

Meeting Date
11/18/20
Agenda Item
#5a.

Verus 



**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**



PERIOD ENDING: SEPTEMBER 30, 2020

Investment Performance Review for

Contra Costa County Employees' Retirement Association

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Investment Landscape

TAB I

Investment Performance
Review

TAB II



**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**

4TH QUARTER 2020
Investment Landscape

Recent Verus research

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

Annual outlooks

2020 PRIVATE OUTLOOK

In the 2020 Private Equity Outlook, we focus attention on General Partner-led (GP-led) secondary transactions that have evolved and are no longer just associated with general partners trying to dispose of lingering assets that have become hard to sell. The outlook also addresses:

- The significant pull back in private equity in 2020
- Our expectations for a decline in both capital calls and distributions from buyout funds likely leading to negative net cash flows for the coming quarters
- Headwinds for perspective IPO's
- Impacts from Covid-19 on many portfolios
- Our view on how the secondary market is very different than it was during the last economic downturn

Topics of interest

BROADENING DIVERSITY CONSIDERATION

CIO Ian Toner, CFA, and Public Markets Managing Director Marianne Feeley, CFA, outline broader elements of diversity – beyond ownership – that may be used to characterize the demographic qualities of an investment firm. It frames the broader approach to understanding diversity that we are adapting at Verus, which is an integral part of our process of collecting and using information about investment managers.

AEIOU > PPPPP

Manager research and selection have long been described in the language of Ps – people, process, etc. Verus believes the familiar Ps approach, while useful, leaves out important aspects of manager assessment and their products because of its focus on inputs. We outline a vowel-based approach that concentrates research on factors that are more likely to drive investment outcomes.

Webinar replays

BROADENING DIVERSITY CONSIDERATION

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3rd quarter summary

THE ECONOMIC CLIMATE

- Real GDP contracted at a -9.0% rate year-over-year in Q2 (-31.4% quarterly annualized rate)—likely the most sudden economic recession in American history. **p. 10**
- Europe is experiencing a drastic second wave of COVID-19 which has been sweeping across the continent. The seven-day average daily case growth of the EU and the U.K. combined rose from 4,699 to 48,807 during Q3. **p. 9**
- Election polls and the betting markets are indicating that Joe Biden is leading President Trump materially as we move into the final weeks pre-election. In 2016, the story was largely the same, as Clinton was expected to win up until the day before the election. **p. 18**

PORTFOLIO IMPACTS

- U.S. and emerging markets have recovered most losses year-to-date, while international remain negative. Global equities are now positive for 2020 despite an earnings recession and considerable economic uncertainty. **p. 29**
- U.S. core inflation increased to a more normal level, rising 1.7% year-over-year in August from 1.2% in June. Inflation expectations also normalized. The 10yr U.S. TIPS inflation breakeven rate recovered to 1.6%, from a low of 0.5% on March 19th. The breakeven rate of inflation is now on par with actual year-over-year inflation. **p. 11**

THE INVESTMENT CLIMATE

- The Federal Reserve announced a notable change to its inflation targeting approach, now aiming to achieve “inflation moderately above 2% for some time so that inflation averages 2% over time and longer-term inflation expectations remain well anchored at 2%.” This was a reversal from the prior goal of achieving 2% inflation. **p. 22**
- The Federal Reserve maintained an accommodative tone, and most members of the FOMC held their view that short rates are likely to stay near-zero through 2023—eventually moving to 2.50% over the longer-term. **p. 22**
- According to FactSet, S&P 500 Q3 earnings are expected to be down -20.5%. However, earnings in Q2 beat expectations by 12.5% (-31.6% YoY vs. -44.1%). Another large positive surprise in Q3 would be welcome news to investors. **p. 28**

ASSET ALLOCATION ISSUES

- U.S. equities delivered +8.9% over the quarter, reaching a new high in September before giving back some gains. The S&P 500 is up +5.6% year-to-date, despite an earnings recession and considerable economic uncertainty. **p. 30**
- The U.S. dollar fell -3.5% in Q3, continuing a downward trend since a sudden jump in March on safe-haven buying. The dollar has now completely unwound the gains experienced during the market sell-off. **p. 38**

A more neutral risk positioning may be warranted in the current environment

There seems to be a high degree of uncertainty regarding the future market path

What drove the market in Q3?

“Europeans face prospect of 2nd lockdowns as COVID cases surge”

DAILY NEW CONFIRMED CASES IN THE EU27 AND THE U.K. COMBINED

4/30	5/31	6/30	7/31	8/31	9/30
14,261	5,985	4,699	9,127	22,225	48,807

Article Source: CBS News, September 21st, 2020

“Second \$1,200 stimulus checks had bipartisan support. Now they could be a longshot”

U.S. PERSONAL INCOME GROWTH (YEAR-OVER-YEAR)

Mar	Apr	May	Jun	Jul	Aug
1.8%	14.1%	9.3%	7.8%	8.1%	4.7%

Article Source: CNBC, September 9th, 2020

“The US job market is gradually recovering from the pandemic lockdown shock”

U-3 UNEMPLOYMENT RATE

Apr	May	Jun	Jul	Aug	Sep
14.7%	13.3%	11.1%	10.2%	8.4%	7.9%

Article Source: CNN Business, September 3rd, 2020

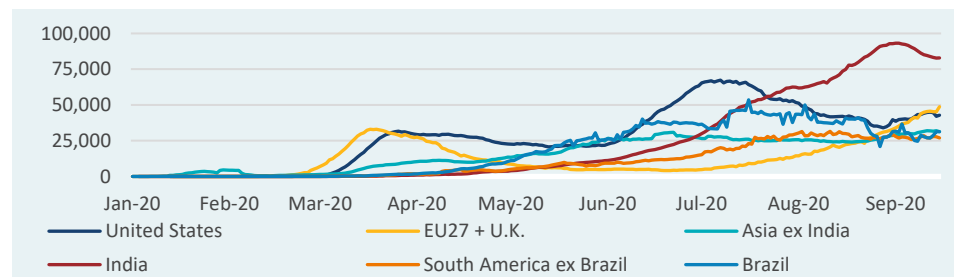
“The market isn’t convinced the Federal Reserve can achieve its inflation objective”

TEN-YEAR BREAK-EVEN INFLATION RATES

4/30	5/31	6/30	7/31	8/31	9/30
1.1%	1.1%	1.3%	1.6%	1.8%	1.6%

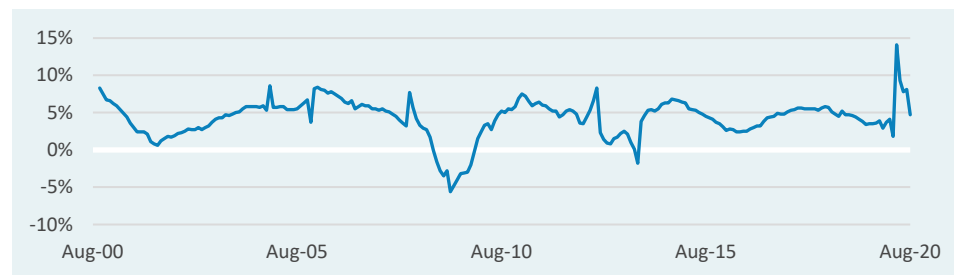
Article Source: CNBC, September 17th, 2020

SEVEN-DAY TRAILING AVERAGE DAILY CASE GROWTH BY REGION



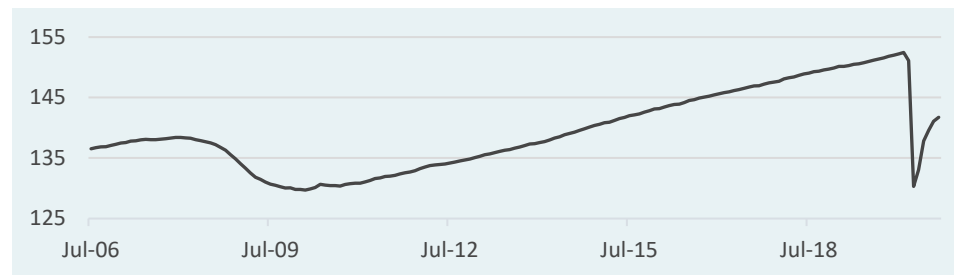
Source: Bloomberg, as of 9/30/20

U.S. PERSONAL INCOME GROWTH (YEAR-OVER-YEAR)



Source: Bureau of Economic Analysis, Bloomberg, as of 8/31/20

NON-FARM EMPLOYEES ON U.S. PAYROLLS (MILLIONS)



Source: Bureau of Labor Statistics, Bloomberg, as of 9/30/20

Economic environment

U.S. economics summary

— Real GDP contracted at a -9.0% rate year-over-year in the second quarter (-31.4% quarterly annualized rate)—likely the most sudden economic recession in American history.

— The Atlanta Fed’s forecast for third quarter growth is -10.7% year-over-year (+33.8% quarterly annualized rate). This projection was based on the expectations that consumption rebounds materially, household investment picks up, businesses begin re-stocking shelves that were allowed to run empty, and supporting fiscal policy.

— The U.S. labor market partially recovered from the recent shock. Unemployment fell from 14.7% in April to 7.9% in September. A report released in September indicated 60% of temporary business closures during the pandemic were now permanent.

— Correlation between election results and market performance

has been weak, and the outcome depends greatly on how the data is sliced and the timing of economic events. The S&P 500 has experienced stronger gains with a Democrat in power, though the results are skewed by extreme events such as the Great Depression.

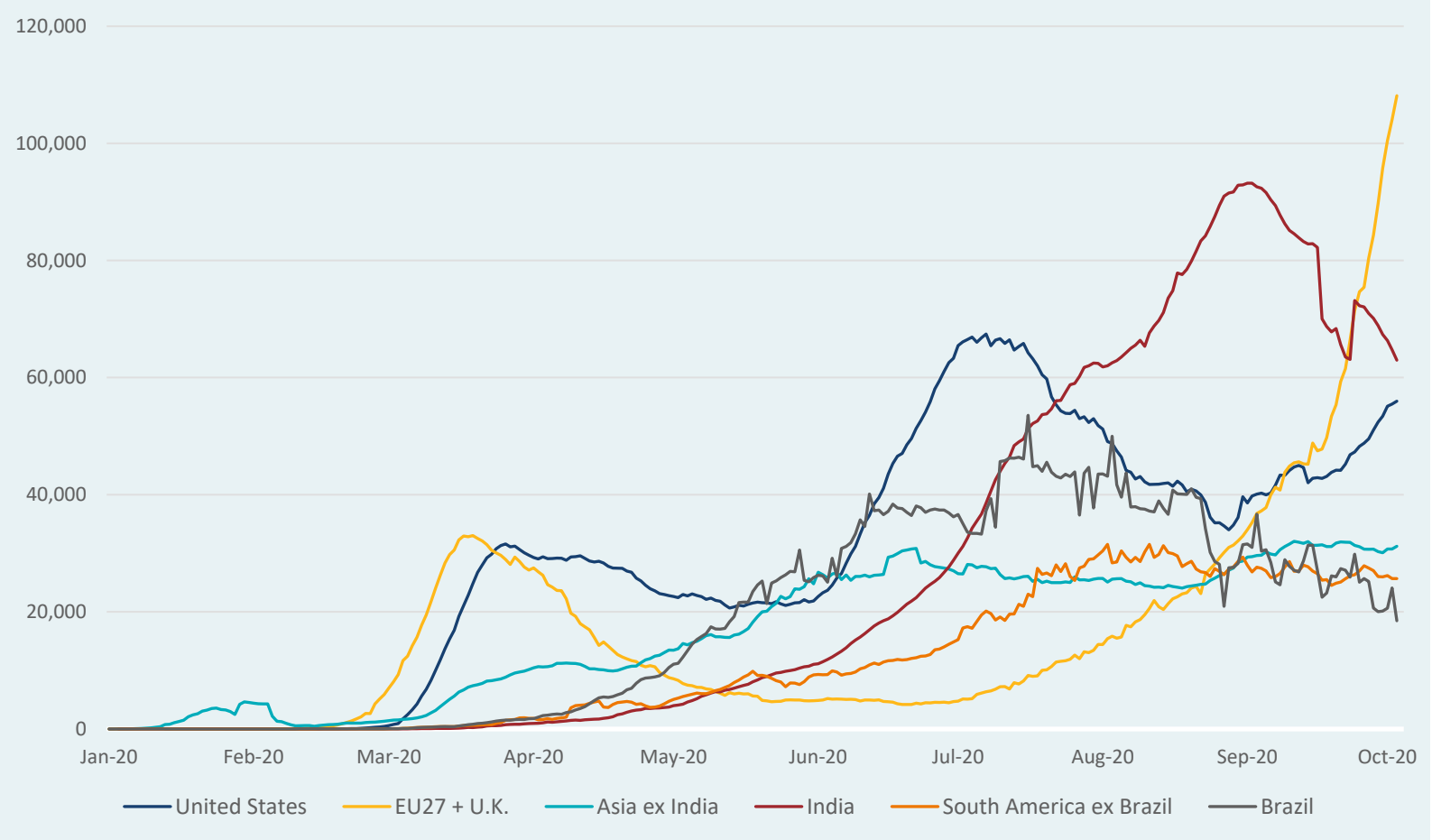
— The NFIB Small Business Optimism Index recovered to 104.0 in Q3, which was in line with pre-pandemic levels. The survey concluded that half of the jobs lost in March and April have been recouped, but that the pace of recovery has slowed.

— The median home price increased 11.1% year-over-year in September, according to Realtor.com. U.S. housing supply has reached record tightness. In August, 3.3 months worth of homes were on the market, which was the lowest inventory ever recorded since the government began tracking this data in 1963.

	Most Recent	12 Months Prior
GDP (YoY)	(9.0%) 6/30/20	2.0% 6/30/19
Inflation (CPI YoY, Core)	1.7% 8/31/20	2.4% 8/31/19
Expected Inflation (5yr-5yr forward)	1.7% 9/30/20	1.7% 9/30/19
Fed Funds Target Range	0% – 0.25% 9/30/20	1.75% – 2.00% 9/30/19
10-Year Rate	0.7% 9/30/20	1.7% 9/30/19
U-3 Unemployment	7.9% 9/30/20	3.5% 9/30/19
U-6 Unemployment	12.8% 9/30/20	6.9% 9/30/19

COVID-19 update

Seven-day trailing daily average case growth by region



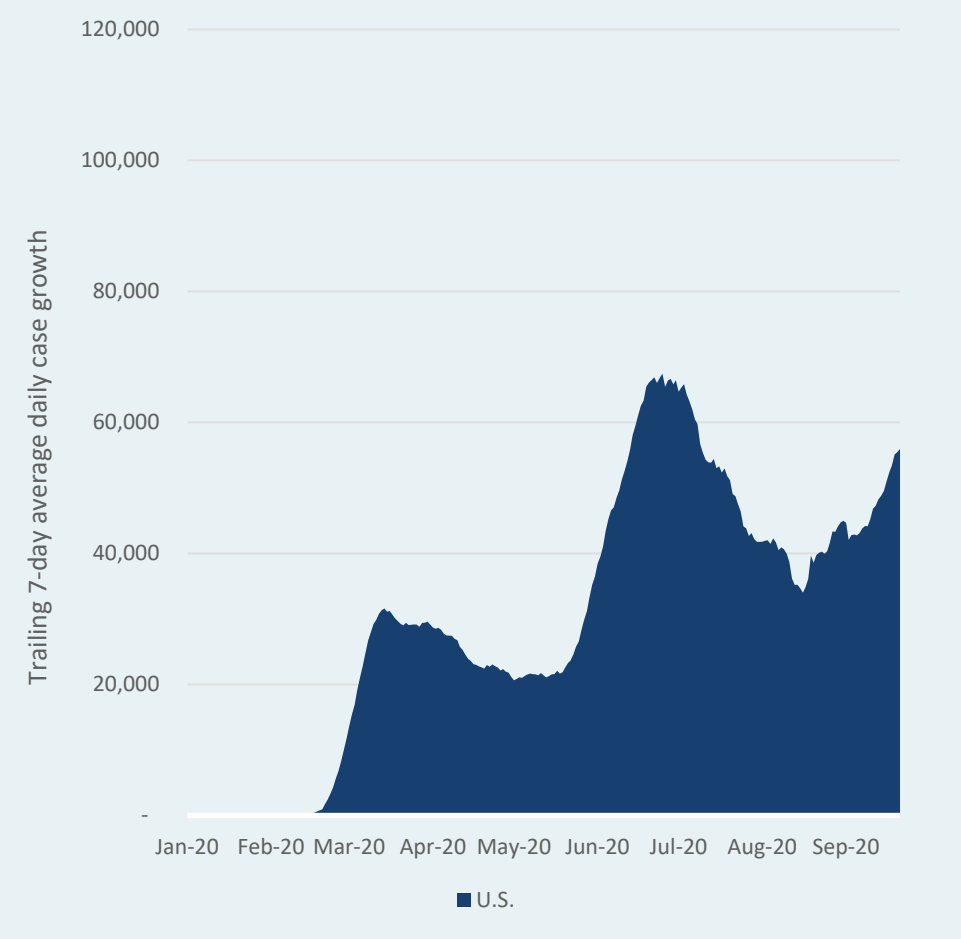
Case growth has increased exponentially across Europe over the past month, resulting in broad reimplementations of economically-restrictive social distancing controls

Deaths have begun to increase on a several-week lag to local case growth, as expected, but remain at lower levels than those seen earlier this year

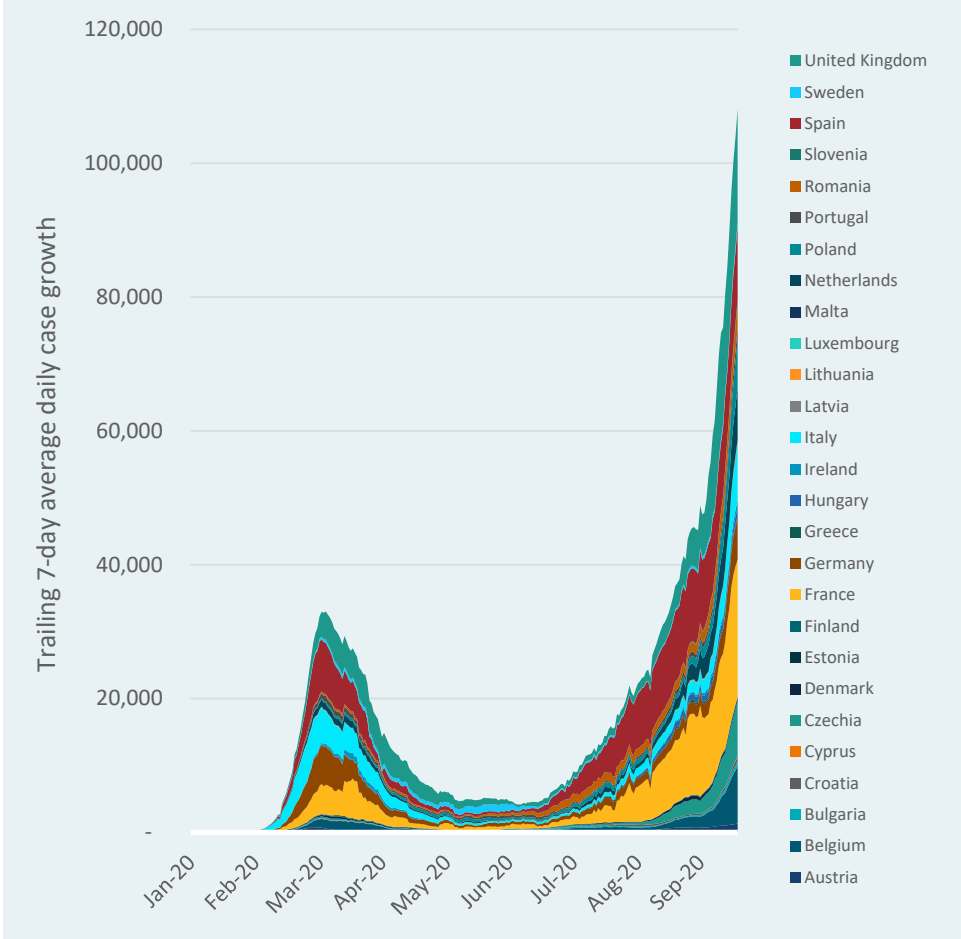
Source: Bloomberg, as of 10/18/20

COVID-19 update

UNITED STATES



EU27 + UNITED KINGDOM



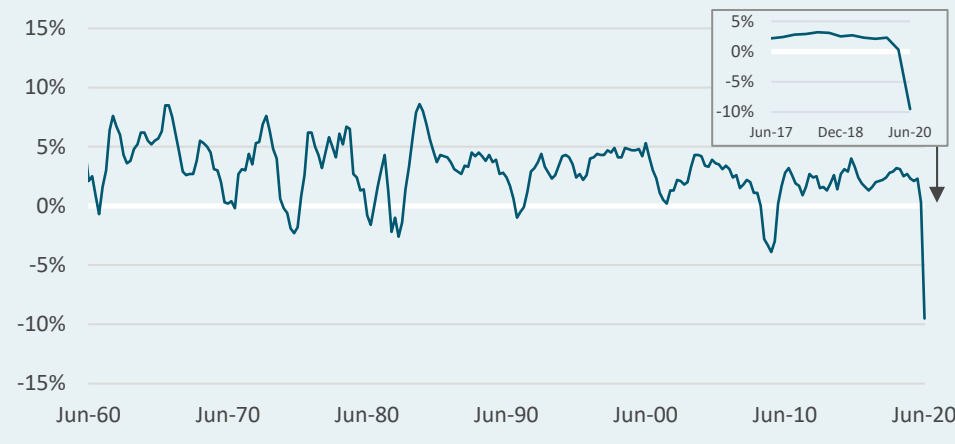
Source: Bloomberg, as of 10/18/20

GDP growth

Real GDP contracted -9.0% year-over-year in Q2 (-31.4% quarterly annualized rate)—likely the most sudden economic recession in American history. Personal consumption expenditures shrunk at a quarterly annualized pace of -24%. The decline was driven by a significant pullback in spending on services (-22%) as economic activity remained constrained. U.S. households and businesses exhibited conservatism in the face of an uncertain outlook on both the virus and policy response fronts. Fixed investment slumped -5.3% and private inventories fell -3.5% as companies appeared unwilling to proactively restock their shelves. Trade remained a tailwind to GDP as the value of imported goods declined more than the value of exported goods.

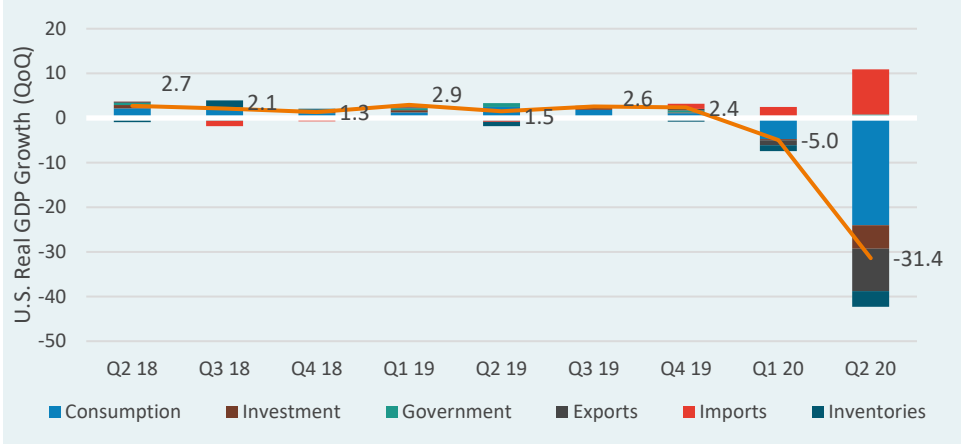
The Atlanta Fed’s forecast for third quarter-growth was +33.8% on a quarter-over-quarter annualized basis (-10.7% year-over-year), as of September 30th. This projection was based on an expectation for consumption to rebound materially, household investment to pick up, businesses to begin re-stocking shelves which were allowed to run empty in the second quarter, and a continuation of supportive fiscal policy. Looking ahead, the strength of the economic recovery will likely remain predicated on the willingness and ability of consumers to spend, the willingness of businesses to supply that demand, and the magnitude of fiscal support.

U.S. REAL GDP GROWTH (YOY)



Source: Bloomberg, as of 6/30/20

U.S. GDP GROWTH ATTRIBUTION



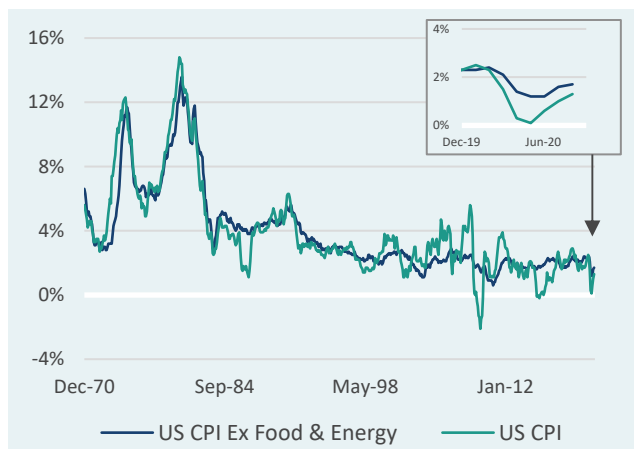
Source: BEA, annualized quarterly rate, as of 6/30/20

Inflation

Growth in headline inflation continued to rebound toward more normal levels in Q3, reaching 1.4% year-over-year in September after bottoming at 0.1% in May. Food items—specifically meats, poultry, fish, eggs, and dairy-related products—continued to drive the recovery in demand for groceries due to COVID-driven restaurant closures. Core inflation, which excludes the more volatile food and energy components, picked up from 1.2% to 1.7% as price increases for used cars and trucks (+10.3%) and medical care services (+4.9%) outweighed a dip in airline fares (-25.0%).

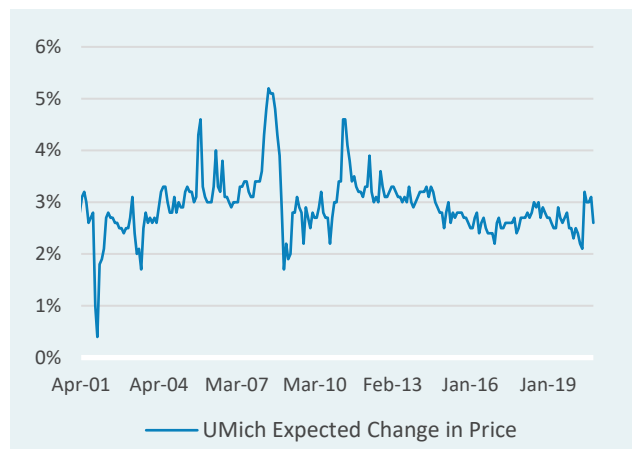
Ten- and 30-year breakeven inflation rates recovered from 1.3% to 1.6% and from 1.6% to 1.8%, respectively, as market participants likely became slightly more bullish on longer-term growth and inflation outlooks. Still, there remains skepticism around the Fed’s ability to sustainably achieve its inflation target average of 2.0%. Year-over-year growth in core PCE inflation recovered to 1.6% in August but remained below the Fed’s target. Officials have stated that in the future they will be less likely to clamp down on rising inflation with restrictive policy and will be more likely to let inflation run above 2.0% for some time.

U.S. CPI (YOY)



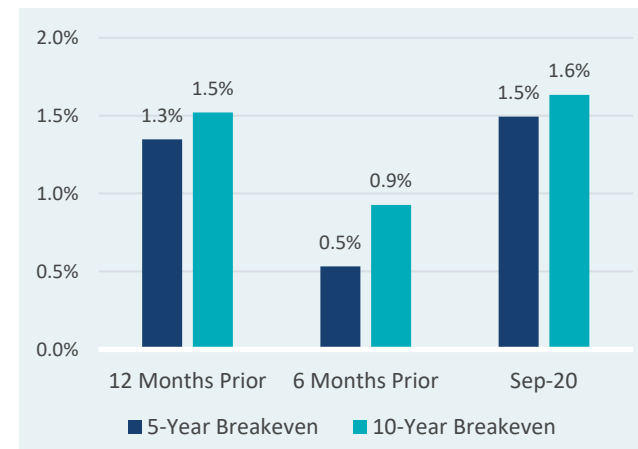
Source: Bloomberg, as of 8/31/20

CONSUMER INFLATION EXPECTATIONS



Source: University of Michigan, as of 9/30/20

BREAKEVEN INFLATION RATES



Source: Bloomberg, as of 9/30/20

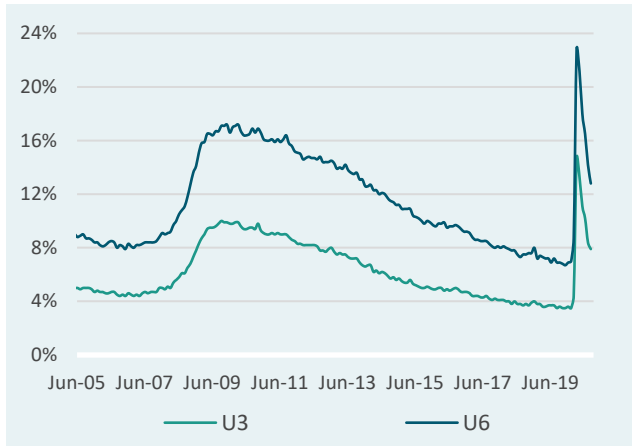
Labor market

The U.S. labor market has partially recovered from the shock sustained in Q1 and Q2. Unemployment fell from 14.7% in April to 7.9% in September. During the economic contraction, the labor participation rate also fell rather dramatically. Most job losses during the pandemic were described by workers as temporary in nature. Most “temporary” job losses have in fact turned out to be temporary, as indicated below. A smaller portion of temporary job losses have unfortunately been reclassified as permanent. We remain watchful regarding how many temporary job losses transition into the “permanent” category in the coming months.

A report released by Yelp in September indicated 60% of businesses that had temporarily closed during the COVID-19 pandemic are now permanently closed. The businesses hit the hardest included: restaurants, bars, retail, fitness, and beauty services. It will be important to monitor whether workers come back to the labor force and once again search for employment as the U.S. economy recovers, or whether these trends result in longer-term unemployment.

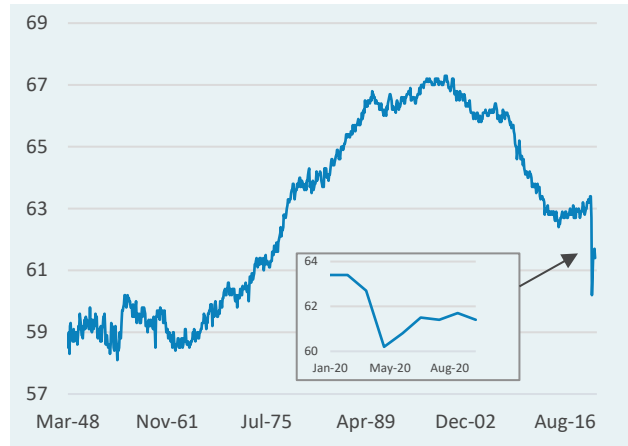
U.S. workers continue to come back to the labor force

U.S. UNEMPLOYMENT



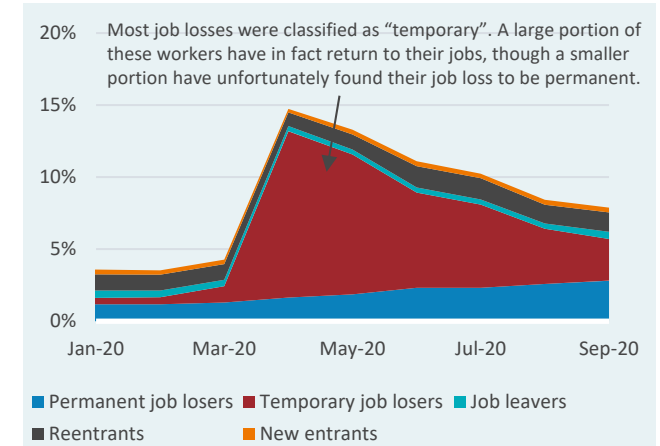
Source: FRED, as of 9/30/20

LABOR PARTICIPATION RATE



Source: FRED, as of 9/30/20

UNEMPLOYMENT DECOMPOSITION BY REASON

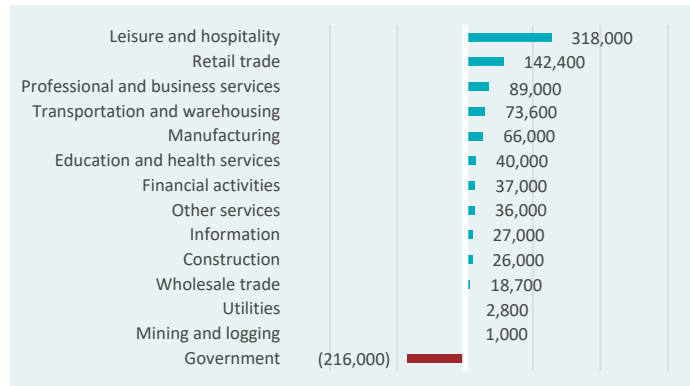


Source: BLS, as of 9/30/20

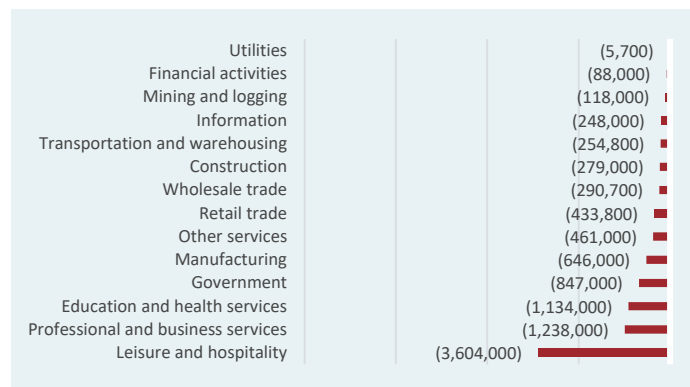
September 2020 jobs report

+661,000 (exp. +859,000) - net revisions to prior two months = +145k

1-MONTH CHANGE



12-MONTH CHANGE



TRAILING % CHANGE



Payrolls continued to recover in the harder-hit services sectors in the third quarter, but payrolls remain well below pre-pandemic levels

All major sectors still have lower payrolls relative to September 2019

Source: BLS, as of 9/30/20

The consumer

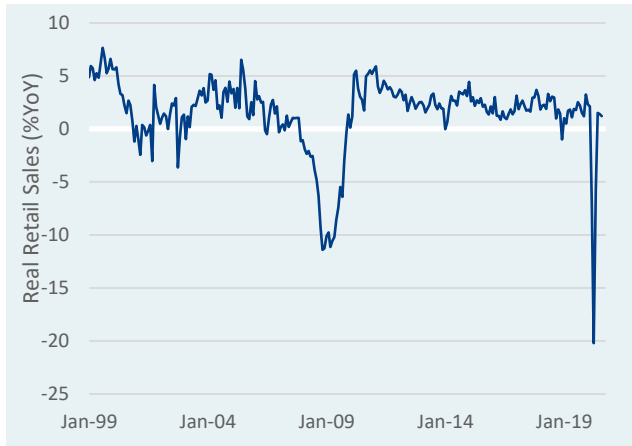
After collapsing -20% year-over-year in April, U.S. real retail sales have now fully recovered and were positive +1.2% in August. Larger purchases, such as automobiles and homes, also slowed considerably earlier in the year but have since rebounded.

The current combination of ultra-low interest rates and vast government fiscal stimulus appears to be supporting many parts of the economy. Despite the inability of households to spend on some traditional discretionary items, other types of purchases have swelled. Recent consumption patterns seem

to indicate that government support is having the intended effect and that the economy is stabilizing.

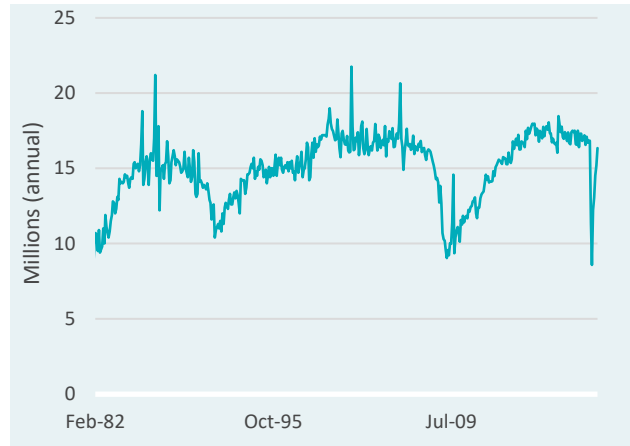
The U.S. personal savings rate fell to 14% in August, largely due to the ending of special unemployment benefits, which expired on July 31st. Broad economic uncertainty typically increases the desire for saving, which is likely the case in today's environment. But perhaps an even greater effect is the overall inability or unwillingness of households to spend on certain items such as vacations and restaurant dining.

REAL RETAIL SALES GROWTH (YOY)



Source: FRED, as of 8/31/20

AUTO SALES



Source: Federal Reserve, as of 9/30/20

PERSONAL SAVINGS RATE



Source: FRED, as of 8/31/20

Sentiment

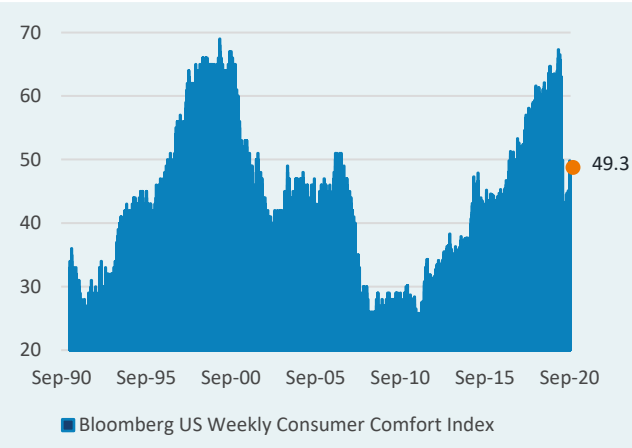
Despite the more optimistic picture painted by a recovery in consumer spending, auto sales, and the housing market, consumer sentiment remains far below the near record-highs of early 2020.

The Bloomberg Consumer Comfort Index attempts to gauge Americans' views on the economy, their personal financial situation, and buying conditions. The index sits at 49.3, compared to a high of 67.3 in January. The University of Michigan Consumer Sentiment Survey attempts to gauge attitudes about the business climate, personal finances, and

spending conditions. The index currently sits at 80.4, down from 101.0 in February.

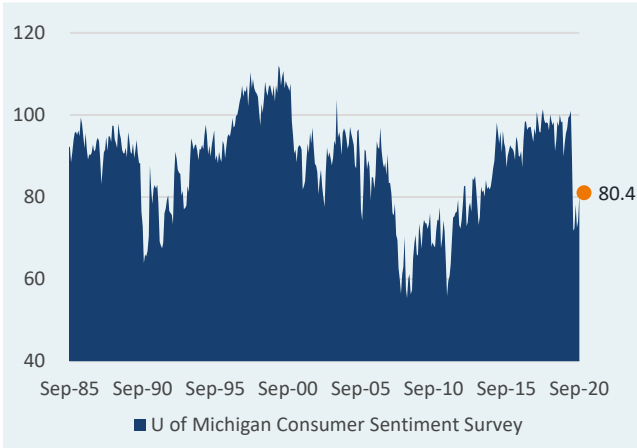
The NFIB Small Business Optimism Index recovered to 104.0 in Q3, which is in line with pre-pandemic levels. The survey concluded that half of the jobs lost in March and April have been recouped, but that the pace of recovery has slowed. Businesses generally expect the economy to continue growing, and hiring plans are now on track with pre-COVID levels.

CONSUMER COMFORT



Source: Bloomberg, as of 9/30/20

CONSUMER SENTIMENT



Source: University of Michigan, as of 9/30/20

SMALL BUSINESS OPTIMISM



Source: NFIB, as of 9/30/20

Housing

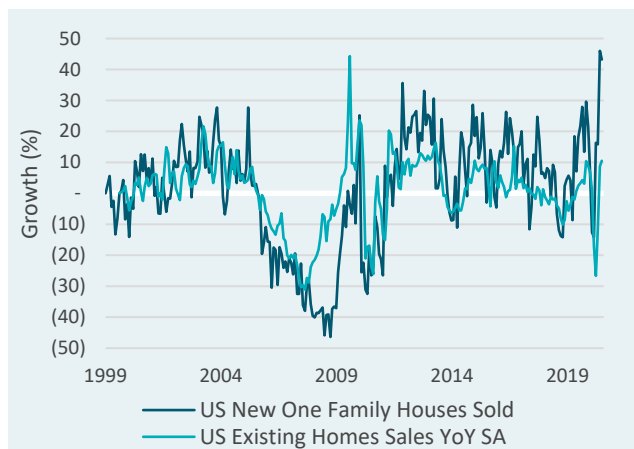
Existing home sales increased intensely over the summer, with existing home purchase activity up 10.5% year-over-year and new home sales higher by a whopping 43.2%. A variety of forces have likely aligned to deliver recent strength, including record-low mortgage interest rates, the desire of many Americans to increase their living space due to the new working-from-home environment, and a record-thin supply of homes on the market.

The portion of U.S. mortgages in the COVID-19 government forbearance program dropped significantly to 5.6% during

the first week of October. This compared to 6.8% the previous week and a high of 8.6% earlier in the year, according to mortgage data firm Black Knight. This positive news eases concerns that the COVID-19 slowdown might lead to another housing crisis.

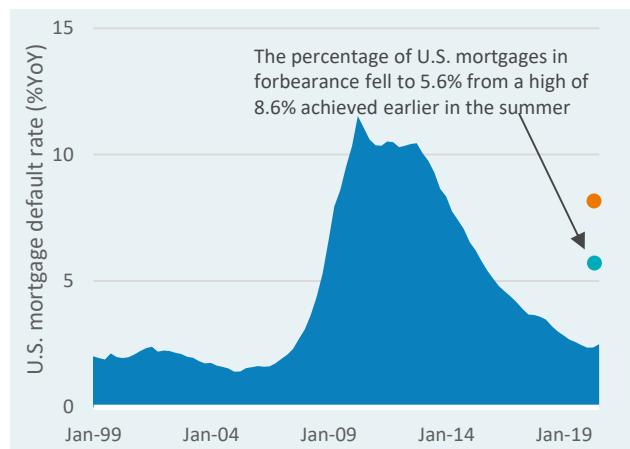
The extremely tight supply of homes has been a major contributor to the recent housing boom. In August, 3.3 months worth of homes were available on the market, which was the lowest inventory level ever recorded since the U.S. government began tracking this data in 1963.

U.S. HOME SALES (YOY)



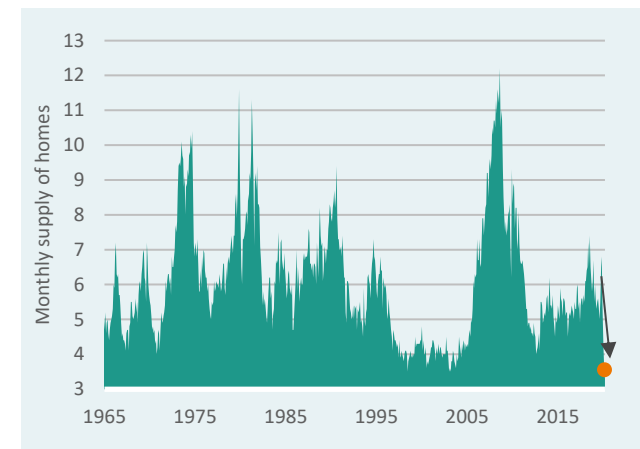
Source: FRED, as of 8/31/20

MORTGAGE DEFAULT RATE (%)



Source: FRED, as of 6/30/20, Black Knight as of 10/9/20

U.S. HOME SUPPLY



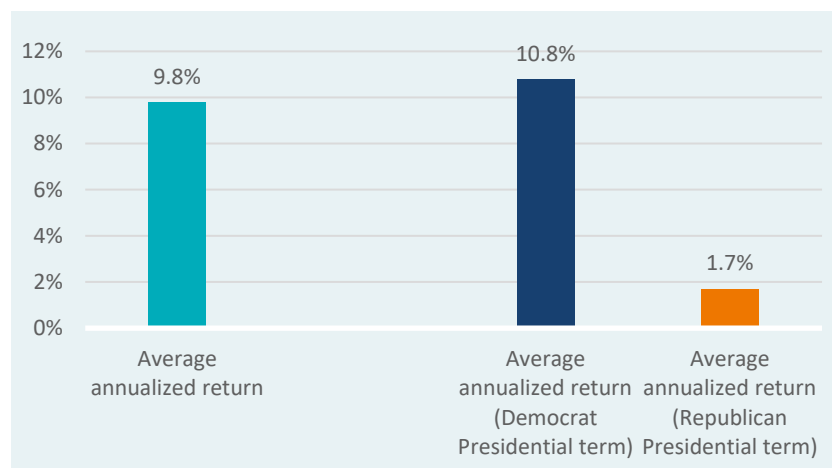
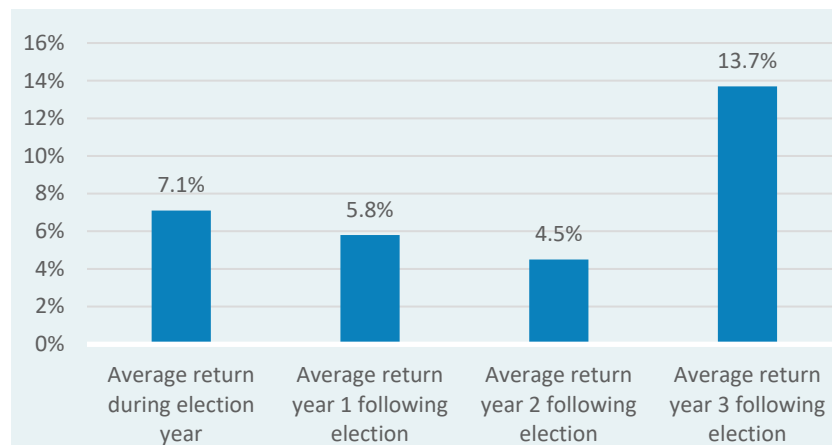
Source: FRED, as of 8/31/20

U.S. presidential election

Correlation between election results and long-term market performance has generally been weak, and the outcome depends greatly on how the data is sliced, as well as the timing of economic and geopolitical events which are often unrelated to elections. The S&P 500 has experienced stronger gains with a Democrat in power, though the results are skewed by extreme events such as the Great Depression (Herbert Hoover saw a -77.1% total return during his presidency, followed by a +205.5% total return in Franklin D. Roosevelt's first term). These events have had a significant impact on the "average" market performance of Democrat and Republican Presidencies.

Markets seem to view a Donald Trump reelection as a positive for markets. But recently investors have also warmed to the idea of a Joe Biden victory, due to expectations for greater fiscal support to the economy which may counteract negative effects of Democratic Party proposals for higher corporate taxes and tax hikes on wealthier households.

PRESIDENTIAL ELECTION & U.S. EQUITY PERFORMANCE (1928 – 2016)



The relationship between election years and market performance has been muddy

Source: Schwab, Bloomberg – S&P 500 Index

Note: Stronger equity performance during one party or the other does not necessarily imply that the party's leadership led to that market performance. The timing of large and significant shocks to the economy such as the Great Depression, natural disasters, and geopolitical turmoil have influenced the performance figures above.

How are we viewing the polling data?

The polls and the betting markets indicate that Biden is leading President Trump materially as we move into the final weeks pre-election. In 2016, the story was largely the same, as Clinton was expected to win up until the day before the election.

“Clinton has 90 percent chance of winning” – Reuters, 11/7/2016

“Election 2016: Hillary Clinton looks poised to lock it up” – Politico, 11/7/2016

“Odds of Clinton win jump on prediction markets” – Financial Times, 11/7/2016

“Polls: Hillary Clinton in position to win the election” – Business Insider, 11/7/2016

Several factors are likely to distort the picture painted by the polling data, including, but not limited to, the following:

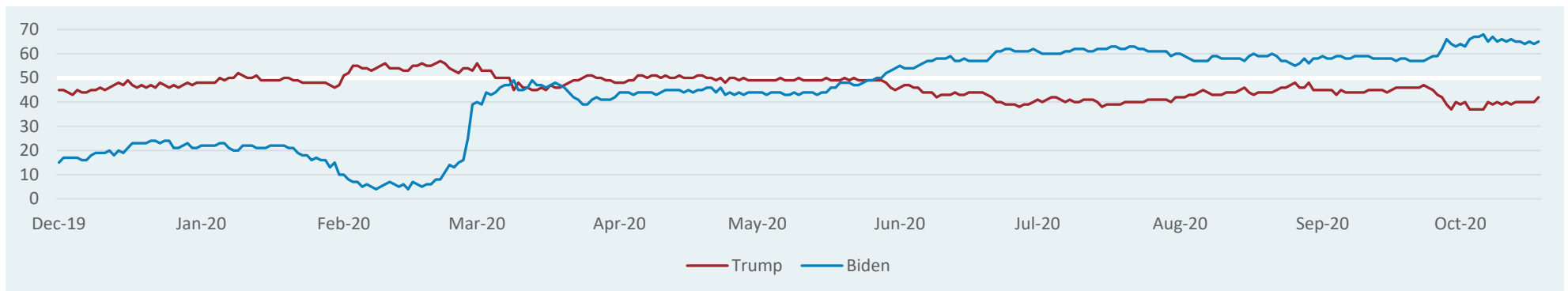
Shy Trump factor: Voters in certain parts of the country may be less willing to express that they would vote for Trump, and this dynamic may be even more prevalent than it was in 2016.

Oversampling: Pollsters do their best to build population samples representative of likely actual voter turnout, but these samples are often flawed. Back in 2016, Democrats were often over-represented in poll samples, which may have incorrectly skewed polling averages in favor of Hillary Clinton. There appears to be some evidence of this effect influencing polling averages this year as well.

Mail-in voting: The increase in reliance on mail-in ballots could delay the distribution of final election results and provide both candidates the opportunity to contest the election results in key swing states.

Late deciding: Voters may break for Trump or Biden in the final few days pre-election, but this is more likely to be a smaller factor than it was in 2016.

PREDICTIT ODDS – WHO WILL WIN THE 2020 U.S. PRESIDENTIAL ELECTION?



Source: PredictIt, as of 10/21/20

International economics summary

- Growth contracted sharply in international developed economies in Q2. Gross domestic product in the Eurozone contracted -14.7% from the prior year, and Japanese GDP sank -9.9% over the same period, despite the deployment of fiscal support to the tune of roughly 40% of Japan's GDP.
- European officials implemented stricter social distancing controls with hopes of stymying the second wave of COVID-19 sweeping across the continent. The seven-day average daily case growth of the EU27 and the United Kingdom combined rose from 4,699 to 48,807 over the third quarter.
- The IMF revised its global growth projections for 2020 and 2021 from -4.9% and 5.4% to -4.4% and 5.2%, respectively. The IMF's model assumes social distancing controls will continue to act as a drag on growth into 2021, and that local transmission of the virus will be falling everywhere by 2023.
- Inflation remained muted globally in the third quarter, supporting arguments that the pandemic's impact has been more disinflationary than inflationary over the short term. The Eurozone's consumer price index ended the quarter -0.3% below its level from September 2019, though most of the deflationary pressures were supplied by an -8.2% decline in energy prices.
- Eurozone retail sales volumes grew 3.7% from the prior year in August (exp. 2.2%), driven by a sharp surge in online purchases and clothing sales. The vigorous rebound in consumer spending has been attributed to pent-up demand and incomes, which have been largely stable due to furlough schemes. Many analysts expect a "normalization" of retail sales in the fourth quarter, under the assumption that current spending levels are unlikely to be sustainable.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	(9.0%) <i>6/30/20</i>	1.3% <i>8/31/20</i>	7.9% <i>9/30/20</i>
Eurozone	(14.7%) <i>6/30/20</i>	(0.3%) <i>9/30/20</i>	8.1% <i>8/31/20</i>
Japan	(9.9%) <i>6/30/20</i>	0.2% <i>9/30/20</i>	3.0% <i>8/31/20</i>
BRICS Nations	(3.1%) <i>6/30/20</i>	3.3% <i>6/30/20</i>	5.3% <i>6/30/20</i>
Brazil	(11.4%) <i>6/30/20</i>	2.4% <i>8/31/20</i>	13.8% <i>7/31/20</i>
Russia	(8.0%) <i>6/30/20</i>	3.3% <i>9/30/20</i>	6.4% <i>8/31/20</i>
India	(23.9%) <i>6/30/20</i>	6.7% <i>8/31/20</i>	8.5% <i>12/31/17</i>
China	4.9% <i>9/30/20</i>	2.4% <i>8/31/20</i>	3.8% <i>6/30/20</i>

International economics

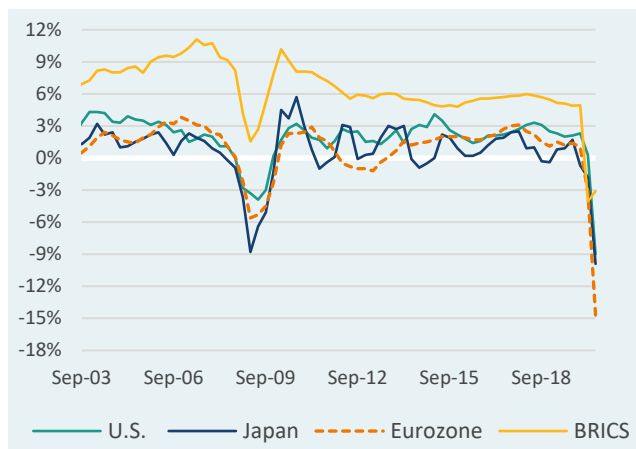
As expected, growth contracted sharply in international developed economies around the world in Q2. Eurozone gross domestic product contracted -14.7% from the prior year, and Japanese growth sank -9.9% over the same period, despite the deployment of fiscal support to the tune of roughly 40% of Japanese GDP.

Growth in most of the emerging markets complex also took a major hit. GDP contracted -11.4% in Brazil, -8.0% in Russia, and -23.9% in India which has been especially hard hit by the coronavirus. China stood out as an exception, and reportedly mustered year-over-year GDP growth of +4.9% in Q3. China's

growth was supported by the People's Bank of China, which cut its 1-year medium-term lending facility rate from 3.15% to 2.95%. Many emerging economies are in a better position to provide monetary stimulus, given higher interest rates.

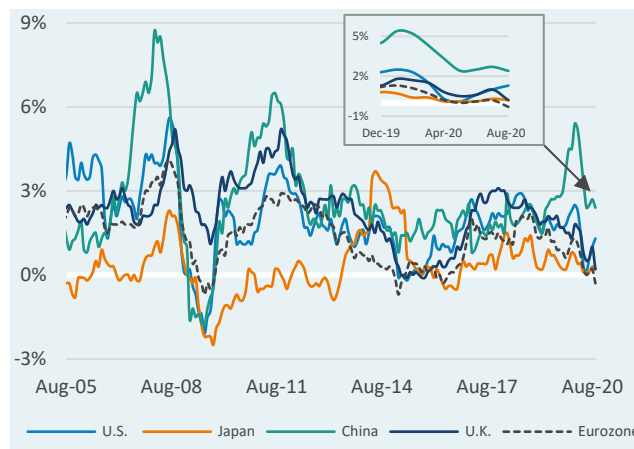
Unemployment in the Eurozone rose from 7.8% to 8.1%, just 0.2% above the quarter-end rate in the United States, as Europe contends with disinflationary pressures. Year-over-year growth of the harmonized consumer price index fell from +0.3% into negative territory at -0.3%. The Union's harmonized measure, however, does not include rents and house prices—a key distinction from the U.S. CPI basket.

REAL GDP GROWTH (YOY)



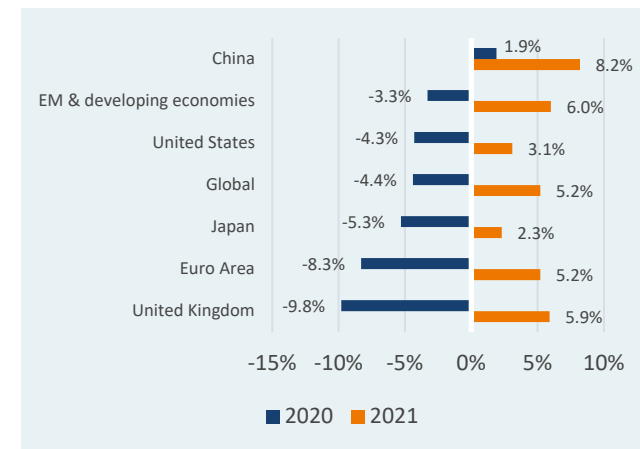
Source: Bloomberg, as of 6/30/20

INFLATION (CPI YOY)



Source: Bloomberg, as of 8/31/20

IMF GLOBAL OUTLOOK GROWTH PROJECTIONS



Source: International Monetary Fund, as of 10/13/20

Fixed income rates & credit

Interest rate environment

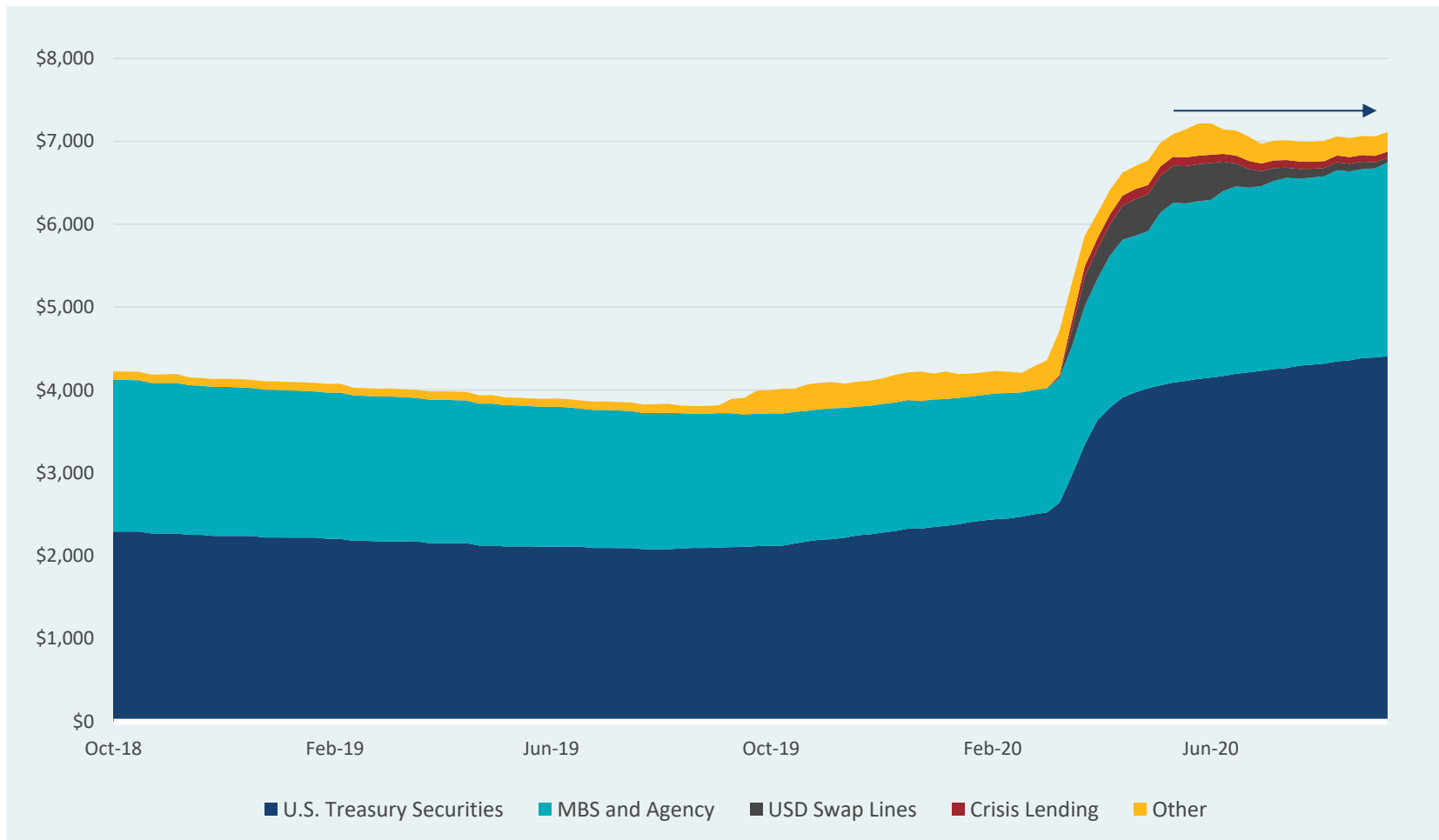
- Global interest rate levels remained extremely depressed relative to long-term averages in Q3, and the 10-year U.S. Treasury yield traded in a relatively narrow range between 0.50%-0.75%.
- The Federal Reserve maintained an accommodative tone, and most members of the Federal Open Market Committee remained of the view that short rates are likely to stay near-zero through 2023, and eventually move toward 2.50% over the longer-term. The Fed repeated that while it has the power to lend, it does not hold the power to spend, and additional fiscal support will likely be required from Congress.
- The U.S. Fed made an adjustment to its policy approach related to its inflation target. Instead of targeting stable prices, defined as 2% annual growth in personal consumption expenditures (PCE), the Fed will now implement an average inflation targeting approach aimed at achieving “inflation moderately above 2% for some time so that inflation averages 2% over time and longer-term inflation expectations remain well anchored at 2%.”
- Officials at the Bank of England (BOE) reportedly warmed to the idea of pursuing a negative interest rate policy, and markets are now pricing in negative overnight rates by May 2021. Many analysts have stated that the BOE is likely to remain extremely supportive and may provide additional monetary accommodation in the form of quantitative easing before year-end.
- Investors were paid for betting on longer-term reflation of growth and inflation, likely due to their expectations for further fiscal and monetary accommodation moving forward. Ten-year breakeven inflation rates recovered from 1.3% to 1.6%, and key term spreads indicated a moderate steepening in the U.S. yield curve.

Area	Short Term (3M)	10-Year
United States	0.09%	0.68%
Germany	(0.63%)	(0.52%)
France	(0.64%)	(0.24%)
Spain	(0.54%)	0.25%
Italy	(0.48%)	0.87%
Greece	(0.08%)	1.02%
U.K.	0.01%	0.23%
Japan	(0.15%)	0.01%
Australia	0.12%	0.79%
China	2.29%	3.13%
Brazil	1.93%	7.45%
Russia	4.09%	6.29%

Source: Bloomberg, as of 9/30/20

Monetary stimulus

FED BALANCE SHEET, MILLIONS



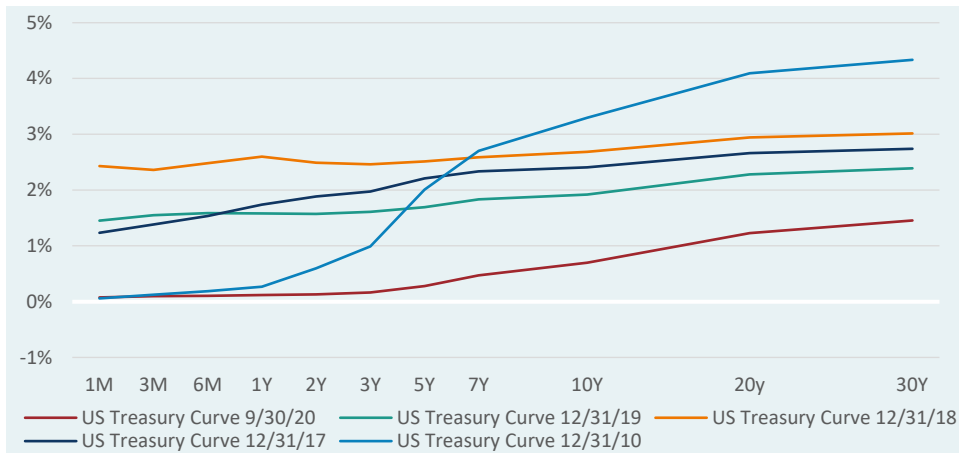
Fed balance sheet levels have remained flat

The Fed provided significant monetary accommodation in Q2. Officials have implied that further stimulus will likely need to come in the form of fiscal support

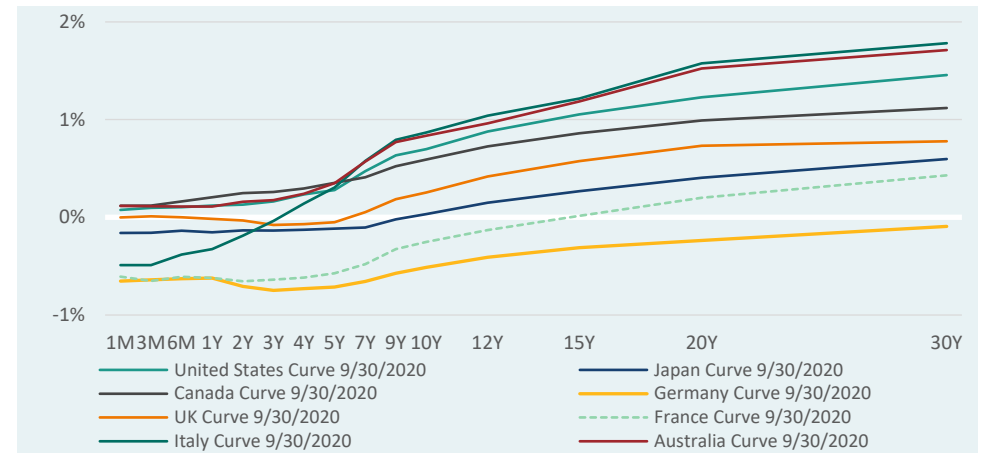
Source: FRED, Bloomberg, as of 9/16/20

Yield environment

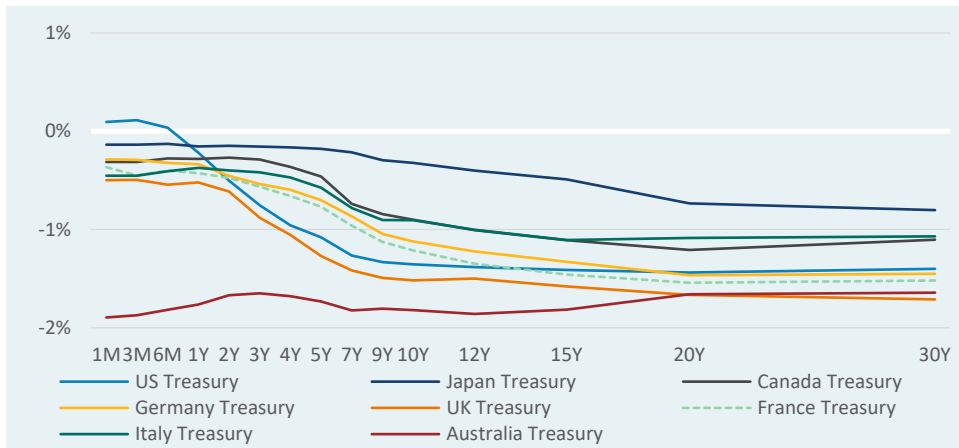
U.S. YIELD CURVE



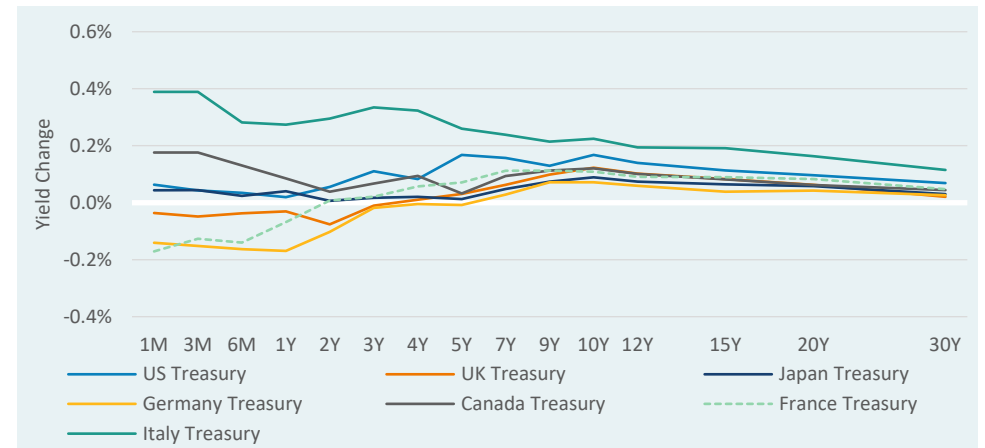
GLOBAL GOVERNMENT YIELD CURVES



YIELD CURVE CHANGES OVER LAST FIVE YEARS



IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 9/30/20

Credit environment

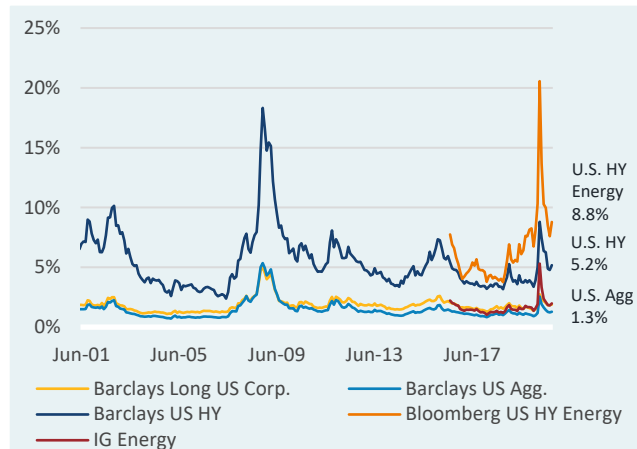
Credit markets performed positively in the third quarter as yields continued to fall from March highs. Buoyed by ongoing support from the Fed as well as increased investor demand for yield, investment grade credit returned 1.5% over the quarter while high yield and leveraged loans returned +4.6% and +4.1%, respectively. Within high yield, lower quality issues outperformed higher quality.

Investment-grade credit has now returned +6.4% year-to-date through September, while high yield performance turned positive at +0.6% and leveraged loans remained negative at -0.8% year-to-date.

Credit spreads fell across the board in Q3 but high yield led the way. Corporate investment grade spreads fell 14 bps through the quarter to 136 bps while high yield spreads fell 109 bps to 517 bps.

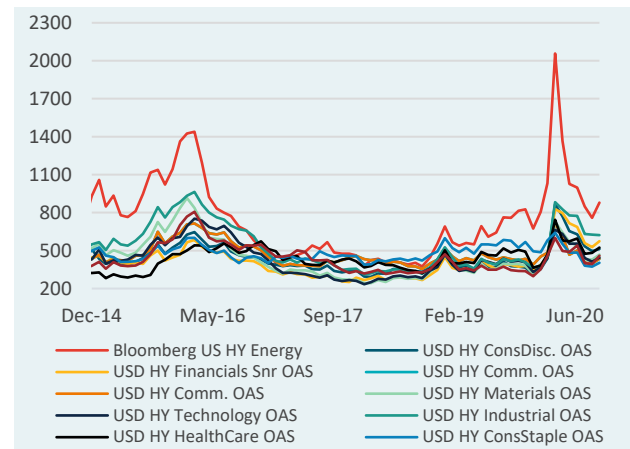
As a result of the post-March recovery, approximately two-thirds of global investment grade debt is now yielding less than 1%, and more debt is currently trading at a negative yield than at above the 2% level. While yields in the U.S. are still modestly higher than pre-pandemic levels, credit markets are priced similarly to how they were in January, despite a very different fundamental picture.

SPREADS



Source: Barclays, Bloomberg, as of 9/30/20

HIGH YIELD SECTOR SPREADS (BPS)



Source: Bloomberg, as of 9/30/20

Market	Credit Spread (OAS)	
	9/30/20	9/30/19
Long U.S. Corp	1.9%	1.7%
U.S. Inv Grade Corp	1.4%	1.2%
U.S. High Yield	5.2%	3.7%
U.S. Bank Loans*	5.3%	4.5%

Source: Barclays, Credit Suisse, Bloomberg, as of 9/30/20

*Discount margin (4-year life)

Default & issuance

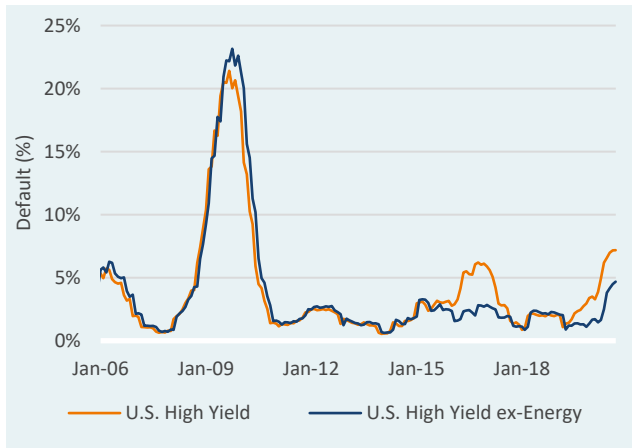
Default activity over the quarter slowed considerably from record numbers in Q2 but remained elevated relative to history. In the third quarter, 26 companies defaulted on \$19.3 billion, bringing the year-to-date default total to \$123.4 billion. This year-to-date figure would rank as the second highest annual default total on record.

The U.S. high yield default rate fell -0.4% in the quarter to 5.8% but remains 3.2% higher than the start of the year. Conversely, the U.S. leveraged loan default rate rose and hit a five-year-high at 4.3%, 2.6% higher year-to-date.

Certain high yield bond issuers took advantage of the low rate environment throughout Q3 and continued to come to market at a record pace. Gross issuance was \$131.9 billion over the quarter, which was second only to \$145.5 billion in Q2, the highest on record. Total gross issuance year-to-date has been \$350.3 billion.

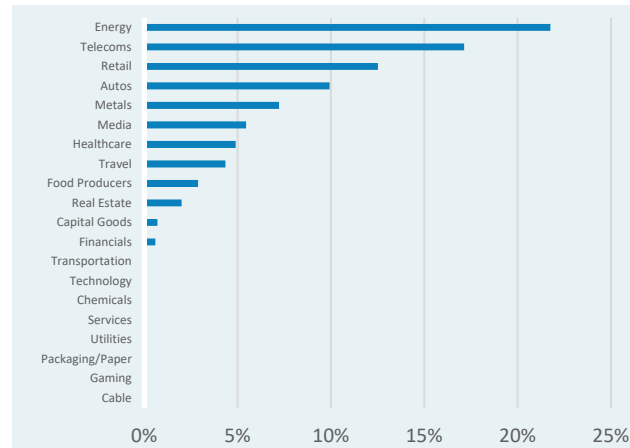
Investment grade issuance fell to nearly half the rate of the second quarter but remains elevated. New investment grade issuance totaled \$371 billion. A year-to-date \$1.54 trillion worth of new investment grade debt was nearly 70% higher than during the same period of 2019.

HY DEFAULT RATE (ROLLING 1-YEAR)



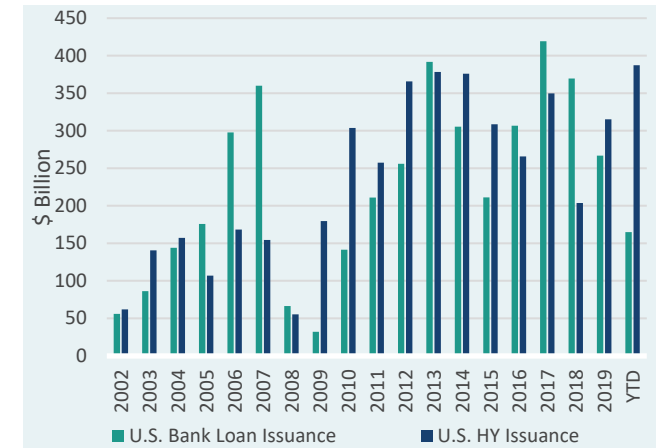
Source: BofA Merrill Lynch, as of 9/30/20

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



Source: BofA Merrill Lynch, as of 9/30/20 – par weighted

U.S. ISSUANCE (\$ BILLIONS)



Source: BofA Merrill Lynch, as of 9/30/20

Equity

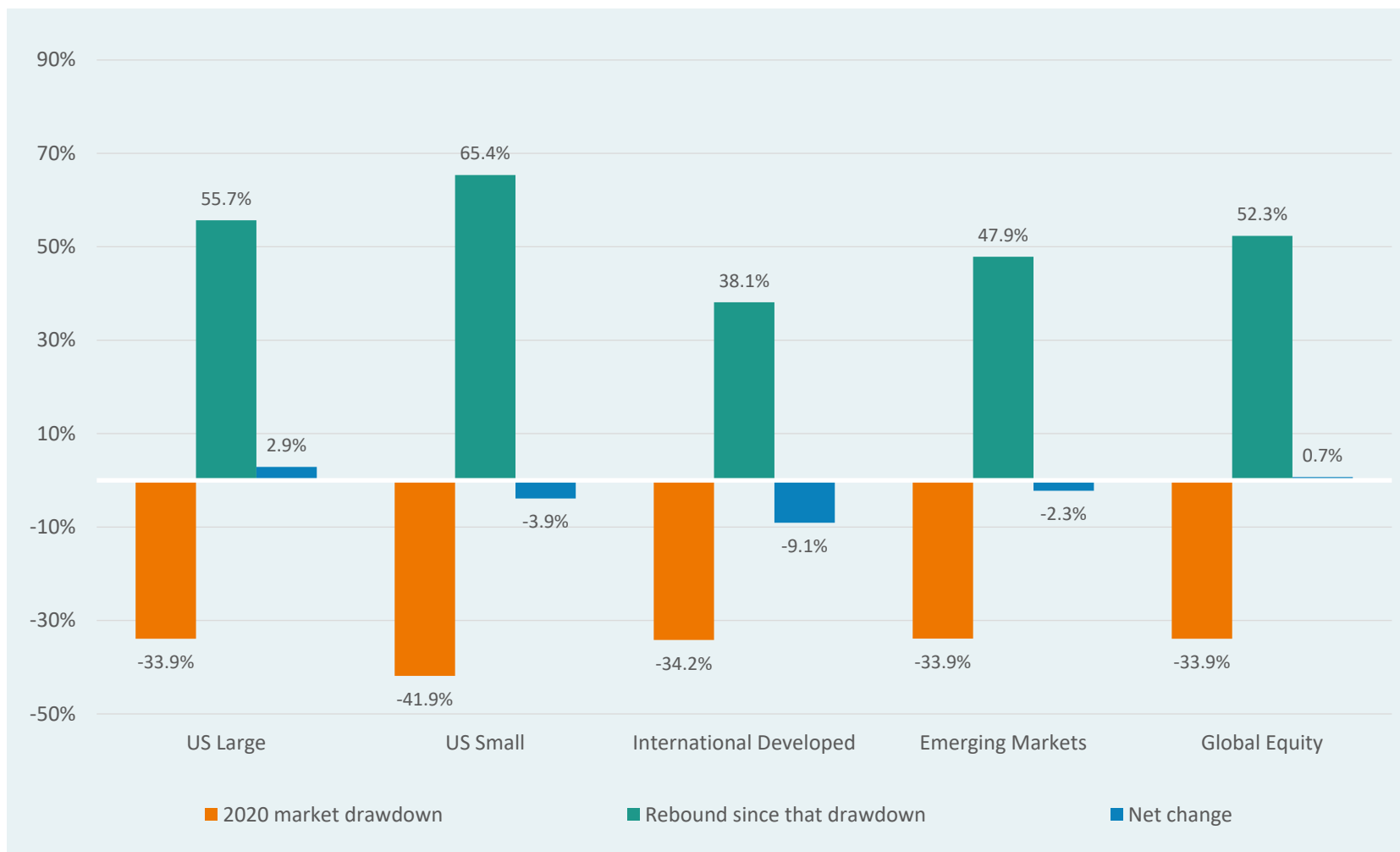
Equity environment

- U.S. equities reached a new high in September before pulling back later in the month. U.S. and emerging markets have recovered most losses year-to-date, while international developed equities remain more negative. Global equities are now positive for 2020 despite an earnings recession and considerable economic uncertainty.
 - Emerging market equities outperformed during the quarter (MSCI Emerging Markets +9.6%) followed by domestic equities (S&P 500 +8.9%) and international developed (MSCI EAFE +4.8%).
 - According to FactSet, S&P 500 Q3 earnings are expected to be down -20.5%. However, earnings in Q2 beat expectations by 12.5% (-31.6% YoY vs. -44.1%). Another large positive surprise in Q3 would be welcome news to investors. The Cboe VIX Index moderated in June
- from heightened levels and remained generally rangebound during the third quarter. The VIX ended the month of September at 26, higher than the long-term average of 19.
- The U.S. dollar fell -3.5% in the third quarter, continuing a downward trend since a sudden jump in March on safe-haven buying. The dollar has now completely unwound the gains experienced during the market sell-off.
 - U.S. growth stocks beat value stocks in the third quarter, continuing an incredible run of market leadership (Russell 1000 Growth +13.2%, Russell 1000 Value +5.6%), while large cap stocks outperformed small cap stocks (Russell 1000 +9.5%, Russell 2000 +4.9%).

	QTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)
US Large Cap (S&P 500)	8.9%		15.1%	
US Small Cap (Russell 2000)	4.9%		0.4%	
US Large Value (Russell 1000 Value)	5.6%		(5.0%)	
US Large Growth (Russell 1000 Growth)	13.2%		37.5%	
International Large (MSCI EAFE)	4.8%	1.3%	0.5%	(3.1%)
Eurozone (Euro Stoxx 50)	3.5%	(0.6%)	(1.7%)	(6.8%)
U.K. (FTSE 100)	0.1%	(4.1%)	(13.9%)	(17.0%)
Japan (NIKKEI 225)	6.8%	4.7%	10.9%	10.2%
Emerging Markets (MSCI Emerging Markets)	9.6%	8.5%	10.5%	12.8%

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 9/30/20

Equity market peak-to-trough



Equity markets around the world have recovered most of their losses

As of 10/15/20 - "Peak-to-trough" is defined as the total loss from the highest value achieved in 2020 to the lowest value achieved following the COVID-19 market drawdown. "Net change" is the difference between the market price on October 15th and the highest value achieved in 2020. Indexes include: S&P 500, Russell 2000, MSCI EAFE, MSCI Emerging Markets, MSCI ACWI.

Domestic equity

U.S. equities delivered +8.9% in Q3, reaching a new high in September before pulling back later in the month. The S&P 500 is up +5.6% year-to-date, despite an earnings recession and considerable economic uncertainty.

Consumer Discretionary (+15.1%) and Materials (+13.3%) sectors led in Q3, with Energy (-19.7%) delivering further underperformance. Information Technology stocks have shown impressive performance year-to-date (+27.5%) and have captured headlines as some company valuations have

reached lofty levels. Large technology names have seen greater volatility recently, and exhibited a quick pullback during the first week of September. Growth stocks continue to be in vogue in the current low-growth environment.

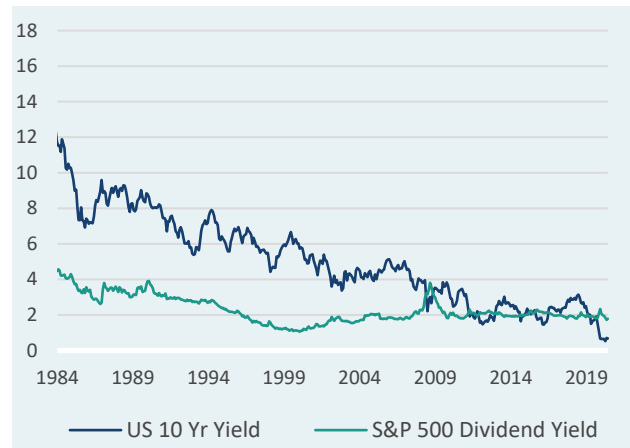
Many investors are justifiably questioning the rationale for such strong risk asset performance, at a time when so much uncertainty exists around public health and the economy, and at a time when some business models may no longer be viable due to COVID-19.

S&P 500



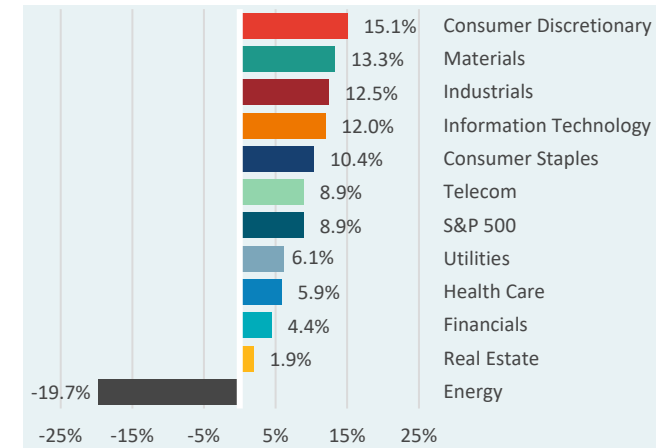
Source: Standard & Poor's, as of 9/30/20

DIVIDEND YIELD VS BOND YIELD



Source: Standard & Poor's, as of 9/30/20

Q3 SECTOR PERFORMANCE



Source: Standard & Poor's, as of 9/30/20

Domestic equity size & style

U.S. growth stocks beat value stocks during Q3, continuing an incredible run of market leadership (Russell 1000 Growth +13.2%, Russell 1000 Value +5.6%), while large cap stocks outperformed small cap stocks (Russell 1000 +9.5%, Russell 2000 +4.9%).

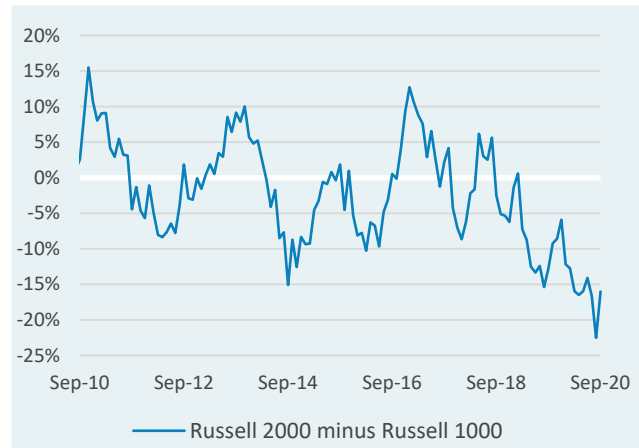
It seems that 2020 has been the perfect storm for value stocks. Commodities sectors were experiencing oversupply leading up to the onset of COVID-19, and the virus greatly accelerated these problems, resulting in a historic crash to prices (the Energy sector contains many value stocks). The Energy sector has delivered -45.2% over the past year. At the same time, the world has been rapidly changing in terms of technological progress, and COVID-19 appears to have accelerated these trends, contributing to extreme

outperformance of the growth-tilted Information Technology sector at +47.2% over the past year.

We recognize that recent value underperformance is anomalous, but we also recognize that much of this price action has been due to global trends that may not necessarily reverse over the short-term. It is very difficult to successfully make short-term bets on style factors, as factors can be incredibly noisy and vulnerable to sector randomness. Value is historically cheap, but a catalyst for a value turnaround is not yet evident. We continue to believe that a buy-and-hold approach to style investing is the best course of action, most of the time, but we are closely watching this space.

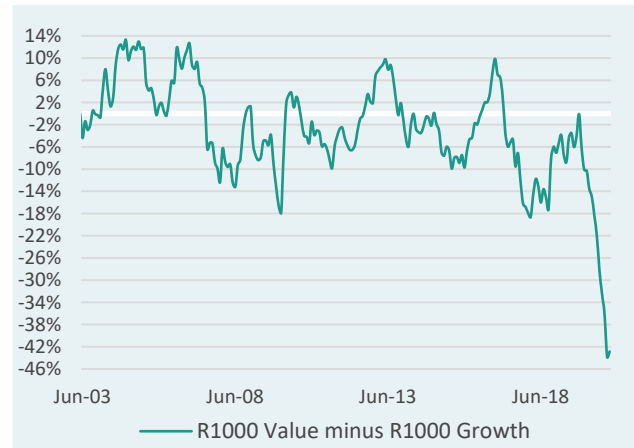
Sector performance has fueled dramatic negative performance of the value premium

SMALL CAP VS LARGE CAP (YOY)



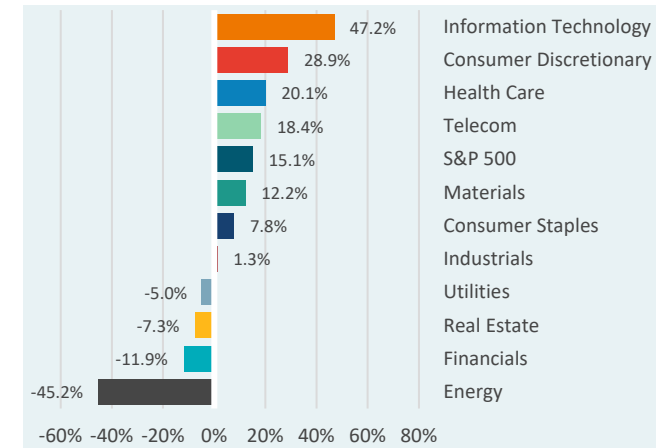
Source: FTSE, as of 9/30/20

VALUE VS GROWTH (YOY)



Source: FTSE, as of 9/30/20

S&P 500 SECTOR PERFORMANCE (1-YEAR)



Source: Standard & Poor's, as of 9/30/20

International developed equity

International equities continued to recover through Q3, though the MSCI EAFE Index (+4.8%) materially lagged the MSCI Emerging Markets Index (+9.6%) and the S&P 500 Index (+8.9%). Dollar weakness coinciding with the risk recovery through the summer was a major theme and dampened the underperformance of international developed equities relative to U.S. equities in U.S. dollar terms. The three largest currency exposures embedded in the MSCI EAFE Index—the euro (32%), the yen (26%), and the pound sterling (13%)—appreciated +4.4%, +2.2%, and +4.6% relative to the greenback over the course of the quarter.

In the second quarter, MSCI EAFE Index revenues dropped nearly -20%, and earnings dropped nearly -60%, pushing certain valuation metrics including price/earnings ratios to historic highs. Moving into Q3 earnings season, analysts are anticipating a historic turnaround in corporate profits, which could help bring valuations back to more normal levels.

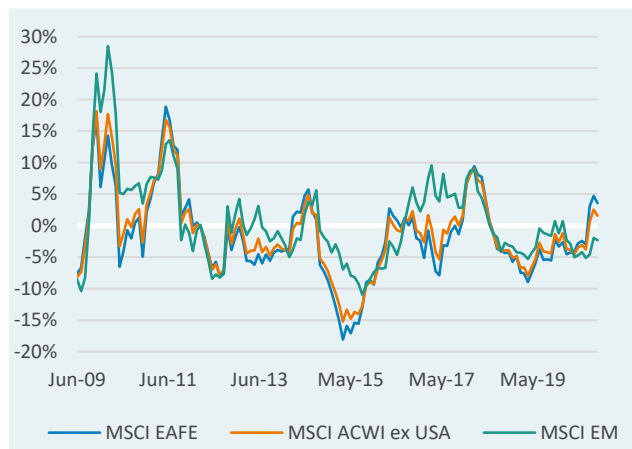
The MSCI EAFE Growth Index returned +8.4% over the third quarter, outpacing the MSCI EAFE Value Index (+1.2%) in U.S. dollar terms, extending its outperformance over the year-to-date to a staggering +23.6%.

INTERNATIONAL DEVELOPED EQUITIES



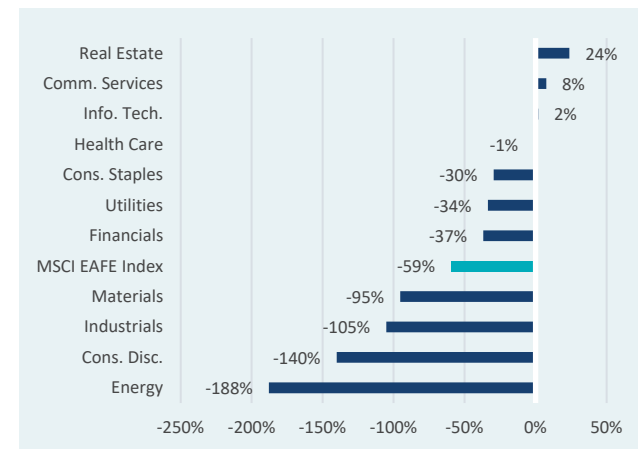
Source: MSCI, as of 9/30/20

EFFECT OF CURRENCY (1-YEAR ROLLING)



Source: MSCI, as of 9/30/20

Q2 2020 EARNINGS GROWTH – MSCI EAFE INDEX



Source: MSCI, Bloomberg, as of 9/30/20

Emerging market equity

Emerging market equities (MSCI EM +9.6%) outperformed U.S. (S&P 500 +8.9%) and international developed equities (MSCI EAFE +4.8%) over the quarter. Looking across the emerging market complex, Latin American equities underperformed (MSCI EM Latin American -1.3%) which was a continuation of a longer-term trend. Latin American stocks have drastically underperformed over the previous 10-year period (MSCI EM Latin America -5.7%, MSCI EM +2.5%).

Inflation remained subdued relative to longer-term averages, due in large part to energy prices remaining under pressure. The Emerging Markets Citi Inflation Surprise Index rose from

-28.8 to -6.6 over the quarter, implying that the magnitude of inflation data misses lessened between June and September.

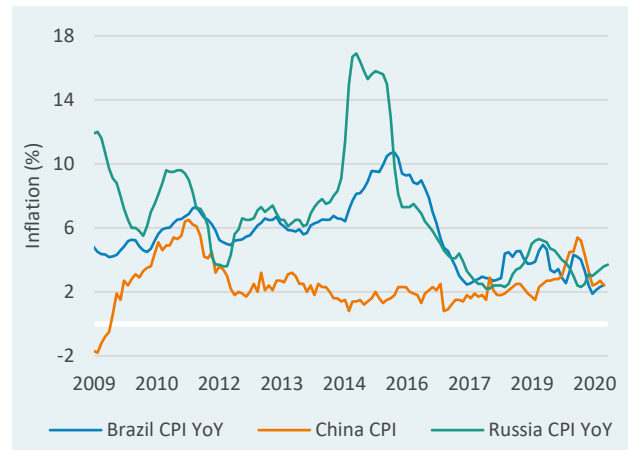
Emerging market currencies broadly appreciated relative to the U.S. dollar, and Asian currencies outperformed. The offshore Chinese renminbi rallied 4.2% versus the greenback to ¥6.78, its strongest level since mid-2019. Part of the rally in the yuan has been attributed to FTSE Russell's recent decision to add Chinese government bonds to its World Government Bond Index. This change would take effect in 2021, and would likely result in increased foreign capital inflows.

EMERGING MARKET EQUITY



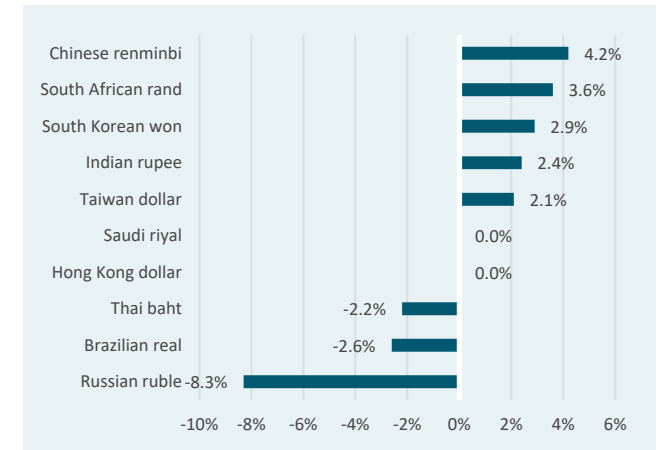
Source: MSCI, as of 9/30/20

INFLATION (YOY)



Source: Bloomberg, as of 9/30/20

Q3 CURRENCY PERFORMANCE – MSCI EM INDEX



Source: Bloomberg, as of 9/30/20

Equity valuations

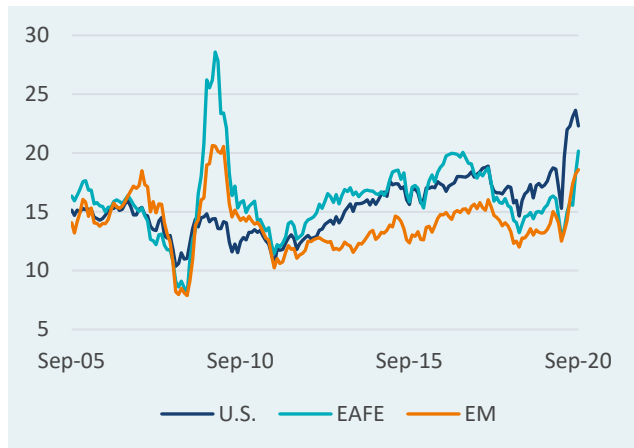
U.S. equity valuation levels moderated in September after continuing to rise through July and August. Prices ended the quarter little changed relative to 12-month earnings forecasts (22.3 Price/Earnings). The moderation of U.S. equity valuations was driven in part by a tech-driven sell-off across U.S. large-caps, and in part by improvement in the earnings growth and outlook.

The blended net profit margin for the S&P 500 Index in Q3, which combines actual reported results and estimated results for companies which have yet to report, is 9.7%. If the

blended net profit margin were to materialize, it would mark the first quarterly improvement in the profitability metric since the second quarter of 2019, and could provide further fundamental backing for current price levels. Analysts are expecting net profit margins to continue to improve. Estimated profit margins for Q4 2020, Q1 2021, and Q2 2021 ended the quarter at 9.8%, 10.4%, and 11.0%, respectively.

Equity dividend yields remain attractive relative to nominal government bond yields, especially in Europe, and could further entice investors to reach for yield through risk assets.

FORWARD P/E RATIOS



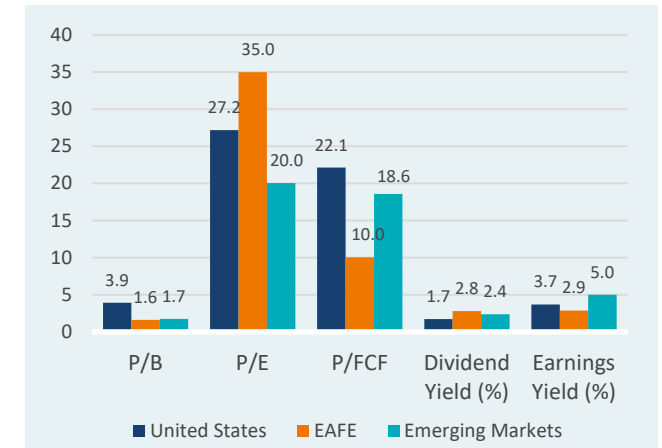
Source: MSCI, 12m forward P/E, as of 9/30/20

S&P 500 NET PROFIT MARGINS



Source: FactSet, as of 9/30/20

VALUATION METRICS (3-MONTH AVERAGE)



Source: Bloomberg, MSCI as of 9/30/20 - trailing P/E

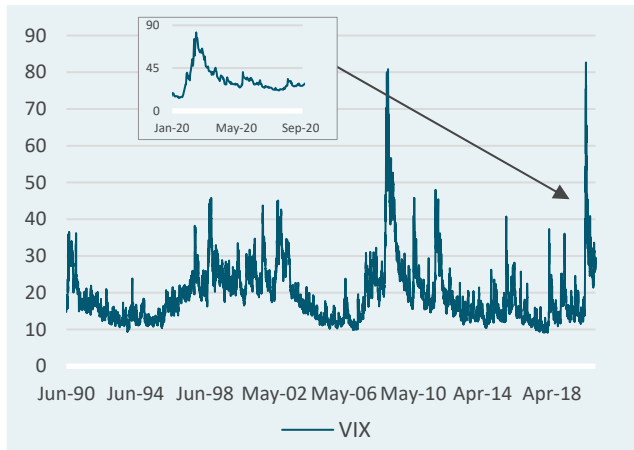
Equity volatility

The Cboe VIX Index moderated in June from heightened levels, and remained generally rangebound during the third quarter. The VIX ended September at 26, but remains elevated relative to the long-term average of 19.

U.S. equities have historically exhibited the lowest risk among developed and emerging markets. In recent years, this relationship has flipped, with U.S. stocks showing higher volatility than developed market stocks, and nearly on par with emerging market equities.

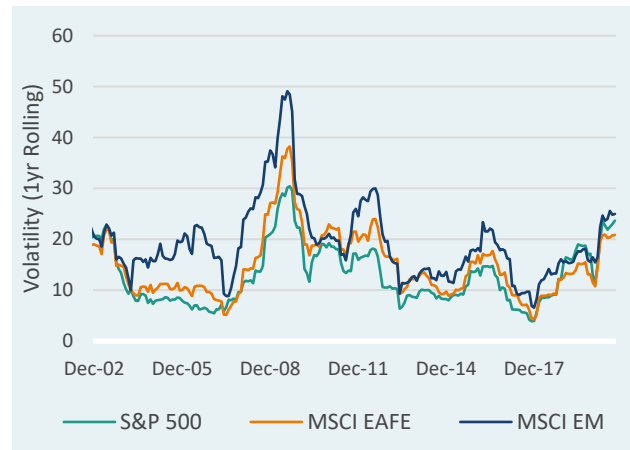
Expectations for short-term equity volatility faded through the summer. The VIX term structure continued to indicate an expectation for heightened volatility around the Presidential election in the beginning of November. Toward the end of the quarter, concerns over the impact of mail-in voting on the timeliness of electoral results reporting led some market participants to position around the prospect of a contested election and its consequences for equity markets. Polling data indicates a widening lead for Biden. The prospect of a “Blue Wave” appears to have emboldened some traders to sell longer-dated VIX futures contracts.

U.S. IMPLIED VOLATILITY (VIX)



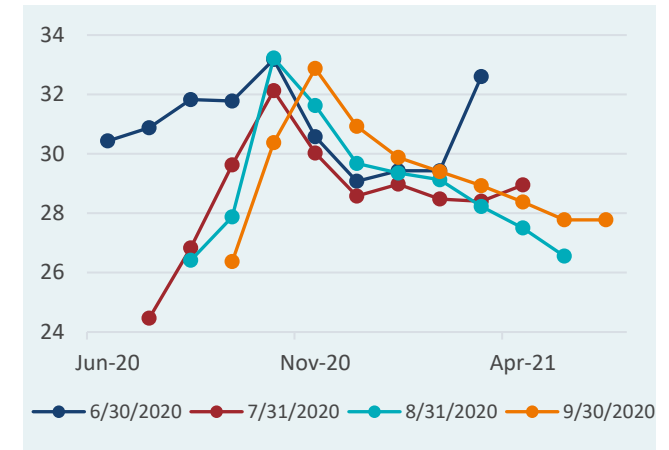
Source: Cboe, as of 9/30/20

REALIZED VOLATILITY



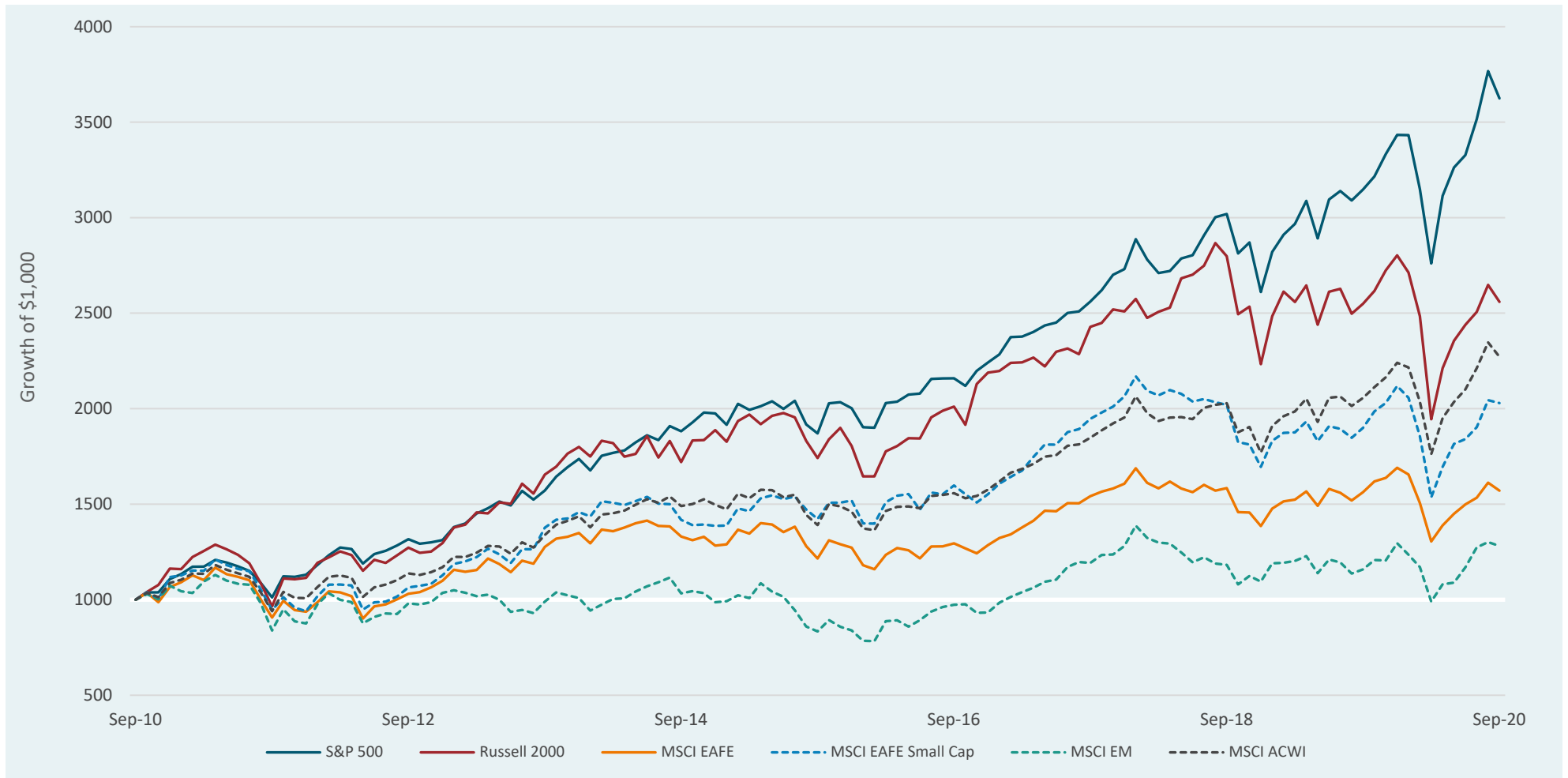
Source: Standard & Poor's, MSCI, as of 9/30/20

HISTORICAL VIX TERM STRUCTURES



Source: Bloomberg, as of 9/30/20

Long-term equity performance



Source: Morningstar, as of 9/30/20

Other assets

Currency

The U.S. dollar fell -3.5% in the third quarter, continuing a downward trend since a sudden jump in March on safe-haven buying. Though the dollar did show some signs of stabilization in September as equities took a step back, the Bloomberg Dollar Spot Index has now completely unwound the gains experienced during the market sell-off.

Interest rate differentials between U.S. Treasury bonds and international developed sovereign bonds have begun to separate once again. U.S. Treasury yields traded in a relatively narrow range while European yields

drifted lower, perhaps as a result of speculation on further quantitative easing from the European Central Bank. A continuation of this trend could be supportive of the dollar bull case, looking ahead.

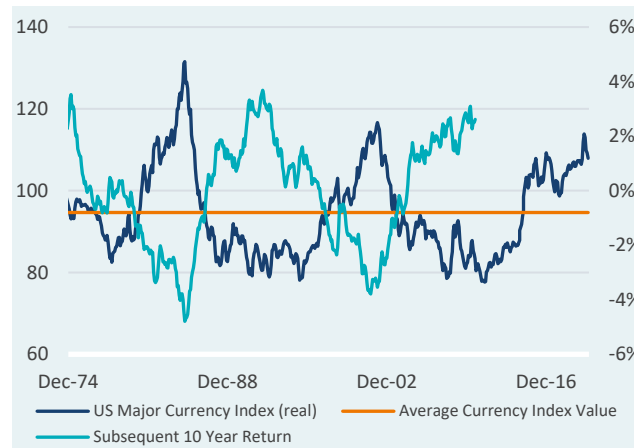
Despite the significant rally of the euro (+4.4%) relative to the greenback in Q3, the common currency remains cheap according to the OECD's purchasing power parity data. At quarter-end, the euro was -20.8% cheap relative to the U.S. dollar, which was significant but still at its least undervalued level since September 2018.

BLOOMBERG DOLLAR SPOT INDEX



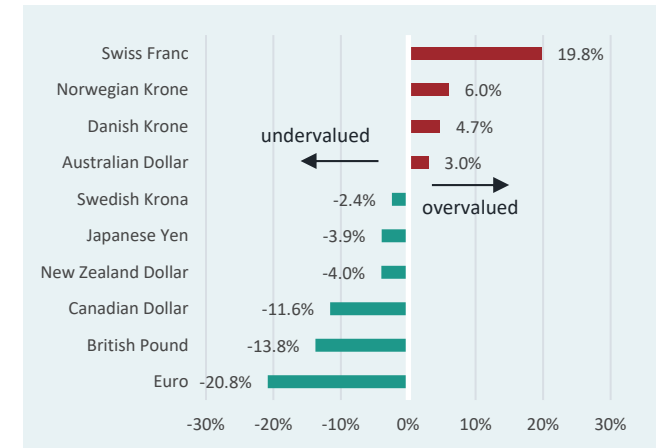
Source: Bloomberg, as of 9/30/20

USD CURRENCY LEVEL & SUBSEQUENT RETURN



Source: Federal Reserve, as of 9/30/20

G10 FX VALUATIONS – OECD PPP (VS USD)



Source: OECD, Bloomberg, as of 9/30/20

Equity factors: A closer look

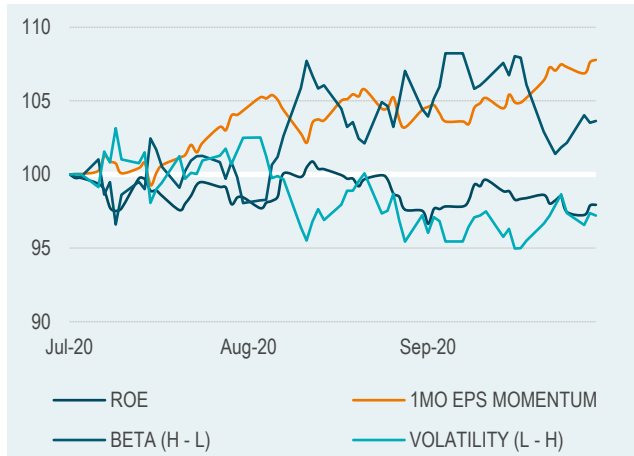
Investors rewarded stocks with improving earnings prospects during the third quarter as one-month earnings momentum (long/short, sector neutral, S&P 500) was the top performing factor for the period. Stocks with higher beta and higher historic volatility also continued to rally during most of the quarter. In contrast, higher quality stocks sold off during the period.

Over the trailing 5-year period, the respective growth, quality and price momentum factors finished with modestly negative results. These factors also showed some recent sensitivity to the dramatic market movements caused by the

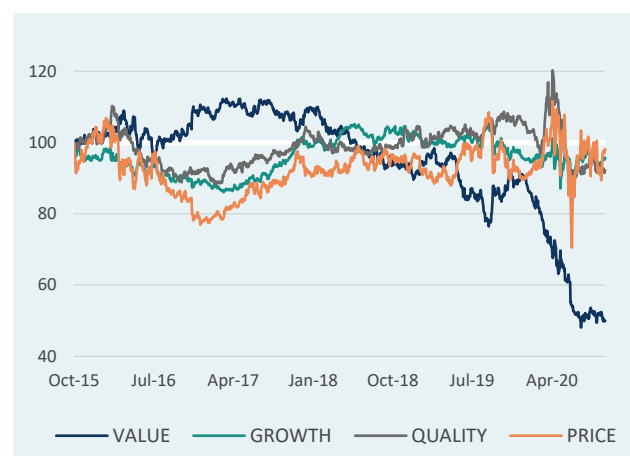
pandemic. In contrast, the value factor remains mired in a long-term drawdown.

The pandemic has caused significant dispersion as investors rushed into stocks perceived to benefit from the crisis. In contrast, the stocks thought to gain most from a potential recovery back to normalcy continue to lag both the beneficiaries and the broad market. The structural risk to the recovery theme is a potential permanent change in behavior as certain activities, such as travel and tourism, remain depressed relative to pre-COVID norms.

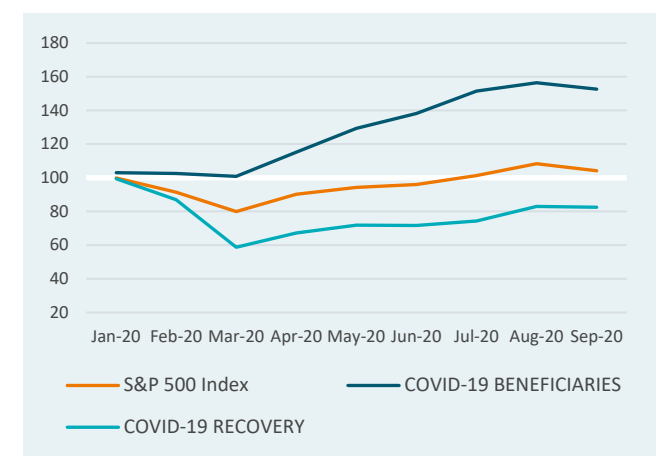
2020 Q3 FACTOR PERFORMANCE



2015Q4 – 2020Q3 FACTOR PERFORMANCE



COVID-19 BASKETS



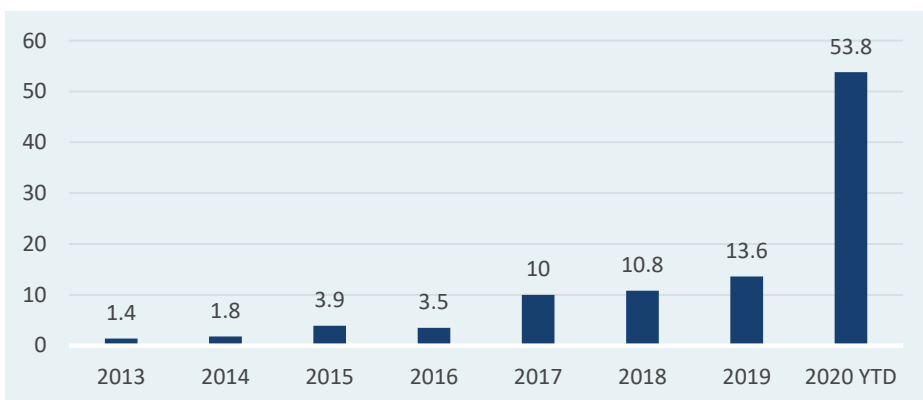
Source: JP Morgan US Equity Strategy

SPACs at a glance

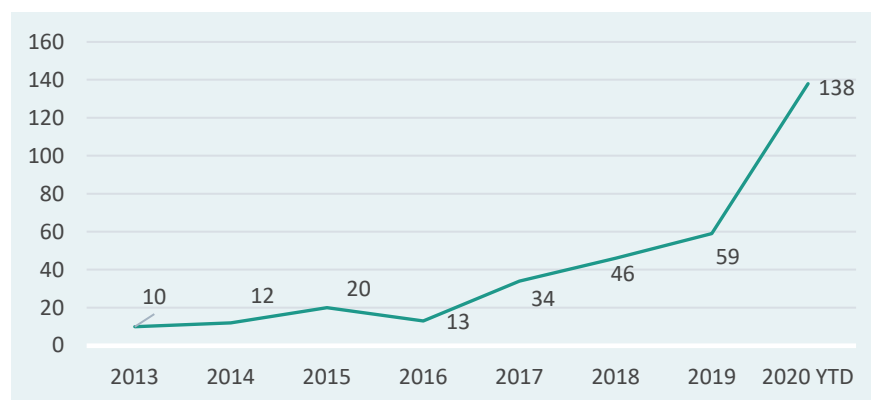
Special Purpose Acquisition Companies, commonly abbreviated as SPACs, have proliferated substantially in 2020, especially in the third quarter. This has been driven by recent market volatility, increasing initial public offering (IPO) risks and inefficiencies, coupled with record retail investor trading volume. The reputation of SPACs is improving as notable investors and operators continue to enter the space.

- A SPAC is a “blank check” shell company formed specifically to acquire a late-stage private company target. From the SPAC sponsor’s point of view, it is analogous to creating a Private Equity fund that renders only one investment, which becomes publicly traded upon the merger process known as “de-SPAC”.
- SPACs allow private companies to undergo public listing quicker, bypassing a traditional IPO process.

TOTAL SPACS CAPITAL RAISED (\$BN)



NUMBER OF SPAC IPOs



Source: SPAC Research, as of 10/9/20

Implications for institutional investors

- SPACs have experienced significant volatility around a historic negative return level.

SPAC RETURNS % POST-MERGER COMPLETION

Sample of SPAC transactions completed since January 2018



- We believe the rise of SPACs will continue to disrupt different asset classes in various ways.
 - In Venture Capital and Leveraged Buyouts, SPAC serves as a new potential exit channel for companies that pre-empts a traditional IPO, generating earlier liquidity for GPs and LPs.
 - SPACs have become a deal source for mutual funds, private markets and hedge fund managers to invest via a PIPE.
 - In SPACs, milestone-based compensation for the management team are more acceptable and normalized as compared to a traditional IPO. This could potentially lead to better alignment of company and GP incentives and interests.

SPACs have yet to be proven as an attractive asset class for prudent investors

We are currently assessing the longer-term impact of SPACs on the private & public markets

Source: Goldman Sachs Global Investment Research, Dealogic, UBS, as of 7/30/20.

Appendix

Periodic table of returns

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	YTD	5-Year	10-Year
Large Cap Growth	38.7	66.4	31.8	14.0	25.9	56.3	26.0	34.5	32.6	39.8	5.2	79.0	29.1	14.3	18.6	43.3	13.5	13.3	31.7	37.3	6.7	36.4	24.3	20.1	17.3
US Bonds	27.0	43.1	22.8	8.4	10.3	48.5	22.2	21.4	26.9	16.2	1.4	37.2	26.9	7.8	18.1	38.8	13.2	5.7	21.3	30.2	1.9	31.4	6.8	14.1	13.8
Large Cap Equity	20.3	33.2	12.2	7.3	6.7	47.3	20.7	20.1	23.5	15.8	-6.5	34.5	24.5	2.6	17.9	34.5	13.0	0.9	17.3	25.0	0.0	28.5	6.4	11.4	12.3
Small Cap Growth	19.3	27.3	11.6	3.3	1.6	46.0	18.3	14.0	22.2	11.8	-21.4	32.5	19.2	1.5	17.5	33.5	11.8	0.6	12.1	22.2	-1.5	26.5	3.9	9.0	9.9
60/40 Global Portfolio	16.2	26.5	7.0	2.8	1.0	39.2	16.5	7.5	18.4	11.6	-25.9	28.4	16.8	0.4	16.4	33.1	6.0	0.0	11.8	21.7	-3.5	25.5	3.6	8.0	9.9
Hedge Funds of Funds	8.7	21.3	4.1	-2.4	-6.0	29.9	14.3	6.3	15.5	10.3	-33.8	23.3	16.1	-2.1	15.3	23.3	4.9	-0.8	11.2	14.6	-6.0	22.4	2.5	8.0	9.3
Cash	15.6	24.3	6.0	2.5	-5.9	30.0	14.5	7.1	16.6	10.9	-28.9	27.2	16.7	0.1	16.3	32.5	5.6	-0.4	11.3	17.1	-4.8	22.0	0.4	7.7	7.1
Real Estate	4.9	20.9	-3.0	-5.6	-11.4	29.7	12.9	5.3	15.1	7.0	-35.6	20.6	15.5	-2.9	14.6	12.1	4.2	-1.4	8.0	13.7	-8.3	18.6	-0.3	6.1	6.2
Emerging Markets Equity	1.2	13.2	-7.3	-9.1	-15.5	25.2	11.4	4.7	13.3	7.0	-36.8	19.7	13.1	-4.2	11.5	11.0	3.4	-2.5	7.1	7.8	-9.3	18.4	-1.2	5.3	4.6
International Equity	-2.5	11.4	-7.8	-9.2	-15.7	23.9	9.1	4.6	10.4	5.8	-37.6	18.9	10.2	-5.5	10.5	9.0	2.8	-3.8	5.7	7.7	-11.0	8.7	-7.1	4.2	3.6
Small Cap Equity	-5.1	7.3	-14.0	-12.4	-20.5	11.6	6.9	4.6	9.1	4.4	-38.4	11.5	8.2	-5.7	4.8	0.1	0.0	-4.4	2.6	7.0	-11.2	7.8	-8.7	4.1	2.9
Large Cap Value	-6.5	4.8	-22.4	-19.5	-21.7	9.0	6.3	4.2	4.8	-0.2	-38.5	5.9	6.5	-11.7	4.2	-2.0	-1.8	-7.5	1.0	3.5	-12.9	7.7	-11.6	3.1	2.5
Commodities	-25.3	-0.8	-22.4	-20.4	-27.9	4.1	4.3	3.2	4.3	-1.6	-43.1	0.2	5.7	-13.3	0.1	-2.3	-4.5	-14.9	0.5	1.7	-13.8	6.4	-12.1	1.1	0.6
Small Cap Value	-27.0	-1.5	-30.6	-21.2	-30.3	1.0	1.4	2.4	2.1	-9.8	-53.2	-16.9	0.1	-18.2	-1.1	-9.5	-17.0	-24.7	0.3	0.9	-14.6	2.1	-21.5	-3.1	-6.0

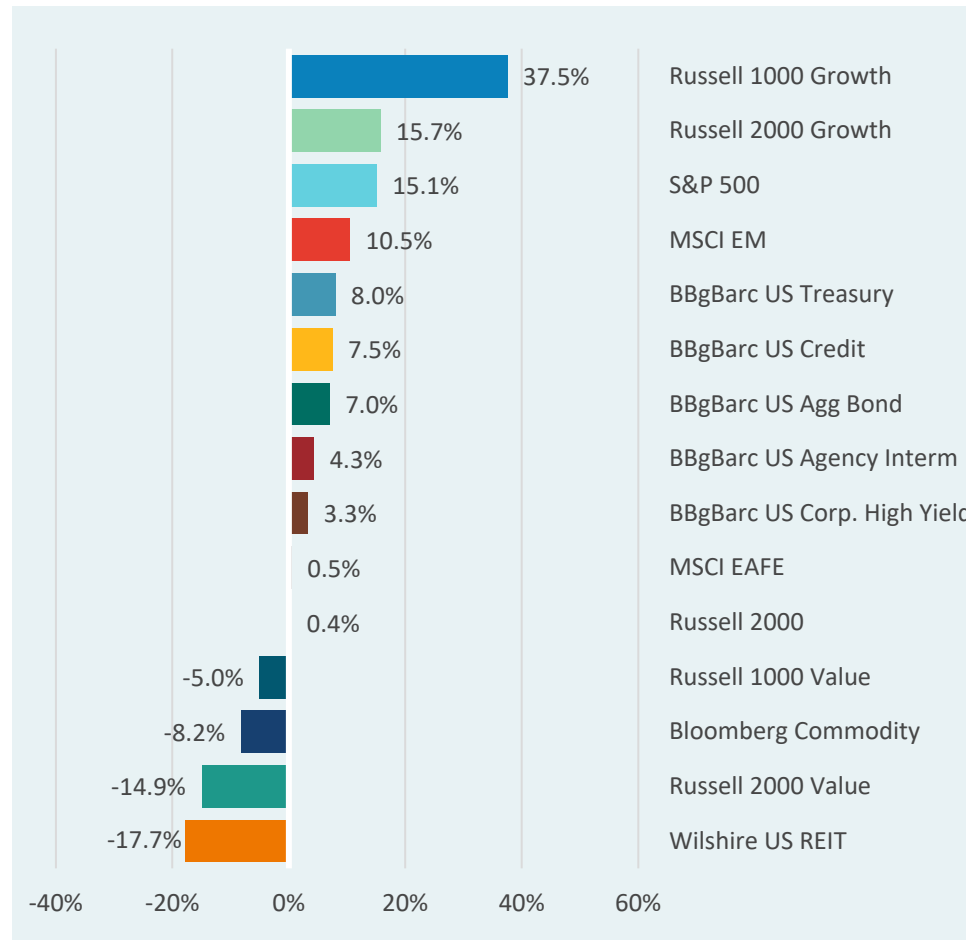
BEST
↑
↓
WORST

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

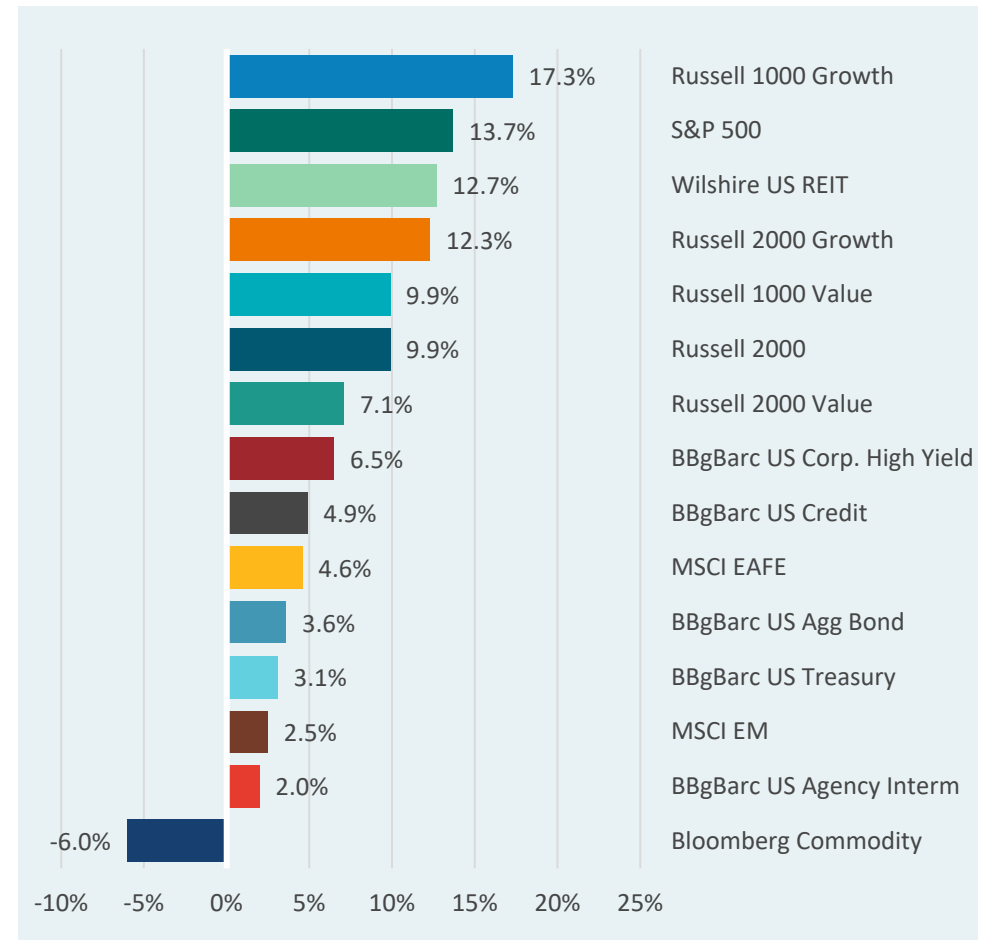
Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BBgBarc US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, BBgBarc Global Bond. NCREIF Property Index performance data as of 6/30/20.

Major asset class returns

ONE YEAR ENDING SEPTEMBER



TEN YEARS ENDING SEPTEMBER



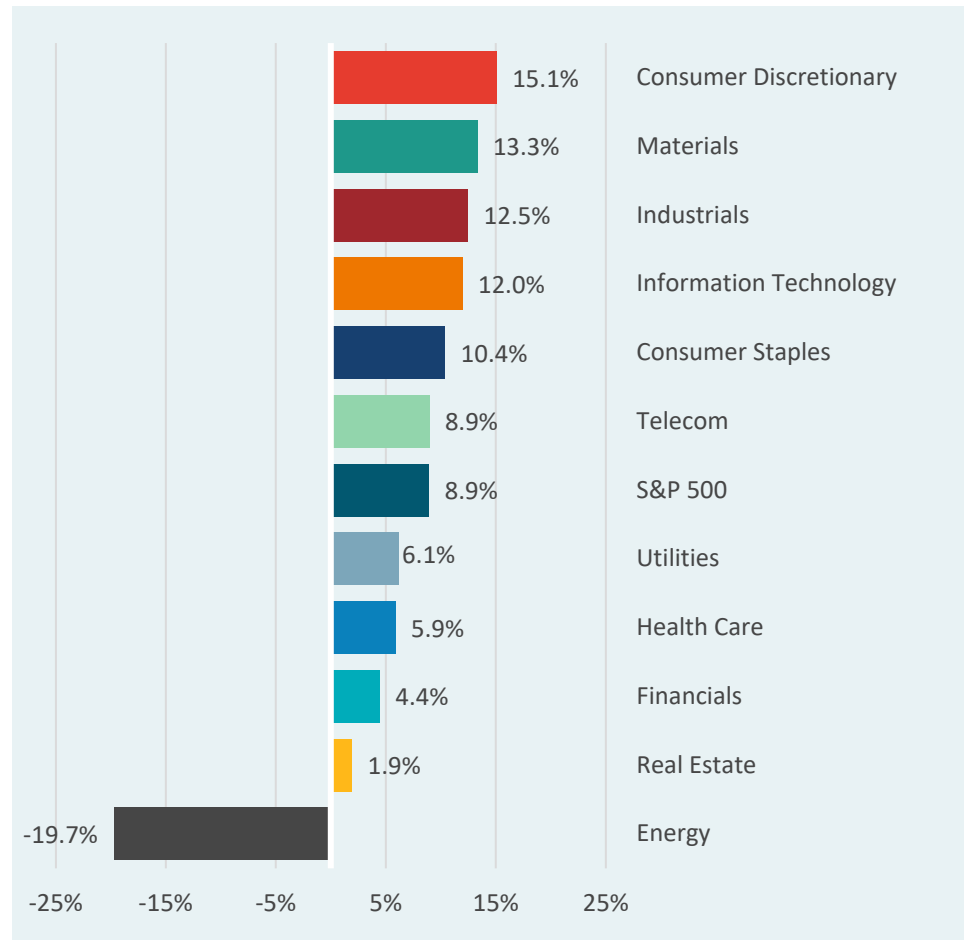
*Only publicly traded asset performance is shown here. Performance of private assets is typically released with a 3- to 6-month delay.

Source: Morningstar, as of 9/30/20

Source: Morningstar, as of 9/30/20

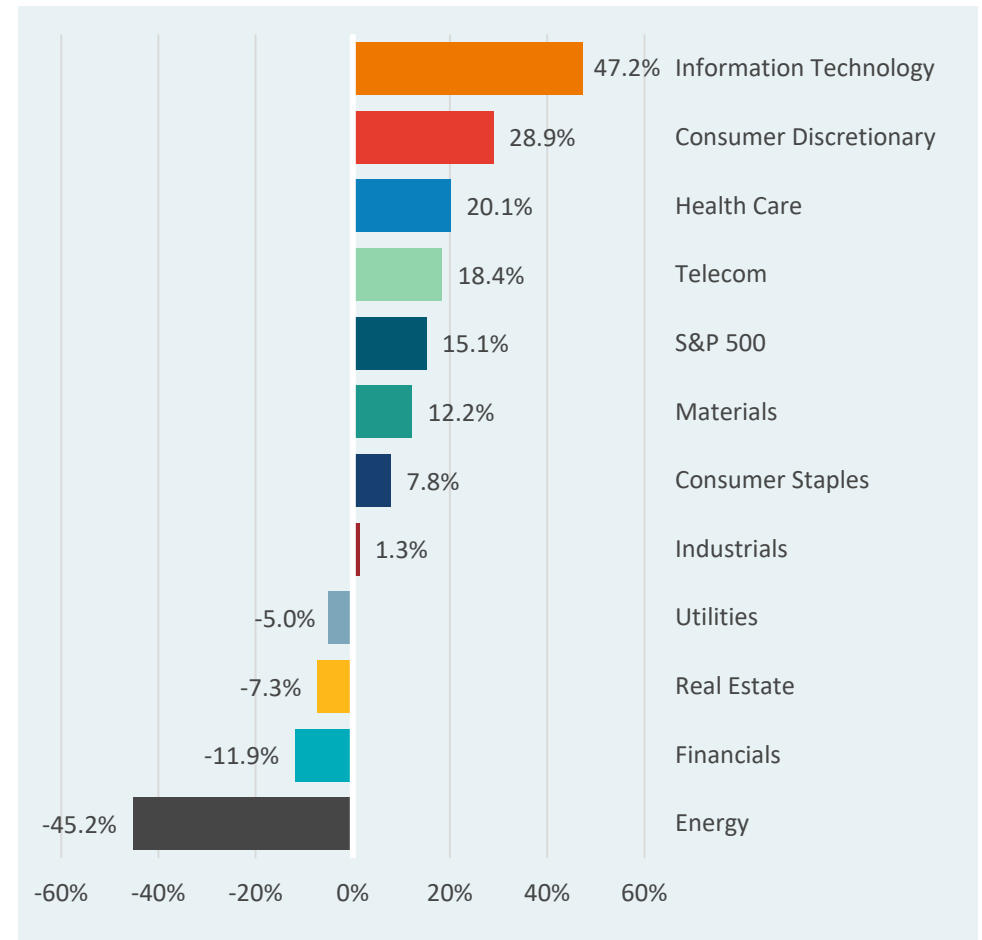
S&P 500 sector returns

Q3 2020



Source: Morningstar, as of 9/30/20

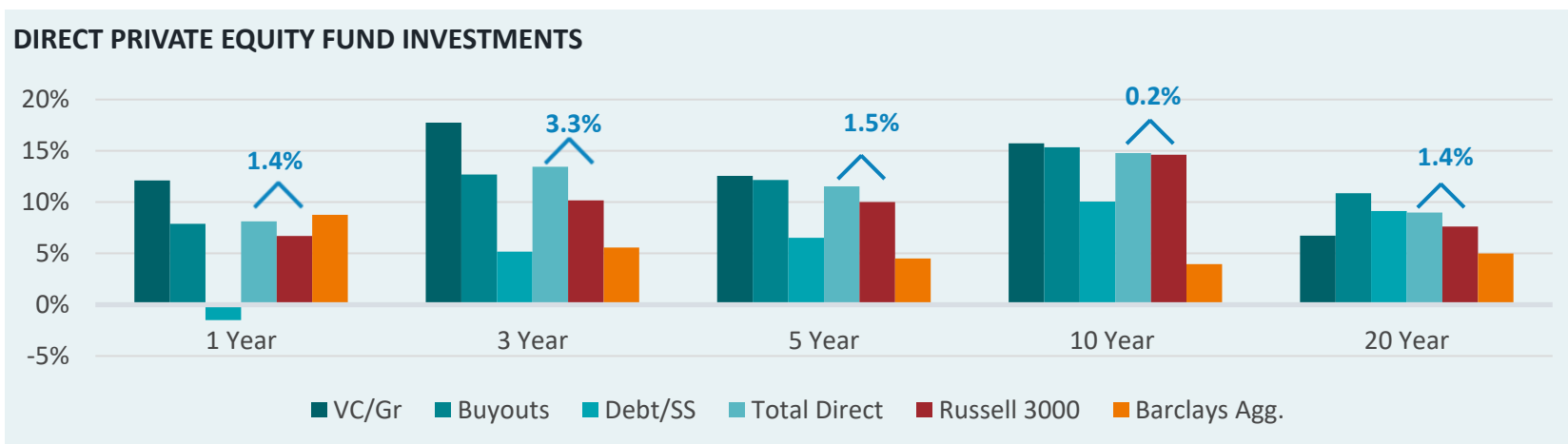
ONE YEAR ENDING SEPTEMBER



Source: Morningstar, as of 9/30/20

Private equity vs. public performance

As of 6/30/2020

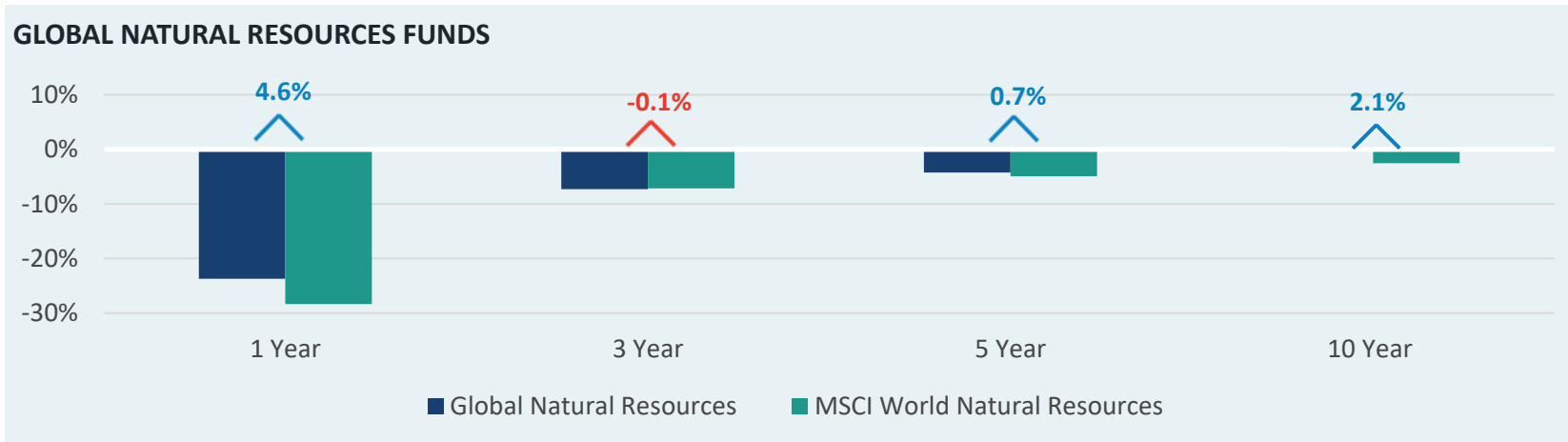


Direct P.E Fund Investments outperformed comparable public equities across all time periods.

Sources: Thomson Reuters Cambridge Universe's PME Module: U.S. Private Equity Funds sub asset classes as of June 30, 2020. Public Market Equivalent returns resulted from "Total Direct's" identical cash flows invested into and distributed from respective traditional asset comparable.

Private equity vs. liquid real assets performance

As of 6/30/2020



N.R. funds underperformed the MSCI World Natural Resources benchmark across all time periods, except on a 3 year basis

Sources: Thomson Reuters C|A PME: Global Natural Resources (vintage 1999 and later, inception of MSCI World Natural Resources benchmark) universes as of June 30, 2020. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real assets universes.

Detailed index returns

DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Core Index							
S&P 500	(3.8)	8.9	5.6	15.1	12.3	14.1	13.7
S&P 500 Equal Weighted	(2.5)	6.7	(4.7)	2.5	6.5	10.3	12.0
DJ Industrial Average	(2.2)	8.2	(0.9)	5.7	10.0	14.0	12.7
Russell Top 200	(4.2)	10.2	9.6	20.3	14.3	15.6	14.5
Russell 1000	(3.7)	9.5	6.4	16.0	12.4	14.1	13.8
Russell 2000	(3.3)	4.9	(8.7)	0.4	1.8	8.0	9.9
Russell 3000	(3.6)	9.2	5.4	15.0	11.6	13.7	13.5
Russell Mid Cap	(1.9)	7.5	(2.3)	4.6	7.1	10.1	11.8
Style Index							
Russell 1000 Growth	(4.7)	13.2	24.3	37.5	21.7	20.1	17.3
Russell 1000 Value	(2.5)	5.6	(11.6)	(5.0)	2.6	7.7	9.9
Russell 2000 Growth	(2.1)	7.2	3.9	15.7	8.2	11.4	12.3
Russell 2000 Value	(4.7)	2.6	(21.5)	(14.9)	(5.1)	4.1	7.1

INTERNATIONAL EQUITY

Broad Index							
MSCI ACWI	(3.2)	8.1	1.4	10.4	7.1	10.3	8.5
MSCI ACWI ex US	(2.5)	6.3	(5.4)	3.0	1.2	6.2	4.0
MSCI EAFE	(2.6)	4.8	(7.1)	0.5	0.6	5.3	4.6
MSCI EM	(1.6)	9.6	(1.2)	10.5	2.4	9.0	2.5
MSCI EAFE Small Cap	(0.7)	10.3	(4.2)	6.8	1.4	7.4	7.3
Style Index							
MSCI EAFE Growth	(0.7)	8.4	4.6	13.4	7.1	9.2	7.0
MSCI EAFE Value	(4.6)	1.2	(18.3)	(11.9)	(5.9)	1.1	2.1
Regional Index							
MSCI UK	(5.0)	(0.2)	(23.4)	(15.8)	(5.6)	(0.4)	2.0
MSCI Japan	1.0	6.9	(0.7)	6.9	3.9	7.5	6.2
MSCI Euro	(3.8)	4.2	(9.1)	(1.9)	(2.1)	4.4	3.5
MSCI EM Asia	(1.1)	11.9	8.0	21.5	5.7	11.3	5.5
MSCI EM Latin American	(5.1)	(1.3)	(36.1)	(29.4)	(11.8)	2.1	(5.7)

FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
BBgBarc US TIPS	(0.4)	3.0	9.2	10.1	5.8	4.6	3.6
BBgBarc US Treasury Bills	0.0	0.0	0.7	1.2	1.7	1.2	0.7
BBgBarc US Agg Bond	(0.1)	0.6	6.8	7.0	5.2	4.2	3.6
Duration							
BBgBarc US Treasury 1-3 Yr	0.0	0.1	3.1	3.6	2.7	1.8	1.3
BBgBarc US Treasury Long	0.4	0.1	21.3	16.3	11.9	8.2	7.2
BBgBarc US Treasury	0.1	0.2	8.9	8.0	5.5	3.7	3.1
Issuer							
BBgBarc US MBS	(0.1)	0.1	3.6	4.4	3.7	3.0	3.0
BBgBarc US Corp. High Yield	(1.0)	4.6	0.6	3.3	4.2	6.8	6.5
BBgBarc US Agency Interim	0.1	0.3	4.0	4.3	3.3	2.4	2.0
BBgBarc US Credit	(0.3)	1.5	6.4	7.5	6.2	5.7	4.9

OTHER

Index							
Bloomberg Commodity	(3.4)	9.1	(12.1)	(8.2)	(4.2)	(3.1)	(6.0)
Wilshire US REIT	(3.4)	1.3	(16.7)	(17.7)	0.4	5.7	12.7
CS Leveraged Loans	0.7	4.1	(0.8)	0.8	3.2	4.6	5.0
Alerian MLP	(13.6)	(16.3)	(48.3)	(50.7)	(21.9)	(12.4)	(4.0)
Regional Index							
JPM EMBI Global Div	(1.9)	2.3	(0.5)	1.3	3.5	6.1	5.4
JPM GBI-EM Global Div	(2.0)	0.6	(6.3)	(1.4)	0.2	4.8	0.5
Hedge Funds							
HFRI Composite	(1.2)	4.1	0.5	4.0	2.7	4.0	3.6
HFRI FOF Composite	(0.4)	4.2	2.5	5.6	2.9	3.1	2.9
Currency (Spot)							
Euro	(1.9)	4.4	4.5	7.6	(0.3)	1.0	(1.5)
Pound	(3.4)	4.6	(2.4)	4.9	(1.2)	(3.1)	(2.0)
Yen	0.5	2.2	3.0	2.4	2.2	2.6	(2.3)

Source: Morningstar, HFR, as of 9/30/20

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)

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

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

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.

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Contra Costa County Employees' Retirement Association

Investment Performance Review

Period Ending: September 30, 2020



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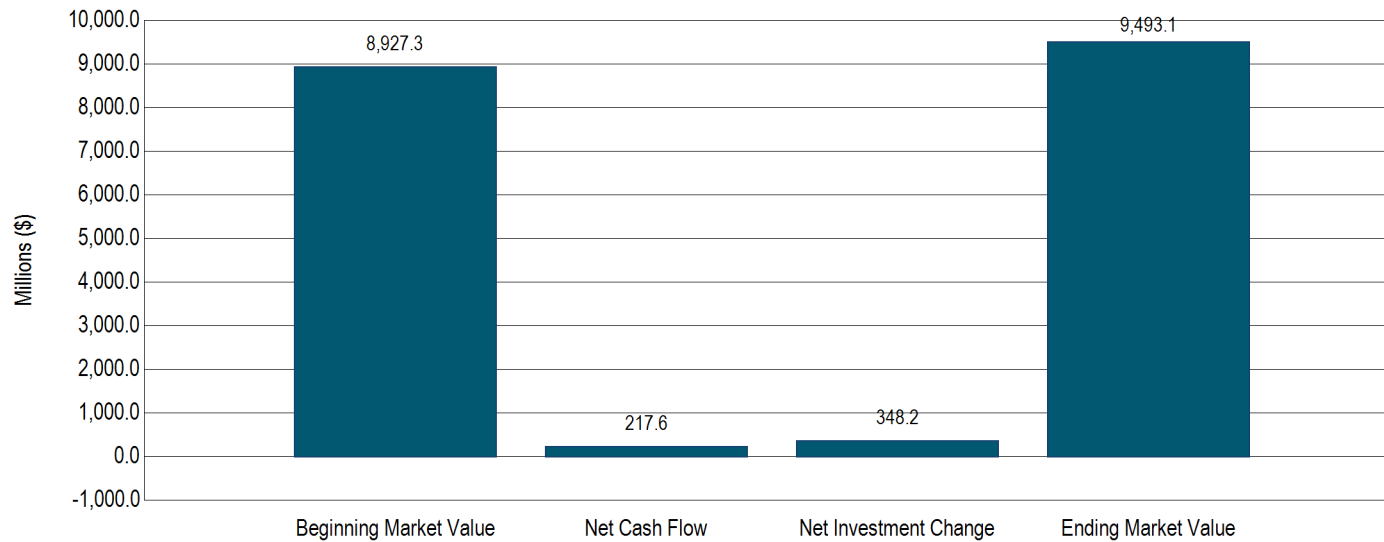
SAN FRANCISCO 415-362-3484

PITTSBURGH 412-784-6678

Portfolio Reconciliation

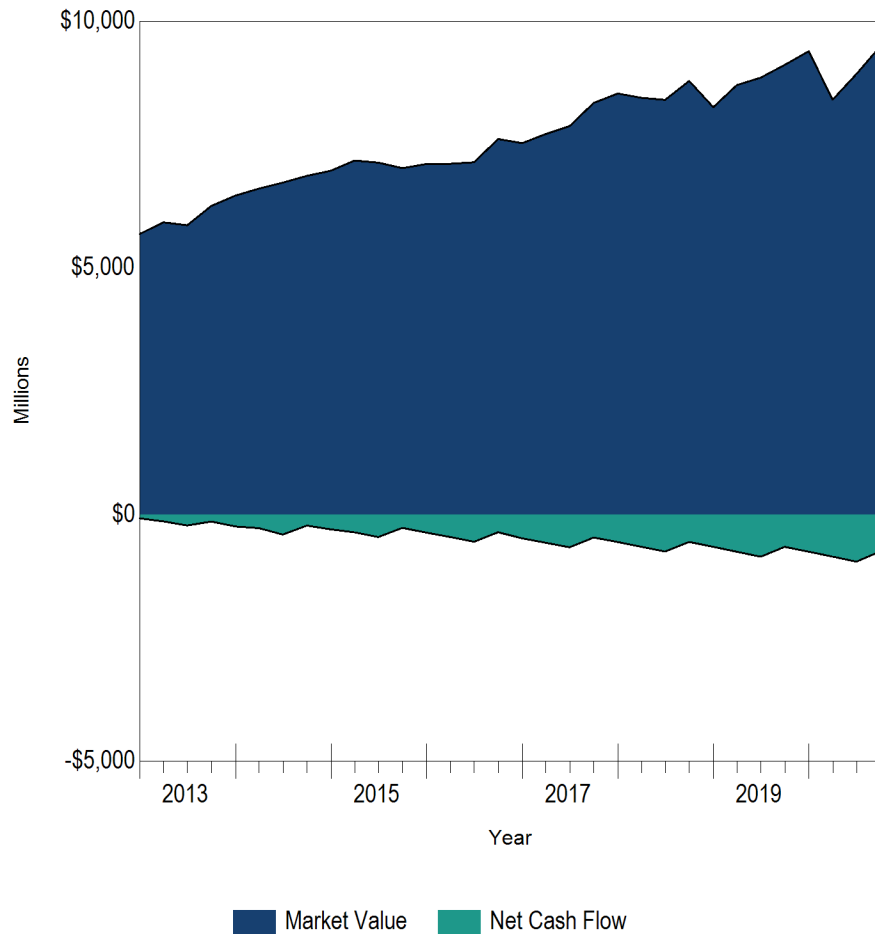
	Last Three Months	Year-To-Date
Beginning Market Value	\$8,927,337,198	\$9,390,188,036
Net Cash Flow	\$217,605,896	\$27,111,518
Net Investment Change	\$348,181,454	\$75,824,994
Ending Market Value	\$9,493,124,547	\$9,493,124,547

**Change in Market Value
Last Three Months**

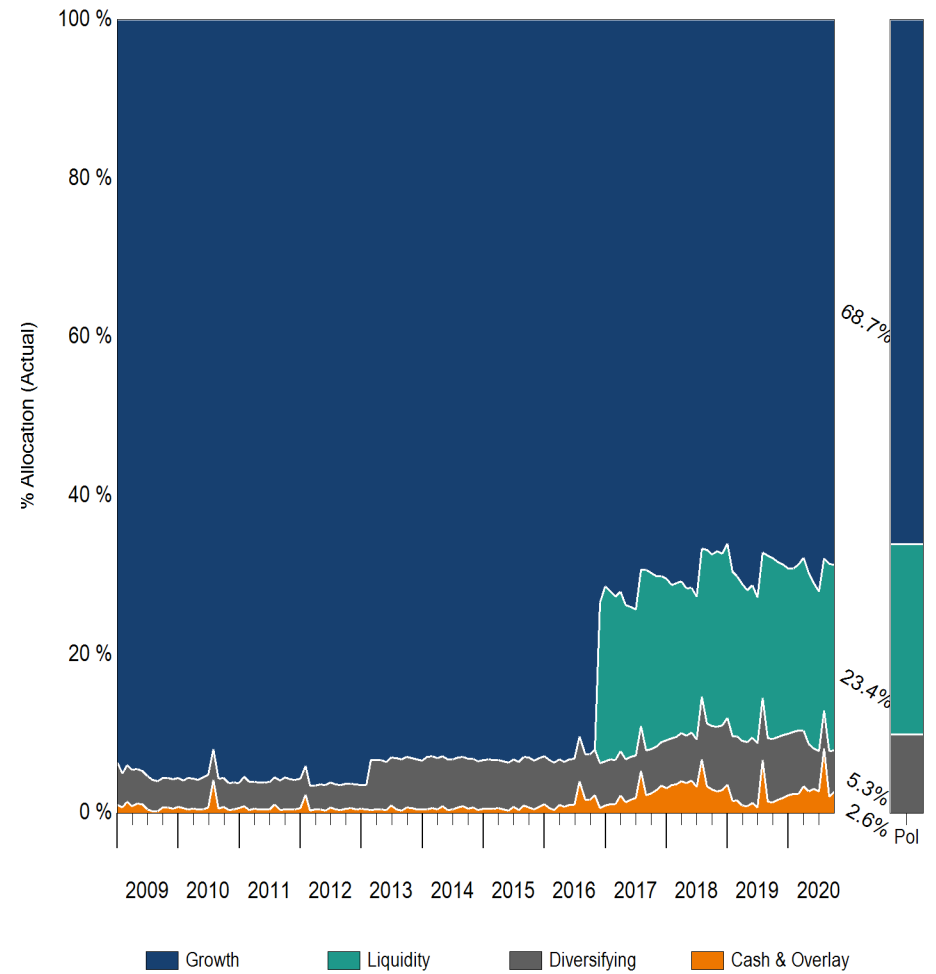


Contributions and withdrawals may include intra-account transfers between managers/funds.

Market Value History
Cumulative Cash Flows



Asset Allocation History

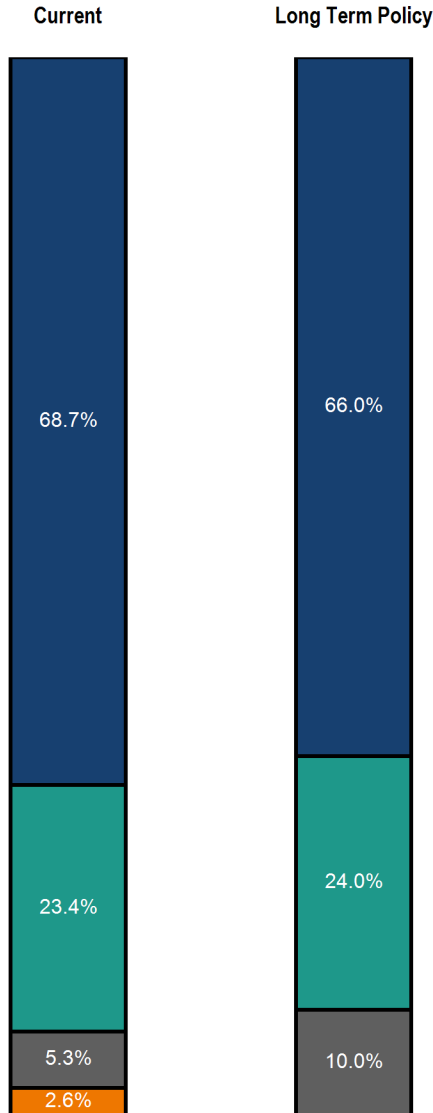


Policy reflects FFP 4-Yr allocations approved in June 2019.

Total Fund

Asset Allocation vs. Long Term Target Policy

Period Ending: September 30, 2020



Allocation vs. Long Term Target

	Current Balance	Current Allocation	Long Term Target	Difference
Growth	\$6,524,983,966	68.7%	66.0%	\$259,521,765
Liquidity	\$2,217,187,141	23.4%	24.0%	-\$61,162,750
Diversifying	\$502,570,151	5.3%	10.0%	-\$446,742,303
Cash & Overlay	\$248,383,288	2.6%	--	\$248,383,288
Total	\$9,493,124,547	100.0%	100.0%	

Allocation vs. Current Targets

	Current Balance	Current Allocation	Current Target	Difference
Growth	\$6,524,983,966	68.7%	68.0%	\$69,659,274
Liquidity	\$2,217,187,141	23.4%	24.0%	-\$61,162,750
Diversifying	\$502,570,151	5.3%	8.0%	-\$256,879,812
Cash & Overlay	\$248,383,288	2.6%	--	\$248,383,288
Total	\$9,493,124,547	100.0%	100.0%	

Long Term Targets reflect FFP 4-Yr allocations approved in June 2019.
 Current Targets reflect targets approved in June 2019.

Total Fund
Executive Summary (Net of Fees)

Period Ending: September 30, 2020

	% of Portfolio	QTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015
Total Fund	100.0	3.9	0.9	5.1	5.1	7.0	7.9	14.6	-2.7	13.9	6.9	2.1
Policy Index		5.9	2.5	6.9	6.3	8.2	8.6	14.6	-0.9	13.7	8.9	0.6
Growth	68.7	5.2	0.6	6.2	6.1	8.4	--	18.4	-3.9	18.7	7.6	2.3
Custom Growth Benchmark		8.5	1.9	8.1	7.6	9.8	--	19.3	-2.1	19.3	10.1	0.3
Diversifying	5.3	0.8	-2.8	-2.3	0.6	0.7	1.3	6.8	-2.3	2.6	0.8	-1.8
Custom Diversifying Benchmark		1.3	3.8	4.3	3.9	4.0	3.7	6.1	1.4	4.7	4.1	2.5
Liquidity	23.4	0.4	2.9	3.5	3.1	--	--	4.8	1.7	1.4	--	--
BBgBarc US Govt/Credit 1-3 Yr. TR		0.2	3.1	3.7	2.8	--	--	4.0	1.6	0.8	--	--

*Correlation between the Growth and Diversifying composites is .88, .61 and .48 over the previous 1, 3 and 5 year periods respectively.

Policy Index (7/1/2019-Present): 10% Russell 3000, 18% MSCI ACWI ex-US (Gross), 11% MSCI ACWI (Net), 24% BBgBarc 1-3 Yr Gov/Credit, 3.5% BBgBarc US Aggregate, 2% BBgBarc Global Aggregate, 5% ICE BofAML High Yield Master II +2%, 2% ICE BofAML High Yield Master II, 1% Wilshire REIT, 1.6% NCREIF Property Index, 6.4% NCREIF ODCE Index, 2.0% CPI +4%, 11% S&P 500 +4%(Lagged), 2.5% HFRI EH Equity Market Neutral. Policy Index (7/1/2018-6/30/2019): 11% Russell 3000, 19% MSCI ACWI ex-US (Gross), 11% MSCI ACWI (Net), 23% BBgBarc 1-3 Yr Gov/Credit, 3.5% BBgBarc US Aggregate, 2% BBgBarc Global Aggregate, 4% ICE BofAML High Yield Master II +2%, 2% ICE BofAML High Yield Master II, 1% Wilshire REIT, 1.8% NCREIF Property Index, 7.2% NCREIF ODCE Index, 2.0% CPI +4%, 10% S&P 500 +4%(Lagged), 2.5% HFRI EH Equity Market Neutral. Policy Index (10/1/2017-6/30/2018): 16.3% Russell 3000, 18.8% MSCI ACWI ex-US (Gross), 8.6% MSCI ACWI (Net), 25% BBgBarc 1-3 Yr Gov/Credit, 3.5% BBgBarc US Aggregate, 1.9% ICE BofAML High Yield Master II +2%, 4.3% ICE BofAML High Yield Master II, 1% Wilshire REIT, 1.6% NCREIF Property Index, 6.4% NCREIF ODCE Index, 2.5% CPI +4%, 10.1% S&P 500 +4%(Lagged). Policy Index (1/1/2017-9/30/2017): 22.9% Russell 3000, 11% MSCI ACWI ex-US (Gross), 10.9% MSCI ACWI (Net), 22.4% BBgBarc 1-3 Yr Gov/Credit, 3.2% BBgBarc US Aggregate, 1.7% ICE BofAML High Yield Master II +2%, 5.1% ICE BofAML High Yield Master II, 1% Wilshire REIT, 1.7% NCREIF Property Index, 6.8% NCREIF ODCE Index, 3.6% CPI +4%, 8.1% S&P 500 +4%(Lagged), 1.6% 90-day T-Bills. Policy Index (4/1/2012-12/31/16): 27.7% Russell 3000, 10.6% MSCI ACWI ex-US (Gross), 12.3% MSCI ACWI (Net), 19.6% BBgBarc U.S. Aggregate, 5% ICE BofAML High Yield Master II, 4% BBgBarc Global Aggregate, 5.4% Wilshire REIT, 6.75% NCREIF Property Index, 1.35% FTSE/EPRA NAREIT Developed exUS, 6.8% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills. Policy Index (4/1/2011-3/31/2012): 31% Russell 3000, 10.4% MSCI EAFE (Gross), 9.6% MSCI ACWI (Net), 25% BBgBarc U.S. Aggregate, 3% ICE BofAML High Yield Master II, 4% BBgBarc Global Aggregate, 8.4% Wilshire REIT, 3.1% NCREIF Property Index, 5% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills. Policy Index (4/1/2010-3/31/2011): 35.6% Russell 3000, 10.4% MSCI EAFE (Gross), 5% MSCI ACWI (Net), 25% BBgBarc U.S. Aggregate, 3% ICE BofAML High Yield Master II, 4% BBgBarc Global Aggregate, 8.4% Wilshire REIT, 3.1% NCREIF Property Index, 5% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills. Policy Index (7/1/2009-3/31/2010): 40.6% Russell 3000, 10.4% MSCI EAFE (Gross), 25% BBgBarc U.S. Aggregate, 3% ICE BofAML High Yield Master II, 4% BBgBarc Global Aggregate, 8.4% Wilshire REIT, 3.1% NCREIF Property Index, 5% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills.

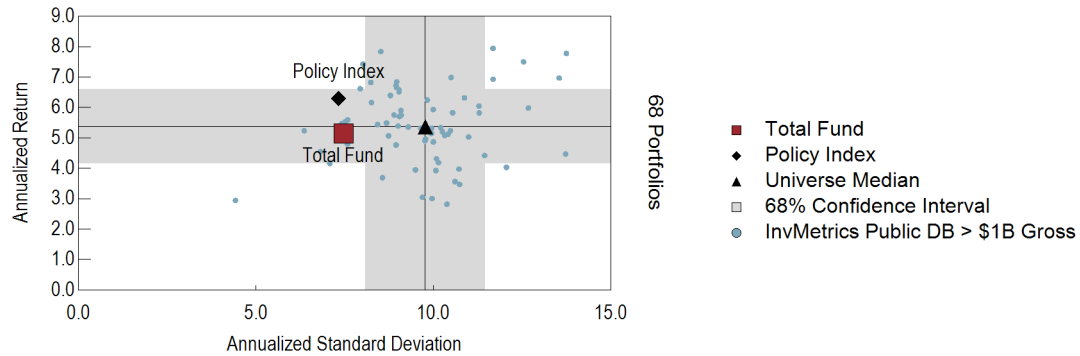
Total Fund Executive Summary (Net of Fees)

Period Ending: September 30, 2020

3 Years

	Anlzd Return	Ann Excess BM Return	Anlzd Standard Deviation	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Information Ratio	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Total Fund	5.15%	-1.16%	7.47%	-1.01%	0.98	2.14%	0.92	0.48	-0.54	95.30%	107.41%

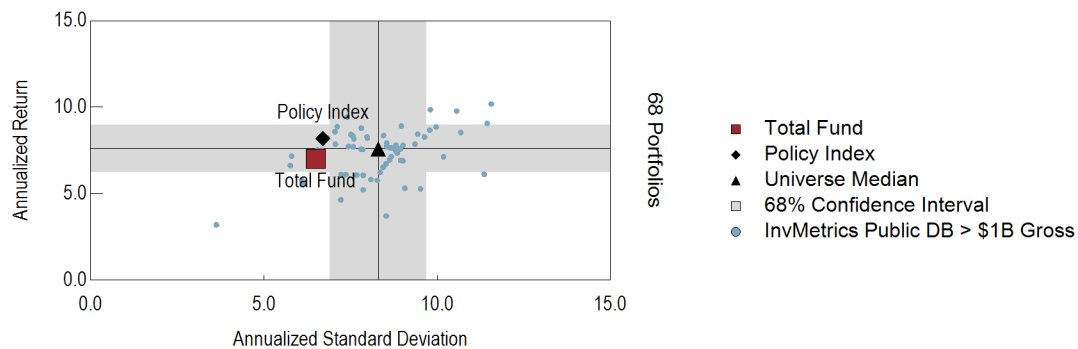
Risk vs. Return



5 Years

	Anlzd Return	Ann Excess BM Return	Anlzd Standard Deviation	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Information Ratio	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Total Fund	7.01%	-1.15%	6.49%	-0.53%	0.92	2.02%	0.91	0.91	-0.57	90.35%	101.90%

Risk vs. Return



Total Fund
Performance Summary (Gross of Fees)

Period Ending: September 30, 2020

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015	Inception	Inception Date
Total Fund	9,493,124,547	100.0	3.9	1.1	5.3	5.4	7.4	8.4	15.0	-2.5	14.2	7.4	2.7		
Policy Index			5.9	2.5	6.9	6.3	8.2	8.6	14.6	-0.9	13.7	8.9	0.6		
InvMetrics Public DB > \$1B Gross Rank			91	50	62	48	60	10	83	25	83	74	5		
Total Fund ex Overlay & Cash	9,244,741,259	97.4	4.0	1.3	5.5	5.5	7.4	8.5	14.7	-2.1	14.1	7.4	2.7		
Policy Index			5.9	2.5	6.9	6.3	8.2	8.6	14.6	-0.9	13.7	8.9	0.6		
InvMetrics Public DB > \$1B Gross Rank			91	46	62	43	60	10	84	20	84	74	5		
Growth	6,524,983,966	68.7	5.3	0.9	6.5	6.5	8.8	--	18.8	-3.6	19.1	8.1	3.0		
Custom Growth Benchmark			8.5	1.9	8.1	7.6	9.8	--	19.3	-2.1	19.3	10.1	0.3		
Total Domestic Equity	893,128,393	9.4	7.3	2.3	9.7	8.5	11.7	13.1	26.7	-7.2	23.9	11.5	1.1		
Russell 3000			9.2	5.4	15.0	11.6	13.7	13.5	31.0	-5.2	21.1	12.7	0.5		
InvMetrics Public DB US Eq Gross Rank			81	42	57	70	61	33	87	78	6	77	21		
BlackRock Russell 1000 Index	202,103,346	2.1	9.5	6.4	16.0	12.4	--	--	31.4	-4.8	--	--	--	12.9	Apr-17
Russell 1000			9.5	6.4	16.0	12.4	--	--	31.4	-4.8	--	--	--	12.9	Apr-17
eV US Large Cap Equity Gross Rank			35	39	38	40	--	--	39	47	--	--	--		
Jackson Square Partners	209,673,177	2.2	9.6	24.7	31.9	17.4	16.0	16.0	27.9	-2.0	29.3	-4.4	6.1	11.7	May-05
Russell 1000 Growth			13.2	24.3	37.5	21.7	20.1	17.3	36.4	-1.5	30.2	7.1	5.7	12.2	May-05
eV US Large Cap Growth Equity Gross Rank			79	31	59	71	78	59	93	59	47	98	37		
Boston Partners	197,682,430	2.1	4.1	-13.3	-6.3	1.8	7.3	10.5	24.3	-8.7	20.1	15.1	-3.9	9.8	Jun-95
Russell 1000 Value			5.6	-11.6	-5.0	2.6	7.7	9.9	26.5	-8.3	13.7	17.3	-3.8	8.7	Jun-95
eV US Large Cap Value Equity Gross Rank			71	77	73	73	67	48	77	55	23	50	65		
Emerald Advisers	154,524,877	1.6	9.8	10.2	22.4	11.6	12.6	15.6	30.3	-10.1	28.8	10.1	4.1	13.6	Apr-03
Russell 2000 Growth			7.2	3.9	15.7	8.2	11.4	12.3	28.5	-9.3	22.2	11.3	-1.4	11.3	Apr-03
eV US Small Cap Growth Equity Gross Rank			40	54	50	63	70	37	45	85	26	54	19		
Ceredex	129,144,563	1.4	2.4	-19.6	-17.5	-3.2	4.0	--	18.4	-11.3	11.4	29.8	-4.4	7.7	Nov-11
Russell 2000 Value			2.6	-21.5	-14.9	-5.1	4.1	--	22.4	-12.9	7.8	31.7	-7.5	7.1	Nov-11
eV US Small Cap Value Equity Gross Rank			54	49	79	46	63	--	87	25	48	32	52		

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Total Fund
Performance Summary (Gross of Fees)

Period Ending: September 30, 2020

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015	Inception	Inception Date
Total International Equity	1,638,310,659	17.3	8.1	-2.3	8.3	3.2	6.6	5.5	23.7	-14.3	25.5	1.2	-1.2		
MSCI ACWI ex USA Gross			6.4	-5.1	3.4	1.6	6.7	4.5	22.1	-13.8	27.8	5.0	-5.3		
MSCI EAFE Gross			4.9	-6.7	0.9	1.1	5.8	5.1	22.7	-13.4	25.6	1.5	-0.4		
InvMetrics Public DB ex-US Eq Gross Rank			31	33	27	17	55	34	28	44	90	89	28		
International Equity	991,942,855	10.4	8.5	4.2	14.3	6.1	8.6	6.5	27.0	-13.6	25.3	1.2	-1.2		
MSCI ACWI ex USA Gross			6.4	-5.1	3.4	1.6	6.7	4.5	22.1	-13.8	27.8	5.0	-5.3		
InvMetrics Public DB ex-US Eq Gross Rank			18	8	5	7	16	11	7	21	93	89	28		
Pyrford	456,590,623	4.8	3.3	-6.0	1.9	2.3	5.8	--	22.1	-10.1	19.8	3.4	-2.9	2.9	May-14
MSCI ACWI ex USA Value			2.3	-17.6	-10.8	-5.1	2.1	--	15.7	-14.0	22.7	8.9	-10.1	-1.4	May-14
eV ACWI ex-US Value Equity Gross Rank			61	13	17	10	17	--	35	5	84	74	59		
William Blair	535,352,232	5.6	13.3	14.3	26.8	9.6	11.2	--	32.0	-16.8	30.9	-1.4	0.5	8.1	Oct-10
MSCI ACWI ex USA Growth			10.2	7.3	17.5	7.3	10.2	--	27.3	-14.4	32.0	0.1	-1.3	6.1	Oct-10
eV ACWI ex-US Growth Equity Gross Rank			23	30	31	44	60	--	39	69	81	55	69		
Emerging Markets Equity	646,367,805	6.8	7.4	-11.1	0.1	-0.8	--	--	19.4	-15.3	--	--	--		
MSCI Emerging Markets			9.6	-1.2	10.5	2.4	--	--	18.4	-14.6	--	--	--		
InvMetrics Public DB Emg Mkt Eq Gross Rank			72	87	85	82	--	--	31	51	--	--	--		
PIMCO RAE Emerging Markets	296,888,358	3.1	3.2	-19.3	-10.2	-4.6	--	--	14.6	-12.3	--	--	--	-1.5	Feb-17
MSCI Emerging Markets Value NR			4.7	-14.2	-5.7	-2.9	--	--	12.0	-10.7	--	--	--	0.4	Feb-17
eV Emg Mkts All Cap Value Equity Gross Rank			83	89	87	85	--	--	72	44	--	--	--		
TT Emerging Markets	349,479,447	3.7	11.2	-2.7	10.8	3.0	--	--	24.8	-18.4	--	--	--	3.4	Jul-17
MSCI Emerging Markets			9.6	-1.2	10.5	2.4	--	--	18.4	-14.6	--	--	--	2.9	Jul-17
eV Emg Mkts Equity Gross Rank			29	59	47	45	--	--	24	83	--	--	--		
Total Global Equity	979,134,572	10.3	10.4	13.0	21.3	11.9	13.7	10.4	28.9	-7.8	23.7	7.6	2.2		
MSCI ACWI			8.1	1.4	10.4	7.1	10.3	8.5	26.6	-9.4	24.0	7.9	-2.4		
InvMetrics Public DB Glbl Eq Gross Rank			4	1	1	1	1	1	3	60	79	40	16		
Artisan Partners	541,609,682	5.7	14.4	27.9	40.3	19.1	19.5	--	37.0	-7.9	32.9	5.6	9.2	16.0	Oct-12
MSCI ACWI			8.1	1.4	10.4	7.1	10.3	--	26.6	-9.4	24.0	7.9	-2.4	9.0	Oct-12
eV All Global Equity Gross Rank			6	5	6	7	6	--	7	40	11	61	4		
First Eagle	437,391,104	4.6	5.6	-2.2	2.6	4.3	8.1	--	21.0	-7.6	15.1	11.7	0.2	7.4	Jan-11
MSCI ACWI			8.1	1.4	10.4	7.1	10.3	--	26.6	-9.4	24.0	7.9	-2.4	7.8	Jan-11
eV All Global Equity Gross Rank			72	59	67	66	67	--	82	38	89	19	49		

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Total Fund
Performance Summary (Gross of Fees)

Period Ending: September 30, 2020

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015	Inception	Inception Date
Private Credit	679,401,095	7.2	4.4	1.2	2.9	6.5	7.8	11.6	7.7	8.3	10.4	8.2	12.9		
ICE BofAML High Yield Master II+2%			5.2	1.2	4.3	5.9	8.7	8.4	16.7	-0.3	9.6	19.8	-2.7		
Total High Yield	167,943,516	1.8	5.2	-0.3	2.4	3.9	6.1	6.2	16.0	-3.2	6.5	14.3	-3.5		
ICE BofAML High Yield Master II			4.7	-0.3	2.3	3.8	6.6	6.3	14.4	-2.3	7.5	17.5	-4.6		
eV US High Yield Fixed Inc Gross Rank			20	74	71	68	68	74	15	88	74	47	68		
Allianz Global Investors	167,943,516	1.8	5.2	-0.3	2.4	3.9	6.1	6.2	16.0	-3.2	6.5	14.3	-3.5	6.9	Apr-00
ICE BofAML High Yield Master II			4.7	-0.3	2.3	3.8	6.6	6.3	14.4	-2.3	7.5	17.5	-4.6	6.9	Apr-00
eV US High Yield Fixed Inc Gross Rank			20	74	71	68	68	74	15	88	74	47	68		
Total Real Estate	665,321,015	7.0	-4.2	-8.1	-7.2	3.0	5.3	9.8	8.1	7.4	11.1	5.5	13.5		
Real Estate Benchmark			0.6	-1.7	-0.5	4.8	6.2	9.3	7.7	6.7	7.1	6.7	8.3		
NCREIF-ODCE			0.5	-0.1	1.4	5.2	6.6	10.3	5.3	8.3	7.6	8.8	15.0		
NCREIF Property Index			0.7	0.5	2.0	5.1	6.3	9.4	6.4	6.7	7.0	8.0	13.3		
Adelante	68,911,573	0.7	1.2	-14.1	-14.7	2.3	4.5	8.9	28.2	-5.0	7.8	4.1	5.1	9.4	Sep-01
Wilshire REIT			1.3	-16.7	-17.7	0.4	3.7	8.0	25.8	-4.8	4.2	7.2	4.2	8.9	Sep-01
Private Equity	1,037,446,201	10.9	1.9	1.1	3.8	8.2	8.6	11.4	8.4	12.1	11.9	9.4	11.6		
S&P 500 Index +4% (Lagged)			21.7	8.9	11.8	15.1	15.1	18.5	8.4	22.6	23.3	20.0	3.4		
Risk Parity	464,300,792	4.9	4.6	1.3	3.0	--	--	--	--	--	--	--	--		
60% MSCI ACWI Net/40% BBgBarc Global Aggregate			6.0	3.6	9.3	--	--	--	--	--	--	--	--		
AQR Global Risk Premium-EL	233,024,231	2.5	4.2	-1.2	2.3	--	--	--	--	--	--	--	--	9.5	Jan-19
60% MSCI ACWI Net/40% BBgBarc Global Aggregate			6.0	3.6	9.3	--	--	--	--	--	--	--	--	12.4	Jan-19
PanAgora Risk Parity Multi Asset	231,276,561	2.4	5.0	3.9	3.8	--	--	--	--	--	--	--	--	11.0	Feb-19
60% MSCI ACWI Net/40% BBgBarc Global Aggregate			6.0	3.6	9.3	--	--	--	--	--	--	--	--	9.2	Feb-19

Individual closed end funds are not shown in performance summary table. Effective 1/01/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation. Effective 7/1/2018, Private Credit and Private Equity data provided by StepStone Group.

Total Fund

Performance Summary (Gross of Fees)

Period Ending: September 30, 2020

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015	Inception	Inception Date
Diversifying	502,570,151	5.3	0.9	-2.5	-1.9	0.9	1.0	1.7	7.1	-2.0	2.8	1.3	-1.4		
Custom Diversifying Benchmark			1.3	3.8	4.3	3.9	4.0	3.7	6.1	1.4	4.7	4.1	2.5		
Diversifying Fixed Income	272,642,292	2.9	0.9	1.5	2.0	2.8	2.6	3.1	8.6	-1.7	2.8	2.8	1.6		
eV US Core Fixed Inc Gross Rank			67	99	99	99	99	99	80	99	96	72	15		
AFL-CIO	272,418,857	2.9	0.9	6.5	6.1	5.2	4.1	3.9	8.2	0.6	3.6	2.4	1.6	6.3	Jun-91
BBgBarc US Aggregate TR			0.6	6.8	7.0	5.2	4.2	3.6	8.7	0.0	3.5	2.6	0.6	5.8	Jun-91
eV US Core Fixed Inc Gross Rank			67	79	92	89	92	82	88	16	76	87	15		
Diversifying Equity	105,472,202	1.1	1.7	-11.2	-10.6	--	--	--	3.3	--	--	--	--		
Parametric Defensive Equity	105,472,202	1.1	1.7	-11.2	-10.6	--	--	--	3.3	--	--	--	--	-4.9	Jul-18
91 Day T-Bill +4%			1.0	3.5	4.8	--	--	--	6.1	--	--	--	--	5.6	Jul-18
Diversifying Multi-Asset	124,455,657	1.3	--	--	--	--	--	--	--	--	--	--	--		
FTSE 3-Month T-bill +5%			--	--	--	--	--	--	--	--	--	--	--		
Acadian Multi-Asset Absolute Return Fund	124,455,657	1.3	--	--	--	--	--	--	--	--	--	--	--	-0.7	Aug-20
FTSE 3-Month T-bill +5%			--	--	--	--	--	--	--	--	--	--	--	0.8	Aug-20
Liquidity	2,217,187,141	23.4	0.4	3.0	3.6	3.2	--	--	4.9	1.8	1.5	--	--		
BBgBarc US Govt/Credit 1-3 Yr. TR			0.2	3.1	3.7	2.8	--	--	4.0	1.6	0.8	--	--		
eV US Short Duration Fixed Inc Gross Rank			66	74	79	54	--	--	34	24	50	--	--		
DFA Short Credit	469,043,159	4.9	0.5	2.4	3.2	2.9	--	--	5.2	1.2	1.9	--	--	2.8	Nov-16
ICE BofA 1-5 Yrs US Corp & Govt TR			0.4	4.3	4.8	3.5	--	--	5.1	1.4	1.3	--	--	3.1	Nov-16
eV US Short Duration Fixed Inc Gross Rank			58	89	89	81	--	--	21	93	26	--	--		
Insight Short Duration	1,145,047,708	12.1	0.3	2.5	3.3	3.0	--	--	4.7	1.7	1.5	--	--	2.7	Nov-16
BBgBarc US Govt/Credit 1-3 Yr. TR			0.2	3.1	3.7	2.8	--	--	4.0	1.6	0.8	--	--	2.5	Nov-16
eV US Short Duration Fixed Inc Gross Rank			79	88	88	75	--	--	45	38	50	--	--		
Sit Short Duration	603,096,275	6.4	0.6	4.6	4.6	3.9	--	--	4.9	2.5	1.3	--	--	3.4	Nov-16
BBgBarc US Govt 1-3 Yr TR			0.1	3.1	3.6	2.7	--	--	3.6	1.6	0.4	--	--	2.3	Nov-16
eV US Short Duration Fixed Inc Gross Rank			46	7	25	5	--	--	35	1	68	--	--		
Total Cash	141,332,694	1.5	0.2	1.1	1.8	2.1	1.6	3.1	3.3	1.7	0.9	0.9	0.1		
91 Day T-Bills			0.0	0.4	0.8	1.6	1.1	0.6	2.1	1.9	0.9	0.3	0.0		
Cash	141,312,387	1.5	0.2	1.1	1.8	2.2	1.6	3.1	3.4	1.7	0.9	0.9	0.1		
Northern Trust Transition	20,307	0.0	90.1	96.7	102.1	--	--	--	--	--	--	--	--		

Individual closed end funds are not shown in performance summary table. Effective 3/1/2019 the custodian of record switched from State Street to Northern Trust. Wellington Real Total Return was liquidated 4/30/2020. \$223,434.91 in residual value is reflected in the Diversifying Fixed Income composite. State Street Cash/Tax Reclaims balance of \$-28,918 in cash and \$223,127 in potential tax reclaims at State Street after assets were transferred to Northern Trust. Effective 1/01/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation. Effective 7/1/2018, Private Credit and Private Equity data provided by StepStone Group.

Total Fund Performance Summary (Net of Fees)

Period Ending: September 30, 2020

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015	Inception	Inception Date
Total Fund	9,493,124,547	100.0	3.9	0.9	5.1	5.1	7.0	7.9	14.6	-2.7	13.9	6.9	2.1		
<i>Policy Index</i>			5.9	2.5	6.9	6.3	8.2	8.6	14.6	-0.9	13.7	8.9	0.6		
Total Fund ex Overlay & Cash	9,244,741,259	97.4	3.9	1.1	5.2	5.2	7.1	8.0	14.4	-2.4	13.8	6.9	2.1		
<i>Policy Index</i>			5.9	2.5	6.9	6.3	8.2	8.6	14.6	-0.9	13.7	8.9	0.6		
Growth	6,524,983,966	68.7	5.2	0.6	6.2	6.1	8.4	--	18.4	-3.9	18.7	7.6	2.3		
<i>Custom Growth Benchmark</i>			8.5	1.9	8.1	7.6	9.8	--	19.3	-2.1	19.3	10.1	0.3		
Total Domestic Equity	893,128,393	9.4	7.2	2.0	9.3	8.0	11.3	12.6	26.1	-7.6	23.5	11.1	0.6		
<i>Russell 3000</i>			9.2	5.4	15.0	11.6	13.7	13.5	31.0	-5.2	21.1	12.7	0.5		
BlackRock Russell 1000 Index	202,103,346	2.1	9.5	6.4	16.0	12.3	--	--	31.4	-4.8	--	--	--	12.8	Apr-17
<i>Russell 1000</i>			9.5	6.4	16.0	12.4	--	--	31.4	-4.8	--	--	--	12.9	Apr-17
Jackson Square Partners	209,673,177	2.2	9.5	24.3	31.3	16.8	15.5	15.5	27.3	-2.4	28.7	-4.8	5.6	11.2	May-05
<i>Russell 1000 Growth</i>			13.2	24.3	37.5	21.7	20.1	17.3	36.4	-1.5	30.2	7.1	5.7	12.2	May-05
Boston Partners	197,682,430	2.1	4.0	-13.5	-6.6	1.5	7.0	10.2	23.8	-8.9	19.7	14.7	-4.2	9.5	Jun-95
<i>Russell 1000 Value</i>			5.6	-11.6	-5.0	2.6	7.7	9.9	26.5	-8.3	13.7	17.3	-3.8	8.7	Jun-95
Emerald Advisers	154,524,877	1.6	9.6	9.7	21.6	10.9	11.9	14.9	29.4	-10.7	28.0	9.4	3.5	13.0	Apr-03
<i>Russell 2000 Growth</i>			7.2	3.9	15.7	8.2	11.4	12.3	28.5	-9.3	22.2	11.3	-1.4	11.3	Apr-03
Ceredex	129,144,563	1.4	2.2	-19.9	-17.9	-3.8	3.4	--	17.7	-11.8	10.7	29.1	-5.0	7.1	Nov-11
<i>Russell 2000 Value</i>			2.6	-21.5	-14.9	-5.1	4.1	--	22.4	-12.9	7.8	31.7	-7.5	7.1	Nov-11
Total International Equity	1,638,310,659	17.3	7.9	-2.7	7.8	2.7	6.1	5.0	23.2	-14.7	25.0	0.8	-1.6		
<i>MSCI ACWI ex USA Gross</i>			6.4	-5.1	3.4	1.6	6.7	4.5	22.1	-13.8	27.8	5.0	-5.3		
<i>MSCI EAFE Gross</i>			4.9	-6.7	0.9	1.1	5.8	5.1	22.7	-13.4	25.6	1.5	-0.4		
International Equity	991,942,855	10.4	8.4	3.9	13.8	5.6	8.2	6.1	26.5	-13.9	24.8	0.8	-1.6		
<i>MSCI ACWI ex USA Gross</i>			6.4	-5.1	3.4	1.6	6.7	4.5	22.1	-13.8	27.8	5.0	-5.3		
Pyrford	456,590,623	4.8	3.2	-6.3	1.5	1.9	5.4	--	21.6	-10.5	19.3	3.0	-3.3	2.5	May-14
<i>MSCI ACWI ex USA Value</i>			2.3	-17.6	-10.8	-5.1	2.1	--	15.7	-14.0	22.7	8.9	-10.1	-1.4	May-14
William Blair	535,352,232	5.6	13.2	13.9	26.3	9.2	10.8	--	31.5	-17.1	30.4	-1.8	0.0	7.6	Oct-10
<i>MSCI ACWI ex USA Growth</i>			10.2	7.3	17.5	7.3	10.2	--	27.3	-14.4	32.0	0.1	-1.3	6.1	Oct-10
Emerging Markets Equity	646,367,805	6.8	7.2	-11.5	-0.5	-1.4	--	--	18.7	-15.7	--	--	--		
<i>MSCI Emerging Markets</i>			9.6	-1.2	10.5	2.4	--	--	18.4	-14.6	--	--	--		
PIMCO RAE Emerging Markets	296,888,358	3.1	3.1	-19.6	-10.7	-5.1	--	--	14.0	-12.6	--	--	--	-2.0	Feb-17
<i>MSCI Emerging Markets Value NR</i>			4.7	-14.2	-5.7	-2.9	--	--	12.0	-10.7	--	--	--	0.4	Feb-17
TT Emerging Markets	349,479,447	3.7	11.0	-3.2	10.1	2.3	--	--	24.0	-18.9	--	--	--	2.7	Jul-17
<i>MSCI Emerging Markets</i>			9.6	-1.2	10.5	2.4	--	--	18.4	-14.6	--	--	--	2.9	Jul-17

Individual closed end funds are not shown in performance summary table. Effective 7/1/2018, Private Credit and Private Equity data provided by StepStone Group.

Total Fund
Performance Summary (Net of Fees)

Period Ending: September 30, 2020

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015	Inception	Inception Date
Total Global Equity	979,134,572	10.3	10.2	12.4	20.4	11.1	12.9	9.7	27.9	-8.5	22.8	6.9	1.6		
<i>MSCI ACWI</i>			8.1	1.4	10.4	7.1	10.3	8.5	26.6	-9.4	24.0	7.9	-2.4		
Artisan Partners	541,609,682	5.7	14.2	27.2	39.3	18.2	18.7	--	36.0	-8.6	31.9	4.8	8.4	15.1	Oct-12
<i>MSCI ACWI</i>			8.1	1.4	10.4	7.1	10.3	--	26.6	-9.4	24.0	7.9	-2.4	9.0	Oct-12
First Eagle	437,391,104	4.6	5.4	-2.7	1.9	3.6	7.3	--	20.1	-8.3	14.3	10.9	-0.6	6.7	Jan-11
<i>MSCI ACWI</i>			8.1	1.4	10.4	7.1	10.3	--	26.6	-9.4	24.0	7.9	-2.4	7.8	Jan-11
Private Credit	679,401,095	7.2	4.4	1.2	2.9	6.5	7.5	10.5	7.7	8.3	10.4	6.9	11.6		
<i>ICE BofAML High Yield Master II +2%</i>			5.2	1.2	4.3	5.9	8.7	8.4	16.7	-0.3	9.6	19.8	-2.7		
Total High Yield	167,943,516	1.8	5.1	-0.6	1.9	3.5	5.6	5.8	15.4	-3.6	6.1	13.9	-3.9		
<i>ICE BofAML High Yield Master II</i>			4.7	-0.3	2.3	3.8	6.6	6.3	14.4	-2.3	7.5	17.5	-4.6		
Allianz Global Investors	167,943,516	1.8	5.1	-0.6	1.9	3.5	5.6	5.8	15.4	-3.6	6.1	13.9	-3.9	6.4	Apr-00
<i>ICE BofAML High Yield Master II</i>			4.7	-0.3	2.3	3.8	6.6	6.3	14.4	-2.3	7.5	17.5	-4.6	6.9	Apr-00
Total Real Estate	665,321,015	7.0	-4.2	-8.2	-7.3	3.0	5.1	9.1	8.1	7.4	11.0	4.8	12.4		
<i>Real Estate Benchmark</i>			0.6	-1.7	-0.5	4.8	6.2	9.3	7.7	6.7	7.1	6.7	8.3		
<i>NCREIF-ODCE</i>			0.5	-0.1	1.4	5.2	6.6	10.3	5.3	8.3	7.6	8.8	15.0		
<i>NCREIF Property Index</i>			0.7	0.5	2.0	5.1	6.3	9.4	6.4	6.7	7.0	8.0	13.3		
Adelante	68,911,573	0.7	1.1	-14.5	-15.2	1.7	3.9	8.3	27.5	-5.5	7.2	3.6	4.6	8.9	Sep-01
<i>Wilshire REIT</i>			1.3	-16.7	-17.7	0.4	3.7	8.0	25.8	-4.8	4.2	7.2	4.2	8.9	Sep-01
Private Equity	1,037,446,201	10.9	1.9	1.1	3.8	8.2	8.4	10.2	8.4	12.1	11.9	8.9	9.9		
<i>S&P 500 Index +4% (Lagged)</i>			21.7	8.9	11.8	15.1	15.1	18.5	8.4	22.6	23.3	20.0	3.4		
Risk Parity	464,300,792	4.9	4.5	1.0	2.6	--	--	--	--	--	--	--	--		
<i>60% MSCI ACWI Net/40% BBgBarc Global Aggregate</i>			6.0	3.6	9.3	--	--	--	--	--	--	--	--		
AQR Global Risk Premium-EL	233,024,231	2.5	4.1	-1.5	1.9	--	--	--	--	--	--	--	--	9.1	Jan-19
<i>60% MSCI ACWI Net/40% BBgBarc Global Aggregate</i>			6.0	3.6	9.3	--	--	--	--	--	--	--	--	12.4	Jan-19
PanAgora Risk Parity Multi Asset	231,276,561	2.4	4.9	3.6	3.4	--	--	--	--	--	--	--	--	10.6	Feb-19
<i>60% MSCI ACWI Net/40% BBgBarc Global Aggregate</i>			6.0	3.6	9.3	--	--	--	--	--	--	--	--	9.2	Feb-19

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Total Fund

Performance Summary (Net of Fees)

Period Ending: September 30, 2020

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015	Inception	Inception Date
Diversifying	502,570,151	5.3	0.8	-2.8	-2.3	0.6	0.7	1.3	6.8	-2.3	2.6	0.8	-1.8		
<i>Custom Diversifying Benchmark</i>			1.3	3.8	4.3	3.9	4.0	3.7	6.1	1.4	4.7	4.1	2.5		
Diversifying Fixed Income	272,642,292	2.9	0.8	1.2	1.7	2.5	2.3	2.7	8.3	-2.0	2.6	2.3	1.1		
AFL-CIO	272,418,857	2.9	0.8	6.1	5.7	4.7	3.7	3.4	7.8	0.2	3.2	1.9	1.1	5.9	Jun-91
<i>BBgBarc US Aggregate TR</i>			0.6	6.8	7.0	5.2	4.2	3.6	8.7	0.0	3.5	2.6	0.6	5.8	Jun-91
Diversifying Equity	105,472,202	1.1	1.7	-11.5	-10.9	--	--	--	3.0	--	--	--	--		
Parametric Defensive Equity	105,472,202	1.1	1.7	-11.5	-10.9	--	--	--	3.0	--	--	--	--	-5.2	Jul-18
<i>91 Day T-Bill +4%</i>			1.0	3.5	4.8	--	--	--	6.1	--	--	--	--	5.6	Jul-18
Diversifying Multi-Asset	124,455,657	1.3	--	--	--	--	--	--	--	--	--	--	--		
<i>FTSE 3-Month T-bill +5%</i>			--	--	--	--	--	--	--	--	--	--	--		
Acadian Multi-Asset Absolute Return Fund	124,455,657	1.3	--	--	--	--	--	--	--	--	--	--	--	-0.8	Aug-20
<i>FTSE 3-Month T-bill +5%</i>			--	--	--	--	--	--	--	--	--	--	--	0.8	Aug-20
Liquidity	2,217,187,141	23.4	0.4	2.9	3.5	3.1	--	--	4.8	1.7	1.4	--	--		
<i>BBgBarc US Govt/Credit 1-3 Yr. TR</i>			0.2	3.1	3.7	2.8	--	--	4.0	1.6	0.8	--	--		
DFA Short Credit	469,043,159	4.9	0.4	2.3	3.0	2.8	--	--	5.2	1.1	1.8	--	--	2.7	Nov-16
<i>ICE BofA 1-5 Yrs US Corp & Govt TR</i>			0.4	4.3	4.8	3.5	--	--	5.1	1.4	1.3	--	--	3.1	Nov-16
Insight Short Duration	1,145,047,708	12.1	0.3	2.5	3.2	2.9	--	--	4.6	1.7	1.5	--	--	2.7	Nov-16
<i>BBgBarc US Govt/Credit 1-3 Yr. TR</i>			0.2	3.1	3.7	2.8	--	--	4.0	1.6	0.8	--	--	2.5	Nov-16
Sit Short Duration	603,096,275	6.4	0.5	4.5	4.5	3.8	--	--	4.7	2.3	1.1	--	--	3.3	Nov-16
<i>BBgBarc US Govt 1-3 Yr TR</i>			0.1	3.1	3.6	2.7	--	--	3.6	1.6	0.4	--	--	2.3	Nov-16
Total Cash	141,332,694	1.5	0.2	1.1	1.8	2.1	1.6	3.1	3.3	1.7	0.9	0.9	0.1		
<i>91 Day T-Bills</i>			0.0	0.4	0.8	1.6	1.1	0.6	2.1	1.9	0.9	0.3	0.0		
Cash	141,312,387	1.5	0.2	1.1	1.8	2.2	1.6	3.1	3.4	1.7	0.9	0.9	0.1		
Northern Trust Transition	20,307	0.0	90.1	96.7	102.1	--	--	--	--	--	--	--	--		

Individual closed end funds are not shown in performance summary table. Effective 3/1/2019 the custodian of record switched from State Street to Northern Trust. Wellington Real Total Return was liquidated 4/30/2020. \$223,434.91 in residual value is reflected in the Diversifying Fixed Income composite. State Street Cash/Tax Reclaims balance of \$-28,918 in cash and \$223,127 in potential tax reclaims at State Street after assets were transferred to Northern Trust. Effective 7/1/2018, Private Credit and Private Equity data provided by StepStone Group.

Total Fund
Closed End Funds - Investment Summary

Period Ending: September 30, 2020

StepStone Group Analysis (*)												
Closing Date	Manager Name/Fund Name	Estimated Market Value as of 9/30/20 ¹	Total Commitment	% Called	Contributed Capital	Current Qtr. Change in Contributed Capital	Current Qtr. Change in Distributed Capital	Total Distributions	Remaining Commitment	Distrib./ Paid-In (DPI) ²	Tot. Value/ Paid-In (TVPI) ³	Latest Valuation
Private Credit												
8/31/2015	Angelo Gordon Energy Credit Opp. ⁴	\$2,692,511	\$16,500,000	114%	\$18,750,000	\$0	\$0	\$18,829,566	\$2,319,783	1.00	1.15	6/30/2020
12/18/2017	Stepstone CC Opportunities Fund	\$646,399,320	\$1,020,000,000	63%	\$643,667,830	\$14,827,494	\$46	\$41,561,904	\$417,797,071	0.06	1.07	6/30/2020
8/1/2012	Torchlight IV	\$9,699,890	\$60,000,000	141%	\$84,866,971	\$0	\$0	\$104,809,507	\$0	1.23	1.35	6/30/2020
3/12/2015	Torchlight V	\$20,609,374	\$75,000,000	80%	\$60,000,000	\$0	\$0	\$55,039,262	\$15,000,000	0.92	1.26	6/30/2020
Total Private Credit		\$679,401,095										
% of Portfolio (Market Value)		7.2%										

*All Data provided by StepStone Group

¹Latest valuation + capital calls - distributions

²(DPI) is equal to (capital returned / capital called)

³(TVPI) is equal to (market value + capital returned) / capital called

⁴Capital has been fully called and fund is in redemption.

Total Fund
Closed End Funds - Investment Summary

Period Ending: September 30, 2020

Verus Internal Analysis												
Inception Date	Manager Name/Fund Name	Estimated Market Value as of 9/30/2020 ¹	Total Commitment	Total % Called	Capital Called	Current Qtr. Capital Called	Current Qtr. Distributions	Total Distributions ⁸	Remaining Commitment	Distrib./Paid-In (DPI) ²	Tot. Value/Paid-In (TVPI) ³	Latest Valuation
Real Estate												
1/23/2012	Angelo Gordon Realty Fund VIII ⁷	\$20,153,035	\$80,000,000	94%	\$75,401,855	\$0	\$0	\$98,433,174	\$12,334,302	1.31	1.57	6/30/2020
12/8/2014	Angelo Gordon Realty Fund IX	\$62,123,148	\$65,000,000	93%	\$60,125,000	\$0	\$0	\$15,275,000	\$7,572,500	0.25	1.29	6/30/2020
6/23/2005	DLJ RECP III	\$15,981,396	\$75,000,000	134%	\$100,709,313 ⁴	\$0	\$0	\$69,364,915	\$4,031,338	0.69	0.85	6/30/2020
2/11/2008	DLJ RECP IV	\$58,979,443	\$100,000,000	130%	\$129,892,605 ⁵	\$0	\$0	\$89,287,687	\$3,162,610	0.69	1.14	6/30/2020
7/1/2014	DLJ RECP V	\$41,912,494	\$75,000,000	114%	\$85,612,038 ⁶	\$0	\$0	\$58,913,882	\$20,556,753	0.69	1.18	6/30/2020
3/19/2019	DLJ RECP VI	\$15,987,603	\$50,000,000	51%	\$25,335,866	\$0	\$0	\$220,742	\$25,050,462	0.01	0.64	6/30/2020
6/17/1998	Hearthstone II ⁷	\$26	\$25,000,000	80%	\$19,932,386	\$0	\$0	\$27,473,662	\$0	1.38	1.38	6/30/2020
6/30/2013	Invesco Real Estate III ⁷	\$3,671,526	\$35,000,000	93%	\$32,386,423	\$0	\$0	\$42,502,805	\$2,613,577	1.31	1.43	9/30/2020
6/30/2014	Invesco Real Estate IV ⁷	\$17,217,722	\$35,000,000	87%	\$30,546,401	\$0	\$0	\$22,353,948	\$4,453,599	0.73	1.30	9/30/2020
6/30/2013	Invesco Real Estate V	\$36,960,896	\$75,000,000	55%	\$41,528,775	\$5,431,923	\$0	\$4,723,439	\$37,212,728 ⁹	0.11	1.00	9/30/2020
7/16/2013	LaSalle Income & Growth VI ⁷	\$24,114,835	\$75,000,000	95%	\$71,428,571	\$0	\$0	\$81,401,001	\$3,571,429	1.14	1.48	6/30/2020
2/28/2017	LaSalle Income & Growth VII	\$53,214,856	\$75,000,000	96%	\$72,154,315	\$2,055,707	\$0	\$33,471,843	\$2,845,685	0.46	1.20	6/30/2020
7/3/2013	Long Wharf Fund IV ⁷	\$2,858,108	\$25,000,000	100%	\$25,000,000	\$0	\$0	\$33,793,648	\$0	1.35	1.47	9/30/2020
9/30/2016	Long Wharf Fund V ⁷	\$0	\$50,000,000	100%	\$50,000,000	\$0	\$0	\$22,049,583	\$0	0.44	0.44	9/30/2020
6/27/2019	Long Wharf Fund VI	\$5,839,184	\$50,000,000	14%	\$7,066,402	\$297,324	\$0	\$0	\$42,933,598	0.00	0.83	9/30/2020
12/31/2011	Oaktree REOF V ⁷	\$3,869,790	\$50,000,000	100%	\$50,000,000	\$0	\$311,778	\$75,380,955	\$5,000,000 ⁹	1.51	1.59	9/30/2020
9/30/2013	Oaktree REOF VI ⁷	\$27,820,910	\$80,000,000	100%	\$80,000,000	\$0	\$0	\$84,010,175	\$18,400,000 ⁹	1.05	1.40	9/30/2020
4/1/2015	Oaktree REOF VII	\$51,527,936	\$65,000,000	96%	\$62,400,000	\$1,300,000	\$0	\$27,040,000	\$21,515,000 ⁹	0.43	1.26	9/30/2020
11/10/2013	Paulson Real Estate Fund II ⁷	\$25,265,952	\$20,000,000	97%	\$19,345,623	\$0	\$963,185	\$7,759,375	\$654,377	0.40	1.71	6/30/2020
1/25/2012	Siguler Guff DREOF	\$27,833,882	\$75,000,000	93%	\$69,375,000	\$0	\$466,350	\$94,584,596	\$5,625,000	1.36	1.76	6/30/2020
8/31/2013	Siguler Guff DREOF II	\$45,400,812	\$70,000,000	89%	\$61,985,000	\$0	\$773,424	\$39,297,843	\$8,015,000	0.63	1.37	6/30/2020
1/27/2016	Siguler Guff DREOF II Co-Inv	\$16,883,712	\$25,000,000	82%	\$20,537,862	\$0	\$825,000	\$9,773,350	\$4,462,138	0.48	1.30	6/30/2020
Total Closed End Real Estate		\$557,617,265	\$1,275,000,000	93%	\$1,190,763,437	\$9,084,954	\$3,339,737	\$937,111,623	\$230,010,095	0.79	1.26	
% of Portfolio (Market Value)		5.9%										

¹Latest valuation + capital calls - distributions

²(DPI) is equal to (capital returned / capital called)

³(TVPI) is equal to (market value + capital returned) / capital called

⁴Includes \$7,360,987 in management fees charged outside the fund.

⁵Includes \$11,322,966 in management fees charged outside the fund.

⁶Includes \$986,559 in management fees charged outside the fund.

⁷Capital has been fully called and fund is in redemption.

⁸Total distributions may include recallable distributions

⁹Remianing commitment includes recallable distributions

Total Fund
Closed End Funds - Investment Summary

Period Ending: September 30, 2020

StepStone Group Analysis (*)													
Closing Date	Manager Name/Fund Name	Estimated Market Value as of 9/30/20 ¹	Total Commitment	Total % Called	Contributed Capital	Current Qtr. Change in Contributed Capital	Current Qtr. Change in Distributed Capital	Total Distributions	Remaining Commitment	Distrib./Paid-In (DPI) ²	Tot. Value/Paid-In (TVPI) ³	Latest Valuation	
Private Equity & Venture Capital													
2/11/2004	Adams Street Partners	\$141,787,250	\$210,000,000	89%	\$186,850,625	\$0	\$3,170,309	\$169,420,359	\$23,149,375	0.91	1.67	6/30/2020	
1/15/2009	Adams Street Partners II	\$5,702,364	\$30,000,000	95%	\$28,365,000	\$0	\$0	\$42,440,681	\$1,635,000	1.50	1.70	6/30/2020	
9/21/2012	Adams Street Partners - Fund 5	\$18,137,889	\$40,000,000	77%	\$30,845,875	\$0	\$0	\$18,066,140	\$9,154,125	0.59	1.17	6/30/2020	
1/18/1996	Adams Street Partners - BPF	\$1,752,256	\$59,565,614	97%	\$57,517,409	\$0	\$0	\$102,731,103	\$2,048,205	1.79	1.82	6/30/2020	
3/31/2016	Adams Street Venture Innovation	\$74,639,439	\$75,000,000	74%	\$55,537,500	\$4,500,000	\$0	\$0	\$19,462,500	0.00	1.34	6/30/2020	
5/18/2018	AE Industrial Partners Fund II, LP	\$14,324,255	\$35,000,000	42%	\$14,853,697	\$3,406,489	\$0	\$0	\$20,146,303	0.00	0.96	6/30/2020	
11/27/2013	Aether Real Assets III	\$18,046,842	\$25,000,000	97%	\$24,320,995	\$331,087	\$6,761	\$3,913,883	\$2,904,645	0.16	0.90	3/31/2020	
11/30/2013	Aether Real Assets III Surplus	\$45,141,684	\$50,000,000	102%	\$51,191,893	\$280,863	\$0	\$8,973,151	\$2,073,602	0.18	1.06	3/31/2020	
1/30/2016	Aether Real Assets IV	\$40,444,344	\$50,000,000	82%	\$41,102,289	\$2,011,537	\$1,178,937	\$3,450,640	\$11,476,522	0.08	1.07	3/31/2020	
4/30/2004	Bay Area Equity Fund I ⁴	\$2,396,776	\$10,000,000	100%	\$10,000,000	\$0	\$0	\$37,018,019	\$0	3.70	3.94	3/31/2020	
6/29/2009	Bay Area Equity Fund II ⁴	\$9,662,956	\$10,000,000	100%	\$10,000,000	\$0	\$0	\$3,684,910	\$0	0.37	1.33	3/31/2020	
6/30/2013	Commonfund	\$31,629,613	\$50,000,000	90%	\$45,024,995	\$0	\$345,181	\$12,505,952	\$4,975,005	0.28	0.98	3/31/2020	
7/15/2005	EIF US Power Fund II ⁴	\$5,148,477	\$50,000,000	130%	\$65,029,556	\$0	\$0	\$74,001,371	\$0	1.14	1.22	6/30/2020	
5/31/2007	EIF US Power Fund III ⁴	\$13,462,498	\$65,000,000	110%	\$71,409,097	\$0	\$0	\$73,638,258	\$0	1.03	1.22	6/30/2020	
11/28/2011	EIF US Power Fund IV	\$37,748,776	\$50,000,000	128%	\$64,155,474	\$367,773	\$367,773	\$31,740,306	\$4	0.49	1.08	6/30/2020	
11/28/2016	EIF US Power Fund V	\$43,925,720	\$50,000,000	99%	\$49,657,265	\$568,278	\$5,632,747	\$14,862,368	\$8,860,664	0.30	1.18	6/30/2020	
2/21/2019	Genstar Capital Partners IX, L.P.	\$19,245,461	\$50,000,000	38%	\$19,070,192	\$6,764,154	\$0	\$980,160	\$31,909,968	0.05	1.06	6/30/2020	
11/18/2009	Oaktree PIF 2009	\$1,148,734	\$40,000,000	87%	\$34,816,729	\$0	\$0	\$45,799,610	\$6,308,961	1.32	1.35	6/30/2020	
5/2/2013	Ocean Avenue Fund II	\$25,208,390	\$30,000,000	90%	\$27,000,000	\$0	\$0	\$16,039,096	\$3,000,000	0.59	1.53	6/30/2020	
4/15/2016	Ocean Avenue Fund III	\$53,224,819	\$50,000,000	87%	\$43,500,000	\$0	\$0	\$10,000,000	\$6,500,000	0.23	1.45	6/30/2020	
11/30/2007	Paladin III	\$29,856,372	\$25,000,000	137%	\$34,229,048	\$192,671	\$11,667,637	\$49,563,483	\$305,677	1.45	2.32	6/30/2020	
8/22/2011	Pathway 6	\$31,582,836	\$40,000,000	97%	\$38,603,323	\$72,000	\$707,788	\$29,951,046	\$3,827,436	0.78	1.59	3/31/2020	
7/10/2013	Pathway 7	\$66,535,542	\$70,000,000	96%	\$67,165,188	\$214,365	\$1,902,487	\$33,216,736	\$6,289,507	0.49	1.49	3/31/2020	
11/23/2015	Pathway 8	\$49,653,559	\$50,000,000	85%	\$42,415,771	\$2,333,706	\$1,619,308	\$7,367,541	\$10,091,928	0.17	1.34	3/31/2020	
1/19/1999	Pathway	\$11,007,132	\$125,000,000	100%	\$125,341,672	\$68,972	\$829,866	\$178,099,677	\$10,647,601	1.42	1.51	6/30/2020	
7/31/2009	Pathway 2008	\$18,096,724	\$30,000,000	98%	\$29,369,748	\$72,009	\$952,535	\$31,998,235	\$3,127,913	1.09	1.71	6/30/2020	
6/3/2014	Siguler Guff CCCERA Opportunities	\$182,552,821	\$200,000,000	83%	\$165,583,208	\$0	\$0	\$66,430,997	\$38,097,500	0.40	1.50	6/30/2020	
11/30/2016	Siguler Guff Secondary Opportunities ⁴	\$61,965	\$50,000,000	60%	\$29,999,802	\$0	\$0	\$42,724,959	\$20,000,198	1.42	1.43	6/30/2020	
5/18/2018	Siris Partners IV, L.P.	\$16,652,501	\$35,000,000	54%	\$18,842,410	\$0	\$0	\$0	\$16,157,590	0.00	0.88	6/30/2020	
6/28/2019	TPG Healthcare Partners, L.P.	\$3,169,639	\$24,000,000	18%	\$4,281,652	\$1,320,933	\$0	\$0	\$19,718,348	-	-	6/30/2020	
5/24/2019	Trident VIII, L.P.	\$5,889,704	\$40,000,000	17%	\$6,994,869	\$4,126,318	\$565,951	\$565,951	\$33,467,151	-	-	-	
12/8/2015	Wastewater Opportunity Fund	\$19,608,864	\$25,000,000	100%	\$25,022,227	\$1,252,529	\$0	\$2,031,922	\$0	0.08	0.86	6/30/2020	
Total Private Equity and Venture Capital		\$1,037,446,201	\$1,743,565,614	87%	\$1,518,097,509	\$27,883,685	\$28,947,279	\$1,111,216,556	\$315,335,728	0.73	1.42		
% of Portfolio (Market Value)		10.9%											

* All Data provided by StepStone Group

¹Latest valuation + capital calls - distributions

²(DPI) is equal to (capital returned / capital called)

³(TVPI) is equal to (market value + capital returned) / capital called

⁴Capital has been fully called and fund is in redemption.

Total Fund

Closed End Funds - IRR Summary

Period Ending: September 30, 2020

Private Credit	Inception	Fund Level (G) ²	CCCERA (G)	Fund Level (N) ^{2,3}	CCCERA (N) ³	IRR Date
Angelo Gordon Energy Cred Opp. ⁴	09/24/2015	-	-	-	6.4%	06/30/2020
Stepstone CC Opportunities Fund	02/02/2018	-	4.0%	-	3.1%	03/31/2020
Torchlight IV	08/01/2012	12.5%	12.9%	9.9%	10.6%	03/31/2020
Torchlight V	03/12/2015	16.1%	16.2%	10.9%	10.9%	03/31/2020
Real Estate	Inception	Fund Level (G) ²	CCCERA (G)	Fund Level (N) ^{2,3}	CCCERA (N) ³	IRR Date
Angelo Gordon VIII ⁴	01/23/2012	-	-	-	14.1%	06/30/2020
Angelo Gordon IX	12/08/2014	-	-	-	9.2%	06/30/2020
DLJ RECP III	06/23/2005	-1.0%	-1.0%	-4.0%	-3.0%	06/30/2020
DLJ RECP IV	02/11/2008	4.0%	4.0%	2.0%	2.0%	06/30/2020
DLJ RECP V	07/01/2014	15.0%	15.0%	8.0%	8.0%	06/30/2020
DLJ RECP VI ¹	03/19/2019	-	-	-	-	-
Hearthstone II ⁴	06/17/1998	-	30.1%	-	30.1%	03/31/2020
Invesco Fund III ⁴	06/30/2013	15.9%	-	12.0%	-	06/30/2020
Invesco Fund IV ⁴	06/30/2014	16.1%	-	12.2%	-	06/30/2020
Invesco Fund V	02/20/2019	11.1%	-	2.5%	-	06/30/2020
LaSalle Income & Growth VI ⁴	07/16/2013	13.8%	13.8%	11.4%	11.5%	06/30/2020
LaSalle Income & Growth VII	02/28/2017	9.4%	9.4%	7.5%	7.4%	06/30/2020
Long Wharf IV ⁴	07/03/2013	16.6%	16.7%	12.2%	12.2%	09/30/2020
Long Wharf V ⁴	09/30/2016	11.2%	11.9%	8.1%	8.6%	09/30/2020
Long Wharf VI	06/27/2019	-0.8%	-0.2%	-19.2%	-4.8%	09/30/2020
Oaktree REOF V ⁴	12/31/2011	16.7%	-	12.3%	-	09/30/2020
Oaktree REOF VI ⁴	09/30/2013	12.9%	-	8.7%	-	09/30/2020
Oaktree REOF VII	04/01/2015	27.5%	-	16.6%	-	09/30/2020
Paulson ⁴	11/10/2013	-	-	13.8%	-	12/31/2019
Siguler Guff I	01/25/2012	13.4%	16.2%	11.9%	13.1%	06/30/2020
Siguler Guff II	08/31/2013	10.9%	10.9%	9.5%	8.7%	06/30/2020
Siguler Guff DREOF II Co-Inv	01/27/2016	10.5%	10.9%	9.5%	8.1%	06/30/2020

¹Manager has yet to report IRR figure.

²Fund level data includes CCCERA and all other fund investors.

³Net IRR calculated after deductions of management fees and carried interest to the General Partner.

⁴Capital has been fully called and fund is in redemption.

Total Fund
Closed End Funds - IRR Summary

Period Ending: September 30, 2020

Private Equity & Venture Capital	Closing Date	Fund Level (G) ²	CCCERA (G)	Fund Level (N) ^{2,3}	CCCERA (N) ³	IRR Date
Adams Street Partners	2/11/2004	-	12.6%	-	10.3%	6/30/2020
Adams Street Partners II	12/31/2008	-	17.8%	-	14.1%	6/30/2020
Adams Street Partners - Fund 5	12/31/2008	-	7.0%	-	4.5%	6/30/2020
Adams Street Partners Venture	1/18/1996	-	26.5%	-	22.6%	6/30/2020
Adams Street Partners - BPF	3/31/2016	-	14.3%	-	11.6%	6/30/2020
AE Industrial Partners Fund II, LP ¹	5/18/2018	-	-	-	-	-
Aether Real Assets III	11/27/2013	0.5%	0.5%	-2.9%	-2.9%	6/30/2020
Aether Real Assets III Surplus	11/30/2013	3.4%	3.4%	1.5%	1.5%	6/30/2020
Aether Real Assets IV	1/30/2016	8.1%	8.1%	3.5%	3.5%	6/30/2020
Bay Area Equity Fund I ⁹	11/26/2003	31.4%	31.4%	23.1%	23.1%	6/30/2020
Bay Area Equity Fund II ⁹	11/26/2003	8.7%	8.7%	4.2%	4.2%	6/30/2020
CommonFund	6/30/2013	-	-	-	1.1%	6/30/2020
Energy Investor Fund II ⁹	7/15/2005	6.2%	5.8%	3.5%	3.2%	6/30/2020
Energy Investor Fund III ⁹	5/31/2007	5.9%	5.9%	3.3%	3.3%	6/30/2020
Energy Investor Fund IV	8/31/2010	5.9%	6.0%	2.4%	2.2%	6/30/2020
Energy Investor Fund V	11/28/2016	16.7%	14.0%	12.3%	9.7%	6/30/2020
Genstar Capital Partners IX, L.P. ¹	2/21/2019	-	-	-	-	-
Oaktree PIF 2009	2/28/2010	6.7%	-	6.4%	-	6/30/2020
Ocean Avenue II	8/15/2013	-	-	12.0%	-	6/30/2020
Ocean Avenue III	4/15/2016	-	-	20.6%	-	6/30/2020
Paladin III	11/30/2007	21.6%	-	14.3%	-	6/30/2020
Pathway 6	8/22/2011	16.3%	16.3%	14.0%	14.0%	6/30/2020
<i>Benchmark</i> ⁴		13.3%	-	-	-	6/30/2020
Pathway 7	7/10/2013	17.1%	17.1%	14.8%	14.8%	6/30/2020
<i>Benchmark</i> ⁵		12.9%	-	-	-	6/30/2020
Pathway 8	11/23/2015	19.4%	19.7%	17.6%	18.1%	6/30/2020
<i>Benchmark</i> ⁶		11.4%	-	-	-	6/30/2020
Pathway Private Equity Fund	1/19/1999	10.2%	10.2%	8.3%	8.3%	6/30/2020
<i>Benchmark</i> ⁷		10.2%	-	-	-	6/30/2020
Pathway Private Equity Fund 2008	7/31/2009	14.5%	14.5%	12.0%	12.0%	6/30/2020
<i>Benchmark</i> ⁸		12.5%	-	-	-	6/30/2020
Siguler Guff CCCERA Opportunities	6/3/2014	17.0%	17.6%	16.4%	14.9%	6/30/2020
Siguler Guff Secondary Opportunities ⁹	8/31/2013	55.3%	118.5%	49.5%	69.1%	6/30/2020
Siris Partners IV, L.P. ¹	5/18/2018	-	-	-	-	-
TPG Healthcare Partners, L.P. ¹	6/28/2019	-	-	-	-	-
Trident VIII, L.P. ¹	5/24/2019	-	-	-	-	-
Wastewater Opportunity Fund	12/8/2015	-2.2%	-	-8.3%	-	6/30/2020

¹Manager has yet to report IRR figure.

²Fund level data includes CCCERA and all other fund investors.

³Net IRR calculated after deductions of management fees and carried interest to the General Partner.

⁴Private iQ global all private equity median pooled return for vintage years 2011-2014, as of June 30, 2020.

⁵Private iQ global all private equity median pooled return for vintage years 2012-2016, as of June 30, 2020.

⁶Private iQ global all private equity median pooled return for vintage years 2015-2018, as of June 30, 2020.

⁷Private iQ global all private equity median pooled return for vintage years 1999-2011, as of June 30, 2020.

⁸Private iQ global all private equity median pooled return for vintage years 2008-2014, as of June 30, 2020.

⁹Capital has been fully called and fund is in redemption.

Total Fund
Performance Analysis - 3 Years (Net of Fees)

Period Ending: September 30, 2020

	3 Years										
	Anlzd Ret	Ann Excess BM Return	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
BlackRock Russell 1000 Index	12.34%	-0.03%	18.18%	-0.03%	1.00	0.02%	1.00	0.59	-1.98	99.86%	100.00%
Jackson Square Partners	16.85%	-4.83%	18.40%	-3.45%	0.94	4.66%	0.94	0.83	-1.04	81.20%	97.98%
Boston Partners	1.45%	-1.18%	19.34%	-1.30%	1.05	2.75%	0.98	-0.01	-0.43	102.73%	105.10%
Emerald Advisers	10.93%	2.75%	23.92%	2.64%	1.01	4.93%	0.96	0.39	0.56	108.99%	98.30%
Ceredex	-3.78%	1.35%	22.95%	1.08%	0.95	5.48%	0.95	-0.23	0.25	93.49%	94.96%
Pyrford	1.86%	6.95%	13.24%	5.49%	0.71	6.47%	0.91	0.02	1.07	82.22%	71.20%
William Blair	9.16%	1.84%	17.08%	1.27%	1.08	3.49%	0.96	0.44	0.53	112.88%	102.04%
PIMCO RAE Emerging Markets	-5.06%	-2.17%	20.96%	-1.90%	1.09	3.67%	0.98	-0.32	-0.59	99.08%	104.93%
Artisan Partners	18.19%	11.08%	16.75%	11.57%	0.93	5.90%	0.88	0.99	1.88	129.58%	79.97%
First Eagle	3.57%	-3.55%	13.03%	-1.82%	0.76	4.83%	0.96	0.15	-0.73	60.39%	80.59%
Allianz Global Investors	3.46%	-0.37%	8.19%	0.14%	0.87	2.06%	0.96	0.23	-0.18	90.31%	93.07%
Adelante	1.75%	1.30%	17.24%	1.33%	0.93	1.93%	0.99	0.01	0.67	95.87%	93.24%
AFL-CIO	4.72%	-0.52%	3.04%	0.18%	0.87	0.96%	0.92	1.04	-0.54	83.80%	74.21%

Performance Analysis excludes closed end funds and those funds without 3 years of performance.

Total Fund
Performance Analysis - 5 Years (Net of Fees)

Period Ending: September 30, 2020

	5 Years										
	Anlzd Ret	Ann Excess BM Return	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
Jackson Square Partners	15.55%	-4.55%	15.76%	-3.12%	0.93	5.38%	0.89	0.91	-0.85	79.48%	101.74%
Boston Partners	6.98%	-0.67%	16.54%	-1.07%	1.05	2.90%	0.97	0.35	-0.23	101.14%	103.26%
Emerald Advisers	11.91%	0.49%	20.65%	0.51%	1.00	4.79%	0.95	0.52	0.10	97.52%	97.62%
Ceredex	3.39%	-0.72%	19.44%	-0.30%	0.90	5.96%	0.92	0.12	-0.12	79.65%	93.91%
Pyrford	5.37%	3.23%	11.86%	3.88%	0.70	6.51%	0.86	0.36	0.50	67.82%	71.57%
William Blair	10.78%	0.62%	14.96%	0.16%	1.05	3.28%	0.95	0.64	0.19	106.77%	101.72%
Total Global Equity	12.86%	2.56%	12.84%	3.92%	0.87	3.44%	0.95	0.91	0.74	94.57%	83.63%
Artisan Partners	18.66%	8.35%	15.12%	8.76%	0.96	6.07%	0.84	1.16	1.38	139.58%	87.15%
First Eagle	7.25%	-3.05%	11.12%	-0.43%	0.75	4.60%	0.94	0.55	-0.66	56.50%	75.61%
Allianz Global Investors	5.63%	-0.98%	7.15%	-0.11%	0.87	1.86%	0.95	0.63	-0.53	86.08%	94.20%
Adelante	3.92%	0.26%	15.38%	0.50%	0.94	1.94%	0.99	0.18	0.14	91.02%	94.68%
AFL-CIO	3.65%	-0.52%	2.84%	0.05%	0.86	0.92%	0.92	0.89	-0.57	81.90%	78.49%

Performance Analysis excludes closed end funds and those funds without 5 years of performance.

Total Fund Investment Fund Fee Analysis

Period Ending: September 30, 2020

Name	Asset Class	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
BlackRock Russell 1000 Index	Growth	0.03% of Assets	\$202,103,346	\$60,631	0.03%
Jackson Square Partners	Growth	0.50% of First 100.0 Mil, 0.40% of Next 150.0 Mil, 0.35% Thereafter	\$209,673,177	\$938,693	0.45%
Boston Partners	Growth	0.50% of First 25.0 Mil, 0.30% Thereafter	\$197,682,430	\$643,047	0.33%
Emerald Advisers	Growth	0.75% of First 10.0 Mil, 0.60% Thereafter	\$154,524,877	\$942,149	0.61%
Ceredex	Growth	0.85% of First 10.0 Mil, 0.68% of Next 40.0 Mil, 0.51% Thereafter	\$129,144,563	\$760,637	0.59%
Pyrford	Growth	0.70% of First 50.0 Mil, 0.50% of Next 50.0 Mil, 0.35% Thereafter	\$456,590,623	\$1,848,067	0.40%
William Blair	Growth	0.80% of First 20.0 Mil, 0.60% of Next 30.0 Mil, 0.50% of Next 50.0 Mil, 0.45% of Next 50.0 Mil, 0.40% of Next 50.0 Mil, 0.30% Thereafter	\$535,352,232	\$2,021,057	0.38%
PIMCO RAE Emerging Markets	Growth	0.75% of First 50.0 Mil, 0.68% of Next 50.0 Mil, 0.50% of Next 100.0 Mil, 0.45% Thereafter	\$296,888,358	\$1,648,498	0.56%
TT Emerging Markets	Growth	0.70% of First 100.0 Mil, 0.65% of Next 100.0 Mil, 0.60% Thereafter	\$349,479,447	\$2,246,877	0.64%
Artisan Partners	Growth	0.75% of Assets	\$541,609,682	\$4,062,073	0.75%
First Eagle	Growth	0.75% of Assets	\$437,391,104	\$3,280,433	0.75%
Allianz Global Investors	Growth	0.50% of First 50.0 Mil, 0.40% of Next 50.0 Mil, 0.35% Thereafter	\$167,943,516	\$687,802	0.41%
AQR Global Risk Premium-EL	Growth	0.38% of Assets	\$233,024,231	\$885,492	0.38%

Mutual fund fees shown are sourced from Morningstar and are as of the most current prospectus.

Total Fund
Investment Fund Fee Analysis

Period Ending: September 30, 2020

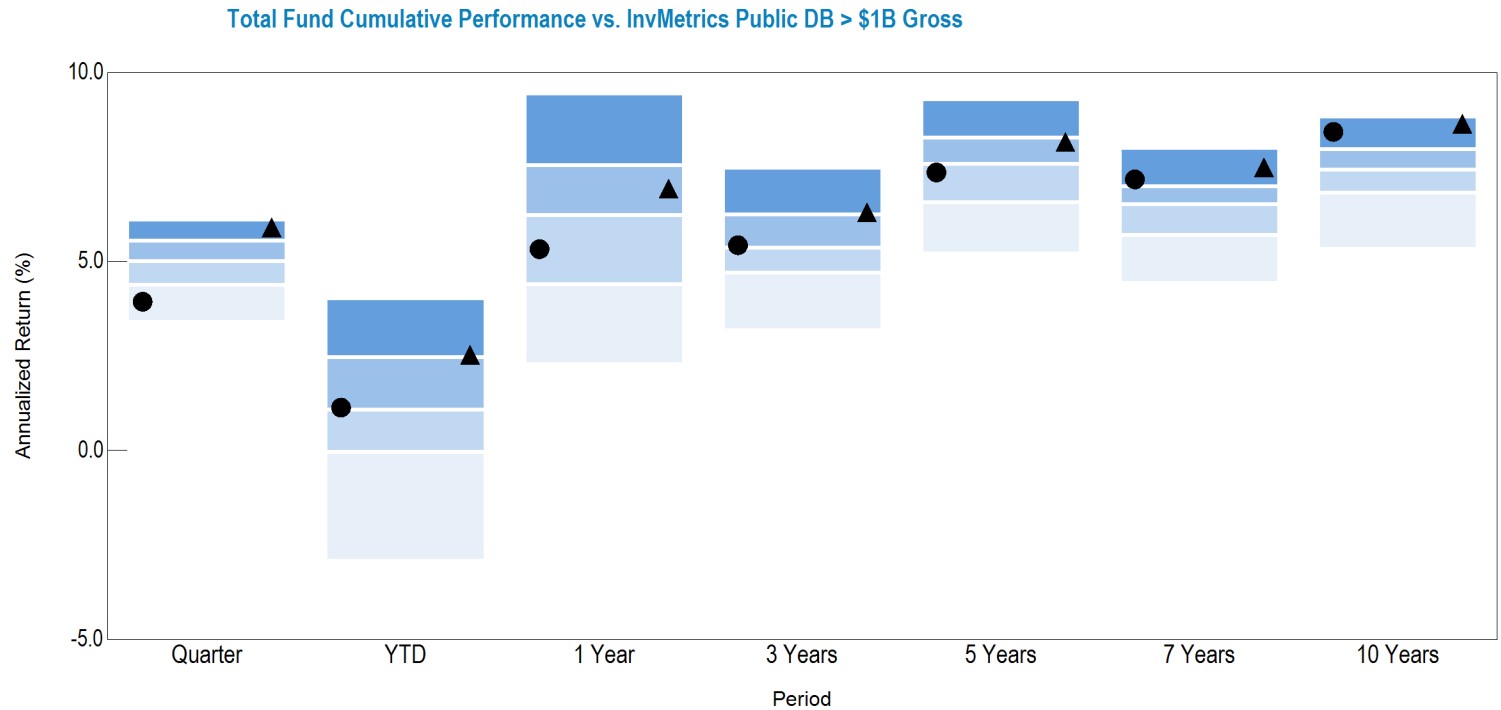
Name	Asset Class	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
PanAgora Risk Parity Multi Asset	Growth	0.35% of Assets	\$231,276,561	\$809,468	0.35%
AFL-CIO	Diversifying	0.43% of Assets	\$272,418,857	\$1,171,401	0.43%
Parametric Defensive Equity	Diversifying	0.42% of First 200.0 Mil, 0.39% Thereafter	\$105,472,202	\$442,983	0.42%
Acadian Multi-Asset Absolute Return Fund	Diversifying	0.50% of Assets	\$124,455,657	\$622,278	0.50%
DFA Short Credit	Liquidity	0.20% of First 25.0 Mil, 0.10% Thereafter	\$469,043,159	\$494,043	0.11%
Insight Short Duration	Liquidity	0.06% of First 500.0 Mil, 0.05% of Next 500.0 Mil, 0.04% Thereafter	\$1,145,047,708	\$608,019	0.05%

Mutual fund fees shown are sourced from Morningstar and are as of the most current prospectus.

Total Fund

Peer Universe Comparison: Cumulative Performance (Gross of Fees)

Period Ending: September 30, 2020



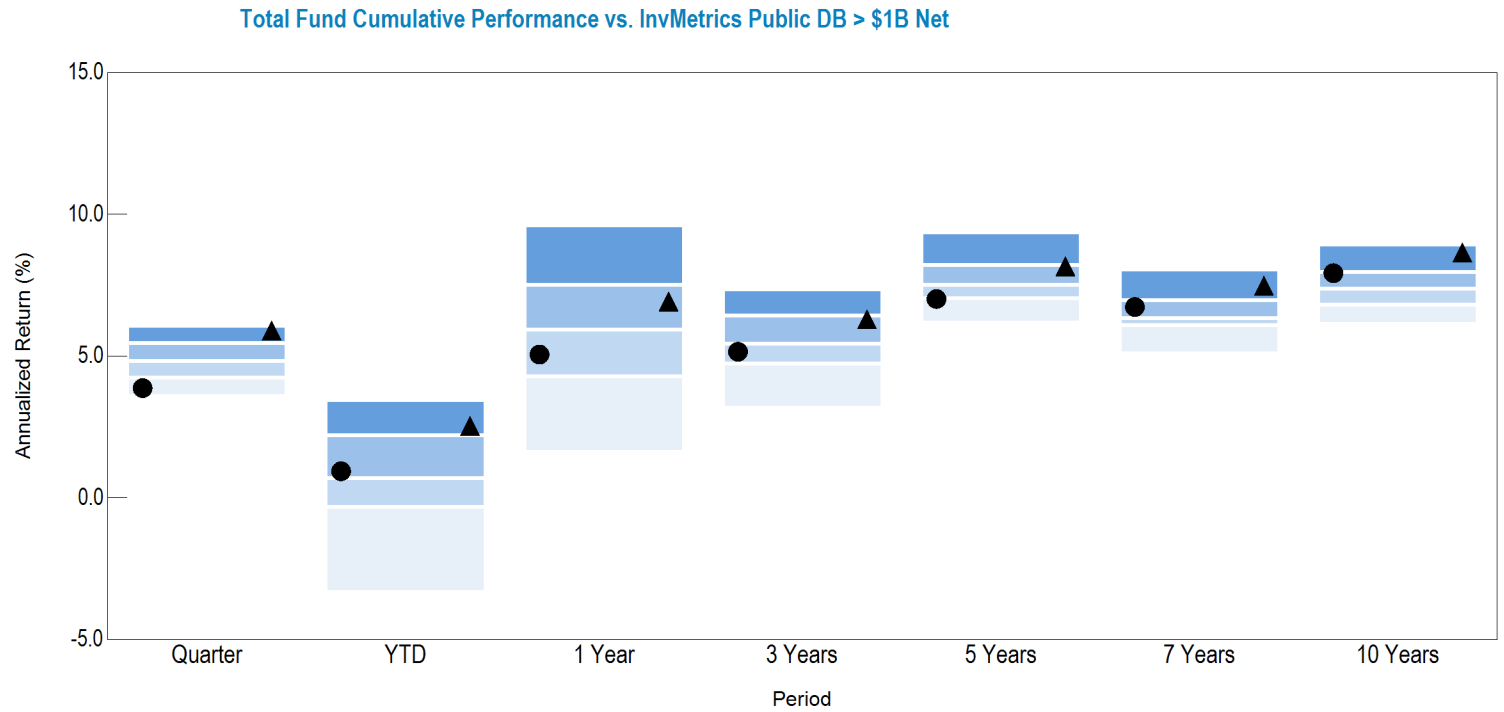
	Quarter		YTD		1 Year		3 Years		5 Years		7 Years		10 Years	
Return (Rank)														
5th Percentile	6.1		4.0		9.4		7.5		9.3		8.0		8.8	
25th Percentile	5.6		2.5		7.5		6.3		8.3		7.0		8.0	
Median	5.0		1.1		6.2		5.4		7.6		6.5		7.4	
75th Percentile	4.4		0.0		4.4		4.7		6.6		5.7		6.8	
95th Percentile	3.4		-2.9		2.3		3.2		5.2		4.4		5.3	
# of Portfolios	68		68		68		68		68		68		66	
● Total Fund	3.9	(91)	1.1	(50)	5.3	(62)	5.4	(48)	7.4	(60)	7.2	(22)	8.4	(10)
▲ Policy Index	5.9	(16)	2.5	(23)	6.9	(36)	6.3	(25)	8.2	(33)	7.5	(11)	8.6	(7)

Effective 1/01/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.

Total Fund

Peer Universe Comparison: Cumulative Performance (Net of Fees)

Period Ending: September 30, 2020

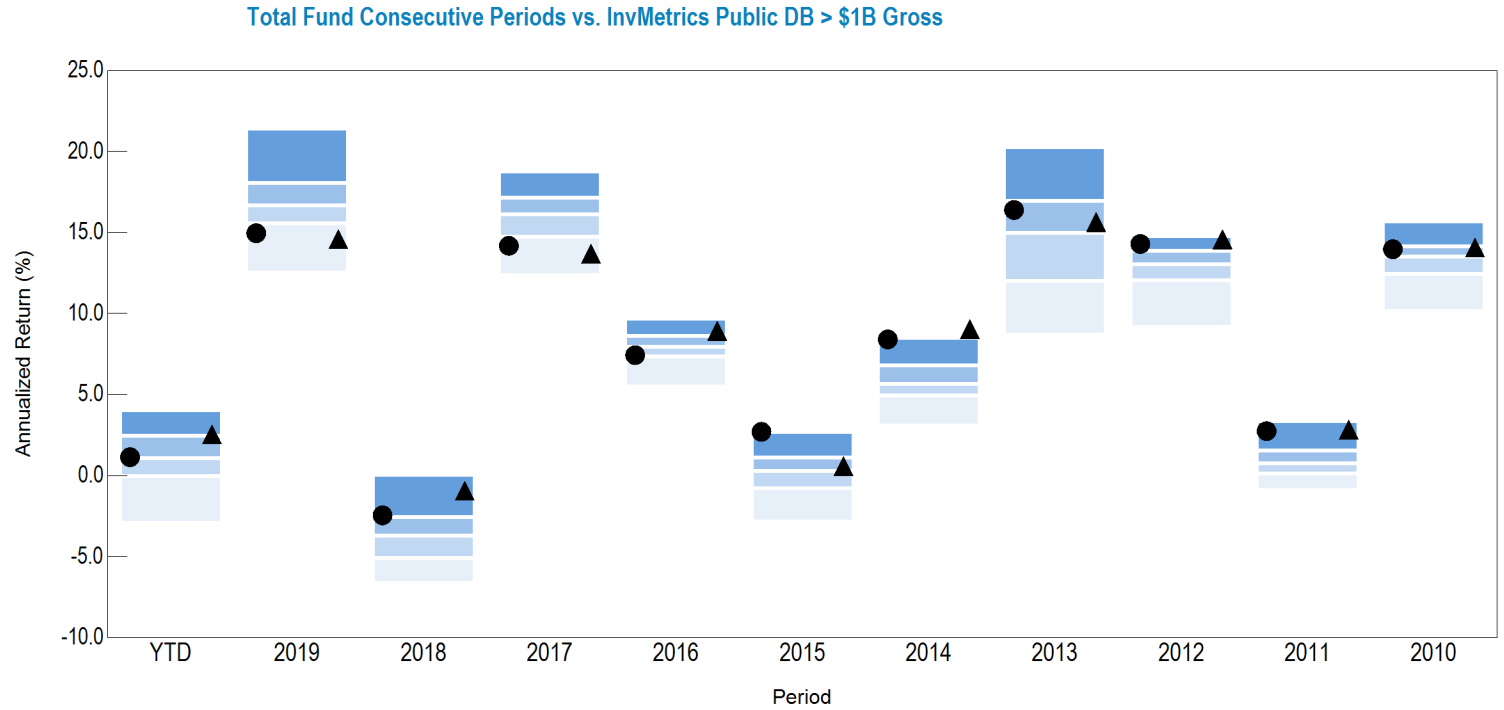


	Return (Rank)													
	Quarter		YTD		1 Year		3 Years		5 Years		7 Years		10 Years	
5th Percentile	6.1	3.4	9.6	7.3	9.4	8.0	8.9	6.1	3.4	9.6	7.3	9.4	8.0	8.9
25th Percentile	5.5	2.2	7.5	6.4	8.2	7.0	8.0	5.5	2.2	7.5	6.4	8.2	7.0	8.0
Median	4.8	0.7	5.9	5.5	7.5	6.3	7.4	4.8	0.7	5.9	5.5	7.5	6.3	7.4
75th Percentile	4.2	-0.3	4.3	4.7	7.1	6.1	6.8	4.2	-0.3	4.3	4.7	7.1	6.1	6.8
95th Percentile	3.6	-3.3	1.6	3.2	6.2	5.1	6.1	3.6	-3.3	1.6	3.2	6.2	5.1	6.1
# of Portfolios	58	58	58	58	58	57	54	58	58	58	58	57	54	
● Total Fund	3.9	(89)	0.9	(42)	5.1	(62)	5.1	(60)	7.0	(78)	6.7	(32)	7.9	(28)
▲ Policy Index	5.9	(7)	2.5	(19)	6.9	(33)	6.3	(30)	8.2	(27)	7.5	(11)	8.6	(11)

Total Fund

Peer Universe Comparison: Consecutive Periods (Gross of Fees)

Period Ending: September 30, 2020



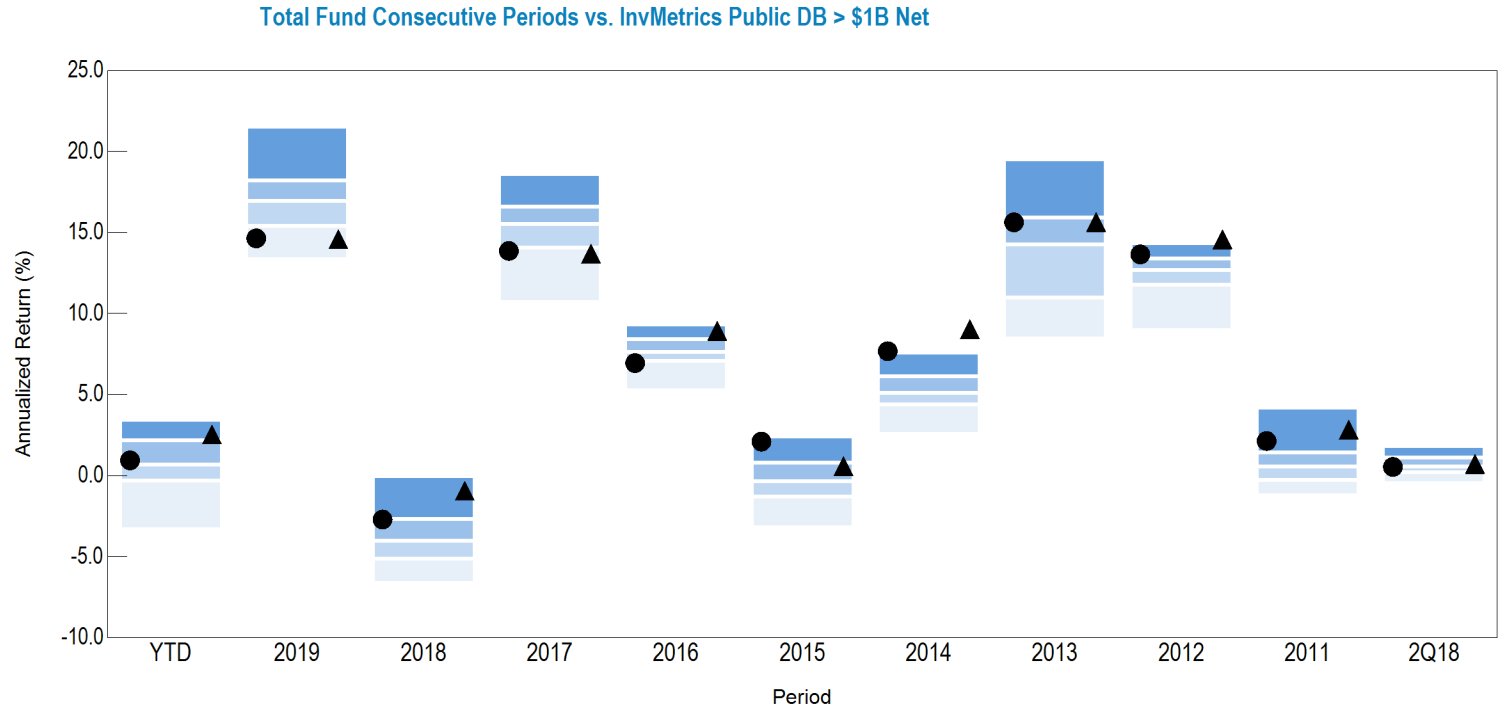
	Return (Rank)											
	YTD	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	
5th Percentile	4.0	21.4	0.0	18.8	9.7	2.7	8.5	20.2	14.7	3.3	15.7	
25th Percentile	2.5	18.1	-2.6	17.2	8.6	1.1	6.8	17.0	13.9	1.6	14.2	
Median	1.1	16.7	-3.7	16.2	8.0	0.3	5.7	15.0	13.0	0.8	13.5	
75th Percentile	0.0	15.6	-5.1	14.8	7.4	-0.7	4.9	12.0	12.1	0.1	12.5	
95th Percentile	-2.9	12.5	-6.6	12.4	5.5	-2.8	3.1	8.7	9.2	-0.9	10.2	
# of Portfolios	68	81	71	98	92	98	79	67	74	68	66	
● Total Fund	1.1 (50)	15.0 (83)	-2.5 (25)	14.2 (83)	7.4 (74)	2.7 (5)	8.4 (6)	16.4 (33)	14.3 (13)	2.7 (9)	14.0 (29)	
▲ Policy Index	2.5 (23)	14.6 (87)	-0.9 (8)	13.7 (89)	8.9 (15)	0.6 (40)	9.0 (2)	15.6 (43)	14.6 (8)	2.8 (9)	14.1 (27)	

Effective 1/01/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.

Total Fund

Peer Universe Comparison: Consecutive Periods (Net of Fees)

Period Ending: September 30, 2020

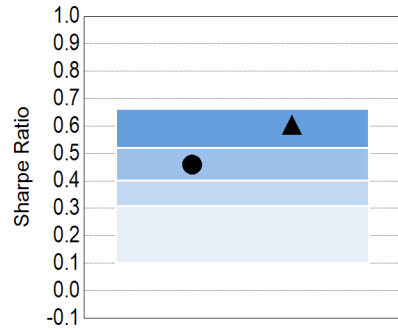


	YTD	2019	2018	2017	2016	2015	2014	2013	2012	2011	2Q18
Return (Rank)											
5th Percentile	3.4	21.5	-0.1	18.6	9.3	2.4	7.6	19.5	14.3	4.2	1.8
25th Percentile	2.2	18.2	-2.7	16.6	8.4	0.8	6.1	16.0	13.4	1.5	1.1
Median	0.7	17.0	-4.0	15.6	7.7	-0.4	5.1	14.3	12.7	0.6	0.6
75th Percentile	-0.3	15.4	-5.1	14.1	7.1	-1.3	4.4	11.0	11.8	-0.3	0.2
95th Percentile	-3.3	13.4	-6.6	10.7	5.3	-3.2	2.6	8.5	9.0	-1.2	-0.4
# of Portfolios	58	69	63	61	62	57	55	48	44	42	52
● Total Fund	0.9 (42)	14.6 (92)	-2.7 (27)	13.9 (81)	6.9 (78)	2.1 (12)	7.7 (5)	15.6 (33)	13.6 (21)	2.1 (12)	0.5 (55)
▲ Policy Index	2.5 (19)	14.6 (92)	-0.9 (8)	13.7 (85)	8.9 (13)	0.6 (29)	9.0 (2)	15.6 (33)	14.6 (1)	2.8 (11)	0.7 (45)

Total Fund
Sharpe Ratio Ranking (Gross of Fees)

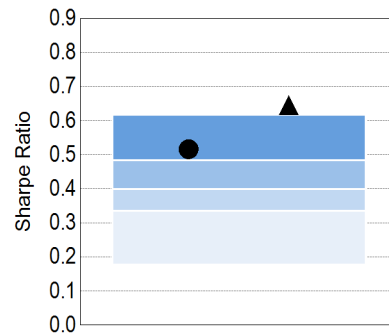
Period Ending: September 30, 2020

Sharpe Ratio
1 Year



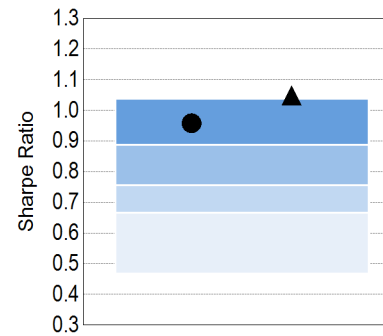
● Total Fund	
Value	0.5
Rank	38
▲ Policy Index	
Value	0.6
Rank	15
Universe	
5th %tile	0.7
25th %tile	0.5
Median	0.4
75th %tile	0.3
95th %tile	0.1

Sharpe Ratio
3 Year



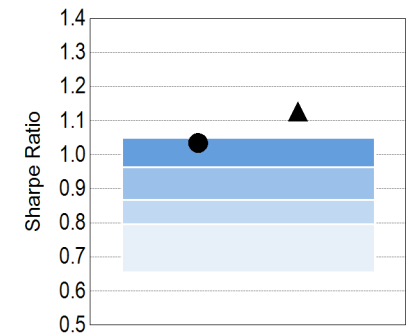
● Total Fund	
Value	0.5
Rank	24
▲ Policy Index	
Value	0.6
Rank	3
Universe	
5th %tile	0.6
25th %tile	0.5
Median	0.4
75th %tile	0.3
95th %tile	0.2

Sharpe Ratio
5 Year



● Total Fund	
Value	1.0
Rank	12
▲ Policy Index	
Value	1.0
Rank	4
Universe	
5th %tile	1.0
25th %tile	0.9
Median	0.8
75th %tile	0.7
95th %tile	0.5

Sharpe Ratio
10 Year



● Total Fund	
Value	1.0
Rank	8
▲ Policy Index	
Value	1.1
Rank	2
Universe	
5th %tile	1.1
25th %tile	1.0
Median	0.9
75th %tile	0.8
95th %tile	0.7

Domestic Equity Managers

Jackson Square Partners Manager Portfolio Overview

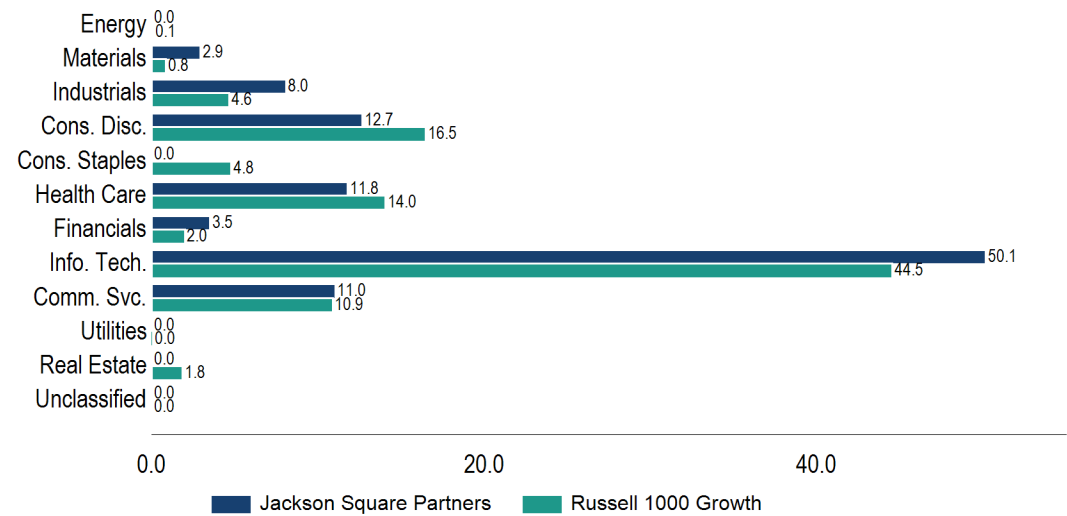
Period Ending: September 30, 2020

Domestic equity large cap growth portfolio concentrated in companies with sustainable long-term growth characteristics. Primary personnel include Jeffrey Van Harte, Christopher Bonavico, Christopher Ericksen, and Daniel Prislín.

Characteristics

	Portfolio	Russell 1000 Growth
Number of Holdings	27	447
Weighted Avg. Market Cap. (\$B)	380.19	652.32
Median Market Cap. (\$B)	73.49	13.78
Price To Earnings	52.06	33.38
Price To Book	10.35	9.62
Price To Sales	6.69	4.24
Return on Equity (%)	8.87	6.47
Yield (%)	0.38	0.84
Beta	0.91	1.00

Sector Allocation (%) vs Russell 1000 Growth



Largest Holdings

	End Weight	Return
MICROSOFT CORP	8.80	3.60
AMAZON.COM INC	6.58	14.13
VISA INC	5.93	3.68
CHARTER COMMUNICATIONS INC	4.79	22.41
UBER TECHNOLOGIES INC	4.78	17.38
MASTERCARD INC	4.75	14.52
SERVICENOW INC	4.63	19.74
PAYPAL HOLDINGS INC	4.45	13.09
TWILIO INC	4.40	12.61
NIKE INC	3.71	28.32

Top Contributors

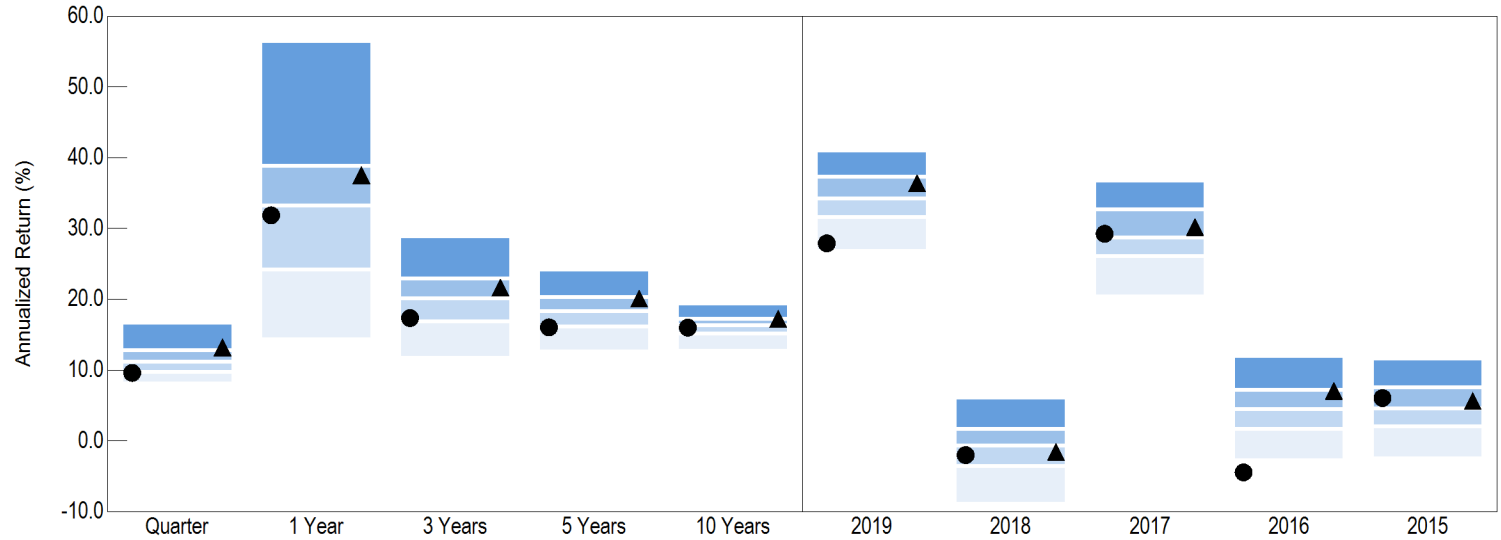
	Avg Wgt	Return	Contribution
CHARTER COMMUNICATIONS INC	1.46	22.41	0.33
AMAZON.COM INC	2.15	14.13	0.30
NIKE INC	1.06	28.32	0.30
SERVICENOW INC	1.44	19.74	0.28
BALL CORP	1.20	19.84	0.24
INTUITIVE SURGICAL INC	0.96	24.52	0.23
UBER TECHNOLOGIES INC	1.27	17.38	0.22
MASTERCARD INC	1.52	14.52	0.22
PAYPAL HOLDINGS INC	1.58	13.09	0.21
IQVIA HOLDINGS INC	1.29	11.10	0.14

Bottom Contributors

	Avg Wgt	Return	Contribution
ILLUMINA INC	1.11	-16.54	-0.18
AUTODESK INC.	1.22	-3.42	-0.04
COUPA SOFTWARE INC	1.09	-1.01	-0.01
PAYCOM SOFTWARE INC	0.80	0.51	0.00
CME GROUP INC	0.32	3.45	0.01
ALPHABET INC	1.30	3.35	0.04
VISA INC	1.78	3.68	0.07
UNITEDHEALTH GROUP INC	1.13	6.14	0.07
WASTE MANAGEMENT INC.	1.12	7.38	0.08
ADOBE INC	0.80	12.66	0.10

Unclassified sector allocation includes cash allocations.

Jackson Square Partners vs. eV US Large Cap Growth Equity Gross Universe

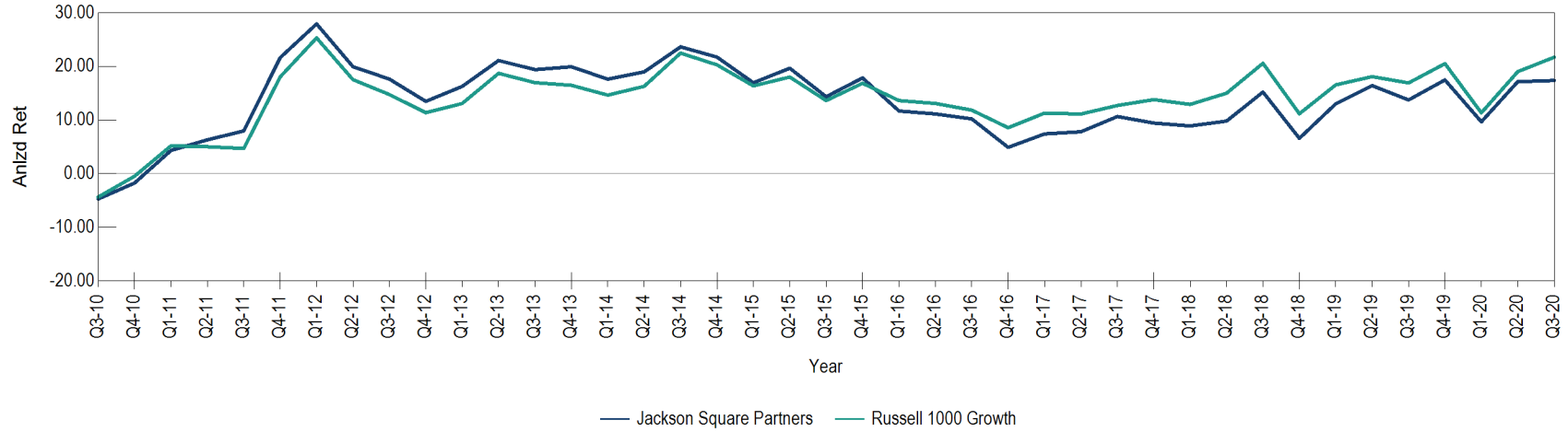


	Return (Rank)										
	Quarter	1 Year	3 Years	5 Years	10 Years	2019	2018	2017	2016	2015	
5th Percentile	16.7	56.5	28.8	24.1	19.4	41.0	6.1	36.7	12.0	11.6	
25th Percentile	12.9	38.9	22.9	20.3	17.3	37.3	1.7	32.7	7.3	7.6	
Median	11.2	33.3	20.2	18.4	16.4	34.2	-0.6	28.8	4.6	4.7	
75th Percentile	9.8	24.3	16.9	16.2	15.2	31.7	-3.5	26.2	1.8	2.1	
95th Percentile	8.1	14.4	11.8	12.7	12.8	26.9	-8.8	20.5	-2.7	-2.4	
# of Portfolios	248	248	242	228	206	253	255	265	282	270	
● Jackson Square Partners	9.6 (79)	31.9 (59)	17.4 (71)	16.0 (78)	16.0 (59)	27.9 (93)	-2.0 (59)	29.3 (47)	-4.4 (98)	6.1 (37)	
▲ Russell 1000 Growth	13.2 (22)	37.5 (30)	21.7 (39)	20.1 (27)	17.3 (27)	36.4 (32)	-1.5 (57)	30.2 (42)	7.1 (26)	5.7 (42)	

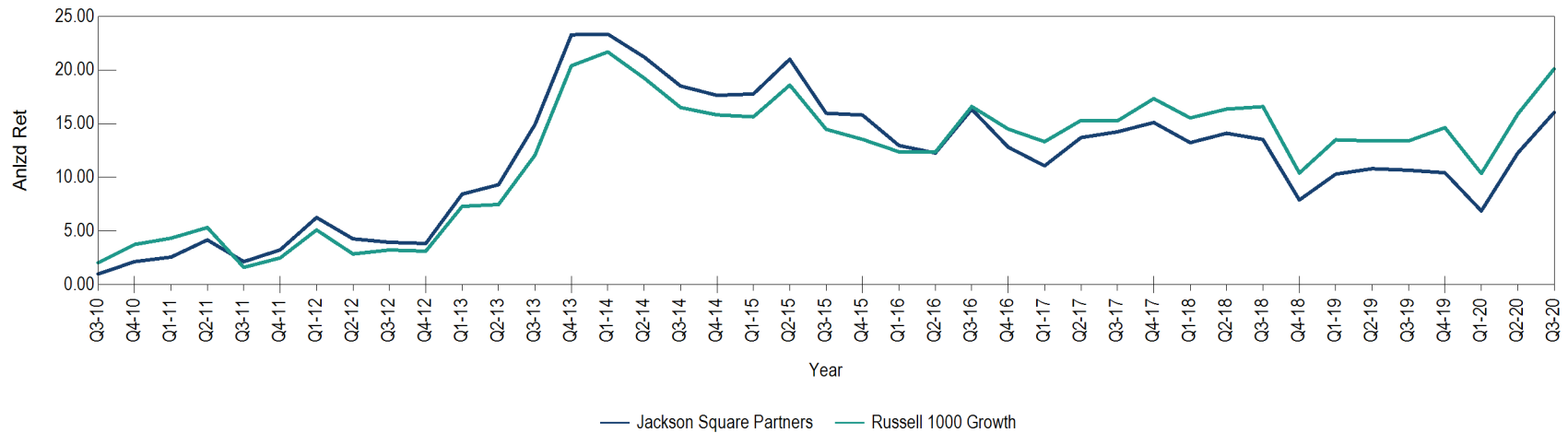
Jackson Square Partners
 Manager Performance - Rolling 3 & 5 Year (Gross of Fees)

Period Ending: September 30, 2020

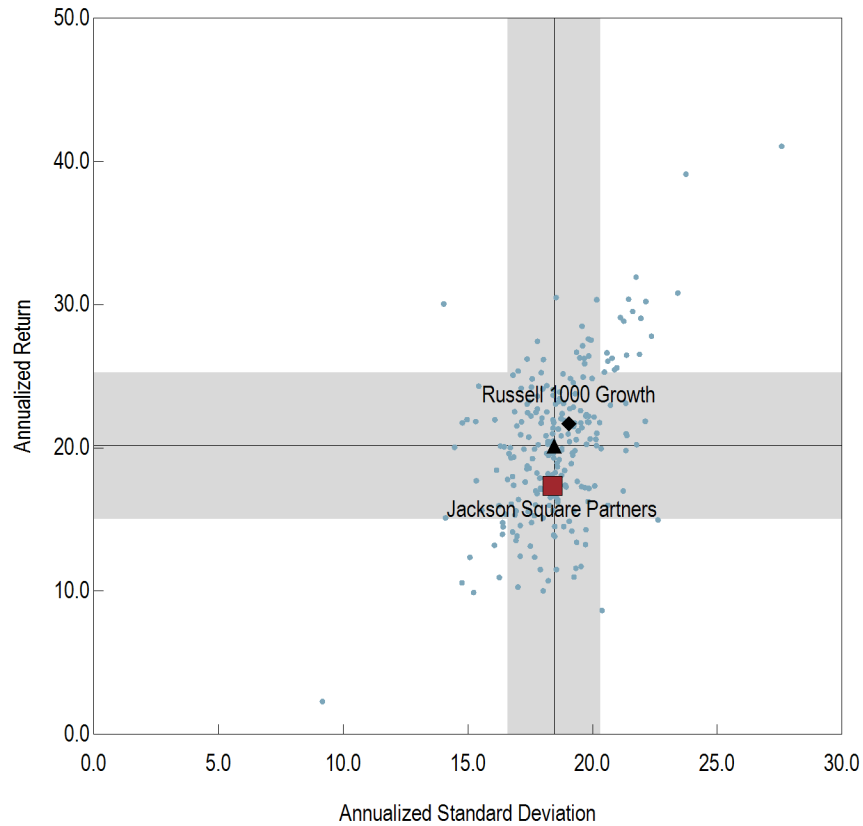
Rolling 3 Year Annualized Return (%)



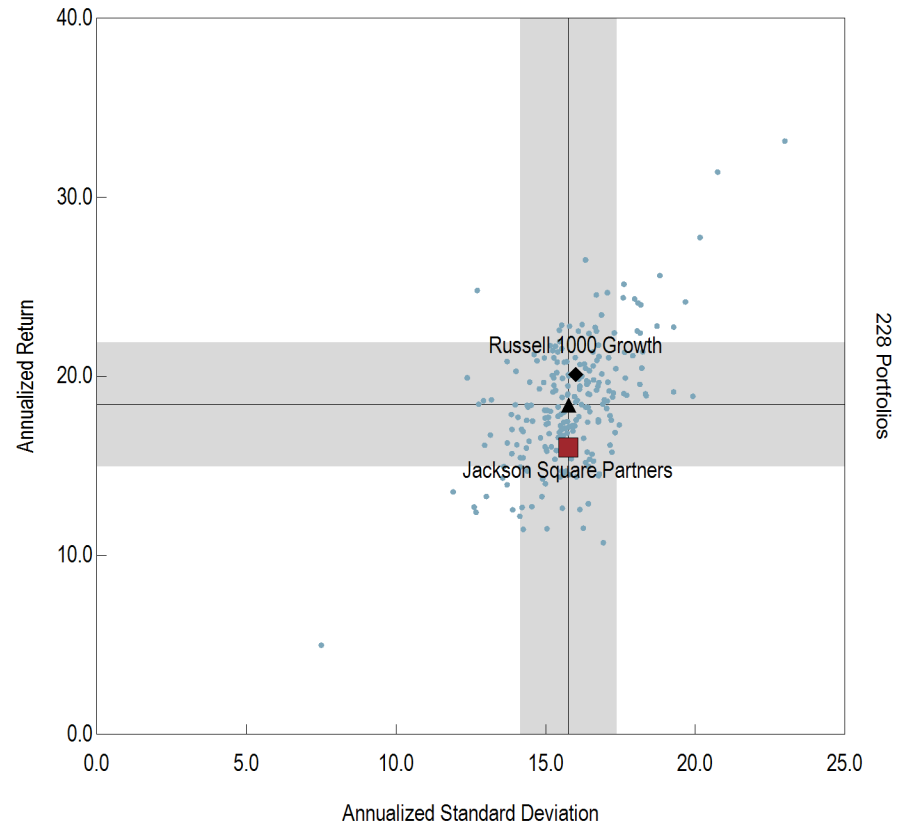
Rolling 5 Year Annualized Return (%)



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Jackson Square Partners	17.4%	18.4%	0.9
Russell 1000 Growth	21.7%	19.0%	1.1
eV US Large Cap Growth Equity Gross Median	20.2%	18.5%	1.0

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Jackson Square Partners	16.0%	15.8%	0.9
Russell 1000 Growth	20.1%	16.0%	1.2
eV US Large Cap Growth Equity Gross Median	18.4%	15.8%	1.1

Boston Partners Manager Portfolio Overview

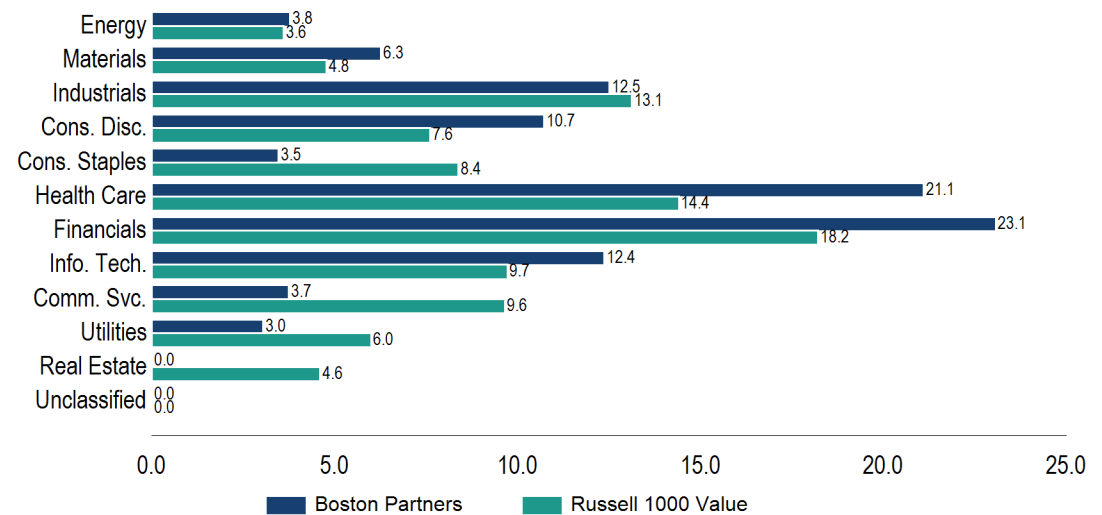
Period Ending: September 30, 2020

Domestic equity large cap value portfolio exhibiting low turnover in companies with low valuations relative to intrinsic value. Primary personnel include Mark Donovan and David Pyle.

Characteristics

	Portfolio	Russell 1000 Value
Number of Holdings	89	850
Weighted Avg. Market Cap. (\$B)	124.67	115.36
Median Market Cap. (\$B)	28.81	9.09
Price To Earnings	16.96	18.71
Price To Book	2.75	2.63
Price To Sales	1.16	1.66
Return on Equity (%)	1.86	1.65
Yield (%)	2.10	2.46
Beta	1.07	1.00

Sector Allocation (%) vs Russell 1000 Value



Largest Holdings

	End Weight	Return
JPMORGAN CHASE & CO	3.88	3.34
JOHNSON & JOHNSON	3.81	6.57
BERKSHIRE HATHAWAY INC	3.76	19.29
BANK OF AMERICA CORP	2.56	2.14
CISCO SYSTEMS INC	2.47	-14.88
PFIZER INC	2.45	13.33
CIGNA CORP	2.34	-9.72
AUTOZONE INC	2.11	4.39
EATON CORP PLC	1.96	17.47
ANTHEM INC	1.93	2.50

Top Contributors

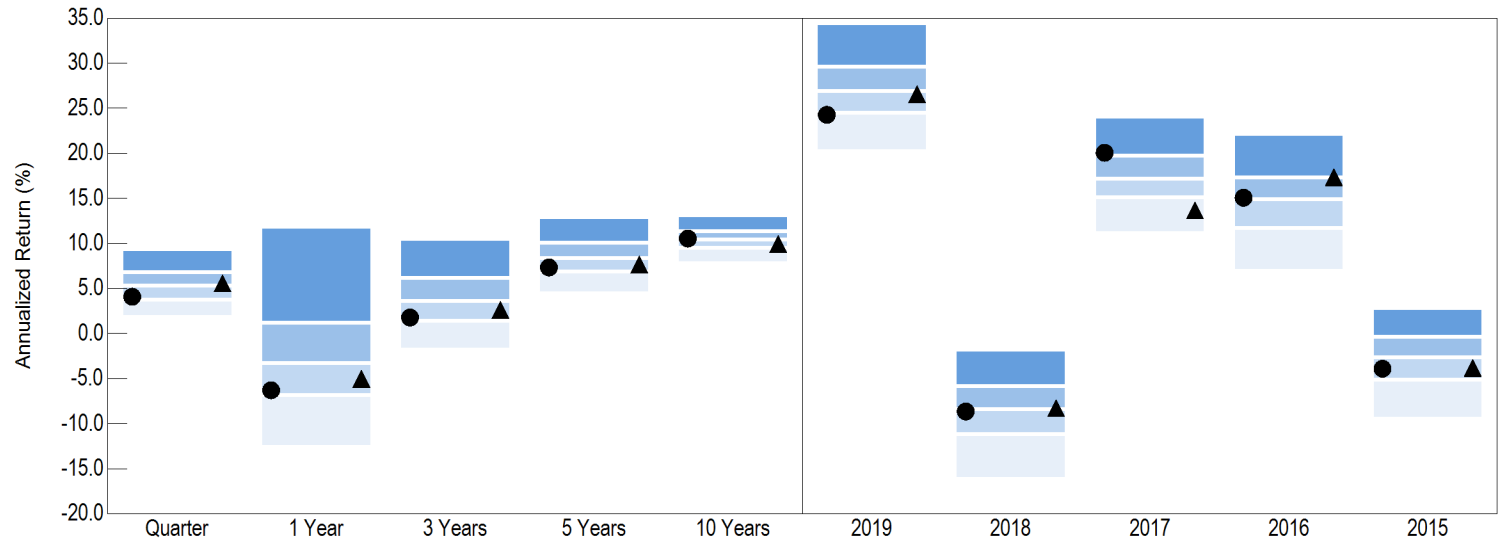
	Avg Wgt	Return	Contribution
BERKSHIRE HATHAWAY INC	1.14	19.29	0.22
BEST BUY CO INC	0.48	28.18	0.13
DEERE & CO	0.31	41.52	0.13
PROGRESSIVE CORP (THE)	0.55	18.32	0.10
EATON CORP PLC	0.57	17.47	0.10
PFIZER INC	0.74	13.33	0.10
LENNAR CORP	0.25	32.82	0.08
OWENS CORNING	0.33	23.91	0.08
MEDTRONIC PLC	0.47	13.98	0.07
LOWE'S COS INC	0.28	23.22	0.06

Bottom Contributors

	Avg Wgt	Return	Contribution
CISCO SYSTEMS INC	0.99	-14.88	-0.15
MARATHON PETROLEUM CORP	0.46	-20.29	-0.09
CIGNA CORP	0.88	-9.72	-0.09
VALERO ENERGY CORP	0.32	-25.01	-0.08
CONOCOPHILLIPS	0.36	-21.03	-0.08
CITIGROUP INC	0.38	-14.78	-0.06
AMERICAN INTERNATIONAL GROUP INC	0.50	-10.76	-0.05
CHUBB LTD	0.69	-7.68	-0.05
MICRON TECHNOLOGY INC.	0.50	-8.85	-0.04

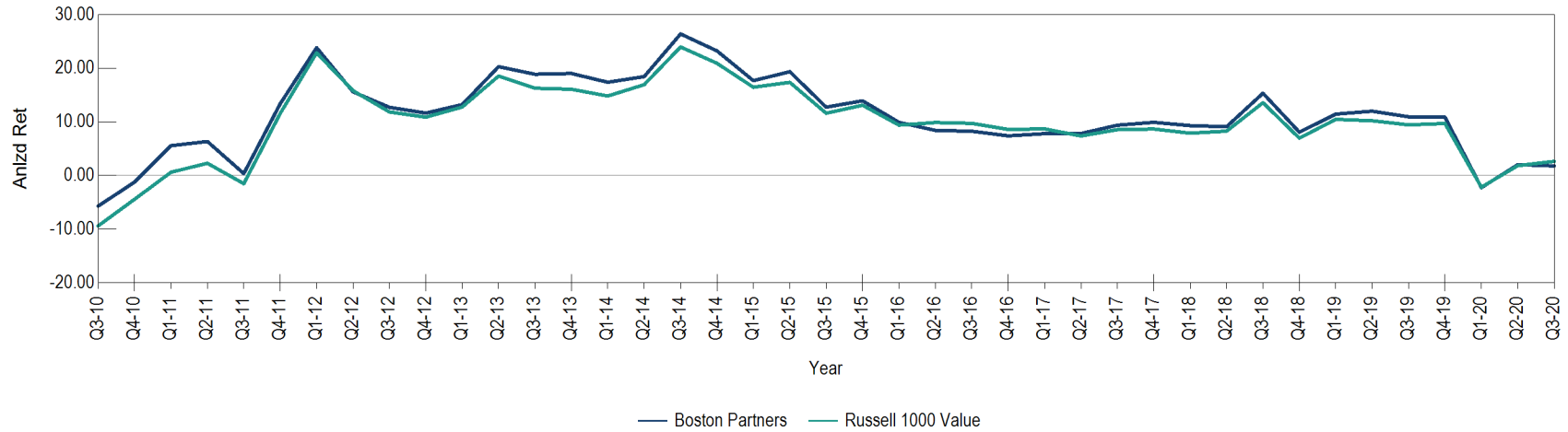
Unclassified sector allocation includes cash allocations.

Boston Partners vs. eV US Large Cap Value Equity Gross Universe

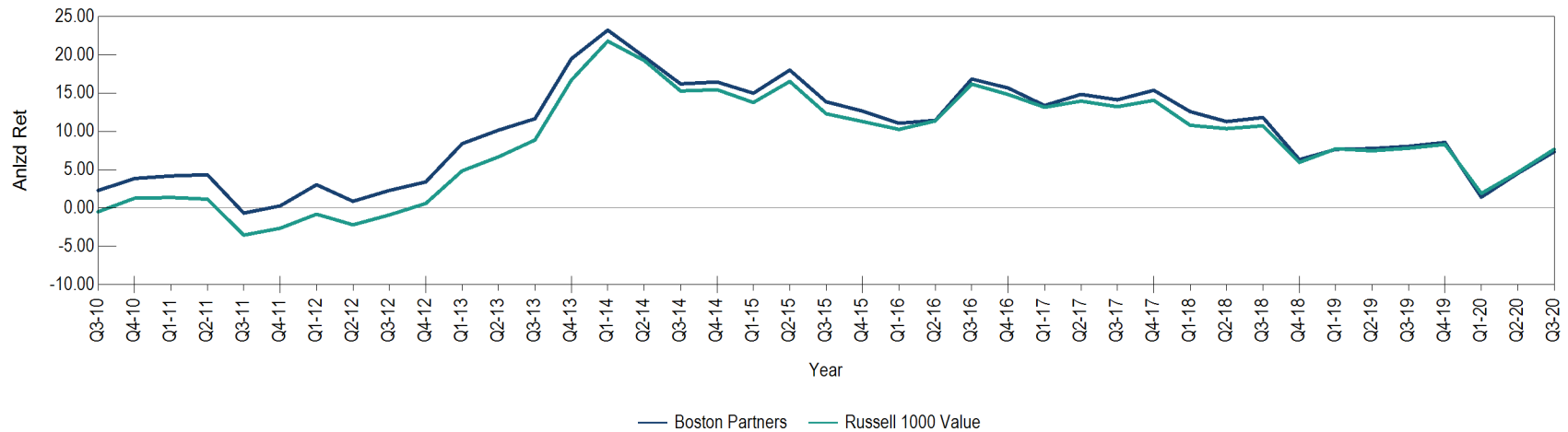


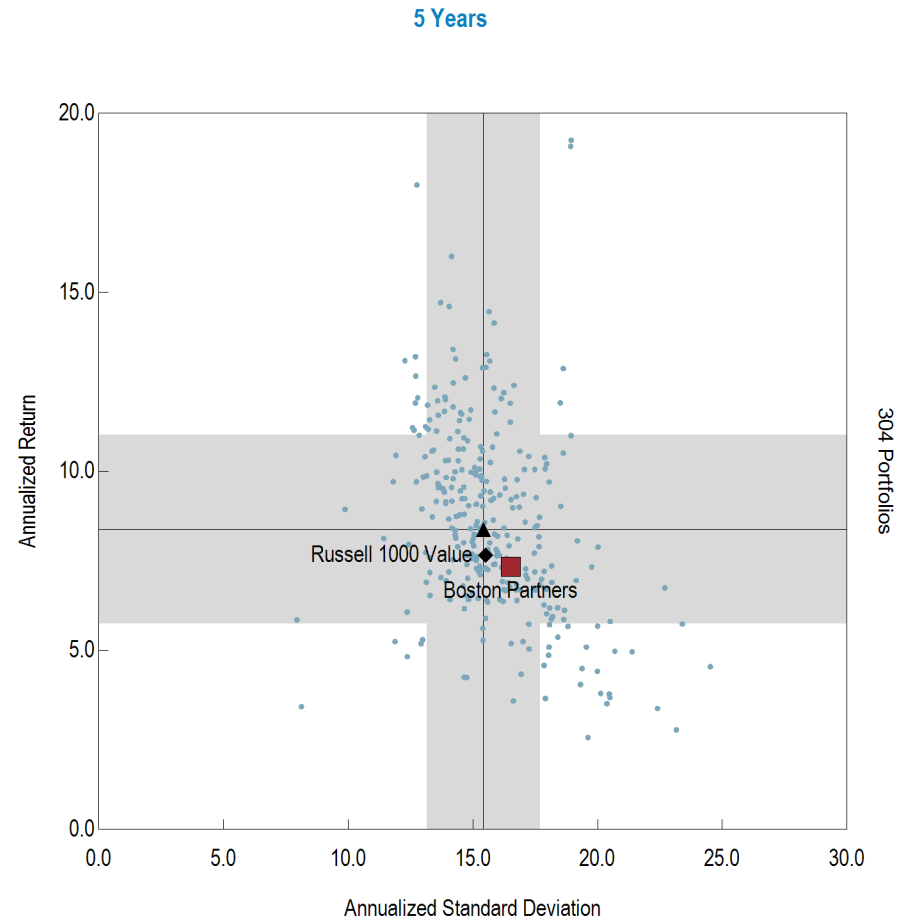
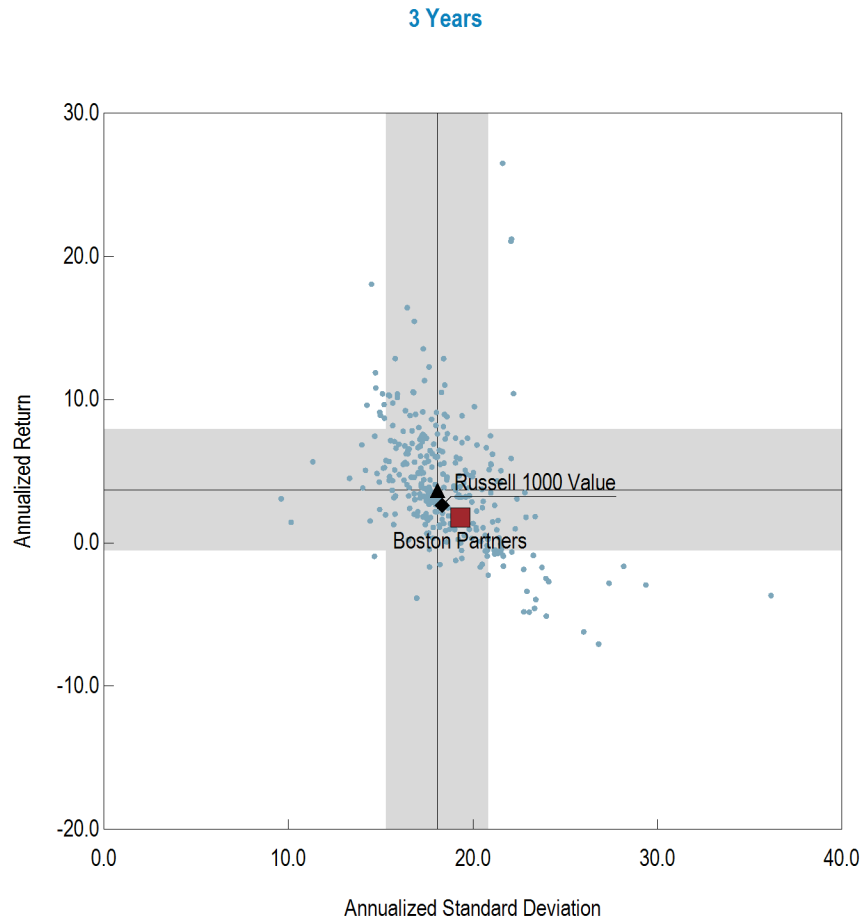
	Quarter	1 Year	3 Years	5 Years	10 Years	2019	2018	2017	2016	2015
5th Percentile	9.3	11.8	10.5	12.9	13.1	34.4	-1.8	24.0	22.1	2.8
25th Percentile	6.9	1.2	6.2	10.1	11.4	29.6	-5.8	19.8	17.4	-0.4
Median	5.3	-3.3	3.7	8.4	10.5	26.9	-8.3	17.2	15.0	-2.6
75th Percentile	3.8	-6.8	1.5	6.9	9.5	24.5	-11.1	15.1	11.8	-5.1
95th Percentile	1.9	-12.5	-1.7	4.5	7.8	20.3	-16.1	11.2	7.0	-9.4
# of Portfolios	321	321	315	304	260	331	336	342	346	312
● Boston Partners	4.1 (71)	-6.3 (73)	1.8 (73)	7.3 (67)	10.5 (48)	24.3 (77)	-8.7 (55)	20.1 (23)	15.1 (50)	-3.9 (65)
▲ Russell 1000 Value	5.6 (44)	-5.0 (67)	2.6 (66)	7.7 (62)	9.9 (66)	26.5 (54)	-8.3 (50)	13.7 (87)	17.3 (26)	-3.8 (64)

Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)





3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Boston Partners	1.8%	19.3%	0.0
Russell 1000 Value	2.6%	18.3%	0.1
eV US Large Cap Value Equity Gross Median	3.7%	18.1%	0.1

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Boston Partners	7.3%	16.5%	0.4
Russell 1000 Value	7.7%	15.5%	0.4
eV US Large Cap Value Equity Gross Median	8.4%	15.4%	0.5

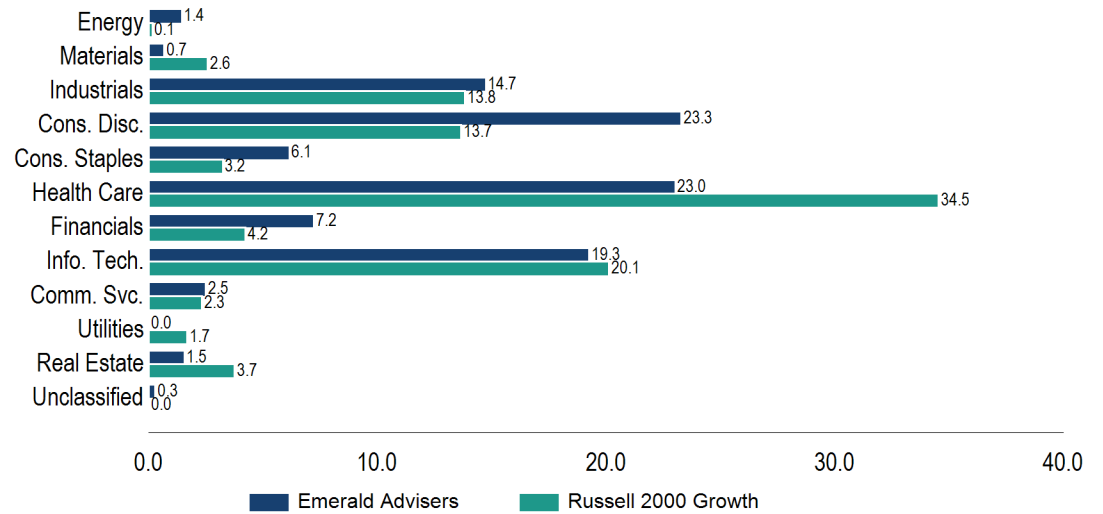
Emerald Advisers Manager Portfolio Overview

Period Ending: September 30, 2020

Domestic equity small cap growth portfolio of companies with significantly high growth rates. Primary personnel include Kenneth Mertz, Joseph Garner, and Stacey Sears.

Characteristics

	Portfolio	Russell 2000 Growth
Number of Holdings	119	1,099
Weighted Avg. Market Cap. (\$B)	3.53	2.96
Median Market Cap. (\$B)	2.39	0.90
Price To Earnings	30.58	25.87
Price To Book	4.47	4.66
Price To Sales	2.51	2.23
Return on Equity (%)	-1.49	-1.59
Yield (%)	0.40	0.49
Beta	1.05	1.00



Largest Holdings

	End Weight	Return
FRESHPET INC	3.04	33.46
CHEGG INC	2.63	6.22
CHURCHILL DOWNS INC	2.19	23.03
NEOGENOMICS INC	2.17	19.08
VARONIS SYSTEMS INC	2.12	30.45
PALOMAR HOLDINGS INC	1.95	21.55
MERITAGE HOMES CORP	1.92	45.02
HORIZON THERAPEUTICS PUBLIC LTD CO	1.88	39.76
RAPID7 INC	1.86	20.03
KRATOS DEFENSE & SECURITY SOLUTIONS INC	1.85	23.35

Top Contributors

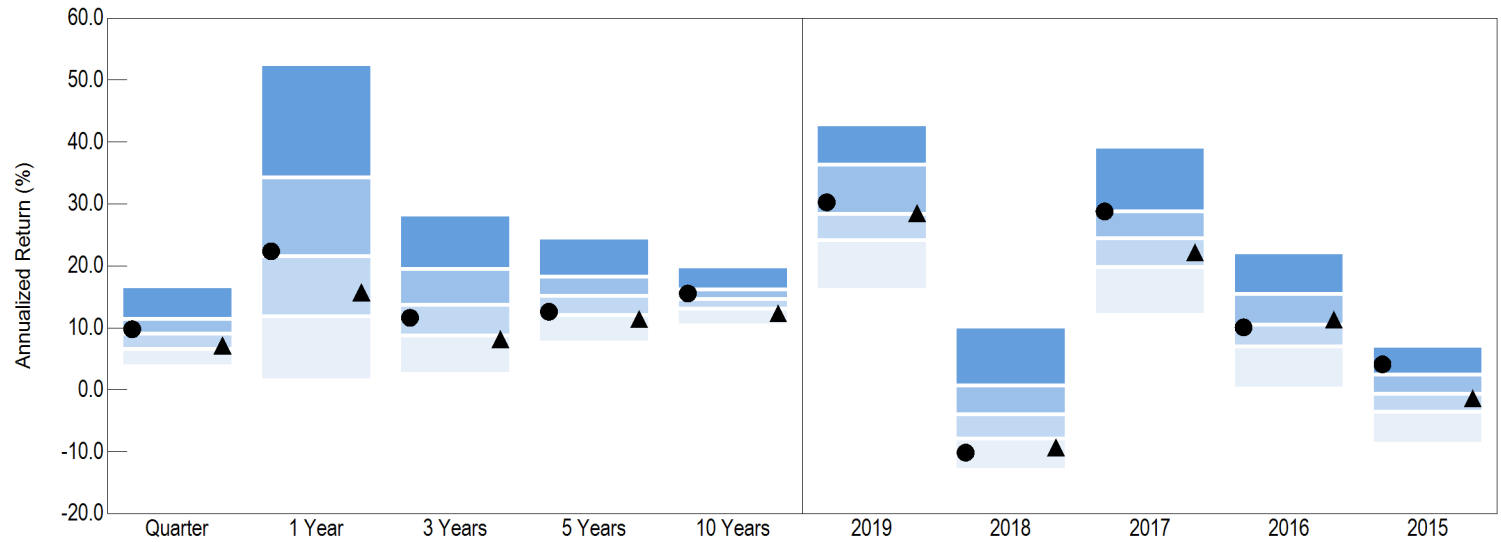
	Avg Wgt	Return	Contribution
NEW FORTRESS ENERGY INC	0.14	239.58	0.34
FRESHPET INC	0.93	33.46	0.31
HORIZON THERAPEUTICS PUBLIC LTD CO	0.66	39.76	0.26
BOSTON BEER CO INC. (THE)	0.36	64.60	0.23
TWIST BIOSCIENCE CORP	0.32	67.70	0.22
MERITAGE HOMES CORP	0.48	45.02	0.22
VARONIS SYSTEMS INC	0.57	30.45	0.17
TOPBUILD CORP	0.34	50.03	0.17

Bottom Contributors

	Avg Wgt	Return	Contribution
EVERQUOTE INC	0.28	-33.56	-0.09
TABULA RASA HEALTHCARE INC	0.35	-25.51	-0.09
APPLIED THERAPEUTICS INC	0.21	-42.57	-0.09
ZOGENIX INC	0.26	-33.62	-0.09
COGENT COMMUNICATIONS HOLDINGS INC	0.40	-21.56	-0.09
GLU MOBILE INC	0.46	-17.21	-0.08
KARYOPHARM THERAPEUTICS INC	0.34	-22.92	-0.08
PASSAGE BIO INC	0.14	-52.03	-0.07

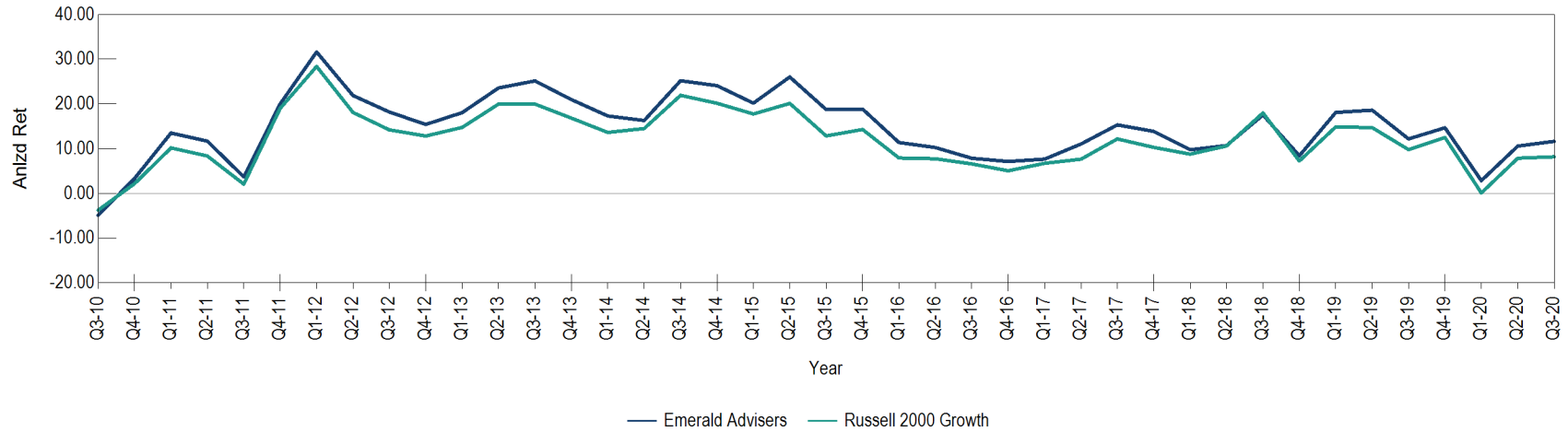
Unclassified sector allocation includes cash allocations.

Emerald Advisers vs. eV US Small Cap Growth Equity Gross Universe

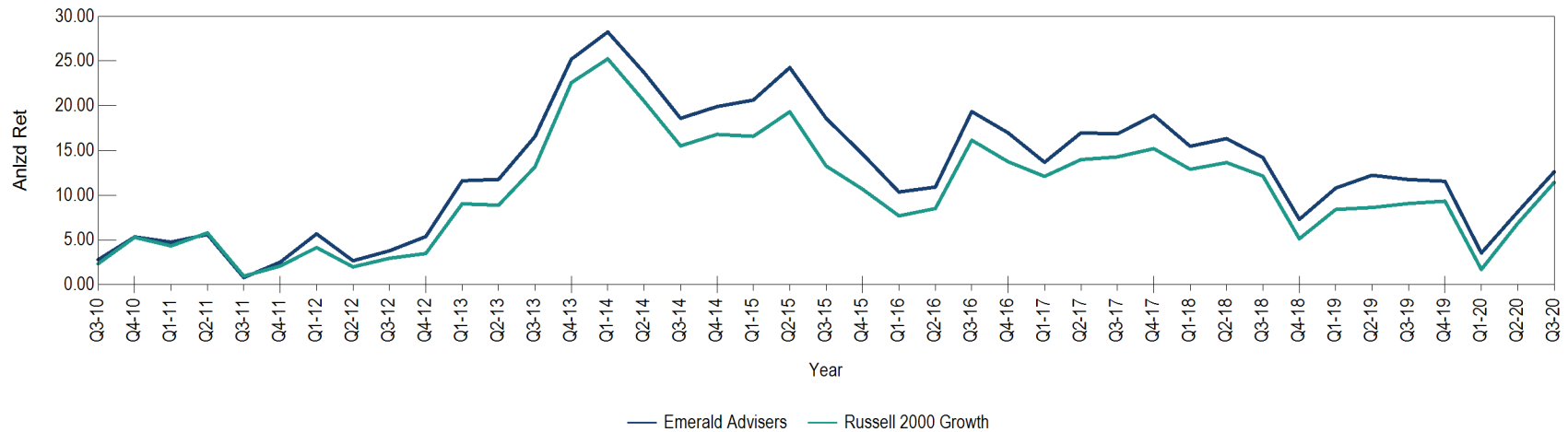


	Quarter	1 Year	3 Years	5 Years	10 Years	2019	2018	2017	2016	2015
5th Percentile	16.6	52.5	28.3	24.5	19.9	42.8	10.2	39.2	22.2	7.1
25th Percentile	11.5	34.3	19.6	18.3	16.3	36.4	0.7	28.9	15.5	2.5
Median	9.1	21.7	13.7	15.2	14.8	28.5	-3.9	24.6	10.6	-0.6
75th Percentile	6.6	11.9	8.8	12.1	13.2	24.2	-7.9	19.8	7.1	-3.5
95th Percentile	3.8	1.6	2.7	7.7	10.5	16.2	-12.8	12.1	0.2	-8.7
# of Portfolios	152	152	152	146	134	157	164	174	170	154
● Emerald Advisers	9.8 (40)	22.4 (50)	11.6 (63)	12.6 (70)	15.6 (37)	30.3 (45)	-10.1 (85)	28.8 (26)	10.1 (54)	4.1 (19)
▲ Russell 2000 Growth	7.2 (68)	15.7 (66)	8.2 (78)	11.4 (79)	12.3 (89)	28.5 (51)	-9.3 (80)	22.2 (62)	11.3 (49)	-1.4 (59)

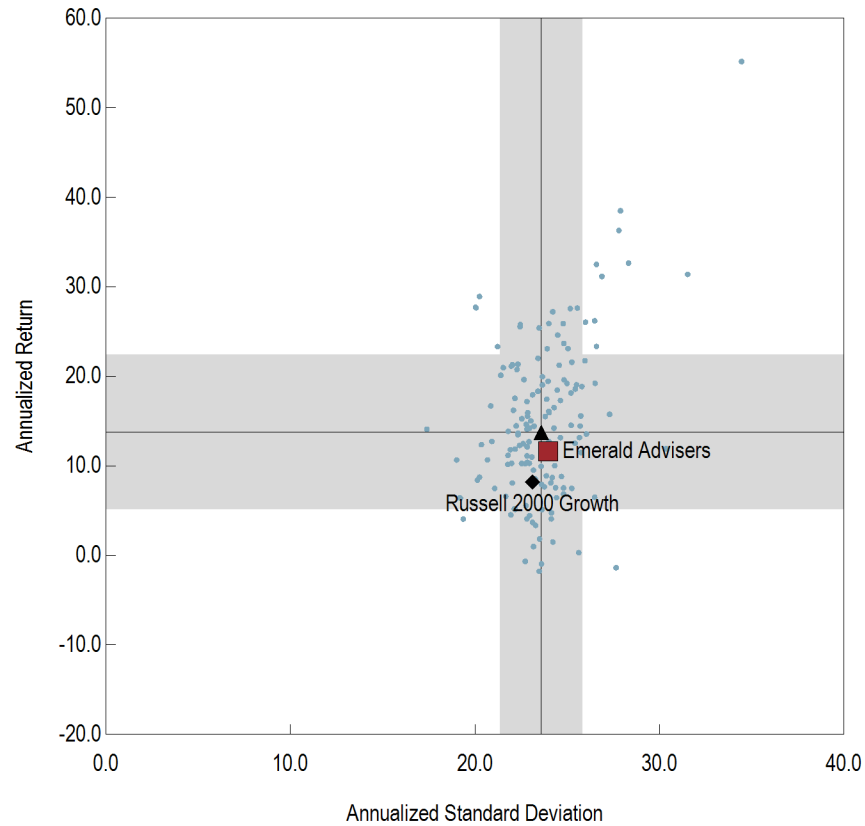
Rolling 3 Year Annualized Return (%)



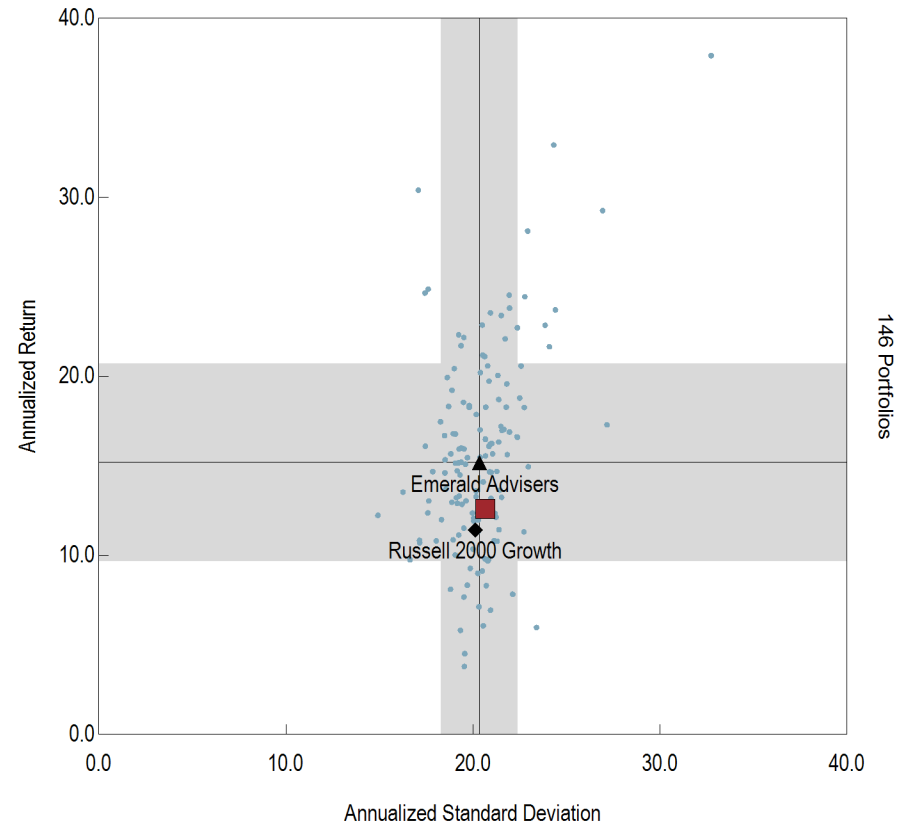
Rolling 5 Year Annualized Return (%)



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Emerald Advisers	11.6%	24.0%	0.4
Russell 2000 Growth	8.2%	23.1%	0.3
eV US Small Cap Growth Equity Gross Median	13.7%	23.6%	0.5

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Emerald Advisers	12.6%	20.7%	0.6
Russell 2000 Growth	11.4%	20.1%	0.5
eV US Small Cap Growth Equity Gross Median	15.2%	20.4%	0.7

Ceredex Manager Portfolio Overview

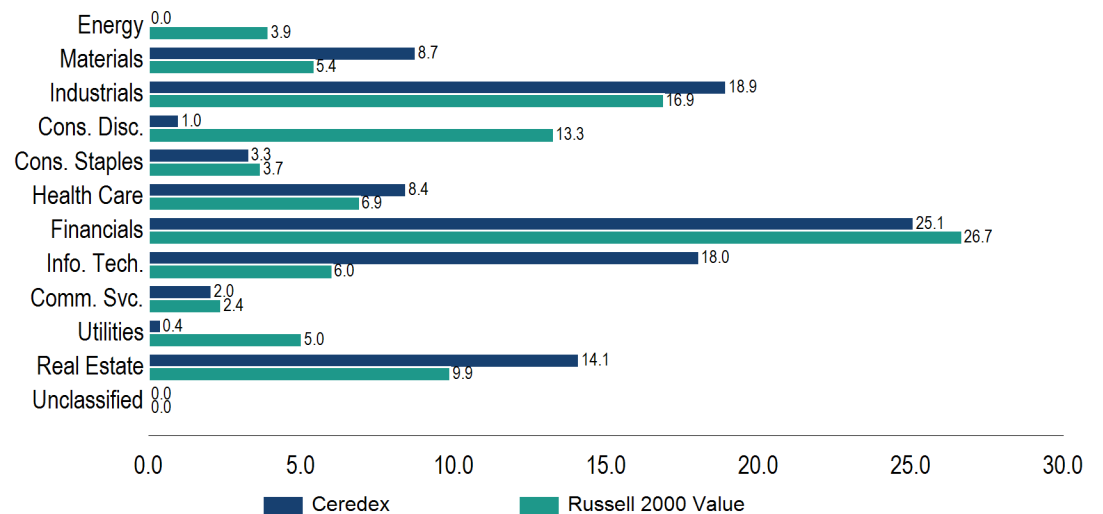
Period Ending: September 30, 2020

Domestic equity small cap value portfolio of companies with dividend yields and low valuations. Primary personnel include Brett Barner and David Maynard.

Characteristics

	Portfolio	Russell 2000 Value
Number of Holdings	51	1,459
Weighted Avg. Market Cap. (\$B)	4.85	1.89
Median Market Cap. (\$B)	4.03	0.55
Price To Earnings	18.67	13.91
Price To Book	2.10	1.75
Price To Sales	1.63	0.74
Return on Equity (%)	4.32	-0.20
Yield (%)	2.48	2.23
Beta	0.92	1.00

Sector Allocation (%) vs Russell 2000 Value



Largest Holdings

	End Weight	Return
QUANTA SERVICES INC.	5.14	34.87
PHYSICIANS REALTY TRUST	4.67	3.56
HEALTHCARE TRUST OF AMERICA INC	4.45	-0.82
POWER INTEGRATIONS INC	4.34	-6.02
APTARGROUP INC.	4.33	1.40
KEMPER CORP	4.25	-7.51
PENTAIR PLC	4.18	21.02
FIRST AMERICAN FINANCIAL CORP	4.16	6.91
SLM CORP	3.85	15.53
HILL-ROM HOLDINGS INC	3.84	-23.73

Top Contributors

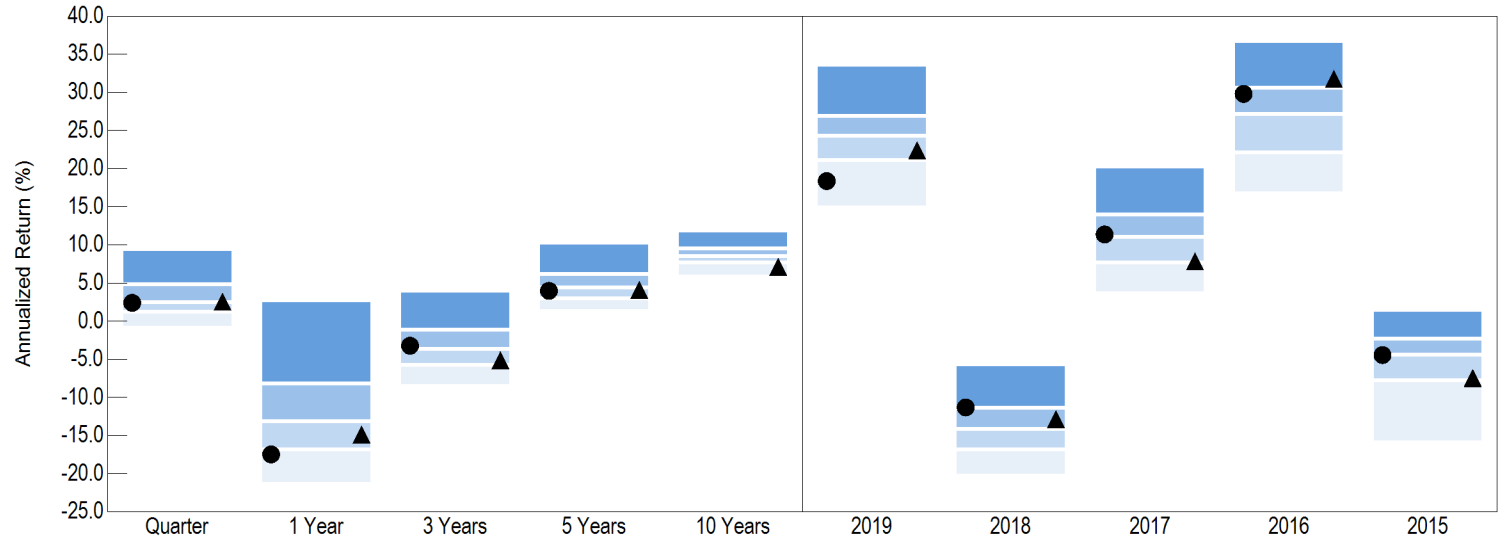
	Avg Wgt	Return	Contribution
QUANTA SERVICES INC.	1.49	34.87	0.52
PENTAIR PLC	1.21	21.02	0.26
RITCHIE BROS AUCTIONEERS INC	0.42	45.57	0.19
MONOLITHIC POWER SYSTEMS INC	0.89	18.19	0.16
SLM CORP	0.97	15.53	0.15
ENTEGRIS INC	0.38	26.04	0.10
FIRST AMERICAN FINANCIAL CORP	1.31	6.91	0.09
EVERCORE INC	0.75	12.13	0.09
TETRA TECH INC	0.38	20.92	0.08
PERKINELMER INC.	0.28	28.04	0.08

Bottom Contributors

	Avg Wgt	Return	Contribution
HILL-ROM HOLDINGS INC	1.61	-23.73	-0.38
GRACE (W R) & CO	0.82	-20.15	-0.17
KEMPER CORP	1.64	-7.51	-0.12
FIRST HAWAIIAN INC	0.76	-14.72	-0.11
POWER INTEGRATIONS INC	1.64	-6.02	-0.10
BANK OF HAWAII CORP	0.57	-16.75	-0.10
FLIR SYSTEMS INC	0.77	-11.22	-0.09
CATHAY GENERAL BANCORP	0.32	-16.53	-0.05
ENERGIZER HOLDINGS INC	0.29	-17.05	-0.05
REYNOLDS CONSUMER PRODUCTS INC	0.43	-11.27	-0.05

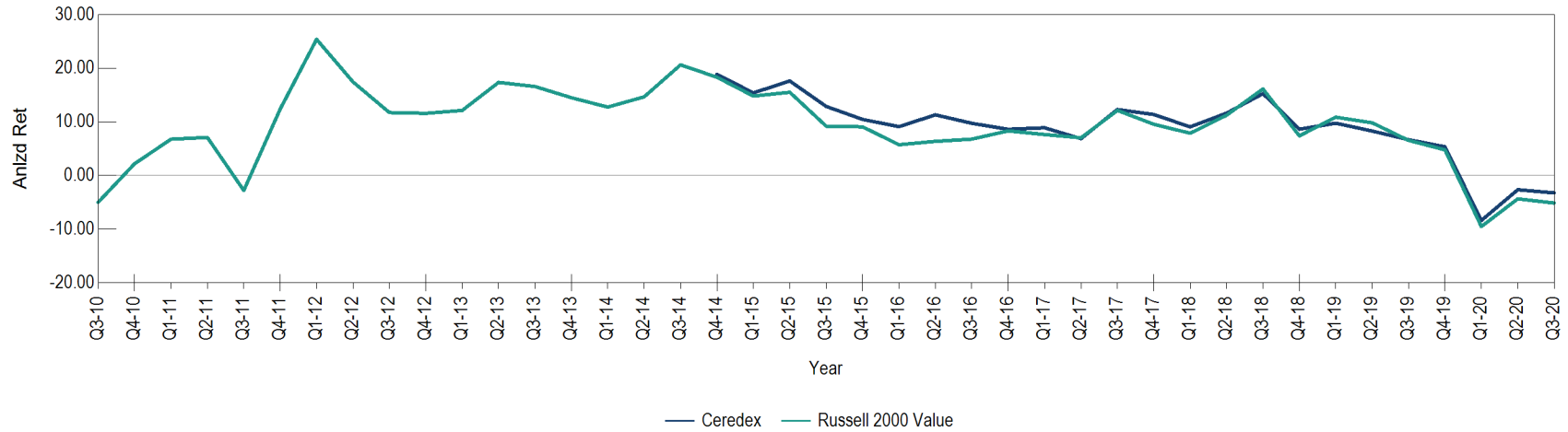
Unclassified sector allocation includes cash allocations.

Ceredex vs. eV US Small Cap Value Equity Gross Universe

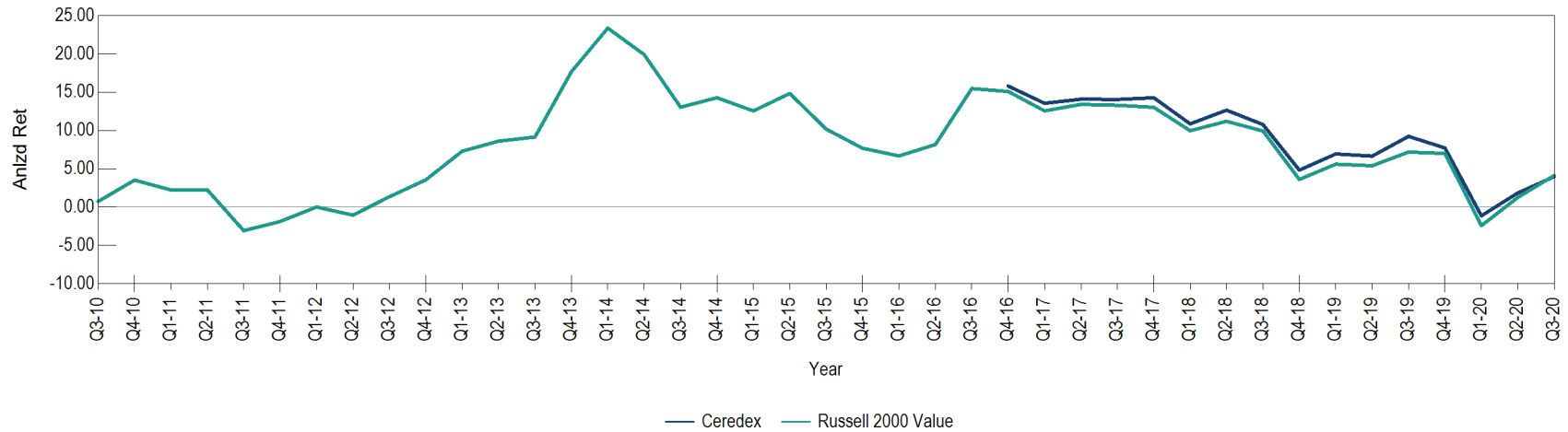


	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2019	2018	2017	2016	2015
5th Percentile	9.4	2.7	4.0	10.3	11.8	33.6	-5.7	20.2	36.7	1.5
25th Percentile	4.9	-8.2	-1.1	6.2	9.6	27.0	-11.4	14.1	30.7	-2.2
Median	2.5	-13.1	-3.6	4.5	8.6	24.4	-14.0	11.1	27.2	-4.3
75th Percentile	1.3	-16.8	-5.7	3.0	7.8	21.2	-16.7	7.8	22.2	-7.7
95th Percentile	-0.8	-21.3	-8.5	1.4	5.9	15.0	-20.2	3.7	16.8	-15.8
# of Portfolios	220	220	213	207	185	217	220	224	222	212
● Ceredex	2.4 (54)	-17.5 (79)	-3.2 (46)	4.0 (63)	-- (--)	18.4 (87)	-11.3 (25)	11.4 (48)	29.8 (32)	-4.4 (52)
▲ Russell 2000 Value	2.6 (50)	-14.9 (63)	-5.1 (70)	4.1 (60)	7.1 (89)	22.4 (69)	-12.9 (39)	7.8 (75)	31.7 (17)	-7.5 (74)

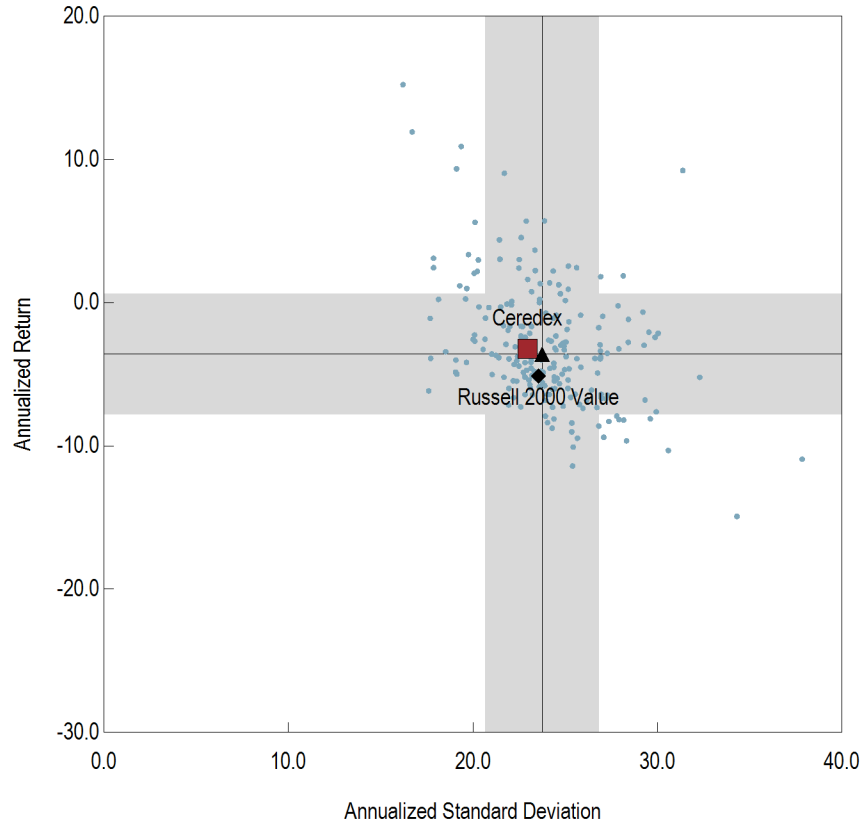
Rolling 3 Year Annualized Return (%)



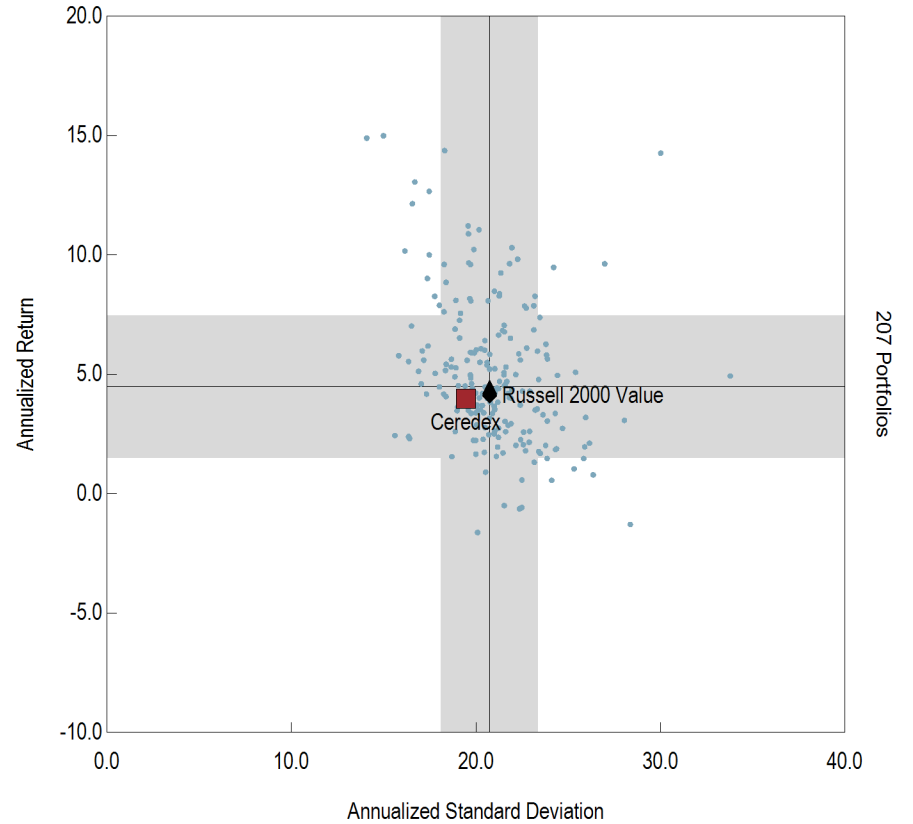
Rolling 5 Year Annualized Return (%)



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Ceredex	-3.2%	23.0%	-0.2
Russell 2000 Value	-5.1%	23.6%	-0.3
eV US Small Cap Value Equity Gross Median	-3.6%	23.8%	-0.2

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Ceredex	4.0%	19.5%	0.1
Russell 2000 Value	4.1%	20.7%	0.1
eV US Small Cap Value Equity Gross Median	4.5%	20.7%	0.2

International Equity Managers

Pyrford Manager Portfolio Overview

Period Ending: September 30, 2020

International equity value portfolio of non-US companies with low valuations at the country and stock level. Primary personnel include Tony Cousins, Daniel McDonagh, and Paul Simons.

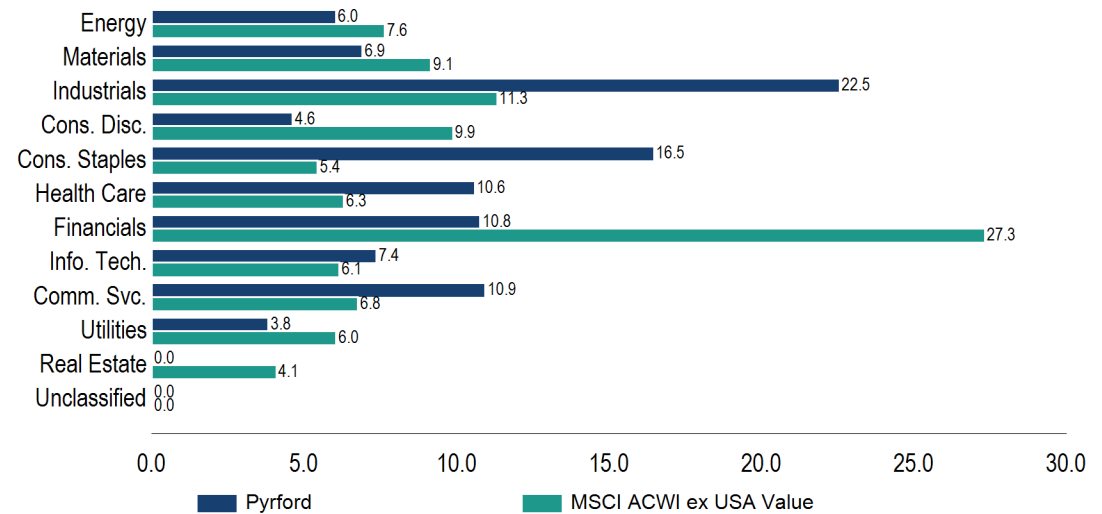
Characteristics

	MSCI ACWI Portfolio	MSCI ACWI ex USA Value
Number of Holdings	70	1,602
Weighted Avg. Market Cap. (\$B)	66.65	48.27
Median Market Cap. (\$B)	24.26	6.24
Price To Earnings	17.82	12.79
Price To Book	2.64	1.84
Price To Sales	1.52	0.68
Return on Equity (%)	13.27	7.17
Yield (%)	4.22	3.93
Beta	0.79	1.00

Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
Totals		
Developed	92.1%	71.5%
Emerging*	7.9%	28.5%
Top 10 Largest Countries		
United Kingdom	15.8%	11.1%
Japan	14.0%	16.5%
Switzerland	12.3%	4.9%
Australia	10.8%	4.5%
Germany	10.5%	8.0%
France	7.5%	6.9%
Singapore	5.0%	0.7%
Hong Kong	4.8%	1.9%
Netherlands	4.6%	0.9%
Taiwan*	4.3%	3.5%
Total-Top 10 Largest Countries	89.4%	59.0%

Sector Allocation (%) vs MSCI ACWI ex USA Value



Top Contributors

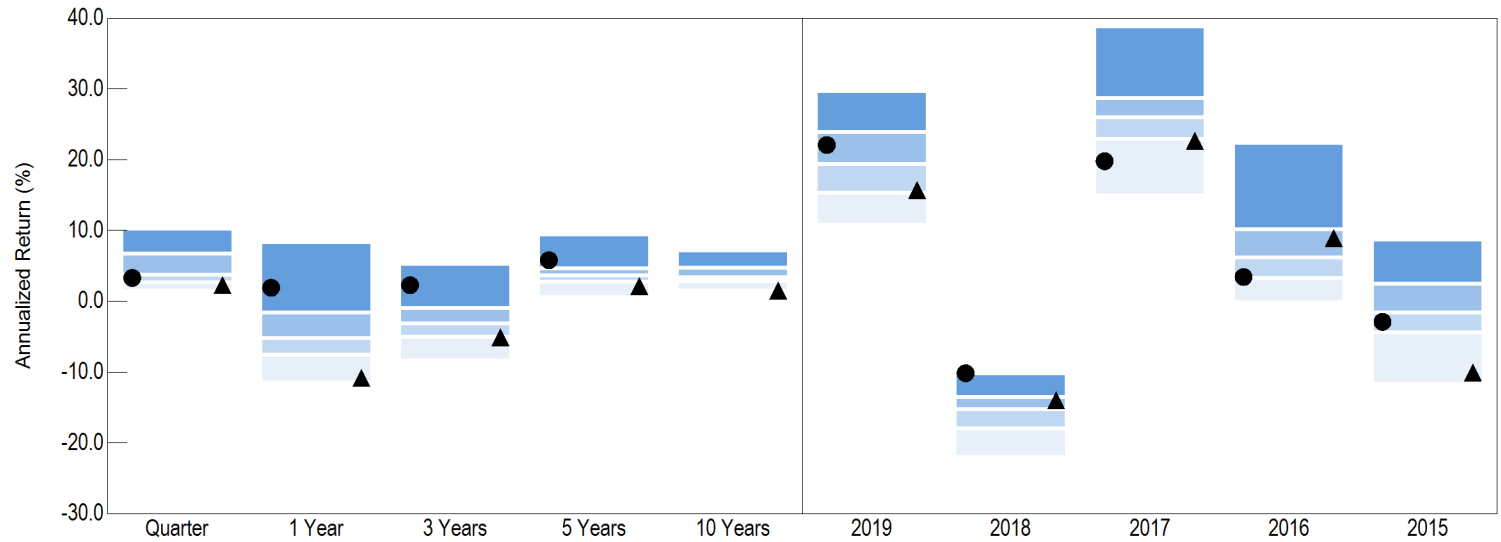
	Avg Wgt	Return	Contribution
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	1.37	41.41	0.57
DEUTSCHE POST AG	1.72	28.44	0.49
KONE OYJ	1.56	27.93	0.43
BRENNTAG AG	1.78	21.14	0.38
THE UNILEVER GROUP	1.95	14.66	0.29
TELENOR ASA	1.80	15.14	0.27
SAP SE	2.14	11.42	0.24
NESTLE SA, CHAM UND VEVEY	2.87	7.78	0.22
FIELMANN AG, HAMBURG	1.15	19.32	0.22
L'AIR LIQUIDE SA	2.15	10.11	0.22

Bottom Contributors

	Avg Wgt	Return	Contribution
KDDI CORP	2.09	-14.17	-0.30
WOODSIDE PETROLEUM LTD	1.76	-14.15	-0.25
ROYAL DUTCH SHELL PLC	1.15	-21.11	-0.24
VODAFONE GROUP PLC	1.42	-16.78	-0.24
RUBIS SA, PARIS	1.24	-16.49	-0.21
LEGAL & GENERAL GROUP PLC	2.16	-9.03	-0.19
BP PLC	0.80	-22.42	-0.18
ROYAL DUTCH SHELL PLC	0.76	-18.93	-0.14
ABC-MART INC	1.39	-10.04	-0.14
GLAXOSMITHKLINE PLC	1.88	-6.22	-0.12

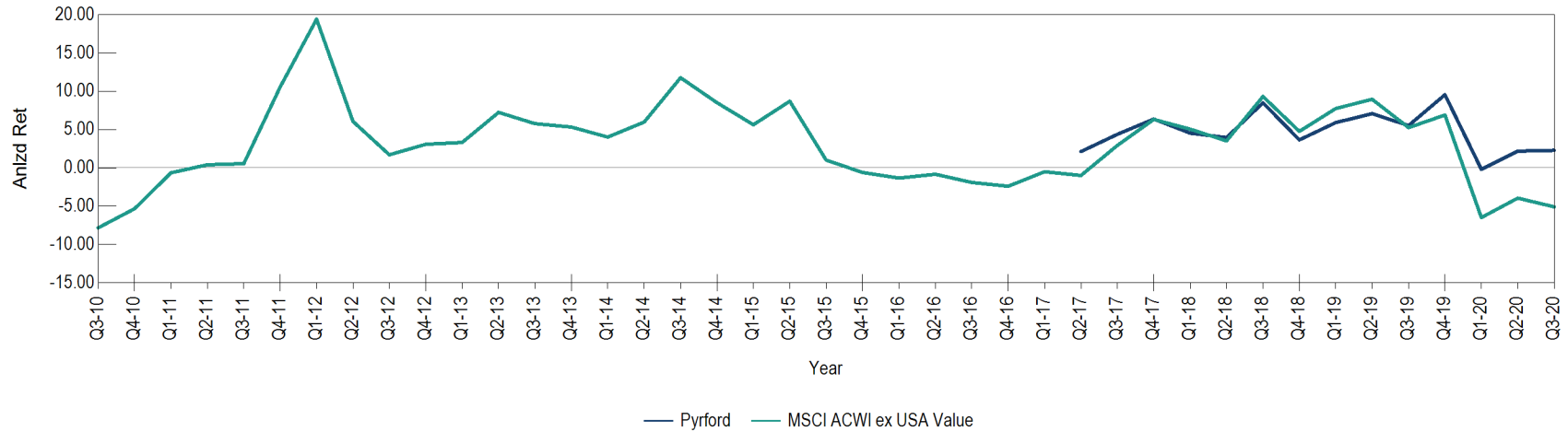
Unclassified sector allocation includes cash allocations.

Pyrford vs. eV ACWI ex-US Value Equity Gross Universe

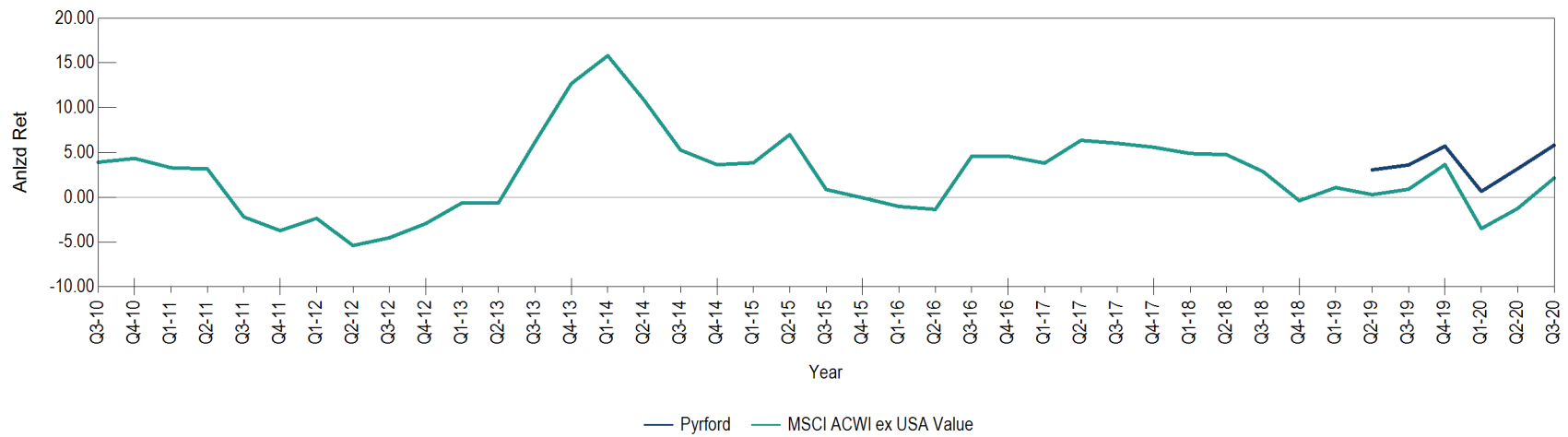


	Return (Rank)										
	Quarter	1 Year	3 Years	5 Years	10 Years	2019	2018	2017	2016	2015	
5th Percentile	10.2	8.3	5.2	9.4	7.1	29.6	-10.2	38.8	22.3	8.7	
25th Percentile	6.8	-1.5	-0.9	4.7	4.8	24.0	-13.4	28.8	10.2	2.5	
Median	3.8	-5.1	-3.1	3.7	3.5	19.5	-15.2	26.0	6.2	-1.6	
75th Percentile	2.7	-7.5	-5.0	2.8	2.9	15.4	-17.9	23.0	3.3	-4.3	
95th Percentile	1.5	-11.4	-8.3	0.6	1.6	10.8	-21.9	15.0	-0.1	-11.6	
# of Portfolios	50	50	48	45	30	52	54	56	55	45	
● Pyrford	3.3 (61)	1.9 (17)	2.3 (10)	5.8 (17)	-- (--)	22.1 (35)	-10.1 (5)	19.8 (84)	3.4 (74)	-2.9 (59)	
▲ MSCI ACWI ex USA Value	2.3 (87)	-10.8 (95)	-5.1 (76)	2.1 (80)	1.5 (96)	15.7 (74)	-14.0 (32)	22.7 (77)	8.9 (35)	-10.1 (93)	

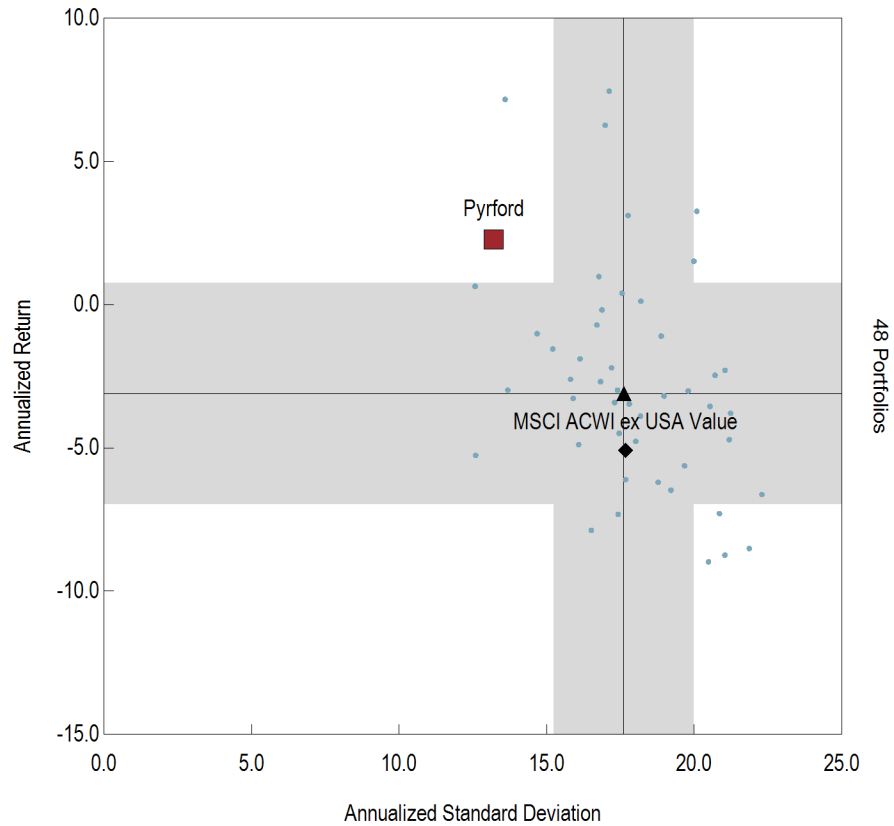
Rolling 3 Year Annualized Return (%)



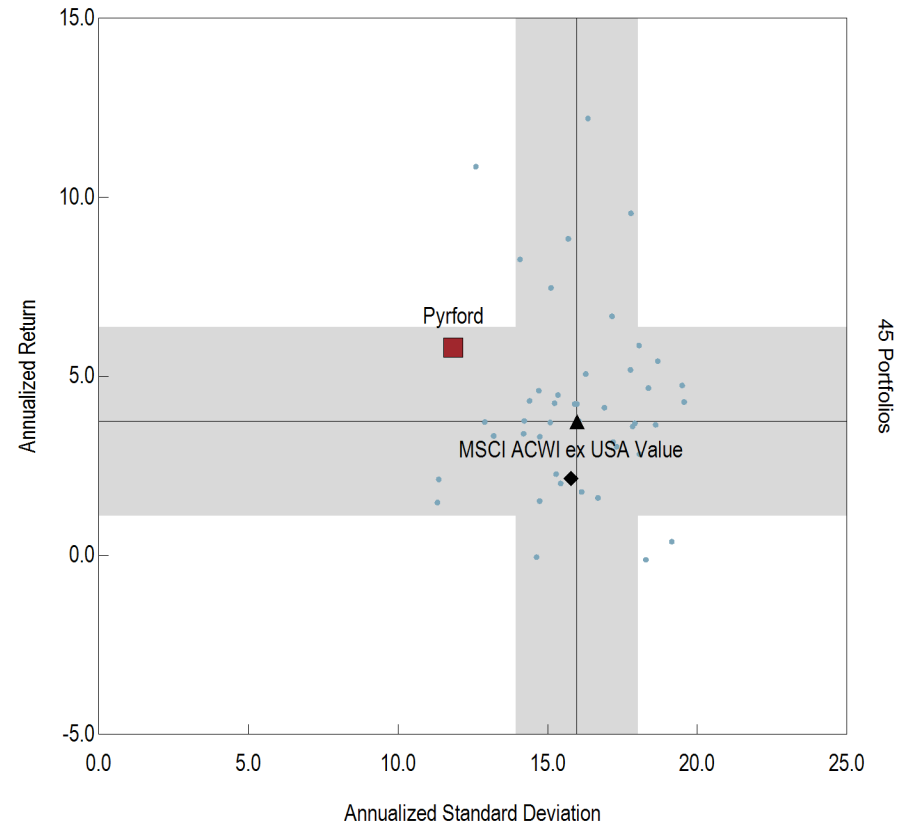
Rolling 5 Year Annualized Return (%)



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Pyrford	2.3%	13.2%	0.1
MSCI ACWI ex USA Value	-5.1%	17.7%	-0.4
eV ACWI ex-US Value Equity Gross Median	-3.1%	17.6%	-0.3

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Pyrford	5.8%	11.8%	0.4
MSCI ACWI ex USA Value	2.1%	15.8%	0.1
eV ACWI ex-US Value Equity Gross Median	3.7%	16.0%	0.2

William Blair Manager Portfolio Overview

Period Ending: September 30, 2020

International equity growth portfolio of non-US companies with high growth rates constructed from the security level. Primary personnel include Simon Fennell and Kenneth McAtamney.

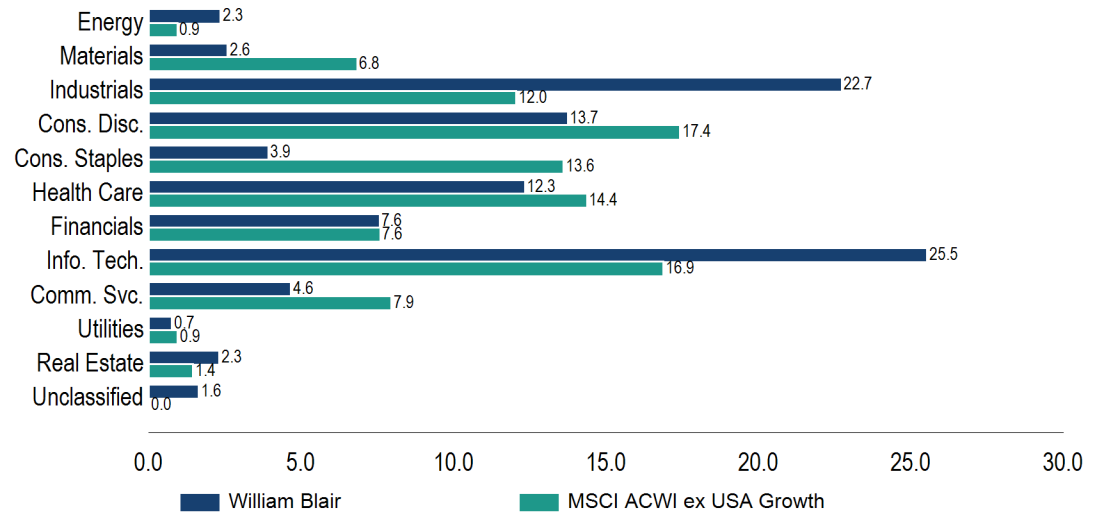
Characteristics

	MSCI ACWI Portfolio	MSCI ACWI ex USA Growth
Number of Holdings	182	1,050
Weighted Avg. Market Cap. (\$B)	69.13	141.53
Median Market Cap. (\$B)	12.04	8.80
Price To Earnings	37.40	24.46
Price To Book	5.52	4.09
Price To Sales	3.79	2.59
Return on Equity (%)	14.80	13.57
Yield (%)	0.89	1.45
Beta	1.17	1.00

Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
Totals		
Developed	84.8%	69.5%
Emerging*	15.2%	30.5%
Top 10 Largest Countries		
Japan	12.2%	16.6%
United Kingdom	10.5%	6.2%
France	10.0%	6.8%
Hong Kong	8.6%	2.3%
Switzerland	6.5%	8.3%
China*	5.8%	13.7%
Germany	5.8%	4.4%
Denmark	5.5%	2.9%
United States	5.4%	0.0%
Sweden	5.4%	2.7%
Total-Top 10 Largest Countries	77.0%	63.7%

Sector Allocation (%) vs MSCI ACWI ex USA Growth



Top Contributors

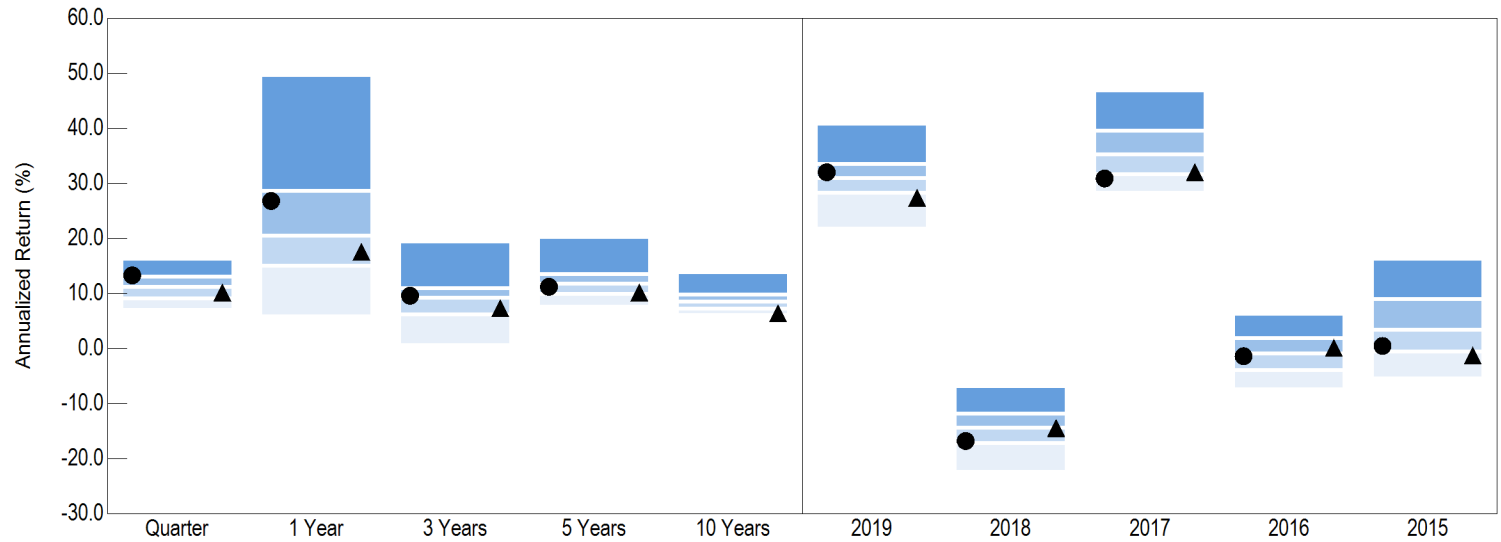
	Avg Wgt	Return	Contribution
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	1.61	43.55	0.70
BABA-SW ORD	2.10	31.50	0.66
DSV PANALPINA A/S	1.47	33.90	0.50
SEA LTD	0.83	43.64	0.36
SIKA AG, BAAR	1.19	28.13	0.34
HEXAGON AB	1.14	29.37	0.33
ADYEN N.V	1.12	26.65	0.30
NESTE OYJ	0.84	34.79	0.29
KINGSPAN GROUP PLC	0.70	41.36	0.29
RELIANCE INDUSTRIES LTD	0.80	35.20	0.28

Bottom Contributors

	Avg Wgt	Return	Contribution
SHISEIDO CO LTD	0.78	-9.75	-0.08
TEMENOS AG	0.58	-12.96	-0.08
PT BANK CENTRAL ASIA TBK	0.96	-7.54	-0.07
GREGGS PLC	0.26	-24.25	-0.06
TEAMVIEWER AG	0.54	-9.57	-0.05
SILERGY CORP	0.54	-9.35	-0.05
MTU AERO ENGINES AG	1.10	-3.86	-0.04
WORLDLINE	0.73	-5.08	-0.04
AK MEDICAL ORD	0.15	-19.75	-0.03
RUBIS SA, PARIS	0.14	-16.49	-0.02

Unclassified sector allocation includes cash allocations.

William Blair vs. eV ACWI ex-US Growth Equity Gross Universe

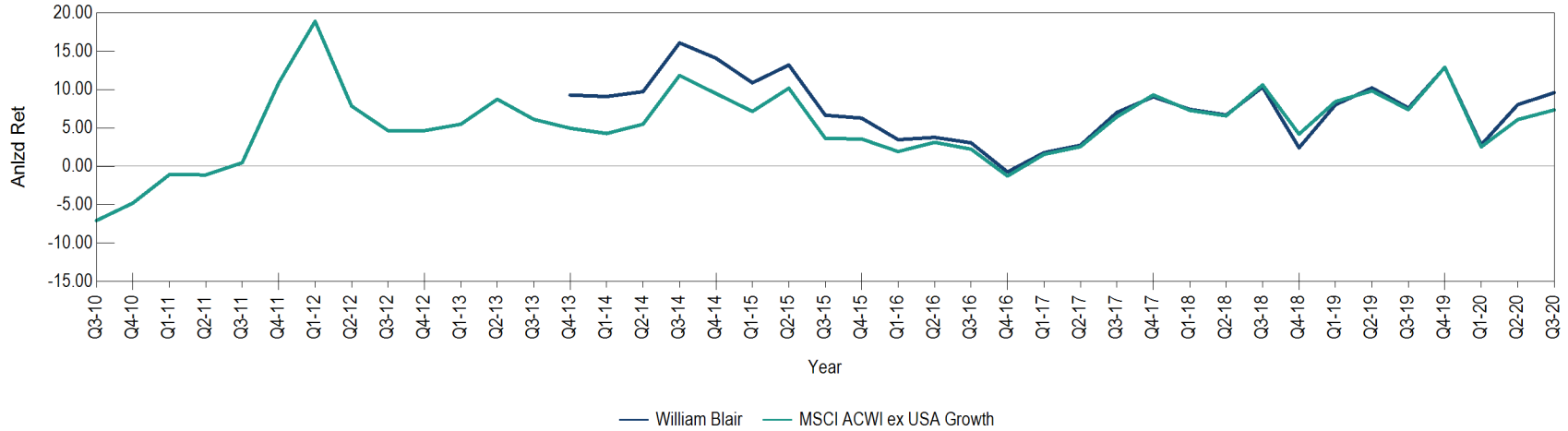


	Quarter	1 Year	3 Years	5 Years	10 Years	2019	2018	2017	2016	2015
5th Percentile	16.3	49.6	19.4	20.2	13.9	40.8	-6.8	46.8	6.3	16.3
25th Percentile	13.2	28.6	11.0	13.6	9.9	33.6	-11.7	39.6	2.0	9.0
Median	11.2	20.6	9.3	11.8	8.6	31.0	-14.3	35.3	-0.9	3.5
75th Percentile	9.2	15.1	6.3	10.0	7.3	28.3	-17.2	31.8	-3.9	-0.5
95th Percentile	7.1	5.9	0.7	7.6	6.2	21.8	-22.3	28.3	-7.4	-5.4
# of Portfolios	93	93	90	82	57	93	82	94	90	70
● William Blair	13.3 (23)	26.8 (31)	9.6 (44)	11.2 (60)	-- (--)	32.0 (39)	-16.8 (69)	30.9 (81)	-1.4 (55)	0.5 (69)
▲ MSCI ACWI ex USA Growth	10.2 (67)	17.5 (64)	7.3 (65)	10.2 (74)	6.4 (93)	27.3 (80)	-14.4 (51)	32.0 (75)	0.1 (45)	-1.3 (83)

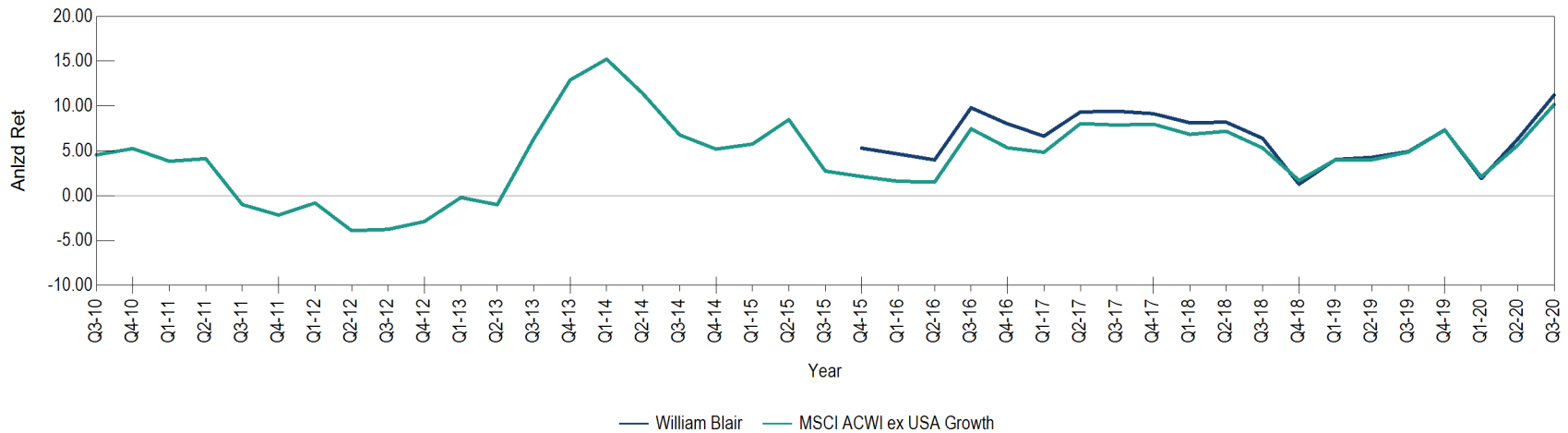
William Blair
 Manager Performance - Rolling 3 & 5 Year (Gross of Fees)

Period Ending: September 30, 2020

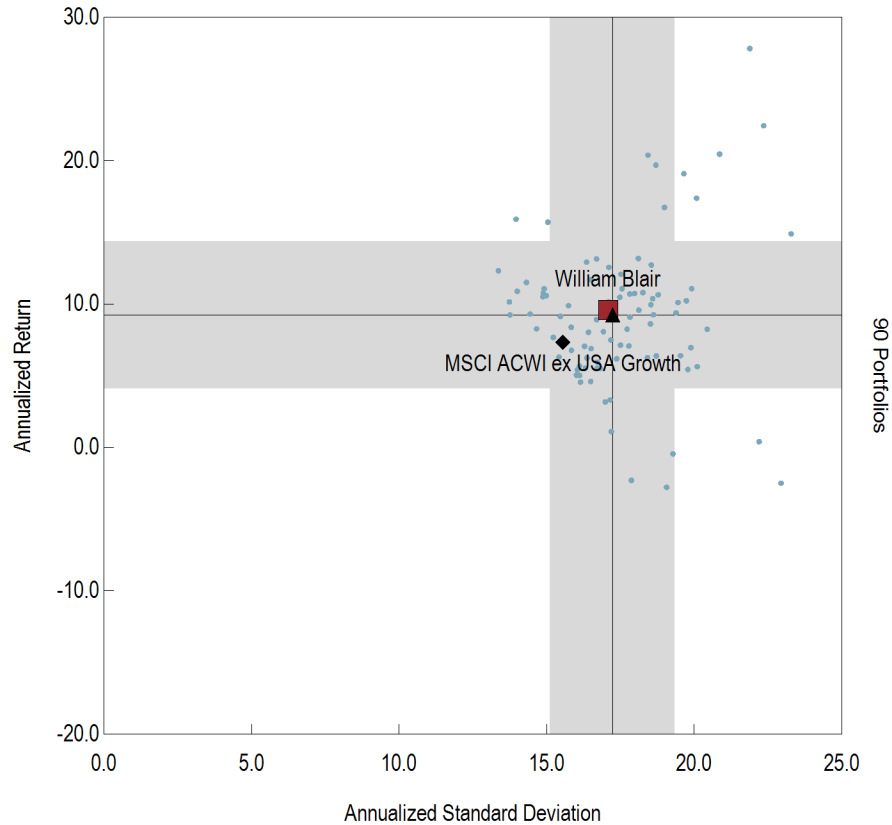
Rolling 3 Year Annualized Return (%)



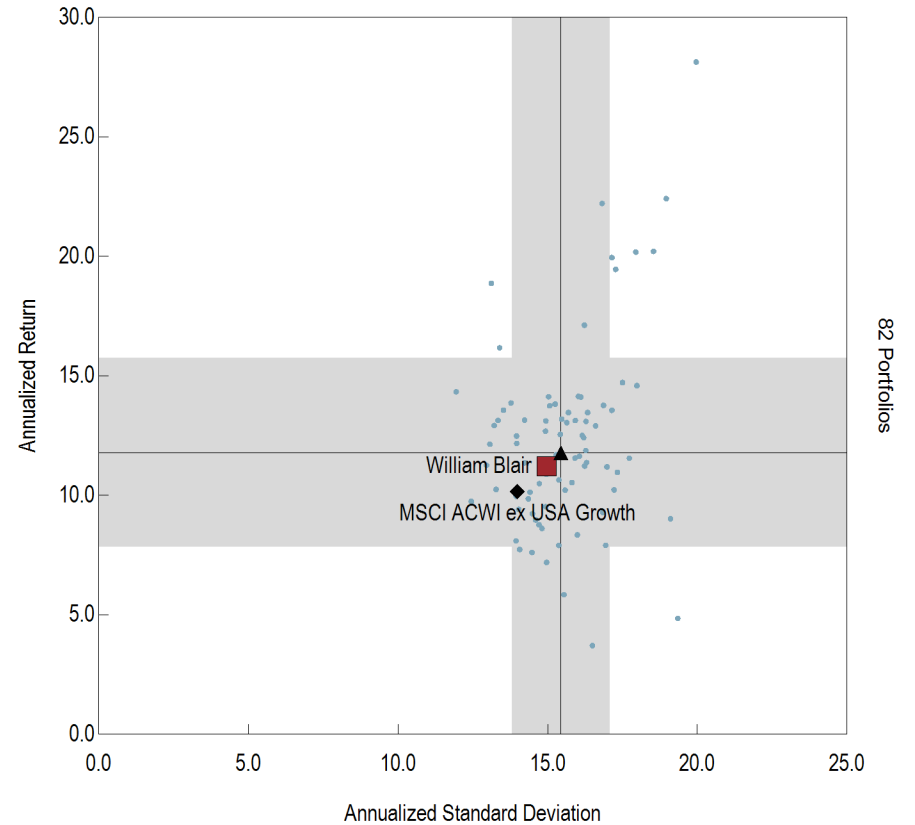
Rolling 5 Year Annualized Return (%)



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
William Blair	9.6%	17.1%	0.5
MSCI ACWI ex USA Growth	7.3%	15.5%	0.4
eV ACWI ex-US Growth Equity Gross Median	9.3%	17.2%	0.4

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
William Blair	11.2%	15.0%	0.7
MSCI ACWI ex USA Growth	10.2%	14.0%	0.6
eV ACWI ex-US Growth Equity Gross Median	11.8%	15.4%	0.7

PIMCO RAE Emerging Markets Manager Portfolio Overview

Period Ending: September 30, 2020

The PIMCO RAE Emerging Markets seeks to invest 80% of its assets in investments that are economically tied to emerging market countries. The portfolio is sub-advised by Research Affiliates, LLC.

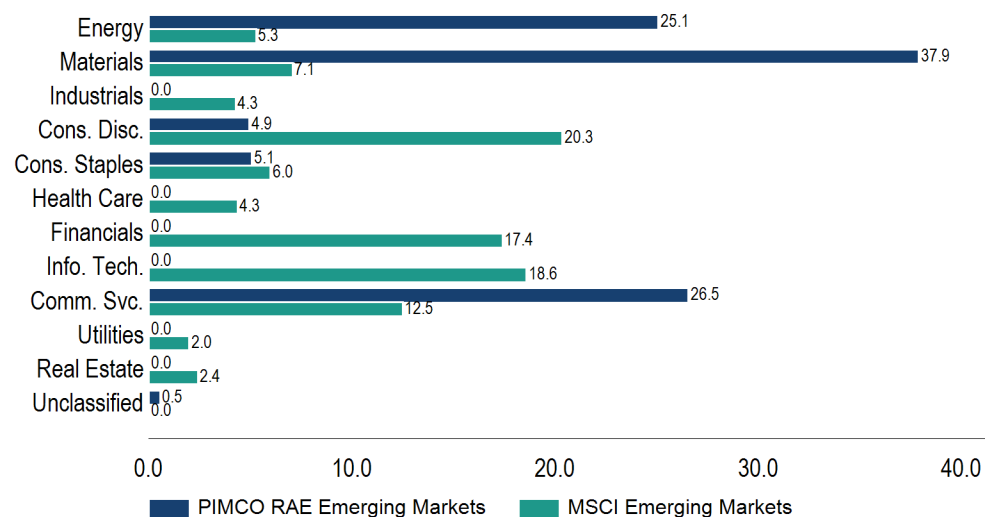
Characteristics

	Portfolio	MSCI Emerging Markets
Number of Holdings	10	1,387
Weighted Avg. Market Cap. (\$B)	19.46	178.51
Median Market Cap. (\$B)	12.14	5.57
Price To Earnings	11.80	12.55
Price To Book	3.75	3.07
Price To Sales	0.42	1.15
Return on Equity (%)	1.11	9.69
Yield (%)	6.66	2.32
Beta	1.10	1.00

Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
Totals		
Developed	5.5%	0.0%
Emerging*	94.5%	100.0%
Top 10 Largest Countries		
Russia*	37.7%	2.5%
South Africa*	25.2%	3.6%
Korea*	21.5%	12.2%
United States	5.5%	0.0%
Mexico*	5.1%	1.6%
China*	4.9%	42.2%
Total-Top 10 Largest Countries	100.0%	62.0%

Sector Allocation (%) vs MSCI Emerging Markets



Top Contributors

	End Weight	Return	Contribution
GOLD FIELDS LTD	25.22	31.70	8.00
SOHU.COM LTD	5.01	115.64	5.79
TELEFONICA BRASIL SA	0.00	-11.60	0.00
AMERICA MOVIL SA DE CV, MEXICO	0.00	-1.58	0.00
COCA-COLA FEMSA SAB DE CV	2.37	-7.14	-0.17
GAZPROM NEFT PJSC	1.05	-18.59	-0.20
FOMENTO ECONOMICO MEXICAN SAB DE CV	2.69	-8.32	-0.22
KT CORP	21.52	-1.33	-0.29
MINING AND METALLURGIAL CO NORILSK NICKEL PJSC	12.64	-7.65	-0.97
VIPSHOP HOLDINGS LIMITED	4.94	-21.45	-1.06

Bottom Contributors

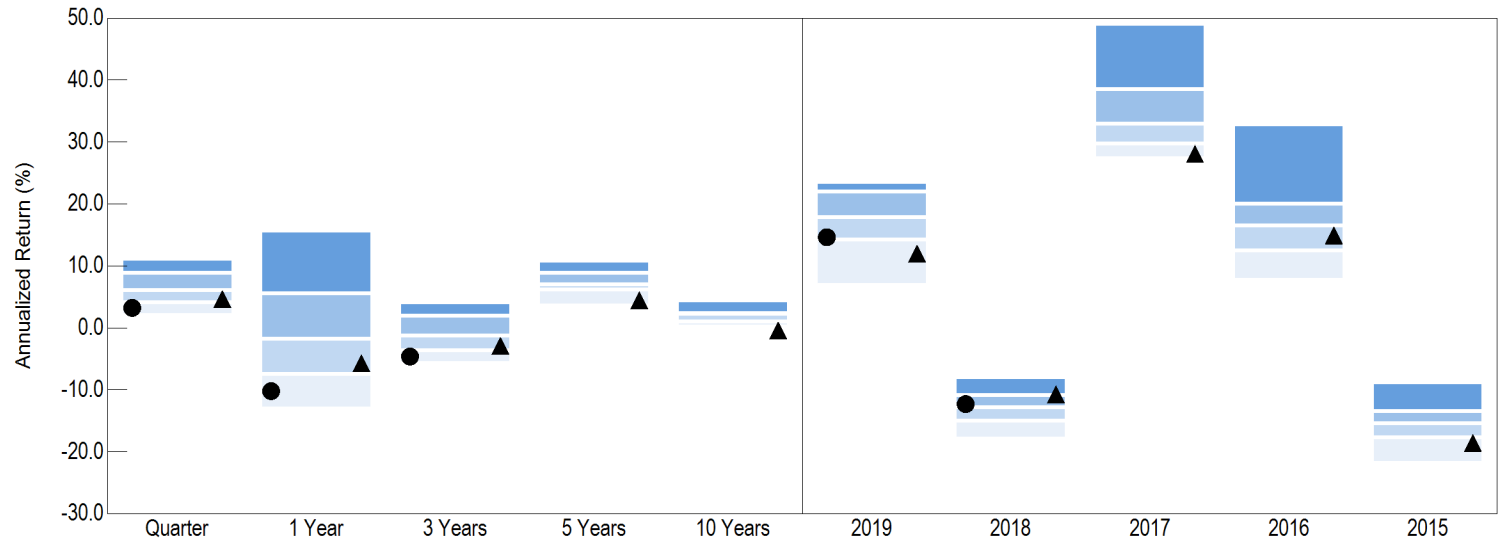
	End Weight	Return	Contribution
OIL CO LUKOIL PJSC	24.01	-16.76	-4.02
VIPSHOP HOLDINGS LIMITED	4.94	-21.45	-1.06
MINING AND METALLURGIAL CO NORILSK NICKEL PJSC	12.64	-7.65	-0.97
KT CORP	21.52	-1.33	-0.29
FOMENTO ECONOMICO MEXICAN SAB DE CV	2.69	-8.32	-0.22
GAZPROM NEFT PJSC	1.05	-18.59	-0.20
COCA-COLA FEMSA SAB DE CV	2.37	-7.14	-0.17
TELEFONICA BRASIL SA	0.00	-11.60	0.00
AMERICA MOVIL SA DE CV, MEXICO	0.00	-1.58	0.00

Unclassified sector allocation includes cash allocations.

PIMCO RAE Emerging Markets
 Manager Performance Comparisons (Gross of Fees)

Period Ending: September 30, 2020

PIMCO RAE Emerging Markets vs. eV Emg Mkts All Cap Value Equity Gross Universe



	Return (Rank)															
5th Percentile	11.1	15.7	4.1	10.8	4.4	23.5	-7.9	49.0	32.8	-8.8						
25th Percentile	9.0	5.7	2.0	9.0	2.5	22.1	-10.8	38.6	20.1	-13.4						
Median	6.2	-1.7	-1.2	7.1	2.3	18.0	-12.7	33.0	16.6	-15.3						
75th Percentile	4.2	-7.4	-3.6	6.2	1.1	14.4	-14.9	29.8	12.6	-17.6						
95th Percentile	2.1	-13.0	-5.6	3.7	0.2	7.0	-17.8	27.4	7.8	-21.7						
# of Portfolios	37	37	33	30	15	33	36	37	38	35						
● PIMCO RAE Emerging Markets	3.2 (83)	-10.2 (87)	-4.6 (85)	-- (--)	-- (--)	14.6 (72)	-12.3 (44)	-- (--)	-- (--)	-- (--)						
▲ MSCI Emerging Markets Value NR	4.7 (69)	-5.7 (71)	-2.9 (71)	4.4 (95)	-0.4 (99)	12.0 (86)	-10.7 (25)	28.1 (90)	14.9 (59)	-18.6 (85)						

TT Emerging Markets Manager Portfolio Overview

Period Ending: September 30, 2020

The Emerging Markets Unconstrained strategy aims to outperform its benchmark, MSCI Emerging Markets Index by 5% per annum over a three-year rolling period. It targets high returns and long term capital growth by investing in a focused portfolio of primarily equity and equity-related securities traded in the Emerging Markets.

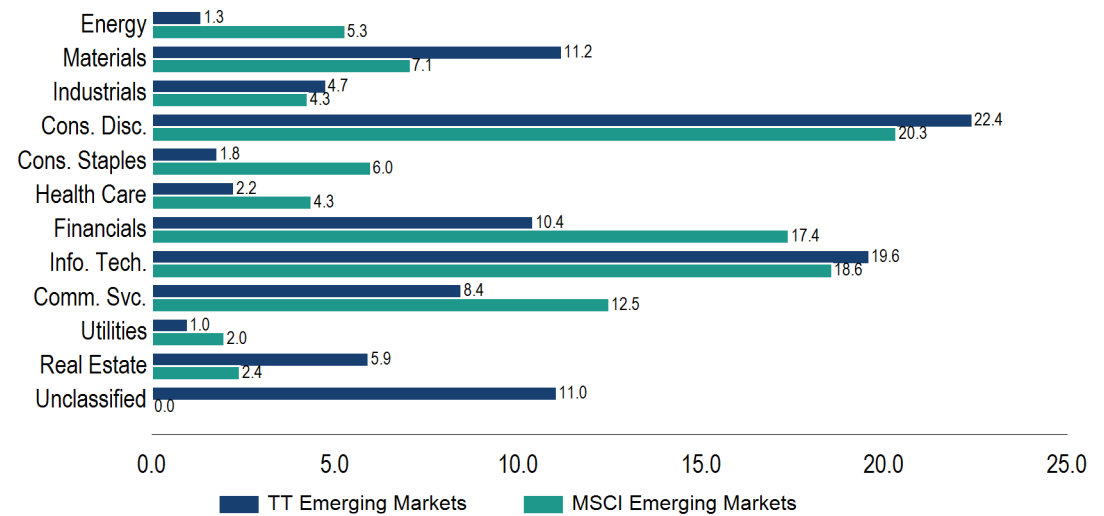
Characteristics

	Portfolio	MSCI Emerging Markets
Number of Holdings	70	1,387
Weighted Avg. Market Cap. (\$B)	200.56	178.51
Median Market Cap. (\$B)	10.31	5.57
Price To Earnings	11.58	12.55
Price To Book	3.32	3.07
Price To Sales	0.98	1.15
Return on Equity (%)	7.83	9.69
Yield (%)	1.68	2.32
Beta	1.17	1.00

Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
Totals		
Developed	34.7%	0.0%
Emerging*	64.7%	100.0%
Frontier**	0.6%	0.0%
Top 10 Largest Countries		
Korea*	15.4%	12.2%
Hong Kong	14.7%	0.0%
China*	12.0%	42.2%
India*	10.0%	8.3%
Taiwan*	8.5%	12.9%
United States	8.0%	0.0%
South Africa*	7.6%	3.6%
Brazil*	7.0%	4.6%
Netherlands	6.8%	0.0%
United Kingdom	2.9%	0.0%
Total-Top 10 Largest Countries	94.9%	83.6%

Sector Allocation (%) vs MSCI Emerging Markets



Top Contributors

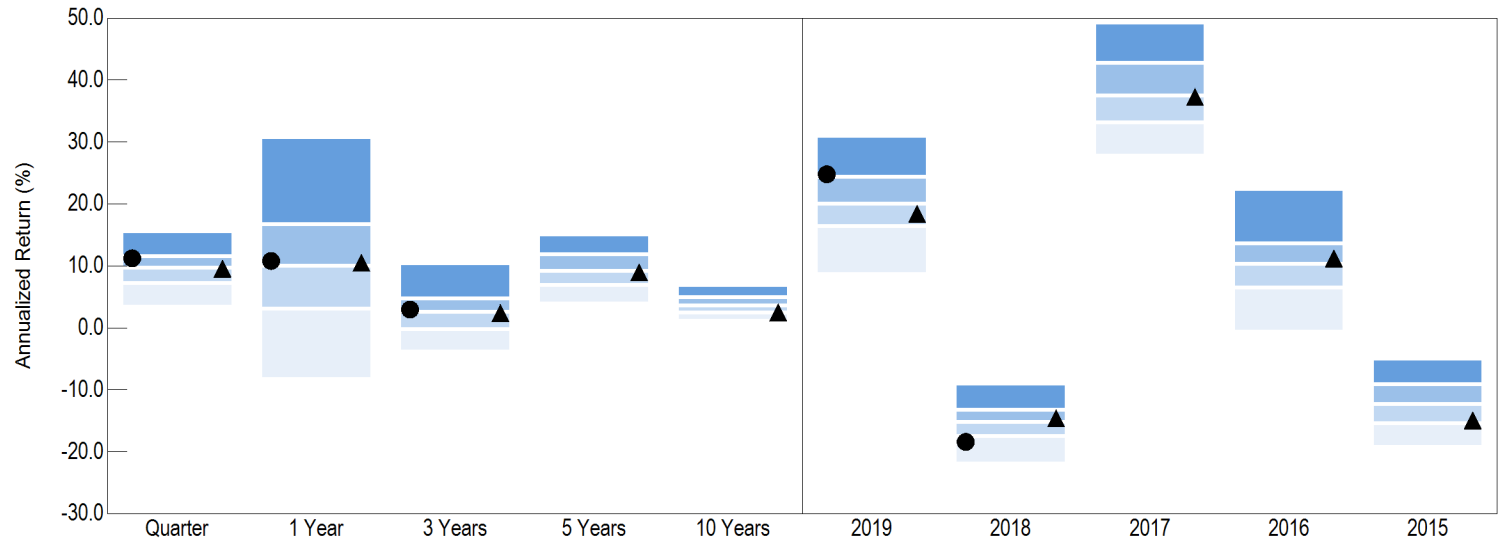
	End Weight	Return	Contribution
ALIBABA GROUP HOLDING LTD	10.28	36.29	3.73
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	5.43	41.41	2.25
HYUNDAI MOTOR CO	1.20	88.23	1.06
RELIANCE INDUSTRIES LTD	1.34	73.34	0.98
SAMSUNG ELECTRONICS CO LTD	7.36	12.67	0.93
SIBANYE STILLWATER ORD	1.68	29.02	0.49

Bottom Contributors

	End Weight	Return	Contribution
VEON LTD	0.96	-30.00	-0.29
PING AN HEALTHCARE AND TECHNOLOGY COMPANY LIMITED	1.27	-15.81	-0.20
YDUQS PARTICIPACOES SA	0.92	-20.55	-0.19
SUNAC CHINA HOLDINGS LTD	2.71	-6.93	-0.19
LOJAS AMERICANAS SA	1.29	-13.95	-0.18
ALIBABA HEALTH INFORMATION TECHNOLOGY LTD	0.97	-16.45	-0.16
NASPERS LTD	5.88	-2.65	-0.16
ZTO EXPRESS (CAYMAN) INC	0.82	-18.50	-0.15

Unclassified sector allocation includes cash allocations.

TT Emerging Markets vs. eV Emg Mkts Equity Gross Universe



	Return (Rank)															
5th Percentile	15.6	30.8	10.4	15.0	6.8	30.9	-9.0	49.2	22.4	-5.0						
25th Percentile	11.7	16.8	4.8	12.0	5.1	24.4	-13.2	42.8	13.7	-9.0						
Median	9.7	10.1	2.6	9.2	3.7	20.1	-15.2	37.6	10.4	-12.2						
75th Percentile	7.3	3.1	-0.1	7.0	2.5	16.5	-17.4	33.2	6.6	-15.3						
95th Percentile	3.4	-8.2	-3.7	4.0	1.2	8.8	-21.8	27.8	-0.6	-19.2						
# of Portfolios	374	374	341	308	163	386	355	343	337	273						
● TT Emerging Markets	11.2 (29)	10.8 (47)	3.0 (45)	-- (--)	-- (--)	24.8 (24)	-18.4 (83)	-- (--)	-- (--)	-- (--)						
▲ MSCI Emerging Markets	9.6 (53)	10.5 (48)	2.4 (54)	9.0 (54)	2.5 (75)	18.4 (63)	-14.6 (43)	37.3 (53)	11.2 (45)	-14.9 (70)						

Global Equity Managers

Artisan Partners Manager Portfolio Overview

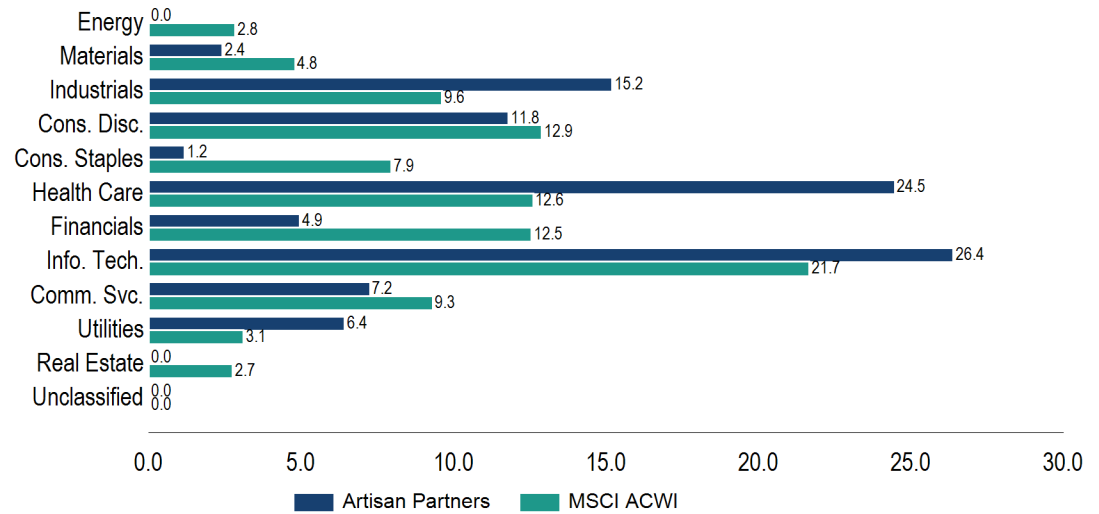
Period Ending: September 30, 2020

Global equity portfolio of companies that is benchmark agnostic with accelerating profit cycles and a focus on capital allocation. Primary personnel include James Hamel, Craigh Cepukenas, and Matthew Kamm.

Characteristics

	Portfolio	MSCI ACWI
Number of Holdings	45	2,993
Weighted Avg. Market Cap. (\$B)	141.19	287.63
Median Market Cap. (\$B)	54.67	9.12
Price To Earnings	37.96	20.73
Price To Book	5.70	3.73
Price To Sales	5.01	1.66
Return on Equity (%)	7.05	6.87
Yield (%)	0.84	2.04
Beta	1.04	1.00

Sector Allocation (%) vs MSCI ACWI



Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
Totals		
Developed	99.0%	87.7%
Emerging*	1.0%	12.3%
Top 10 Largest Countries		
United States	55.6%	58.3%
United Kingdom	8.9%	3.5%
Hong Kong	7.6%	0.9%
Denmark	7.3%	0.7%
Netherlands	5.0%	1.2%
Sweden	3.9%	0.9%
Switzerland	3.8%	2.8%
Japan	3.1%	6.9%
Spain	2.4%	0.6%
Germany	1.3%	2.5%
Total-Top 10 Largest Countries	99.0%	78.3%

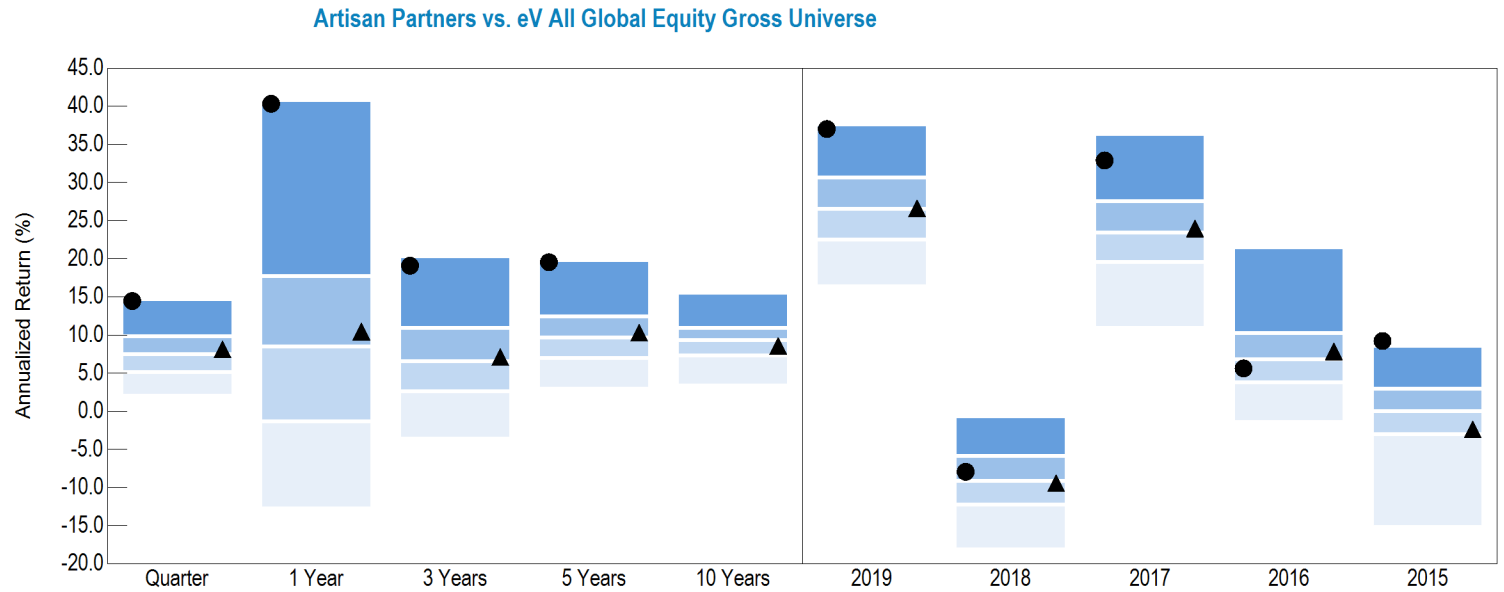
Top Contributors

	Avg Wgt	Return	Contribution
ZOOM VIDEO COMMUNICATIONS INC	3.15	85.42	2.69
TECHTRONIC INDUSTRIES CO LTD	4.48	34.77	1.56
VESTAS WIND SYSTEMS A/S	2.10	59.39	1.25
ADVANCED MICRO DEVICES INC	2.15	55.84	1.20
LOWE'S COS INC	4.67	23.22	1.09
LONZA GROUP AG, ZUERICH	4.68	17.36	0.81
VEEVA SYSTEMS INC	3.12	19.95	0.62

Bottom Contributors

	Avg Wgt	Return	Contribution
ILLUMINA INC	1.80	-16.54	-0.30
SPOTIFY TECHNOLOGY S.A	1.37	-6.05	-0.08
NOTRE DAME INTERMEDICA PARTICIPACOES SA	1.06	-6.69	-0.07
ARISTA NETWORKS INC	1.87	-1.48	-0.03
ATLISSIAN CORP PLC	1.04	0.84	0.01
KONINKLIJKE PHILIPS NV	1.38	1.02	0.01
L3HARRIS TECHNOLOGIES INC	2.60	0.57	0.01
BURBERRY GROUP	1.23	1.47	0.02
BANK OF AMERICA CORP	1.61	2.14	0.03
TENCENT HOLDINGS LTD	1.66	2.59	0.04

Unclassified sector allocation includes cash allocations.

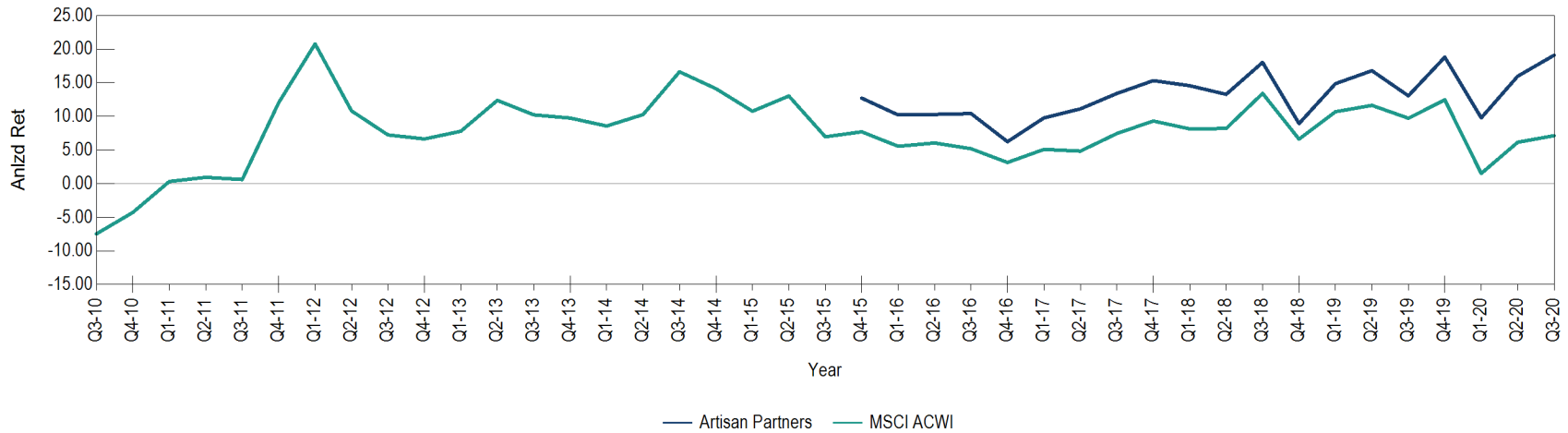


	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2019	2018	2017	2016	2015
5th Percentile	14.6	40.7	20.3	19.8	15.5	37.6	-0.7	36.3	21.5	8.5
25th Percentile	9.9	17.8	11.0	12.4	11.0	30.7	-5.8	27.6	10.3	3.0
Median	7.6	8.5	6.6	9.7	9.4	26.6	-9.1	23.5	6.8	0.1
75th Percentile	5.2	-1.3	2.6	7.1	7.4	22.6	-12.2	19.6	3.9	-2.9
95th Percentile	2.1	-12.7	-3.6	3.0	3.4	16.5	-18.1	11.0	-1.4	-15.1
# of Portfolios	1,004	1,003	925	817	519	989	920	880	842	692
● Artisan Partners	14.4 (6)	40.3 (6)	19.1 (7)	19.5 (6)	-- (--)	37.0 (7)	-7.9 (40)	32.9 (11)	5.6 (61)	9.2 (4)
▲ MSCI ACWI	8.1 (43)	10.4 (46)	7.1 (47)	10.3 (45)	8.5 (65)	26.6 (50)	-9.4 (53)	24.0 (47)	7.9 (42)	-2.4 (73)

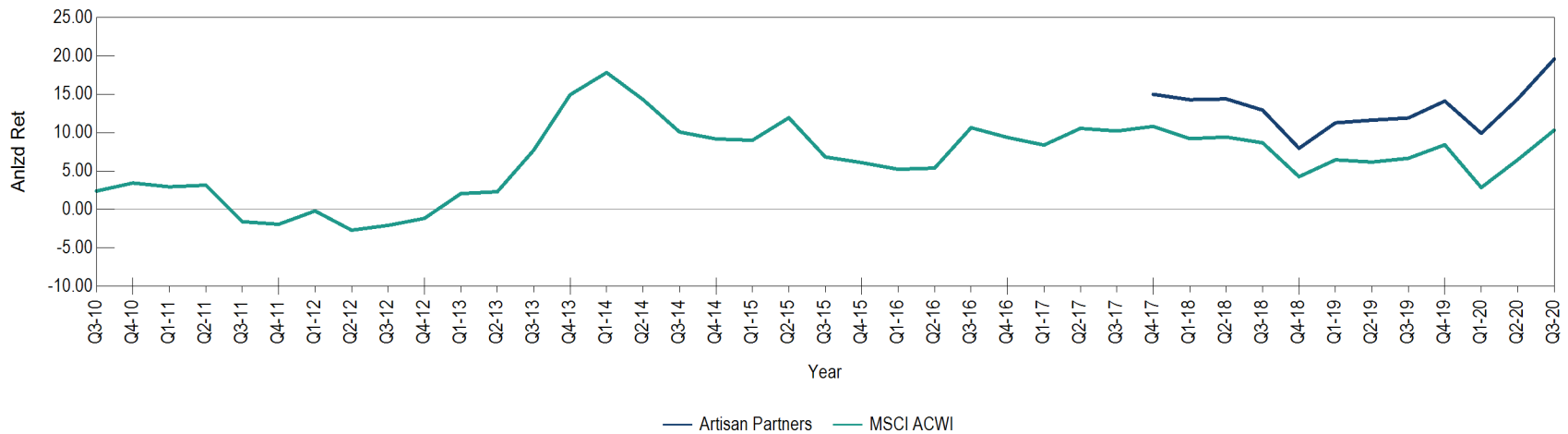
Artisan Partners
 Manager Performance - Rolling 3 & 5 Year (Gross of Fees)

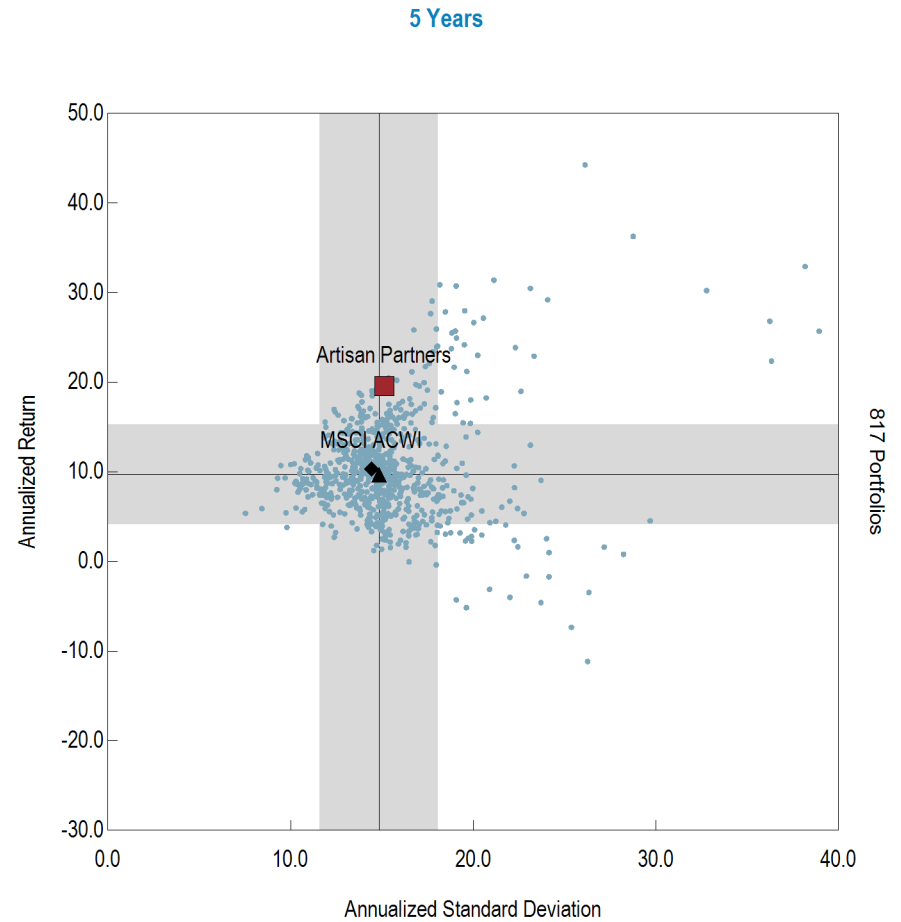
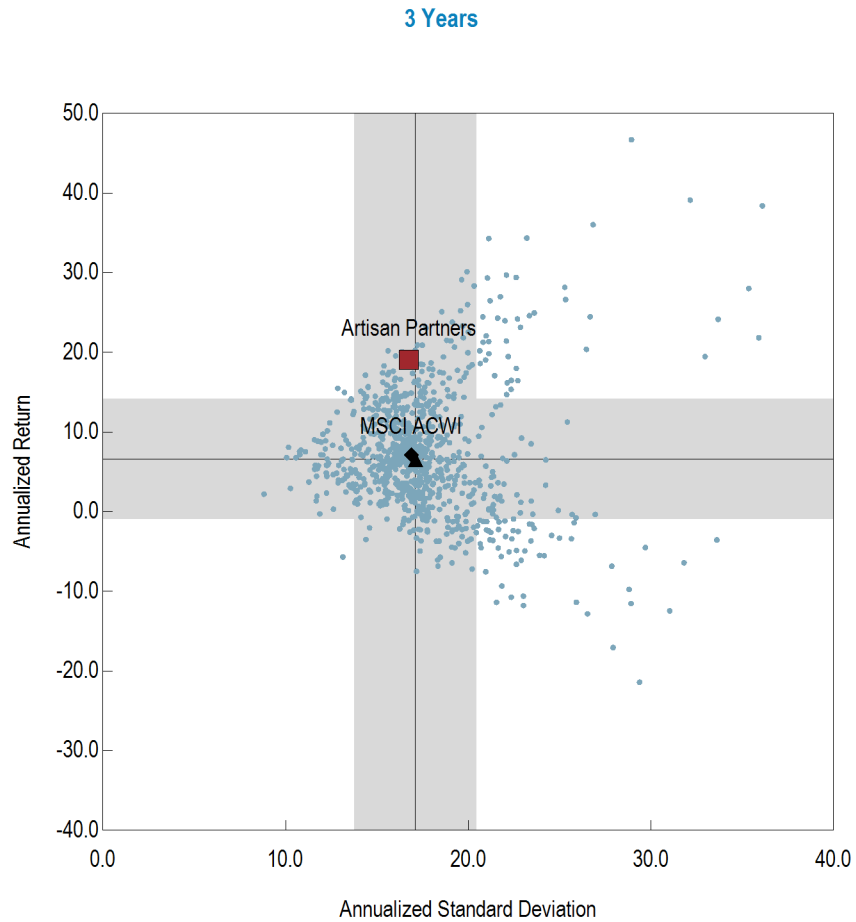
Period Ending: September 30, 2020

Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)





	3 Years		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Artisan Partners	19.1%	16.8%	1.0
MSCI ACWI	7.1%	16.9%	0.3
eV All Global Equity Gross Median	6.6%	17.1%	0.3

	5 Years		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Artisan Partners	19.5%	15.1%	1.2
MSCI ACWI	10.3%	14.4%	0.6
eV All Global Equity Gross Median	9.7%	14.8%	0.6

First Eagle Manager Portfolio Overview

Period Ending: September 30, 2020

Global equity portfolio that is benchmark agnostic comprised of companies with low valuations. Primary personnel include Matt McLennan and Kimball Brooker.

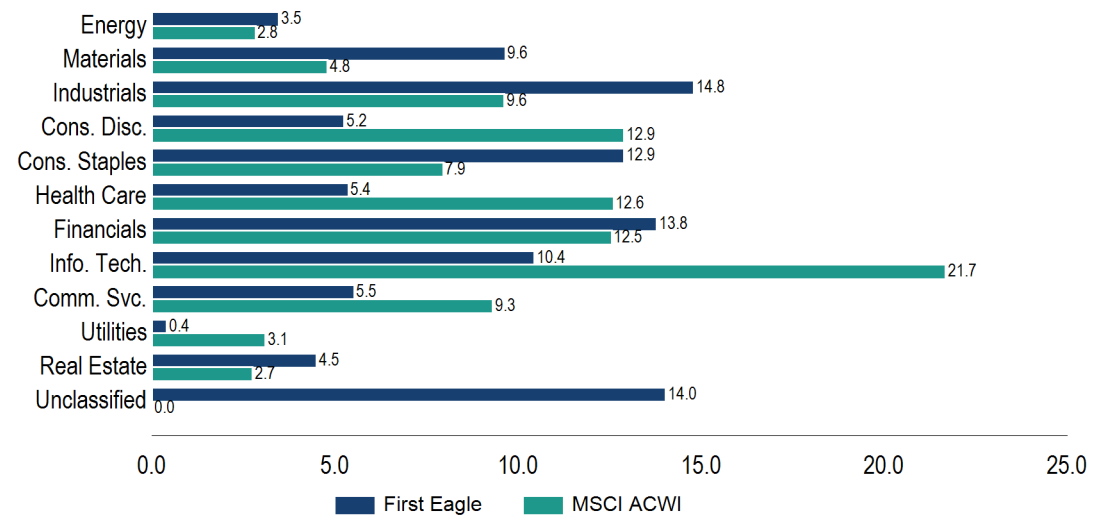
Characteristics

	Portfolio	MSCI ACWI
Number of Holdings	135	2,993
Weighted Avg. Market Cap. (\$B)	104.80	287.63
Median Market Cap. (\$B)	22.00	9.12
Price To Earnings	19.46	20.73
Price To Book	2.94	3.73
Price To Sales	1.49	1.66
Return on Equity (%)	6.65	6.87
Yield (%)	2.22	2.04
Beta	0.76	1.00

Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
Totals		
Developed	93.9%	87.7%
Emerging*	6.1%	12.3%
Top 10 Largest Countries		
United States	58.2%	58.3%
Japan	11.1%	6.9%
France	5.1%	2.8%
United Kingdom	4.7%	3.5%
Canada	4.0%	2.7%
Korea*	2.5%	1.5%
Switzerland	2.3%	2.8%
Belgium	1.6%	0.3%
Singapore	1.5%	0.3%
Sweden	1.3%	0.9%
Total-Top 10 Largest Countries	92.3%	80.0%

Sector Allocation (%) vs MSCI ACWI



Top Contributors

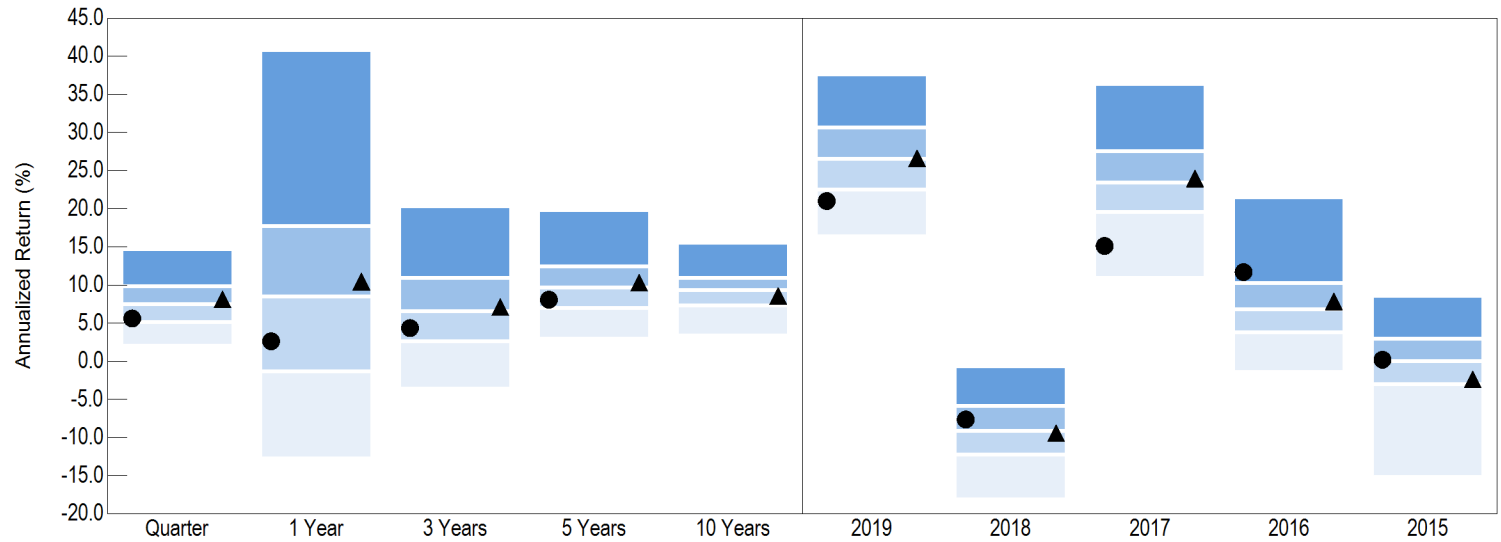
	End Weight	Return	Contribution
SPDR GOLD TRUST	12.81	5.82	0.75
DEERE & CO	1.61	41.52	0.67
C.H. ROBINSON WORLDWIDE INC.	1.89	29.93	0.57
COMCAST CORP	2.68	18.68	0.50
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	1.12	43.55	0.49
WEYERHAEUSER CO	1.34	26.98	0.36
NUTRIEN LTD	1.19	23.64	0.28
ORACLE CORP	3.13	8.47	0.27
SALESFORCE.COM INC	0.77	34.16	0.26
FRESNILLO PLC	0.50	48.78	0.25

Bottom Contributors

	End Weight	Return	Contribution
EXXON MOBIL CORP	1.62	-21.72	-0.35
NATIONAL OILWELL VARCO INC	0.57	-26.04	-0.15
SCHLUMBERGER LTD	0.87	-14.82	-0.13
BANK OF NEW YORK MELLON CORP (THE)	1.16	-10.39	-0.12
AMBEV SA	0.66	-14.39	-0.10
IMPERIAL OIL LTD	0.37	-24.70	-0.09
BRITISH AMERICAN TOBACCO PLC	1.76	-4.88	-0.09
CK ASSET HOLDINGS	0.38	-17.61	-0.07
EQUITY RESIDENTIAL	0.54	-11.69	-0.06
DANONE	1.76	-3.13	-0.06

Unclassified sector allocation includes cash allocations and Gold allocations (12.8% as of 9/30/2020).

First Eagle vs. eV All Global Equity Gross Universe

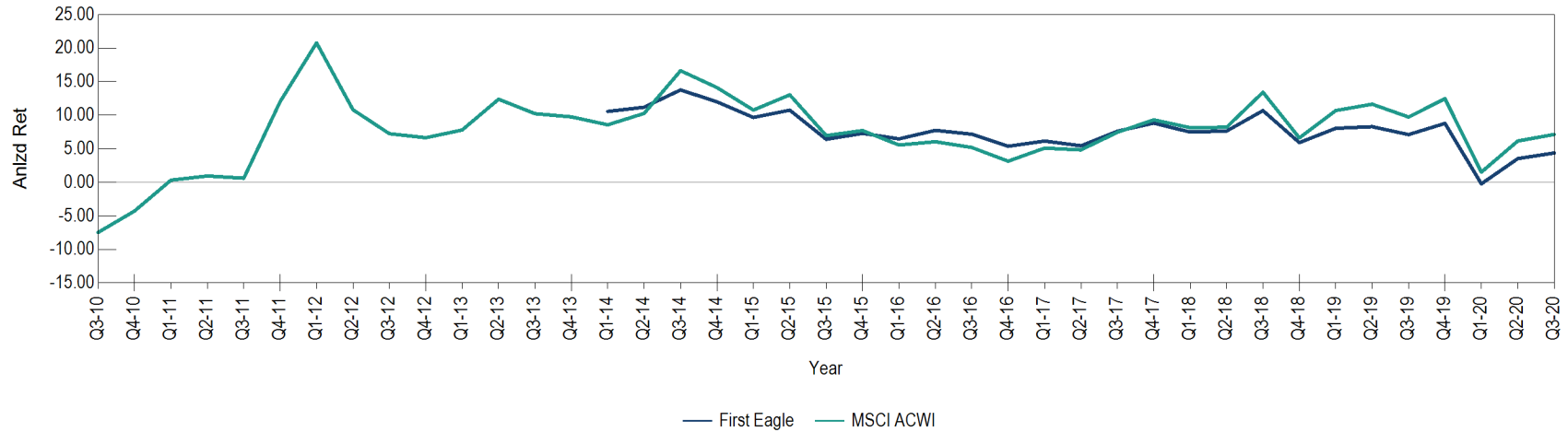


	Quarter	1 Year	3 Years	5 Years	10 Years	2019	2018	2017	2016	2015
Return (Rank)										
5th Percentile	14.6	40.7	20.3	19.8	15.5	37.6	-0.7	36.3	21.5	8.5
25th Percentile	9.9	17.8	11.0	12.4	11.0	30.7	-5.8	27.6	10.3	3.0
Median	7.6	8.5	6.6	9.7	9.4	26.6	-9.1	23.5	6.8	0.1
75th Percentile	5.2	-1.3	2.6	7.1	7.4	22.6	-12.2	19.6	3.9	-2.9
95th Percentile	2.1	-12.7	-3.6	3.0	3.4	16.5	-18.1	11.0	-1.4	-15.1
# of Portfolios	1,004	1,003	925	817	519	989	920	880	842	692
● First Eagle	5.6 (72)	2.6 (67)	4.3 (66)	8.1 (67)	-- (--)	21.0 (82)	-7.6 (38)	15.1 (89)	11.7 (19)	0.2 (49)
▲ MSCI ACWI	8.1 (43)	10.4 (46)	7.1 (47)	10.3 (45)	8.5 (65)	26.6 (50)	-9.4 (53)	24.0 (47)	7.9 (42)	-2.4 (73)

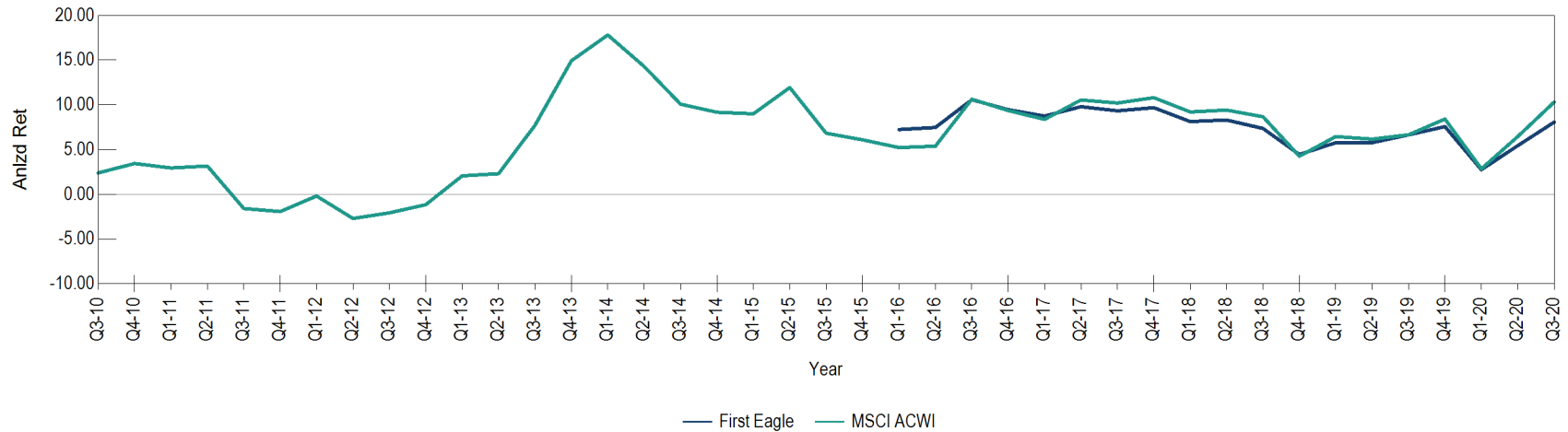
First Eagle
 Manager Performance - Rolling 3 & 5 Year (Gross of Fees)

Period Ending: September 30, 2020

Rolling 3 Year Annualized Return (%)



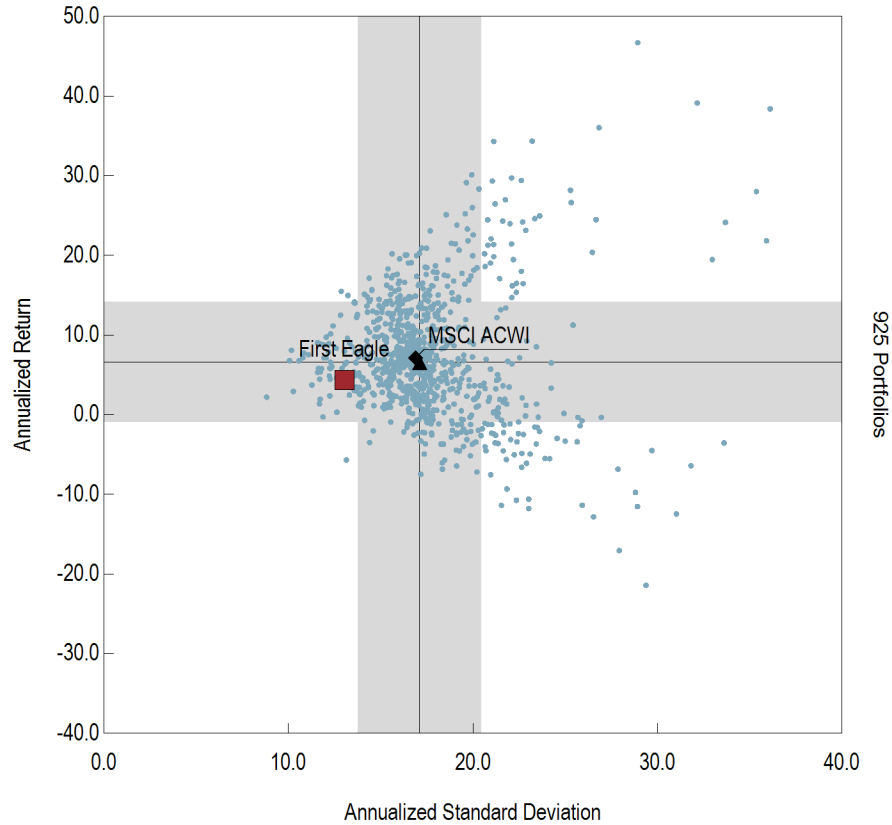
Rolling 5 Year Annualized Return (%)



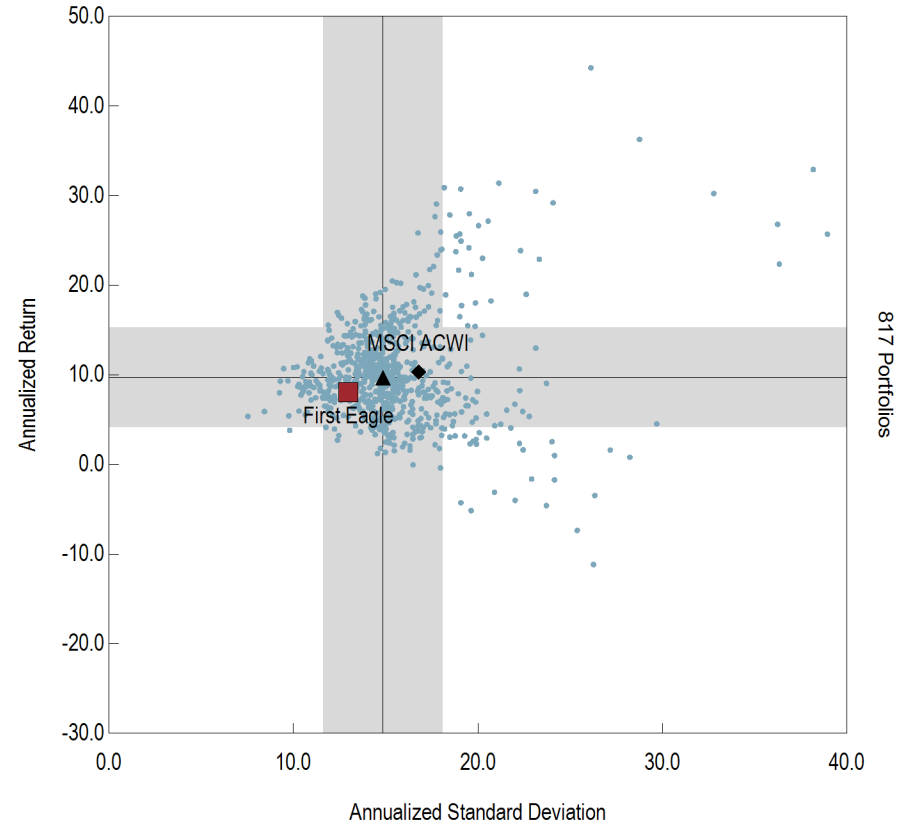
First Eagle
Risk vs. Return 3 & 5 Year (Gross of Fees)

Period Ending: September 30, 2020

3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
First Eagle	4.3%	13.0%	0.2
MSCI ACWI	7.1%	16.9%	0.3
eV All Global Equity Gross Median	6.6%	17.1%	0.3

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
First Eagle	8.1%	11.1%	0.6
MSCI ACWI	10.3%	14.4%	0.6
eV All Global Equity Gross Median	9.7%	14.8%	0.6

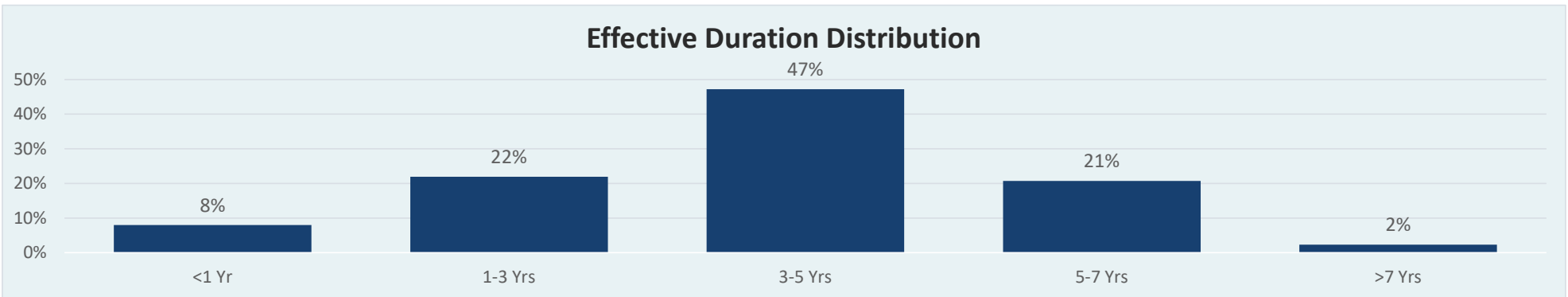
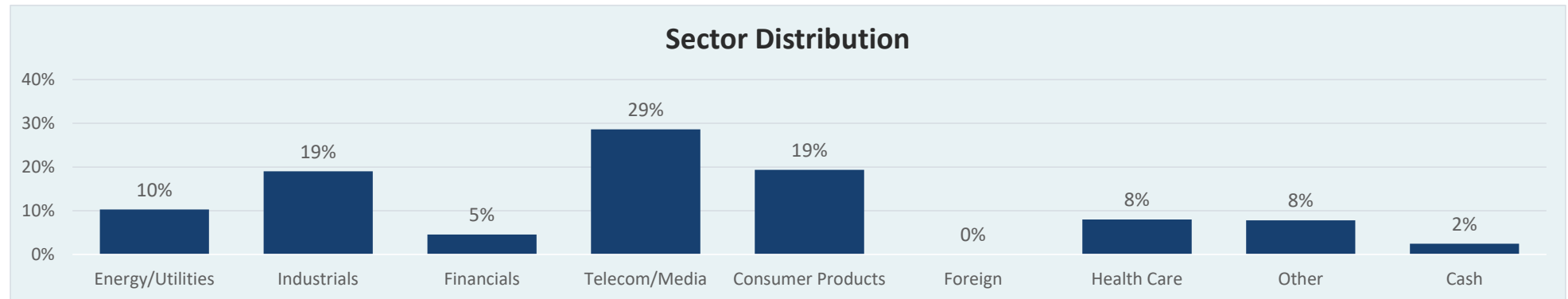
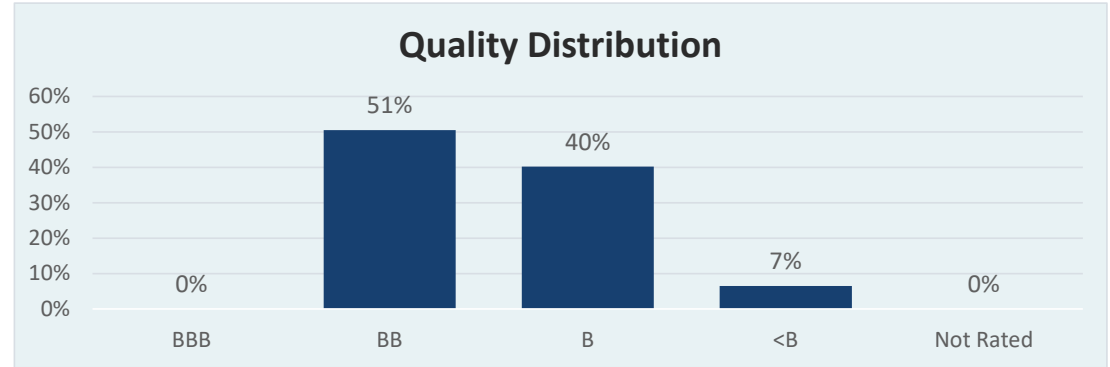
High Yield Managers

Allianz Global Investors Manager Portfolio Overview

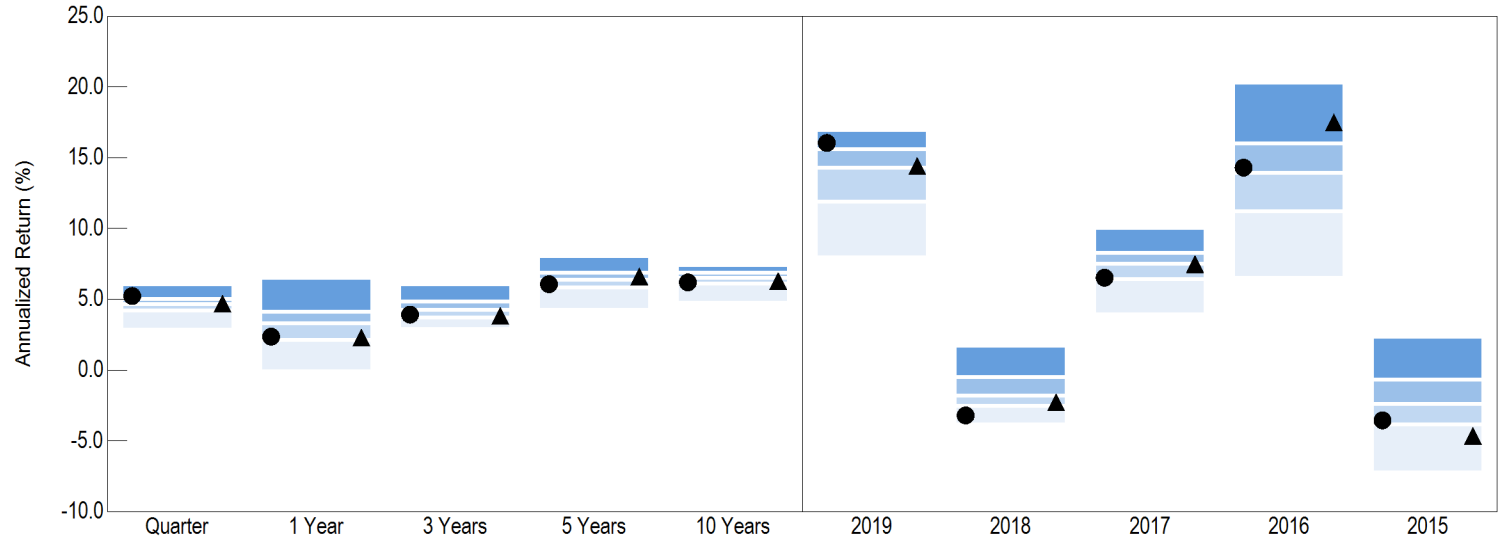
Period Ending: September 30, 2020

Domestic high yield fixed income portfolio with a focus on security selection. Primary personnel include Douglas Forsyth, Justin Kass, William Stickney, and Michael Yee.

	Allianz	ICE BofAML HY Master II
Effective Duration	3.20	3.90
Yield to Maturity	5.90	6.10
Average Quality	B1	B1
Average Coupon	6.6%	6.0%

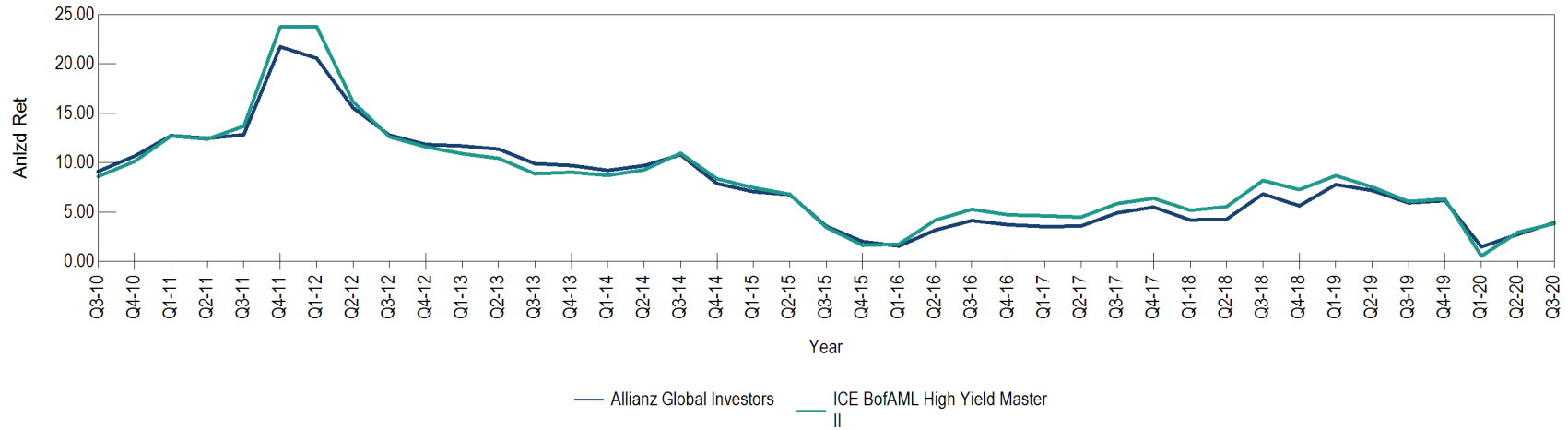


Allianz Global Investors vs. eV US High Yield Fixed Inc Gross Universe

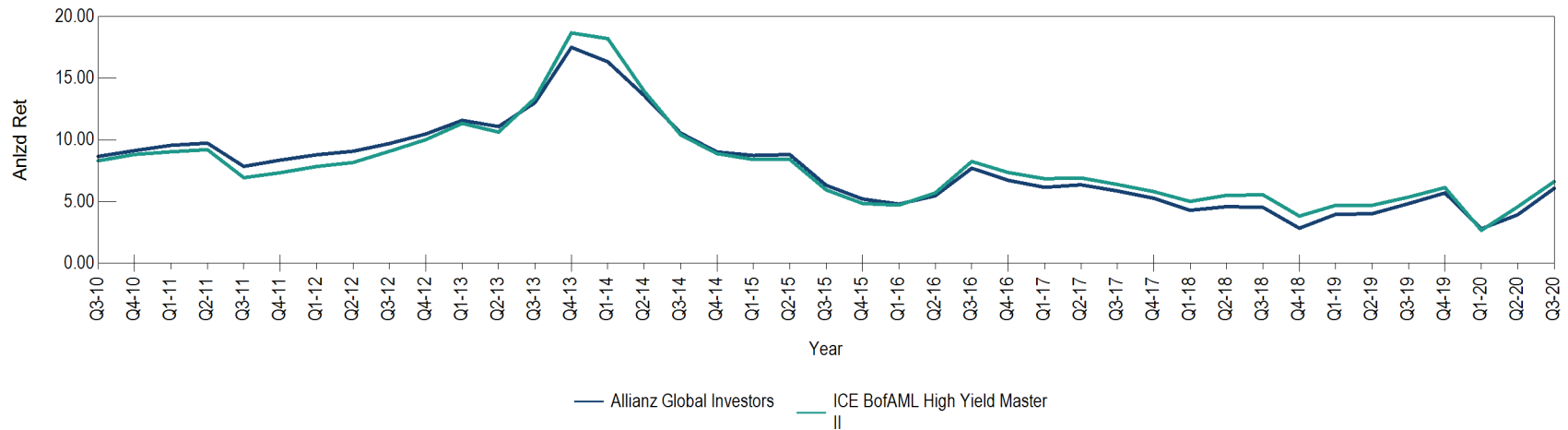


	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2019	2018	2017	2016	2015
5th Percentile	6.1	6.5	6.0	8.0	7.4	16.9	1.7	10.0	20.3	2.3
25th Percentile	5.0	4.1	4.9	6.9	6.9	15.6	-0.5	8.3	16.0	-0.7
Median	4.7	3.3	4.3	6.4	6.6	14.3	-1.8	7.5	14.0	-2.4
75th Percentile	4.2	2.1	3.8	5.9	6.1	11.9	-2.5	6.5	11.3	-3.8
95th Percentile	2.9	-0.1	2.9	4.3	4.8	8.0	-3.8	4.0	6.6	-7.2
# of Portfolios	205	205	200	182	135	226	210	198	183	155
● Allianz Global Investors	5.2 (20)	2.4 (71)	3.9 (68)	6.1 (68)	6.2 (74)	16.0 (15)	-3.2 (88)	6.5 (74)	14.3 (47)	-3.5 (68)
▲ ICE BofAML High Yield Master II	4.7 (51)	2.3 (73)	3.8 (73)	6.6 (43)	6.3 (71)	14.4 (49)	-2.3 (69)	7.5 (53)	17.5 (14)	-4.6 (83)

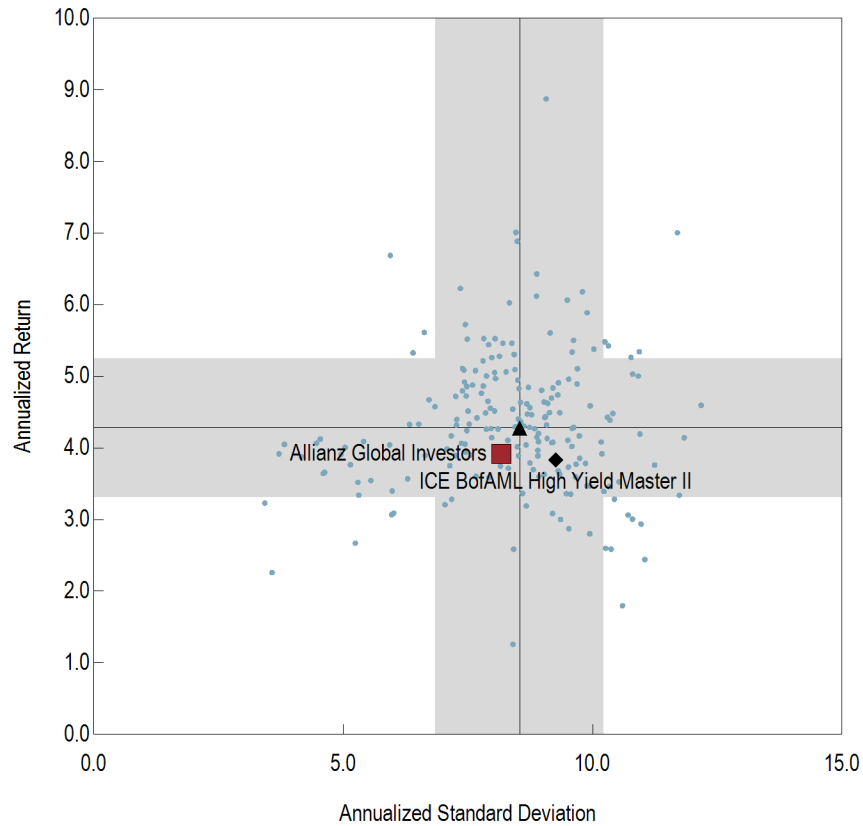
Rolling 3 Year Annualized Return (%)



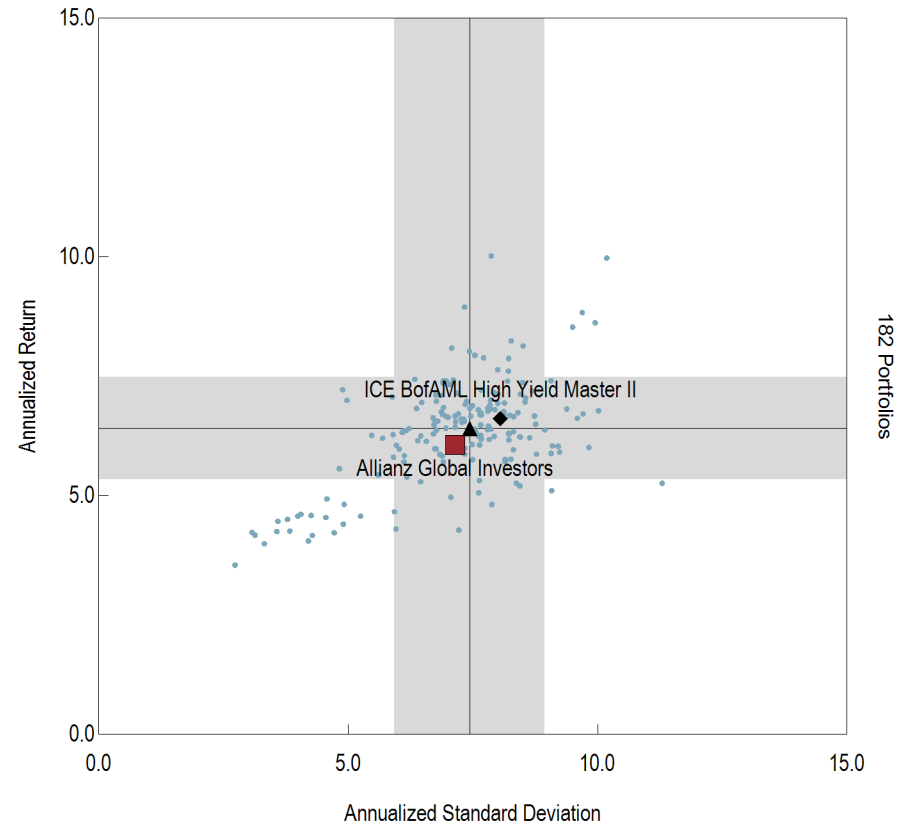
Rolling 5 Year Annualized Return (%)



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Allianz Global Investors	3.9%	8.2%	0.3
ICE BofAML High Yield Master II	3.8%	9.3%	0.2
eV US High Yield Fixed Inc Gross Median	4.3%	8.5%	0.3

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Allianz Global Investors	6.1%	7.1%	0.7
ICE BofAML High Yield Master II	6.6%	8.1%	0.7
eV US High Yield Fixed Inc Gross Median	6.4%	7.4%	0.7

Real Estate Managers

Adelante Manager Portfolio Overview

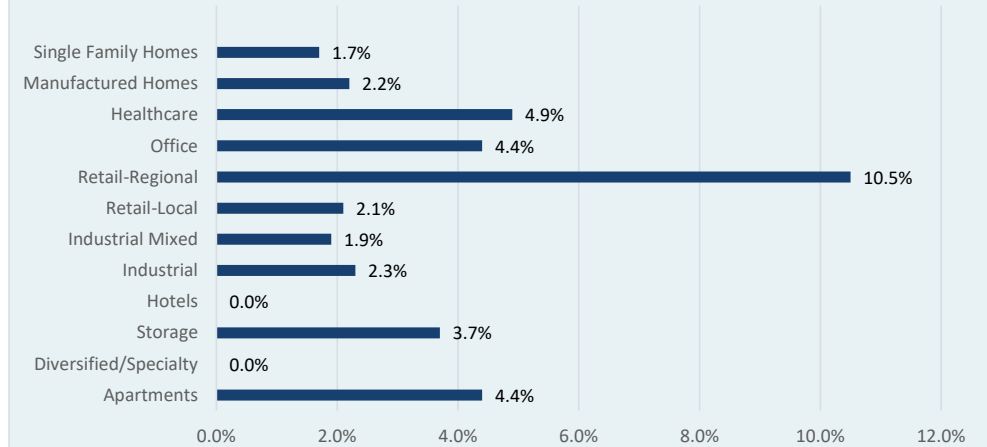
Period Ending: September 30, 2020

Diversified portfolio of U.S. REITs with a focus on the underlying real estate assets

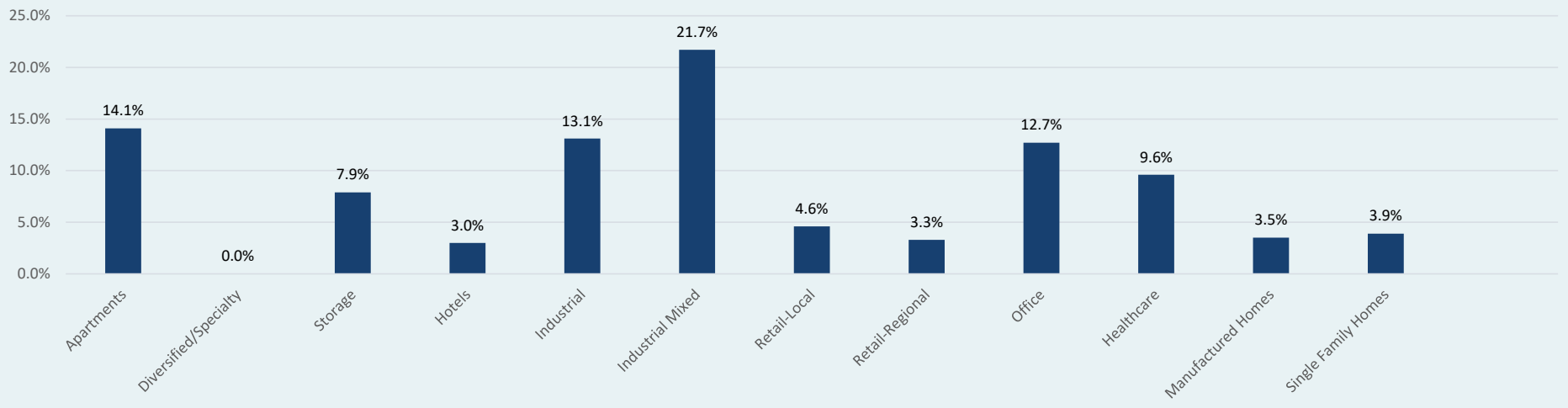
Top Five Holdings

Company	Property Type	Allocation
Equinix Inc	Industrial Mixed	12.0%
ProLogis Inc.	Industrial	11.1%
Extra Space Storage, Inc.	Storage	4.6%
Duke Realty Corporation	Industrial Mixed	4.5%
Equity Residential	Apartments	4.1%

Dividend Yield by Property Type



Property Type Allocation



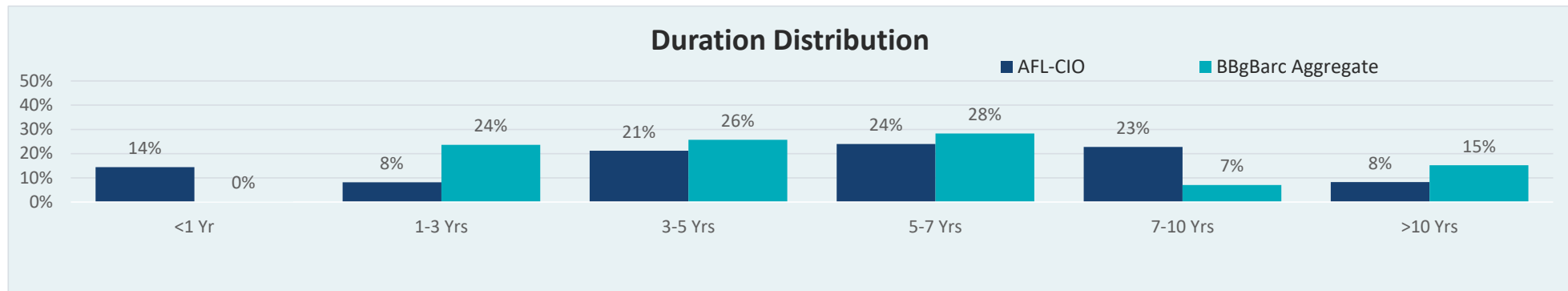
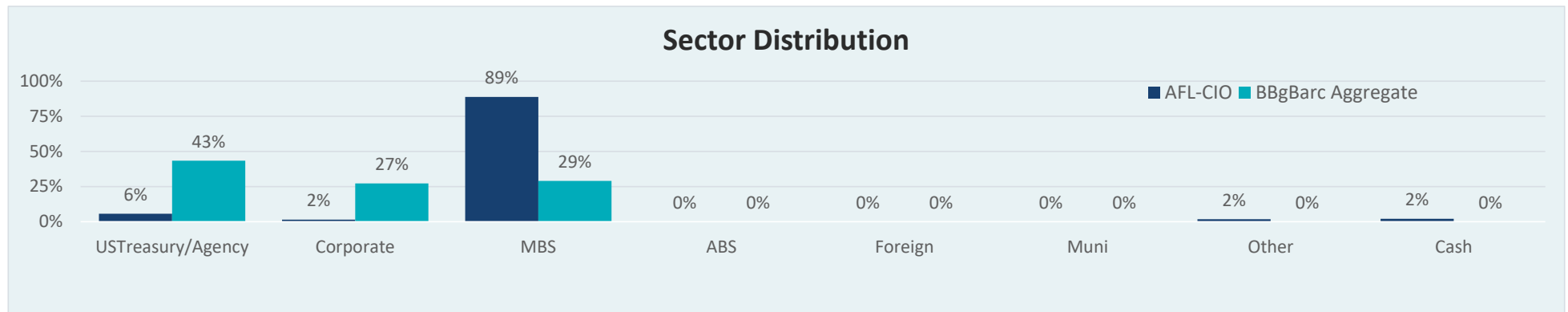
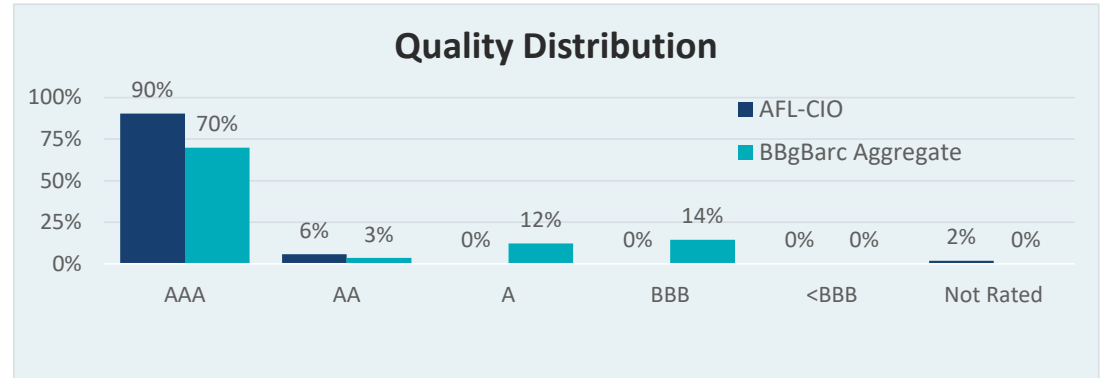
Diversifying Fixed Income Managers

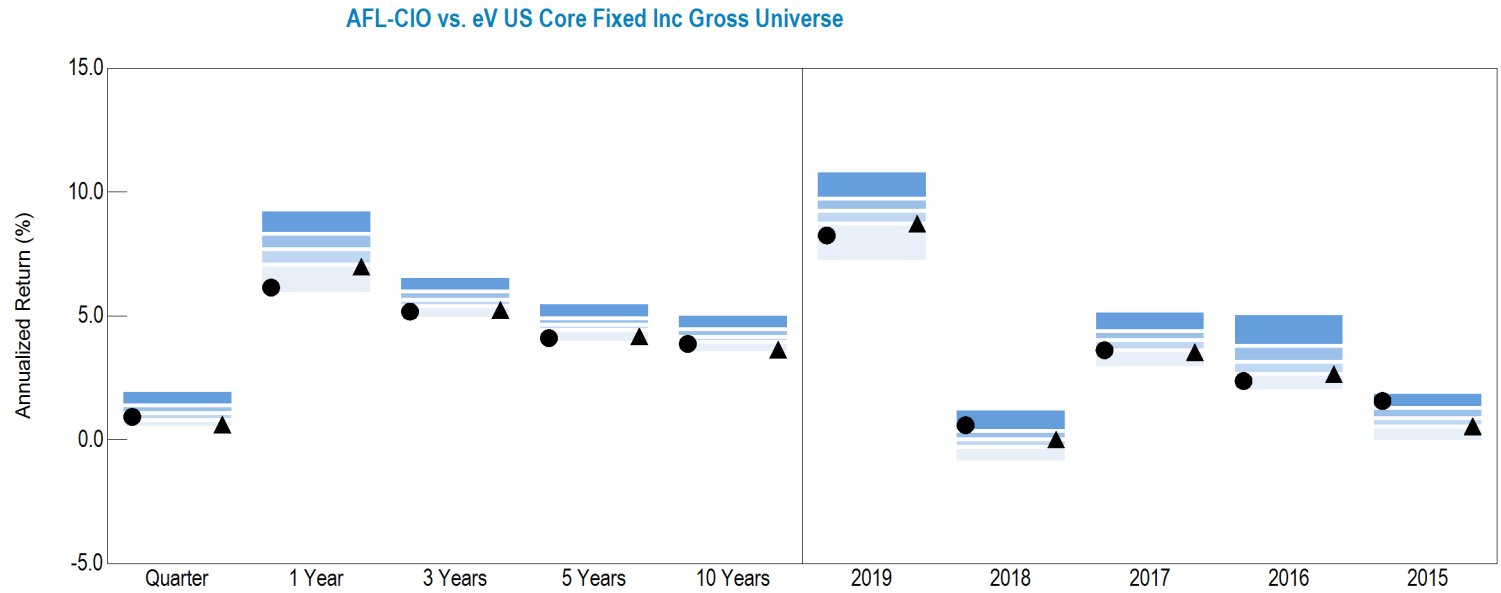
AFL-CIO Manager Portfolio Overview

Period Ending: September 30, 2020

Domestic core fixed income portfolio with an exclusive focus on mortgage-related securities. Primary personnel include Stephen Coyle and Chang Su.

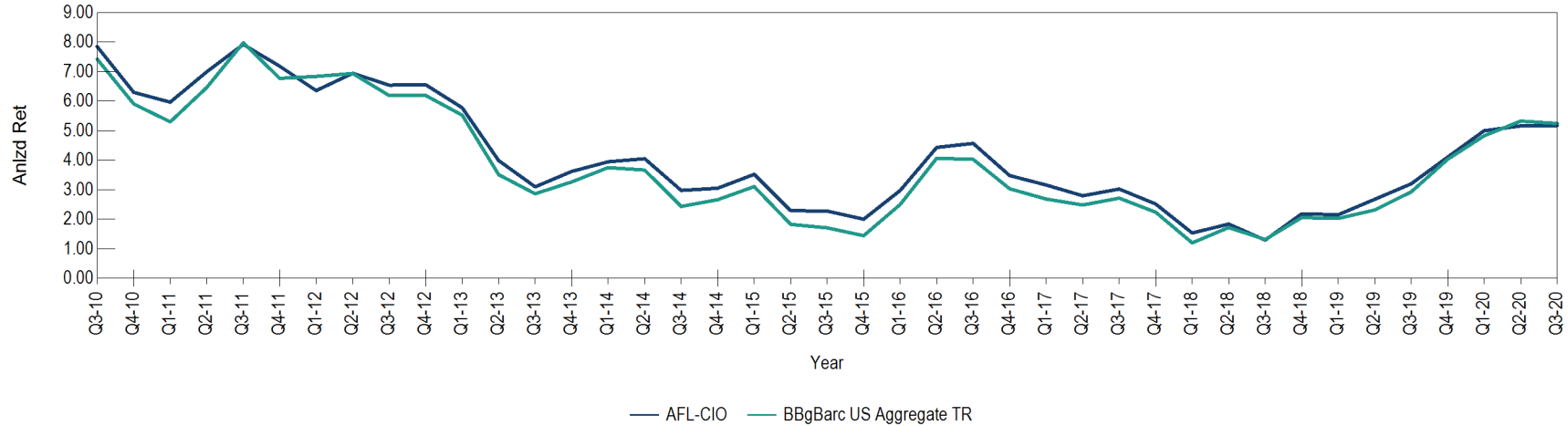
	AFL-CIO	BBgBarc Aggregate
Effective Duration	5.91	6.12
Yield to Maturity	2.74	1.20
Average Quality	AAA	AA/AA+
Average Coupon	2.9%	2.9%



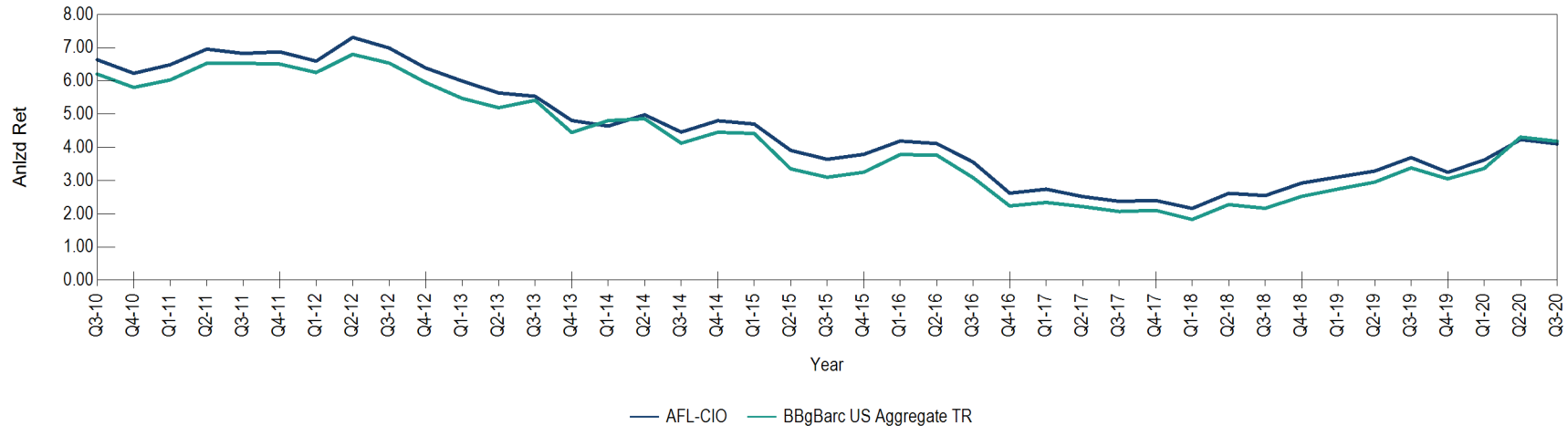


	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2019	2018	2017	2016	2015
5th Percentile	2.0	9.3	6.6	5.5	5.1	10.9	1.2	5.2	5.1	1.9
25th Percentile	1.4	8.3	6.0	4.9	4.5	9.8	0.4	4.4	3.8	1.3
Median	1.1	7.7	5.7	4.7	4.2	9.3	0.0	4.0	3.2	0.9
75th Percentile	0.8	7.1	5.4	4.5	4.0	8.7	-0.3	3.6	2.7	0.5
95th Percentile	0.5	5.9	4.9	3.9	3.5	7.2	-0.9	2.9	2.0	-0.1
# of Portfolios	215	215	212	208	201	228	240	233	223	196
● AFL-CIO	0.9 (66)	6.1 (92)	5.2 (89)	4.1 (92)	3.9 (82)	8.2 (88)	0.6 (16)	3.6 (76)	2.4 (87)	1.6 (15)
▲ BBgBarc US Aggregate TR	0.6 (90)	7.0 (77)	5.2 (87)	4.2 (91)	3.6 (94)	8.7 (77)	0.0 (54)	3.5 (79)	2.6 (77)	0.6 (75)

Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)

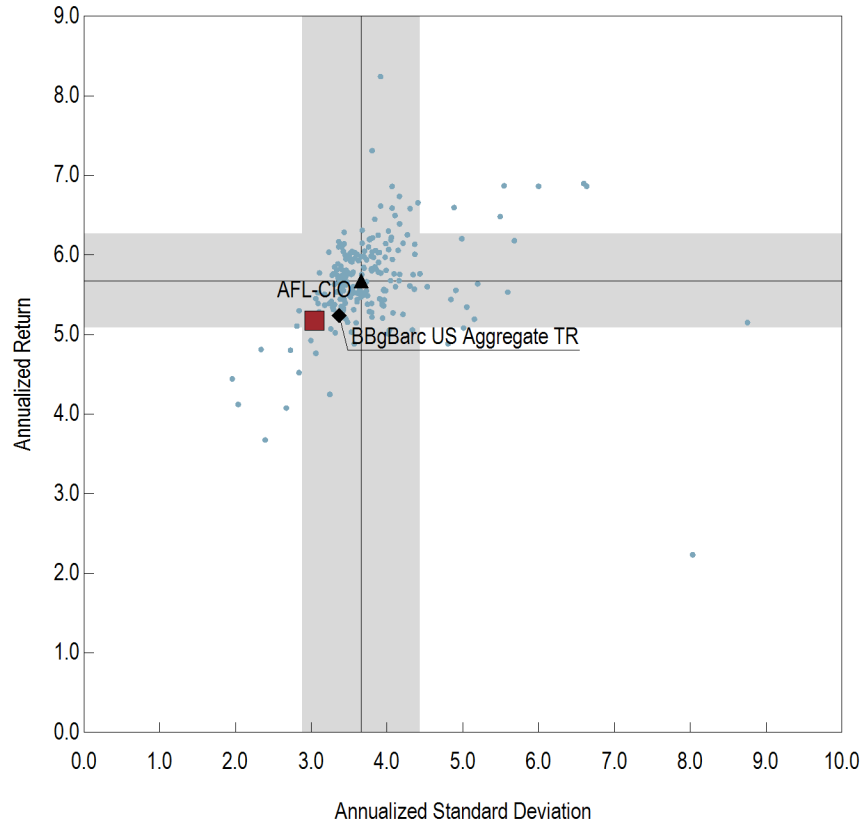


AFL-CIO

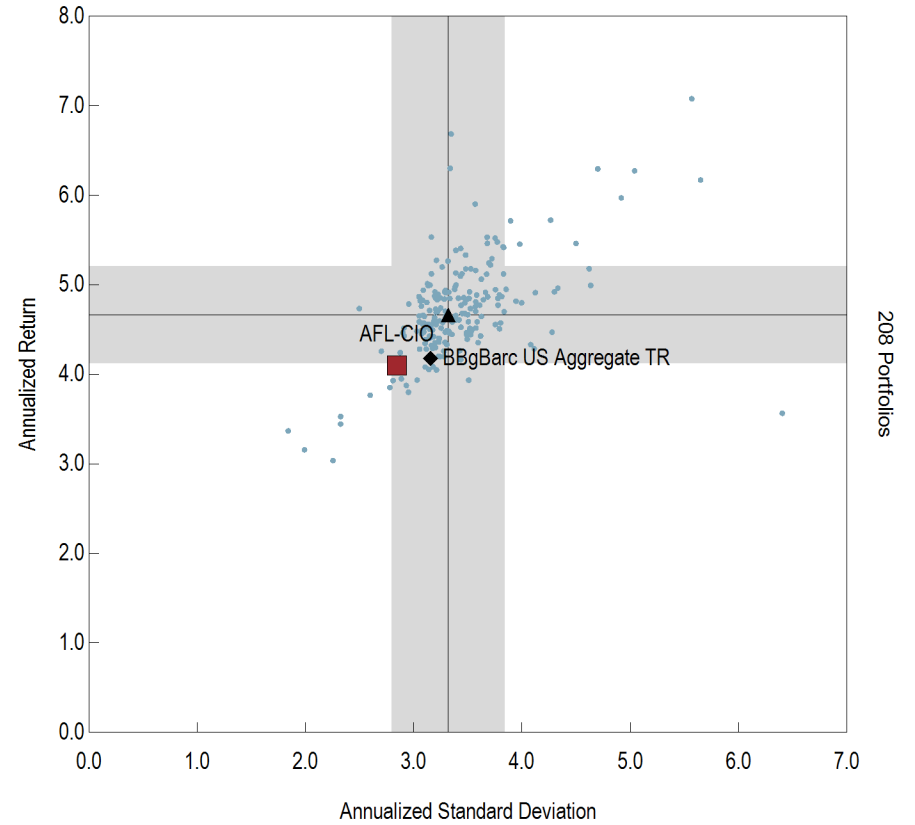
Risk vs. Return 3 & 5 Year (Gross of Fees)

Period Ending: September 30, 2020

3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
AFL-CIO	5.2%	3.0%	1.2
BBgBarc US Aggregate TR	5.2%	3.4%	1.1
eV US Core Fixed Inc Gross Median	5.7%	3.7%	1.1

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
AFL-CIO	4.1%	2.8%	1.0
BBgBarc US Aggregate TR	4.2%	3.2%	1.0
eV US Core Fixed Inc Gross Median	4.7%	3.3%	1.1

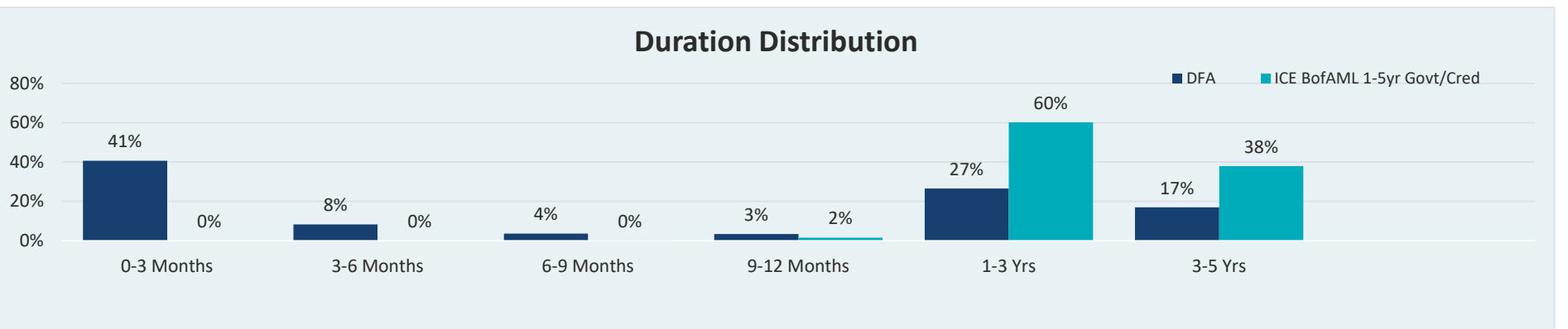
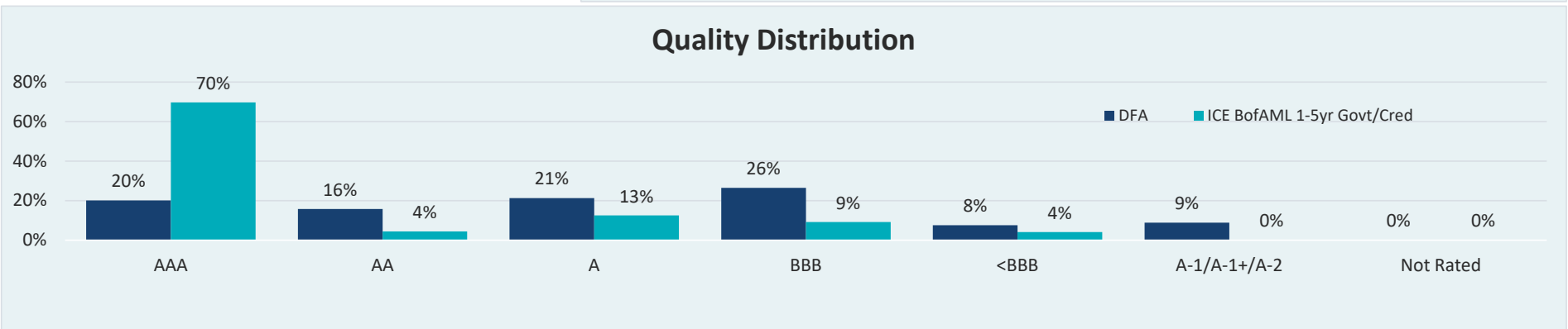
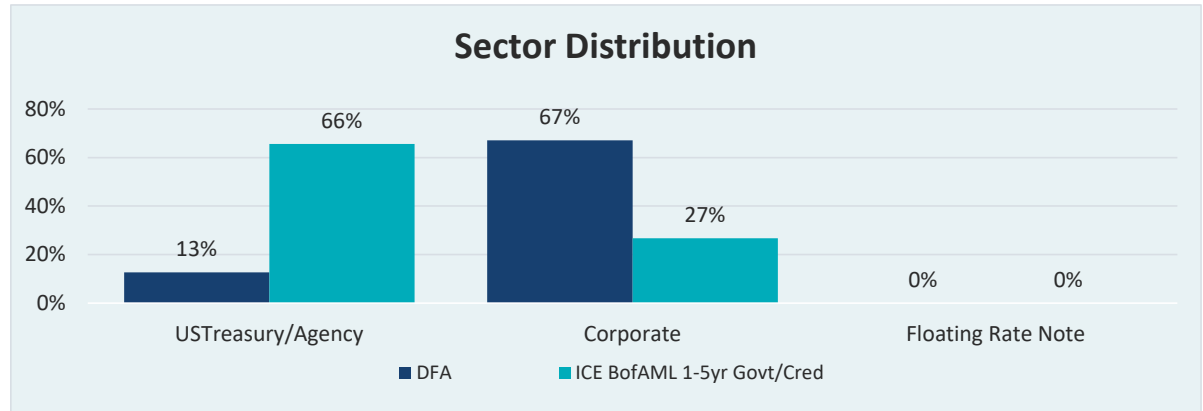
Liquidity Managers

DFA Short Credit Manager Portfolio Overview

Period Ending: September 30, 2020

Domestic short term US credit fixed income portfolio that maximizes total return through income and capital appreciation. Primary personnel include Dave Plecha and Joseph Kolerich.

	DFA	ICE BofAML 1-5yr Govt/Cred
Effective Duration	1.21	2.69
Yield to Maturity	0.77	0.46
Average Quality	A+	AA+
Average Coupon	2.11%	2.29%

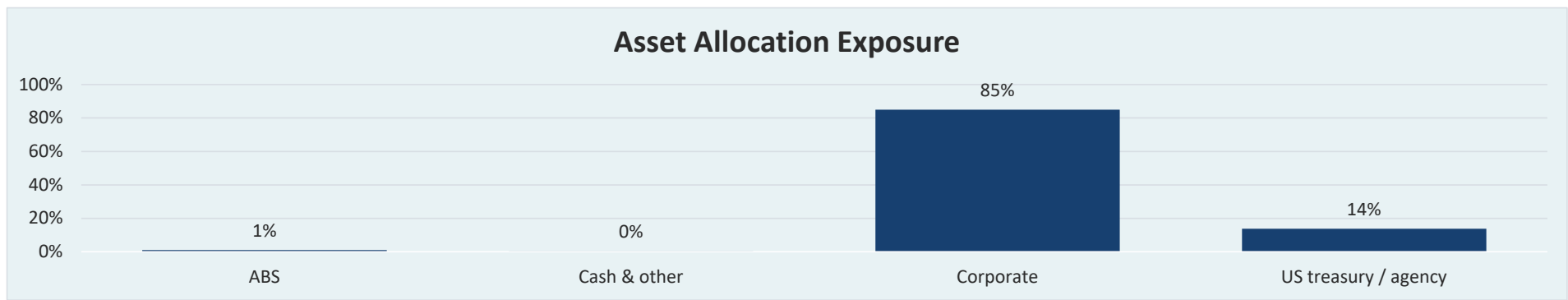
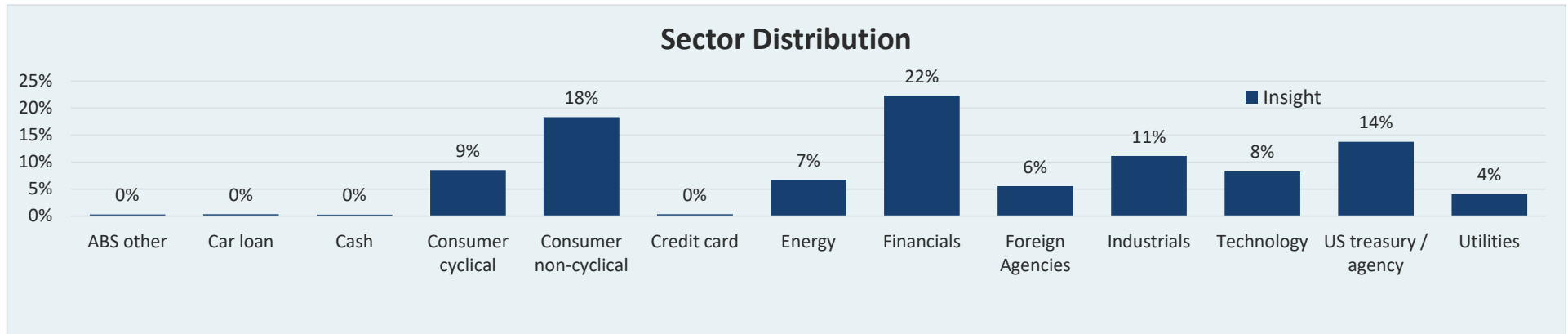
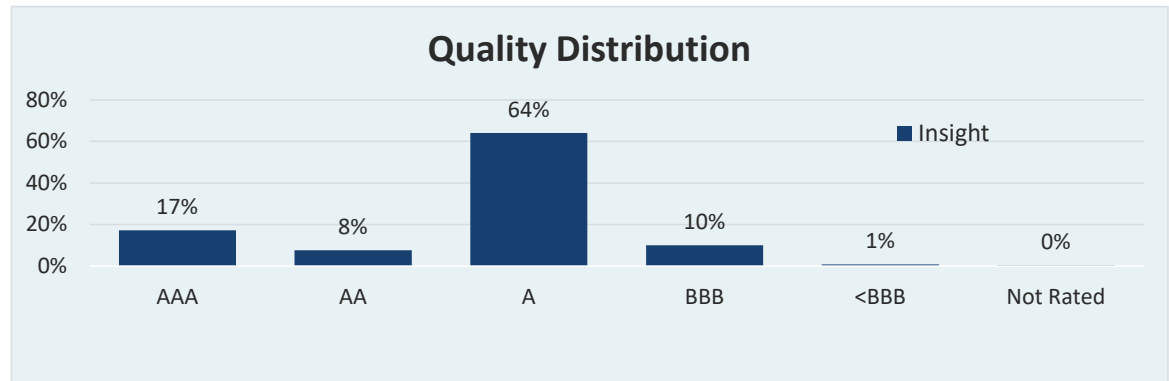


Insight Short Duration Manager Portfolio Overview

Period Ending: September 30, 2020

High quality, short duration multi-sector fixed income portfolio comprised of Treasuries, Agencies, investment grade corporates, and ABS designed specifically to meet CCCERA's liabilities. Key personnel include Gerard Berrigan and Jesse Fogarty.

	Insight	BBgBarc 1-3yr Govt
Effective Duration	1.73	1.95
Yield to Maturity	0.75	0.14
Average Quality	A+	AAA
Average Coupon	2.67%	1.60%

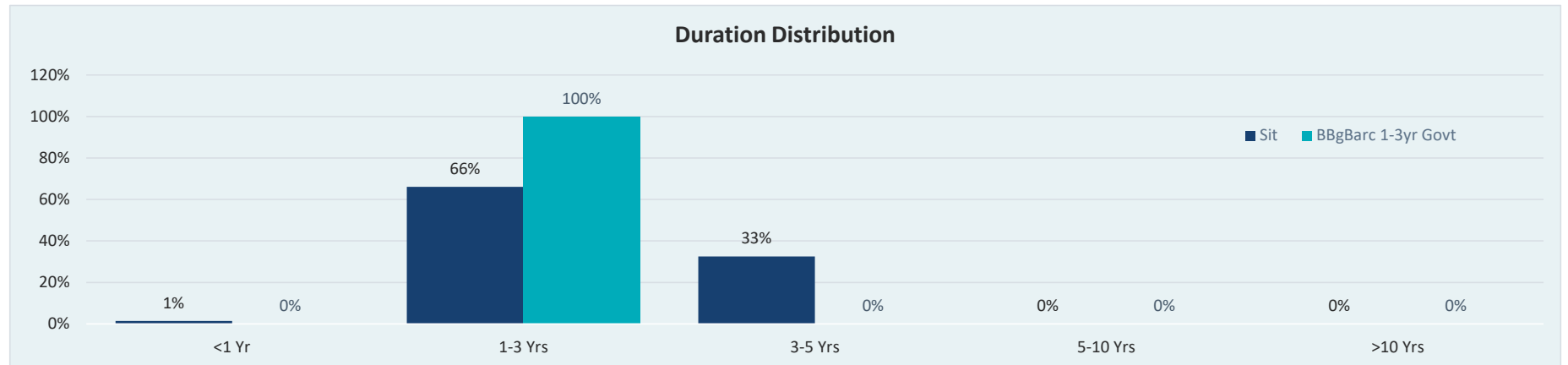
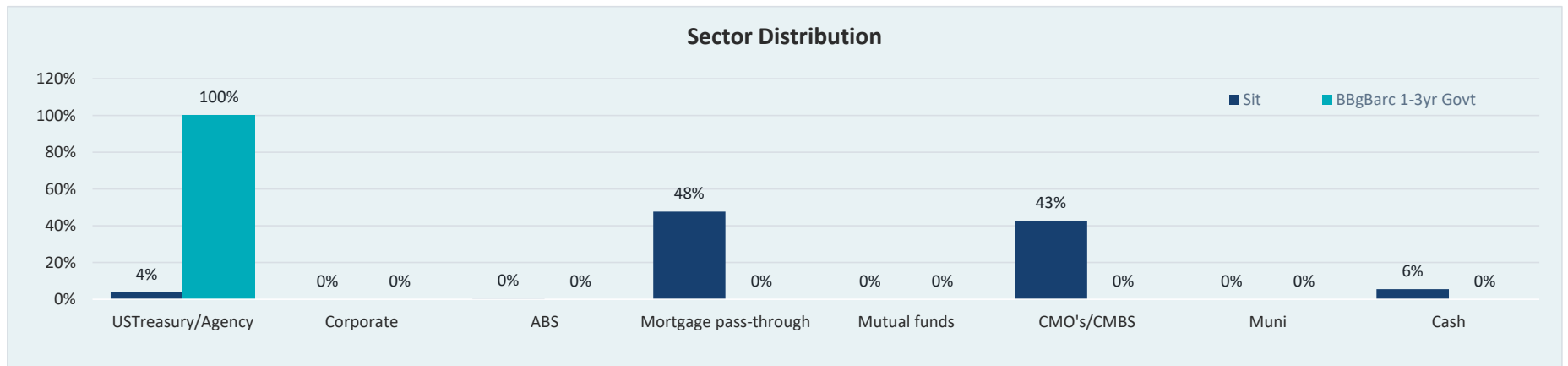


Sit Short Duration Manager Portfolio Overview

Period Ending: September 30, 2020

Short duration fixed income portfolio with a focus on earning high levels of interest income. Primary personnel include Bryce Doty, Paul Jungquist and Michael Brilley.

	Sit	BBgBarc 1-3yr Govt
Modified Duration	2.90	1.90
Yield to Maturity	1.30	0.10
Average Quality	AAA	AAA
Average Coupon	5.60%	1.60%



Performance Return Calculations
 Performance is calculated using Modified Dietz and for time periods with large cash flow (generally greater than 10% of portfolio value), Time Weighted Rates of Return (TWRR) methodologies. Monthly returns are geometrically linked and annualized for periods longer than one year.

Data Source
 Verus is an independent third party consulting firm and calculates returns from best source book of record data. Returns calculated by Verus may deviate from those shown by the manager in part, but not limited to, differences in prices and market values reported by the custodian and manager, as well as significant cash flows into or out of an account. It is the responsibility of the manager and custodian to provide insight into the pricing methodologies and any difference in valuation.

Illiquid Alternatives
 Due to the inability to receive final valuation prior to report production, closed end funds (including but are not limited to Real Estate, Hedge Funds, Private Equity, and Private Credit) performance is typically reported at a one-quarter lag. Valuation is reported at a one-quarter lag, adjusted for current quarter flow (cash flows are captured real time). Closed end fund performance is calculated using a time-weighted return methodology consistent with all portfolio and total fund performance calculations. For Private Markets, performance reports also include Verus-calculated multiples based on flows and valuations (e.g. DPI and TVPI) and manager-provided IRRs.

Policy & Custom Index Composition

Policy Index (7/1/2019 - present)	10% Russell 3000, 18% MSCI ACWI ex-US (Gross), 11% MSCI ACWI (Net), 1% Wilshire REIT, 1.6% NCREIF Property Index, 6.4% NCREIF ODCE Index, 2% CPI + 4%, 11% S&P 500 +4% (Lagged), 5% ICE BofAML High Yield Master II +2%, 2% ICE BofAML High Yield Master II, 24% BBgBarc 1-3 Yr Gov/Credit, 3.5% BBgBarc US Aggregate, 2% BBgBarc Global Aggregate, 2.5% HFRI EH Equity Market Neutral.
Policy Index (7/1/2018 - 6/30/2019)	11% Russell 3000, 19% MSCI ACWI ex-US (Gross), 11% MSCI ACWI (Net), 1% Wilshire REIT, 1.8% NCREIF Property Index, 7.2% NCREIF ODCE Index, 2% CPI + 4%, 10% S&P 500 +4% (Lagged), 4% ICE BofAML High Yield Master II +2%, 2% ICE BofAML High Yield Master II, 23% BBgBarc 1-3 Yr Gov/Credit, 3.5% BBgBarc US Aggregate, 2% BBgBarc Global Aggregate, 2.5% HFRI EH Equity Market Neutral.
Policy Index (10/1/2017 - 6/30/2018)	16.3% Russell 3000, 18.8% MSCI ACWI ex-US (Gross), 8.6% MSCI ACWI (Net), 1% Wilshire REIT, 1.6% NCREIF Property Index, 6.4% NCREIF ODCE Index, 2.5% CPI + 4%, 10.1% S&P 500 +4% (Lagged), 1.9% ICE BofAML High Yield Master II +2%, 4.3% ICE BofAML High Yield Master II, 25% BBgBarc 1-3 Yr Gov/Credit, 3.5% BBgBarc US Aggregate.
Policy Index (1/1/2017 - 9/30/2017)	22.9% Russell 3000, 11% MSCI ACWI ex-US (Gross), 10.9% MSCI ACWI (Net), 1% Wilshire REIT, 1.7% NCREIF Property Index, 6.8% NCREIF ODCE Index, 3.6% CPI + 4%, 8.1% S&P 500 +4% (Lagged), 1.7% ICE BofAML High Yield Master II +2%, 5.1% ICE BofAML High Yield Master II, 22.4% BBgBarc 1-3 Yr Gov/Credit, 3.2% BBgBarc US Aggregate, 1.6% 91-Day T-Bills.
Policy Index (4/1/2012-12/31/2016)	27.7% Russell 3000, 10.6% MSCI ACWI ex-US (Gross), 12.3% MSCI ACWI (Net), 19.6% BBgBarc U.S. Aggregate, 5% ICE BofAML High Yield Master II, 4% BBgBarc Global Aggregate, 13.5% Real Estate Benchmark, 6.8% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills.
Policy Index (4/1/2011-3/31/2012)	31% Russell 3000, 10.4% MSCI EAFE (Gross), 9.6% MSCI ACWI (Net), 25% BBgBarc U.S. Aggregate, 3% ICE BofAML High Yield Master II, 4% BBgBarc Global Aggregate, 8.4% DJ Wilshire REIT, 3.1% NCREIF, 5% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills.
Policy Index (4/1/2010-3/31/2011)	35.6% Russell 3000, 10.4% MSCI EAFE (Gross), 5% MSCI ACWI (Net), 25% BBgBarc U.S. Aggregate, 3% ICE BofAML High Yield Master II, 4% BBgBarc Global Aggregate, 8.4% DJ Wilshire REIT, 3.1% NCREIF, 5% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills.
Policy Index (7/1/2009-3/31/2010)	40.6% Russell 3000, 10.4% MSCI EAFE (Gross), 25% BBgBarc U.S. Aggregate, 3% ICE BofAML High Yield Master II, 4% BBgBarc Global Aggregate, 8.4% DJ Wilshire REIT, 3.1% NCREIF, 5% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills.
Custom Growth Benchmark (7/1/2019 - present)	14.7% Russell 3000, 26.4% MSCI ACWI ex-US (Gross), 16.2% MSCI ACWI (Net), 1.5% Wilshire REIT, 2.4% NCREIF Property Index, 9.4% NCREIF ODCE Index, 16.2% S&P 500 +4% (Lagged), 7.4% ICE BofAML High Yield Master II +2%, 2.9% ICE BofAML High Yield Master II, 2.9% BBgBarc Global Bond
Custom Growth Benchmark (7/1/2018 - 6/30/2019)	16.0% Russell 3000, 27.5% MSCI ACWI ex-US (Gross), 15.9% MSCI ACWI (Net), 1.5% Wilshire REIT, 2.6% NCREIF Property Index, 10.4% NCREIF ODCE Index, 14.5% S&P 500 +4% (Lagged), 5.8% ICE BofAML High Yield Master II +2%, 2.9% ICE BofAML High Yield Master II, 2.9% BBgBarc Global Bond
Custom Growth Benchmark (9/30/2017-6/30/2018)	23.6% Russell 3000, 27.2% MSCI ACWI ex-US (Gross), 12.5% MSCI ACWI (Net), 1.5% Wilshire REIT, 2.3% NCREIF Property Index, 9.3% NCREIF ODCE Index, 14.6% S&P 500 +4% (Lagged), 2.8% ICE BofAML High Yield Master II +2%, 6.2% ICE BofAML High Yield Master II
Custom Growth Benchmark (1/1/2017-9/30/2017)	32.6% Russell 3000, 15.7% MSCI ACWI ex-US (Gross), 15.5% MSCI ACWI (Net), 1.4% Wilshire REIT, 2.4% NCREIF Property Index, 9.6% NCREIF ODCE Index, 1.6% CPI +4%, 11.5% S&P 500 +4% (Lagged), 2.4% ICE BofAML High Yield Master II +2%, 7.3% ICE BofAML High Yield Master II
Custom Growth Benchmark (Prior to 1/1/2017)	Weighted-average of the benchmarks of the sub-composites that make up the composite.
Custom Diversifying Benchmark (7/1/2018 - present)	43.75% BBgBarc US Aggregate, 25% CPI + 4%, 31.25% HFRI EH Equity Market Neutral.
Custom Diversifying Benchmark (10/1/2017 - 6/30/2018)	58.33% BBgBarc US Aggregate, 41.67% CPI + 4%
Custom Diversifying Benchmark (1/1/2017 - 9/30/2017)	56.1% BBgBarc US Aggregate, 43.9% CPI + 4%
Custom Diversifying Benchmark (Prior to 1/1/2017)	Weighted-average of the benchmarks of the sub-composites that make up the composite.
Real Estate Benchmark (current)	11% Wilshire REIT, 18% NCREIF Property Index, 71% NCREIF ODCE Index.
Real Estate Benchmark (4/1/2012-11/30/2016)	40% Wilshire REIT, 50% NCREIF Property Index, 10% FTSE/EPRA NAREIT Developed ex-US.

Manager Line Up					
Manager	Inception Date	Data Source	Manager	Inception Date	Data Source
BlackRock Russell 1000 Index	4/20/2017	BlackRock	Invesco Real Estate IV	6/30/2014	Invesco
Jackson Square Partners	5/1/2005	Northern Trust	Invesco Real Estate V	2/20/2019	Invesco
Boston Partners	6/1/1995	Northern Trust	Oaktree REOF V	12/31/2011	Oaktree
Emerald Advisors	4/7/2003	Northern Trust	Oaktree REOF VI	9/30/2013	Oaktree
Ceredex	11/6/2011	Northern Trust	Oaktree REOF VII	4/1/2015	Oaktree
Pyrford	4/25/2014	State Street	Siguler Guff DREOF	1/25/2012	Siguler Guff
William Blair	10/29/2010	William Blair	Siguler Guff DREOF II	8/31/2013	Siguler Guff
PIMCO RAE Emerging Markets	2/28/2017	State Street	Siguler Guff DREOF II Co-Inv	1/27/2016	Siguler Guff
TT Emerging Markets	7/27/2017	TT	Paulson Real Estate Fund II	11/10/2013	Paulson
Artisan Partners	10/1/2012	SEI Trust	AE Industrial Partners Fund II	4/8/2019	StepStone Group
First Eagle	1/18/2011	Northern Trust	Adams Street Partners	3/18/1996	StepStone Group
Allianz Global Investors	4/25/2000	Northern Trust	Adams Street Partners II	1/16/2009	StepStone Group
Adelante	9/30/2001	Northern Trust	Adams Street Partners Venture	4/28/2017	StepStone Group
AQR Global Risk Premium - EL	1/18/2019	AQR	Adams Street Partners - BFP	1/18/1996	StepStone Group
Panagora Risk Parity Multi Asset	3/15/2019	Panagora	Adams Street Partners - Fund 5	9/21/2012	StepStone Group
AFL-CIO	6/30/1991	AFL-CIO	Aether Real Assets IV	3/16/2016	StepStone Group
Wellington Real Total Return (in Liquidation)	2/26/2013	Wellington	Aether Real Assets III	11/27/2013	StepStone Group
Acadian Multi-Asset Absolute Return Fund	8/4/2020	Northern Trust	Aether Real Assets III Surplus	11/30/2013	StepStone Group
Parametric Defensive Equity	7/23/2018	Northern Trust	Bay Area Equity Fund	6/14/2004	StepStone Group
Sit Short Duration	11/2/2016	Northern Trust	Bay Area Equity Fund II	12/7/2009	StepStone Group
DFA Short Credit	11/21/2016	Northern Trust	Commonfund	6/28/2013	StepStone Group
Insight Short Duration	11/18/2016	Northern Trust	EIF US Power Fund II	8/16/2005	StepStone Group
Parametric Overlay	3/29/2017	Northern Trust	EIF US Power Fund III	5/30/2007	StepStone Group
Cash	-	Northern Trust	EIF US Power Fund IV	11/28/2011	StepStone Group
Angelo Gordon Energy Credit Opp	9/24/2015	StepStone Group	EIF US Power Fund V	11/28/2016	StepStone Group
StepStone CC Opportunities Fund	2/1/2018	StepStone Group	Genstar Capital Partners IX, L.P.	2/21/2019	StepStone Group
Torchlight II	9/30/2006	StepStone Group	Oaktree PIF 2009	2/28/2010	StepStone Group
Torchlight IV	7/1/2012	StepStone Group	Paladin III	11/30/2007	StepStone Group
Torchlight V	7/1/2012	StepStone Group	Ocean Avenue Fund II	6/11/2014	StepStone Group
Angelo Gordon Realty Fund VIII	1/23/2012	Angelo Gordon	Ocean Avenue Fund III	4/15/2016	StepStone Group
Angelo Gordon Realty Fund IX	12/8/2014	Angelo Gordon	Pathway 6	5/24/2011	StepStone Group
DLJ RECP III	6/23/2005	DLJ	Pathway 7	2/7/2013	StepStone Group
DLJ RECP IV	2/11/2008	DLJ	Pathway 8	11/23/2015	StepStone Group
DLJ RECP V	7/1/2014	DLJ	Pathway	11/9/1998	StepStone Group
DLJ RECP VI	3/19/2019	DLJ	Pathway 2008	12/26/2008	StepStone Group
LaSalle Income & Growth VI	7/16/2013	LaSalle	Siguler Guff CCCERA Opps	6/3/2014	StepStone Group
LaSalle Income & Growth VII	2/28/2017	LaSalle	Siguler Guff Secondary Opps	11/30/2016	StepStone Group
Hearthstone II	6/17/1998	Hearthstone	Siris Partners IV	3/15/2019	StepStone Group
Long Wharf Fund IV	7/3/2013	Long Wharf	TPG Healthcare Partners, L.P.	6/28/2019	StepStone Group
Long Wharf Fund V	9/30/2016	Long Wharf	Trident VIII, L.P.	5/24/2019	StepStone Group
Long Wharf Fund VI	2/5/2020	Long Wharf	Wastewater Opp. Fund	12/8/2015	StepStone Group
Invesco Real Estate III	6/30/2013	Invesco			

Other Disclosures

All data prior to 12/31/2014 was provided by previous consultant.
 As of 7/1/2018 all Private Equity and Private Credit data is provided by StepStone Group.

Glossary

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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