



**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**



**PERIOD ENDING: MARCH 31, 2020**

Investment Performance Review for

**San Mateo County Employees' Retirement Association**

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# 1<sup>st</sup> quarter summary

## THE ECONOMIC CLIMATE

- Real GDP grew at a 0.3% rate year-over-year in the first quarter (-4.8% quarterly annualized rate). Personal consumption expenditures shrunk -7.6%, resulting in a -5.3% hit to headline growth. Forecasts of Q2 GDP growth have varied between -15% to -35%.
- The U.S. government quickly crafted and implemented historic stimulus measures to combat the economic impact of the virus. Support of this magnitude has not been seen since the Great Depression of the 1930s.

## PORTFOLIO IMPACTS

- U.S. equities experienced an unusually sudden and significant sell-off in March as investors grew fearful of the health and economic impacts of COVID-19. During Q1 the S&P 500 fell -19.6%, international developed equities (MSCI EAFE) fell -22.8% and emerging markets (MSCI EM) fell -23.6%.
- U.S. core inflation increased 2.1% YoY in March. Headline inflation slowed to 1.5%, pushed lower by a sharp decline in energy prices which will likely have persistent effects in future months. Downward pressure could be compounded as households slow spending due to loss of income and a greater propensity to save rather than spend.

## THE INVESTMENT CLIMATE

- In mid-March, the Federal Open Market Committee cut interest rates by a full 1.00% to a new range of 0 – 0.25%. This surprise action was taken on a Sunday with the intent to get out ahead of economic impacts of COVID-19.
- Implied volatility spiked in March to a record daily close of 82.7%, surpassing the high of 80.9% reached in November 2008 during the depths of the global financial crisis.
- Central banks are facing an economic slowdown and need for monetary policy support, but very little room to cut interest rates. This is a risk that has been discussed for years. We believe fiscal policies will play a much larger role in addressing the inevitable economic slowdown.

## ASSET ALLOCATION ISSUES

- Risk markets experienced one of the most sudden corrections on record, amidst extreme volatility. The S&P 500 showed its largest one-day drop since 1987 (March 16 -11.98%) and its largest one-day gain since 2008 (March 24 +9.38%). Implied volatility reached global financial crisis levels, and high yield credit spreads temporarily expanded above 11%. Some of these losses were recovered toward the end of March as the market rebounded.
- The U.S. dollar appreciated significantly in the first quarter, rising 7.1% on a trade-weighted basis, resulting in losses for investors with unhedged currency exposure.

An underweight risk stance appears appropriate in today's environment

We remain watchful for investment opportunities

# U.S. economics summary

- Real GDP grew at a 0.3% rate year-over-year in the first quarter (-4.8% quarterly annualized rate). Personal consumption expenditures shrunk -7.6%, resulting in a -5.3% hit to headline growth. Forecasts of Q2 GDP growth have varied between -15% to -35%.
- The U.S. government quickly crafted and implemented historic stimulus measures to combat the economic impacts of the virus. Support of this magnitude has not been seen since the Great Depression of the 1930s.
- U.S. core inflation rose 2.1% YoY in March. Headline inflation slowed to 1.5%, pushed lower by a sharp decline in energy prices which will likely have persistent effects in the coming months. This downward pressure could be compounded as households slow spending due to loss of income and show a greater propensity to save.
- The U.S. labor market exhibited a sharp weakening in March, as unemployment jumped to 4.4%. Some have estimated the true unemployment rate in April to be above 10%.
- March economic data should not be expected to fully reflect the extent of COVID-19. We are watching daily data releases to gain a better understanding of how conditions are evolving.
- The Bloomberg Consumer Comfort Index exhibited its sharpest two week drop since 1985, from 63.0 to 56.3, dipping from a 20-year high of 67.3 that was achieved in January.
- Existing homes sales increased +7.2% in February YoY, and new homes sales were up +14.3%. The 30-year fixed mortgage interest rate has continued to fall, finishing Q1 at 3.33%.

	Most Recent	12 Months Prior
GDP (YoY)	0.3% 3/31/20	2.7% 3/31/19
Inflation (CPI YoY, Core)	2.1% 3/31/20	2.0% 3/31/19
Expected Inflation (5yr-5yr forward)	1.3% 3/31/20	2.4% 3/31/19
Fed Funds Target Range	0% – 0.25% 3/31/20	2.25% – 2.50% 3/31/19
10 Year Rate	0.7% 3/31/20	2.4% 3/31/19
U-3 Unemployment	4.4% 3/31/20	3.8% 3/31/19
U-6 Unemployment	8.7% 3/31/20	7.4% 3/31/19

# International economics summary

- Most international developed economies grew at a rate of 0.5% to 2.5% in Q4. The low and stable expansion of recent years has changed suddenly with the onset of COVID-19. Many global economies will enter recession in 2020. On April 14<sup>th</sup> the IMF revised their 2020 global growth forecast from +3.3% to -3.0%.
- Governments are using monetary and fiscal policies to fill the large hole in spending and lending that the slowdown may cause. These policies vary in their characteristics and aggressiveness.
- Governments with limited ability to implement stimulus policies may face tougher economic fallout. Specifically, European Union member nations that cannot exercise independent actions may see greater difficulties ahead as income gaps cannot be supplemented with fiscal spending.
- The World Trade Organization (WTO) forecast a 13%-32% fall in global trade in 2020 – a larger decrease than witnessed during the global financial crisis. This forecast was paired with the expectation of a 21%-24% rebound in trade throughout 2021.
- While not yet reflected in the most recent economic data, unemployment rates around the world are certain to rise considerably.
- The COVID-19 virus breakout originated in China, and many investors have pointed to China as a testcase for how the virus might play out economically. Although the data released by China suggests the outbreak has been defeated, there is increasing evidence that the severity of virus has been underreported – perhaps severely.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	0.3% <i>3/31/20</i>	1.5% <i>3/31/20</i>	4.4% <i>3/31/20</i>
Eurozone	1.0% <i>12/31/19</i>	0.7% <i>3/31/20</i>	7.3% <i>2/29/20</i>
Japan	(0.7%) <i>12/31/19</i>	0.4% <i>3/31/20</i>	2.3% <i>2/29/20</i>
BRICS Nations	5.0% <i>12/31/19</i>	4.9% <i>3/31/20</i>	5.0% <i>12/31/19</i>
Brazil	1.7% <i>12/31/19</i>	3.3% <i>3/31/20</i>	11.6% <i>2/29/20</i>
Russia	2.1% <i>12/31/19</i>	2.6% <i>3/31/20</i>	4.6% <i>2/29/20</i>
India	4.7% <i>12/31/19</i>	5.9% <i>3/31/20</i>	8.5% <i>12/31/17</i>
China	6.0% <i>12/31/19</i>	4.3% <i>3/31/20</i>	3.6% <i>12/31/19</i>

# Equity environment

- U.S. equities experienced an unusually sudden and significant sell-off in March as investors grew fearful of the health and economic impacts of COVID-19 spread. During Q1 the S&P 500 fell -19.6%, international developed equities (MSCI EAFE) fell -22.8% and emerging markets (MSCI EM) fell -23.6%.
- The greatest influence on equity performance in 2020 will perhaps be the path of corporate earnings. The degree to which corporate earnings will fall is largely unknown with few reliable estimates.
- Implied volatility spiked in March to a record daily close of 82.7%, surpassing the high of 80.9% in November 2008 during the depths of the global financial crisis.
- In March, a squabble between OPEC+ members led to a historic drop in energy prices. The energy sector faces sharply falling demand and potentially significant oversupply due to oil producers' decision to ramp up production in an oil war. The energy sector experienced a loss of -50.5% in Q1.
- The U.S. dollar appreciated significantly in the first quarter, rising 7.1% on a trade-weighted basis, resulting in large losses for investors with unhedged currency exposure. As is often the case during higher risk market environments, demand for safe-haven currencies positively impacted the dollar.
- Value stocks severely underperformed growth stocks during the first quarter (Russell 1000 Value -26.7%, Russell 1000 Growth -14.1%). Small cap stocks underperformed large cap stocks by a similar magnitude (Russell 2000 -30.6%, Russell 1000 -20.2%). Value and size factors continue to experience an extended period of relative underperformance.

	QTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)
US Large Cap (S&P 500)	(19.6%)		(7.0%)	
US Small Cap (Russell 2000)	(30.6%)		(24.0%)	
US Large Value (Russell 1000 Value)	(26.7%)		(17.2%)	
US Large Growth (Russell 1000 Growth)	(14.1%)		(0.9%)	
International Large (MSCI EAFE)	(22.8%)	(19.9%)	(14.4%)	(10.3%)
Eurozone (Euro Stoxx 50)	(27.0%)	(24.8%)	(16.6%)	(12.0%)
U.K. (FTSE 100)	(28.8%)	(23.0%)	(22.0%)	(16.4%)
Japan (NIKKEI 225)	(18.6%)	(18.8%)	(6.7%)	(6.8%)
Emerging Markets (MSCI Emerging Markets)	(23.6%)	(18.5%)	(17.7%)	(12.7%)

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 3/31/20

# Domestic equity

U.S. equities experienced an unusually sudden and significant sell-off in March as investors grew fearful of the health and economic impacts of COVID-19 spread. During Q1 the S&P 500 fell -19.6%, international developed equities (MSCI EAFE) fell -22.8% and emerging markets (MSCI EM) fell -23.6%.

At the same time that COVID-19 was spreading throughout the U.S., a squabble between OPEC+ members led to a historic drop in energy prices. The energy sector faces a perfect storm – sharply falling demand due to a global economic slowdown, and potentially significant oversupply due to oil producers’ decision to ramp up production in an oil war. The energy sector experienced a loss of -50.5% in Q1.

The greatest influence on equity performance in 2020 will perhaps be the path of corporate earnings. The degree to which corporate earnings will fall throughout the year is largely unknown with few reliable estimates.

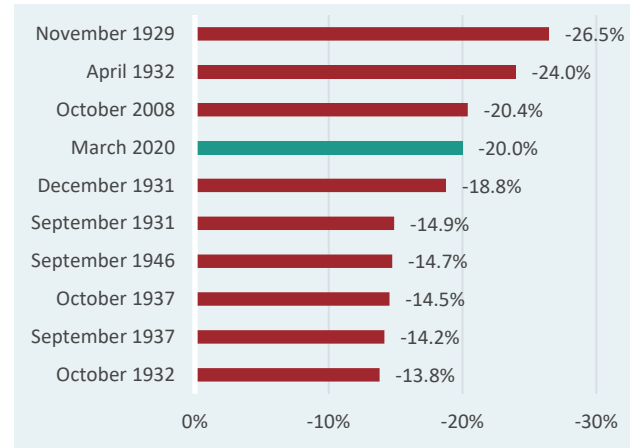
We continue to believe an underweight to international developed equities is appropriate. The economic pain that European Union member countries face may be significant, and membership to the EU inherently limits the ability of these countries to enact certain changes to address weakening economies. The U.S. market may continue to perform relatively well throughout the economic recovery.

## S&P 500



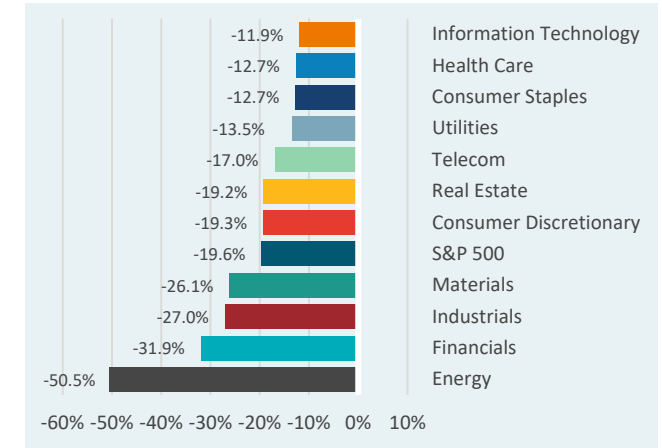
Source: Standard & Poor's, as of 3/31/20

## WORST S&P 500 MAX MONTHLY DRAWDOWNS



Source: Standard & Poor's, as of 3/31/20

## Q1 SECTOR PERFORMANCE



Source: Standard & Poor's, as of 3/31/20

# Domestic equity size & style

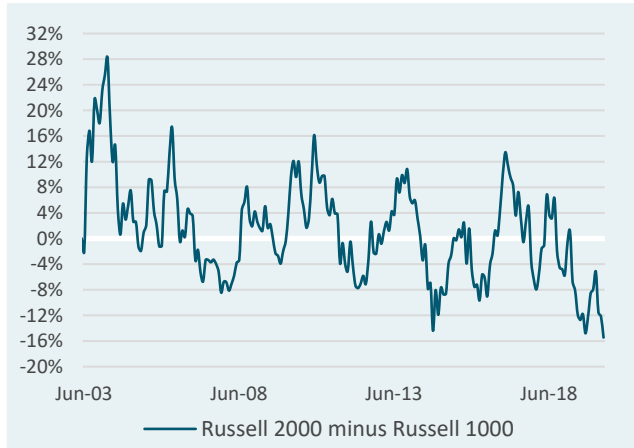
Value stocks severely underperformed growth stocks during the first quarter (Russell 1000 Value -26.7%, Russell 1000 Growth -14.1%). Small cap stocks underperformed large cap stocks by a similar magnitude (Russell 2000 -30.6%, Russell 1000 -20.2%). Value and size factors continue to experience a surprisingly long period of relative underperformance.

Once again, the impact of sector performance on the value premium in Q1 was notable – specifically energy and financial sectors (-50.5% and -31.9%, respectively) which tend to be value-tilted. Energy prices saw a historic drop fueled by OPEC+ infighting and likely the intent of the cartel to push out U.S. energy producers. Financial stocks delivered losses as

falling interest rates hurt profitability. Information Technology (-11.9%), a sector that tends to contain more growth stocks, was the best performer.

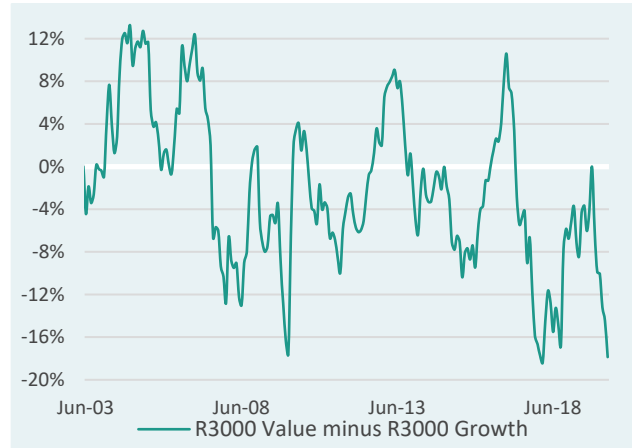
We believe that it is extremely difficult to successfully make short-term bets on style factors. Factor performance can be incredibly noisy and vulnerable to sector randomness. Market events of the past month seem to support this belief. While value in particular continues to be historically cheap, price itself does not translate to short-term outperformance – a catalyst for a turnaround should also be clearly identified and understood. We remain watchful and believe that consistent long-term exposure to these style factors is an ideal implementation approach for most investors, most of the time.

**SMALL CAP VS LARGE CAP (YOY)**



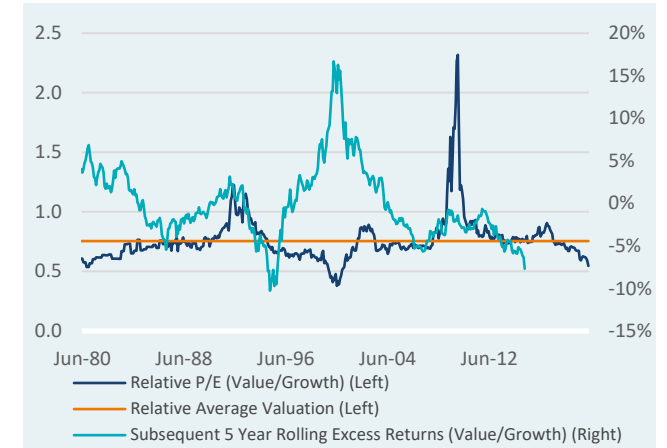
Source: FTSE, as of 3/31/20

**VALUE VS GROWTH (YOY)**



Source: FTSE, as of 3/31/20

**VALUE HISTORICALLY CHEAP**



Source: Russell, Bloomberg, as of 3/31/20



# International developed equity

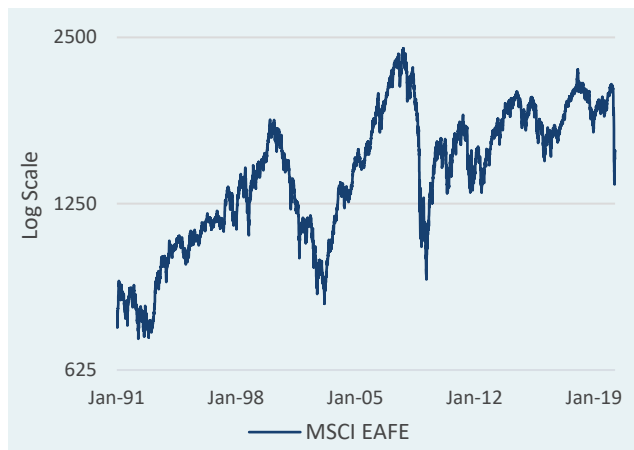
Equity markets around the world sold off broadly in the first quarter, down between -16% to -29%. Japanese equities were among the best performing (MSCI Japan -17%) while the U.K. was one of the worst performing (MSCI U.K. -29%).

As the global transactional currency, demand for U.S. dollars tends to ramp up when markets become stressed and companies abroad require dollars to pay down dollar-denominated liabilities. In the first quarter, the U.S. dollar gained +2.3% against the Euro and +6.4% against the British pound, resulting in losses for U.S. investors in European

equities with unhedged currency exposure. In mid-March, the Federal Reserve expanded its dollar swap liquidity lines and opened a FIMA repo facility which will allow foreign monetary authorities to enter repurchase agreements with the Fed. Both measures worked to help improve U.S. dollar liquidity abroad, and as a result, slow the pace of appreciation of the U.S. dollar relative to international pairs.

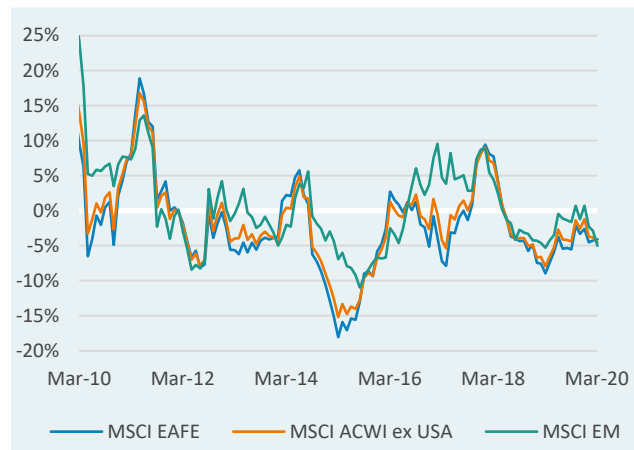
Cross-currency basis, which measure the additional premia investors must pay to swap one currency for another over a term, narrowed in March, signaling that the Fed's efforts to ease dollar funding strains have proved effective thus far.

**INTERNATIONAL DEVELOPED EQUITIES**



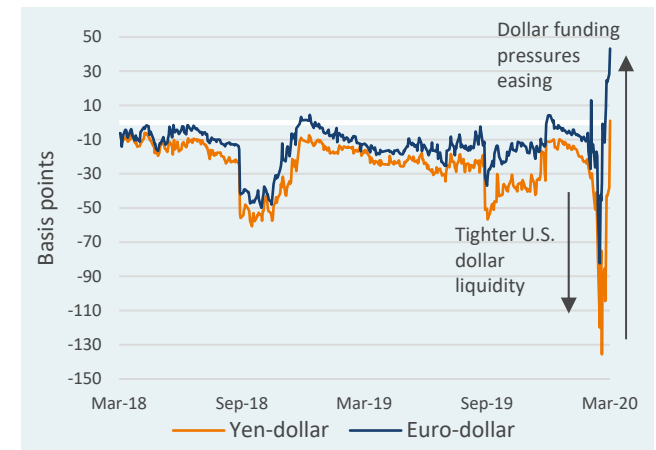
Source: MSCI, as of 3/31/20

**EFFECT OF CURRENCY (1-YEAR ROLLING)**



Source: MSCI, as of 3/31/20

**3M/3M CROSS CURRENCY BASIS SWAPS**



Source: Bloomberg, as of 3/31/20

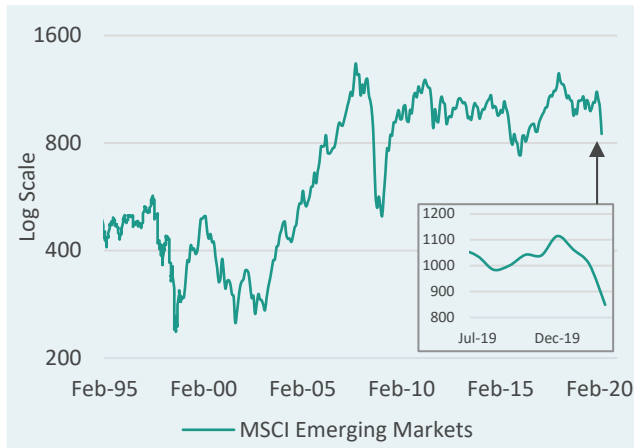
# Emerging market equity

Emerging market equities (MSCI EM -23.6%) underperformed both U.S. (S&P 500 -19.6%) and international developed equities (MSCI EAFE -22.8%) over the quarter. Within the complex, Latin American equities (MSCI EM Latin American -45.6%) dramatically underperformed Asian equities (MSCI EM Asia -18.1%), which were propped up by remarkably resilient Chinese equity markets. Currency exposure also played a big role in the outperformance of EM Latin America over EM Asia, as the U.S. dollar strengthened significantly against the Brazilian real, and the Mexican peso, and was little changed against the Chinese renminbi.

Inflation remains low in emerging economies and may face downward pressure in the coming months as energy prices have fallen. Central banks may have more room to maneuver relative to developed economies with regard to monetary policy, as interest rates are closer to average levels.

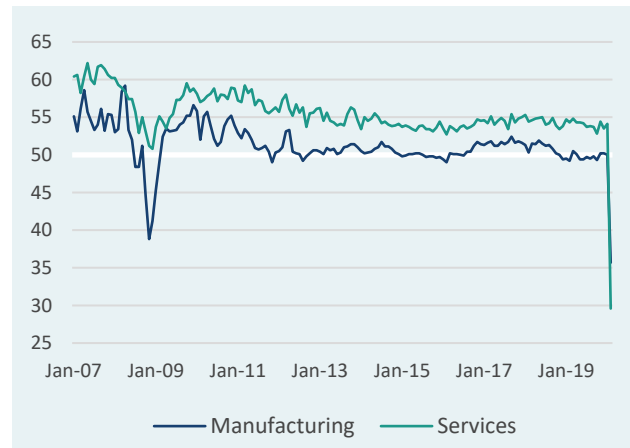
Countries viewed as having poor health infrastructure as well as economic dependence on oil prices fared the worst. Mexico's sovereign debt rating was downgraded by several rating agencies, and Moody's downgraded South Africa's sovereign debt rating below investment-grade.

**EMERGING MARKET EQUITY**



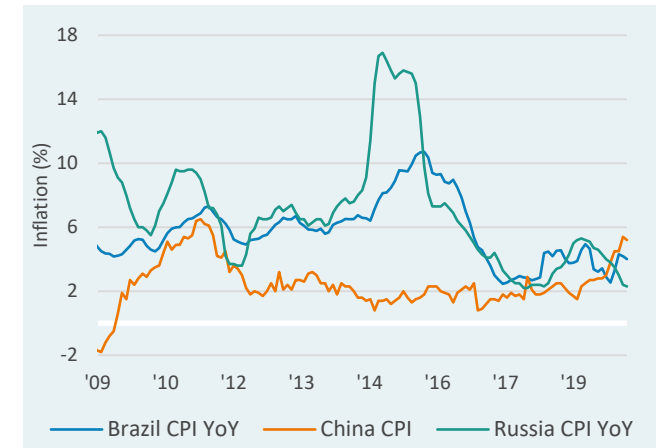
Source: MSCI, as of 3/31/20

**CHINA PURCHASING MANAGERS' INDICES**



Source: China Federation of Logistics and Purchasing, as of 2/29/20

**INFLATION (CPI YOY)**



Source: Bloomberg, as of 2/29/20

# Interest rate environment

- In mid-March, the Federal Open Market Committee cut interest rates by a full 1.00% to a new range of 0 – 0.25%. This surprise action was taken on a Sunday with the intent to get out ahead of the economic impacts of COVID-19.
- On April 9<sup>th</sup>, the Federal Reserve announced an additional \$2.3 Trillion program aimed towards providing financing to small businesses and municipalities. The program included \$1M-\$25M sized loans at an interest rate of 2.5%-4.0% with a four-year maturity. This move involved Fed purchases of certain types of low-grade speculative debt, a reversal from comments just weeks earlier that the Federal Reserve would stick to investment-grade debt purchases.
- The European Central Bank (ECB) announced a €750B asset purchase program in March to address effects of the virus. ECB President Christine Lagarde claimed that there are “no limits to our commitment to the

euro”. Bond yields of Euro member countries fell on the news.

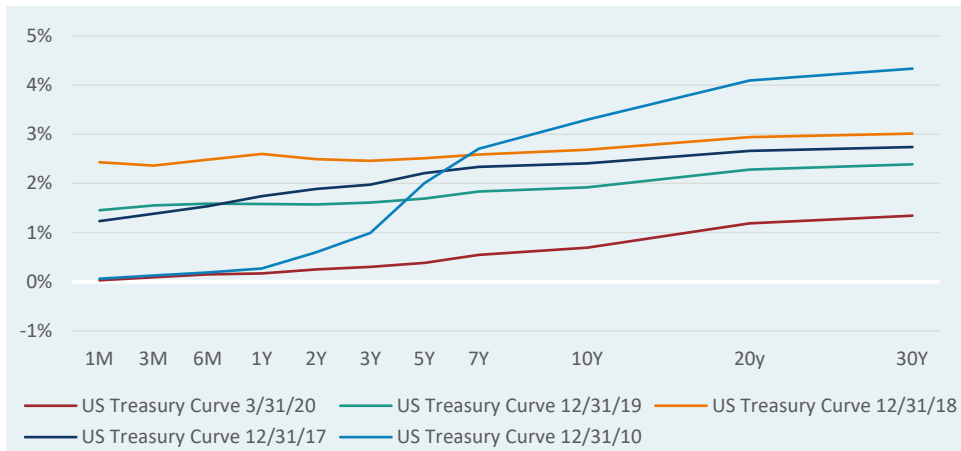
- Central banks are now facing a unique problem – an immediate economic slowdown and need for monetary policy support, but very little room to cut interest rates to provide that support. This is a risk that has been discussed by investors for years, only now becoming reality. We believe fiscal policies will play a much larger role in addressing the inevitable economic slowdown.
- The Federal Reserve rolled out several liquidity programs which were components of its Global Financial Crisis playbook and are aimed at ensuring the flow of credit to U.S. households and businesses, as well as financial market stability. The New York Fed began offering up to \$500B in overnight liquidity through repurchase agreements and has expanded dollar swap lines to alleviate any possible strains in global U.S. dollar funding markets.

Area	Short Term (3M)	10-Year
United States	0.09%	0.67%
Germany	(0.71%)	(0.47%)
France	(0.50%)	(0.02%)
Spain	(0.23%)	0.67%
Italy	(0.05%)	1.52%
Greece	0.16%	1.63%
U.K.	0.03%	0.36%
Japan	(0.30%)	0.01%
Australia	0.37%	0.76%
China	1.34%	2.58%
Brazil	3.37%	7.77%
Russia	5.47%	6.70%

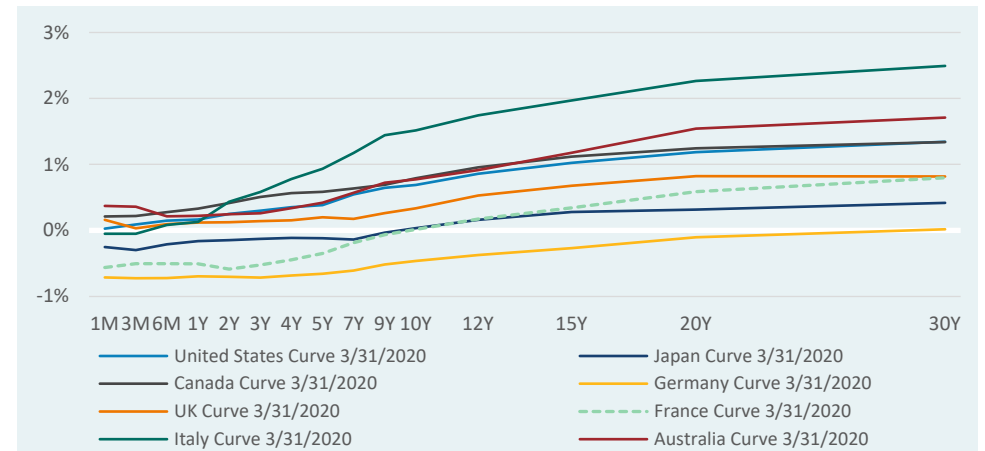
Source: Bloomberg, as of 3/31/20

# Yield environment

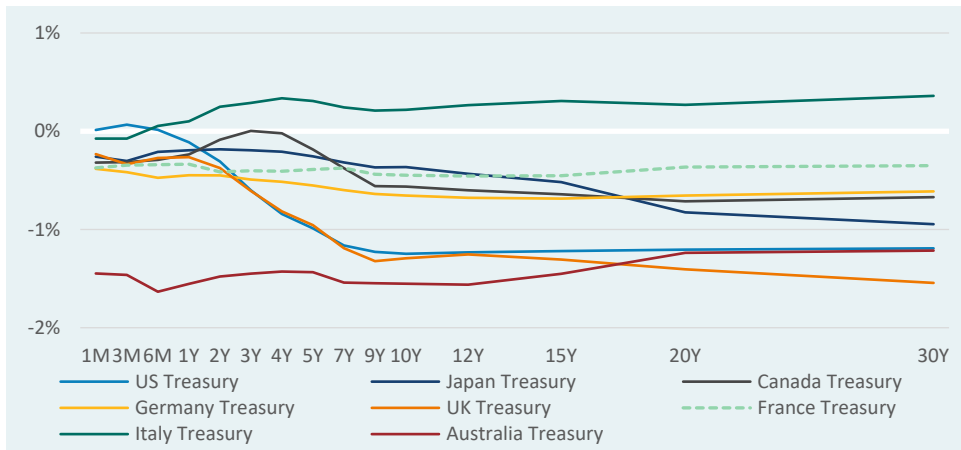
## U.S. YIELD CURVE



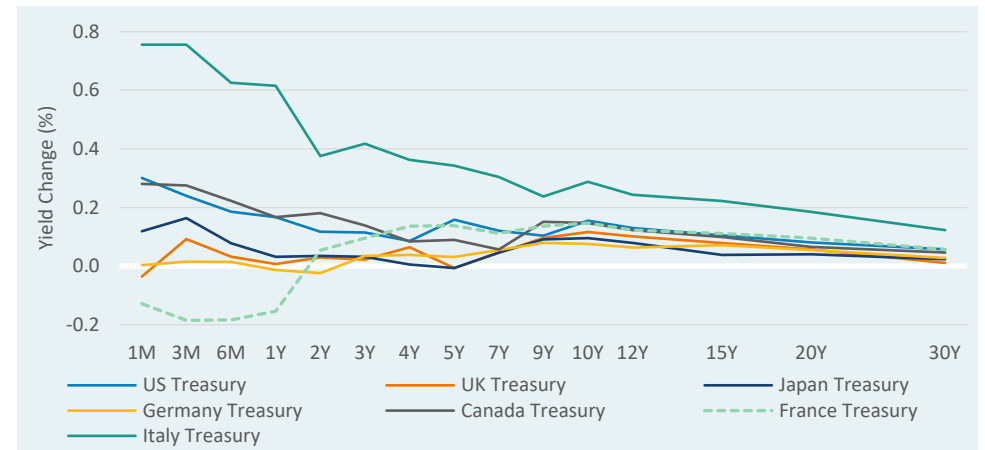
## GLOBAL GOVERNMENT YIELD CURVES



## YIELD CURVE CHANGES OVER LAST FIVE YEARS



## IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 3/31/20

# Currency

The U.S. dollar appreciated significantly in the first quarter, rising 7.1% on a trade-weighted basis, resulting in losses for investors with unhedged currency exposure. As is often the case during higher risk market environments, demand for safe-haven currencies contributed to the rising dollar.

Historically speaking, environments where the U.S. dollar was much more expensive than average tended to be followed by an eventual mean-reversion. However, this mean-reversion effect is not a sure bet, and it can take years (or perhaps decades) to occur. As recent years have shown,

leaving currency exposure unhedged tends to result in uncompensated volatility, and occasional (or frequent) large and sharp losses or gains.

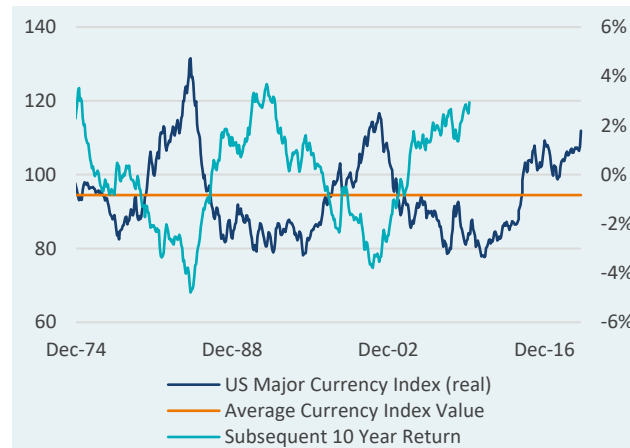
The MSCI Currency Factor Mix Index, constructed as a combination of individual Currency Factor indices (carry, value, momentum) advanced 1.2% in Q1. The momentum factor (+8.7%) posted strong gains as appreciating currencies continued to strengthen while the carry factor (-7.2%) lagged as the exchange rate adjustments implied by local interest rate differentials occurred faster than expected.

**BLOOMBERG DOLLAR SPOT INDEX**



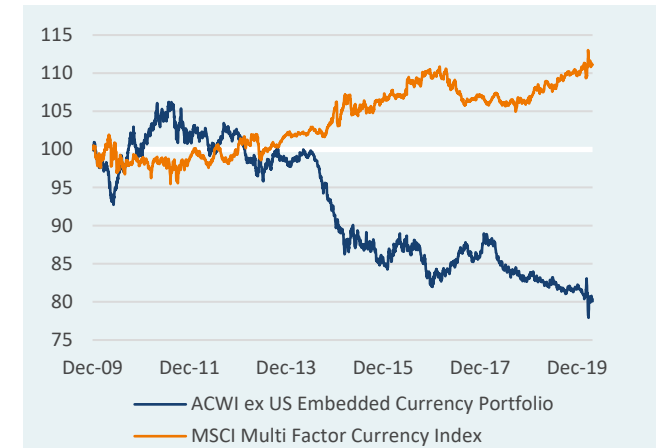
Source: Bloomberg, as of 3/31/20

**USD CURRENCY LEVEL & SUBSEQUENT RETURN**



Source: Federal Reserve, Verus, as of 3/31/20

**EMBEDDED CURRENCY VS CURRENCY BETA**



Source: MSCI, Bloomberg, as of 3/31/20

- The Total Fund, net of manager fees, returned -12.6% in the First quarter of 2020 and in the ranked 48<sup>th</sup> percentile among other public plans greater than \$1 billion (median of -12.6%). It lagged the policy index return of -11.1%. The Total Fund ex Overlay returned -12.7% for the quarter. The Total Fund one-year return of -5.0% lagged the policy index return of -2.3% and ranked in the 55<sup>th</sup> percentile of its peer universe. The three-year return of 2.1% (68<sup>th</sup> percentile) lagged the median large public plan (2.8%) and the policy index (3.6%).
  
- First quarter results were enhanced by the following factors:
  1. Baillie Gifford lost -19.7% beating the MSCI ACWI ex US (-23.3%). Baillie Gifford's focus on good quality names contributed to relative performance during the quarter.
  2. Mondrian outperformed the MSCI ACWI ex US Value down -27.2% vs 28.5% for the index. Country allocations added to relative returns especially within the Asia Pacific market, where equity markets were relatively resilient due to strong company balance sheets (particularly within Japan).
  
- First quarter results were hindered by the following factors:
  1. QMA small cap lost -36.7% trailing the Russell 2000 (-30.6%). Their valuation factors hurt relative performance for the quarter, as value stocks continued to underperform growth stocks. QMA is also emphasizing valuation as the growth value spread is over 90<sup>th</sup> percentile historically.
  2. Parametric Core trailed the MSCI EM Index (-30.7% versus -23.6%.) The strategic underweight to China hurt during the first Quarter as China was moderately successful in stimulating their economy.
  3. Western TRU lost -8.9% as spreads widened during the quarter. They underperformed the Barclays US Aggregate (3.1%.) As spreads widened investments in investment grade bonds and high yield bonds hurt relative performance.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: March 31, 2020

	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Total Fund**</b>	<b>-12.6</b>	<b>48</b>	<b>-7.8</b>	<b>48</b>	<b>-5.0</b>	<b>55</b>	<b>-1.1</b>	<b>53</b>	<b>2.1</b>	<b>68</b>	<b>3.4</b>	<b>57</b>	<b>6.4</b>	<b>43</b>
<i>Policy Index<sup>1</sup></i>	-11.1	29	-5.9	24	-2.3	18	0.6	22	3.6	27	4.3	24	7.1	20
<i>InvMetrics Public DB &gt; \$1B Net Median</i>	-12.6		-8.0		-5.0		-1.0		2.8		3.7		6.4	
<b>Total Fund ex Overlay</b>	<b>-12.7</b>	<b>52</b>	<b>-7.9</b>	<b>50</b>	<b>-5.1</b>	<b>55</b>	<b>-1.3</b>	<b>57</b>	<b>1.9</b>	<b>75</b>	<b>3.3</b>	<b>63</b>	<b>6.3</b>	<b>54</b>
<i>Policy Index<sup>1</sup></i>	-11.1	29	-5.9	24	-2.3	18	0.6	22	3.6	27	4.3	24	7.1	20
<i>InvMetrics Public DB &gt; \$1B Net Median</i>	-12.6		-8.0		-5.0		-1.0		2.8		3.7		6.4	
<b>Public Equity</b>	<b>-22.0</b>	<b>34</b>	<b>-15.2</b>	<b>37</b>	<b>-12.1</b>	<b>40</b>	<b>-5.2</b>	<b>52</b>	<b>1.0</b>	<b>53</b>	<b>2.8</b>	<b>54</b>	<b>6.8</b>	<b>61</b>
<i>Blended Public Equity Index<sup>1</sup></i>	-21.5	23	-14.4	25	-11.5	29	-4.8	44	1.6	37	3.2	37	7.2	49
<i>InvMetrics All DB Total Eq Net Median</i>	-22.6		-15.8		-12.6		-5.1		1.0		2.9		7.2	
<b>US Equity</b>	<b>-22.0</b>	<b>43</b>	<b>-14.6</b>	<b>44</b>	<b>-11.3</b>	<b>49</b>	<b>-2.3</b>	<b>48</b>	<b>2.8</b>	<b>49</b>	<b>4.7</b>	<b>45</b>	<b>9.3</b>	<b>47</b>
<i>Blended US Equity Index<sup>1</sup></i>	-20.9	20	-12.7	14	-9.1	15	-0.6	16	4.0	18	5.6	21	10.1	15
<i>Russell 3000</i>	-20.9	20	-12.7	14	-9.1	15	-0.6	16	4.0	18	5.8	13	10.1	13
<i>InvMetrics All DB US Eq Net Median</i>	-22.3		-14.9		-11.4		-2.4		2.7		4.6		9.2	
<b>Large Cap Equity</b>	<b>-20.7</b>	<b>49</b>	<b>-13.1</b>	<b>51</b>	<b>-9.4</b>	<b>50</b>	<b>-0.5</b>	<b>42</b>	<b>4.3</b>	<b>40</b>	<b>6.3</b>	<b>32</b>	<b>10.0</b>	<b>39</b>
<i>Russell 1000</i>	-20.2	47	-11.8	43	-8.0	44	0.3	39	4.6	37	6.2	33	10.4	31
<i>eV US Large Cap Equity Net Median</i>	-20.9		-13.1		-9.5		-1.7		2.9		4.7		9.3	
<i>Acadian US MGD V</i>	-21.3	66	-15.0	76	-11.0	70	--	--	--	--	--	--	--	--
<i>BlackRock Russell 1000</i>	-20.2	51	-11.8	42	-8.0	45	0.3	34	4.7	28	--	--	--	--
<i>DE Shaw</i>	-21.3	66	-13.1	57	-10.8	69	-1.9	63	3.8	45	6.3	20	10.6	9
<i>PanAgora Defuseq</i>	-21.0	62	-15.8	81	-11.2	71	--	--	--	--	--	--	--	--
<i>Russell 1000</i>	-20.2	51	-11.8	42	-8.0	45	0.3	34	4.6	28	6.2	21	10.4	14
<i>eV US Large Cap Core Equity Net Median</i>	-20.1		-12.7		-8.7		-1.3		3.4		5.0		9.6	

\* Total Fund and asset class aggregates are ranked in InvMetrics 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: March 31, 2020

	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Small Cap Equity</b>	<b>-36.7</b>	<b>84</b>	<b>-31.4</b>	<b>79</b>	<b>-31.2</b>	<b>84</b>	<b>-17.7</b>	<b>78</b>	<b>-9.5</b>	<b>74</b>	<b>-4.2</b>	<b>85</b>	<b>4.9</b>	<b>79</b>
<i>Russell 2000</i>	-30.6	47	-25.5	46	-24.0	48	-11.9	48	-4.6	46	-0.2	48	6.9	49
<i>eV US Small Cap Equity Net Median</i>	-31.3		-26.4		-24.7		-12.5		-5.3		-0.6		6.8	
<b>QMA US Small Cap</b>	<b>-36.7</b>	<b>95</b>	<b>-31.4</b>	<b>92</b>	<b>-31.2</b>	<b>94</b>	<b>-17.7</b>	<b>88</b>	<b>-9.5</b>	<b>90</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>Russell 2000</i>	-30.6	48	-25.5	47	-24.0	47	-11.9	49	-4.6	47	-0.2	52	6.9	57
<i>eV US Small Cap Core Equity Net Median</i>	-30.7		-26.2		-24.7		-12.3		-5.0		-0.2		7.1	
<b>International Equity</b>	<b>-22.0</b>	<b>14</b>	<b>-15.7</b>	<b>15</b>	<b>-12.9</b>	<b>16</b>	<b>-8.5</b>	<b>15</b>	<b>-1.1</b>	<b>20</b>	<b>0.3</b>	<b>21</b>	<b>2.5</b>	<b>41</b>
<i>Blended International Equity Index<sup>1</sup></i>	-22.2	15	-16.4	20	-14.2	24	-9.6	22	-1.4	22	0.1	23	2.7	37
<i>MSCI EAFE Gross</i>	-22.7	19	-17.2	26	-13.9	22	-8.7	16	-1.3	22	-0.1	29	3.2	22
<i>InvMetrics All DB ex-US Eq Net Median</i>	-24.4		-18.8		-16.5		-11.3		-2.6		-0.9		2.3	
<b>Developed Markets</b>	<b>-23.2</b>	<b>49</b>	<b>-16.5</b>	<b>47</b>	<b>-13.5</b>	<b>46</b>	<b>-8.7</b>	<b>43</b>	<b>-1.3</b>	<b>48</b>	<b>0.1</b>	<b>48</b>	<b>2.7</b>	<b>71</b>
<i>MSCI ACWI ex USA Gross</i>	-23.3	51	-17.8	55	-15.1	55	-9.6	52	-1.5	50	-0.2	54	2.5	75
<i>InvMetrics All DB Dev Mkt ex-US Eq Net Median</i>	-23.2		-17.1		-14.3		-9.2		-1.5		0.0		3.3	
<b>Baillie Gifford</b>	<b>-19.7</b>	<b>48</b>	<b>-10.7</b>	<b>24</b>	<b>-5.4</b>	<b>24</b>	<b>-5.2</b>	<b>36</b>	<b>2.2</b>	<b>58</b>	<b>2.4</b>	<b>53</b>	<b>--</b>	<b>--</b>
<i>MSCI ACWI ex US<sup>1</sup></i>	-23.3	81	-17.8	87	-15.1	89	-9.6	75	-1.5	92	-0.2	91	--	--
<i>MSCI ACWI ex US Growth<sup>1</sup></i>	-18.2	27	-11.0	28	-6.9	39	-4.8	35	2.9	40	2.5	53	--	--
<i>eV ACWI ex-US Growth Equity Net Median</i>	-19.8		-13.2		-9.1		-6.7		2.7		2.7		5.2	
<b>BlackRock EAFE Index</b>	<b>-22.8</b>	<b>38</b>	<b>-17.3</b>	<b>37</b>	<b>-14.1</b>	<b>33</b>	<b>-8.8</b>	<b>29</b>	<b>-1.5</b>	<b>39</b>	<b>-0.3</b>	<b>47</b>	<b>--</b>	<b>--</b>
<i>MSCI EAFE</i>	-22.8	39	-17.4	38	-14.4	35	-9.2	33	-1.8	45	-0.6	56	2.7	79
<i>MSCI EAFE Gross</i>	-22.7	38	-17.2	37	-13.9	31	-8.7	28	-1.3	36	-0.1	45	3.2	70
<i>eV EAFE Core Equity Net Median</i>	-24.0		-18.2		-15.9		-11.2		-2.2		-0.5		3.8	
<b>Mondrian</b>	<b>-27.2</b>	<b>34</b>	<b>-21.6</b>	<b>39</b>	<b>-20.5</b>	<b>41</b>	<b>-12.1</b>	<b>18</b>	<b>-4.6</b>	<b>31</b>	<b>-2.2</b>	<b>29</b>	<b>1.8</b>	<b>51</b>
<i>MSCI ACWI ex USA Value Gross</i>	-28.5	49	-24.6	68	-23.2	62	-14.5	44	-5.9	43	-2.9	53	0.7	72
<i>MSCI ACWI ex USA Gross</i>	-23.3	14	-17.8	13	-15.1	11	-9.6	10	-1.5	6	-0.2	12	2.5	30
<i>eV ACWI ex-US Value Equity Net Median</i>	-28.5		-22.6		-21.8		-14.8		-6.5		-2.9		1.8	

1. See Appendix for Benchmark History.



Total Fund  
Performance Summary (Net of Fees)

Period Ending: March 31, 2020

	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Emerging Markets</b>	<b>-30.7</b>	<b>86</b>	<b>-28.3</b>	<b>92</b>	<b>-26.8</b>	<b>92</b>	<b>-18.2</b>	<b>80</b>	<b>-7.6</b>	<b>86</b>	<b>-3.6</b>	<b>89</b>	<b>--</b>	<b>--</b>
MSCI Emerging Markets Gross	-23.6	22	-18.0	22	-17.4	24	-12.4	17	-1.3	12	0.0	18	1.0	24
InvMetrics All DB Emg Mkt Eq Net Median	-25.8		-20.7		-19.6		-14.8		-4.1		-1.7		-0.2	
<b>Parametric Core</b>	<b>-30.7</b>	<b>89</b>	<b>-28.3</b>	<b>91</b>	<b>-26.8</b>	<b>88</b>	<b>-18.2</b>	<b>86</b>	<b>-7.6</b>	<b>89</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
MSCI Emerging Markets Gross	-23.6	35	-18.0	34	-17.4	39	-12.4	28	-1.3	30	0.0	35	1.0	53
eV Emg Mkts Equity Net Median	-25.1		-20.1		-19.1		-14.1		-2.7		-0.9		1.3	
Parametric Currency Overlay	31.6	--	40.7	--	36.5	--	--	--	--	--	--	--	--	--
<b>Fixed Income</b>	<b>-2.4</b>	<b>69</b>	<b>0.1</b>	<b>66</b>	<b>2.7</b>	<b>67</b>	<b>3.2</b>	<b>61</b>	<b>3.1</b>	<b>60</b>	<b>3.3</b>	<b>28</b>	<b>4.8</b>	<b>19</b>
Blended Fixed Income Index <sup>1</sup>	-1.8	62	1.3	52	4.3	47	4.8	38	3.8	32	3.3	30	3.8	58
InvMetrics All DB Total Fix Inc Net Median	-1.0		1.4		4.0		4.0		3.3		2.8		3.9	
<b>Core Fixed</b>	<b>0.8</b>	<b>--</b>	<b>3.3</b>	<b>--</b>	<b>6.0</b>	<b>--</b>	<b>4.7</b>	<b>--</b>	<b>3.8</b>	<b>--</b>	<b>3.2</b>	<b>--</b>	<b>4.4</b>	<b>--</b>
BBgBarc US Aggregate TR	3.1	--	5.7	--	8.9	--	6.7	--	4.8	--	3.4	--	3.9	--
<b>BlackRock Intermediate Govt</b>	<b>5.2</b>	<b>46</b>	<b>6.5</b>	<b>60</b>	<b>9.0</b>	<b>61</b>	<b>6.4</b>	<b>65</b>	<b>4.3</b>	<b>66</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
BBgBarc US Govt Int TR	5.2	46	6.4	61	8.9	62	6.3	67	4.1	68	2.8	60	2.8	76
BBgBarc US Aggregate TR	3.1	99	5.7	76	8.9	62	6.7	56	4.8	40	3.4	28	3.9	5
eV US Government Fixed Inc Net Median	5.1		6.8		9.5		6.7		4.7		3.1		3.4	
<b>DoubleLine*</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
BBgBarc US Aggregate TR	3.1	3	5.7	1	8.9	1	6.7	1	4.8	1	3.4	5	3.9	50
eV US Securitized Fixed Inc Net Median	-1.9		-0.8		1.1		2.5		2.4		2.6		3.9	
<b>FIAM Bond</b>	<b>1.0</b>	<b>69</b>	<b>3.8</b>	<b>58</b>	<b>7.1</b>	<b>57</b>	<b>5.8</b>	<b>51</b>	<b>4.4</b>	<b>50</b>	<b>3.4</b>	<b>25</b>	<b>4.4</b>	<b>20</b>
BBgBarc US Aggregate TR	3.1	15	5.7	12	8.9	13	6.7	15	4.8	15	3.4	30	3.9	56
<b>Western TRU</b>	<b>-8.9</b>	<b>99</b>	<b>-5.3</b>	<b>99</b>	<b>-3.2</b>	<b>99</b>	<b>-1.4</b>	<b>99</b>	<b>1.0</b>	<b>99</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
3-Month Libor Total Return USD	0.4	80	1.4	92	2.1	99	2.3	99	2.1	99	1.5	99	0.9	99
BBgBarc US Aggregate TR	3.1	15	5.7	12	8.9	13	6.7	15	4.8	15	3.4	30	3.9	56
eV US Core Fixed Inc Net Median	1.7		4.1		7.3		5.9		4.4		3.2		3.9	

\* Funded March 2020.

1. See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: March 31, 2020

	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Opportunistic Credit</b>	<b>-8.7</b>	<b>--</b>	<b>-6.1</b>	<b>--</b>	<b>-3.8</b>	<b>--</b>	<b>0.2</b>	<b>--</b>	<b>2.2</b>	<b>--</b>	<b>4.0</b>	<b>--</b>	<b>7.5</b>	<b>--</b>
<i>BBgBarc BA Intermediate HY<sup>1</sup></i>	-10.0	--	-6.3	--	-3.6	--	1.3	--	1.9	--	3.1	--	4.8	--
Angelo Gordon Opportunistic*	-24.2	--	-20.1	--	-15.8	--	-1.1	--	5.1	--	5.8	--	--	--
Angelo Gordon STAR*	-11.4	--	-7.6	--	-2.4	--	8.4	--	12.5	--	10.0	--	--	--
<i>BBgBarc US Aggregate TR</i>	3.1	--	5.7	--	8.9	--	6.7	--	4.8	--	3.4	--	3.9	--
Angelo Gordon Credit Solutions*	15.1	1	--	--	--	--	--	--	--	--	--	--	--	--
<i>BBgBarc BA Intermediate HY</i>	-10.0	19	-6.3	15	-3.6	15	1.3	5	1.9	7	3.1	12	4.8	72
<i>eV US High Yield Fixed Inc Net Median</i>	-12.1		-8.9		-6.6		-1.0		0.6		2.3		5.2	
Beach Point Select	-12.8	58	-8.5	45	-5.7	34	-0.9	48	1.7	9	4.5	2	--	--
<i>BBgBarc BA Intermediate HY</i>	-10.0	19	-6.3	15	-3.6	15	1.3	5	1.9	7	3.1	12	4.8	72
<i>eV US High Yield Fixed Inc Net Median</i>	-12.1		-8.9		-6.6		-1.0		0.6		2.3		5.2	
Brigade Capital	-18.4	98	-16.1	98	-14.5	99	-6.5	99	-2.9	99	0.3	99	--	--
<i>BBgBarc BA Intermediate HY</i>	-10.0	19	-6.3	15	-3.6	15	1.3	5	1.9	7	3.1	12	4.8	72
<i>50% Barclays HY/ 50% Bank Loan</i>	-12.9	60	-10.1	68	-8.2	73	-2.0	74	0.0	71	2.0	66	--	--
<i>eV US High Yield Fixed Inc Net Median</i>	-12.1		-8.9		-6.6		-1.0		0.6		2.3		5.2	
PIMCO Diversified	-7.3	6	-4.6	7	-1.2	2	2.1	3	--	--	--	--	--	--
<i>Blended PIMCO Diversified Index<sup>1</sup></i>	-9.1	11	-5.7	11	-2.4	7	1.2	7	1.9	6	3.1	13	5.1	55
<i>BBgBarc BA Intermediate HY</i>	-10.0	19	-6.3	15	-3.6	15	1.3	5	1.9	7	3.1	12	4.8	72
<i>eV US High Yield Fixed Inc Net Median</i>	-12.1		-8.9		-6.6		-1.0		0.6		2.3		5.2	
Franklin Templeton	-5.8	41	-7.7	64	-6.4	70	-3.4	80	-2.0	91	0.4	85	--	--
<i>BBgBarc Multiverse TR</i>	-1.1	16	0.2	18	3.5	19	1.6	27	3.4	17	2.7	27	2.6	64
<i>eV All Global Fixed Inc Net Median</i>	-7.1		-4.5		-2.0		-0.4		1.6		2.0		3.3	

\* Preliminary return as of 03/31/2020.

1. See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: March 31, 2020

	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Private Credit</b>	<b>-1.2</b>	<b>--</b>	<b>2.5</b>	<b>--</b>	<b>4.2</b>	<b>--</b>	<b>6.2</b>	<b>--</b>	<b>6.3</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>Cliffwater Direct Lending Index*</i>	2.0	--	5.9	--	8.3	--	8.5	--	8.5	--	8.4	--	10.3	--
Blackrock DL Feeder IX-U**	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Cliffwater Direct Lending Index</i>	2.0	1	5.9	1	8.3	1	8.5	1	8.5	1	8.4	1	10.3	1
<i>eV US High Yield Fixed Inc Net Median</i>	-12.1	--	-8.9	--	-6.6	--	-1.0	--	0.6	--	2.3	--	5.2	--
PIMCO Private Income*	0.0	1	5.2	1	--	--	--	--	--	--	--	--	--	--
<i>BBgBarc BA Intermediate HY</i>	-10.0	19	-6.3	15	-3.6	15	1.3	5	1.9	7	3.1	12	4.8	72
<i>Cliffwater Direct Lending Index</i>	2.0	1	5.9	1	8.3	1	8.5	1	8.5	1	8.4	1	10.3	1
<i>eV US High Yield Fixed Inc Net Median</i>	-12.1	--	-8.9	--	-6.6	--	-1.0	--	0.6	--	2.3	--	5.2	--
TCP Direct Lending VIII†	-3.3	2	-0.4	1	1.3	1	4.9	1	5.3	1	--	--	--	--
White Oak Yield*	0.0	1	3.6	1	5.3	1	6.4	1	--	--	--	--	--	--
<i>Cliffwater Direct Lending Index</i>	2.0	1	5.9	1	8.3	1	8.5	1	8.5	1	8.4	1	10.3	1
<i>eV US High Yield Fixed Inc Net Median</i>	-12.1	--	-8.9	--	-6.6	--	-1.0	--	0.6	--	2.3	--	5.2	--
<b>Risk Parity</b>	<b>-12.2</b>	<b>--</b>	<b>-7.9</b>	<b>--</b>	<b>-2.7</b>	<b>--</b>	<b>0.9</b>	<b>--</b>	<b>3.4</b>	<b>--</b>	<b>2.8</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>Blended Risk Parity Index<sup>1</sup></i>	-12.4	--	-6.9	--	-3.5	--	0.5	--	3.3	--	4.3	--	--	--
AQR GRP, 10% Volatility	-14.2	--	-9.2	--	-4.0	--	0.3	--	3.4	--	2.2	--	--	--
PanAgora	-9.7	--	-6.1	--	-1.0	--	1.8	--	3.6	--	3.5	--	--	--
<i>Blended Risk Parity Index</i>	-12.4	--	-6.9	--	-3.5	--	0.5	--	3.3	--	4.3	--	--	--
<i>S&amp;P Risk Parity 10% Target Volatility Index TR USD</i>	-10.8	--	-5.8	--	-1.7	--	2.1	--	2.8	--	2.2	--	4.9	--
<b>Alternatives</b>	<b>-1.9</b>	<b>--</b>	<b>3.7</b>	<b>--</b>	<b>5.9</b>	<b>--</b>	<b>3.6</b>	<b>--</b>	<b>4.3</b>	<b>--</b>	<b>6.0</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>Blended Alternatives Index<sup>1</sup></i>	5.5	--	10.6	--	19.5	--	10.5	--	10.8	--	9.0	--	--	--
<b>Private Equity*** †</b>	<b>7.3</b>	<b>3</b>	<b>19.9</b>	<b>3</b>	<b>27.0</b>	<b>1</b>	<b>18.6</b>	<b>10</b>	<b>16.2</b>	<b>26</b>	<b>16.9</b>	<b>8</b>	<b>--</b>	<b>--</b>
<i>Blended Private Equity Index<sup>1</sup></i>	9.8	1	17.0	5	34.0	1	14.5	29	15.2	29	13.7	22	15.7	4
<i>InvMetrics All DB Private Eq Net Median</i>	1.7	--	6.1	--	9.4	--	10.4	--	11.9	--	11.0	--	11.4	--

\* Preliminary return as of 03/31/2020.

\*\* Funded March 2020.

\*\*\* Returns are one-quarter lag.

† Excludes EnCap Energy Capital Fund and Sheridan Production Partners.

1. See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: March 31, 2020

	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Hedge Fund/Absolute Return</b>	<b>-12.3</b>	<b>66</b>	<b>-13.4</b>	<b>86</b>	<b>-15.2</b>	<b>90</b>	<b>-11.8</b>	<b>95</b>	<b>-7.9</b>	<b>94</b>	<b>-3.0</b>	<b>86</b>	<b>--</b>	<b>--</b>
<i>Libor 1 month +4%</i>	1.2	7	4.3	6	6.0	7	6.1	3	5.9	5	5.3	3	4.8	8
<i>InvMetrics All DB Hedge Funds Net Median</i>	-9.4		-7.4		-6.1		-1.7		0.5		0.6		2.8	
AQR DELTA XN	-23.1	88	-26.3	94	-29.6	97	-22.0	99	-15.2	99	-7.5	95	--	--
Aberdeen Standard GARS	-2.7	32	0.2	29	1.5	30	1.1	37	1.1	52	--	--	--	--
Graham Quant Macro*	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Libor 1 month +4%</i>	1.2	19	4.3	17	6.0	18	6.1	13	5.9	19	5.3	22	4.8	44
<i>eV Alt All Multi-Strategy Median</i>	-7.5		-5.6		-3.8		-1.2		1.2		1.5		4.0	
<b>Inflation Hedge</b>	<b>-12.6</b>	<b>--</b>	<b>-10.5</b>	<b>--</b>	<b>-9.5</b>	<b>--</b>	<b>-3.3</b>	<b>--</b>	<b>-0.6</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>Blended Inflation Hedge Index<sup>1</sup></i>	-8.9	--	-6.3	--	-3.7	--	-0.2	--	1.9	--	--	--	--	--
<b>Real Estate</b>	<b>1.3</b>	<b>15</b>	<b>5.5</b>	<b>1</b>	<b>6.7</b>	<b>7</b>	<b>7.2</b>	<b>7</b>	<b>7.4</b>	<b>9</b>	<b>9.0</b>	<b>5</b>	<b>11.4</b>	<b>5</b>
<i>NCREIF ODCE</i>	1.0	33	3.8	26	4.9	36	6.2	31	6.8	22	8.5	18	11.4	5
<i>InvMetrics All DB Real Estate Pub Net Median</i>	0.5		3.0		4.5		5.7		6.2		7.4		10.1	
Harrison Street Core Property**	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>NCREIF ODCE</i>	1.0	--	3.8	--	4.9	--	6.2	--	6.8	--	8.5	--	11.4	--
Invesco	1.6	--	5.8	--	6.8	--	7.2	--	7.4	--	8.9	--	11.4	--
<i>NCREIF ODCE</i>	1.0	--	3.8	--	4.9	--	6.2	--	6.8	--	8.5	--	11.4	--
Invesco US Val IV	0.7	--	9.2	--	10.3	--	11.6	--	11.6	--	--	--	--	--
<i>NCREIF ODCE</i>	1.0	--	3.8	--	4.9	--	6.2	--	6.8	--	8.5	--	11.4	--
<i>NCREIF CEVA 1Q Lag - NET</i>	3.0	--	9.1	--	12.3	--	11.9	--	11.5	--	12.6	--	--	--
Invesco US Val V	1.0	--	6.7	--	12.5	--	--	--	--	--	--	--	--	--
<i>NCREIF ODCE</i>	1.0	--	3.8	--	4.9	--	6.2	--	6.8	--	8.5	--	11.4	--
<i>NCREIF CEVA 1Q Lag - NET</i>	3.0	--	9.1	--	12.3	--	11.9	--	11.5	--	12.6	--	--	--
PGIM RE US Debt Fund	1.1	--	4.1	--	5.6	--	6.1	--	--	--	--	--	--	--
<i>NCREIF ODCE</i>	1.0	--	3.8	--	4.9	--	6.2	--	6.8	--	8.5	--	11.4	--

\* Funded February 2020.

\*\* Funded January 2020.

1. See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: March 31, 2020

	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Private Real Asset**</b>	0.6	--	-0.1	--	1.6	--	-2.3	--	-5.0	--	4.8	--	--	--
<i>Blended Private Real Asset Index<sup>1</sup></i>	6.5	--	7.5	--	21.5	--	5.4	--	5.6	--	6.0	--	--	--
<i>Blended Secondary CA Private RA Index<sup>1</sup></i>	0.7	--	-0.6	--	2.0	--	2.7	--	6.1	--	4.9	--	--	--
<b>Public Real Assets</b>	-33.9	--	-33.1	--	-32.5	--	-17.5	--	-9.9	--	--	--	--	--
<i>Blended Public Real Asset Index<sup>1</sup></i>	-27.1	--	-24.9	--	-23.6	--	-11.7	--	-5.8	--	-0.7	--	--	--
Cushing MLP Alpha TR*														
SSgA Custom Real Asset	-26.5	--	-24.3	--	-23.0	--	-11.3	--	-5.5	--	--	--	--	--
<i>SSgA Custom Real Asset Index*</i>	-27.1	--	-24.9	--	-23.6	--	-11.7	--	-5.8	--	--	--	--	--
<b>Cash</b>	0.3	--	0.8	--	1.1	--	1.2	--	1.1	--	1.1	--	0.9	--
<i>91 Day T-Bills</i>	0.4	--	1.3	--	1.9	--	2.0	--	1.7	--	1.1	--	0.6	--
General Account	0.4	--	1.5	--	2.7	--	4.0	--	3.3	--	2.6	--	1.4	--
Treasury & LAIF	-3.5	--	-2.1	--	-1.3	--	1.0	--	1.7	--	1.3	--	1.1	--
<i>91 Day T-Bills</i>	0.4	--	1.3	--	1.9	--	2.0	--	1.7	--	1.1	--	0.6	--

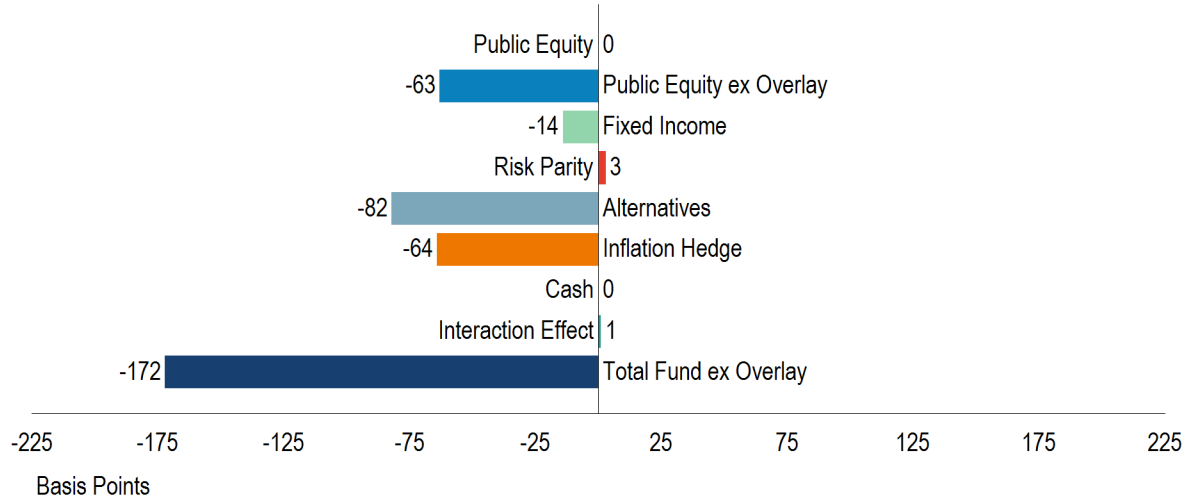
\*\* Returns are one-quarter lag.

\* Liquidating as of March 2020.

1. See Appendix for Benchmark History.

Total Fund ex Overlay  
Performance Attribution

Period Ending: March 31, 2020

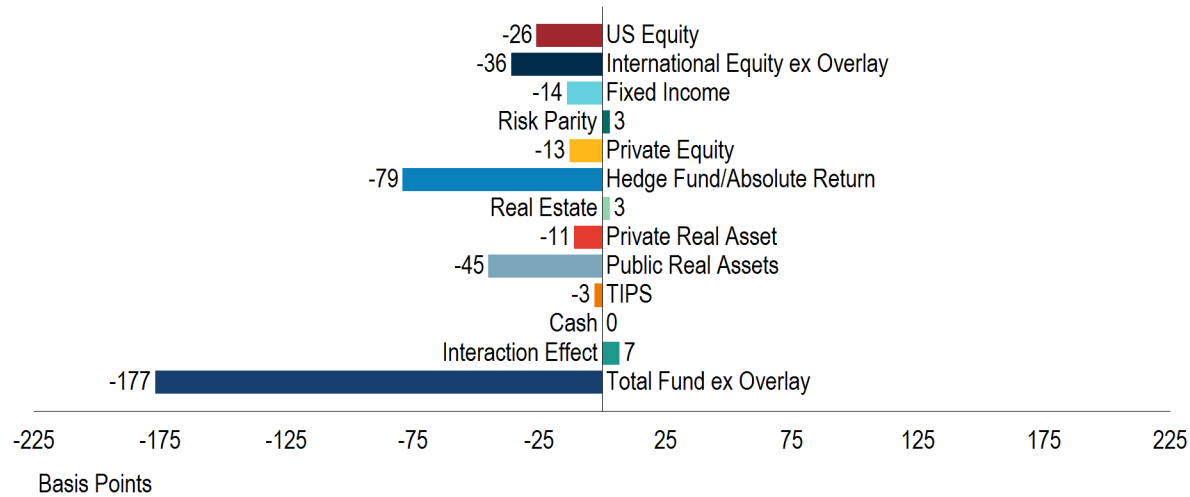


	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction *	Total Effects
Public Equity	-21.99%	-21.47%	-0.52%	0.00%	0.00%	0.00%	0.00%
Public Equity ex Overlay	-22.90%	-21.47%	-1.43%	-0.63%	0.15%	0.01%	-0.47%
Fixed Income	-2.43%	-1.76%	-0.66%	-0.14%	0.03%	0.00%	-0.11%
Risk Parity	-12.15%	-12.44%	0.29%	0.03%	0.02%	0.04%	0.08%
Alternatives	-1.93%	5.48%	-7.41%	-0.82%	0.03%	-0.05%	-0.83%
Inflation Hedge	-12.63%	-8.89%	-3.74%	-0.64%	0.00%	0.01%	-0.63%
Cash	0.26%	0.37%	-0.12%	0.00%	0.24%	0.00%	0.24%
<b>Total</b>	<b>-12.84%</b>	<b>-11.12%</b>	<b>-1.72%</b>	<b>-2.19%</b>	<b>0.46%</b>	<b>0.01%</b>	<b>-1.72%</b>

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

Total Fund ex Overlay  
Performance Attribution

Period Ending: March 31, 2020

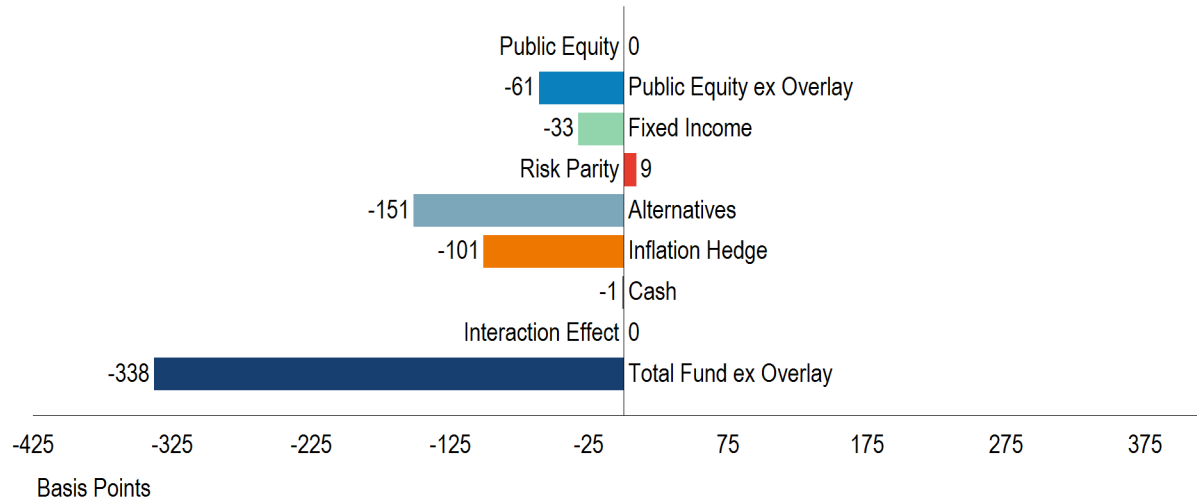


	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction *	Total Effects
US Equity	-22.01%	-20.90%	-1.11%	-0.26%	0.05%	0.00%	-0.21%
International Equity ex Overlay	-24.00%	-22.18%	-1.82%	-0.36%	0.09%	0.01%	-0.26%
Fixed Income	-2.43%	-1.76%	-0.66%	-0.14%	0.03%	0.00%	-0.11%
Risk Parity	-12.15%	-12.44%	0.29%	0.03%	0.02%	0.04%	0.08%
Private Equity	7.35%	9.83%	-2.48%	-0.13%	0.10%	-0.03%	-0.06%
Hedge Fund/Absolute Return	-12.33%	1.24%	-13.57%	-0.79%	-0.02%	0.02%	-0.79%
Real Estate	1.31%	0.97%	0.34%	0.03%	0.07%	0.00%	0.10%
Private Real Asset	0.57%	6.51%	-5.93%	-0.11%	-0.01%	0.00%	-0.12%
Public Real Assets	-33.95%	-27.07%	-6.87%	-0.45%	-0.05%	-0.01%	-0.52%
TIPS	--	3.51%	--	-0.03%	-0.12%	0.03%	-0.12%
Cash	0.26%	0.37%	-0.12%	0.00%	0.24%	0.00%	0.24%
<b>Total</b>	<b>-12.89%</b>	<b>-11.11%</b>	<b>-1.77%</b>	<b>-2.22%</b>	<b>0.39%</b>	<b>0.07%</b>	<b>-1.77%</b>

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: March 31, 2020



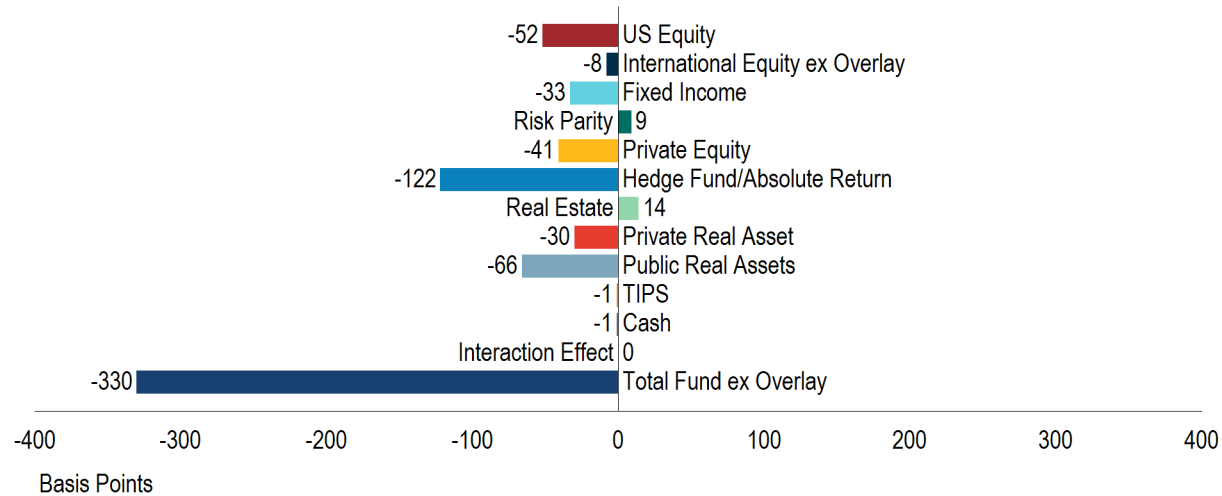
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction *	Total Effects
Public Equity	-12.09%	-11.46%	-0.63%	0.00%	0.00%	0.00%	0.00%
Public Equity ex Overlay	-12.97%	-11.46%	-1.51%	-0.61%	0.00%	0.00%	-0.61%
Fixed Income	2.72%	4.34%	-1.62%	-0.33%	0.00%	0.00%	-0.33%
Risk Parity	-2.75%	-3.48%	0.73%	0.09%	0.00%	0.00%	0.09%
Alternatives	5.90%	19.47%	-13.57%	-1.51%	0.00%	0.00%	-1.51%
Inflation Hedge	-9.47%	-3.73%	-5.74%	-1.01%	0.00%	0.00%	-1.01%
Cash	1.14%	1.85%	-0.71%	-0.01%	0.00%	0.00%	-0.01%
<b>Total</b>	<b>-5.25%</b>	<b>-1.87%</b>	<b>-3.38%</b>	<b>-3.38%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>-3.38%</b>

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: March 31, 2020



	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction *	Total Effects
US Equity	-11.32%	-9.13%	-2.19%	-0.52%	0.00%	0.00%	-0.52%
International Equity ex Overlay	-14.93%	-14.21%	-0.71%	-0.08%	0.00%	0.00%	-0.08%
Fixed Income	2.72%	4.34%	-1.62%	-0.33%	0.00%	0.00%	-0.33%
Risk Parity	-2.75%	-3.48%	0.73%	0.09%	0.00%	0.00%	0.09%
Private Equity	26.96%	34.02%	-7.06%	-0.41%	0.00%	0.00%	-0.41%
Hedge Fund/Absolute Return	-15.19%	5.97%	-21.16%	-1.22%	0.00%	0.00%	-1.22%
Real Estate	6.71%	4.88%	1.84%	0.14%	0.00%	0.00%	0.14%
Private Real Asset	1.59%	21.53%	-19.94%	-0.30%	0.00%	0.00%	-0.30%
Public Real Assets	-32.46%	-23.61%	-8.85%	-0.66%	0.00%	0.00%	-0.66%
TIPS	--	8.76%	--	-0.01%	0.00%	0.00%	-0.01%
Cash	1.14%	1.85%	-0.71%	-0.01%	0.00%	0.00%	-0.01%
<b>Total</b>	<b>-5.29%</b>	<b>-1.99%</b>	<b>-3.30%</b>	<b>-3.30%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>-3.30%</b>

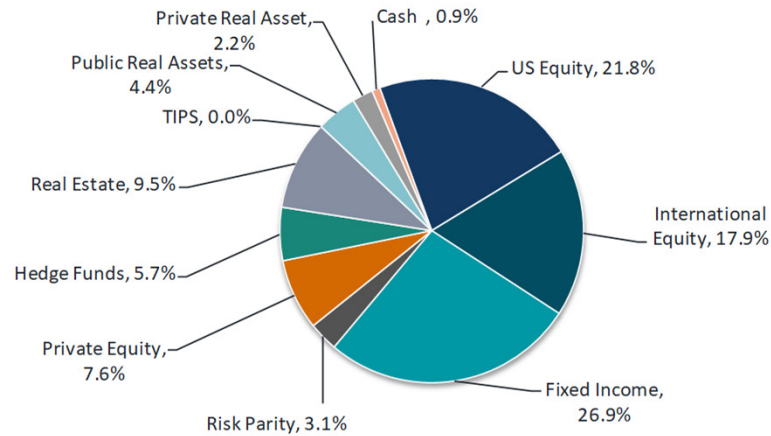
Attribution does not include the impact of the Parametric Minneapolis strategy.  
\* Interaction Effects include Residual Effects.

# Total Fund

## Asset Allocation Analysis

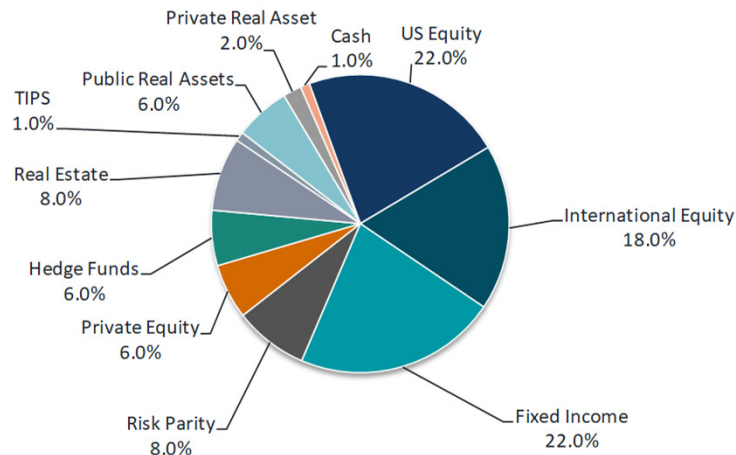
Period Ending: March 31, 2020

**Current w/ Overlay**



ASSET ALLOCATION	MARKET VALUE W/ OVERLAY	W/ OVERLAY	W/O OVERLAY
US Equity	955,621,833	21.8%	20.7%
International Equity	781,720,746	17.9%	17.0%
Fixed Income	1,178,748,985	26.9%	26.4%
Risk Parity	136,903,348	3.1%	3.1%
Private Equity	331,252,571	7.6%	7.6%
Hedge Funds	247,536,287	5.7%	5.7%
Real Estate	416,860,191	9.5%	9.5%
TIPS	0	0.0%	0.0%
Public Real Assets	190,626,719	4.4%	4.4%
Private Real Asset	97,457,691	2.2%	2.2%
Cash	37,230,046	0.9%	3.4%
<b>TOTAL</b>	<b>4,373,958,417</b>	<b>100.0%</b>	<b>100.0%</b>

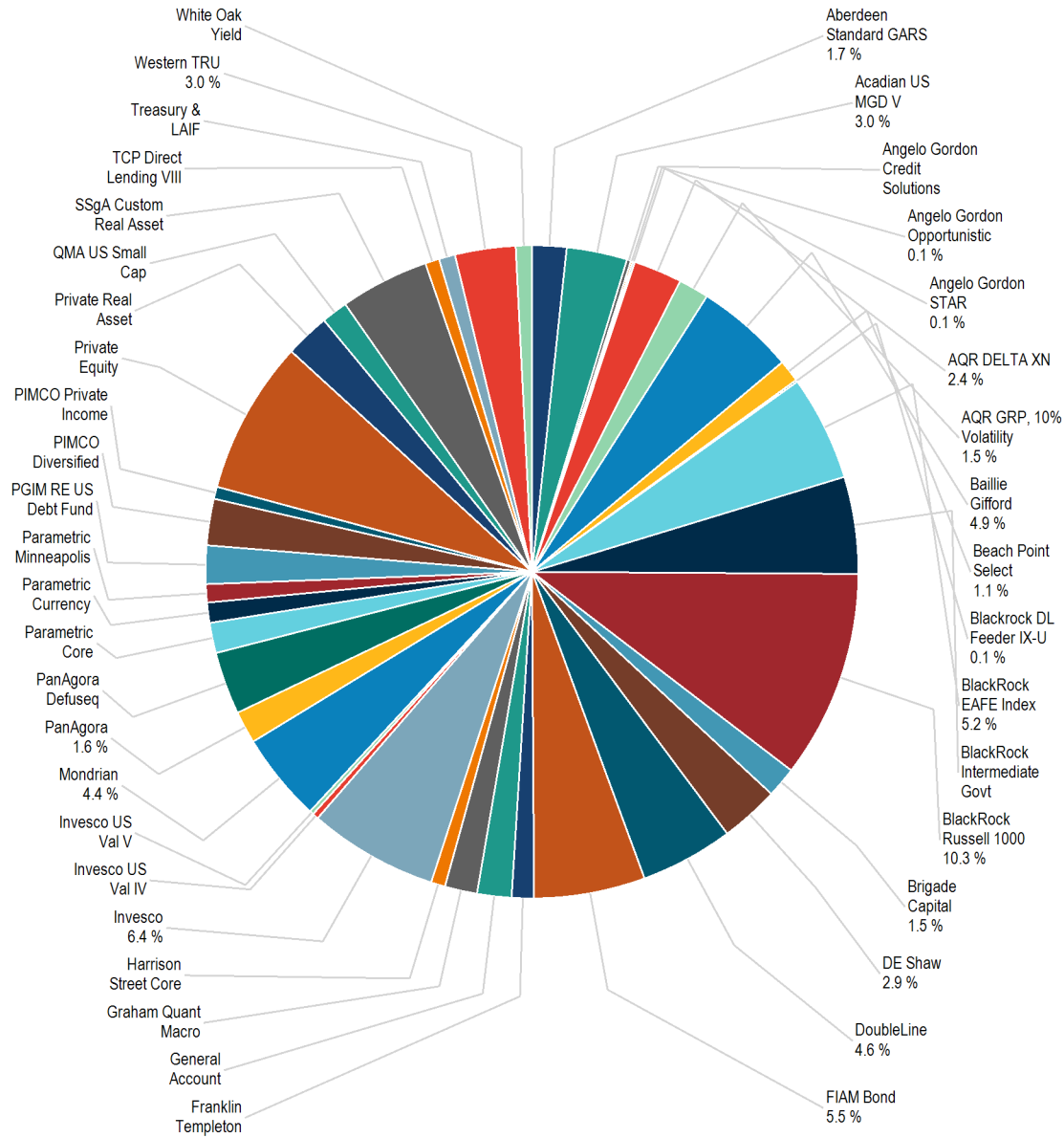
**Target**



ASSET ALLOCATION	W/ OVERLAY	TARGET	DIFF
US Equity	21.8%	22.0%	-0.2%
International Equity	17.9%	18.0%	-0.1%
Fixed Income	26.9%	22.0%	4.9%
Risk Parity	3.1%	8.0%	-4.9%
Private Equity	7.6%	6.0%	1.6%
Hedge Funds	5.7%	6.0%	-0.3%
Real Estate	9.5%	8.0%	1.5%
TIPS	0.0%	1.0%	-1.0%
Public Real Assets	4.4%	6.0%	-1.6%
Private Real Asset	2.2%	2.0%	0.2%
Cash	0.9%	1.0%	-0.1%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>

# Total Fund Manager Allocation Analysis

Period Ending: March 31, 2020



	Actual	Actual
Aberdeen Standard GARS	\$73,515,573	2%
Acadian US MGD V	\$133,233,462	3%
Angelo Gordon Credit Solutions	\$8,750,781	0%
Angelo Gordon Opportunistic	\$3,063,385	0%
Angelo Gordon STAR	\$2,949,326	0%
AQR DELTA XN	\$103,557,464	2%
AQR GRP, 10% Volatility	\$67,226,250	2%
Baillie Gifford	\$213,773,112	5%
Beach Point Select	\$48,083,380	1%
Blackrock DL Feeder IX-U	\$2,458,242	0%
BlackRock EAFE Index	\$226,952,946	5%
BlackRock Intermediate Govt	\$208,865,785	5%
BlackRock Russell 1000	\$452,478,069	10%
Brigade Capital	\$66,530,324	2%
Cushing MLP Alpha TR	\$66,770	0%
DE Shaw	\$126,200,819	3%
DoubleLine	\$200,536,434	5%
FIAM Bond	\$240,109,938	5%
Franklin Templeton	\$48,533,393	1%
General Account	\$72,810,120	2%
Graham Quant Macro	\$70,463,250	2%
Harrison Street Core Property	\$30,000,000	1%
Invesco	\$277,783,770	6%
Invesco US Val IV	\$14,643,008	0%
Invesco US Val V	\$9,250,743	0%
Mondrian	\$190,897,824	4%
PanAgora	\$69,677,098	2%
PanAgora Defuseq	\$136,905,611	3%
Parametric Core	\$65,554,331	1%
Parametric Currency Overlay	\$44,816,913	1%
Parametric Minneapolis Overlay	\$39,680,227	1%
PGIM RE US Debt Fund	\$85,182,670	2%
PIMCO Diversified	\$102,730,971	2%
PIMCO Private Income	\$27,263,131	1%
Private Equity	\$331,252,571	8%
Private Real Asset	\$97,457,691	2%
QMA US Small Cap	\$58,192,716	1%
SSgA Custom Real Asset	\$190,559,950	4%
TCP Direct Lending VIII	\$32,261,599	1%
Transition 3	\$8	0%
Treasury & LAIF	\$36,657,902	1%
Western TRU	\$129,900,961	3%
White Oak Yield	\$33,129,900	1%
<b>Total</b>	<b>\$4,373,958,417</b>	<b>100%</b>

**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	2.1%	68	8.3%	49	0.0	70	-1.3	95	1.2%	57
Policy Index	3.6%	27	7.9%	27	0.2	30	--	--	0.0%	1
InvMetrics Public DB > \$1B Net Median	2.8%	--	8.5%	--	0.1	--	0.0	--	1.2%	--

**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	3.4%	57	7.7%	47	0.3	53	-0.8	88	1.2%	52
Policy Index	4.3%	24	7.7%	44	0.4	32	--	--	0.0%	1
InvMetrics Public DB > \$1B Net Median	3.7%	--	7.8%	--	0.3	--	-0.1	--	1.2%	--

**Statistics Summary**

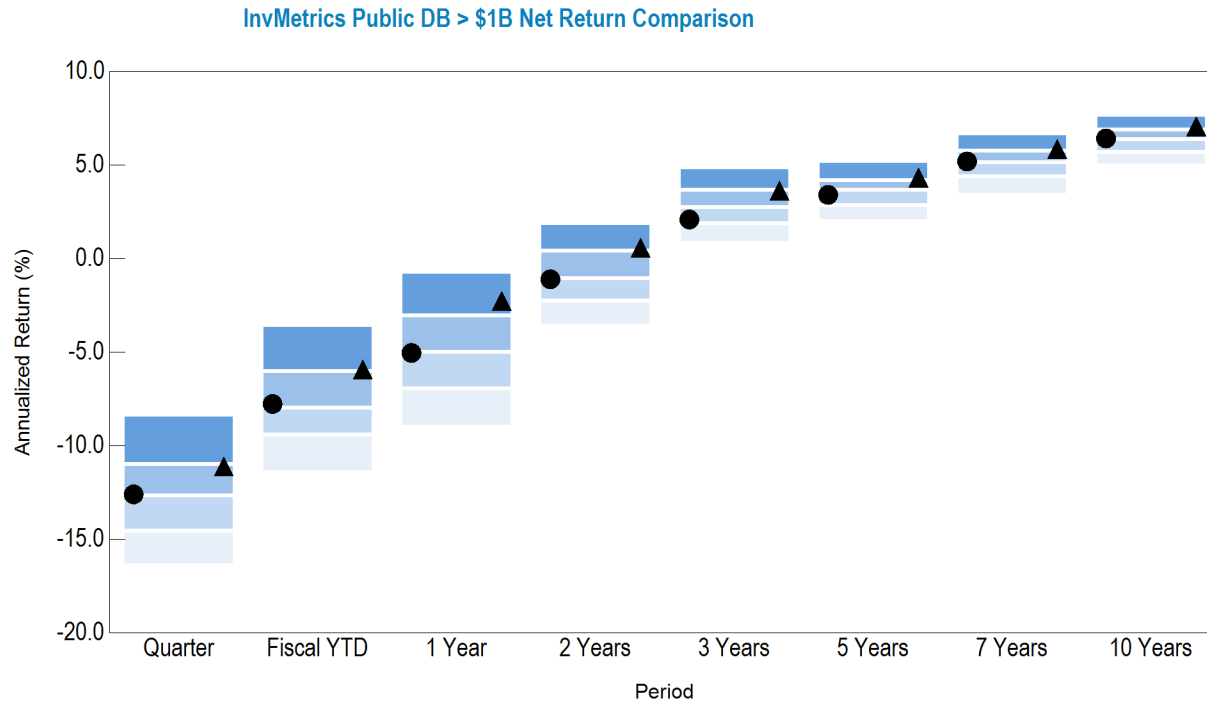
**3 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Cash	1.1%	0.2%	-4.1	-3.6	0.2%
91 Day T-Bills	1.7%	0.1%	0.0	--	0.0%
General Account	3.3%	0.9%	1.7	1.8	0.9%
91 Day T-Bills	1.7%	0.1%	0.0	--	0.0%
Treasury & LAIF	1.7%	1.7%	0.0	0.0	1.7%
91 Day T-Bills	1.7%	0.1%	0.0	--	0.0%

**Statistics Summary**

**5 Years**

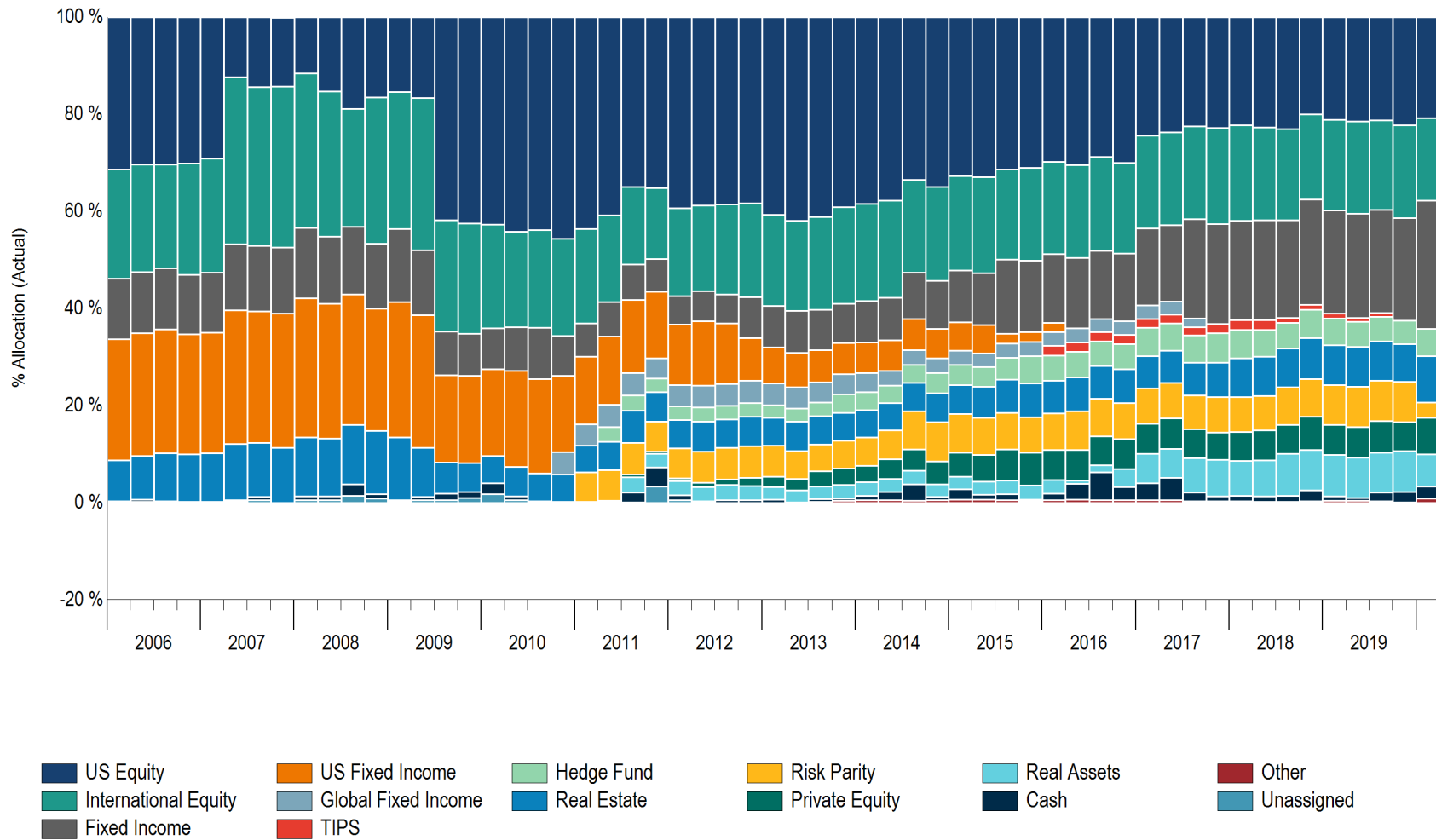
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Cash	1.1%	0.3%	-0.1	-0.1	0.4%
91 Day T-Bills	1.1%	0.2%	0.0	--	0.0%
General Account	2.6%	0.9%	1.7	1.8	0.8%
91 Day T-Bills	1.1%	0.2%	0.0	--	0.0%
Treasury & LAIF	1.3%	1.4%	0.1	0.1	1.3%
91 Day T-Bills	1.1%	0.2%	0.0	--	0.0%



	Quarter	Fiscal YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
<b>Return (Rank)</b>								
5th Percentile	-8.3	-3.6	-0.7	1.9	4.9	5.2	6.7	7.7
25th Percentile	-10.9	-6.0	-3.0	0.5	3.7	4.2	5.8	6.9
Median	-12.6	-8.0	-5.0	-1.0	2.8	3.7	5.2	6.4
75th Percentile	-14.5	-9.4	-6.9	-2.2	1.9	2.9	4.4	5.7
95th Percentile	-16.4	-11.4	-9.0	-3.6	0.9	2.0	3.4	5.0
# of Portfolios	62	62	62	62	62	59	58	55
● Total Fund	-12.6 (48)	-7.8 (48)	-5.0 (55)	-1.1 (53)	2.1 (68)	3.4 (57)	5.2 (50)	6.4 (43)
▲ Policy Index	-11.1 (29)	-5.9 (24)	-2.3 (18)	0.6 (22)	3.6 (27)	4.3 (24)	5.9 (21)	7.1 (20)

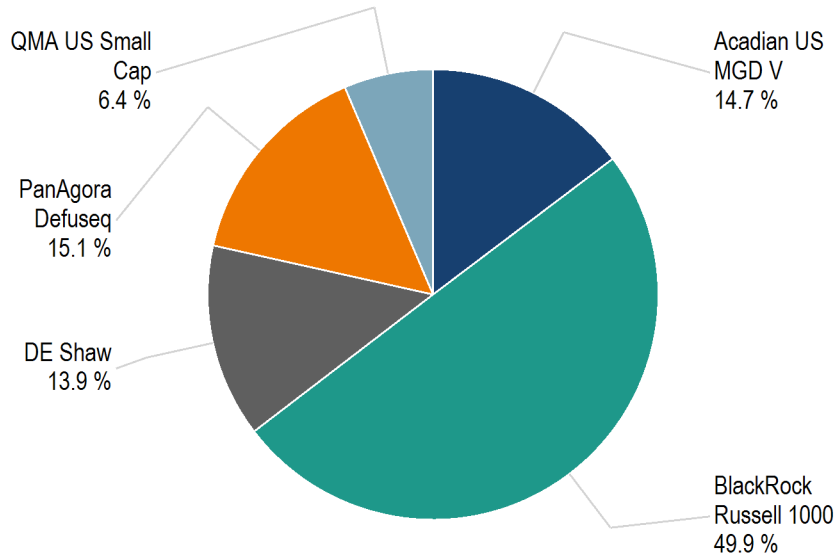
Total Fund  
Asset Allocation History

Period Ending: March 31, 2020



US Equity  
 Manager Allocation Analysis

Period Ending: March 31, 2020



	Actual \$	Actual %	Manager Contribution to Excess Return %
Acadian US MGD V	\$133,233,462	14.7%	-0.2%
BlackRock Russell 1000	\$452,478,069	49.9%	0.0%
DE Shaw	\$126,200,819	13.9%	-0.2%
PanAgora Defuseq	\$136,905,611	15.1%	-0.1%
QMA US Small Cap	\$58,192,716	6.4%	-0.5%
Transition Account	\$8	0.0%	0.0%
Actual vs. Policy Weight Difference			-0.2%
<b>Total</b>	<b>\$907,010,684</b>	<b>100.0%</b>	<b>-1.1%</b>



**Statistics Summary**

**3 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
US Equity	2.8%	15.7%	0.1	-1.2	1.0%
Blended US Equity Index	4.0%	15.8%	0.1	--	0.0%
Russell 3000	4.0%	15.8%	0.1	--	0.0%

Statistics Summary

3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Large Cap Equity	4.3%	15.1%	0.2	-0.3	1.1%
Russell 1000	4.6%	15.5%	0.2	--	0.0%
BlackRock Russell 1000	4.7%	15.5%	0.2	0.7	0.0%
Russell 1000	4.6%	15.5%	0.2	--	0.0%
DE Shaw	3.8%	15.4%	0.1	-0.4	2.3%
Russell 1000	4.6%	15.5%	0.2	--	0.0%
Small Cap Equity	-9.5%	23.2%	-0.5	-1.3	3.7%
Russell 2000	-4.6%	21.2%	-0.3	--	0.0%
QMA US Small Cap	-9.5%	23.2%	-0.5	-1.3	3.7%
Russell 2000	-4.6%	21.2%	-0.3	--	0.0%

**Statistics Summary**

**5 Years**

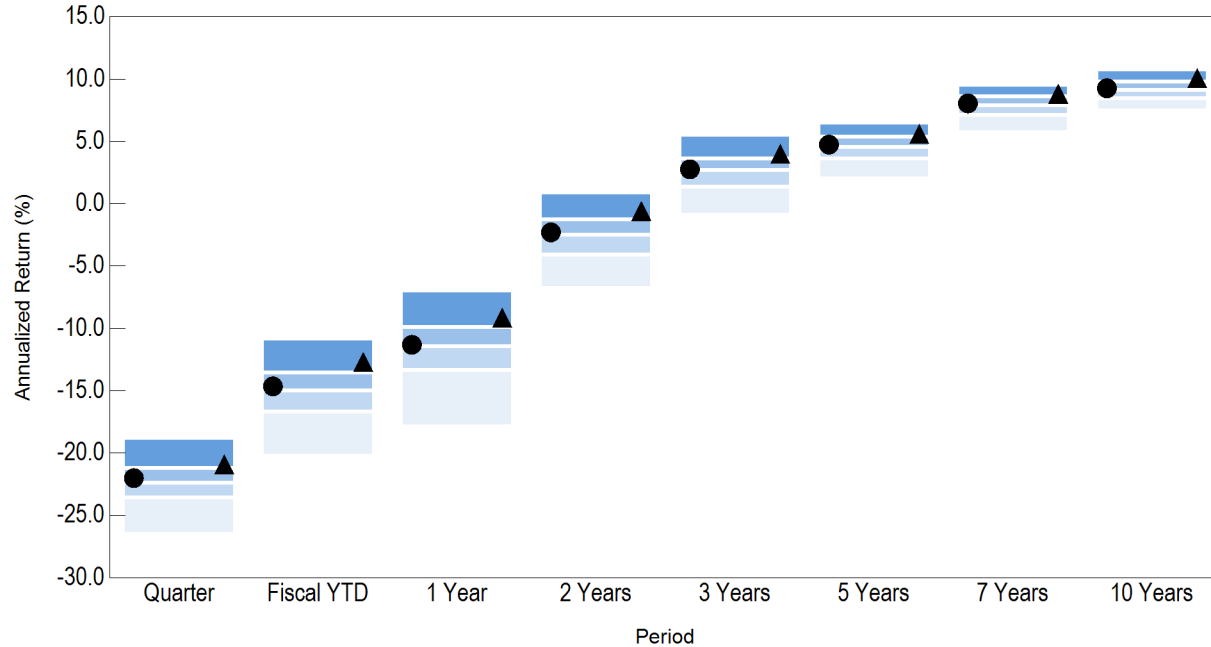
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
US Equity	4.7%	14.1%	0.3	-0.9	0.9%
Blended US Equity Index	5.6%	14.2%	0.3	--	0.0%
Russell 3000	5.8%	14.2%	0.3	0.4	0.4%

**Statistics Summary**

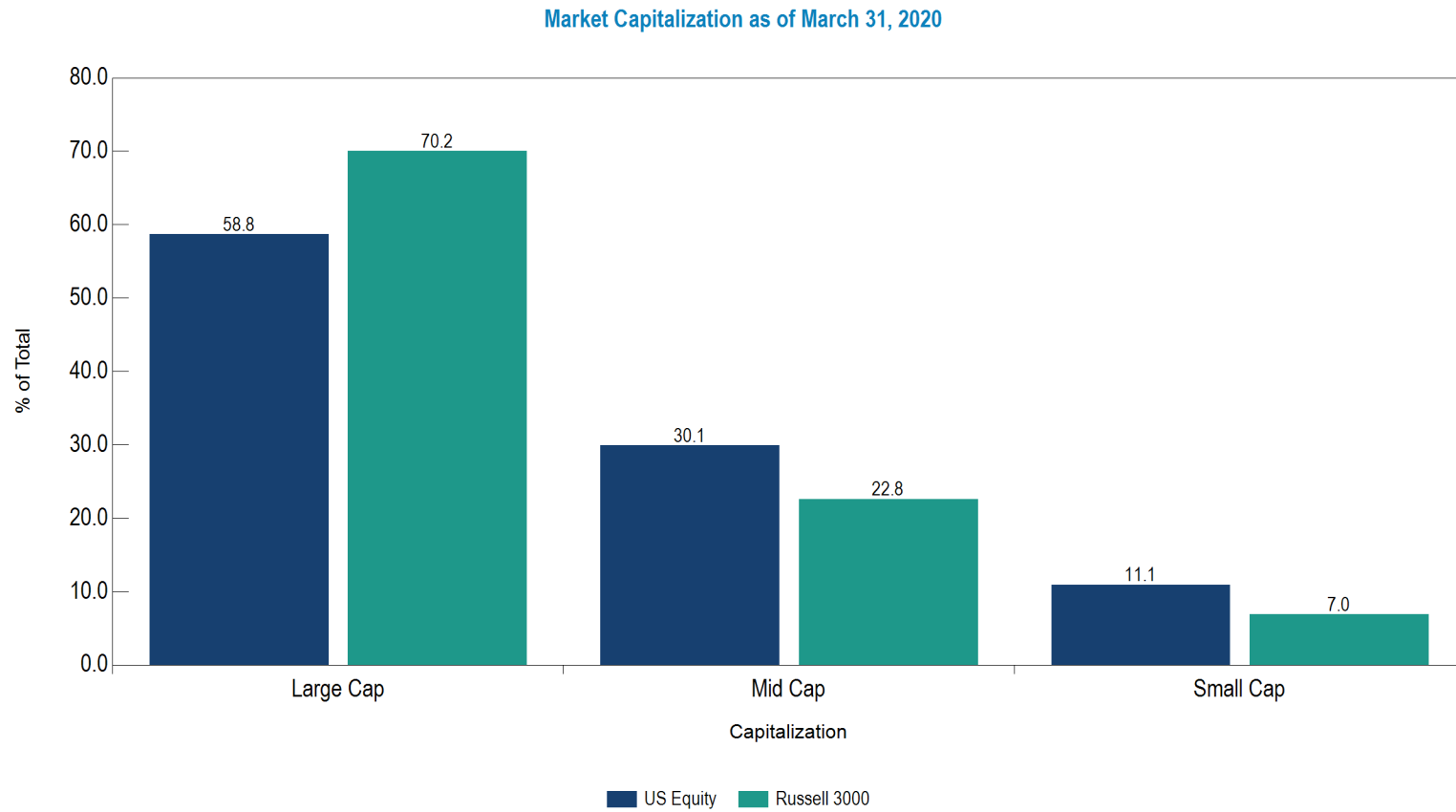
**5 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Large Cap Equity	6.3%	13.6%	0.4	0.1	1.2%
Russell 1000	6.2%	13.9%	0.4	--	0.0%
DE Shaw	6.3%	13.9%	0.4	0.0	2.2%
Russell 1000	6.2%	13.9%	0.4	--	0.0%
Small Cap Equity	-4.2%	20.3%	-0.3	-1.1	3.5%
Russell 2000	-0.2%	19.2%	-0.1	--	0.0%

InvMetrics All DB US Eq Net Return Comparison



	Return (Rank)							
	Quarter	Fiscal YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	-18.8	-10.8	-7.0	0.9	5.5	6.5	9.5	10.8
25th Percentile	-21.2	-13.5	-9.9	-1.2	3.7	5.4	8.6	9.8
Median	-22.3	-14.9	-11.4	-2.4	2.7	4.6	7.9	9.2
75th Percentile	-23.5	-16.6	-13.3	-4.1	1.4	3.7	7.1	8.5
95th Percentile	-26.5	-20.2	-17.8	-6.7	-0.8	2.1	5.8	7.5
# of Portfolios	578	577	575	570	558	530	485	371
● US Equity	-22.0 (43)	-14.6 (44)	-11.3 (49)	-2.3 (48)	2.8 (49)	4.7 (45)	8.1 (47)	9.3 (47)
▲ Blended US Equity Index	-20.9 (20)	-12.7 (14)	-9.1 (15)	-0.6 (16)	4.0 (18)	5.6 (21)	8.8 (17)	10.1 (15)



See appendix for the market capitalization breakpoints.

Characteristics

	Portfolio	Russell 3000
Number of Holdings	2,996	2,976
Weighted Avg. Market Cap. (\$B)	174.6	227.2
Median Market Cap. (\$B)	2.2	1.1
Price To Earnings	16.1	16.8
Price To Book	3.3	3.6
Price To Sales	2.3	2.5
Return on Equity (%)	22.4	21.9
Yield (%)	2.5	2.3
Beta (holdings; domestic)	1.0	1.0

Top Holdings

MICROSOFT	3.7%
APPLE	3.1%
AMAZON.COM	1.9%
JOHNSON & JOHNSON	1.5%
ALPHABET A	1.2%
VERIZON COMMUNICATIONS	1.2%
FACEBOOK CLASS A	1.1%
PROCTER & GAMBLE	1.0%
VISA 'A'	0.9%
JP MORGAN CHASE & CO.	0.9%

Best Performers

	Return %
ATHERSYS (ATHX)	143.9%
FORTY SEVEN (FTSV)	142.4%
KALA PHARMACEUTICALS (KALA)	138.2%
ADURO BIOTECH (ADRO)	132.2%
TOCAGEN (TOCA)	128.8%
INOVIO PHARMACEUTICALS (INO)	125.5%
NEON THERAPEUTICS (NTGN)	123.7%
ZOOM VIDEO COMMUNICATIONS A (ZM)	114.8%
CYTOSORBENTS (CTSO)	100.8%
TELADOC HEALTH (TDOC)	85.2%

Worst Performers

	Return %
INTERNAP (INAPQ)	-97.2%
PIER 1 IMPORTS (PIRRQ)	-96.5%
STAGE STORES (SSINQ)	-95.5%
CENTENNIAL RSO.DEV.CL.A (CDEV)	-94.3%
VALARIS A (VAL)	-93.1%
INDEPENDENCE CNTRT.DRL. (ICD)	-93.0%
QEP RESOURCES (QEP)	-92.5%
MCDERMOTT INTL. (MDRIQ)	-91.4%
WHITING PETROLEUM (WLL)	-90.9%
AMPLIFY ENERGY (AMPY)	-90.4%

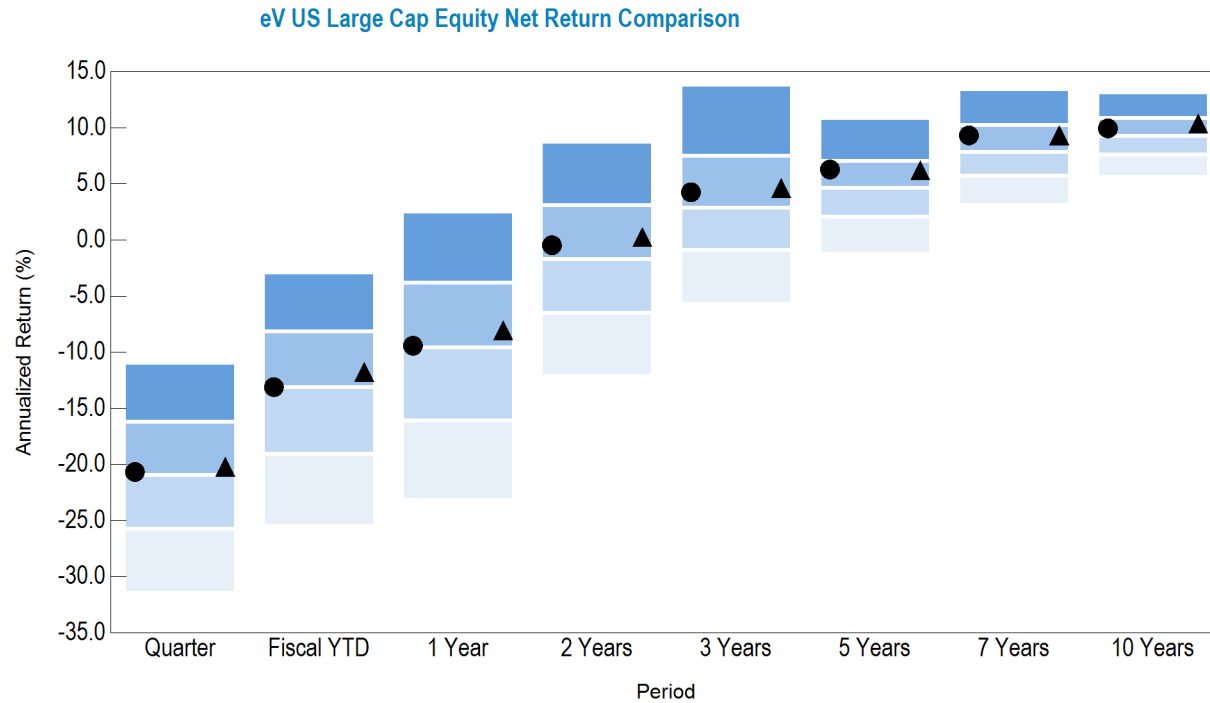
US Equity Performance Attribution vs. Russell 3000

	Attribution Effects				Returns		Sector Weights				
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.3%	0.1%	0.2%	0.0%	-50.3%	-51.9%	3.3%	4.1%			
Materials	0.0%	0.1%	0.0%	0.0%	-26.3%	-28.0%	3.3%	2.9%			
Industrials	0.0%	0.0%	0.0%	0.0%	-27.9%	-27.7%	9.2%	9.9%			
Consumer Discretionary	-0.6%	-0.5%	0.0%	-0.1%	-26.3%	-21.5%	11.4%	10.1%			
Consumer Staples	0.1%	0.0%	0.1%	0.0%	-11.7%	-11.2%	7.5%	6.5%			
Health Care	-0.2%	-0.2%	0.0%	0.0%	-14.2%	-13.0%	13.8%	14.1%			
Financials	-0.5%	-0.6%	0.1%	0.0%	-37.2%	-32.7%	12.9%	13.5%			
Information Technology	-0.5%	-0.3%	-0.2%	0.0%	-14.2%	-12.8%	19.8%	22.5%			
Communication Services	-0.2%	-0.2%	0.0%	0.0%	-19.8%	-17.5%	9.0%	9.4%			
Utilities	0.1%	-0.1%	0.2%	-0.1%	-15.2%	-13.2%	5.9%	3.2%			
Real Estate	-0.2%	-0.2%	0.0%	0.0%	-29.3%	-24.4%	3.7%	4.0%			
Cash	0.0%	--	--	--	--	--	0.0%	0.0%			
Unclassified	0.0%	0.0%	0.0%	0.0%	-20.0%	-20.7%	0.2%	0.0%			
<b>Portfolio</b>	<b>-1.6%</b>	<b>=</b>	<b>-1.9%</b>	<b>+</b>	<b>0.4%</b>	<b>+</b>	<b>0.0%</b>	<b>-22.3%</b>	<b>-20.7%</b>	<b>100.0%</b>	<b>100.0%</b>



U.S. Effective Style Map





	Return (Rank)							
	Quarter	Fiscal YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
<b>5th Percentile</b>	-10.9	-2.9	2.5	8.7	13.8	10.9	13.4	13.1
<b>25th Percentile</b>	-16.2	-8.1	-3.8	3.1	7.6	7.1	10.3	10.9
<b>Median</b>	-20.9	-13.1	-9.5	-1.7	2.9	4.7	7.9	9.3
<b>75th Percentile</b>	-25.7	-19.0	-16.1	-6.5	-0.9	2.1	5.8	7.6
<b>95th Percentile</b>	-31.4	-25.5	-23.1	-12.1	-5.7	-1.2	3.1	5.6
<b># of Portfolios</b>	640	634	634	630	614	583	540	454
<b>● Large Cap Equity</b>	-20.7 (49)	-13.1 (51)	-9.4 (50)	-0.5 (42)	4.3 (40)	6.3 (32)	9.3 (33)	10.0 (39)
<b>▲ Russell 1000</b>	-20.2 (47)	-11.8 (43)	-8.0 (44)	0.3 (39)	4.6 (37)	6.2 (33)	9.3 (33)	10.4 (31)

Large Cap Equity  
Equity Only Summary Statistics

Period Ending: March 31, 2020

Characteristics

	Portfolio	Russell 1000
Number of Holdings	2,964	997
Weighted Avg. Market Cap. (\$B)	186.3	241.0
Median Market Cap. (\$B)	2.4	7.4
Price To Earnings	16.6	17.1
Price To Book	3.5	3.7
Price To Sales	2.5	2.7
Return on Equity (%)	23.3	25.1
Yield (%)	2.5	2.3
Beta (holdings; domestic)	0.9	1.0

Top Holdings

MICROSOFT	3.9%
APPLE	3.3%
AMAZON.COM	2.0%
JOHNSON & JOHNSON	1.6%
ALPHABET A	1.3%
VERIZON COMMUNICATIONS	1.3%
FACEBOOK CLASS A	1.2%
PROCTER & GAMBLE	1.1%
VISA 'A'	1.0%
JP MORGAN CHASE & CO.	1.0%

Best Performers

	Return %
ATHERSYS (ATHX)	143.9%
FORTY SEVEN (FTSV)	142.4%
KALA PHARMACEUTICALS (KALA)	138.2%
ADURO BIOTECH (ADRO)	132.2%
TOCAGEN (TOCA)	128.8%
INOVIO PHARMACEUTICALS (INO)	125.5%
NEON THERAPEUTICS (NTGN)	123.7%
ZOOM VIDEO COMMUNICATIONS A (ZM)	114.8%
CYTOSORBENTS (CTSO)	100.8%
TELADOC HEALTH (TDOC)	85.2%

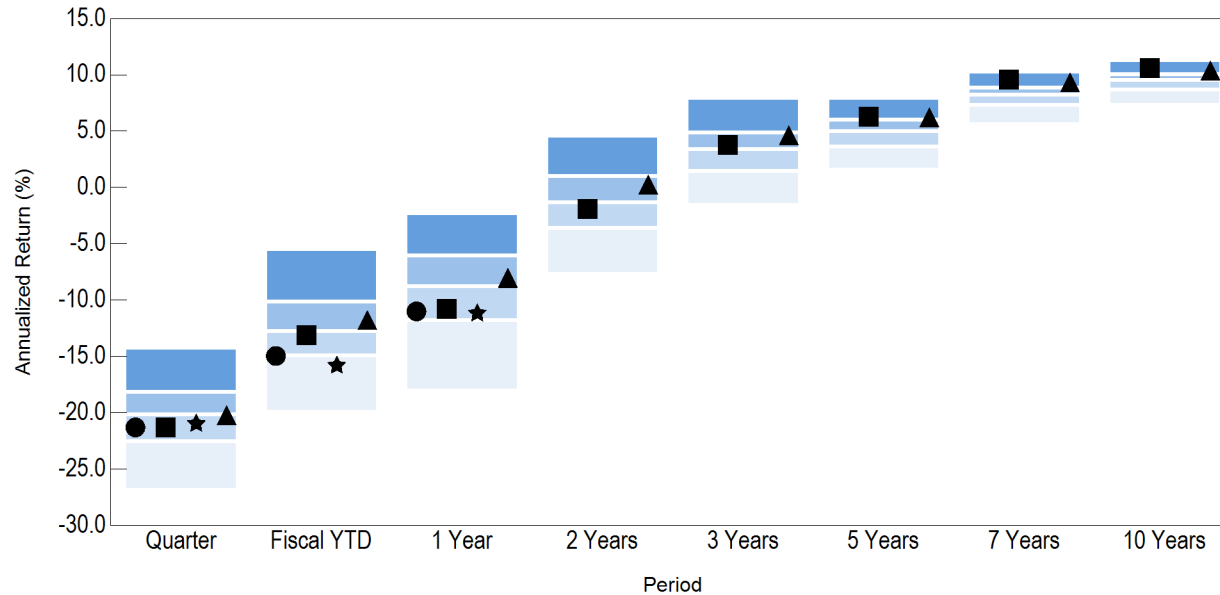
Worst Performers

	Return %
INTERNAP (INAPQ)	-97.2%
PIER 1 IMPORTS (PIRRQ)	-96.5%
STAGE STORES (SSINQ)	-95.5%
CENTENNIAL RSO.DEV.CL.A (CDEV)	-94.3%
VALARIS A (VAL)	-93.1%
INDEPENDENCE CNTRT.DRL. (ICD)	-93.0%
QEP RESOURCES (QEP)	-92.5%
MCDERMOTT INTL. (MDRIQ)	-91.4%
WHITING PETROLEUM (WLL)	-90.9%
AMPLIFY ENERGY (AMPY)	-90.4%

Large Cap Equity Performance Attribution vs. Russell 1000

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.3%	0.1%	0.2%	0.0%	-50.1%	-51.3%	3.4%	4.1%			
Materials	0.1%	0.1%	0.0%	0.0%	-24.3%	-27.0%	3.3%	2.8%			
Industrials	0.2%	0.1%	0.1%	0.0%	-25.8%	-27.1%	8.6%	9.5%			
Consumer Discretionary	-0.6%	-0.5%	0.0%	-0.1%	-24.8%	-19.8%	11.4%	10.0%			
Consumer Staples	0.1%	0.0%	0.1%	0.0%	-11.2%	-10.8%	7.9%	6.7%			
Health Care	-0.1%	-0.1%	0.0%	0.0%	-13.2%	-12.5%	13.5%	13.8%			
Financials	-0.4%	-0.5%	0.1%	0.0%	-36.2%	-32.6%	12.4%	13.2%			
Information Technology	-0.5%	-0.3%	-0.2%	0.0%	-13.5%	-12.2%	20.3%	23.1%			
Communication Services	-0.2%	-0.2%	0.0%	0.0%	-19.4%	-17.2%	9.6%	9.9%			
Utilities	0.1%	-0.1%	0.2%	-0.1%	-15.3%	-13.2%	6.1%	3.2%			
Real Estate	-0.1%	-0.1%	0.0%	0.0%	-25.2%	-22.5%	3.3%	3.7%			
Cash	0.0%	--	--	--	--	--	0.0%	0.0%			
Unclassified	0.0%	0.0%	0.0%	0.0%	-19.5%	--	0.2%	0.0%			
<b>Portfolio</b>	<b>-1.2%</b>	<b>=</b>	<b>-1.5%</b>	<b>+</b>	<b>0.4%</b>	<b>+</b>	<b>-0.1%</b>	<b>-21.1%</b>	<b>-19.9%</b>	<b>100.0%</b>	<b>100.0%</b>

eV US Large Cap Core Equity Net Return Comparison



	Quarter	Fiscal YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
<b>Return (Rank)</b>								
5th Percentile	-14.2	-5.5	-2.3	4.6	7.9	7.9	10.3	11.3
25th Percentile	-18.1	-10.1	-6.0	1.1	4.9	6.1	8.9	10.1
Median	-20.1	-12.7	-8.7	-1.3	3.4	5.0	8.2	9.6
75th Percentile	-22.5	-14.9	-11.7	-3.6	1.5	3.6	7.4	8.8
95th Percentile	-26.8	-19.9	-18.0	-7.7	-1.5	1.6	5.7	7.3
# of Portfolios	204	202	202	200	194	180	160	126
● Acadian US MGD V	-21.3 (66)	-15.0 (76)	-11.0 (70)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
■ DE Shaw	-21.3 (66)	-13.1 (57)	-10.8 (69)	-1.9 (63)	3.8 (45)	6.3 (20)	9.6 (14)	10.6 (9)
★ PanAgora Defuseq	-21.0 (62)	-15.8 (81)	-11.2 (71)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
▲ Russell 1000	-20.2 (51)	-11.8 (42)	-8.0 (45)	0.3 (34)	4.6 (28)	6.2 (21)	9.3 (19)	10.4 (14)

Characteristics

	Portfolio	Russell 1000
Number of Holdings	187	997
Weighted Avg. Market Cap. (\$B)	95.6	241.0
Median Market Cap. (\$B)	10.2	7.4
Price To Earnings	14.6	17.1
Price To Book	3.1	3.7
Price To Sales	2.4	2.7
Return on Equity (%)	24.3	25.1
Yield (%)	2.6	2.3
Beta (holdings; domestic)	0.9	1.0

Top Holdings

CITRIX SYS.	1.4%
MICROSOFT	1.3%
COSTCO WHOLESALE	1.3%
GILEAD SCIENCES	1.3%
DANAHER	1.3%
WALMART	1.2%
CABLE ONE	1.2%
CHEMED	1.2%
AMGEN	1.1%
ALPHABET A	1.1%

Best Performers

	Return %
REGENERON PHARMS. (REGN)	30.0%
CITRIX SYS. (CTXS)	28.0%
GILEAD SCIENCES (GILD)	16.2%
CABLE ONE (CABO)	10.6%
VERTEX PHARMS. (VRTX)	8.7%
UNITED THERAPEUTICS (UTHR)	7.7%
JACK HENRY AND ASSOCIATES (JKHY)	6.9%
BIOGEN (BIIB)	6.6%
ELI LILLY (LLY)	6.1%
AMAZON.COM (AMZN)	5.5%

Worst Performers

	Return %
TPG RE FINANCE TRUST (TRTX)	-72.9%
WESCO INTL. (WCC)	-61.5%
MARCUS (MCS)	-61.0%
COMERICA (CMA)	-58.3%
APOLLO COML.RLST.FIN. (ARI)	-57.2%
STARWOOD PROPERTY TRUST (STWD)	-57.0%
IMAX (NYS) (IMAX)	-55.7%
LINCOLN NATIONAL (LNC)	-55.1%
WINTRUST FINANCIAL (WTFC)	-53.5%
CITIZENS FINANCIAL GROUP (CFG)	-53.2%

Acadian US MGD V Performance Attribution vs. Russell 1000

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	1.3%	--	1.3%	--	--	-51.3%	0.0%	4.1%			
Materials	0.2%	0.2%	0.0%	0.0%	-18.2%	-27.0%	2.2%	2.8%			
Industrials	0.7%	0.8%	0.5%	-0.6%	-18.5%	-27.1%	2.8%	9.5%			
Consumer Discretionary	-1.0%	-0.8%	0.0%	-0.1%	-28.2%	-19.8%	11.7%	10.0%			
Consumer Staples	-0.1%	-0.2%	0.1%	0.0%	-13.7%	-10.8%	8.1%	6.7%			
Health Care	0.0%	-0.1%	0.1%	0.0%	-13.4%	-12.5%	15.2%	13.8%			
Financials	-2.9%	-1.5%	-0.8%	-0.7%	-43.6%	-32.6%	19.2%	13.2%			
Information Technology	-0.8%	0.0%	-0.8%	0.0%	-12.2%	-12.2%	13.2%	23.1%			
Communication Services	-0.8%	-0.7%	0.1%	-0.3%	-24.0%	-17.2%	14.2%	9.9%			
Utilities	0.1%	-0.1%	0.6%	-0.4%	-17.0%	-13.2%	12.4%	3.2%			
Real Estate	0.2%	0.7%	0.1%	-0.6%	-3.4%	-22.5%	0.6%	3.7%			
Cash	0.1%	0.0%	0.1%	0.0%	0.4%	--	0.5%	0.0%			
<b>Portfolio</b>	<b>-2.9%</b>	<b>=</b>	<b>-1.7%</b>	<b>+</b>	<b>1.4%</b>	<b>+</b>	<b>-2.7%</b>	<b>-22.9%</b>	<b>-19.9%</b>	<b>100.0%</b>	<b>100.0%</b>

Characteristics

	Portfolio	Russell 1000
Number of Holdings	996	997
Weighted Avg. Market Cap. (\$B)	241.0	241.0
Median Market Cap. (\$B)	7.4	7.4
Price To Earnings	17.1	17.1
Price To Book	3.7	3.7
Price To Sales	2.6	2.7
Return on Equity (%)	25.1	25.1
Yield (%)	2.3	2.3
Beta (holdings; domestic)	1.0	1.0

Top Holdings

MICROSOFT	5.1%
APPLE	4.5%
AMAZON.COM	3.5%
FACEBOOK CLASS A	1.7%
BERKSHIRE HATHAWAY 'B'	1.5%
ALPHABET 'C'	1.5%
JOHNSON & JOHNSON	1.5%
ALPHABET A	1.5%
JP MORGAN CHASE & CO.	1.2%
VISA 'A'	1.2%

Best Performers

	Return %
SPRINT (S)	65.5%
MODERNA (MRNA)	53.1%
LEGG MASON (LM)	37.2%
TAUBMAN CENTERS (TCO)	36.6%
VIRTU FINANCIAL CL.A (VIRT)	31.9%
ZSCALER (ZS)	30.9%
REGENERON PHARMS. (REGN)	30.0%
CITRIX SYS. (CTXS)	28.0%
NORTONLIFELOCK (NLOK)	27.7%
RINGCENTRAL (RNG)	25.6%

Worst Performers

	Return %
CENTENNIAL RSO.DEV.CL.A (CDEV)	-94.3%
KOSMOS ENERGY (BER) (D:KOS1)	-85.3%
KOSMOS ENERGY (KOS)	-84.0%
APACHE (APA)	-83.5%
TRANSOCEAN (RIG)	-83.1%
APERGY (APY)	-83.0%
TARGA RESOURCES (TRGP)	-82.7%
NORWEGIAN CRUISE LINE HDG. (NCLH)	-81.2%
MFA FINANCIAL (MFA)	-79.7%
CHESAPEAKE ENERGY (CHK)	-79.1%



Characteristics

	Portfolio	Russell 1000
Number of Holdings	205	997
Weighted Avg. Market Cap. (\$B)	40.5	241.0
Median Market Cap. (\$B)	11.9	7.4
Price To Earnings	18.4	17.1
Price To Book	2.8	3.7
Price To Sales	2.6	2.7
Return on Equity (%)	19.4	25.1
Yield (%)	3.2	2.3
Beta (holdings; domestic)	0.8	1.0

Top Holdings

VERISK ANALYTICS CL.A	2.0%
ROLLINS	1.9%
VERIZON COMMUNICATIONS	1.8%
T-MOBILE US	1.5%
OMNICOM GROUP	1.5%
REPUBLIC SVS.'A'	1.4%

Best Performers

	Return %
CLOROX (CLX)	13.6%
CABLE ONE (CABO)	10.6%
ROLLINS (ROL)	9.3%
J M SMUCKER (SJM)	7.5%
T-MOBILE US (TMUS)	7.0%

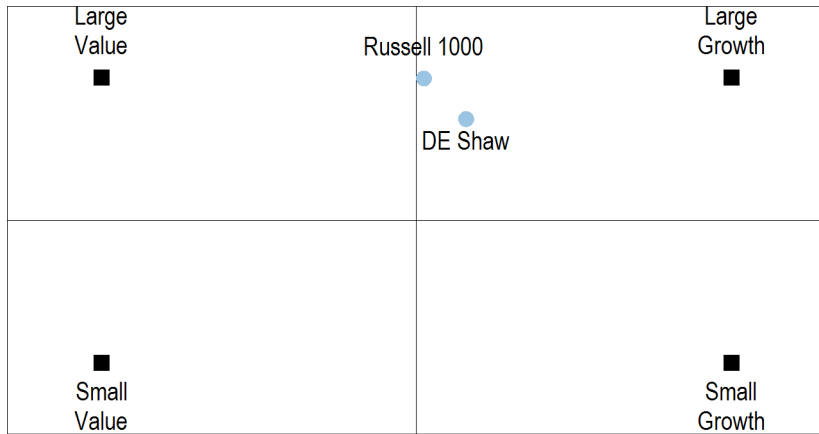
Worst Performers

	Return %
KOSMOS ENERGY (KOS)	-84.0%
TARGA RESOURCES (TRGP)	-82.7%
MFA FINANCIAL (MFA)	-79.7%
WPX ENERGY (WPX)	-77.8%
TWO HARBORS INVESTMENT (TWO)	-73.9%

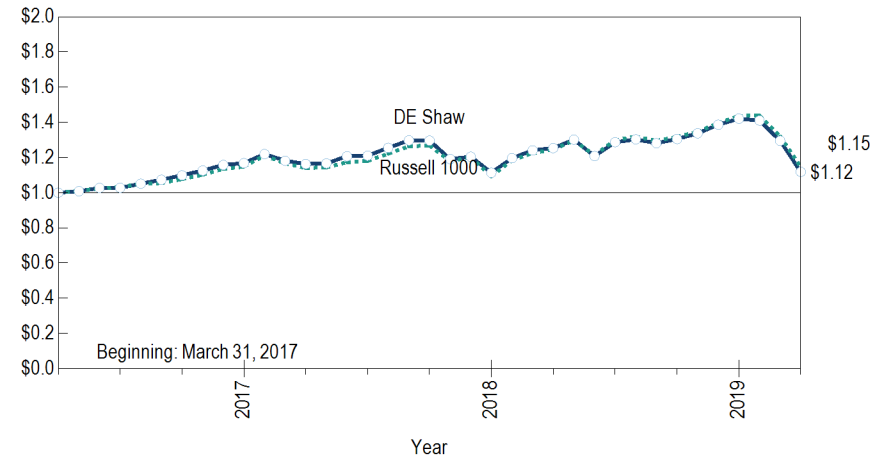
**PanAgora Defuseq Performance Attribution vs. Russell 1000**

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.4%	0.3%	0.0%	0.0%	-43.0%	-51.3%	4.0%	4.1%			
Materials	0.5%	0.3%	-0.3%	0.5%	-15.6%	-27.0%	7.6%	2.8%			
Industrials	1.2%	1.2%	0.0%	0.1%	-14.8%	-27.1%	10.0%	9.5%			
Consumer Discretionary	-1.2%	-1.1%	0.0%	-0.1%	-31.2%	-19.8%	10.8%	10.0%			
Consumer Staples	1.0%	0.2%	0.6%	0.2%	-7.2%	-10.8%	12.8%	6.7%			
Health Care	-0.7%	-0.6%	-0.3%	0.2%	-16.5%	-12.5%	9.5%	13.8%			
Financials	0.4%	-1.4%	0.9%	0.8%	-42.9%	-32.6%	5.7%	13.2%			
Information Technology	-1.6%	-1.4%	-1.1%	0.8%	-18.4%	-12.2%	9.3%	23.1%			
Communication Services	-0.1%	-0.1%	0.0%	0.0%	-18.6%	-17.2%	9.2%	9.9%			
Utilities	0.6%	0.0%	0.8%	-0.2%	-14.5%	-13.2%	15.1%	3.2%			
Real Estate	-0.5%	-0.3%	-0.1%	-0.2%	-31.0%	-22.5%	5.8%	3.7%			
Cash	0.0%	0.0%	0.0%	0.0%	0.4%	--	0.2%	0.0%			
<b>Portfolio</b>	<b>-0.2%</b>	<b>=</b>	<b>-2.9%</b>	<b>+</b>	<b>0.5%</b>	<b>+</b>	<b>2.2%</b>	<b>-20.1%</b>	<b>-19.9%</b>	<b>100.0%</b>	<b>100.0%</b>

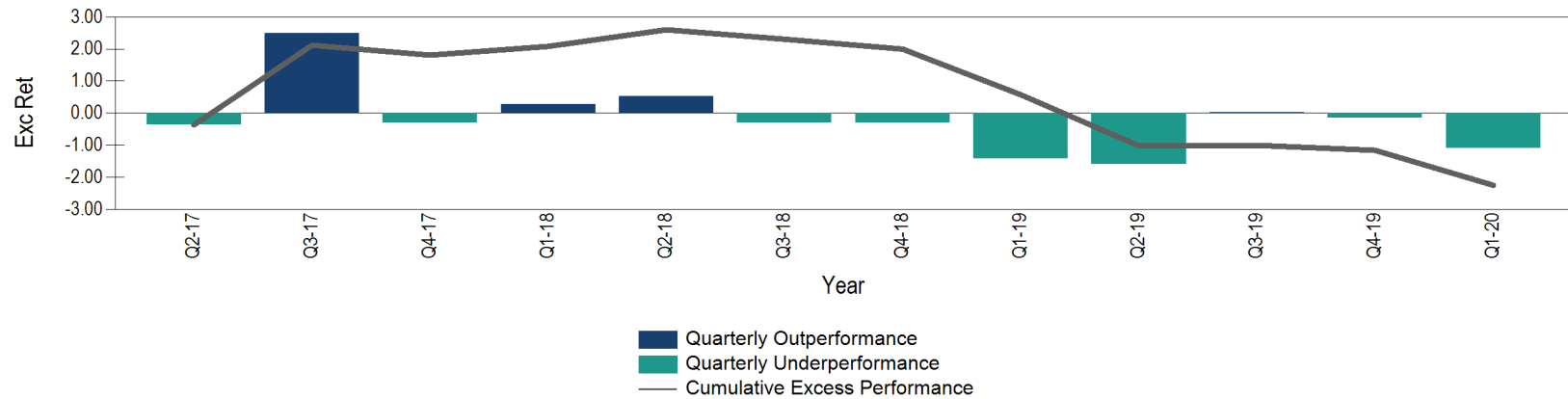
U.S. Effective Style Map



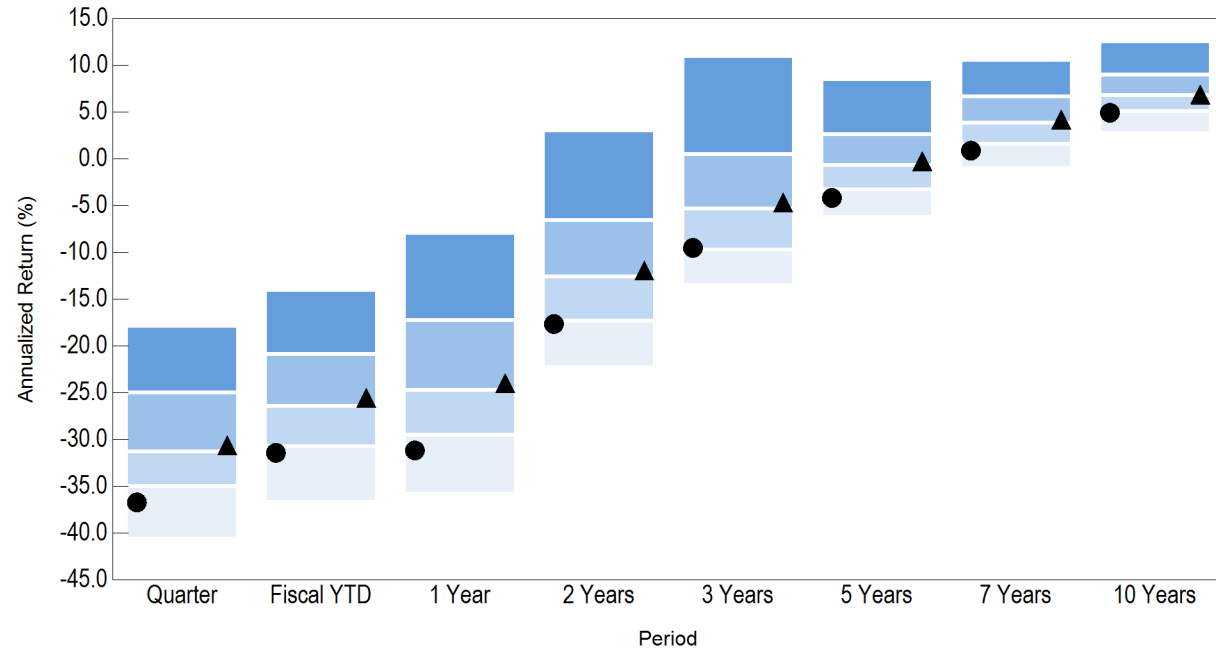
Growth of a Dollar



Quarterly and Cumulative Excess Performance



eV US Small Cap Equity Net Return Comparison



	Quarter	Fiscal YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
<b>Return (Rank)</b>								
5th Percentile	-17.9	-14.0	-8.0	3.0	11.0	8.5	10.6	12.5
25th Percentile	-24.9	-20.8	-17.2	-6.5	0.5	2.7	6.7	9.1
Median	-31.3	-26.4	-24.7	-12.5	-5.3	-0.6	3.9	6.8
75th Percentile	-35.0	-30.7	-29.5	-17.2	-9.6	-3.2	1.6	5.2
95th Percentile	-40.6	-36.7	-35.8	-22.3	-13.4	-6.1	-0.9	2.8
# of Portfolios	414	413	413	408	402	378	352	317
● Small Cap Equity	-36.7 (84)	-31.4 (79)	-31.2 (84)	-17.7 (78)	-9.5 (74)	-4.2 (85)	0.9 (85)	4.9 (79)
▲ Russell 2000	-30.6 (47)	-25.5 (46)	-24.0 (48)	-11.9 (48)	-4.6 (46)	-0.2 (48)	4.2 (46)	6.9 (49)

Characteristics

	Portfolio	Russell 2000
Number of Holdings	333	1,979
Weighted Avg. Market Cap. (\$B)	1.9	2.0
Median Market Cap. (\$B)	0.9	0.5
Price To Earnings	10.4	13.3
Price To Book	2.1	2.5
Price To Sales	1.0	1.5
Return on Equity (%)	9.1	0.9
Yield (%)	2.2	2.0
Beta (holdings; domestic)	1.4	1.2

Top Holdings

PORTLAND GEN.ELEC.	1.1%
EMCOR GROUP	1.0%
SPIRE	1.0%
TECH DATA	1.0%
EMERGENT BIOSOLUTIONS	1.0%
SPS COMMERCE	0.9%
INTEGER HOLDINGS	0.9%
FIBROGEN	0.9%
ACADIA PHARMACEUTICALS	0.9%
STAMPS.COM	0.9%

Best Performers

	Return %
TELADOC HEALTH (TDOC)	85.2%
ACCELERON PHARMA (XLRN)	69.5%
STAMPS.COM (STMP)	55.7%
ARCUS BIOSCIENCES (RCUS)	37.4%
LEGG MASON (LM)	37.2%
QUIDEL (QDEL)	30.4%
COGENT COMMS.HOLDINGS (CCOI)	25.6%
SIMULATIONS PLUS (SLP)	20.3%
SHENANDOAH TELECOM. (SHEN)	18.4%
MEET GROUP (MEET)	17.2%

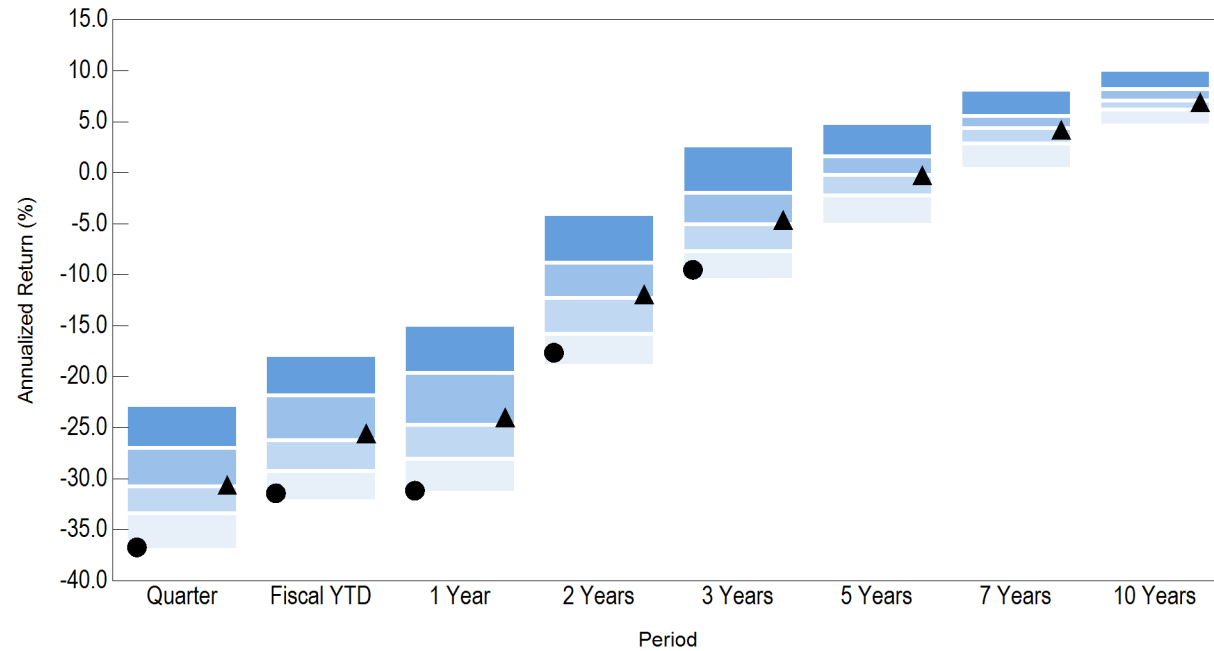
Worst Performers

	Return %
SM ENERGY (SM)	-89.1%
AG MORTGAGE INV.TRUST (MITT)	-82.2%
BRAEMAR HOTELS RESORTS (BHR)	-81.0%
WESTERN ASSET MGE.CAP. (WMC)	-77.8%
INVESCO MORTGAGE CAPITAL (IVR)	-77.3%
EXANTAS CAPITAL (XAN)	-76.6%
COML.VEH.GP. (CVGI)	-76.2%
LIBERTY TRIP ADVI.HDG. SR.A (LTRPA)	-75.5%
EVERI HOLDINGS (EVRI)	-75.4%
HERSHA HOSPITALITY TST. SHS.BENL.INT.CL.A (HT)	-74.9%

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	0.4%	0.3%	0.2%	-0.1%	-52.8%	-62.1%	2.4%	3.1%			
Materials	-0.3%	-0.4%	0.0%	0.1%	-50.1%	-39.1%	3.3%	3.9%			
Industrials	-1.3%	-1.2%	0.0%	0.0%	-40.4%	-32.7%	16.3%	15.9%			
Consumer Discretionary	-0.1%	-0.1%	0.0%	0.0%	-45.4%	-44.3%	11.2%	11.0%			
Consumer Staples	-0.2%	-0.1%	0.0%	0.0%	-26.1%	-21.7%	2.7%	3.0%			
Health Care	-0.7%	-0.6%	0.0%	0.0%	-22.8%	-19.3%	17.4%	17.8%			
Financials	-1.9%	-1.9%	0.0%	0.0%	-45.1%	-34.6%	18.0%	17.9%			
Information Technology	-0.5%	-0.5%	0.1%	0.0%	-25.9%	-22.4%	14.2%	13.6%			
Communication Services	-0.2%	-0.3%	0.0%	0.0%	-42.2%	-31.3%	2.3%	2.3%			
Utilities	0.0%	0.0%	0.0%	0.0%	-13.6%	-13.1%	3.4%	3.6%			
Real Estate	-1.3%	-1.1%	0.0%	-0.1%	-47.3%	-33.0%	8.7%	7.9%			
Cash	0.0%	0.0%	0.0%	0.0%	0.4%	--	0.0%	0.0%			
<b>Portfolio</b>	<b>-6.0%</b>	<b>=</b>	<b>-6.0%</b>	<b>+</b>	<b>0.2%</b>	<b>+</b>	<b>-0.1%</b>	<b>-36.6%</b>	<b>-30.6%</b>	<b>100.0%</b>	<b>100.0%</b>

eV US Small Cap Core Equity Net Return Comparison



	Quarter	Fiscal YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
<b>5th Percentile</b>	-22.8	-17.9	-15.0	-4.1	2.6	4.8	8.1	10.1
<b>25th Percentile</b>	-26.9	-21.8	-19.6	-8.8	-1.9	1.7	5.6	8.3
<b>Median</b>	-30.7	-26.2	-24.7	-12.3	-5.0	-0.2	4.4	7.1
<b>75th Percentile</b>	-33.3	-29.2	-28.0	-15.8	-7.7	-2.2	2.9	6.2
<b>95th Percentile</b>	-37.0	-32.2	-31.4	-18.9	-10.5	-5.1	0.4	4.7
<b># of Portfolios</b>	107	107	107	106	103	96	90	73
<b>● QMA US Small Cap</b>	-36.7 (95)	-31.4 (92)	-31.2 (94)	-17.7 (88)	-9.5 (90)	-- (--)	-- (--)	-- (--)
<b>▲ Russell 2000</b>	-30.6 (48)	-25.5 (47)	-24.0 (47)	-11.9 (49)	-4.6 (47)	-0.2 (52)	4.2 (55)	6.9 (57)

Characteristics

	Portfolio	Russell 2000
Number of Holdings	333	1,979
Weighted Avg. Market Cap. (\$B)	1.9	2.0
Median Market Cap. (\$B)	0.9	0.5
Price To Earnings	10.4	13.3
Price To Book	2.1	2.5
Price To Sales	1.0	1.5
Return on Equity (%)	9.1	0.9
Yield (%)	2.2	2.0
Beta (holdings; domestic)	1.4	1.2

Top Holdings

PORTLAND GEN.ELEC.	1.1%
EMCOR GROUP	1.0%
SPIRE	1.0%
TECH DATA	1.0%
EMERGENT BIOSOLUTIONS	1.0%
SPS COMMERCE	0.9%
INTEGER HOLDINGS	0.9%
FIBROGEN	0.9%
ACADIA PHARMACEUTICALS	0.9%
STAMPS.COM	0.9%

Best Performers

	Return %
TELADOC HEALTH (TDOC)	85.2%
ACCELERON PHARMA (XLRN)	69.5%
STAMPS.COM (STMP)	55.7%
ARCUS BIOSCIENCES (RCUS)	37.4%
LEGG MASON (LM)	37.2%
QUIDEL (QDEL)	30.4%
COGENT COMMS.HOLDINGS (CCOI)	25.6%
SIMULATIONS PLUS (SLP)	20.3%
SHENANDOAH TELECOM. (SHEN)	18.4%
MEET GROUP (MEET)	17.2%

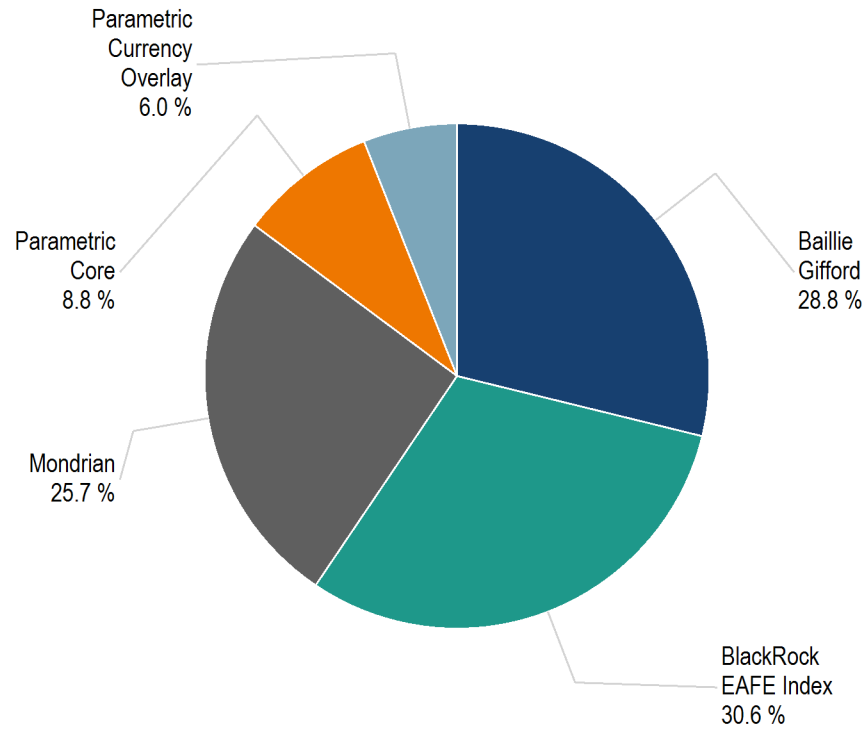
Worst Performers

	Return %
SM ENERGY (SM)	-89.1%
AG MORTGAGE INV.TRUST (MITT)	-82.2%
BRAEMAR HOTELS RESORTS (BHR)	-81.0%
WESTERN ASSET MGE.CAP. (WMC)	-77.8%
INVESCO MORTGAGE CAPITAL (IVR)	-77.3%
EXANTAS CAPITAL (XAN)	-76.6%
COML.VEH.GP. (CVGI)	-76.2%
LIBERTY TRIP ADVI.HDG. SR.A (LTRPA)	-75.5%
EVERI HOLDINGS (EVRI)	-75.4%
HERSHA HOSPITALITY TST. SHS.BENL.INT.CL.A (HT)	-74.9%



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	0.4%	0.3%	0.2%	-0.1%	-52.8%	-62.1%	2.4%	3.1%			
Materials	-0.3%	-0.4%	0.0%	0.1%	-50.1%	-39.1%	3.3%	3.9%			
Industrials	-1.3%	-1.2%	0.0%	0.0%	-40.4%	-32.7%	16.3%	15.9%			
Consumer Discretionary	-0.1%	-0.1%	0.0%	0.0%	-45.4%	-44.3%	11.2%	11.0%			
Consumer Staples	-0.2%	-0.1%	0.0%	0.0%	-26.1%	-21.7%	2.7%	3.0%			
Health Care	-0.7%	-0.6%	0.0%	0.0%	-22.8%	-19.3%	17.4%	17.8%			
Financials	-1.9%	-1.9%	0.0%	0.0%	-45.1%	-34.6%	18.0%	17.9%			
Information Technology	-0.5%	-0.5%	0.1%	0.0%	-25.9%	-22.4%	14.2%	13.6%			
Communication Services	-0.2%	-0.3%	0.0%	0.0%	-42.2%	-31.3%	2.3%	2.3%			
Utilities	0.0%	0.0%	0.0%	0.0%	-13.6%	-13.1%	3.4%	3.6%			
Real Estate	-1.3%	-1.1%	0.0%	-0.1%	-47.3%	-33.0%	8.7%	7.9%			
Cash	0.0%	0.0%	0.0%	0.0%	0.4%	--	0.0%	0.0%			
<b>Portfolio</b>	<b>-6.0%</b>	<b>=</b>	<b>-6.0%</b>	<b>+</b>	<b>0.2%</b>	<b>+</b>	<b>-0.1%</b>	<b>-36.6%</b>	<b>-30.6%</b>	<b>100.0%</b>	<b>100.0%</b>



	Actual \$	Actual %	Manager Contribution to Excess Return %
Baillie Gifford	\$213,773,112	28.8%	1.0%
BlackRock EAFE Index	\$226,952,946	30.6%	0.0%
Mondrian	\$190,897,824	25.7%	0.4%
Parametric Core	\$65,554,331	8.8%	-0.7%
Parametric Currency Overlay	\$44,816,913	6.0%	0.0%
Actual vs. Policy Weight Difference			-0.5%
<b>Total</b>	<b>\$741,995,127</b>	<b>100.0%</b>	<b>0.2%</b>

Statistics Summary

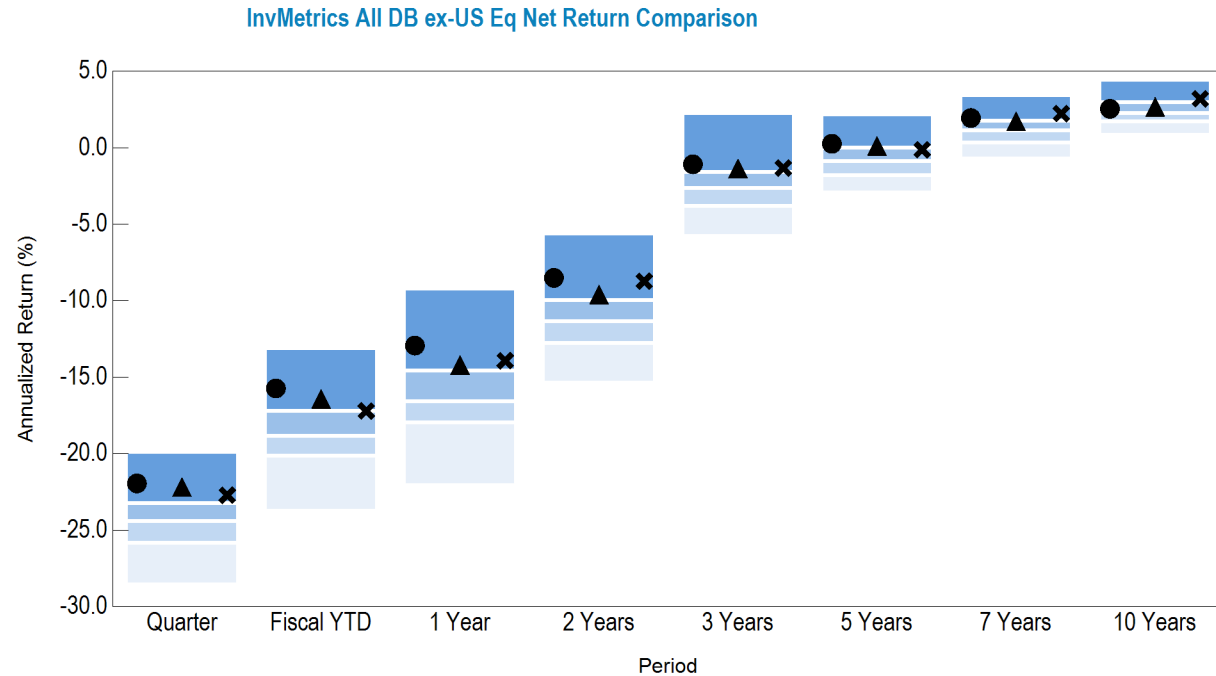
3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
International Equity	-1.1%	14.5%	-0.2	0.2	1.3%
Blended International Equity Index	-1.4%	14.6%	-0.2	--	0.0%
Developed Markets	-1.3%	15.2%	-0.2	0.1	1.8%
MSCI ACWI ex USA Gross	-1.5%	15.1%	-0.2	--	0.0%
Baillie Gifford	2.2%	15.5%	0.0	0.8	4.9%
MSCI ACWI ex US	-1.5%	15.1%	-0.2	--	0.0%
Mondrian	-4.6%	16.6%	-0.4	0.4	2.8%
MSCI ACWI ex USA Value Gross	-5.9%	16.9%	-0.5	--	0.0%
BlackRock EAFE Index	-1.5%	14.6%	-0.2	1.6	0.2%
MSCI EAFE	-1.8%	14.6%	-0.2	--	0.0%
Emerging Markets	-7.6%	18.0%	-0.5	-1.3	5.1%
MSCI Emerging Markets Gross	-1.3%	17.4%	-0.2	--	0.0%
Parametric Core	-7.6%	18.0%	-0.5	-1.3	5.1%
MSCI Emerging Markets Gross	-1.3%	17.4%	-0.2	--	0.0%

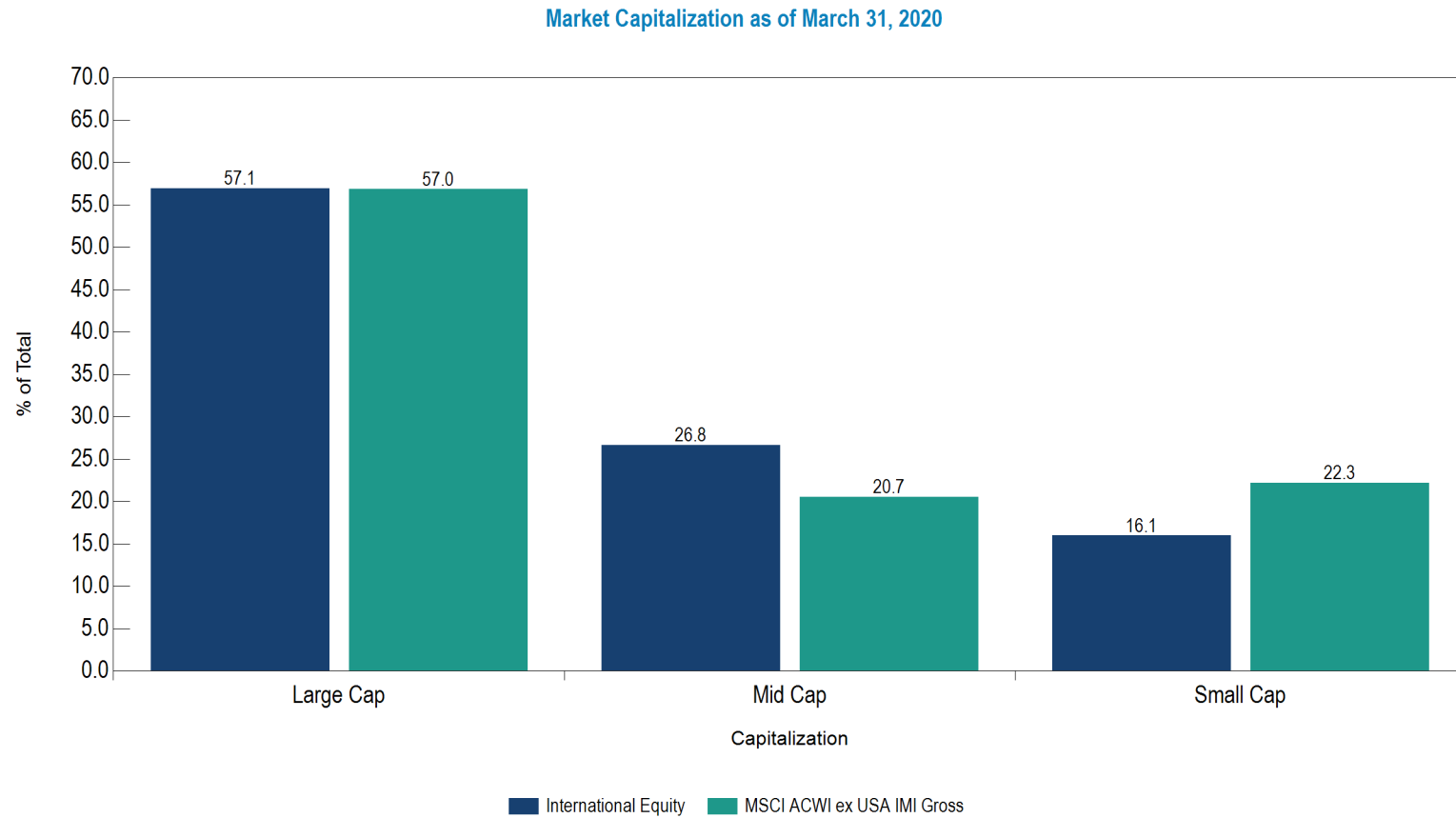
Statistics Summary

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
International Equity	0.3%	14.0%	-0.1	0.1	1.6%
Blended International Equity Index	0.1%	14.2%	-0.1	--	0.0%
Developed Markets	0.1%	14.4%	-0.1	0.1	2.0%
MSCI ACWI ex USA Gross	-0.2%	14.5%	-0.1	--	0.0%
Baillie Gifford	2.4%	15.2%	0.1	0.6	4.7%
MSCI ACWI ex US	-0.2%	14.5%	-0.1	--	0.0%
BlackRock EAFE Index	-0.3%	14.1%	-0.1	1.9	0.2%
MSCI EAFE	-0.6%	14.1%	-0.1	--	0.0%
Mondrian	-2.2%	15.0%	-0.2	0.2	4.1%
MSCI ACWI ex USA Value Gross	-2.9%	16.0%	-0.3	--	0.0%
Emerging Markets	-3.6%	17.4%	-0.3	-0.8	4.8%
MSCI Emerging Markets Gross	0.0%	17.6%	-0.1	--	0.0%



	Return (Rank)							
	Quarter	Fiscal YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	-19.9	-13.1	-9.2	-5.6	2.3	2.2	3.4	4.4
25th Percentile	-23.2	-17.2	-14.5	-10.0	-1.6	0.0	1.8	3.0
Median	-24.4	-18.8	-16.5	-11.3	-2.6	-0.9	1.2	2.3
75th Percentile	-25.8	-20.1	-17.9	-12.7	-3.8	-1.8	0.4	1.7
95th Percentile	-28.5	-23.7	-22.0	-15.3	-5.7	-2.9	-0.7	0.8
# of Portfolios	382	381	381	378	364	348	314	233
● International Equity	-22.0 (14)	-15.7 (15)	-12.9 (16)	-8.5 (15)	-1.1 (20)	0.3 (21)	1.9 (24)	2.5 (41)
▲ Blended International Equity Index	-22.2 (15)	-16.4 (20)	-14.2 (24)	-9.6 (22)	-1.4 (22)	0.1 (23)	1.7 (27)	2.7 (37)
✕ MSCI EAFE Gross	-22.7 (19)	-17.2 (26)	-13.9 (22)	-8.7 (16)	-1.3 (22)	-0.1 (29)	2.2 (18)	3.2 (22)



See appendix for the market capitalization breakpoints.

Characteristics

	Portfolio	MSCI ACWI ex USA IMI Gross
Number of Holdings	2,148	6,578
Weighted Avg. Market Cap. (\$B)	50.2	60.8
Median Market Cap. (\$B)	5.0	1.2
Price To Earnings	13.7	12.9
Price To Book	2.6	2.4
Price To Sales	1.3	1.3
Return on Equity (%)	15.3	14.8
Yield (%)	3.5	3.7
Beta (holdings; global)	1.0	0.9

Top Holdings

ALIBABA GROUP HOLDING ADR 1:8	1.4%
UNITED OVERSEAS BANK	1.1%
ASML HOLDING	1.0%
SANOFI	1.0%
NOVARTIS 'R'	1.0%
TAIWAN SEMICON.SPN.ADR 1:5	1.0%
AIA GROUP	1.0%
SHOPIFY 'A' (NYS)	1.0%
GLAXOSMITHKLINE	0.9%
NESTLE 'N'	0.8%

Best Performers

	Return %
CELLTRION HEALTHCARE (KO:CLL)	60.8%
GLOBAL POWER SYNERGY FB (Q:GPSF)	58.3%
SOHO CHINA (K:SOHO)	36.8%
TOP GLOVE CORPORATION (L:TOGL)	29.9%
BIOMERIEUX (F:BIM)	26.4%
CHUGAI PHARM. (J:CP@N)	24.8%
SPENCER S RETAIL (IN:SS3)	23.8%
NEXON (J:NXCL)	22.5%
SUN ART RETAIL GROUP (K:SARG)	22.3%
SARTORIUS STEDIM BIOTECH (F:DIM)	21.1%

Worst Performers

	Return %
SASOL (R:SOLJ)	-90.5%
NAMPAK (R:NPKJ)	-88.5%
TONGAAT-HULETT (R:TONJ)	-87.0%
FLIGHT CENTRE TRAVEL GP. (A:FLTX)	-80.4%
CVC BRA.OPD.E ACDV. ON (BR:CVC)	-80.3%
EOH (R:EOHJ)	-80.3%
AVIANCA HOLDING PREF. (CB:AVT)	-78.0%
BUMI ARMADA (L:ARMO)	-75.9%
ALSEA DE CV (MX:ALE)	-75.5%
REDEFINE PROPERTIES (R:RDFJ)	-75.5%

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	0.2%	-0.1%	0.2%	0.2%	-39.0%	-39.1%	4.4%	5.7%			
Materials	0.1%	-0.1%	0.1%	0.2%	-28.6%	-27.9%	5.2%	7.8%			
Industrials	0.0%	0.1%	-0.1%	0.0%	-26.6%	-27.4%	14.3%	13.0%			
Consumer Discretionary	-0.4%	-0.3%	0.0%	-0.1%	-28.5%	-25.8%	13.6%	12.0%			
Consumer Staples	-0.1%	-0.1%	0.0%	0.0%	-15.8%	-14.8%	9.1%	9.0%			
Health Care	-0.1%	-0.2%	0.1%	0.0%	-11.7%	-9.6%	9.6%	8.7%			
Financials	0.3%	-0.3%	0.2%	0.3%	-31.5%	-31.2%	17.0%	20.1%			
Information Technology	0.4%	0.3%	0.0%	0.1%	-14.3%	-18.6%	9.7%	9.6%			
Communication Services	-0.4%	-0.4%	0.1%	-0.1%	-22.1%	-15.4%	7.2%	6.4%			
Utilities	0.0%	0.0%	0.0%	0.0%	-15.5%	-16.6%	3.1%	3.4%			
Real Estate	0.0%	-0.3%	0.1%	0.2%	-36.0%	-27.2%	2.0%	4.3%			
Cash	1.0%	0.0%	1.0%	0.0%	0.4%	--	4.6%	0.0%			
Unclassified	0.0%	0.0%	0.0%	0.0%	-2.6%	-24.0%	0.0%	0.0%			
<b>Portfolio</b>	<b>1.0%</b>	<b>=</b>	<b>-1.3%</b>	<b>+</b>	<b>1.6%</b>	<b>+</b>	<b>0.7%</b>	<b>-23.0%</b>	<b>-24.0%</b>	<b>100.0%</b>	<b>100.0%</b>



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

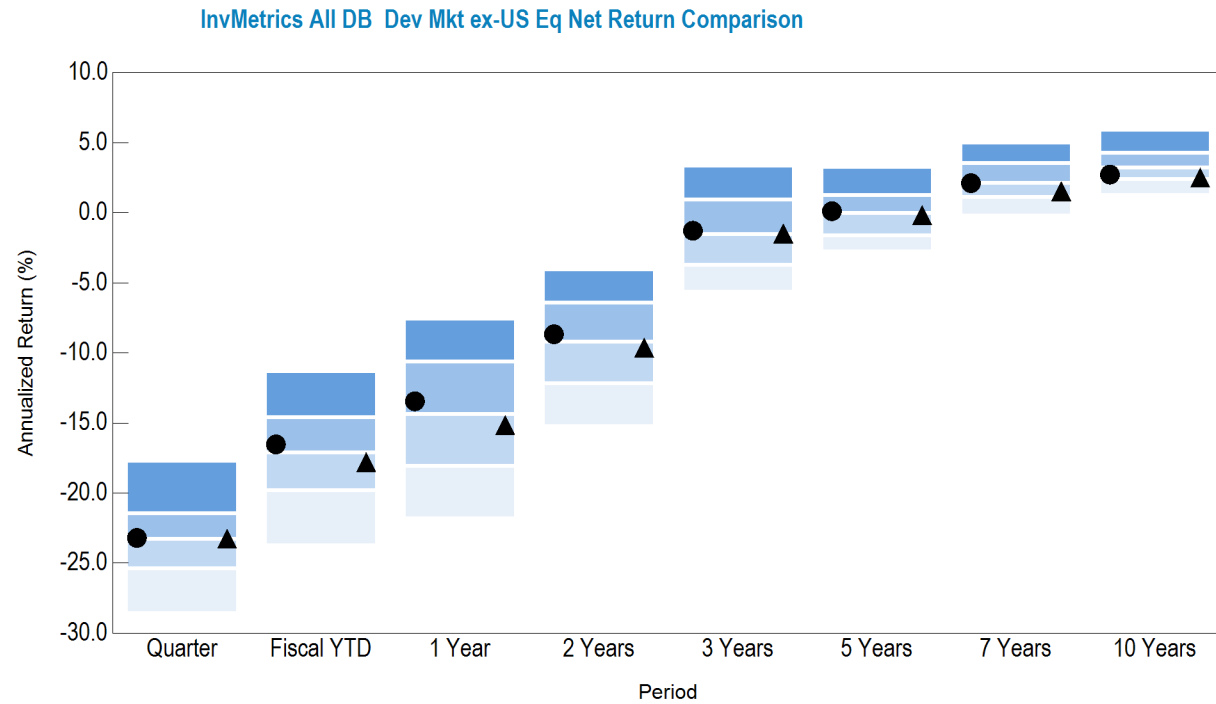
	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>Europe</b>									
Austria	-42.9%	-38.2%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Belgium	-33.4%	-28.7%	0.3%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
Czech Republic*	-32.7%	-37.5%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Denmark	-20.7%	-9.3%	1.0%	1.2%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Finland	-14.1%	-20.5%	0.7%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%
France	-28.4%	-27.5%	5.3%	6.8%	-0.1%	0.1%	0.0%	0.0%	0.0%
Germany	-27.2%	-27.3%	7.3%	5.6%	0.0%	-0.1%	0.0%	0.0%	-0.1%
Greece*	-39.5%	-42.8%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Hungary*	-33.9%	-38.7%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Ireland	-14.7%	-27.4%	0.5%	0.4%	0.1%	0.0%	0.0%	0.0%	0.1%
Italy	-25.5%	-29.2%	1.7%	1.7%	0.1%	0.0%	0.0%	0.0%	0.1%
Luxembourg	-48.4%	-24.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Netherlands	-20.8%	-21.6%	2.6%	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Norway	-33.3%	-36.5%	0.2%	0.6%	0.0%	0.0%	0.0%	0.0%	0.1%
Poland*	-32.8%	-36.0%	0.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Portugal	7.1%	-19.2%	0.4%	0.1%	0.0%	0.0%	0.0%	0.1%	0.1%
Russia*	-38.5%	-36.4%	1.1%	1.0%	-0.1%	0.0%	0.1%	0.0%	0.0%
Spain	-32.8%	-29.8%	2.0%	1.8%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Sweden	-17.1%	-22.6%	3.0%	2.1%	0.1%	0.0%	0.0%	0.0%	0.1%
Switzerland	-14.8%	-11.7%	4.9%	5.9%	-0.2%	-0.1%	0.0%	0.0%	-0.2%
United Kingdom	-32.9%	-29.6%	13.4%	10.8%	-0.4%	-0.1%	-0.1%	-0.1%	-0.7%

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		
<b>AsiaPacific</b>										
Australia	-34.6%	-33.7%	3.4%	4.6%	-0.1%	0.0%	0.1%	0.0%	0.1%	
China*	-15.1%	-10.6%	4.1%	8.3%	-0.4%	-0.4%	0.0%	0.2%	-0.6%	
Hong Kong	-18.5%	-17.6%	4.3%	2.2%	0.0%	0.1%	0.0%	0.0%	0.0%	
India*	-31.2%	-31.8%	3.0%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	
Indonesia*	-42.5%	-41.1%	0.4%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	
Japan	-15.0%	-17.4%	18.5%	17.1%	0.4%	0.0%	0.0%	0.0%	0.5%	
Korea*	-21.6%	-22.6%	1.8%	3.3%	0.0%	0.0%	0.1%	0.0%	0.0%	
Malaysia*	-23.1%	-21.3%	0.7%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	
New Zealand	-24.3%	-22.8%	0.4%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
Pakistan*	-35.4%	-34.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Philippines*	-29.6%	-32.8%	0.3%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	
Singapore	-29.2%	-28.2%	2.4%	0.9%	0.0%	0.0%	0.0%	0.0%	-0.1%	
Taiwan*	-18.4%	-19.5%	2.4%	3.4%	0.0%	0.0%	0.0%	0.0%	0.0%	
Thailand*	-21.7%	-35.0%	0.4%	0.7%	0.1%	0.0%	0.0%	0.0%	0.1%	
<b>Americas</b>										
Argentina*	-51.0%	-43.6%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
Brazil*	-42.7%	-50.6%	1.8%	2.1%	0.2%	0.0%	0.0%	0.0%	0.2%	
Canada	-18.3%	-28.7%	1.2%	6.7%	0.4%	0.0%	0.4%	-0.3%	0.6%	
Chile*	-38.0%	-34.4%	0.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
Colombia*	-44.4%	-49.7%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
Mexico*	-37.7%	-36.1%	1.0%	0.6%	0.0%	0.0%	0.0%	0.0%	-0.1%	
Peru*	-34.6%	-35.8%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
United States	-21.8%	-19.8%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	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	
<b>Other</b>									
Egypt*	-27.2%	-29.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Israel	-19.3%	-20.5%	0.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Kuwait**	-25.9%	-26.8%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Qatar*	-16.1%	-17.8%	0.2%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Romania**	-28.4%	-30.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Saudi Arabia*	--	-23.5%	0.0%	0.7%	--	0.0%	0.0%	--	0.0%
South Africa*	-36.2%	-40.9%	1.2%	1.3%	0.1%	0.0%	0.0%	0.0%	0.1%
Turkey*	-28.8%	-29.6%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
United Arab Emirates*	-31.1%	-28.1%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Totals</b>									
Americas	-32.0%	-34.3%	6.0%	9.9%	0.1%	0.2%	0.4%	0.0%	0.7%
Europe	-26.5%	-25.3%	45.1%	42.6%	-0.6%	0.0%	0.0%	0.0%	-0.7%
Asia/Pacific	-20.1%	-20.1%	42.2%	44.5%	-0.1%	-0.1%	0.2%	0.0%	0.0%
Other	-31.3%	-30.3%	2.1%	3.1%	0.1%	0.0%	0.0%	0.0%	0.1%
Cash	0.4%	--	4.6%	0.0%	0.0%	1.0%	0.0%	0.0%	1.0%
<b>Total</b>	<b>-23.0%</b>	<b>-24.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>-0.5%</b>	<b>1.1%</b>	<b>0.6%</b>	<b>-0.1%</b>	<b>1.0%</b>
<b>Totals</b>									
Developed	-23.2%	-23.8%	75.0%	73.4%	0.0%	0.0%	0.4%	0.0%	0.4%
Emerging*	-27.5%	-24.6%	20.3%	26.6%	-0.6%	0.0%	0.1%	0.1%	-0.4%
Frontier**	-26.2%	--	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cash	0.4%	--	4.6%	0.0%	0.0%	1.0%	0.0%	0.0%	1.0%



	Return (Rank)							
	Quarter	Fiscal YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	-17.7	-11.3	-7.6	-4.0	3.3	3.2	5.0	5.9
25th Percentile	-21.4	-14.6	-10.6	-6.4	1.0	1.3	3.6	4.3
Median	-23.2	-17.1	-14.3	-9.2	-1.5	0.0	2.1	3.3
75th Percentile	-25.4	-19.8	-18.0	-12.1	-3.7	-1.6	1.2	2.5
95th Percentile	-28.5	-23.7	-21.8	-15.2	-5.6	-2.7	-0.2	1.3
# of Portfolios	159	158	156	152	147	138	119	78
● Developed Markets	-23.2 (49)	-16.5 (47)	-13.5 (46)	-8.7 (43)	-1.3 (48)	0.1 (48)	2.1 (53)	2.7 (71)
▲ MSCI ACWI ex USA Gross	-23.3 (51)	-17.8 (55)	-15.1 (55)	-9.6 (52)	-1.5 (50)	-0.2 (54)	1.5 (70)	2.5 (75)

Characteristics

	Portfolio	MSCI ACWI ex USA Gross
Number of Holdings	1,031	2,404
Weighted Avg. Market Cap. (\$B)	52.8	69.2
Median Market Cap. (\$B)	8.8	5.9
Price To Earnings	14.4	13.1
Price To Book	2.6	2.5
Price To Sales	1.3	1.3
Return on Equity (%)	15.4	15.5
Yield (%)	3.4	3.8
Beta (holdings; global)	1.0	0.9

Top Holdings

ALIBABA GROUP HOLDING ADR 1:8	1.5%
UNITED OVERSEAS BANK	1.2%
ASML HOLDING	1.1%
SANOFI	1.1%
NOVARTIS 'R'	1.1%
TAIWAN SEMICON.SPN.ADR 1:5	1.1%
AIA GROUP	1.1%
SHOPIFY 'A' (NYS)	1.1%
GLAXOSMITHKLINE	1.0%
NESTLE 'N'	0.9%

Best Performers

	Return %
BIOMERIEUX (F:BIM)	26.4%
CHUGAI PHARM. (J:CP@N)	24.8%
NEXON (J:NXCL)	22.5%
SARTORIUS STEDIM BIOTECH (F:DIM)	21.1%
FISHER & PAYKEL HLTHCR. (Z:FPHZ)	20.3%
QIAGEN (FRA) (D:QIA)	17.7%
COLOPLAST 'B' (DK:COL)	16.9%
YAMAZAKI BAKING (J:BV@N)	16.6%
TOYO SUISAN KAISHA (J:TOSU)	14.3%
LONZA GROUP (S:LONN)	14.0%

Worst Performers

	Return %
SASOL (R:SOLJ)	-90.5%
FLIGHT CENTRE TRAVEL GP. (A:FLTJ)	-80.4%
CARNIVAL (UKIR:CCL)	-74.5%
OIL SEARCH (A:OSHX)	-71.1%
INDIABULLS HOUSING FIN (IN:IEZ)	-70.3%
DUFREY 'R' (S:DUFN)	-68.6%
AIB GROUP (LON) (UKIR:AIBG)	-68.6%
ASOS (UKIR:ASC)	-66.8%
BANK OF IRELAND GROUP (UKIR:BIRG)	-65.5%
MICRO FOCUS INTL. (UKIR:MCRO)	-64.8%

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	0.3%	-0.2%	0.3%	0.3%	-38.8%	-37.9%	4.0%	6.1%			
Materials	0.2%	-0.1%	0.1%	0.2%	-27.7%	-27.5%	4.8%	7.4%			
Industrials	-0.1%	0.0%	-0.1%	0.0%	-25.8%	-26.3%	15.4%	12.0%			
Consumer Discretionary	-0.7%	-0.5%	-0.1%	-0.2%	-28.2%	-24.2%	14.8%	11.9%			
Consumer Staples	0.0%	-0.1%	0.0%	0.0%	-15.0%	-14.7%	9.4%	9.5%			
Health Care	-0.1%	-0.2%	0.2%	-0.1%	-11.3%	-8.9%	10.5%	8.9%			
Financials	0.4%	-0.3%	0.3%	0.4%	-31.1%	-31.1%	17.9%	21.6%			
Information Technology	0.4%	0.3%	0.1%	0.1%	-13.8%	-17.7%	10.7%	9.4%			
Communication Services	-0.5%	-0.5%	0.0%	0.0%	-22.2%	-14.2%	7.1%	6.7%			
Utilities	0.1%	0.1%	0.0%	0.0%	-12.5%	-15.8%	2.9%	3.4%			
Real Estate	-0.1%	-0.3%	0.1%	0.1%	-35.7%	-26.3%	1.6%	3.1%			
Cash	0.2%	0.0%	0.2%	0.0%	0.4%	--	1.0%	0.0%			
<b>Portfolio</b>	<b>0.1%</b>	<b>=</b>	<b>-1.7%</b>	<b>+</b>	<b>0.9%</b>	<b>+</b>	<b>0.9%</b>	<b>-23.2%</b>	<b>-23.3%</b>	<b>100.0%</b>	<b>100.0%</b>

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	
<b>Europe</b>									
Austria	-42.9%	-42.9%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Belgium	-32.6%	-32.6%	0.3%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%
Czech Republic*	--	-38.5%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Denmark	-20.7%	-7.8%	1.1%	1.2%	-0.2%	0.0%	0.0%	0.0%	-0.2%
Finland	-14.1%	-18.9%	0.8%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
France	-28.4%	-27.0%	6.1%	7.5%	-0.1%	0.1%	0.0%	0.0%	0.0%
Germany	-27.2%	-27.3%	8.5%	5.7%	0.0%	-0.1%	0.0%	0.0%	-0.2%
Greece*	--	-45.1%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Hungary*	--	-39.0%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Ireland	-14.7%	-27.1%	0.6%	0.4%	0.1%	0.0%	0.0%	0.0%	0.1%
Italy	-25.5%	-29.1%	2.0%	1.6%	0.1%	0.0%	0.0%	0.0%	0.0%
Luxembourg	-48.7%	-23.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Netherlands	-20.8%	-20.5%	3.0%	2.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Norway	-33.3%	-33.3%	0.2%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Poland*	--	-36.5%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
Portugal	7.1%	-13.1%	0.4%	0.1%	0.0%	0.0%	0.0%	0.1%	0.1%
Russia*	-42.5%	-36.5%	0.5%	1.1%	-0.2%	0.0%	0.2%	0.1%	0.1%
Spain	-32.8%	-29.8%	2.3%	1.9%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Sweden	-17.1%	-21.3%	3.4%	1.8%	0.1%	0.1%	-0.1%	0.1%	0.1%
Switzerland	-14.8%	-11.1%	5.6%	6.2%	-0.2%	-0.1%	0.0%	0.0%	-0.3%
United Kingdom	-32.9%	-28.4%	15.4%	10.5%	-0.5%	-0.2%	-0.2%	-0.2%	-1.1%

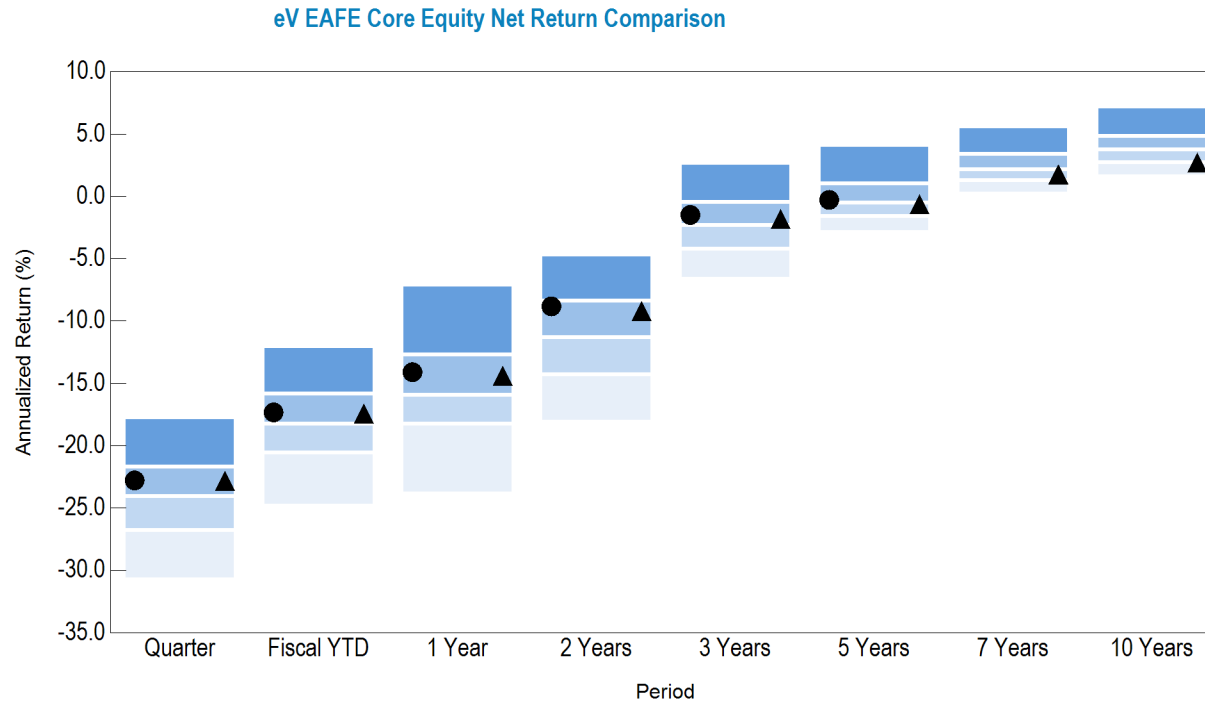
Developed Markets Performance Attribution vs. MSCI ACWI ex USA Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>AsiaPacific</b>									
Australia	-34.6%	-33.2%	3.9%	4.5%	-0.1%	0.0%	0.1%	0.0%	0.0%
China*	-15.1%	-10.5%	4.1%	9.2%	-0.4%	-0.5%	0.0%	0.2%	-0.7%
Hong Kong	-19.0%	-17.3%	4.3%	2.3%	0.0%	0.0%	0.0%	0.0%	0.0%
India*	-31.8%	-31.2%	2.6%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Indonesia*	-39.2%	-39.5%	0.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.1%
Japan	-15.0%	-16.8%	21.3%	16.3%	0.3%	0.1%	0.0%	0.1%	0.5%
Korea*	-19.8%	-22.6%	1.4%	3.3%	0.1%	0.0%	0.1%	-0.1%	0.1%
Malaysia*	-24.6%	-19.1%	0.4%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
New Zealand	-24.3%	-16.4%	0.5%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Pakistan*	--	-39.6%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Philippines*	--	-32.0%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Singapore	-29.2%	-28.2%	2.7%	0.9%	0.0%	-0.1%	-0.1%	0.0%	-0.2%
Taiwan*	-17.9%	-19.0%	1.9%	3.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Thailand*	-44.8%	-34.0%	0.1%	0.7%	-0.1%	0.0%	0.0%	0.1%	0.1%
<b>Americas</b>									
Argentina*	--	-39.3%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Brazil*	-39.2%	-50.0%	1.3%	2.1%	0.2%	0.1%	0.1%	-0.1%	0.4%
Canada	-18.3%	-27.3%	1.4%	6.7%	0.3%	0.0%	0.4%	-0.2%	0.5%
Chile*	--	-33.9%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
Colombia*	--	-49.6%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Mexico*	-35.8%	-35.5%	0.5%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Peru*	-32.9%	-35.8%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
United States	-20.2%	-19.8%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	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	
<b>Other</b>									
Egypt*	--	-27.1%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Israel	-19.3%	-18.0%	0.1%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Qatar*	-10.9%	-17.3%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Romania**	-28.4%	-30.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Saudi Arabia*	--	-24.0%	0.0%	0.7%	--	0.0%	0.0%	--	0.0%
South Africa*	-26.9%	-39.6%	0.7%	1.3%	0.2%	0.0%	0.1%	-0.1%	0.2%
Turkey*	--	-30.0%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
United Arab Emirates*	-32.8%	-27.4%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Totals</b>									
Americas	-26.8%	-33.1%	4.4%	9.9%	0.4%	0.2%	0.6%	-0.2%	1.0%
Europe	-26.3%	-24.5%	50.3%	42.8%	-0.8%	-0.1%	-0.1%	-0.1%	-1.2%
Asia/Pacific	-19.7%	-19.4%	43.3%	44.3%	-0.3%	0.0%	0.2%	0.0%	-0.1%
Other	-25.8%	-30.0%	0.9%	3.0%	0.3%	0.0%	0.1%	-0.2%	0.2%
Cash	0.4%	--	1.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.2%
<b>Total</b>	<b>-23.2%</b>	<b>-23.3%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>-0.4%</b>	<b>0.3%</b>	<b>0.8%</b>	<b>-0.6%</b>	<b>0.1%</b>
<b>Totals</b>									
Developed	-23.2%	-23.1%	85.3%	72.5%	-0.6%	0.0%	0.2%	-0.1%	-0.5%
Emerging*	-24.5%	-23.8%	13.6%	27.5%	-0.2%	-0.1%	0.6%	0.1%	0.4%
Frontier**	-28.4%	--	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cash	0.4%	--	1.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.2%



	Return (Rank)							
	Quarter	Fiscal YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
<b>5th Percentile</b>	-17.7	-12.0	-7.1	-4.7	2.7	4.1	5.6	7.2
<b>25th Percentile</b>	-21.7	-15.8	-12.7	-8.3	-0.4	1.1	3.5	4.9
<b>Median</b>	-24.0	-18.2	-15.9	-11.2	-2.2	-0.5	2.2	3.8
<b>75th Percentile</b>	-26.8	-20.5	-18.2	-14.2	-4.2	-1.5	1.3	2.8
<b>95th Percentile</b>	-30.7	-24.8	-23.8	-18.0	-6.6	-2.8	0.2	1.7
<b># of Portfolios</b>	149	147	147	145	143	125	105	87
<b>● BlackRock EAFE Index</b>	-22.8 (38)	-17.3 (37)	-14.1 (33)	-8.8 (29)	-1.5 (39)	-0.3 (47)	-- (--)	-- (--)
<b>▲ MSCI EAFE</b>	-22.8 (39)	-17.4 (38)	-14.4 (35)	-9.2 (33)	-1.8 (45)	-0.6 (56)	1.8 (65)	2.7 (79)

Characteristics

	Portfolio	MSCI EAFE
Number of Holdings	920	918
Weighted Avg. Market Cap. (\$B)	55.0	55.6
Median Market Cap. (\$B)	8.1	8.2
Price To Earnings	13.9	13.9
Price To Book	2.5	2.5
Price To Sales	1.2	1.2
Return on Equity (%)	14.5	14.5
Yield (%)	3.9	3.9
Beta (holdings; global)	0.9	0.9

Top Holdings

NESTLE 'N'	2.6%
ROCHE HOLDING	1.9%
NOVARTIS 'R'	1.5%
TOYOTA MOTOR	1.2%
ASTRAZENECA	1.0%
ASML HOLDING	1.0%
HSBC HOLDINGS	1.0%
AIA GROUP	1.0%
SAP	0.9%
LVMH	0.9%

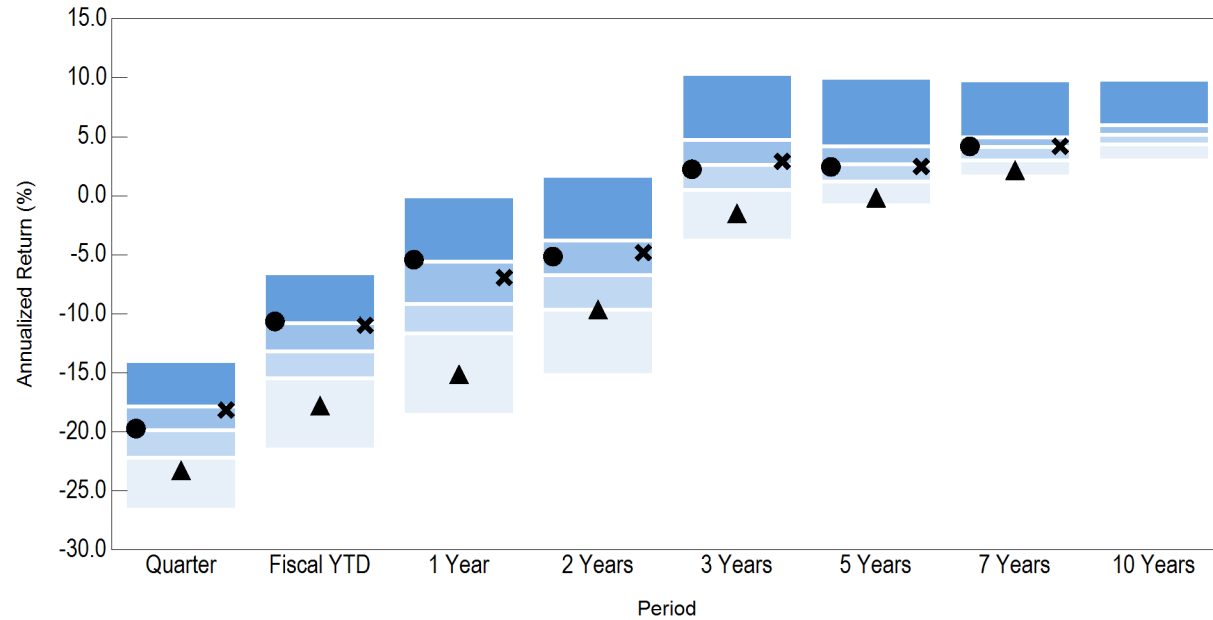
Best Performers

	Return %
BIOMERIEUX (F:BIM)	26.4%
CHUGAI PHARM. (J:CP@N)	24.8%
NEXON (J:NXCL)	22.5%
SARTORIUS STEDIM BIOTECH (F:DIM)	21.1%
FISHER & PAYKEL HLTHCR. (Z:FPHZ)	20.3%
QIAGEN (FRA) (D:QIA)	17.7%
COLOPLAST 'B' (DK:COL)	16.9%
YAMAZAKI BAKING (J:BV@N)	16.6%
TOYO SUISAN KAISHA (J:TOSU)	14.3%
LONZA GROUP (S:LONN)	14.0%

Worst Performers

	Return %
FLIGHT CENTRE TRAVEL GP. (A:FLTX)	-80.4%
CARNIVAL (UKIR:CCL)	-74.5%
OIL SEARCH (A:OSHX)	-71.1%
DUFY 'R' (S:DUFN)	-68.6%
AIB GROUP (LON) (UKIR:AIBG)	-68.6%
BANK OF IRELAND GROUP (UKIR:BIRG)	-65.5%
MICRO FOCUS INTL. (UKIR:MCRO)	-64.8%
WORLEY (A:WORX)	-64.4%
MELROSE INDUSTRIES (UKIR:MRO)	-64.3%
VICINITY CENTRES (A:VCXX)	-63.8%

eV ACWI ex-US Growth Equity Net Return Comparison



	Return (Rank)							
	Quarter	Fiscal YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	-14.0	-6.6	-0.1	1.6	10.3	10.0	9.8	9.8
25th Percentile	-17.9	-10.8	-5.6	-3.8	4.8	4.2	5.0	6.0
Median	-19.8	-13.2	-9.1	-6.7	2.7	2.7	4.2	5.2
75th Percentile	-22.2	-15.4	-11.7	-9.6	0.5	1.2	3.0	4.4
95th Percentile	-26.6	-21.5	-18.5	-15.2	-3.7	-0.8	1.7	3.0
# of Portfolios	77	77	77	76	73	67	56	46
● Baillie Gifford	-19.7 (48)	-10.7 (24)	-5.4 (24)	-5.2 (36)	2.2 (58)	2.4 (53)	4.2 (50)	-- (--)
▲ MSCI ACWI ex US	-23.3 (81)	-17.8 (87)	-15.1 (89)	-9.6 (75)	-1.5 (92)	-0.2 (91)	2.2 (93)	-- (--)
✕ MSCI ACWI ex US Growth	-18.2 (27)	-11.0 (28)	-6.9 (39)	-4.8 (35)	2.9 (40)	2.5 (53)	4.2 (50)	-- (--)

Characteristics

	Portfolio	MSCI ACWI ex USA Gross
Number of Holdings	88	2,404
Weighted Avg. Market Cap. (\$B)	48.3	69.2
Median Market Cap. (\$B)	11.8	5.9
Price To Earnings	20.3	13.1
Price To Book	4.0	2.5
Price To Sales	2.4	1.3
Return on Equity (%)	21.3	15.5
Yield (%)	1.6	3.8
Beta (holdings; global)	1.0	0.9

Top Holdings

ALIBABA GROUP HOLDING ADR 1:8	3.2%
TAIWAN SEMICON.SPN.ADR 1:5	3.1%
SHOPIFY 'A' (NYS)	3.1%
ASML HOLDING	2.3%
SARTORIUS SHS.PREF.	2.1%
BECHTLE	2.1%
AIA GROUP	2.1%
SHISEIDO	2.0%
SMC	2.0%
OLYMPUS	1.9%

Best Performers

	Return %
SARTORIUS SHS.PREF. (D:SRT3)	10.9%
JERONIMO MARTINS (P:JMT)	9.6%
UBISOFT ENTERTAINMENT CAT A (F:UBI)	6.6%
SYSMEX (J:TOAF)	6.5%
SHOPIFY 'A' (NYS) (SHOP)	4.9%
PIGEON (J:PIGC)	3.9%
SUGI HOLDINGS (J:SUGP)	1.6%
KAO (J:KA@N)	-1.5%
NOVOZYMES B (DK:NZY)	-5.7%
OLYMPUS (J:OLYC)	-6.3%

Worst Performers

	Return %
ASOS (UKIR:ASC)	-66.8%
WOOD GROUP (JOHN) (UKIR:WG.)	-63.4%
WEIR GROUP (UKIR:WEIR)	-55.3%
JUPITER FUND MANAGEMENT (UKIR:JUP)	-52.3%
MAHINDRA AND MAHINDRA REG S GDR (UKIR:MHID)	-48.9%
MAKEMYTRIP (MMYT)	-47.8%
TREASURY WINE ESTATES (A:TWEX)	-45.2%
JOHNSON MATTHEY (UKIR:JMAT)	-43.8%
BURBERRY GROUP (UKIR:BRBY)	-43.8%
SUZUKI MOTOR (J:IX@N)	-42.3%

**Baillie Gifford 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	0.9%	-1.5%	0.7%	1.7%	-63.4%	-37.2%	0.5%	6.5%			
Materials	0.5%	0.3%	0.1%	0.0%	-23.0%	-27.3%	3.0%	7.4%			
Industrials	0.8%	0.8%	-0.3%	0.3%	-19.8%	-26.3%	19.0%	12.0%			
Consumer Discretionary	-0.9%	-0.2%	-0.2%	-0.5%	-27.0%	-24.2%	19.5%	11.8%			
Consumer Staples	-0.2%	-0.1%	0.1%	-0.3%	-17.0%	-14.7%	11.4%	9.4%			
Health Care	0.1%	0.2%	-0.1%	0.0%	-6.5%	-8.9%	8.0%	8.8%			
Financials	1.6%	0.9%	0.5%	0.2%	-25.2%	-31.0%	14.4%	21.5%			
Information Technology	0.8%	0.4%	0.2%	0.2%	-12.7%	-17.7%	15.0%	9.3%			
Communication Services	-0.6%	-0.5%	0.2%	-0.2%	-22.3%	-14.2%	8.2%	6.6%			
Utilities	-0.1%	--	-0.3%	--	--	-15.8%	0.0%	3.4%			
Real Estate	0.2%	--	0.1%	--	--	-26.5%	0.0%	3.2%			
Cash	0.3%	0.0%	0.3%	0.0%	0.4%	--	1.0%	0.0%			
<b>Portfolio</b>	<b>3.3%</b>	<b>=</b>	<b>0.3%</b>	<b>+</b>	<b>1.5%</b>	<b>+</b>	<b>1.6%</b>	<b>-19.9%</b>	<b>-23.2%</b>	<b>100.0%</b>	<b>100.0%</b>

**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	
<b>Europe</b>									
Austria	--	-42.9%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Belgium	--	-32.6%	0.0%	0.7%	--	0.1%	0.0%	--	0.1%
Czech Republic*	--	-38.5%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Denmark	6.6%	-7.7%	0.3%	1.2%	0.1%	-0.2%	0.0%	0.0%	-0.1%
Finland	-10.6%	-18.9%	1.3%	0.6%	0.1%	0.0%	0.0%	0.0%	0.1%
France	-14.3%	-27.2%	1.4%	7.5%	1.0%	0.3%	0.1%	-0.6%	0.7%
Germany	-15.8%	-27.2%	8.2%	5.7%	0.6%	-0.1%	0.0%	0.2%	0.7%
Greece*	--	-45.2%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Hungary*	--	-39.0%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Ireland	-12.6%	-24.9%	1.4%	0.4%	0.1%	0.0%	0.0%	0.1%	0.1%
Italy	--	-29.2%	0.0%	1.5%	--	0.1%	0.0%	--	0.1%
Netherlands	-9.3%	-20.6%	2.7%	2.6%	0.3%	0.0%	0.0%	0.0%	0.3%
Norway	--	-33.3%	0.0%	0.4%	--	0.0%	0.1%	--	0.1%
Poland*	--	-36.5%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
Portugal	9.6%	-13.1%	1.1%	0.1%	0.0%	0.1%	0.0%	0.2%	0.3%
Russia*	--	-36.8%	0.0%	1.1%	--	0.0%	0.2%	--	0.2%
Spain	-26.5%	-29.8%	1.9%	1.9%	0.1%	0.0%	0.0%	0.0%	0.1%
Sweden	-15.5%	-21.3%	5.6%	1.8%	0.1%	0.1%	-0.2%	0.2%	0.3%
Switzerland	-22.2%	-11.1%	3.2%	6.2%	-0.7%	-0.3%	0.0%	0.3%	-0.6%
United Kingdom	-36.8%	-28.1%	14.4%	10.9%	-1.0%	-0.1%	-0.1%	-0.3%	-1.5%

**Baillie Gifford Performance Attribution vs. MSCI ACWI ex USA Gross**

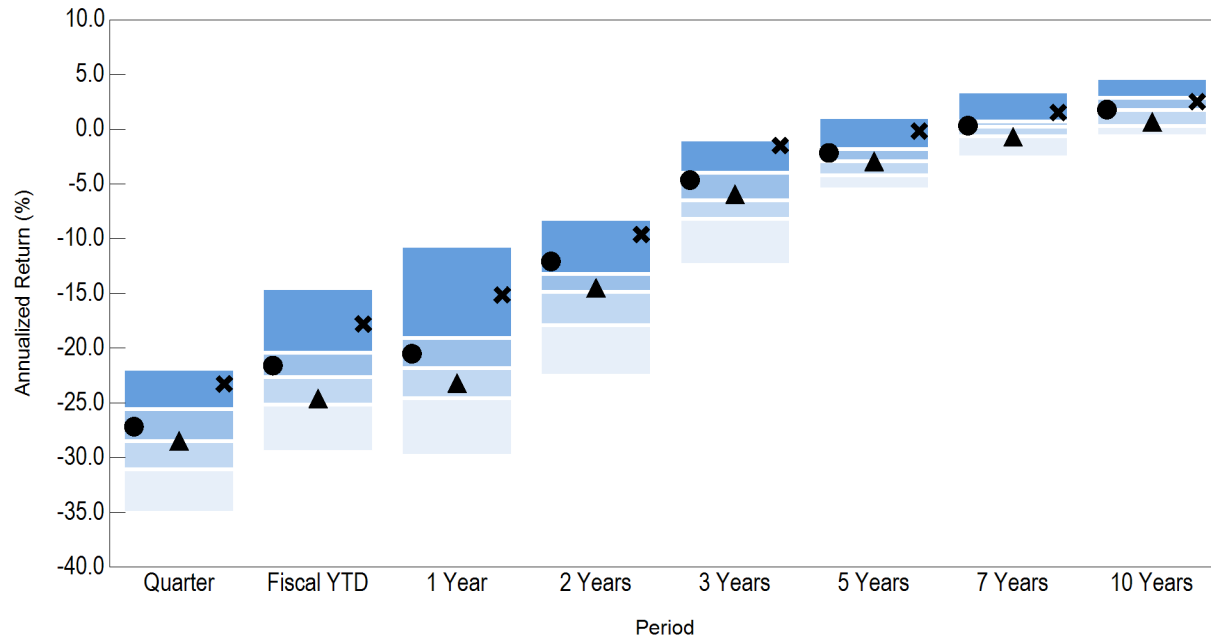
	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>AsiaPacific</b>									
Australia	-36.0%	-33.1%	3.8%	4.5%	-0.2%	0.1%	0.1%	0.0%	0.0%
China*	-17.0%	-10.3%	7.1%	9.2%	-0.6%	-0.2%	0.0%	0.2%	-0.7%
Hong Kong	-16.3%	-17.3%	3.0%	2.3%	0.0%	0.0%	0.0%	0.0%	0.1%
India*	-27.9%	-31.2%	4.9%	2.4%	0.1%	-0.2%	-0.1%	0.1%	-0.1%
Indonesia*	--	-39.5%	0.0%	0.5%	--	0.0%	0.1%	--	0.1%
Japan	-13.6%	-16.8%	19.6%	16.2%	0.5%	0.1%	0.0%	0.1%	0.7%
Korea*	-13.4%	-22.6%	0.6%	3.2%	0.3%	0.0%	0.1%	-0.2%	0.1%
Malaysia*	-20.7%	-19.1%	0.7%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
New Zealand	-26.1%	-16.4%	1.2%	0.2%	0.0%	0.1%	-0.1%	-0.1%	-0.1%
Pakistan*	--	-39.6%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Philippines*	--	-32.0%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Singapore	-29.3%	-28.2%	3.3%	0.8%	0.0%	-0.1%	-0.1%	-0.1%	-0.2%
Taiwan*	-17.0%	-19.0%	3.1%	3.2%	0.0%	0.0%	0.0%	0.0%	0.1%
Thailand*	--	-33.9%	0.0%	0.7%	--	0.1%	0.0%	--	0.1%
<b>Americas</b>									
Argentina*	--	-39.3%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Brazil*	-29.1%	-50.1%	1.6%	2.1%	0.5%	0.0%	0.0%	-0.1%	0.5%
Canada	-5.3%	-27.3%	3.2%	6.7%	1.1%	0.0%	0.4%	-0.5%	1.0%
Chile*	--	-33.3%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
Colombia*	--	-49.6%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Mexico*	-17.1%	-35.4%	0.6%	0.6%	0.1%	0.0%	0.0%	0.0%	0.1%
Peru*	--	-35.8%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
United States	-19.2%	-19.8%	3.1%	0.0%	0.0%	0.0%	0.0%	0.0%	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	
<b>Other</b>									
Egypt*	--	-27.1%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Israel	--	-18.0%	0.0%	0.4%	--	0.0%	0.0%	--	0.0%
Qatar*	--	-17.3%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Saudi Arabia*	--	-24.0%	0.0%	0.7%	--	0.0%	0.0%	--	0.0%
South Africa*	-12.7%	-40.0%	1.6%	1.3%	0.4%	0.0%	-0.1%	0.1%	0.4%
Turkey*	--	-30.0%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
United Arab Emirates*	--	-28.6%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
<b>Totals</b>									
Americas	-15.6%	-33.2%	8.5%	9.8%	1.3%	0.0%	0.5%	-0.1%	1.7%
Europe	-22.4%	-24.5%	41.6%	43.1%	1.0%	0.0%	0.0%	0.0%	0.9%
Asia/Pacific	-19.3%	-19.4%	47.3%	44.1%	-0.1%	0.1%	0.1%	0.0%	0.0%
Other	-12.7%	-30.1%	1.6%	3.0%	0.9%	0.0%	-0.1%	-0.4%	0.4%
Cash	0.4%	--	1.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.3%
<b>Total</b>	<b>-19.9%</b>	<b>-23.2%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>3.1%</b>	<b>0.4%</b>	<b>0.4%</b>	<b>-0.6%</b>	<b>3.3%</b>
<b>Totals</b>									
Developed	-20.2%	-23.1%	78.7%	72.6%	1.8%	0.0%	0.2%	0.1%	2.1%
Emerging*	-20.2%	-23.8%	20.3%	27.4%	1.1%	-0.1%	0.2%	-0.3%	1.0%
Cash	0.4%	--	1.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.3%

eV ACWI ex-US Value Equity Net Return Comparison



	Return (Rank)							
	Quarter	Fiscal YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	-21.9	-14.6	-10.7	-8.2	-0.9	1.1	3.5	4.6
25th Percentile	-25.5	-20.4	-19.1	-13.2	-3.9	-1.8	0.8	2.9
Median	-28.5	-22.6	-21.8	-14.8	-6.5	-2.9	0.3	1.8
75th Percentile	-31.1	-25.1	-24.5	-17.9	-8.2	-4.2	-0.6	0.3
95th Percentile	-35.0	-29.5	-29.8	-22.5	-12.4	-5.5	-2.6	-0.6
# of Portfolios	36	36	36	35	34	32	27	20
● Mondrian	-27.2 (34)	-21.6 (39)	-20.5 (41)	-12.1 (18)	-4.6 (31)	-2.2 (29)	0.3 (45)	1.8 (51)
▲ MSCI ACWI ex USA Value Gross	-28.5 (49)	-24.6 (68)	-23.2 (62)	-14.5 (44)	-5.9 (43)	-2.9 (53)	-0.7 (76)	0.7 (72)
✕ MSCI ACWI ex USA Gross	-23.3 (14)	-17.8 (13)	-15.1 (11)	-9.6 (10)	-1.5 (6)	-0.2 (12)	1.5 (17)	2.5 (30)

Characteristics

	Portfolio	MSCI ACWI ex USA Value Gross
Number of Holdings	124	1,476
Weighted Avg. Market Cap. (\$B)	55.4	41.7
Median Market Cap. (\$B)	17.3	5.0
Price To Earnings	11.1	9.5
Price To Book	1.8	1.6
Price To Sales	0.9	0.9
Return on Equity (%)	11.6	11.1
Yield (%)	5.0	5.6
Beta (holdings: global)	1.0	1.0

Top Holdings

FUJIFILM HOLDINGS	2.9%
SSE	2.8%
SANOFI	2.6%
TAKEDA PHARMACEUTICAL	2.6%
KYOCERA	2.5%
GLAXOSMITHKLINE	2.5%
CK HUTCHISON HOLDINGS	2.4%
HONDA MOTOR	2.4%
TESCO	2.3%
UNITED OVERSEAS BANK	2.3%

Best Performers

	Return %
HENGAN INTL.GP. (K:HENG)	5.7%
FUJIFILM HOLDINGS (J:FP@N)	5.6%
NETEASE ADR 1:25 (NTES)	5.0%
TENCENT HOLDINGS (K:TCNT)	1.8%
FUJITSU (J:FT@N)	-3.4%
TINGYI CYMN.ISLE.HLDG. (K:CAYM)	-4.2%
NIPPON TELG. & TEL. (J:NTT)	-4.3%
NATIONAL GRID (UKIR:NG.)	-6.2%
KONINKLIJKE AHOLD DELHAIZE (H:AD)	-6.7%
SECOM (J:KP@N)	-6.7%

Worst Performers

	Return %
SASOL (R:SOLJ)	-90.5%
INDIABULLS HOUSING FIN (IN:IEZ)	-70.3%
WOOD GROUP (JOHN) (UKIR:WG.)	-63.4%
EMBRAER SPNS ADR 1:4 (ERJ)	-62.0%
H&R RLST.IT.STAPLE UNIT (C:HR.UN)	-60.7%
G4S (UKIR:GFS)	-60.4%
VEDANTA (IN:VED)	-58.6%
LLOYDS BANKING GROUP (UKIR:LLOY)	-52.1%
SOCIETE GENERALE (F:SGE)	-51.6%
WPP (UKIR:WPP)	-51.6%

**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	0.3%	-0.4%	0.2%	0.5%	-39.3%	-38.4%	7.3%	10.3%			
Materials	0.3%	-0.2%	0.1%	0.3%	-33.2%	-31.9%	4.4%	9.3%			
Industrials	-1.0%	-0.8%	0.0%	-0.2%	-35.1%	-27.4%	12.0%	9.7%			
Consumer Discretionary	-0.3%	-0.1%	-0.2%	-0.1%	-31.5%	-30.6%	13.2%	9.0%			
Consumer Staples	0.4%	0.0%	0.3%	0.1%	-13.9%	-17.3%	5.6%	3.2%			
Health Care	0.6%	0.1%	0.6%	-0.1%	-17.4%	-18.6%	11.6%	5.3%			
Financials	0.2%	-1.2%	0.4%	1.0%	-34.7%	-31.9%	20.9%	32.7%			
Information Technology	1.2%	0.4%	0.3%	0.5%	-10.9%	-21.2%	9.8%	4.0%			
Communication Services	-0.2%	-0.2%	0.1%	-0.1%	-22.6%	-19.5%	7.8%	6.9%			
Utilities	0.1%	0.2%	-0.1%	-0.1%	-11.9%	-15.0%	5.0%	5.6%			
Real Estate	-0.4%	-1.0%	0.0%	0.6%	-56.5%	-26.1%	1.5%	4.0%			
Cash	0.2%	0.0%	0.2%	0.0%	0.4%	--	1.0%	0.0%			
<b>Portfolio</b>	<b>1.4%</b>	<b>=</b>	<b>-3.2%</b>	<b>+</b>	<b>1.9%</b>	<b>+</b>	<b>2.6%</b>	<b>-27.0%</b>	<b>-28.4%</b>	<b>100.0%</b>	<b>100.0%</b>

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	
<b>Europe</b>									
Austria	--	-44.6%	0.0%	0.3%	--	0.0%	0.0%	--	0.1%
Belgium	--	-31.7%	0.0%	0.5%	--	0.0%	0.0%	--	0.0%
Czech Republic*	--	-35.4%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Denmark	-42.8%	-34.7%	1.2%	0.2%	0.0%	-0.1%	0.0%	-0.1%	-0.2%
Finland	--	-25.2%	0.0%	0.6%	--	0.0%	0.0%	--	0.0%
France	-33.0%	-29.9%	5.9%	7.1%	-0.2%	0.0%	0.0%	0.0%	-0.1%
Germany	-36.1%	-31.2%	8.6%	6.5%	-0.3%	-0.1%	0.0%	-0.1%	-0.6%
Greece*	--	-36.7%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Hungary*	--	-37.3%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Ireland	--	-38.4%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
Italy	-23.3%	-31.5%	3.7%	2.6%	0.2%	0.0%	0.0%	0.1%	0.2%
Netherlands	-29.5%	-39.5%	1.9%	1.1%	0.1%	-0.1%	0.0%	0.1%	0.1%
Norway	--	-35.1%	0.0%	0.5%	--	0.0%	0.1%	--	0.0%
Poland*	--	-39.2%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
Portugal	--	-7.5%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Russia*	-42.5%	-36.8%	1.4%	1.2%	-0.3%	0.0%	0.2%	0.0%	-0.1%
Spain	-41.9%	-31.1%	2.3%	2.7%	-0.3%	0.0%	0.0%	0.0%	-0.2%
Sweden	-16.2%	-26.4%	2.0%	1.4%	0.2%	0.0%	0.0%	0.1%	0.2%
Switzerland	-16.7%	-21.0%	4.5%	3.8%	0.2%	0.0%	0.0%	0.0%	0.2%
United Kingdom	-33.8%	-31.9%	17.8%	13.6%	-0.3%	-0.1%	-0.2%	-0.1%	-0.6%

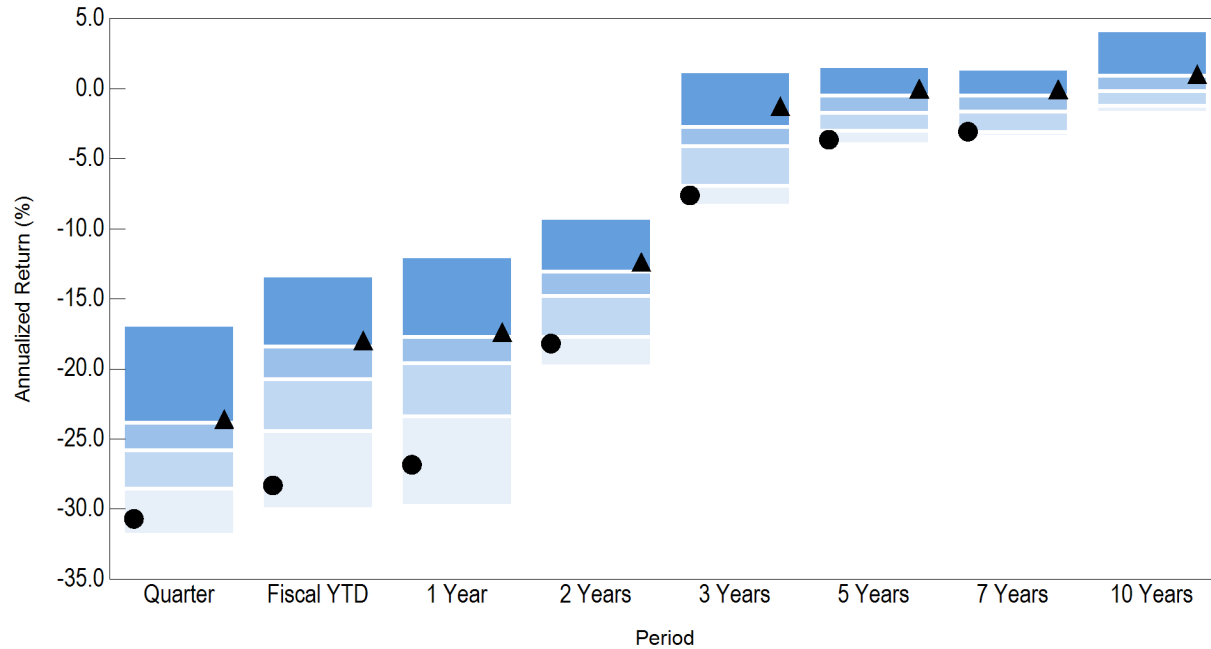
Mondrian Performance Attribution vs. MSCI ACWI ex USA Value Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>AsiaPacific</b>									
Australia	-40.6%	-37.3%	1.0%	4.5%	-0.2%	0.1%	0.3%	0.1%	0.4%
China*	-12.3%	-16.4%	5.0%	9.1%	0.4%	-0.4%	0.0%	-0.2%	-0.2%
Hong Kong	-20.4%	-19.0%	5.5%	2.3%	0.0%	0.2%	0.0%	0.0%	0.1%
India*	-39.0%	-32.1%	2.8%	2.4%	-0.2%	0.0%	0.0%	0.0%	-0.2%
Indonesia*	-39.2%	-44.2%	0.4%	0.5%	0.0%	0.0%	0.0%	0.0%	0.1%
Japan	-14.6%	-20.5%	19.7%	16.5%	1.0%	0.1%	0.0%	0.2%	1.3%
Korea*	-21.0%	-29.0%	3.4%	3.2%	0.3%	0.0%	0.0%	0.0%	0.3%
Malaysia*	-29.5%	-21.5%	0.6%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
New Zealand	--	-29.8%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
Pakistan*	--	-45.7%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Philippines*	--	-30.1%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Singapore	-30.0%	-27.7%	3.5%	0.9%	0.0%	0.0%	-0.1%	-0.1%	-0.1%
Taiwan*	-19.0%	-19.5%	2.5%	3.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Thailand*	-44.8%	-36.7%	0.2%	0.7%	-0.1%	0.0%	0.0%	0.0%	0.0%
<b>Americas</b>									
Argentina*	--	-51.2%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Brazil*	-46.6%	-51.8%	2.2%	2.1%	0.0%	0.0%	0.1%	0.0%	0.1%
Canada	-60.7%	-34.0%	1.0%	6.8%	-2.0%	0.1%	0.4%	1.7%	0.2%
Chile*	--	-27.8%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
Colombia*	--	-52.1%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Mexico*	-48.9%	-39.6%	0.8%	0.6%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Peru*	-32.9%	-32.9%	0.2%	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	
<b>Other</b>									
Egypt*	--	-26.3%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Israel	--	-21.6%	0.0%	0.4%	--	0.0%	0.0%	--	0.0%
Qatar*	-10.9%	-19.6%	0.1%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Romania**	-28.4%	-28.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Saudi Arabia*	--	-28.3%	0.0%	0.7%	--	0.0%	0.0%	--	0.0%
South Africa*	-90.5%	-53.6%	0.4%	1.3%	-0.6%	0.1%	0.2%	0.4%	0.1%
Turkey*	--	-32.7%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
United Arab Emirates*	-32.8%	-30.1%	0.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Totals</b>									
Americas	-49.8%	-38.4%	4.2%	10.0%	-1.1%	0.3%	0.5%	0.7%	0.3%
Europe	-31.7%	-30.7%	49.4%	42.6%	-0.7%	-0.2%	0.0%	-0.1%	-0.9%
Asia/Pacific	-19.7%	-23.3%	44.6%	44.4%	1.3%	0.0%	0.3%	0.0%	1.6%
Other	-59.4%	-38.0%	0.7%	3.0%	-0.8%	0.1%	0.2%	0.6%	0.1%
Cash	0.4%	--	1.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.2%
<b>Total</b>	<b>-27.0%</b>	<b>-28.4%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>-1.3%</b>	<b>0.5%</b>	<b>1.0%</b>	<b>1.1%</b>	<b>1.4%</b>
<b>Totals</b>									
Developed	-26.9%	-28.5%	78.7%	72.5%	0.6%	0.0%	0.5%	0.0%	1.1%
Emerging*	-28.8%	-28.1%	20.3%	27.5%	-0.5%	-0.1%	0.5%	0.1%	0.1%
Frontier**	-28.4%	--	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cash	0.4%	--	1.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.2%

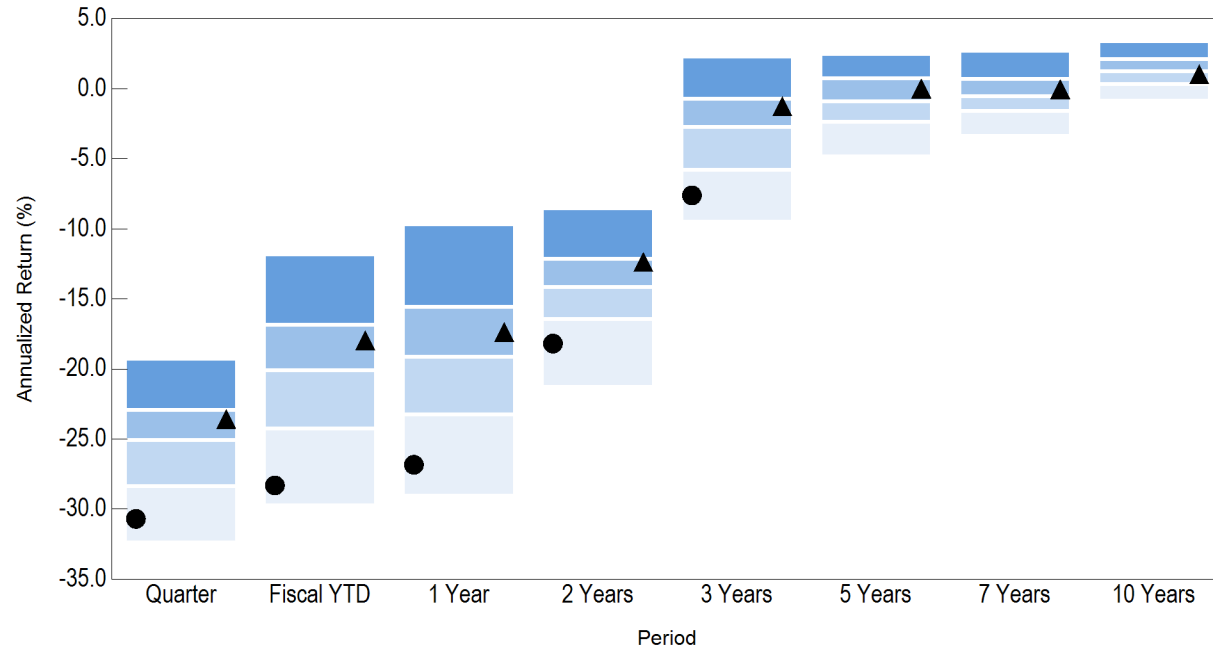
InvMetrics All DB Emg Mkt Eq Net Return Comparison



	Return (Rank)							
	Quarter	Fiscal YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	-16.9	-13.4	-12.0	-9.2	1.2	1.6	1.4	4.2
25th Percentile	-23.8	-18.4	-17.7	-13.0	-2.7	-0.5	-0.4	0.9
Median	-25.8	-20.7	-19.6	-14.8	-4.1	-1.7	-1.6	-0.2
75th Percentile	-28.5	-24.4	-23.4	-17.7	-6.9	-3.0	-3.1	-1.2
95th Percentile	-31.8	-30.0	-29.7	-19.8	-8.3	-3.9	-3.4	-1.7
# of Portfolios	88	88	88	85	82	73	60	23
● Emerging Markets	-30.7 (86)	-28.3 (92)	-26.8 (92)	-18.2 (80)	-7.6 (86)	-3.6 (89)	-3.1 (75)	-- (--)
▲ MSCI Emerging Markets Gross	-23.6 (22)	-18.0 (22)	-17.4 (24)	-12.4 (17)	-1.3 (12)	0.0 (18)	0.0 (20)	1.0 (24)



eV Emg Mkts Equity Net Return Comparison



	Return (Rank)															
	Quarter		Fiscal YTD		1 Year		2 Years		3 Years		5 Years		7 Years		10 Years	
5th Percentile	-19.3	(89)	-11.8	(91)	-9.7	(88)	-8.5	(86)	2.3	(89)	2.5	(--)	2.7	(--)	3.4	(--)
25th Percentile	-22.9	(35)	-16.8	(34)	-15.6	(39)	-12.1	(28)	-0.7	(30)	0.8	(35)	0.7	(39)	2.2	(53)
Median	-25.1		-20.1		-19.1		-14.1		-2.7		-0.9		-0.5		1.3	
75th Percentile	-28.3		-24.2		-23.2		-16.4		-5.8		-2.4		-1.6		0.4	
95th Percentile	-32.4		-29.7		-29.0		-21.2		-9.4		-4.8		-3.4		-0.8	
# of Portfolios	224		223		222		209		198		173		144		83	
● Parametric Core	-30.7	(89)	-28.3	(91)	-26.8	(88)	-18.2	(86)	-7.6	(89)	--	(--)	--	(--)	--	(--)
▲ MSCI Emerging Markets Gross	-23.6	(35)	-18.0	(34)	-17.4	(39)	-12.4	(28)	-1.3	(30)	0.0	(35)	0.0	(39)	1.0	(53)

Characteristics

	Portfolio	MSCI Emerging Markets Gross
Number of Holdings	1,173	1,397
Weighted Avg. Market Cap. (\$B)	22.7	109.8
Median Market Cap. (\$B)	2.2	4.4
Price To Earnings	10.2	12.2
Price To Book	2.2	2.6
Price To Sales	1.1	1.5
Return on Equity (%)	14.9	17.6
Yield (%)	4.4	3.4
Beta (holdings; global)	0.8	1.0

Top Holdings

SBERBANK OF RUSSIA	0.9%
SAMSUNG ELECTRONICS	0.8%
NASPERS	0.8%
PJSC MMC NORILSK NICKEL SPN.ADR 10:1	0.8%
CREDICORP	0.8%
AMERICA MOVIL ADR 1:20	0.8%
TENCENT HOLDINGS	0.7%
PJSC GAZPROM ADR (OTC) CDI 1:2	0.7%
LUKOIL OAO SPN.ADR 1:1	0.6%
ALIBABA GROUP HOLDING ADR 1:8	0.6%

Best Performers

	Return %
CELLTRION HEALTHCARE (KO:CLL)	60.8%
GLOBAL POWER SYNERGY FB (Q:GPSF)	58.3%
SOHO CHINA (K:SOHO)	36.8%
TOP GLOVE CORPORATION (L:TOGL)	29.9%
SPENCER S RETAIL (IN:SS3)	23.8%
SUN ART RETAIL GROUP (K:SARG)	22.3%
CELLTRION (KO:ORC)	20.2%
HARTALEGA HOLDINGS (L:HARA)	19.2%
PLDT (PH:PLD)	18.3%
KOSSAN RUBBER (L:KOSS)	17.6%

Worst Performers

	Return %
SASOL (R:SOLJ)	-90.5%
NAMPAK (R:NPKJ)	-88.5%
TONGAAT-HULETT (R:TONJ)	-87.0%
CVC BRA.OPD.E ACDV. ON (BR:CVC)	-80.3%
EOH (R:EOHJ)	-80.3%
AVIANCA HOLDING PREF. (CB:AVT)	-78.0%
BUMI ARMADA (L:ARMO)	-75.9%
ALSEA DE CV (MX:ALE)	-75.5%
REDEFINE PROPERTIES (R:RDFJ)	-75.5%
SMILES FIDELIDADE ON (BR:SMF)	-75.4%

**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	-0.6%	-0.3%	-0.3%	0.1%	-39.8%	-39.6%	10.1%	7.5%			
Materials	-0.5%	-0.3%	-0.1%	-0.1%	-32.3%	-30.5%	10.5%	7.4%			
Industrials	-1.3%	-0.4%	-0.3%	-0.7%	-37.4%	-28.4%	10.1%	5.3%			
Consumer Discretionary	-1.4%	-1.9%	-0.3%	0.8%	-33.1%	-18.0%	8.5%	14.3%			
Consumer Staples	-0.3%	-0.2%	0.3%	-0.4%	-22.5%	-19.7%	10.1%	6.1%			
Health Care	-0.3%	-0.2%	0.4%	-0.5%	-19.9%	-8.6%	5.2%	2.7%			
Financials	0.4%	-0.7%	0.6%	0.5%	-35.2%	-31.2%	15.8%	24.5%			
Information Technology	-0.4%	-0.7%	-0.4%	0.7%	-24.1%	-18.3%	4.7%	15.5%			
Communication Services	-1.3%	-0.9%	0.0%	-0.4%	-21.2%	-9.7%	11.0%	11.0%			
Utilities	-0.4%	0.0%	-0.1%	-0.3%	-27.7%	-26.1%	6.7%	2.6%			
Real Estate	-0.9%	-0.2%	-0.2%	-0.5%	-36.5%	-26.9%	6.6%	3.0%			
Cash	0.1%	0.0%	0.1%	0.0%	0.4%	--	0.4%	0.0%			
Unclassified	0.0%	0.0%	0.0%	0.0%	-2.6%	--	0.3%	0.0%			
<b>Portfolio</b>	<b>-6.8%</b>	<b>=</b>	<b>-5.8%</b>	<b>+</b>	<b>-0.2%</b>	<b>+</b>	<b>-0.8%</b>	<b>-30.6%</b>	<b>-23.8%</b>	<b>100.0%</b>	<b>100.0%</b>

Parametric Core Performance Attribution vs. MSCI Emerging Markets Gross

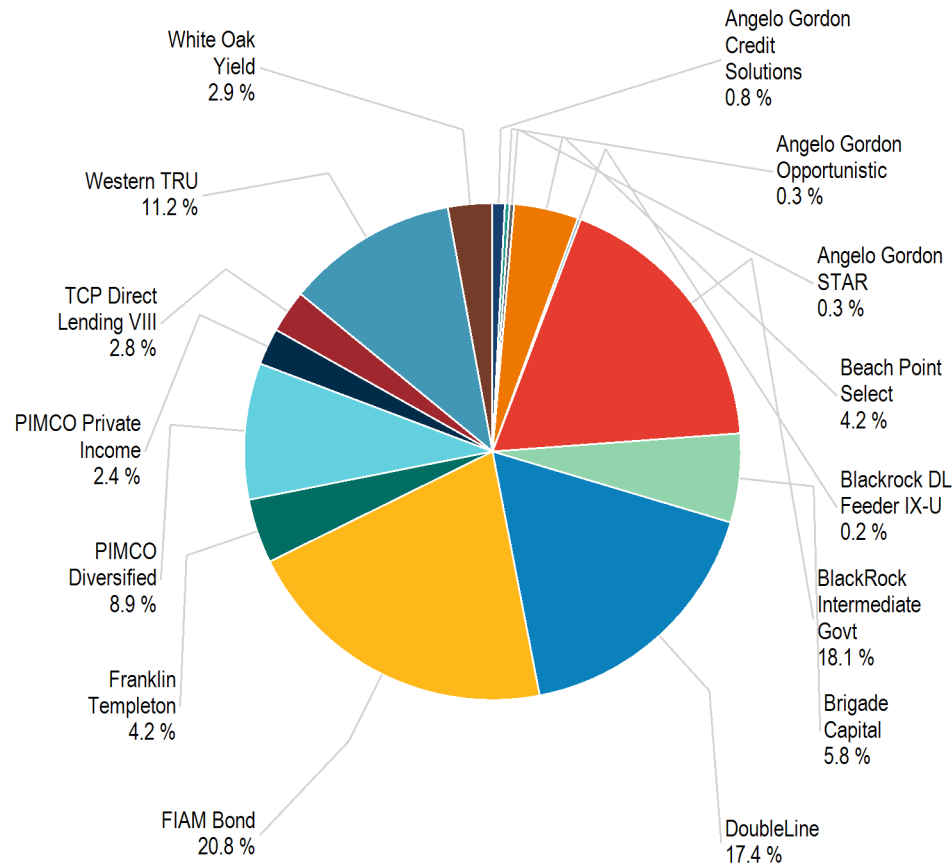
	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>Europe</b>									
Belgium	-47.6%	-32.6%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Czech Republic*	-32.7%	-38.5%	0.8%	0.1%	0.0%	-0.1%	0.0%	0.0%	-0.1%
Greece*	-39.5%	-45.1%	1.5%	0.3%	0.0%	-0.3%	0.0%	0.1%	-0.2%
Hungary*	-33.9%	-39.0%	0.9%	0.3%	0.0%	-0.1%	0.0%	0.0%	-0.1%
Luxembourg	-47.6%	-23.8%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Netherlands	-36.2%	-20.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Poland*	-32.8%	-36.5%	3.4%	0.9%	0.0%	-0.3%	-0.2%	0.1%	-0.3%
Russia*	-36.1%	-36.5%	7.3%	3.9%	-0.2%	-0.1%	0.0%	-0.2%	-0.6%
United Kingdom	-17.5%	-28.4%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>AsiaPacific</b>									
China*	-15.1%	-10.5%	6.3%	33.6%	-1.6%	-2.4%	0.0%	1.3%	-2.7%
Hong Kong	-14.5%	-17.3%	5.7%	0.0%	0.0%	0.1%	0.0%	0.2%	0.3%
India*	-29.4%	-31.2%	7.4%	8.7%	0.1%	0.1%	0.1%	0.0%	0.3%
Indonesia*	-43.6%	-39.5%	3.4%	2.0%	-0.1%	-0.1%	-0.1%	-0.1%	-0.4%
Korea*	-24.9%	-22.6%	6.8%	11.9%	-0.3%	0.0%	0.2%	0.1%	0.0%
Malaysia*	-21.1%	-19.1%	3.1%	1.8%	0.0%	0.1%	-0.1%	0.0%	-0.1%
Pakistan*	-35.4%	-39.6%	0.9%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%
Philippines*	-29.6%	-32.0%	3.4%	1.0%	0.0%	-0.3%	0.0%	0.1%	-0.2%
Singapore	-36.0%	-28.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Taiwan*	-19.6%	-19.0%	7.7%	11.8%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Thailand*	-16.7%	-34.0%	3.4%	2.6%	0.5%	-0.1%	-0.1%	0.2%	0.5%
<b>Americas</b>									
Argentina*	-51.0%	-39.3%	0.4%	0.2%	0.0%	0.0%	0.0%	0.0%	-0.1%
Brazil*	-48.2%	-50.0%	7.4%	7.5%	0.0%	0.0%	0.1%	0.0%	0.2%
Chile*	-38.0%	-33.9%	2.7%	0.8%	0.0%	-0.1%	-0.1%	-0.1%	-0.4%
Colombia*	-44.4%	-49.6%	1.8%	0.4%	0.0%	-0.3%	-0.2%	0.1%	-0.3%
Mexico*	-38.9%	-35.5%	6.8%	2.3%	-0.2%	0.0%	-0.3%	-0.4%	-0.9%
Peru*	-35.4%	-35.8%	1.4%	0.3%	0.0%	-0.2%	0.0%	0.0%	-0.2%
United States	-29.9%	-19.8%	2.2%	0.0%	0.0%	0.0%	0.0%	-0.2%	-0.2%

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	
<b>Other</b>									
Egypt*	-27.2%	-27.1%	0.8%	0.1%	0.0%	-0.1%	0.0%	0.0%	0.0%
Kuwait**	-25.9%	-26.8%	1.8%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%
Qatar*	-17.0%	-17.3%	1.7%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%
Saudi Arabia*	--	-24.0%	0.0%	2.6%	--	0.1%	0.0%	--	0.1%
South Africa*	-45.2%	-39.6%	6.5%	4.8%	-0.3%	-0.1%	-0.2%	-0.1%	-0.7%
Turkey*	-28.8%	-30.0%	1.9%	0.5%	0.0%	0.0%	-0.1%	0.0%	-0.1%
United Arab Emirates*	-30.1%	-27.4%	1.5%	0.6%	0.0%	-0.1%	0.0%	0.0%	-0.1%
<b>Totals</b>									
Americas	-41.3%	-45.4%	22.7%	11.4%	0.0%	-1.4%	-0.5%	0.0%	-2.0%
Europe	-35.1%	-37.2%	14.6%	5.5%	-0.2%	-0.6%	-0.3%	-0.3%	-1.3%
Asia/Pacific	-23.3%	-18.4%	48.3%	73.4%	-2.9%	-0.7%	0.0%	1.0%	-2.7%
Other	-34.6%	-31.7%	14.1%	9.6%	-0.3%	-0.2%	-0.3%	-0.2%	-1.0%
Cash	0.4%	--	0.4%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%
<b>Total</b>	<b>-30.6%</b>	<b>-23.8%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>-3.5%</b>	<b>-2.8%</b>	<b>-1.2%</b>	<b>0.5%</b>	<b>-6.8%</b>
<b>Totals</b>									
Developed	-20.1%	--	8.8%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%
Emerging*	-31.9%	-23.8%	89.1%	100.0%	-6.3%	0.0%	-1.1%	0.7%	-6.7%
Frontier**	-25.9%	--	1.8%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%
Cash	0.4%	--	0.4%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%

# Fixed Income Manager Allocation Analysis

Period Ending: March 31, 2020



	Actual \$	Actual %	Manager Contribution to Excess Return %
Angelo Gordon Credit Solutions	\$8,750,781	0.8%	0.1%
Angelo Gordon Opportunistic	\$3,063,385	0.3%	-0.1%
Angelo Gordon STAR	\$2,949,326	0.3%	-0.1%
Beach Point Select	\$48,083,380	4.2%	-0.1%
Blackrock DL Feeder IX-U	\$2,458,242	0.2%	0.0%
BlackRock Intermediate Govt	\$208,865,785	18.1%	0.0%
Brigade Capital	\$66,530,324	5.8%	-0.7%
DoubleLine	\$200,536,434	17.4%	0.0%
FIAM Bond	\$240,109,938	20.8%	-0.6%
Franklin Templeton	\$48,533,393	4.2%	-0.2%
PIMCO Diversified	\$102,730,971	8.9%	0.2%
PIMCO Private Income	\$27,263,131	2.4%	0.3%
TCP Direct Lending VIII	\$32,261,599	2.8%	-0.2%
Western TRU	\$129,900,961	11.2%	-1.3%
White Oak Yield	\$33,129,900	2.9%	-0.1%
Actual vs. Policy Weight Difference			2.1%
<b>Total</b>	<b>\$1,155,167,550</b>	<b>100.0%</b>	<b>-0.7%</b>

Fixed Income  
Risk vs. Return (3 Years)

Period Ending: March 31, 2020

Statistics Summary

3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Fixed Income	3.1%	2.9%	0.5	-0.5	1.5%
Blended Fixed Income Index	3.8%	3.5%	0.6	--	0.0%
Core Fixed	3.8%	2.4%	0.9	-0.7	1.4%
BBgBarc US Aggregate TR	4.8%	3.2%	1.0	--	0.0%
BlackRock Intermediate Govt	4.3%	2.6%	1.0	3.5	0.0%
BBgBarc US Govt Int TR	4.1%	2.6%	0.9	--	0.0%
FIAM Bond	4.4%	3.3%	0.8	-0.4	1.2%
BBgBarc US Aggregate TR	4.8%	3.2%	1.0	--	0.0%
Western TRU	1.0%	5.8%	-0.1	-0.2	5.8%
3-Month Libor Total Return USD	2.1%	0.1%	2.2	--	0.0%
Opportunistic Credit	2.2%	5.8%	0.1	0.1	2.6%
BBgBarc BA Intermediate HY	1.9%	6.5%	0.0	--	0.0%
Angelo Gordon Opportunistic	5.1%	17.1%	0.2	0.0	17.1%
BBgBarc US Aggregate TR	4.8%	3.2%	1.0	--	0.0%
Angelo Gordon STAR	12.5%	10.8%	1.0	0.7	10.9%
BBgBarc US Aggregate TR	4.8%	3.2%	1.0	--	0.0%
Beach Point Select	1.7%	7.7%	0.0	-0.1	3.0%
BBgBarc BA Intermediate HY	1.9%	6.5%	0.0	--	0.0%
Brigade Capital	-2.9%	10.9%	-0.4	-0.8	5.8%
BBgBarc BA Intermediate HY	1.9%	6.5%	0.0	--	0.0%
Franklin Templeton	-2.0%	7.0%	-0.5	-0.7	7.8%
BBgBarc Multiverse TR	3.4%	3.9%	0.4	--	0.0%

**Statistics Summary**

**3 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Private Credit	6.3%	2.3%	2.0	-0.6	3.4%
Cliffwater Direct Lending Index	8.5%	3.5%	1.9	--	0.0%
TCP Direct Lending VIII	5.3%	3.5%	1.0	-0.6	5.5%
Cliffwater Direct Lending Index	8.5%	3.5%	1.9	--	0.0%

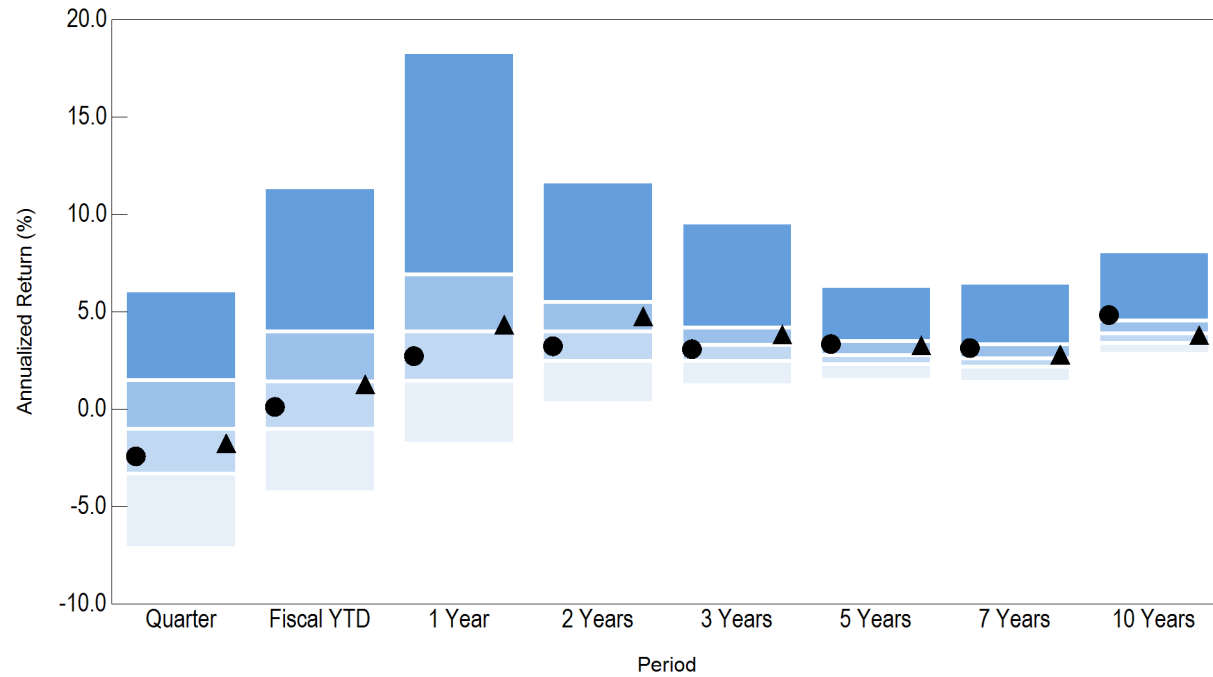


Statistics Summary

5 Years

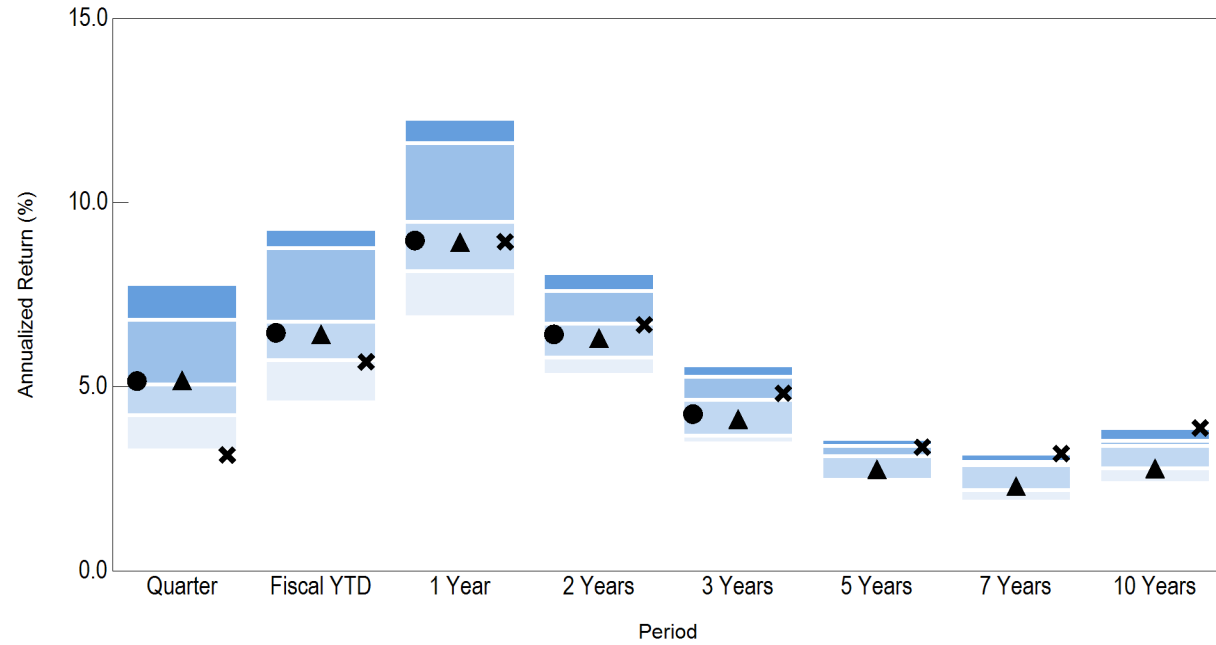
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Fixed Income	3.3%	3.1%	0.7	0.0	1.9%
Blended Fixed Income Index	3.3%	3.3%	0.6	--	0.0%
Core Fixed	3.2%	2.7%	0.8	-0.1	1.7%
BBgBarc US Aggregate TR	3.4%	3.1%	0.7	--	0.0%
FIAM Bond	3.4%	3.3%	0.7	0.1	1.1%
BBgBarc US Aggregate TR	3.4%	3.1%	0.7	--	0.0%
Opportunistic Credit	4.0%	5.3%	0.5	0.3	2.9%
BBgBarc BA Intermediate HY	3.1%	5.9%	0.3	--	0.0%
Angelo Gordon Opportunistic	5.8%	13.5%	0.3	0.2	13.7%
BBgBarc US Aggregate TR	3.4%	3.1%	0.7	--	0.0%
Angelo Gordon STAR	10.0%	8.9%	1.0	0.7	9.2%
BBgBarc US Aggregate TR	3.4%	3.1%	0.7	--	0.0%
Beach Point Select	4.5%	6.7%	0.5	0.5	2.9%
BBgBarc BA Intermediate HY	3.1%	5.9%	0.3	--	0.0%
Brigade Capital	0.3%	10.1%	-0.1	-0.5	5.6%
BBgBarc BA Intermediate HY	3.1%	5.9%	0.3	--	0.0%
Franklin Templeton	0.4%	7.2%	-0.1	-0.3	8.5%
BBgBarc Multiverse TR	2.7%	4.6%	0.3	--	0.0%

InvMetrics All DB Total Fix Inc Net Return Comparison



	Return (Rank)							
	Quarter	Fiscal YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	6.1	11.4	18.3	11.7	9.6	6.3	6.5	8.1
25th Percentile	1.5	4.0	6.9	5.5	4.2	3.5	3.3	4.6
Median	-1.0	1.4	4.0	4.0	3.3	2.8	2.6	3.9
75th Percentile	-3.3	-1.0	1.5	2.5	2.5	2.3	2.2	3.4
95th Percentile	-7.1	-4.2	-1.7	0.3	1.2	1.6	1.4	2.8
# of Portfolios	331	331	330	326	316	297	277	216
● Fixed Income	-2.4 (69)	0.1 (66)	2.7 (67)	3.2 (61)	3.1 (60)	3.3 (28)	3.1 (31)	4.8 (19)
▲ Blended Fixed Income Index	-1.8 (62)	1.3 (52)	4.3 (47)	4.8 (38)	3.8 (32)	3.3 (30)	2.8 (43)	3.8 (58)

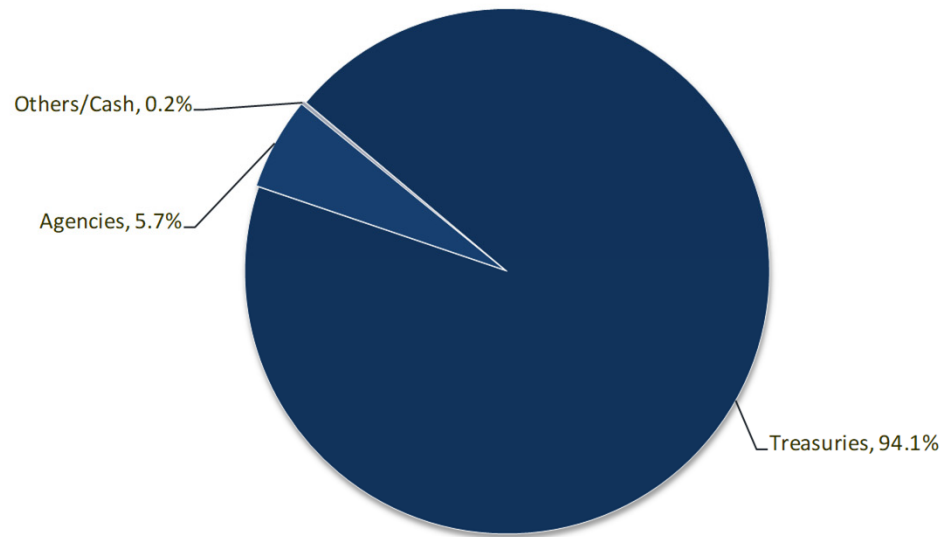
eV US Government Fixed Inc Net Return Comparison



	Return (Rank)							
	Quarter	Fiscal YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	7.8	9.3	12.3	8.1	5.6	3.6	3.2	3.9
25th Percentile	6.8	8.8	11.6	7.6	5.3	3.4	3.0	3.6
Median	5.1	6.8	9.5	6.7	4.7	3.1	2.9	3.4
75th Percentile	4.2	5.7	8.1	5.8	3.7	2.5	2.2	2.8
95th Percentile	3.3	4.6	6.9	5.3	3.5	2.4	1.9	2.4
# of Portfolios	12	12	12	12	12	12	12	12
● BlackRock Intermediate Govt	5.2 (46)	6.5 (60)	9.0 (61)	6.4 (65)	4.3 (66)	-- (--)	-- (--)	-- (--)
▲ BBgBarc US Govt Int TR	5.2 (46)	6.4 (61)	8.9 (62)	6.3 (67)	4.1 (68)	2.8 (60)	2.3 (64)	2.8 (76)
✕ BBgBarc US Aggregate TR	3.1 (99)	5.7 (76)	8.9 (62)	6.7 (56)	4.8 (40)	3.4 (28)	3.2 (5)	3.9 (5)

BlackRock Intermediate Govt Market Duration Pool  
 Bond Sector Allocation

Period Ending: March 31, 2020



Sector	Account Weight	BBgBarc Intermediate	
		Govt Weight	Difference
Treasuries	94.1%	96.7%	-2.6%
Agencies	5.7%	3.3%	2.4%
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	0.2%	0.0%	0.2%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>

BlackRock Intermediate Govt Market Duration Pool  
 Bond Summary Statistics

Period Ending: March 31, 2020

Portfolio Characteristics		Portfolio
Total Number of Securities		232
Total Market Value	\$	208,865,785
Current Coupon		2.71
Yield to Maturity		0.42
Average Life		4.01
Duration		3.74
Quality		AA+

BBgBarc Intermediate Govt	
Current Coupon	2.10
Yield to Maturity	0.40
Average Life	4.01
Duration	3.79
Quality	AA+

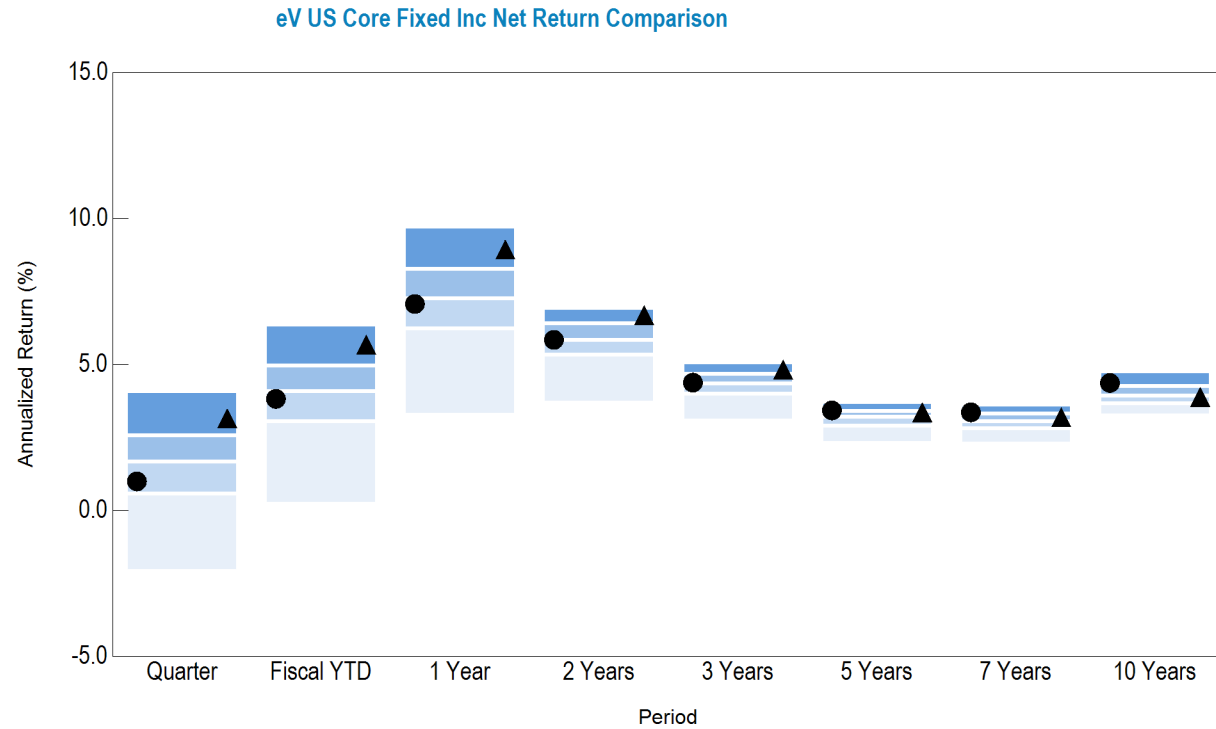
Yield to Maturity	
Range	% Held
0.0 - 5.0	100.0
5.0 - 7.0	0.0
7.0 - 9.0	0.0
9.0 - 11.0	0.0
11.0 - 13.0	0.0
13.0+	0.0
Unclassified	0.0

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	23.2
2.0 - 4.0	36.6
4.0 - 6.0	22.8
6.0 - 8.0	15.5
8.0+	2.0
Unclassified	0.0

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

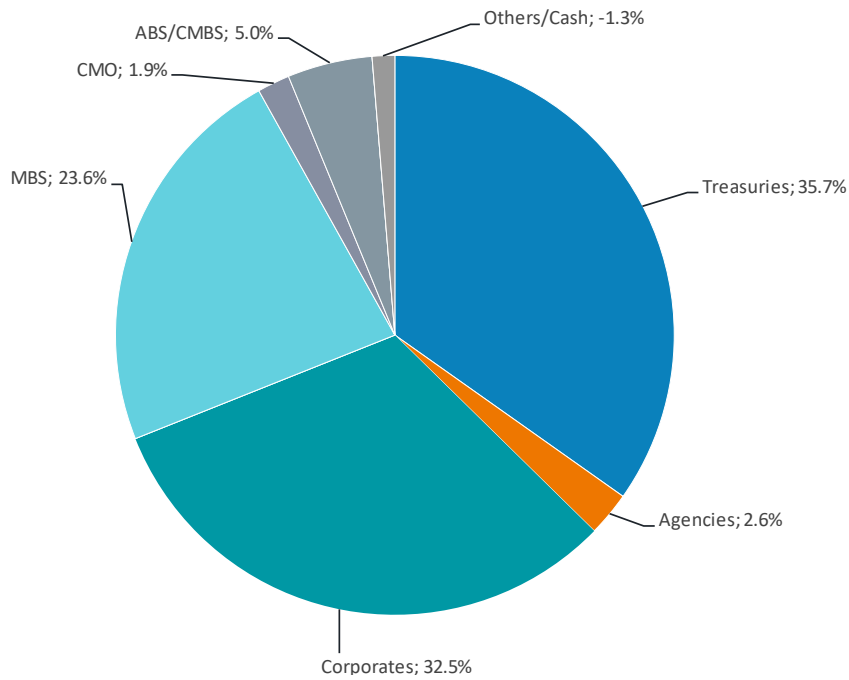
Coupon	
Range	% Held
0.0 - 5.0	100.0
5.0 - 7.0	0.0
7.0 - 9.0	0.0
9.0 - 10.0	0.0
10.0+	0.0
Unclassified	0.0



	Return (Rank)							
	Quarter	Fiscal YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	4.1	6.3	9.7	6.9	5.1	3.7	3.6	4.8
25th Percentile	2.6	5.0	8.3	6.4	4.7	3.4	3.3	4.3
Median	1.7	4.1	7.3	5.9	4.4	3.2	3.1	3.9
75th Percentile	0.6	3.1	6.3	5.3	4.0	2.9	2.8	3.7
95th Percentile	-2.1	0.2	3.3	3.7	3.1	2.3	2.3	3.3
# of Portfolios	145	144	144	141	141	138	136	125
● FIAM Bond	1.0 (69)	3.8 (58)	7.1 (57)	5.8 (51)	4.4 (50)	3.4 (25)	3.4 (20)	4.4 (20)
▲ BBgBarc US Aggregate TR	3.1 (15)	5.7 (12)	8.9 (13)	6.7 (15)	4.8 (15)	3.4 (30)	3.2 (39)	3.9 (56)

FIAM Bond Market Duration Pool  
Bond Sector Allocation

Period Ending: March 31, 2020



Sector	BBgBarc Aggregate		
	Account Weight	Weight	Difference
Treasuries	35.7%	40.3%	-4.6%
Agencies	2.6%	5.8%	-3.2%
Corporates	32.5%	24.7%	7.8%
Utilities	0.0%	0.0%	0.0%
Foreign	0.0%	0.0%	0.0%
MBS	23.6%	26.7%	-3.1%
CMO	1.9%	0.0%	1.9%
ABS/CMBS	5.0%	2.5%	2.5%
Municipals	0.0%	0.0%	0.0%
Others/Cash	-1.3%	0.0%	-1.4%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>

FIAM Bond Market Duration Pool  
Bond Summary Statistics

Period Ending: March 31, 2020

Portfolio Characteristics		
		Portfolio
Total Number of Securities		1,058
Total Market Value	\$	240,109,938
Current Coupon		3.39
Yield to Maturity		2.66
Average Life		8.32
Duration		5.77
Quality		AA-

BBgBarc Aggregate	
	3.15
	1.65
	7.85
	5.54
	AA+

Yield to Maturity	
Range	% Held
0.0 - 5.0	74.5
5.0 - 7.0	5.6
7.0 - 9.0	2.1
9.0 - 11.0	1.5
11.0 - 13.0	1.1
13.0+	15.3
Unclassified	0.0

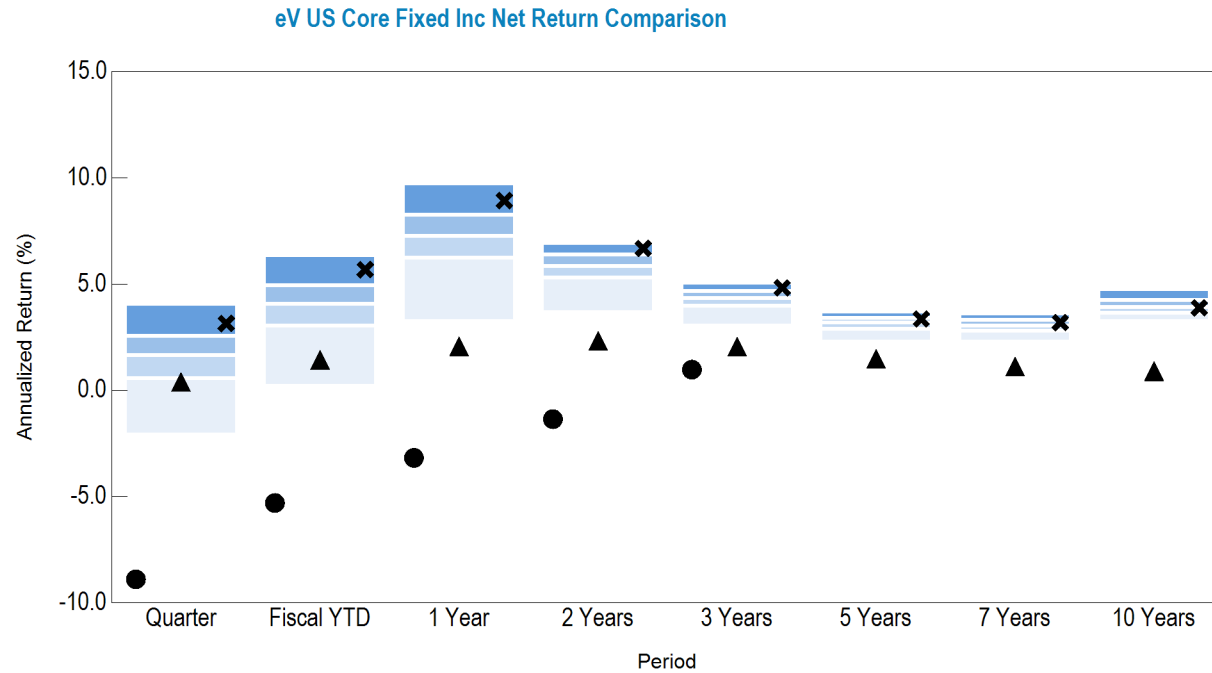
Average Life	
Range	% Held
0.0 - 1.0	0.6
1.0 - 3.0	11.1
3.0 - 5.0	37.8
5.0 - 10.0	28.0
10.0 - 20.0	5.2
20.0+	17.4
Unclassified	0.0

Duration	
Range	% Held
0.0 - 1.0	7.4
1.0 - 3.0	21.3
3.0 - 5.0	21.9
5.0 - 7.0	14.1
7.0 - 10.0	8.9
10.0+	26.5
Unclassified	0.0

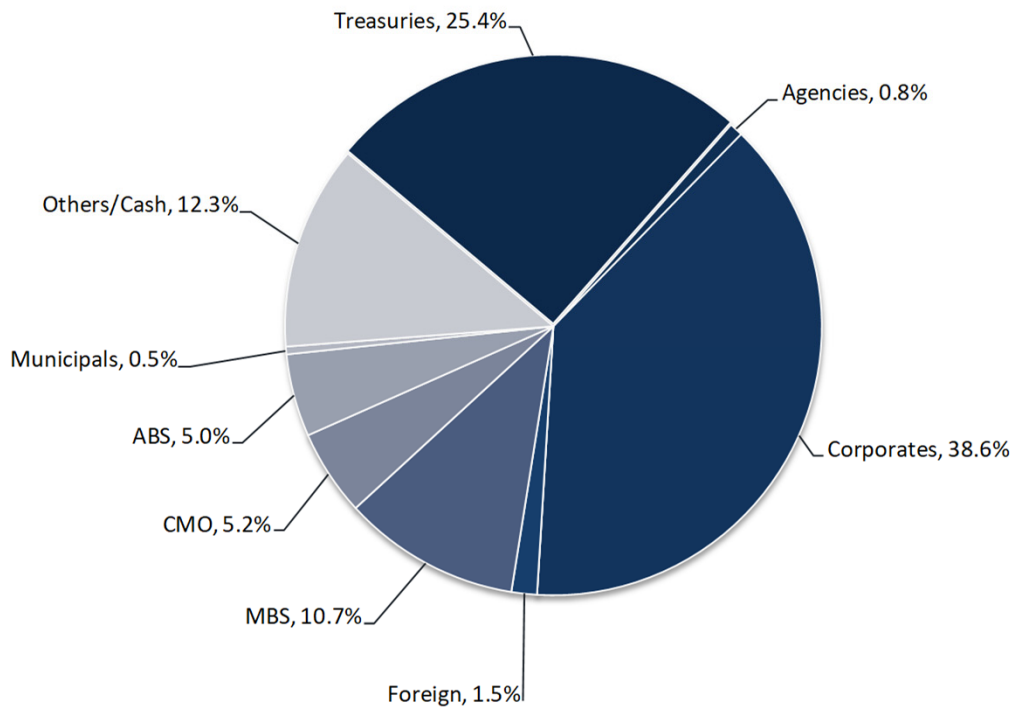
Quality	
Range	% Held
Govt (10)	53.1
Aaa (10)	3.2
Aa (9)	2.7
A (8)	20.6
Baa (7)	18.3
Below Baa (6-1)	1.3
Other	0.8

Coupon	
Range	% Held
0.0 - 5.0	86.8
5.0 - 7.0	8.7
7.0 - 9.0	1.1
9.0 - 11.0	0.0
11.0 - 13.0	0.0
13.0+	3.4
Unclassified	0.0





	Quarter	Fiscal YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
<b>Return (Rank)</b>								
5th Percentile	4.1	6.3	9.7	6.9	5.1	3.7	3.6	4.8
25th Percentile	2.6	5.0	8.3	6.4	4.7	3.4	3.3	4.3
Median	1.7	4.1	7.3	5.9	4.4	3.2	3.1	3.9
75th Percentile	0.6	3.1	6.3	5.3	4.0	2.9	2.8	3.7
95th Percentile	-2.1	0.2	3.3	3.7	3.1	2.3	2.3	3.3
# of Portfolios	145	144	144	141	141	138	136	125
● Western TRU	-8.9 (99)	-5.3 (99)	-3.2 (99)	-1.4 (99)	1.0 (99)	-- (--)	-- (--)	-- (--)
▲ 3-Month Libor Total Return USD	0.4 (80)	1.4 (92)	2.1 (99)	2.3 (99)	2.1 (99)	1.5 (99)	1.1 (99)	0.9 (99)
✕ BBgBarc US Aggregate TR	3.1 (15)	5.7 (12)	8.9 (13)	6.7 (15)	4.8 (15)	3.4 (30)	3.2 (39)	3.9 (56)



Sector	Account Weight	BBgBarc Aggregate	
		Weight	Difference
Treasuries	25.4%	40.3%	-14.9%
Agencies	0.8%	5.8%	-5.0%
Corporates	38.6%	24.7%	14.0%
Utilities	0.0%	0.0%	0.0%
Foreign	1.5%	0.0%	1.5%
MBS	10.7%	26.7%	-16.1%
CMO	5.2%	0.0%	5.2%
ABS	5.0%	2.5%	2.5%
Municipals	0.5%	0.0%	0.5%
Others/Cash	12.3%	0.0%	12.3%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>-0.1%</b>

Portfolio Characteristics		Portfolio
Total Number of Securities		5,527
Total Market Value	\$	129,900,961
Current Coupon		3.09
Yield to Maturity		4.33
Average Life		7.12
Duration		0.15
Quality		A-

BBgBarc Aggregate
3.15
1.65
7.85
5.54
AA+

Yield to Maturity	
Range	% Held
0.0 - 5.0	60.6
5.0 - 7.0	19.0
7.0 - 9.0	7.7
9.0 - 11.0	4.7
11.0 - 13.0	3.2
13.0+	6.2
Unclassified	-1.5

Average Life	
Range	% Held
0.0 - 1.0	14.7
1.0 - 3.0	13.1
3.0 - 5.0	24.6
5.0 - 10.0	16.5
10.0 - 20.0	10.1
20.0+	21.0
Unclassified	0.0

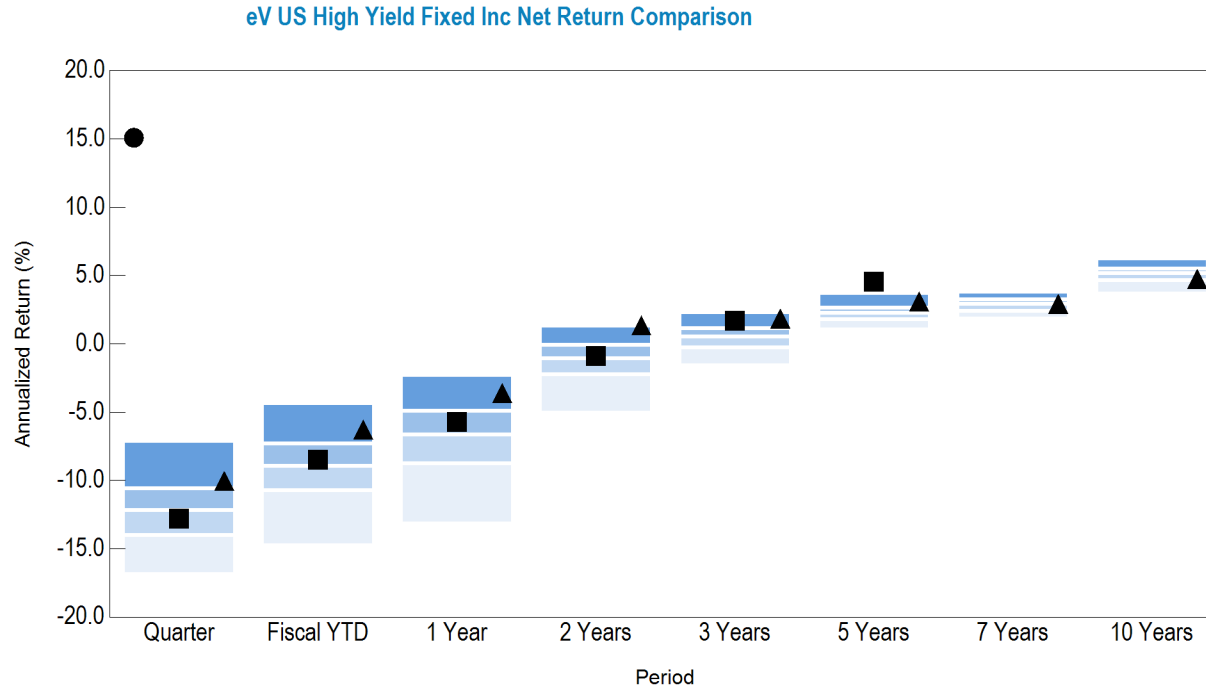
Duration	
Range	% Held
< 1.0	31.3
1.0 - 3.0	11.9
3.0 - 5.0	22.3
5.0 - 7.0	11.4
7.0 - 10.0	6.0
10.0+	17.1
Unclassified	0.0

\*Unclassified includes negative YTM

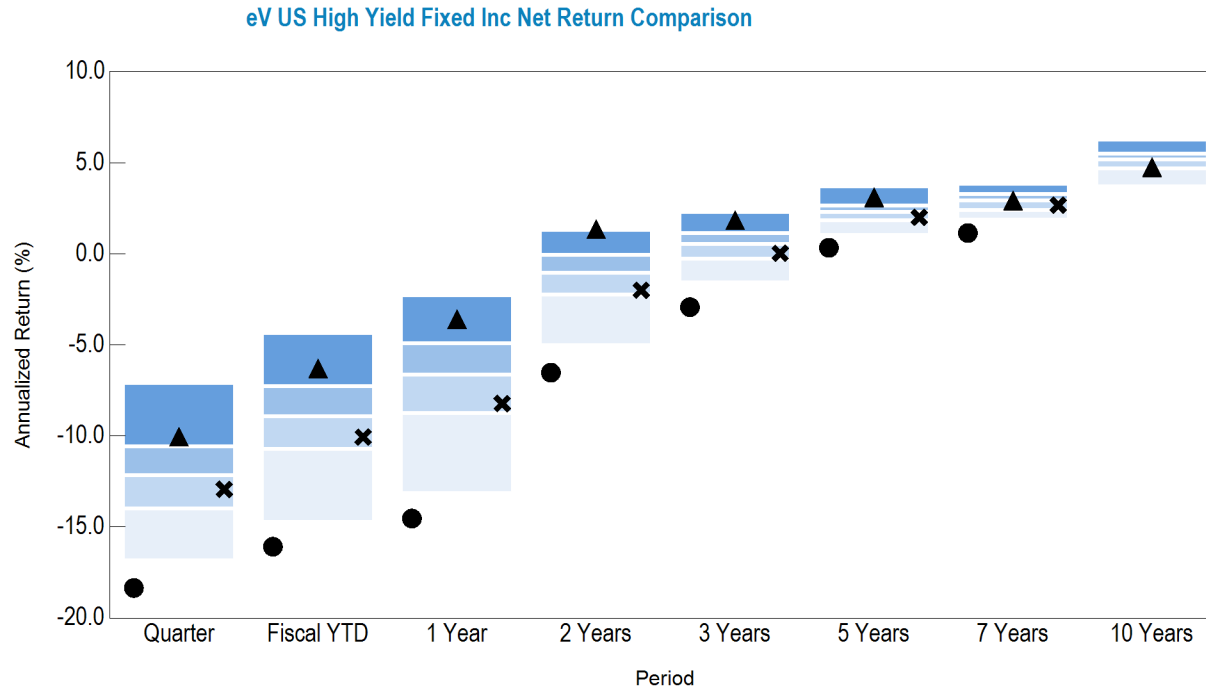
Quality	
Range	% Held
Govt* (10)	6.6
Aaa (10)	21.7
Aa (9)	2.8
A (8)	22.2
Baa (7)	23.1
Below Baa (6-1)	23.6
Other	0.1

Coupon	
Range	% Held
0.0 - 5.0	68.1
5.0 - 7.0	20.0
7.0 - 9.0	10.1
9.0 - 10.0	0.5
10.0+	1.4
Unclassified	0.0

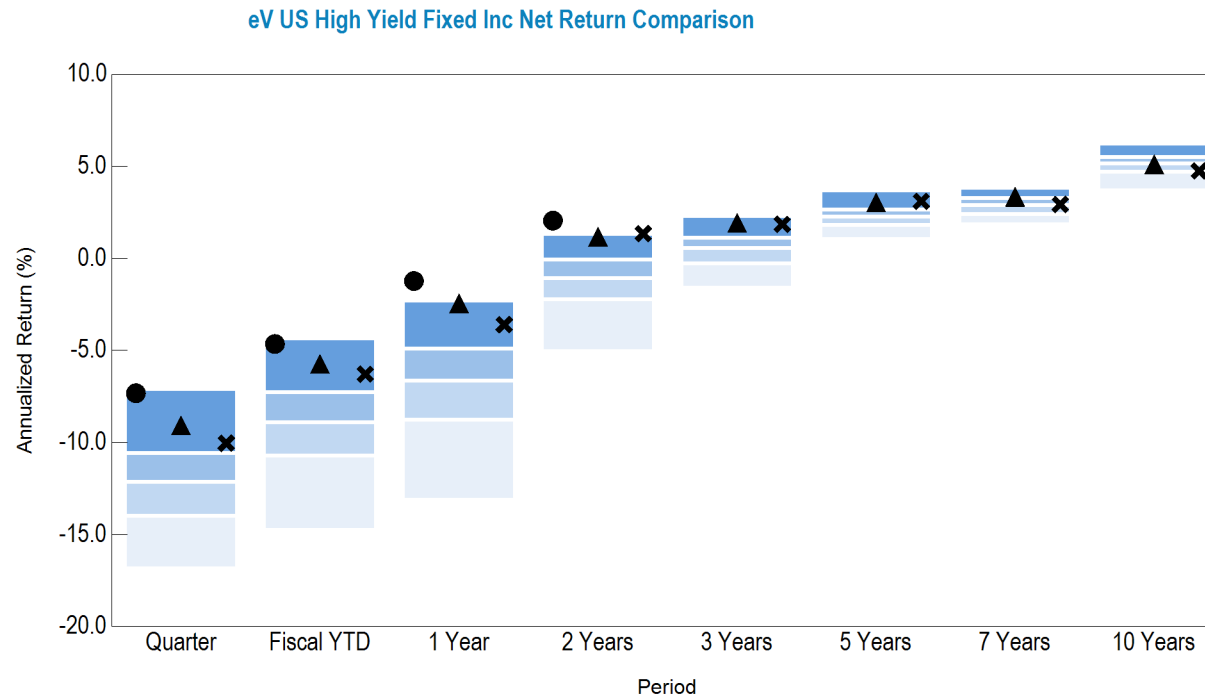
\*Govt is specifically U.S Govt securities



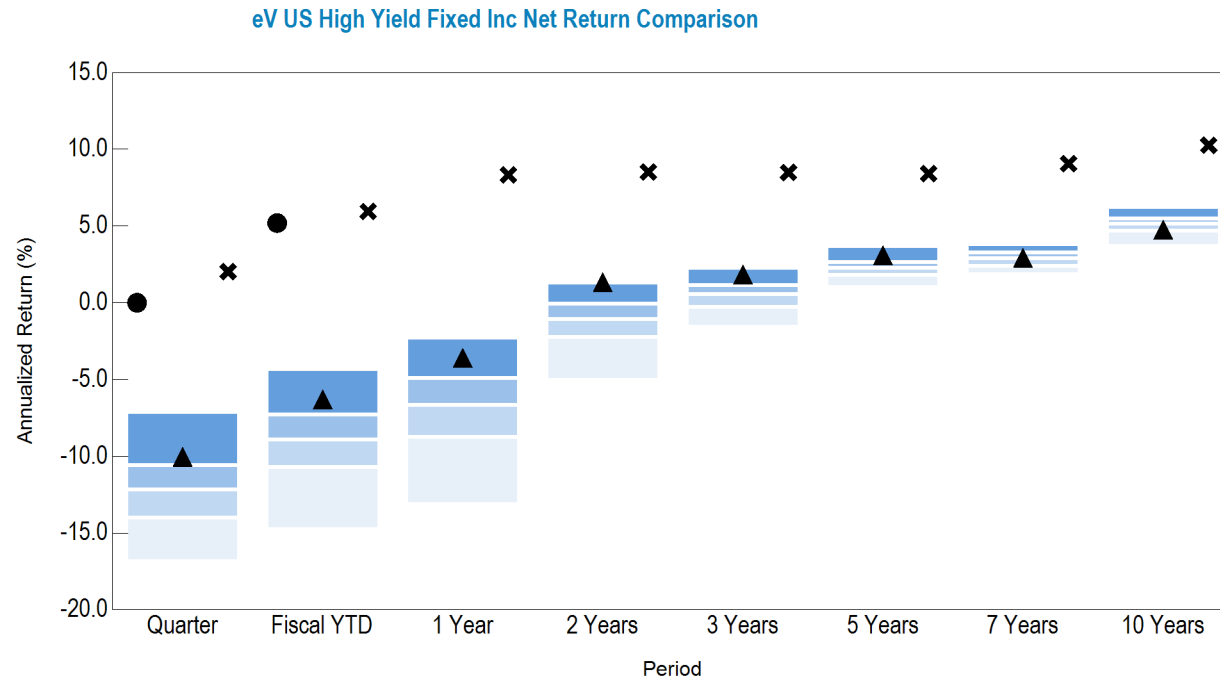
	Return (Rank)							
	Quarter	Fiscal YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	-7.1	-4.4	-2.3	1.3	2.3	3.7	3.8	6.2
25th Percentile	-10.6	-7.3	-4.9	-0.1	1.2	2.7	3.3	5.5
Median	-12.1	-8.9	-6.6	-1.0	0.6	2.3	2.9	5.2
75th Percentile	-14.0	-10.7	-8.7	-2.2	-0.2	1.9	2.4	4.7
95th Percentile	-16.8	-14.7	-13.1	-5.0	-1.6	1.1	1.9	3.7
# of Portfolios	144	142	142	140	136	124	104	84
● Angelo Gordon Credit Solutions	15.1 (1)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
■ Beach Point Select	-12.8 (58)	-8.5 (45)	-5.7 (34)	-0.9 (48)	1.7 (9)	4.5 (2)	-- (--)	-- (--)
▲ BBgBarc BA Intermediate HY	-10.0 (19)	-6.3 (15)	-3.6 (15)	1.3 (5)	1.9 (7)	3.1 (12)	2.9 (51)	4.8 (72)



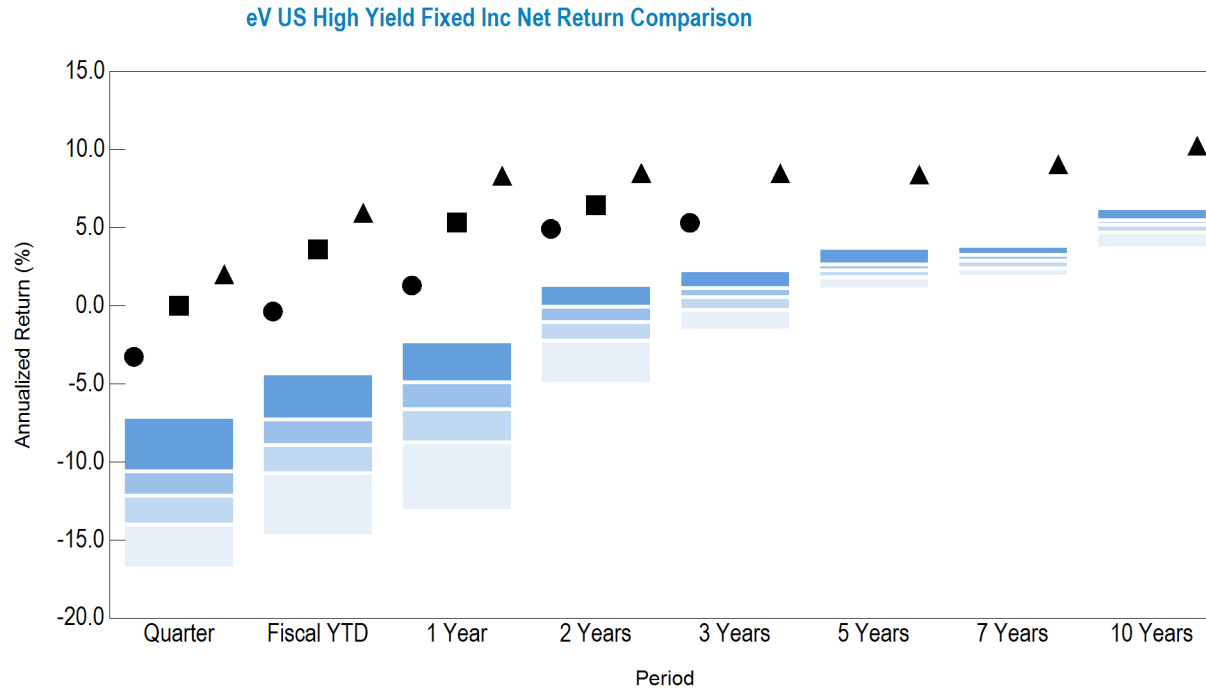
	Return (Rank)							
	Quarter	Fiscal YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	-7.1	-4.4	-2.3	1.3	2.3	3.7	3.8	6.2
25th Percentile	-10.6	-7.3	-4.9	-0.1	1.2	2.7	3.3	5.5
Median	-12.1	-8.9	-6.6	-1.0	0.6	2.3	2.9	5.2
75th Percentile	-14.0	-10.7	-8.7	-2.2	-0.2	1.9	2.4	4.7
95th Percentile	-16.8	-14.7	-13.1	-5.0	-1.6	1.1	1.9	3.7
# of Portfolios	144	142	142	140	136	124	104	84
● Brigade Capital	-18.4 (98)	-16.1 (98)	-14.5 (99)	-6.5 (99)	-2.9 (99)	0.3 (99)	1.1 (99)	-- (--)
▲ BBgBarc BA Intermediate HY	-10.0 (19)	-6.3 (15)	-3.6 (15)	1.3 (5)	1.9 (7)	3.1 (12)	2.9 (51)	4.8 (72)
✕ 50% Barclays HY/ 50% Bank Loan	-12.9 (60)	-10.1 (68)	-8.2 (73)	-2.0 (74)	0.0 (71)	2.0 (66)	2.7 (68)	-- (--)



	Return (Rank)															
	Quarter		Fiscal YTD		1 Year		2 Years		3 Years		5 Years		7 Years		10 Years	
5th Percentile	-7.1	(6)	-4.4	(7)	-2.3	(2)	1.3	(3)	2.3	(--)	3.7	(--)	3.8	(--)	6.2	(--)
25th Percentile	-10.6	(11)	-7.3	(11)	-4.9	(7)	-0.1	(7)	1.2	(6)	2.7	(13)	3.3	(24)	5.5	(55)
Median	-12.1	(19)	-8.9	(15)	-6.6	(15)	-1.0	(5)	0.6	(7)	2.3	(12)	2.9	(51)	5.2	(72)
75th Percentile	-14.0		-10.7		-8.7		-2.2		-0.2		1.9		2.4		4.7	
95th Percentile	-16.8		-14.7		-13.1		-5.0		-1.6		1.1		1.9		3.7	
# of Portfolios	144		142		142		140		136		124		104		84	
● PIMCO Diversified	-7.3	(6)	-4.6	(7)	-1.2	(2)	2.1	(3)	--	(--)	--	(--)	--	(--)	--	(--)
▲ Blended PIMCO Diversified Index	-9.1	(11)	-5.7	(11)	-2.4	(7)	1.2	(7)	1.9	(6)	3.1	(13)	3.3	(24)	5.1	(55)
✕ BBgBarc BA Intermediate HY	-10.0	(19)	-6.3	(15)	-3.6	(15)	1.3	(5)	1.9	(7)	3.1	(12)	2.9	(51)	4.8	(72)

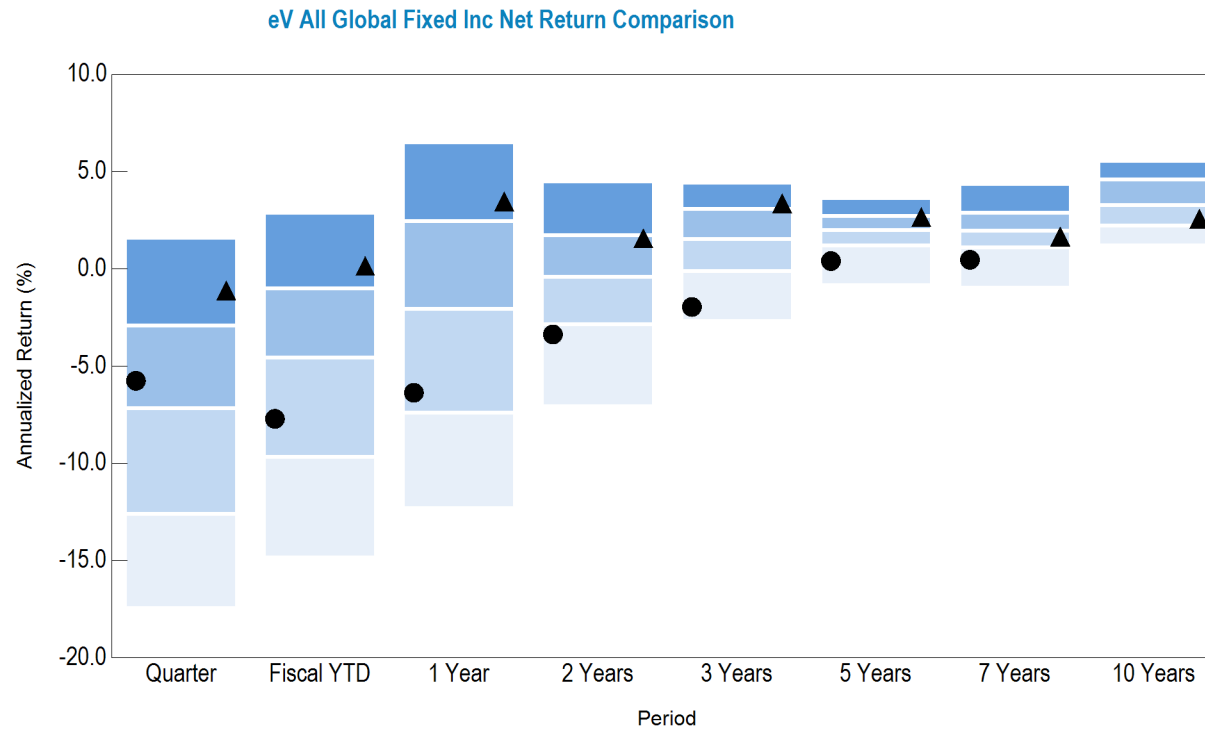


	Return (Rank)															
	Quarter		Fiscal YTD		1 Year		2 Years		3 Years		5 Years		7 Years		10 Years	
5th Percentile	-7.1	(1)	-4.4	(1)	-2.3	(--)	1.3	(--)	2.3	(--)	3.7	(--)	3.8	(--)	6.2	(--)
25th Percentile	-10.6	(19)	-7.3	(15)	-4.9	(15)	-0.1	(5)	1.2	(7)	2.7	(12)	3.3	(51)	5.5	(72)
Median	-12.1		-8.9		-6.6		-1.0		0.6		2.3		2.9		5.2	
75th Percentile	-14.0		-10.7		-8.7		-2.2		-0.2		1.9		2.4		4.7	
95th Percentile	-16.8		-14.7		-13.1		-5.0		-1.6		1.1		1.9		3.7	
# of Portfolios	144		142		142		140		136		124		104		84	
● PIMCO Private Income	0.0	(1)	5.2	(1)	--	(--)	--	(--)	--	(--)	--	(--)	--	(--)	--	(--)
▲ BBgBarc BA Intermediate HY	-10.0	(19)	-6.3	(15)	-3.6	(15)	1.3	(5)	1.9	(7)	3.1	(12)	2.9	(51)	4.8	(72)
✕ Cliffwater Direct Lending Index	2.0	(1)	5.9	(1)	8.3	(1)	8.5	(1)	8.5	(1)	8.4	(1)	9.1	(1)	10.3	(1)



	Return (Rank)							
	Quarter	Fiscal YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	-7.1	-4.4	-2.3	1.3	2.3	3.7	3.8	6.2
25th Percentile	-10.6	-7.3	-4.9	-0.1	1.2	2.7	3.3	5.5
Median	-12.1	-8.9	-6.6	-1.0	0.6	2.3	2.9	5.2
75th Percentile	-14.0	-10.7	-8.7	-2.2	-0.2	1.9	2.4	4.7
95th Percentile	-16.8	-14.7	-13.1	-5.0	-1.6	1.1	1.9	3.7
# of Portfolios	144	142	142	140	136	124	104	84
● TCP Direct Lending VIII	-3.3 (2)	-0.4 (1)	1.3 (1)	4.9 (1)	5.3 (1)	-- (--)	-- (--)	-- (--)
■ White Oak Yield	0.0 (1)	3.6 (1)	5.3 (1)	6.4 (1)	-- (--)	-- (--)	-- (--)	-- (--)
▲ Cliffwater Direct Lending Index	2.0 (1)	5.9 (1)	8.3 (1)	8.5 (1)	8.5 (1)	8.4 (1)	9.1 (1)	10.3 (1)

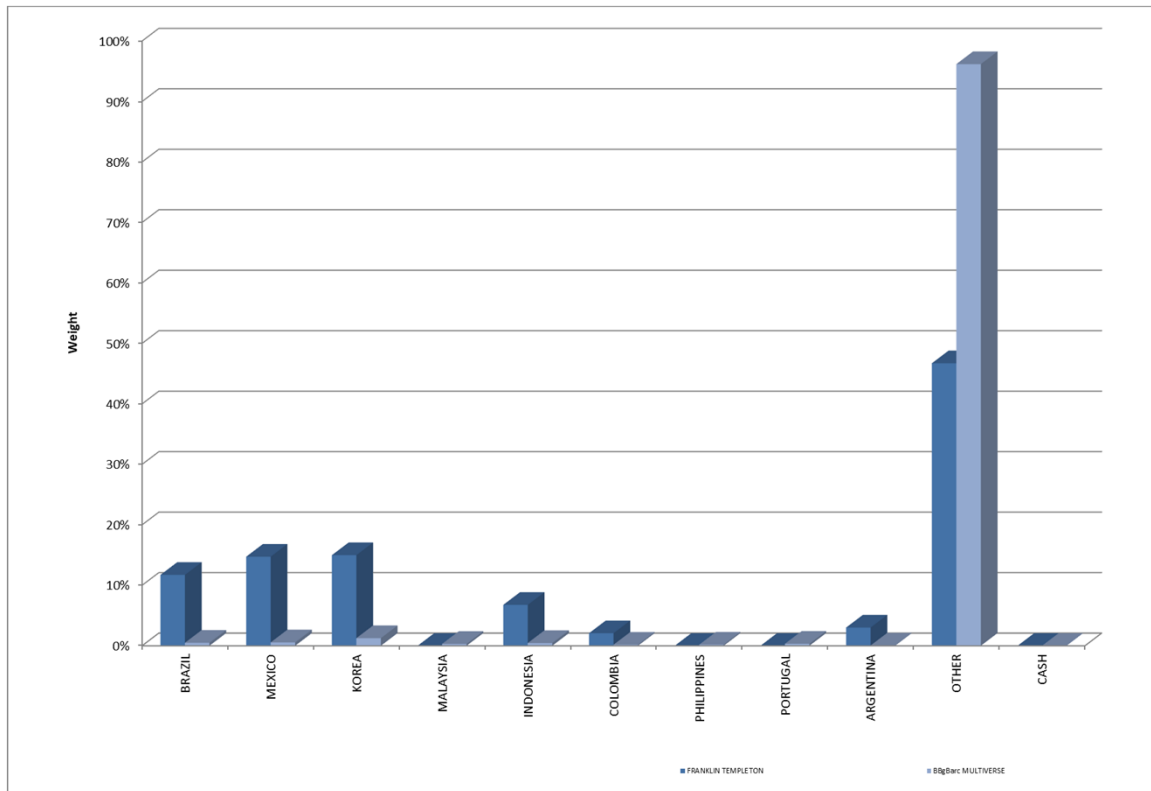




	Return (Rank)							
	Quarter	Fiscal YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	1.6	2.9	6.5	4.5	4.4	3.6	4.4	5.5
25th Percentile	-2.9	-1.0	2.5	1.7	3.1	2.7	2.9	4.6
Median	-7.1	-4.5	-2.0	-0.4	1.6	2.0	2.0	3.3
75th Percentile	-12.6	-9.6	-7.4	-2.8	-0.1	1.2	1.1	2.3
95th Percentile	-17.4	-14.8	-12.3	-7.0	-2.7	-0.8	-1.0	1.2
# of Portfolios	249	237	237	232	225	202	178	121
● Franklin Templeton	-5.8 (41)	-7.7 (64)	-6.4 (70)	-3.4 (80)	-2.0 (91)	0.4 (85)	0.5 (86)	-- (--)
▲ BBgBarc Multiverse TR	-1.1 (16)	0.2 (18)	3.5 (19)	1.6 (27)	3.4 (17)	2.7 (27)	1.7 (59)	2.6 (64)

Franklin Templeton  
Portfolio Country Weights

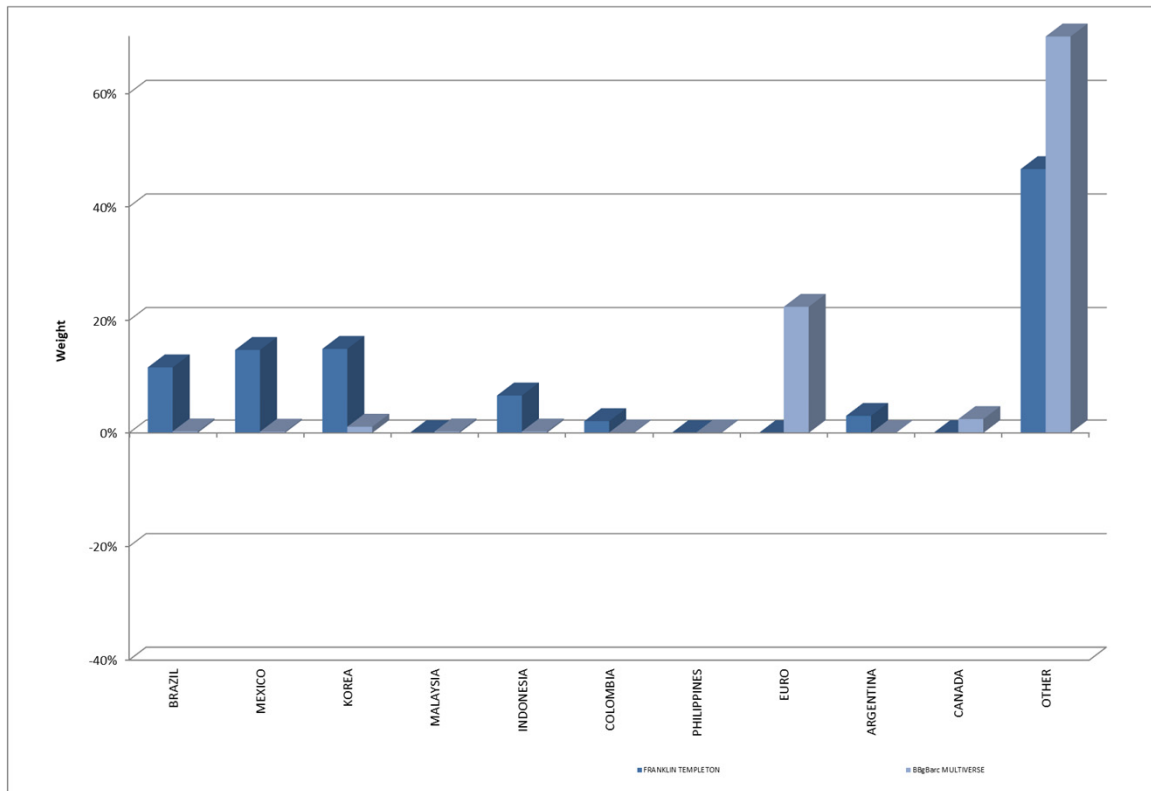
Period Ending: March 31, 2020



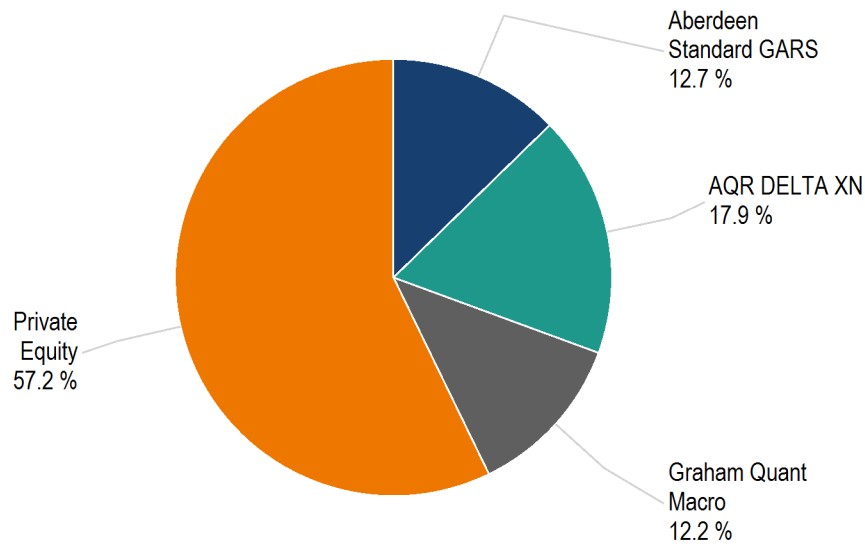
COUNTRY	MARKET VALUE	FRANKLIN TEMPLETON	BBgBarc MULTIVERSE	DIFF
BRAZIL	\$ 5,690	11.7%	0.5%	+11.2%
MEXICO	\$ 7,148	14.7%	0.6%	+14.2%
KOREA	\$ 7,272	15.0%	1.3%	+13.7%
MALAYSIA	\$ -	0.0%	0.3%	-0.3%
INDONESIA	\$ 3,284	6.8%	0.5%	+6.3%
COLOMBIA	\$ 1,007	2.1%	0.2%	+1.9%
PHILIPPINES	\$ -	0.0%	0.2%	-0.2%
PORTUGAL	\$ -	0.0%	0.3%	-0.3%
ARGENTINA	\$ 1,463	3.0%	0.1%	+3.0%
OTHER	\$ 22,670	46.7%	96.2%	-49.5%
CASH	\$ -	0.0%	0.0%	0.0%
	\$ 48,533	100.0%	100.0%	0.0%

Franklin Templeton  
Portfolio Currency Exposures

Period Ending: March 31, 2020



CURRENCY	MARKET VALUE	FRANKLIN TEMPLETON	BBgBarc MULTIVERSE	DIFF
BRAZIL	\$ 5,690	11.7%	0.3%	+11.4%
MEXICO	\$ 7,180	14.8%	0.2%	+14.6%
KOREA	\$ 7,272	15.0%	1.1%	+13.9%
MALAYSIA	\$ -	0.0%	0.3%	-0.3%
INDONESIA	\$ 3,284	6.8%	0.3%	+6.5%
COLOMBIA	\$ 1,007	2.1%	0.1%	+2.0%
PHILIPPINES	\$ -	0.0%	0.1%	-0.1%
EURO	\$ 0	0.0%	22.4%	-22.4%
ARGENTINA	\$ 1,463	3.0%	0.0%	+3.0%
CANADA	\$ -	0.0%	2.5%	-2.5%
OTHER	\$ 22,638	46.6%	72.8%	-26.2%
	\$ 48,533	100.0%	100.0%	0.0%



	Actual \$	Actual %	Manager Contribution to Excess Return %
Aberdeen Standard GARS	\$73,515,573	12.7%	-0.8%
AQR DELTA XN	\$103,557,464	17.9%	-6.1%
Graham Quant Macro	\$70,463,250	12.2%	0.0%
Private Equity	\$331,252,571	57.2%	-1.4%
Actual vs. Policy Weight Difference			0.8%
<b>Total</b>	<b>\$578,788,858</b>	<b>100.0%</b>	<b>-7.4%</b>

Statistics Summary

3 Years

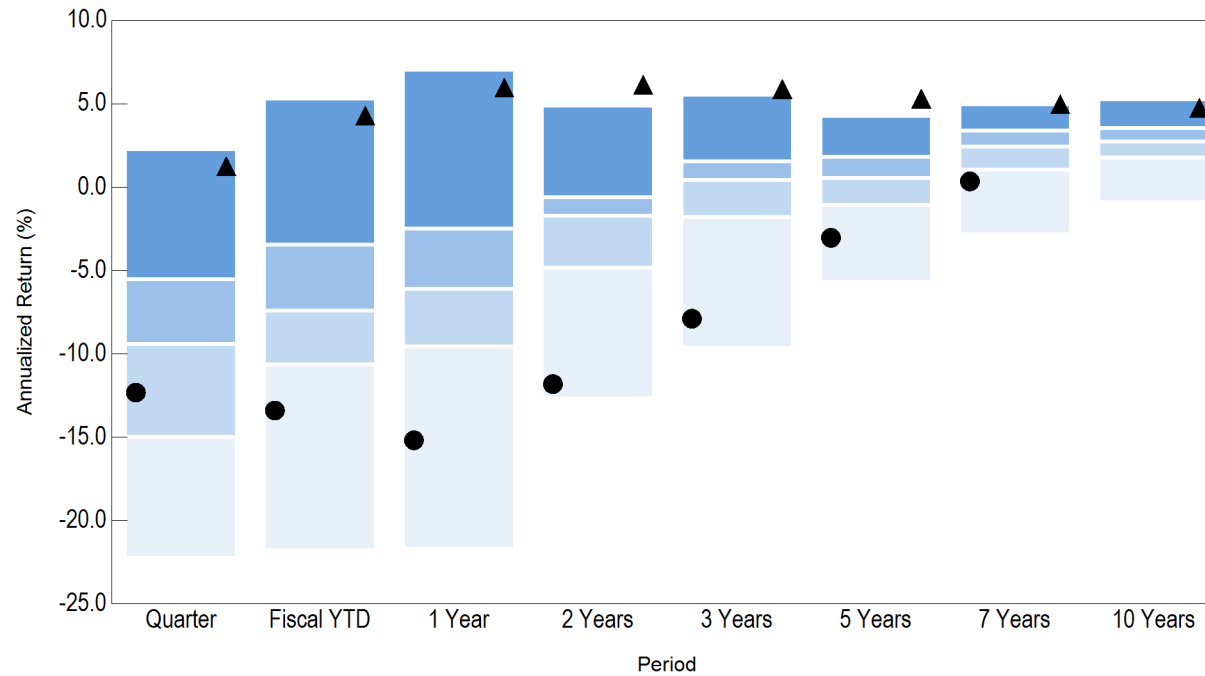
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Alternatives	4.3%	7.3%	0.4	-0.8	8.3%
Blended Alternatives Index	10.8%	6.4%	1.4	--	0.0%
Private Equity	16.2%	11.5%	1.3	0.1	14.1%
Blended Private Equity Index	15.2%	12.5%	1.1	--	0.0%
Hedge Fund/Absolute Return	-7.9%	6.6%	-1.5	-2.1	6.6%
Libor 1 month +4%	5.9%	0.2%	26.3	--	0.0%
AQR DELTA XN	-15.2%	10.9%	-1.6	-1.9	10.9%
Libor 1 month +4%	5.9%	0.2%	26.3	--	0.0%
Aberdeen Standard GARS	1.1%	4.5%	-0.1	-1.1	4.5%
Libor 1 month +4%	5.9%	0.2%	26.3	--	0.0%

**Statistics Summary**

**5 Years**

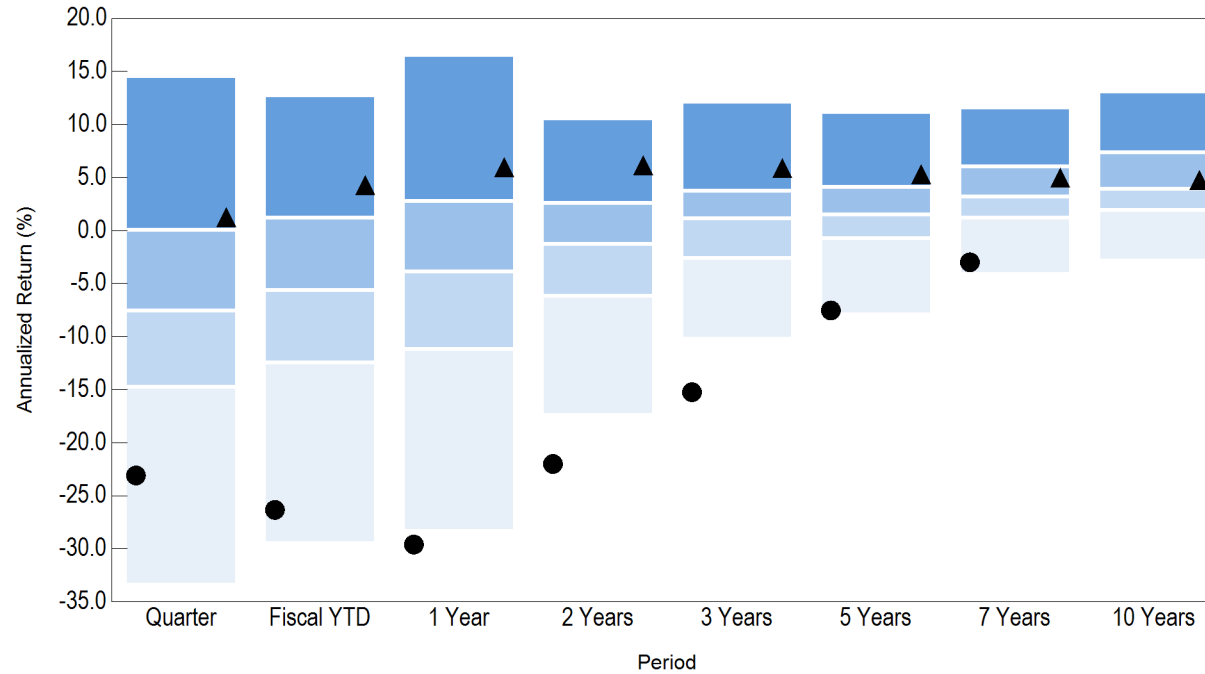
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Alternatives	6.0%	6.8%	0.7	-0.4	7.9%
Blended Alternatives Index	9.0%	6.2%	1.3	--	0.0%
Private Equity	16.9%	11.2%	1.4	0.2	14.1%
Blended Private Equity Index	13.7%	11.9%	1.1	--	0.0%
Hedge Fund/Absolute Return	-3.0%	6.2%	-0.7	-1.3	6.2%
Libor 1 month +4%	5.3%	0.2%	17.4	--	0.0%
AQR DELTA XN	-7.5%	9.5%	-0.9	-1.3	9.6%
Libor 1 month +4%	5.3%	0.2%	17.4	--	0.0%

InvMetrics All DB Hedge Funds Net Return Comparison



	Return (Rank)							
	Quarter	Fiscal YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	2.3	5.3	7.0	4.9	5.5	4.2	4.9	5.3
25th Percentile	-5.5	-3.4	-2.5	-0.6	1.6	1.8	3.4	3.5
Median	-9.4	-7.4	-6.1	-1.7	0.5	0.6	2.4	2.8
75th Percentile	-15.0	-10.6	-9.5	-4.8	-1.8	-1.1	1.1	1.8
95th Percentile	-22.2	-21.7	-21.7	-12.6	-9.6	-5.7	-2.8	-0.9
# of Portfolios	213	213	212	206	203	190	170	110
● Hedge Fund/Absolute Return	-12.3 (66)	-13.4 (86)	-15.2 (90)	-11.8 (95)	-7.9 (94)	-3.0 (86)	0.3 (82)	-- (--)
▲ Libor 1 month +4%	1.2 (7)	4.3 (6)	6.0 (7)	6.1 (3)	5.9 (5)	5.3 (3)	5.0 (5)	4.8 (8)

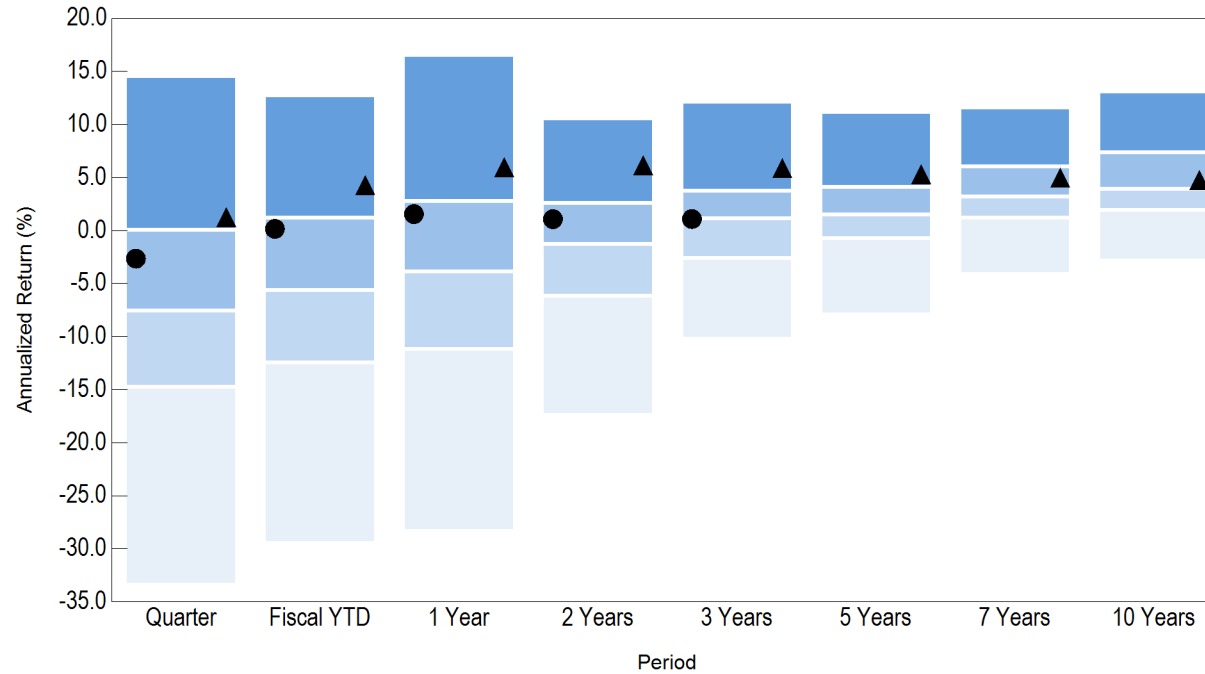
eV Alt All Multi-Strategy Return Comparison



	Return (Rank)							
	Quarter	Fiscal YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	14.5	12.7	16.5	10.5	12.1	11.1	11.6	13.1
25th Percentile	0.1	1.3	2.8	2.7	3.8	4.1	6.1	7.4
Median	-7.5	-5.6	-3.8	-1.2	1.2	1.5	3.3	4.0
75th Percentile	-14.7	-12.4	-11.1	-6.1	-2.5	-0.7	1.3	2.0
95th Percentile	-33.4	-29.4	-28.3	-17.3	-10.2	-7.9	-4.1	-2.8
# of Portfolios	252	250	248	235	217	184	161	118
● AQR DELTA XN	-23.1 (88)	-26.3 (94)	-29.6 (97)	-22.0 (99)	-15.2 (99)	-7.5 (95)	-3.0 (94)	-- (--)
▲ Libor 1 month +4%	1.2 (19)	4.3 (17)	6.0 (18)	6.1 (13)	5.9 (19)	5.3 (22)	5.0 (37)	4.8 (44)

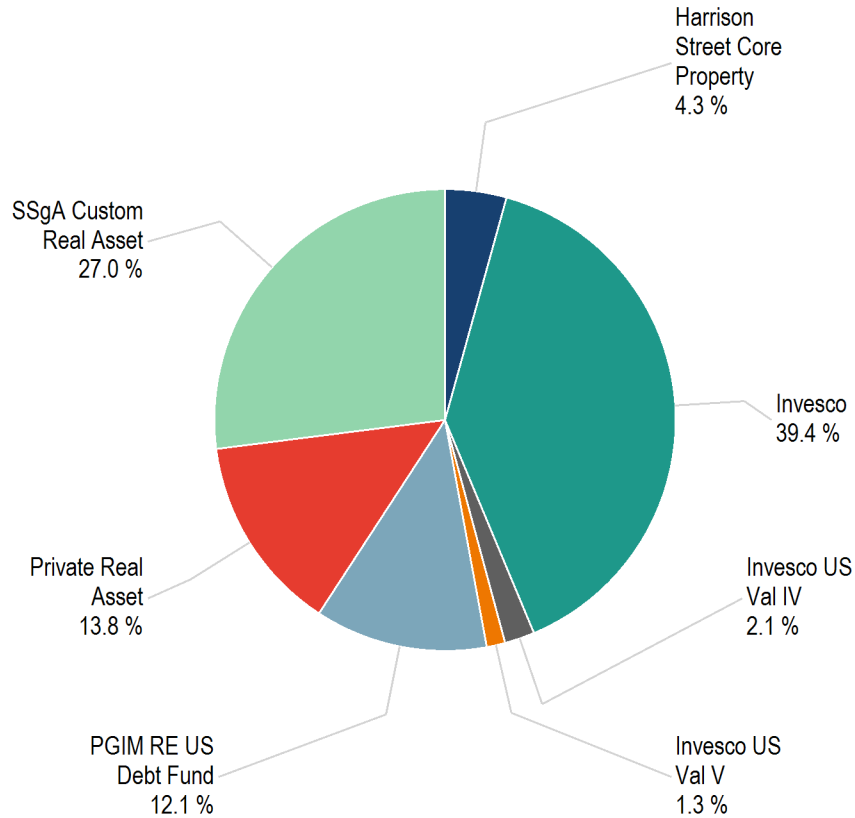


eV Alt All Multi-Strategy Return Comparison



Return (Rank)

5th Percentile	14.5	12.7	16.5	10.5	12.1	11.1	11.6	13.1
25th Percentile	0.1	1.3	2.8	2.7	3.8	4.1	6.1	7.4
Median	-7.5	-5.6	-3.8	-1.2	1.2	1.5	3.3	4.0
75th Percentile	-14.7	-12.4	-11.1	-6.1	-2.5	-0.7	1.3	2.0
95th Percentile	-33.4	-29.4	-28.3	-17.3	-10.2	-7.9	-4.1	-2.8
# of Portfolios	252	250	248	235	217	184	161	118
● Aberdeen Standard GARS	-2.7 (32)	0.2 (29)	1.5 (30)	1.1 (37)	1.1 (52)	-- (--)	-- (--)	-- (--)
▲ Libor 1 month +4%	1.2 (19)	4.3 (17)	6.0 (18)	6.1 (13)	5.9 (19)	5.3 (22)	5.0 (37)	4.8 (44)



	Actual \$	Actual %	Manager Contribution to Excess Return %
Cushing MLP Alpha TR	\$66,770	0.0%	-4.4%
Harrison Street Core Property	\$30,000,000	4.3%	0.0%
Invesco	\$277,783,770	39.4%	0.2%
Invesco US Val IV	\$14,643,008	2.1%	0.0%
Invesco US Val V	\$9,250,743	1.3%	0.0%
PGIM RE US Debt Fund	\$85,182,670	12.1%	0.0%
Private Real Asset	\$97,457,691	13.8%	-0.6%
SSgA Custom Real Asset	\$190,559,950	27.0%	0.2%
Actual vs. Policy Weight Difference			0.9%
<b>Total</b>	<b>\$704,944,602</b>	<b>100.0%</b>	<b>-3.7%</b>

Statistics Summary

3 Years

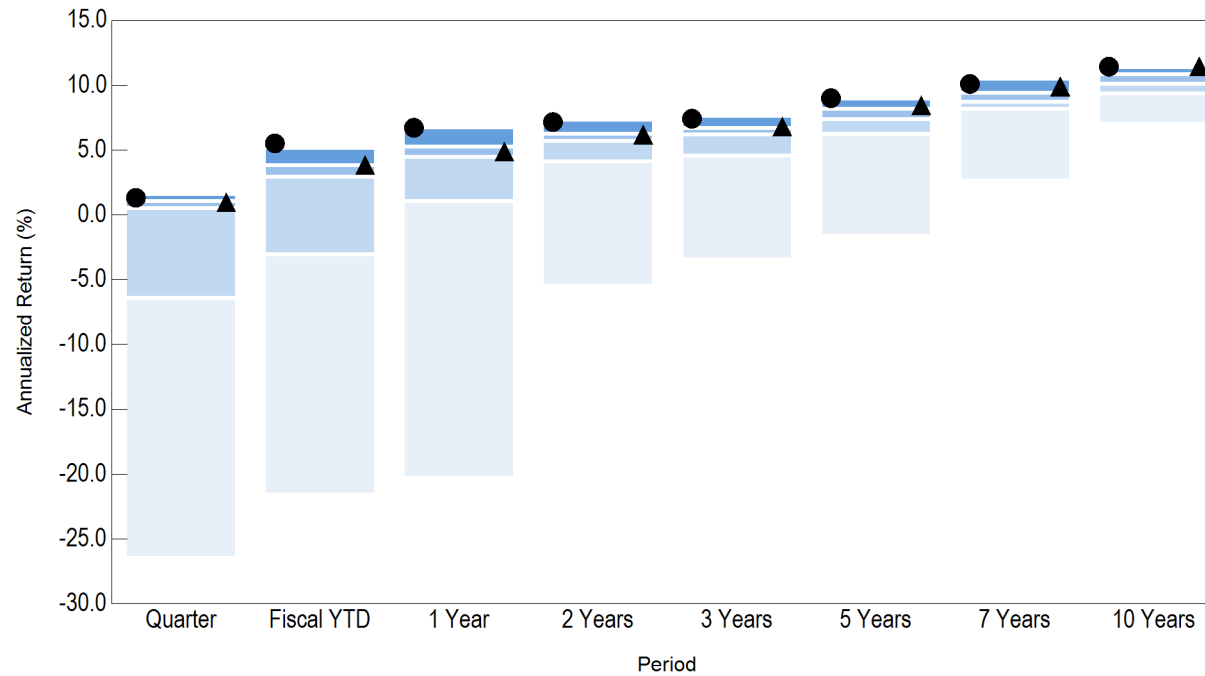
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Inflation Hedge	-0.6%	6.7%	-0.3	-1.2	2.2%
Blended Inflation Hedge Index	1.9%	5.3%	0.0	--	0.0%
Real Estate	7.4%	3.1%	1.8	0.9	0.7%
NCREIF ODCE	6.8%	2.9%	1.8	--	0.0%
Invesco	7.4%	3.1%	1.8	0.8	0.8%
NCREIF ODCE	6.8%	2.9%	1.8	--	0.0%
Invesco US Val IV	11.6%	5.5%	1.8	1.4	3.5%
NCREIF ODCE	6.8%	2.9%	1.8	--	0.0%
Private Real Asset	-5.0%	8.0%	-0.8	-0.9	11.6%
Blended Private Real Asset Index	5.6%	11.2%	0.3	--	0.0%
Public Real Assets	-9.9%	18.2%	-0.6	-0.9	4.4%
Blended Public Real Asset Index	-5.8%	14.8%	-0.5	--	0.0%
SSgA Custom Real Asset	-5.5%	14.6%	-0.5	1.0	0.4%
SSgA Custom Real Asset Index	-5.8%	14.8%	-0.5	--	0.0%

Statistics Summary

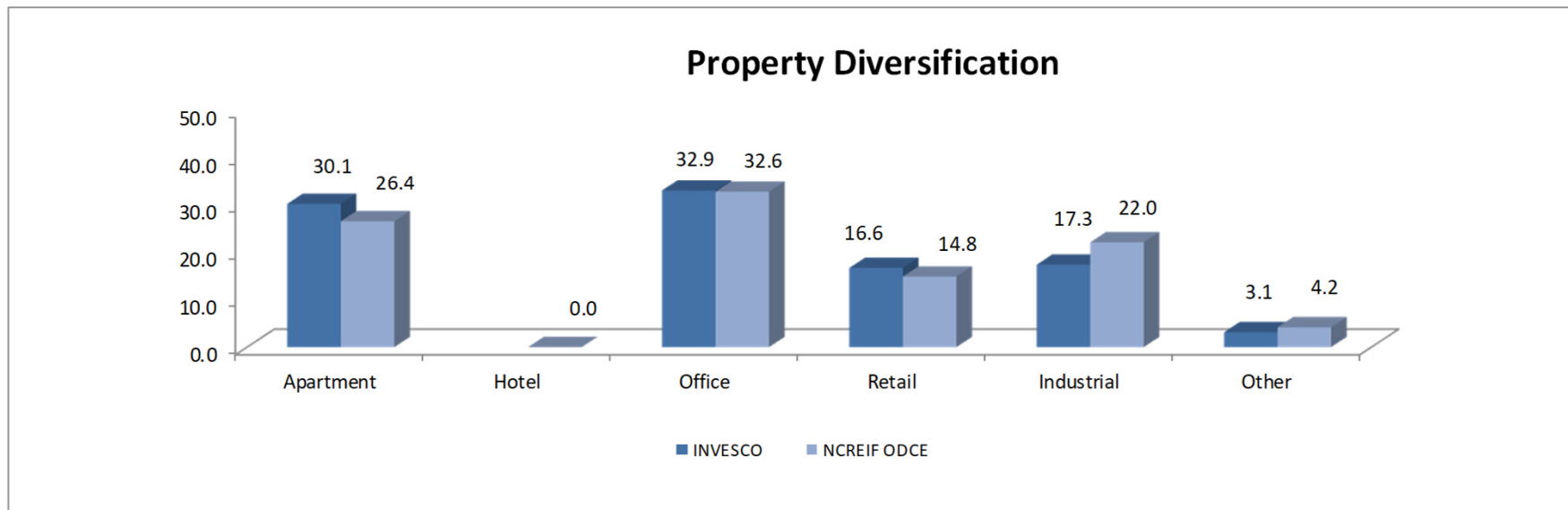
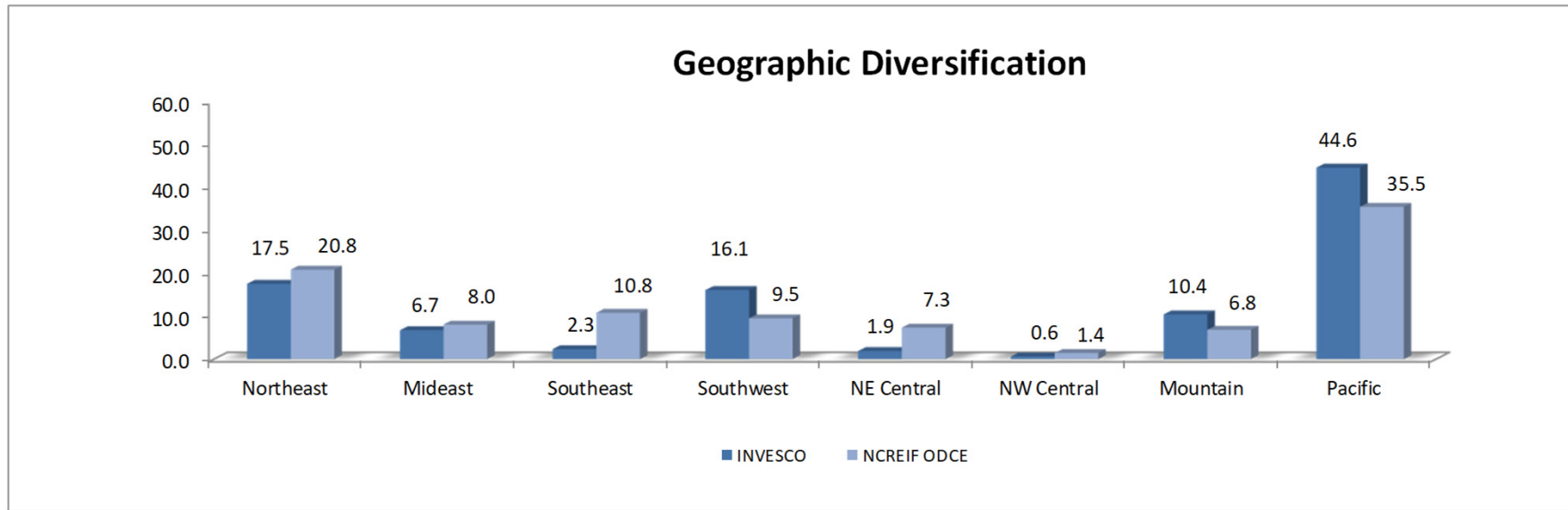
5 Years

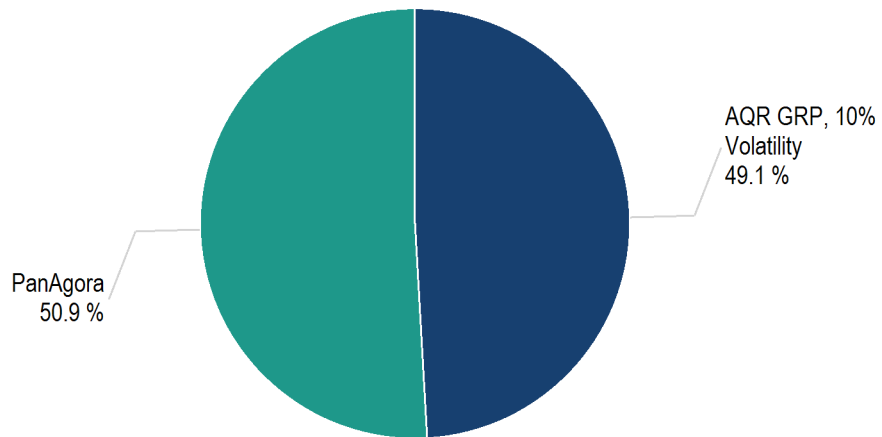
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error Rank
Real Estate	9.0%	4.0%	1.9	0.4	33
NCREIF ODCE	8.5%	3.7%	2.0	--	1
Invesco	8.9%	4.0%	1.9	0.4	--
NCREIF ODCE	8.5%	3.7%	2.0	--	--
Private Real Asset	4.8%	21.6%	0.2	-0.1	--
Blended Private Real Asset Index	6.0%	8.8%	0.5	--	--

InvMetrics All DB Real Estate Pub Net Return Comparison



	Return (Rank)							
	Quarter	Fiscal YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	1.6	5.2	6.7	7.3	7.6	9.0	10.5	11.4
25th Percentile	1.1	3.8	5.3	6.3	6.7	8.2	9.5	10.9
Median	0.5	3.0	4.5	5.7	6.2	7.4	8.7	10.1
75th Percentile	-6.4	-3.0	1.1	4.2	4.6	6.3	8.2	9.4
95th Percentile	-26.4	-21.5	-20.3	-5.4	-3.4	-1.6	2.7	7.0
# of Portfolios	95	95	92	91	87	86	76	61
● Real Estate	1.3 (15)	5.5 (1)	6.7 (7)	7.2 (7)	7.4 (9)	9.0 (5)	10.1 (7)	11.4 (5)
▲ NCREIF ODCE	1.0 (33)	3.8 (26)	4.9 (36)	6.2 (31)	6.8 (22)	8.5 (18)	9.9 (8)	11.4 (5)





	Actual \$	Actual %	Manager Contribution to Excess Return %
AQR GRP, 10% Volatility	\$67,226,250	49.1%	-0.9%
PanAgora	\$69,677,098	50.9%	1.4%
Actual vs. Policy Weight Difference			-0.2%
<b>Total</b>	<b>\$136,903,348</b>	<b>100.0%</b>	<b>0.3%</b>

**Statistics Summary**

**3 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Risk Parity	3.4%	9.6%	0.2	0.0	4.9%
Blended Risk Parity Index	3.3%	9.0%	0.2	--	0.0%
AQR GRP, 10% Volatility	3.4%	10.3%	0.2	0.0	4.5%
Blended Risk Parity Index	3.3%	9.0%	0.2	--	0.0%
PanAgora	3.6%	9.2%	0.2	0.1	6.1%
Blended Risk Parity Index	3.3%	9.0%	0.2	--	0.0%

**Statistics Summary**

**5 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Risk Parity	2.8%	9.2%	0.2	-0.3	5.6%
Blended Risk Parity Index	4.3%	8.1%	0.4	--	0.0%
AQR GRP, 10% Volatility	2.2%	9.5%	0.1	-0.4	5.4%
Blended Risk Parity Index	4.3%	8.1%	0.4	--	0.0%
PanAgora	3.5%	9.2%	0.3	-0.1	6.6%
Blended Risk Parity Index	4.3%	8.1%	0.4	--	0.0%



Total Fund  
Performance Summary (Gross of Fees)

Period Ending: March 31, 2020

	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
<b>Total Fund</b>	<b>-12.6</b>	<b>-7.6</b>	<b>-4.9</b>	<b>-0.9</b>	<b>2.3</b>	<b>3.6</b>	<b>6.7</b>
<i>Policy Index</i>	-11.1	-5.9	-2.3	0.6	3.6	4.3	7.1
<b>Total Fund ex Overlay</b>	<b>-12.7</b>	<b>-7.8</b>	<b>-5.0</b>	<b>-1.1</b>	<b>2.1</b>	<b>3.5</b>	<b>6.6</b>
<i>Policy Index</i>	-11.1	-5.9	-2.3	0.6	3.6	4.3	7.1
<b>Public Equity</b>	<b>-21.9</b>	<b>-15.0</b>	<b>-11.9</b>	<b>-5.0</b>	<b>1.2</b>	<b>3.1</b>	<b>7.2</b>
<i>Blended Public Equity Index</i>	-21.5	-14.4	-11.5	-4.8	1.6	3.2	7.2
<b>US Equity</b>	<b>-22.0</b>	<b>-14.5</b>	<b>-11.2</b>	<b>-2.1</b>	<b>2.9</b>	<b>5.0</b>	<b>9.6</b>
<i>Blended US Equity Index</i>	-20.9	-12.7	-9.1	-0.6	4.0	5.6	10.1
<i>Russell 3000</i>	-20.9	-12.7	-9.1	-0.6	4.0	5.8	10.1
<b>Large Cap Equity</b>	<b>-20.7</b>	<b>-13.0</b>	<b>-9.3</b>	<b>-0.4</b>	<b>4.4</b>	<b>6.5</b>	<b>10.2</b>
<i>Russell 1000</i>	-20.2	-11.8	-8.0	0.3	4.6	6.2	10.4
<i>Acadian US MGD V</i>	-21.3	-14.9	-10.9	--	--	--	--
<i>BlackRock Russell 1000</i>	-20.2	-11.8	-8.0	0.3	4.7	--	--
<i>DE Shaw</i>	-21.2	-12.8	-10.4	-1.5	4.4	7.0	11.2
<i>PanAgora Defuseq</i>	-20.9	-15.7	-11.0	--	--	--	--
<i>Russell 1000</i>	-20.2	-11.8	-8.0	0.3	4.6	6.2	10.4
<b>Small Cap Equity</b>	<b>-36.5</b>	<b>-31.0</b>	<b>-30.8</b>	<b>-17.1</b>	<b>-9.0</b>	<b>-3.5</b>	<b>5.7</b>
<i>Russell 2000</i>	-30.6	-25.5	-24.0	-11.9	-4.6	-0.2	6.9
<i>QMA US Small Cap</i>	-36.5	-31.0	-30.8	-17.1	-9.0	--	--
<i>Russell 2000</i>	-30.6	-25.5	-24.0	-11.9	-4.6	-0.2	6.9
<b>International Equity</b>	<b>-21.9</b>	<b>-15.6</b>	<b>-12.7</b>	<b>-8.2</b>	<b>-0.8</b>	<b>0.6</b>	<b>2.9</b>
<i>Blended International Equity Index</i>	-22.2	-16.4	-14.2	-9.6	-1.4	0.1	2.7
<i>MSCI EAFE Gross</i>	-22.7	-17.2	-13.9	-8.7	-1.3	-0.1	3.2
<b>Developed Markets</b>	<b>-23.1</b>	<b>-16.3</b>	<b>-13.2</b>	<b>-8.4</b>	<b>-1.0</b>	<b>0.5</b>	<b>3.1</b>
<i>MSCI ACWI ex USA Gross</i>	-23.3	-17.8	-15.1	-9.6	-1.5	-0.2	2.5
<i>Baillie Gifford</i>	-19.6	-10.3	-5.0	-4.7	2.7	2.9	--
<i>MSCI ACWI ex US</i>	-23.3	-17.8	-15.1	-9.6	-1.5	-0.2	--
<i>MSCI ACWI ex US Growth</i>	-18.2	-11.0	-6.9	-4.8	2.9	2.5	--

Total Fund  
Performance Summary (Gross of Fees)

Period Ending: March 31, 2020

	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
BlackRock EAFE Index	-22.8	-17.3	-14.1	-8.8	-1.4	-0.2	--
<i>MSCI EAFE</i>	-22.8	-17.4	-14.4	-9.2	-1.8	-0.6	2.7
<i>MSCI EAFE Gross</i>	-22.7	-17.2	-13.9	-8.7	-1.3	-0.1	3.2
Mondrian	-27.1	-21.4	-20.2	-11.7	-4.3	-1.8	2.1
<i>MSCI ACWI ex USA Value Gross</i>	-28.5	-24.6	-23.2	-14.5	-5.9	-2.9	0.7
<i>MSCI ACWI ex USA Gross</i>	-23.3	-17.8	-15.1	-9.6	-1.5	-0.2	2.5
<b>Emerging Markets</b>	<b>-30.6</b>	<b>-28.1</b>	<b>-26.6</b>	<b>-17.9</b>	<b>-7.3</b>	<b>-3.3</b>	<b>--</b>
<i>MSCI Emerging Markets Gross</i>	-23.6	-18.0	-17.4	-12.4	-1.3	0.0	1.0
Parametric Core	-30.6	-28.1	-26.6	-17.9	-7.3	--	--
<i>MSCI Emerging Markets Gross</i>	-23.6	-18.0	-17.4	-12.4	-1.3	0.0	1.0
Parametric Currency Overlay	31.7	41.1	36.9	--	--	--	--
<b>Fixed Income</b>	<b>-2.4</b>	<b>0.2</b>	<b>2.8</b>	<b>3.3</b>	<b>3.2</b>	<b>3.6</b>	<b>5.1</b>
<i>Blended Fixed Income Index</i>	-1.8	1.3	4.3	4.8	3.8	3.3	3.8
<b>Core Fixed</b>	<b>0.8</b>	<b>3.4</b>	<b>6.2</b>	<b>4.9</b>	<b>4.0</b>	<b>3.4</b>	<b>4.6</b>
<i>BBgBarc US Aggregate TR</i>	3.1	5.7	8.9	6.7	4.8	3.4	3.9
BlackRock Intermediate Govt	5.2	6.5	9.0	6.5	4.3	--	--
<i>BBgBarc US Govt Int TR</i>	5.2	6.4	8.9	6.3	4.1	2.8	2.8
<i>BBgBarc US Aggregate TR</i>	3.1	5.7	8.9	6.7	4.8	3.4	3.9
DoubleLine	--	--	--	--	--	--	--
<i>BBgBarc US Aggregate TR</i>	3.1	5.7	8.9	6.7	4.8	3.4	3.9
FIAM Bond	1.0	3.9	7.2	6.0	4.5	3.6	4.5
<i>BBgBarc US Aggregate TR</i>	3.1	5.7	8.9	6.7	4.8	3.4	3.9
Western TRU	-8.7	-4.9	-2.7	-0.9	1.5	--	--
<i>3-Month Libor Total Return USD</i>	0.4	1.4	2.1	2.3	2.1	1.5	0.9
<i>BBgBarc US Aggregate TR</i>	3.1	5.7	8.9	6.7	4.8	3.4	3.9
<b>Opportunistic Credit</b>	<b>-8.7</b>	<b>-6.1</b>	<b>-3.8</b>	<b>0.2</b>	<b>2.2</b>	<b>4.3</b>	<b>7.9</b>
<i>BBgBarc BA Intermediate HY</i>	-10.0	-6.3	-3.6	1.3	1.9	3.1	4.8

Total Fund  
Performance Summary (Gross of Fees)

Period Ending: March 31, 2020

	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Angelo Gordon Opportunistic	-24.2	-20.1	-15.8	-1.1	5.1	6.2	--
Angelo Gordon STAR	-11.4	-7.6	-2.4	8.4	12.5	10.6	--
<i>BBgBarc US Aggregate TR</i>	3.1	5.7	8.9	6.7	4.8	3.4	3.9
Angelo Gordon Credit Solutions	15.1	--	--	--	--	--	--
<i>BBgBarc BA Intermediate HY</i>	-10.0	-6.3	-3.6	1.3	1.9	3.1	4.8
Beach Point Select	-12.8	-8.5	-5.7	-0.9	1.7	4.9	--
<i>BBgBarc BA Intermediate HY</i>	-10.0	-6.3	-3.6	1.3	1.9	3.1	4.8
Brigade Capital	-18.4	-16.1	-14.5	-6.5	-2.9	0.6	--
<i>BBgBarc BA Intermediate HY</i>	-10.0	-6.3	-3.6	1.3	1.9	3.1	4.8
<i>50% Barclays HY/ 50% Bank Loan</i>	-12.9	-10.1	-8.2	-2.0	0.0	2.0	--
PIMCO Diversified	-7.3	-4.6	-1.2	2.1	--	--	--
<i>Blended PIMCO Diversified Index</i>	-9.1	-5.7	-2.4	1.2	1.9	3.1	5.1
<i>BBgBarc BA Intermediate HY</i>	-10.0	-6.3	-3.6	1.3	1.9	3.1	4.8
Franklin Templeton	-5.8	-7.7	-6.4	-3.4	-2.0	0.4	--
<i>BBgBarc Multiverse TR</i>	-1.1	0.2	3.5	1.6	3.4	2.7	2.6
<b>Private Credit</b>	<b>-1.2</b>	<b>2.5</b>	<b>4.2</b>	<b>6.2</b>	<b>6.3</b>	<b>--</b>	<b>--</b>
<i>Cliffwater Direct Lending Index</i>	2.0	5.9	8.3	8.5	8.5	8.4	10.3
Blackrock DL Feeder IX-U	--	--	--	--	--	--	--
<i>Cliffwater Direct Lending Index</i>	2.0	5.9	8.3	8.5	8.5	8.4	10.3
PIMCO Private Income	0.0	5.2	--	--	--	--	--
<i>BBgBarc BA Intermediate HY</i>	-10.0	-6.3	-3.6	1.3	1.9	3.1	4.8
<i>Cliffwater Direct Lending Index</i>	2.0	5.9	8.3	8.5	8.5	8.4	10.3
TCP Direct Lending VIII	-3.3	-0.4	1.3	4.9	5.3	--	--
White Oak Yield	0.0	3.6	5.3	6.4	--	--	--
<i>Cliffwater Direct Lending Index</i>	2.0	5.9	8.3	8.5	8.5	8.4	10.3
<b>Risk Parity</b>	<b>-12.2</b>	<b>-7.9</b>	<b>-2.7</b>	<b>0.9</b>	<b>3.4</b>	<b>2.8</b>	<b>--</b>
<i>Blended Risk Parity Index</i>	-12.4	-6.9	-3.5	0.5	3.3	4.3	--

Total Fund  
Performance Summary (Gross of Fees)

Period Ending: March 31, 2020

	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
AQR GRP, 10% Volatility	-14.2	-9.2	-4.0	0.3	3.4	2.2	--
PanAgora	-9.7	-6.1	-1.0	1.8	3.6	3.5	--
<i>Blended Risk Parity Index</i>	-12.4	-6.9	-3.5	0.5	3.3	4.3	--
<i>S&amp;P Risk Parity 10% Target Volatility Index TR USD</i>	-10.8	-5.8	-1.7	2.1	2.8	2.2	4.9
<b>Alternatives</b>	<b>-1.9</b>	<b>3.7</b>	<b>5.9</b>	<b>3.6</b>	<b>4.3</b>	<b>6.0</b>	<b>--</b>
<i>Blended Alternatives Index</i>	5.5	10.6	19.5	10.5	10.8	9.0	--
<b>Private Equity</b>	<b>7.3</b>	<b>19.9</b>	<b>27.0</b>	<b>18.6</b>	<b>16.2</b>	<b>16.9</b>	<b>--</b>
<i>Blended Private Equity Index</i>	9.8	17.0	34.0	14.5	15.2	13.7	15.7
<b>Hedge Fund/Absolute Return</b>	<b>-12.3</b>	<b>-13.4</b>	<b>-15.2</b>	<b>-11.8</b>	<b>-7.9</b>	<b>-3.0</b>	<b>--</b>
<i>Libor 1 month +4%</i>	1.2	4.3	6.0	6.1	5.9	5.3	4.8
AQR DELTA XN	-23.1	-26.3	-29.6	-22.0	-15.2	-7.5	--
Aberdeen Standard GARS	-2.7	0.2	1.5	1.1	1.1	--	--
Graham Quant Macro	--	--	--	--	--	--	--
<i>Libor 1 month +4%</i>	1.2	4.3	6.0	6.1	5.9	5.3	4.8
<b>Inflation Hedge</b>	<b>-12.6</b>	<b>-10.3</b>	<b>-9.2</b>	<b>-3.0</b>	<b>-0.3</b>	<b>--</b>	<b>--</b>
<i>Blended Inflation Hedge Index</i>	-8.9	-6.3	-3.7	-0.2	1.9	--	--
<b>Real Estate</b>	<b>1.4</b>	<b>5.8</b>	<b>7.2</b>	<b>7.6</b>	<b>7.9</b>	<b>9.4</b>	<b>11.9</b>
NCREIF ODCE	1.0	3.8	4.9	6.2	6.8	8.5	11.4
Harrison Street Core Property	--	--	--	--	--	--	--
<i>NCREIF ODCE</i>	1.0	3.8	4.9	6.2	6.8	8.5	11.4
Invesco	1.7	6.1	7.2	7.5	7.8	9.3	11.8
<i>NCREIF ODCE</i>	1.0	3.8	4.9	6.2	6.8	8.5	11.4
Invesco US Val IV	0.9	10.0	11.3	12.7	12.7	--	--
<i>NCREIF ODCE</i>	1.0	3.8	4.9	6.2	6.8	8.5	11.4
<i>NCREIF CEVA 1Q Lag - NET</i>	3.0	9.1	12.3	11.9	11.5	12.6	--
Invesco US Val V	1.4	7.8	14.0	--	--	--	--
<i>NCREIF ODCE</i>	1.0	3.8	4.9	6.2	6.8	8.5	11.4
<i>NCREIF CEVA 1Q Lag - NET</i>	3.0	9.1	12.3	11.9	11.5	12.6	--

Total Fund  
Performance Summary (Gross of Fees)

Period Ending: March 31, 2020

	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
PGIM RE US Debt Fund	1.2	4.5	6.2	6.7	--	--	--
NCREIF ODCE	1.0	3.8	4.9	6.2	6.8	8.5	11.4
<b>Private Real Asset</b>	<b>0.6</b>	<b>-0.1</b>	<b>1.6</b>	<b>-2.3</b>	<b>-5.0</b>	<b>5.6</b>	<b>--</b>
<i>Blended Private Real Asset Index</i>	6.5	7.5	21.5	5.4	5.6	6.0	--
<i>Blended Secondary CA Private RA Index</i>	0.7	-0.6	2.0	2.7	6.1	4.9	--
<b>Public Real Assets</b>	<b>-33.9</b>	<b>-33.0</b>	<b>-32.3</b>	<b>-17.3</b>	<b>-9.7</b>	<b>--</b>	<b>--</b>
<i>Blended Public Real Asset Index</i>	-27.1	-24.9	-23.6	-11.7	-5.8	-0.7	--
Cushing MLP Alpha TR							
SSgA Custom Real Asset	-26.5	-24.1	-22.8	-11.1	-5.3	--	--
<i>SSgA Custom Real Asset Index</i>	-27.1	-24.9	-23.6	-11.7	-5.8	--	--
<b>Cash</b>	<b>0.3</b>	<b>0.8</b>	<b>1.1</b>	<b>1.2</b>	<b>1.1</b>	<b>1.1</b>	<b>0.9</b>
<i>91 Day T-Bills</i>	0.4	1.3	1.9	2.0	1.7	1.1	0.6
General Account	0.4	1.5	2.7	4.0	3.3	2.6	1.4
Treasury & LAIF	-3.5	-2.1	-1.3	1.0	1.7	1.3	1.1
<i>91 Day T-Bills</i>	0.4	1.3	1.9	2.0	1.7	1.1	0.6

### **Acadian Asset Management – Acadian U.S. Managed Volatility**

Acadian attempts to take advantage of the mispricing of risk by building low-risk equity portfolios that hold predominantly low-risk stocks, and then also adding information on the correlation structure of equities to help further reduce risk through diversification.

### **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.

### **Angelo, Gordon & Co. – Credit Solutions**

This fund is Angelo, Gordon's re-entry into the special situations private fund market. The fund expects to hold concentrated positions in the US and within Europe in both public and private markets.

### **AQR Capital Management - 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 Capital Management, L.P. - 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.

## **BlackRock – Direct Lending Fund**

Upon completion of the TCP acquisition, the former TCP team is raising a direct lending portfolio. The fund will invest in privately originated, performing senior secured debt primarily in North American based companies with an average EV of \$750 million.

## **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.



## **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.

## **DoubleLine – Securitized Income**

The DoubleLine Securitized Income strategy is an actively managed, liquid, long only, intermediate-term fixed income product. The primary objective of the strategy is to seek and maximize current income and total return by utilizing a combination of Agency MBS and structured credit. The DoubleLine Structured Products team aims to offer clients investment grade exposure to both interest rate duration and credit spread to provide a more attractive total return profile compared to the benchmark in its Securitized Income portfolios.

## **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 begin 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.

## **Graham – Quant Macro Fund**

Graham Quant Macro ("GQM") is a directional, long and short strategy that utilizes fundamental and price-based indicators to establish return forecasts across global interest rates, foreign exchange, stock indices and commodities. The strategy incorporates a variety of submodels that generate macro fundamental forecasts, assess yield and earnings differentials, compare current valuations relative to historic fair value, and analyze directional price trends across markets. Quantitative risk management and portfolio construction techniques are used to diversify risk across the portfolio and enhance risk-adjusted returns. Historically, the average holding period has been approximately eight to ten weeks, although the sub-models will make daily adjustments to positions. The strategy is designed to have low correlation to traditional markets and other alternative strategies and has the potential to provide significant portfolio diversification benefits.

## **Harrison Street Core Property**

Based in Chicago, Harrison Street's exclusive focus since inception in 2005 has been investing in non-core property sectors of the real estate market. The Harrison Street Core Fund is an open-end fund that invests primarily in stabilized education, healthcare, and self-storage real estate assets in the United States using modest leverage with an emphasis on generating current income. The focus on these alternative property types is intended to concentrate on areas of the real estate market that are less GDP sensitive with demand drivers that are more demographic driven such as aging populations, education growth and healthcare delivery. Each of these areas tend to be less tied to the business cycle, have fragmented ownership and more operationally intensive. The fund acts as a diversifier within real estate portfolios with sector exposures that are not a typical focus of other core ODCE funds.

## **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.

## **INVESCO Realty Advisors – INVESCO US Val V**

Invesco has provided SamCERA with Core Real Estate exposure since 2004 through the Invesco Core Equity Fund and through the Invesco US Value IV Fund since December 2015. The Invesco real estate team manages around \$62B in assets with investments and offices around the globe. Invesco Value Fund V will be similar to the Value Add IV and 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).

## **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 Asset Management – Defensive U.S. Equity Low Volatility**

PanAgora’s Defensive Equity strategy seeks to balance risk exposures within the portfolio across multiple dimensions to achieve true diversification. The Defensive Equity approach is used to construct equity portfolios designed to achieve tailored exposure to certain factors, including low volatility, multi-factor (value, quality, and momentum), and high dividend yield while maintaining less risk concentration throughout the portfolio.

## **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.

## **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).

## **PIMCO Private Income Fund**

PIMCO Private Income Fund provides an attractive total return oriented global credit exposure utilizing both top-down sector relative value and bottom up security selection. The strategy invests across private residential, commercial, corporate and specialty finance markets.

## **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.

## **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.

## **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: March 31, 2020

Total Plan Policy Index	As of:									
	10/1/19	7/1/19	4/1/19	1/1/19	10/1/18	4/1/18	10/1/17	2/1/17	1/1/17	
10 Year Treasury +2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
60/40 MSCI World/BBgBarc Global Aggregate (RP)	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%
60/40 Russell 3000/BBgBarc US Aggregate (RP)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
91 Day T-Bills	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Aggregate	14.0%	14.0%	14.0%	14.0%	14.0%	14.0%	14.0%	12.0%	10.0%	
BBgBarc BA Intermediate HY	8.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	6.0%	6.0%	
BBgBarc BBB	0.0%	0.0%	0.0%	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%	
BBgBarc Multiverse	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	3.0%	
BBgBarc TIPS	1.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	
Bloomberg Commodity	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Citigroup non-US WGBI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
CPI + 5% (RA)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Blended Liquid Real Asset	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	0.0%	0.0%	
Blended Private Real Asset	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	8.0%	7.0%	5.0%	
Labor +4% (HF)	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	5.0%	
MSCI ACWI ex-US	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
MSCI ACWI ex US IMI 100% Hedged (Net)	9.0%	7.6%	5.7%	3.8%	1.9%	0.0%	0.0%	0.0%	0.0%	
MSCI ACWI ex-US IMI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	19.0%	19.0%	
MSCI ACWI ex-US IMI (Net)	9.0%	11.4%	13.3%	15.2%	17.1%	19.0%	19.0%	0.0%	0.0%	
MSCI EAFE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
NCREIF ODCE	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	7.0%	7.0%	
NCREIF Property	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Russell 1000	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Russell 1000 Value	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Russell 2000	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Russell 3000	22.0%	22.0%	22.0%	22.0%	22.0%	21.0%	21.0%	23.0%	28.0%	
Russell 3000 +3% (PE)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.0%	7.0%	7.0%	
Russell 3000 +3% 1Q Lag (PE)	6.0%	6.0%	6.0%	6.0%	6.0%	7.0%	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%	
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	

Total Plan Policy Index	As of:													
	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%	8.0%	10.0%	10.0%
60/40 MSCI World/BBgBarc Global Aggregate (RP)	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)	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%
91 Day T-Bills	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%
BBgBarc Aggregate	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	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%	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%	3.5%	3.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Multiverse	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%	3.1%	3.3%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Bloomberg Commodity	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%
Citigroup 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%	5.0%	9.0%	9.0%
CPI + 5% (RA)	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	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	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%
Labor +4% (HF)	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%	18.0%	18.0%	18.0%	21.0%	21.0%	15.0%	0.0%	0.0%	0.0%
MSCI ACWI ex US IMI 100% Hedged (Net)	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 ACWI ex-US IMI	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)	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%
MSCI EAFE	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	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%	6.0%	6.0%	0.0%	0.0%	0.0%
Russell 1000	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%	5.0%	5.0%	0.0%
Russell 2000	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	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)	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)	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%	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%

# Policy Index and Benchmark History

Period Ending: March 31, 2020

Public Equity Benchmark	As of:																
	10/1/19	7/1/19	4/1/19	1/1/19	10/1/18	10/1/17	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%	0.0%	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 100% Hedged (Net)	22.5%	18.5%	13.9%	9.3%	4.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI ACWI ex-US IMI	0.0%	0.0%	0.0%	0.0%	0.0%	47.5%	45.2%	40.4%	41.7%	41.7%	40.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI ACWI ex US IMI (Net)	22.5%	27.8%	32.4%	37.0%	41.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
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%	32.3%	33.3%	33.3%
Russell 1000	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	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%	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%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.3%	12.0%	13.2%	13.5%	15.4%	24.2%	25.0%	25.0%
Russell 3000	55.0%	53.7%	53.7%	53.7%	53.7%	52.5%	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%	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%	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:								
	10/1/19	7/1/19	4/1/19	1/1/19	10/1/18	10/1/17	1/1/14	6/1/00	1/1/96
MSCI ACWI ex US	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
MSCI ACWI ex US IMI 100% Hedged (Net)	50.0%	40.0%	30.0%	20.0%	10.0%	0.0%	0.0%	100.0%	0.0%
MSCI ACWI ex US IMI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
MSCI ACWI ex US IMI (Net)	50.0%	60.0%	70.0%	80.0%	90.0%	100.0%	0.0%	0.0%	0.0%
MSCI EAFE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Fixed Income Benchmark	As of:												
	10/1/19	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	63.6%	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	36.4%	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%	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%	0.0%	16.0%	15.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Multiverse	0.0%	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%	0.0%	10.0%	10.0%	14.0%	15.0%	13.6%	0.0%	0.0%	0.0%
Citigroup 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%	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%	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:	
	1/1/17	10/1/10
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%

Alternatives Benchmark	As of:						
	10/1/18	4/1/18	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%	0.0%	0.0%	30.0%
Bloomberg Commodity	0.0%	0.0%	0.0%	0.0%	17.7%	18.8%	15.0%
CPI + 5% (RA)	0.0%	0.0%	0.0%	0.0%	11.8%	12.5%	0.0%
Libor +4% (HF)	50.0%	46.2%	46.2%	41.7%	29.4%	25.0%	15.0%
Russell 3000 +3% (PE)	0.0%	0.0%	53.8%	58.3%	41.2%	43.8%	40.0%
Russell 3000 +3% 1Q Lag (PE)	50.0%	53.8%	0.0%	0.0%	0.0%	0.0%	0.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

# Policy Index and Benchmark History

Period Ending: March 31, 2020

Alternatives Benchmark	As of:						
	10/1/18	4/1/18	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%	0.0%	0.0%	30.0%
Bloomberg Commodity	0.0%	0.0%	0.0%	0.0%	17.7%	18.8%	15.0%
CPI +5% (RA)	0.0%	0.0%	0.0%	0.0%	11.8%	12.5%	0.0%
Libor +4% (HF)	50.0%	46.2%	46.2%	41.7%	29.4%	25.0%	15.0%
Russell 3000 +3% (PE)	0.0%	0.0%	53.8%	58.3%	41.2%	43.8%	40.0%
Russell 3000 +3% 1Q Lag (PE)	50.0%	53.8%	0.0%	0.0%	0.0%	0.0%	0.0%
	100.0%	100.0%	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:				
	10/1/19	4/1/18	2/1/17	10/1/16	4/1/16
BBgBarc TIPS	5.88%	11.11%	12.50%	14.3%	14.3%
Bloomberg Commodity	0.00%	0.00%	0.00%	0.0%	21.4%
CPI +5% (RA)	0.00%	0.00%	0.00%	0.0%	14.3%
Blended Liquid Real Asset	35.29%	33.34%	0.00%	0.0%	0.0%
Blended Private Real Asset	11.77%	11.11%	43.75%	35.7%	0.0%
NCREIF ODCE	47.06%	44.44%	43.75%	50.0%	50.0%
	100.0%	100.0%	100.0%	100.0%	100.0%

Public 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: March 31, 2020

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%
	<b>100.0%</b>	<b>100.0%</b>

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%
	<b>100.0%</b>	<b>100.0%</b>

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

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%
	<b>100.0%</b>	<b>100.0%</b>

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%
	<b>100.0%</b>	<b>100.0%</b>

PIMCO Diversified	As of:	
	9/1/17	
JPMorgan EMBI Global	33.333%	
BofAMLBB-BRatedDvlpdMktsHYHdgdUSD	33.333%	
Global Agg Credit Ex EM USD hedged	33.334%	
	<b>100.0%</b>	

# Fee Schedule

Period Ending: March 31, 2020

## **Acadian Asset Management**

First \$50 million:	0.27% per annum
Next \$50 million:	0.225% per annum
Thereafter:	0.18% per annum

## **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:	0.03% per annum
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## **BlackRock-Russell 1000 Index Fund**

On All Assets:	0.01% per annum
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## **BlackRock-Intermediate Govt Bond Index Fund**

On All Assets:	0.025% per annum
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## **Cushing Asset Management**

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

## **DoubleLine**

On All Assets:	0.30% per annum
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## **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

## **PanAgora Asset Management**

First \$50 million:	0.25% per annum
Next \$50 million:	0.15% per annum
Thereafter:	0.10% per annum

## **Parametric**

On All Assets:	0.30% per annum
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## **Parametric Overlay**

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	

## **Parametric Currency Overlay**

First \$250 million:	0.05% per annum
Thereafter:	0.03% 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

Manager Compliance (Net)

Period Ending: March 31, 2020

Name	Primary Benchmark	Rule 1	Rule 2	Rule 3
Acadian US MGD V	Russell 1000	--	--	--
DE Shaw	Russell 1000	✓	✓	✓
PanAgora Defuseq	Russell 1000	--	--	--
QMA US Small Cap	Russell 2000	--	--	--
Baillie Gifford	MSCI ACWI ex US	✓	R	✓
Mondrian	MSCI ACWI ex USA Value Gross	✓	✓	✓
Parametric Core	MSCI Emerging Markets Gross	--	--	--
DoubleLine	BBgBarc US Aggregate TR	--	--	--
FIAM Bond	BBgBarc US Aggregate TR	✓	✓	✓
Western TRU	3-Month Libor Total Return USD	--	--	--
Angelo Gordon Opportunistic	BBgBarc US Aggregate TR	✓	--	R
Angelo Gordon STAR	BBgBarc US Aggregate TR	✓	--	✓
Angelo Gordon Credit Solutions	BBgBarc BA Intermediate HY	--	--	--
Beach Point Select	BBgBarc BA Intermediate HY	✓	✓	✓
Brigade Capital	BBgBarc BA Intermediate HY	R	R	R
PIMCO Diversified	Blended PIMCO Diversified Index	--	--	--
Franklin Templeton	BBgBarc Multiverse TR	--	--	--
Blackrock DL Feeder IX-U	Cliffwater Direct Lending Index	--	--	--
PIMCO Private Income	BBgBarc BA Intermediate HY	--	--	--
TCP Direct Lending VIII	Cliffwater Direct Lending Index	--	--	--
White Oak Yield	Cliffwater Direct Lending Index	--	--	--
AQR DELTA XN	Libor 1 month +4%	R	R	R
Aberdeen Standard GARS	Libor 1 month +4%	--	--	--
Graham Quant Macro	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 Compliance (Gross)

Period Ending: March 31, 2020

Name	Primary Benchmark	Rule 1	Rule 2	Rule 3
Acadian US MGD V	Russell 1000	--	--	--
DE Shaw	Russell 1000	✓	✓	✓
PanAgora Defuseq	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	--	--	--
DoubleLine	BBgBarc US Aggregate TR	--	--	--
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	✓	--	✓
Angelo Gordon Credit Solutions	BBgBarc BA Intermediate HY	--	--	--
Beach Point Select	BBgBarc BA Intermediate HY	✓	✓	✓
Brigade Capital	BBgBarc BA Intermediate HY	✗	✗	✗
PIMCO Diversified	Blended PIMCO Diversified Index	--	--	--
Franklin Templeton	BBgBarc Multiverse TR	--	--	--
Blackrock DL Feeder IX-U	Cliffwater Direct Lending Index	--	--	--
PIMCO Private Income	BBgBarc BA Intermediate HY	--	--	--
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%	--	--	--
Graham Quant Macro	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: March 31, 2020

	Jan	Feb	Mar	1st Qtr. 2020	Difference	4th Qtr. 2019	Difference	3rd Qtr. 2019	Difference	2nd Qtr. 2019	Difference	1st Qtr. 2019	Difference
Verus	-0.67%	-9.00%	-12.95%	-21.31%		5.21%		2.82%		4.71%		10.70%	
Acadian US MGD V	-0.67%	-8.95%	-12.90%	-21.23%	-0.08%	5.21%	0.00%	2.82%	0.00%	4.71%	0.00%	10.69%	0.01%
Russell 1000 Index	0.11%	-8.17%	-13.22%	-20.22%		9.04%		1.42%		4.25%		14.00%	
Verus	0.11%	-8.18%	-13.20%	-20.21%		9.04%		1.43%		4.25%		14.02%	
BlackRock Russell 1000	0.11%	-8.18%	-13.20%	-20.21%	0.00%	9.04%	0.00%	1.42%	0.01%	4.25%	0.00%	14.02%	0.00%
Russell 1000 Index	0.11%	-8.17%	-13.22%	-20.22%		9.04%		1.42%		4.25%		14.00%	
Verus	-0.73%	-8.10%	-13.65%	-21.23%		8.98%		1.53%		2.75%		12.68%	
D.E. Shaw	-0.73%	-8.10%	-13.65%	-21.23%	0.00%	8.98%	0.00%	1.54%	-0.01%	2.75%	0.00%	12.69%	-0.01%
Russell 1000 Index	0.11%	-8.17%	-13.22%	-20.22%		9.04%		1.42%		4.25%		14.00%	
Verus	0.63%	-8.13%	-14.48%	-20.94%		3.32%		3.20%		5.51%		15.01%	
PanAgora Defuseq	0.63%	-8.13%	-14.48%	-20.94%	0.00%	3.33%	-0.01%	3.19%	0.01%	5.55%	-0.04%	15.01%	0.00%
Russell 1000 Index	0.11%	-8.17%	-13.22%	-20.22%		9.04%		1.42%		4.25%		14.00%	
Verus	-4.59%	-9.82%	-26.23%	-36.53%		9.35%		-0.62%		0.37%		12.59%	
QMA US Small Cap	-4.59%	-9.82%	-26.24%	-36.54%	0.01%	9.35%	0.00%	-0.62%	0.00%	0.38%	-0.01%	12.59%	0.00%
Russell 2000 Index	-3.21%	-8.42%	-21.73%	-30.61%		9.94%		-2.40%		2.10%		14.58%	
Verus	-2.29%	-6.67%	-11.88%	-19.64%		12.60%		-0.92%		5.96%		13.47%	
Baillie Gifford (net)	-2.44%	-6.72%	-11.91%	-19.83%	0.19%	12.46%	0.15%	-0.95%	0.03%	5.89%	0.08%	13.41%	0.06%
MSCI ACWI ex US	-2.67%	-7.89%	-14.40%	-23.26%		8.99%		-1.70%		3.22%		10.44%	
MSCI ACWI ex US Growth	-0.95%	-7.29%	-10.88%	-18.16%		9.63%		-0.79%		4.55%		12.42%	
Verus	-2.09%	-9.04%	-13.29%	-22.77%		8.22%		-1.05%		3.92%		10.08%	
BlackRock EAFE Equity	-2.10%	-9.04%	-13.29%	-22.78%	0.01%	8.22%	0.00%	-1.05%	0.00%	3.92%	0.00%	10.08%	0.00%
MSCI EAFE (Net)	-2.09%	-9.04%	-13.35%	-22.83%		8.17%		-1.07%		3.68%		9.98%	
MSCI EAFE (Gross)	-2.08%	-9.03%	-13.25%	-22.72%		8.21%		-1.00%		3.97%		10.13%	
Verus	-3.72%	-7.98%	-17.72%	-27.10%		10.81%		-2.66%		1.47%		9.19%	
Mondrian	-3.71%	-8.00%	-17.70%	-27.09%	-0.01%	10.81%	0.00%	-2.62%	-0.04%	1.48%	-0.01%	9.18%	0.01%
MSCI ACWI -ex US Value Index	-4.42%	-8.52%	-18.17%	-28.45%		8.29%		-2.66%		1.86%		8.46%	
MSCI ACWI -ex US	-2.67%	-7.89%	-14.40%	-23.26%		8.99%		-1.70%		3.22%		10.44%	
Verus	-4.74%	-7.66%	-21.15%	-30.64%		8.18%		-4.23%		2.13%		7.73%	
Parametric Core	-4.72%	-7.64%	-21.14%	-30.60%	-0.04%	8.23%	-0.05%	-4.19%	-0.04%	2.19%	-0.06%	7.80%	-0.07%
MSCI EM Market Index	-4.66%	-5.27%	-15.38%	-23.57%		11.92%		-4.11%		0.74%		9.97%	
Verus	1.42%	1.64%	2.01%	5.16%		0.04%		1.22%		2.37%		1.63%	
BlackRock Intermediate Govt	1.44%	1.64%	2.01%	5.18%	-0.02%	0.04%	0.00%	1.22%	0.00%	2.37%	0.00%	1.63%	0.00%
BBgBarc US Govt Int Index	1.41%	1.64%	2.04%	5.18%		0.01%		1.18%		2.34%		1.58%	
BBgBarc US Aggregate Index	1.92%	1.80%	-0.59%	3.15%		0.18%		2.27%		3.08%		2.94%	

Manager Performance Comparison (Gross of Fees)

Period Ending: March 31, 2020

	Jan	Feb	Mar	1st Qtr. 2020	Difference	4th Qtr. 2019	Difference	3rd Qtr. 2019	Difference	2nd Qtr. 2019	Difference	1st Qtr. 2019	Difference
Verus	2.05%	1.37%	-2.35%	1.02%		0.62%		2.23%		3.16%		3.47%	
FIAM Bond	2.05%	1.37%	-2.35%	1.02%	0.00%	0.62%	0.00%	2.23%	0.00%	3.16%	0.00%	3.47%	0.00%
BBgBarc US Aggregate Index	1.92%	1.80%	-0.59%	3.15%		0.18%		2.27%		3.08%		2.94%	
Verus	0.30%	-1.69%	-7.37%	-8.67%		3.09%		1.02%		2.31%		2.95%	
Western TRU	0.30%	-1.69%	-7.37%	-8.67%	0.00%	3.09%	0.00%	1.02%	0.00%	2.31%	0.00%	2.95%	0.00%
3-Month Libor Total Return USD Index	0.15%	0.12%	0.12%	0.39%		0.49%		0.55%		0.62%		0.67%	
BBgBarc US Aggregate Index	1.92%	1.80%	-0.59%	3.15%		0.18%		2.27%		3.08%		2.94%	
Verus				-24.23%		2.21%		3.34%		5.43%		0.89%	
Angelo Gordon Opportunistic				-24.23%	0.00%	2.21%	0.00%	3.34%	0.00%	5.43%	0.00%	0.89%	0.00%
BBgBarc US Aggregate Index				3.15%		0.18%		2.27%		3.08%		2.94%	
Verus				-11.44%		2.20%		-3.95%		6.24%		5.44%	
Angelo Gordon STAR Fund				-11.44%	0.00%	2.20%	0.00%	-3.95%	0.00%	6.24%	0.00%	5.44%	0.00%
BBgBarc US Aggregate Index				3.15%		0.18%		2.27%		3.08%		2.94%	
Verus				15.09%		2.20%		-3.95%		6.24%		5.44%	
Angelo Gordon Credit Solutions				15.09%	0.00%	2.20%	0.00%	-3.95%	0.00%	6.24%	0.00%	5.44%	0.00%
BBgBarc BA Intermediate HY				-10.04%		0.18%		2.27%		3.08%		2.94%	
Verus	0.67%	-2.02%	-11.58%	-12.79%		3.36%		1.54%		3.03%		4.44%	
Beach Point Select	0.67%	-2.02%	-11.58%	-12.79%	0.00%	3.35%	0.00%	1.54%	0.00%	3.03%	0.00%	4.44%	0.00%
BBgBarc BA Intermediate HY	0.18%	-1.38%	-8.95%	-10.04%		2.29%		1.84%		2.87%		7.00%	
Verus	0.50%	-1.90%	-17.18%	-18.35%		3.19%		-0.41%		1.92%		4.26%	
Brigade Capital	0.50%	-1.90%	-17.18%	-18.35%	0.00%	3.19%	0.00%	-0.41%	0.00%	1.92%	0.00%	4.18%	0.08%
BBgBarc BA Intermediate HY	0.18%	-1.38%	-8.95%	-10.04%		2.29%		1.84%		2.87%		7.00%	
50% BBgBarc HY/ 50% Bank Loan	0.28%	-1.38%	-11.96%	-12.94%		2.15%		1.13%		2.05%		5.51%	
Verus	1.51%	-0.15%	-8.57%	-7.32%		1.67%		1.20%		3.59%		5.82%	
PIMCO Diversified	1.51%	-0.15%	-8.57%	-7.32%	0.00%	1.67%	0.00%	1.20%	0.00%	3.59%	0.00%	5.81%	0.01%
Blended PIMCO Diversified Index	1.32%	-0.45%	-9.85%	-9.07%		1.70%		1.93%		3.48%		5.97%	
BBgBarc BA Intermediate HY	0.18%	-1.38%	-8.95%	-10.04%		2.29%		1.84%		2.87%		7.00%	
Verus	-0.26%	-0.96%	-4.60%	-5.76%		1.36%		-3.39%		1.45%		1.72%	
Franklin Templeton Investments	-0.26%	-0.96%	-4.60%	-5.76%	0.00%	1.36%	0.01%	-3.39%	0.00%	1.45%	0.00%	1.72%	0.00%
BBgBarc Multiverse Index	1.19%	0.53%	-2.78%	-1.11%		0.64%		0.63%		3.31%		2.40%	
Verus				0.00%		-0.01%		0.00%					
PIMCO Private Income				0.00%	0.00%	-0.01%	0.00%	0.00%	0.00%				
BBgBarc BA Intermediate HY				-10.04%		2.29%		1.84%					
Cliffwater Direct Lending Index				2.03%		1.77%		2.25%					

Manager Performance Comparison (Gross of Fees)

Period Ending: March 31, 2020

	Jan	Feb	Mar	1st Qtr. 2020	Difference	4th Qtr. 2019	Difference	3rd Qtr. 2019	Difference	2nd Qtr. 2019	Difference	1st Qtr. 2019	Difference
Verus				-3.27%		1.46%		1.57%		1.75%		2.41%	
TCP Direct Lending VIII				-3.27%	0.00%	1.46%	0.00%	1.57%	0.00%	1.75%	0.00%	2.41%	0.00%
Cliffwater Direct Lending Index				2.03%		1.77%		2.25%		2.78%		0.84%	
Verus				0.00%		0.00%		0.00%		0.00%		0.00%	
White Oak Yield				0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Cliffwater Direct Lending Index				2.03%		1.77%		2.25%		2.78%		0.84%	
Verus	-0.22%	-3.20%	-11.12%	-14.16%		4.47%		1.23%		5.70%		11.14%	
AQR GRP, 10% Volatility (Net)	-0.22%	-3.20%	-11.12%	-14.16%	0.00%	4.47%	0.00%	1.23%	0.00%	5.70%	0.00%	11.14%	0.00%
60% R3000/ 40% BBgBarc Agg	0.36%	-4.58%	-8.56%	-12.44%		4.87%		1.38%		3.68%		8.65%	
S&P Risk Parity 10% Target Volatility TR	-0.24%	-2.76%	-8.09%	-10.84%		3.16%		2.41%		4.34%		7.98%	
Verus	1.55%	-2.24%	-9.03%	-9.68%		-0.21%		4.18%		5.44%		11.43%	
PanAgora (Net)	1.55%	-2.24%	-9.03%	-9.68%	0.00%	-0.21%	0.00%	4.18%	0.00%	5.44%	0.00%	11.43%	0.00%
60% R3000/ 40% BBgBarc Agg	0.36%	-4.58%	-8.56%	-12.44%		4.87%		1.38%		3.68%		8.65%	
S&P Risk Parity 10% Target Volatility TR	-0.24%	-2.76%	-8.09%	-10.84%		3.16%		2.41%		4.34%		7.98%	
Verus	-3.84%	-4.58%	-16.18%	-23.09%		-3.07%		-1.18%		-4.43%		-1.95%	
AQR DELTA XN (Net)	-3.84%	-4.58%	-16.18%	-23.09%	0.00%	-3.07%	0.00%	-1.18%	0.00%	-4.43%	0.00%	-1.97%	0.02%
Libor + 4%	0.39%	0.43%	0.42%	1.24%		1.44%		1.54%		1.62%		1.52%	
Verus	2.53%	-2.04%	-3.08%	-2.65%		1.26%		1.60%		1.39%		4.63%	
Aberdeen Standard GARS (Net)	2.53%	-2.04%	-3.08%	-2.65%	0.00%	1.26%	0.00%	1.60%	0.00%	1.39%	0.00%	4.63%	0.00%
Libor + 4%	0.39%	0.43%	0.42%	1.24%		1.44%		1.54%		1.62%		1.52%	
Verus				1.66%		2.27%		2.01%		1.04%		1.09%	
INVESCO Real Estate				1.63%	0.03%	2.29%	-0.02%	2.00%	0.01%	1.04%	0.00%	1.11%	-0.02%
NCREIF NFI ODCE Index				0.97%		1.51%		1.31%		0.99%		1.42%	
Verus				0.93%		3.64%		2.12%		1.20%		4.17%	
Invesco US Val IV				0.93%	0.00%	3.64%	0.00%	2.12%	0.00%	1.20%	0.00%	4.17%	0.00%
NCREIF NFI ODCE Index				0.97%		1.51%		1.31%		0.99%		1.42%	
NCREIF CEVA 1Q Lag - NET				2.95%		2.95%		2.95%		2.95%		2.95%	
Verus				1.40%		5.17%		1.09%		5.72%			
Invesco US Val V				1.40%	0.00%	5.17%	0.00%	1.09%	0.00%	5.72%	0.00%		
NCREIF NFI ODCE Index				0.97%		1.51%		1.31%		0.99%			
NCREIF CEVA 1Q Lag - NET				2.95%		2.95%		2.95%		2.95%			
Verus (net)				1.09%		1.38%		1.57%		1.45%		1.61%	
PGIM RE US Debt Fund (net)				1.09%	0.00%	1.38%	0.00%	1.57%	0.00%	1.45%	0.00%	1.61%	0.00%
NCREIF NFI ODCE Index				0.97%		1.51%		1.31%		0.99%		1.42%	

**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 Investment Metrics 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
3/31/2020	19.501	11.889	5.460	2.921	0
12/31/2019	19.41	11.708	5.699	2.981	0
9/30/2019	19.41	11.708	5.699	2.981	0
6/30/2019	17.991	11.416	5.265	3.039	0
3/31/2019	17.991	11.416	5.265	3.039	0
12/31/2018	18.559	11.536	5.547	3.012	0
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
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Number in billion USD

InvestmentMetrics 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
3/31/2020	17.828	8.914	6.127	3.0635	0
12/31/2019	17.828	8.914	6.127	3.0635	0
9/30/2019	17.274	8.637	6.203	3.1015	0
6/30/2019	17.274	8.637	6.203	3.1015	0
3/31/2019	16.204	8.102	5.928	2.964	0
12/31/2018	16.204	8.102	5.928	2.964	0
9/30/2018	17.201	8.6005	6.374	3.187	0
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

Number in billion USD

InvestmentMetrics 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: March 31, 2020

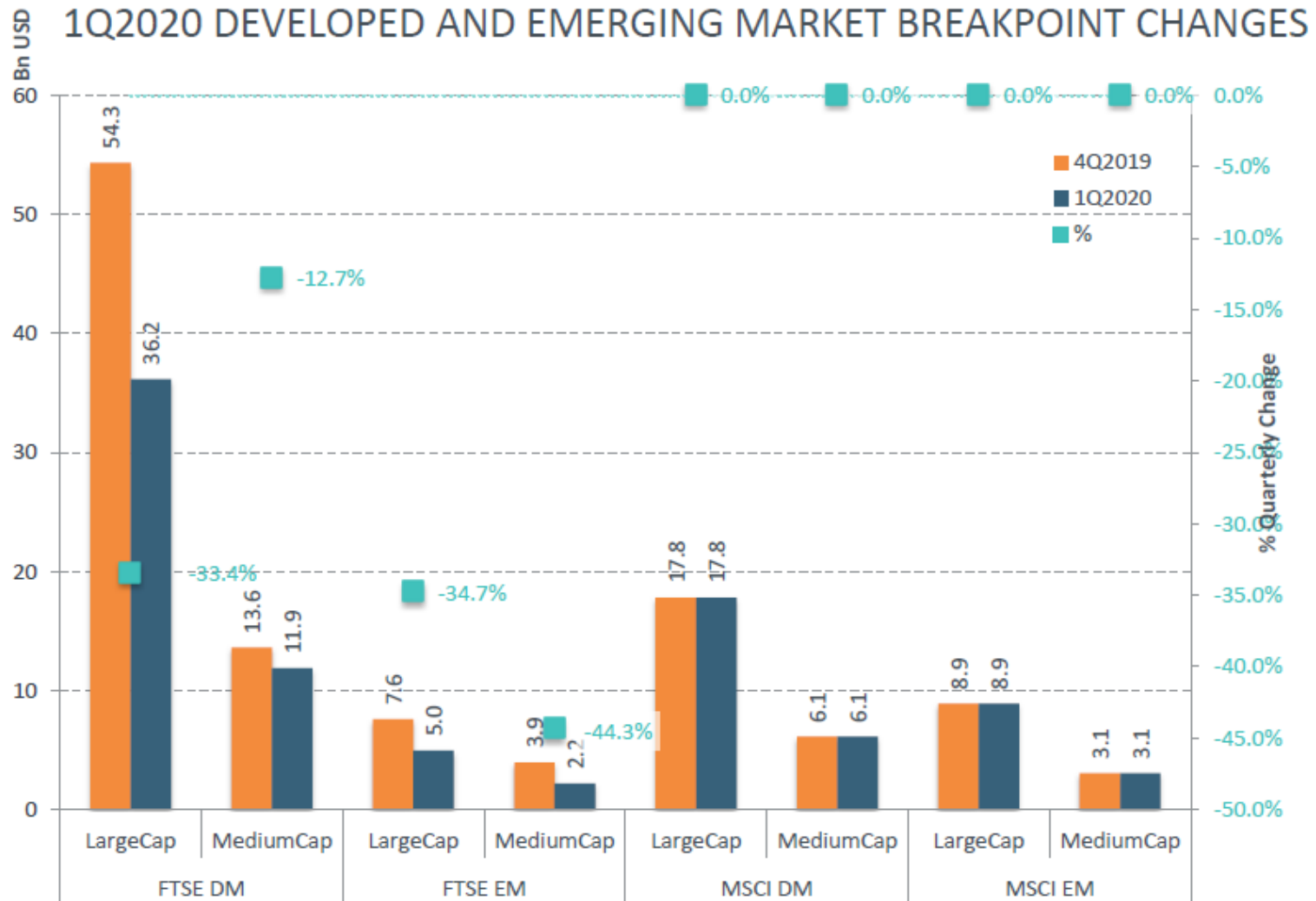
As Of	Large Cap	Medium Large Cap	Medium Cap	Medium Small Cap	Small Cap
3/31/2020	107.925	27.869	9.142	3.662	0
12/31/2019	111.442	29.379	11.055	4.376	0
9/30/2019	111.164	28.416	9.142	3.059	0
6/30/2019	110.136	28.151	9.061	3.057	0
3/31/2019	113.008	26.539	8.787	2.951	0
12/31/2018	93.377	23.285	7.693	2.595	0
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

## Market Capitalization Breakpoints

Period Ending: March 31, 2020

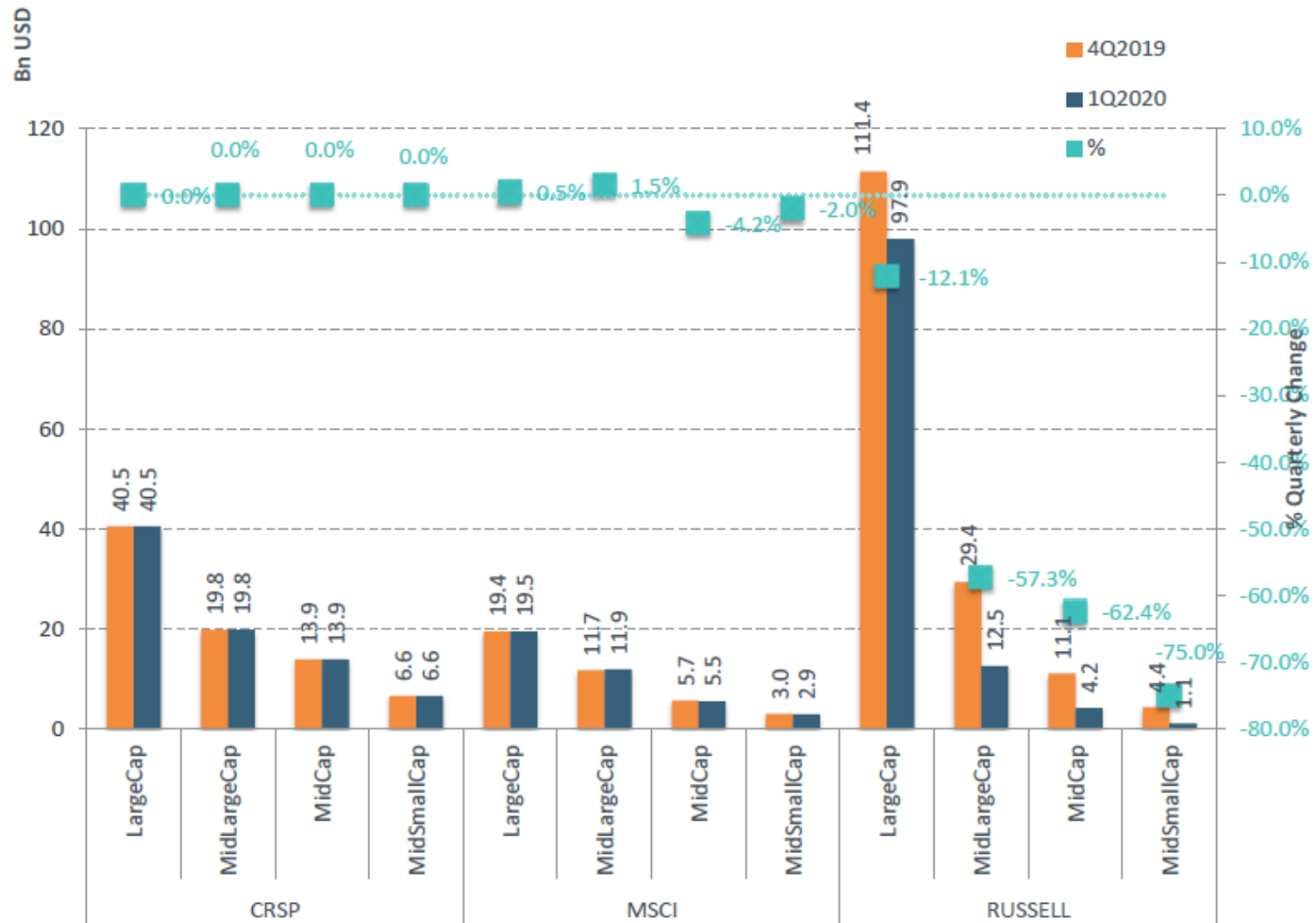
12/31/2011	51.97	14.66	4.93	1.93	0
9/30/2011	45.35	13.88	4.38	1.66	0
6/30/2011	54.25	15.95	5.66	2.16	0
3/31/2011	52.22	15.69	5.7	2.16	0
12/31/2010	49.54	14.8	5.16	2.04	0
9/30/2010	42.83	13.13	4.64	1.8	0
6/30/2010	39.95	11.58	4.1	1.59	0

*Numbers are billions USD*



*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.*

### 1Q2020 US MARKET BREAKPOINT CHANGES



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**

2<sup>ND</sup> QUARTER 2020  
Investment Landscape

# Recent Verus research

Visit: <https://www.verusinvestments.com/insights/>

## Annual outlooks

### ACTIVE MANAGEMENT ENVIRONMENT

Our work on active management addresses some shortfalls of the traditional analysis, which uses the median product to describe the active management universe as a whole. These improvements and insights have allowed us to better understand product behavior and may allow for more informed selection in the future.

## Sound thinking

### TEN THOUGHTS FOR 2020

A new year begins, and with it comes an opportunity to assess whether the correct areas were focused on in the previous year, and to create new suggested topics of interest for the year ahead. In this piece, our CIO, Ian Toner, will try to help investors prioritize shorter-term actions they might take, while addressing longer-term issues to improve their success.

### THE JUDGMENTAL WAITER

In this piece our CIO, Ian Toner, lays out how Verus is approaching the challenge of building customized ESG advice and service to each of our clients, and outlines the significant resource commitment Verus is making during 2020 and beyond to provide that tailored support.

## COVID-19

### MARKET UPDATE 3/17/20

The first few weeks of March have been almost unprecedented in terms of market volatility and behavior. The combination of health concerns and oil market disruption has led to market moves of a type that we rarely see. Underlying this, there is also a real human concern about our families, and the human effect on people we love as the coronavirus spreads. So what are long term investors to do?

### MARKET UPDATE 4/9/20

The COVID-19 crisis has had a sudden impact on the capital markets, which has been made worse by the recent disruption in the oil market. Now is a good time for investors to take stock of the possible intermediate and long-term implications of these disruptions, as well as to try to assess the possible short-term factors which might cause further market disruption.



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# 1<sup>st</sup> quarter summary

## THE ECONOMIC CLIMATE

- Real GDP grew at a 0.3% rate year-over-year in the first quarter (-4.8% quarterly annualized rate). Personal consumption expenditures shrunk -7.6%, resulting in a -5.3% hit to headline growth. Forecasts of Q2 GDP growth have varied between -15% to -35%. **p. 9**
- The U.S. government quickly crafted and implemented historic stimulus measures to combat the economic impact of the virus. Support of this magnitude has not been seen since the Great Depression of the 1930s. **p. 10**

## PORTFOLIO IMPACTS

- U.S. equities experienced an unusually sudden and significant sell-off in March as investors grew fearful of the health and economic impacts of COVID-19. During Q1 the S&P 500 fell -19.6%, international developed equities (MSCI EAFE) fell -22.8% and emerging markets (MSCI EM) fell -23.6%. **p. 25**
- U.S. core inflation increased 2.1% YoY in March. Headline inflation slowed to 1.5%, pushed lower by a sharp decline in energy prices which will likely have persistent effects in future months. Downward pressure could be compounded as households slow spending due to loss of income and a greater propensity to save rather than spend. **p. 11**

## THE INVESTMENT CLIMATE

- In mid-March, the Federal Open Market Committee cut interest rates by a full 1.00% to a new range of 0 – 0.25%. This surprise action was taken on a Sunday with the intent to get out ahead of economic impacts of COVID-19. **p. 19**
- Implied volatility spiked in March to a record daily close of 82.7%, surpassing the high of 80.9% reached in November 2008 during the depths of the global financial crisis. **p. 32**
- Central banks are facing an economic slowdown and need for monetary policy support, but very little room to cut interest rates. This is a risk that has been discussed for years. We believe fiscal policies will play a much larger role in addressing the inevitable economic slowdown. **p. 19**

## ASSET ALLOCATION ISSUES

- Risk markets experienced one of the most sudden corrections on record, amidst extreme volatility. The S&P 500 showed its largest one-day drop since 1987 (March 16 -11.98%) and its largest one-day gain since 2008 (March 24 +9.38%). Implied volatility reached global financial crisis levels, and high yield credit spreads temporarily expanded above 11%. Some of these losses were recovered toward the end of March as the market rebounded. **p. 27**
- The U.S. dollar appreciated significantly in the first quarter, rising 7.1% on a trade-weighted basis, resulting in losses for investors with unhedged currency exposure. **p. 36**

An underweight risk stance appears appropriate in today's environment

We remain watchful for investment opportunities

# What drove the market in Q1?

**“World Health Organization declares the coronavirus outbreak a global pandemic”**

## GLOBAL CONFIRMED COVID-19 CASES

1/31	2/15	2/29	3/15	3/31	4/15
11,374	69,267	86,351	164,403	857,778	2,077,469

Article Source: CNBC, March 11<sup>th</sup>, 2020

**“Vix Hits Highest Level Since the Financial Crisis as Volatility Soars”**

## CBOE VIX INDEX

Oct	Nov	Dec	Jan	Feb	Mar
13.22	12.62	13.78	18.84	40.11	53.54

Article Source: Barron's, March 9<sup>th</sup>, 2020

**“Fed announces unlimited QE and sets up several new lending programs”**

## FEDERAL RESERVE BALANCE SHEET (USD TRILLIONS)

3/4	3/11	3/18	3/25	4/1	4/8
4.3	4.4	4.7	5.3	5.9	6.1

Article Source: MarketWatch, March 23<sup>rd</sup>, 2020

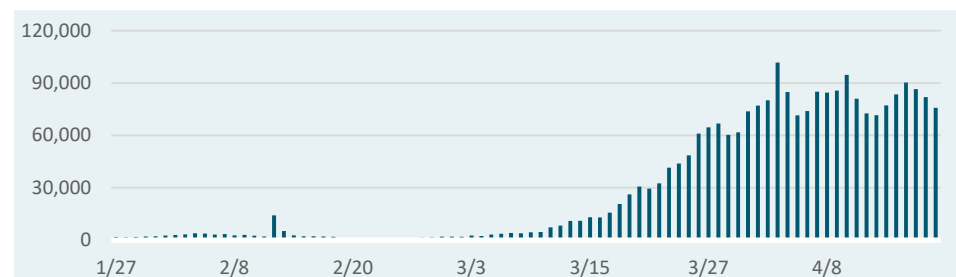
**“Coronavirus job losses could total 47 million, unemployment rate may hit 32 percent, Fed estimates”**

## INITIAL WEEKLY JOBLESS CLAIMS

3/6	3/13	3/20	3/27	4/3	4/10
211,000	282,000	3,307,000	6,867,000	6,615,000	5,245,000

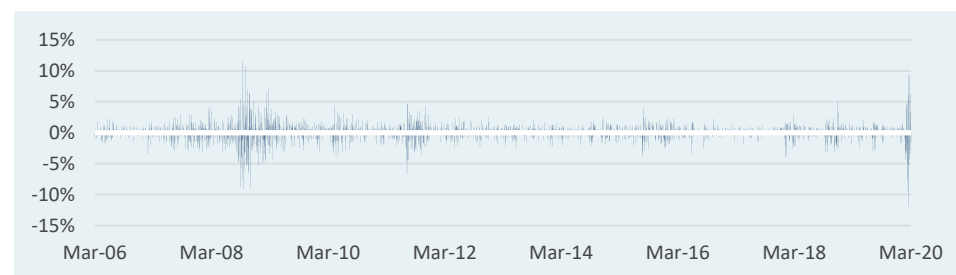
Article Source: NBC News, March 30<sup>th</sup>, 2020

## DAILY NEW COVID-19 CASES (WORLDWIDE)



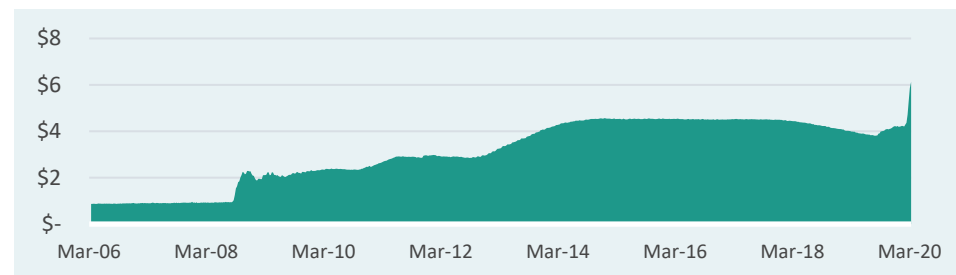
Source: Worldometer, as of 4/19/20

## S&P 500 INDEX 1-DAY PERCENTAGE PRICE MOVE



Source: Standard & Poor's, Bloomberg, as of 3/31/20

## FEDERAL RESERVE BALANCE SHEET (USD TRILLIONS)



Source: Federal Reserve, as of 4/8/20

# Economic environment

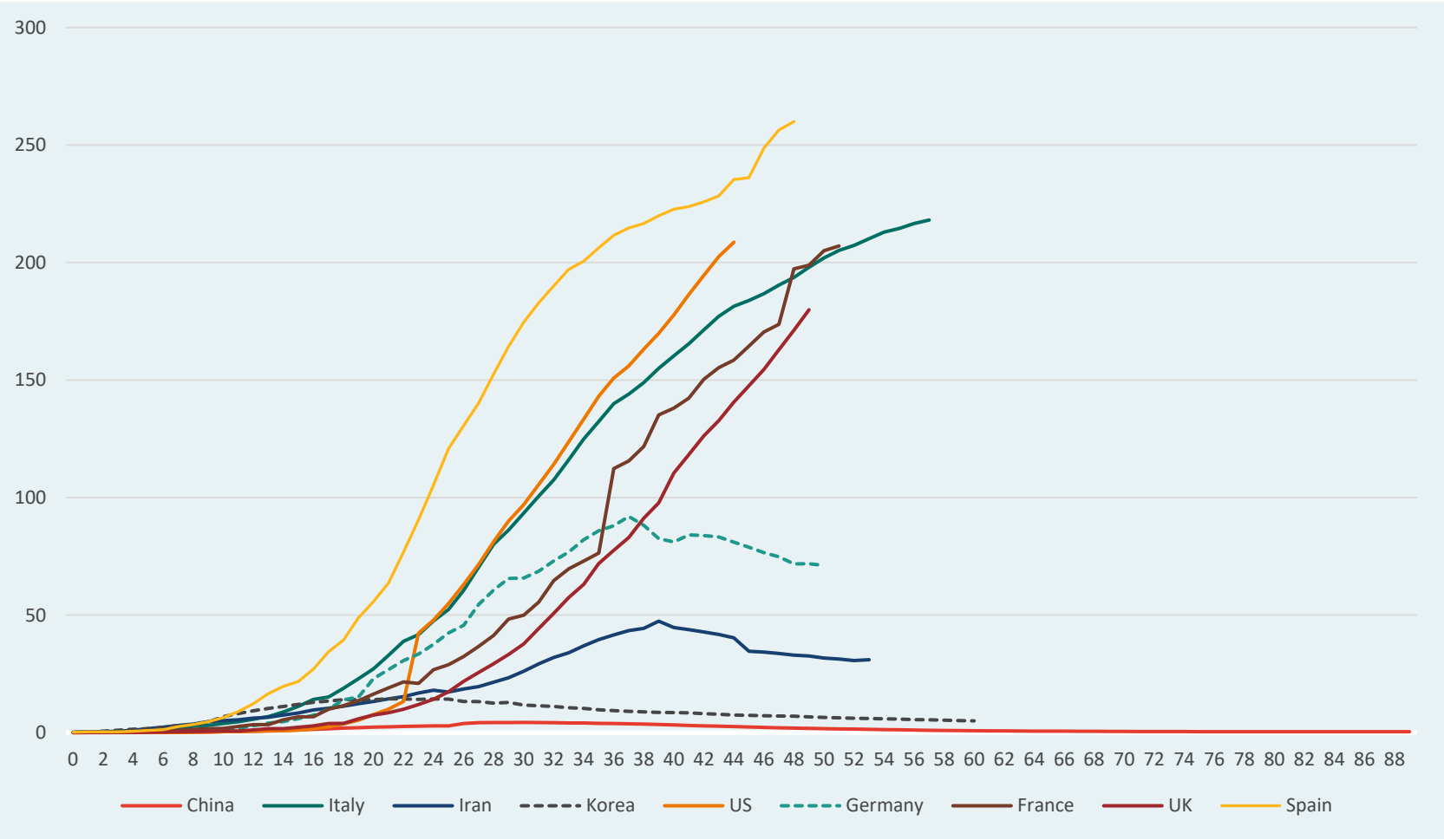
# U.S. economics summary

- Real GDP grew at a 0.3% rate year-over-year in the first quarter (-4.8% quarterly annualized rate). Personal consumption expenditures shrunk -7.6%, resulting in a -5.3% hit to headline growth. Forecasts of Q2 GDP growth have varied between -15% to -35%.
- The U.S. government quickly crafted and implemented historic stimulus measures to combat the economic impacts of the virus. Support of this magnitude has not been seen since the Great Depression of the 1930s.
- U.S. core inflation rose 2.1% YoY in March. Headline inflation slowed to 1.5%, pushed lower by a sharp decline in energy prices which will likely have persistent effects in the coming months. This downward pressure could be compounded as households slow spending due to loss of income and show a greater propensity to save.
- The U.S. labor market exhibited a sharp weakening in March, as unemployment jumped to 4.4%. Some have estimated the true unemployment rate in April to be above 10%.
- March economic data should not be expected to fully reflect the extent of COVID-19. We are watching daily data releases to gain a better understanding of how conditions are evolving.
- The Bloomberg Consumer Comfort Index exhibited its sharpest two week drop since 1985, from 63.0 to 56.3, dipping from a 20-year high of 67.3 that was achieved in January.
- Existing homes sales increased +7.2% in February YoY, and new homes sales were up +14.3%. The 30-year fixed mortgage interest rate has continued to fall, finishing Q1 at 3.33%.

	Most Recent	12 Months Prior
GDP (YoY)	0.3% 3/31/20	2.7% 3/31/19
Inflation (CPI YoY, Core)	2.1% 3/31/20	2.0% 3/31/19
Expected Inflation (5yr-5yr forward)	1.3% 3/31/20	2.4% 3/31/19
Fed Funds Target Range	0% – 0.25% 3/31/20	2.25% – 2.50% 3/31/19
10 Year Rate	0.7% 3/31/20	2.4% 3/31/19
U-3 Unemployment	4.4% 3/31/20	3.8% 3/31/19
U-6 Unemployment	8.7% 3/31/20	7.4% 3/31/19

# COVID-19 update

ACTIVE CASES PER 100,000 PEOPLE



The COVID-19 crisis has quickly become a global pandemic

Source: Bloomberg, aggregated official country statistics, x-axis indexed to when the country first reached 100 cases, as of 4/17/20

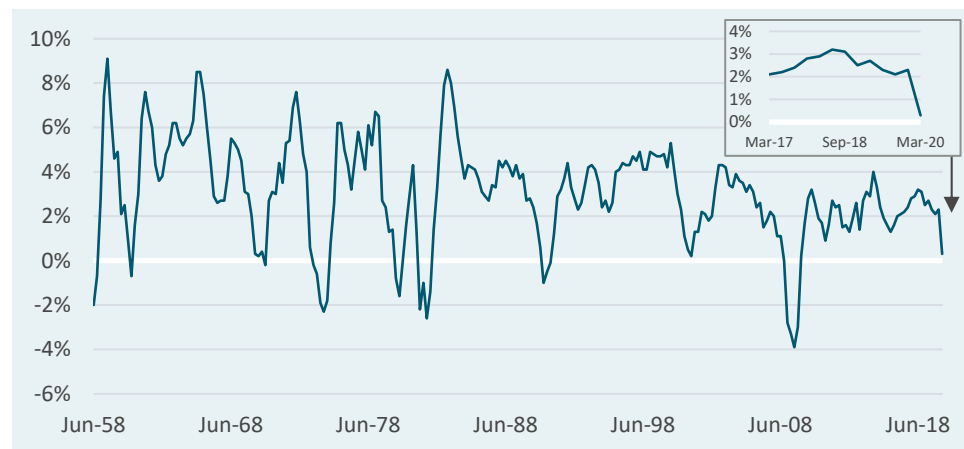
# GDP growth

Real GDP grew at a 0.3% rate year-over-year in the first quarter (-4.8% quarterly annualized rate). Personal consumption expenditures shrunk -7.6%, resulting in a -5.3% hit to headline growth. Forecasts of Q2 GDP growth have varied between -15% to -35%.

The United States fiscal and monetary response to COVID-19 is unparalleled. The first response was from the Federal Reserve, swiftly cutting interest rates to zero, though 0% was not far away from levels at the time. The administration then rolled out the Families First Coronavirus Response Act, which guaranteed sick days to full-time workers, prorated for part-time workers. Next was an expansion of the

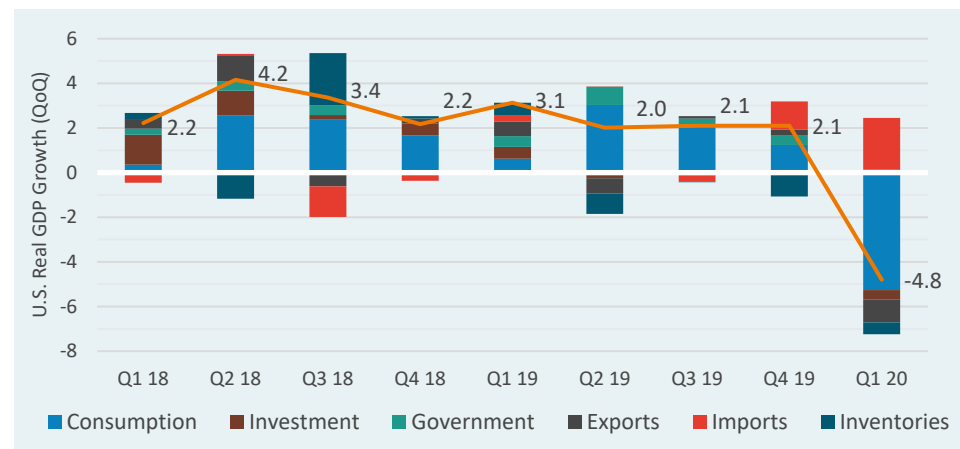
Family and Medical Leave Act, which provided paid leave for employees of businesses with fewer than 500 staff. For workers requiring more than two weeks of leave, the act covered those employees for up to 14 weeks. The most recent CARES Act was the largest in modern history, at \$2.2 Trillion in size. It included up to \$1,200 payments to every American, a \$600 increase in weekly unemployment benefits, expansion of unemployment to many of those not previously eligible, \$350 Billion in loans to small businesses, \$500 Billion in aid to corporations, and additional funding to individual states and government programs.

## U.S. REAL GDP GROWTH (YOY)



Source: Bloomberg, as of 3/31/20

## U.S. GDP GROWTH ATTRIBUTION



Source: BEA, annualized quarterly rate, as of 3/31/20

# U.S. fiscal response

## **Families First Coronavirus Response Act:**

- 10 sick days to full-time workers, prorated for part-time workers. This legislation applies to most U.S. workers, though some restrictions exist.
- Food support for low-income families increased through programs such as: increased SNAP coverage for jobless and lower-income Americans, emergency food allotments, and guaranteed school lunches.

## **Family and Medical Leave Act:**

- This existing act has been amended to provide paid leave for employees of businesses with fewer than 500 staff in size.
- For workers who still require time off after the first two weeks, this act covers these employees for up to 14 weeks.

## **\$2.2 Trillion Coronavirus Relief Package**

- \$1,200 checks to every American, which begin to be phased out for Americans with more than \$75,000 of income and fully phased out for Americans with more than \$99,000 in income. It was communicated that these non-taxable checks would be issued within weeks.
- Weekly unemployment benefits were increased by \$600 per week for up to 4 months and were made available to many who previously did not qualify, such as freelance workers and furloughed employees.
- \$350 Billion in loans to small businesses.
- Companies with fewer than 500 employees could be eligible for up to \$10 Million in forgivable loans to meet payroll needs.
- \$500 Billion in aid to corporations, \$100 Billion in aid to hospitals, \$150 Billion for state and local governments.
- 60-day delays in home foreclosures. Optional 6-month student loan deferrals.



# Inflation

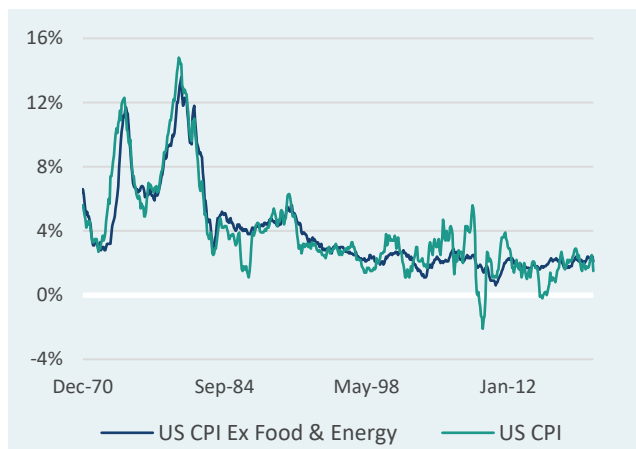
U.S. core inflation increased 2.1% YoY in March. Headline inflation slowed to 1.5%, pushed lower by a sharp decline in energy prices which will likely have continued effects over the coming months. This downward pressure could be compounded as households slow spending due to loss of income and show a greater propensity to save rather than spend.

During the sudden market sell-off in March, the U.S. TIPS inflation breakeven rate fell drastically from 1.7% to a low of 0.5%, ending the month at 0.9%. U.S. TIPS breakevens have historically tended to plummet in times of market turmoil.

We believe these moves may partially reflect the illiquidity of TIPS in volatile environments, rather than falling inflation expectations. This draws into question the usefulness of TIPS breakeven rates as a pure indication of investors' inflation forecasts. Inflation swaps, such as the 5-year Inflation Swap Forward Rate, may offer a cleaner reflection of true inflation expectations.

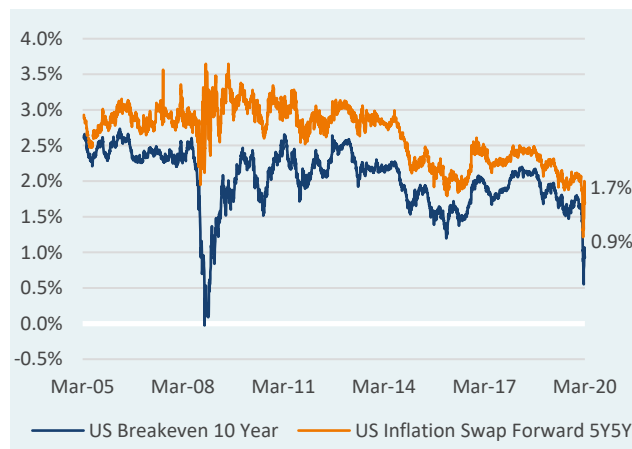
Consumer inflation surveys indicate that expectations were relatively flat, moving from 2.3% in December to 2.2% in March.

**U.S. CPI (YOY)**



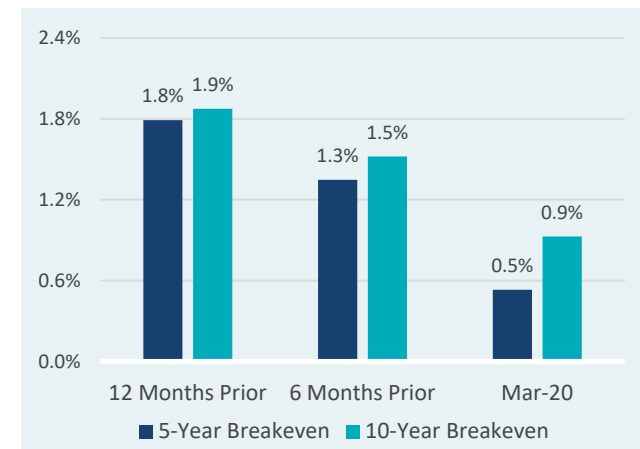
Source: Bloomberg, as of 3/31/20

**U.S. INFLATION INDICATORS**



Source: FRED, Bloomberg, as of 3/31/20

**INFLATION EXPECTATIONS**



Source: Bloomberg, as of 3/31/20

# Labor market

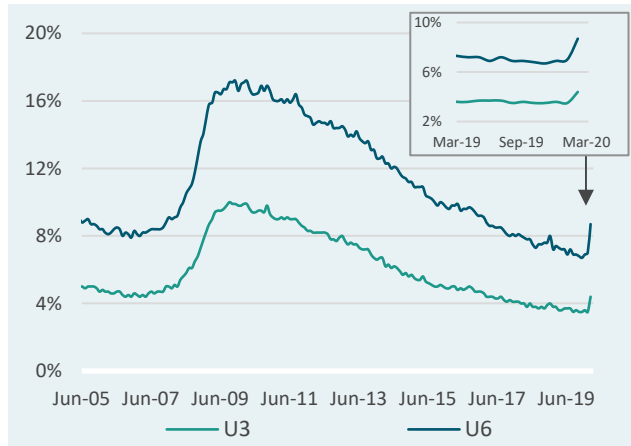
The U.S. labor market exhibited a sharp weakening in March, as unemployment jumped to 4.4%. Some have estimated the true unemployment rate in April to be above 10%.

The total number of Americans applying for unemployment skyrocketed to 6.65 Million at the end of March – a number historically unthinkable. This figure may stay elevated due to shelter-in-place mandates and widespread business closures across the country.

The NFIB Small Business Optimism Index decreased by 8.1 in March to 96.4, which was the largest drop of the series' history. Survey respondents indicated greater uncertainty on the horizon, contracting business conditions, falling sales in the coming six months, and fewer job openings. NFIB stated that "Small business orders are bracing themselves for a significant reduction in consumer spending and future orders." The organization also reported that around half of small businesses indicated that they cannot survive a shutdown of more than two months under current conditions.

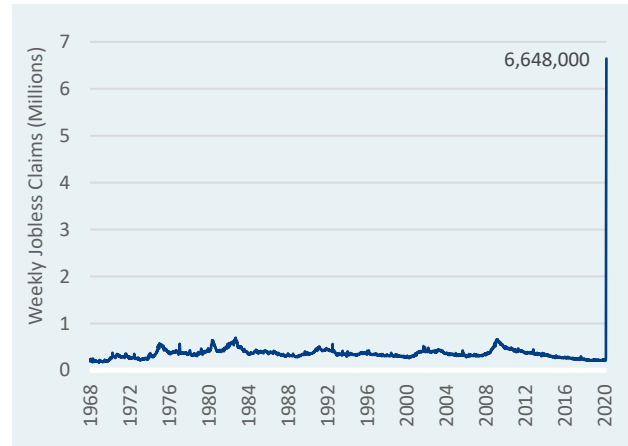
U.S. labor market is experiencing the largest negative shock in modern history

## U.S. UNEMPLOYMENT



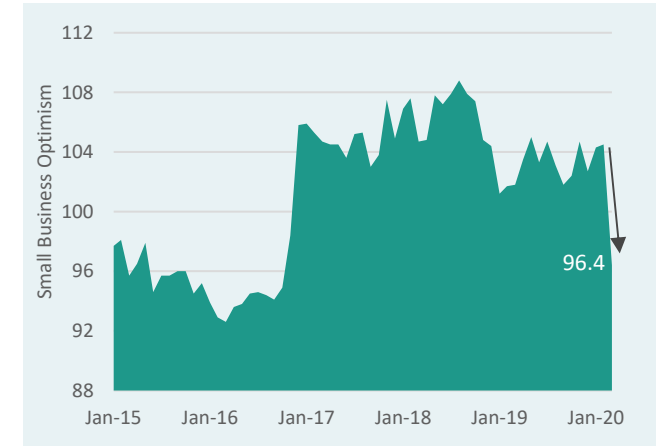
Source: FRED, as of 3/31/20

## WEEKLY JOBLESS CLAIMS



Source: FRED, as 3/31/20

## SMALL BUSINESS OPTIMISM



Source: NFIB, as of 3/31/20

# The consumer

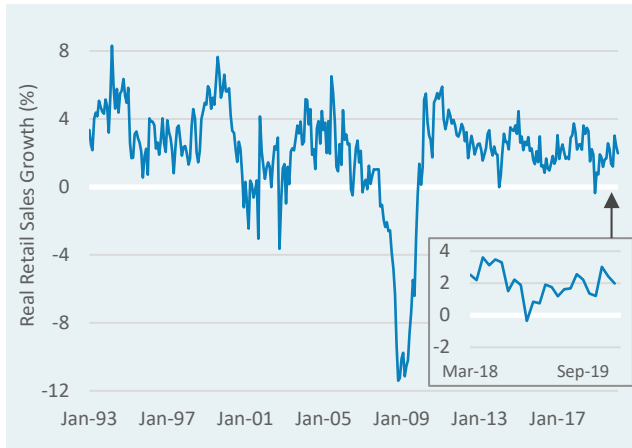
The U.S. consumer has been the greatest support to moderate domestic economic growth of recent years. At the same time, spending and use of credit has been conservative, and household balance sheets have remained robust. The relatively strong position of households at the onset of the crisis may help mitigate some pain of the COVID-19 economic slowdown.

U.S. retail sales declined -8.7% in March from the prior month, the largest ever decline since the series' inception in 1992. Big ticket discretionary purchases are likely to see severe slowdowns due to coronavirus.

Consumers appear to be paring back more elective purchases and allocating more of their income toward staple goods. In March, sales at clothing and home furnishing stores fell -51% and -27% respectively, while food and beverage purchases (+27%) posted a record advance.

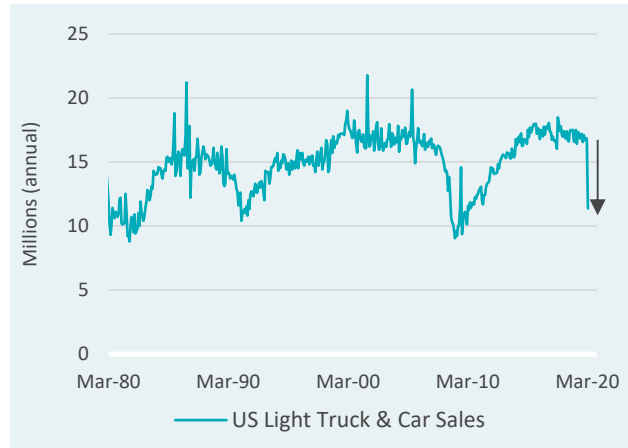
Data from Google suggests that consumers have been travelling far less as of late, and whether that trend continues will be interesting to observe as we move into spring in the United States. Filling station receipts fell around 17% in March, and those revenues are less likely to be "made up" later in the year.

**REAL RETAIL SALES GROWTH (YOY)**



Source: FRED, as of 2/29/20

**U.S. AUTO SALES**



Source: Bloomberg, as of 3/31/20

**HOUSEHOLD DEBT BURDEN**



Source: FRED, as of 12/31/19

# Sentiment

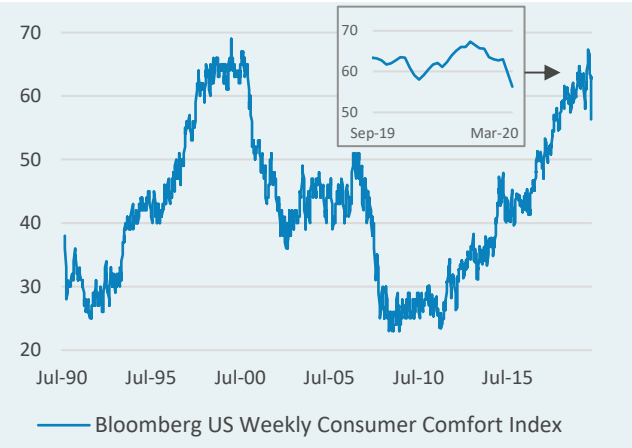
The Bloomberg Consumer Comfort Index exhibited its sharpest two week drop since 1985, falling from 63.0 to 56.3, down from a 20-year high of 67.3 that was achieved in January. Slowing business activity, rising unemployment, and greater uncertainty has led to a broad deterioration in consumer confidence.

Small business owners have been among the hardest hit by the COVID-19 economic disruptions. The NFIB Small Business Optimism Index registered its largest ever single month drop

in March, falling -8.1 points to 96.4. Plummeting expectations for real sales over the next six months drove the decline in the overall index, and it appears Main Street business owners are anticipating and bracing themselves for continued economic disruptions moving forward.

While hiring activity remained relatively healthy in early March, hiring plans showed a significant drop-off in February, a signal of a strong downturn in the coming months.

**CONSUMER COMFORT**



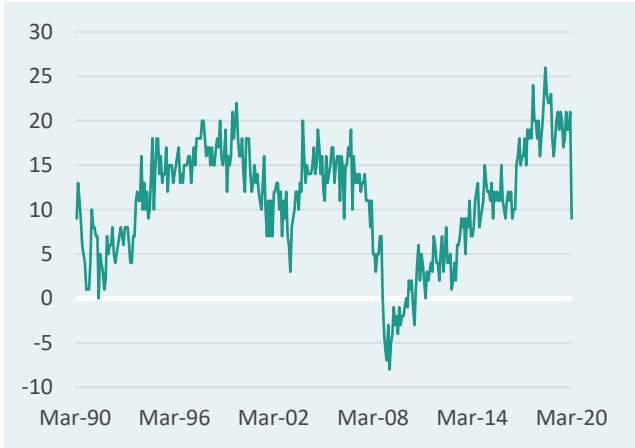
Source: Bloomberg, as of 3/31/20

**SMALL BUSINESS OPTIMISM**



Source: NFIB, as of 3/31/20

**SMALL BUSINESS HIRING PLANS INDEX**



Source: NFIB, as of 3/31/20

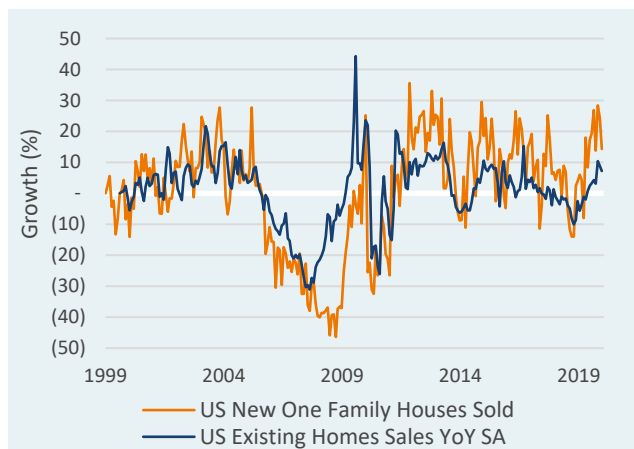
# Housing

The housing market exhibited strength to start the year, with February existing homes sales rising 7.2% YoY, and new home sales up 14.3%. The 30-year fixed mortgage interest rate has continued to fall, finishing Q1 at 3.33%. Near record-low interest rates will likely continue to support housing prices and demand, as home affordability improves for Americans.

It is difficult to forecast the effect that COVID-19 will have on the housing market, as there are perhaps two opposing forces at work. The first effect is falling mortgage rates, which should be supportive of home values and purchase activity, assuming U.S. interest rates remain lower as they

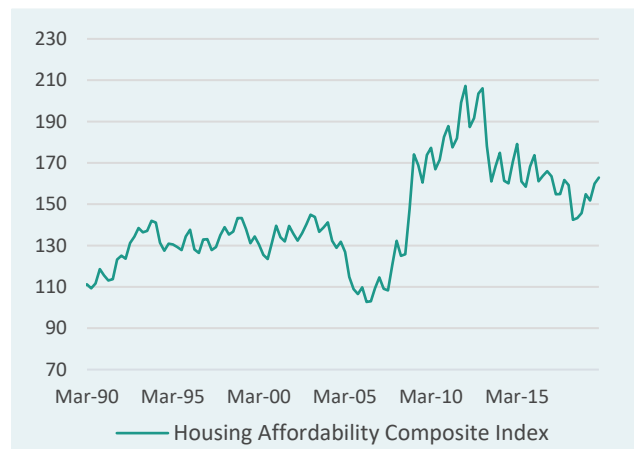
typically do during market strain. The second effect – a slowing U.S. economy – is of course negative on housing values and demand. Millions of job losses have occurred in the first few weeks of the COVID-19 nationwide shutdown, and many Americans will soon struggle to meet mortgage payments. Under the new CARES Act, homeowners with Federally-backed mortgages who have been affected by COVID-19 can request forbearance on mortgage payments for up to 180 days, with an option to extend for an additional 180 days. This intervention will hopefully ease some of the strains and mitigate some downside risk during a time of historically unprecedented spikes in unemployment.

**U.S. HOME SALES (YOY)**



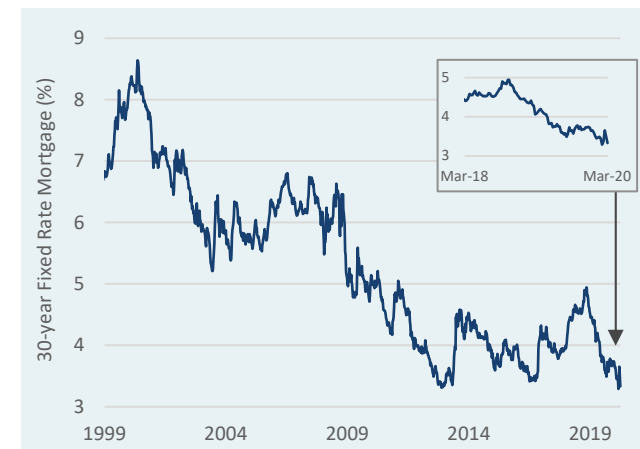
Source: FRED, as of 2/29/20

**HOUSING AFFORDABILITY INDEX**



Source: Bloomberg, NAHB, as of 12/31/19 (see appendix)

**30YR FIXED RATE MORTGAGE**



Source: FRED, as of 3/31/20

# International economics summary

- Most international developed economies grew at a rate of 0.5% to 2.5% in Q4. The low and stable expansion of recent years has changed suddenly with the onset of COVID-19. Many global economies will enter recession in 2020. On April 14<sup>th</sup> the IMF revised their 2020 global growth forecast from +3.3% to -3.0%.
- Governments are using monetary and fiscal policies to fill the large hole in spending and lending that the slowdown may cause. These policies vary in their characteristics and aggressiveness.
- Governments with limited ability to implement stimulus policies may face tougher economic fallout. Specifically, European Union member nations that cannot exercise independent actions may see greater difficulties ahead as income gaps cannot be supplemented with fiscal spending.
- The World Trade Organization (WTO) forecast a 13%-32% fall in global trade in 2020 – a larger decrease than witnessed during the global financial crisis. This forecast was paired with the expectation of a 21%-24% rebound in trade throughout 2021.
- While not yet reflected in the most recent economic data, unemployment rates around the world are certain to rise considerably.
- The COVID-19 virus breakout originated in China, and many investors have pointed to China as a testcase for how the virus might play out economically. Although the data released by China suggests the outbreak has been defeated, there is increasing evidence that the severity of virus has been underreported – perhaps severely.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	0.3% <i>3/31/20</i>	1.5% <i>3/31/20</i>	4.4% <i>3/31/20</i>
Eurozone	1.0% <i>12/31/19</i>	0.7% <i>3/31/20</i>	7.3% <i>2/29/20</i>
Japan	(0.7%) <i>12/31/19</i>	0.4% <i>3/31/20</i>	2.3% <i>2/29/20</i>
BRICS Nations	5.0% <i>12/31/19</i>	4.9% <i>3/31/20</i>	5.0% <i>12/31/19</i>
Brazil	1.7% <i>12/31/19</i>	3.3% <i>3/31/20</i>	11.6% <i>2/29/20</i>
Russia	2.1% <i>12/31/19</i>	2.6% <i>3/31/20</i>	4.6% <i>2/29/20</i>
India	4.7% <i>12/31/19</i>	5.9% <i>3/31/20</i>	8.5% <i>12/31/17</i>
China	6.0% <i>12/31/19</i>	4.3% <i>3/31/20</i>	3.6% <i>12/31/19</i>

# International economics

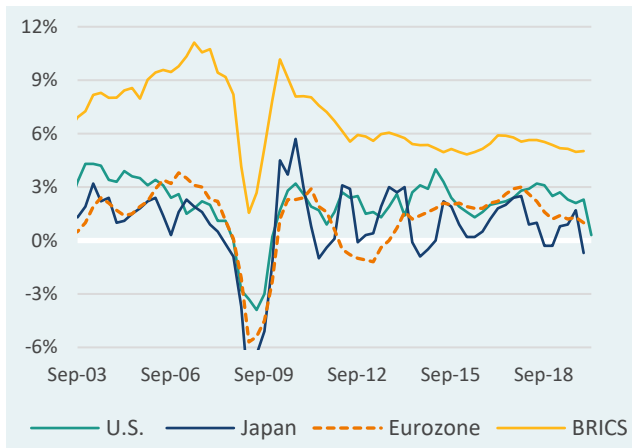
Most international developed economies grew at a rate of 0.5% to 2.5% in Q4. The low and stable expansion of recent years has changed suddenly with the onset of COVID-19. Many global economies will enter recession in 2020. On April 14<sup>th</sup> the IMF revised their 2020 global growth forecast from +3.3% to -3.0%.

Governments are using monetary and fiscal policies to fill the potentially large hole in spending and lending that the slowdown may cause. These policies vary in their characteristics. For example, the UK government has taken a more aggressive stance, committing to subsidize 80% of the salaries of workers who become unemployed, up to £2,500 per month for a three-month period.

The World Trade Organization (WTO) forecast a 13%-32% fall in global trade in 2020 – a larger decrease than witnessed during the global financial crisis due to broader restrictions on labor and travel that are not involved with a typical recession. This forecast was paired with the expectation of a 21%-24% rebound in trade throughout 2021, though forecasts of the shape and nature of the recovery may be more speculative in nature.

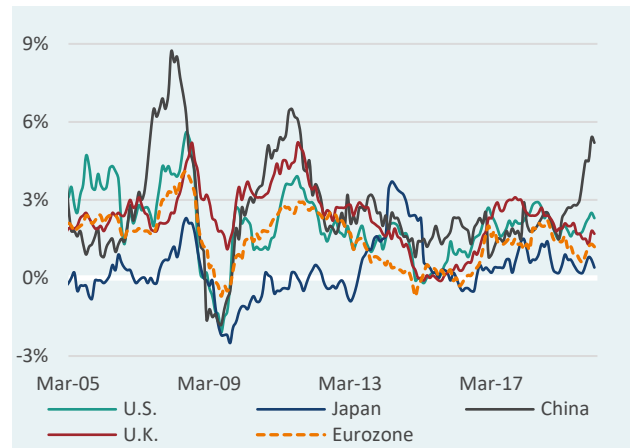
Due to the extremely quick onset of COVID-19 and its economic impacts, many traditional economic metrics do not yet reflect the effects of the virus since these metrics are released with a one-month or greater lag.

**REAL GDP GROWTH (YOY)**



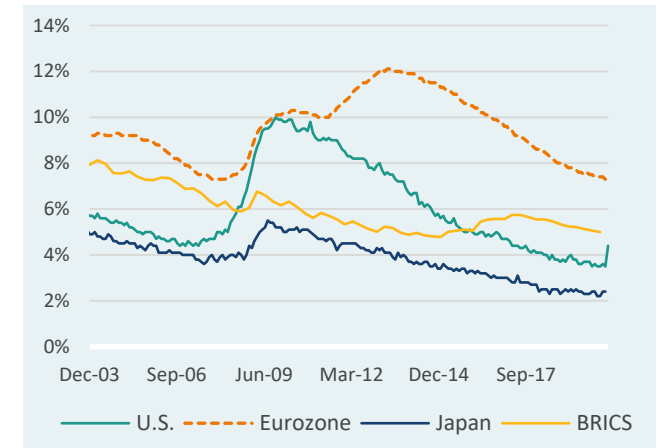
Source: Bloomberg, as of 3/31/20 or most recent release

**INFLATION (CPI YOY)**



Source: Bloomberg, inflation range of past 5 years, as of 2/29/20

**UNEMPLOYMENT RATE**



Source: Bloomberg, as of 3/31/20 or most recent release

# Fixed income rates & credit



# Interest rate environment

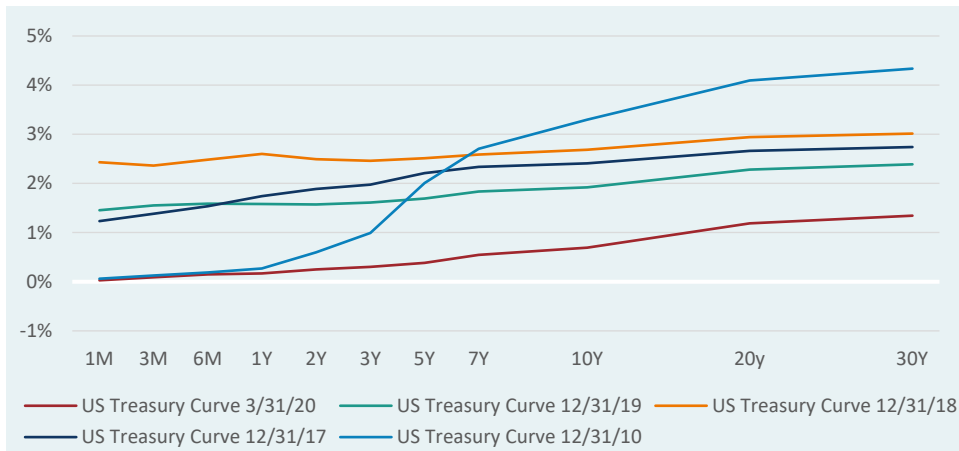
- In mid-March, the Federal Open Market Committee cut interest rates by a full 1.00% to a new range of 0 – 0.25%. This surprise action was taken on a Sunday with the intent to get out ahead of the economic impacts of COVID-19.
- On April 9<sup>th</sup>, the Federal Reserve announced an additional \$2.3 Trillion program aimed towards providing financing to small businesses and municipalities. The program included \$1M-\$25M sized loans at an interest rate of 2.5%-4.0% with a four-year maturity. This move involved Fed purchases of certain types of low-grade speculative debt, a reversal from comments just weeks earlier that the Federal Reserve would stick to investment-grade debt purchases.
- The European Central Bank (ECB) announced a €750B asset purchase program in March to address effects of the virus. ECB President Christine Lagarde claimed that there are “no limits to our commitment to the euro”. Bond yields of Euro member countries fell on the news.
- Central banks are now facing a unique problem – an immediate economic slowdown and need for monetary policy support, but very little room to cut interest rates to provide that support. This is a risk that has been discussed by investors for years, only now becoming reality. We believe fiscal policies will play a much larger role in addressing the inevitable economic slowdown.
- The Federal Reserve rolled out several liquidity programs which were components of its Global Financial Crisis playbook and are aimed at ensuring the flow of credit to U.S. households and businesses, as well as financial market stability. The New York Fed began offering up to \$500B in overnight liquidity through repurchase agreements and has expanded dollar swap lines to alleviate any possible strains in global U.S. dollar funding markets.

Area	Short Term (3M)	10-Year
United States	0.09%	0.67%
Germany	(0.71%)	(0.47%)
France	(0.50%)	(0.02%)
Spain	(0.23%)	0.67%
Italy	(0.05%)	1.52%
Greece	0.16%	1.63%
U.K.	0.03%	0.36%
Japan	(0.30%)	0.01%
Australia	0.37%	0.76%
China	1.34%	2.58%
Brazil	3.37%	7.77%
Russia	5.47%	6.70%

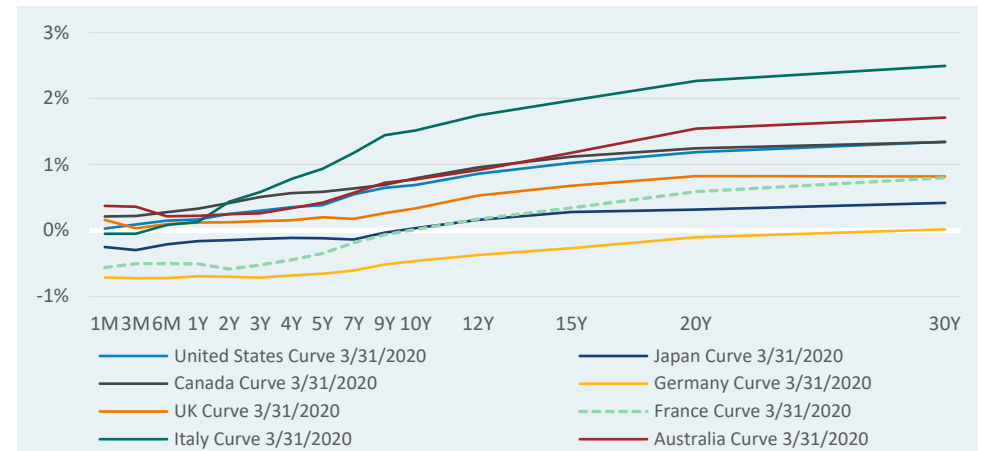
Source: Bloomberg, as of 3/31/20

# Yield environment

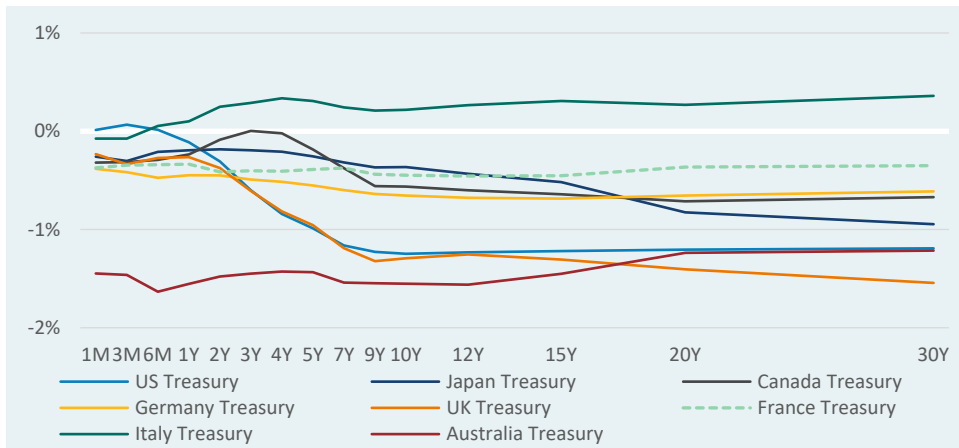
## U.S. YIELD CURVE



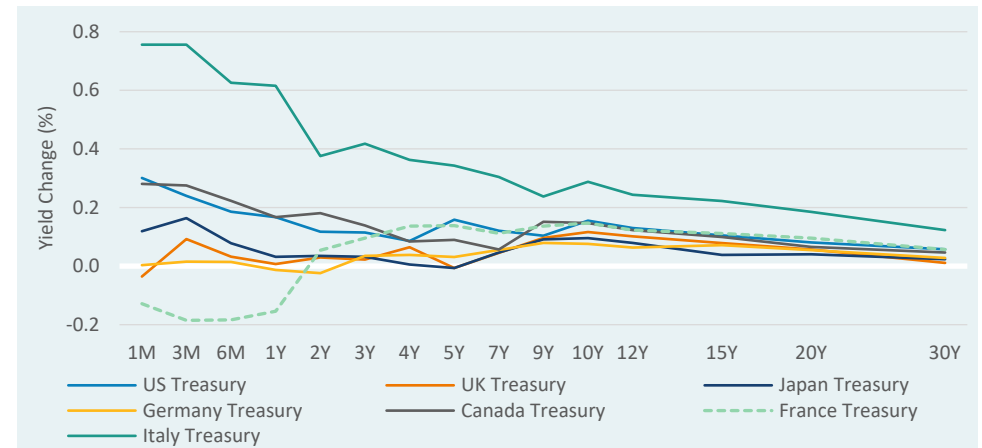
## GLOBAL GOVERNMENT YIELD CURVES



## YIELD CURVE CHANGES OVER LAST FIVE YEARS



## IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 3/31/20

# Credit environment

After a positive start to the year following the completion of phase one of the US-China trade deal, the impacts of the COVID-19 pandemic struck fear into credit markets, causing a broad-based sell-off and liquidity crisis in early March. This volatility prompted decisive Fed action, including but not limited to announcing unlimited QE and the reopening of several financial crisis-era liquidity facilities, which collectively incited a partial recovery in the last week of the quarter and restored a reasonable level of liquidity to credit markets.

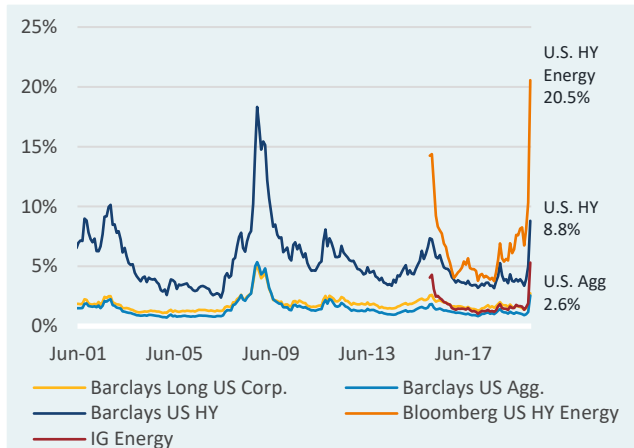
U.S. investment grade credit spreads widened from 93 bps at the end of 2019 to 272 bps at the end of the quarter after reaching highs of 373 bps in March. Similarly, high yield credit spreads spiked from 336 bps to 880 bps over the quarter, after March highs of 1100 bps. High yield ex-

Energy spreads increased from 295 bps to 749 bps over the same period.

The US Aggregate finished the quarter up 3.15%, while investment grade credit fell -3.63% followed by high yield -12.68% and leveraged loans -13.05%. In general, higher quality bonds meaningfully outperformed lower quality.

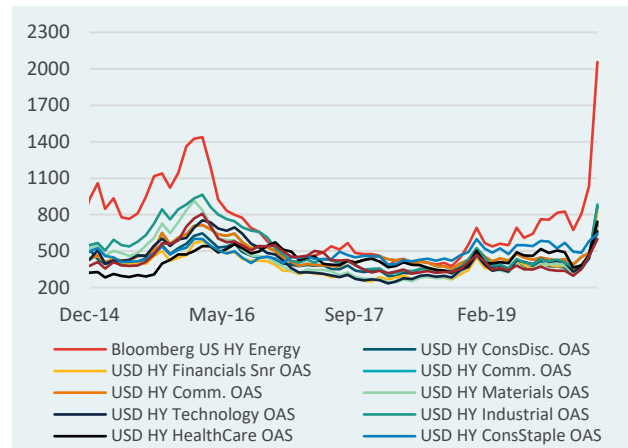
While the energy sector within high yield was the top performer in Q4 2019, the sector was faced with both a supply and demand shock with the Saudi Arabia-Russia production conflict and COVID-19 outbreak, causing it to decline by -38.94% in Q1 2020. The utility and technology sectors held up relatively well, declining -5.1% and -5.3%, respectively.

## SPREADS



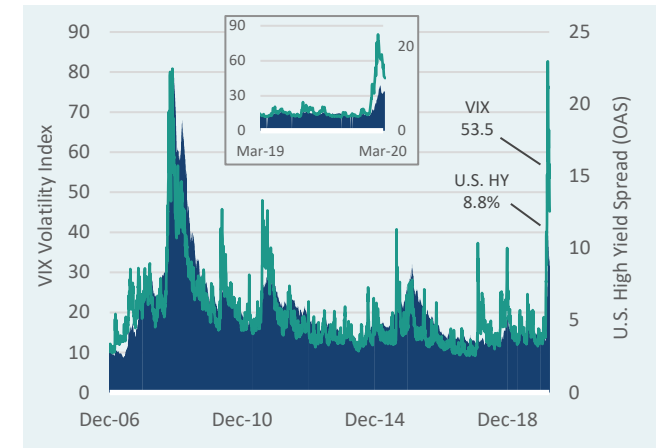
Source: Barclays, Bloomberg, as of 3/31/20

## HIGH YIELD SECTOR SPREADS (BPS)



Source: Bloomberg, as of 3/31/20

## CREDIT SPREADS MOVING WITH VOLATILITY



Source: CBOE, BofA, as of 3/31/20

# Default & issuance

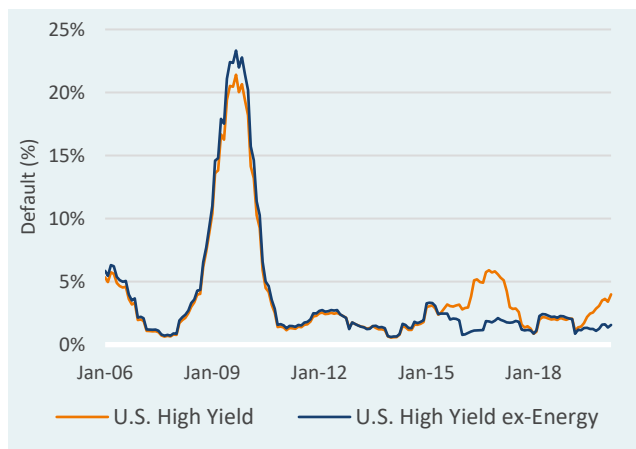
The first quarter saw 13 defaults affecting \$23.5 Billion in bonds and loans. However, one company, Frontier Communications, accounted for \$16.7 Billion of the total. For context, this quarterly amount compares with 43 defaults affecting \$51.5 Billion in bonds and loans for the full year of 2019. While this quarter ranks as the seventh highest in default volume on record, fixed income investors are expecting the worst is yet to come as companies grapple with the COVID-19-induced economic shutdown.

In March, the par-weighted U.S. high-yield default rate rose to a three-year high of 3.4%, up from 2.6% at the end of last year. Loan default rates rose less dramatically, to 1.9% over the trailing 12 months, up from 1.6% at year end.

Energy has driven around 45% of total defaults over the last 12 months, and in Q1 the full year 2020 outlook for the sector worsened dramatically. The trailing 12-month energy default rate in high yield ended the quarter at 9.8% (high yield ex-energy was 2.2%) while the trailing 12-month energy default rate in loans ended at 13.0% (loan ex-energy was 1.8%). In addition to energy, travel and tourism, gaming, leisure, retail, and restaurants appear particularly vulnerable in the current economic environment.

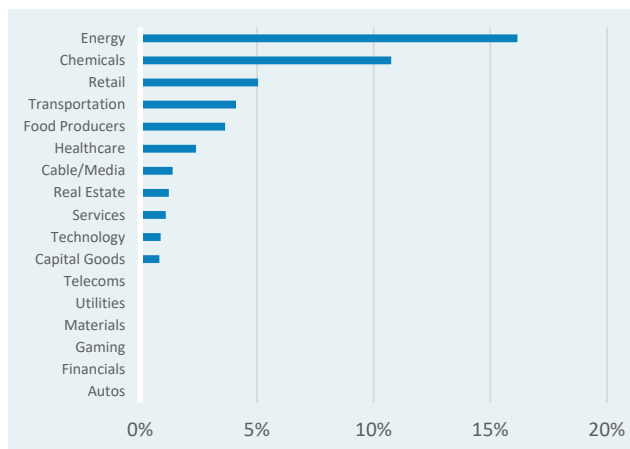
Investment grade bond issuance boomed in Q1 as companies tried to shore up liquidity for the coming recession. This was particularly pronounced in March, which saw a record \$262 Billion in investment grade issuance. Q1 also saw \$73 Billion in high yield volume and loan issuance spike to \$199 Billion.

**HY DEFAULT RATE (ROLLING 1-YEAR)**



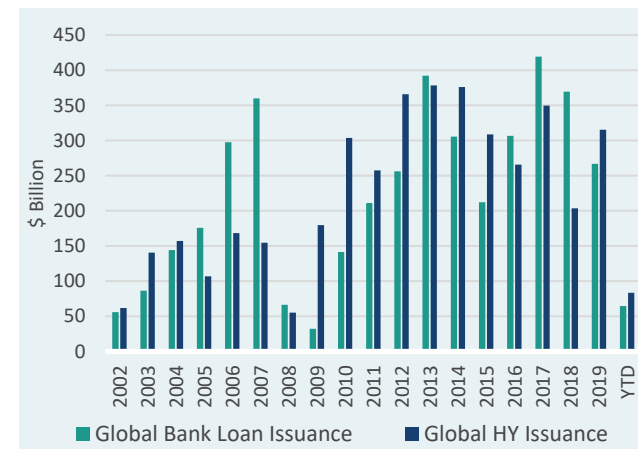
Source: BofA Merrill Lynch, as of 3/31/20

**U.S. HY SECTOR DEFAULTS (LAST 12 MONTHS)**



Source: BofA Merrill Lynch, as of 3/31/20 – par weighted

**GLOBAL ISSUANCE (\$ BILLIONS)**



Source: Bloomberg, BofA Merrill Lynch, as of 3/31/20

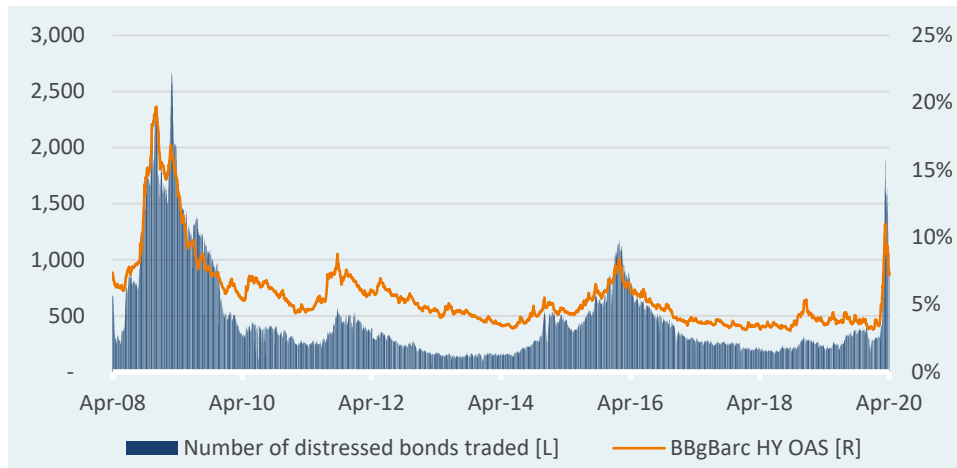
# High yield – what happened?

The considerable economic fallout from the COVID-19 pandemic and collapsing oil prices broadly impacted credit markets. Credit spreads topped 1,000 basis points for the first time since the global financial crisis and the number of distressed bonds soared from 218 at the beginning of the year to a peak of 1,896. Higher defaults typically follow slowing growth and credit spread widening. J.P. Morgan’s estimates of credit defaults increased from a 3% rate to an 8% rate for the near-term.

Approximately half of the investment grade bond market now sits within the BBB rated segment, which is the lowest

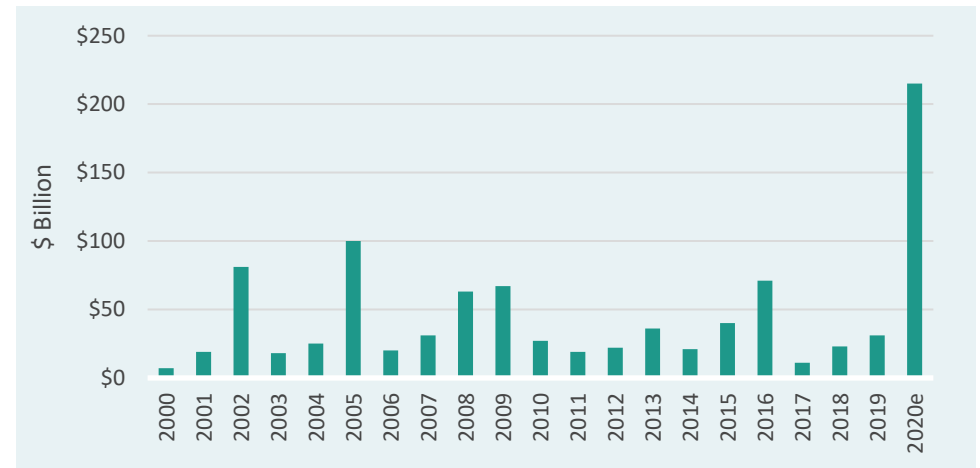
rung on the investment grade scale. Some market participants now expect more than \$200 Billion to fall from the investment grade to the high yield space. Because the BBB sector alone totals more the twice the size of the entire high yield market, downgrades and subsequent forced selling are likely to add pressure to that already stressed market segment throughout the rest of the year. These dislocations have already impacted strategies across the space as investors redeem capital, resulting in suspensions and even closures.

## VOLUME AND SPREADS



Source: J.P. Morgan, Bloomberg, as of 4/16/20

## FALLEN ANGELS



# Equity

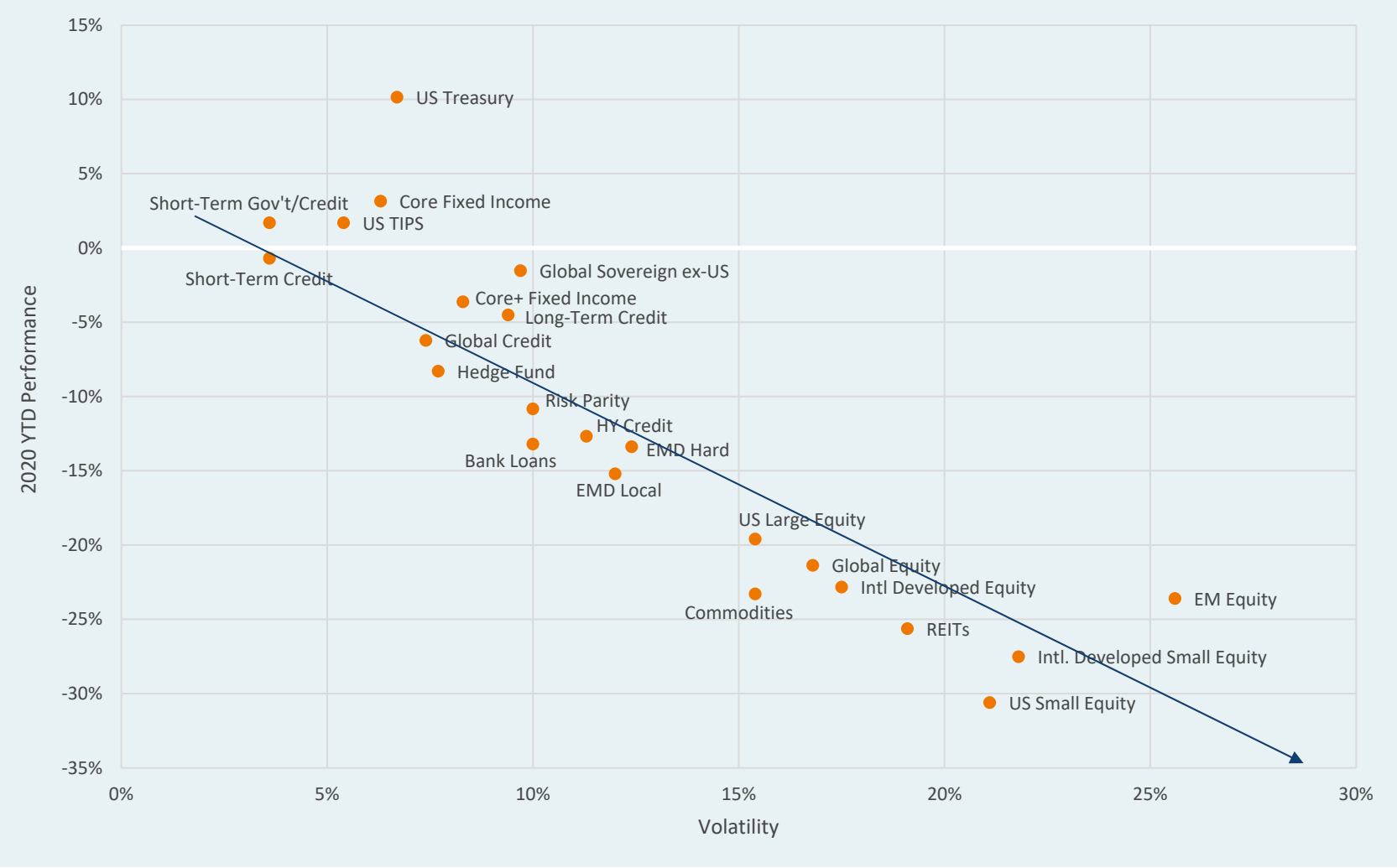
# Equity environment

- U.S. equities experienced an unusually sudden and significant sell-off in March as investors grew fearful of the health and economic impacts of COVID-19 spread. During Q1 the S&P 500 fell -19.6%, international developed equities (MSCI EAFE) fell -22.8% and emerging markets (MSCI EM) fell -23.6%.
- The greatest influence on equity performance in 2020 will perhaps be the path of corporate earnings. The degree to which corporate earnings will fall is largely unknown with few reliable estimates.
- Implied volatility spiked in March to a record daily close of 82.7%, surpassing the high of 80.9% in November 2008 during the depths of the global financial crisis.
- In March, a squabble between OPEC+ members led to a historic drop in energy prices. The energy sector faces sharply falling demand and potentially significant oversupply due to oil producers' decision to ramp up production in an oil war. The energy sector experienced a loss of -50.5% in Q1.
- The U.S. dollar appreciated significantly in the first quarter, rising 7.1% on a trade-weighted basis, resulting in large losses for investors with unhedged currency exposure. As is often the case during higher risk market environments, demand for safe-haven currencies positively impacted the dollar.
- Value stocks severely underperformed growth stocks during the first quarter (Russell 1000 Value -26.7%, Russell 1000 Growth -14.1%). Small cap stocks underperformed large cap stocks by a similar magnitude (Russell 2000 -30.6%, Russell 1000 -20.2%). Value and size factors continue to experience an extended period of relative underperformance.

	QTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)
US Large Cap (S&P 500)	(19.6%)		(7.0%)	
US Small Cap (Russell 2000)	(30.6%)		(24.0%)	
US Large Value (Russell 1000 Value)	(26.7%)		(17.2%)	
US Large Growth (Russell 1000 Growth)	(14.1%)		(0.9%)	
International Large (MSCI EAFE)	(22.8%)	(19.9%)	(14.4%)	(10.3%)
Eurozone (Euro Stoxx 50)	(27.0%)	(24.8%)	(16.6%)	(12.0%)
U.K. (FTSE 100)	(28.8%)	(23.0%)	(22.0%)	(16.4%)
Japan (NIKKEI 225)	(18.6%)	(18.8%)	(6.7%)	(6.8%)
Emerging Markets (MSCI Emerging Markets)	(23.6%)	(18.5%)	(17.7%)	(12.7%)

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 3/31/20

# Q1 performance



Riskier assets performed the worst in Q1...

...and this relationship was fairly consistent across most asset classes

Source: Verus, as of 3/31/20 – Volatility is based on our forward looking 10-year Capital Market Assumptions



# Domestic equity

U.S. equities experienced an unusually sudden and significant sell-off in March as investors grew fearful of the health and economic impacts of COVID-19 spread. During Q1 the S&P 500 fell -19.6%, international developed equities (MSCI EAFE) fell -22.8% and emerging markets (MSCI EM) fell -23.6%.

At the same time that COVID-19 was spreading throughout the U.S., a squabble between OPEC+ members led to a historic drop in energy prices. The energy sector faces a perfect storm – sharply falling demand due to a global economic slowdown, and potentially significant oversupply due to oil producers’ decision to ramp up production in an oil war. The energy sector experienced a loss of -50.5% in Q1.

The greatest influence on equity performance in 2020 will perhaps be the path of corporate earnings. The degree to which corporate earnings will fall throughout the year is largely unknown with few reliable estimates.

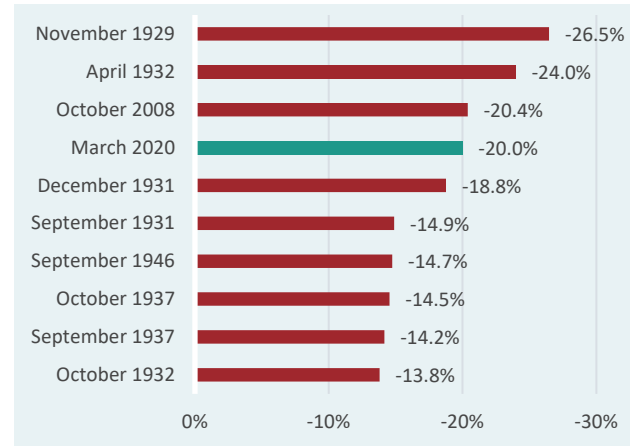
We continue to believe an underweight to international developed equities is appropriate. The economic pain that European Union member countries face may be significant, and membership to the EU inherently limits the ability of these countries to enact certain changes to address weakening economies. The U.S. market may continue to perform relatively well throughout the economic recovery.

## S&P 500



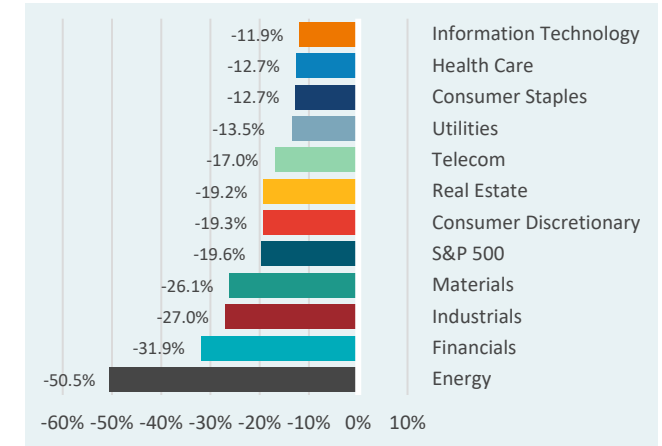
Source: Standard & Poor's, as of 3/31/20

## WORST S&P 500 MAX MONTHLY DRAWDOWNS



Source: Standard & Poor's, as of 3/31/20

## Q1 SECTOR PERFORMANCE



Source: Standard & Poor's, as of 3/31/20

# Domestic equity size & style

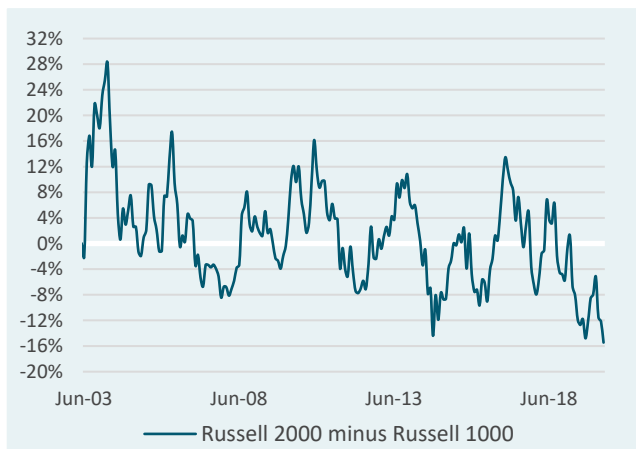
Value stocks severely underperformed growth stocks during the first quarter (Russell 1000 Value -26.7%, Russell 1000 Growth -14.1%). Small cap stocks underperformed large cap stocks by a similar magnitude (Russell 2000 -30.6%, Russell 1000 -20.2%). Value and size factors continue to experience a surprisingly long period of relative underperformance.

Once again, the impact of sector performance on the value premium in Q1 was notable – specifically energy and financial sectors (-50.5% and -31.9%, respectively) which tend to be value-tilted. Energy prices saw a historic drop fueled by OPEC+ infighting and likely the intent of the cartel to push out U.S. energy producers. Financial stocks delivered losses as

falling interest rates hurt profitability. Information Technology (-11.9%), a sector that tends to contain more growth stocks, was the best performer.

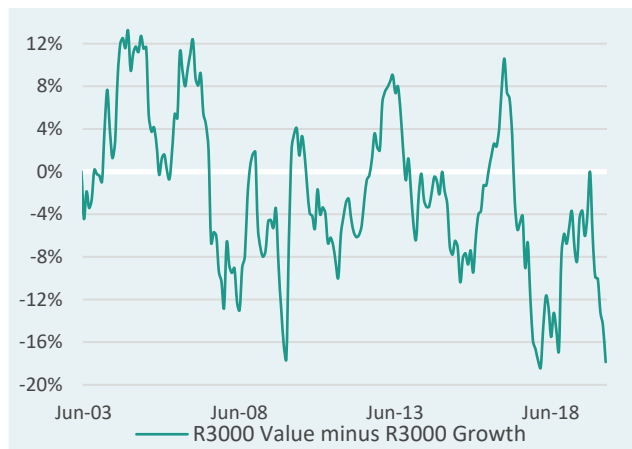
We believe that it is extremely difficult to successfully make short-term bets on style factors. Factor performance can be incredibly noisy and vulnerable to sector randomness. Market events of the past month seem to support this belief. While value in particular continues to be historically cheap, price itself does not translate to short-term outperformance – a catalyst for a turnaround should also be clearly identified and understood. We remain watchful and believe that consistent long-term exposure to these style factors is an ideal implementation approach for most investors, most of the time.

**SMALL CAP VS LARGE CAP (YOY)**



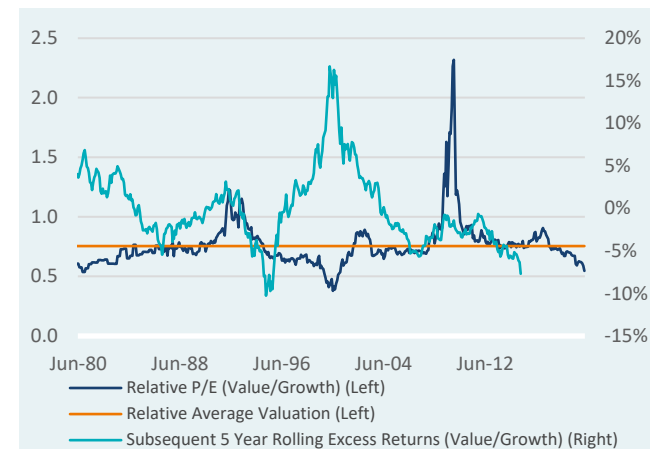
Source: FTSE, as of 3/31/20

**VALUE VS GROWTH (YOY)**



Source: FTSE, as of 3/31/20

**VALUE HISTORICALLY CHEAP**



Source: Russell, Bloomberg, as of 3/31/20

# International developed equity

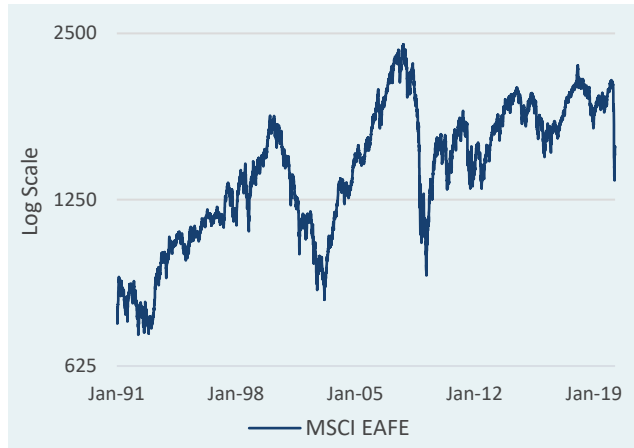
Equity markets around the world sold off broadly in the first quarter, down between -16% to -29%. Japanese equities were among the best performing (MSCI Japan -17%) while the U.K. was one of the worst performing (MSCI U.K. -29%).

As the global transactional currency, demand for U.S. dollars tends to ramp up when markets become stressed and companies abroad require dollars to pay down dollar-denominated liabilities. In the first quarter, the U.S. dollar gained +2.3% against the Euro and +6.4% against the British pound, resulting in losses for U.S. investors in European

equities with unhedged currency exposure. In mid-March, the Federal Reserve expanded its dollar swap liquidity lines and opened a FIMA repo facility which will allow foreign monetary authorities to enter repurchase agreements with the Fed. Both measures worked to help improve U.S. dollar liquidity abroad, and as a result, slow the pace of appreciation of the U.S. dollar relative to international pairs.

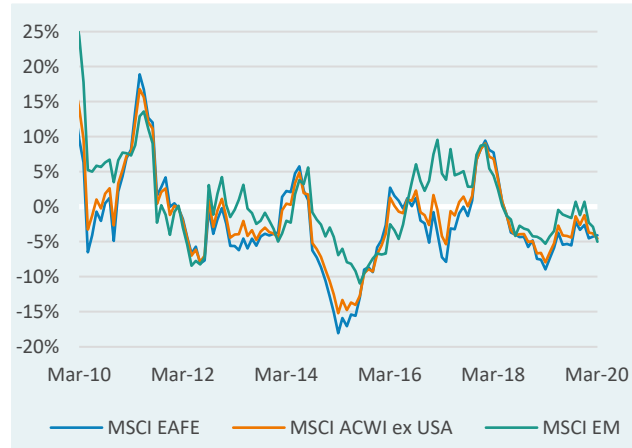
Cross-currency basis, which measure the additional premia investors must pay to swap one currency for another over a term, narrowed in March, signaling that the Fed's efforts to ease dollar funding strains have proved effective thus far.

**INTERNATIONAL DEVELOPED EQUITIES**



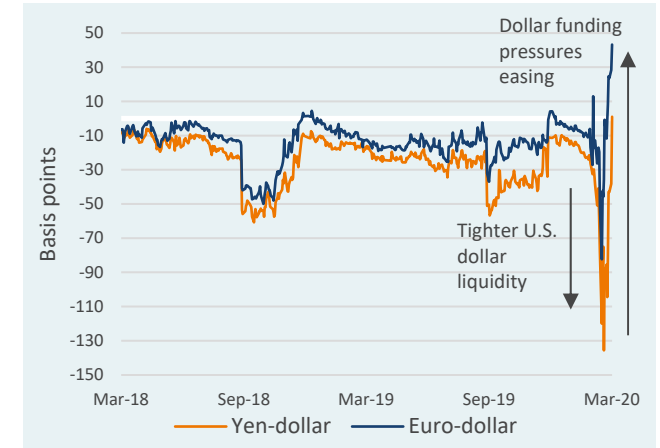
Source: MSCI, as of 3/31/20

**EFFECT OF CURRENCY (1-YEAR ROLLING)**



Source: MSCI, as of 3/31/20

**3M/3M CROSS CURRENCY BASIS SWAPS**



Source: Bloomberg, as of 3/31/20

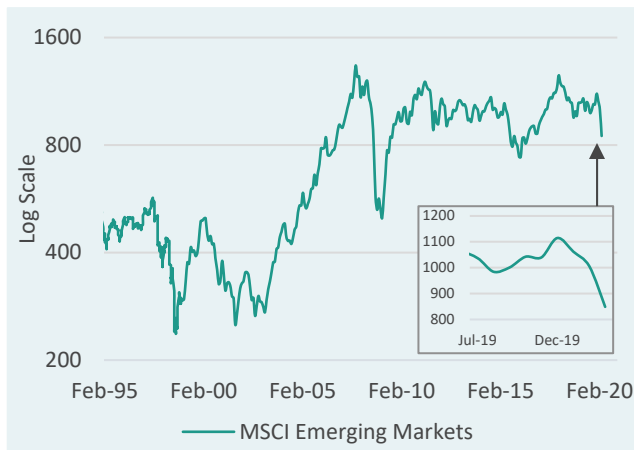
# Emerging market equity

Emerging market equities (MSCI EM -23.6%) underperformed both U.S. (S&P 500 -19.6%) and international developed equities (MSCI EAFE -22.8%) over the quarter. Within the complex, Latin American equities (MSCI EM Latin American -45.6%) dramatically underperformed Asian equities (MSCI EM Asia -18.1%), which were propped up by remarkably resilient Chinese equity markets. Currency exposure also played a big role in the outperformance of EM Latin America over EM Asia, as the U.S. dollar strengthened significantly against the Brazilian real, and the Mexican peso, and was little changed against the Chinese renminbi.

Inflation remains low in emerging economies and may face downward pressure in the coming months as energy prices have fallen. Central banks may have more room to maneuver relative to developed economies with regard to monetary policy, as interest rates are closer to average levels.

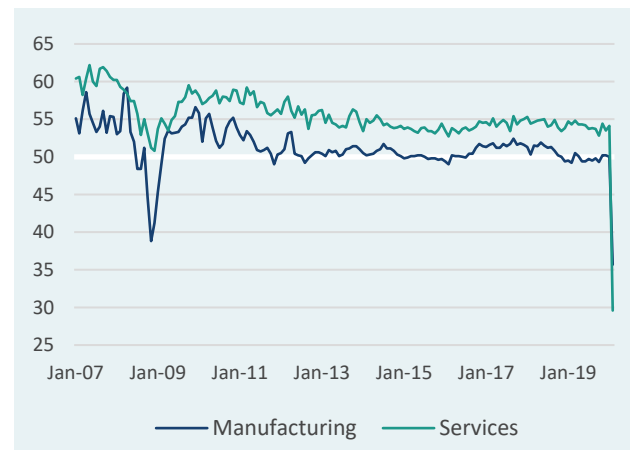
Countries viewed as having poor health infrastructure as well as economic dependence on oil prices fared the worst. Mexico's sovereign debt rating was downgraded by several rating agencies, and Moody's downgraded South Africa's sovereign debt rating below investment-grade.

**EMERGING MARKET EQUITY**



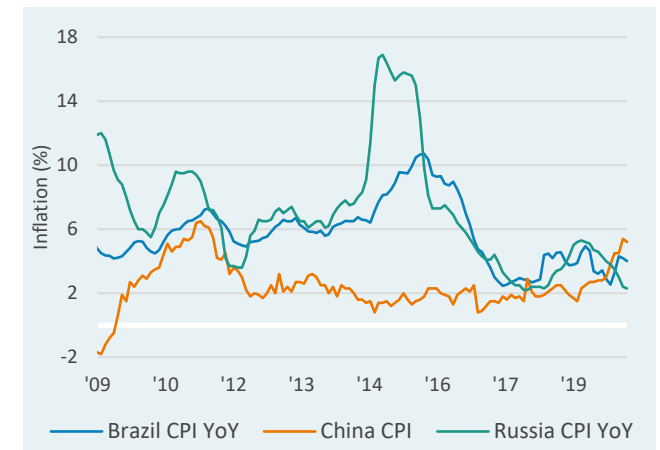
Source: MSCI, as of 3/31/20

**CHINA PURCHASING MANAGERS' INDICES**



Source: China Federation of Logistics and Purchasing, as of 2/29/20

**INFLATION (CPI YOY)**



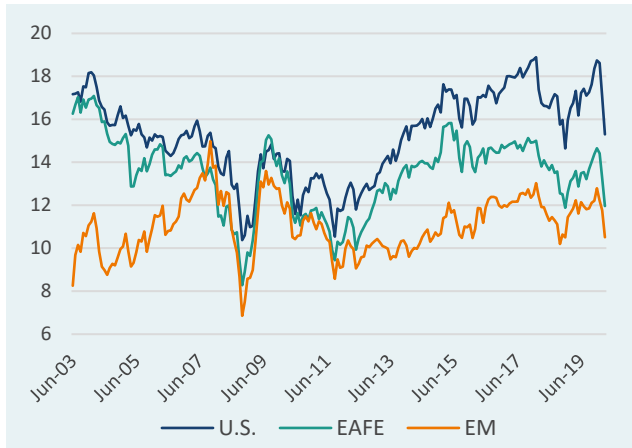
Source: Bloomberg, as of 2/29/20

# Equity valuations

Throughout the significant Q1 market sell-off, losses across global markets have been fairly similar. This has resulted in U.S. equities retaining their status as the most expensive market, though we believe this may be justified as governments with limited ability to implement stimulus policies could face tougher economic fallout. Specifically, European Union member nations that cannot exercise independent actions may see greater difficulties ahead as income gaps cannot be supplemented with government spending.

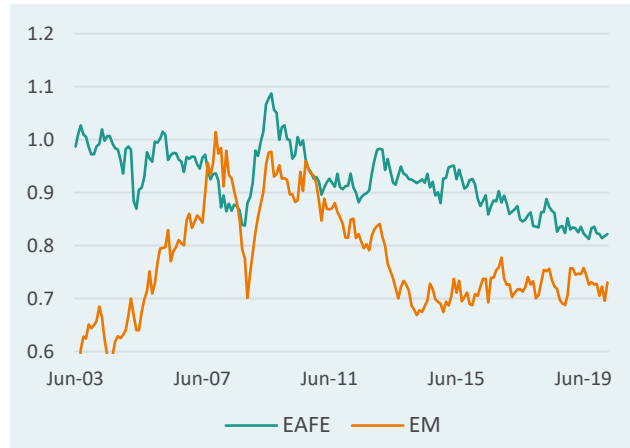
In 2005, Thomas Friedman put forth the notion that “The World is Flat”, and that the 21<sup>st</sup> century will be characterized by globalization, with historical and geographical divisions becoming less relevant. In Friedman’s world, companies produce their goods where it is cheapest to do so, often in emerging and developing economies with fewer labor protections. Supply chains are built within profit maximization frameworks often with little regard for the risks associated with having a supply chain concentrated in one or a few countries. Looking ahead, it will be interesting to follow whether Friedman’s world becomes slightly bumpier.

**FORWARD P/E RATIOS**



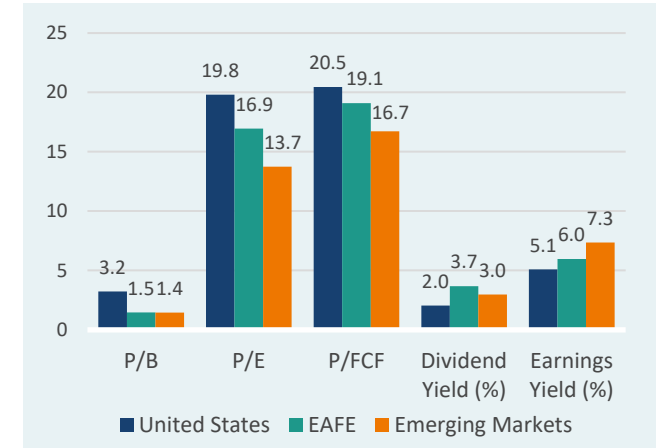
Source: MSCI, 12m forward P/E, as of 3/31/20

**FORWARD P/E RATIOS (RELATIVE TO THE U.S.)**



Source: MSCI, 12m forward P/E, as of 3/31/20

**VALUATION METRICS (3-MONTH AVERAGE)**



Source: Bloomberg, MSCI as of 3/31/20 - trailing P/E

# Equity volatility

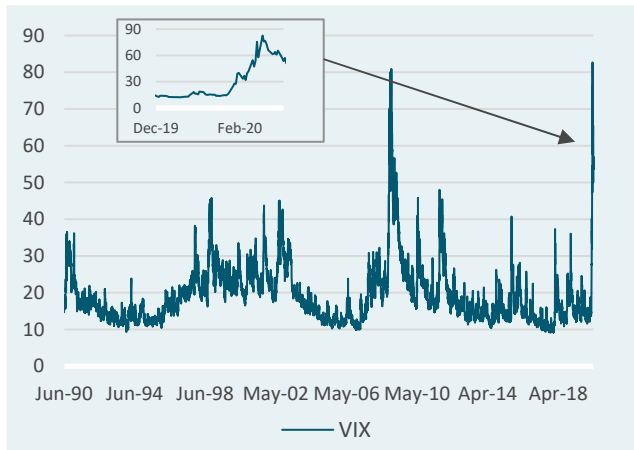
Risk markets experienced one of the most sudden corrections on record, amidst extreme volatility. The S&P 500 showed its largest one-day drop since 1987 (March 16 -11.9%) and its largest one-day gain since 2008 (March 24 +9.4%). The transition from a very low- to a very high-volatility environment likely caught many investors off guard.

Implied volatility (CBOE VIX Index) spiked in March to a record daily close of 82.7, surpassing the high of 80.9 on November 20<sup>th</sup>, 2008 during the depths of the global financial crisis. Such extreme levels of market volatility can

create difficulties for investors in managing portfolios. Processes such as portfolio rebalancing that are often systematic can become complex and subjective when equities are exhibiting nearly double-digit daily moves.

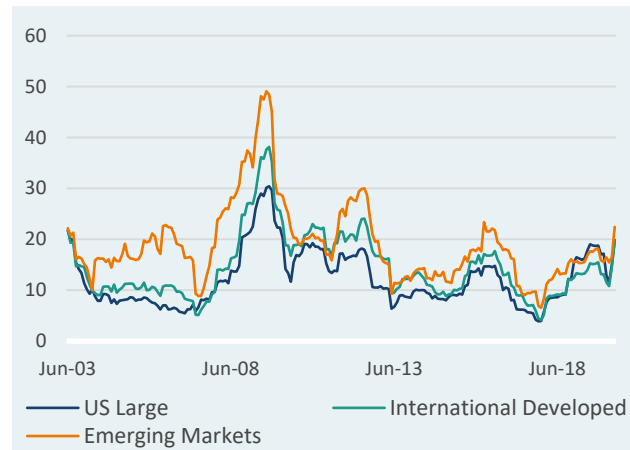
The S&P 500 Price Index closed at 2237 on March 23<sup>rd</sup>, -33.9% below February 19<sup>th</sup> peaks. Since then, U.S. equities have staged a remarkable rebound in the foreground of a historically bleak economic background. Debate over whether the rebound is justified has continued as economic uncertainty remains at unprecedented levels.

**U.S. IMPLIED VOLATILITY (VIX)**



Source: CBOE, as of 3/31/20

**ROLLING 1-YEAR REALIZED VOLATILITY**



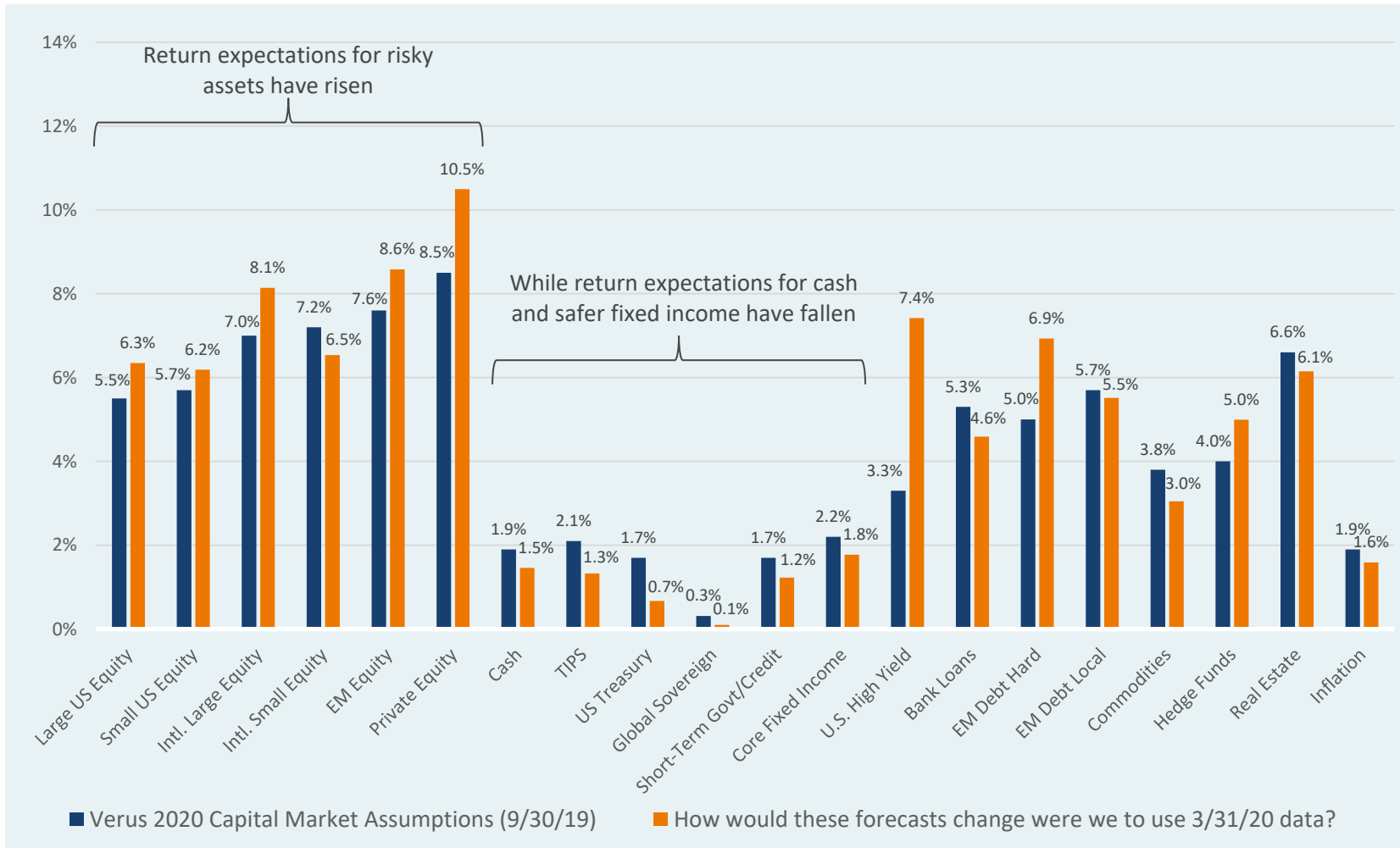
Source: Standard & Poor's, MSCI, Bloomberg, as of 3/31/20

**MAX DRAWDOWN FROM PRIOR PEAKS**



Source: Standard & Poor's, Bloomberg, as of 3/31/20

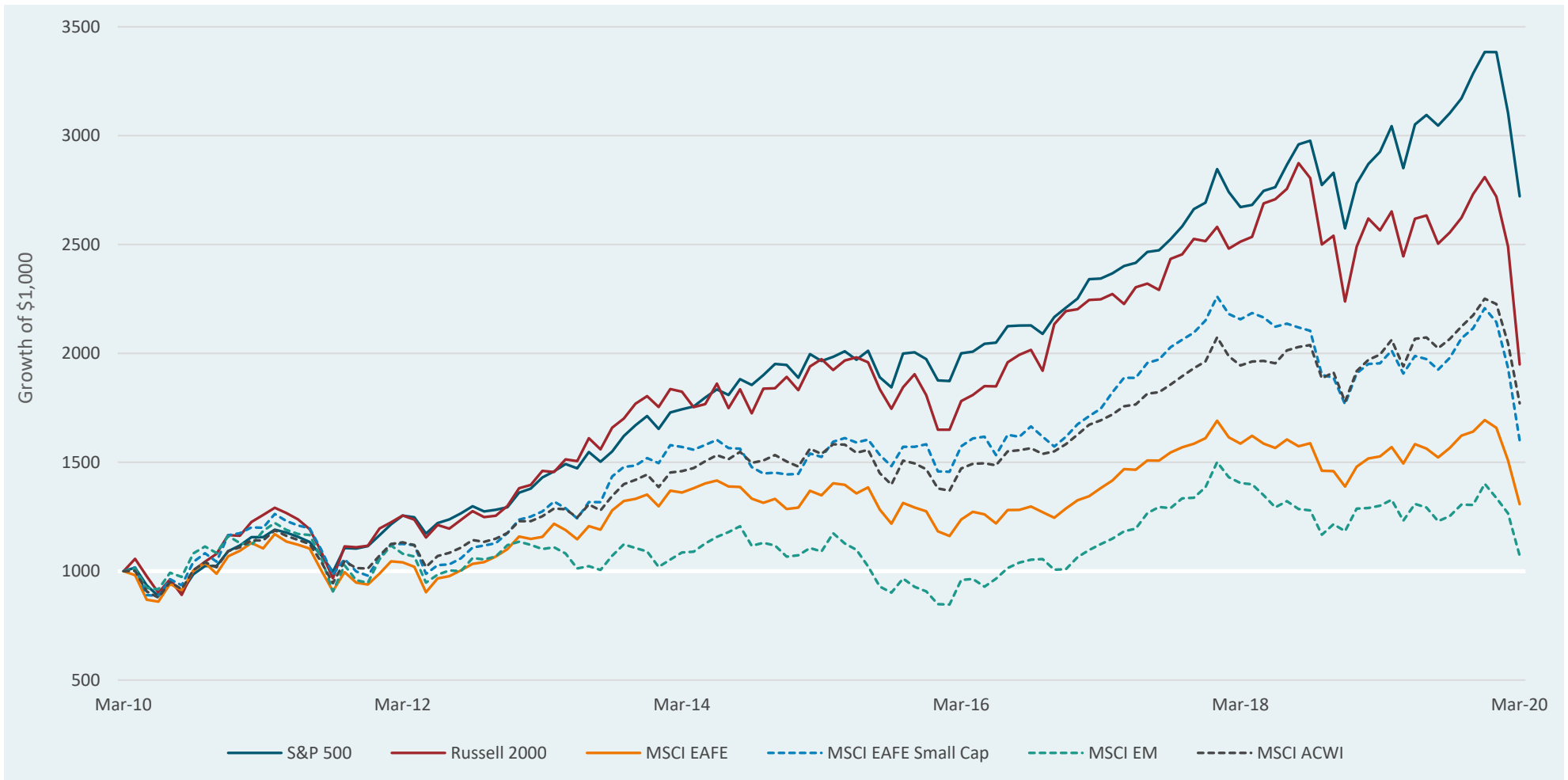
# How have return expectations changed?



The overall portfolio's expected return may have risen or fallen during Q1, depending on the asset allocation & risk level

Source: Verus

# Long-term equity performance



Source: Morningstar, as of 3/31/20



# Other assets

# Currency

The U.S. dollar appreciated significantly in the first quarter, rising 7.1% on a trade-weighted basis, resulting in losses for investors with unhedged currency exposure. As is often the case during higher risk market environments, demand for safe-haven currencies contributed to the rising dollar.

Historically speaking, environments where the U.S. dollar was much more expensive than average tended to be followed by an eventual mean-reversion. However, this mean-reversion effect is not a sure bet, and it can take years (or perhaps decades) to occur. As recent years have shown,

leaving currency exposure unhedged tends to result in uncompensated volatility, and occasional (or frequent) large and sharp losses or gains.

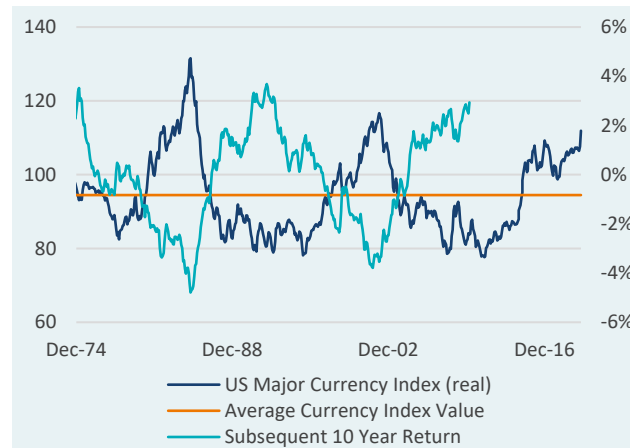
The MSCI Currency Factor Mix Index, constructed as a combination of individual Currency Factor indices (carry, value, momentum) advanced 1.2% in Q1. The momentum factor (+8.7%) posted strong gains as appreciating currencies continued to strengthen while the carry factor (-7.2%) lagged as the exchange rate adjustments implied by local interest rate differentials occurred faster than expected.

**BLOOMBERG DOLLAR SPOT INDEX**



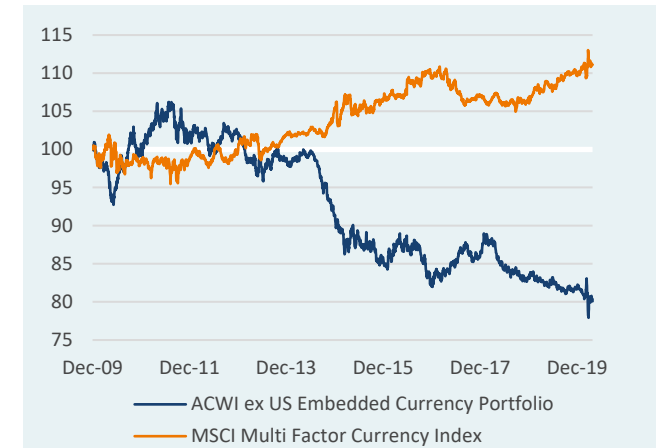
Source: Bloomberg, as of 3/31/20

**USD CURRENCY LEVEL & SUBSEQUENT RETURN**



Source: Federal Reserve, Verus, as of 3/31/20

**EMBEDDED CURRENCY VS CURRENCY BETA**



Source: MSCI, Bloomberg, as of 3/31/20

# Oil crisis

In mid-March, the price of oil experienced a sudden drop as Russia refused to join the OPEC recommended production cuts. In retribution, Saudi Arabia signaled that they would increase production drastically in April upon expiration of the OPEC pact. These events led to a 30% one-day drop in price, and historically volatile trading.

Russia's actions are likely linked to increased U.S. sanctions on its energy producers, which have negatively impacted the economy. Sanctions have prevented Russia from completing the Nord Stream 2 gas pipeline in the Baltic Sea, a project that \$11 Billion had previously been invested in, which would

carry Russian Gas directly to Germany and would circumvent the Ukraine. Sanctions were also levied against Russia's Rosneft for allegedly supporting the Nicolas Maduro regime in Venezuela. It is estimated that 70% of oil production in Venezuela was going through Rosneft.

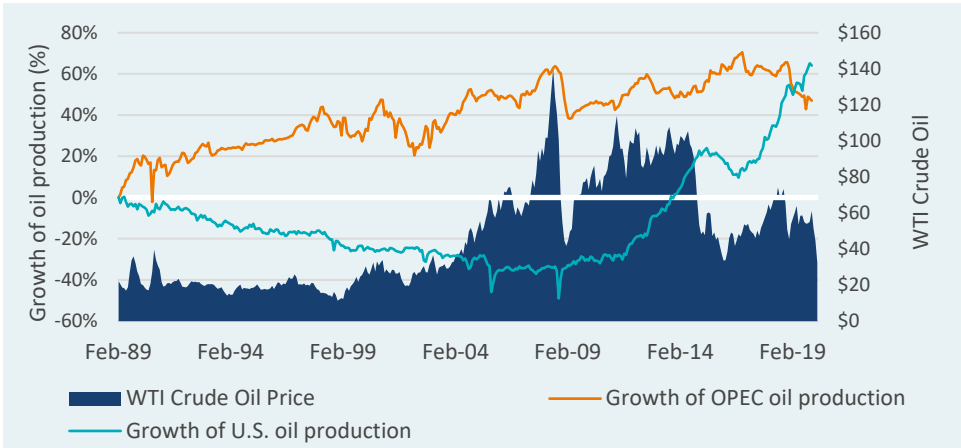
A similar dynamic occurred during the oil crash of 2014 as OPEC let oil plummet, arguably with the intent to put U.S. oil producers out of business. American oil production has been ramped up drastically over the last decade, at a time when OPEC producers were working to minimize their own production in order to balance global supply.

**WTI OIL PRICE**



Source: FRED, as of 3/31/20

**GLOBAL OIL PRODUCER CONFLICT**



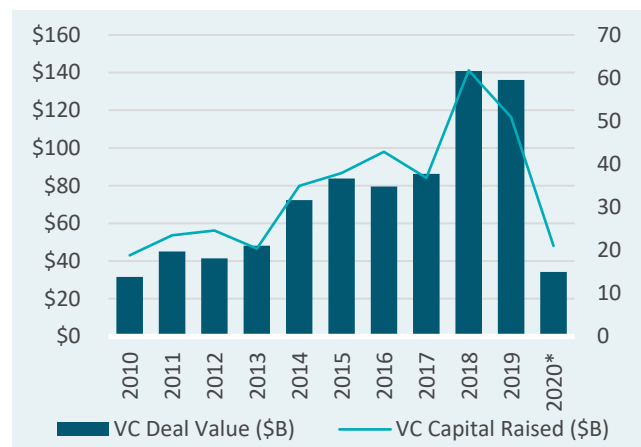
Source: Bloomberg, U.S. Energy Information Administration, as of 3/31/20

# Private markets

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

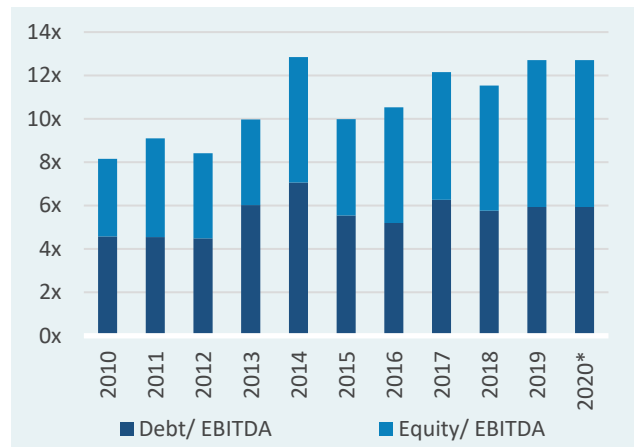
- Before the impending market dislocation, venture capital fundraising was on pace to eclipse 2019, while total deal volume and number of deals had plateaued. \$21 Billion of venture capital was raised in the U.S. in Q1 2020, constituting 40% of capital raised in 2019. Deal value and number of deals in the quarter represented 25% and 19% of 2019's totals, respectively.
- Buyout activity continued to decrease in Q1 2020 from 2019. Through the first quarter, buyouts dollar value and number of transactions amounted to 18% and 19% of 2019 levels, respectively. The size of the average buyout, \$135.6M, has decreased from 2019, \$145.2M. Similarly, fundraising has also slowed. Only 46 buyout funds representing \$45 Billion closed in Q1 2020, down from 249 funds representing \$315 Billion in 2019.
- Pricing multiples on completed buyout deals remained in line with 2019's. Median EV/EBITDA is 12.9x (up slightly from 12.7x in 2019) with debt multiples unchanged at 5.9x. Debt as a percentage of transaction value hovers around 45%.

### VENTURE DEAL VOLUME & FUNDRAISING



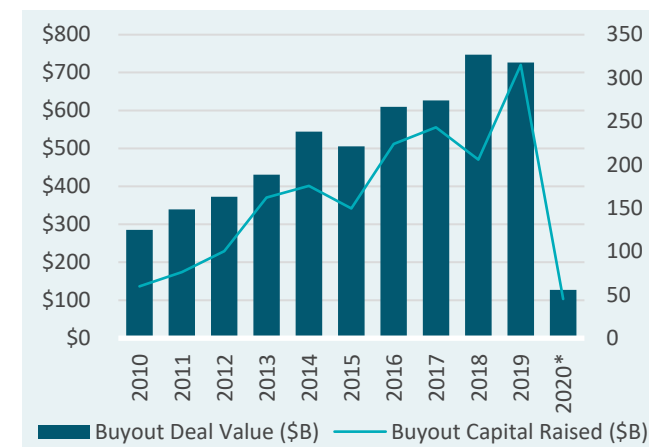
\*2020 figures through 3/31/20  
Source: PitchBook

### TRANSACTION MULTIPLES



\*2020 figures through 3/31/20  
Source: PitchBook

### BUYOUTS DEAL VOLUME & CAPITAL RAISED



\*2020 figures through 3/31/20  
Source: PitchBook

# Appendix

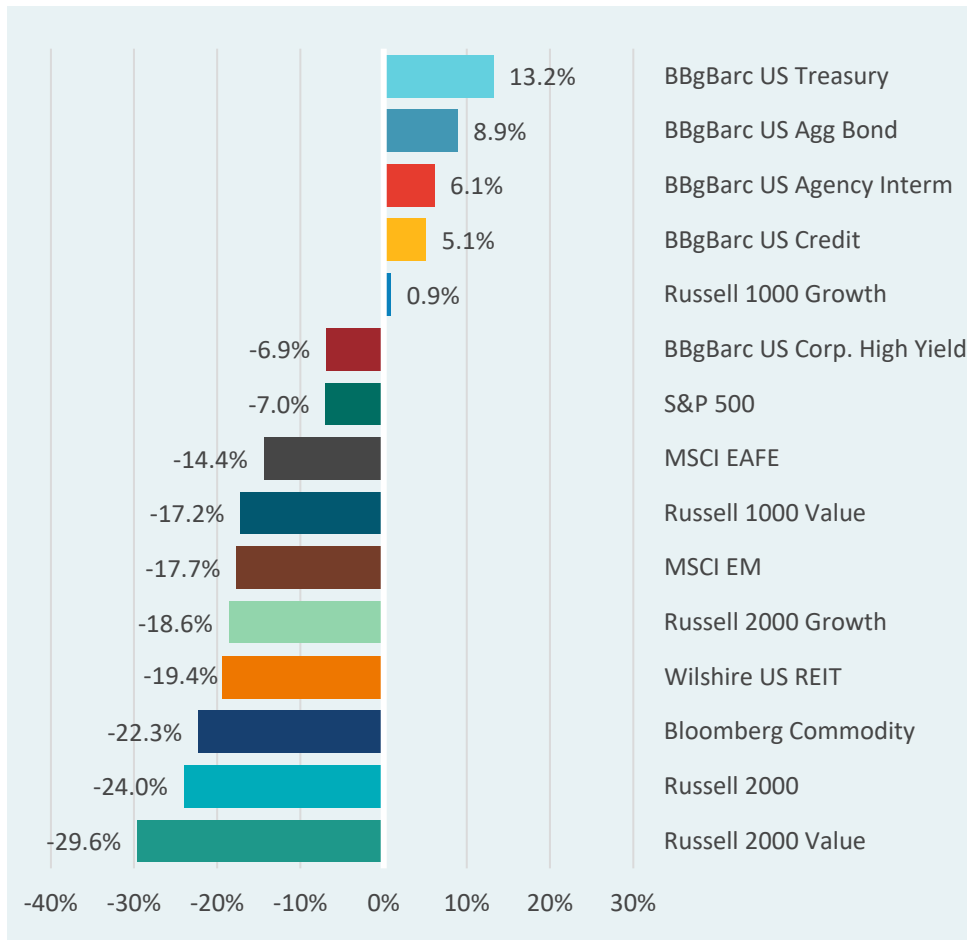
# Periodic table of returns



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 12/31/19.

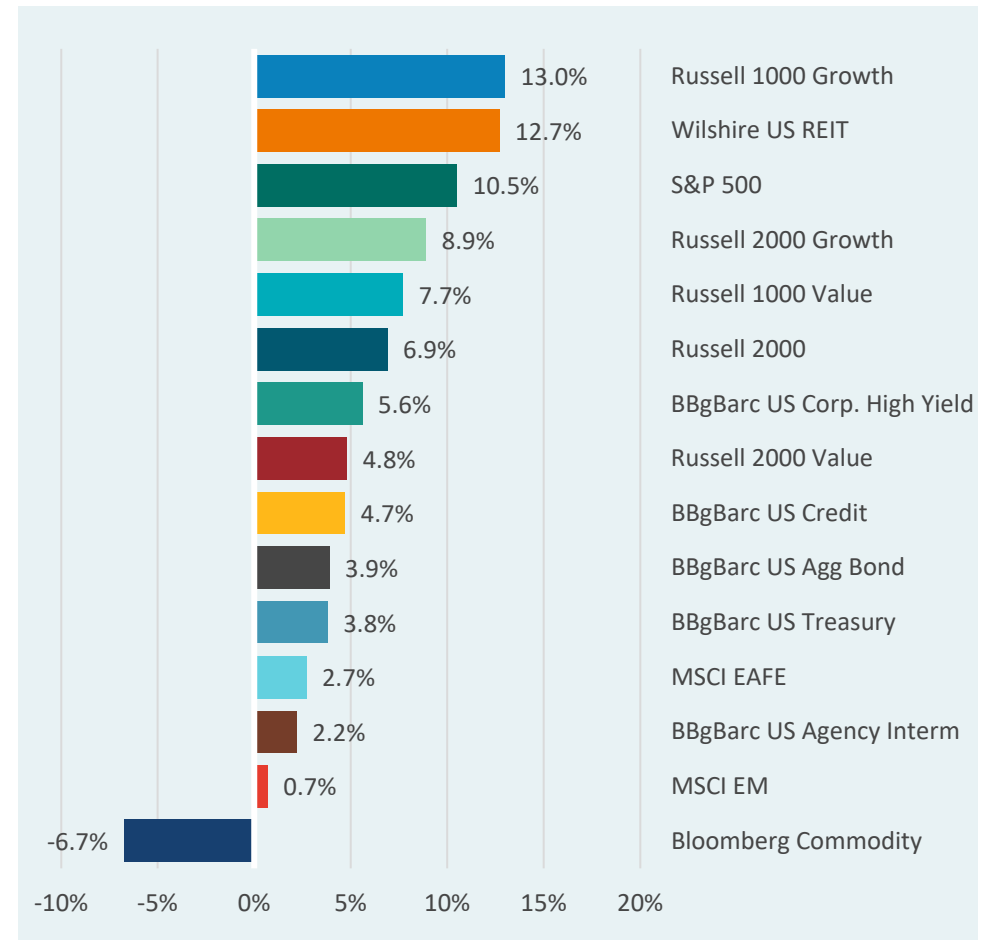
# Major asset class returns

ONE YEAR ENDING MARCH



Source: Morningstar, as of 3/31/20

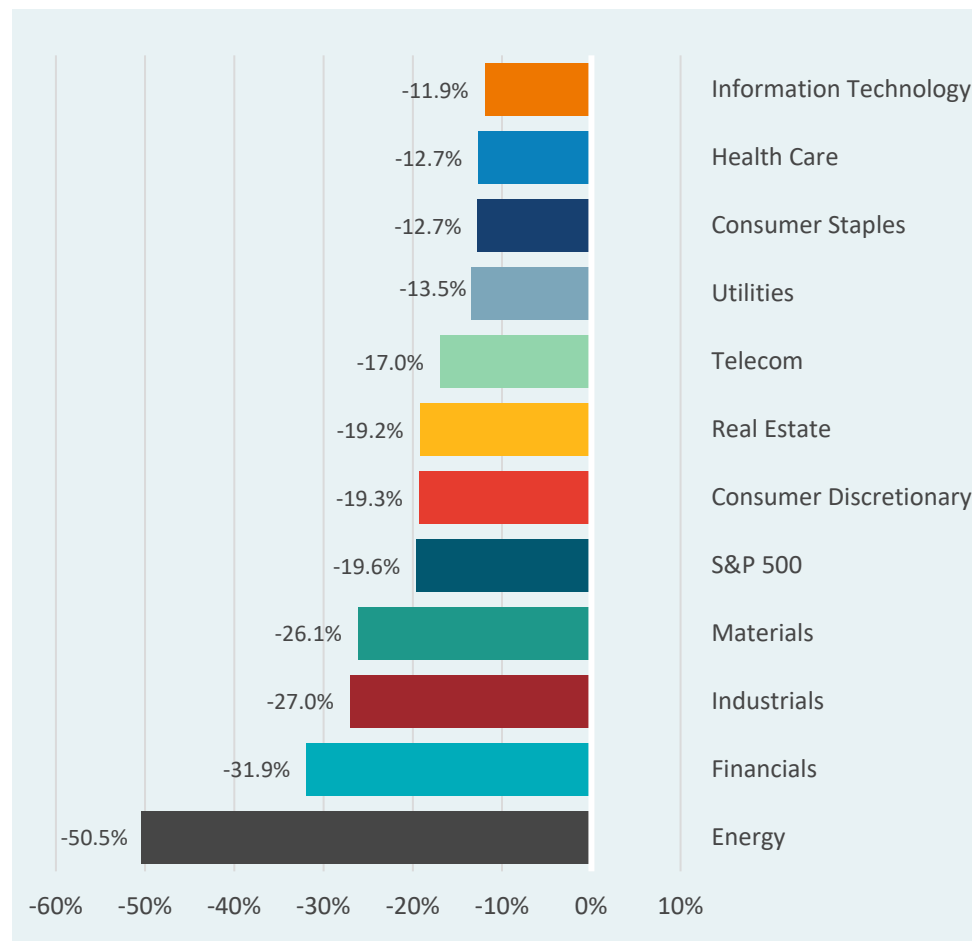
TEN YEARS ENDING MARCH



Source: Morningstar, as of 3/31/20

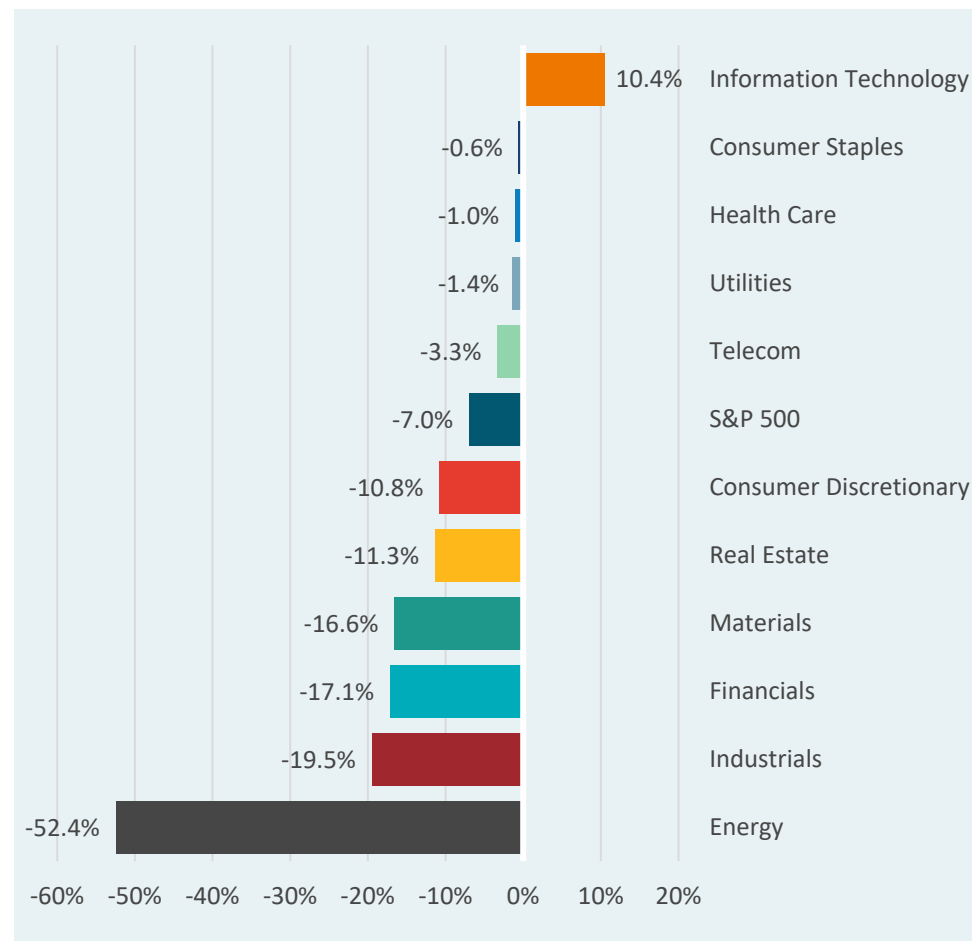
# S&P 500 sector returns

Q1 2020



Source: Morningstar, as of 3/31/20

ONE YEAR ENDING MARCH



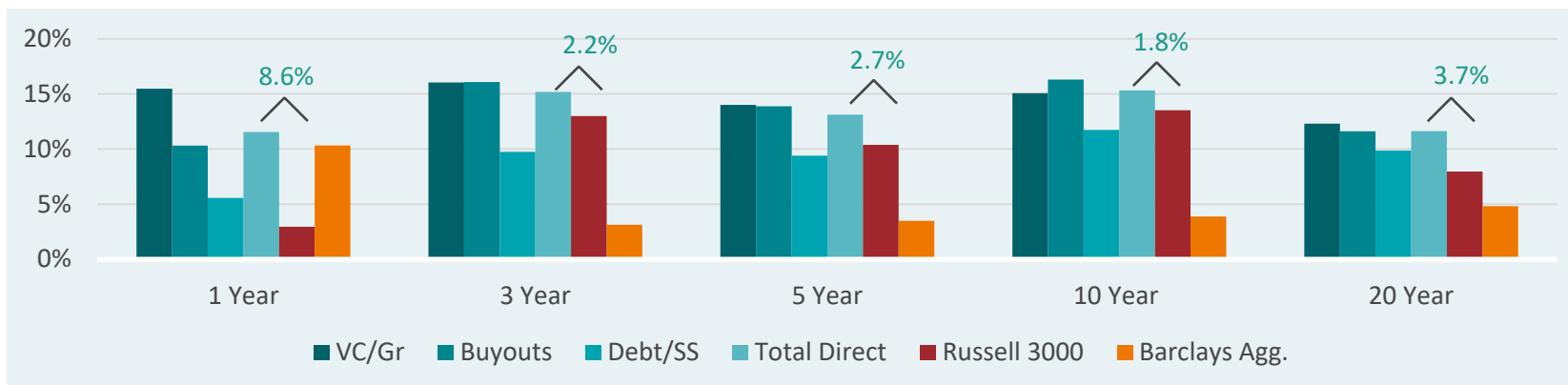
Source: Morningstar, as of 3/31/20



# Private equity vs. public performance

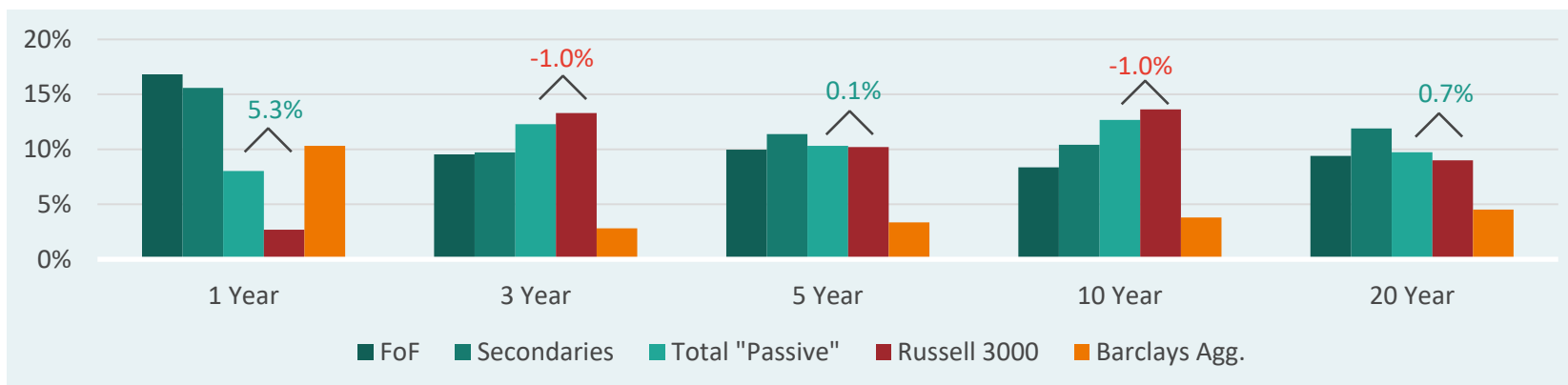
As of 9/30/2019

## DIRECT PRIVATE EQUITY FUND INVESTMENTS



Direct P.E Fund Investments outperformed comparable public equities across all time periods

## "PASSIVE" STRATEGIES



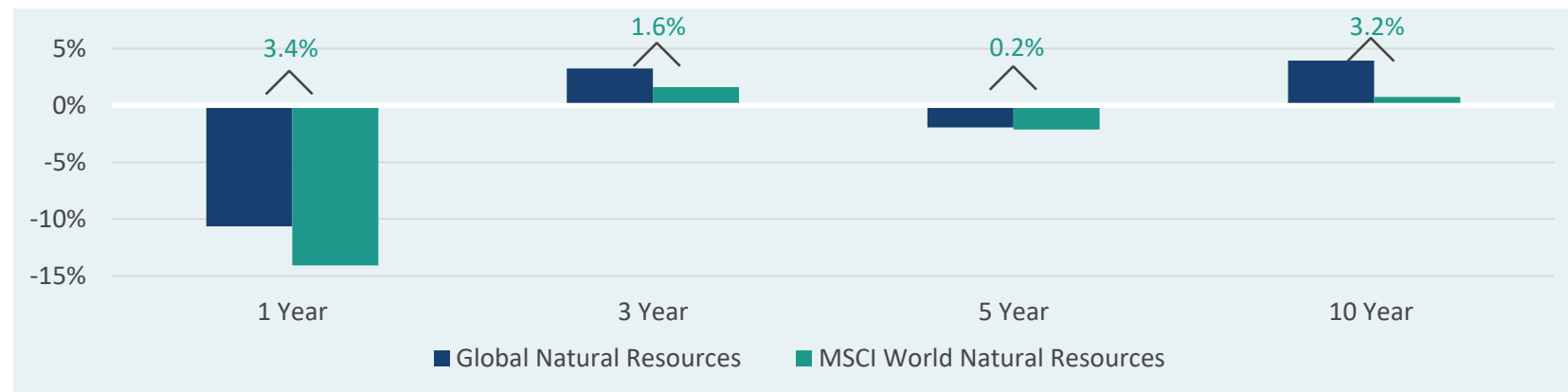
"Passive" strategies outperformed comparable public equities on a 1-, 5-, and 20-year basis, and underperformed on a 3- and 10-year basis

Sources: Thomson Reuters Cambridge Universe's PME Module: U.S. Private Equity Funds sub asset classes as of September 30, 2019. Public Market Equivalent returns resulted from "Total Passive" and Total Direct's identical cash flows invested into and distributed from respective traditional asset comparable.

# Private equity vs. liquid real assets performance

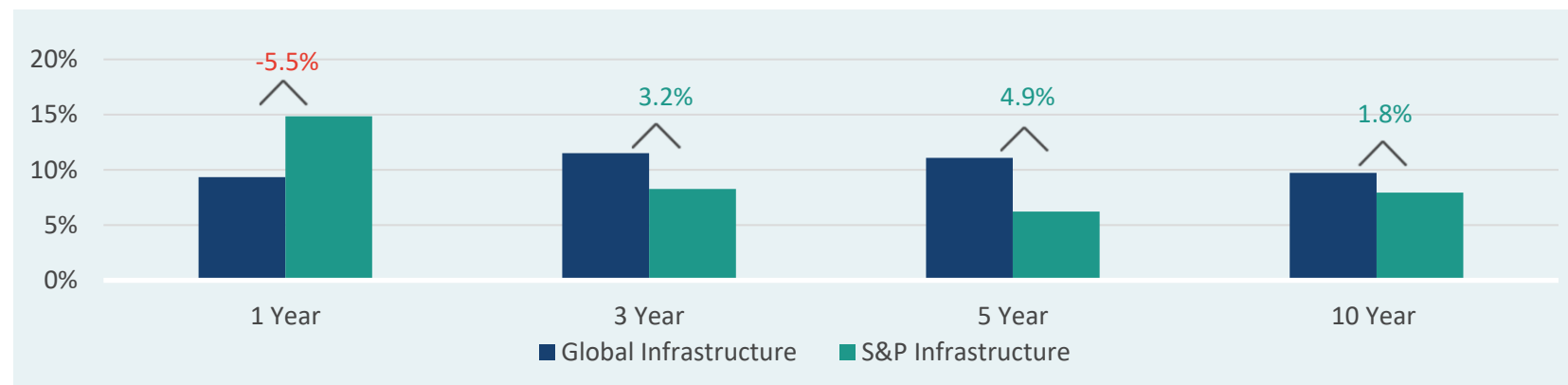
As of 9/30/2019

## GLOBAL NATURAL RESOURCES FUNDS



N.R. funds outperformed the MSCI World Natural Resources benchmark across all time periods

## GLOBAL INFRASTRUCTURE FUNDS



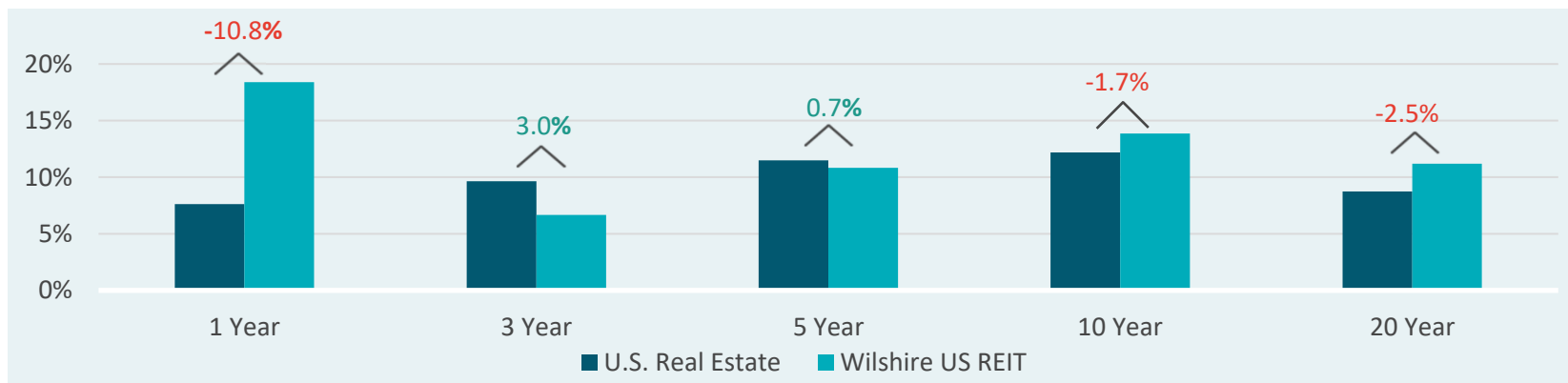
Infra. funds outperformed the S&P Infra. across all periods, except on a 1-year basis

Sources: Thomson Reuters C|A PME: Global Natural Resources (vintage 1999 and later, inception of MSCI World Natural Resources benchmark) and Global Infrastructure (vintage 2002 and later, inception of S&P Infrastructure benchmark) universes as of September 30, 2019. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real assets universes.

# Private vs. liquid & core real estate performance

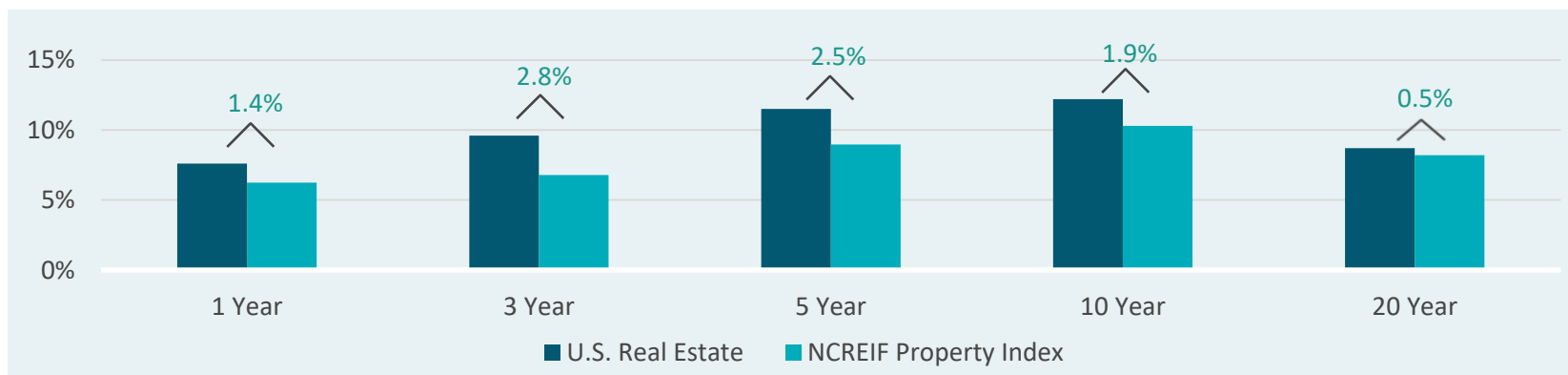
As of 9/30/2019

## U.S. PRIVATE REAL ESTATE FUNDS VS. LIQUID UNIVERSE



U.S. Private R.E. funds underperformed the Wilshire U.S. REIT Index on a 1-, 10-, and 20-year basis, but not over 3- and 5-years

## U.S. PRIVATE REAL ESTATE FUNDS VS. CORE FUNDS



U.S. Private R.E. Funds outperformed the NCREIF Property Index over all time periods

Sources: Thomson Reuters C|A PME: Global and U.S. Real Estate universes as of September 30, 2019. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real estate universes.

# Detailed index returns

## DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Core Index</b>							
S&P 500	(12.4)	(19.6)	(19.6)	(7.0)	5.1	6.7	10.5
S&P 500 Equal Weighted	(18.0)	(26.7)	(26.7)	(17.6)	(0.4)	2.8	9.2
DJ Industrial Average	(13.6)	(22.7)	(22.7)	(13.4)	4.4	6.9	10.0
Russell Top 200	(11.0)	(17.7)	(17.7)	(4.1)	6.7	7.9	11.0
Russell 1000	(13.2)	(20.2)	(20.2)	(8.0)	4.6	6.2	10.4
Russell 2000	(21.7)	(30.6)	(30.6)	(24.0)	(4.6)	(0.2)	6.9
Russell 3000	(13.8)	(20.9)	(20.9)	(9.1)	4.0	5.8	10.1
Russell Mid Cap	(19.5)	(27.1)	(27.1)	(18.3)	(0.8)	1.8	8.8
<b>Style Index</b>							
Russell 1000 Growth	(9.8)	(14.1)	(14.1)	0.9	11.3	10.4	13.0
Russell 1000 Value	(17.1)	(26.7)	(26.7)	(17.2)	(2.2)	1.9	7.7
Russell 2000 Growth	(19.1)	(25.8)	(25.8)	(18.6)	0.1	1.7	8.9
Russell 2000 Value	(24.7)	(35.7)	(35.7)	(29.6)	(9.5)	(2.4)	4.8

## INTERNATIONAL EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Broad Index</b>							
MSCI ACWI	(13.5)	(21.4)	(21.4)	(11.3)	1.5	2.8	5.9
MSCI ACWI ex US	(14.5)	(23.4)	(23.4)	(15.6)	(2.0)	(0.6)	2.1
MSCI EAFE	(13.3)	(22.8)	(22.8)	(14.4)	(1.8)	(0.6)	2.7
MSCI EM	(15.4)	(23.6)	(23.6)	(17.7)	(1.6)	(0.4)	0.7
MSCI EAFE Small Cap	(17.2)	(27.5)	(27.5)	(18.1)	(2.9)	1.0	4.8
<b>Style Index</b>							
MSCI EAFE Growth	(9.2)	(17.5)	(17.5)	(5.8)	3.0	2.5	4.7
MSCI EAFE Value	(17.7)	(28.2)	(28.2)	(22.8)	(6.7)	(3.8)	0.6
<b>Regional Index</b>							
MSCI UK	(16.0)	(28.8)	(28.8)	(23.0)	(4.9)	(3.3)	1.6
MSCI Japan	(7.1)	(16.8)	(16.8)	(6.7)	1.0	1.8	3.8
MSCI Euro	(17.2)	(27.0)	(27.0)	(18.3)	(4.4)	(2.3)	1.1
MSCI EM Asia	(11.7)	(18.1)	(18.1)	(12.1)	1.3	1.4	3.5
MSCI EM Latin American	(34.5)	(45.6)	(45.6)	(40.8)	(13.0)	(5.9)	(6.7)

## FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Broad Index</b>							
BBgBarc US TIPS	(1.8)	1.7	1.7	6.8	3.5	2.7	3.5
BBgBarc US Treasury Bills	0.3	0.6	0.6	2.4	1.8	1.2	0.7
BBgBarc US Agg Bond	(0.6)	3.1	3.1	8.9	4.8	3.4	3.9
<b>Duration</b>							
BBgBarc US Treasury 1-3 Yr	1.3	2.8	2.8	5.4	2.7	1.8	1.4
BBgBarc US Treasury Long	6.1	20.9	20.9	32.6	13.4	7.3	9.0
BBgBarc US Treasury	2.9	8.2	8.2	13.2	5.8	3.6	3.8
<b>Issuer</b>							
BBgBarc US MBS	1.1	2.8	2.8	7.0	4.0	2.9	3.3
BBgBarc US Corp. High Yield	(11.5)	(12.7)	(12.7)	(6.9)	0.8	2.8	5.6
BBgBarc US Agency Interm	0.9	2.9	2.9	6.1	3.2	2.3	2.2
BBgBarc US Credit	(6.6)	(3.1)	(3.1)	5.1	4.2	3.3	4.7

## OTHER

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Index</b>							
Bloomberg Commodity	(12.8)	(23.3)	(23.3)	(22.3)	(8.6)	(7.8)	(6.7)
Wilshire US REIT	(20.0)	(25.6)	(25.6)	(19.4)	(2.5)	5.7	12.7
CS Leveraged Loans	(12.5)	(13.2)	(13.2)	(9.5)	(0.7)	4.6	5.0
Alerian MLP	(48.1)	(58.1)	(58.1)	(61.9)	(29.9)	(21.1)	(4.7)
<b>Regional Index</b>							
JPM EMBI Global Div	(13.8)	(13.4)	(13.4)	(6.8)	0.4	2.8	4.9
JPM GBI-EM Global Div	(11.1)	(15.2)	(15.2)	(6.5)	(0.8)	0.3	0.5
<b>Hedge Funds</b>							
HFRI Composite	(5.9)	(8.3)	(8.3)	(4.0)	0.7	1.3	2.9
HFRI FOF Composite	(4.9)	(6.0)	(6.0)	(2.6)	1.0	0.6	2.1
<b>Currency (Spot)</b>							
Euro	(0.1)	(2.3)	(2.3)	(2.3)	0.9	0.4	(2.1)
Pound	(2.9)	(6.4)	(6.4)	(4.8)	(0.3)	(3.5)	(2.0)
Yen	(0.1)	0.7	0.7	2.5	1.1	2.1	(1.4)

Source: Morningstar, HFR, as of 3/31/20

# 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](http://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](http://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/>)

**NAHB Housing Market Index** - the housing market index is a weighted average of separate diffusion indices for three key single-family indices: market conditions for the sale of new homes at the present time, market conditions for the sale of new homes in the next six months, and the traffic of prospective buyers of new homes. The first two series are rated on a scale of Good, Fair, and Poor and the last is rated on a scale of High/Very High, Average, and Low/Very Low. A diffusion index is calculated for each series by applying the formula  $(\text{Good-Poor} + 100)/2$  to the present and future sales series and  $(\text{High/Very High-Low/Very Low} + 100)/2$  to the traffic series. Each resulting index is then seasonally adjusted and weighted to produce the HMI. Based on this calculation, the HMI can range between 0 and 100.

# Notices & disclosures

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# Glossary

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**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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