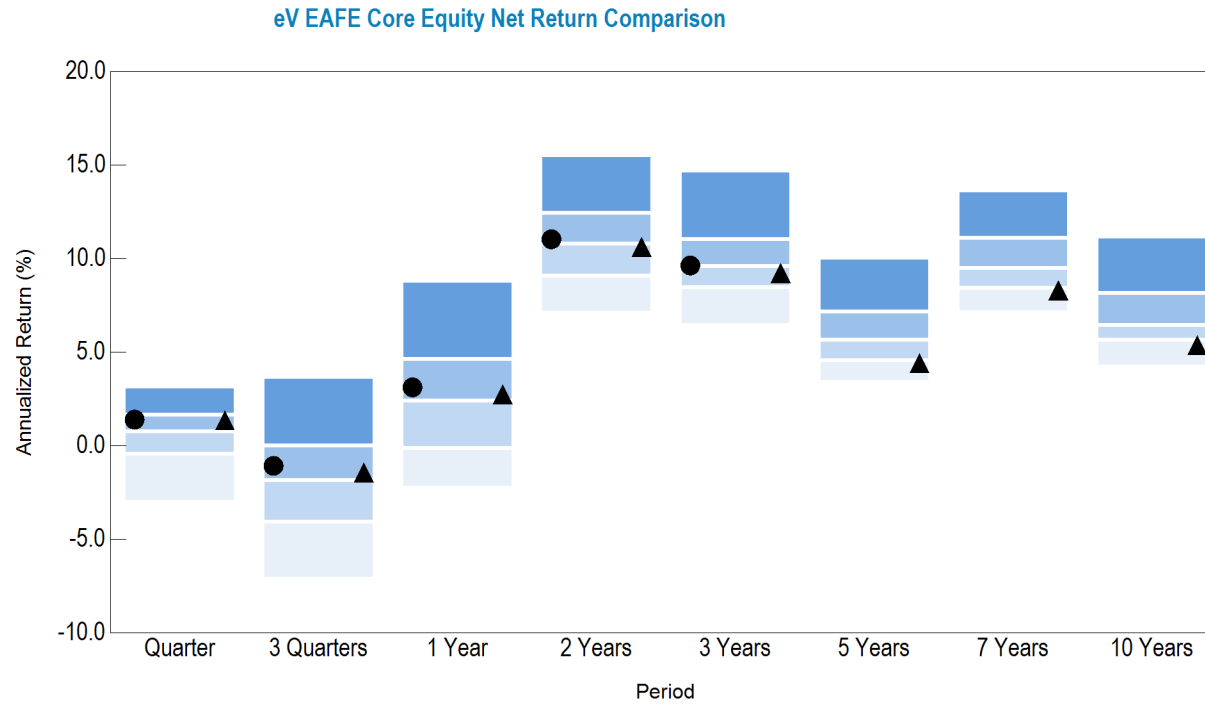
	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
Europe									
Austria	0.4%	0.4%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Belgium	-5.2%	-5.2%	0.4%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%
Czech Republic*	--	4.0%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Denmark	4.3%	2.4%	2.0%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Finland	4.1%	3.2%	0.7%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%
France	3.3%	2.9%	5.6%	7.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Germany	-1.4%	-0.6%	7.8%	6.5%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Greece*	--	-18.1%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Hungary*	--	4.7%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Ireland	-5.8%	-5.3%	0.3%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Italy	-1.6%	-4.2%	2.4%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Luxembourg	2.4%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Netherlands	-1.7%	-1.6%	3.1%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Norway	6.9%	6.9%	0.2%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Poland*	--	11.0%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Portugal	1.8%	-0.4%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Russia*	14.9%	7.2%	0.4%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%
Spain	-5.6%	-2.4%	3.0%	2.1%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Sweden	7.2%	6.5%	3.4%	1.6%	0.0%	0.1%	0.0%	0.0%	0.1%
Switzerland	7.0%	7.3%	5.2%	5.3%	0.0%	0.0%	0.0%	0.0%	0.0%
United Kingdom	-1.9%	-1.6%	16.4%	12.4%	0.0%	-0.1%	0.0%	0.0%	-0.2%

Developed Markets Performance Attribution vs. MSCI ACWI ex USA Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
AsiaPacific									
Australia	-0.3%	-0.9%	4.2%	4.8%	0.0%	0.0%	0.0%	0.0%	0.0%
China*	-11.6%	-7.3%	4.0%	8.1%	-0.3%	0.4%	0.0%	0.2%	0.2%
Hong Kong	0.2%	-0.9%	3.9%	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%
India*	-8.1%	-2.3%	2.5%	2.1%	-0.2%	0.0%	0.0%	0.0%	-0.2%
Indonesia*	6.7%	2.0%	0.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Japan	3.8%	3.7%	18.0%	16.7%	0.0%	0.1%	0.0%	0.0%	0.0%
Korea*	6.0%	0.4%	2.1%	3.7%	0.2%	0.0%	0.0%	-0.1%	0.1%
Malaysia*	5.7%	3.8%	0.6%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
New Zealand	2.5%	2.6%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Pakistan*	--	-4.7%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Philippines*	-0.3%	1.0%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Singapore	2.3%	2.2%	3.1%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%
Taiwan*	15.2%	7.2%	1.9%	2.9%	0.2%	-0.1%	0.0%	-0.1%	0.1%
Thailand*	8.6%	13.7%	0.2%	0.6%	0.0%	0.0%	0.0%	0.0%	-0.1%
Americas									
Brazil*	-1.4%	6.2%	1.4%	1.5%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Canada	4.2%	0.9%	1.1%	6.6%	0.3%	0.1%	-0.1%	-0.2%	0.1%
Chile*	--	-1.9%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Colombia*	--	-2.4%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Mexico*	4.8%	6.9%	0.4%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%
Peru*	-0.9%	-2.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
United States	0.4%	7.4%	1.3%	0.0%	0.0%	0.1%	0.0%	-0.1%	0.0%

Developed Markets Performance Attribution vs. MSCI ACWI ex USA Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
Other									
Egypt*	--	-7.5%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Israel	1.9%	5.0%	0.1%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Qatar*	8.4%	11.5%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Romania**	8.5%	6.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
South Africa*	-12.9%	-7.1%	1.7%	1.6%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Turkey*	-29.5%	-20.5%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
United Arab Emirates*	15.0%	1.2%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Totals									
Americas	1.2%	2.0%	4.3%	9.3%	0.0%	0.0%	-0.1%	0.0%	-0.1%
Europe	0.5%	1.0%	51.6%	44.4%	-0.2%	0.0%	0.0%	0.0%	-0.3%
Asia/Pacific	1.3%	0.6%	40.8%	43.7%	0.4%	0.0%	0.0%	0.0%	0.3%
Other	-10.5%	-4.3%	2.3%	2.5%	-0.2%	0.0%	0.0%	0.0%	-0.1%
Cash	0.5%	--	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	0.6%	0.8%	100.0%	100.0%	0.1%	0.0%	-0.1%	-0.1%	-0.1%
Totals									
Developed	1.2%	1.3%	82.9%	75.1%	0.0%	0.0%	-0.2%	0.0%	-0.1%
Emerging*	-2.4%	-0.9%	16.1%	24.9%	-0.3%	0.1%	0.0%	0.1%	0.0%
Frontier**	8.5%	--	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cash	0.5%	--	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%



	Return (Rank)							
	Quarter	3 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	3.1	3.7	8.8	15.5	14.7	10.0	13.7	11.2
25th Percentile	1.7	0.0	4.6	12.5	11.1	7.2	11.1	8.2
Median	0.8	-1.8	2.4	10.8	9.6	5.7	9.5	6.5
75th Percentile	-0.4	-4.1	-0.1	9.1	8.5	4.6	8.5	5.7
95th Percentile	-3.0	-7.1	-2.2	7.1	6.5	3.4	7.2	4.2
# of Portfolios	142	142	142	141	134	112	96	81
● BlackRock EAFE Index	1.4 (32)	-1.1 (40)	3.1 (42)	11.0 (48)	9.6 (50)	-- (--)	-- (--)	-- (--)
▲ MSCI EAFE	1.4 (33)	-1.4 (43)	2.7 (47)	10.6 (52)	9.2 (59)	4.4 (79)	8.3 (78)	5.4 (85)

Characteristics

	Portfolio	MSCI EAFE
Number of Holdings	925	924
Weighted Avg. Market Cap. (\$B)	57.8	57.8
Median Market Cap. (\$B)	10.8	10.8
Price To Earnings	20.5	19.0
Price To Book	3.0	2.6
Price To Sales	2.6	2.3
Return on Equity (%)	16.8	14.7
Yield (%)	3.1	3.1
Beta (holdings: global)	1.0	1.0

Top Holdings

NESTLE 'R'	1.8%
NOVARTIS 'R'	1.3%
HSBC HOLDINGS	1.2%
ROCHE HOLDING	1.2%
ROYAL DUTCH SHELL	1.1%
TOTAL	1.1%
BP	1.1%
TOYOTA MOTOR	1.0%
ROYAL DUTCH SHELL B	0.9%
SAP	0.8%

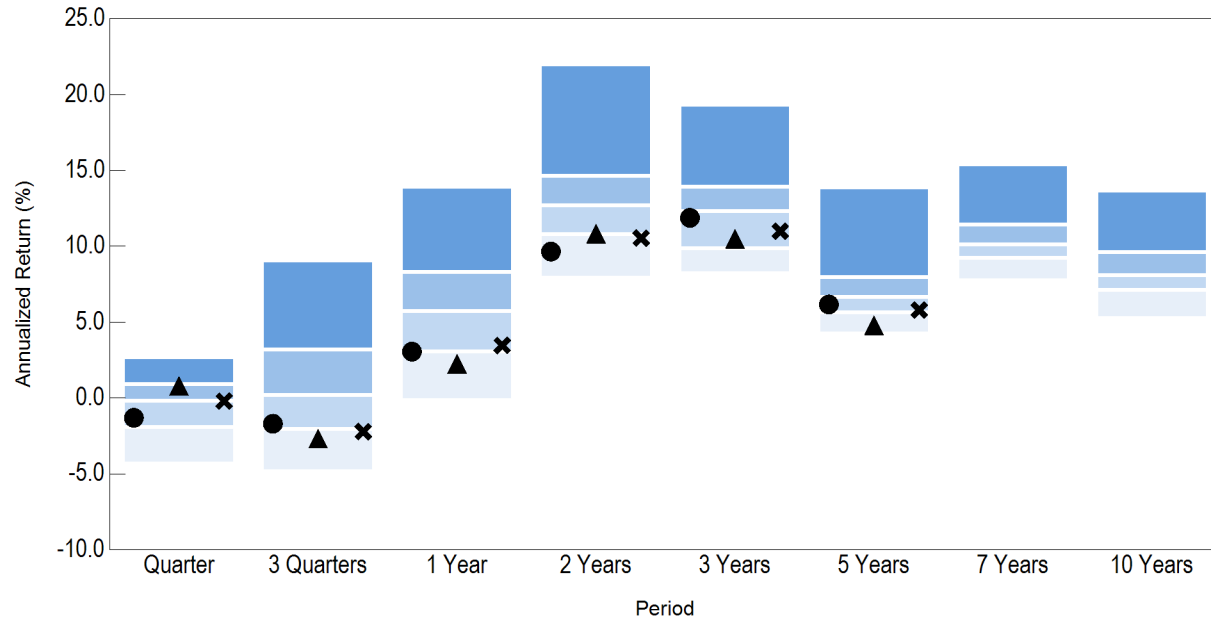
Best Performers

	Return %
TPG TELECOM (A:TPMX)	61.8%
IDEMITSU KOSAN (J:IDKO)	49.6%
SHOWA SHELL SEKIYU (J:SHSS)	42.0%
SOFTBANK GROUP (J:SFTB)	40.6%
ORION B (M:ORNB)	40.5%
EISAI (J:ES@N)	39.1%
YANGZIJIANG SHIPBUILDING (HOLDINGS) (T:YSHL)	36.7%
WIRECARD (D:WDI)	35.8%
ICL (IS:ICL)	34.5%
LONZA GROUP (S:LONN)	29.2%

Worst Performers

	Return %
SURUGA BANK (J:SURB)	-43.1%
LI & FUNG (K:FUNG)	-38.2%
RENESAS ELECTRONICS (J:RENE)	-36.2%
COCA-COLA BOTTLERS JAPAN HOLDINGS (J:KITK)	-33.0%
CYBERDYNE (J:DYNE)	-32.6%
MGM CHINA HOLDINGS (K:MCHL)	-31.4%
ZALANDO (D:ZAL)	-30.5%
ATLANTIA (I:ATL)	-29.8%
FRESNILLO (UKIR:FRES)	-28.5%
SUMCO (J:UMCO)	-28.2%

eV ACWI ex-US Growth Equity Net Return Comparison



	Return (Rank)							
	Quarter	3 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	2.7	9.1	13.9	22.0	19.3	13.9	15.4	13.7
25th Percentile	1.0	3.2	8.3	14.7	13.9	8.0	11.4	9.6
Median	-0.2	0.2	5.8	12.7	12.3	6.7	10.1	8.1
75th Percentile	-1.9	-2.0	3.1	10.8	9.9	5.7	9.3	7.2
95th Percentile	-4.3	-4.8	-0.1	8.0	8.2	4.3	7.8	5.3
# of Portfolios	69	69	69	69	66	54	50	42
● Baillie Gifford	-1.3 (65)	-1.7 (70)	3.1 (77)	9.7 (85)	11.9 (58)	6.2 (60)	-- (--)	-- (--)
▲ MSCI ACWI ex US	0.8 (29)	-2.7 (82)	2.3 (85)	10.8 (75)	10.5 (69)	4.8 (93)	-- (--)	-- (--)
✕ MSCI ACWI ex US Growth	-0.2 (51)	-2.2 (78)	3.5 (72)	10.5 (78)	11.0 (64)	5.8 (74)	-- (--)	-- (--)

Characteristics

	Portfolio	MSCI ACWI ex USA Gross
Number of Holdings	87	2,166
Weighted Avg. Market Cap. (\$B)	44.8	62.2
Median Market Cap. (\$B)	15.1	7.7
Price To Earnings	31.4	18.8
Price To Book	6.7	2.6
Price To Sales	4.9	2.4
Return on Equity (%)	25.0	15.6
Yield (%)	1.6	3.0
Beta (holdings; global)	1.2	1.0

Top Holdings

HARGREAVES LANSDOWN	3.1%
TAIWAN SEMICON.SPN.ADR 1:5	3.0%
NASPERS	2.5%
SHISEIDO	2.5%
ALIBABA GROUP HLDG.SPN. ADR 1:1	2.4%
COCHLEAR	2.3%
NOVOZYMES B	2.1%
MS&AD INSURANCE GP.HDG.	2.0%
PIGEON	2.0%
ADIDAS	1.9%

Best Performers

	Return %
SOFTBANK GROUP (J:SFTB)	40.6%
WOOD GROUP (JOHN) (UKIR:WG.)	22.8%
TAIWAN SEMICON.SPN.ADR 1:5 (TSM)	20.8%
PIGEON (J:PIGC)	16.5%
SCHINDLER 'P' (S:SCHP)	16.4%
WALMART DE MEXICO 'V' (MX:WAV)	15.1%
HOMESERVE (UKIR:HSV)	14.4%
HARGREAVES LANSDOWN (UKIR:HL.)	13.5%
SVENSKA HANDBKN.'A' (W:SVK)	13.4%
INVESTOR B (W:ISBF)	13.2%

Worst Performers

	Return %
SURUGA BANK (J:SURB)	-43.1%
JD.COM 'A' ADR 1:2 (JD)	-33.0%
ZALANDO (D:ZAL)	-30.5%
U-BLOX HOLDING (S:BHOL)	-27.4%
MAKEMYTRIP (MMYT)	-24.1%
CTRP.COM INTL.ADR 8:1 (CTRP)	-22.0%
NASPERS (R:NPNJ)	-15.0%
DISTRIBUIDORA INTNAC.DE ALIMENTACION (E:DIA)	-15.0%
SUGI HOLDINGS (J:SUGP)	-14.6%
CLICKS GROUP (R:CLSJ)	-13.8%

Baillie Gifford Performance Attribution vs. MSCI ACWI ex USA Gross

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.0%	1.3%	-0.2%	-1.1%	22.8%	4.4%	0.9%	7.4%			
Materials	0.1%	0.2%	0.0%	-0.1%	1.5%	0.4%	4.7%	8.2%			
Industrials	-0.5%	-0.4%	0.1%	-0.1%	-0.6%	2.8%	14.5%	11.7%			
Consumer Discretionary	-1.9%	-1.0%	-0.2%	-0.7%	-10.9%	-2.7%	18.9%	11.3%			
Consumer Staples	-0.2%	0.1%	-0.1%	-0.2%	-1.0%	-0.5%	13.9%	9.7%			
Health Care	-0.1%	0.0%	0.0%	0.0%	3.4%	4.5%	7.1%	8.1%			
Financials	0.4%	0.6%	0.0%	-0.2%	4.5%	1.6%	16.3%	21.9%			
Information Technology	-0.3%	0.0%	-0.3%	0.0%	-2.1%	-2.4%	21.2%	11.9%			
Communication Services	0.2%	1.3%	-0.1%	-1.0%	40.6%	3.6%	0.8%	3.7%			
Utilities	0.1%	--	0.0%	--	--	-0.9%	0.0%	3.0%			
Real Estate	0.2%	--	0.1%	--	--	-3.6%	0.0%	3.2%			
Cash	0.0%	0.0%	0.0%	0.0%	0.5%	--	1.7%	0.0%			
Portfolio	-1.9%	=	2.1%	+	-0.7%	+	-3.2%	-1.2%	0.8%	100.0%	100.0%

Baillie Gifford Performance Attribution vs. MSCI ACWI ex USA Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
Europe									
Austria	--	0.4%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
Belgium	--	-5.2%	0.0%	0.7%	--	0.0%	0.0%	--	0.0%
Czech Republic*	--	4.0%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Denmark	6.4%	2.4%	2.8%	1.1%	0.0%	0.0%	0.0%	0.1%	0.1%
Finland	4.9%	3.2%	1.1%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%
France	-0.7%	2.9%	1.4%	7.5%	-0.3%	-0.1%	0.0%	0.2%	-0.1%
Germany	-6.8%	-0.6%	6.7%	6.4%	-0.4%	0.0%	0.0%	0.0%	-0.4%
Greece*	--	-18.2%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Hungary*	--	4.7%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Ireland	-6.6%	-5.4%	0.6%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Italy	--	-4.0%	0.0%	1.6%	--	0.1%	0.0%	--	0.1%
Netherlands	-5.7%	-1.3%	1.5%	2.4%	-0.1%	0.0%	0.0%	0.0%	0.0%
Norway	--	6.9%	0.0%	0.5%	--	0.0%	0.0%	--	0.0%
Poland*	--	11.1%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Portugal	2.0%	-0.4%	1.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Russia*	--	7.1%	0.0%	0.9%	--	-0.1%	0.0%	--	0.0%
Spain	-11.9%	-2.3%	2.4%	2.1%	-0.2%	0.0%	0.0%	0.0%	-0.2%
Sweden	9.6%	7.0%	4.5%	1.7%	0.0%	0.1%	0.0%	0.1%	0.3%
Switzerland	2.5%	7.3%	3.6%	5.3%	-0.3%	-0.1%	0.0%	0.1%	-0.3%
United Kingdom	-0.4%	-1.6%	14.2%	12.3%	0.1%	0.0%	0.0%	0.0%	0.1%

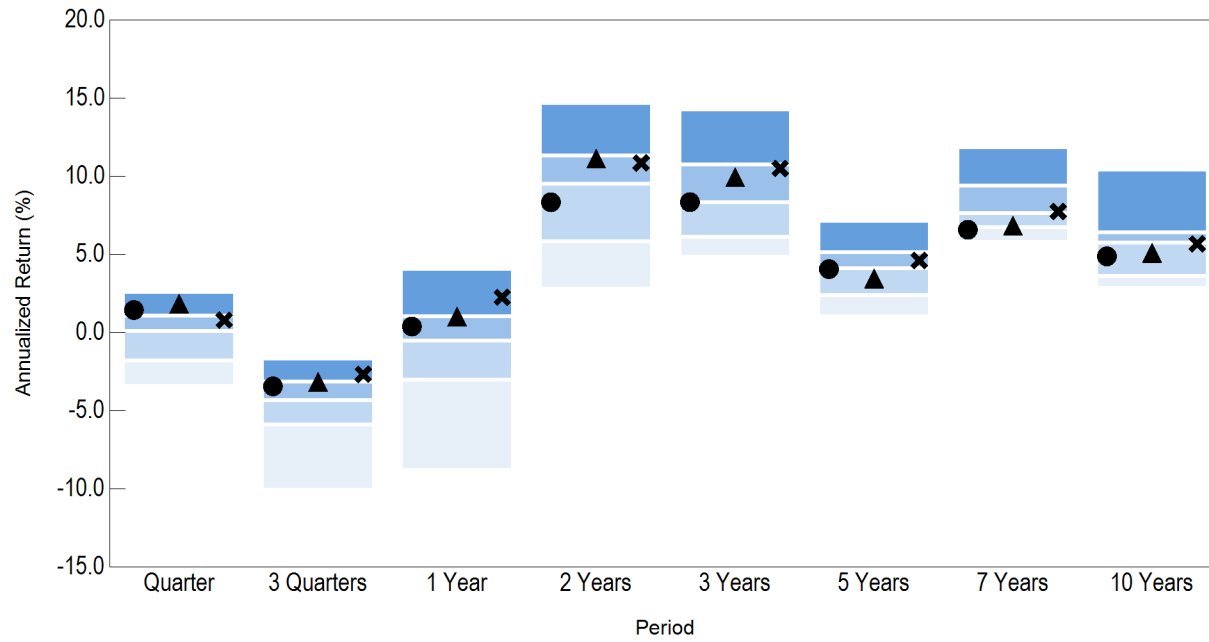
Baillie Gifford Performance Attribution vs. MSCI ACWI ex USA Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
AsiaPacific									
Australia	-2.2%	-0.8%	4.7%	4.8%	0.0%	0.0%	0.0%	0.0%	-0.1%
China*	-15.6%	-7.3%	8.6%	8.1%	-0.7%	0.0%	0.0%	0.0%	-0.7%
Hong Kong	2.6%	-0.9%	1.8%	2.5%	0.1%	0.0%	0.0%	0.0%	0.1%
India*	-8.1%	-2.3%	3.9%	2.1%	-0.2%	0.1%	0.0%	-0.1%	-0.3%
Indonesia*	--	2.0%	0.0%	0.5%	--	0.0%	0.0%	--	0.0%
Japan	2.2%	3.7%	16.6%	16.7%	-0.2%	0.0%	0.0%	0.0%	-0.2%
Korea*	2.5%	0.3%	2.7%	3.6%	0.1%	0.0%	0.0%	0.0%	0.1%
Malaysia*	5.8%	3.8%	1.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
New Zealand	--	2.6%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Pakistan*	--	-4.8%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Philippines*	-4.6%	1.1%	0.4%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Singapore	0.6%	2.2%	3.6%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%
Taiwan*	15.5%	7.1%	3.4%	2.9%	0.2%	0.0%	0.0%	0.0%	0.3%
Thailand*	--	13.7%	0.0%	0.6%	--	-0.1%	0.0%	--	-0.1%
Americas									
Brazil*	5.3%	6.2%	1.1%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Canada	5.1%	1.0%	2.3%	6.6%	0.3%	0.1%	-0.1%	-0.2%	0.1%
Chile*	--	-1.9%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Colombia*	--	-2.4%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Mexico*	15.1%	6.9%	0.6%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%
Peru*	--	-2.1%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
United States	1.7%	7.4%	3.3%	0.0%	0.0%	0.2%	0.0%	-0.2%	0.0%

Baillie Gifford Performance Attribution vs. MSCI ACWI ex USA Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
Other									
Egypt*	--	-7.5%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Israel	--	5.1%	0.0%	0.4%	--	0.0%	0.0%	--	0.0%
Qatar*	--	11.5%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
South Africa*	-14.6%	-7.1%	4.3%	1.6%	-0.1%	-0.1%	-0.1%	-0.2%	-0.5%
Turkey*	--	-20.3%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
United Arab Emirates*	--	1.4%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
Totals									
Americas	4.4%	2.0%	7.3%	9.3%	0.3%	0.0%	-0.1%	-0.1%	0.2%
Europe	-0.3%	1.0%	40.0%	44.5%	-0.6%	0.0%	0.0%	0.0%	-0.5%
Asia/Pacific	-1.5%	0.5%	46.7%	43.6%	-0.9%	0.0%	0.0%	-0.1%	-1.0%
Other	-14.6%	-4.4%	4.3%	2.5%	-0.3%	0.0%	0.0%	-0.2%	-0.5%
Cash	0.5%	--	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	-1.2%	0.8%	100.0%	100.0%	-1.4%	0.0%	-0.2%	-0.3%	-1.9%
Totals									
Developed	0.5%	1.4%	72.4%	75.2%	-0.5%	0.0%	-0.1%	0.0%	-0.7%
Emerging*	-5.9%	-1.0%	25.9%	24.8%	-1.2%	0.0%	-0.1%	0.0%	-1.3%
Cash	0.5%	--	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

eV ACWI ex-US Value Equity Net Return Comparison



	Return (Rank)							
	Quarter	3 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	2.6	-1.7	4.1	14.7	14.2	7.1	11.8	10.4
25th Percentile	1.1	-3.1	1.1	11.3	10.8	5.1	9.4	6.4
Median	0.1	-4.3	-0.5	9.6	8.4	4.1	7.7	5.8
75th Percentile	-1.8	-5.9	-3.0	5.9	6.2	2.4	6.8	3.6
95th Percentile	-3.4	-10.0	-8.7	2.8	4.9	1.1	5.8	2.9
# of Portfolios	38	38	38	38	34	30	22	17
● Mondrian	1.4 (23)	-3.4 (34)	0.4 (34)	8.3 (57)	8.3 (51)	4.1 (54)	6.6 (79)	4.9 (63)
▲ MSCI ACWI ex USA Value Gross	1.8 (11)	-3.1 (27)	1.0 (26)	11.1 (28)	9.9 (33)	3.5 (60)	6.8 (69)	5.1 (55)
✕ MSCI ACWI ex USA Gross	0.8 (35)	-2.7 (15)	2.3 (18)	10.8 (30)	10.5 (27)	4.6 (39)	7.7 (48)	5.7 (51)

Characteristics

	Portfolio	MSCI ACWI ex USA Value Gross
Number of Holdings	138	1,274
Weighted Avg. Market Cap. (\$B)	54.7	58.2
Median Market Cap. (\$B)	20.7	7.0
Price To Earnings	13.1	13.7
Price To Book	1.7	1.5
Price To Sales	1.7	1.7
Return on Equity (%)	12.2	11.8
Yield (%)	4.1	4.0
Beta (holdings: global)	1.0	1.0

Top Holdings

SANOFI	2.9%
ENI	2.5%
ENEL	2.4%
UNITED OVERSEAS BANK	2.4%
CK HUTCHISON HOLDINGS	2.4%
LLOYDS BANKING GROUP	2.3%
BP	2.2%
HONDA MOTOR	2.2%
TELIA COMPANY	2.2%
IBERDROLA	2.1%

Best Performers

	Return %
WOOD GROUP (JOHN) (UKIR:WG.)	22.8%
SK TELECOM (KO:SKT)	21.6%
SAMSUNG SDI (KO:SCT)	21.4%
TAIWAN SEMICON.MNFG. (TW:TSM)	21.1%
ISUZU MOTORS (J:IM@N)	19.9%
KROTON EDUCACIONAL ON (BR:KRO)	19.2%
PJSC GAZPROM ADR (OTC) CDI 1:2 (OGZPY)	18.9%
FUJITSU (J:FT@N)	18.5%
FUJIFILM HOLDINGS (J:FP@N)	16.2%
NOVATEK MICROELS. (TW:NOV)	15.4%

Worst Performers

	Return %
COCA-COLA BOTTLERS JAPAN HOLDINGS (J:KITK)	-33.0%
TKI.GARANTI BKSJ. (TK:GAR)	-29.8%
CHINA MED.SY.HDG.(DI) (K:CHM)	-29.5%
TURKIYE HALK BANKASI (TK:HLB)	-29.3%
INDIABULLS HOUSING FIN (IN:IEZ)	-28.6%
TONGDA GROUP HOLDINGS (K:TGDA)	-26.2%
TRAVIS PERKINS (UKIR:TPK)	-26.0%
MIDEA GROUP 'A' (CN:MGA)	-25.7%
EMBRAER SPNS ADR 1:4 (ERJ)	-21.3%
CMPH.COCS. RODOVIARIAS ON (BR:CCR)	-19.5%

Mondrian Performance Attribution vs. MSCI ACWI ex USA Value Gross

	Attribution Effects				Returns		Sector Weights				
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.1%	0.1%	-0.1%	0.0%	6.3%	5.1%	10.4%	12.1%			
Materials	0.1%	0.2%	0.0%	-0.1%	3.2%	1.5%	3.5%	8.0%			
Industrials	-0.2%	-0.2%	0.1%	-0.1%	0.6%	2.5%	12.6%	7.5%			
Consumer Discretionary	-0.3%	0.0%	-0.1%	-0.2%	-1.4%	-0.6%	13.9%	8.2%			
Consumer Staples	-0.4%	-0.2%	-0.1%	-0.1%	-6.4%	-0.8%	5.9%	4.1%			
Health Care	0.1%	0.1%	0.1%	0.0%	4.9%	4.1%	10.0%	6.6%			
Financials	0.3%	0.6%	0.0%	-0.3%	2.8%	1.9%	18.2%	33.9%			
Information Technology	0.5%	0.3%	0.0%	0.2%	10.5%	2.8%	7.0%	4.4%			
Communication Services	0.1%	0.1%	0.0%	0.1%	3.5%	1.2%	7.6%	5.5%			
Utilities	-0.5%	-0.3%	-0.1%	-0.2%	-5.5%	-0.2%	8.2%	5.0%			
Real Estate	0.2%	0.1%	0.1%	0.0%	0.1%	-3.6%	2.4%	4.6%			
Cash	0.0%	0.0%	0.0%	0.0%	0.5%	--	0.3%	0.0%			
Portfolio	0.0%	=	0.8%	+	0.0%	+	-0.7%	1.8%	1.8%	100.0%	100.0%

Mondrian Performance Attribution vs. MSCI ACWI ex USA Value Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
Europe									
Austria	--	-0.1%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Belgium	--	0.3%	0.0%	0.4%	--	0.0%	0.0%	--	0.0%
Czech Republic*	--	8.0%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Denmark	2.4%	-7.6%	1.6%	0.3%	0.0%	-0.1%	0.0%	0.1%	0.0%
Finland	--	1.8%	0.0%	0.8%	--	0.0%	0.0%	--	0.0%
France	5.5%	4.1%	4.7%	7.0%	0.1%	0.0%	0.0%	0.0%	0.0%
Germany	3.1%	-0.8%	7.3%	5.2%	0.2%	-0.1%	0.0%	0.1%	0.2%
Greece*	--	-24.9%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Hungary*	--	7.7%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Ireland	--	-3.3%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Italy	-0.4%	-4.5%	5.1%	2.1%	0.1%	-0.2%	0.0%	0.1%	0.0%
Netherlands	-2.1%	1.1%	3.5%	1.2%	0.0%	0.0%	0.0%	-0.1%	-0.2%
Norway	--	7.7%	0.0%	0.6%	--	0.0%	0.0%	--	0.0%
Poland*	--	12.0%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Portugal	--	-3.9%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Russia*	14.9%	9.8%	1.3%	0.8%	0.0%	0.0%	0.0%	0.0%	0.1%
Spain	-4.0%	-3.3%	3.6%	3.0%	0.0%	0.0%	0.0%	0.0%	-0.1%
Sweden	4.6%	13.6%	3.2%	0.9%	-0.1%	0.2%	0.0%	-0.2%	0.0%
Switzerland	10.1%	8.3%	4.6%	4.5%	0.1%	0.0%	0.0%	0.0%	0.1%
United Kingdom	-3.5%	-2.9%	19.5%	16.5%	-0.1%	-0.1%	0.0%	0.0%	-0.3%

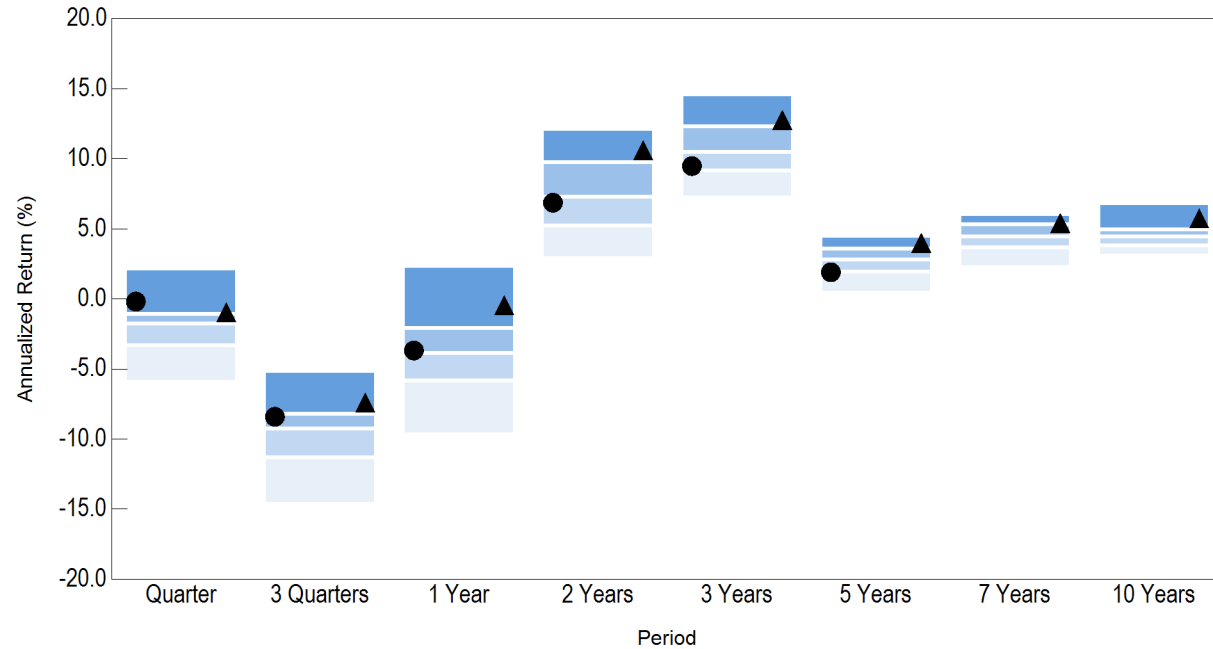
Mondrian Performance Attribution vs. MSCI ACWI ex USA Value Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
AsiaPacific									
Australia	14.1%	-0.7%	0.9%	4.8%	0.7%	0.1%	0.1%	-0.6%	0.3%
China*	-0.2%	2.1%	3.2%	7.9%	-0.1%	0.0%	0.0%	0.1%	0.0%
Hong Kong	0.9%	-0.2%	5.2%	2.5%	0.0%	-0.1%	0.0%	0.0%	0.0%
India*	-8.1%	4.3%	3.6%	2.2%	-0.3%	0.1%	-0.1%	-0.2%	-0.4%
Indonesia*	6.7%	3.3%	0.3%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Japan	6.2%	4.0%	13.5%	16.7%	0.4%	-0.1%	0.1%	-0.1%	0.3%
Korea*	8.7%	2.5%	3.5%	3.6%	0.2%	0.0%	0.0%	0.0%	0.2%
Malaysia*	5.6%	4.8%	0.9%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
New Zealand	--	3.7%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
Pakistan*	--	-4.8%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Philippines*	6.0%	-0.6%	0.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Singapore	4.1%	4.1%	4.2%	0.9%	0.0%	0.1%	0.0%	0.0%	0.0%
Taiwan*	14.7%	5.3%	2.1%	3.0%	0.3%	0.0%	0.0%	-0.1%	0.2%
Thailand*	8.6%	15.8%	0.6%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Americas									
Brazil*	-3.8%	11.0%	3.2%	1.5%	-0.2%	0.2%	0.0%	-0.3%	-0.3%
Canada	2.2%	1.2%	1.0%	6.7%	0.1%	0.2%	-0.1%	-0.1%	0.1%
Chile*	--	0.7%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Colombia*	--	-10.4%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Mexico*	-8.4%	10.1%	0.5%	0.7%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Peru*	-0.9%	-1.1%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%

Mondrian Performance Attribution vs. MSCI ACWI ex USA Value Gross

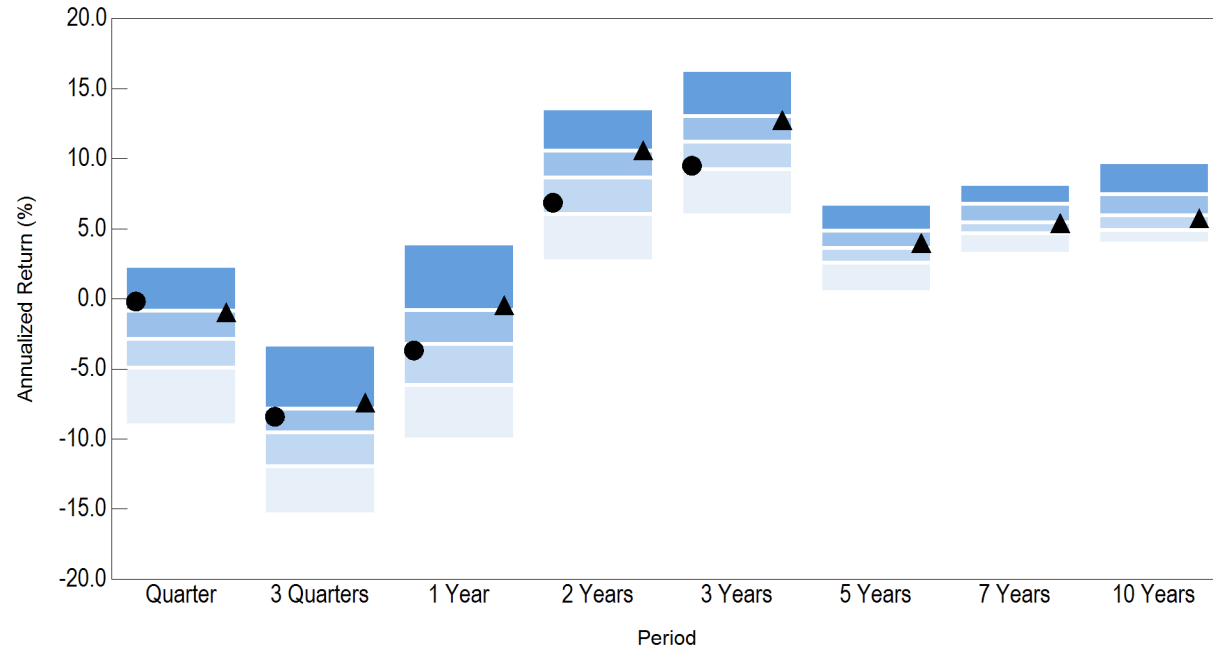
	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
Other									
Egypt*	--	-4.0%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Israel	--	-0.8%	0.0%	0.4%	--	0.0%	0.0%	--	0.0%
Qatar*	8.4%	9.4%	0.4%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Romania**	8.5%	1.8%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
South Africa*	-1.2%	-2.1%	0.6%	1.6%	0.0%	0.0%	0.0%	0.0%	0.1%
Turkey*	-29.5%	-28.1%	0.6%	0.2%	0.0%	0.0%	-0.1%	0.0%	-0.1%
United Arab Emirates*	15.0%	4.8%	0.4%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Totals									
Americas	-2.9%	3.2%	5.0%	9.4%	-0.4%	0.0%	-0.1%	0.2%	-0.3%
Europe	0.7%	0.5%	54.5%	44.3%	0.1%	-0.2%	0.0%	0.0%	-0.1%
Asia/Pacific	4.3%	3.0%	38.2%	43.7%	0.6%	-0.1%	0.1%	-0.1%	0.5%
Other	-3.9%	-2.4%	2.0%	2.6%	0.1%	0.0%	0.0%	0.0%	0.0%
Cash	0.5%	--	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	1.8%	1.8%	100.0%	100.0%	0.3%	-0.2%	-0.1%	0.1%	0.0%
Totals									
Developed	1.8%	1.2%	77.9%	75.2%	0.5%	0.0%	0.0%	0.0%	0.5%
Emerging*	1.8%	3.7%	21.6%	24.8%	-0.3%	-0.1%	-0.1%	0.0%	-0.4%
Frontier**	8.5%	--	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cash	0.5%	--	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

InvestorForce All DB Emg Mkt Eq Net Return Comparison



	Return (Rank)									
	Quarter	3 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years		
5th Percentile	2.2	-5.1	2.3	12.1	14.6	4.5	6.1	6.8		
25th Percentile	-1.0	-8.2	-2.1	9.8	12.3	3.6	5.3	5.0		
Median	-1.7	-9.2	-3.8	7.3	10.5	2.8	4.5	4.5		
75th Percentile	-3.3	-11.3	-5.8	5.2	9.2	2.0	3.7	3.8		
95th Percentile	-5.9	-14.6	-9.6	2.9	7.3	0.5	2.3	3.1		
# of Portfolios	96	94	93	89	87	72	53	16		
● Emerging Markets	-0.2 (13)	-8.4 (27)	-3.7 (48)	6.9 (63)	9.5 (67)	1.9 (77)	-- (--)	-- (--)	-- (--)	-- (--)
▲ MSCI Emerging Markets Gross	-0.9 (22)	-7.4 (16)	-0.4 (11)	10.6 (19)	12.8 (20)	4.0 (18)	5.4 (22)	5.8 (14)		

eV Emg Mkts Equity Net Return Comparison



	Return (Rank)															
	Quarter		3 Quarters		1 Year		2 Years		3 Years		5 Years		7 Years		10 Years	
5th Percentile	2.3	-3.3	3.9	13.6	16.3	6.8	8.2	9.8								
25th Percentile	-0.8	-7.8	-0.8	10.6	13.1	4.9	6.8	7.5								
Median	-2.8	-9.5	-3.2	8.7	11.2	3.7	5.5	6.0								
75th Percentile	-4.9	-11.9	-6.1	6.1	9.3	2.6	4.7	5.0								
95th Percentile	-9.0	-15.3	-10.0	2.7	6.0	0.5	3.2	4.0								
# of Portfolios	199	196	195	189	180	152	113	72								
● Parametric Core	-0.2 (20)	-8.4 (37)	-3.7 (54)	6.9 (69)	9.5 (72)	-- (--)	-- (--)	-- (--)								
▲ MSCI Emerging Markets Gross	-0.9 (27)	-7.4 (23)	-0.4 (23)	10.6 (26)	12.8 (29)	4.0 (40)	5.4 (53)	5.8 (55)								

Characteristics

	Portfolio	MSCI Emerging Markets Gross
Number of Holdings	1,183	1,151
Weighted Avg. Market Cap. (\$B)	22.3	79.3
Median Market Cap. (\$B)	3.2	5.3
Price To Earnings	19.3	18.6
Price To Book	2.8	3.1
Price To Sales	2.9	2.5
Return on Equity (%)	17.1	17.7
Yield (%)	3.3	2.7
Beta (holdings; global)	0.9	1.0

Top Holdings

CHINA MOBILE	1.1%
AMERICA MOVIL SAB DE CV SPN.ADR 'L' 1:20	0.9%
LUKOIL OAO SPN.ADR 1:1	0.8%
SBERBANK OF RUSSIA	0.8%
CREDICORP	0.8%
PJSC GAZPROM ADR (OTC) CDI 1:2	0.7%
NASPERS	0.6%
GPO FINANCE BANORTE	0.6%
PETROLEO BRASILEIRO ADR 1:2	0.6%
SAMSUNG ELECTRONICS	0.5%

Best Performers

	Return %
MY EG SERVICES (L:MYEG)	77.0%
GRUPO ELEKTRA (MX:ELP)	65.6%
TATUNG (TW:TAT)	48.5%
CHIN.COMMS.SVS.'H' (K:CHCM)	47.2%
CONTROLADORA VUELA COMPANIA DE AVIACION (MX:VOA)	46.3%
CHABIOTECH (KO:DTH)	46.2%
GLOBE TELECOM (PH:GLA)	42.7%
BANGKOK DUSIT MED.SVS.FB (Q:BDMF)	42.6%
SILLAJEN (KO:JLS)	40.4%
SHDG.WEIGAO GP.MED. PLM. 'H' (K:SDW)	39.6%

Worst Performers

	Return %
BLUE LABEL TELECOMS (R:BLUJ)	-51.2%
INDIABULLS REAL ESTATE (IN:IBR)	-46.9%
PALM HILLS DEVS.SAE (EG:PAL)	-46.3%
SILOAM INTL.HOSPS. (ID:SIO)	-46.3%
TURK TELEKOMUNIKASYON (TK:TUT)	-44.4%
VIPSHOP HOLDINGS ADR 5:1 (VIPS)	-42.5%
YAPI VE KREDI BANKASI (TK:YKB)	-42.2%
TURKIYE IS BANKASI 'C' (TK:ISC)	-40.9%
DOGUS OTO SERVIS VTC. (TK:DOA)	-40.8%
TKI.VAKIFLAR BANKASI (TK:TVB)	-40.3%

Parametric Core Performance Attribution vs. MSCI Emerging Markets Gross

	Attribution Effects				Returns		Sector Weights				
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.1%	-0.2%	0.4%	-0.1%	12.2%	14.5%	9.4%	7.2%			
Materials	-0.1%	-0.2%	0.2%	-0.1%	2.0%	4.6%	10.8%	7.6%			
Industrials	-0.1%	-0.1%	0.2%	-0.2%	0.7%	2.7%	9.5%	5.2%			
Consumer Discretionary	0.5%	0.4%	0.1%	-0.1%	-6.3%	-10.3%	8.8%	9.8%			
Consumer Staples	-0.1%	0.0%	0.0%	-0.1%	-2.8%	-2.6%	9.7%	6.6%			
Health Care	-0.1%	0.0%	-0.1%	0.0%	-6.3%	-7.0%	5.4%	3.2%			
Financials	-0.1%	0.0%	-0.2%	0.2%	1.8%	1.5%	14.7%	22.8%			
Information Technology	1.2%	1.0%	1.0%	-0.8%	-1.3%	-4.5%	6.3%	28.0%			
Communication Services	-0.2%	-0.1%	0.1%	-0.2%	-1.3%	1.9%	9.1%	4.3%			
Utilities	-0.1%	0.0%	0.0%	-0.1%	-2.1%	-1.9%	6.5%	2.4%			
Real Estate	-0.2%	0.0%	-0.2%	-0.1%	-5.8%	-5.6%	6.4%	2.8%			
Cash	0.0%	0.0%	0.0%	0.0%	0.5%	--	3.2%	0.0%			
Unclassified	0.0%	0.0%	0.0%	0.0%	2.1%	--	0.1%	0.0%			
Portfolio	0.8%	=	1.0%	+	1.3%	+	-1.5%	-0.2%	-0.9%	100.0%	100.0%

Parametric Core Performance Attribution vs. MSCI Emerging Markets Gross

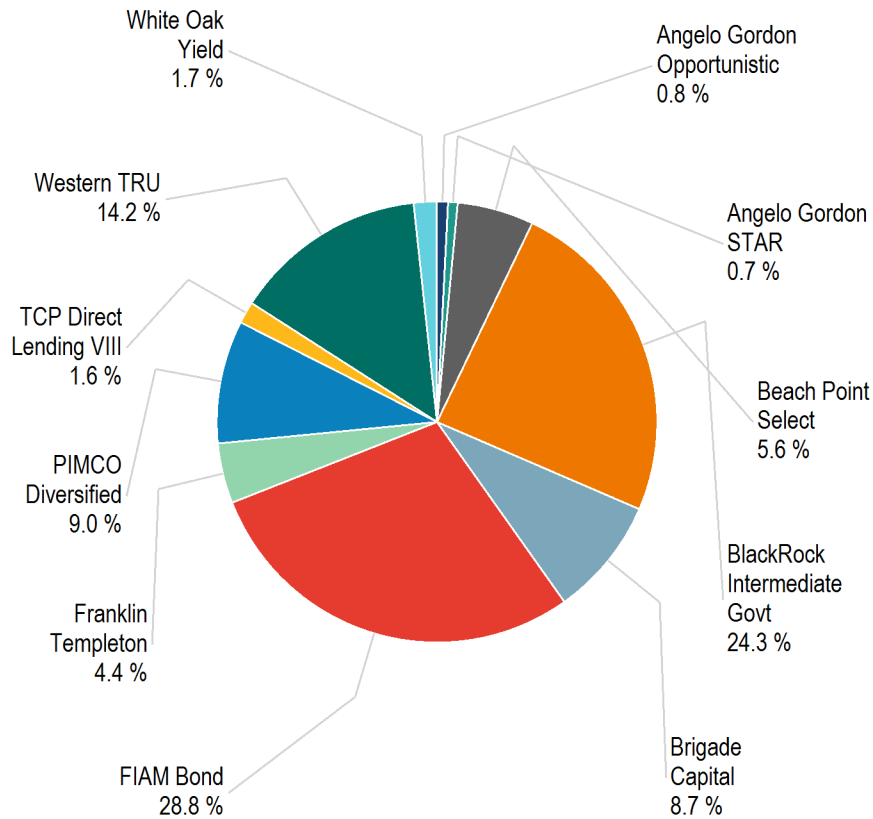
	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
Europe									
Czech Republic*	3.2%	4.0%	0.8%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Greece*	-7.1%	-18.1%	1.4%	0.3%	0.0%	-0.2%	0.0%	0.1%	0.0%
Hungary*	4.9%	4.7%	0.9%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Luxembourg	-13.4%	-0.9%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Netherlands	27.4%	-1.5%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Poland*	5.9%	11.0%	3.3%	1.1%	-0.1%	0.2%	0.0%	-0.1%	0.1%
Russia*	3.5%	7.2%	5.9%	3.4%	-0.2%	0.3%	0.0%	-0.1%	0.0%
United Kingdom	-6.0%	-1.7%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
AsiaPacific									
China*	-1.1%	-7.3%	5.9%	32.7%	2.0%	2.0%	0.0%	-1.6%	2.4%
Hong Kong	-5.8%	-0.9%	5.4%	0.0%	0.0%	-0.1%	0.0%	-0.3%	-0.3%
India*	-3.4%	-2.3%	6.7%	8.6%	-0.2%	-0.1%	0.2%	0.0%	0.0%
Indonesia*	-0.6%	2.0%	3.3%	1.9%	-0.1%	0.1%	-0.1%	0.0%	-0.1%
Korea*	2.1%	0.4%	6.8%	14.7%	0.3%	0.0%	0.0%	-0.1%	0.1%
Malaysia*	3.1%	3.8%	3.3%	2.3%	0.0%	0.1%	0.0%	0.0%	0.0%
Pakistan*	-6.0%	-4.7%	1.7%	0.1%	0.0%	0.0%	0.0%	0.0%	-0.1%
Philippines*	1.1%	1.0%	3.5%	0.9%	0.0%	0.1%	0.0%	0.0%	0.0%
Singapore	-2.9%	2.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Taiwan*	6.4%	7.2%	6.8%	11.6%	-0.1%	-0.3%	0.0%	0.0%	-0.4%
Thailand*	8.8%	13.7%	3.0%	2.2%	-0.1%	0.1%	0.0%	0.0%	0.0%
Americas									
Brazil*	-0.3%	6.2%	6.6%	5.9%	-0.4%	0.1%	0.0%	-0.1%	-0.4%
Chile*	-1.8%	-1.9%	3.3%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Colombia*	-3.6%	-2.4%	1.7%	0.5%	0.0%	0.0%	0.0%	0.0%	-0.1%
Mexico*	8.7%	6.9%	7.1%	2.9%	0.1%	0.1%	0.1%	0.1%	0.4%
Peru*	-1.4%	-2.1%	1.3%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%
United States	-3.8%	7.4%	1.6%	0.0%	0.0%	0.1%	0.0%	-0.2%	-0.1%

Parametric Core Performance Attribution vs. MSCI Emerging Markets Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
Other									
Egypt*	-14.5%	-7.5%	0.9%	0.1%	0.0%	-0.1%	0.0%	-0.1%	-0.1%
Kuwait**	6.3%	8.6%	1.7%	0.0%	0.0%	0.2%	0.0%	0.0%	0.1%
Qatar*	5.9%	11.5%	1.7%	0.8%	0.0%	0.1%	0.0%	-0.1%	0.0%
South Africa*	-8.5%	-7.1%	6.7%	6.4%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Turkey*	-21.2%	-20.5%	3.6%	0.8%	0.0%	0.1%	-0.7%	0.0%	-0.6%
United Arab Emirates*	3.9%	1.2%	1.4%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Totals									
Americas	1.8%	4.8%	21.7%	10.8%	-0.4%	0.6%	0.1%	-0.4%	-0.1%
Europe	2.8%	6.3%	12.8%	5.3%	-0.3%	0.6%	0.0%	-0.4%	0.0%
Asia/Pacific	0.5%	-1.7%	46.3%	75.1%	1.9%	0.3%	0.0%	-0.7%	1.5%
Other	-7.3%	-5.9%	16.0%	8.7%	0.1%	-0.1%	-0.7%	0.1%	-0.7%
Cash	0.5%	--	3.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	-0.2%	-0.9%	100.0%	100.0%	1.3%	1.5%	-0.5%	-1.5%	0.8%
Totals									
Developed	-5.1%	--	7.6%	0.0%	0.0%	0.0%	0.0%	-0.4%	-0.4%
Emerging*	0.1%	-0.9%	87.5%	100.0%	1.8%	0.0%	-0.5%	-0.2%	1.0%
Frontier**	6.3%	--	1.7%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%
Cash	0.5%	--	3.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Fixed Income
 Manager Allocation Analysis

Period Ending: September 30, 2018



	Actual \$	Actual %	Manager Contribution to Excess Return %
Angelo Gordon Opportunistic	\$7,215,000	0.8%	0.0%
Angelo Gordon STAR	\$6,594,100	0.7%	0.1%
Beach Point Select	\$50,850,522	5.6%	0.0%
BlackRock Intermediate Govt	\$219,692,433	24.3%	0.0%
Brigade Capital	\$79,075,925	8.7%	0.0%
FIAM Bond	\$260,531,458	28.8%	0.0%
Franklin Templeton	\$40,180,366	4.4%	0.0%
PIMCO Diversified	\$81,104,876	9.0%	0.0%
TCP Direct Lending VIII	\$14,893,759	1.6%	0.0%
Western Asset TRU	\$128,715,909	14.2%	-0.1%
White Oak Yield	\$15,717,612	1.7%	0.0%
Actual vs. Policy Weight Difference			-0.2%
Total	\$904,571,960	100.0%	-0.1%

Statistics Summary

3 Years

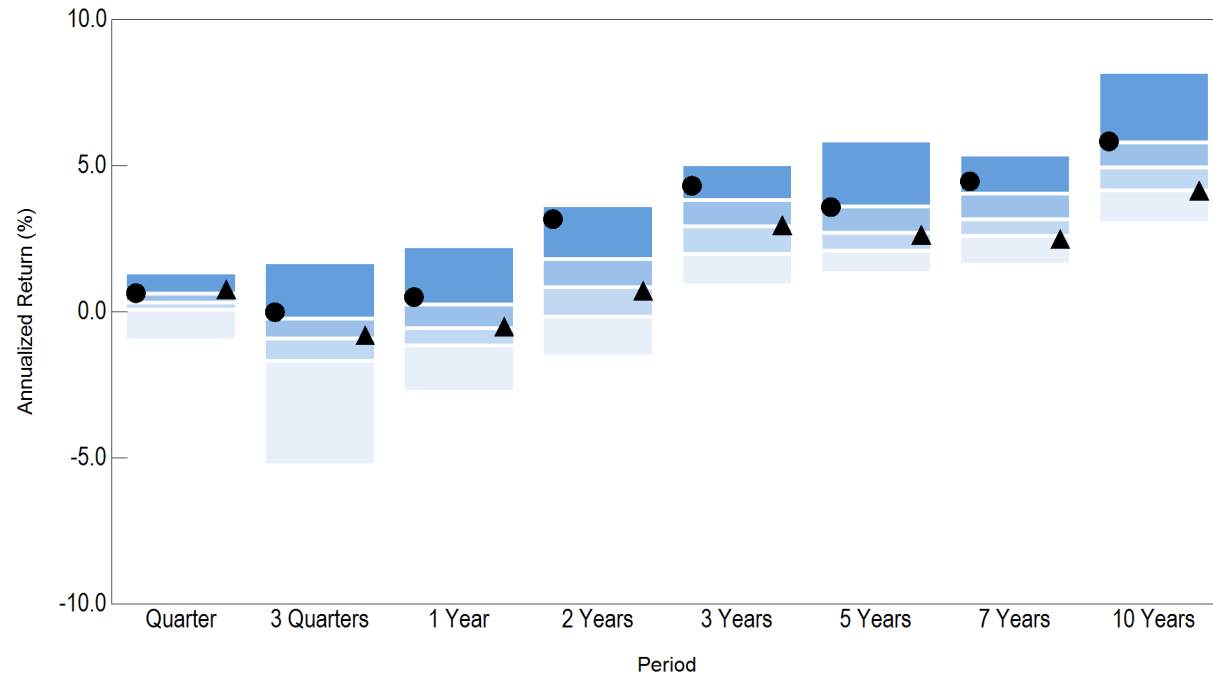
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Fixed Income	4.3%	2.6%	1.3	0.7	2.1%
Blended Fixed Income Index	3.0%	2.7%	0.8	--	0.0%
Core Fixed	2.5%	2.6%	0.6	0.7	1.7%
BBgBarc US Aggregate TR	1.3%	2.7%	0.2	--	0.0%
FIAM Bond	2.3%	2.8%	0.5	1.1	0.9%
BBgBarc US Aggregate TR	1.3%	2.7%	0.2	--	0.0%
Opportunistic Credit	7.8%	3.7%	1.9	0.5	2.9%
BBgBarc BA Intermediate HY	6.2%	3.8%	1.4	--	0.0%
Angelo Gordon Opportunistic	15.0%	9.0%	1.6	1.5	9.4%
BBgBarc US Aggregate TR	1.3%	2.7%	0.2	--	0.0%
Angelo Gordon STAR	14.0%	7.7%	1.7	1.5	8.4%
BBgBarc US Aggregate TR	1.3%	2.7%	0.2	--	0.0%
Beach Point Select	9.2%	3.7%	2.2	1.2	2.4%
BBgBarc BA Intermediate HY	6.2%	3.8%	1.4	--	0.0%
Brigade Capital	9.0%	6.4%	1.3	0.7	4.3%
BBgBarc BA Intermediate HY	6.2%	3.8%	1.4	--	0.0%
Franklin Templeton	3.9%	7.0%	0.4	0.2	8.7%
BBgBarc Multiverse TR	2.3%	4.9%	0.3	--	0.0%

Statistics Summary

5 Years

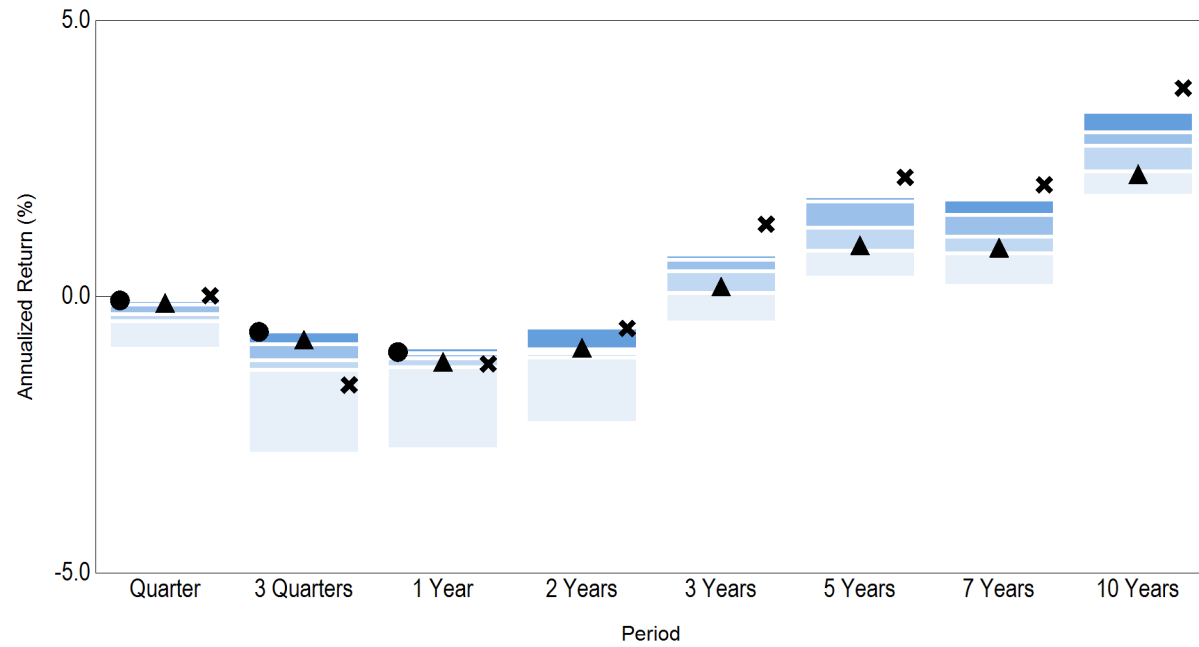
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Fixed Income	3.6%	2.5%	1.2	0.5	1.8%
Blended Fixed Income Index	2.6%	2.7%	0.8	--	0.0%
Core Fixed	2.8%	2.7%	0.9	0.5	1.4%
BBgBarc US Aggregate TR	2.2%	2.7%	0.6	--	0.0%
FIAM Bond	2.8%	2.8%	0.8	0.8	0.7%
BBgBarc US Aggregate TR	2.2%	2.7%	0.6	--	0.0%
Opportunistic Credit	6.6%	3.5%	1.7	0.5	3.4%
BBgBarc BA Intermediate HY	4.7%	4.0%	1.0	--	0.0%
Angelo Gordon STAR	13.4%	7.0%	1.9	1.4	7.9%
BBgBarc US Aggregate TR	2.2%	2.7%	0.6	--	0.0%
Brigade Capital	4.9%	6.0%	0.7	0.0	3.9%
BBgBarc BA Intermediate HY	4.7%	4.0%	1.0	--	0.0%
Franklin Templeton	1.8%	6.4%	0.2	0.1	7.6%
BBgBarc Multiverse TR	0.9%	4.4%	0.1	--	0.0%

InvestorForce All DB Total Fix Inc Net Return Comparison



	Return (Rank)							
	Quarter	3 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	1.3	1.7	2.2	3.6	5.0	5.8	5.4	8.2
25th Percentile	0.6	-0.2	0.3	1.8	3.8	3.6	4.1	5.8
Median	0.3	-0.9	-0.5	0.9	2.9	2.7	3.2	4.9
75th Percentile	0.1	-1.7	-1.1	-0.2	2.0	2.1	2.6	4.2
95th Percentile	-1.0	-5.3	-2.7	-1.5	0.9	1.3	1.6	3.0
# of Portfolios	312	311	310	297	293	271	237	191
● Fixed Income	0.6 (26)	0.0 (22)	0.5 (21)	3.2 (9)	4.3 (12)	3.6 (28)	4.5 (16)	5.8 (25)
▲ Blended Fixed Income Index	0.8 (19)	-0.8 (47)	-0.5 (48)	0.7 (55)	3.0 (50)	2.6 (52)	2.5 (80)	4.1 (77)

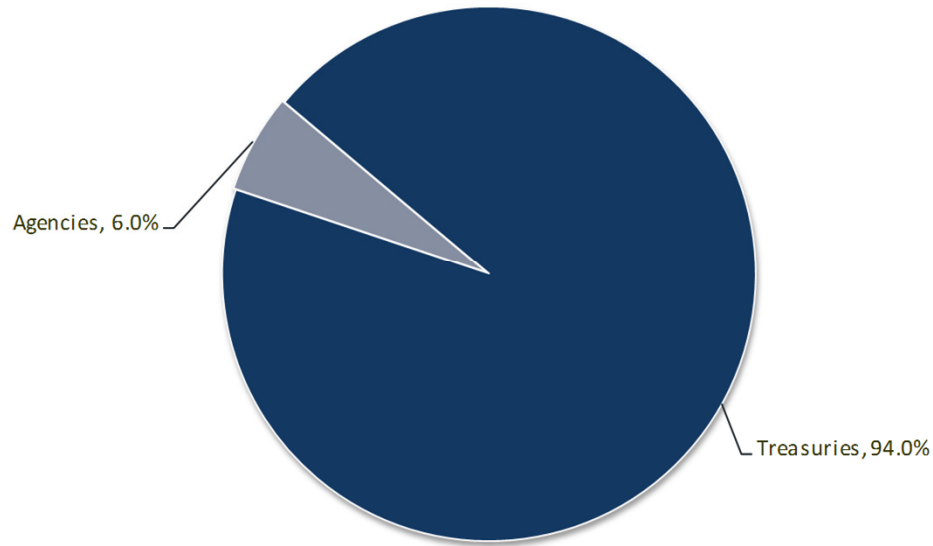
eV US Government Fixed Inc Net Return Comparison



	Return (Rank)															
5th Percentile	-0.1	-0.6	-0.9	-0.6	0.8	1.8	1.8	3.3								
25th Percentile	-0.1	-0.8	-1.0	-0.9	0.7	1.7	1.5	3.0								
Median	-0.3	-1.1	-1.1	-1.0	0.5	1.3	1.1	2.7								
75th Percentile	-0.4	-1.3	-1.3	-1.1	0.1	0.8	0.8	2.3								
95th Percentile	-0.9	-2.8	-2.8	-2.3	-0.5	0.4	0.2	1.8								
# of Portfolios	11	11	11	11	11	11	11	11								
● BlackRock Intermediate Govt	-0.1	(5)	-0.6	(6)	-1.0	(23)	--	(--)	--	(--)	--	(--)	--	(--)	--	(--)
▲ BBgBarc US Govt Int TR	-0.1	(16)	-0.8	(13)	-1.2	(65)	-0.9	(22)	0.2	(68)	0.9	(70)	0.9	(71)	2.2	(79)
✕ BBgBarc US Aggregate TR	0.0	(1)	-1.6	(87)	-1.2	(69)	-0.6	(7)	1.3	(1)	2.2	(1)	2.0	(1)	3.8	(1)

BlackRock Intermediate Govt Market Duration Pool
 Bond Sector Allocation

Period Ending: September 30, 2018



Sector	BBgBarc Intermediate		
	Account Weight	Govt Weight	Difference
Treasuries	94.0%	96.2%	-2.2%
Agencies	6.0%	3.8%	2.2%
Corporates	0.0%	0.0%	0.0%
Utilities	0.0%	0.0%	0.0%
Foreign	0.0%	0.0%	0.0%
MBS	0.0%	0.0%	0.0%
CMO	0.0%	0.0%	0.0%
ABS	0.0%	0.0%	0.0%
Municipals	0.0%	0.0%	0.0%
Others/Cash	0.0%	0.0%	0.0%
TOTAL	100.0%	100.0%	0.0%

BlackRock Intermediate Govt Market Duration Pool
 Bond Summary Statistics

Period Ending: September 30, 2018

Portfolio Characteristics		Portfolio
Total Number of Securities		321
Total Market Value	\$	219,692,433
Current Coupon		2.24
Yield to Maturity		2.89
Average Life		4.00
Duration		3.71
Quality		AA+

BBgBarc Intermediate Govt	
Current Coupon	2.12
Yield to Maturity	2.90
Average Life	4.04
Duration	3.74
Quality	AA+

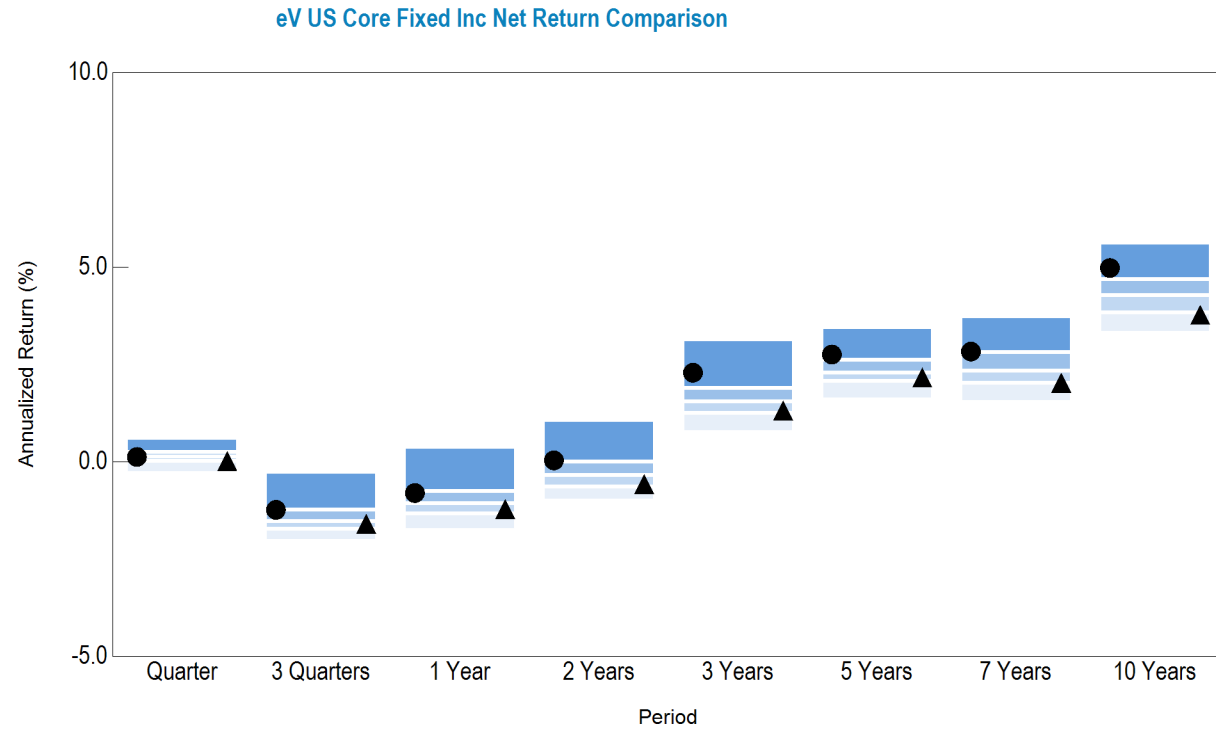
Yield to Maturity	
Range	% Held
0.0 - 5.0	100.0
5.0 - 7.0	0.0
7.0 - 9.0	0.0
9.0 - 11.0	0.0
11.0 - 13.0	0.0
13.0+	0.0
Unclassified	0.0

Average Life	
Range	% Held
0.0 - 1.0	n/a
1.0 - 3.0	n/a
3.0 - 5.0	n/a
5.0 - 10.0	n/a
10.0 - 20.0	n/a
20.0+	n/a
Unclassified	n/a

Duration	
Range	% Held
0.0 - 2.0	21.4
2.0 - 4.0	39.8
4.0 - 6.0	21.4
6.0 - 8.0	15.4
8.0+	2.0
Unclassified	0.0

Quality	
Range	% Held
Govt (10)	0.0
Aaa (10)	99.0
Aa (9)	1.0
A (8)	0.0
Baa (7)	0.0
Below Baa (6-1)	0.0
Other	0.0

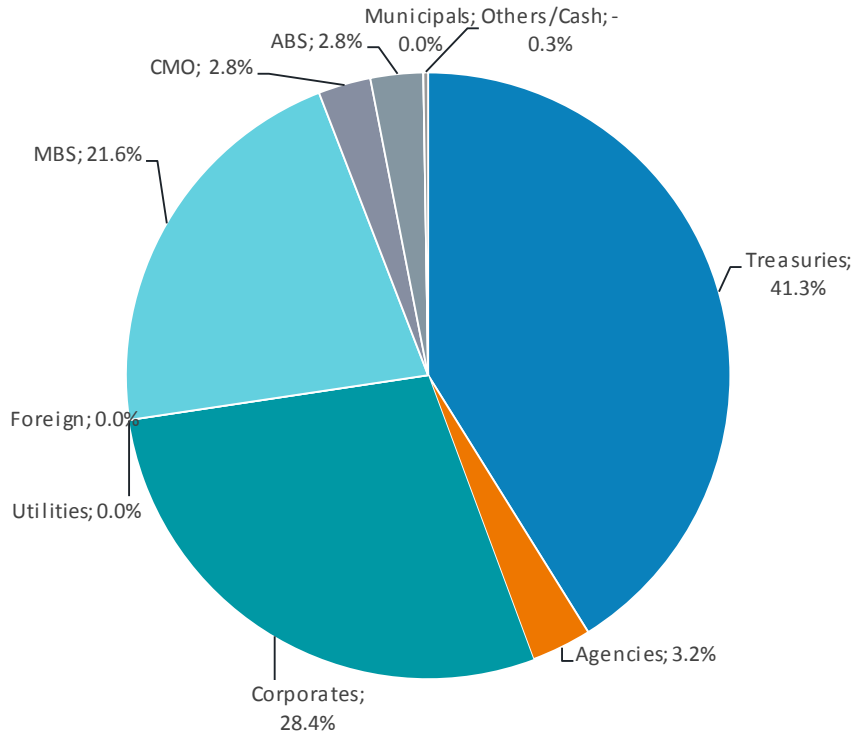
Coupon	
Range	% Held
0.0 - 5.0	100.0
5.0 - 7.0	0.0
7.0 - 9.0	0.0
9.0 - 10.0	0.0
10.0+	0.0
Unclassified	0.0



	Return (Rank)							
5th Percentile	0.6	-0.3	0.4	1.1	3.1	3.5	3.7	5.6
25th Percentile	0.3	-1.2	-0.7	0.0	1.9	2.6	2.8	4.7
Median	0.1	-1.5	-1.1	-0.3	1.6	2.3	2.4	4.3
75th Percentile	0.0	-1.7	-1.3	-0.6	1.3	2.1	2.0	3.8
95th Percentile	-0.3	-2.0	-1.7	-1.0	0.8	1.6	1.5	3.3
# of Portfolios	144	143	141	139	136	134	127	116
● FIAM Bond	0.1 (58)	-1.2 (26)	-0.8 (29)	0.0 (25)	2.3 (13)	2.8 (19)	2.8 (26)	5.0 (17)
▲ BBgBarc US Aggregate TR	0.0 (77)	-1.6 (64)	-1.2 (67)	-0.6 (72)	1.3 (69)	2.2 (67)	2.0 (76)	3.8 (80)

FIAM Bond Market Duration Pool
Bond Sector Allocation

Period Ending: September 30, 2018



Sector	Account Weight	BBgBarc Aggregate	
		Weight	Difference
Treasuries	41.3%	37.9%	3.5%
Agencies	3.2%	6.5%	-3.2%
Corporates	28.4%	25.1%	3.4%
Utilities	0.0%	0.0%	0.0%
Foreign	0.0%	0.0%	0.0%
MBS	21.6%	28.1%	-6.5%
CMO	2.8%	0.0%	2.8%
ABS	2.8%	2.5%	0.4%
Municipals	0.0%	0.0%	0.0%
Others/Cash	-0.3%	0.0%	-0.3%
TOTAL	100.0%	100.0%	0.1%

FIAM Bond Market Duration Pool
Bond Summary Statistics

Period Ending: September 30, 2018

Portfolio Characteristics		Portfolio	BBgBarc Aggregate	
Total Number of Securities		847		
Total Market Value	\$	260,531,458		
Current Coupon		3.07	3.19	
Yield to Maturity		3.51	3.45	
Average Life		8.55	8.17	
Duration		5.90	5.97	
Quality		AA	AA	

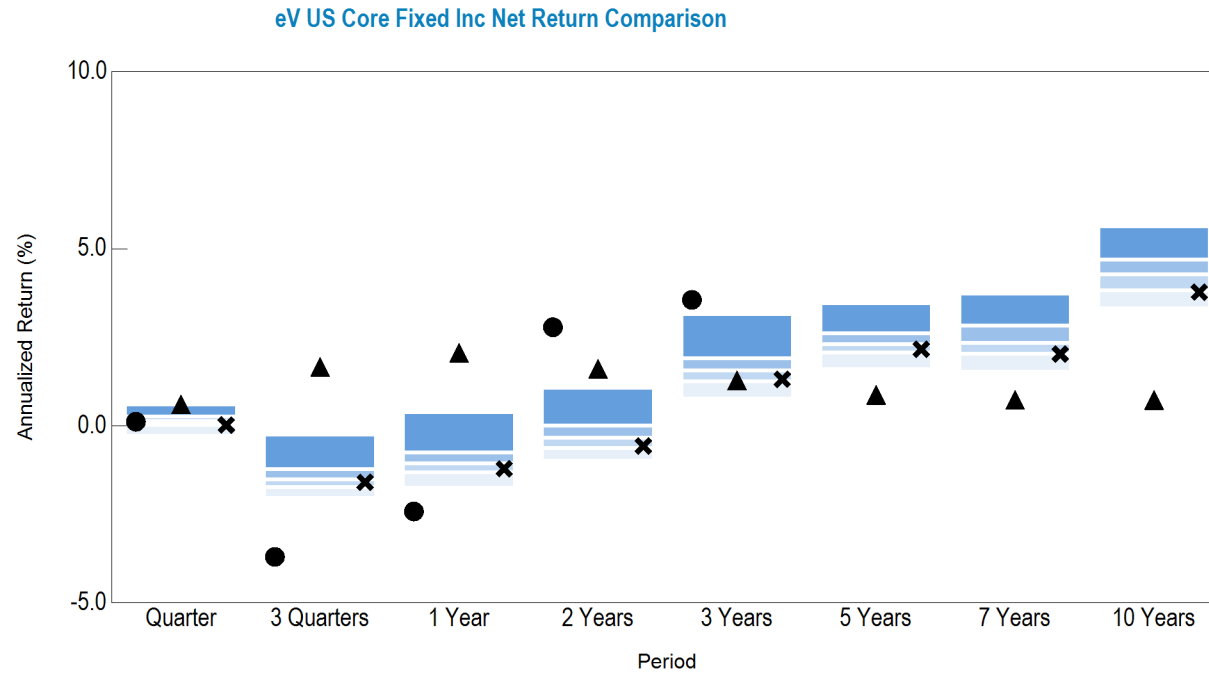
Yield to Maturity	
Range	% Held
0.0 - 5.0	95.9
5.0 - 7.0	5.8
7.0 - 9.0	0.9
9.0 - 11.0	0.0
11.0 - 13.0	0.0
13.0+	-2.7
Unclassified	0.0

Average Life	
Range	% Held
0.0 - 1.0	0.6
1.0 - 3.0	10.1
3.0 - 5.0	27.6
5.0 - 10.0	46.7
10.0 - 20.0	3.4
20.0+	11.7
Unclassified	0.0

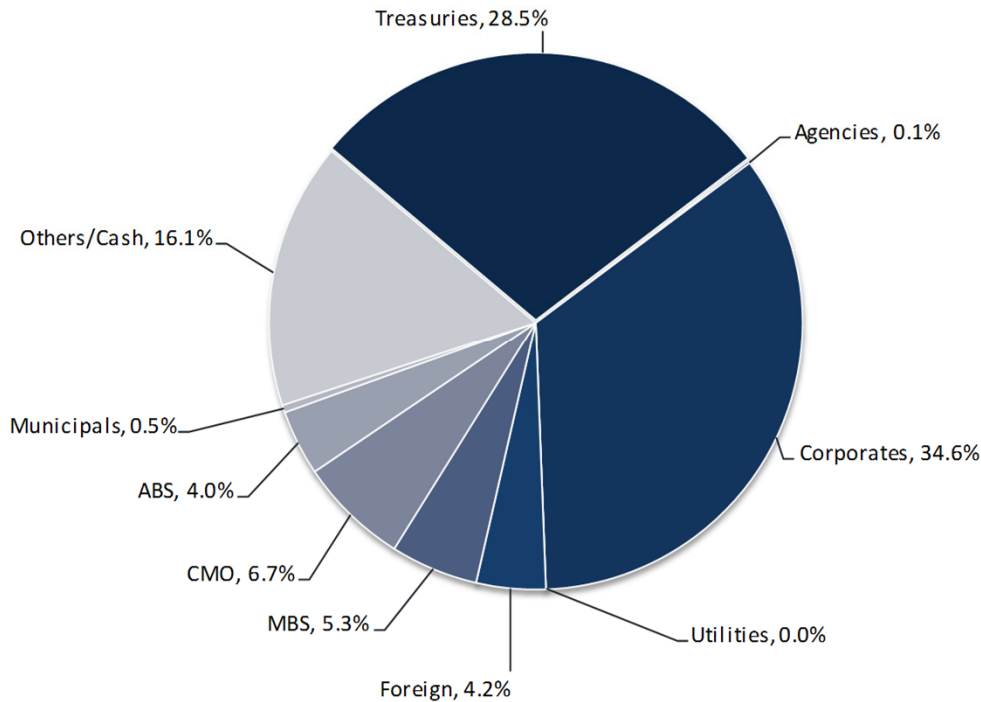
Duration	
Range	% Held
0.0 - 1.0	2.0
1.0 - 3.0	14.2
3.0 - 5.0	35.9
5.0 - 7.0	28.1
7.0 - 10.0	5.1
10.0+	14.6
Unclassified	0.0

Quality	
Range	% Held
Govt (10)	68.3
Aaa (10)	0.7
Aa (9)	1.5
A (8)	12.4
Baa (7)	17.5
Below Baa (6-1)	0.9
Other	-1.3

Coupon	
Range	% Held
0.0 - 5.0	85.6
5.0 - 7.0	7.9
7.0 - 9.0	1.4
9.0 - 11.0	0.0
11.0 - 13.0	0.0
13.0+	5.2
Unclassified	0.0



	Return (Rank)							
	Quarter	3 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	0.6	-0.3	0.4	1.1	3.1	3.5	3.7	5.6
25th Percentile	0.3	-1.2	-0.7	0.0	1.9	2.6	2.8	4.7
Median	0.1	-1.5	-1.1	-0.3	1.6	2.3	2.4	4.3
75th Percentile	0.0	-1.7	-1.3	-0.6	1.3	2.1	2.0	3.8
95th Percentile	-0.3	-2.0	-1.7	-1.0	0.8	1.6	1.5	3.3
# of Portfolios	144	143	141	139	136	134	127	116
● Western TRU	0.1 (62)	-3.7 (99)	-2.4 (99)	2.8 (1)	3.6 (3)	-- (--)	-- (--)	-- (--)
▲ 3-Month Libor Total Return USD	0.6 (5)	1.7 (1)	2.1 (1)	1.6 (3)	1.3 (73)	0.9 (99)	0.7 (99)	0.7 (99)
✕ BBgBarc US Aggregate TR	0.0 (77)	-1.6 (64)	-1.2 (67)	-0.6 (72)	1.3 (69)	2.2 (67)	2.0 (76)	3.8 (80)



Sector	Account Weight	BBgBarc Aggregate	
		Weight	Difference
Treasuries	28.5%	37.9%	-9.3%
Agencies	0.1%	6.5%	-6.3%
Corporates	34.6%	25.1%	9.5%
Utilities	0.0%	0.0%	0.0%
Foreign	4.2%	0.0%	4.2%
MBS	5.3%	28.1%	-22.9%
CMO	6.7%	0.0%	6.7%
ABS	4.0%	2.5%	1.5%
Municipals	0.5%	0.0%	0.5%
Others/Cash	16.1%	0.0%	16.1%
TOTAL	100.0%	100.0%	0.0%

Portfolio Characteristics		
	Portfolio	
Total Number of Securities		5,205
Total Market Value	\$	128,715,909
Current Coupon		5.60
Yield to Maturity		5.58
Average Life		5.49
Duration		4.23
Quality		A

BBgBarc Aggregate	
	3.19
	3.45
	8.17
	5.97
	AA

Yield to Maturity	
Range	% Held
0.0 - 5.0	66.1
5.0 - 7.0	25.4
7.0 - 9.0	15.8
9.0 - 11.0	2.3
11.0 - 13.0	1.1
13.0+	2.0
Unclassified	-12.7

Average Life	
Range	% Held
0.0 - 1.0	20.1
1.0 - 3.0	13.3
3.0 - 5.0	16.8
5.0 - 10.0	16.9
10.0 - 20.0	16.8
20.0+	16.1
Unclassified	0.0

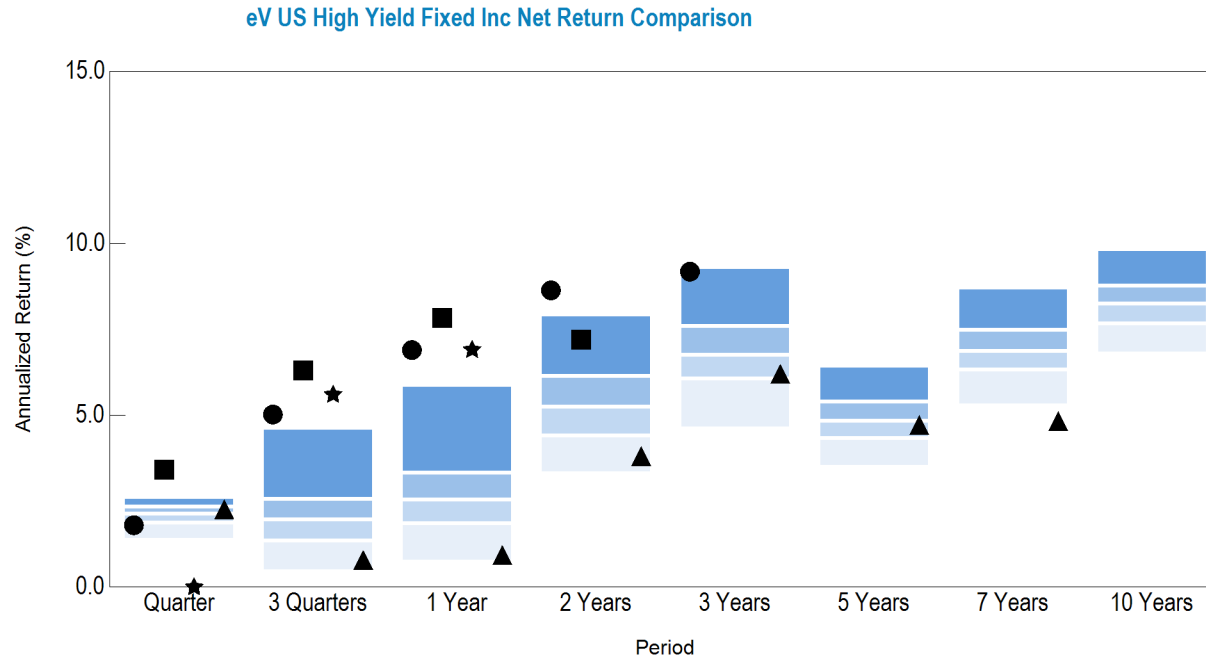
Duration	
Range	% Held
< 1.0	33.1
1.0 - 3.0	9.9
3.0 - 5.0	16.6
5.0 - 7.0	20.2
7.0 - 10.0	7.8
10.0+	12.4
Unclassified	0.0

*Unclassified includes negative YTM

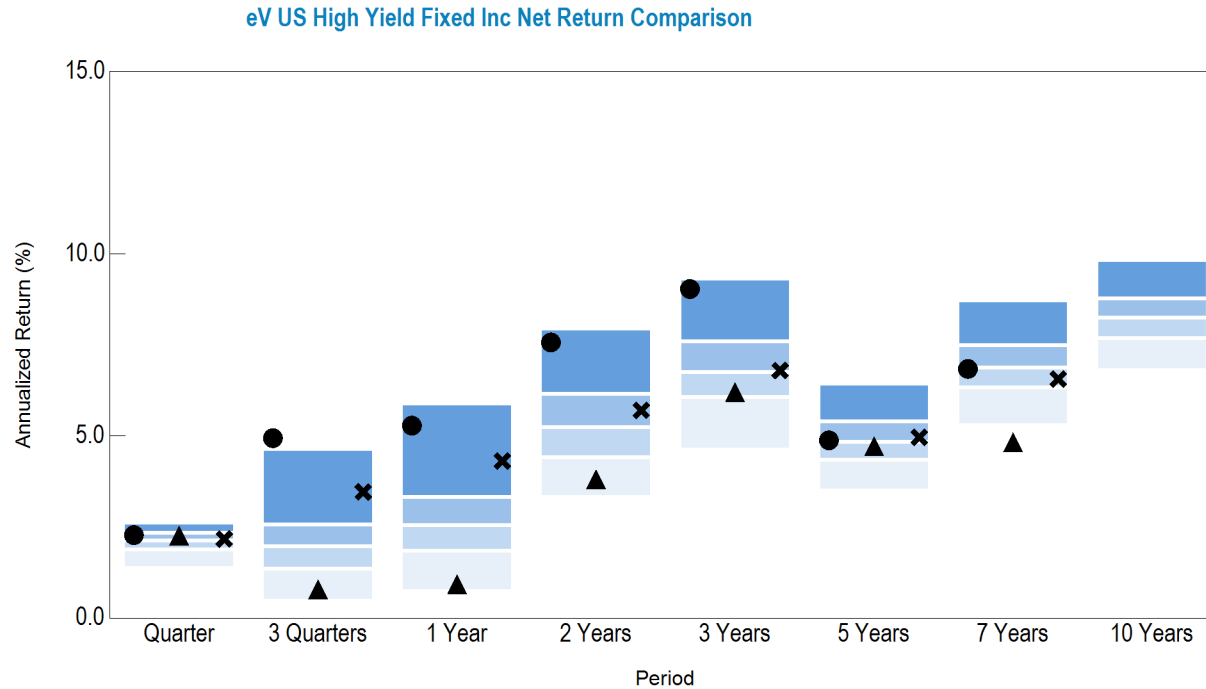
Quality	
Range	% Held
Govt* (10)	9.5
Aaa (10)	21.8
Aa (9)	2.0
A (8)	17.9
Baa (7)	26.4
Below Baa (6-1)	22.6
Other	-0.1

Coupon	
Range	% Held
0.0 - 5.0	58.1
5.0 - 7.0	26.4
7.0 - 9.0	11.2
9.0 - 10.0	1.2
10.0+	3.2
Unclassified	0.0

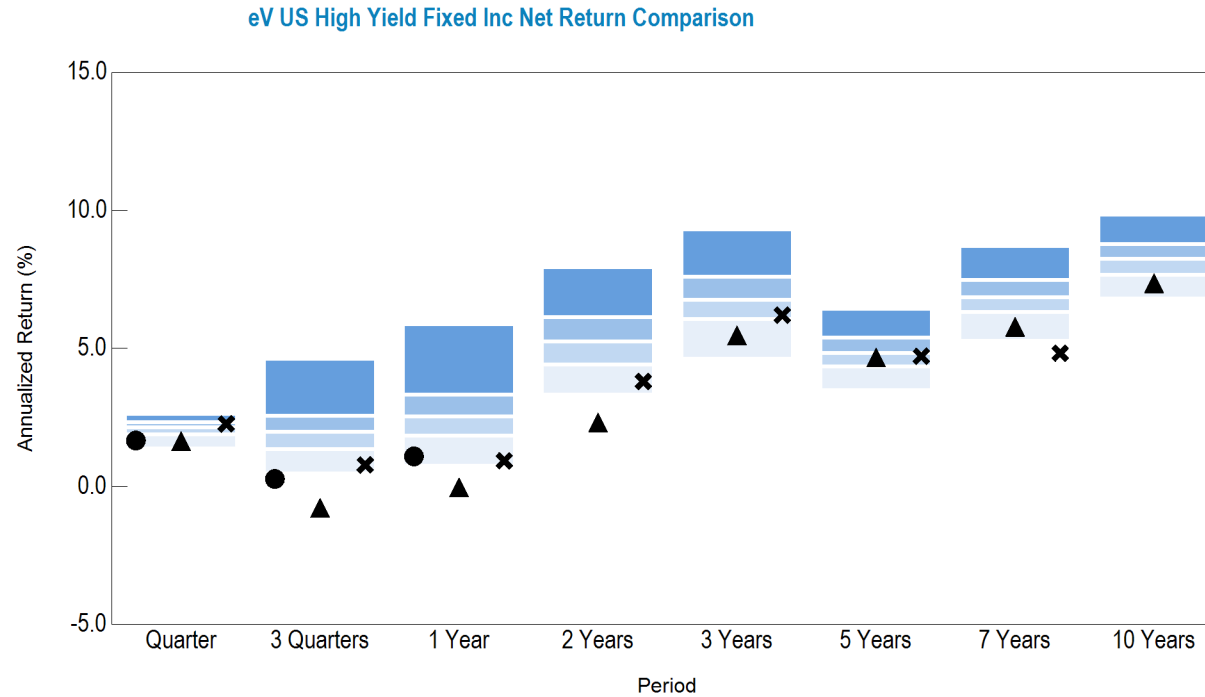
*Govt is specifically U.S Govt securities



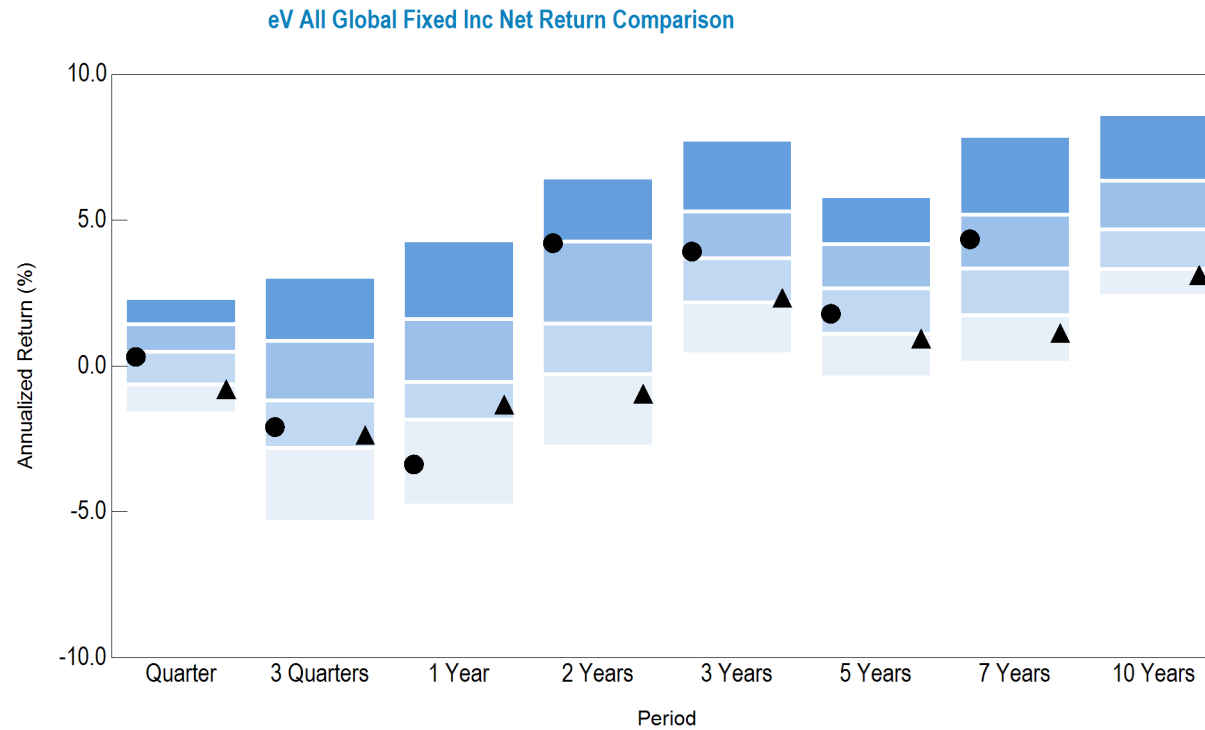
	Return (Rank)							
	Quarter	3 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	2.6	4.6	5.9	7.9	9.3	6.4	8.7	9.8
25th Percentile	2.3	2.6	3.3	6.2	7.6	5.4	7.5	8.8
Median	2.1	2.0	2.6	5.3	6.8	4.8	6.9	8.3
75th Percentile	1.9	1.4	1.9	4.4	6.1	4.4	6.3	7.7
95th Percentile	1.4	0.5	0.8	3.3	4.6	3.5	5.3	6.8
# of Portfolios	136	135	135	131	128	107	93	72
● Beach Point Select	1.8 (81)	5.0 (4)	6.9 (4)	8.6 (5)	9.2 (6)	-- (--)	-- (--)	-- (--)
■ TCP Direct Lending VIII	3.4 (1)	6.3 (2)	7.8 (2)	7.2 (12)	-- (--)	-- (--)	-- (--)	-- (--)
★ White Oak Yield	0.0 (98)	5.6 (3)	6.9 (4)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
▲ BBgBarc BA Intermediate HY	2.3 (36)	0.8 (93)	0.9 (94)	3.8 (91)	6.2 (71)	4.7 (56)	4.8 (97)	-- (--)



	Return (Rank)							
	Quarter	3 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	2.6	4.6	5.9	7.9	9.3	6.4	8.7	9.8
25th Percentile	2.3	2.6	3.3	6.2	7.6	5.4	7.5	8.8
Median	2.1	2.0	2.6	5.3	6.8	4.8	6.9	8.3
75th Percentile	1.9	1.4	1.9	4.4	6.1	4.4	6.3	7.7
95th Percentile	1.4	0.5	0.8	3.3	4.6	3.5	5.3	6.8
# of Portfolios	136	135	135	131	128	107	93	72
● Brigade Capital	2.3 (34)	4.9 (5)	5.3 (8)	7.6 (10)	9.0 (7)	4.9 (49)	6.8 (54)	-- (--)
▲ BBgBarc BA Intermediate HY	2.3 (36)	0.8 (93)	0.9 (94)	3.8 (91)	6.2 (71)	4.7 (56)	4.8 (97)	-- (--)
✕ 50% Barclays HY/ 50% Bank Loan	2.2 (46)	3.5 (12)	4.3 (13)	5.7 (37)	6.8 (50)	5.0 (46)	6.6 (65)	-- (--)



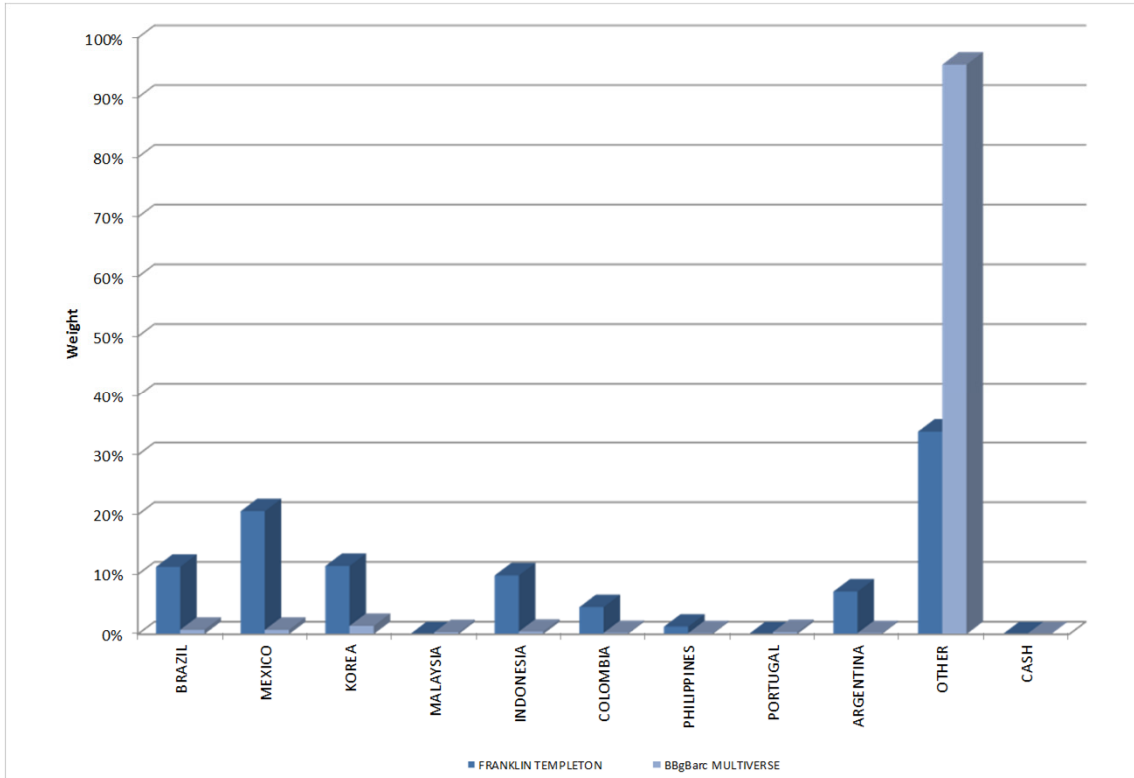
	Return (Rank)															
	Quarter		3 Quarters		1 Year		2 Years		3 Years		5 Years		7 Years		10 Years	
5th Percentile	2.6	4.6	5.9	7.9	9.3	6.4	8.7	9.8								
25th Percentile	2.3	2.6	3.3	6.2	7.6	5.4	7.5	8.8								
Median	2.1	2.0	2.6	5.3	6.8	4.8	6.9	8.3								
75th Percentile	1.9	1.4	1.9	4.4	6.1	4.4	6.3	7.7								
95th Percentile	1.4	0.5	0.8	3.3	4.6	3.5	5.3	6.8								
# of Portfolios	136	135	135	131	128	107	93	72								
● PIMCO Diversified	1.7 (85)	0.3 (96)	1.1 (92)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)								
▲ Blended PIMCO Diversified Index	1.6 (86)	-0.8 (99)	0.0 (99)	2.3 (99)	5.5 (86)	4.7 (59)	5.8 (92)	7.4 (86)								
✕ BBgBarc BA Intermediate HY	2.3 (36)	0.8 (93)	0.9 (94)	3.8 (91)	6.2 (71)	4.7 (56)	4.8 (97)	-- (--)								



	Return (Rank)							
	Quarter	3 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	2.3	3.1	4.3	6.4	7.8	5.8	7.9	8.6
25th Percentile	1.4	0.9	1.6	4.3	5.3	4.2	5.2	6.4
Median	0.5	-1.2	-0.5	1.5	3.7	2.7	3.4	4.7
75th Percentile	-0.6	-2.8	-1.8	-0.3	2.2	1.1	1.7	3.3
95th Percentile	-1.6	-5.4	-4.8	-2.7	0.4	-0.4	0.1	2.4
# of Portfolios	227	223	223	217	207	190	150	102
● Franklin Templeton	0.3 (56)	-2.1 (63)	-3.4 (88)	4.2 (26)	3.9 (46)	1.8 (67)	4.3 (35)	-- (--)
▲ BBgBarc Multiverse TR	-0.8 (80)	-2.4 (67)	-1.3 (63)	-0.9 (82)	2.3 (73)	0.9 (79)	1.1 (81)	3.1 (80)

Franklin Templeton
Portfolio Country Weights

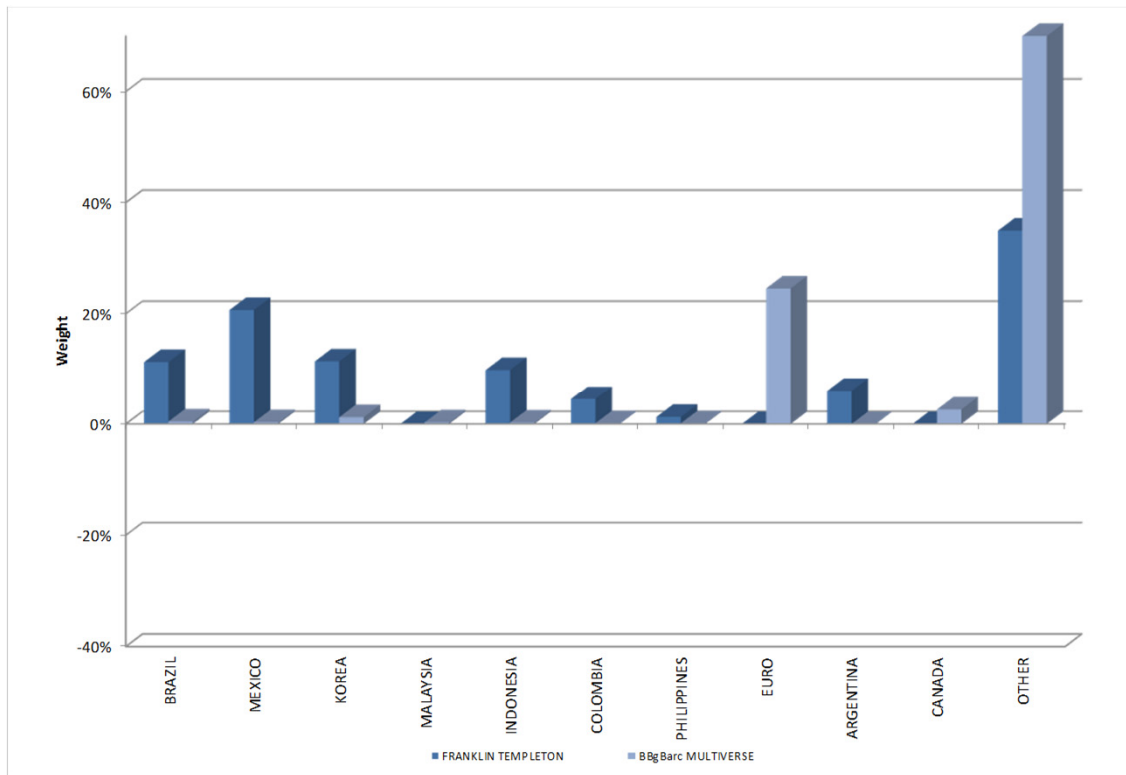
Period Ending: September 30, 2018



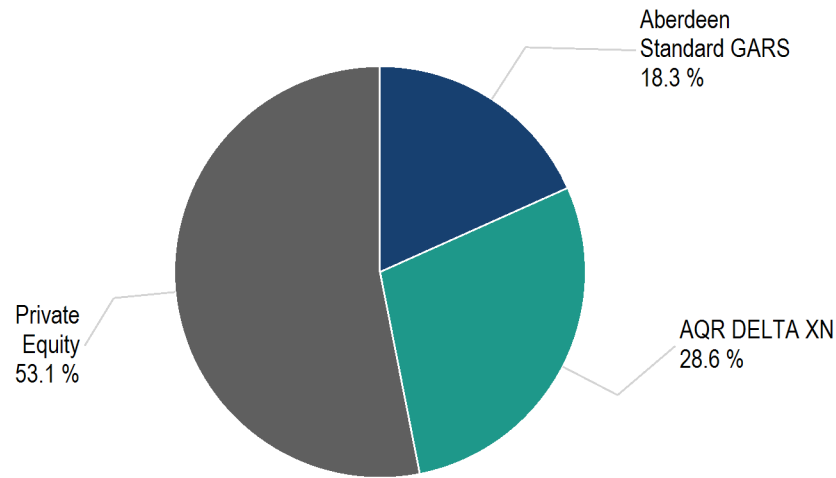
COUNTRY	MARKET VALUE	FRANKLIN TEMPLETON	BbgBarc MULTIVERSE	DIFF
BRAZIL	\$ 4,532	11.3%	0.7%	+10.6%
MEXICO	\$ 8,277	20.6%	0.7%	+19.9%
KOREA	\$ 4,589	11.4%	1.4%	+10.0%
MALAYSIA	\$ -	0.0%	0.3%	-0.3%
INDONESIA	\$ 3,954	9.8%	0.4%	+9.4%
COLOMBIA	\$ 1,820	4.5%	0.2%	+4.3%
PHILIPPINES	\$ 510	1.3%	0.2%	+1.1%
PORTUGAL	\$ -	0.0%	0.4%	-0.4%
ARGENTINA	\$ 2,869	7.1%	0.2%	+7.0%
OTHER	\$ 13,629	33.9%	95.5%	-61.6%
CASH	\$ -	0.0%	0.0%	0.0%
	\$ 40,180	100.0%	100.0%	0.0%

Franklin Templeton
Portfolio Currency Exposures

Period Ending: September 30, 2018



CURRENCY	MARKET VALUE	FRANKLIN TEMPLETON	BBgBarc MULTIVERSE	DIFF
BRAZIL	\$ 4,532	11.3%	0.4%	+10.8%
MEXICO	\$ 8,301	20.7%	0.3%	+20.4%
KOREA	\$ 4,585	11.4%	1.2%	+10.2%
MALAYSIA	\$ -	0.0%	0.3%	-0.3%
INDONESIA	\$ 3,954	9.8%	0.2%	+9.6%
COLOMBIA	\$ 1,820	4.5%	0.1%	+4.4%
PHILIPPINES	\$ 510	1.3%	0.1%	+1.2%
EURO	\$ -	0.0%	24.6%	-24.6%
ARGENTINA	\$ 2,431	6.1%	0.0%	+6.1%
CANADA	\$ -	0.0%	2.6%	-2.6%
OTHER	\$ 14,047	35.0%	70.2%	-35.2%
	\$ 40,180	100.0%	100.0%	0.0%



	Actual \$	Actual %	Manager Contribution to Excess Return %
Aberdeen Standard GARS	\$93,660,279	18.3%	-0.2%
AQR DELTA XN	\$146,440,389	28.6%	-1.0%
Private Equity	\$272,007,450	53.1%	0.5%
Actual vs. Policy Weight Difference			0.0%
Total	\$512,108,118	100.0%	-0.7%

Statistics Summary

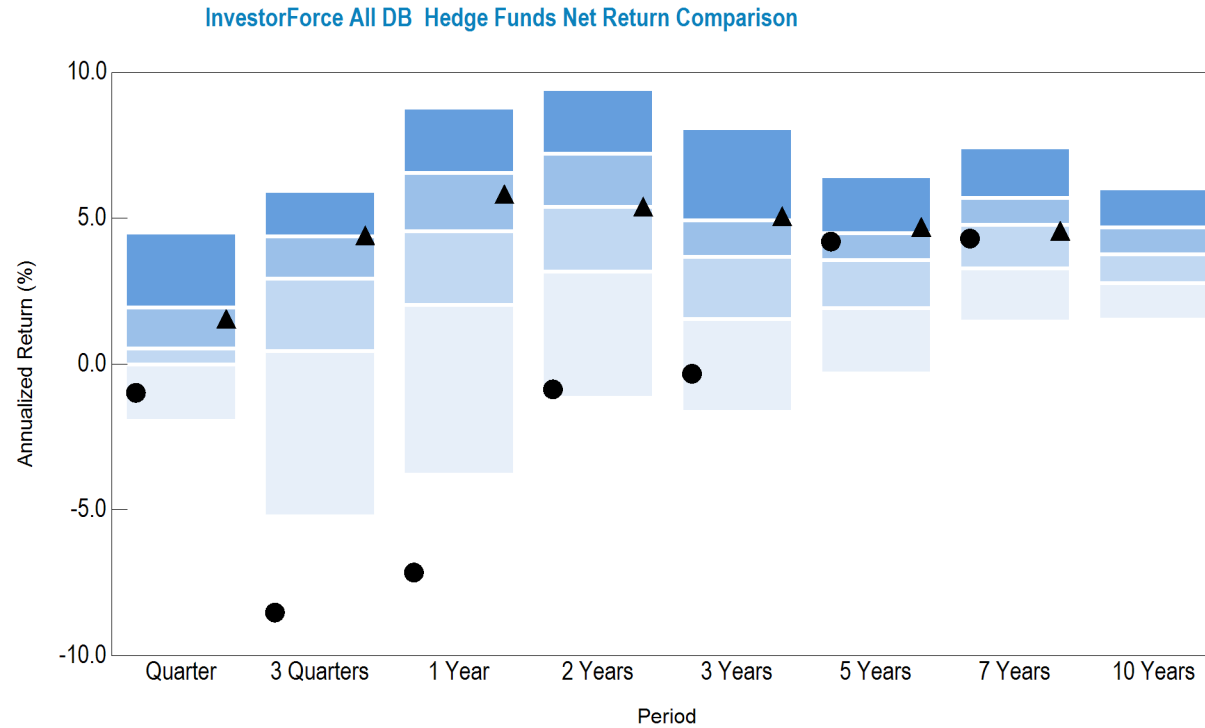
3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Alternatives	6.5%	5.3%	1.1	-0.7	5.8%
Blended Alternatives Index	10.6%	5.2%	1.9	--	0.0%
Private Equity	13.7%	8.5%	1.5	-0.3	11.6%
Blended Private Equity Index	17.1%	9.7%	1.7	--	0.0%
Hedge Fund/Absolute Return	-0.3%	4.0%	-0.3	-1.3	4.0%
Libor 1 month +4%	5.1%	0.2%	20.4	--	0.0%
AQR DELTA XN	-0.9%	5.1%	-0.3	-1.2	5.2%
Libor 1 month +4%	5.1%	0.2%	20.4	--	0.0%

Statistics Summary

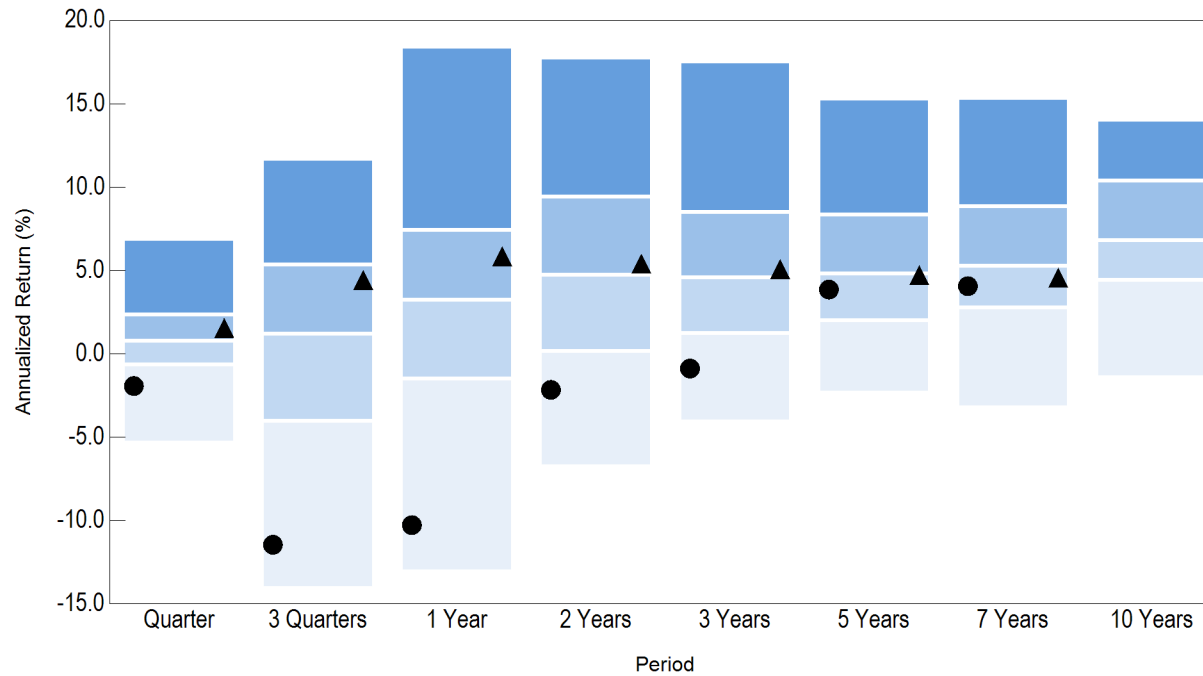
5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Alternatives	7.2%	5.0%	1.3	-0.1	6.1%
Blended Alternatives Index	7.8%	5.5%	1.3	--	0.0%
Private Equity	17.7%	9.5%	1.8	0.2	12.9%
Blended Private Equity Index	14.7%	9.8%	1.4	--	0.0%
Hedge Fund/Absolute Return	4.2%	5.0%	0.7	-0.1	5.0%
Libor 1 month +4%	4.7%	0.2%	20.1	--	0.0%
AQR DELTA XN	3.9%	5.6%	0.6	-0.2	5.6%
Libor 1 month +4%	4.7%	0.2%	20.1	--	0.0%



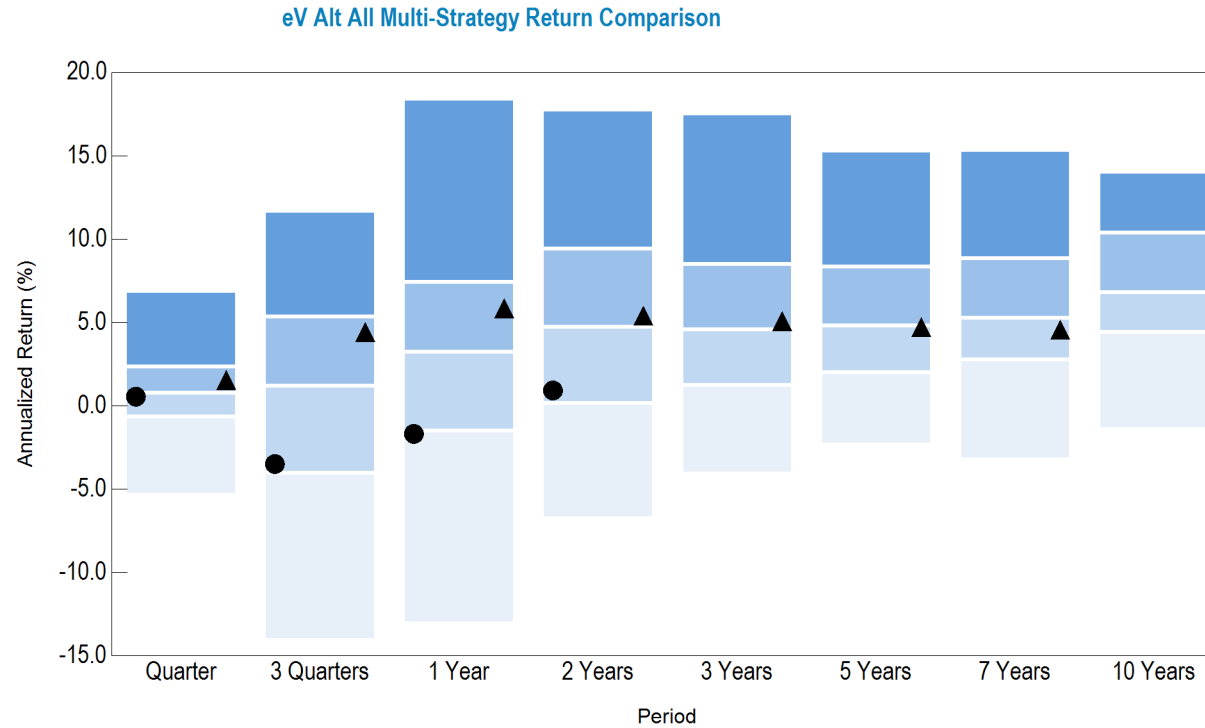
	Return (Rank)							
5th Percentile	4.5	5.9	8.8	9.4	8.1	6.4	7.4	6.0
25th Percentile	2.0	4.4	6.6	7.2	4.9	4.5	5.7	4.7
Median	0.6	2.9	4.6	5.4	3.7	3.6	4.8	3.8
75th Percentile	0.0	0.5	2.0	3.2	1.6	1.9	3.3	2.8
95th Percentile	-1.9	-5.2	-3.8	-1.2	-1.6	-0.3	1.5	1.5
# of Portfolios	227	223	223	217	208	197	171	99
● Hedge Fund/Absolute Return	-1.0 (93)	-8.5 (98)	-7.1 (98)	-0.9 (94)	-0.3 (89)	4.2 (32)	4.3 (61)	-- (--)
▲ Libor 1 month +4%	1.6 (29)	4.4 (25)	5.8 (36)	5.4 (51)	5.1 (24)	4.7 (23)	4.6 (56)	-- (--)

eV Alt All Multi-Strategy Return Comparison

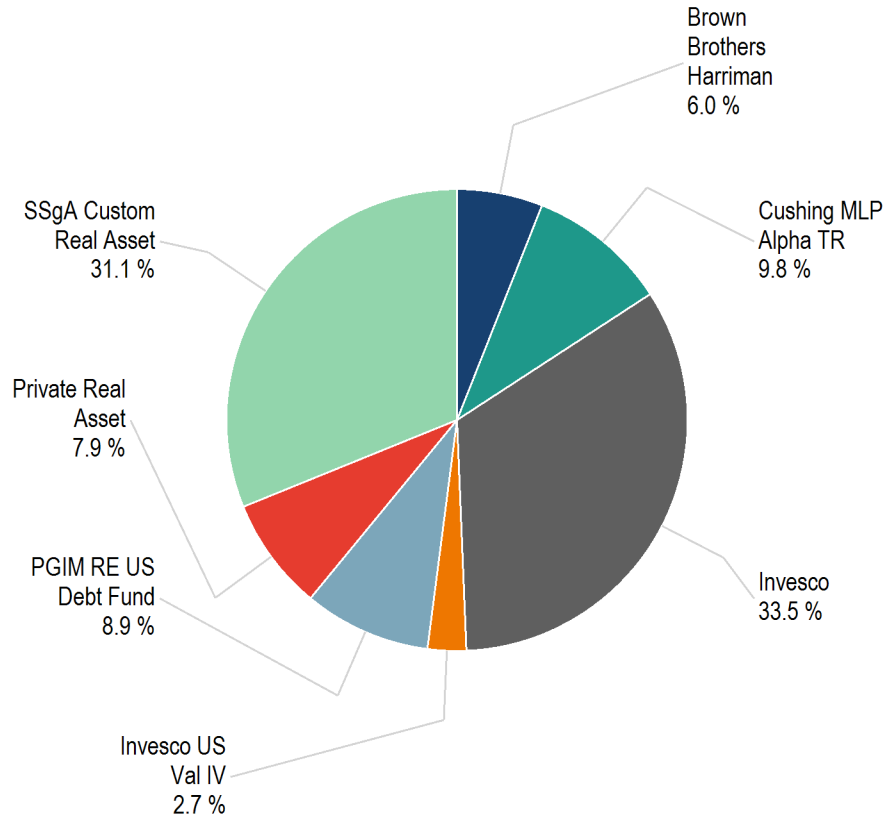


Return (Rank)

5th Percentile	6.9	11.7	18.4	17.7	17.5	15.3	15.3	14.0
25th Percentile	2.4	5.4	7.4	9.4	8.5	8.4	8.9	10.4
Median	0.8	1.2	3.3	4.8	4.6	4.9	5.3	6.9
75th Percentile	-0.6	-4.0	-1.5	0.2	1.3	2.0	2.8	4.4
95th Percentile	-5.3	-14.0	-13.0	-6.7	-4.0	-2.3	-3.2	-1.4
# of Portfolios	288	284	280	261	240	197	158	112
● AQR DELTA XN	-1.9 (83)	-11.5 (92)	-10.3 (93)	-2.2 (84)	-0.9 (85)	3.9 (58)	4.1 (65)	-- (--)
▲ Libor 1 month +4%	1.6 (37)	4.4 (30)	5.8 (34)	5.4 (46)	5.1 (48)	4.7 (51)	4.6 (59)	-- (--)



	Return (Rank)							
	Quarter	3 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	6.9	11.7	18.4	17.7	17.5	15.3	15.3	14.0
25th Percentile	2.4	5.4	7.4	9.4	8.5	8.4	8.9	10.4
Median	0.8	1.2	3.3	4.8	4.6	4.9	5.3	6.9
75th Percentile	-0.6	-4.0	-1.5	0.2	1.3	2.0	2.8	4.4
95th Percentile	-5.3	-14.0	-13.0	-6.7	-4.0	-2.3	-3.2	-1.4
# of Portfolios	288	284	280	261	240	197	158	112
● Aberdeen Standard GARS	0.5 (57)	-3.5 (74)	-1.7 (77)	0.9 (74)	-- (--)	-- (--)	-- (--)	-- (--)
▲ Libor 1 month +4%	1.6 (37)	4.4 (30)	5.8 (34)	5.4 (46)	5.1 (48)	4.7 (51)	4.6 (59)	-- (--)



	Actual \$	Actual %	Manager Contribution to Excess Return %
Brown Brother Harriman	\$47,585,201	6.0%	0.1%
Cushing MLP Alpha TR	\$77,645,181	9.8%	0.0%
Invesco	\$264,554,452	33.5%	0.1%
Invesco US Val IV	\$21,644,473	2.7%	0.0%
PGIM RE US Debt Fund	\$70,139,094	8.9%	0.0%
Private Real Asset	\$62,171,795	7.9%	-0.3%
SSgA Custom Real Asset	\$245,523,883	31.1%	0.2%
Actual vs. Policy Weight Difference			-0.4%
Total	\$789,264,080	100.0%	-0.4%

Statistics Summary

3 Years

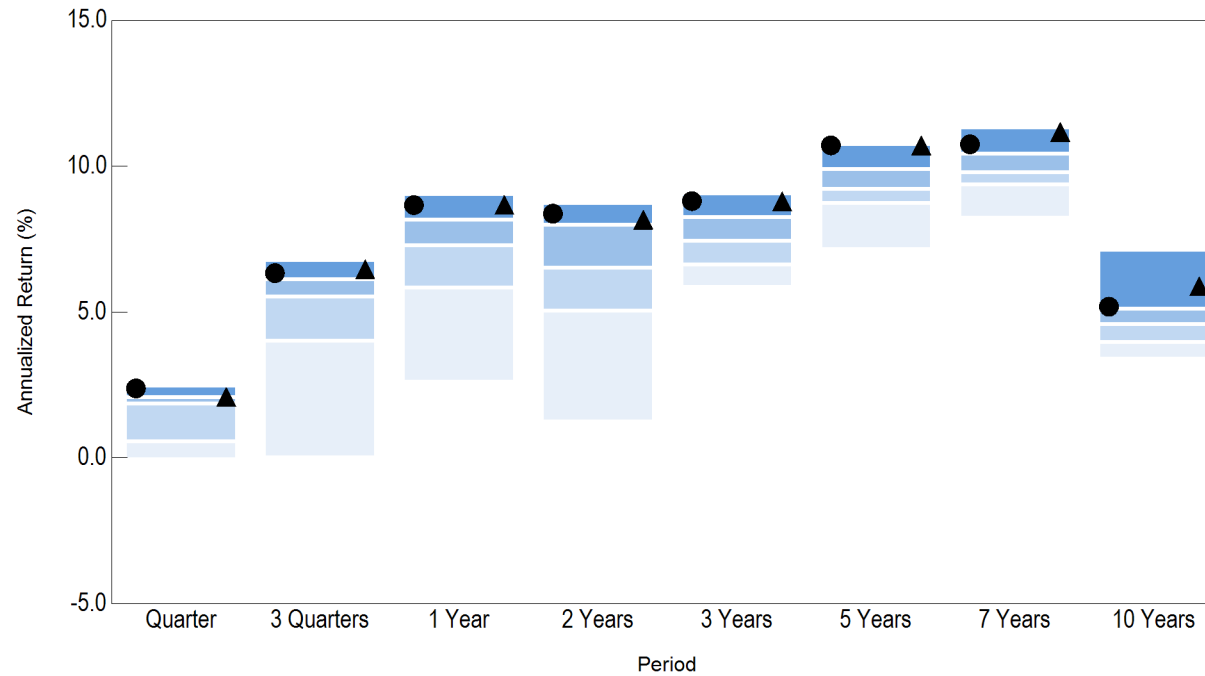
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Real Estate	8.81%	3.74%	2.12	0.00	1.13%
NCREIF ODCE	8.80%	3.62%	2.19	--	0.00%
Invesco	8.77%	3.72%	2.12	-0.03	1.24%
NCREIF ODCE	8.80%	3.62%	2.19	--	0.00%
Private Real Asset	10.11%	26.88%	0.34	0.16	27.47%
Blended Private Real Asset Index	5.57%	6.72%	0.70	--	0.00%
TIPS	2.39%	2.11%	0.72	0.29	1.19%
BBgBarc US TIPS TR	2.04%	3.00%	0.39	--	0.00%
Brown Brothers Harriman	2.39%	2.11%	0.72	0.29	1.19%
BBgBarc US TIPS TR	2.04%	3.00%	0.39	--	0.00%

Statistics Summary

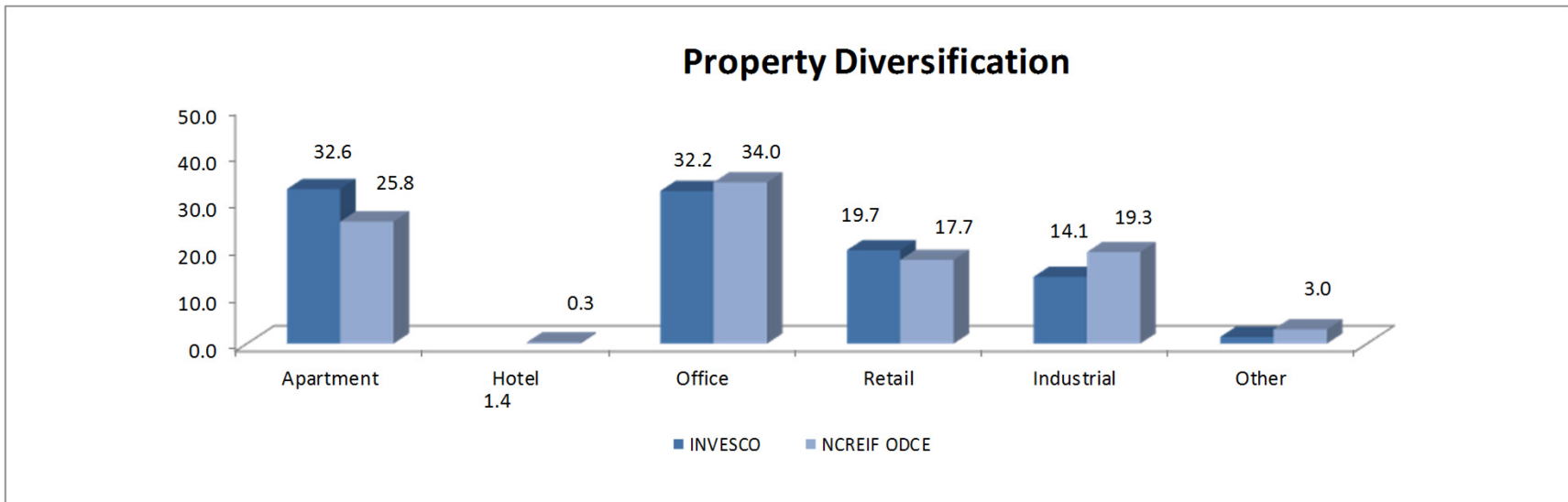
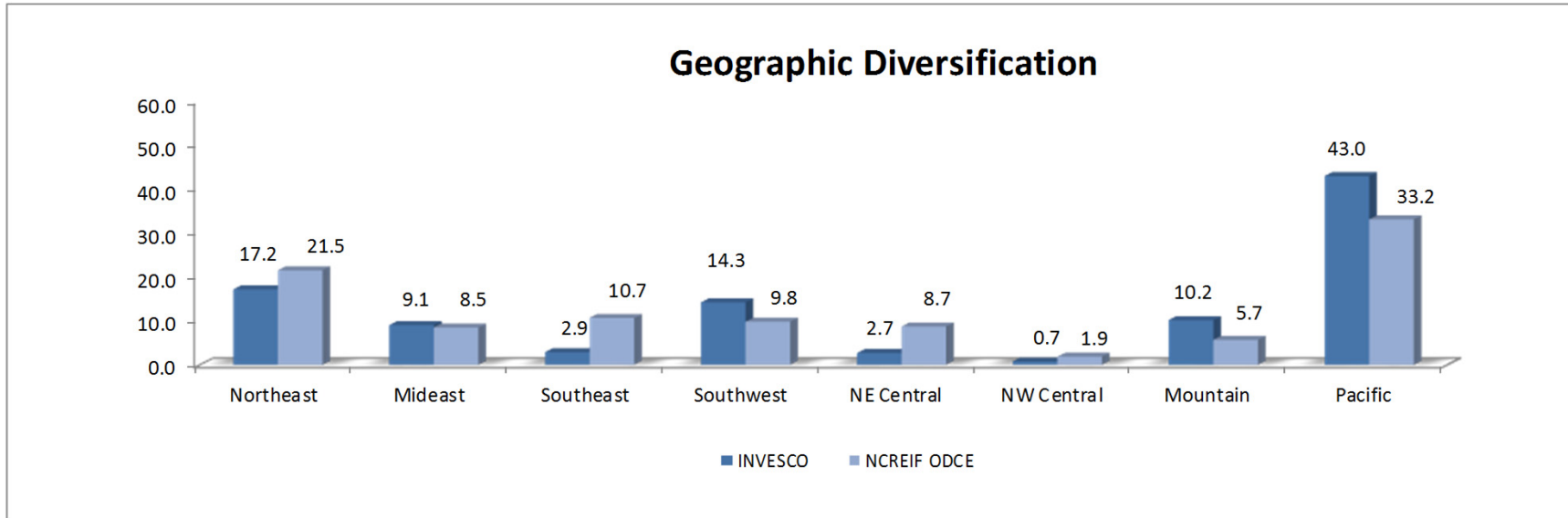
5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error Rank
Real Estate	10.72%	4.65%	2.19	0.00	21
NCREIF ODCE	10.71%	4.46%	2.28	--	1
Invesco	10.69%	4.64%	2.19	-0.02	--
NCREIF ODCE	10.71%	4.46%	2.28	--	--
TIPS	1.12%	2.66%	0.22	-0.18	--
BBgBarc US TIPS TR	1.37%	3.61%	0.23	--	--
Brown Brothers Harriman	1.12%	2.66%	0.22	-0.18	73
BBgBarc US TIPS TR	1.37%	3.61%	0.23	--	1

InvestorForce All DB Real Estate Pub Net Return Comparison



	Return (Rank)							
	Quarter	3 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	2.5	6.8	9.0	8.7	9.1	10.8	11.3	7.1
25th Percentile	2.1	6.1	8.2	8.0	8.3	9.9	10.4	5.1
Median	1.9	5.5	7.3	6.5	7.5	9.2	9.8	4.6
75th Percentile	0.6	4.0	5.9	5.1	6.6	8.8	9.4	4.0
95th Percentile	0.0	0.0	2.6	1.3	5.9	7.2	8.2	3.4
# of Portfolios	96	96	95	91	90	84	74	49
● Real Estate	2.4 (10)	6.3 (20)	8.7 (12)	8.4 (15)	8.8 (14)	10.7 (6)	10.8 (15)	5.2 (23)
▲ NCREIF ODCE	2.1 (27)	6.5 (15)	8.7 (12)	8.2 (18)	8.8 (15)	10.7 (6)	11.2 (6)	5.9 (10)



INVESCO Core Real Estate
Real Estate Valuation Analysis

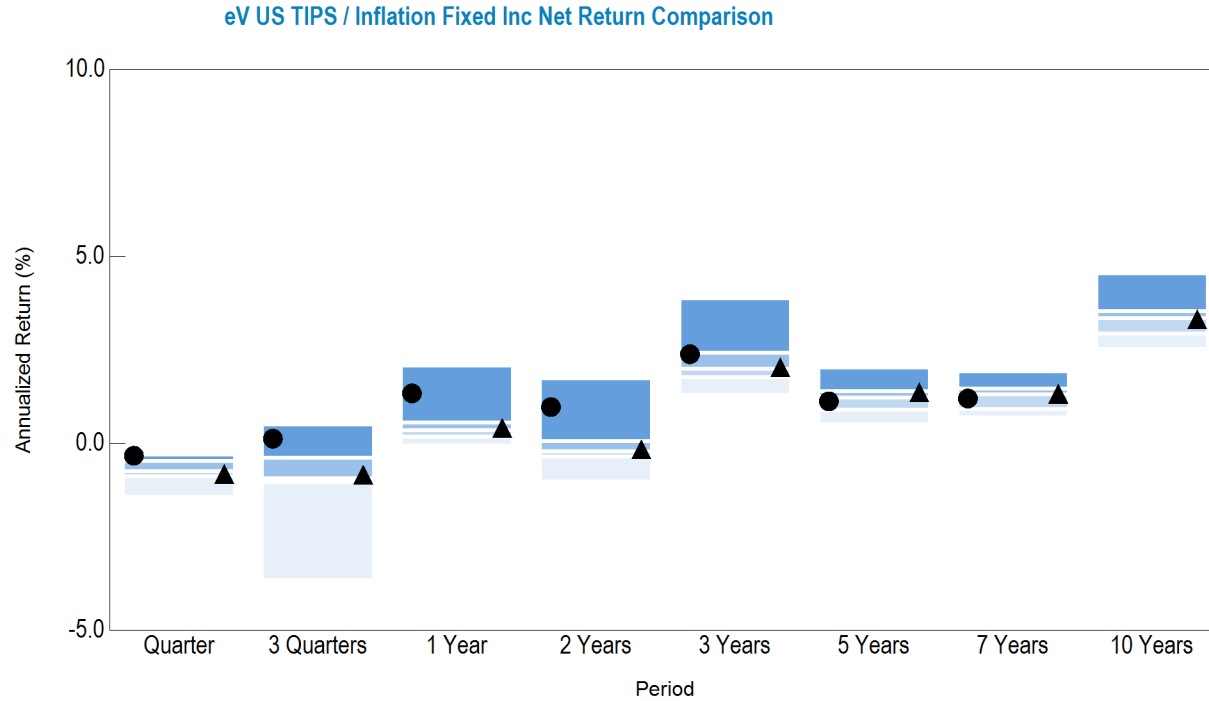
Period Ending: September 30, 2018

Property Name	MSA	Prior Quarter Carry Value	Current Quarter Carry Value	Net Market Value	Date Added to Fund	Last Valuation Date	SamCERA ownership as of 09/30/2018 2.69%
APARTMENTS							
Stoneridge Apartments	Pleasanton, CA	\$239,000,000	\$242,000,000	\$242,000,000	4Q06	September-18	\$6,513,164
Instrata Pentagon City	Arlington, VA	\$152,000,000	\$152,000,000	\$152,000,000	3Q10	September-18	\$4,090,913
Ladd Tower	Portland, OR	\$132,000,000	\$131,000,000	\$74,752,441	4Q10	September-18	\$2,011,880
Legacy Fountain Plaza	San Jose, CA	\$159,972,508	\$161,974,462	\$161,974,462	1Q11	September-18	\$4,359,365
Instrata Gramercy (fka The Elektra)	New York, NY	\$171,000,000	\$172,000,000	\$100,021,518	1Q11	September-18	\$2,691,969
Instrata Brooklyn Heights (fka 75 Clinton Street)	Brooklyn, NY	\$68,300,000	\$68,400,000	\$68,400,000	1Q12	September-18	\$1,840,911
The Artisan Laguna Beach	Orange County, CA	\$164,000,000	\$164,000,000	\$103,128,515	3Q12	September-18	\$2,775,591
The GoodWynn	Atlanta, GA	\$98,600,000	\$99,100,000	\$99,100,000	4Q12	September-18	\$2,667,168
Instrata Hell's Kitchen	New York, NY	\$194,000,000	\$194,000,000	\$194,000,000	1Q13	September-18	\$5,221,297
Sunset Vine Tower	Los Angeles, CA	\$102,000,000	\$103,000,000	\$103,000,000	2Q13	September-18	\$2,772,132
Instrata Ashton Uptown	Dallas, TX	\$123,000,000	\$123,000,000	\$66,454,602	4Q13	September-18	\$1,788,553
206 Bell	Seattle, WA	\$48,500,000	\$48,900,000	\$48,900,000	4Q13	September-18	\$1,316,090
Cadence Union Station	Denver, CO	\$90,700,000	\$92,600,000	\$55,888,116	1Q14	September-18	\$1,504,167
Joseph Arnold Lofts	Seattle, WA	\$71,400,000	\$71,400,000	\$37,536,882	2Q14	September-18	\$1,010,264
Verve	Denver, CO	\$108,000,000	\$108,000,000	\$108,000,000	3Q14	September-18	\$2,906,701
Broadstone Little Italy	San Diego CA	\$121,000,000	\$121,000,000	\$68,389,839	3Q14	September-18	\$1,840,637
33 Tehama	San Francisco, CA	\$297,123,440	\$301,179,684	\$180,310,259	3Q14	September-18	\$4,852,852
The Parker	Portland, OR	\$63,700,000	\$63,700,000	\$32,839,928	1Q15	September-18	\$883,851
Legacy West Apartments	Plano, TX	\$108,382,915	\$107,784,632	\$52,934,629	1Q15	September-18	\$1,424,677
The Royce	Irvine, CA	\$191,803,121	\$203,211,701	\$113,973,225	2Q15	September-18	\$3,067,464
Wheaton 121	Wheaton, IL	\$77,100,000	\$72,000,000	\$72,000,000	2Q15	September-18	\$1,937,801
Jefferson Marketplace	Washington, DC	\$155,000,000	\$159,000,000	\$89,373,697	4Q15	September-18	\$2,405,395
Retreat at Park Meadows	Littleton, CO	\$148,000,000	\$158,000,000	\$158,000,000	4Q15	September-18	\$4,252,396
North Water Apartments	Chicago, IL	\$265,000,000	\$265,000,000	\$265,000,000	1Q16	September-18	\$7,132,184
2270 Broadway	Oakland, CA	\$28,165,174	\$28,157,728	\$28,157,728	1Q16	September-18	\$757,834
Runway at Playa Vista Apartments	Playa Vista, CA	\$163,770,000	\$166,420,000	\$103,016,636	1Q16	September-18	\$2,772,580
Clayton Lane Apartments	Denver, CO	\$37,963,551	\$38,522,588	\$38,522,588	1Q16	September-18	\$1,036,793
Biscayne 27	Miami, FL	\$68,022,592	\$75,857,121	\$53,377,996	2Q16	September-18	\$1,436,610
Flats 8300	Washington DC	\$242,000,000	\$245,000,000	\$245,000,000	2Q16	September-18	\$6,593,906
407 1st Ave	New York, NY	\$197,000,000	\$199,000,000	\$199,000,000	4Q16	September-18	\$5,355,866
5250 Park	Miami, FL	\$26,131,258	\$34,995,368	\$25,483,650	2Q17	September-18	\$685,864
The Mason	Pleasanton, CA	\$100,000,000	\$101,000,000	\$101,000,000	3Q17	September-18	\$2,718,304
		\$4,212,634,557	\$4,271,203,284	\$3,441,536,709			\$92,625,177
INDUSTRIAL							
Arjons Industrial Park	San Diego CA	\$45,300,000	\$45,600,000	\$45,600,000	2Q04	September-18	\$1,227,274
Gateway Business Park	Dallas TX	\$13,500,000	\$14,400,000	\$14,400,000	2Q04	September-18	\$387,560
Hayward Industrial	Oakland CA	\$195,800,000	\$206,900,000	\$206,900,000	3Q04-3Q07	September-18	\$5,568,486
Oakesdale Commerce Center	Seattle - Belle - Eve WA	\$61,300,000	\$62,300,000	\$62,300,000	1Q06	September-18	\$1,676,736
South Bay Industrial	Los Angeles, CA	\$58,400,000	\$60,600,000	\$60,600,000	4Q06	September-18	\$1,630,982
Steeplechase Portfolio	Capitol Heights, MD	\$105,500,000	\$106,400,000	\$106,400,000	1Q11	September-18	\$2,863,639
Airport Trade Center Portfolio	Dallas, TX	\$135,500,000	\$142,000,000	\$142,000,000	1Q11	September-18	\$3,821,774
IE Logistics	San Bernardino, CA	\$150,000,000	\$152,100,000	\$152,100,000	3Q11	September-18	\$4,093,604
Railhead Industrial	Dallas, TX	\$66,200,000	\$66,400,000	\$66,400,000	4Q11	September-18	\$1,787,083
Empire Gateway aka Chino South Logistics Center	Chino, CA	\$282,000,000	\$292,000,000	\$292,000,000	4Q12	September-18	\$7,858,859
SFO Logistics Center	San Francisco, CA	\$163,000,000	\$163,000,000	\$163,000,000	4Q13	September-18	\$4,386,966
Miami Industrial Portfolio	Various, FL	\$85,466,334	\$86,021,228	\$59,511,427	1Q16	September-18	\$1,601,685
Miami Industrial Portfolio - Fedex	Hollywood, FL	\$43,700,000	\$45,000,000	\$30,827,352	1Q16	September-18	\$829,684
OMP Burbank	Los Angeles, CA	\$72,305,480	\$71,898,228	\$71,898,228	2Q16	September-18	\$1,935,062
Pacific Commons	Freemont, CA	\$154,973,874	\$173,937,156	\$156,597,248	1Q17	September-18	\$4,214,643
Gateway 80 Business Park	Fairfield, CA	\$106,600,000	\$106,500,000	\$106,500,000	1Q18	September-18	\$2,866,330
Meridian Distribution Center II	Riverside, CA	\$0	\$52,370,000	\$52,370,000	3Q18	Acq 3Q18	\$1,409,481
		\$1,739,545,687	\$1,847,426,611	\$1,789,404,254			\$48,159,848

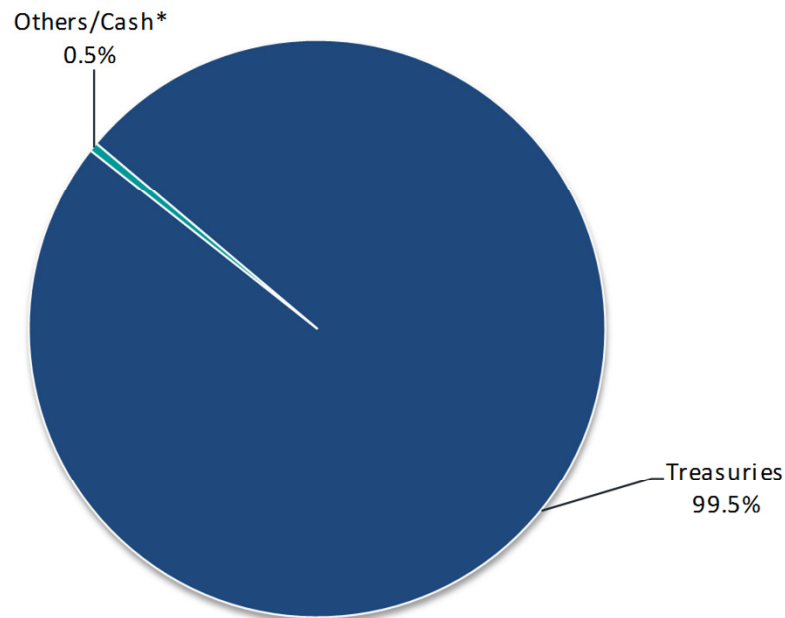
INVESCO Core Real Estate
Real Estate Valuation Analysis

Period Ending: September 30, 2018

OFFICE							
55 Cambridge Parkway	Boston MA - NH	\$308,000,000	\$346,000,000	\$346,000,000	4Q06	September-18	\$9,312,210
1111 Pennsylvania Avenue	Washington, D.C.	\$345,000,000	\$345,000,000	\$345,000,000	4Q10	September-18	\$9,285,296
1800 Larimer	Denver, CO	\$330,000,000	\$331,000,000	\$331,000,000	1Q11	September-18	\$8,908,501
Hillview Office	San Jose, CA	\$79,600,000	\$75,600,000	\$75,600,000	3Q12	September-18	\$2,034,691
Williams Tower	Houston, TX	\$600,000,000	\$602,000,000	\$419,753,355	1Q13	September-18	\$11,297,200
Westlake Park Place	Westlake Village, CA	\$109,000,000	\$109,000,000	\$109,000,000	4Q13	September-18	\$2,933,615
101 Second	San Francisco, CA	\$416,000,000	\$434,000,000	\$434,000,000	1Q14	September-18	\$11,680,633
Energy Crossing II	Houston, TX	\$104,000,000	\$104,000,000	\$104,000,000	2Q14	September-18	\$2,799,046
1776 Wilson Blvd.	Arlington, VA	\$89,500,000	\$88,300,000	\$88,300,000	3Q14	September-18	\$2,376,497
631 Howard	San Francisco, CA	\$95,600,000	\$98,100,000	\$98,100,000	3Q14	September-18	\$2,640,254
Barton Oaks	Austin, TX	\$94,200,000	\$95,000,000	\$95,000,000	3Q14	September-18	\$2,556,821
Hercules East and South Campus	Los Angeles, CA	\$182,150,051	\$184,931,042	\$184,931,042	3Q14	September-18	\$4,977,216
The Reserve	Playa Vista, CA	\$383,747,471	\$384,030,283	\$384,030,283	1Q15	September-18	\$10,335,753
Fort Point Portfolio	Boston, MA	\$247,336,511	\$259,208,664	\$259,208,664	2Q15	September-18	\$6,976,316
Summit IV	Aliso Viejo, CA	\$113,000,000	\$113,000,000	\$75,540,875	2Q15	September-18	\$2,033,100
1101 Westlake	Seattle, WA	\$136,000,000	\$137,000,000	\$137,000,000	3Q15	September-18	\$3,687,204
PearlWest	Boulder, CO	\$127,000,000	\$131,000,000	\$131,000,000	4Q16	September-18	\$3,525,721
The Mark 302	Santa Monica, CA	\$50,528,109	\$50,991,394	\$50,991,394	1Q18	September-18	\$1,372,377
430 West 15th Street	New York NY	\$158,500,000	\$160,000,000	\$160,000,000	2Q18	September-18	\$4,306,224
Ten Fawcett	Cambridge, MA	\$0	\$58,755,250	\$58,755,250	3Q18	Acq 3Q18	\$1,581,333
Press Blocks	Portland, OR	\$0	\$4,234,440	\$4,234,440	3Q18	Acq 3Q18	\$113,965
		\$4,069,693,140	\$4,215,982,701	\$3,941,599,867			\$106,083,827
RETAIL							
Chandler Pavilion	Phoenix - Mesa AZ	\$26,400,000	\$26,700,000	\$26,700,000	2Q04	September-18	\$718,601
Cityline at Tenley	Washington, D.C.	\$61,000,000	\$63,400,000	\$63,400,000	4Q05	September-18	\$1,706,341
Ridgehaven Shopping Center	Minnnetonka, MN	\$42,500,000	\$42,500,000	\$42,500,000	4Q05	September-18	\$1,143,841
The Beacon Garage (units)	San Francisco, CA	\$36,249,909	\$36,526,099	\$36,526,099	1Q06	September-18	\$983,060
The Beacon Office (210 King)	San Francisco, CA	\$28,500,000	\$28,700,000	\$28,700,000	1Q15	September-18	\$772,429
Hawthorne Plaza	Overland Park, KS	\$53,425,000	\$53,150,000	\$53,150,000	4Q07	September-18	\$1,430,474
The Loop	Boston MA - NH	\$83,000,000	\$83,000,000	\$83,000,000	1Q08	September-18	\$2,233,854
Westbank Market	Austin, TX	\$63,000,000	\$63,900,000	\$63,900,000	3Q10	September-18	\$1,719,798
910 Lincoln Road	Miami, FL	\$35,100,000	\$35,200,000	\$35,200,000	4Q10	September-18	\$1,719,798
Lake Pointe Village	Houston, TX	\$86,950,000	\$87,350,000	\$87,350,000	4Q11	September-18	\$947,369
Safeway Kapahulu	Hawaii	\$95,100,000	\$94,800,000	\$58,937,747	4Q11	September-18	\$1,586,245
Safeway Burlingame	San Francisco, CA	\$58,600,000	\$58,900,000	\$36,411,952	4Q11	September-18	\$979,988
Shamrock Plaza	Oakland, CA	\$40,700,000	\$40,800,000	\$24,701,401	4Q11	September-18	\$664,811
Pavilions Marketplace	West Hollywood, CA	\$70,600,000	\$70,600,000	\$46,159,317	1Q12	September-18	\$1,242,327
130 Prince	New York, NY	\$218,000,000	\$220,000,000	\$220,000,000	2Q12	September-18	\$5,921,058
Safeway Pleasanton	Pleasanton, CA	\$82,600,000	\$82,500,000	\$82,500,000	4Q12	September-18	\$2,220,397
Liberty Wharf	Boston, MA	\$97,300,000	\$97,400,000	\$67,962,583	4Q12	September-18	\$1,829,138
Shops at Legacy	Plano, TX	\$115,588,287	\$117,547,410	\$117,547,410	3Q13	September-18	\$3,163,659
Pasadena Commons	Pasadena, CA	\$61,900,000	\$63,400,000	\$63,400,000	4Q14	September-18	\$1,706,341
Rush Street Retail	Chicago, IL	\$16,900,000	\$16,900,000	\$16,900,000	4Q14	September-18	\$454,845
Legacy West Retail	Plano, TX	\$193,969,026	\$198,589,494	\$125,283,218	1Q15	September-18	\$3,371,860
Legacy West Land	Plano, TX	\$917,929	\$3,955,230	\$3,955,230	2Q17	September-18	\$106,451
131-137 Spring Street	New York, NY	\$224,000,000	\$212,000,000	\$99,200,000	3Q15	September-18	\$2,669,859
Runway at Playa Vista - Retail	Playa Vista, CA	\$127,200,000	\$127,730,000	\$65,385,564	1Q16	September-18	\$1,759,781
139 Spring	New York, NY	\$126,924,800	\$118,992,000	\$118,992,000	1Q16	September-18	\$3,202,539
Clayton Lane	Denver, CO	\$146,689,047	\$148,760,560	\$103,277,713	1Q16	September-18	\$2,779,606
4th & Colorado	Santa Monica, CA	\$13,280,000	\$13,280,000	\$13,280,000	1Q16	September-18	\$357,417
Legacy West - Block H	Plano, TX	\$6,713,845	\$7,098,996	\$7,098,996	4Q17	September-18	\$191,062
Shops at Crystals	Las Vegas, NV	\$293,750,000	\$298,750,000	\$162,970,929	2Q16	September-18	\$4,386,183
		\$2,575,607,934	\$2,581,703,691	\$2,023,664,061			\$53,833,563
Other							
Baranof - Walden Park	San Marcos, TX	\$9,664,361	\$9,650,448	\$9,650,448	1Q18	September-18	\$259,731
Baranof - Ranch Road 620	San Marcos, TX	\$8,928,029	\$8,915,176	\$8,915,176	1Q18	September-18	\$239,942
Baranof - Glenwood Avenue	Raleigh, NC	\$9,112,112	\$9,282,812	\$9,282,812	1Q18	September-18	\$249,837
Baranof - 1-84 & 60th	Vancouver, WA	\$20,893,429	\$21,506,712	\$21,506,712	1Q18	September-18	\$578,830
Baranof - Fishers Landing Vancouver	Vancouver, WA	\$15,370,937	\$15,900,262	\$15,900,262	1Q18	September-18	\$427,938
US Storage	Compton, CA	\$8,679,384	\$10,276,649	\$10,018,596	4Q17	September-18	\$269,639
The Quad	New York NY	\$71,566,306	\$65,016,212	\$29,879,142	2Q18	September-18	\$804,164
Baranof - 622 Capital	Raleigh, NC	\$0	\$18,611,578	\$18,611,578	3Q18	Acq 3Q18	\$500,910
51st Street Self Storage	Austin, TX	\$0	\$12,000,000	\$12,000,000	3Q18	Acq 3Q18	\$322,967
Campbell Self Storage	Campbell, CA	\$0	\$17,800,000	\$17,800,000	3Q18	Acq 3Q18	\$479,067
		\$144,214,559	\$188,959,848	\$153,564,724			\$4,133,026
Portfolio Total		\$12,741,695,877	\$13,105,276,135	\$11,349,769,615			\$304,835,441



	Return (Rank)							
5th Percentile	-0.3	0.5	2.1	1.7	3.9	2.0	1.9	4.5
25th Percentile	-0.5	-0.4	0.6	0.1	2.4	1.4	1.5	3.5
Median	-0.7	-0.9	0.4	-0.2	2.0	1.2	1.3	3.4
75th Percentile	-0.9	-1.0	0.2	-0.3	1.8	0.9	0.9	2.9
95th Percentile	-1.4	-3.6	-0.1	-1.0	1.3	0.5	0.7	2.5
# of Portfolios	21	20	20	20	20	18	16	13
● Brown Brothers Harriman	-0.3 (7)	0.1 (8)	1.3 (10)	1.0 (13)	2.4 (26)	1.1 (65)	1.2 (57)	-- (--)
▲ BBgBarc US TIPS TR	-0.8 (63)	-0.8 (45)	0.4 (40)	-0.2 (41)	2.0 (47)	1.4 (37)	1.3 (49)	3.3 (52)



Sector	Account Weight	BBgBarc TIPS	
		Index	Difference
Treasuries	99.5%	100.0%	-0.5%
Agencies	0.0%	0.0%	0.0%
Corporates	0.0%	0.0%	0.0%
Utilities	0.0%	0.0%	0.0%
Foreign	0.0%	0.0%	0.0%
MBS	0.0%	0.0%	0.0%
CMO	0.0%	0.0%	0.0%
ABS	0.0%	0.0%	0.0%
Municipals	0.0%	0.0%	0.0%
Others/Cash*	0.5%	0.0%	0.5%
TOTAL	100.0%	100.0%	0.0%

* May include Derivatives, Futures, Swaps, Credit Default Swaps, Total Return Swaps or Currency Contracts.

Brown Brothers Harriman
Bond Summary Statistics

Period Ending: September 30, 2018

Portfolio Characteristics		Portfolio	BBgBarc TIPS
Total Number of Securities		10	39
Total Market Value	\$	47,585,201	N/A
Current Coupon		1.09	0.71
Yield to Maturity		0.86	0.90
Average Life			
Duration		5.82	7.44
Quality		AAA	AAA

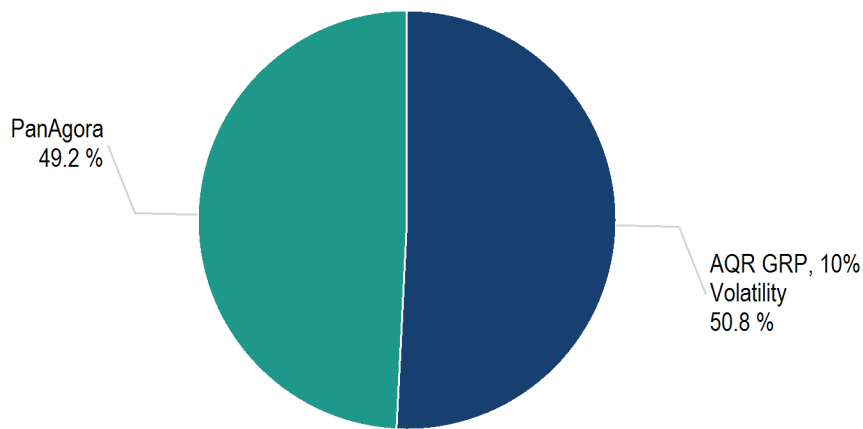
Yield to Maturity	
Range	% Held
0.0 - 5.0	100.0
5.0 - 7.0	0.0
7.0 - 9.0	0.0
9.0 - 11.0	0.0
11.0 - 13.0	0.0
13.0+	0.0
Unclassified	0.0

Average Life	
Range	% Held
0.0 - 3.0	18.0
3.0 - 5.0	28.3
5.0 - 10.0	35.2
10.0 - 15.0	6.4
15.0+	12.1
Unclassified	0.0

Duration	
Range	% Held
0.0 - 3.0	18.1
3.0 - 5.0	28.3
5.0 - 10.0	35.2
10.0 - 15.0	6.4
15.0+	12.1
Unclassified	0.0

Quality	
Range	% Held
Govt (10)	100.0
Aaa (10)	0.0
Aa (9)	0.0
A (8)	0.0
Baa (7)	0.0
Below Baa (6-1)	0.0
Other	0.0

Coupon	
Range	% Held
0.0 - 5.0	100.0
5.0 - 7.0	0.0
7.0 - 9.0	0.0
9.0 - 11.0	0.0
11.0 - 13.0	0.0
13.0+	0.0
Unclassified	0.0



	Actual \$	Actual %	Manager Contribution to Excess Return %
AQR GRP, 10% Volatility	\$176,834,984	50.8%	-1.2%
PanAgora	\$170,960,060	49.2%	-2.7%
Actual vs. Policy Weight Difference			0.0%
Total	\$347,795,044	100.0%	-3.9%

Statistics Summary

3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Risk Parity	7.2%	6.8%	0.9	-0.5	6.0%
Blended Risk Parity Index	10.0%	5.4%	1.7	--	0.0%
AQR GRP, 10% Volatility	7.1%	6.5%	1.0	-0.5	5.5%
Blended Risk Parity Index	10.0%	5.4%	1.7	--	0.0%
PanAgora	7.3%	7.5%	0.9	-0.4	6.9%
Blended Risk Parity Index	10.0%	5.4%	1.7	--	0.0%

Statistics Summary

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Risk Parity	5.8%	7.7%	0.7	-0.5	6.0%
Blended Risk Parity Index	8.6%	5.7%	1.4	--	0.0%
AQR GRP, 10% Volatility	4.7%	7.6%	0.5	-0.7	5.9%
Blended Risk Parity Index	8.6%	5.7%	1.4	--	0.0%

Total Fund
Performance Summary (Gross of Fees)

Period Ending: September 30, 2018

	3 Mo (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Total Fund	2.0	2.2	5.5	8.9	9.4	7.6	7.7
<i>Policy Index</i>	2.5	2.6	6.5	9.5	10.0	7.6	8.0
Total Fund ex Overlay	2.0	2.2	5.6	8.8	9.3	7.5	7.7
<i>Policy Index</i>	2.5	2.6	6.5	9.5	10.0	7.6	8.0
Public Equity	4.0	4.4	10.0	14.4	14.0	9.8	9.3
<i>Blended Public Equity Index</i>	4.1	4.4	10.5	15.0	14.3	9.8	9.6
US Equity	7.0	10.7	17.3	18.3	16.8	12.9	11.7
<i>Blended US Equity Index</i>	7.1	10.6	17.6	18.1	17.0	13.1	11.9
<i>Russell 3000</i>	7.1	10.6	17.6	18.1	17.1	13.5	12.0
Large Cap Equity	7.4	10.7	17.9	19.3	17.7	14.0	11.9
<i>Russell 1000</i>	7.4	10.5	17.8	18.2	17.1	13.7	12.1
BlackRock Russell 1000	7.4	10.5	17.8	--	--	--	--
DE Shaw	7.2	11.5	18.6	20.7	19.6	15.6	--
<i>Russell 1000</i>	7.4	10.5	17.8	18.2	17.1	13.7	12.1
Small Cap Equity	3.7	10.4	12.9	17.6	15.4	9.4	11.3
<i>Russell 2000</i>	3.6	11.5	15.2	18.0	17.1	11.1	11.1
QMA US Small Cap	3.7	10.4	12.9	17.6	--	--	--
<i>Russell 2000</i>	3.6	11.5	15.2	18.0	17.1	11.1	11.1
International Equity	0.5	-2.5	1.9	9.5	10.3	5.2	4.9
<i>MSCI ACWI ex US IMI</i>	0.4	-3.3	1.8	10.6	10.5	4.8	5.8
<i>MSCI EAFE Gross</i>	1.4	-1.0	3.2	11.1	9.8	4.9	5.9
Developed Markets	0.6	-1.9	2.5	9.8	10.4	5.5	5.2
<i>MSCI ACWI ex USA Gross</i>	0.8	-2.7	2.3	10.8	10.5	4.6	5.7
Baillie Gifford	-1.2	-1.4	3.5	10.1	12.4	6.6	--
<i>MSCI ACWI ex US</i>	0.8	-2.7	2.3	10.8	10.5	4.8	--
<i>MSCI ACWI ex US Growth</i>	-0.2	-2.2	3.5	10.5	11.0	5.8	--
BlackRock EAFE Index	1.4	-1.1	3.2	11.1	9.7	--	--
<i>MSCI EAFE</i>	1.4	-1.4	2.7	10.6	9.2	4.4	5.4
<i>MSCI EAFE Gross</i>	1.4	-1.0	3.2	11.1	9.8	4.9	5.9

Total Fund
Performance Summary (Gross of Fees)

Period Ending: September 30, 2018

	3 Mo (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Mondrian	1.5	-3.2	0.8	8.7	8.7	4.4	5.2
<i>MSCI ACWI ex USA Value Gross</i>	1.8	-3.1	1.0	11.1	9.9	3.5	5.1
<i>MSCI ACWI ex USA Gross</i>	0.8	-2.7	2.3	10.8	10.5	4.6	5.7
Emerging Markets	-0.1	-8.2	-3.4	7.2	9.8	2.4	--
<i>MSCI Emerging Markets Gross</i>	-0.9	-7.4	-0.4	10.6	12.8	4.0	5.8
Parametric Core	-0.1	-8.2	-3.4	7.2	9.8	--	--
<i>MSCI Emerging Markets Gross</i>	-0.9	-7.4	-0.4	10.6	12.8	4.0	5.8
Parametric Currency Overlay	--	--	--	--	--	--	--
Fixed Income	0.7	0.1	0.6	3.4	4.6	3.9	6.1
<i>Blended Fixed Income Index</i>	0.8	-0.8	-0.5	0.7	3.0	2.6	4.1
Core Fixed	0.1	-1.5	-1.1	0.8	2.7	3.0	5.2
<i>BBgBarc US Aggregate TR</i>	0.0	-1.6	-1.2	-0.6	1.3	2.2	3.8
BlackRock Intermediate Govt	-0.1	-0.6	-1.0	--	--	--	--
<i>BBgBarc US Govt Int TR</i>	-0.1	-0.8	-1.2	-0.9	0.2	0.9	2.2
FIAM Bond	0.2	-1.1	-0.7	0.2	2.4	2.9	5.1
<i>BBgBarc US Aggregate TR</i>	0.0	-1.6	-1.2	-0.6	1.3	2.2	3.8
Western TRU	0.2	-3.4	-1.9	3.5	4.1	--	--
<i>3-Month Libor Total Return USD</i>	0.6	1.7	2.1	1.6	1.3	0.9	0.7
<i>BBgBarc US Aggregate TR</i>	0.0	-1.6	-1.2	-0.6	1.3	2.2	3.8
Opportunistic Credit	1.8	3.3	4.2	7.5	8.2	7.3	--
<i>BBgBarc BA Intermediate HY</i>	2.3	0.8	0.9	3.8	6.2	4.7	--
Angelo Gordon Opportunistic	5.3	21.4	32.1	21.1	15.5	--	--
Angelo Gordon STAR	6.6	18.9	22.3	20.2	14.8	14.5	--
<i>BBgBarc US Aggregate TR</i>	0.0	-1.6	-1.2	-0.6	1.3	2.2	3.8
Beach Point Select	1.8	5.0	6.9	8.8	9.6	--	--
<i>BBgBarc BA Intermediate HY</i>	2.3	0.8	0.9	3.8	6.2	4.7	--
Brigade Capital	2.3	4.9	5.3	7.7	9.4	5.4	--
<i>BBgBarc BA Intermediate HY</i>	2.3	0.8	0.9	3.8	6.2	4.7	--
<i>50% Barclays HY/ 50% Bank Loan</i>	2.2	3.5	4.3	5.7	6.8	5.0	--

Total Fund
Performance Summary (Gross of Fees)

Period Ending: September 30, 2018

	3 Mo (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
PIMCO Diversified	1.7	0.3	1.1	--	--	--	--
<i>Blended PIMCO Diversified Index</i>	1.6	-0.8	0.0	2.3	5.5	4.7	7.4
<i>BBgBarc BA Intermediate HY</i>	2.3	0.8	0.9	3.8	6.2	4.7	--
Franklin Templeton	0.3	-2.1	-3.4	4.2	3.9	1.8	--
<i>BBgBarc Multiverse TR</i>	-0.8	-2.4	-1.3	-0.9	2.3	0.9	3.1
Private Credit	1.7	5.8	7.6	6.6	--	--	--
<i>Cliffwater Direct Lending Index</i>	2.4	7.2	9.4	9.3	8.9	9.1	10.0
TCP Direct Lending VIII	3.4	6.3	7.8	7.2	--	--	--
White Oak Yield	0.0	5.6	6.9	--	--	--	--
<i>Cliffwater Direct Lending Index</i>	2.4	7.2	9.4	9.3	8.9	9.1	10.0
Risk Parity	-0.9	-2.5	1.9	3.7	7.2	5.9	--
<i>Blended Risk Parity Index</i>	3.0	3.3	7.1	9.4	10.0	8.6	--
AQR GRP, 10% Volatility	0.3	-1.4	3.3	5.7	7.1	4.7	--
PanAgora	-2.1	-3.6	0.6	1.9	7.3	--	--
<i>Blended Risk Parity Index</i>	3.0	3.3	7.1	9.4	10.0	8.6	--
<i>Blended RP Secondary Index</i>	4.2	5.6	9.8	9.7	9.7	7.3	--
Alternatives	2.1	1.6	3.1	7.5	6.5	7.3	--
<i>Blended Alternatives Index</i>	2.8	4.5	9.1	11.5	10.6	7.8	--
Private Equity	4.9	12.3	13.9	15.8	13.7	17.7	--
<i>Blended Private Equity Index</i>	3.9	4.4	11.7	16.6	17.1	14.7	14.2
Hedge Fund/Absolute Return	-1.0	-8.5	-7.1	-0.9	-0.3	4.2	--
<i>Libor 1 month +4%</i>	1.6	4.4	5.8	5.4	5.1	4.7	--
AQR DELTA XN	-1.9	-11.5	-10.3	-2.2	-0.9	3.9	--
Aberdeen Standard GARS	0.5	-3.5	-1.7	0.9	--	--	--
<i>Libor 1 month +4%</i>	1.6	4.4	5.8	5.4	5.1	4.7	--
Inflation Hedge	0.5	2.2	5.0	6.1	--	--	--
<i>Blended Inflation Hedge Index</i>	0.8	1.7	4.7	5.8	--	--	--

Total Fund
Performance Summary (Gross of Fees)

Period Ending: September 30, 2018

	3 Mo (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Real Estate	2.5	6.7	9.1	8.8	9.2	11.1	5.6
<i>NCREIF ODCE</i>	2.1	6.5	8.7	8.2	8.8	10.7	5.9
Invesco	2.6	7.0	9.4	8.9	9.1	11.1	5.6
<i>NCREIF ODCE</i>	2.1	6.5	8.7	8.2	8.8	10.7	5.9
Invesco US Val IV	3.0	7.8	10.1	11.1	--	--	--
<i>NCREIF ODCE</i>	2.1	6.5	8.7	8.2	8.8	10.7	5.9
<i>NCREIF CEVA 1Q Lag - NET</i>	3.0	8.7	12.0	10.8	11.7	--	--
PGIM RE US Debt Fund	2.1	4.7	7.3	--	--	--	--
<i>NCREIF ODCE</i>	2.1	6.5	8.7	8.2	8.8	10.7	5.9
Private Real Asset	0.6	0.3	-2.2	-1.3	10.8	--	--
<i>Blended Private Real Asset Index</i>	4.4	-3.0	1.2	5.0	5.6	--	--
<i>Blended Secondary CA Private RA Index</i>	2.2	7.9	11.2	12.2	7.9	--	--
Liquid Real Asset	-1.5	-1.6	3.0	--	--	--	--
<i>Blended Liquid Real Asset Index</i>	-1.5	-2.3	1.9	5.3	5.8	--	--
Cushing MLP Alpha TR	--	--	--	--	--	--	--
<i>50% BBgBarc US TIPS/ 50% Blended LRA Index</i>	-1.2	--	--	--	--	--	--
<i>Alerian MLP TR USD</i>	6.6	5.9	4.9	0.5	4.4	-2.7	9.2
SSgA Custom Real Asset	-1.0	-1.2	3.5	--	--	--	--
<i>Blended Liquid Real Asset Index</i>	-1.5	-2.3	1.9	5.3	5.8	--	--
TIPS	-0.3	0.2	1.4	1.1	2.5	1.3	--
<i>BBgBarc US TIPS TR</i>	-0.8	-0.8	0.4	-0.2	2.0	1.4	3.3
Brown Brothers Harriman	-0.3	0.2	1.4	1.1	2.5	1.3	--
<i>BBgBarc US TIPS TR</i>	-0.8	-0.8	0.4	-0.2	2.0	1.4	3.3
Cash	0.1	0.6	0.9	0.9	1.1	0.8	0.9
91 Day T-Bills	0.5	1.3	1.6	1.2	0.9	0.5	0.3
General Account	0.8	2.3	3.1	2.2	2.2	1.5	0.9
Treasury & LAIF	1.3	4.0	4.2	2.5	1.9	1.6	1.3
91 Day T-Bills	0.5	1.3	1.6	1.2	0.9	0.5	0.3

Angelo, Gordon & Co. – AG STAR Fund

The STAR Fund will focus on CMBS and non-Agency RMBS priced between 25-75% of par, which AG believes are even today mispriced due to their complex nature and a dearth of natural buyers capable of accurately valuing these assets. In addition, AG will target securities that are well-positioned to benefit from home and commercial property price stabilization and recovery, and/or borrower credit quality improvement. In this regard the STAR Fund will be more aggressive than the PPIP Fund since it will target securities that are more geared to a recovery of the commercial and residential real estate markets. The Fund will utilize a moderate amount of leverage (1x to 1.5x) and is targeting a base-case 15% net IRR with a downside return in the mid/high single digits and an upside projection of 25%+ returns.

Angelo, Gordon & Co. – AG Opportunistic Whole Loan Fund

As bank balance sheets have strengthened since the crisis, Angelo Gordon expects approximately \$40 billion of re-performing loans and non-performing loans will trade hands each year in the near term. By acquiring these loans at a discounted price and replacing original servicers with better-focused special servicers, Angelo Gordon believes it can improve operational efficiency and generate attractive returns. To take advantage of this opportunity, Angelo Gordon established this Opportunistic Whole Loan Fund to make investments primarily in a portfolio of non-performing loans and re-performing, but will also include investments in new residential mortgage loans and excess mortgage servicing rights. Opportunistic investments in commercial mortgage loans and other mortgage related investments may also be included in the Fund's portfolio. Angelo Gordon has been an active participant in the residential and consumer debt market since 2008. The Partnership's investment approach to residential mortgage loans and securities is guided by an analytically based investment process anchored by distressed asset valuation and cash flow modeling. Angelo Gordon's analysis of re-performing and non-performing loans begins with its loan due diligence process. This process will include a review of substantially all of the properties in the pool, as well as a review of the loan files backing the loan pool. In addition, a macro overlay is embedded in the investment process which incorporates general economic trends, along with specific views on interest rates, unemployment, collateral appreciation or depreciation, governmental intervention in creditors' rights and liquidation timelines.

AQR Delta

The AQR DELTA Fund aims to deliver efficient exposure to a well-diversified portfolio of hedge fund strategies, including Convertible Arbitrage, Event Driven, Fixed Income Relative Value, Equity Market Neutral, Long/Short Equity, Dedicated Short Bias, Global Macro, Managed Futures, and Emerging Markets. The Delta Fund's approach is to capture and deliver the "hedge fund risk premiums" that explain much of the returns of each of these strategies by building bottom-up positions in each strategy. AQR's research has demonstrated that many hedge funds use similar strategies to generate returns. These strategies are often well-known, widely understood and share common exposures. AQR's experience and research suggests much of the insight underlying these strategies - as well as a meaningful portion of their returns - can be captured using a dynamic, disciplined investment approach. Just as the equity risk premium can explain a large portion of the returns from equity investing, hedge fund risk premiums can explain the returns from hedge fund investing. Importantly, while compensation for equity risk is dependent on economic growth, hedge fund risk premiums are largely unrelated to economic activity, and thus provide attractive diversification properties.

AQR – Risk Parity

The objective of Global Risk Parity (GRP) is to generate excess returns from a risk diversified portfolio of asset exposures. AQR believes that its approach maximizes the diversification benefit across a broad range of economic environments. For many institutional portfolios, equity risk has historically been the predominant risk and the source of most return expectations since equities offer higher expected returns to compensate for their high risk. Investor preference for and concentration in equities has been driven by their expected return needs, which cannot be satisfied in a well-diversified un-levered portfolio. GRP is a diversified portfolio that can be scaled to similar levels of risk as a portfolio concentrated in equities, but with a higher expected return resulting from diversification across asset class risk. The approach helps do away with the compromise of concentrating in high risk assets to meet high return needs. Consistent with portfolio theory, the GRP strategy is designed to maximize diversification across a broad spectrum of liquid global risk premia to create a portfolio with higher expected risk-adjusted returns. Research shows that risk-adjusted returns across asset classes are similar over the long-term. Since realized risk-adjusted returns across asset classes are similar, AQR expects a portfolio that is diversified equally by risk to perform better. The Global Risk Premium strategy aims to deliver efficient market exposure across four broad asset classes in a risk balanced fashion.

Baillie Gifford – ACWI ex US Focus Equities

ACWI ex US Focus is a fundamental growth strategy. Research is organized primarily by regional teams, with each member of the ACWI ex US Focus Portfolio Construction Group representing a regional team. Four global sector groups also contribute research. Baillie Gifford conducts approximately 2000 company meetings annually both in Edinburgh and onsite. Companies are evaluated on their growth opportunity relative to the average company, their ability to execute on that opportunity, and the degree to which probability of future success is already valued by the market. Baillie Gifford's basic philosophy is that share prices ultimately follow earnings. They believe that the stock market has a recurring tendency to under-appreciate the value of long-term compound growth. The process seeks to add value through use of proprietary fundamental research to identify companies exhibiting some combination of sustained above average growth, and attractive financial characteristics. The portfolio generally holds 80-120 stocks, with country and sector weights +/-6% relative to the index and industry weights +/- 5% relative to the index.

Beach Point Select Fund

Beach Point Select Fund is a commingled fund vehicle within the firm's Opportunistic Credit strategy. This fund focuses on off-the-run, complex, and less-liquid securities. It is a best ideas portfolio of distressed debt, special situations, private/direct loans, catalyst-driven high yield bonds and bank loans, and credit-informed equities with a North American and European focus. The Select Fund differs from other funds and accounts in the Opportunistic Credit strategy by pursuing a more concentrated portfolio and emphasizing a higher percentage of less-liquid/private investments. Beach Point invests up and down the entire capital structure and it constructs portfolios with a bottom-up, research-driven approach that also takes into account top-down macro considerations. Its investment process includes idea generation, detailed credit analysis, relative value decision making and investment selection, portfolio construction and on-going monitoring. The ultimate goal of its investment process is to produce a well-diversified investment portfolio with limited downside risk and substantial upside potential.

BlackRock – EAFE Index

The EAFE Index Fund seeks to replicate the return of the MSCI EAFE Index. This index represents the developed equity markets outside of North America: Europe, Austral, Asia and the Far East.

BlackRock – Intermediate Government Index

The Intermediate Government Index Fund seeks to track the results of an index composed of U.S. dollar-denominated government, government related, and investment grade U.S. corporate bonds with maturities between 1 and 10 years.

BlackRock – Russell 1000 Index

The Russell 1000 Index Fund tracks large U.S. companies and achieve broad diversification with low costs by fully replicating the Russell 1000 Index.

Brigade – Opportunistic Credit

Opportunistic Credit is a fundamental, bottom-up strategy focused on high yield corporate bonds and bank loans with tactical allocations to structured securities, convertibles and other sectors of the bond markets as they become attractive on a relative value basis. While performing credits represent the majority, Brigade will invest up to 35% of the portfolio in distressed securities and restructuring situations if these types of opportunities are attractive on a risk-adjusted basis and the timing is right with respect to the credit cycle. The portfolio is comprised of mostly North American issuers, but they are not restricted geographically and expect to have a moderate allocation to Europe over time. Although the portfolio is generally long-only, Brigade has the ability to implement a limited amount of tactical macro hedges.

Brown Brothers Harriman – Inflation Indexed Securities

BBH manages TIPS using three main types of strategies: Fundamental, Technical and Opportunistic. The Fundamental bucket has two sub-strategies, real yield duration and real yield curve slope vs. nominal yield curve slope. The Technical strategies consist of yield curve roll-down, auction cycle trading, seasonal vs. non-seasonal CPI and security selection/option value analysis. Finally, nominal Treasuries vs. TIPS, sector relative value (i.e., corporate or Agency inflation-linked bonds) and non-Dollar inflation-linked bonds make up the Opportunistic group. Real yield duration is held to +/- 1 year vs. the benchmark and the portfolio has a limited allocation to non-index securities, typically 5-10% with a maximum of 20% (including nominal Treasuries).

Cushing MLP Alpha TR

A strategy focusing on bottom-up research of company and sectors that will allow them to identify superior distribution growth opportunities in public MLPs.

DE Shaw – DE Shaw US Broad Market Core Alpha Extension Fund

The D. E. Shaw group believes that there exist some market inefficiencies that may be identified through quantitative analysis, advanced technology, and the insight of practitioners. Identifying these inefficiencies involves a process of hypothesis formulation, testing, and validation. Importantly, to avoid data-mining, the hypothesis formulation precedes the analysis of the historical data. D.E. Shaw's Structured Equity strategies rely largely on quantitative and computational investment techniques developed by the D. E. Shaw over the last 19 years in the course of research conducted for purposes of managing the firm's hedge funds. In addition to its beta one strategies, D.E. Shaw manages substantial assets in its hedge fund strategies. D.E. Shaw's investment process involves a suite of quantitative models, each designed to capitalize on a distinct and uncorrelated set of market inefficiencies. Some of these models are technical in nature and involve price and volume inputs. Other models rely on fundamental data, such as figures gleaned from corporate balance sheets or income statements. Still others, again quantitative, anticipate or react to a particular corporate event or set of events. These models typically operate with forecast horizons of a few weeks to many months. The ability to trade on shorter-term signals distinguishes D.E. Shaw from many of its long only and 130/30 peers. Portfolio construction involves the use of a proprietary optimizer which runs dynamically throughout the trading day. The portfolio is broadly diversified with several hundred long and short positions. Over- and under-weighting of sectors and industries relative to the benchmark will be quite modest, with the intention that most of the alpha be generated by security selection. The US Broad Market Core Alpha Extension Fund is a 130/30 strategy which maintains a beta that is approximately neutral to the Russell 1000 Index.

Eaton Vance/Parametric – Structured Emerging Markets Core Equity

Parametric utilizes a structured, rules-based approach, which they believe is capable of generating enhanced returns with lower volatility compared to both traditional active management and passive capitalization weighted indices. The basic idea is to structure the portfolio with more balanced country weights than the market cap weighted indices, and also to capture a rebalancing premium. This provides more diversification and greater exposure to smaller countries than is provided by the market cap weighted indices. The approach is to divide emerging markets countries into three tiers, and to equally weight the countries within each tier. Tier 1 countries are the largest eight countries that dominate the cap weighted index. Each successive tier is comprised of smaller countries, each of which is given a smaller target weighting in the model portfolio. In aggregate, the eight Tier 1 countries are given a much lower weighting than in the capitalization weighted index, but they nevertheless comprise more than 50% of the portfolio. The Core SEM strategy targets excess return of 3% over a market cycle with 2.5%-4.5% tracking error. It is designed to generate a level of volatility 90%-100% of the MSCI EM index. The strategy invests in 44 countries and will typically hold 700-1,000 securities. Turnover is expected to be in the range of 5%-15%.

Franklin Templeton Investments – Global Fixed Income

Franklin Templeton manages the global bond mandate in an unconstrained fashion using a top-down, fundamental framework. In the short term and on a country-by-country basis there are often inefficiencies in global bond and currency markets, however, over the longer term the market will generally price to fundamentals. Thus, FT focuses on fundamental research to identify long-term opportunities and uses short-term market inefficiencies to build positions in such investments. The investment and portfolio construction process begins with the determination of the Fund's or institutional client's investment objectives, resulting in a set of risk-return parameters and exposure limits within which the portfolio is managed. Next the firm's global economic outlook for the industrialized countries is developed, with a focus on interest rate and exchange rate forecasts. The portfolio's interest rate outlook is a function of global general equilibrium macroeconomic analysis as well as country-specific research. Macroeconomic conditions in the G-3 economies are analyzed first, primarily with respect to how current and projected growth and inflation dynamics are expected to influence monetary policy. This analysis is then extended out to the rest of the industrialized countries (G-13) as well as emerging markets, which results in broad targets for cash, duration, currencies and the developed/emerging market mix. Using the firm's interest rate and exchange rate outlook, probability-weighted horizon returns for bonds of various countries are then calculated. This analysis is used to establish specific country weights and duration targets based on risk-adjusted expected total return measured in the portfolio's base currency. Analysis of emerging markets includes sovereign credit analysis along with greater emphasis on capital flows, inter-market dynamics and trends in the level of risk aversion in the market.

INVESCO Realty Advisors – INVESCO Core Equity, LLC

SamCERA is a founding member of INVESCO's open end Core Equity real estate fund and rolled its separate account properties into the fund. INVESCO Core Equity, LLC (the "Fund") is a perpetual life, open-end vehicle which invests in a diversified portfolio of institutional quality office, retail, industrial and multifamily residential real estate assets. The Fund buys core properties that are located within the United States, typically requiring an investment of \$10 million or more. The portfolio cannot be more than 30% leveraged.

INVESCO Realty Advisors – INVESCO US Val IV

Invesco has provided SamCERA with Core Real Estate exposure since 2004 through the Invesco Core Equity Fund. The Invesco real estate team manages around \$62B in assets with investments and offices around the globe. Invesco Value Fund IV will look to acquire fundamentally sound but broken "core" assets that can be repositioned into institutional-quality, income producing properties. Investments will be limited to direct equity interests in office, multi-family, retail and industrial properties across the US. The Fund is expected to be geographically concentrated in U.S. gateway cities and top 25 Metropolitan Statistical Areas (MSA's). Invesco Value Fund IV will provide a nice compliment to the more conservative Invesco Core Fund and offer the potential of enhanced returns to the SamCERA Real Estate portfolio.

Mondrian Investment Partners – International Equity

Mondrian is a value-oriented, defensive manager whose investment philosophy is based on the principle that investments must be evaluated for their fundamental long-term value. The firm's philosophy involves three stated investment objectives: 1) provide a rate of return meaningfully greater than the client's domestic rate of inflation, 2) structure client portfolios that preserve capital during protracted international market declines, and 3) provide portfolio performance that is less volatile than benchmark indices and other international managers. Mondrian applies typical value screening criteria to a universe of 1,500 stocks, from which 500 are selected for more detailed work. Through fundamental research, and the deliberations of the Investment Committee, the universe is further reduced to a list of 150 stocks. The investment team conducts detailed fundamental analysis on the remaining stocks, a process which includes applying the firm's dividend discount model consistently across all markets and industries. Mondrian also uses a purchasing power parity model to give an accurate currency comparison of the value of the stocks under consideration. The firm will only consider buying stocks in countries with good investor protection practices and relatively simple repatriation procedures. A computer based optimization program is employed in the portfolio construction process. Mondrian's portfolio holds 80-125 issues.

Panagora – Diversified Risk Multi Asset Fund

The Multi Asset team is headed up by Edward Qian, CIO of the group, and the founder of Panagora's risk parity strategy. A staff of approximately thirteen works in this group on research and portfolio construction, with some people spending more time on the former and some more on the latter. Panagora implements risk parity by distinguishing between three categories of assets: equities, nominal fixed income, and inflation protection. Each of these categories corresponds to a respective economic environment: economic growth, economic contraction and inflation. Panagora's risk allocation targets 40% each from equities and nominal fixed income, and 20% from inflation protection. In addition to applying concept of risk parity between asset classes, Panagora also applies it within each asset class. The 40/40/20 allocation to equities/nominal fixed income/inflation protection is a long term strategic allocation. In 2009 Panagora introduced what they refer to as "Dynamic Risk Allocation" or "DRA," which involves tactically tilting the risk allocations away from the neutral targets in order to enhance returns and reduce risk.

PGIM RE Debt

PGIM Real Estate US Debt Fund focuses on a loan origination strategy with a mix of 20% senior long duration loans on stable assets, 60% senior short/medium duration loans on stable and transitional assets, and 20% mezzanine mid/long duration debt.

Parametric Currency Overlay – Currency Hedge

An overlay hedge placed on half of the notional value of international equities. The portfolio uses Parametric for this overlay.

PIMCO Diversified

PIMCO Diversified Income Fund offers a broad and flexible multi-credit approach in a liquid and cost-effective format. The Diversified Income Fund seeks to produce consistent above benchmark performance using diversified sources of alpha from a universe that includes global credit as well as “non-core” credit sectors (ex., securitized, emerging markets).

Pyramis Global Advisors – Broad Market Duration Commingled Pool

Pyramis’ Broad Market Duration (BMD) investment strategy seeks to achieve absolute and risk-adjusted returns in excess of the BC U.S. Aggregate Index, focusing its investments in US Treasuries, agencies, investment grade corporate bonds, mortgage-backed and asset-backed securities. The BMD commingled pool can also hold small, opportunistic positions in out-of-benchmark securities, such as inflation-linked bonds. The investable universe includes all US dollar denominated, investment grade debt securities. The BMD investment approach emphasizes issuer and sector valuation and individual security selection. Through the integration of fundamental and quantitative research and trading, the BMD strategy is implemented in a team environment. Risk management technology is utilized to explicitly quantify benchmark exposures on a daily basis, and Pyramis uses the same analytical framework to assess both index and portfolio risk. Tracking error should range between 40 and 60 basis points per annum over the benchmark, and stringent portfolio construction risk control rules are strictly adhered to.

Pyramis Global Advisors – Select International Small Cap

Pyramis Select International Small Cap is a core strategy. The approach is designed to leverage Pyramis/Fidelity’s proprietary resources to add value exclusively via stock selection. To that end the portfolio is constructed to be regionally neutral, with only modest deviations from the benchmark’s country and sector weights. The investment process involves three basic stages. The first stage is the security level research conducted by the analysts. The second stage is stock selection from within the pool of names that are highly ranked by the analysts. The third step is portfolio construction and risk management. The essential differentiating feature of this strategy is the breadth of coverage that is made possible by the large staff of analysts. Analysts actively conduct regular fundamental research on, and give a formal rating of 1-5, 1200-1300 international small cap companies. While there is no single firm-wide approach to security research, analysts are expected to establish an upside target for any given stock and assign a formal rating. The decision making structure is quite efficient, with portfolio manager Rob Feldman making all the buy and sell decisions. His role, as he puts it, is to be an intelligent user of the analysts’ research. He selects the 1- and 2-rated stocks that he thinks are compelling and additive to his portfolio, and he sells names when they are downgraded by the analysts. There are approximately 200 holdings in the portfolio. Country and sector weights are within 3 percentage points of the benchmark and position sizes are within 2 percentage points of the benchmark. Turnover tends to be in the 60%-80% range.

Quantitative Management Associates – QMA Small-Cap Core

Quantitative Management Associates (QMA) utilizes a bottom-up quantitative framework in order provide a diversified exposure to core U.S. small-cap stocks, while attempting to produce consistent outperformance versus the benchmark with moderate tracking error levels. QMA uses an adaptive, systematic investment process to exploit opportunities created by mispriced securities to consistently add value over long time periods. Bottom-up stock selection drives exposure to key sources of alpha (valuation, growth, and quality). The QMA stock selection model adapts to changes in company growth rates and market environments by putting more emphasis on valuation for slowly growing companies, and more emphasis on future growth projections for companies with higher projected growth rates.

Standard Life Aberdeen Global Absolute Return Strategy (GARS)

The Standard Life Aberdeen Global Absolute Return Strategy (GARS) was initially launched in 2005 to help address Standard Life's own pension plan's deficit problem. GARS' primary investment objective is to deliver a positive absolute return over the medium to long term with lower volatility than equities, irrespective of market conditions. It seeks returns through dynamic allocation to investment opportunities in traditional and advanced asset classes, and also separately exploits the team's security selection expertise. In the search for attractive investment positions, the team follows a rigorous research process. This includes a variety of research techniques, including broad global macro-economic, fundamental analysis, quantitative research and valuation modeling. The GARS investment process is designed to capitalize on an array of research and investment techniques and draws together the team's three-year investment insights. The team then rigorously examines and review position proposals to approve a high conviction, short list of positions that work well together. Having a cash benchmark means that GARS has a potentially unrestricted investment universe and all portfolio holdings are at the Portfolio Manager's discretion. The GARS portfolio also routinely uses a variety of conventional derivatives for investment, liquidity, efficiency and hedging purposes. The GARS strategy has experienced significant growth in its asset under management since it becomes available to external investors in 2006.

State Street Global Advisors (SSgA) Custom Real Asset

SSgA Custom Real Asset portfolio uses a portfolio of liquid real assets to proxy private real assets. The portfolio is comprised of equal weightings of the Bloomberg Commodity Index, S&P Global Natural Resources Index, and S&P Global Infrastructure Index. The portfolio is used to fund upcoming private real asset mandates.

Tennenbaum Capital Partners - TCP Direct Lending Fund VIII

TCP Direct Lending Fund VIII is a private investment fund managed by Tennenbaum Capital Partners ("TCP"). The Fund is designed to continue TCP's successful strategy of investing in privately-originated, performing senior secured debt primarily in North America-based companies with target enterprise values between \$100 million and \$1.5 billion. The Fund will include positions in 1st lien, 2nd lien and unitranche debt, with a preference for floating-rate debt, which TCP believes provides better flexibility to adapt to market conditions. TCP's direct lending strategy has generated attractive investment opportunities across market cycles, as evidenced by the Firm's prior direct lending track record. Fund VIII targets an unlevered annual yield of approximately 9-12%, with its return primarily driven by current income.

Western Asset Management – Total Return Unconstrained (TRU)

Western Asset's Total Return Unconstrained strategy (TRU) seeks to provide bond-like risk and return over the long term, but does not have a benchmark. This allows for asset allocation based on value rather than using the construction of a benchmark as baseline positioning. The investment approach is active with very broad latitude on duration (-3 to +8 years) and on asset allocation across all of the eligible sectors in a core plus mandate. The portfolio must have at least 50% of its holdings in investment-grade securities. The flexibility offered by this strategy allows for defensive positioning in rising rate environments and opportunistic deployment of capital when value opportunities arise. It also allows the portfolio managers to emphasize (or deemphasize) either credit or rates when one or the other appears to offer greater (or lesser) value. um non-US exposure.

White Oak - White Oak Yield Spectrum Fund

The White Oak Yield Spectrum Fund's objective is to earn substantial current income by originating, extending, and/or investing in a diversified portfolio of primarily senior secured corporate credit and debt instruments consisting of term loans, asset based loans and equipment leases and loans issued by small to middle-market companies located primarily in the United States and Canada. It focuses on providing self-originated deals for predominantly non-sponsored, privately-held borrowers.

Policy Index and Benchmark History

Period Ending: September 30, 2018

Total Plan Policy Index	As of																	
	4/1/18	10/1/17	2/1/17	1/1/17	10/1/16	9/1/16	1/1/16	7/1/14	1/1/14	2/1/13	1/1/11	10/1/10	1/1/09	5/1/07	6/1/00	3/1/99	9/1/98	7/1/96
10 Year Treasury +2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.0%	10.0%	10.0%
60/40 MSCI World/BBgBarc Global Aggregate (RP)	8.0%	8.0%	8.0%	8.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
60/40 Russell 3000/BBgBarc US Aggregate (RP)	0.0%	0.0%	0.0%	0.0%	8.0%	8.0%	8.0%	8.0%	8.0%	6.0%	6.0%	6.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Aggregate	14.0%	14.0%	12.0%	10.0%	10.0%	10.0%	10.0%	10.0%	9.3%	11.0%	11.0%	12.9%	27.0%	27.0%	29.0%	25.0%	21.0%	21.0%
BBgBarc BA Intermediate HY	7.0%	7.0%	6.0%	6.0%	6.0%	5.0%	5.0%	5.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc BBB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Credit BAA	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.5%	3.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Multiverse	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.8%	4.4%	4.4%	4.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc TIPS	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	3.1%	3.3%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Bloomberg Commodity	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
FTSE non-US WGBI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	9.0%	9.0%
CPI + 5% (RA)	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	2.0%	2.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Blended Liquid Real Asset	6.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Blended Private Real Asset	2.0%	8.0%	7.0%	5.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Libor +4% (HF)	6.0%	6.0%	6.0%	5.0%	5.0%	5.0%	5.0%	4.0%	4.0%	3.0%	3.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI ACWI ex-US	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	18.0%	18.0%	18.0%	21.0%	21.0%	15.0%	0.0%	0.0%	0.0%
MSCI ACWI ex-US IMI	0.0%	0.0%	19.0%	19.0%	19.0%	20.0%	20.0%	20.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI ACWI ex-US IMI (Net)	19.0%	19.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI EAFE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.0%	20.0%	20.0%
NCREIF ODCE	8.0%	8.0%	7.0%	7.0%	7.0%	7.0%	7.0%	6.0%	6.0%	5.0%	5.0%	5.0%	6.0%	0.0%	0.0%	0.0%	0.0%	0.0%
NCREIF Property	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.0%	6.0%	0.0%	0.0%	0.0%
Russell 1000	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	24.0%	24.0%	24.0%	28.0%	28.0%	28.0%	37.0%	37.0%	40.0%	22.0%	20.0%	20.0%
Russell 1000 Value	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	5.0%	0.0%
Russell 2000	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.0%	6.0%	6.0%	7.0%	7.0%	7.0%	9.0%	9.0%	10.0%	15.0%	15.0%	15.0%
Russell 3000	21.0%	21.0%	23.0%	28.0%	28.0%	28.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Russell 3000 +3% (PE)	0.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	8.0%	8.0%	8.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Russell 3000 +3% 1Q Lag (PE)	7.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
S&P 500	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Policy Index and Benchmark History

Period Ending: September 30, 2018

Total Equity Benchmark	As of:										
	2/1/17	10/1/16	9/1/16	1/1/16	1/1/14	10/1/10	5/1/07	6/1/00	3/1/99	9/1/98	1/1/96
MSCI ACWI ex-US	0.0%	0.0%	0.0%	0.0%	0.0%	34.0%	31.3%	23.1%	0.0%	0.0%	0.0%
MSCI ACWI ex-US IMI	45.2%	40.4%	41.7%	41.7%	40.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI EAFE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	32.3%	33.3%	33.3%
Russell 1000	0.0%	0.0%	0.0%	50.0%	48.0%	52.8%	55.2%	61.5%	35.5%	33.3%	33.3%
Russell 1000 Value	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.0%	8.4%	0.0%
Russell 2000	0.0%	0.0%	0.0%	8.3%	12.0%	13.2%	13.5%	15.4%	24.2%	25.0%	25.0%
Russell 3000	54.8%	59.6%	58.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
S&P 500	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.4%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

US Equity Benchmark	As of:						
	9/1/16	1/1/16	6/1/00	3/1/99	9/1/98	7/1/96	1/1/95
Russell 1000	0.0%	85.7%	80.0%	52.0%	50.0%	50.0%	69.0%
Russell 1000 Value	0.0%	0.0%	0.0%	12.0%	12.5%	0.0%	0.0%
Russell 2000	0.0%	14.3%	20.0%	36.0%	37.5%	37.5%	14.0%
Russell 3000	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
S & P 500	0.0%	0.0%	0.0%	0.0%	0.0%	12.5%	17.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

International Equity Benchmark	As of:			
	10/1/17	1/1/14	6/1/00	1/1/96
MSCI ACWI ex US	0.0%	0.0%	100.0%	0.0%
MSCI ACWI ex US IMI	0.0%	100.0%	0.0%	0.0%
MSCI ACWI ex US IMI (Net)	100.0%	0.0%	0.0%	0.0%
MSCI EAFE	0.0%	0.0%	0.0%	100.0%
	100.0%	100.0%	100.0%	100.0%

Fixed Income Benchmark	As of:											
	10/1/17	2/1/17	10/1/16	4/1/16	7/1/14	1/1/14	2/1/13	1/1/11	10/1/10	6/1/00	3/1/99	7/1/96
BBgBarc Aggregate	66.7%	57.1%	52.6%	55.5%	50.0%	46.3%	50.0%	50.0%	58.6%	100.0%	83.3%	70.0%
BBgBarc BA Intermediate HY	33.3%	28.6%	31.6%	27.8%	25.0%	25.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc BBB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.3%	0.0%	0.0%	0.0%
BBgBarc Credit BAA	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.0%	15.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Multiverse	0.0%	14.3%	15.8%	16.7%	15.0%	18.8%	20.0%	20.0%	20.5%	0.0%	0.0%	0.0%
BBgBarc TIPS	0.0%	0.0%	0.0%	0.0%	10.0%	10.0%	14.0%	15.0%	13.6%	0.0%	0.0%	0.0%
FTSE non-US WGBI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.7%	30.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Opportunistic Credit Benchmark	As of:	
	1/1/14	12/1/09
BBgBarc BA Intermediate HY	100.0%	0.0%
BBgBarc Credit BAA	0.0%	100.0%
	100.0%	100.0%

Risk Parity Benchmark	As of:		RP Secondary Benchmark	As of:	
	1/1/17	10/1/10		1/1/17	10/1/10
BBgBarc Aggregate	0.0%	40.0%	BBgBarc Aggregate	40.0%	0.0%
BBgBarc Global Aggregate	40.0%	0.0%	BBgBarc Global Aggregate	0.0%	40.0%
MSCI World	60.0%	0.0%	MSCI World	0.0%	60.0%
Russell 3000	0.0%	60.0%	Russell 3000	60.0%	0.0%
	100.0%	100.0%		100.0%	100.0%

Policy Index and Benchmark History

Period Ending: September 30, 2018

Alternatives Benchmark	As of:				
	2/1/17	4/1/16	1/1/16	1/1/14	1/1/11
60/40 Russell 3000/BBgBarc US Aggregate (RP)	0.0%	0.0%	0.0%	0.0%	30.0%
Bloomberg Commodity	0.0%	0.0%	17.7%	18.8%	15.0%
CPI + 5% (RA)	0.0%	0.0%	11.8%	12.5%	0.0%
Libor +4% (HF)	46.2%	41.7%	29.4%	25.0%	15.0%
Russell 3000 +3% (PE)	53.8%	58.3%	41.2%	43.8%	40.0%
Russell 3000 +3% 1Q Lag (PE)	0.0%	0.0%	0.0%	0.0%	0.0%
	100.0%	100.0%	100.0%	100.0%	100.0%

Private Equity Benchmark	As of:	
	4/1/18	10/1/10
Russell 3000 +3% 1Q Lag	100.0%	0.0%
Russell 3000 +3%	0.0%	100.0%
	100.0%	100.0%

Hedge Fund Benchmark	As of:
	10/1/10
Libor +4%	100.0%
	100.0%

Inflation Hedge	As of:			
	4/1/18	2/1/17	10/1/16	4/1/16
BBgBarc TIPS	11.11%	12.50%	14.3%	14.3%
Bloomberg Commodity	0.00%	0.00%	0.0%	21.4%
CPI + 5% (RA)	0.00%	0.00%	0.0%	14.3%
Blended Liquid Real Asset	33.34%	0.00%	0.0%	0.0%
Blended Private Real Asset	11.11%	43.75%	35.7%	0.0%
NCREIF ODCE	44.44%	43.75%	50.0%	50.0%
	100.0%	100.0%	100.0%	100.0%

Liquid Real Asset Benchmark	As of:	
	10/1/16	1/1/14
Bloomberg Roll Select Commodity	34.0%	0.0%
S&P Global Large-MidCap Commodity and Resources	33.0%	0.0%
S&P Global Infrastructure	33.0%	0.0%
CPI + 5%	0.0%	100.0%
	100.0%	100.0%

Private Real Asset Benchmark	As of:		
	4/1/18	10/1/16	1/1/14
Bloomberg Roll Select Commodity	0.0%	34.0%	0.0%
S&P Global Large-MidCap Commodity and Resources	0.0%	33.0%	0.0%
50/50 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL	100.0%	0.0%	0.0%
S&P Global Infrastructure	0.0%	33.0%	0.0%
CPI + 5%	0.0%	0.0%	100.0%
	100.0%	100.0%	100.0%

Private RA Secondary Benchmark	As of:
	9/1/14
Cambridge Associates Private Natural Resources 1 Qtr Lag	50.0%
Cambridge Associates Private Infrastructure 1 Qtr Lag	50.0%
	100.0%

Real Estate Benchmark	As of:		
	1/1/09	6/1/00	7/1/96
10 Year Treasury +2%	0.0%	0.0%	100.0%
NCREIF ODCE	100.0%	0.0%	0.0%
NCREIF Property	0.0%	100.0%	0.0%
	100.0%	100.0%	100.0%

Policy Index and Benchmark History

Period Ending: September 30, 2018

Baillie Gifford Benchmark	As of:	
	1/1/14	5/1/12
MSCI ACWI ex-US	100.0%	0.0%
MSCI EAFE	0.0%	100.0%
	100.0%	100.0%

Baillie Gifford Secondary Benchmark	As of:	
	1/1/14	5/1/12
MSCI ACWI ex-US Growth	100.0%	0.0%
MSCI EAFE Growth	0.0%	100.0%
	100.0%	100.0%

Brigade Secondary Benchmark	As of:	
	8/1/10	
BBgBarc High Yield	50.0%	
Credit Suisse Leveraged Loans	50.0%	
	100.0%	

AQR GRP, 10% Volatility	As of:	
	1/1/17	3/1/11
BBgBarc Aggregate	0.0%	40.0%
BBgBarc Global Aggregate	40.0%	0.0%
MSCI World	60.0%	0.0%
Russell 3000	0.0%	60.0%
	100.0%	100.0%

PanAgora	As of:	
	1/1/17	8/1/14
BBgBarc Aggregate	0.0%	40.0%
BBgBarc Global Aggregate	40.0%	0.0%
MSCI World	60.0%	0.0%
Russell 3000	0.0%	60.0%
	100.0%	100.0%

PIMCO Diversified	As of:	
	9/1/17	
JPMorgan EMBI Global	33.3%	
ICE BofAMLBB-BRatedDvlpdMktsHYHgdUSD	33.3%	
Global Agg Credit Ex EM USD hedged	33.4%	
	100.0%	

Baillie Gifford

First \$25 million:	0.60% per annum
Next \$75 million:	0.50% per annum
Next \$300 million:	0.40% per annum
Thereafter:	0.30% per annum

BlackRock-EAFE Equity Index Fund

On All Assets:	0.05% per annum
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BlackRock-Russell 1000 Index Fund

First \$250 million:	0.02% per annum
Thereafter:	0.015% per annum

BlackRock-Intermediate Govt Bond Index Fund

On All Assets:	0.04% per annum
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Brown Brothers Harriman

On All Assets:	0.15% per annum
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Parametric

On All Assets:	0.30% per annum
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Clifton Group

First \$50 million:	0.12% per annum
Next \$100 million:	0.10% per annum
Thereafter:	0.05% per annum
Plus monthly reporting fee of \$1500	

Cushing Asset Management

First \$50 million:	0.70% per annum
Next \$50 million:	0.60% per annum
Thereafter:	0.55% per annum

Franklin Templeton Investment

First \$50 million:	0.40% per annum
Next \$50 million:	0.30% per annum
Thereafter:	0.25% per annum

FIAM Bond

First \$50 million:	0.20% per annum
Next \$50 million:	0.175% per annum
Next \$100 million:	0.10% per annum
Thereafter:	0.085% per annum

PIMCO Diversified

On All Assets:	0.75% per annum
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QMA

First \$50 million:	0.55% per annum
Thereafter:	0.50% per annum

Western Asset Management

On All Assets:	0.25% per annum
Performance Fee:	20.00%

Mondrian Investment Partners

Assets Below \$190 million

First \$20 million:	1.00% per annum
Thereafter:	0.33% per annum

Assets Above \$190 million

First \$50 million:	1.00% per annum
Next \$150 million:	0.19% per annum
Thereafter:	0.33% per annum

Name	Primary Benchmark	Rule 1	Rule 2	Rule 3
DE Shaw	Russell 1000	✓	✓	✓
QMA US Small Cap	Russell 2000	--	--	--
Baillie Gifford	MSCI ACWI ex US	✓	✗	✓
Mondrian	MSCI ACWI ex USA Value Gross	✓	✗	✓
Parametric Core	MSCI Emerging Markets Gross	--	--	--
FIAM Bond	BBgBarc US Aggregate TR	✓	✓	✓
Western TRU	3-Month Libor Total Return USD	--	--	--
Angelo Gordon Opportunistic	BBgBarc US Aggregate TR	--	--	--
Angelo Gordon STAR	BBgBarc US Aggregate TR	✓	--	✓
Beach Point Select	BBgBarc BA Intermediate HY	--	--	--
Brigade Capital	BBgBarc BA Intermediate HY	✓	✓	✗
PIMCO Diversified	Blended PIMCO Diversified Index	--	--	--
Franklin Templeton	BBgBarc Multiverse TR	--	--	--
TCP Direct Lending VIII	Cliffwater Direct Lending Index	--	--	--
White Oak Yield	Cliffwater Direct Lending Index	--	--	--
AQR DELTA XN	Libor 1 month +4%	✗	✗	✗
Aberdeen Standard GARS	Libor 1 month +4%	--	--	--

Rule 1 - Manager has underperformed the benchmark index for the five year period.

Rule 2 - Manager has underperformed the 50th percentile in the appropriate style universe for the five year period.

Rule 3 - Excess 5 Year Sharpe Ratio vs. Benchmark is positive

Name	Primary Benchmark	Rule 1	Rule 2	Rule 3
DE Shaw	Russell 1000	✓	✓	✓
QMA US Small Cap	Russell 2000	--	--	--
Baillie Gifford	MSCI ACWI ex US	✓	✗	✓
Mondrian	MSCI ACWI ex USA Value Gross	✓	✓	✓
Parametric Core	MSCI Emerging Markets Gross	--	--	--
FIAM Bond	BBgBarc US Aggregate TR	✓	✓	✓
Western TRU	3-Month Libor Total Return USD	--	--	--
Angelo Gordon Opportunistic	BBgBarc US Aggregate TR	--	--	--
Angelo Gordon STAR	BBgBarc US Aggregate TR	✓	--	✓
Beach Point Select	BBgBarc BA Intermediate HY	--	--	--
Brigade Capital	BBgBarc BA Intermediate HY	✓	✓	✗
PIMCO Diversified	Blended PIMCO Diversified Index	--	--	--
Franklin Templeton	BBgBarc Multiverse TR	--	--	--
TCP Direct Lending VIII	Cliffwater Direct Lending Index	--	--	--
White Oak Yield	Cliffwater Direct Lending Index	--	--	--
AQR DELTA XN	Libor 1 month +4%	✗	✗	✗
Aberdeen Standard GARS	Libor 1 month +4%	--	--	--

Rule 1 - Manager has underperformed the benchmark index for the five year period.

Rule 2 - Manager has underperformed the 50th percentile in the appropriate style universe for the five year period.

Rule 3 - Excess 5 Year Sharpe Ratio vs. Benchmark is positive

Manager Performance Comparison (Gross of Fees)

Period Ending: September 30, 2018

	Jul	Aug	Sep	3rd Qtr. 2018	Difference	2nd Qtr. 2018	Difference	1st Qtr. 2018	Difference	4th Qtr. 2017	Difference	3rd Qtr. 2017	Difference
Verus	3.43%	3.45%	0.38%	7.41%		3.59%		-0.69%		6.58%		4.49%	
BlackRock Russell 1000	3.43%	3.45%	0.38%	7.41%	0.00%	3.59%	0.00%	-0.69%	0.00%	6.59%	0.00%	4.49%	0.00%
Russell 1000 Index	3.45%	3.45%	0.38%	7.42%		3.57%		-1.19%		4.90%		4.48%	
Verus	3.72%	3.39%	-0.01%	7.23%		4.31%		-0.32%		6.38%		7.60%	
D.E. Shaw	3.73%	3.39%	-0.01%	7.24%	-0.01%	4.32%	-0.01%	-0.31%	-0.01%	6.39%	-0.01%	7.60%	0.00%
Russell 1000 Index	3.45%	3.45%	0.38%	7.42%		3.57%		-1.19%		4.90%		4.48%	
Verus	2.49%	4.03%	-2.74%	3.70%		6.98%		-0.51%		2.34%		5.94%	
QMA US Small Cap (Net)	2.49%	4.03%	-2.74%	3.70%	0.00%	6.98%	0.00%	-0.51%	0.00%	2.34%	0.00%	5.95%	-0.01%
Russell 2000 Index	1.74%	4.31%	-2.41%	3.58%		7.75%		-0.08%		3.34%		5.67%	
Verus	1.58%	-1.35%	-1.51%	-1.31%		0.36%		-0.75%		4.95%		5.14%	
Baillie Gifford (Net)	1.57%	-1.29%	-1.55%	-1.29%	-0.01%	0.35%	0.00%	-0.74%	-0.01%	4.92%	0.03%	5.12%	0.02%
MSCI ACWI ex US	2.42%	-2.07%	0.50%	0.80%		-2.39%		-1.08%		5.06%		6.25%	
MSCI ACWI ex US Growth	1.73%	-1.11%	-0.80%	-0.20%		-1.23%		-0.80%		5.81%		6.39%	
Verus	2.45%	-1.93%	0.91%	1.40%		-0.83%		-1.59%		4.26%		5.47%	
BlackRock EAFE Equity	2.45%	-1.93%	0.91%	1.40%	0.00%	-0.83%	0.00%	-1.59%	0.00%	4.26%	0.00%	5.47%	0.00%
MSCI EAFE (Net)	2.46%	-1.93%	0.87%	1.35%		-1.24%		-1.53%		4.23%		5.40%	
MSCI EAFE (Gross)	2.47%	-1.92%	0.91%	1.42%		-0.97%		-1.41%		4.27%		5.47%	
Verus	2.67%	-2.02%	0.93%	1.54%		-3.43%		-1.24%		4.06%		5.05%	
Mondrian(Net)	2.68%	-2.02%	0.94%	1.55%	-0.01%	-3.43%	0.00%	-1.22%	-0.02%	4.02%	0.04%	5.08%	-0.03%
MSCI ACWI -ex US Value Index	3.15%	-3.06%	1.86%	1.85%		-3.59%		-1.36%		4.31%		6.11%	
MSCI ACWI -ex US	2.42%	-2.07%	0.50%	0.80%		-2.39%		-1.08%		5.06%		6.25%	
Verus	3.45%	-3.60%	0.17%	-0.11%		-9.47%		1.51%		5.24%		6.91%	
Parametric Core	3.46%	-3.58%	0.18%	-0.06%	-0.05%	-9.42%	-0.05%	1.56%	-0.05%	5.30%	-0.06%	6.96%	-0.05%
MSCI EM Market Index	2.28%	-2.67%	-0.50%	-0.95%		-7.86%		1.47%		7.50%		8.04%	

Manager Performance Comparison (Gross of Fees)

Period Ending: September 30, 2018

	Jul	Aug	Sep	3rd Qtr. 2018	Difference	2nd Qtr. 2018	Difference	1st Qtr. 2018	Difference	4th Qtr. 2017	Difference	3rd Qtr. 2017	Difference
Verus	-0.18%	0.61%	-0.49%	-0.07%		0.12%		-0.67%		-0.36%		0.40%	
BlackRock Intermediate Govt	-0.18%	0.61%	-0.49%	-0.07%	0.00%	0.12%	0.00%	-0.67%	0.00%	-0.35%	-0.01%	0.41%	-0.01%
BBgBarc US Govt Int Index	-0.20%	0.59%	-0.51%	-0.11%		0.06%		-0.73%		-0.41%		0.85%	
Verus	0.13%	0.50%	-0.48%	0.15%		0.02%		-1.31%		0.47%		1.13%	
FIAM Bond	0.13%	0.50%	-0.48%	0.15%	0.00%	0.02%	0.00%	-1.31%	0.00%	0.48%	-0.01%	1.13%	0.00%
BBgBarc US Aggregate Index	0.02%	0.64%	-0.64%	0.02%		-0.16%		-1.46%		0.39%		0.85%	
Verus	0.93%	-1.27%	0.53%	0.17%		-2.90%		-0.69%		1.51%		2.09%	
Western TRU	0.93%	-1.27%	0.53%	0.17%	0.00%	-2.90%	0.00%	-0.69%	0.00%	1.51%	0.00%	2.09%	0.00%
3-Month Libor Total Return USD Index	0.20%	0.20%	0.20%	0.60%		0.59%		0.46%		0.39%		0.34%	
BBgBarc US Aggregate Index	0.02%	0.64%	-0.64%	0.02%		-0.16%		-1.46%		0.39%		0.85%	
Verus (Net)				5.35%		9.49%		5.70%		11.05%		-0.59%	
Angelo Gordon Opportunistic				5.35%	0.00%	9.49%	0.00%	5.70%	0.00%	11.05%	0.00%	-0.59%	0.00%
BBgBarc US Aggregate Index				0.02%		-0.16%		-1.46%		0.39%		0.85%	
Verus (Net)				6.59%		4.83%		7.54%		3.13%		4.96%	
Angelo Gordon STAR Fund (Net)				6.59%	0.00%	4.83%	0.00%	7.54%	0.00%	3.13%	0.00%	4.96%	0.00%
BBgBarc US Aggregate Index				0.02%		-0.16%		-1.46%		0.39%		0.85%	
Verus	0.80%	0.61%	0.38%	1.80%		2.01%		1.14%		1.79%		2.07%	
Beach Point Select (Net)	0.80%	0.61%	0.38%	1.80%	0.00%	2.01%	0.00%	1.14%	0.00%	1.79%	0.00%	2.07%	0.00%
BBgBarc BA Intermediate HY	1.11%	0.87%	0.27%	2.27%		0.04%		-1.49%		0.15%		1.72%	
Verus	1.03%	0.09%	1.15%	2.28%		1.53%		1.05%		0.33%		1.40%	
Brigade Capital (Net)	1.02%	0.07%	1.11%	2.21%	0.07%	1.56%	-0.03%	1.03%	0.02%	0.28%	0.05%	1.44%	-0.04%
BBgBarc BA Intermediate HY	1.11%	0.87%	0.27%	2.27%		0.04%		-1.49%		0.15%		1.72%	
50% BBgBarc HY/ 50% Bank Loan	0.96%	0.57%	0.62%	2.17%		0.91%		0.36%		0.82%		1.52%	
Verus	1.11%	-0.25%	0.79%	1.66%		-0.73%		-0.64%		0.82%			
PIMCO Diversified	1.11%	-0.25%	0.79%	1.66%	0.00%	-0.73%	0.00%	-0.64%	0.00%	0.82%	0.00%		
Blended PIMCO Diversified Index	1.26%	-0.26%	0.65%	1.65%		-1.13%		-1.26%		0.75%			
BBgBarc BA Intermediate HY	1.11%	0.87%	0.27%	2.27%		0.04%		-1.49%		0.15%			
Verus	3.66%	-4.52%	1.36%	0.32%		-4.32%		2.01%		-1.31%		1.25%	
Franklin Templeton Investments	3.66%	-4.52%	1.36%	0.32%	0.00%	-4.32%	0.00%	2.01%	0.00%	-1.32%	0.01%	1.25%	0.00%
BBgBarc Multiverse Index	0.00%	0.00%	0.00%	0.00%		-2.83%		1.29%		1.06%		1.88%	
Verus				3.41%		2.15%		1.46%		4.67%		2.69%	
TCP Direct Lending VIII				3.41%	0.00%	2.15%	0.00%	1.46%	0.00%	4.67%	0.00%	2.69%	0.00%
Cliffwater Direct Lending Index				2.44%		2.18%		2.02%		1.97%		1.72%	

Manager Performance Comparison (Gross of Fees)

Period Ending: September 30, 2018

	Jul	Aug	Sep	3rd Qtr. 2018	Difference	2nd Qtr. 2018	Difference	1st Qtr. 2018	Difference	4th Qtr. 2017	Difference	3rd Qtr. 2017	Difference
Verus				0.00%		0.00%		2.17%		0.51%		-4.64%	
White Oak Yield				0.00%	0.00%	0.00%	0.00%	2.17%	0.00%	0.51%	0.00%	-4.64%	0.00%
Cliffwater Direct Lending Index				2.44%		2.18%		2.02%		1.97%		1.72%	
Verus	0.80%	-0.86%	0.37%	0.30%		-0.45%		-1.21%		4.72%		4.47%	
AQR GRP, 10% Volatility (Net)	0.80%	-0.86%	0.37%	0.30%	0.00%	-0.45%	0.00%	-1.21%	0.00%	4.72%	0.00%	4.47%	0.00%
60% R3000/ 40% BBgBarc Agg	1.88%	0.87%	0.18%	2.95%		1.12%		-0.67%		3.61%		3.21%	
60% MSCI World/ 40% BBgBarc Glb	2.00%	2.36%	-0.16%	4.25%		2.26%		-0.91%		3.93%		3.08%	
Verus	-0.65%	0.00%	-1.47%	-2.11%		0.02%		-1.58%		4.38%		2.98%	
PanAgora (Net)	-0.65%	0.00%	-1.47%	-2.11%	0.00%	0.02%	0.00%	-1.58%	0.00%	4.38%	0.00%	2.98%	0.00%
60% R3000/ 40% BBgBarc Agg	1.88%	0.87%	0.18%	2.95%		1.12%		-0.67%		3.61%		3.21%	
60% MSCI World/ 40% BBgBarc Glb	2.00%	2.36%	-0.16%	4.25%		2.26%		-0.91%		3.93%		3.08%	
Verus	-0.95%	-1.44%	0.44%	-1.94%		-6.09%		-3.86%		1.33%		3.99%	
AQR DELTA XN (Net)	-0.95%	-1.44%	0.44%	-1.94%	0.00%	-6.09%	0.00%	-3.86%	0.00%	1.33%	0.00%	3.99%	0.00%
Libor + 4%	0.52%	0.50%	0.53%	1.55%		1.51%		1.29%		1.46%		1.22%	
Verus	0.95%	-0.51%	0.11%	0.54%		-2.18%		-1.88%		1.87%		0.34%	
Aberdeen Standard GARS (Net)	0.95%	-0.51%	0.11%	0.54%	0.00%	-2.18%	0.00%	-1.88%	0.00%	1.87%	0.00%	0.34%	0.00%
Libor + 4%	0.52%	0.50%	0.53%	1.55%		1.51%		1.29%		1.46%		1.22%	
Verus				2.56%		1.86%		2.42%		2.29%		1.48%	
INVESCO Real Estate				2.57%	-0.01%	1.85%	0.01%	2.46%	-0.04%	2.26%	0.00%	1.46%	0.02%
NCREIF NFI ODCE Index				2.09%		2.05%		2.20%		2.07%		1.87%	
Verus				2.98%		1.97%		2.67%		2.09%		5.56%	
Invesco US Val IV				2.98%	0.00%	1.97%	0.00%	2.67%	0.00%	2.09%	0.00%	5.56%	0.00%
NCREIF NFI ODCE Index				2.09%		2.05%		2.20%		2.07%		1.87%	
NCREIF CEVA 1Q Lag - NET				2.95%		2.13%		3.41%		3.00%		2.61%	
Verus (net)				2.12%		1.25%		1.09%		2.52%			
PGIM RE US Debt Fund (net)				1.95%	0.17%	1.25%	0.00%	1.09%	0.00%	2.52%	0.00%		
NCREIF NFI ODCE Index				2.09%		2.05%		2.20%		2.07%			
Verus	-0.11%	0.56%	-0.77%	-0.33%		0.78%		-0.25%		1.25%		0.76%	
Brown Brothers Harriman	-0.11%	0.56%	-0.77%	-0.33%	0.00%	0.78%	0.00%	-0.27%	0.02%	1.26%	0.00%	0.76%	0.00%
BBgBarc U.S Tips	-0.48%	0.72%	-1.05%	-0.82%		0.77%		-0.79%		1.26%		0.86%	

1 MSCI

1.1 MSCI US MARKET BREAKPOINTS

Break Point*	Companies included
Large Cap	1-200
Medium-Large Cap	201-550
Medium Cap	551-750
Medium-Small Cap	751-2500
Small Cap	2501+

*MSCI only categorizes equities per size into large, mid and small cap. For InvestorForce Report analytics coherence regarding domestic benchmarks the buffer zones of the mid-cap category are used to determine Medium-Large and Medium-Small Cap categories.

As Of	Large Cap	Medium Large Cap	Medium Cap	Medium Small Cap	Small Cap
09/30/2018	18.559	11.536	5.547	3.012	0
06/30/2018	17.921	10.888	5.334	3.023	0
03/31/2018	17.921	10.888	5.334	3.023	0
12/31/2017	17.679	9.979	5.011	2.793	0
9/30/2017	17.696	9.979	5.011	2.793	0
6/30/2017	15.834	9.267	4.517	2.573	0
3/31/2017	15.834	9.267	4.517	2.573	0
12/31/2016	15.239	9.375	4.416	2.520	0
9/30/2016	15.239	9.375	4.416	2.520	0
6/30/2016	15.358	9.43	4.548	2.591	0
3/31/2016	15.358	9.43	4.548	2.591	0
12/31/2015	16.507	9.968	5.069	2.917	0
9/30/2015	16.507	9.968	5.069	2.917	0
6/30/2015	15.288	9.09	4.506	2.596	0
3/31/2015	15.356	9.083	4.491	2.577	0
12/31/2014	15.356	9.083	4.491	2.577	0

Number in billion USD

InvestorForce Report reflects changes in the MSCI breakpoints once MSCI publishes new breakpoints. For months when no new breakpoints are published always the last breakpoints are applied. Changes usually but always happen around re-balancing of the indexes. Some index reviews do not contain changes to the market-cap breakpoints.

1.2 MSCI DEVELOPED AND EMERGING MARKET BREAKPOINTS

In case of MSCI Indexes to define the Size - Segment Indexes for a market, the following free float - adjustedmarket capitalization Market Coverage Target Ranges are applied to the Market Investable Equity Universe:

Break Point	Companies included
Large Cap Index	70% ±5%
Standard Index*	85% ±5%
Investable Market Index**	99%+1% or -0.5%

* Standard Index (Large+Mid)

**Investable Market Index (Large+Mid+Small)

MSCI Country Classification can be found here: <https://www.msci.com/market-classification>

For Emerging Markets, the Global Minimum Size Reference is set at *one-half* the corresponding level of full market capitalization used for the Developed Markets for each size-segment.

As Of	Large Cap DM	Large Cap EM	Medium Cap DM	Medium Cap EM	Small Cap
9/30/2018	17.201	8.6005	6.374	3.187	
6/30/2018	17.201	8.6005	6.374	3.187	0
3/31/2018	16.392	8.196	6.106	3.053	0
12/31/2017	16.392	8.196	6.106	3.053	0
9/30/2017	15.008	7.504	5.500	2.750	0
6/30/2017	15.008	7.504	5.500	2.750	0
3/31/2017	14.361	7.180	5.077	2.538	0
12/31/2016	14.361	7.180	5.077	2.538	0
9/30/2016	14.180	7.090	5.076	2.538	0
6/30/2016	14.180	7.090	5.076	2.538	0
3/31/2016	14.077	7.0385	5.046	2.523	0
12/31/2015	14.077	7.0385	5.046	2.5230	0
9/30/2015	14.883	7.4415	5.359	2.6795	0
6/30/2015	14.883	7.4415	5.359	2.6795	0
3/31/2015	13.368	6.684	4.781	2.3905	0
12/31/2014	13.368	6.684	4.781	2.3905	0

Numbers are billions USD

InvestorForce Report shows changes in the MSCI breakpoints once MSCI publishes a new one. For months when no new breakpoints are published always the last breakpoint is applied. Changes usually happen around re-balancing of the indexes.

2 RUSSELL US BREAKPOINTS

The market capitalization breakpoints that appear in the Market Capitalization Chart are defined by the Russell 3000 Index and change for each period end. Russell calculated the total market capitalization of each security for the end of the period, based on the total shares and price, to determine whether it is large enough for inclusion in one or more of the Russell Breakpoints.

Once the market capitalization for each security is determined, each security is then placed in the appropriate market capitalization breakpoint. A market capitalization breakpoint is determined by the break between the companies below.

Break Point	Companies included
Large Cap	50 Largest US Companies
Medium Large Cap	Next largest 150 US Companies
Medium Cap	Next largest 300 US Companies
Medium Small Cap	Next largest 500 US Companies
Small Cap	All US Companies below 1,000 largest

After the breakpoints are determined by the ranges above, new members are assigned on the basis of the breakpoints and existing members are reviewed to determine if they fall within a cumulative 5% market cap range around the new market capitalization breakpoints. If an existing securities market cap falls within this 5%, it will remain in its current index rather than move into a new market capitalization based index.

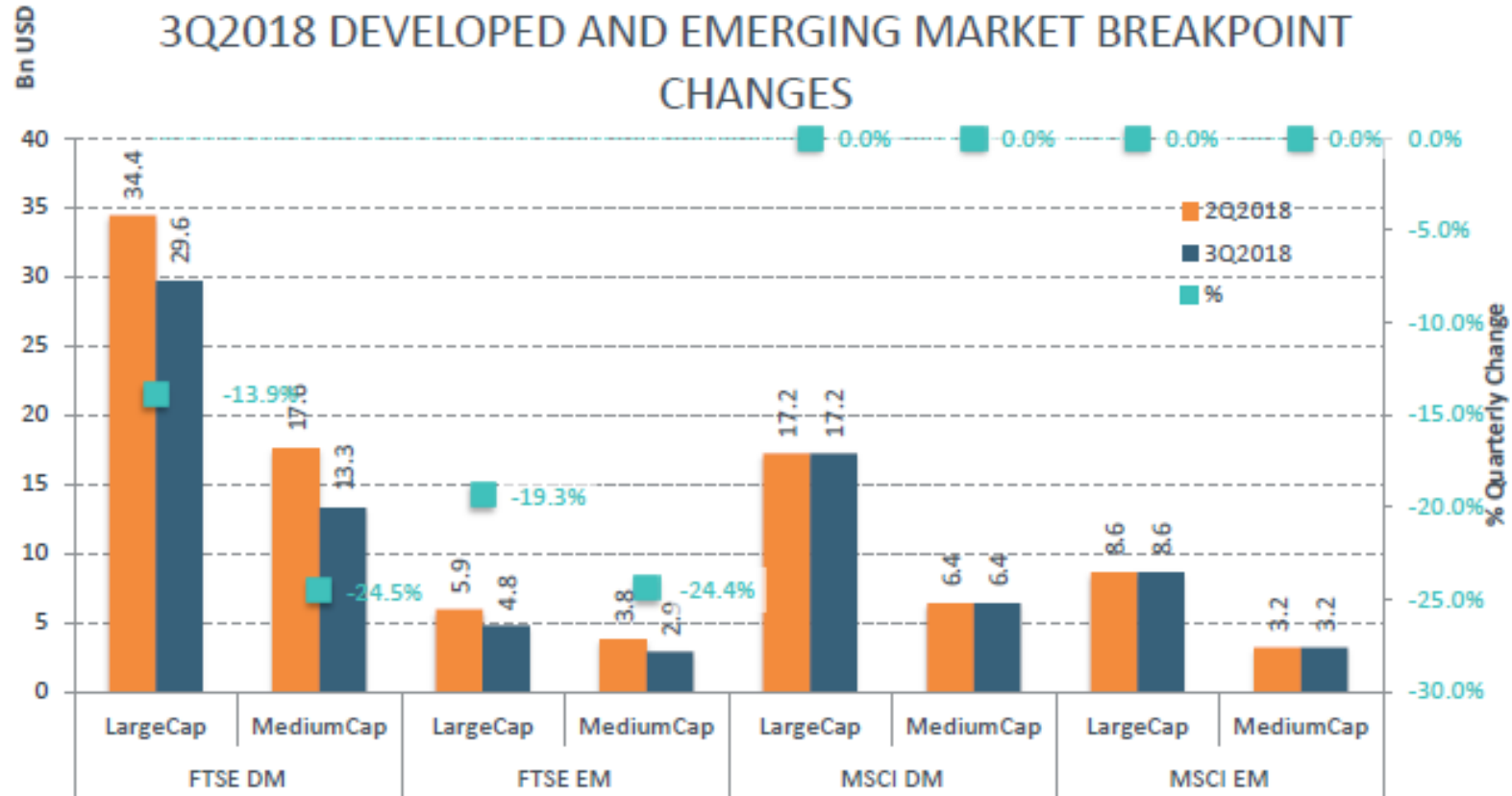
Market Capitalization Breakpoints

Period Ending: September 30, 2018

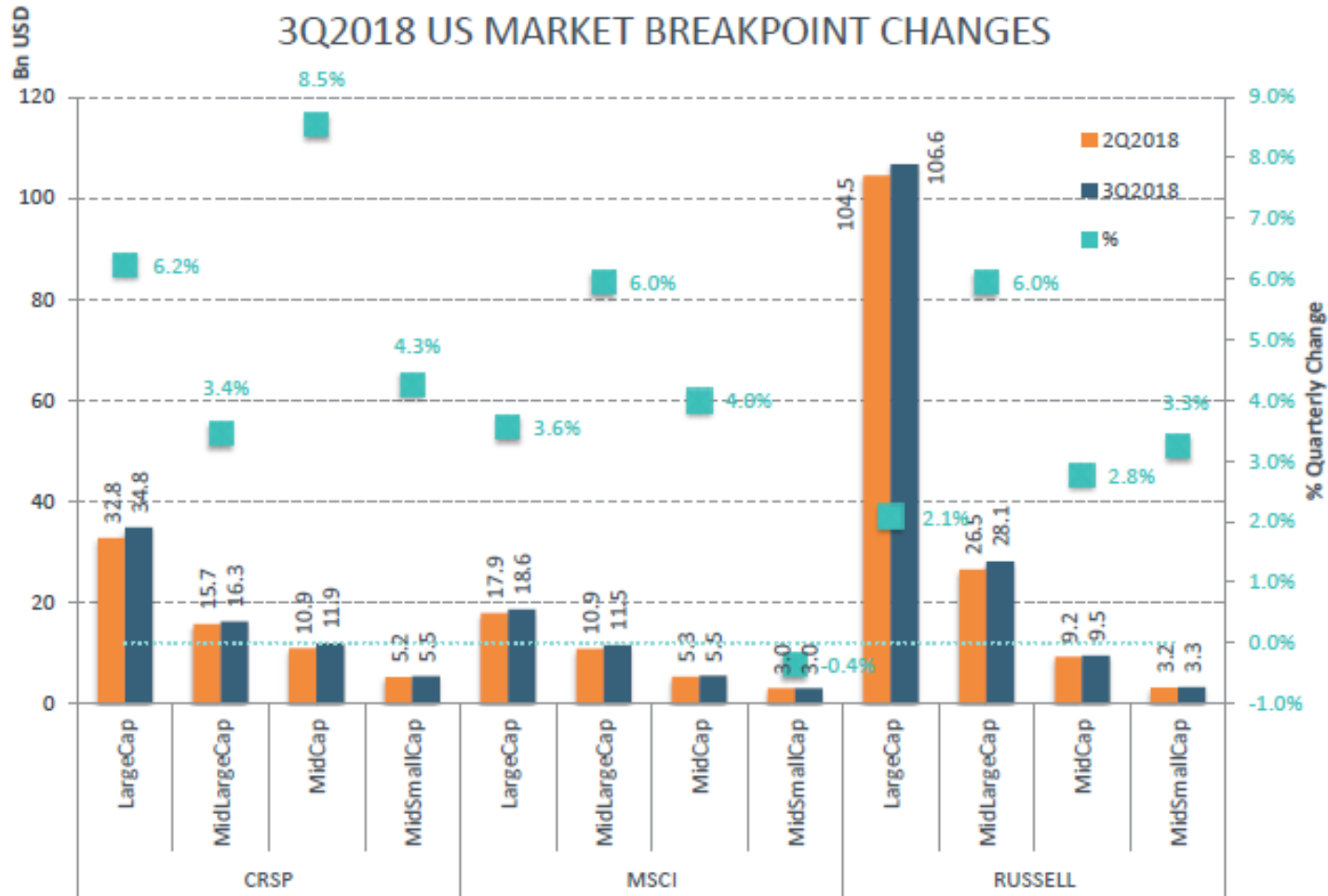
As Of	Large Cap	Medium Large Cap	Medium Cap	Medium Small Cap	Small Cap
9/30/2018	106.633	28.088	9.457	3.273	0
6/30/2018	104.455	26.511	9.202	3.171	0
3/31/2018	101.922	26.399	8.890	2.958	0
12/31/2017	95.036	26.237	8.819	3.021	0
9/30/2017	93.539	24.882	8.344	2.935	0
6/30/2017	87.845	25.481	8.204	2.859	0
3/31/2017	89.968	25.293	8.241	2.737	0
12/31/2016	84.960	23.168	7.890	2.702	0
9/30/2016	78.745	23.385	7.394	2.533	0
6/30/2016	77.349	22.250	7.1432	2.444	0
3/31/2016	83.360	22.414	7.435	2.395	0
12/31/2015	90.075	24.308	8.141	2.936	0
9/30/2015	88.944	23.139	7.993	2.946	0
6/30/2015	92.87	25.07	8.797	3.352	0
3/31/2015	93.082	25.494	8.794	3.384	0
12/31/2014	89.92	25.19	8.51	3.29	0
9/30/2014	84.51	24.44	7.97	3.04	0
6/30/2014	80.39	23.62	8.07	3.24	0
3/31/2014	76.77	23.15	7.83	3.06	0
12/31/2013	77.11	22.27	7.65	3.03	0
9/30/2013	72.4	19.93	7.15	2.71	0
6/30/2013	68.47	19.36	6.48	2.46	0
3/31/2013	64.31	18.64	6.39	2.39	0
12/31/2012	58.45	16.8	5.75	2.13	0
9/30/2012	57.06	16.48	5.49	2.08	0
6/30/2012	55.65	16.13	5.14	1.99	0
3/31/2012	57.58	16.43	5.55	2.13	0
12/31/2011	51.97	14.66	4.93	1.93	0
9/30/2011	45.35	13.88	4.38	1.66	0
6/30/2011	54.25	15.95	5.66	2.16	0
3/31/2011	52.22	15.69	5.7	2.16	0
12/31/2010	49.54	14.8	5.16	2.04	0
9/30/2010	42.83	13.13	4.64	1.8	0
6/30/2010	39.95	11.58	4.1	1.59	0

Numbers are billions USD

BREAKPOINT TRENDS



MSCI is releasing market capitalization breakpoints less frequently than FTSE, hence the market capitalization breakpoints are longer in effect. This could result in no change.



MSCI is releasing market capitalization breakpoints less frequently than others, hence the market capitalization breakpoints are longer in effect. This could result in no change.



**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**

4TH QUARTER 2018
Investment Landscape

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3rd quarter summary

THE ECONOMIC CLIMATE

- The U.S., Mexico, and Canada reached a new trade agreement. The new deal, USMCA, involves few changes to NAFTA, but may create mildly more favorable terms for U.S. businesses. [p. 13](#)
- The U.S. continued to outshine other developed economies in Q2 with its strongest quarterly growth since 2014. A few smaller emerging market economies experienced idiosyncratic weakness that led to concerns of economic contagion, but fundamentals in most countries still appear strong. [p. 14, 16](#)

PORTFOLIO IMPACTS

- Emerging market equities delivered slight losses in Q3, but seem to have stabilized as currency depreciation recently subsided (MSCI Emerging Markets Index -1.1%, JP Morgan EM Currency Index -1.6%). We maintain a positive outlook on emerging market equities. [p. 30](#)
- The Fed raised the target range for the fed funds rate by 0.25% to a range of 2.00%-2.25%. The probability of a December rate hike was 78%, as of October 8th. [p. 20, 22](#)
- U.S. trade discussions have narrowed in on China. Negotiations between the two countries in recent months do not appear to have produced tangible results. [p. 17](#)

THE INVESTMENT CLIMATE

- Another strong quarter of U.S. corporate earnings is expected in Q3 on both an absolute and relative basis. S&P 500 earnings and revenue growth are forecast to be 19.3% and 6.9% YoY, respectively. [p. 27](#)
- Fixed income yields around the world rose slightly. The U.S. Treasury yield hit a 7-year high of 3.23%, reigniting investor concerns over rising interest rates. [p. 20](#)
- The Italian coalition government sparred with the European Commission over its fiscal spending plans. Fading ECB stimulus will likely lift interest rates on European bonds, which is creating doubts around the sustainability of Italy's debt. [p. 14, 15](#)

ASSET ALLOCATION ISSUES

- Capital market returns have been largely flat-to-negative in 2018, with U.S. equities being the exception. Diversification remains important, but has been painful for investors in this environment. [p. 26](#)
- Trade conflicts between the U.S. and its trading partners appear to be mostly resolved. All eyes are on negotiations between U.S. and Chinese representatives, though it increasingly appears that these negotiations are broader in nature than trade alone. [p. 17](#)

A neutral to mild risk overweight may be warranted in today's environment

What drove the market in Q3?

“Bullish U.S. stocks leave the rest of the world trailing”

S&P 500 VS. MSCI ACWI EX U.S. RELATIVE MONTHLY PERFORMANCE

Apr	May	Jun	Jul	Aug	Sep
-3.1%	3.2%	1.4%	1.4%	4.6%	-0.1%

Article Source: Financial Times, September 13th, 2018

“Traders take Fed’s cues, pile on bets on U.S. rate hikes”

YEAR-END 2020 MARKET IMPLIED FED FUNDS RATE

Apr	May	Jun	Jul	Aug	Sep
2.70%	2.55%	2.65%	2.72%	2.62%	2.82%

Article Source: Reuters, September 17th, 2018

“Fitch cuts Italy’s credit outlook on debt and governance concerns”

10-YEAR ITALIAN-GERMAN YIELD SPREAD

Apr	May	Jun	Jul	Aug	Sep
123	245	238	228	291	268

Article Source: Financial Times, August 31st, 2018

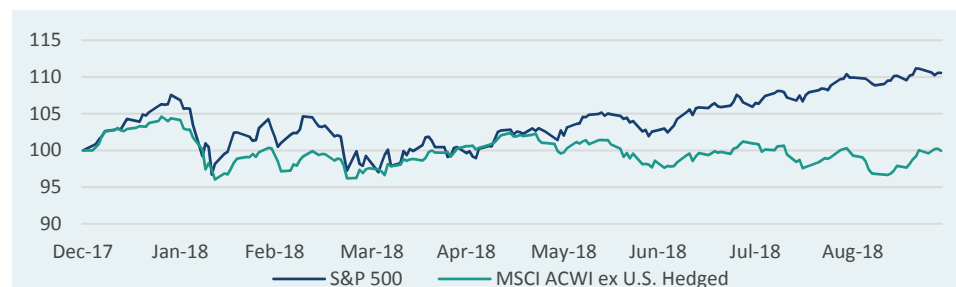
“No breakthrough in U.S.-China trade talks as new tariffs kick in”

U.S. IMPORTS SUBJECT TO RECENTLY ENACTED TARIFFS (\$ BILLIONS)

Apr	May	Jun	Jul	Aug	Sep
33	33	56	90	106	306

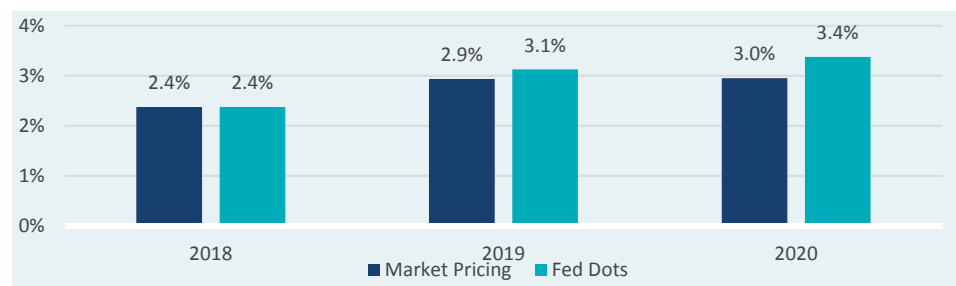
Article Source: CNBC, August 23rd, 2018

U.S. VS. NON-U.S. EQUITY YTD PERFORMANCE



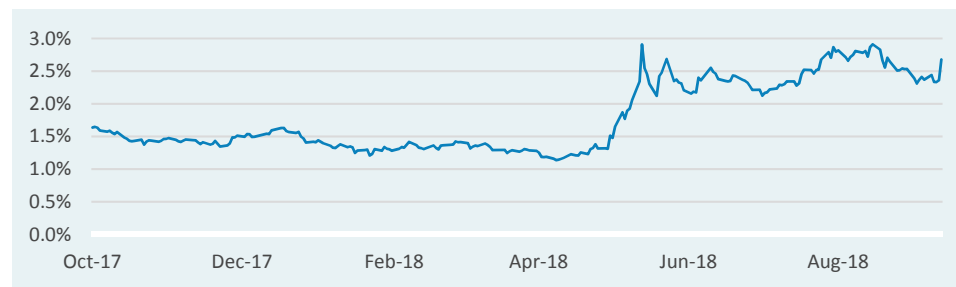
Source: Bloomberg, as of 9/30/18

MARKET IMPLIED FED FUNDS PRICING VS. FED DOTS (YEAR-END)



Source: Bloomberg, Federal Reserve, as of 10/8/18

10-YEAR ITALIAN-GERMAN SOVEREIGN YIELD SPREAD



Source: Bloomberg, as of 9/30/18

Economic environment

U.S. economics summary

- Real GDP growth was 2.9% year-over-year in the second quarter. Expectations for third quarter growth have risen alongside recently strengthening U.S. economic data.
- U.S. inflation fell slightly to 2.3% YoY, moving closer to the U.S. Core CPI rate of 2.2% YoY.
- Non-farm payrolls added 134,000 jobs in September, missing the consensus estimate of 185,000. Hurricane Florence likely contributed to the miss, as leisure and hospitality employment fell by 17,000, the largest drop in a year.
- The U3 unemployment rate fell from 3.9% to 3.7% in September, the lowest rate since 1969. The U6 unemployment increased from 7.4% to 7.5%.
- The United States, Mexico, and Canada reached an agreement on a new trade deal to replace NAFTA.

The new deal, USMCA, included provisions aimed towards protecting the business interests of North American auto manufacturers as well as workers' wages. The deal also partially opened the Canadian dairy market to U.S. farmers.

- The U.S. imposed 10% tariffs on \$200 billion of Chinese goods on September 24th. The White House claimed that the tariff rate will advance from 10% to 25% at year-end if no progress is made through negotiations in the meantime. China retaliated with tariffs of 10% on \$60 billion of U.S. imports.
- As expected, the Federal Open Market Committee raised the target range for the fed funds rate by 0.25%, moving the new range to 2.00%-2.25%. The market implied odds for an additional December rate hike were 78%, as of October 8th.

	Most Recent	12 Months Prior
GDP (YoY)	2.9% <i>6/30/18</i>	2.1% <i>6/30/17</i>
Inflation (CPI YoY, Core)	2.2% <i>9/30/18</i>	1.7% <i>9/30/17</i>
Expected Inflation (5yr-5yr forward)	2.2% <i>9/30/18</i>	2.0% <i>9/30/17</i>
Fed Funds Target Range	2.00 – 2.25% <i>9/30/18</i>	1.00 – 1.25% <i>9/30/17</i>
10 Year Rate	3.1% <i>9/30/18</i>	2.3% <i>9/30/17</i>
U-3 Unemployment	3.7% <i>9/30/18</i>	4.2% <i>9/30/17</i>
U-6 Unemployment	7.5% <i>9/30/18</i>	8.3% <i>9/30/17</i>

GDP growth

Real GDP growth accelerated to 2.9% YoY (4.2% quarterly annualized rate) in the second quarter, driven in part by fiscal stimulus. This quarterly growth rate marked the fastest pace of expansion since the third quarter of 2014.

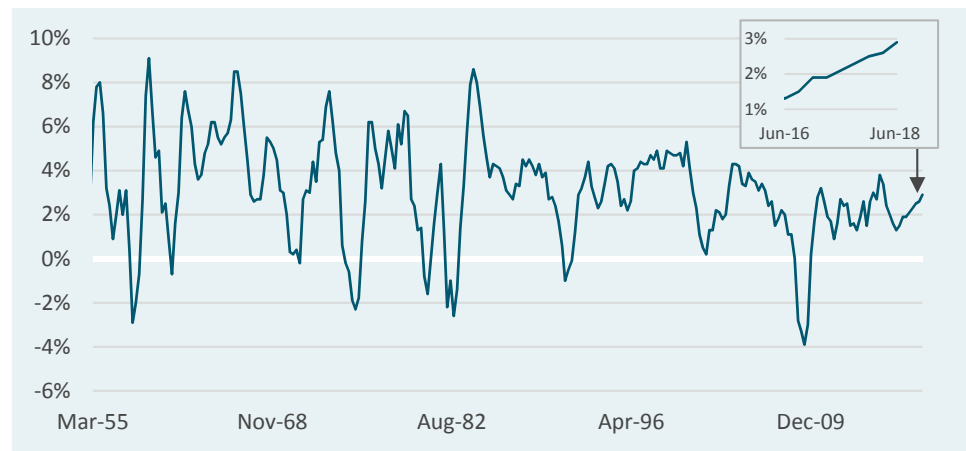
The consumer was once again the biggest contributor to growth after a slowdown in the previous quarter. Consumer spending added 2.6% to the quarterly growth rate. Exports and business investment also boosted growth – each contributed 1.1% to GDP growth. However, some of the increase in exports may have been a result of businesses

attempting to ship goods ahead of pending tariffs, pulling future growth into the current quarter.

Although the current expansion is near the longest on record, it still appears the economy is on solid footing without many typical signs of late-cycle overheating. While we are cautious about a potential prolonged economic war between the U.S. and China, we do not believe the tariffs that have been implemented thus far will in themselves create a material drag on the domestic economy. We remain watchful for any indirect effects on consumer and business confidence that could lead to a slowdown in activity.

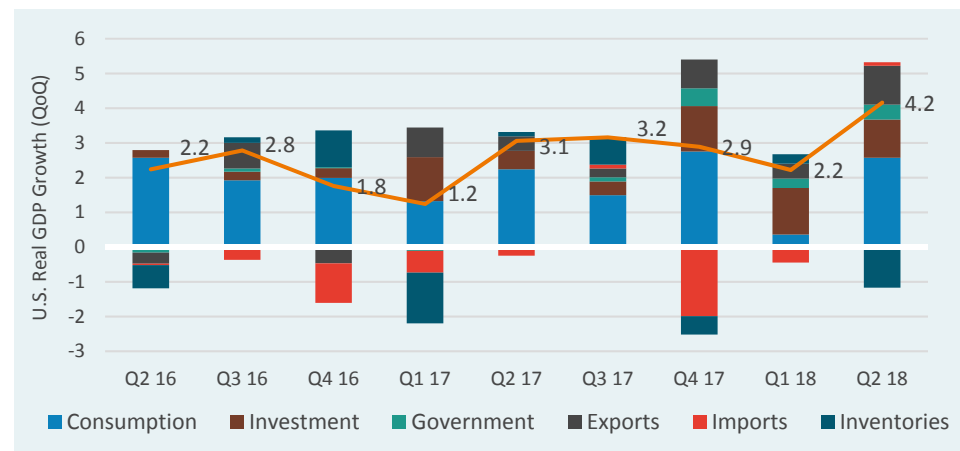
GDP growth was the highest since Q3 2014

U.S. REAL GDP GROWTH (YOY)



Source: Bloomberg, as of 6/30/18

U.S. GDP COMPONENTS



Source: BEA, annualized quarterly rate, as of 6/30/18

Inflation

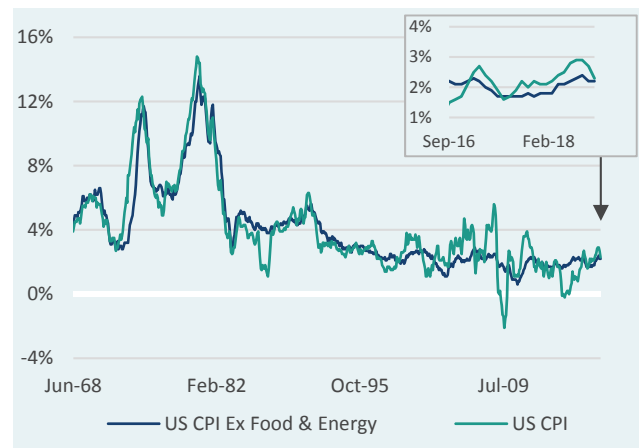
Inflation has remained relatively muted throughout the current economic cycle. Headline and core CPI rose 2.2% and 2.3%, respectively over the 12 months ending in September.

Although there has been some occasional concern in the market over a potential spike in inflation, we have yet to see any sustained pressure on consumer prices. This effect has not been confined to the current cycle. In fact, secular disinflation caused in part by automation and

globalization has contributed to stable core inflation of around 1-3% per annum since the early 1990s.

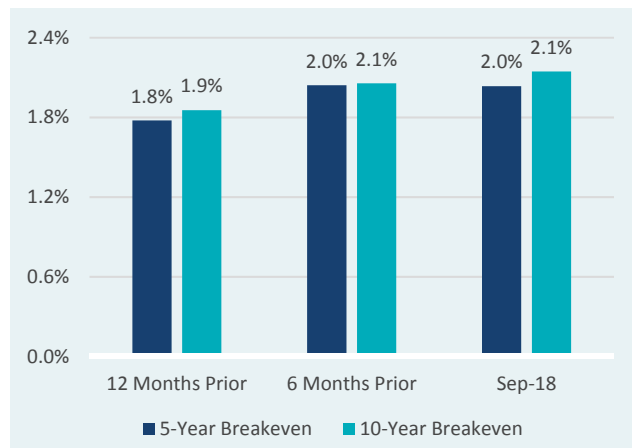
The potential impact of tariffs on inflation has been widely scrutinized, but it is important to note that the flow-through from import prices to consumer prices is ambiguous. The flow-through will depend on numerous factors including substitution effects and the price elasticity of demand. At this point, we do not expect a material increase in inflation due to tariffs.

U.S. CPI (YOY)



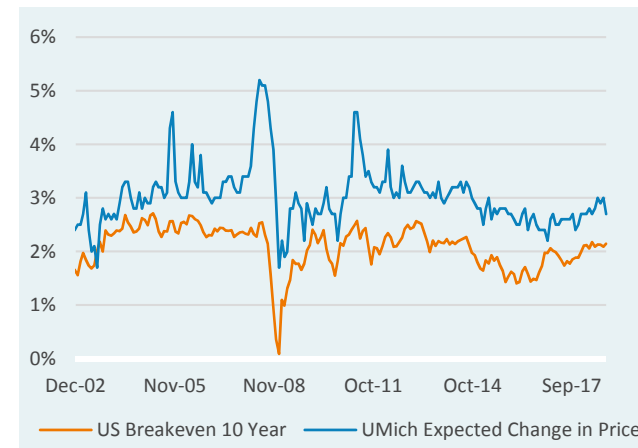
Source: Bloomberg, as of 9/30/18

BREAKEVEN INFLATION RATES



Source: Bloomberg, as of 9/30/18

INFLATION EXPECTATIONS



Source: Bloomberg, as of 9/30/18

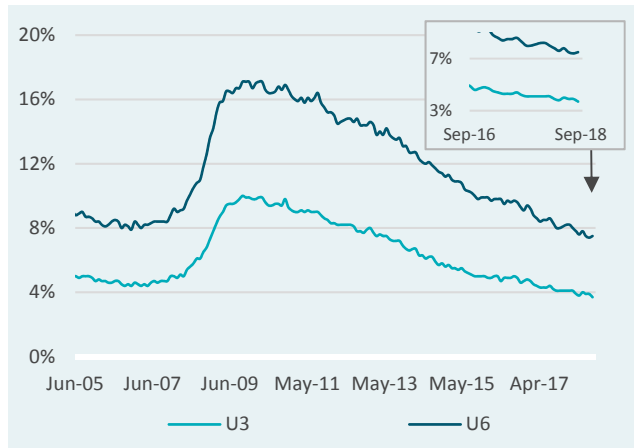
Labor market

Labor market trends were largely unchanged over the quarter. The economy continued to add jobs at a fairly steady pace and the U-3 unemployment rate fell further from 4.0% to 3.7% in September. The broader U-6 unemployment rate also tightened, dropping from 7.8% to 7.5%. This measure has finally recovered to below its pre-global financial crisis level, indicating that there may be fewer pockets of labor market slack as potential workers increasingly search for and find employment. However, looking at the broadest measure of employment – the percentage of Americans currently employed, we are currently at 60%, compared to 63% prior in 2006. This seems to suggest that labor slack remains.

Wage growth remained moderate as average hourly earnings for private workers rose 2.7% from the previous year in September. On a real basis, however, wages rose 0.7% YoY, in-line with the long-term average since 1970.

Surging job openings, along with business survey responses, suggest companies are having a difficult time finding qualified workers. As of August, there were 7.1 million job openings compared to only 6.2 million people classified as unemployed.

UNEMPLOYMENT RATE



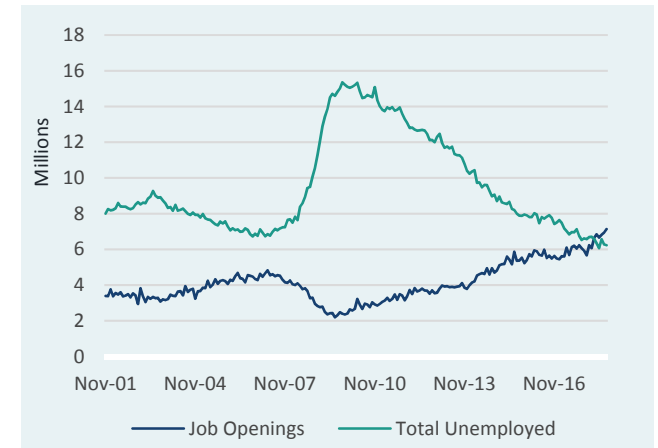
Source: FRED, as of 9/30/18

AVERAGE HOURLY EARNINGS (YOY)



Source: Bloomberg, as 9/30/18

JOB OPENINGS VS TOTAL UNEMPLOYED



Source: Bloomberg, as of 8/31/18

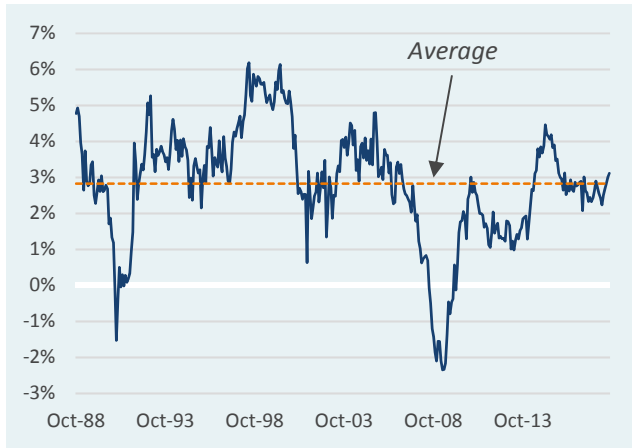
The consumer

Real consumer spending rose 3.1% from the previous year in August, in-line with the long-term average over the past 30 years. Conditions facing consumers, including moderate income gains, a tight labor market, and low interest rates are still supportive of spending. Despite some evidence that the U.S. is moving into the later stages of the economic cycle, we have yet to see big increases in consumer spending, which is often indicative of overconfidence.

With the 30-year mortgage rate nearing 5%, there have been increasing concerns over the impact of rising rates on the

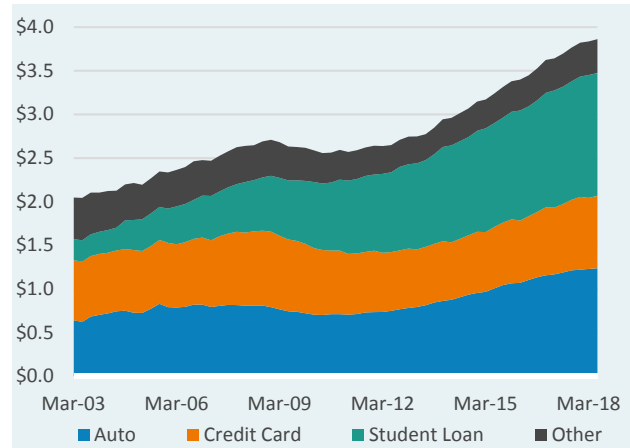
cost of living. However, a rise in market interest rates will impact various types of debt in different ways. For example, nearly all U.S. mortgage debt issued since the global financial crisis has been with fixed interest rates. Higher mortgage rates will have a greater impact on new home buyers, rather than all homeowners. In fact, household mortgage debt service fell to a cycle low of 4.2% of disposable income in the second quarter. On the other hand, interest rates on shorter-term debt, such as auto and credit card loans, will be much quicker to reflect changes in market rates.

REAL CONSUMER SPENDING (YOY)



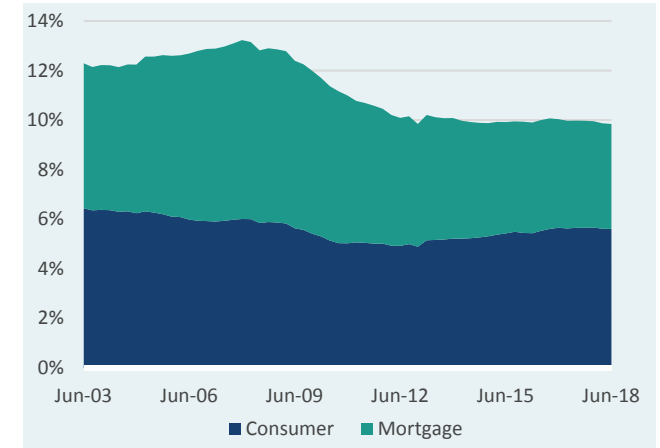
Source: Bloomberg, as of 8/31/18

NON-HOUSING DEBT BALANCE (TRILLIONS)



Source: FRBNY, as of 6/30/18

DEBT SERVICE AS % OF DISPOSABLE INCOME



Source: Federal Reserve, as of 6/30/18

Sentiment

Sentiment readings from both households and businesses are incredibly strong. Americans across all income subgroups expressed optimism for the future, according to the University of Michigan Consumer Sentiment survey. The most often cited concern was U.S. tariffs, which were mentioned by one third of respondents. Those surveyed were optimistic about their personal financial situation, continued economic growth, and low inflation.

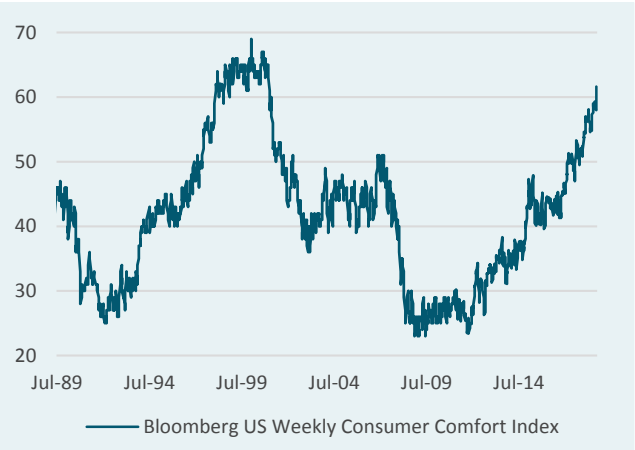
The Bloomberg U.S. Weekly Consumer Confidence Index has surpassed its 17-year high of 59.3, reflecting a rosy outlook

for personal finances, wages, and the economy.

The NFIB Small Business Optimism Index reached 107.9 in September – the third strongest reading in the 45-year history of the index. NFIB commented, “In the small business half of the economy, 2018 has produced 45-year record high measures of job openings, hiring plans, actual job creation, compensation increases (actual and planned), profit growth, and inventory investment.” The positive outlook of small business owners is likely supportive of continued economic growth.

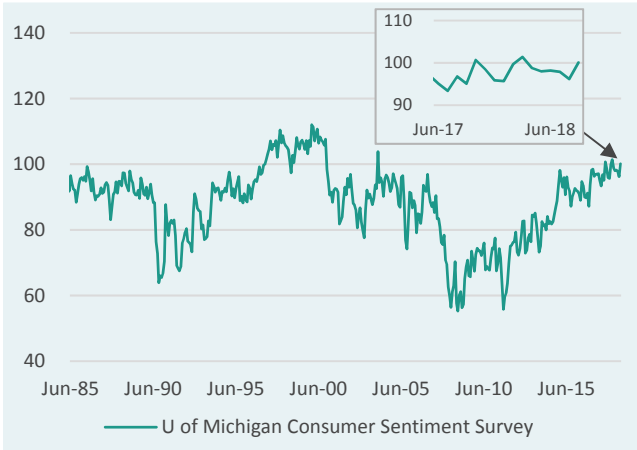
Consumers and business are confident about the future

CONSUMER COMFORT INDEX



Source: Bloomberg, as of 9/30/18 (see Appendix)

CONSUMER SENTIMENT



Source: University of Michigan, as of 9/30/18 (see Appendix)

NFIB SMALL BUSINESS OPTIMISM INDEX



Source: NFIB, as of 9/30/18 (see Appendix)

Housing

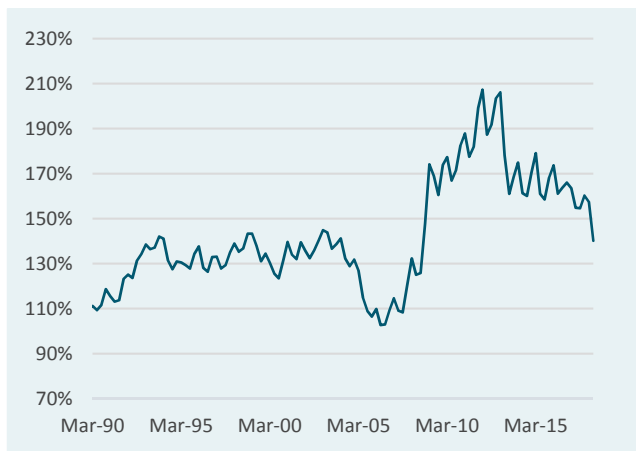
Single-family home prices appreciated at a strong pace. As of July, the Case-Shiller National Home Price Index was up 4.7% year-to-date. Over the past 5 years home prices have risen 5.3% per annum, outpacing wage growth and likely creating difficulties for those planning new purchases.

Nationwide home prices are now 11% above the previous high reached in mid-2006. Lower interest rates have partially offset rising prices, though this effect is fading as

borrowing rates have moved back towards pre-2008 levels.

U.S. home affordability has dropped materially in 2018 and is now back to a level not seen since late 2008. The 30-year fixed mortgage interest rate rose from 4.0% in January to more than 4.7% through the end of September. Home sales have recently slowed - perhaps a result of less buyer-friendly conditions.

HOUSING AFFORDABILITY INDEX



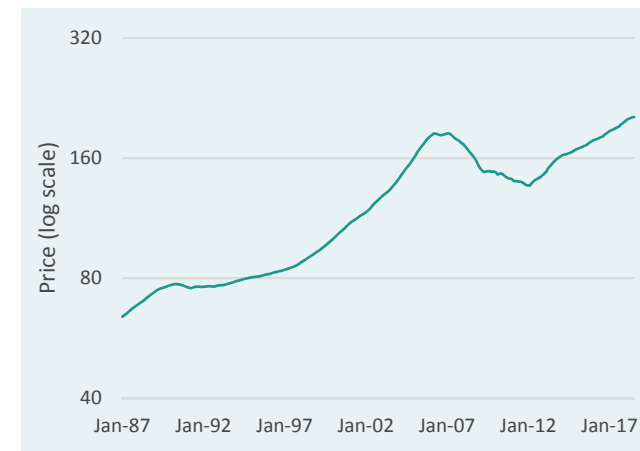
Source: Bloomberg, as of 6/30/18

EXISTING HOME SALES (MILLIONS)



Source: Bloomberg, SAAR, as of 8/31/18

U.S. HOME PRICE INDEX



Source: Case-Shiller National Home Price Index, as of 7/31/18

International economics summary

- The U.S., Mexico, and Canada reached an agreement on a trade deal to replace NAFTA. The new U.S.-Mexico-Canada Agreement (USMCA) involves few material changes to NAFTA, but the terms appear mildly more favorable for U.S. businesses.
- U.S. negotiations with China, its largest trading partner, continued with little apparent progress. The U.S. imposed 10% tariffs on \$200 billion of Chinese goods on September 24th. The White House claimed that the tariff rate will advance from 10% to 25% at year-end if no progress is made in the meantime. China responded with retaliatory tariffs of 10% on \$60 billion of U.S. imports.
- Trade negotiations with other trading partners appear to be mostly resolved, easing concerns of a global trade war.
- Developed market economies are expected to grow less quickly in the coming years, while emerging economy growth rates are expected to rise.
- PMI readings around the globe have weakened during 2018, led by the Eurozone. U.S. PMIs remain very high, indicating expansion in the manufacturing and services sectors.
- The Italian coalition government sparred with the European Commission over its fiscal spending plans. Fading ECB stimulus will likely lift interest rates on European bonds, creating doubts around the sustainability of Italy's debt.
- The U.S. dollar appreciated by 1% during the quarter. A stable dollar would help dampen the volatility of unhedged equity investments, particularly in emerging markets where currency moves have been larger.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	2.9% <i>6/30/18</i>	2.7% <i>8/31/18</i>	3.8% <i>9/30/18</i>
Eurozone	2.1% <i>6/30/18</i>	2.1% <i>9/30/18</i>	8.3% <i>6/30/18</i>
Japan	1.3% <i>6/30/18</i>	1.3% <i>8/31/18</i>	2.4% <i>6/30/18</i>
BRICS Nations	5.8% <i>6/30/18</i>	2.5% <i>6/30/18</i>	5.5% <i>6/30/18</i>
Brazil	1.0% <i>6/30/18</i>	4.5% <i>9/30/18</i>	12.2% <i>9/30/18</i>
Russia	1.9% <i>6/30/18</i>	3.4% <i>9/30/18</i>	4.6% <i>8/31/18</i>
India	8.2% <i>6/30/18</i>	3.7% <i>8/31/18</i>	8.8% <i>12/31/17</i>
China	6.7% <i>6/30/18</i>	2.3% <i>8/31/18</i>	3.8% <i>6/30/18</i>

International economics

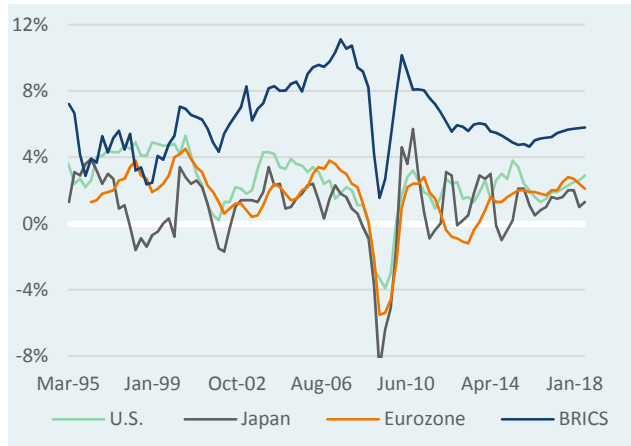
While U.S. economic growth improved, international growth remained moderate. In the Eurozone, real GDP rose 2.1% YoY in Q2, down from 2.4% in Q1. In addition to slowing growth, political uncertainty in Italy and less stimulus from the European Central Bank has clouded the economic outlook. The political situation in Italy highlights the problems caused by an uneven recovery across the Eurozone. While the French and German economies may be in a position to withstand monetary tightening, it does not appear that this is the case in places such as Italy, Spain, and Portugal.

Political issues have also created much uncertainty in the United Kingdom with the March 2019 deadline for a Brexit deal fast approaching. Theresa May's initial plan was rejected by the European Union, and it appears both sides have at least considered how to move forward without a deal.

Developed international inflation remains well below central bank targets, which may provide greater flexibility for management of these economic imbalances.

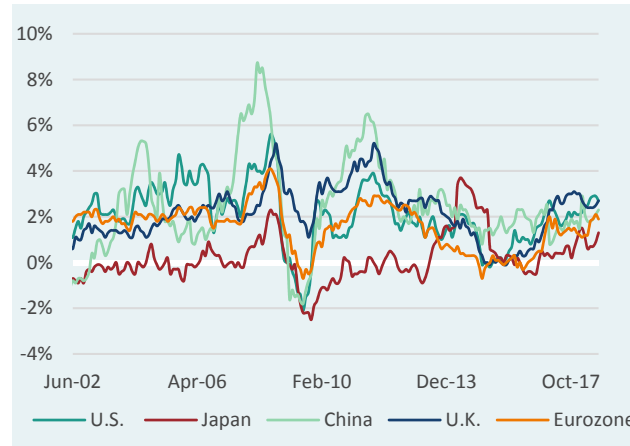
Synchronized global growth has moderated

REAL GDP GROWTH (YOY)



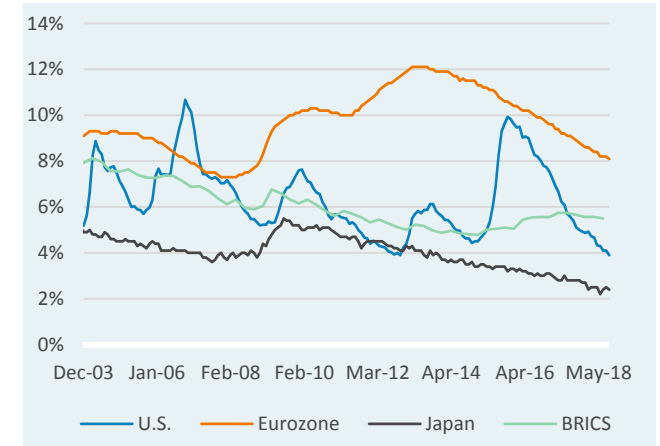
Source: Bloomberg, as of 6/30/18

INFLATION (CPI YOY)



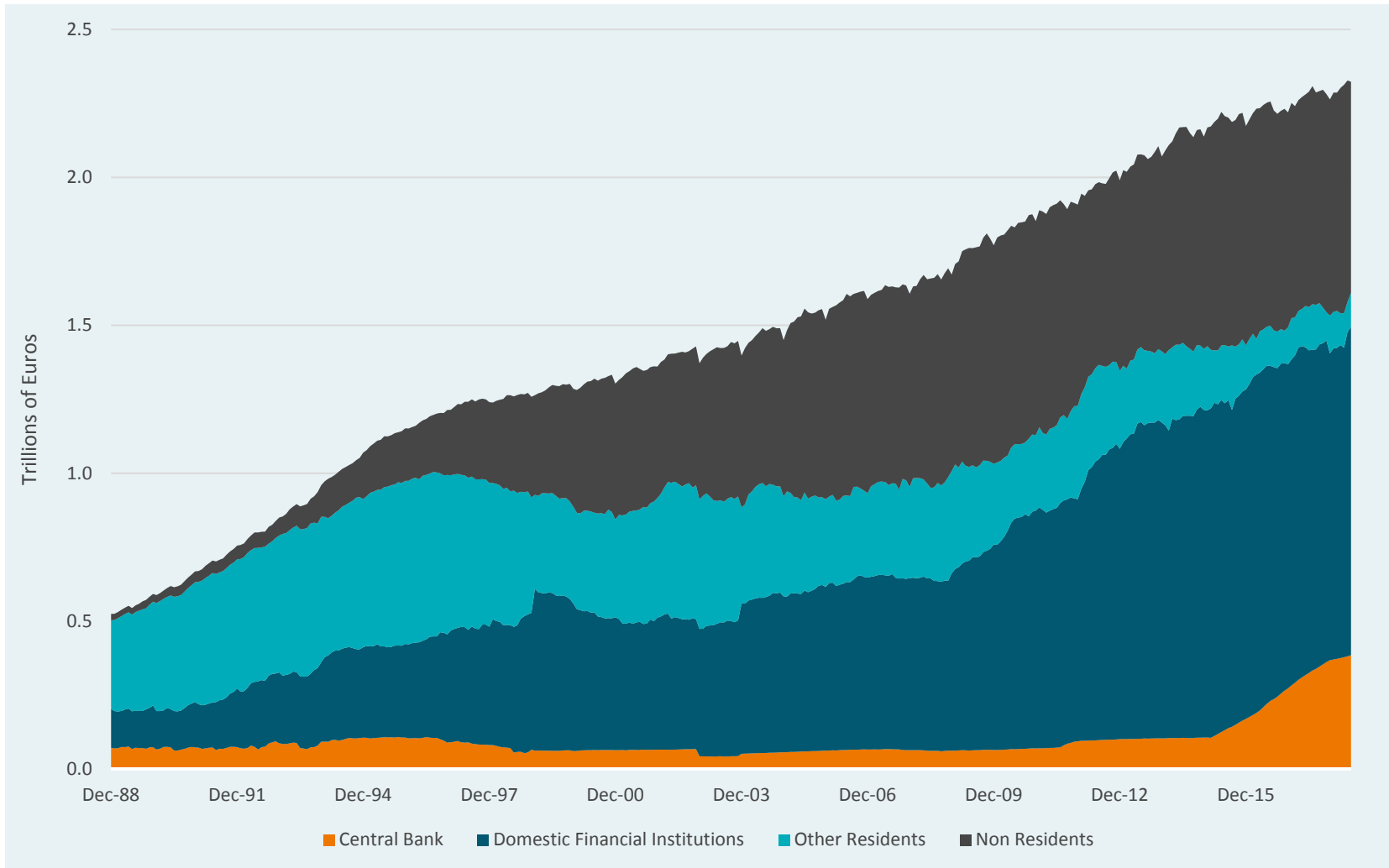
Source: Bloomberg, as of 8/31/18

UNEMPLOYMENT RATE



Source: Bloomberg, as of 8/31/18 or most recent release

Italian debt ownership



European banks have helped suppress Italian bond yields

This support may be dwindling as central bank stimulus ends

Source: Bank of Italy, as of 6/30/18

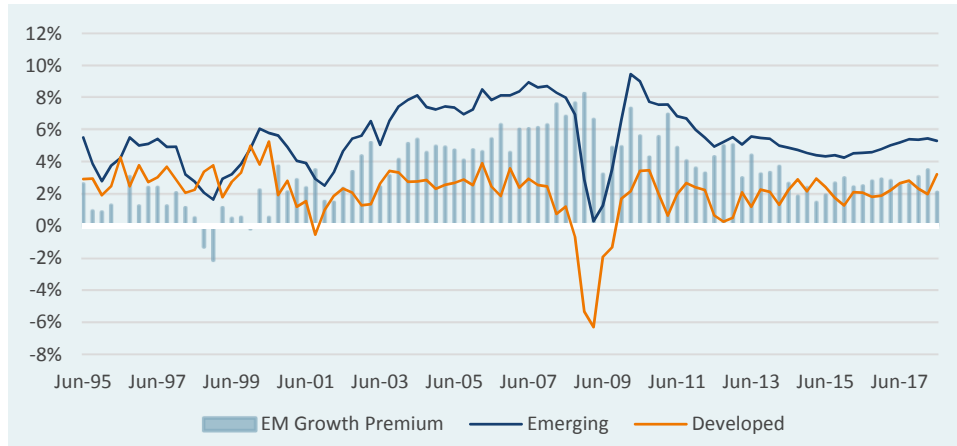
Emerging economies

Several events over the quarter helped lead to broad weakness in emerging markets assets and to investor concerns about contagion, including a 25% plunge in the Turkish lira in August and Argentina securing a \$50 billion bailout from the IMF. Contagion events in EM economies, such as the Asian financial crisis in the 1990s, have been characterized by a trigger event that caused mass capital outflows, currency depreciation, rising domestic interest rates, and eventually recession. These economies have withstood multiple recent shocks, but the last serious emerging market contagion occurred nearly 20 years ago. This likely reflects material changes in these economies that have made them more resilient to exogenous events.

First, the development of local savings institutions has created a marginal buyer of debt when foreign investors sell that has helped combat interest rate shocks. Second, more emerging economies have moved to flexible exchange rate systems and accumulated significant FX reserves, which gives them more control to slow currency depreciation. Third, many emerging markets have trimmed their reliance on foreign capital, particularly in terms of hard currency debt. Overall, we believe emerging economies remain on solid footing, and provide investors with opportunities in both the short- and long-term.

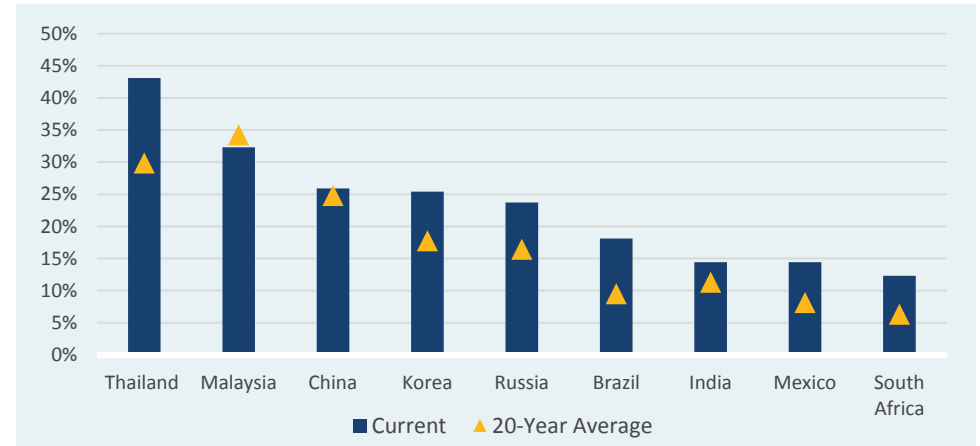
Economic contagion fears seem overblown

EMERGING VS. DEVELOPED ECONOMY REAL GDP GROWTH (YOY)



Source: IMF, as of 6/30/18

FX RESERVES (% OF GDP)



Source: IMF, GDP as of 6/30/18, FX reserves as of 8/31/18

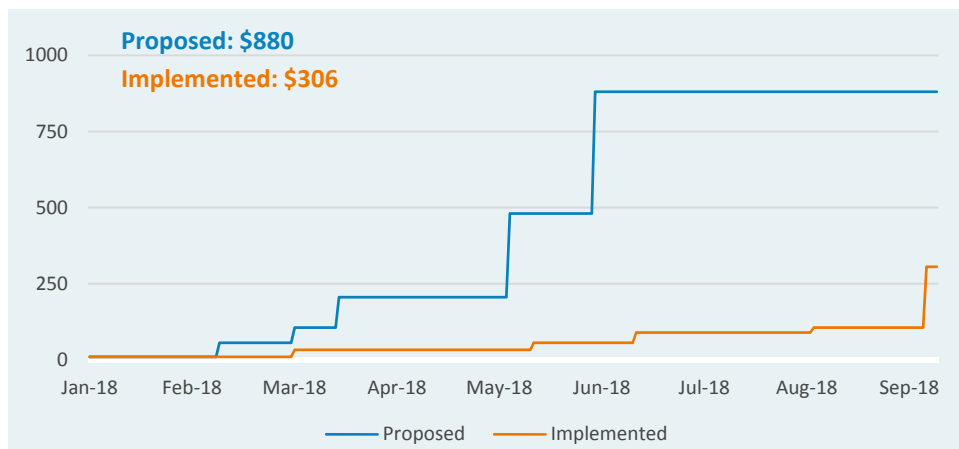
U.S.-China trade

Following the successful renegotiation of NAFTA, the Trump Administration has clearly focused in on U.S. and China trade terms. The U.S. implemented 10% tariffs on an additional \$200 billion of Chinese imports that may rise to a 25% rate at the beginning of next year if no progress is made in the meantime. China responded with retaliatory tariffs of 5-10% on \$60 billion of U.S. imports. Based on equity market reactions to this point, and the growing divide between U.S. and China market performance, it appears investors may be more concerned with the impact of trade on China. Chinese equities are down more than 30% from their recent peak in January, while U.S. equities have moved steadily higher.

As the conflict between the two sides continues to drag on, it appears that this may be more than just a trade war. Recent developments, including U.S. sanctions on Chinese military leaders and naval run-ins in the South China Sea, point towards a much broader struggle centered around global hegemony. U.S. policy focused on confronting China's rise as a world power would represent a marked break from the past and widen the potential outcomes. If this is the case, the chances of a trade deal may be lower, and even the conclusion of a successful trade deal may not be a safe indicator of a return to stable relations between the two countries.

The U.S.-China conflict appears to be about more than just trade

U.S. IMPORTS SUBJECT TO TARIFFS (\$ BILLIONS)



Source: Verus, as of 9/30/18, only includes recently proposed or implemented tariffs

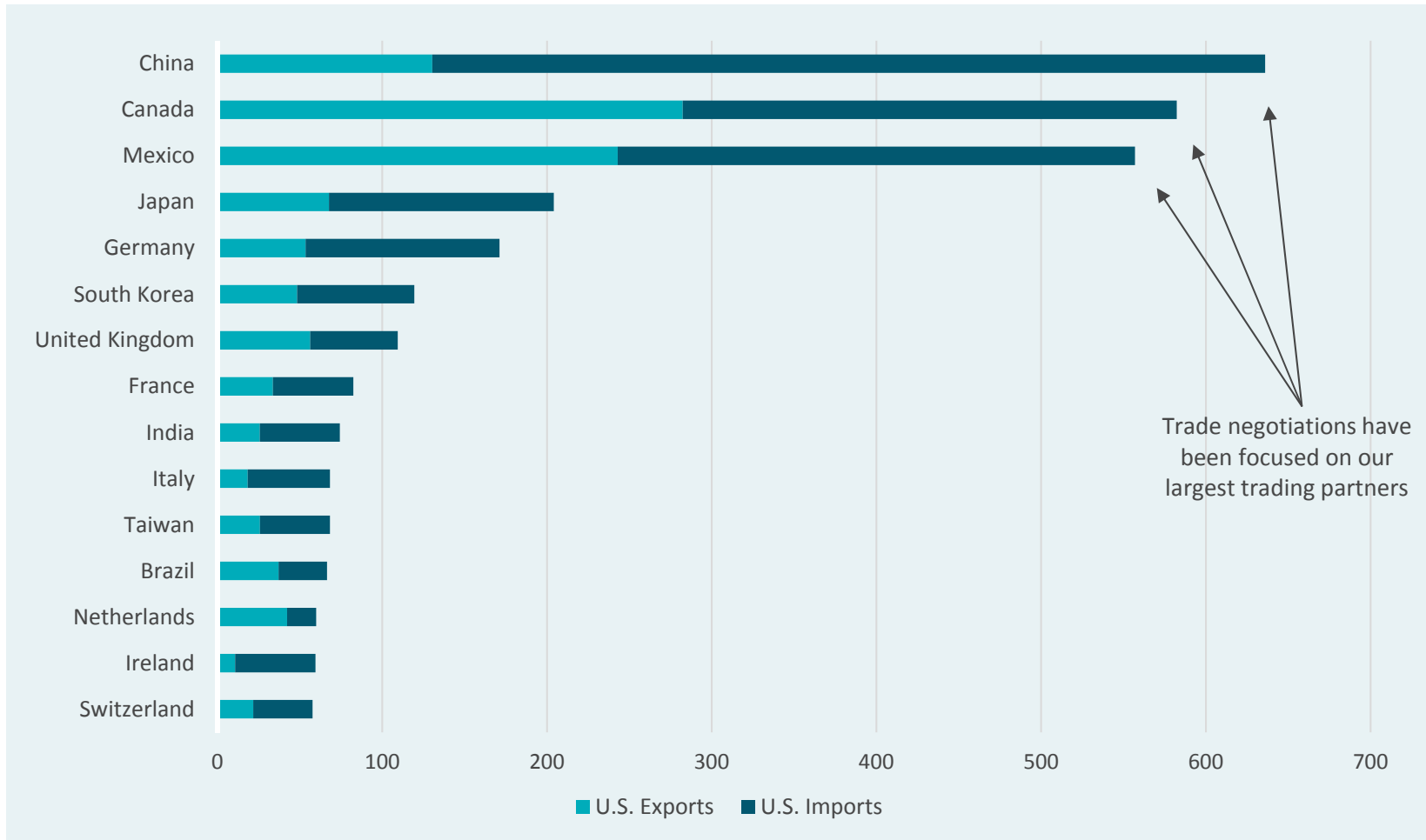
1-YEAR EQUITY PRICE MOVEMENT (INDEXED TO 100)



Source: Bloomberg, as of 9/30/18, China A shares are represented by the CSI 300 Index

U.S. trade

U.S. TRADING PARTNERS (\$BILLIONS)



U.S. negotiations have focused on our largest trade partners

NAFTA will be replaced by the U.S.-Mexico-Canada Agreement (USMCA)

Trade negotiations have been focused on our largest trading partners

Source: U.S. Census Bureau, year 2017

Fixed income rates & credit

Interest rate environment

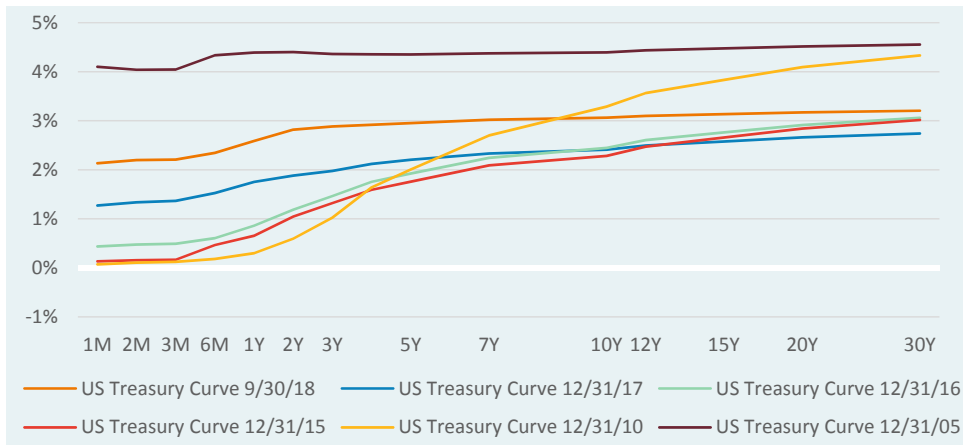
- The Federal Reserve raised the target range for the fed funds rate by 0.25%, to a range of 2.00%-2.25%. The odds for a December rate hike were 78%, as of October 8th.
- Fixed income yields around the world moved slightly higher during the quarter. The U.S. Treasury yield rose to a 7-year high of 3.23%, reigniting investor concerns over rising interest rates. The spread between 2- and 10-year yields has remained steady at around 30 bps.
- In September, the European Central Bank left interest rates unchanged, and confirmed its intent to leave rates at current levels “at least through the summer of 2019, and in any case for as long as necessary to ensure the continued sustained convergence of inflation to levels that are below, but close to, 2% over the medium term.” The ECB also stated that bond purchases of \$30 billion euros per month would be cut in half beginning in October, and would stop altogether at the end of the year.
- The yield spread between Italian and German 10-year bonds has exhibited significant volatility following Italy’s political shakeup in the second quarter. Discussions around compliance with European Union budget rules, and the general fear that Italy may push either for structural monetary policy changes, or to leave the Eurozone, contributed to a tumultuous quarter.
- Emerging market local and hard yields were rangebound in Q3, but remained elevated due to continued idiosyncratic risks in countries such as Turkey and Argentina.

Area	Short Term (3M)	10 Year
United States	2.19%	3.06%
Germany	(0.56%)	0.47%
France	(0.56%)	0.80%
Spain	(0.39%)	1.50%
Italy	0.01%	3.15%
Greece	1.12%	4.18%
U.K.	0.77%	1.57%
Japan	(0.13%)	0.13%
Australia	1.89%	2.67%
China	2.97%	3.63%
Brazil	6.58%	11.76%
Russia	7.02%	8.69%

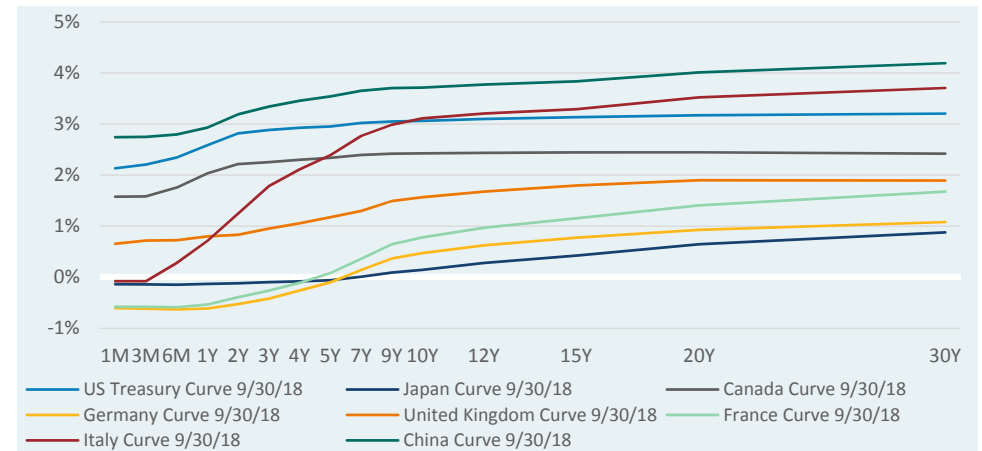
Source: Bloomberg, as of 9/30/18

Yield environment

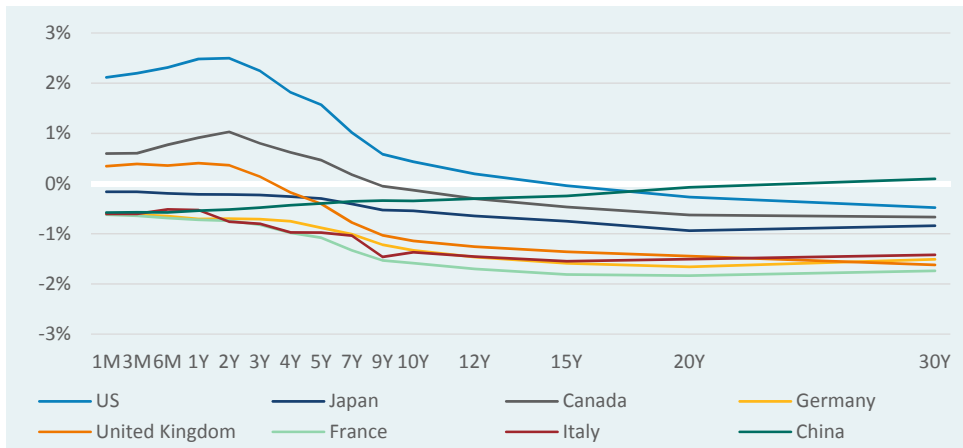
U.S. YIELD CURVE



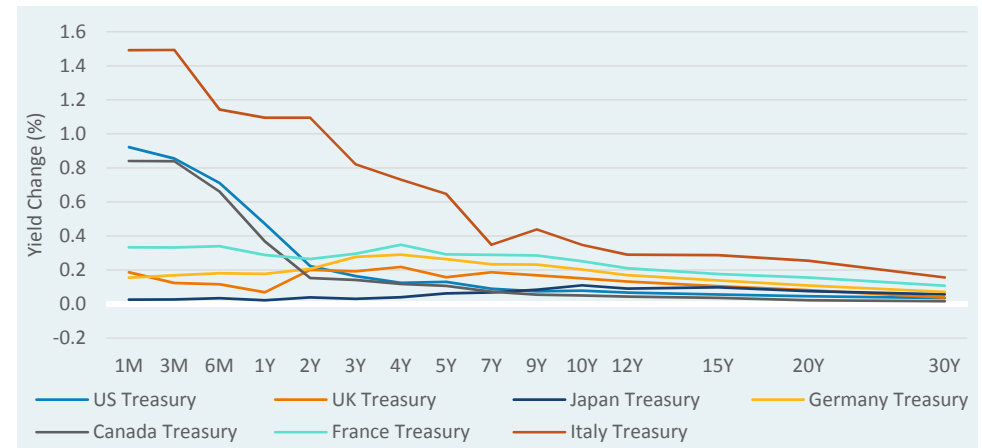
GLOBAL GOVERNMENT YIELD CURVES



YIELD CURVE CHANGES OVER LAST FIVE YEARS



IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 9/30/18

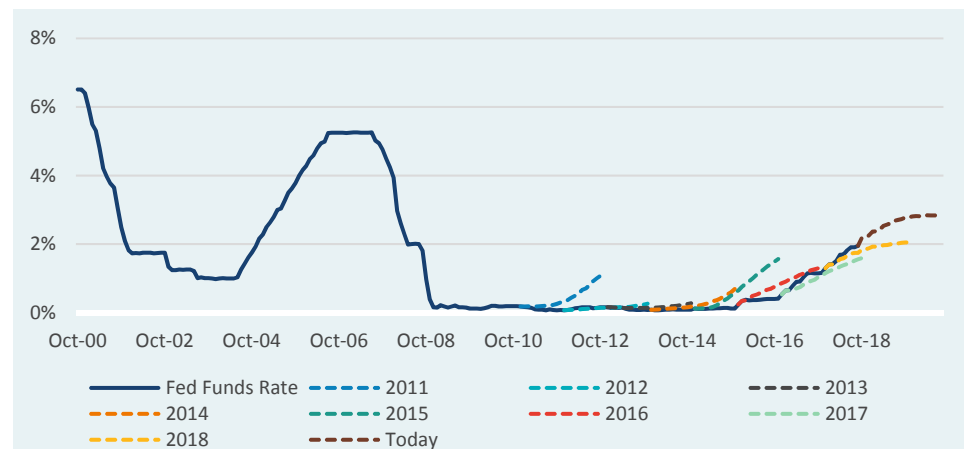
Fed tightening vs. expectations

The market raised its expectations for further Fed tightening during the quarter. Investors are now pricing in a fourth rate hike in December, but only two more through the end of 2020, which would bring the fed funds rate to near 3%. Meanwhile, Fed officials have communicated a slightly more aggressive path of tightening with expectations to increase the benchmark interest rate to 3.4% by the end of 2020.

Over the past few years, there has been an interesting shift in how Fed policy has come in relative to market

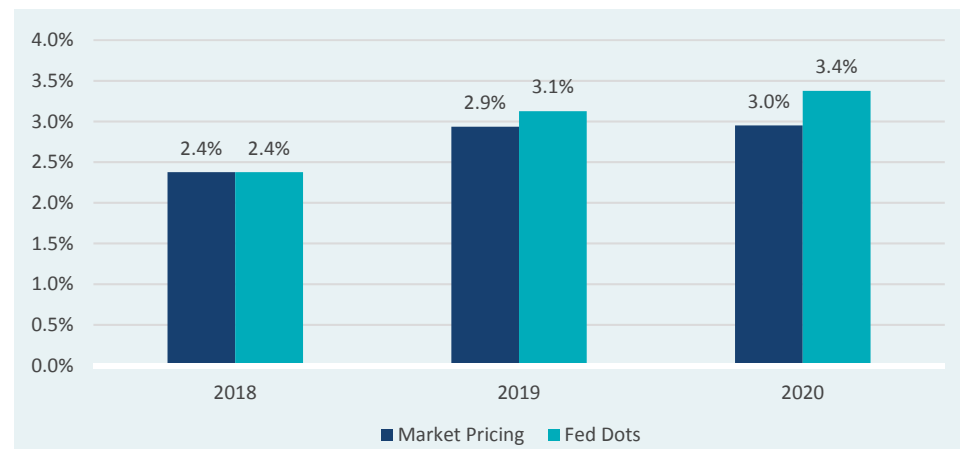
expectations. From 2010 to 2015, the market consistently overestimated when and by how much the Fed would hike rates. However, beginning in 2016 the Fed has been more aggressive than the market expected. Given the current differences between market pricing and Fed expectations, this trend has the potential to continue, which would likely act as a headwind to financial asset prices. However, it is important to remember that official guidance from the Fed dot plot assumes that economic conditions unfold as expected. Based on the uncertain future state of the economy, the Fed may be cautious relative its current expectations.

FED FUNDS RATE VS. MARKET EXPECTATIONS



Source: Bloomberg, as of 9/30/18, dotted lines are forward pricing at the start of the year

FED FUNDS EXPECTATIONS AT YEAR-END



Source: Bloomberg, Federal Reserve, as of 10/8/18

Credit environment

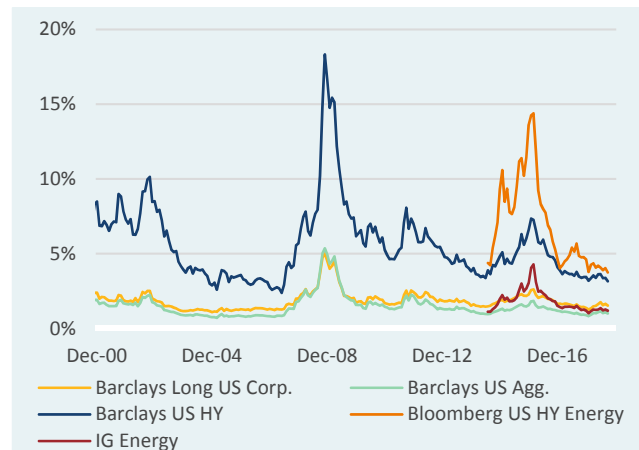
Spreads in both bank loans and high yield credit are well below their historical averages. Loans are outperforming high yield bonds for only the second time in the last 13 years. Bank loans have limited duration risk due to their floating-rate nature, which is a quality that some investors have seen as attractive due to the rising rate story. However, credit quality in bank loans has deteriorated throughout the cycle as covenant-lite loans have dominated new issuance. While bank loans offer interest rate protection and a small spread premium over high yield, investors may be paying for this by taking greater downside risk.

U.S. high yield option-adjusted spreads tightened to a decade low in September, despite concerns over a global growth slowdown, rising U.S. Treasury yields, and a volatile landscape in emerging markets. The asset class generated a 2.4% total return over the quarter.

Based on low interest rates and tight spreads, we do not believe investors are being properly compensated for credit risk and recommend an underweight to U.S. investment and high yield credit.

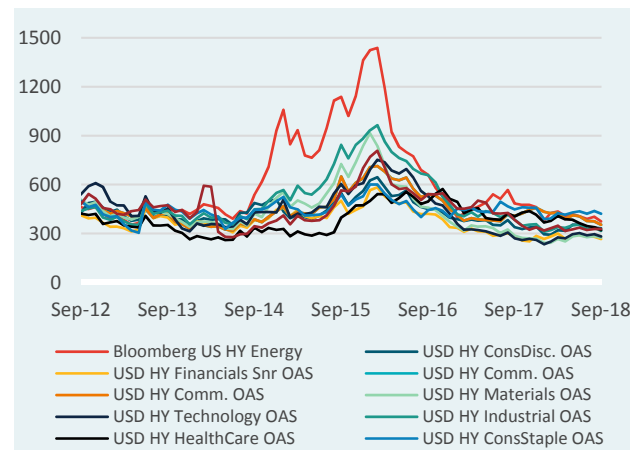
Credit spreads are tight across the capital structure

SPREADS



Source: Barclays, Bloomberg, as of 9/30/18

HIGH YIELD SECTOR SPREADS (BPS)



Source: Bloomberg, as of 9/30/18

Market	Credit Spread (OAS 9/30/18)	Credit Spread (1 Year Ago)
Long US Corporate	1.5%	1.5%
US Aggregate	1.0%	1.0%
US High Yield	3.2%	3.5%
US Bank Loans*	3.7%	4.2%

Source: Barclays, Credit Suisse, Bloomberg, as of 9/30/18

*Discount margin 4-year life

Issuance and default

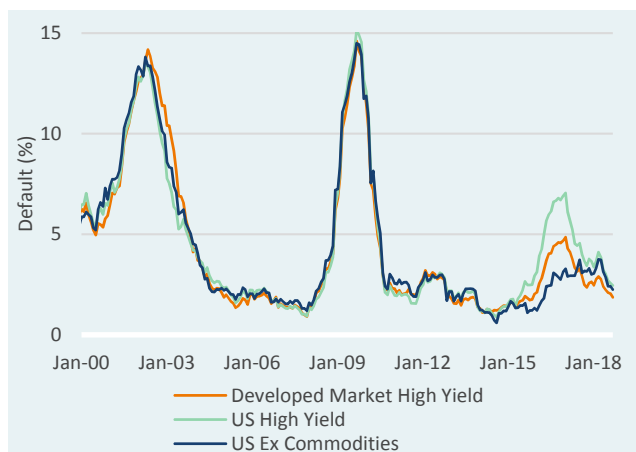
Default activity has been low and stable in the U.S. credit market. The par-weighted default rate remains below its long-term average of 3.0-3.5%, currently at 2.0% for high yield bonds. Total default activity in the last six months encompassed five defaults and \$3.8 billion in affected bonds and loans, the lightest volume over a six-month period since June 2011.

Senior loan and high yield markets have essentially recovered from a wave of defaults seen in 2015-2016, generated from the energy and metals/mining sectors.

Recovery rates for high yield bonds have vastly improved since that time.

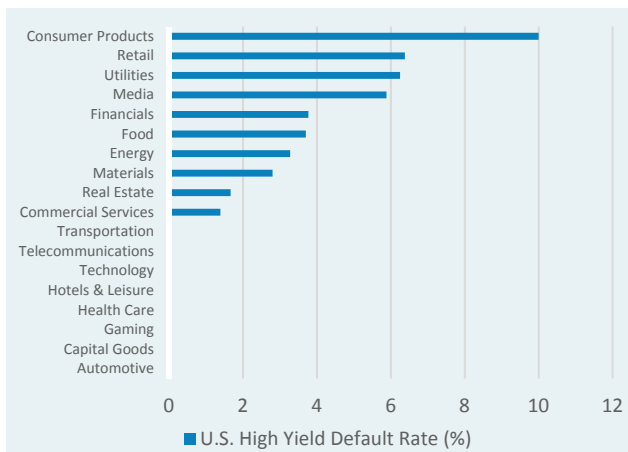
High yield new issue activity has totaled \$175 billion so far this year, which is down 35% over the same period a year ago. Meanwhile, issuance in leveraged loans totaled \$611 billion year-to-date. Notably, repricing activity represents 38% of total volume. New issue spreads continue to compress with strong demand supported by significant retail and institutional inflows into both high yield and senior loan asset classes, as well as CLO formation.

HY DEFAULT TRENDS (ROLLING 1 YEAR)



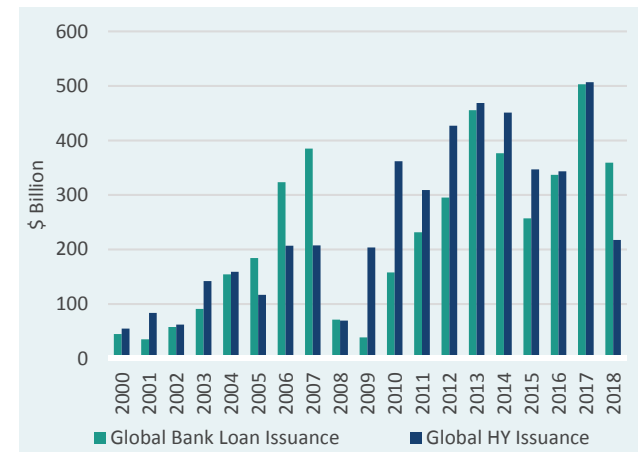
Source: BofA Merrill Lynch, as of 9/30/18

HY SECTOR DEFAULTS (LAST 12 MONTHS)



Source: BofA Merrill Lynch, as of 9/30/18 – par weighted

GLOBAL ISSUANCE (BILLIONS)



Source: Bloomberg, BofA Merrill Lynch, as of 9/30/18

Equity

Equity environment

- U.S. equities delivered strong returns during the quarter (S&P 500 +7.7%), and have outperformed year-to-date. We remain concerned about the large valuation difference between U.S. and international equities, though the relatively positive outlook for the domestic economy should justify some of the valuation difference.
- Emerging market equities delivered slight losses in Q3, but seem to have stabilized as currency depreciation subsided (MSCI Emerging Markets Index -1.1%, JP Morgan EM Currency Index -1.6%). Many emerging market currencies have rebounded from their lows. We maintain a positive outlook on emerging market equities.
- Developed non-U.S. equities have remained range bound following the selloff in the first quarter. International equity performance outside of emerging markets has been flat (MSCI EAFE +1.4% unhedged, +2.9% hedged).
- Another strong quarter of U.S. corporate earnings is expected in Q3 on both an absolute and relative basis. S&P 500 earnings and revenue growth is expected to be 19.3% and 6.9% YoY, respectively. Earnings growth in 2019 is expected to be 10.2% YoY.
- Large cap equities (Russell 1000 7.4%) outperformed small cap (Russell 2000 3.6%) during the quarter. Value stocks lagged growth by a similar margin (Russell 1000 Value 5.7% vs. Russell 1000 Growth 9.2%).
- The performance gap between growth and value equities widened further in Q3. The differential continued to be driven by strong returns generated by large names in the tech sector.

	QTD TOTAL RETURN		YTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)	(unhedged)	(hedged)
US Large Cap (Russell 1000)	7.4%		10.5%		17.8%	
US Small Cap (Russell 2000)	3.6%		11.5%		15.2%	
US Large Value (Russell 1000 Value)	5.7%		3.9%		9.5%	
US Large Growth (Russell 1000 Growth)	9.2%		17.1%		26.3%	
International Large (MSCI EAFE)	1.4%	2.9%	0.1%	2.9%	2.7%	7.1%
Eurozone (Euro Stoxx 50)	(0.2%)	1.2%	(2.5%)	1.6%	(4.6%)	(0.3%)
U.K. (FTSE 100)	(1.8%)	(0.2%)	(2.7%)	2.0%	3.2%	7.4%
Japan (NIKKEI 225)	6.2%	8.7%	6.8%	7.4%	19.7%	20.7%
Emerging Markets (MSCI Emerging Markets)	(1.1%)	(0.2%)	(7.7%)	(3.8%)	(0.8%)	1.9%

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 9/30/18

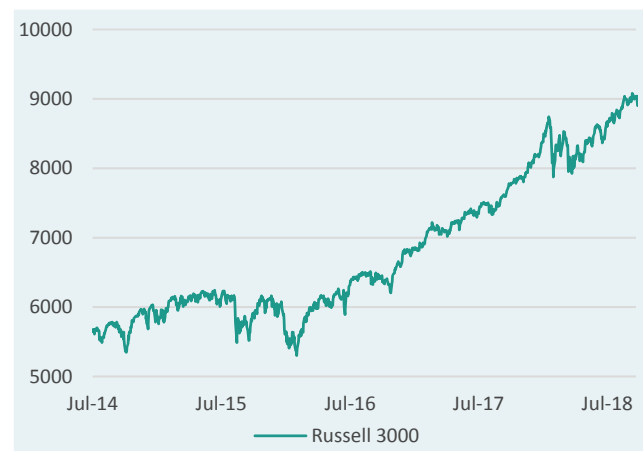
Domestic equity

U.S. equities delivered strong returns during the quarter (S&P 500 +7.7%), and have outperformed year-to-date. Fears of trade conflict crowded the headlines, with the focus nearly all on China as the U.S. successfully concluded negotiations with other trading partners. Equity markets on both sides have generally rallied on news of potential resolution, though the performance gap between U.S. and Chinese equities has trended wider. Trade frictions will likely remain a headwind to performance.

Another strong quarter of U.S. corporate earnings is expected in Q3 on both an absolute and relative basis. S&P 500 earnings and revenue growth are expected to be 19.3% and 6.9% YoY, respectively. Earnings growth in 2019 is expected to be 10.2% YoY. If analyst forecasts are as overly optimistic as they typically are, this would put 2019 earnings growth at a more average rate of 5-6%. While average earnings growth can be conducive to moderate positive equity returns, current relatively high valuations could case concerns once growth rates decelerate.

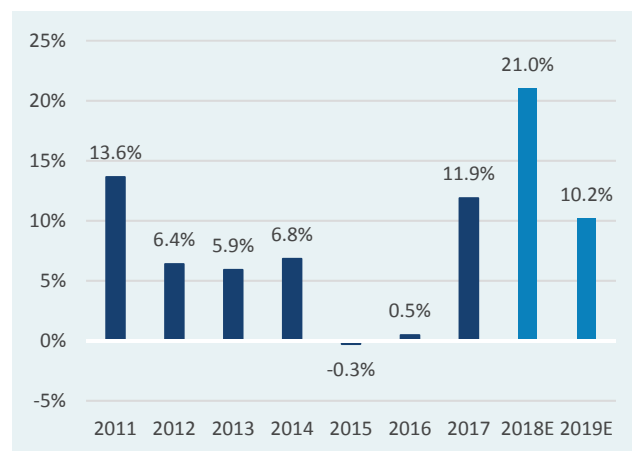
U.S. equities have risen with earnings growth and strong fundamentals, despite trade concerns

U.S. EQUITIES



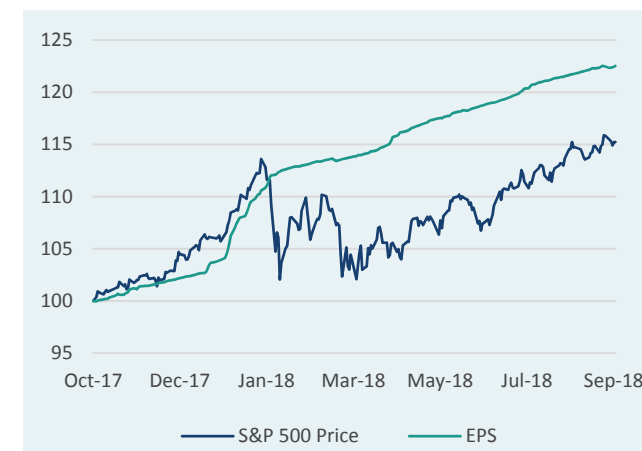
Source: Russell Investments, as of 9/30/18

CALENDAR YEAR EARNINGS GROWTH



Source: FactSet, as of 10/12/18

S&P 500 PRICE & EARNINGS



Source: Bloomberg, as of 9/30/18

Domestic equity size & style

Large cap equities (Russell 1000 7.4%) outperformed small cap equities (Russell 2000 3.6%) during the quarter.

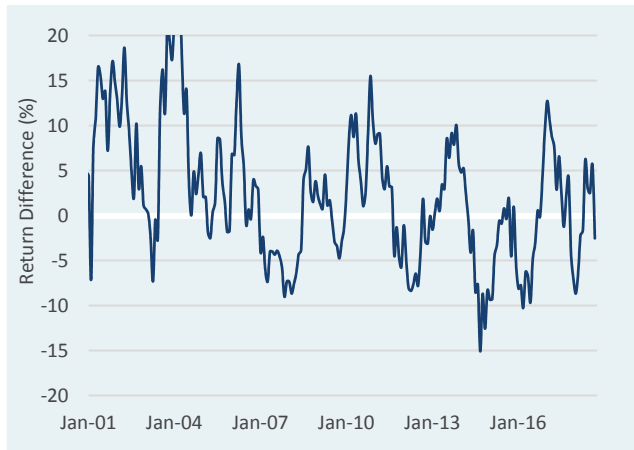
Growth stocks outpaced value stocks by a similar margin (Russell 1000 Growth 9.2% vs. Russell 1000 Value 5.7%).

Differences between sector composition in large-cap style benchmarks have explained much of the recent growth outperformance. Nearly 50% of the Russell 1000 Growth Index is in the more cyclical Information Technology and Consumer Discretionary sectors, which have been by far

and away the best performing sectors over the past year.

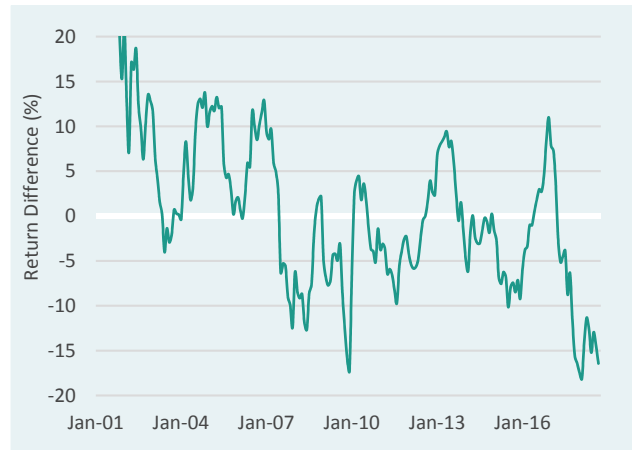
Size and value factor performance continues to frustrate investors. While the extent of underperformance is not anomalous, it may be testament to the long-term nature of factor investing. Unless an investor believes that these risk premia no longer exist, maintaining exposure and avoiding capitulation should be the primary goal.

SMALL CAP VS LARGE CAP (YOY)



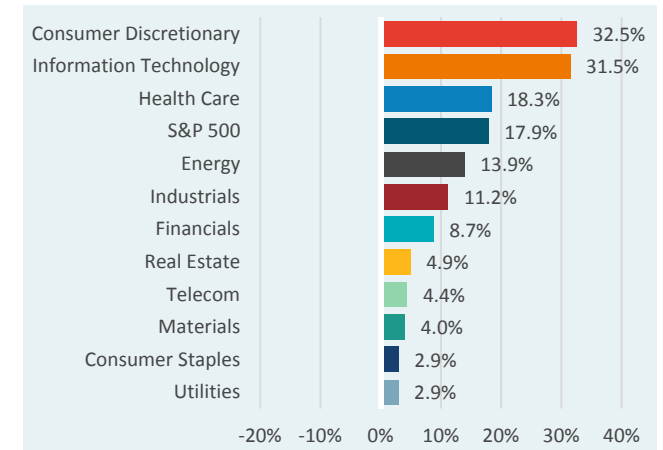
Source: FTSE, as of 9/30/18

VALUE VS GROWTH (YOY)



Source: FTSE, as of 9/30/18

1-YEAR S&P 500 SECTOR RETURNS



Source: Morningstar, as of 9/30/18

International developed equity

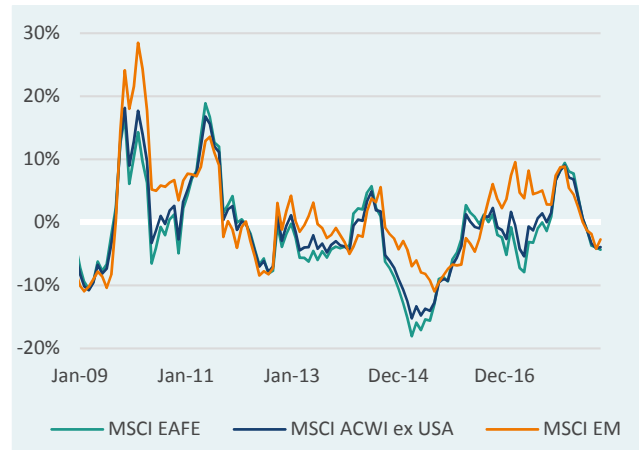
Unhedged international equities underperformed U.S. equities during Q3 (MSCI EAFE +1.4% vs. S&P 500 +7.7%). On a currency hedged basis, international equities delivered returns of 2.9%.

Currency movement continued to create losses for unhedged equity investors. U.S. investors that hedged their international equity exposure outperformed their unhedged peers by approximately 5% year-to-date (MSCI EAFE Index).

Regional divergence in earnings remained a story in Q3. Year-over-year growth in forward earnings reached 23% for U.S. equities, while estimates fell from 14% to 9% in emerging markets and from 12% to 10% in international developed markets, according to MSCI estimates.

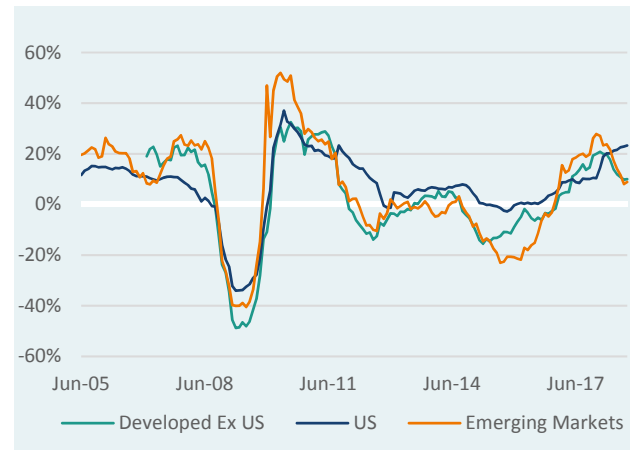
Differences in forward P/E multiples between U.S. and non-U.S. equities remained high. At quarter-end, this valuation gap relative to international developed equity ranked in the 96th percentile since 2005. The U.S.-EM valuation gap ranked in the 89th percentile over the same period.

EFFECT OF CURRENCY (1-YEAR ROLLING)



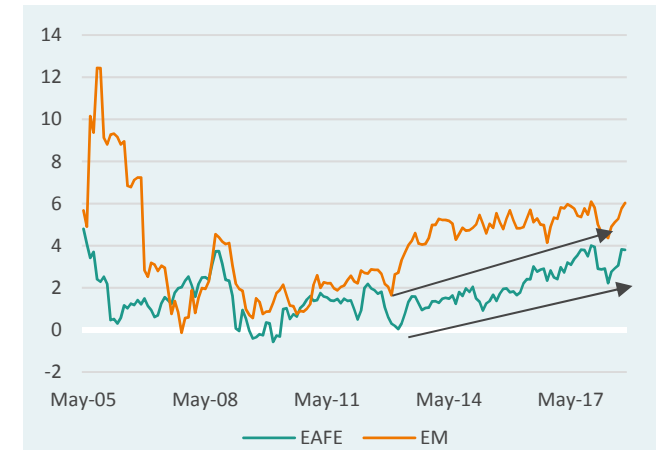
Source: MSCI, as of 9/30/18

EARNINGS GROWTH (YOY)



Source: MSCI, as of 9/30/18 – YoY growth in forward earnings

FORWARD P/E SPREADS RELATIVE TO U.S.



Source: MSCI, as of 9/30/18

Emerging market equity

Emerging market equities delivered a slight loss in Q3 but seem to have stabilized as currency depreciation subsided (MSCI Emerging Markets Index -1.1%, JP Morgan EM Currency Index -1.6%). Many of these currencies have rebounded from their lows.

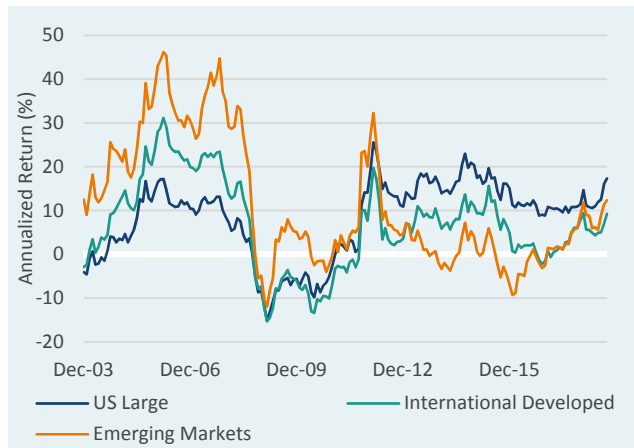
Developed markets are expected to grow less quickly in the coming years while emerging economic growth is expected to rise. A positive growth premium of emerging economies relative to developed economies has

historically acted as a tailwind for EM outperformance.

We believe positive emerging economy growth trends, attractive valuations, a strong earnings environment, and depressed currencies should provide an environment of strong relative equity performance across these markets.

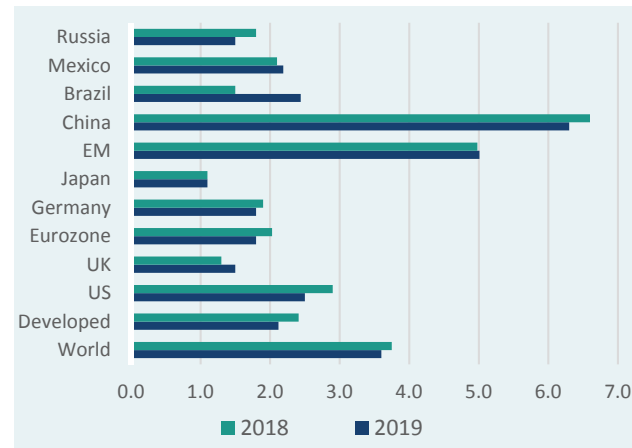
Conditions remain positive for medium-term EM equity performance, though volatility may persist

EQUITY PERFORMANCE (3YR ROLLING)



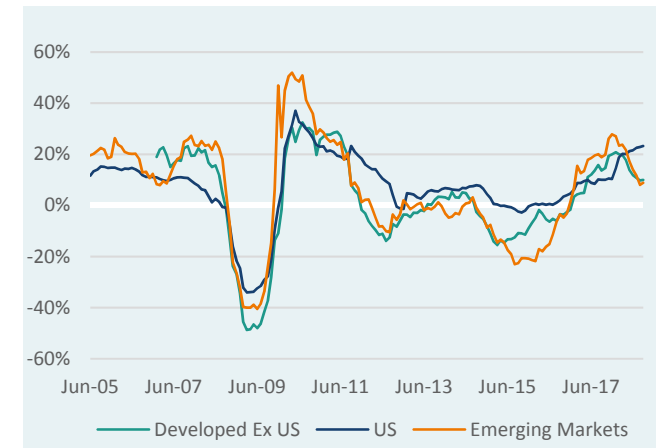
Source: Standard & Poor's, MSCI, as of 9/30/18

GDP GROWTH EXPECTATIONS (%)



Source: Bloomberg, as of 9/30/18

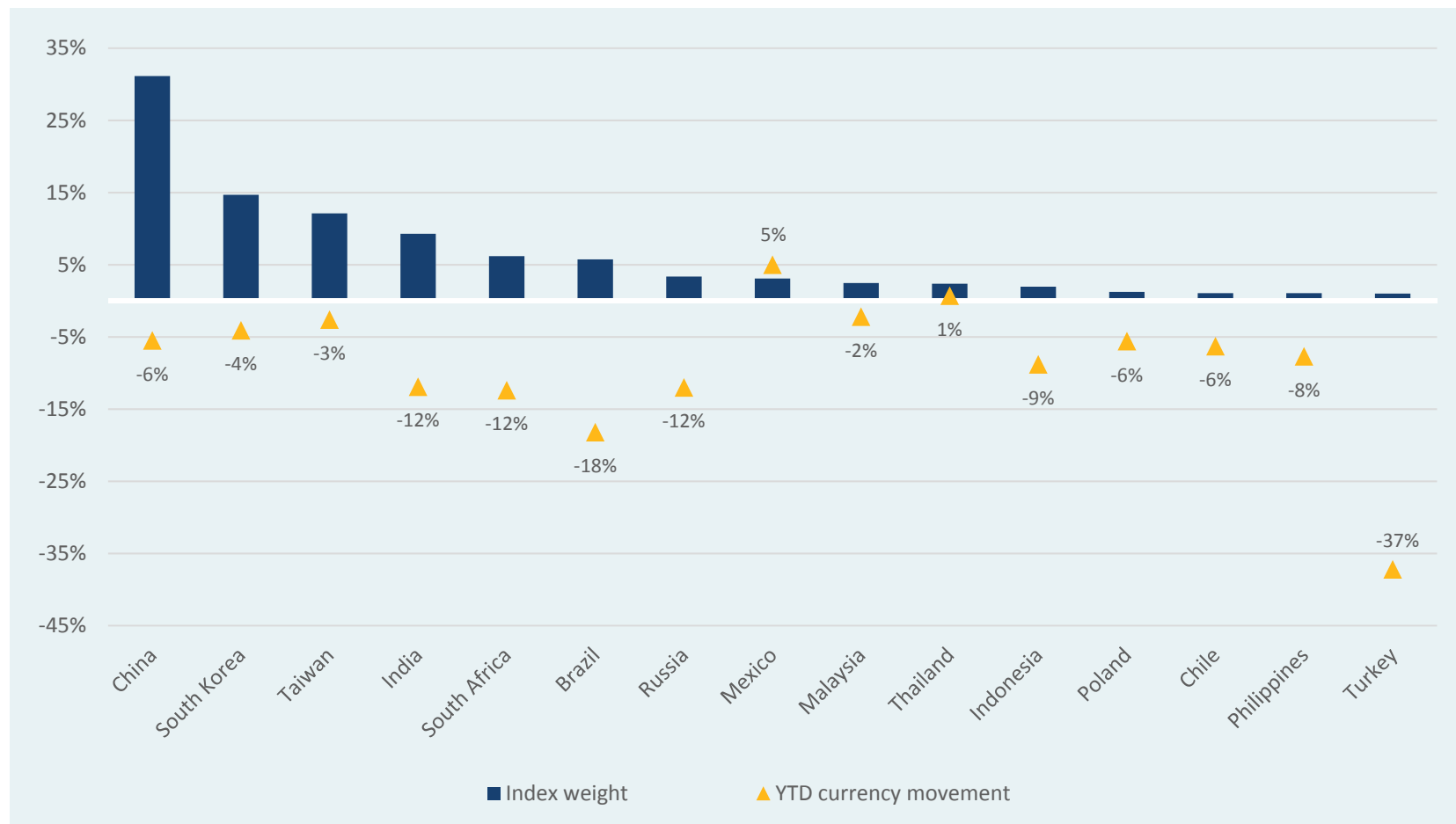
EARNINGS GROWTH (YOY)



Source: MSCI, as of 9/30/18 – YoY growth in forward earnings

Emerging market currency movement

Currency moves across most of EM are in-line with DM (~5% depreciation)



South Africa, Brazil, and Russia are causing greater currency pain in EM

Many of these currencies have recovered some of their losses

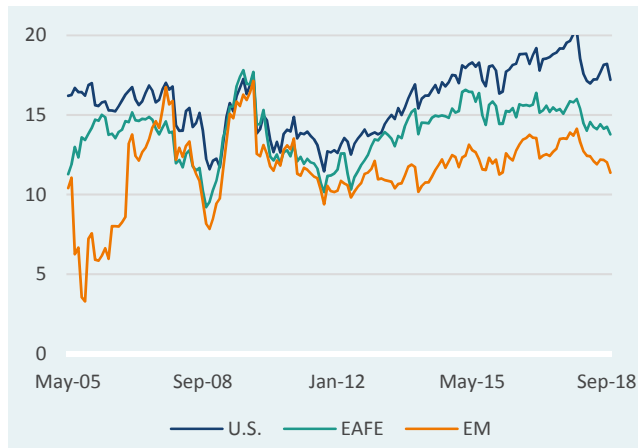
Source: MSCI, Bloomberg, as of 9/30/18

Equity valuations

Forward equity P/E multiples moved lower during the quarter and year-to-date as strong earnings growth expectations came to fruition. We remain concerned about the large valuation difference between U.S. and international equities, though the relatively positive domestic economic outlook and strong expected earnings growth through year-end should justify some of the valuation difference. However, because a significant portion of U.S. earnings outperformance has been due to a one-time tax cut, it may become more difficult to justify the valuation disparity beyond 2018.

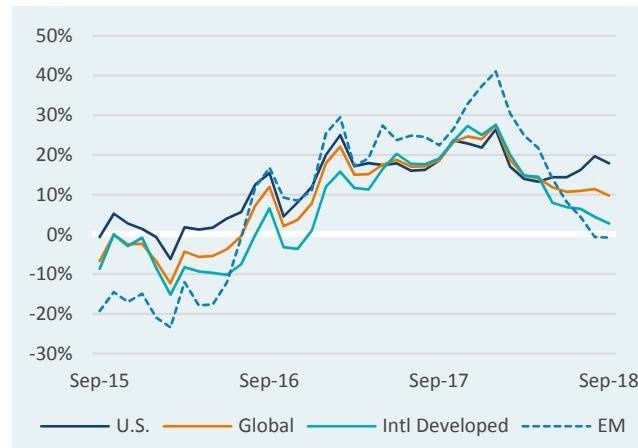
Looking at markets through our *carry, value, trend, and macro* lens, carry and value have improved through lower prices and higher underlying earnings. Trend has flattened out in international markets as equity performance has been rangebound year-to-date. The macro environment has weakened outside the U.S., with economic data indicating a more average backdrop.

FORWARD P/E RATIOS



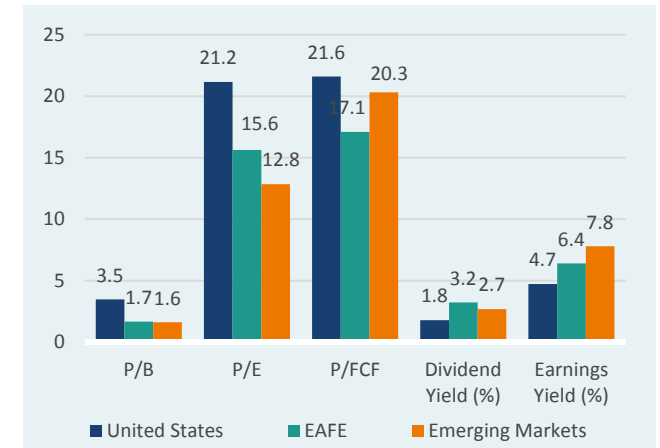
Source: MSCI, as of 9/30/18

MOMENTUM (1YR)



Source: Standard & Poor's, MSCI, as of 9/30/18

VALUATION METRICS (3-MONTH AVERAGE)



Source: Bloomberg, as of 9/30/18 - trailing P/E

Equity volatility

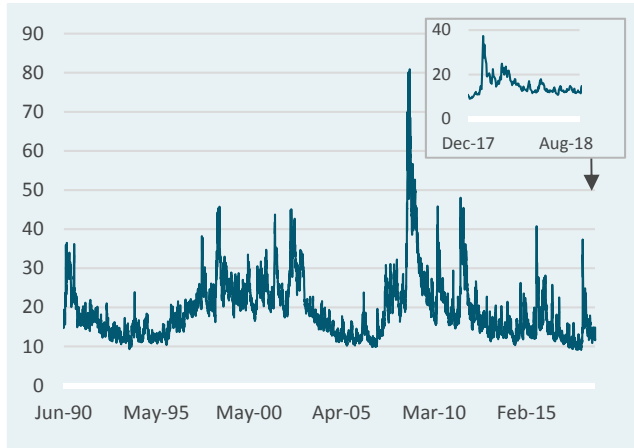
U.S. equity volatility remains muted. The VIX index ranged from 11 to 16 for the entirety of the quarter. Despite such an extended period of below-average volatility, it may be helpful to remember that the VIX Index has averaged 19.3 since 1990. Volatility has remain depressed or elevated for extended periods of time.

Realized volatility of the S&P 500 was below average at 9.1%. International equities have also exhibited muted volatility (MSCI EAFE 9.1%, MSCI Emerging Markets 13.3%).

Stories of idiosyncratic emerging market crises dominated news headlines over the quarter. However, emerging market equity volatility is at an average level (MSCI EM). At the end of the third quarter, the one-month implied volatility of the index was 17.1%, slightly below its three-year average of 18.5%. In Q3, the MSCI EM Index fell 1.1%, bringing the year-to-date decline to 7.7%.

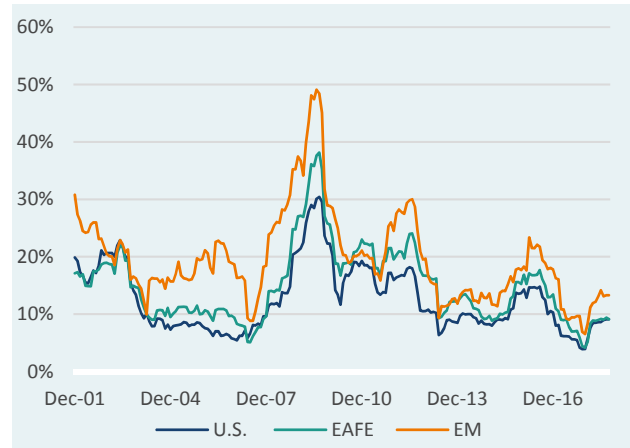
Global equity volatility remained below average

U.S. IMPLIED VOLATILITY (VIX)



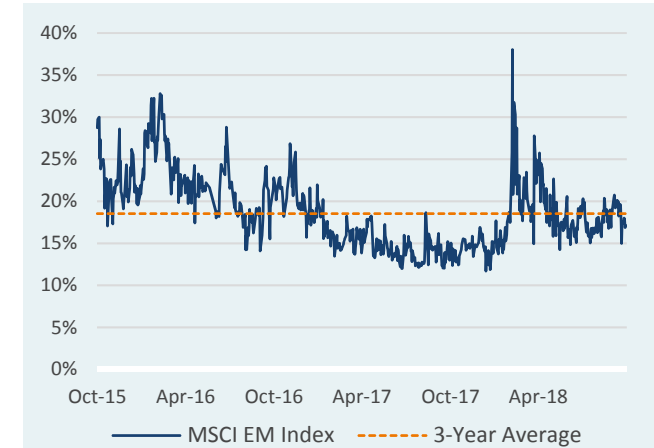
Source: CBOE, as of 9/30/18

REALIZED 1-YEAR ROLLING VOLATILITY



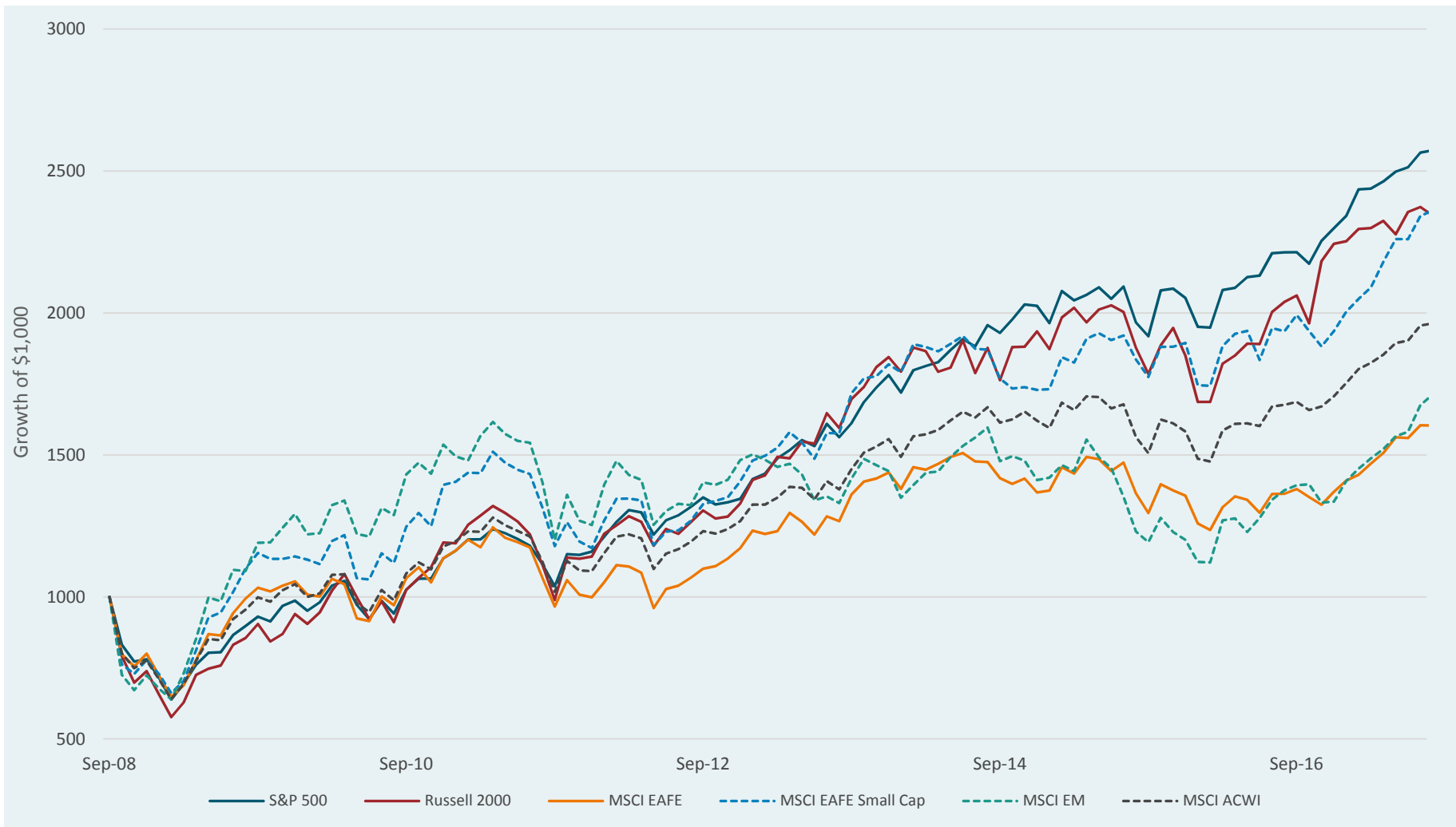
Source: Bloomberg, as of 9/30/18

MSCI EM INDEX 1-MONTH IMPLIED VOLATILITY



Source: Bloomberg, as of 9/30/18

Long-term equity performance



Source: Morningstar, as of 9/30/18

Other assets

Currency

The U.S. dollar appreciated 1% during the quarter on a trade-weighted dollar basis. A stable dollar going forward would help dampen the volatility of unhedged equity investments, particularly in emerging markets where currency moves have been larger. Some of the worst performing emerging market currencies have partially recovered from 2nd quarter losses.

Major currencies have fluctuated widely relative to the U.S. dollar in 2018. Most currencies strengthened through the first quarter, but this trend reversed when international economic growth began to show weakness, which helped

push up the value of the dollar. Because foreign currencies have been positively correlated with equity markets, these movements have added to total volatility.

Wide short-term interest rate differentials between the U.S. and the rest of the world have created a tailwind for those hedging U.S. dollar exposures. For example, based on current FX forward pricing, an investor would lock in an annualized gain of 3.3% when hedging the euro, which is typically the biggest foreign currency exposure in portfolios.

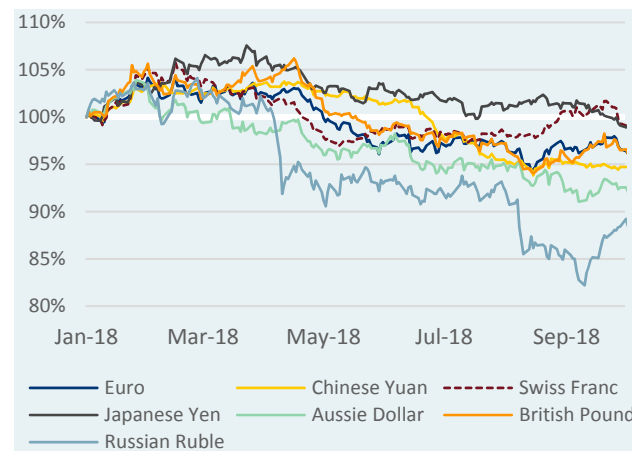
The U.S. dollar materially appreciated, reversing a multi-year downtrend

U.S. DOLLAR TRADE WEIGHTED INDEX



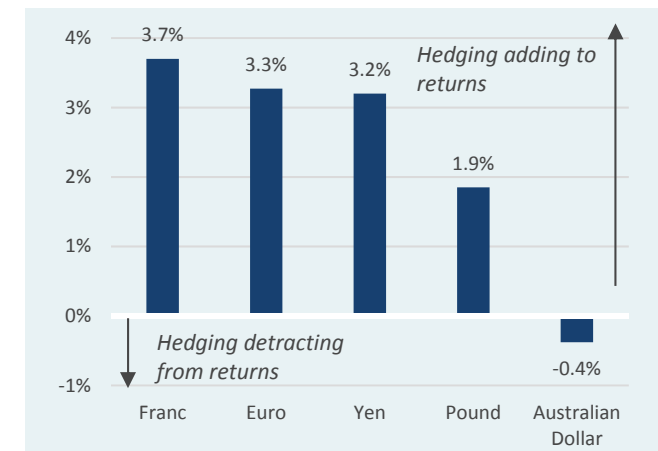
Source: Federal Reserve, as of 9/30/18

USD MOVES VS MAJOR CURRENCIES



Source: Verus, Bloomberg, as of 9/30/18

ANNUALIZED FX HEDGING COSTS (GAINS)



Source: Bloomberg, as of 9/30/18, based on 3-month FX forwards

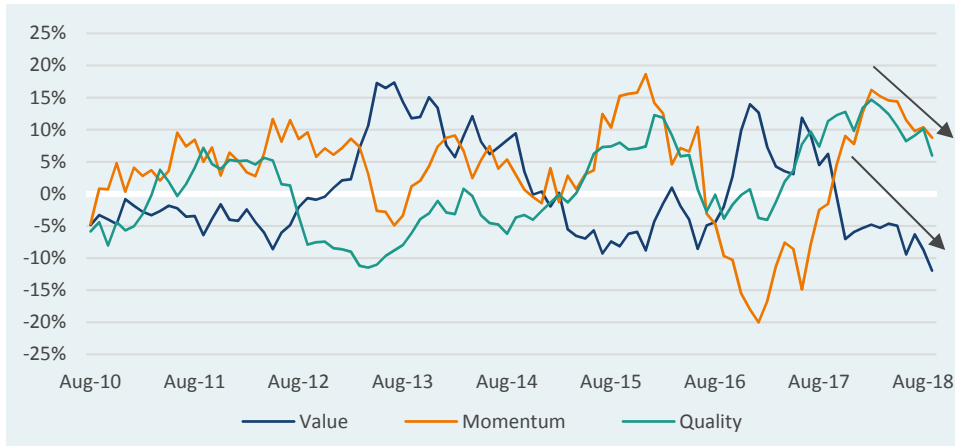
Alternative beta

Alternative beta strategies have suffered sharp losses so far this year, near a two standard deviation downside event for many strategies based on historical returns and volatility. Returns from managers we follow were better in the third quarter, but most strategies are still digging out of a hole created in the first two quarters of the year. Factor exposure, in particular equity value, can help explain some of the poor performance. The long drawdown in the value factor has come at a time when other factors that are often relied on in alt beta strategies, including trend-following and short volatility, have also experienced losses. The magnitude of the

drawdown in the value factor is within normal bounds based on history, but it has been the longest on record. Momentum in U.S. equities has performed well, but this has not been enough to offset negative value returns.

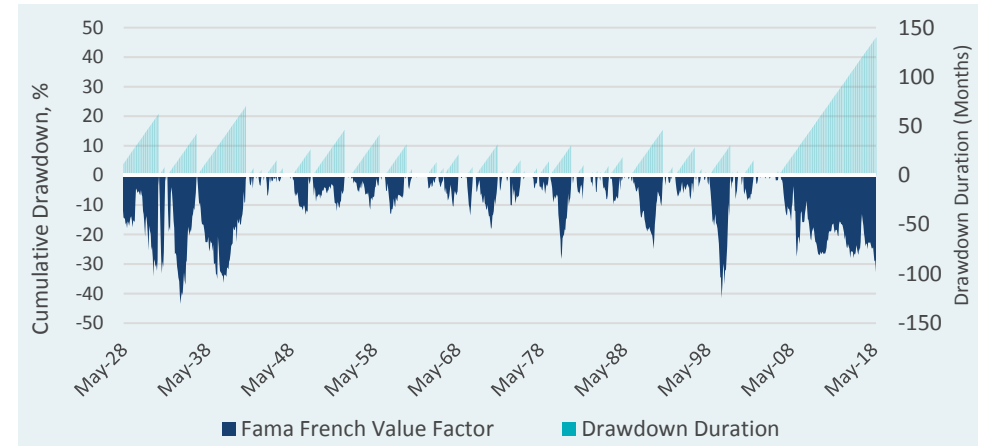
We reiterate our belief that alternative beta strategies are not “broken” per se, but instead have reflected extreme drawdowns in some factors and muted returns in others. We will continue to closely monitor these strategies and engage in frequent discussions with managers.

U.S. MARKET NEUTRAL FACTOR PERFORMANCE (12-MONTH ROLLING)



Source: S&P Dow Jones, Thematic Market Neutral Indices, as of 9/30/18

VALUE FACTOR DRAWDOWN MAGNITUDE AND DURATION



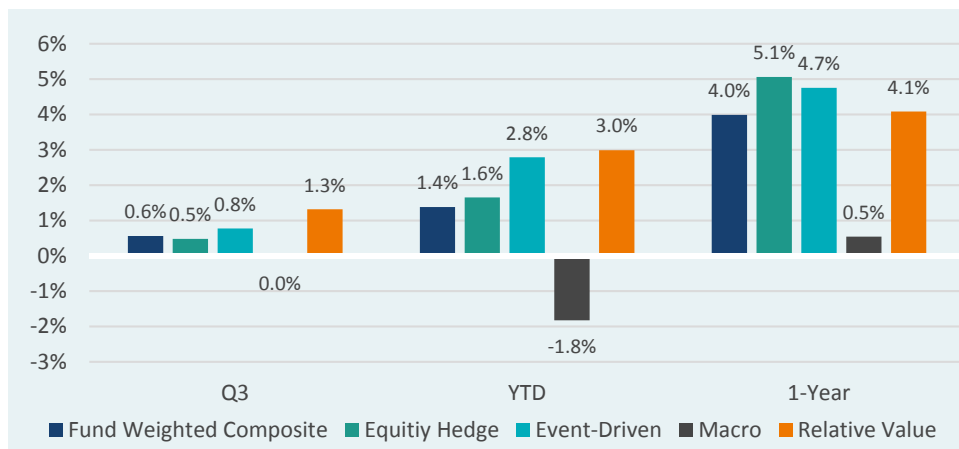
Source: Kenneth French Data Library, as of 8/31/18

Hedge funds

Hedge funds delivered modestly positive results across strategies in Q3 (HFRI Fund Weighted Composite +0.6%). Equity-focused managers had mixed results. Funds specializing in health care (+5.0%) stood out as strong performers. At the beginning of the quarter, growth-oriented managers had enjoyed a run of favorable results relative to value-oriented peers dating back to Q4 2017. Growth manager results relative to peers suffered as a narrow set of high growth equity names sold off in the quarter. Many other equity-focused managers were marginally positive or flat. Emerging market fund results ranged from small losses in Latin America to significant losses in China and India.

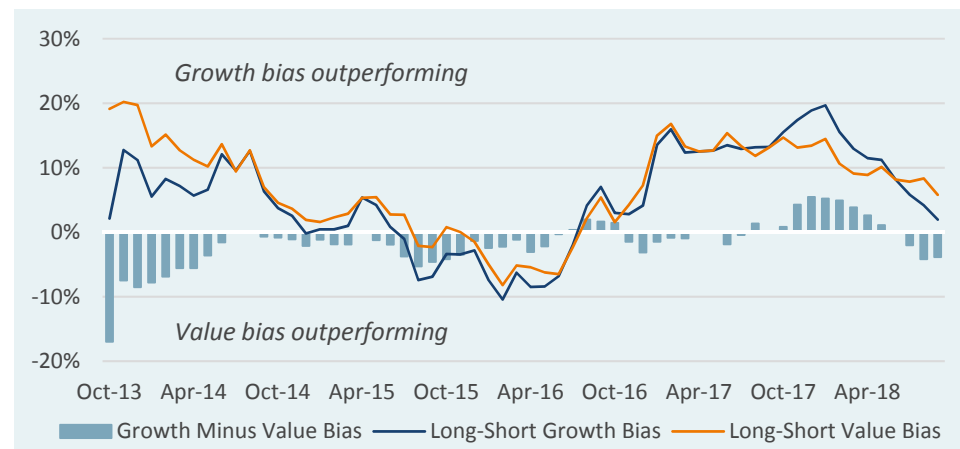
Within the fixed income markets, managers that focused on the credit and asset-backed securities sectors, in aggregate, were up about +1.5% for the quarter. Most other fixed income focused investment styles were modestly positive to flat for the period. Due to the relatively tight credit spreads, many credit-oriented managers are now carefully allocating capital to idiosyncratic long positions to protect against downside losses from a potential increase in spreads.

HFRI HEDGE FUND STYLE PERFORMANCE



Source: HFRI, as of 9/30/18

GROWTH VS VALUE BIAS IN LONG-SHORT EQUITY MANAGERS (1-YR ROLLING PERFORMANCE)



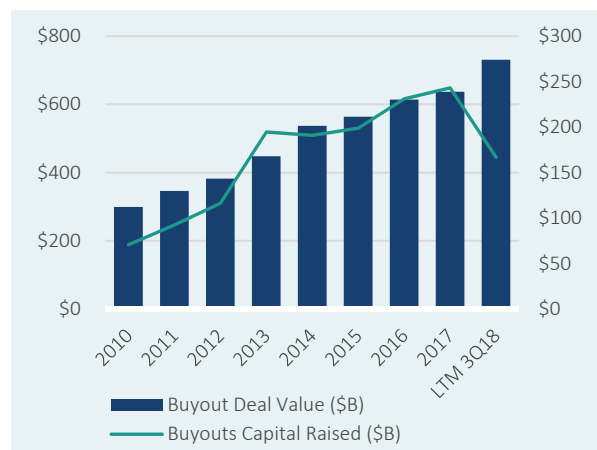
Source: HFRI, as of 9/30/18

Private markets

Deals increased in buyouts and venture; multiples are steady; buyout fundraising has slowed

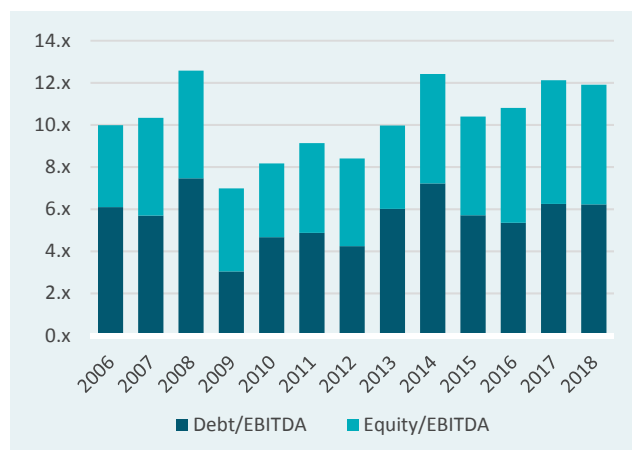
- Buyout activity has continued to increase in 2018. Through the third quarter buyouts are up 25% and 24% when measured by dollar value and number of transactions, respectively. The size of the average buyout is virtually unchanged from 2017 (\$142 million). Unlike deal flow, fund capital raising has slowed from the peaks of 2017. Only 143 buyout funds representing \$121 billion closed so far this year, down from 184 funds representing \$178 billion through the same period last year. Trailing-twelve-month funds raised is down 25% from a record \$224 billion in 2017.
- Buyout multiples are largely unchanged from 2017. Average EV/EBITDA is 11.9x through September 30, 2018 (down from 12.1x in 2017) with debt multiples averaging 5.7x through the third quarter. Debt as a percentage of transaction value remains at 50%, which is down from 60% in 2013.
- Venture capital fundraising and deal volumes continue to set records. \$32 billion of venture capital has been raised in the U.S. through the first 9 months of 2018, an increase of 33% over the same period last year. Similarly, venture deals are up 37%. In fact, year-to-date venture deal volume (\$84 billion) exceeds the record of \$82 billion that was set in 2017.
- Balancing high deal multiples and a growing number of deals against a slowdown in fundraising, we advocate selectivity in fund investments.

BUYOUTS DEAL VOLUME & CAPITAL RAISED



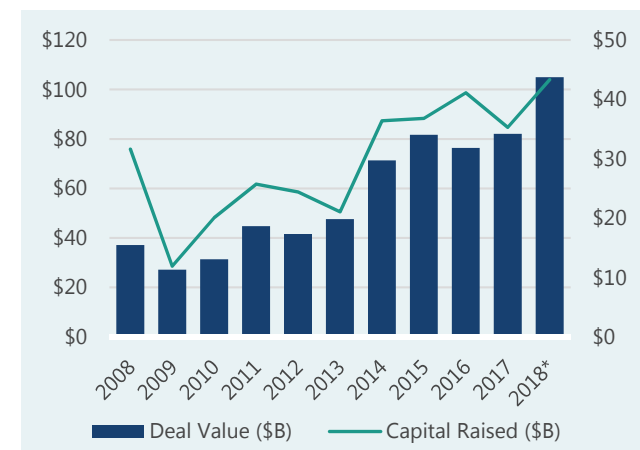
Source: PitchBook

TRANSACTION MULTIPLES



Source: PitchBook

VENTURE DEAL VOLUME & FUNDRAISING



Source: PitchBook

Appendix

Periodic table of returns

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	YTD	5-Year	10-Year
Large Cap Growth	38.7	66.4	31.8	14.0	25.9	56.3	26.0	34.5	32.6	39.8	5.2	79.0	29.1	14.3	18.6	43.3	13.5	13.3	31.7	37.3	17.1	16.6	14.3
Small Cap Growth	27.0	43.1	22.8	8.4	10.3	48.5	22.2	21.4	26.9	16.2	1.4	37.2	26.9	7.8	18.1	38.8	13.2	5.7	21.3	30.2	15.8	13.7	12.7
Small Cap Equity	20.3	33.2	12.2	7.3	6.7	47.3	20.7	20.1	23.5	15.8	-6.5	34.5	24.5	2.6	17.9	34.5	13.0	0.9	17.3	25.0	11.5	12.1	12.1
Large Cap Equity	19.3	27.3	11.6	3.3	1.6	46.0	18.3	14.0	22.2	11.8	-21.4	32.5	19.2	1.5	17.5	33.5	11.8	0.6	12.1	22.2	10.5	11.1	11.1
Small Cap Value	16.2	26.5	7.0	2.8	1.0	39.2	16.5	7.5	18.4	11.6	-25.9	28.4	16.8	0.4	16.4	33.1	6.0	0.0	11.8	21.7	7.1	10.7	9.8
Large Cap Value	15.6	24.3	6.0	2.5	-5.9	30.0	14.5	7.1	16.6	10.9	-28.9	27.2	16.7	0.1	16.3	32.5	5.6	-0.4	11.3	17.1	3.9	9.9	9.5
Real Estate	8.7	21.3	4.1	-2.4	-6.0	29.9	14.3	6.3	15.5	10.3	-33.8	23.3	16.1	-2.1	15.3	23.3	4.9	-0.8	11.2	14.6	3.5	9.2	6.3
60/40 Global Portfolio	4.9	20.9	-3.0	-5.6	-11.4	29.7	12.9	5.3	15.1	7.0	-35.6	20.6	15.5	-2.9	14.6	12.1	4.2	-1.4	8.0	13.7	1.4	5.6	6.2
Cash	1.2	13.2	-7.3	-9.1	-15.5	25.2	11.4	4.7	13.3	7.0	-36.8	19.7	13.1	-4.2	11.5	11.0	3.4	-2.5	7.1	7.8	1.3	4.4	5.4
Hedge Funds of Funds	-2.5	11.4	-7.8	-9.2	-15.7	23.9	9.1	4.6	10.4	5.8	-37.6	18.9	10.2	-5.5	10.5	9.0	2.8	-3.8	5.7	7.7	1.2	3.6	5.4
International Equity	-5.1	7.3	-14.0	-12.4	-20.5	11.6	6.9	4.6	9.1	4.4	-38.4	11.5	8.2	-5.7	4.8	0.1	0.0	-4.4	2.6	5.1	-1.4	3.2	3.8
US Bonds	-6.5	4.8	-22.4	-19.5	-21.7	9.0	6.3	4.2	4.8	-0.2	-38.5	5.9	6.5	-11.7	4.2	-2.0	-1.8	-7.5	1.0	3.5	-1.6	2.2	2.6
Commodities	-25.3	-0.8	-22.4	-20.4	-27.9	4.1	4.3	3.2	4.3	-1.6	-43.1	0.2	5.7	-13.3	0.1	-2.3	-4.5	-14.9	0.5	1.7	-2.0	0.5	0.3
Emerging Markets Equity	-27.0	-1.5	-30.6	-21.2	-30.3	1.0	1.4	2.4	2.1	-9.8	-53.2	-16.9	0.1	-18.2	-1.1	-9.5	-17.0	-24.7	0.3	0.9	-7.7	-7.2	-6.2

WORST

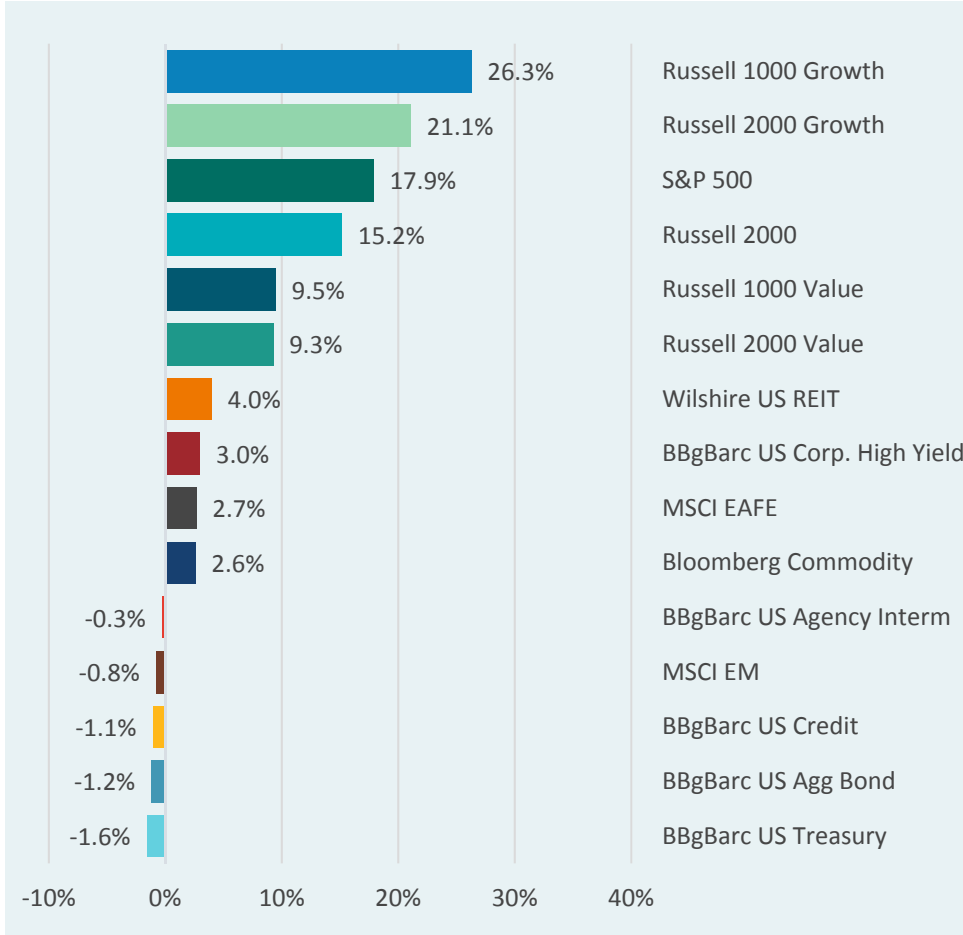
BEST

■ Large Cap Equity	■ Small Cap Growth	■ Commodities
■ Large Cap Value	■ International Equity	■ Real Estate
■ Large Cap Growth	■ Emerging Markets Equity	■ Hedge Funds of Funds
■ Small Cap Equity	■ US Bonds	■ 60% MSCI ACWI/40% BBgBarc Global Bond
■ Small Cap Value	■ Cash	

Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BBgBarc US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, BBgBarc Global Bond. NCREIF Property Index performance data as of 6/30/18.

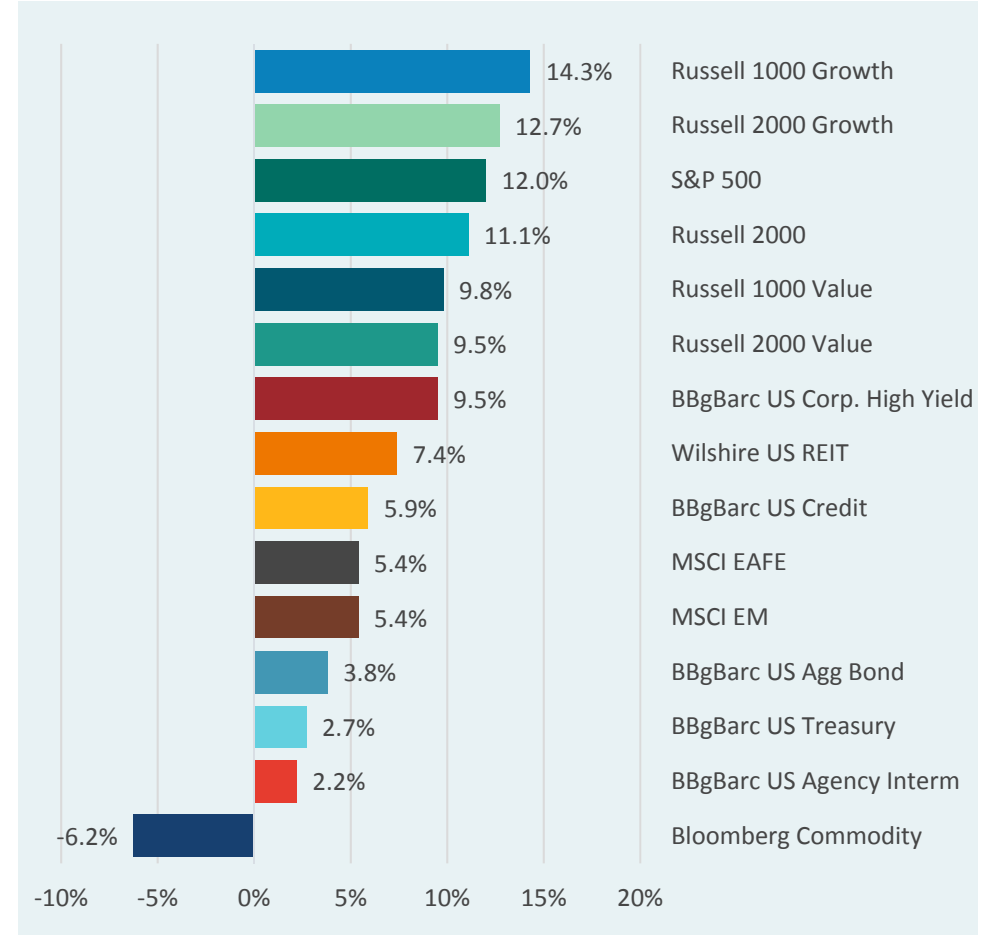
Major asset class returns

ONE YEAR ENDING SEPTEMBER



Source: Morningstar, as of 9/30/18

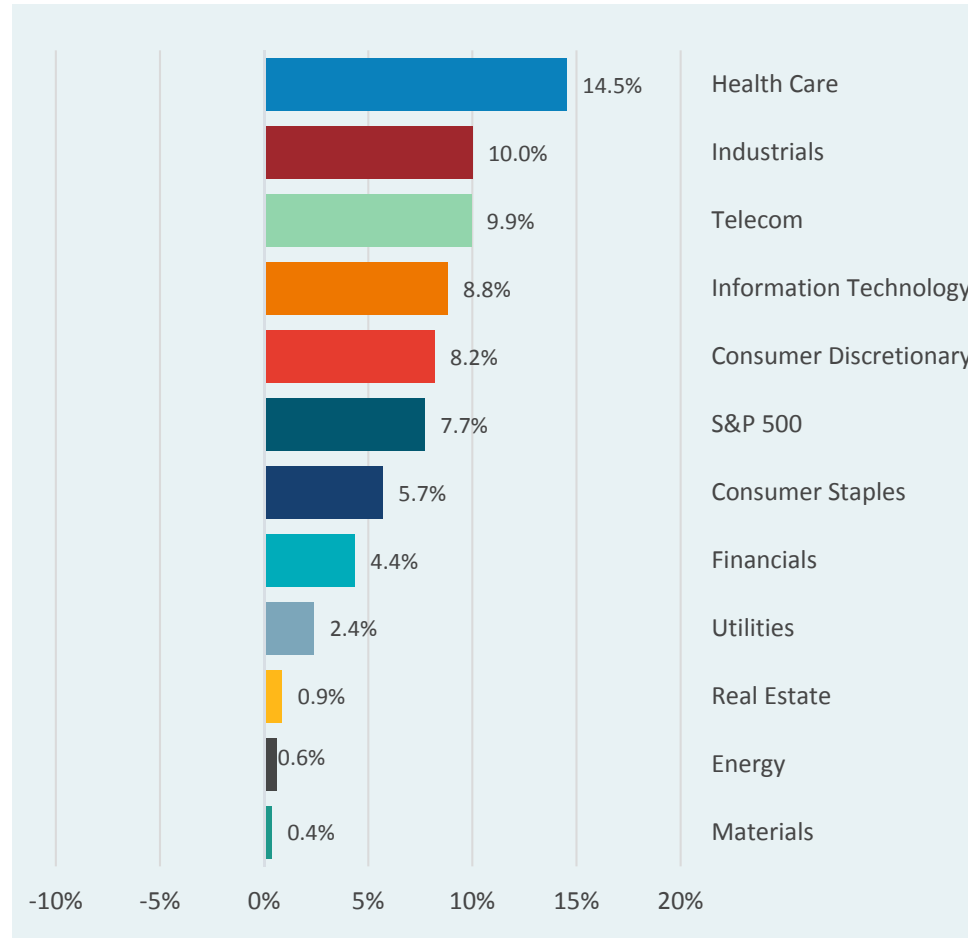
TEN YEARS ENDING SEPTEMBER



Source: Morningstar, as of 9/30/18

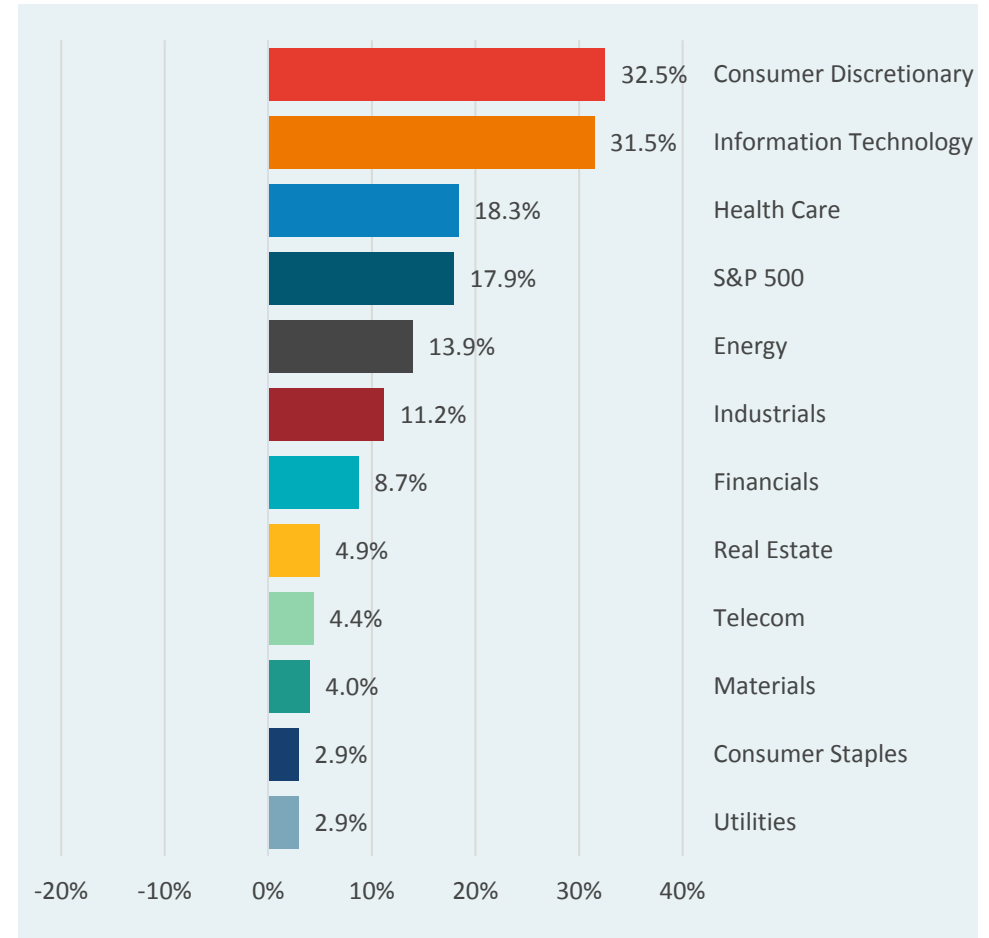
S&P 500 sector returns

THIRD QUARTER



Source: Morningstar, as of 9/30/18

ONE YEAR ENDING SEPTEMBER



Source: Morningstar, as of 9/30/18

Detailed index returns

DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Core Index							
S&P 500	0.6	7.7	10.6	17.9	17.3	13.9	12.0
S&P 500 Equal Weighted	0.1	5.4	7.3	13.9	15.4	12.5	13.1
DJ Industrial Average	2.0	9.6	8.8	20.8	20.5	14.6	12.2
Russell Top 200	0.8	8.4	11.7	19.3	18.1	14.5	12.0
Russell 1000	0.4	7.4	10.5	17.8	17.1	13.7	12.1
Russell 2000	(2.4)	3.6	11.5	15.2	17.1	11.1	11.1
Russell 3000	0.2	7.1	10.6	17.6	17.1	13.5	12.0
Russell Mid Cap	(0.6)	5.0	7.5	14.0	14.5	11.7	12.3
Style Index							
Russell 1000 Growth	0.6	9.2	17.1	26.3	20.6	16.6	14.3
Russell 1000 Value	0.2	5.7	3.9	9.5	13.6	10.7	9.8
Russell 2000 Growth	(2.3)	5.5	15.8	21.1	18.0	12.1	12.7
Russell 2000 Value	(2.5)	1.6	7.1	9.3	16.1	9.9	9.5

INTERNATIONAL EQUITY

Broad Index							
MSCI ACWI	0.4	4.3	3.8	9.8	13.4	8.7	8.2
MSCI ACWI ex US	0.5	0.7	(3.1)	1.8	10.0	4.1	5.2
MSCI EAFE	0.9	1.4	(1.4)	2.7	9.2	4.4	5.4
MSCI EM	(0.5)	(1.1)	(7.7)	(0.8)	12.4	3.6	5.4
MSCI EAFE Small Cap	(0.7)	(0.9)	(2.2)	3.7	12.4	8.0	9.7
Style Index							
MSCI EAFE Growth	(0.2)	1.5	0.6	5.8	10.3	5.6	6.2
MSCI EAFE Value	2.1	1.2	(3.5)	(0.4)	8.1	3.1	4.5
Regional Index							
MSCI UK	1.8	(1.7)	(2.7)	2.9	6.2	2.2	4.9
MSCI Japan	3.0	3.7	1.6	10.2	12.1	6.8	6.0
MSCI Euro	(0.1)	(0.4)	(3.6)	(3.2)	8.5	3.9	3.4
MSCI EM Asia	(1.7)	(1.8)	(6.8)	1.0	13.5	6.7	8.2
MSCI EM Latin American	4.7	4.8	(6.9)	(9.1)	13.7	(2.3)	0.7

Source: Morningstar, HFR, as of 9/30/18

FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
BBgBarc US TIPS	(1.1)	(0.8)	(0.8)	0.4	2.0	1.4	3.3
BBgBarc US Treasury Bills	0.2	0.5	1.3	1.5	0.8	0.5	0.4
BBgBarc US Agg Bond	(0.6)	0.0	(1.6)	(1.2)	1.3	2.2	3.8
Duration							
BBgBarc US Treasury 1-3 Yr	(0.1)	0.2	0.2	(0.0)	0.4	0.6	1.1
BBgBarc US Treasury Long	(3.0)	(2.9)	(5.8)	(3.6)	0.7	4.4	5.5
BBgBarc US Treasury	(0.9)	(0.6)	(1.7)	(1.6)	0.2	1.3	2.7
Issuer							
BBgBarc US MBS	(0.6)	(0.1)	(1.1)	(0.9)	1.0	2.0	3.3
BBgBarc US Corp. High Yield	0.6	2.4	2.6	3.0	8.1	5.5	9.5
BBgBarc US Agency Interm	(0.2)	0.2	0.0	(0.3)	0.6	1.1	2.2
BBgBarc US Credit	(0.3)	0.9	(2.1)	(1.1)	3.0	3.4	5.9

OTHER

Index							
Bloomberg Commodity	1.9	(2.0)	(2.0)	2.6	(0.1)	(7.2)	(6.2)
Wilshire US REIT	(2.8)	(5.4)	2.2	4.0	7.1	9.2	7.4
CS Leveraged Loans	0.7	4.4	4.4	5.6	5.4	4.4	5.8
Alerian MLP	(2.0)	7.0	5.2	3.3	3.9	(2.8)	10.0
Regional Index							
JPM EMBI Global Div	1.5	2.3	(3.0)	(1.9)	6.0	5.4	7.5
JPM GBI-EM Global Div	2.6	(1.8)	(8.1)	(7.4)	5.2	(1.7)	2.7
Hedge Funds							
HFRI Composite	(0.2)	0.6	1.5	4.1	5.4	4.1	4.6
HFRI FOF Composite	(0.0)	0.4	1.2	3.3	3.4	3.2	2.6
Currency (Spot)							
Euro	(0.2)	(0.5)	(3.3)	(1.8)	1.3	(3.0)	(1.9)
Pound	0.3	(1.2)	(3.6)	(2.8)	(4.9)	(4.2)	(3.1)
Yen	(2.4)	(2.5)	(0.8)	(0.9)	1.8	(2.9)	(0.7)

Definitions

Bloomberg US Weekly Consumer Comfort Index - tracks the public's economic attitudes each week, providing a high-frequency read on consumer sentiment. The index, based on cell and landline telephone interviews with a random, representative national sample of U.S. adults, tracks Americans' ratings of the national economy, their personal finances and the buying climate on a weekly basis, with views of the economy's direction measured separately each month. (www.lanqerresearch.com)

University of Michigan Consumer Sentiment Index - A survey of consumer attitudes concerning both the present situation as well as expectations regarding economic conditions conducted by the University of Michigan. For the preliminary release approximately three hundred consumers are surveyed while five hundred are interviewed for the final figure. The level of consumer sentiment is related to the strength of consumer spending. (www.Bloomberg.com)

NFIB Small Business Outlook - Small Business Economic Trends (SBET) is a monthly assessment of the U.S. small-business economy and its near-term prospects. Its data are collected through mail surveys to random samples of the National Federal of Independent Business (NFIB) membership. The survey contains three broad question types: recent performance, near-term forecasts, and demographics. The topics addressed include: outlook, sales, earnings, employment, employee compensation, investment, inventories, credit conditions, and single most important problem. (<http://www.nfib-sbet.org/about/>)

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Glossary

Allocation Effect: An attribution effect that describes the amount attributable to the managers' asset allocation decisions, relative to the benchmark.

Alpha: The excess return of a portfolio after adjusting for market risk. This excess return is attributable to the selection skill of the portfolio manager. Alpha is calculated as: $\text{Portfolio Return} - [\text{Risk-free Rate} + \text{Portfolio Beta} \times (\text{Market Return} - \text{Risk-free Rate})]$.

Benchmark R-squared: Measures how well the Benchmark return series fits the manager's return series. The higher the Benchmark R-squared, the more appropriate the benchmark is for the manager.

Beta: A measure of systematic, or market risk; the part of risk in a portfolio or security that is attributable to general market movements. Beta is calculated by dividing the covariance of a security by the variance of the market.

Book-to-Market: The ratio of book value per share to market price per share. Growth managers typically have low book-to-market ratios while value managers typically have high book-to-market ratios.

Capture Ratio: A statistical measure of an investment manager's overall performance in up or down markets. The capture ratio is used to evaluate how well an investment manager performed relative to an index during periods when that index has risen (up market) or fallen (down market). The capture ratio is calculated by dividing the manager's returns by the returns of the index during the up/down market, and multiplying that factor by 100.

Correlation: A measure of the relative movement of returns of one security or asset class relative to another over time. A correlation of 1 means the returns of two securities move in lock step, a correlation of -1 means the returns of two securities move in the exact opposite direction over time. Correlation is used as a measure to help maximize the benefits of diversification when constructing an investment portfolio.

Excess Return: A measure of the difference in appreciation or depreciation in the price of an investment compared to its benchmark, over a given time period. This is usually expressed as a percentage and may be annualized over a number of years or represent a single period.

Information Ratio: A measure of a manager's ability to earn excess return without incurring additional risk. Information ratio is calculated as: excess return divided by tracking error.

Interaction Effect: An attribution effect that describes the portion of active management that is contributable to the cross interaction between the allocation and selection effect. This can also be explained as an effect that cannot be easily traced to a source.

Portfolio Turnover: The percentage of a portfolio that is sold and replaced (turned over) during a given time period. Low portfolio turnover is indicative of a buy and hold strategy while high portfolio turnover implies a more active form of management.

Price-to-Earnings Ratio (P/E): Also called the earnings multiplier, it is calculated by dividing the price of a company's stock into earnings per share. Growth managers typically hold stocks with high price-to-earnings ratios whereas value managers hold stocks with low price-to-earnings ratios.

R-Squared: Also called the coefficient of determination, it measures the amount of variation in one variable explained by variations in another, i.e., the goodness of fit to a benchmark. In the case of investments, the term is used to explain the amount of variation in a security or portfolio explained by movements in the market or the portfolio's benchmark.

Selection Effect: An attribution effect that describes the amount attributable to the managers' stock selection decisions, relative to the benchmark.

Sharpe Ratio: A measure of portfolio efficiency. The Sharpe Ratio indicates excess portfolio return for each unit of risk associated with achieving the excess return. The higher the Sharpe Ratio, the more efficient the portfolio. Sharpe ratio is calculated as: $\text{Portfolio Excess Return} / \text{Portfolio Standard Deviation}$.

Sortino Ratio: Measures the risk-adjusted return of an investment, portfolio, or strategy. It is a modification of the Sharpe Ratio, but penalizes only those returns falling below a specified benchmark. The Sortino Ratio uses downside deviation in the denominator rather than standard deviation, like the Sharpe Ratio.

Standard Deviation: A measure of volatility, or risk, inherent in a security or portfolio. The standard deviation of a series is a measure of the extent to which observations in the series differ from the arithmetic mean of the series. For example, if a security has an average annual rate of return of 10% and a standard deviation of 5%, then two-thirds of the time, one would expect to receive an annual rate of return between 5% and 15%.

Style Analysis: A return based analysis designed to identify combinations of passive investments to closely replicate the performance of funds

Style Map: A specialized form or scatter plot chart typically used to show where a Manager lies in relation to a set of style indices on a two-dimensional plane. This is simply a way of viewing the asset loadings in a different context. The coordinates are calculated by rescaling the asset loadings to range from -1 to 1 on each axis and are dependent on the Style Indices comprising the Map.

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