Verus

PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS

PERIOD ENDING: SEPTEMBER 30, 2020

Investment Performance Review for

Imperial County Employees’ Retirement System

Table of Contents

Verus

VERUSINVESTMENTS.COM

SEATTLE 206-622-3700
LOS ANGELES 300-297-1777
SAN FRANCISCO 415-362-3484
PITTSBURGH 412-784-6678

Verus

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

AEIOU > PPPPP

Table of contents

Verus

VERUSINVESTMENTS.COM

SEATTLE 206-622-3700
LOS ANGELES 310-297-1777
SAN FRANCISCO 415-362-3484
PITTSBURGH 412-784-6678

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

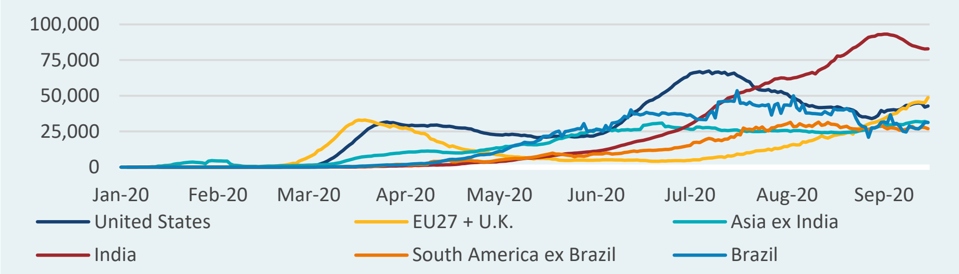
"The market isn't convinced the Federal Reserve can achieve its inflation objective"

TEN-YEAR BREAKEVEN 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%

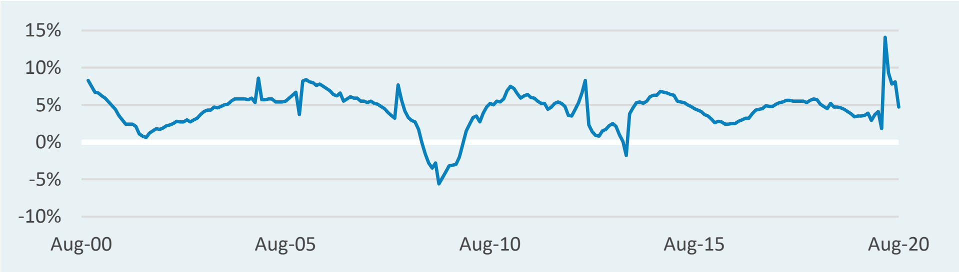
Article Source: CNBC, September 17th, 2020

SEVEN-DAY TRAILING AVERAGE DAILY CASE GROWTH BY REGION



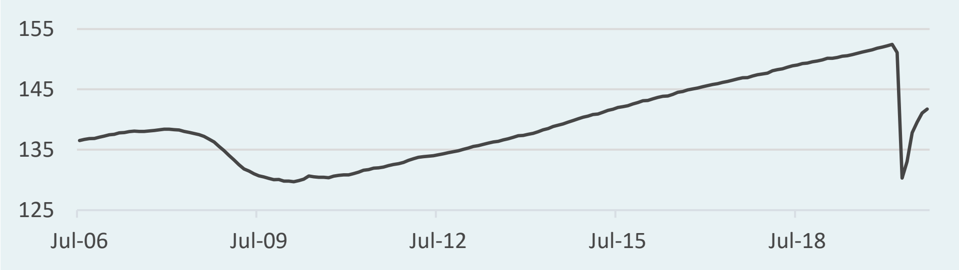
Source: Bloomberg, as of 9/30/20

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.

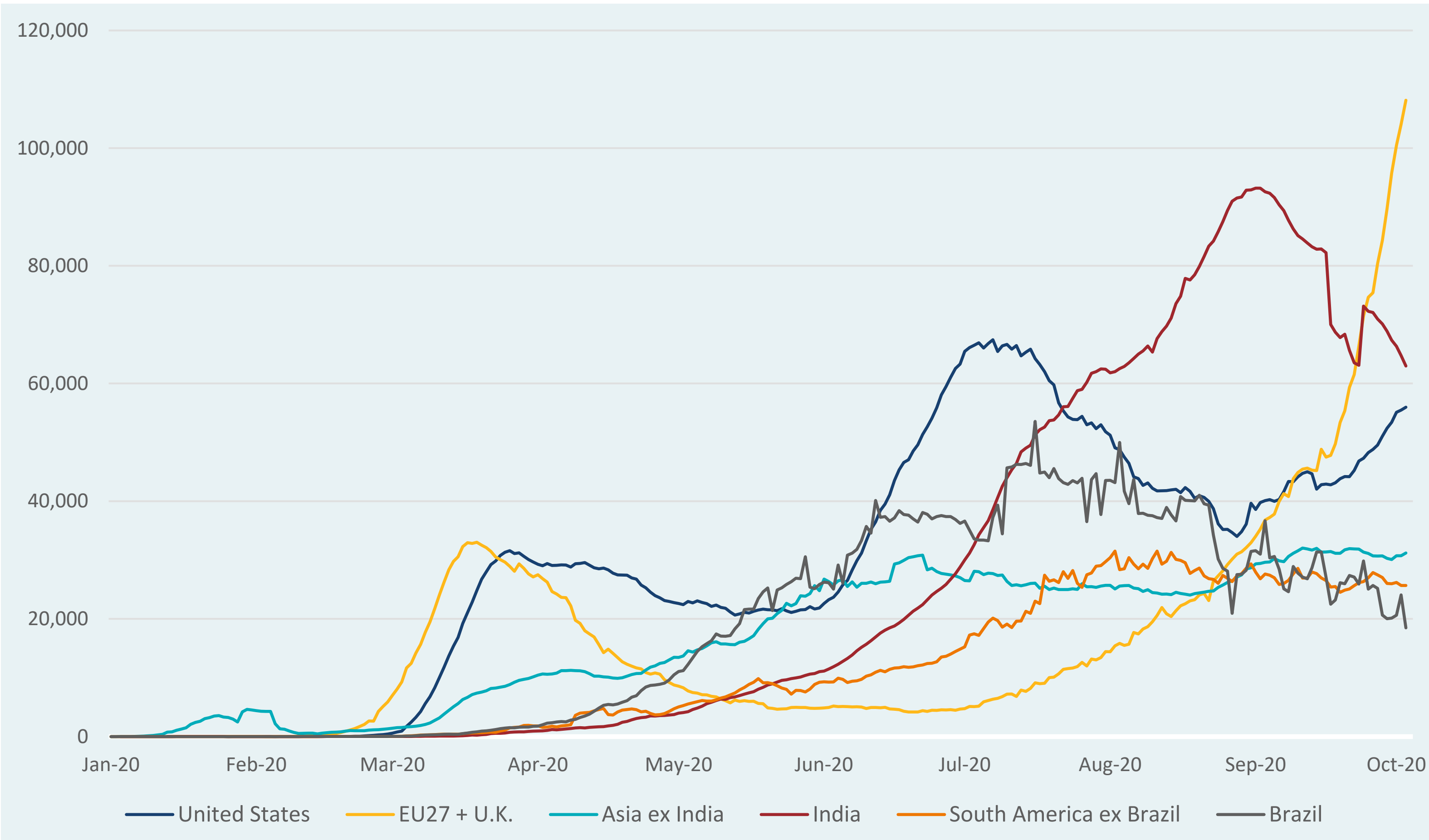
— The NFIB Small Business Optimism Index recovered to 104.0 in Q3, which was in line with pre-pandemic levels. The survey concluded that half of the jobs lost in March and April have been recouped, but that the pace of recovery has slowed.

— 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



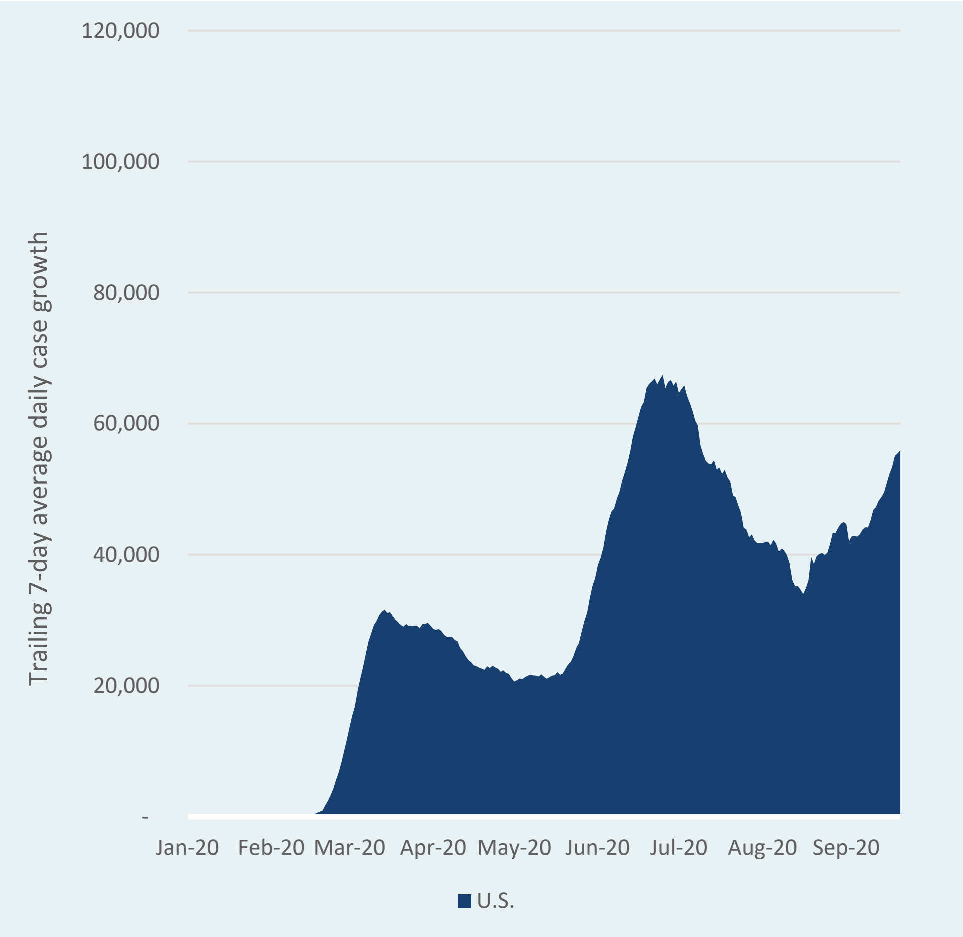
Source: Bloomberg, as of 10/18/20

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

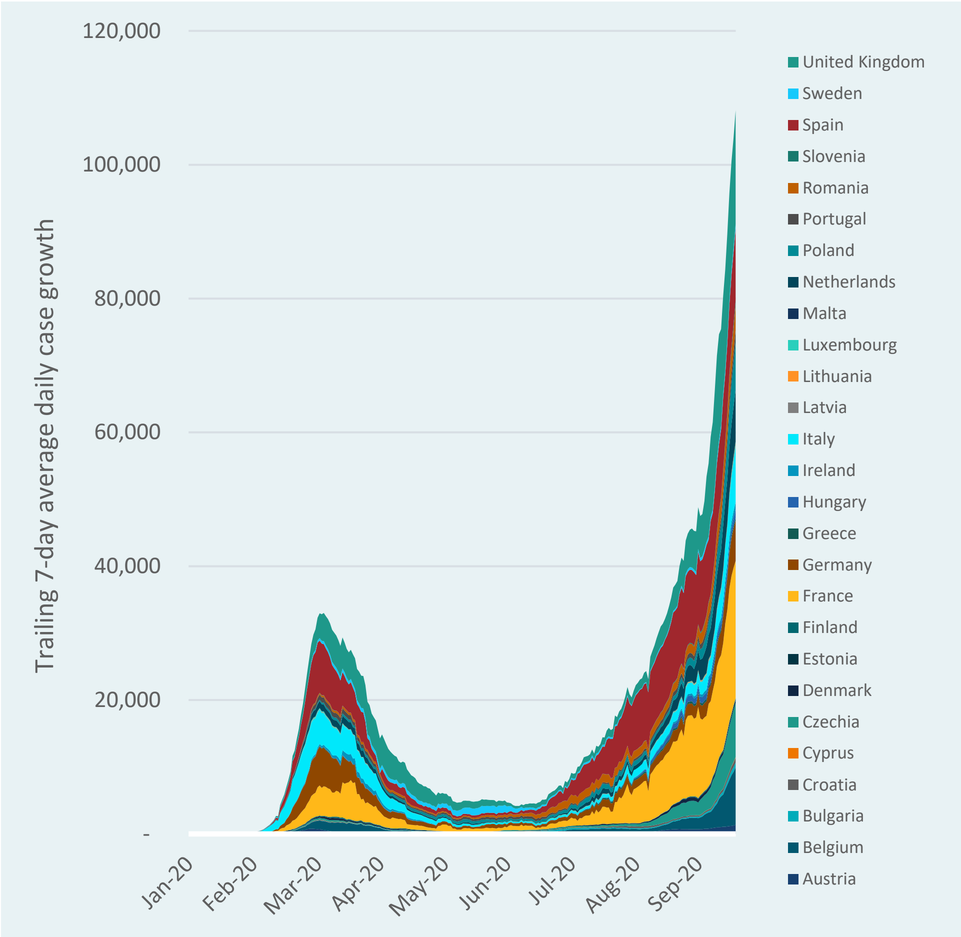
Deaths have begun to increase on a several-week lag to local case growth, as expected, but remain at lower levels than those seen earlier this year

COVID-19 update

UNITED STATES



EU27 + UNITED KINGDOM



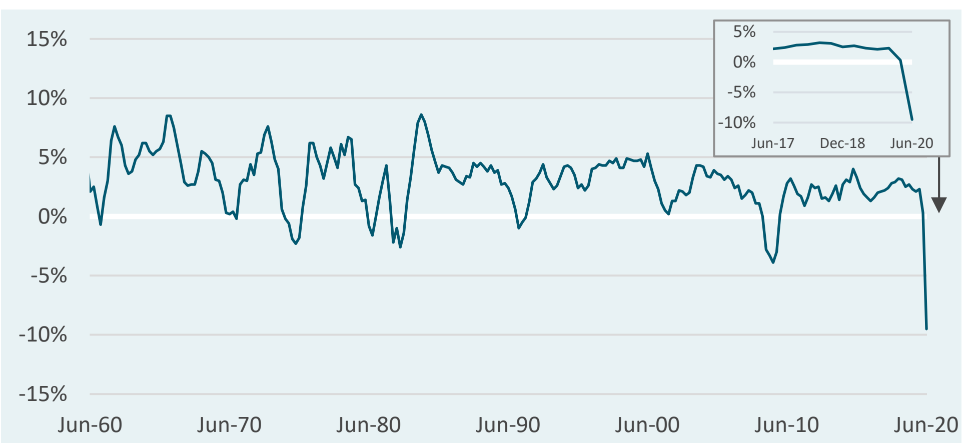
Source: Bloomberg, as of 10/18/20

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.

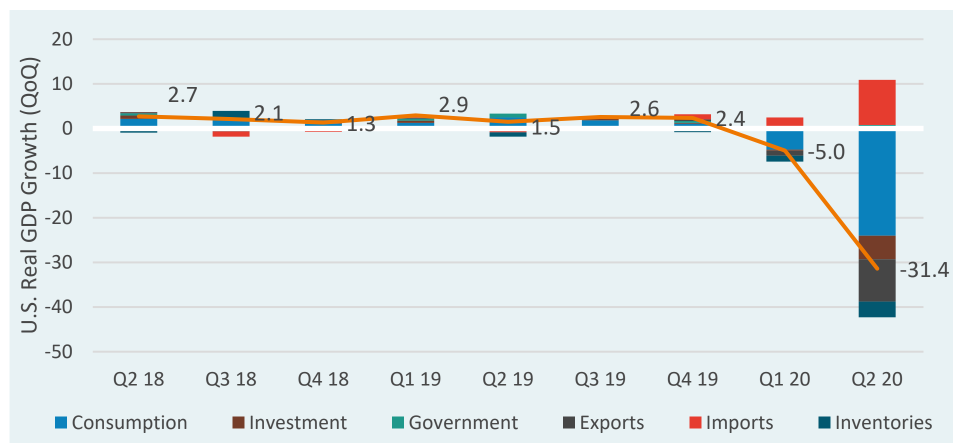
The Atlanta Fed's forecast for third quarter-growth was +33.8% on a quarter-over-quarter annualized basis (-10.7% year-over-year), as of September 30th. This projection was based on an expectation for consumption to rebound materially, household investment to pick up, businesses to begin re-stocking 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



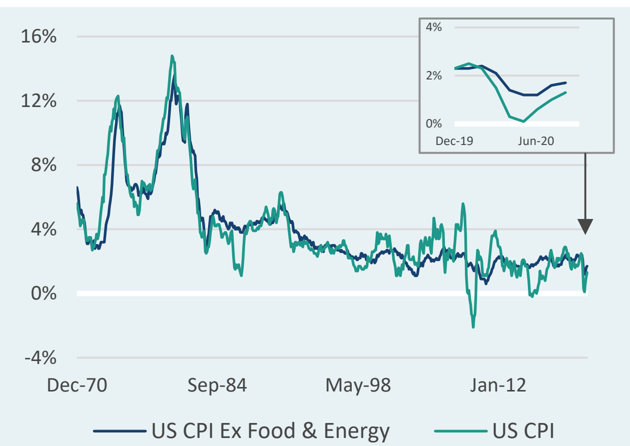
Source: BEA, annualized quarterly rate, as of 6/30/20

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%).

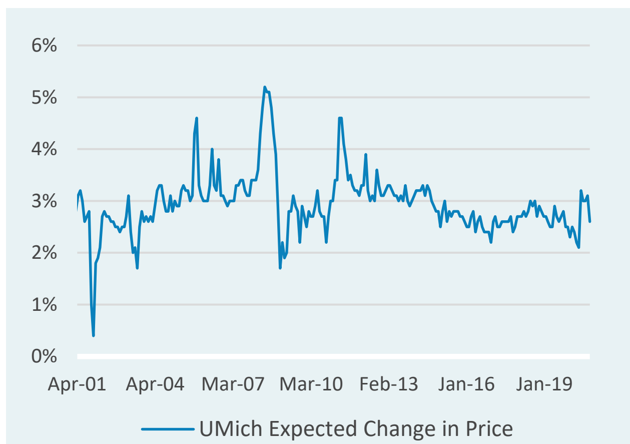
Ten- and 30-year breakeven inflation rates recovered from 1.3% to 1.6% and from 1.6% to 1.8%, respectively, as market participants likely became slightly more bullish on longer-term growth and inflation outlooks. Still, there remains skepticism around the Fed's ability to sustainably achieve its inflation 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)



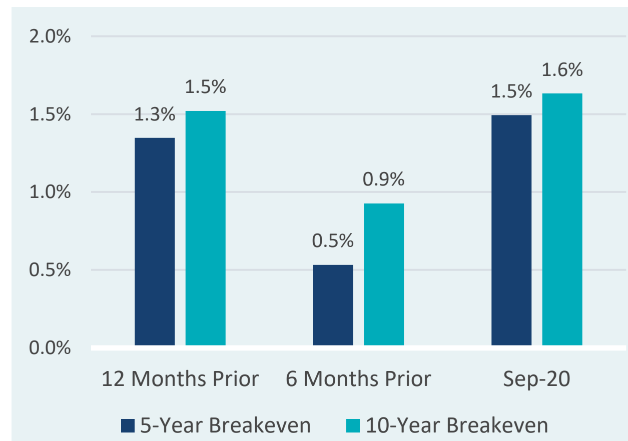
Source: Bloomberg, as of 8/31/20

CONSUMER INFLATION EXPECTATIONS



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

BREAKEVEN INFLATION RATES



Source: Bloomberg, as of 9/30/20

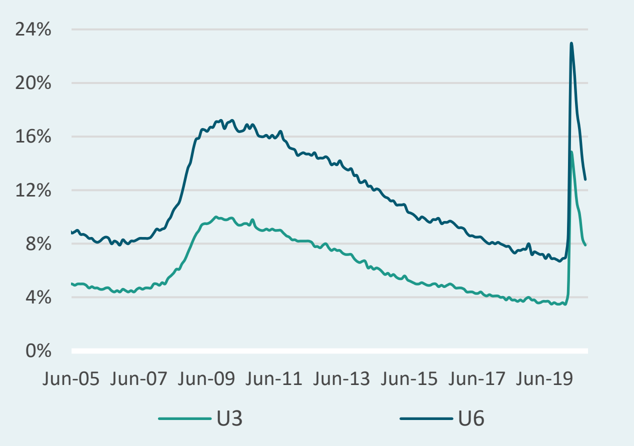
Labor market

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.

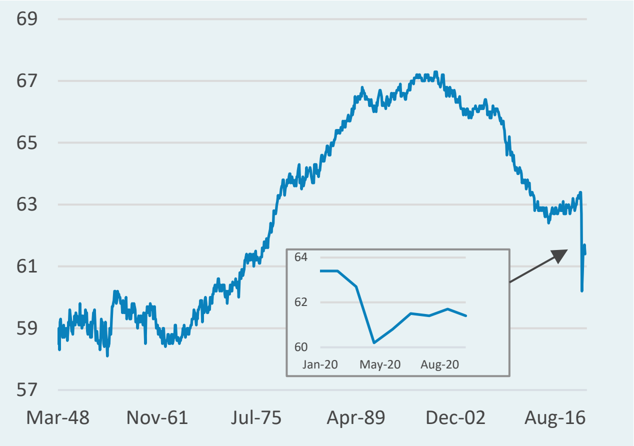
U.S. workers continue to come back to the labor force

U.S. UNEMPLOYMENT



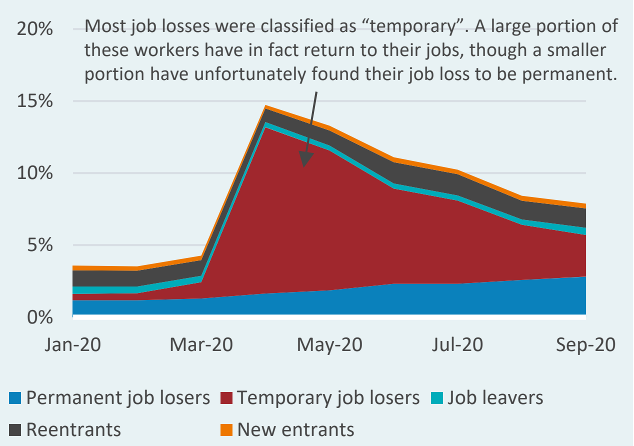
Source: FRED, as of 9/30/20

LABOR PARTICIPATION RATE



Source: FRED, as of 9/30/20

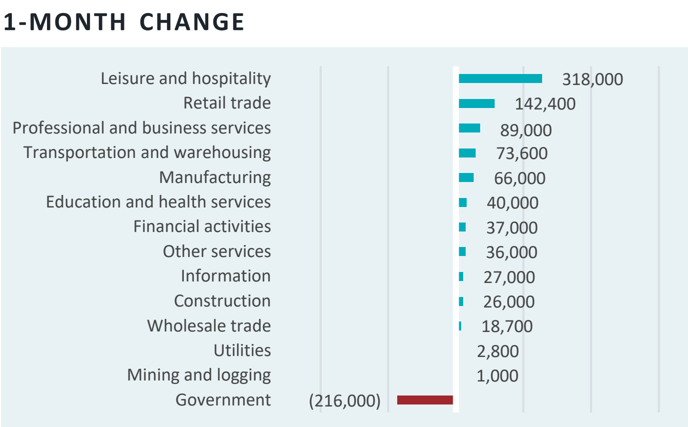
UNEMPLOYMENT DECOMPOSITION BY REASON

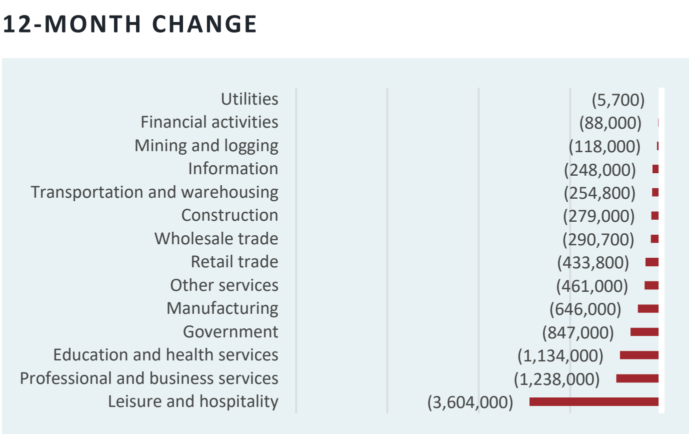


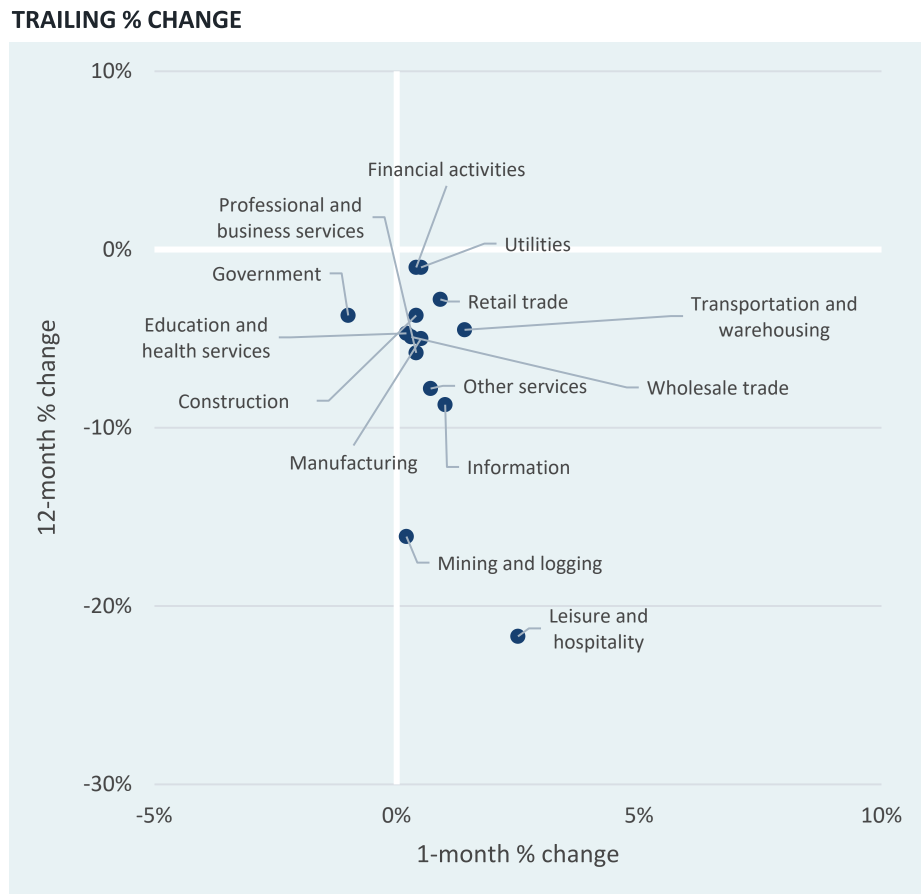
Source: BLS, as of 9/30/20

September 2020 jobs report

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







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

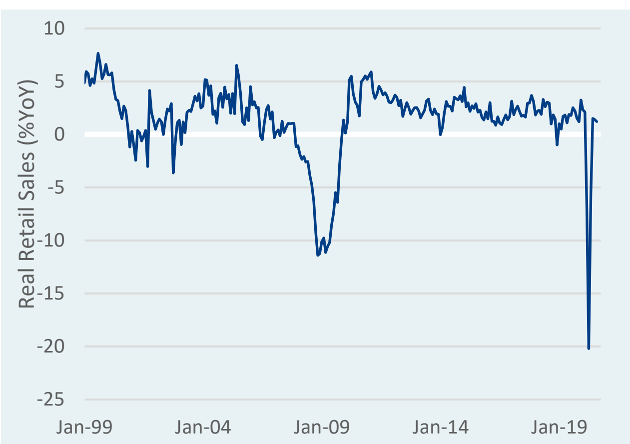
The consumer

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.

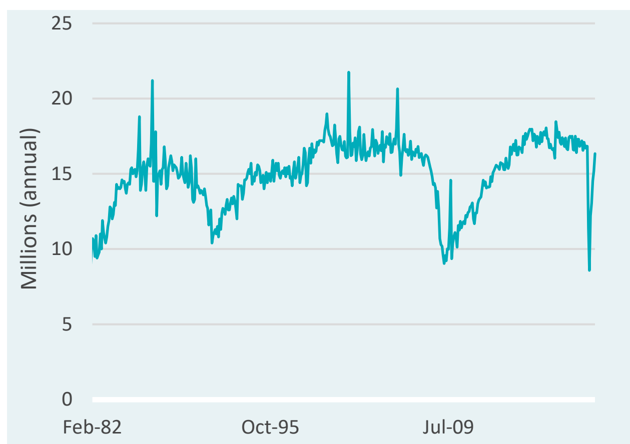
The U.S. personal savings rate fell to 14% in August, largely due to the ending of special unemployment benefits, which expired on July 31st. Broad economic uncertainty typically increases the desire for saving, which is likely the case in today's environment. But perhaps an even greater effect is the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

REAL RETAIL SALES GROWTH (YOY)



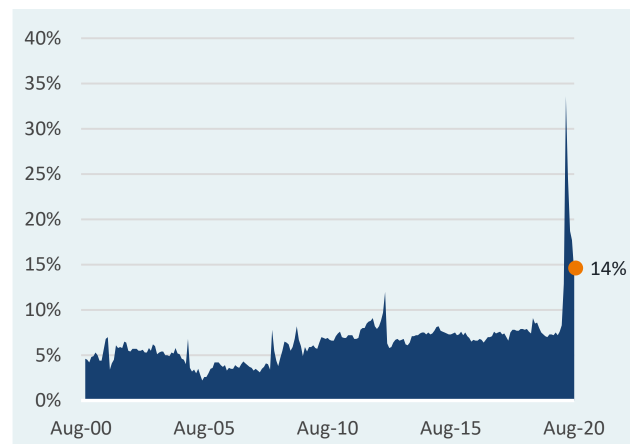
Source: FRED, as of 8/31/20

AUTO SALES



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

PERSONAL SAVINGS RATE



Source: FRED, as of 8/31/20

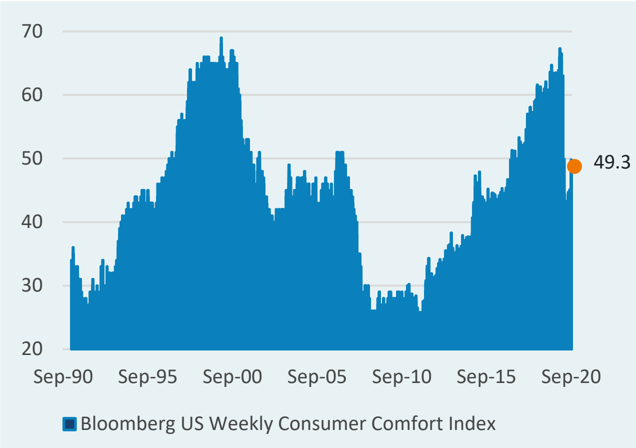
Sentiment

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.

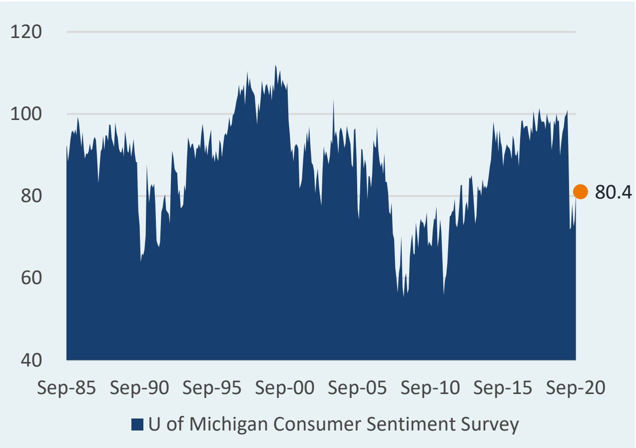
The NFIB Small Business Optimism Index recovered to 104.0 in Q3, which is in line with pre-pandemic levels. The survey concluded that half of the jobs lost in March and April have been recouped, but that the pace of recovery has slowed. Businesses generally expect the economy to continue growing, and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

CONSUMER COMFORT



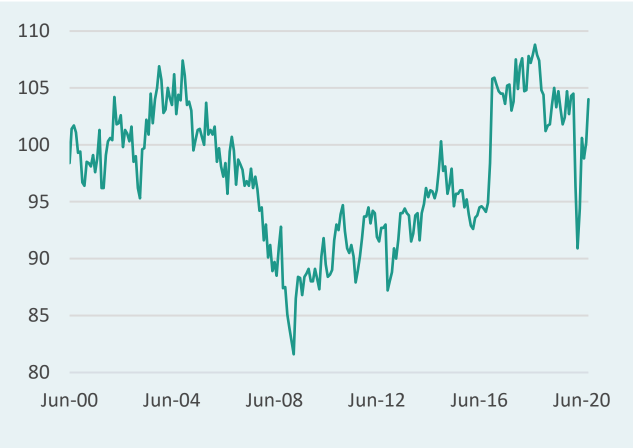
Source: Bloomberg, as of 9/30/20

CONSUMER SENTIMENT



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

SMALL BUSINESS OPTIMISM



Source: NFIB, as of 9/30/20

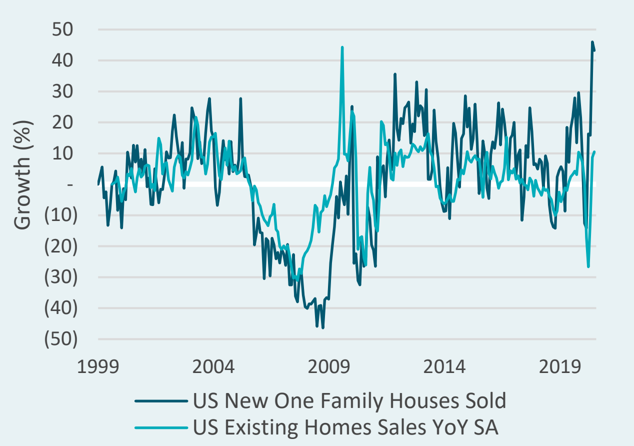
Housing

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.

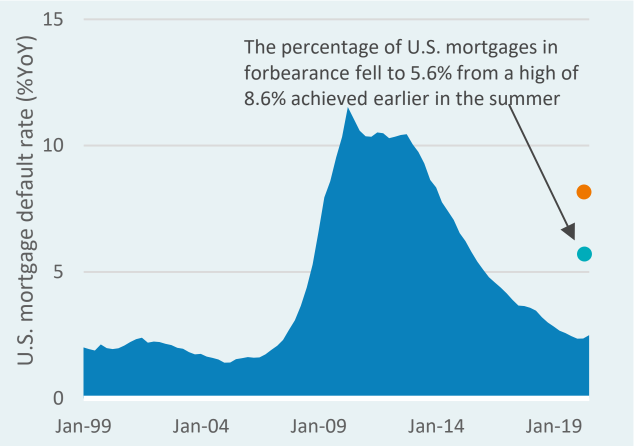
The extremely tight supply of homes has been a major contributor to the recent housing boom. In August, 3.3 months worth of homes were available on the market, which was the lowest inventory level ever recorded since the U.S. government began tracking this data in 1963.

U.S. HOME SALES (YOY)



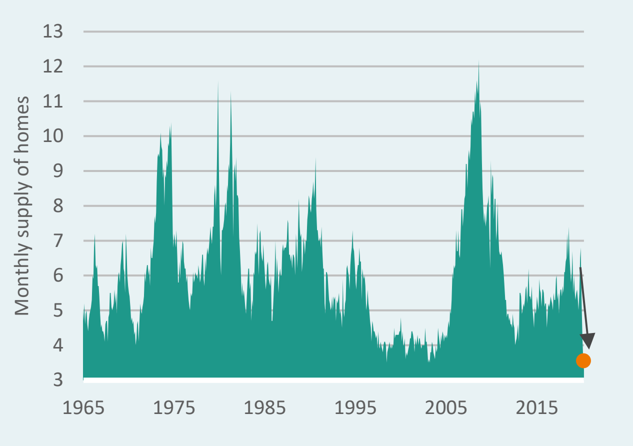
Source: FRED, as of 8/31/20

MORTGAGE DEFAULT RATE (%)



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

U.S. HOME SUPPLY



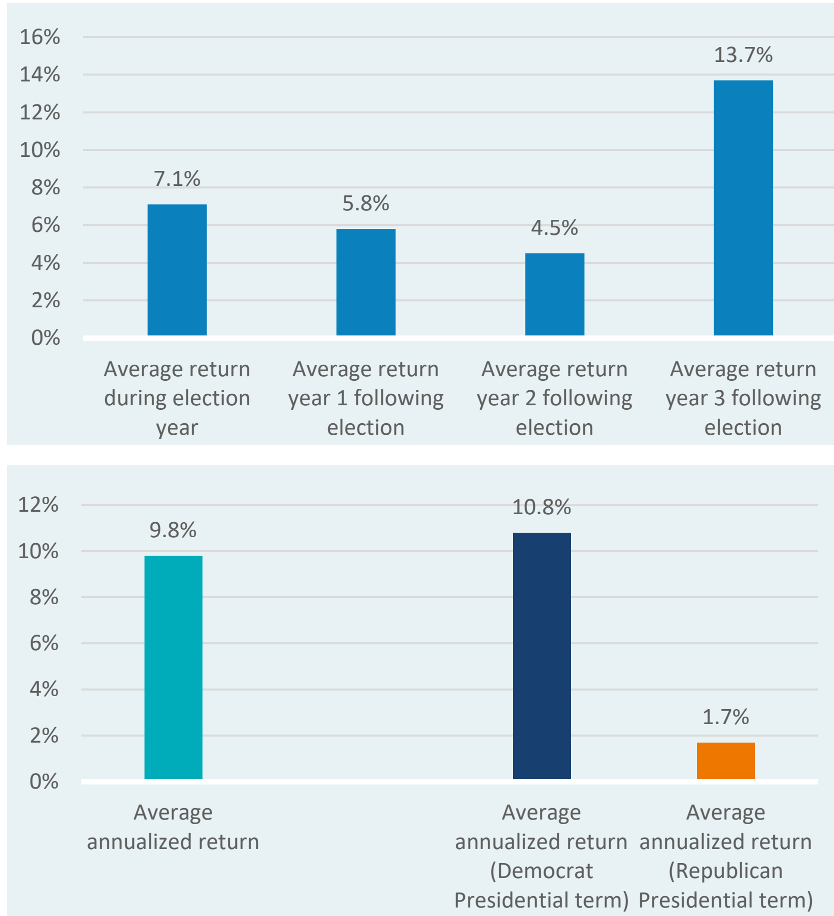
Source: FRED, as of 8/31/20

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:

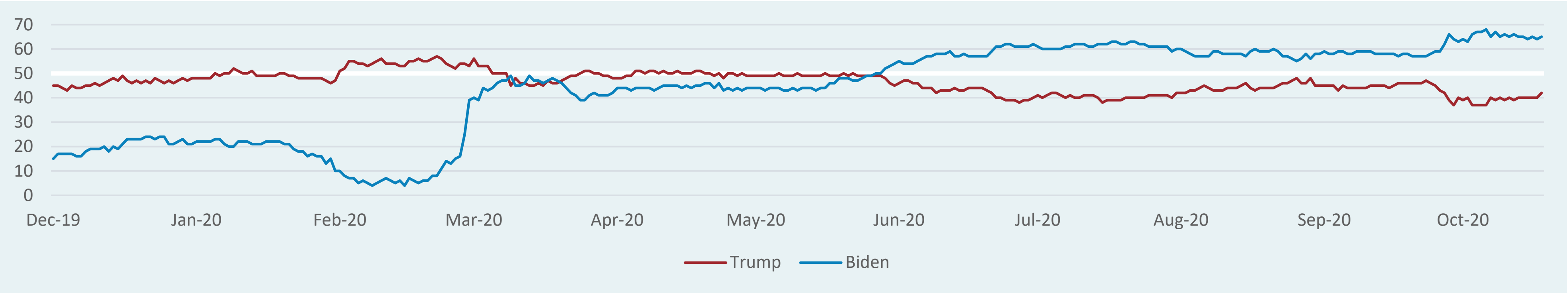
Shy Trump factor: Voters in certain parts of the country may be less willing to express that they would vote for Trump, and this dynamic may be even more prevalent than it was in 2016.

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%) *6/30/20*	1.3% *8/31/20*	7.9% *9/30/20*
Eurozone	(14.7%) *6/30/20*	(0.3%) *9/30/20*	8.1% *8/31/20*
Japan	(9.9%) *6/30/20*	0.2% *9/30/20*	3.0% *8/31/20*
BRICS Nations	(3.1%) *6/30/20*	3.3% *6/30/20*	5.3% *6/30/20*
Brazil	(11.4%) *6/30/20*	2.4% *8/31/20*	13.8% *7/31/20*
Russia	(8.0%) *6/30/20*	3.3% *9/30/20*	6.4% *8/31/20*
India	(23.9%) *6/30/20*	6.7% *8/31/20*	8.5% *12/31/17*
China	4.9% *9/30/20*	2.4% *8/31/20*	3.8% *6/30/20*

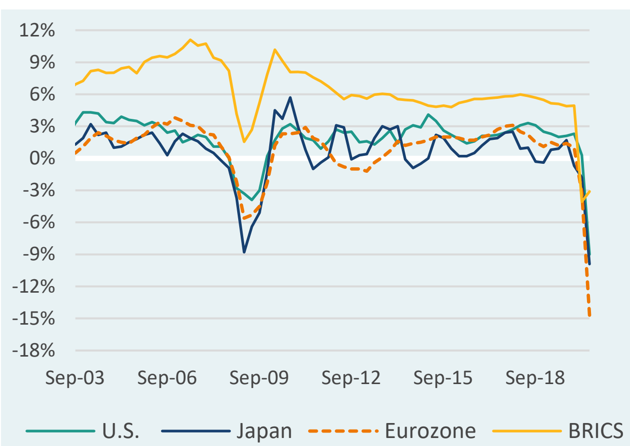
International economics

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.

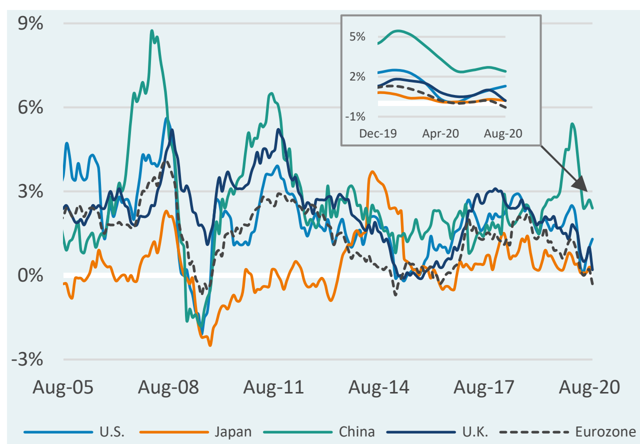
Unemployment in the Eurozone rose from 7.8% to 8.1%, just 0.2% above the quarter-end rate in the United States, as Europe contends with disinflationary pressures. Year-over-year growth of the harmonized consumer price index fell from +0.3% into negative territory at -0.3%. The Union's harmonized measure,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

REAL GDP GROWTH (YOY)



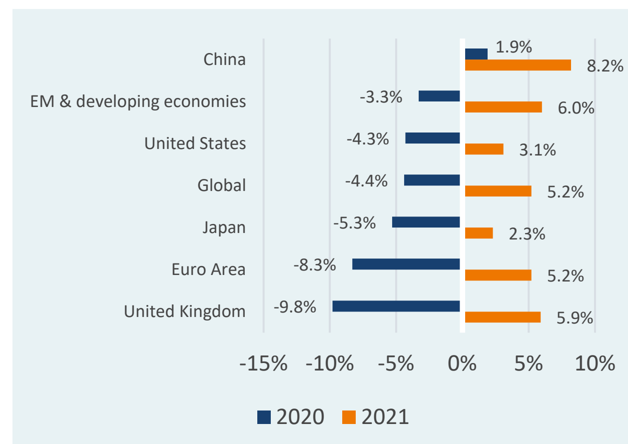
Source: Bloomberg, as of 6/30/20

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.

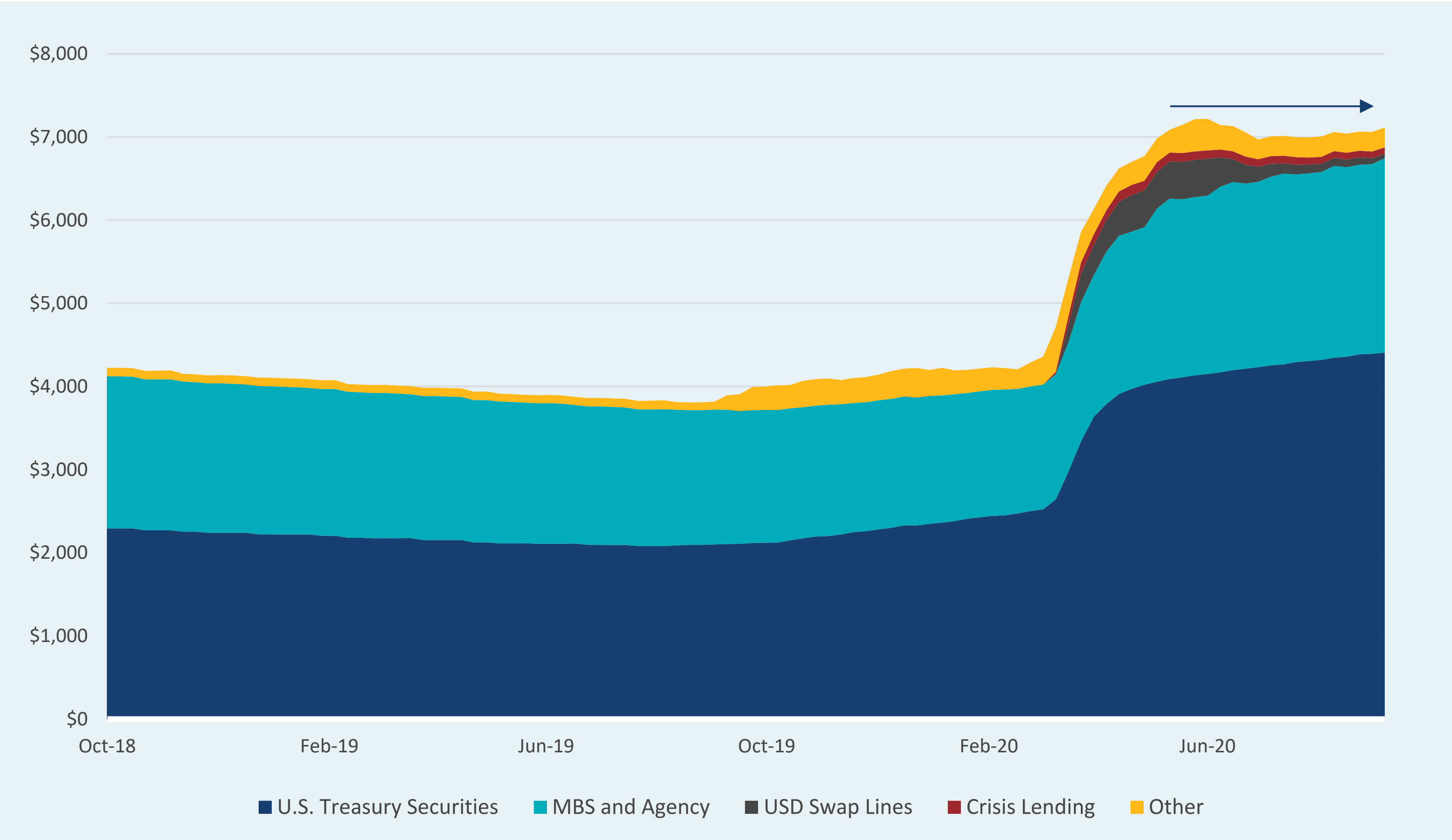
— Investors were paid for betting on longer-term reflation of growth and inflation, likely due to their expectations for further fiscal and monetary accommodation moving forward. Ten-year breakeven inflation rates recovered from 1.3% to 1.6%, and key term spreads indicated a moderate steepening in the 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



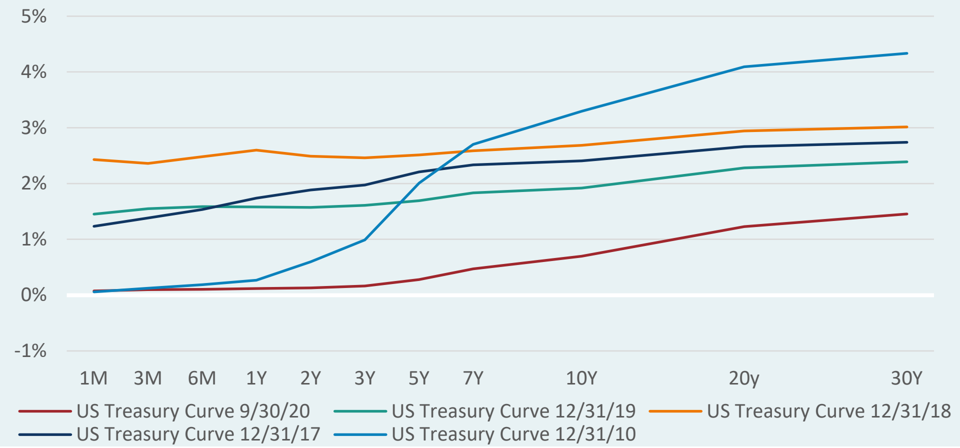
Fed balance sheet levels have remained flat

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

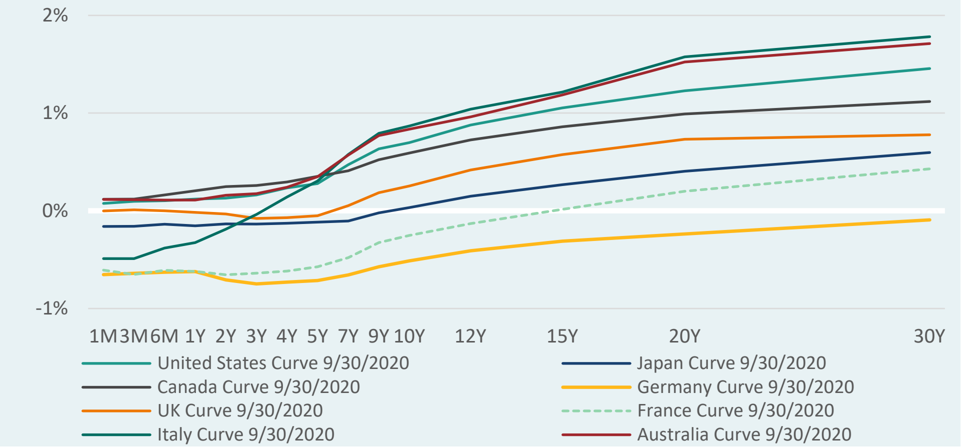
Source: FRED, Bloomberg, as of 9/16/20

Yield environment

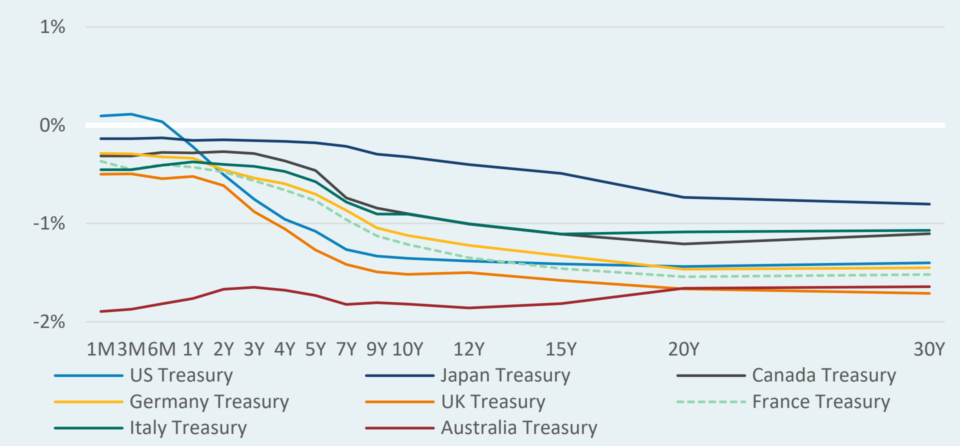
U.S. YIELD CURVE



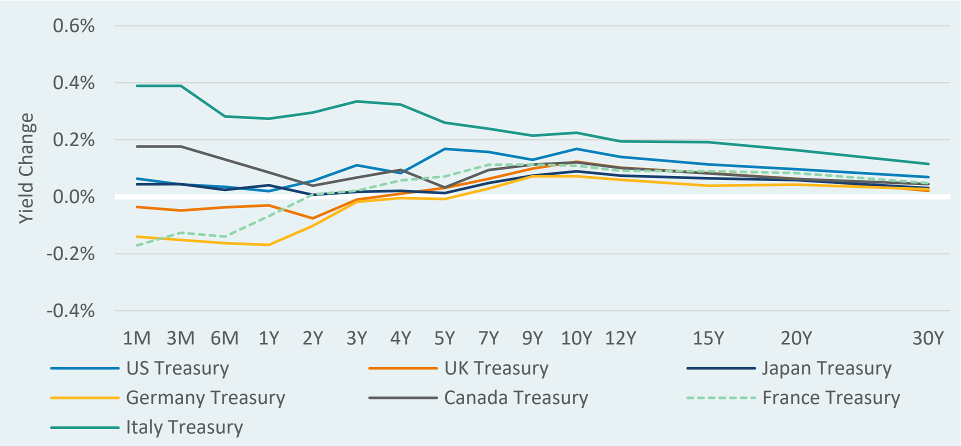
GLOBAL GOVERNMENT YIELD CURVES



YIELD CURVE CHANGES OVER LAST FIVE YEARS



IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 9/30/20

Credit environment

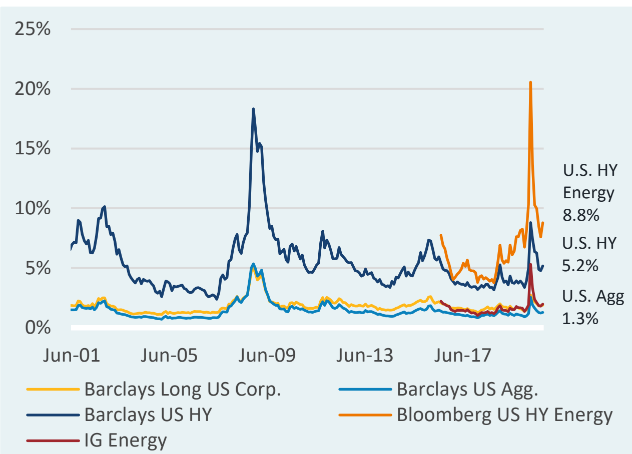
Credit markets performed positively in the third quarter as yields continued to fall from March highs. Buoyed by ongoing support from the Fed as well as increased investor demand for yield, investment grade credit returned 1.5% over the quarter while high yield and leveraged loans returned +4.6% and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

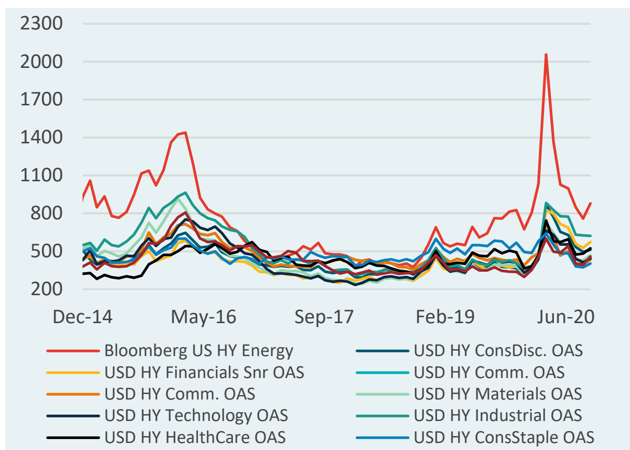
As a result of the post-March recovery, approximately two-thirds of global investment grade debt is now yielding less than 1%, and more debt is currently trading at a negative yield than at above the 2% level. While yields in the U.S. are still modestly higher than pre-pandemic levels, credit markets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

	Credit Spread (OAS)	
Market	**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

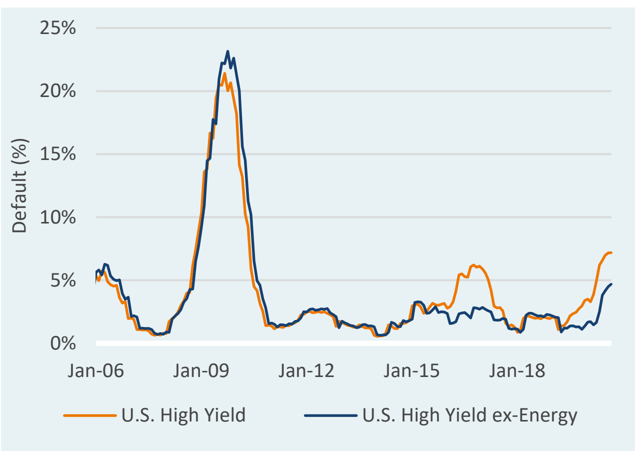
Default activity over the quarter slowed considerably from record numbers in Q2 but remained elevated relative to history. In the third quarter, 26 companies defaulted on $19.3 billion, bringing the year-to-date default total to $123.4 billion. This year-to-date figure would rank as the second highest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

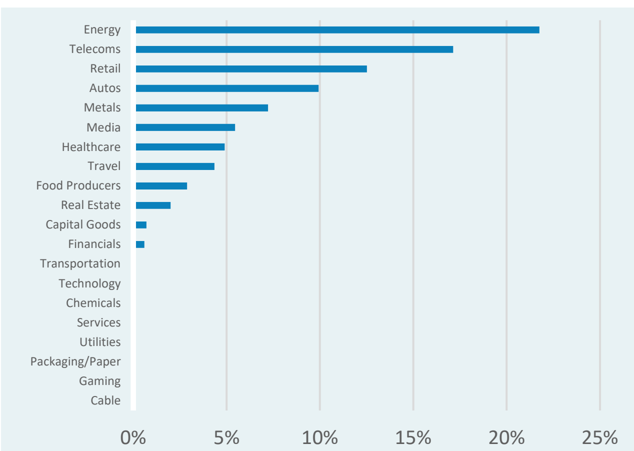
Investment grade issuance fell to nearly half the rate of the second quarter but remains elevated. New investment grade issuance totaled $371 billion. A year-to-date $1.54 trillion worth of new investment grade debt was nearly 70% higher than during the same period of 2019.

HY DEFAULT RATE (ROLLING 1-YEAR)



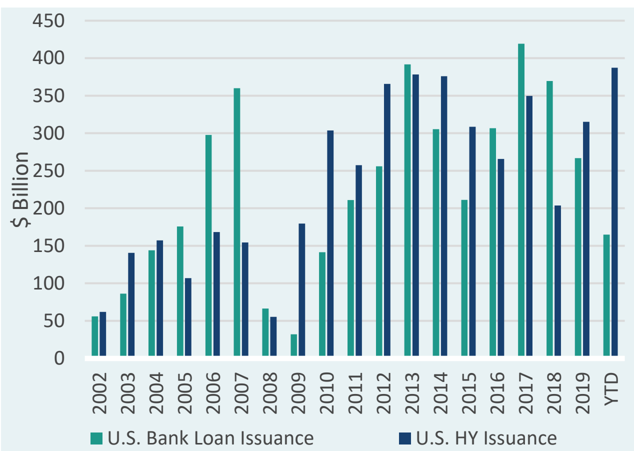
Source: BofA Merrill Lynch, as of 9/30/20

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.

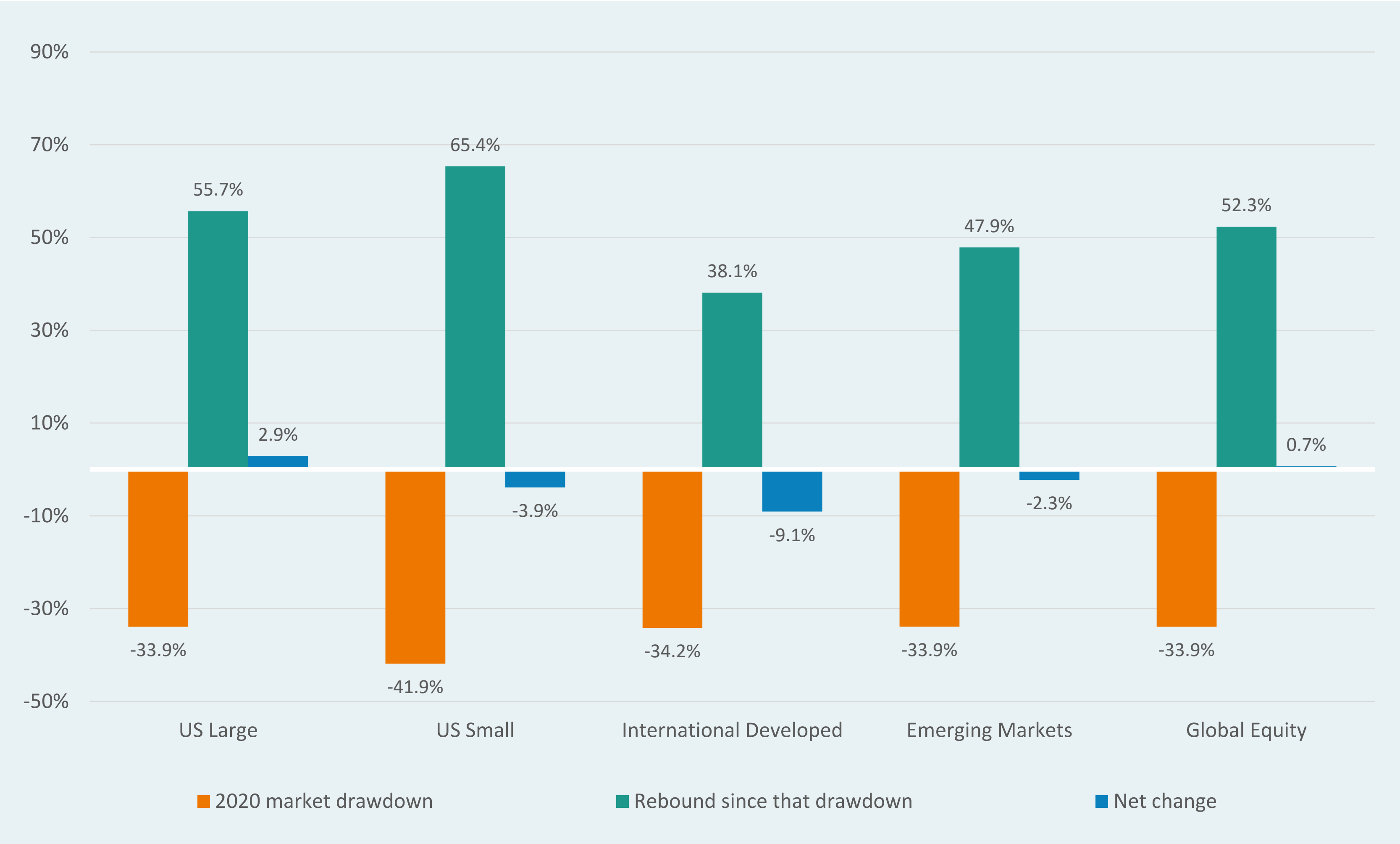
— The U.S. dollar fell -3.5% in the third quarter, continuing a downward trend since a sudden jump in March on safe-haven buying. The dollar has now completely unwound the gains experienced during the market sell-off.

— 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.

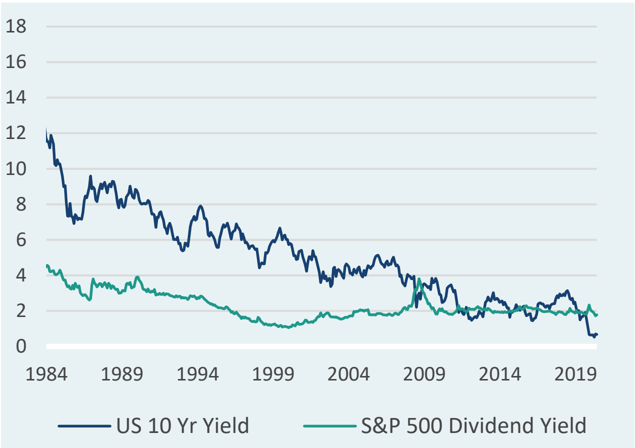
Consumer Discretionary (+15.1%) and Materials (+13.3%) sectors led in Q3, with Energy (-19.7%) delivering further underperformance. Information Technology stocks have shown impressive performance year-to-date (+27.5%) and have captured headlines as some company valuations have reached lofty levels. Large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

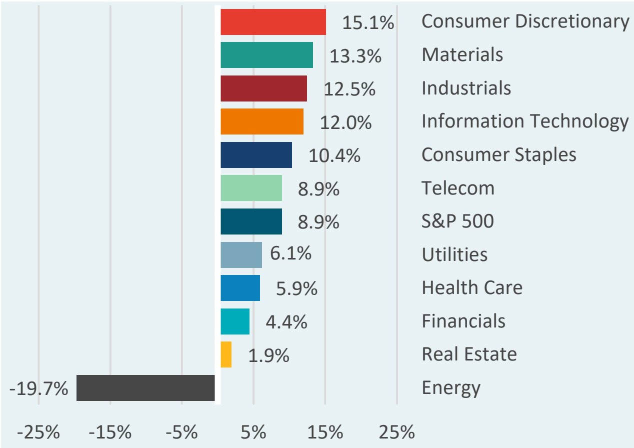
Source: Standard & Poor's, as of 9/30/20

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

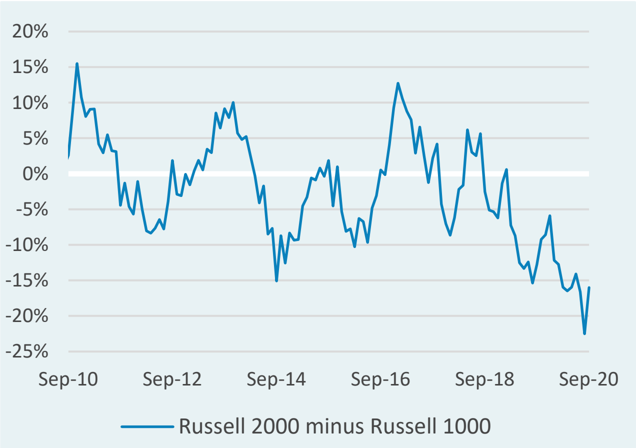
U.S. growth stocks beat value stocks during Q3, continuing an incredible run of market leadership (Russell 1000 Growth +13.2%, Russell 1000 Value +5.6%), while large cap stocks outperformed small cap stocks (Russell 1000 +9.5%, Russell 2000 +4.9%).

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.

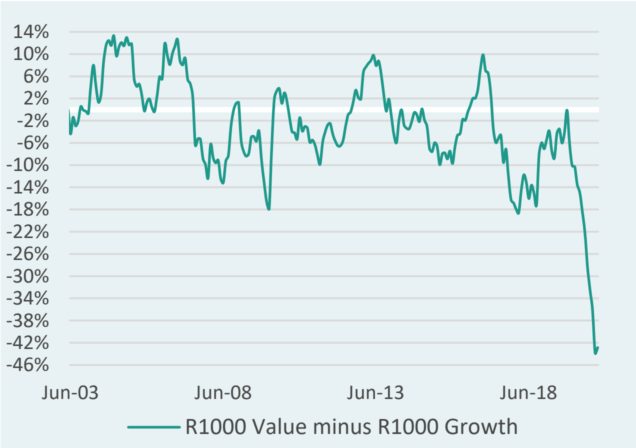
Sector performance has fueled dramatic negative performance of the value premium

SMALL CAP VS LARGE CAP (YOY)



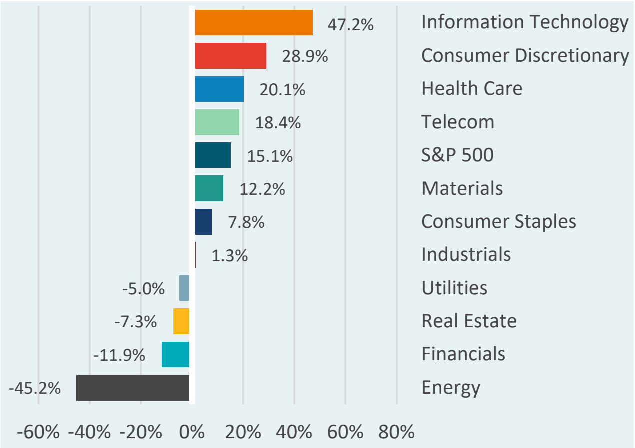
Source: FTSE, as of 9/30/20

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

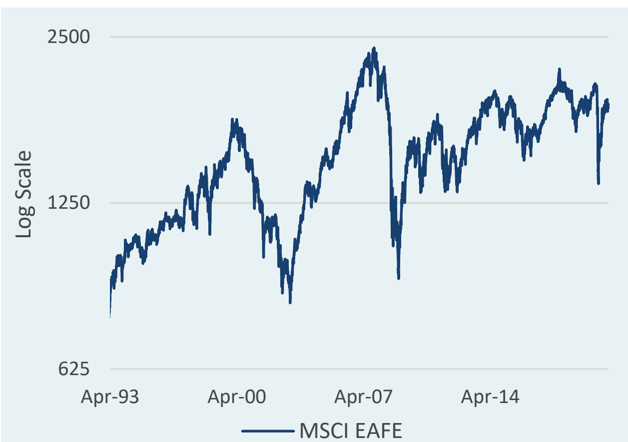
International developed equity

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.

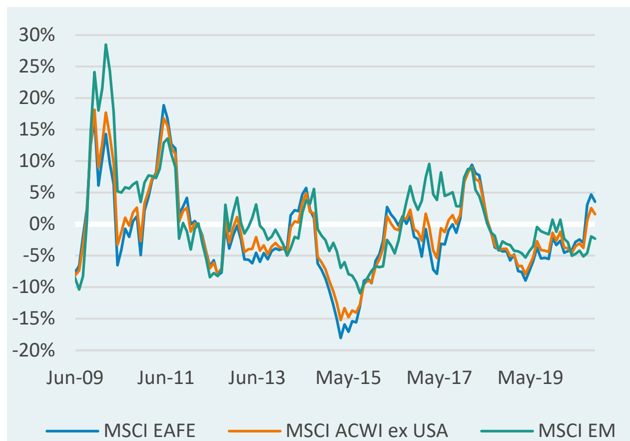
The MSCI EAFE Growth Index returned +8.4% over the third quarter, outpacing the MSCI EAFE Value Index (+1.2%) in U.S. dollar terms, extending its outperformance over the year-to-date to a staggering +23.6%.

INTERNATIONAL DEVELOPED EQUITIES



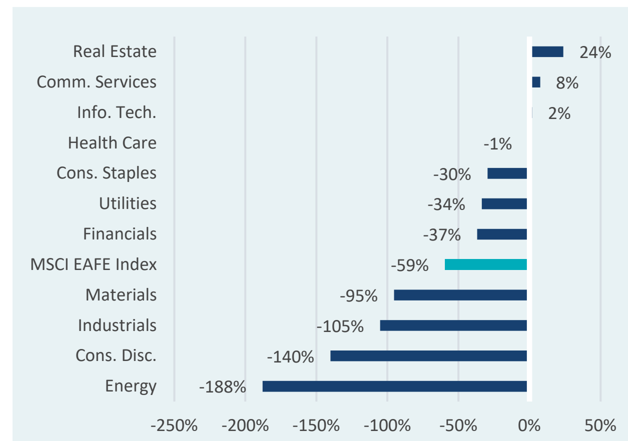
Source: MSCI, as of 9/30/20

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

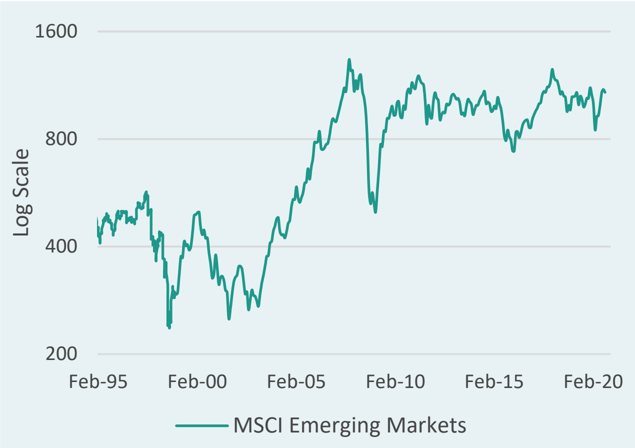
Emerging market equity

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.

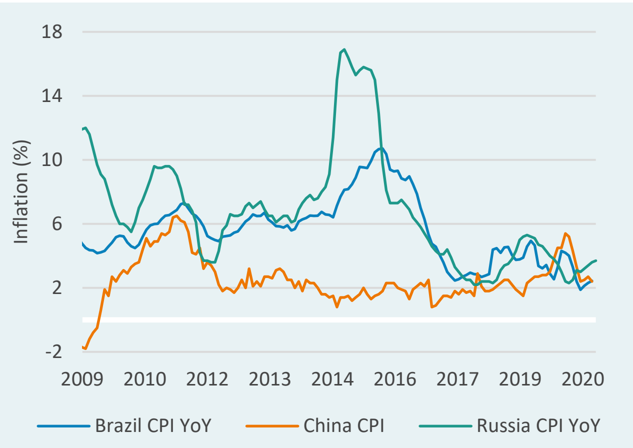
Emerging market currencies broadly appreciated relative to the U.S. dollar, and Asian currencies outperformed. The offshore Chinese renminbi rallied 4.2% versus the greenback to ¥6.78, its strongest level since mid-2019. Part of the rally in the yuan has been attributed to FTSE Russell's recent decision 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



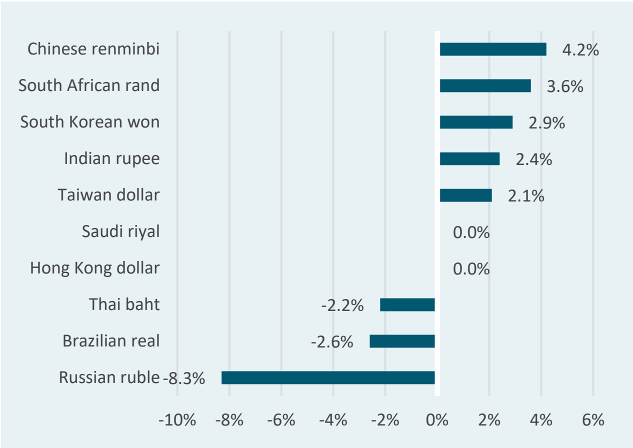
Source: MSCI, as of 9/30/20

INFLATION (YOY)



Source: Bloomberg, as of 9/30/20

Q3 CURRENCY PERFORMANCE – MSCI EM INDEX



Source: Bloomberg, as of 9/30/20

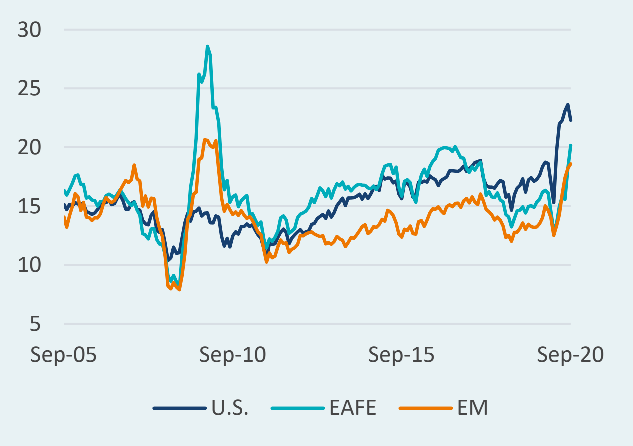
Equity valuations

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.

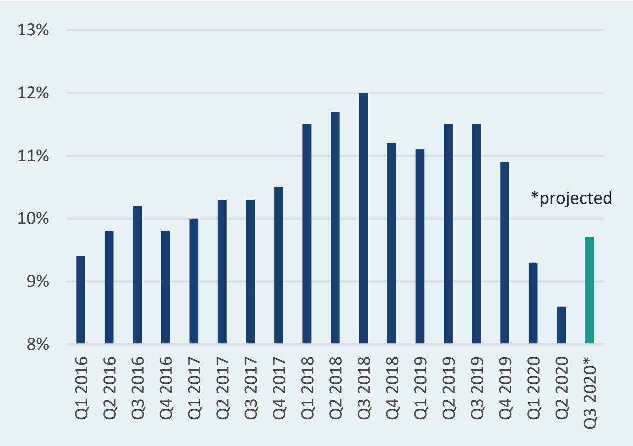
Equity dividend yields remain attractive relative to nominal government bond yields, especially in Europe, and could further entice investors to reach for yield through risk assets.

FORWARD P/E RATIOS



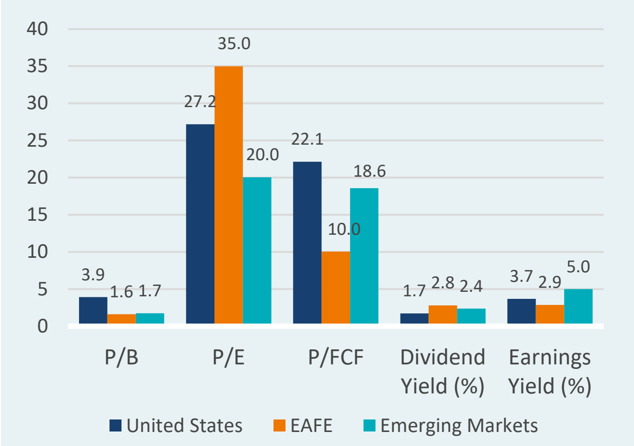
Source: MSCI, 12m forward P/E, as of 9/30/20

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

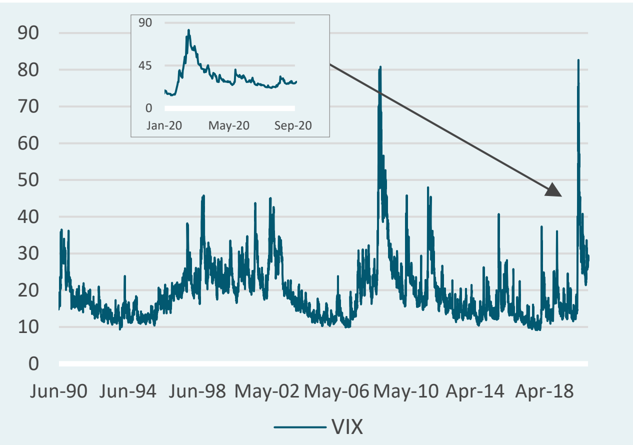
Equity volatility

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.

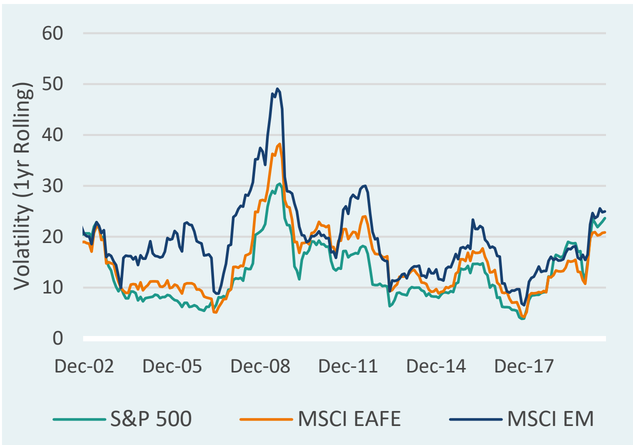
Expectations for short-term equity volatility faded through the summer. The VIX term structure continued to indicate an expectation for heightened volatility around the Presidential election in the beginning of November. Toward the end of the quarter, concerns over the impact of mail-in voting on the 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)



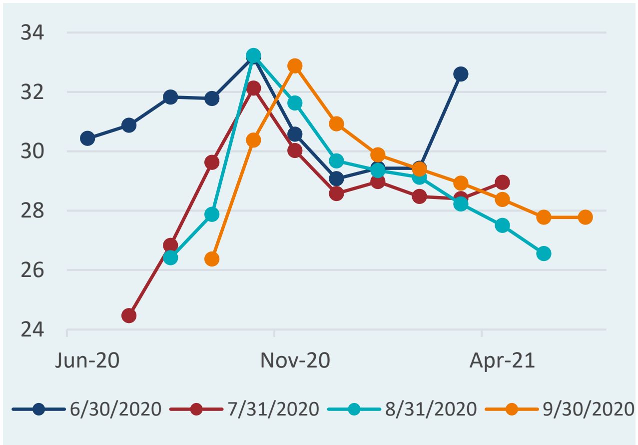
Source: Cboe, as of 9/30/20

REALIZED VOLATILITY



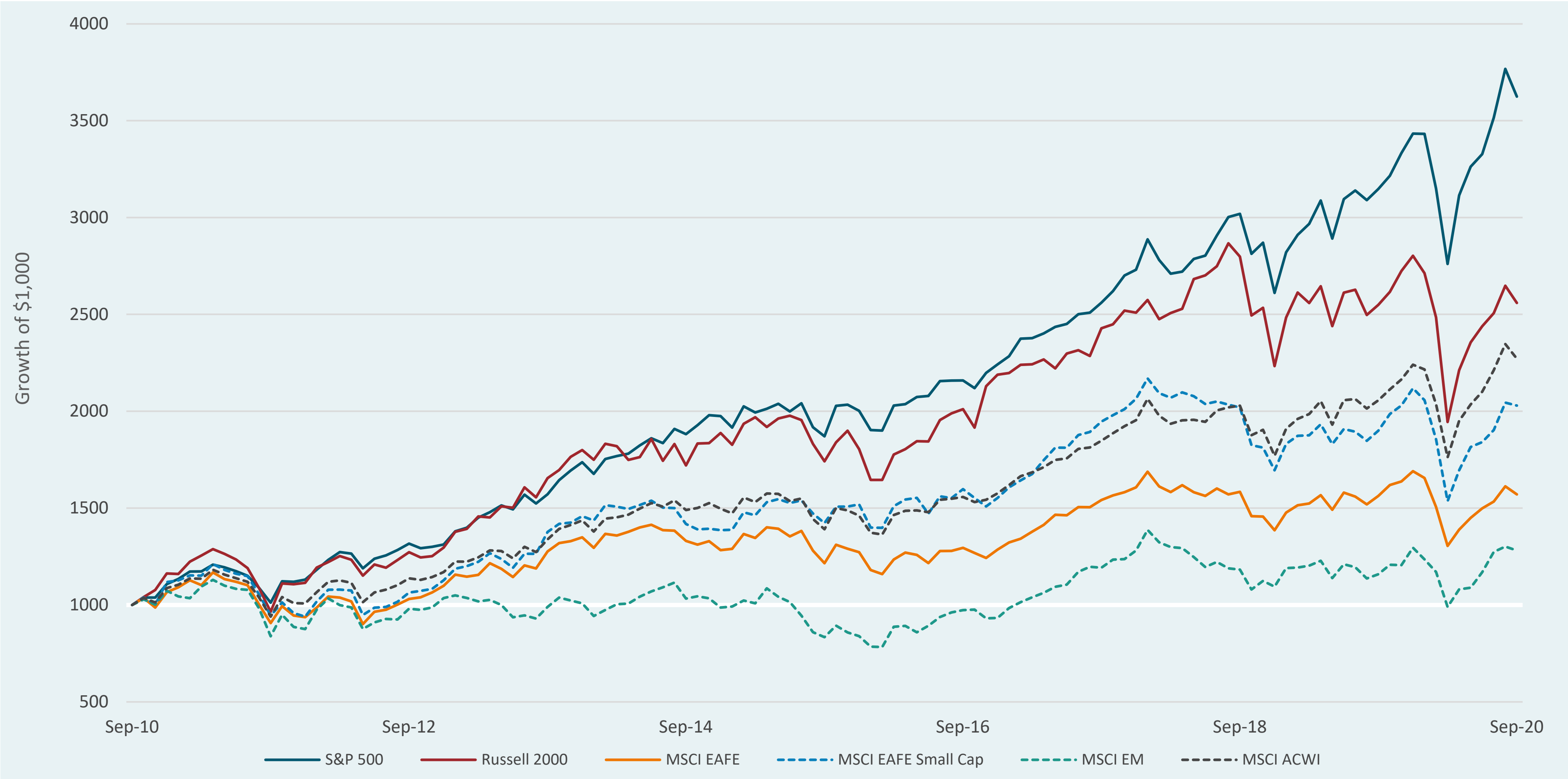
Source: Standard & Poor's, MSCI, as of 9/30/20

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.

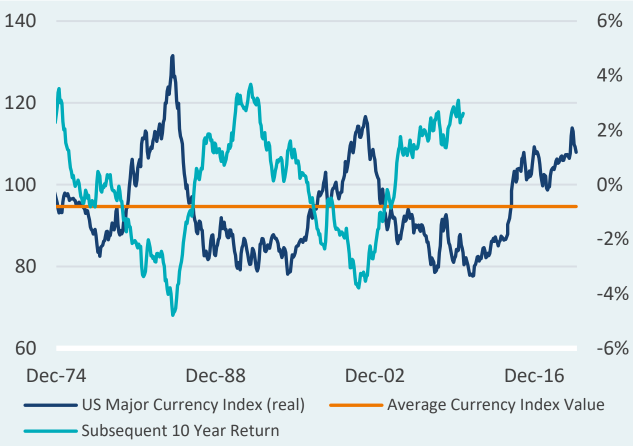
Interest rate differentials between U.S. Treasury bonds and international developed sovereign bonds have begun to separate once again. U.S. Treasury yields traded in a relatively narrow range while European yields drifted lower, perhaps as a result of speculation on further quantitative easing from the 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

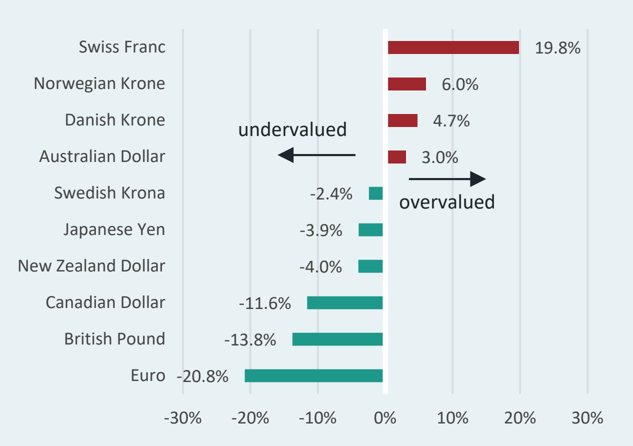
Source: Bloomberg, as of 9/30/20

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

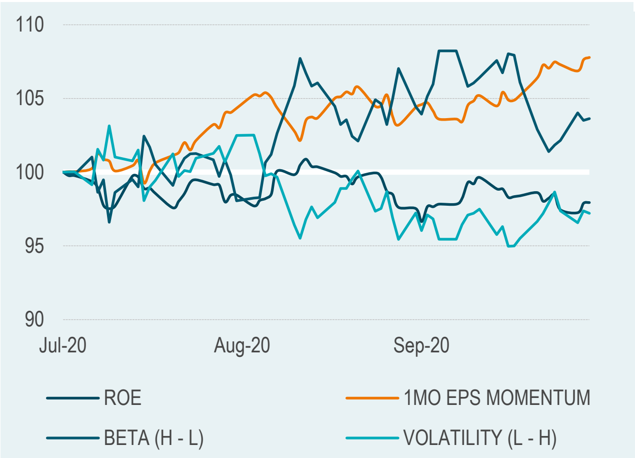
Equity factors: A closer look

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.

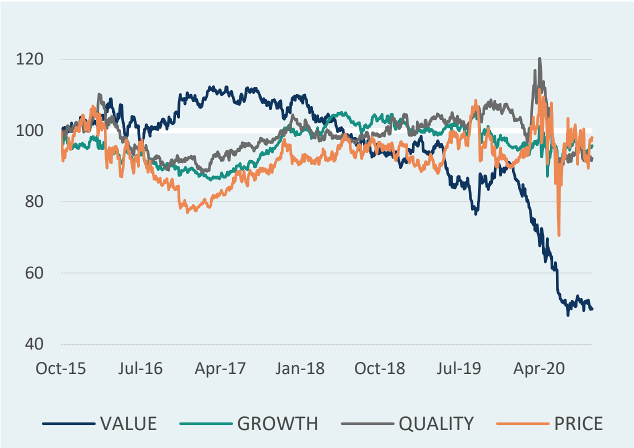
Over the trailing 5-year period, the respective growth, quality and price momentum factors finished with modestly negative results. These factors also showed some recent sensitivity to the dramatic market movements caused by the pandemic. In contrast, the value factor remains mired in a long-term drawdown.

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.

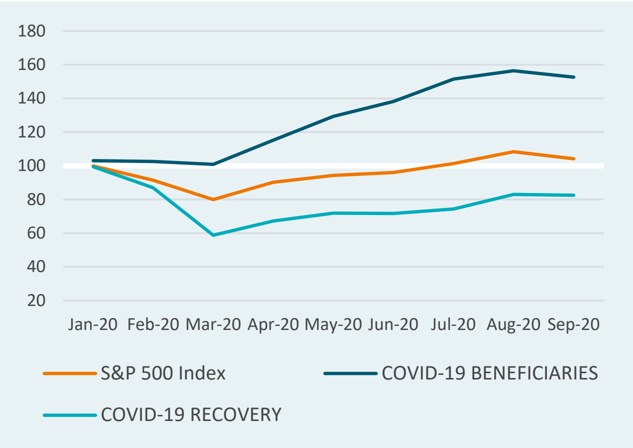
2020 Q3 FACTOR PERFORMANCE



2015Q4 – 2020Q3 FACTOR PERFORMANCE



COVID-19 BASKETS



Source: JP Morgan US Equity Strategy

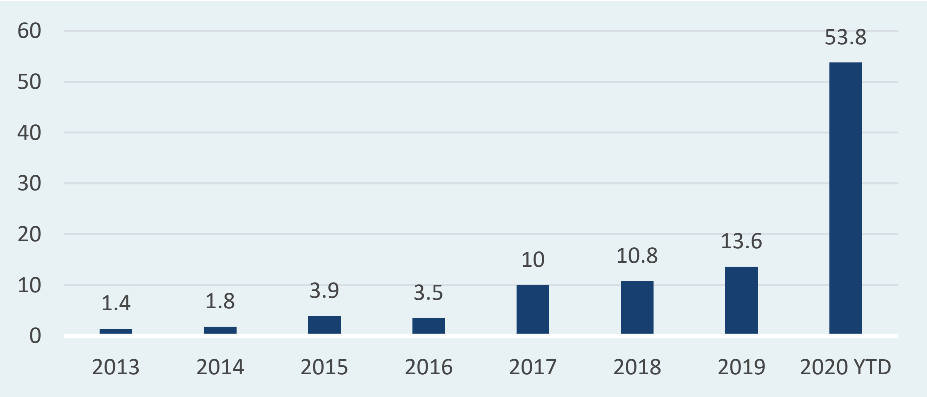
SPACs at a glance

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.

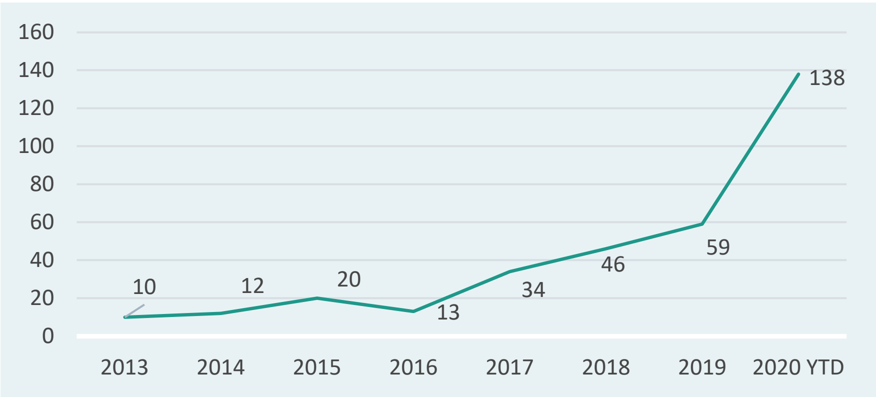
— A SPAC is a "blank check" shell company formed specifically to acquire a late-stage private company target. From the SPAC sponsor's point of view, it is analogous to creating a Private Equity fund that renders only one investment, which becomes publicly traded upon the merger process known as "de-SPAC".

— 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

BEST ↑

	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

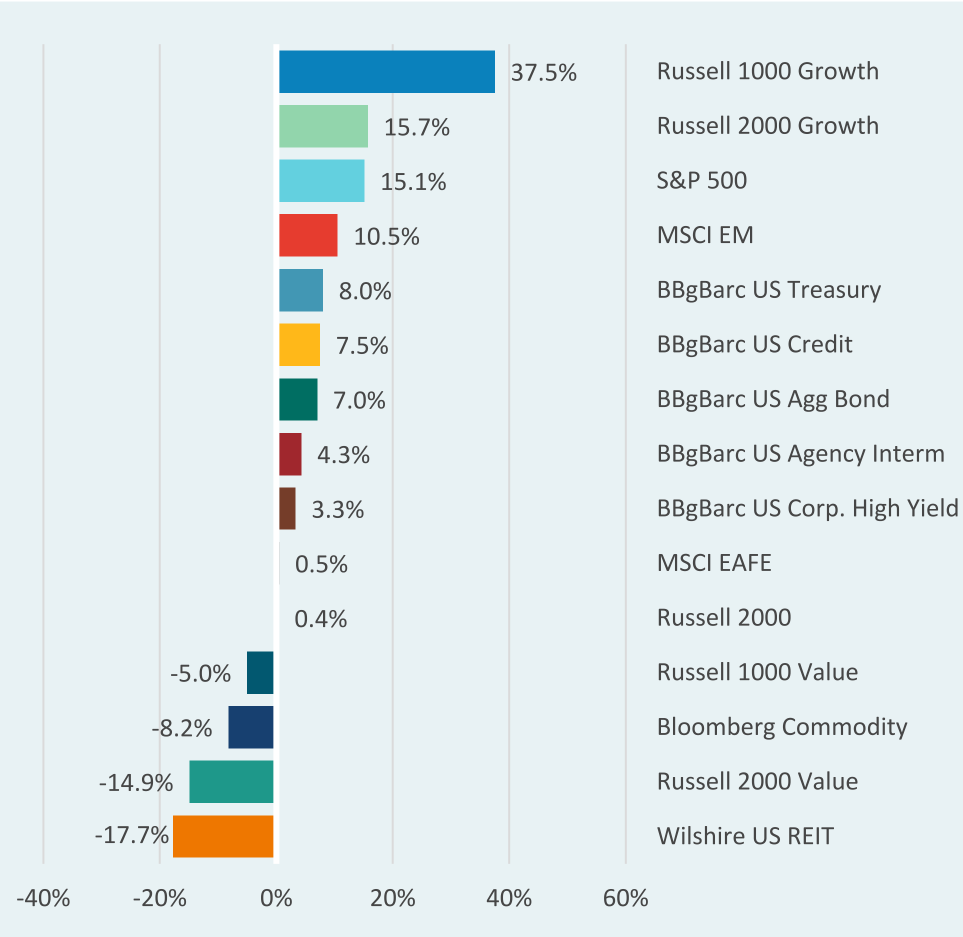
↓ WORST

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

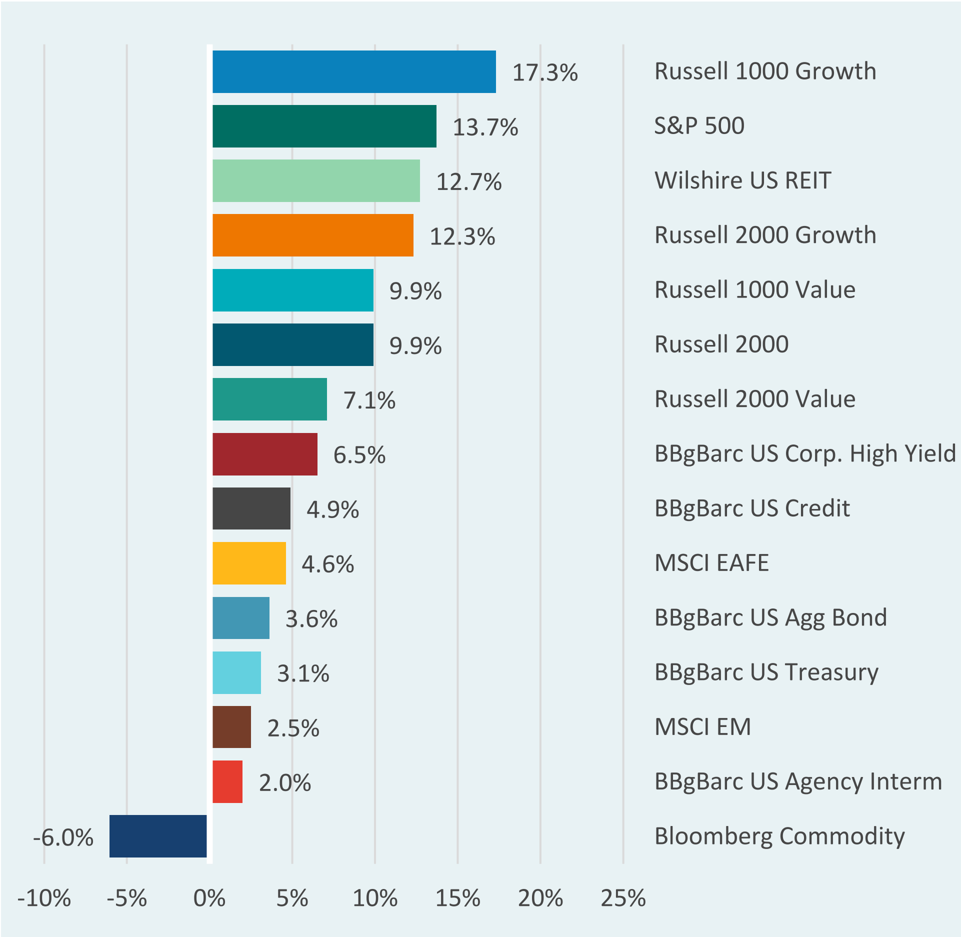
Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BBgBarc US Aggregate, T-Bill 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



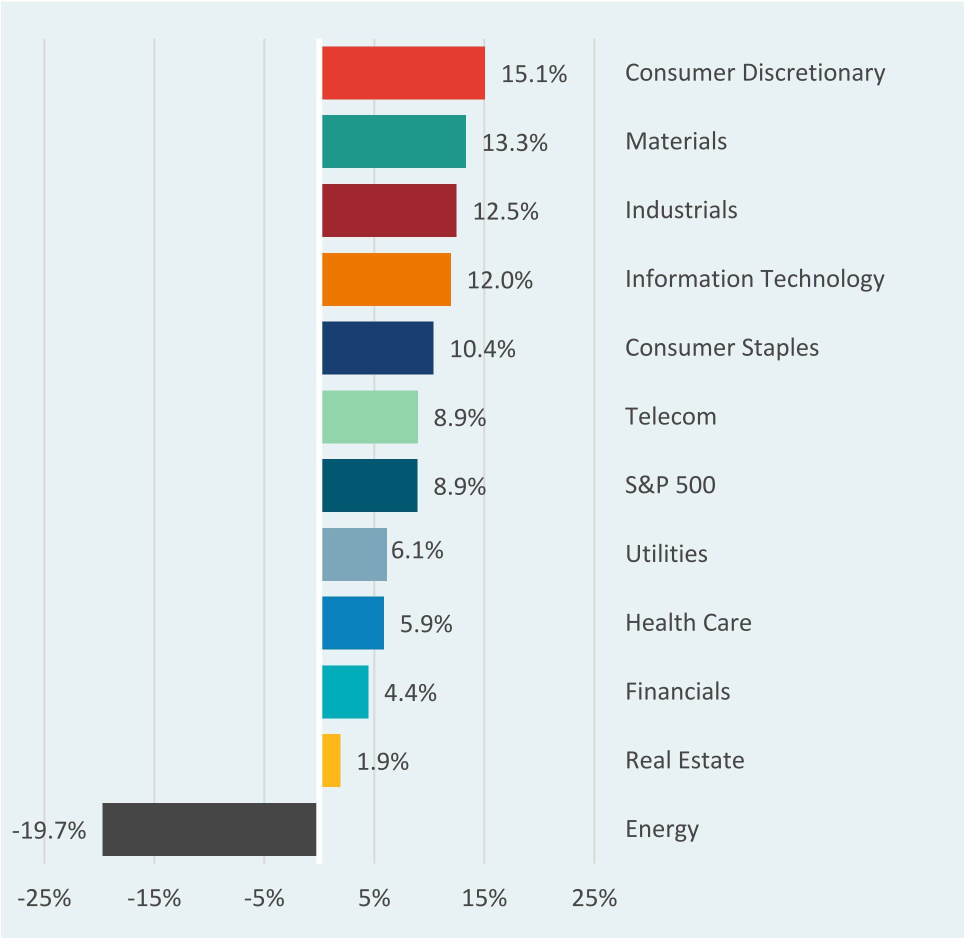
**Only publicly traded asset performance is shown here. Performance of private assets is typically released with a 3- to 6-month delay.*

Source: Morningstar, as of 9/30/20

Source: Morningstar, as of 9/30/20

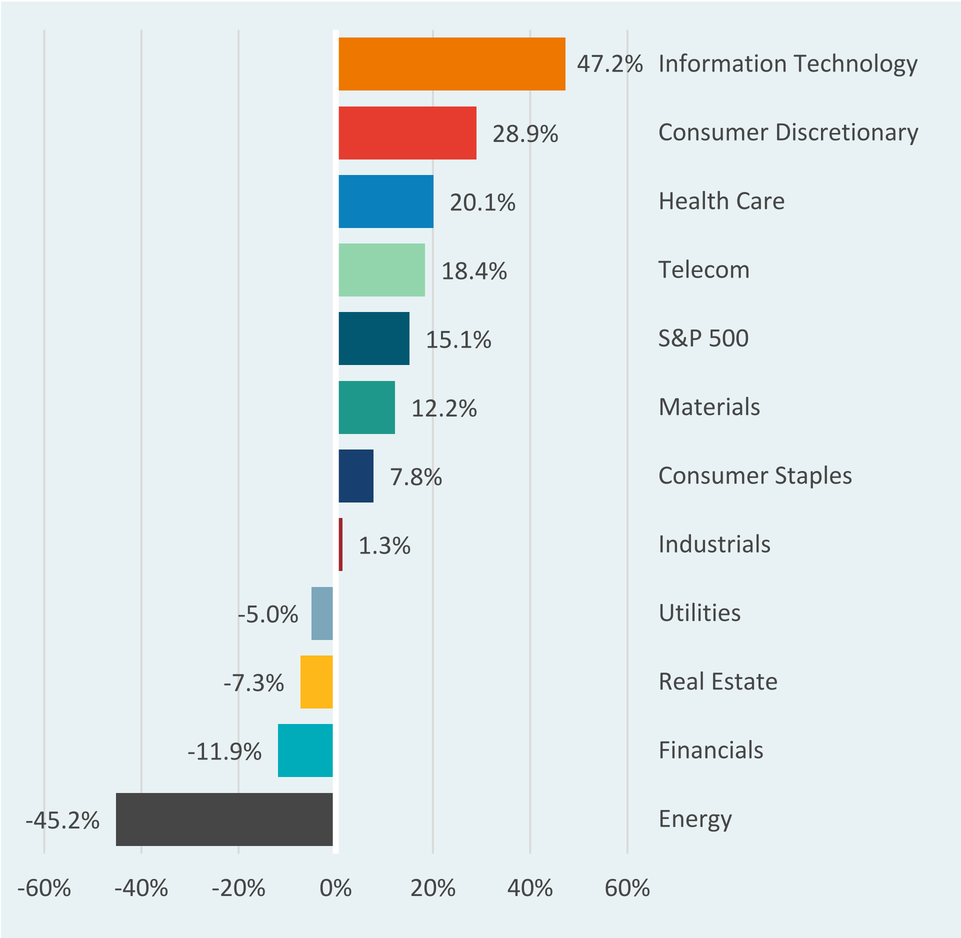
S&P 500 sector returns

Q3 2020



Source: Morningstar, as of 9/30/20

ONE YEAR ENDING SEPTEMBER

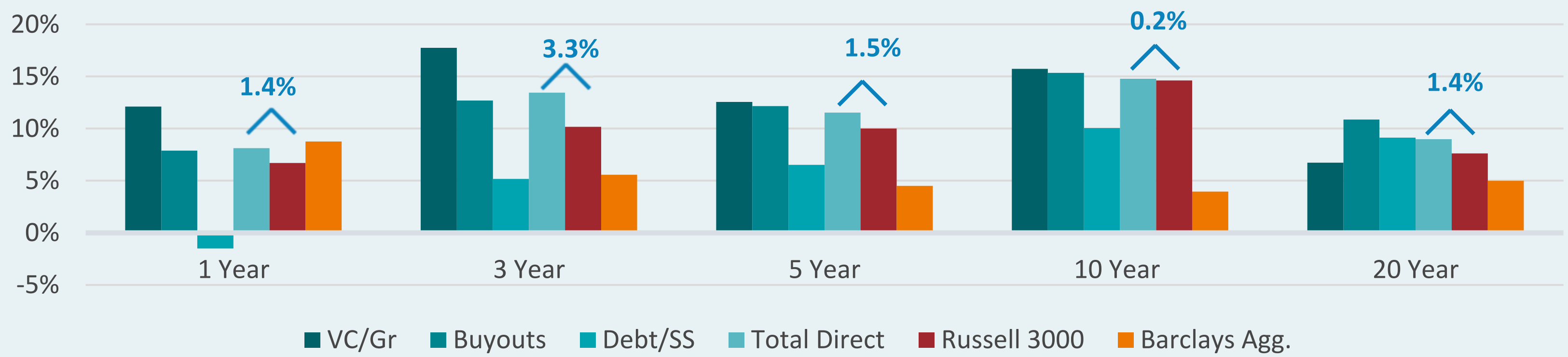


Source: Morningstar, as of 9/30/20

Private equity vs. public performance

As of 6/30/2020

DIRECT PRIVATE EQUITY FUND INVESTMENTS

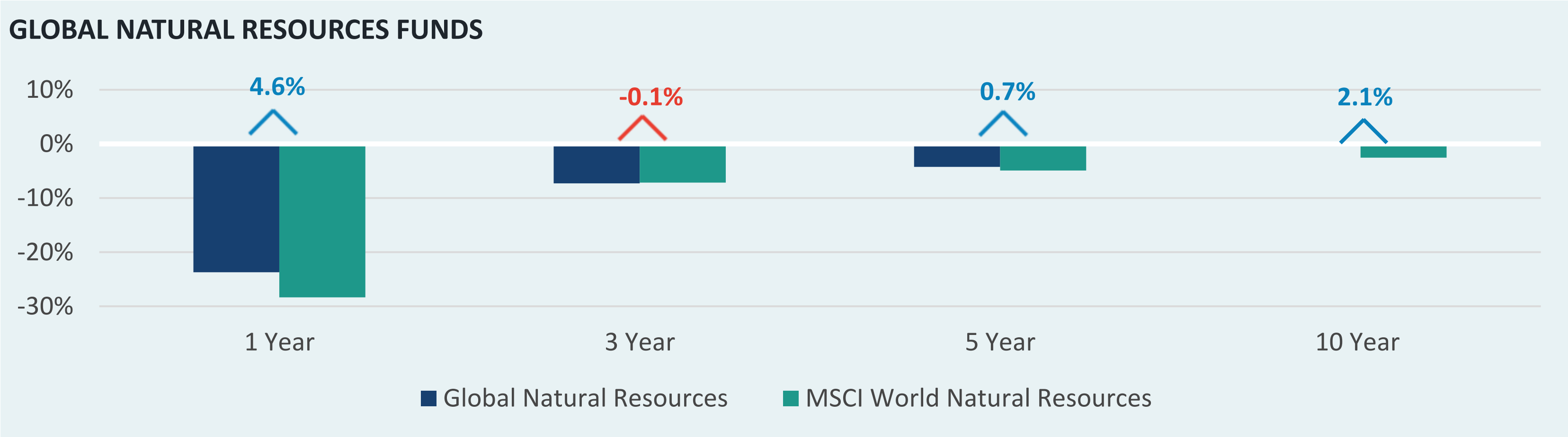


Direct P.E Fund Investments outperformed comparable public equites across all time periods.

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

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
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 Interm	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

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
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.langerresearch.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 induces 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 "(Good-Poor + 100)/2" to the present and future sales series and "(High/Very High-Low/Very Low + 100)/2" to the traffic series. Each resulting index is then seasonally adjusted and weighted to produce the HMI. Based on this calculation, the HMI can range between 0 and 100.*

Notices & disclosures

Imperial County Employees' Retirement System

Investment Performance Review

Period Ending: September 30, 2020

Verus

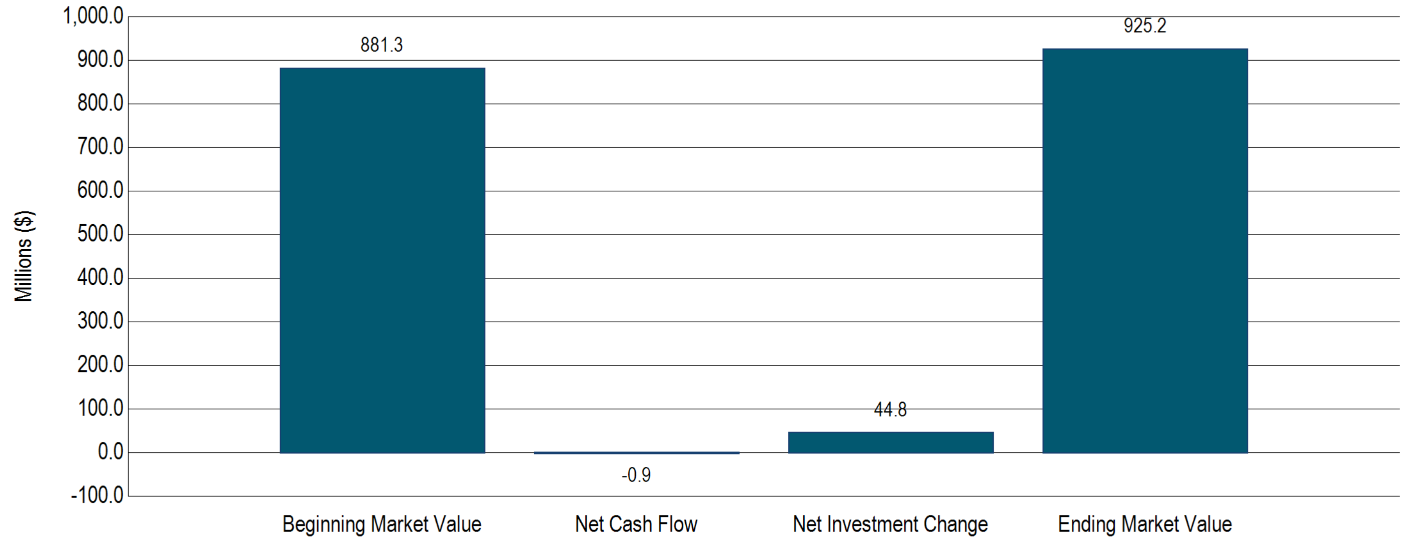
VERUSINVESTMENTS.COM

SEATTLE 206-622-3700
LOS ANGELES 310-297-1777
SAN FRANCISCO 415-362-3484
PITTSBURGH 412-784-6678

Portfolio Reconciliation

	Last Three Months	Fiscal Year-To-Date	One Year
Beginning Market Value	$881,347,790	$881,347,790	$867,289,775
Net Cash Flow	-$946,190	-$946,190	-$6,002,511
Net Investment Change	$44,798,961	$44,798,961	$63,913,297
Ending Market Value	$925,200,561	$925,200,561	$925,200,561

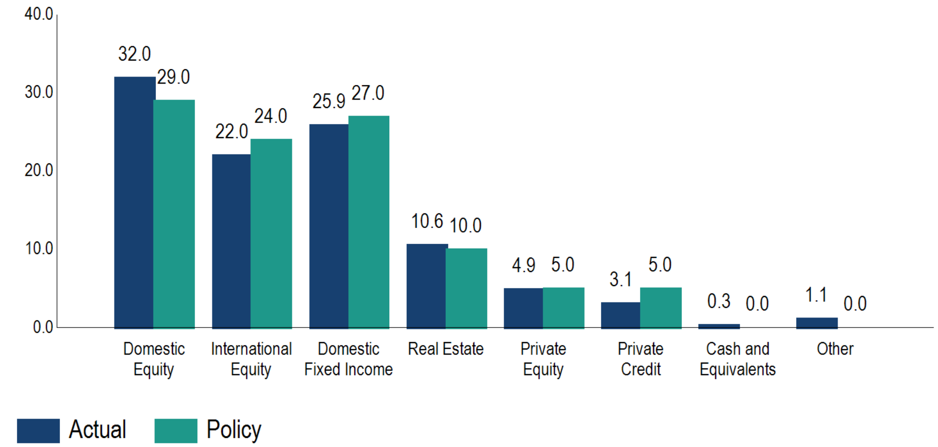
Change in Market Value
Last Three Months



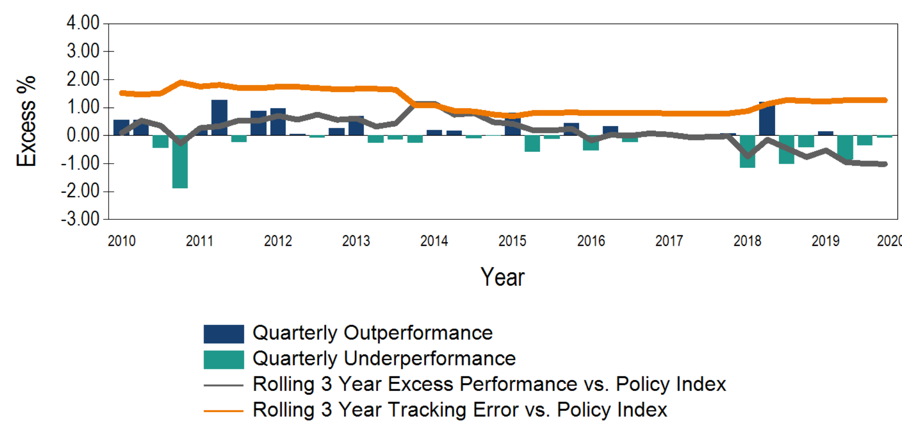
Contributions and withdrawals may include intra-account transfers between managers/funds. Fee transactions are excluded from Portfolio Reconciliation.

	QTD	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
Total Fund	5.1	1.9	5.1	7.3	6.1	8.0	7.5
Policy Index	5.1	3.3	5.1	8.6	7.1	8.7	7.6
InvMetrics Public DB Net Rank	58	63	58	61	63	54	59
Total Domestic Equity	9.2	5.5	9.2	15.1	11.7	13.6	13.3
Russell 3000	9.2	5.4	9.2	15.0	11.6	13.7	13.5
InvMetrics Public DB Net Rank	1	12	1	2	1	1	1
Total International Equity	5.5	-8.3	5.5	0.0	-0.1	5.6	3.3
MSCI ACWI ex USA Gross	6.4	-5.1	6.4	3.4	1.6	6.7	4.5
InvMetrics Public DB ex-US Eq Net Rank	94	90	94	93	86	84	98
Total Fixed Income	1.9	7.7	1.9	8.2	5.6	4.9	4.3
BBgBarc US Aggregate TR	0.6	6.8	0.6	7.0	5.2	4.2	3.6
InvMetrics Public DB Total Fix Inc Net Rank	38	5	38	5	12	29	25
Total Real Estate	-0.9	-0.4	-0.9	1.4	4.8	5.8	9.3
NCREIF ODCE Net	0.3	-0.7	0.3	0.5	4.3	5.7	9.3
Total Private Equity	13.7	7.5	13.7	10.5	15.6	14.2	8.0
Private Equity Benchmark	13.7	7.5	13.7	10.5	15.6	14.2	--
Total Private Credit	0.3	-1.3	0.3	1.5	4.8	--	--
Private Credit Benchmark	0.3	-1.3	0.3	1.5	4.8	--	--
Total Opportunistic	-4.9	-3.4	-4.9	-1.9	4.9	5.1	10.4
Assumption Rate + 1%	2.0	6.1	2.0	8.3	8.3	8.3	8.6

Actual vs Target Allocation (%)

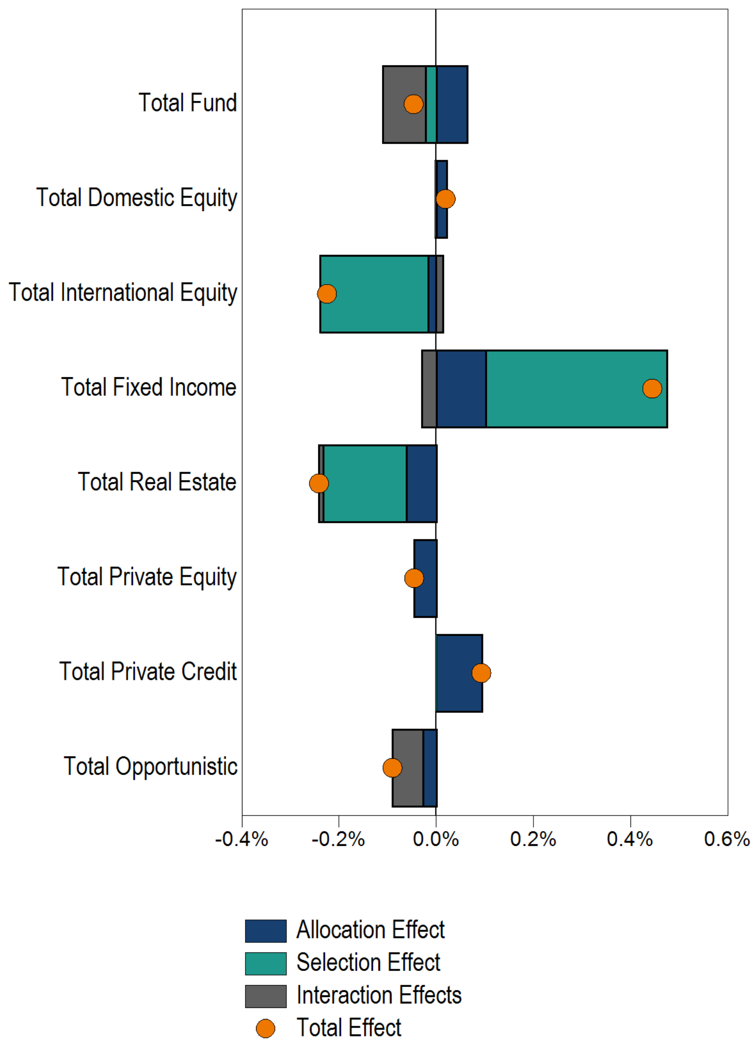


Rolling Annualized Excess Performance and Tracking Error
Total Fund vs. Policy Index



New Policy Index (as of 1/1/2020): 29% Russell 3000, 24% MSCI ACWI ex USA Gross, 27% BBgBarc Aggregate, 10% NCREIF Property,1% Russell 3000, 2%BBgBarc Aggregate, 4% Private Equity Benchmark, 3% Private Credit Benchmark. Prior Policy Index (10/1/2016 to 9/30/2018): 29% Russell 3000, 24% MSCI ACWI Ex USA Gross, 27% BBgBarc Aggregate, 5% NCREIF Property Index, 5% NCREIF Property Index +2%, 5% Russell 3000 +3% (Lagged), 5% BBgBarc High Yield +2% (Lagged). Prior quarter Private Equity returns, and index data are used. All returns are Net of fees. 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. As of 10/1/20 the SAA Target for equity changed to 33% Russell 3000 + 20% ACWI ex-US (see Exhibit B attached).

Attribution Effects



Performance Attribution

	Quarter	YTD
Wtd. Actual Return	5.07%	1.87%
Wtd. Index Return *	5.27%	3.37%
Excess Return	**-0.21%**	**-1.50%**
Selection Effect	-0.02%	-0.62%
Allocation Effect	0.06%	-0.51%
Interaction Effect	-0.09%	-0.07%

*Calculated from benchmark returns and weightings of each component.

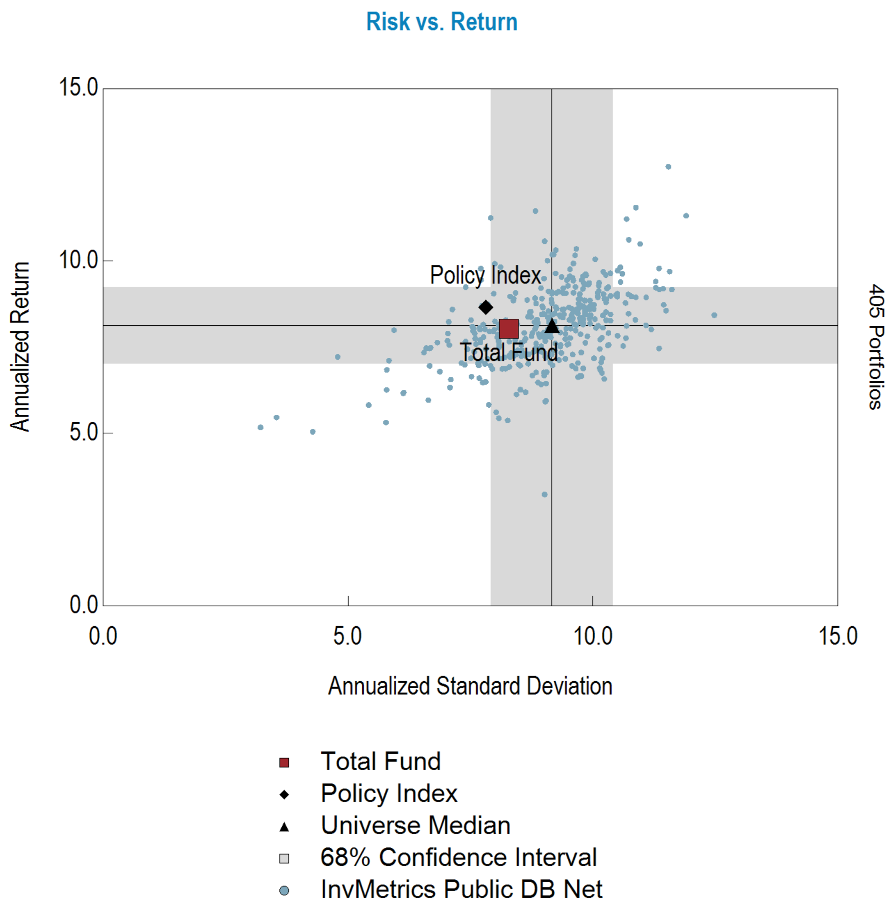
Attribution Summary
Last Three Months

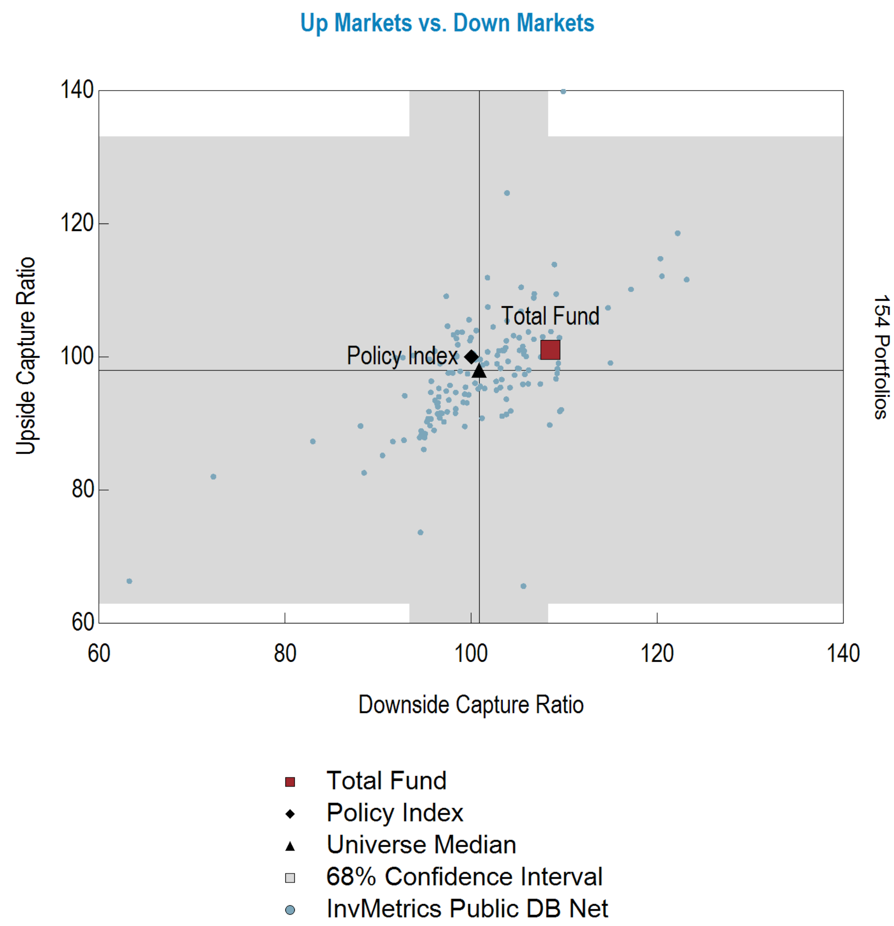
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Total Domestic Equity	9.2%	9.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Total International Equity	5.5%	6.4%	-0.9%	-0.2%	0.0%	0.0%	-0.2%
Total Fixed Income	1.9%	0.6%	1.2%	0.4%	0.1%	0.0%	0.4%
Total Real Estate	-0.9%	0.7%	-1.6%	-0.2%	-0.1%	0.0%	-0.2%
Total Private Equity	13.7%	13.7%	0.0%	0.0%	0.0%	0.0%	0.0%
Total Private Credit	0.3%	0.3%	0.0%	0.0%	0.1%	0.0%	0.1%
Total Opportunistic	-4.9%	2.0%	-6.9%	0.0%	0.0%	-0.1%	-0.1%
Total	**5.1%**	**5.3%**	**-0.2%**	**0.0%**	**0.1%**	**-0.1%**	**0.0%**

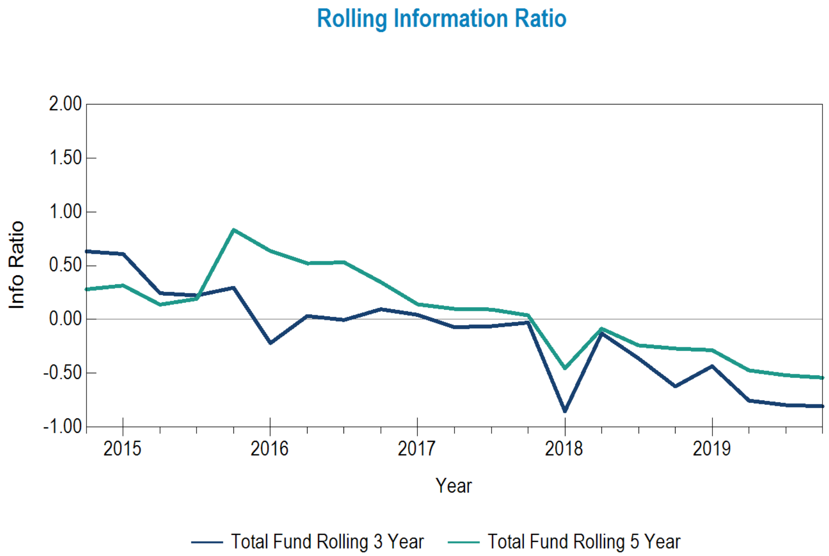
Weighted returns shown in attribution analysis may differ from actual returns.

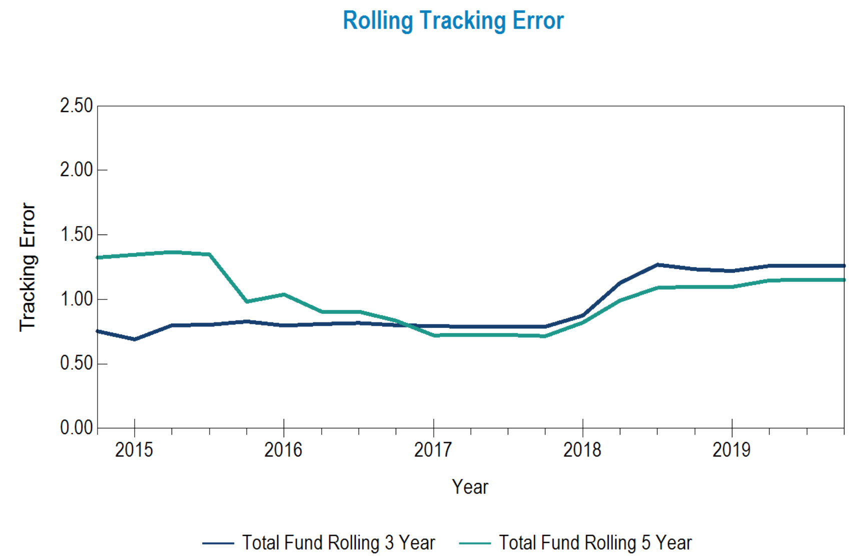
Risk Analysis - 5 Years (Net of Fees)

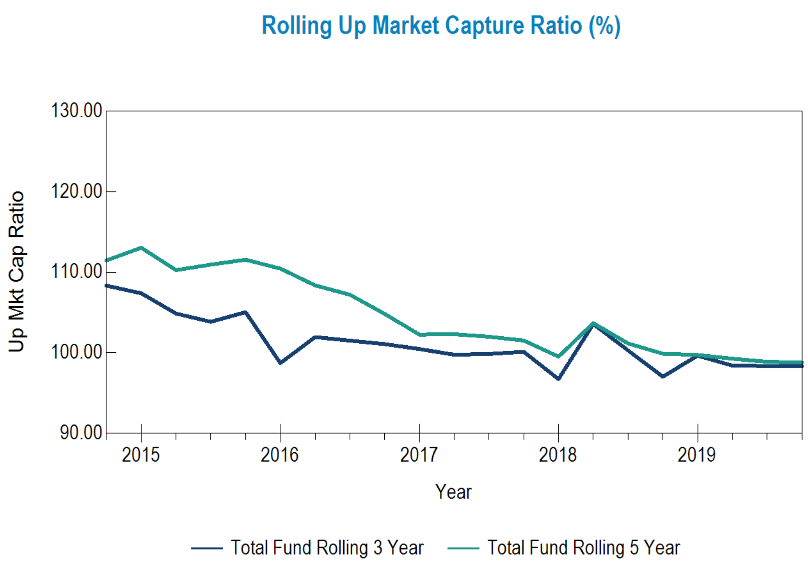
	Anlzd Ret	Ann Excess BM Return	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
Total Fund	8.04%	-0.62%	8.28%	-1.09%	1.05	1.01%	0.99	0.83	-0.61	101.01%	108.51%

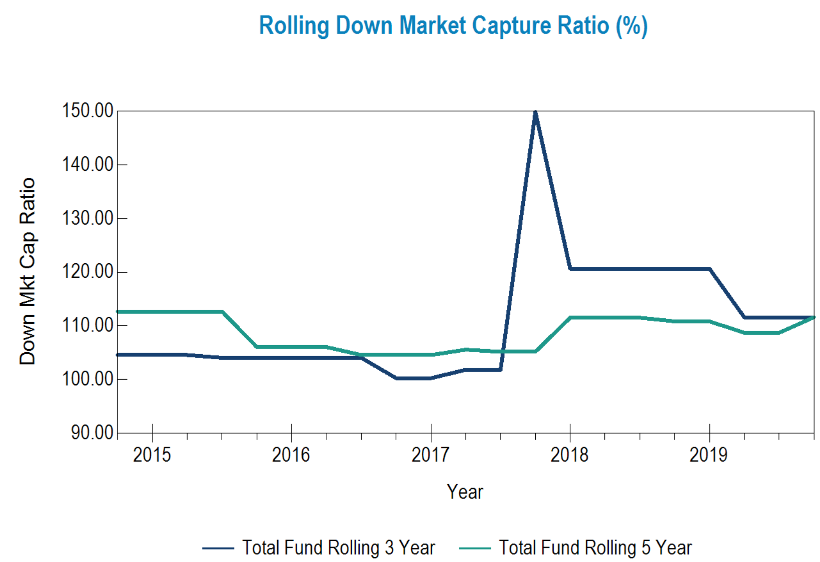





Rolling Information Ratio
Info Ratio
2.00
1.50
1.00
0.50
0.00
-0.50
-1.00
2015
2016
2017
2018
2019
Year
Total Fund Rolling 3 Year
Total Fund Rolling 5 Year


Rolling Tracking Error
Tracking Error
2.50
2.00
1.50
1.00
0.50
0.00
2015
2016
2017
2018
2019
Year
Total Fund Rolling 3 Year
Total Fund Rolling 5 Year


Rolling Up Market Capture Ratio (%)
Up Mkt Cap Ratio
130.00
120.00
110.00
100.00
90.00
2015
2016
2017
2018
2019
Year
Total Fund Rolling 3 Year
Total Fund Rolling 5 Year


Rolling Down Market Capture Ratio (%)
Down Mkt Cap Ratio
150.00
140.00
130.00
120.00
110.00
100.00
90.00
2015
2016
2017
2018
2019
Year
Total Fund Rolling 3 Year
Total Fund Rolling 5 Year

Total Fund

Performance Summary (Net of Fees)

Period Ending: September 30, 2020

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015	Inception	Inception Date
Total Fund	**925,200,561**	**100.0**	**5.1**	**1.9**	**5.1**	**7.3**	**6.1**	**8.0**	**7.5**	**17.8**	**-4.1**	**16.0**	**7.4**	**-0.4**	**8.7**	**Mar-89**
Policy Index			*5.1*	*3.3*	*5.1*	*8.6*	*7.1*	*8.7*	*7.6*	*18.0*	*-2.8*	*15.9*	*8.3*	*-1.2*	*--*	*Mar-89*
InvMetrics Public DB Net Rank			*58*	*63*	*58*	*61*	*63*	*54*	*59*	*73*	*43*	*22*	*49*	*51*	*11*	*Mar-89*
Total Domestic Equity	**296,039,002**	**32.0**	**9.2**	**5.5**	**9.2**	**15.1**	**11.7**	**13.6**	**13.3**	**31.1**	**-5.2**	**21.2**	**12.8**	**0.1**	**--**	
Russell 3000			*9.2*	*5.4*	*9.2*	*15.0*	*11.6*	*13.7*	*13.5*	*31.0*	*-5.2*	*21.1*	*12.7*	*0.5*	*--*	
InvMetrics Public DB Net Rank			*1*	*12*	*1*	*2*	*1*	*1*	*1*	*1*	*75*	*1*	*1*	*31*	*--*	
BlackRock Russell 3000	296,039,002	32.0	9.2	5.5	9.2	15.1	11.7	--	--	31.1	-5.2	21.2	12.8	--	12.5	Dec-15
Russell 3000			*9.2*	*5.4*	*9.2*	*15.0*	*11.6*	*--*	*--*	*31.0*	*-5.2*	*21.1*	*12.7*	*--*	*12.3*	*Dec-15*
eV US All Cap Core Equity Net Rank			*32*	*47*	*32*	*42*	*33*	*--*	*--*	*42*	*40*	*42*	*20*	*--*	*33*	*Dec-15*
Total International Equity	**203,942,475**	**22.0**	**5.5**	**-8.3**	**5.5**	**0.0**	**-0.1**	**5.6**	**3.3**	**20.7**	**-14.3**	**27.9**	**4.4**	**-4.0**	**--**	
MSCI ACWI ex USA Gross			*6.4*	*-5.1*	*6.4*	*3.4*	*1.6*	*6.7*	*4.5*	*22.1*	*-13.8*	*27.8*	*5.0*	*-5.3*	*--*	
InvMetrics Public DB ex-US Eq Net Rank			*94*	*90*	*94*	*93*	*86*	*84*	*98*	*84*	*29*	*55*	*48*	*54*	*--*	
BlackRock International Equity	141,391,829	15.3	4.8	-6.9	4.8	0.7	0.9	5.6	4.9	22.4	-13.5	25.4	1.3	-0.6	6.5	Jul-03
MSCI EAFE			*4.8*	*-7.1*	*4.8*	*0.5*	*0.6*	*5.3*	*4.6*	*22.0*	*-13.8*	*25.0*	*1.0*	*-0.8*	*6.3*	*Jul-03*
eV All EAFE Equity Net Rank			*74*	*58*	*74*	*60*	*50*	*51*	*68*	*47*	*33*	*60*	*37*	*65*	*59*	*Jul-03*
DFA Emerging Markets Value	28,109,228	3.0	4.7	-15.0	4.7	-6.8	-4.0	5.4	-0.6	9.6	-11.9	33.8	19.8	-18.8	2.5	Jan-07
MSCI Emerging Markets Value NR			*4.7*	*-14.2*	*4.7*	*-5.7*	*-2.9*	*4.4*	*-0.4*	*12.0*	*-10.7*	*28.1*	*14.9*	*-18.6*	*2.5*	*Jan-07*
eV Emg Mkts All Cap Value Equity Net Rank			*64*	*68*	*64*	*74*	*73*	*79*	*99*	*98*	*20*	*49*	*22*	*74*	*69*	*Jan-07*
Harding Loevner Emerging Markets	34,441,419	3.7	9.0	-8.1	9.0	2.9	-1.1	--	--	24.0	-19.5	33.6	--	--	4.6	Jul-16
MSCI Emerging Markets Growth GR			*14.2*	*12.6*	*14.2*	*28.1*	*7.7*	*--*	*--*	*25.4*	*-18.0*	*47.1*	*--*	*--*	*13.0*	*Jul-16*
eV Emg Mkts All Cap Growth Equity Net Rank			*89*	*98*	*89*	*98*	*98*	*--*	*--*	*61*	*73*	*89*	*--*	*--*	*97*	*Jul-16*
Total Fixed Income	**239,487,909**	**25.9**	**1.9**	**7.7**	**1.9**	**8.2**	**5.6**	**4.9**	**4.3**	**9.5**	**-0.8**	**4.3**	**4.8**	**-0.6**	**--**	
BBgBarc US Aggregate TR			*0.6*	*6.8*	*0.6*	*7.0*	*5.2*	*4.2*	*3.6*	*8.7*	*0.0*	*3.5*	*2.6*	*0.6*	*--*	
InvMetrics Public DB Total Fix Inc Net Rank			*38*	*5*	*38*	*5*	*12*	*29*	*25*	*32*	*59*	*62*	*43*	*59*	*--*	
Ducenta Squared	99,351,603	10.7	1.3	7.3	1.3	7.7	5.7	5.1	4.8	9.9	-0.1	4.3	4.8	0.9	6.3	Dec-92
BBgBarc US Aggregate TR			*0.6*	*6.8*	*0.6*	*7.0*	*5.2*	*4.2*	*3.6*	*8.7*	*0.0*	*3.5*	*2.6*	*0.6*	*5.5*	*Dec-92*
eV US Core Plus Fixed Inc Net Rank			*75*	*28*	*75*	*29*	*27*	*30*	*29*	*45*	*23*	*74*	*41*	*12*	*31*	*Dec-92*
MacKay Shields Core Plus Opportunities	96,974,048	10.5	1.9	7.5	1.9	7.9	5.5	4.8	--	9.7	-1.0	4.5	4.7	--	3.8	Mar-15
BBgBarc US Aggregate TR			*0.6*	*6.8*	*0.6*	*7.0*	*5.2*	*4.2*	*--*	*8.7*	*0.0*	*3.5*	*2.6*	*--*	*3.7*	*Mar-15*
eV US Core Plus Fixed Inc Net Rank			*31*	*26*	*31*	*27*	*46*	*51*	*--*	*54*	*75*	*62*	*47*	*--*	*78*	*Mar-15*
BlackRock US TIPS	43,162,257	4.7	3.1	9.4	3.1	10.3	5.9	4.7	3.6	8.5	-1.2	3.2	4.8	-1.3	4.6	Apr-07
BBgBarc US TIPS TR			*3.0*	*9.2*	*3.0*	*10.1*	*5.8*	*4.6*	*3.6*	*8.4*	*-1.3*	*3.0*	*4.7*	*-1.4*	*4.5*	*Apr-07*
eV US TIPS / Inflation Fixed Inc Net Rank			*62*	*26*	*62*	*25*	*33*	*38*	*18*	*53*	*36*	*47*	*43*	*30*	*48*	*Apr-07*

ARA American Strategic Value Realty funded 1/4/2018. Tortoise is now Ducenta Square.

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015	Inception	Inception Date
Total Real Estate	**97,716,535**	**10.6**	**-0.9**	**-0.4**	**-0.9**	**1.4**	**4.8**	**5.8**	**9.3**	**5.7**	**7.5**	**5.8**	**6.5**	**15.0**	**--**	
NCREIF Property Index			*0.7*	*0.5*	*0.7*	*2.0*	*5.1*	*6.3*	*9.4*	*6.4*	*6.7*	*7.0*	*8.0*	*13.3*	--	
ASB Real Estate	28,507,758	3.1	-1.9	-1.2	-1.9	-0.4	3.4	4.5	--	3.0	6.6	4.0	4.6	16.2	7.4	Dec-12
NCREIF Property Index			*0.7*	*0.5*	*0.7*	*2.0*	*5.1*	*6.3*	--	*6.4*	*6.7*	*7.0*	*8.0*	*13.3*	*8.3*	*Dec-12*
NCREIF ODCE Net			*0.3*	*-0.7*	*0.3*	*0.5*	*4.3*	*5.7*	--	*4.4*	*7.4*	*6.7*	*7.8*	*13.9*	*8.1*	*Dec-12*
Clarion Lion	29,288,033	3.2	-1.8	-2.3	-1.8	-0.3	4.9	6.4	10.1	6.8	8.6	7.9	8.0	14.6	4.2	Dec-06
NCREIF Property Index			*0.7*	*0.5*	*0.7*	*2.0*	*5.1*	*6.3*	*9.4*	*6.4*	*6.7*	*7.0*	*8.0*	*13.3*	*6.5*	*Dec-06*
NCREIF ODCE Net			*0.3*	*-0.7*	*0.3*	*0.5*	*4.3*	*5.7*	*9.3*	*4.4*	*7.4*	*6.7*	*7.8*	*13.9*	*4.8*	*Dec-06*
ARA American Strategic Value Realty	37,959,143	4.1	0.6	1.6	0.6	3.9	--	--	--	7.8	--	--	--	--	6.5	Jan-18
NCREIF Property Index +2%			*1.2*	*2.0*	*1.2*	*4.0*	--	--	--	*8.5*	--	--	--	--	*7.0*	*Jan-18*
NCREIF ODCE +2%			*1.0*	*1.4*	*1.0*	*3.4*	--	--	--	*7.4*	--	--	--	--	*6.4*	*Jan-18*
1221 State St. Corp	1,961,601	0.2	0.0	0.0	0.0	7.9	2.6	4.9	1.6	7.9	0.0	0.0	17.5	0.0	1.7	Sep-08
Total Private Equity																
Harbourvest Buyout IX	7,475,422	0.8	12.1	8.3	12.1	14.2	18.1	17.3	--	17.6	23.6	23.2	13.7	18.0	--	Sep-11
Harbourvest Credit Ops IX	1,280,968	0.1	11.4	-2.0	11.4	0.0	8.9	9.0	--	8.0	14.4	17.5	8.5	12.8	--	Sep-11
Harbourvest International PE VI	2,408,018	0.3	8.7	2.0	8.7	5.4	6.6	8.6	6.0	-2.9	14.8	19.4	12.2	8.3	--	Jun-10
Harbourvest Venture IX	4,781,643	0.5	14.7	19.0	14.7	20.1	24.3	17.2	--	24.6	25.9	9.4	5.3	22.4	--	Sep-11
Harbourvest 2017 Global Fund	17,684,711	1.9	10.9	3.0	10.9	4.8	13.4	--	--	8.8	20.9	--	--	--	13.4	Sep-17
Harbourvest 2018 Global Fund	9,160,153	1.0	15.5	8.1	15.5	12.5	--	--	--	14.3	--	--	--	--	12.3	Dec-18
Harbourvest 2019 Global Fund	2,668,021	0.3	40.4	12.3	40.4	--	--	--	--	--	--	--	--	--	12.3	Dec-19
Russell 3000 + 3%			*10.0*	*7.8*	*10.0*	--	--	--	--	--	--	--	--	--	*11.1*	*Dec-19*
Total Private Credit																
Portfolio Advisors	29,073,811	3.1	0.3	-1.3	0.3	1.5	--	--	--	9.4	6.7	--	--	--	5.0	Oct-17
BBgBarc High Yield +2% (Lagged)			*10.7*	*0.2*	*10.7*	*2.0*	--	--	--	*8.5*	*5.1*	--	--	--	*5.1*	*Oct-17*
Total Opportunistic																
KKR Mezzanine Partners	1,623,580	0.2	-18.8	-19.2	-18.8	-19.3	-0.3	2.5	--	-4.2	25.3	8.7	4.0	4.1	7.1	Apr-11
PIMCO BRAVO	101,651	0.0	20.4	-43.2	20.4	-26.5	-20.9	-13.0	--	-49.1	77.8	-12.4	11.2	1.0	1.8	May-11
TSSP Adjacent Opportunities Partners	8,842,237	1.0	0.0	--	0.0	--	--	--	--	--	--	--	--	--	5.2	Apr-20
Total Cash																
Cash Account	2,914,424	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	--	
91 Day T-Bills			*0.0*	*0.4*	*0.0*	*0.8*	*1.6*	*1.1*	*0.6*	*2.1*	*1.9*	*0.9*	*0.3*	*0.0*	--	

TSSP Adjacent funded 4/16/2020.

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 3000	11.68%	0.03%	18.44%	0.04%	1.00	0.03%	1.00	0.55	0.95	100.12%	99.98%
BlackRock International Equity	0.88%	0.27%	15.46%	0.27%	1.00	0.22%	1.00	-0.05	1.23	101.48%	99.89%
DFA Emerging Markets Value	-3.97%	-1.08%	20.78%	-0.84%	1.08	3.86%	0.97	-0.27	-0.28	101.36%	103.19%
Harding Loevner Emerging Markets	-1.14%	-8.84%	20.81%	-8.96%	1.02	5.41%	0.93	-0.13	-1.64	78.57%	111.30%
Ducenta Squared	5.75%	0.50%	3.60%	0.57%	0.99	1.39%	0.85	1.14	0.36	107.56%	100.72%
MacKay Shields Core Plus Opportunities	5.47%	0.23%	4.20%	-0.21%	1.08	2.10%	0.75	0.93	0.11	112.96%	126.85%
BlackRock US TIPS	5.89%	0.09%	3.84%	0.03%	1.01	0.09%	1.00	1.10	1.03	101.36%	100.39%
ASB Real Estate	3.41%	-1.70%	2.83%	-0.59%	0.78	2.05%	0.52	0.62	-0.83	66.12%	77.87%
Clarion Lion	4.87%	-0.24%	3.47%	-1.05%	1.16	1.77%	0.75	0.93	-0.14	101.16%	185.14%

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
BlackRock International Equity	5.56%	0.30%	14.03%	0.29%	1.00	0.19%	1.00	0.31	1.62	101.77%	99.80%
DFA Emerging Markets Value	5.42%	0.97%	19.15%	0.69%	1.06	3.43%	0.97	0.22	0.28	111.47%	101.72%
Ducenta Squared	5.10%	0.92%	3.31%	1.01%	0.98	1.21%	0.87	1.19	0.76	113.67%	93.68%
MacKay Shields Core Plus Opportunities	4.84%	0.66%	3.74%	0.54%	1.03	1.86%	0.75	0.99	0.35	118.11%	113.78%
BlackRock US TIPS	4.72%	0.11%	3.60%	0.08%	1.01	0.09%	1.00	0.99	1.28	101.66%	99.82%
ASB Real Estate	4.47%	-1.80%	3.43%	-1.17%	0.90	2.22%	0.59	0.97	-0.81	71.44%	77.87%
Clarion Lion	6.35%	0.07%	3.69%	-0.93%	1.16	1.51%	0.85	1.41	0.05	107.83%	185.14%

Vintage	Manager & Fund Name	Estimated 9/30 Market Value[3]	Total Commitment	Capital Called	% Called	Remaining Commitment	Capital Returned	Market Value for IRR	Distrib./ Paid-In (DPI)[1]	Tot. Value/ Paid-In (TVPI)[2]	Net IRR Since Inception[4]	IRR Date
2011	HarbourVest IX-Buyout	$7,475,422	$10,000,000	$8,525,000	85%	$1,475,000	$7,216,785	$6,894,784	*84.7%*	*172.3%*	*17.2%*	*6/30/20*
2011	HarbourVest IX-Credit	$1,280,968	$2,000,000	$1,600,000	80%	$400,000	$1,023,695	$1,149,886	*64.0%*	*144.0%*	*12.0%*	*6/30/20*
2008	HarbourVest Int'l VI[5]	$2,408,018	$3,712,930	$2,630,078	71%	$1,082,852	$2,254,981	$2,287,497	*85.7%*	*177.3%*	*13.3%*	*6/30/20*
2011	HarbourVest IX-Venture	$4,781,643	$4,000,000	$3,800,000	95%	$200,000	$3,325,742	$4,386,581	*87.5%*	*213.4%*	*18.8%*	*6/30/20*
2017	HarbourVest 2017 Global	$17,684,711	$30,000,000	$16,050,000	54%	$13,950,000	$2,260,137	$15,946,435	*14.1%*	*124.3%*	*11.7%*	*6/30/20*
2018	HarbourVest 2018 Global	$9,160,153	$20,000,000	$8,022,400	40%	$11,977,600	$0	$7,158,304	*0.0%*	*114.2%*	*20.2%*	*6/30/20*
2019	HarbourVest 2019 Global	$2,668,021	$20,000,000	$2,100,000	11%	$17,900,000	$0	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
	Total Illiquid Private Equity	**$45,458,936**	$89,712,930	$42,727,478	48%	$46,985,452	$16,081,340	$37,823,487	*88.5%*	*126.2%*		
	% of Portfolio (Market Value)	**4.9%**										

	Management Fee	Admin Fee	Interest Expense	Other Expense	Total Expense[6]
HarbourVest IX-Buyout	$24,912	$0	$214	$2,271	$27,397
HarbourVest IX-Credit	$4,977	$0	$21	$1,231	$6,229
HarbourVest Int'l VI	$6,056	$0	$57	$69	$6,182
HarbourVest IX-Venture	$9,982	$0	$64	$304	$10,350
HarbourVest 2017 Global	$66,000	$0	$8,534	$44,385	$118,919
HarbourVest 2018 Global	$44,296	$0	$19	$15,121	$59,436
HarbourVest 2019 Global	$29,457	$0	$0	$23,280	$52,737
	$185,680	$0	$8,909	$86,661	**$281,250**

[1](DPI) is equal to (capital returned / capital called)
[2](TVPI) is equal to (market value + capital returned) / capital called
[3]Last known market value + capital calls - distributions (preliminary MV's as of 6/30/20)
[4]Net IRR is calculated on the cash flows of all the limited partners of the fund and is net of all fees. Each IRR figure is provided by its respective manager.
[5]HarbourVest International Private Equity Partners VI-Partnership Fund L.P. values are originally presented in euros and are calculated to dollars using XE™.
[6]All fees and expenses are for 2Q 2020

HarbourVest 2017 Global Fund first capital call issued 9/21/2017. Portfolio Advisors first capital call issued 10/5/2017. HarbourVest 2018 Global Fund first capital call issued 12/13/2018.

Vintage	Manager & Fund Name	Estimated 9/30 Market Value[3]	Total Commitment	Capital Called	% Called	Remaining Commitment	Capital Returned	Market Value for IRR	Distrib./ Paid-In (DPI)[1]	Tot. Value/ Paid-In (TVPI)[2]	Net IRR Since Inception[4]	IRR Date
2013	Portfolio Advisors Credit Strategies Fund	$12,239,860	$11,250,000	$11,250,000	100%	$0	$236,207	$12,239,860	*2.1%*	*110.9%*	*6.5%*	*6/30/20*
2017	Crescent Direct Lending Levered Fund II	$5,957,941	$7,000,000	$5,707,507	82%	$1,292,493	$48,772	$5,957,941	*0.9%*	*105.2%*	*6.6%*	*6/30/20*
2017	Audax Direct Lending Fund A	$2,588,285	$7,000,000	$2,732,561	39%	$4,267,439	$333,050	*NA*	*12.2%*	*106.9%*	*NM*[6]	*NM*[6]
2018	Ares Capital Europe IV	$5,677,065	$8,000,000	$4,146,161	52%	$3,853,839	$179,195	*NA*	*4.3%*	*141.2%*	*NM*[7]	*NM*[7]
2019	Lone Star Fund XI	$181,206	$5,750,000	$505,883	9%	$5,244,117	$103,177	*NA*	*20.4%*	*56.2%*	*NA*	*NA*
2019	Ascribe Opportunities IV	$0	$6,000,000	$0	0%	$6,000,000	$0	*NA*	*NA*	*NA*	*NA*	*NA*
2020	Sixth Street Diversified Credit	$2,429,454	$20,000,000	$2,506,399	13%	$17,493,601	$0	*NA*	*0.0%*	*96.9%*	*NA*	*NA*
	Total Illiquid Private Credit	**$29,073,811**	$65,000,000	$26,848,511	41%	$38,151,489	$900,400	$18,197,801	*67.8%*	*71.1%*		
	% of Portfolio (Market Value)	**3.1%**										

	Management Fee	Accrued Carried Interest	Admin Fee	Interest Expense	Other Expense	Total Expense[5]
Portfolio Advisors CSF	$0	$250,006	$0	$0	$0	$250,006
Crescent Direct Lending II	$0	$0	$0	$0	$0	$0
Audax Direct Lending A	$20,212	$0	$0	$0	$45,397	$65,609
Ares Capital Europe IV	$20,321	$17,797	$4,087	$27,560	$0	$69,765
Ascribe Opportunities IV	$0	$0	$0	$0	$0	$0
Lone Star Fund XI	$0	$0	$0	$0	$0	$0
Sixth Street Diversified Credit	$0	$0	$0	$0	$0	$0
	$40,533	$267,803	$4,087	$27,560	$45,397	**$385,380**

[1](DPI) is equal to (capital returned / capital called)
[2](TVPI) is equal to (market value + capital returned) / capital called
[3]Last known market value + capital calls - distributions (preliminary MV's as of 6/30/20)
[4]Net IRR is calculated on the cash flows of all the limited partners of the fund and is net of all fees. Each IRR figure is provided by its respective manager.
[5]All fees and expenses are for 2Q 2020
[6]The Fund issued its first capital call on October 26, 2018. As such it does not consider the IRR to be meaningful.
[7]Given the nature of the ACE IV strategy, Ares will begin reporting fund-level IRR metrics beginning in Q3 2019, one year after the fund's first investment.

Portfolio Advisors first capital call issued 10/5/2017. Crescent Direct Lending first called 3/13/2018. Ares IV first called 8/13/2018. Audax Direct Lending first called 10/26/2018.

Vintage	Manager & Fund Name	Estimated 9/30 Market Value[3]	Total Commitment	Capital Called	% Called	Remaining Commitment	Capital Returned	Market Value for IRR	Distrib./ Paid-In (DPI)[1]	Tot. Value/ Paid-In (TVPI)[2]	Net IRR Since Inception[5]	IRR Date
2010	KKR Mezzanine[6]	$2,112,794	$10,000,000	$10,000,000	100%	$0	$13,460,765	$2,112,794	*134.6%*	*155.7%*	*6.7%*	*9/30/20*
2011	PIMCO BRAVO [4]	$84,409	$10,000,000	$10,000,000	100%	$0	$18,054,734	$84,409	*180.5%*	*181.4%*	*22.0%*	*6/30/20*
2020	TSSP Adjacent Opportunities Partners	$8,842,237	$40,000,000	$8,571,319	21%	$31,428,681	$0	*NA*	*0.0%*	*103.2%*	*NA*	*NA*
	Total Illiquid Opportunistic	**$11,039,440**	$60,000,000	$28,571,319	48%	$31,428,681	$31,515,499	$2,197,203	*7.7%*	*118.0%*		
	% of Portfolio (Market Value)	**1.2%**										

	Management Fee	Accrued Carried Interest	Admin Fee	Interest Expense	Other Expense	Total Expense[7]
KKR Mezzanine	$0	$0	$0	$0	$0	$0
PIMCO BRAVO	$0	$0	$0	$0	$0	$0
TSSP Adjacent Opportun	$0	$0	$0	$0	$0	$0
	$0	$0	$0	$0	$0	**$0**

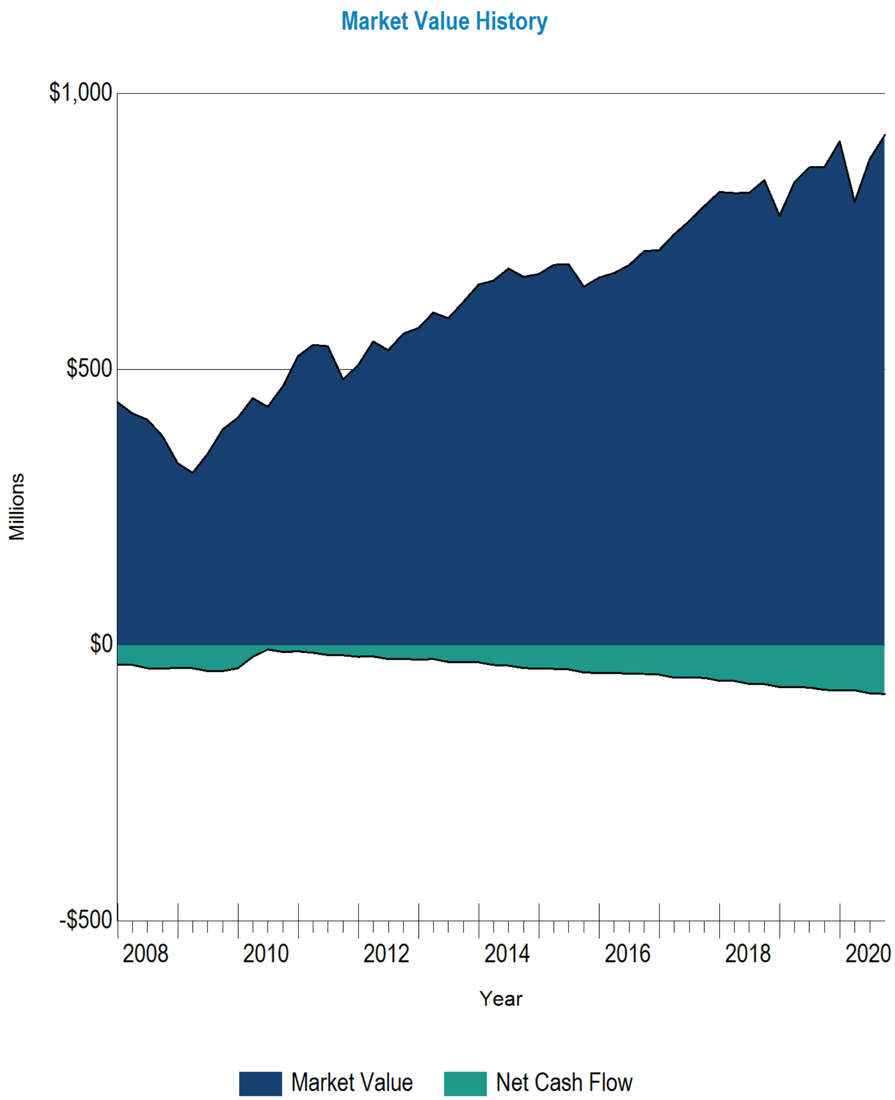
[1](DPI) is equal to (capital returned / capital called)
[2](TVPI) is equal to (market value + capital returned) / capital called
[3]Last known market value + capital calls - distributions (preliminary MV's as of 6/30/2020)
[4]Investment period ended, no further capital to be called.
[5]Net IRR is calculated on the cash flows of all the limited partners of the fund and is net of all fees. Each IRR figure is provided by its respective manager.
[6]KKR: Total capital called is $11,574,098, which includes recycled distributions. Unused capital commitment is $839,888 after including distribution proceeds available for investment
[7]All fees and expenses are for 2Q 2020

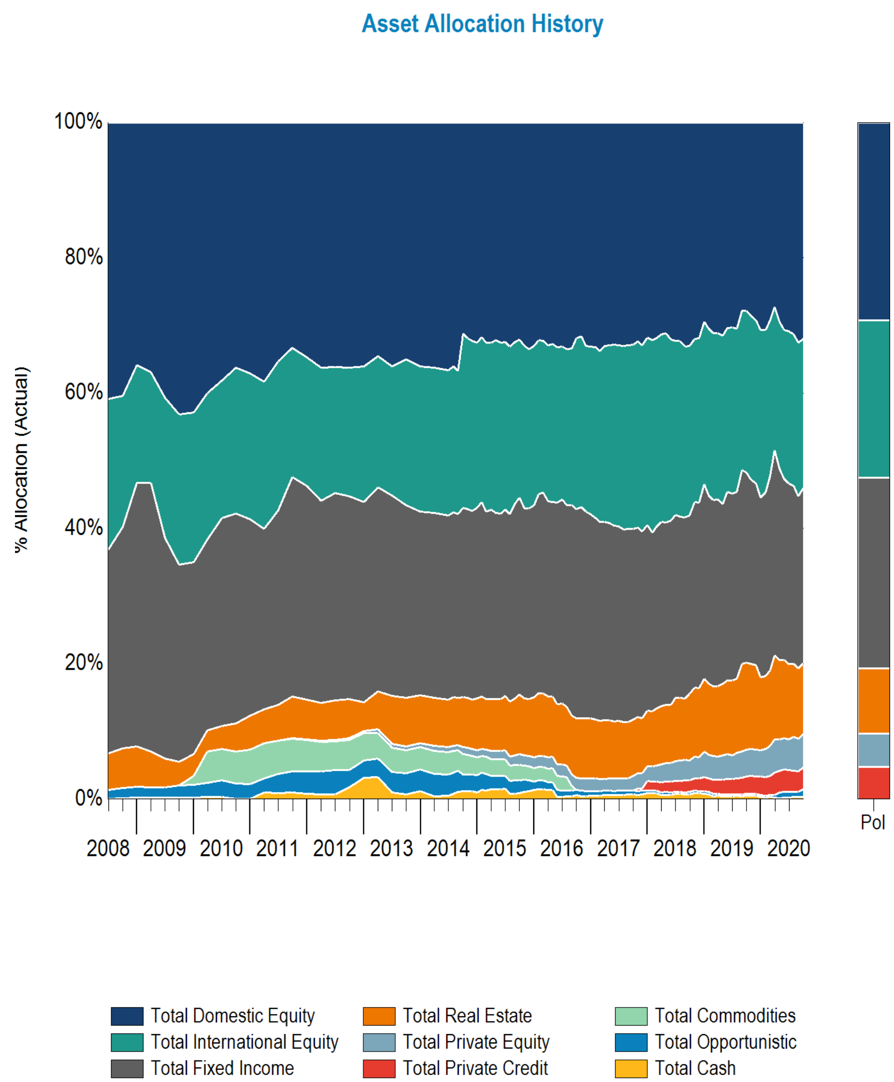
Financial Reconciliation (Last Three Months)

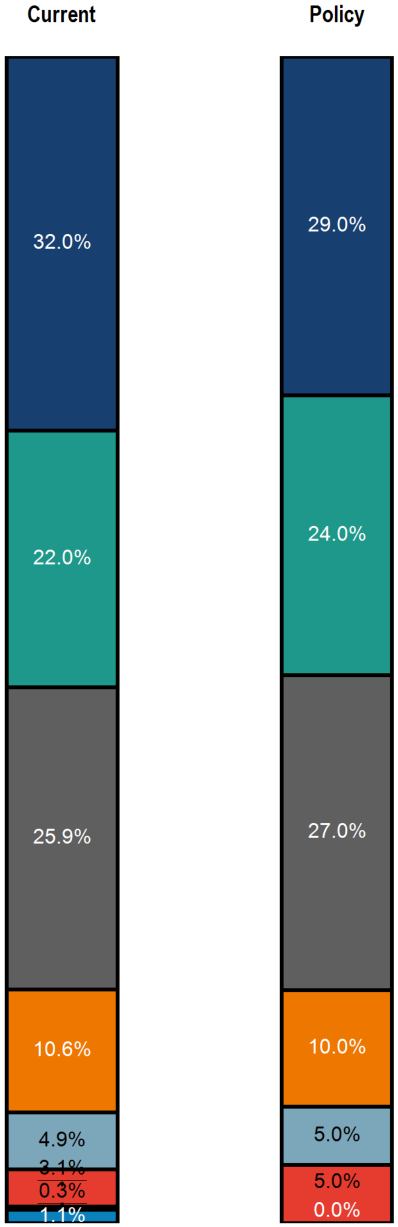
Manager						Investment Income	Capital Gain/ Loss		
Blackrock Russell 3000 Index	$271,729,161	$0	($700,000)	$0	($700,000)	$0	$25,009,841	$25,009,841	$296,039,002
DFA Emerging Markets	$26,835,109	$0	$0	$0	$0	$0	$1,274,119	$1,274,119	$28,109,228
Harding Loevner Emerging Markets	$32,452,781	$0	($1,030,043)	$0	($1,030,043)	$0	$3,018,681	$3,018,681	$34,441,419
Blackrock International Equity	$139,420,022	$0	($4,733,833)	$0	($4,733,833)	$0	$6,705,640	$6,705,640	$141,391,829
Ducenta Squared	$97,976,794	$0	$0	$0	$0	$0	$1,374,809	$1,374,809	$99,351,603
MacKay Shields Core Plus Opp.	$95,183,998	$0	$0	$0	$0	$0	$1,790,050	$1,790,050	$96,974,048
Blackrock US TIPS	$41,865,786	$0	$0	$0	$0	$0	$1,296,471	$1,296,471	$43,162,257
Clarion Lion Properties	$29,918,343	$199,879	($203,320)	($77,476)	($80,917)	$0	($549,393)	($549,393)	$29,288,033
ICERS State Street Real Estate	$1,944,344	$0	$0	$0	$0	$0	$0	$0	$1,961,601
ASB Allegiance Real Estate	$28,984,198	$65,952	$0	($66,845)	($893)	$203,874	($679,421)	($475,547)	$28,507,758
ARA American Strategic Value Realty	$37,744,450	$0	$0	$0	$0	$0	$214,693	$214,693	$37,959,143
Portfolio Advisors Credit Strategies Fund[1]	$13,263,773	$0	$0	($250,006)	($250,006)	$0	($773,907)	($773,907)	$12,239,860
Crescent Direct Lending II [1]	$5,806,003	$0	$0	$0	$0	$0	$151,938	$151,938	$5,957,941
Audax Direct Lending A	$2,693,584	$0	($162,257)	($65,609)	($227,866)	$0	$122,567	$122,567	$2,588,285
Ares Capital Europe IV	$5,752,834	$0	($97,255)	($69,765)	($167,020)	$47,644	$43,607	$91,251	$5,677,065
Lone Star Fund XI [1]	$153,804	$56,935	$0	$0	$56,935	$0	($29,533)	($29,533)	$181,206
PIMCO BRAVO [1]	$84,409	$0	$0	$0	$0	$0	$17,242	$17,242	$101,651
KKR Mezzanine I [1]	$2,112,794	$8,012	($100,591)	$0	($92,579)	$0	($396,635)	($396,635)	$1,623,580
HarbourVest International VI [1]	$2,287,497	$0	$0	($6,182)	($6,182)	$0	$15,403,396	$15,403,396	$17,684,711
HarbourVest Buyout IX [1]	$6,894,784	$0	$0	($27,397)	($27,397)	$0	$608,035	$608,035	$7,475,422
HarbourVest Credit Opportunities IX [1]	$1,149,886	$0	$0	($6,229)	($6,229)	$0	$137,311	$137,311	$1,280,968
HarbourVest Venture IX [1]	$4,386,581	$0	($243,645)	($10,350)	($253,995)	$0	$649,057	$649,057	$4,781,643
HarbourVest 2017 Global [1]	$15,946,435	$0	$0	($118,919)	($118,919)	$0	$1,857,195	$1,857,195	$17,684,711
HarbourVest 2018 Global [1]	$7,158,304	$800,000	$0	($59,436)	$740,564	$0	$1,261,285	$1,261,285	$9,160,153
HarbourVest 2019 Global [1]	$1,899,920	$0	$0	($52,737)	($52,737)	$0	$820,838	$820,838	$2,668,021
Sixth Street Diversified Credit[1]	$1,389,111	$1,040,343	$0	$0	$1,040,343	$0	$0	$0	$2,429,454
TSSP Adjacent Opportunities Partners [1]	$5,508,404	$3,333,833	$0	$0	$3,333,833	$0	$0	$0	$8,842,237
Cash	$1,706,188	$0	$0	$0	$0	$0	$0	$0	$2,529,656
Totals	**$882,249,297**	**$5,504,954**	**($6,570,944)**	**($810,951)**	**($2,576,940)**	**$251,518**	**$59,327,886**	**$59,579,403**	**$940,092,486**

[1]Market value as of 6/30/2020 +/- 3Q20 calls and distributions
[2]Fee transactions not included in the Portfolio Reconciliation page at beginning of report

Cash Account Plugged zero for cap gain/loss


Market Value History
$1,000
$500
$0
-$500
Millions
2008
2010
2012
2014
2016
2018
2020
Year
Market Value
Net Cash Flow


Asset Allocation History
100%
80%
60%
40%
20%
0%
% Allocation (Actual)
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
Pol
Total Domestic Equity
Total International Equity
Total Fixed Income
Total Real Estate
Total Private Equity
Total Private Credit
Total Commodities
Total Opportunistic
Total Cash



	Current Balance	Current Allocation	Policy	Difference	Policy Range	Within IPS Range?
Domestic Equity	$296,039,002	32.0%	29.0%	$27,730,839	19.0% - 39.0%	Yes
International Equity	$203,942,475	22.0%	24.0%	-$18,105,659	14.0% - 34.0%	Yes
Domestic Fixed Income	$239,487,909	25.9%	27.0%	-$10,316,243	17.0% - 40.0%	Yes
Real Estate	$97,716,535	10.6%	10.0%	$5,196,479	5.0% - 15.0%	Yes
Private Equity	$45,458,936	4.9%	5.0%	-$801,092	0.0% - 10.0%	Yes
Private Credit	$29,073,811	3.1%	5.0%	-$17,186,217	0.0% - 10.0%	Yes
Cash and Equivalents	$2,914,424	0.3%	0.0%	$2,914,424	0.0% - 0.0%	No
Other	$10,567,468	1.1%	0.0%	$10,567,468	0.0% - 10.0%	Yes
Total	**$925,200,561**	**100.0%**	**100.0%**			

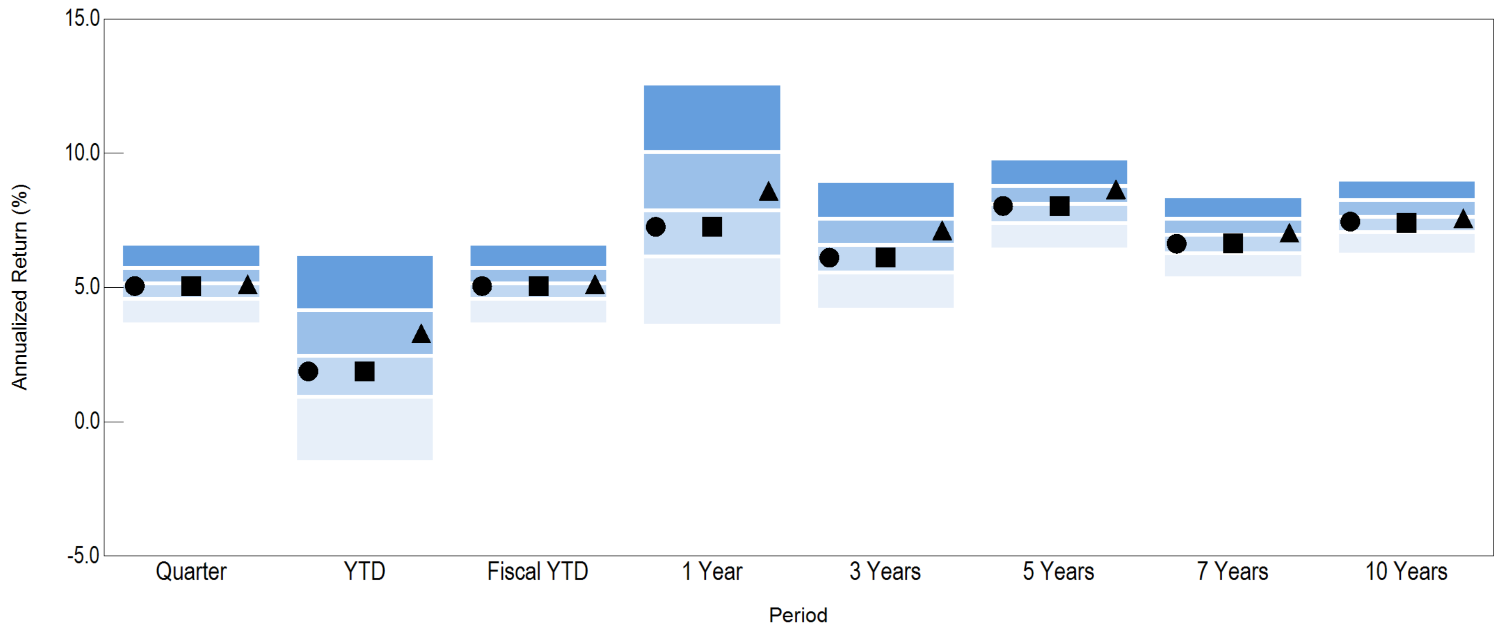
Investment Fee Analysis

Period Ending: September 30, 2020

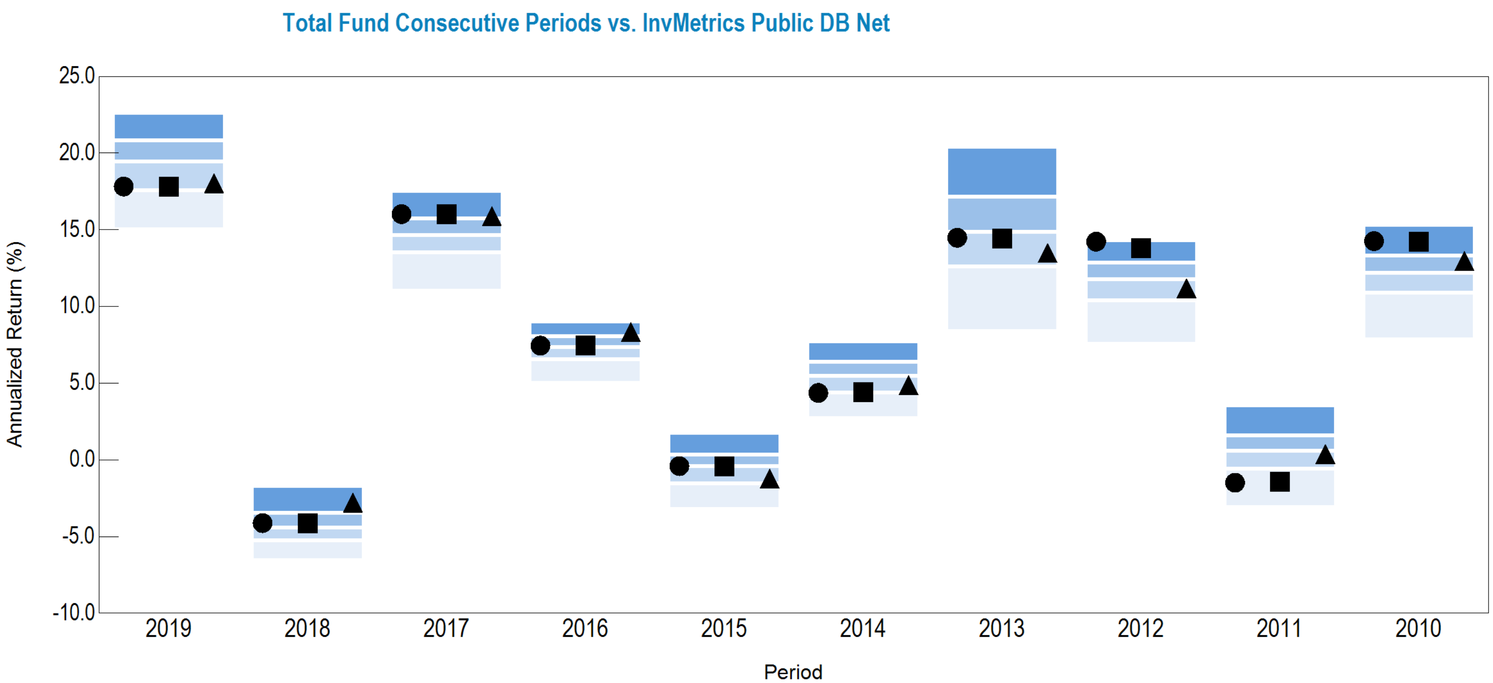
Account	Fee Schedule	Market Value As of 9/30/2020	% of Portfolio	Estimated Annual Fee ($)	Estimated Annual Fee (%)
1221 State St. Corp	No Fee	$1,961,601	0.2%	--	--
ARA American Strategic Value Realty	1.25% of First 10.0 Mil, 1.20% of Next 15.0 Mil, 1.10% of Next 25.0 Mil, 1.00% Thereafter	$37,959,143	4.2%	$447,551	1.18%
ASB Real Estate	1.25% of First 5.0 Mil, 1.00% of Next 10.0 Mil, 0.75% Thereafter	$28,507,758	3.1%	$263,808	0.93%
BlackRock International Equity	0.15% of First 50.0 Mil, 0.10% of Next 50.0 Mil	$141,391,829	15.5%	$125,000	0.09%
BlackRock Russell 3000	0.03% of Assets	$296,039,002	32.5%	$88,812	0.03%
BlackRock US TIPS	0.07% of Assets	$43,162,257	4.7%	$30,214	0.07%
Cash Account	No Fee	$2,914,424	0.3%	--	--
Clarion Lion	No Fee	$29,288,033	3.2%	--	--
DFA Emerging Markets Value	0.54% of Assets	$28,109,228	3.1%	$151,790	0.54%
Ducenta Squared	0.29% of First 100.0 Mil, 0.25% of Next 100.0 Mil	$99,351,603	10.9%	$283,152	0.28%
Harbourvest 2017 Global Fund	262,500 Annually	$17,684,711	1.9%	$262,500	1.48%
Harbourvest 2018 Global Fund	138,000 Annually	$9,160,153	1.0%	$138,000	1.51%
Harbourvest 2019 Global Fund	0.45% of Assets	$2,668,021	0.3%	$12,006	0.45%
Harbourvest Buyout IX	100,000 Annually	$7,475,422	0.8%	$100,000	1.34%
Harbourvest Credit Ops IX	20,000 Annually	$1,280,968	0.1%	$20,000	1.56%
Harbourvest International PE VI	35,000 Annually	$2,408,018	0.3%	$35,000	1.45%
Harbourvest Venture IX	40,000 Annually	$4,781,643	0.5%	$40,000	0.84%
Harding Loevner Emerging Markets	1.05% of Assets	$34,441,419	3.8%	$361,635	1.05%
KKR Mezzanine Partners	150,000 Annually	$1,623,580	0.2%	$150,000	9.24%
MacKay Shields Core Plus Opportunities	0.35% of Assets	$96,974,048	10.6%	$339,409	0.35%
PIMCO BRAVO	1.90% of Assets	$101,651	0.0%	$1,931	1.90%
Portfolio Advisors Credit Strategies Fund	180,000 Annually	$12,239,860	1.3%	$180,000	1.47%
Sixth Street Diversified Credit	No Fee	$2,429,454	0.3%	--	--
TSSP Adjacent Opportunities Partners	No Fee	$8,842,237	1.0%	--	--
Investment Management Fee		**$910,796,063**	**100.0%**	**$3,030,807**	**0.33%**

**HarbourVest, KKR and PIMCO BRAVO fees are estimated gross management fees only and do not include incentive allocations or offsetting cash flows received by the fund.*
**HarbourVest International Private Equity VI fees are based on committed Euros, actual US Dollar amount will fluctuate based on exchange rates.*
**Verus advisory fee shown for disclosure purposes only and is not included in total investment management fee calculations.*
**Portfolio Advisors fee is 0.20% on committed capital and 1.00% on invested capital.*
**Total fund market value excludes other investments managed by Portfolio Advisors.*
**HarbourVest funds annual fee amounts calculated by applying the average annual fee charged to each fund over its expected lifecycle by its respective capital commitment.*

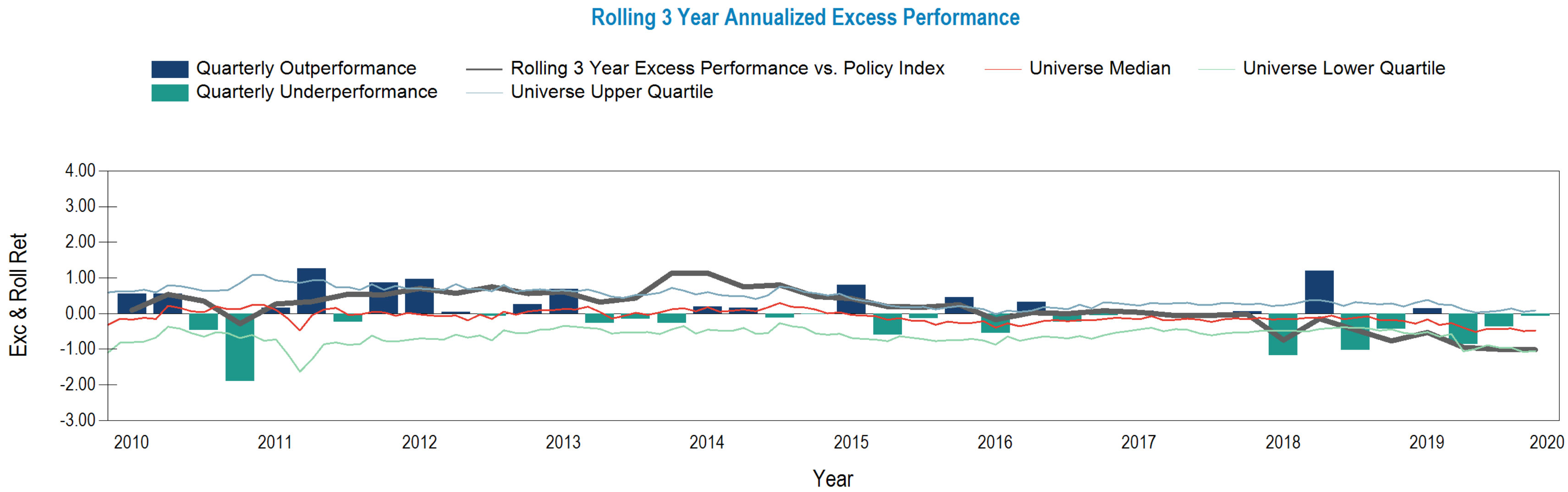
Total Fund Cumulative Performance vs. InvMetrics Public DB Net

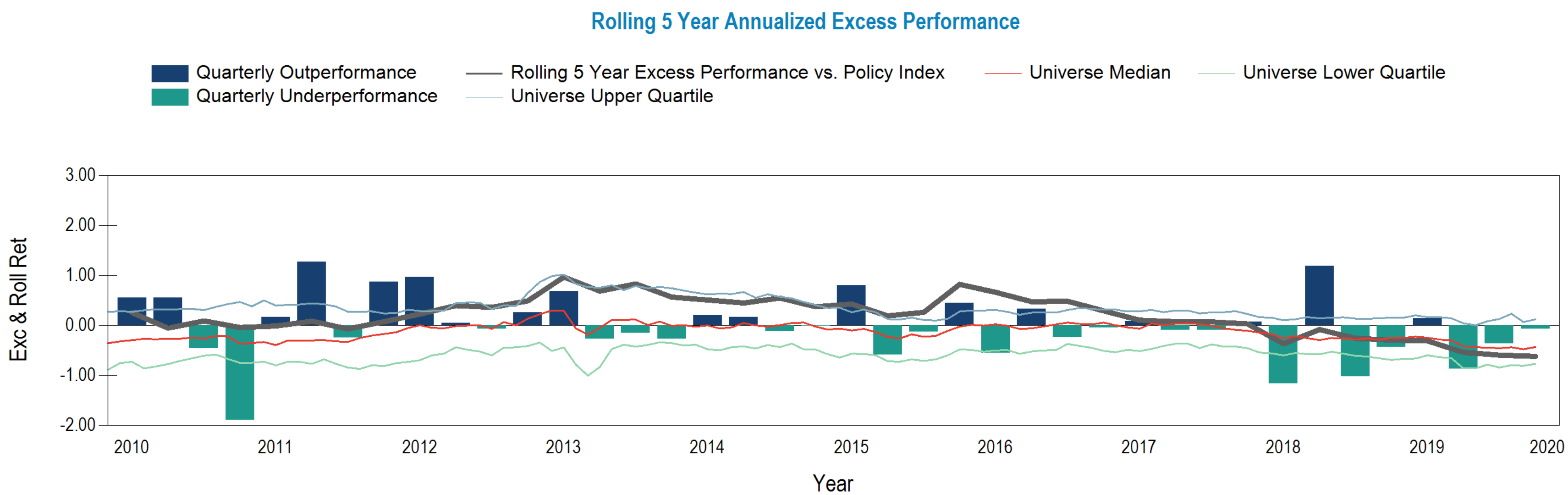


	Return (Rank)															
5th Percentile	6.6		6.2		6.6		12.6		8.9		9.8		8.4		9.0	
25th Percentile	5.7		4.2		5.7		10.0		7.6		8.8		7.6		8.3	
Median	5.2		2.5		5.2		7.9		6.6		8.1		7.0		7.6	
75th Percentile	4.6		1.0		4.6		6.2		5.6		7.4		6.3		7.1	
95th Percentile	3.6		-1.5		3.6		3.6		4.2		6.4		5.4		6.3	
# of Portfolios	446		444		446		443		426		405		373		329	
● Total Fund	5.1	(58)	1.9	(63)	5.1	(58)	7.3	(61)	6.1	(63)	8.0	(54)	6.6	(63)	7.5	(59)
■ Total Fund ex Parametric	5.1	(58)	1.9	(63)	5.1	(58)	7.3	(61)	6.1	(63)	8.0	(54)	6.6	(62)	7.4	(60)
▲ Policy Index	5.1	(52)	3.3	(37)	5.1	(52)	8.6	(42)	7.1	(35)	8.7	(29)	7.0	(47)	7.6	(53)



	Return (Rank)																			
5th Percentile	22.6		-1.7		17.5		9.0		1.7		7.7		20.4		14.3		3.6		15.3	
25th Percentile	20.8		-3.4		15.8		8.1		0.4		6.4		17.2		12.9		1.6		13.4	
Median	19.5		-4.4		14.7		7.4		-0.4		5.5		14.9		11.8		0.6		12.2	
75th Percentile	17.6		-5.2		13.6		6.6		-1.5		4.4		12.7		10.4		-0.5		10.9	
95th Percentile	15.1		-6.5		11.1		5.0		-3.2		2.7		8.4		7.6		-3.1		7.9	
# of Portfolios	550		496		269		269		262		210		191		159		137		131	
● Total Fund	17.8	(73)	-4.1	(43)	16.0	(22)	7.4	(49)	-0.4	(51)	4.4	(77)	14.5	(55)	14.2	(6)	-1.5	(86)	14.3	(11)
■ Total Fund ex Parametric	17.8	(73)	-4.1	(43)	16.0	(22)	7.5	(48)	-0.4	(51)	4.4	(76)	14.4	(56)	13.8	(13)	-1.4	(85)	14.2	(12)
▲ Policy Index	18.0	(70)	-2.8	(14)	15.9	(24)	8.3	(22)	-1.2	(72)	4.9	(64)	13.5	(69)	11.2	(63)	0.4	(57)	13.0	(33)

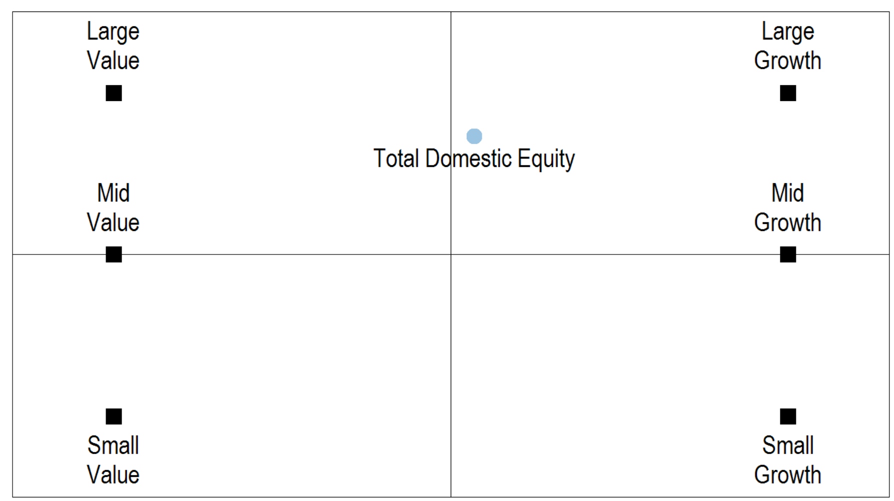

Rolling 3 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 3 Year Excess Performance vs. Policy Index
Universe Upper Quartile
Universe Median
Universe Lower Quartile
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
Exc & Roll Ret
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
Year


Rolling 5 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 5 Year Excess Performance vs. Policy Index
Universe Upper Quartile
Universe Median
Universe Lower Quartile
3.00
2.00
1.00
0.00
-1.00
-2.00
Exc & Roll Ret
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
Year

	Market Value	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015
Total Domestic Equity	**296,039,002**	**9.2**	**5.5**	**9.2**	**15.1**	**11.7**	**13.6**	**13.3**	**31.1**	**-5.2**	**21.2**	**12.8**	**0.1**
Russell 3000		*9.2*	*5.4*	*9.2*	*15.0*	*11.6*	*13.7*	*13.5*	*31.0*	*-5.2*	*21.1*	*12.7*	*0.5*
InvMetrics Public DB Net Rank		*1*	*12*	*1*	*2*	*1*	*1*	*1*	*1*	*75*	*1*	*1*	*31*
BlackRock Russell 3000	296,039,002	9.2	5.5	9.2	15.1	11.7	--	--	31.1	-5.2	21.2	12.8	--
Russell 3000		*9.2*	*5.4*	*9.2*	*15.0*	*11.6*	--	--	*31.0*	*-5.2*	*21.1*	*12.7*	--
eV US All Cap Core Equity Net Rank		*32*	*47*	*32*	*42*	*33*	--	--	*42*	*40*	*42*	*20*	--

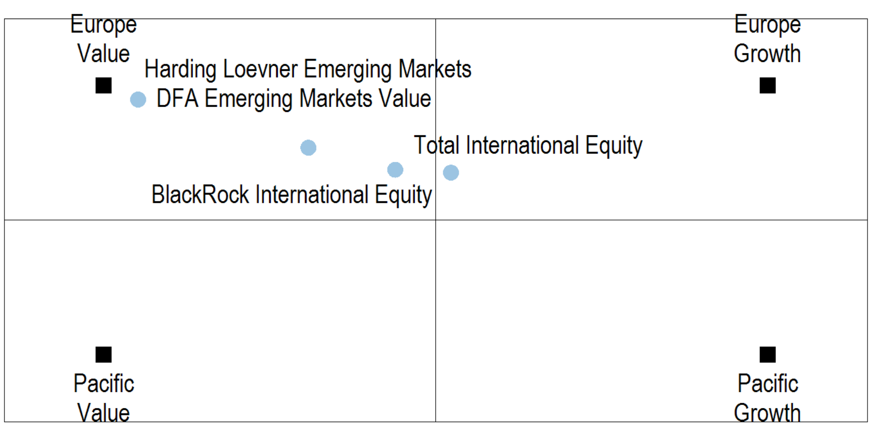
U.S. Effective Style Map
3 Years Ending September 30, 2020

U.S. Effective Style Map
5 Years Ending September 30, 2020

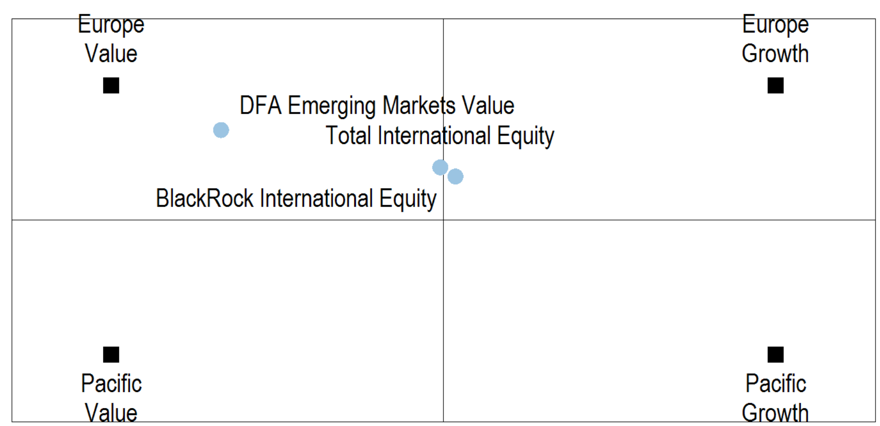


	Market Value	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015
Total International Equity	**203,942,475**	**5.5**	**-8.3**	**5.5**	**0.0**	**-0.1**	**5.6**	**3.3**	**20.7**	**-14.3**	**27.9**	**4.4**	**-4.0**
MSCI ACWI ex USA Gross		*6.4*	*-5.1*	*6.4*	*3.4*	*1.6*	*6.7*	*4.5*	*22.1*	*-13.8*	*27.8*	*5.0*	*-5.3*
InvMetrics Public DB ex-US Eq Net Rank		*94*	*90*	*94*	*93*	*86*	*84*	*98*	*84*	*29*	*55*	*48*	*54*
BlackRock International Equity	141,391,829	4.8	-6.9	4.8	0.7	0.9	5.6	4.9	22.4	-13.5	25.4	1.3	-0.6
MSCI EAFE		*4.8*	*-7.1*	*4.8*	*0.5*	*0.6*	*5.3*	*4.6*	*22.0*	*-13.8*	*25.0*	*1.0*	*-0.8*
eV All EAFE Equity Net Rank		*74*	*58*	*74*	*60*	*50*	*51*	*68*	*47*	*33*	*60*	*37*	*65*
DFA Emerging Markets Value	28,109,228	4.7	-15.0	4.7	-6.8	-4.0	5.4	-0.6	9.6	-11.9	33.8	19.8	-18.8
MSCI Emerging Markets Value NR		*4.7*	*-14.2*	*4.7*	*-5.7*	*-2.9*	*4.4*	*-0.4*	*12.0*	*-10.7*	*28.1*	*14.9*	*-18.6*
eV Emg Mkts All Cap Value Equity Net Rank		*64*	*68*	*64*	*74*	*73*	*79*	*99*	*98*	*20*	*49*	*22*	*74*
Harding Loevner Emerging Markets	34,441,419	9.0	-8.1	9.0	2.9	-1.1	--	--	24.0	-19.5	33.6	--	--
MSCI Emerging Markets Growth GR		*14.2*	*12.6*	*14.2*	*28.1*	*7.7*	*--*	*--*	*25.4*	*-18.0*	*47.1*	*--*	*--*
eV Emg Mkts All Cap Growth Equity Net Rank		*89*	*98*	*89*	*98*	*98*	*--*	*--*	*61*	*73*	*89*	*--*	*--*

MSCI Effective Style Map
3 Years Ending Sep 30, 2020



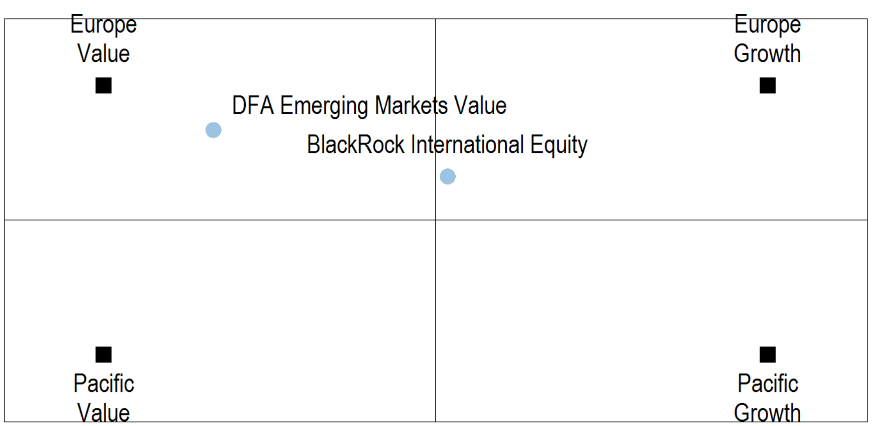
MSCI Effective Style Map
5 Years Ending Sep 30, 2020



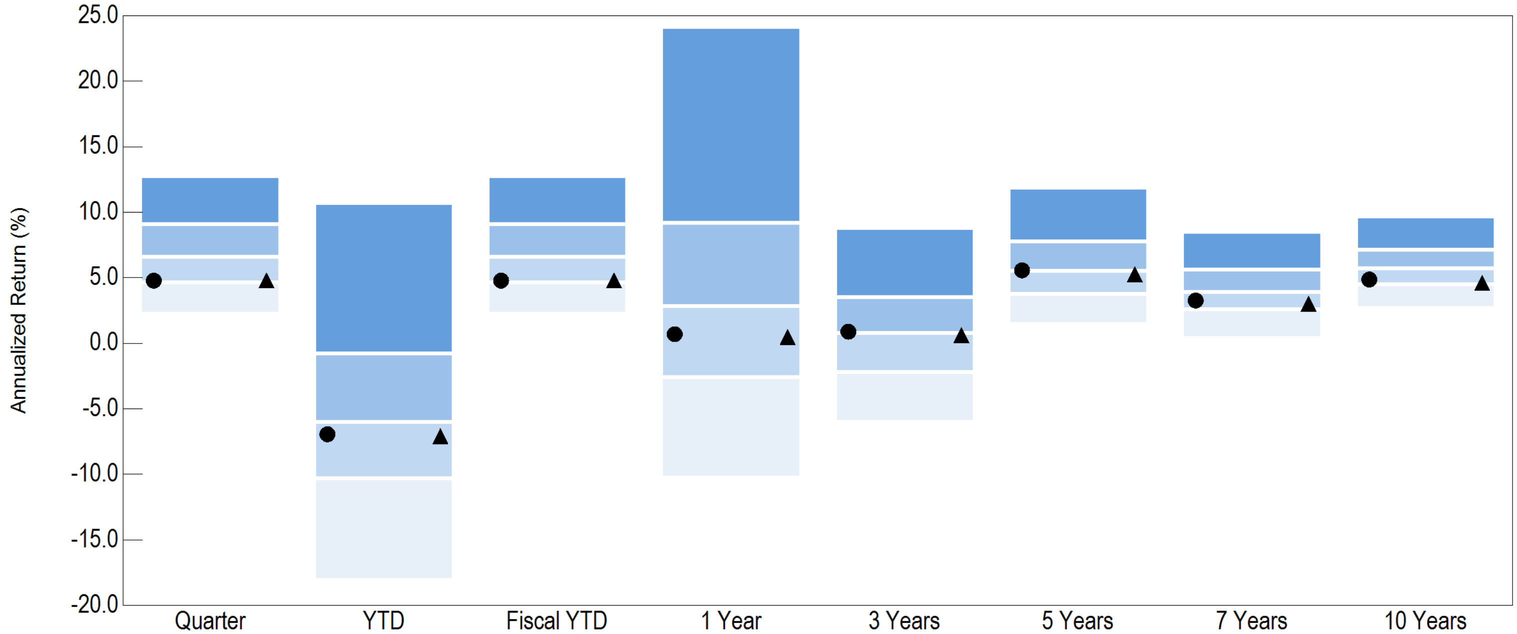
	Market Value	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015
Total International Equity	**203,942,475**	**5.5**	**-8.3**	**5.5**	**0.0**	**-0.1**	**5.6**	**3.3**	**20.7**	**-14.3**	**27.9**	**4.4**	**-4.0**
MSCI ACWI ex USA Gross		*6.4*	*-5.1*	*6.4*	*3.4*	*1.6*	*6.7*	*4.5*	*22.1*	*-13.8*	*27.8*	*5.0*	*-5.3*
BlackRock International Equity	141,391,829	4.8	-6.9	4.8	0.7	0.9	5.6	4.9	22.4	-13.5	25.4	1.3	-0.6
MSCI EAFE		*4.8*	*-7.1*	*4.8*	*0.5*	*0.6*	*5.3*	*4.6*	*22.0*	*-13.8*	*25.0*	*1.0*	*-0.8*
DFA Emerging Markets Value	28,109,228	4.7	-15.0	4.7	-6.8	-4.0	5.4	-0.6	9.6	-11.9	33.8	19.8	-18.8
MSCI Emerging Markets Value NR		*4.7*	*-14.2*	*4.7*	*-5.7*	*-2.9*	*4.4*	*-0.4*	*12.0*	*-10.7*	*28.1*	*14.9*	*-18.6*
Harding Loevner Emerging Markets	34,441,419	9.0	-8.1	9.0	2.9	-1.1	--	--	24.0	-19.5	33.6	--	--
MSCI Emerging Markets Growth GR		*14.2*	*12.6*	*14.2*	*28.1*	*7.7*	--	--	*25.4*	*-18.0*	*47.1*	--	--

MSCI Effective Style Map
3 Years Ending Sep 30, 2020

MSCI Effective Style Map
5 Years Ending Sep 30, 2020

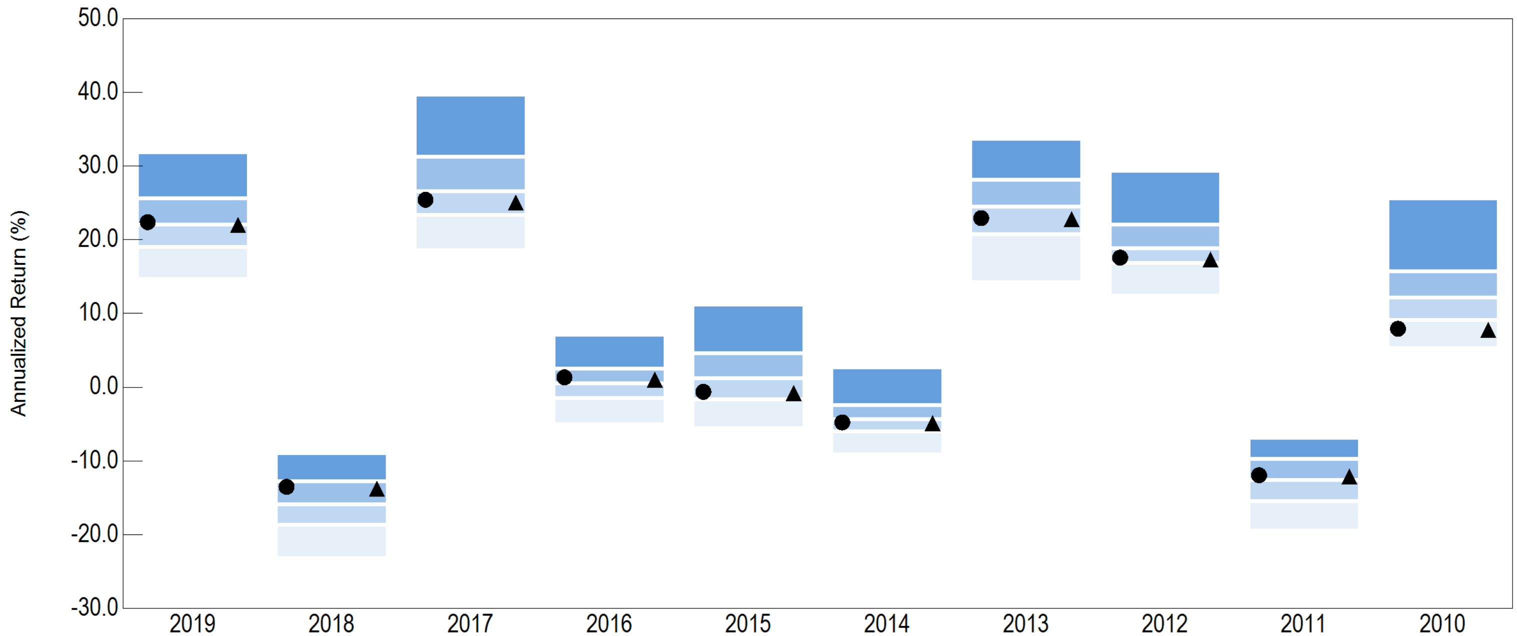


BlackRock International Equity vs. eV All EAFE Equity Net Universe

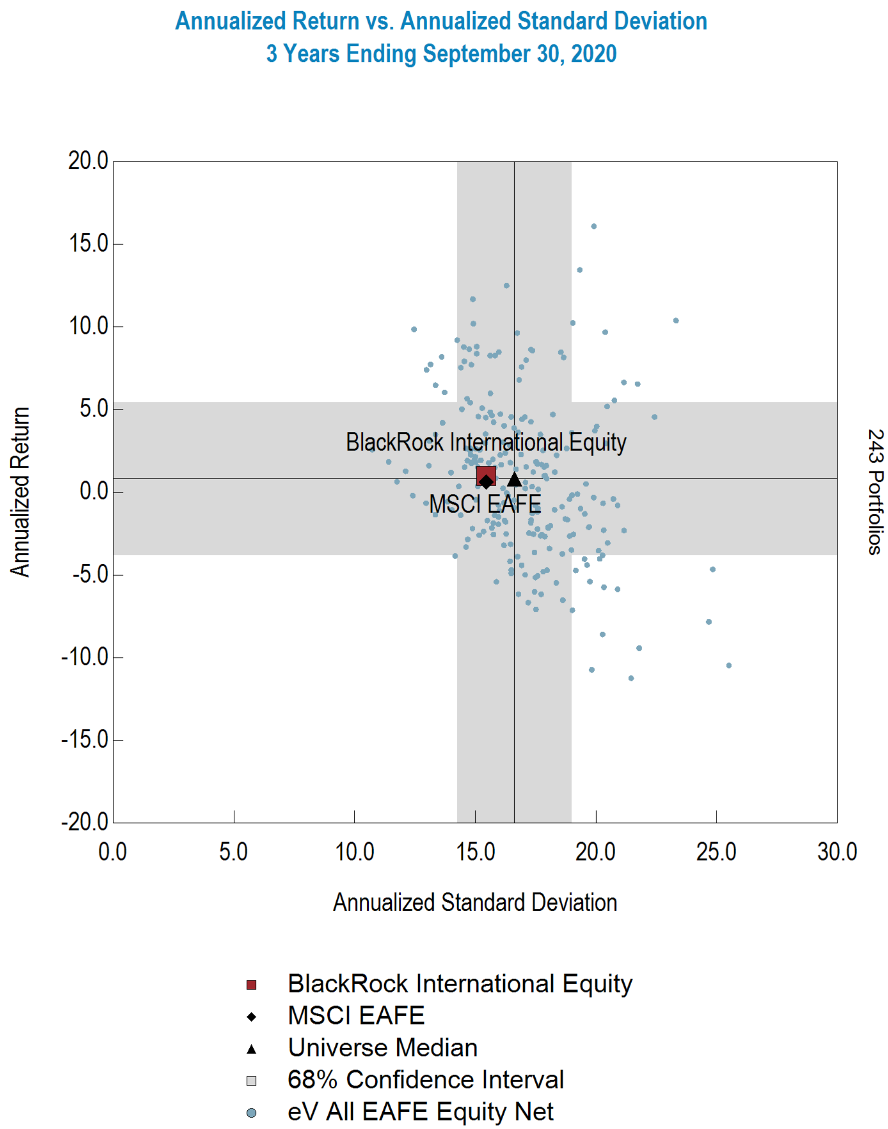


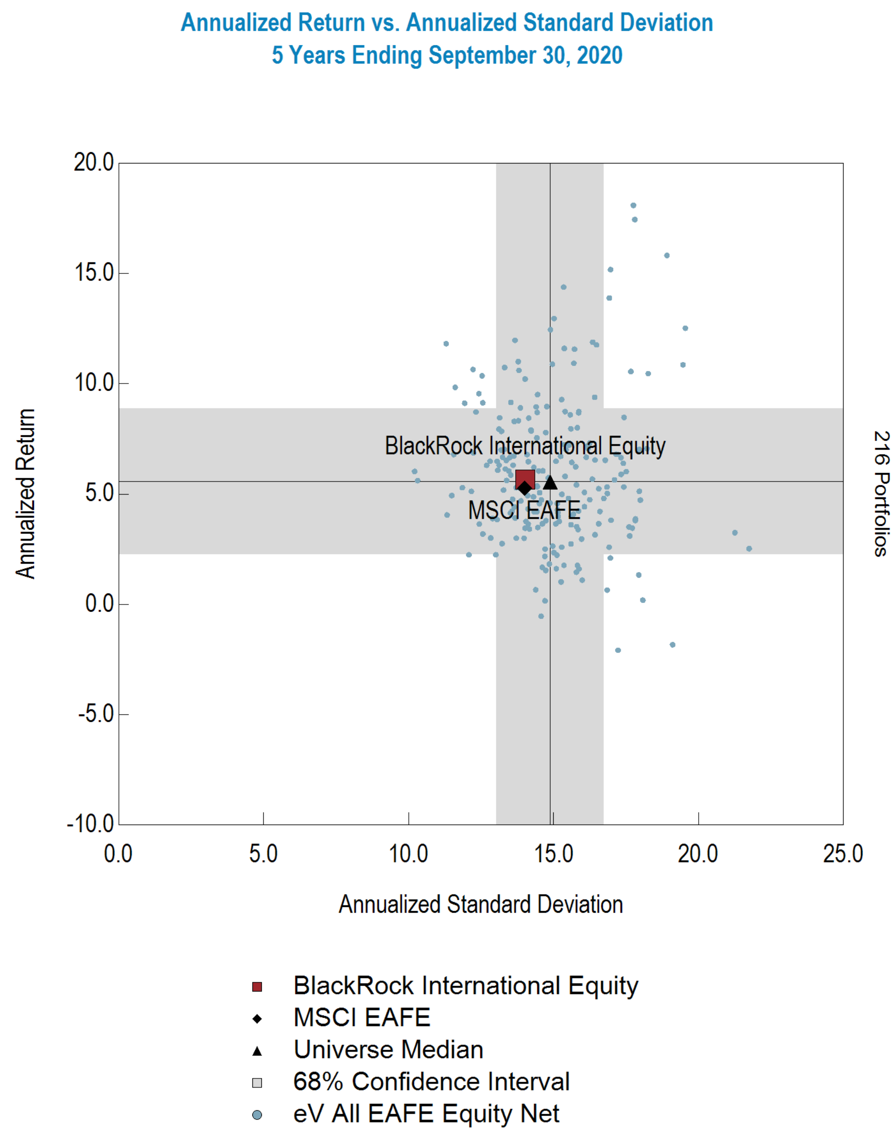
	Return (Rank)															
5th Percentile	12.7		10.7		12.7		24.1		8.8		11.8		8.5		9.7	
25th Percentile	9.1		-0.8		9.1		9.2		3.6		7.8		5.7		7.2	
Median	6.6		-6.0		6.6		2.9		0.8		5.6		3.9		5.7	
75th Percentile	4.7		-10.3		4.7		-2.6		-2.2		3.8		2.6		4.5	
95th Percentile	2.3		-18.0		2.3		-10.2		-6.0		1.5		0.4		2.7	
# of Portfolios	257		256		257		256		243		216		191		153	
● BlackRock International Equity	4.8	(74)	-6.9	(58)	4.8	(74)	0.7	(60)	0.9	(50)	5.6	(51)	3.3	(61)	4.9	(68)
▲ MSCI EAFE	4.8	(74)	-7.1	(60)	4.8	(74)	0.5	(62)	0.6	(53)	5.3	(56)	3.0	(69)	4.6	(73)

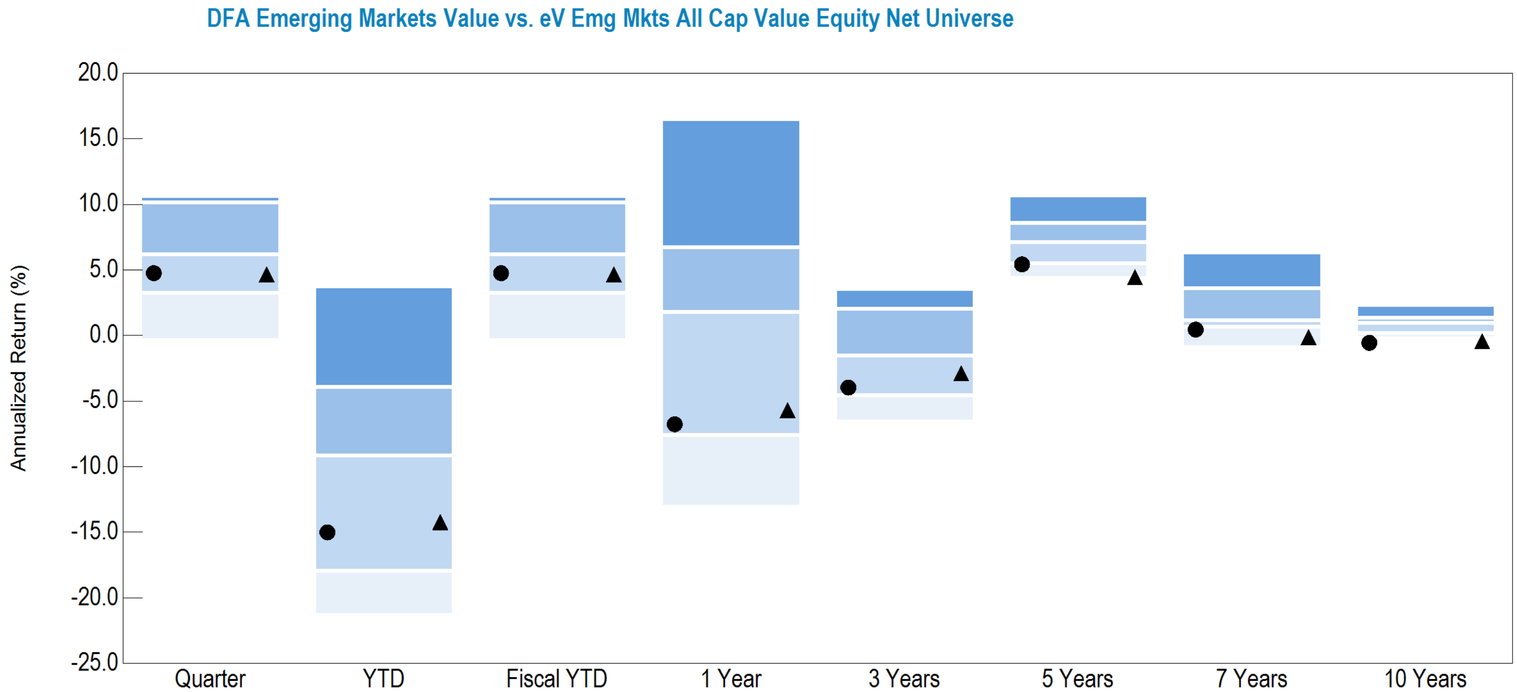
BlackRock International Equity vs. eV All EAFE Equity Net Universe



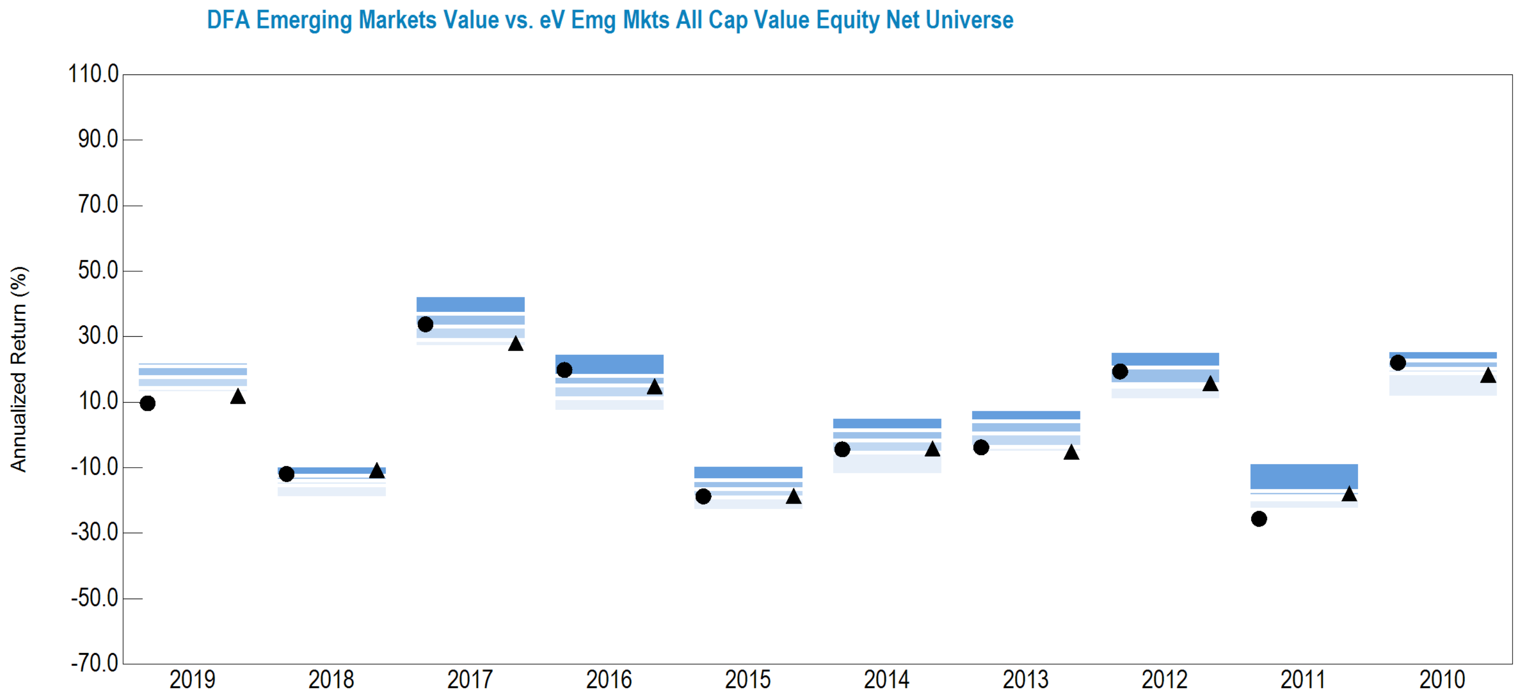
	Return (Rank)																			
5th Percentile	31.9		-9.0		39.6		7.1		11.2		2.6		33.6		29.3		-6.9		25.6	
25th Percentile	25.7		-12.7		31.3		2.6		4.7		-2.4		28.2		22.1		-9.7		15.7	
Median	22.1		-15.8		26.6		0.6		1.2		-4.3		24.5		18.9		-12.6		12.2	
75th Percentile	19.1		-18.6		23.4		-1.5		-1.6		-6.0		20.8		16.9		-15.4		9.1	
95th Percentile	14.7		-23.1		18.6		-5.0		-5.5		-9.1		14.3		12.5		-19.4		5.3	
# of Portfolios	255		243		232		215		188		164		151		144		129		143	
● BlackRock International Equity	22.4	(47)	-13.5	(33)	25.4	(60)	1.3	(37)	-0.6	(65)	-4.8	(58)	22.9	(63)	17.6	(69)	-11.9	(43)	7.9	(83)
▲ MSCI EAFE	22.0	(52)	-13.8	(37)	25.0	(64)	1.0	(44)	-0.8	(67)	-4.9	(60)	22.8	(64)	17.3	(72)	-12.1	(45)	7.8	(83)


Annualized Return vs. Annualized Standard Deviation
3 Years Ending September 30, 2020
20.0
15.0
10.0
5.0
0.0
-5.0
-10.0
-15.0
-20.0
Annualized Return
BlackRock International Equity
MSCI EAFE
243 Portfolios
0.0
5.0
10.0
15.0
20.0
25.0
30.0
Annualized Standard Deviation
BlackRock International Equity
MSCI EAFE
Universe Median
68% Confidence Interval
eV All EAFE Equity Net

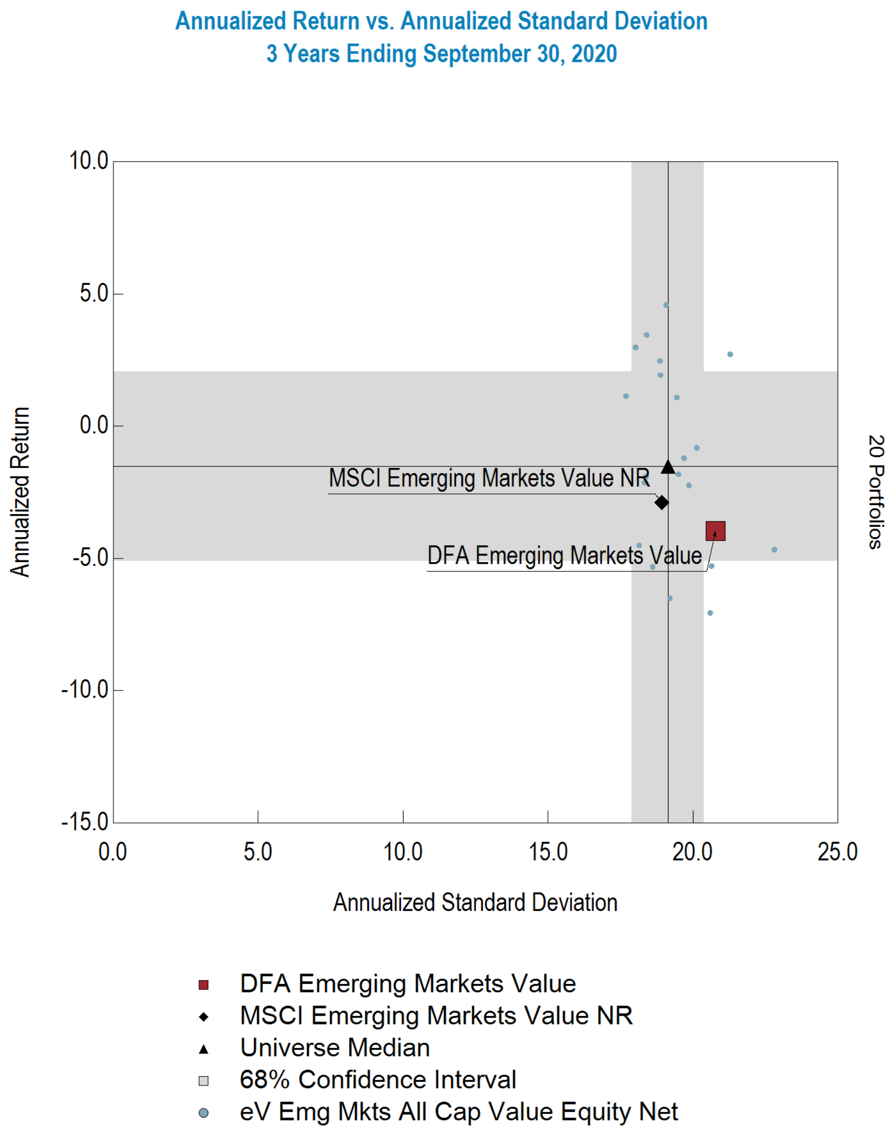

Annualized Return vs. Annualized Standard Deviation
5 Years Ending September 30, 2020
20.0
15.0
10.0
5.0
0.0
-5.0
-10.0
Annualized Return
BlackRock International Equity
MSCI EAFE
216 Portfolios
0.0
5.0
10.0
15.0
20.0
25.0
Annualized Standard Deviation
BlackRock International Equity
MSCI EAFE
Universe Median
68% Confidence Interval
eV All EAFE Equity Net

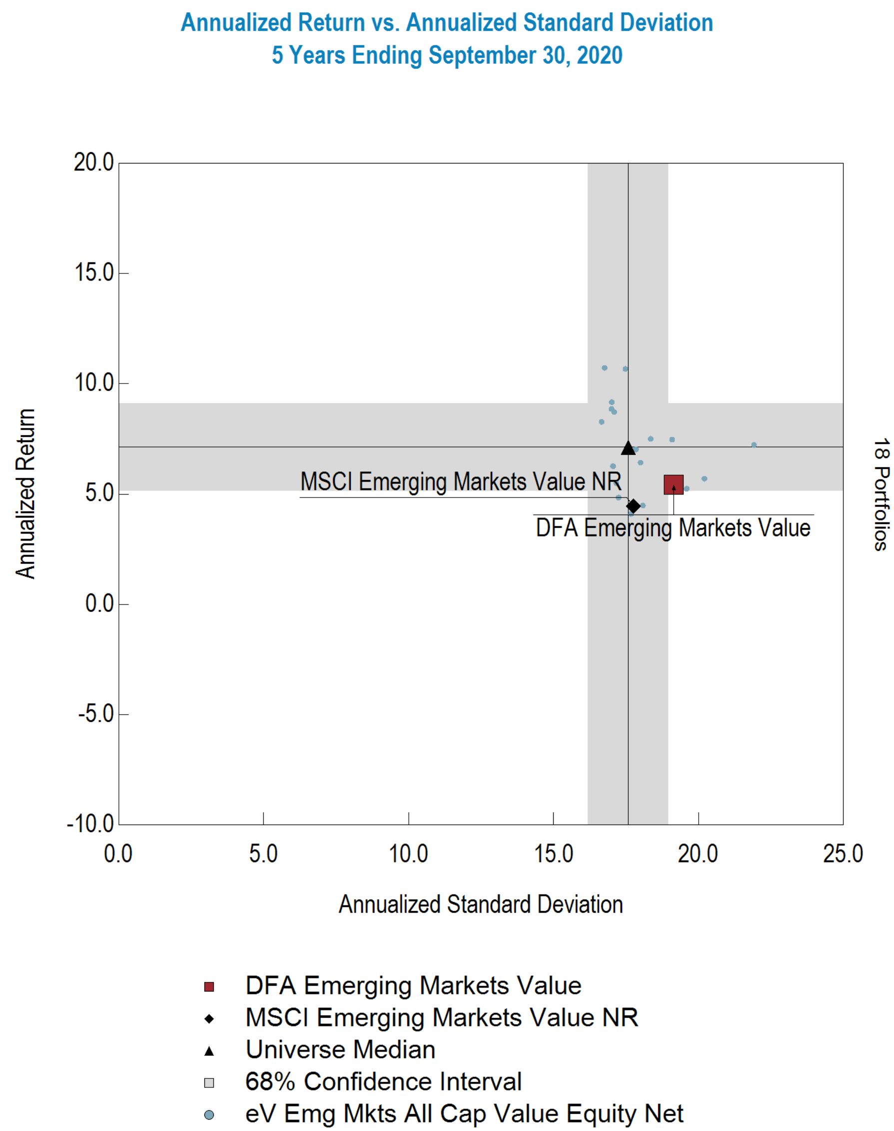


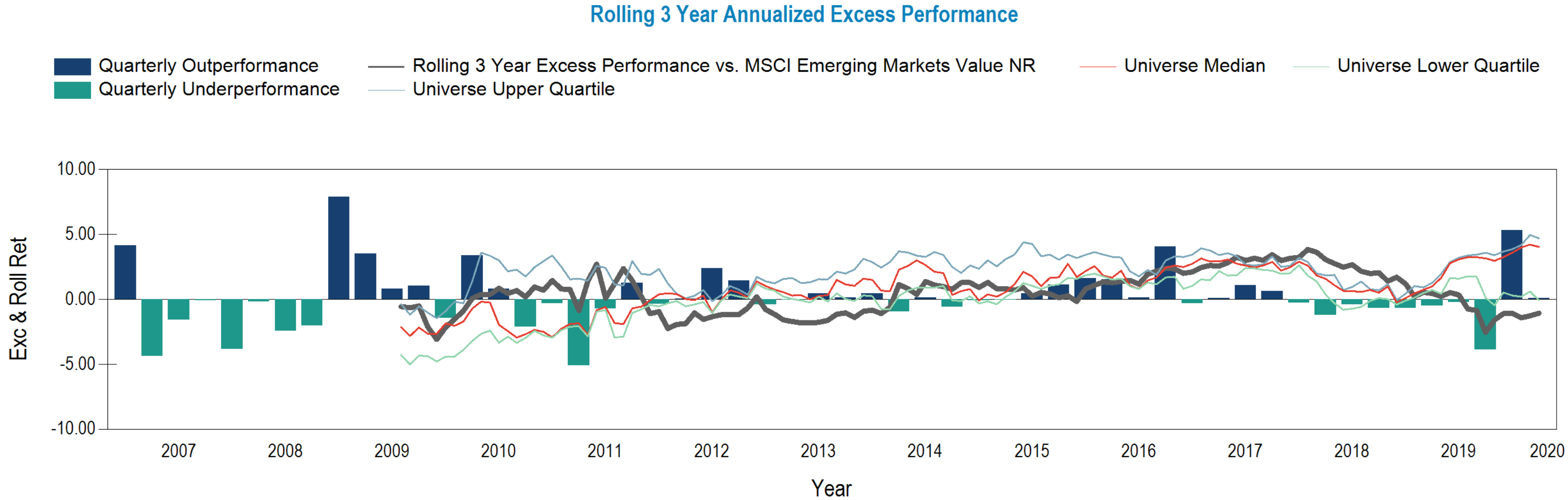
	Return (Rank)															
	Quarter		YTD		Fiscal YTD		1 Year		3 Years		5 Years		7 Years		10 Years	
5th Percentile	10.6		3.7		10.6		16.5		3.5		10.7		6.3		2.3	
25th Percentile	10.2		-3.9		10.2		6.8		2.1		8.6		3.6		1.4	
Median	6.2		-9.1		6.2		1.8		-1.5		7.1		1.2		1.0	
75th Percentile	3.3		-17.9		3.3		-7.5		-4.5		5.5		0.7		0.2	
95th Percentile	-0.3		-21.3		-0.3		-13.0		-6.5		4.4		-0.9		-0.2	
# of Portfolios	23		23		23		23		20		18		15		8	
● DFA Emerging Markets Value	4.7	(64)	-15.0	(68)	4.7	(64)	-6.8	(74)	-4.0	(73)	5.4	(79)	0.4	(83)	-0.6	(99)
▲ MSCI Emerging Markets Value NR	4.7	(65)	-14.2	(67)	4.7	(65)	-5.7	(68)	-2.9	(70)	4.4	(95)	-0.1	(89)	-0.4	(99)

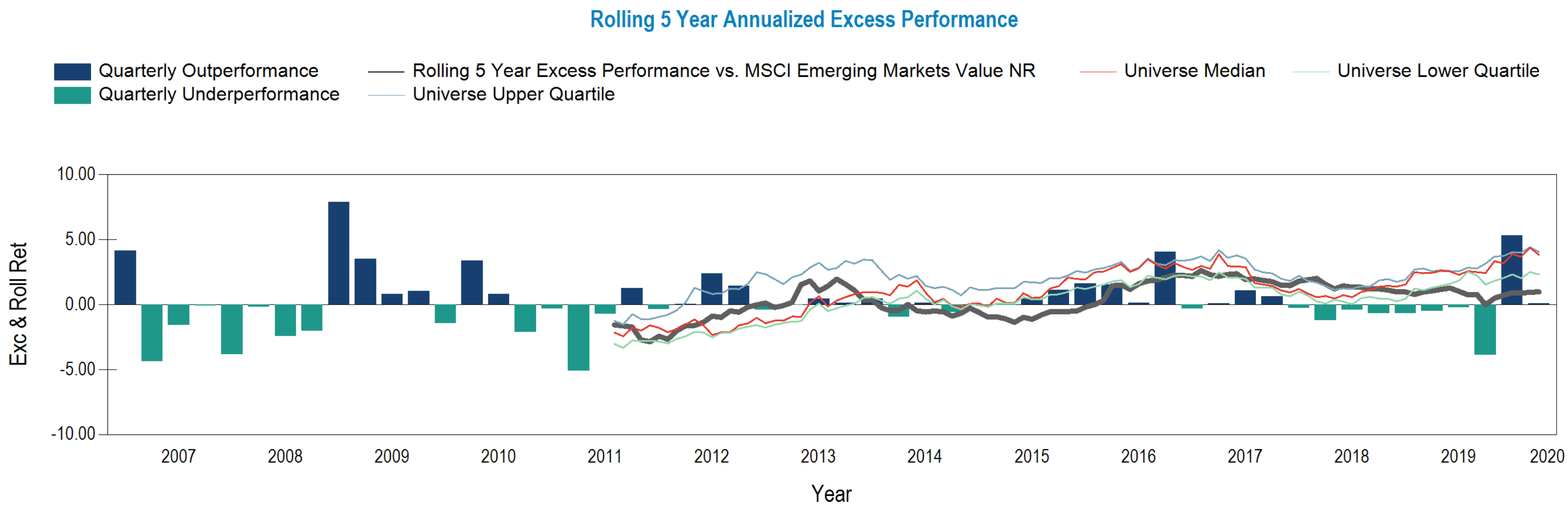


Return (Rank)	2019		2018		2017		2016		2015		2014		2013		2012		2011		2010	
5th Percentile	22.2		-9.4		42.6		25.1		-9.1		5.5		7.7		25.5		-8.5		25.8	
25th Percentile	21.0		-12.3		37.2		18.2		-13.8		1.6		4.3		20.7		-17.0		22.7	
Median	17.7		-14.0		33.1		15.1		-16.4		-1.6		0.6		15.6		-18.6		20.4	
75th Percentile	14.4		-15.3		29.1		11.4		-19.0		-5.3		-3.6		14.8		-19.7		18.9	
95th Percentile	12.9		-19.2		26.9		7.2		-23.1		-12.1		-5.3		10.8		-22.7		11.5	
# of Portfolios	22		25		22		22		20		18		16		11		11		11	
● DFA Emerging Markets Value	9.6	(98)	-11.9	(20)	33.8	(49)	19.8	(22)	-18.8	(74)	-4.4	(73)	-3.8	(78)	19.4	(31)	-25.6	(99)	22.1	(32)
▲ MSCI Emerging Markets Value NR	12.0	(97)	-10.7	(15)	28.1	(87)	14.9	(52)	-18.6	(72)	-4.1	(72)	-5.1	(93)	15.9	(40)	-17.9	(38)	18.4	(79)


Annualized Return vs. Annualized Standard Deviation
3 Years Ending September 30, 2020
Annualized Return
10.0
5.0
0.0
-5.0
-10.0
-15.0
0.0
5.0
10.0
15.0
20.0
25.0
Annualized Standard Deviation
MSCI Emerging Markets Value NR
DFA Emerging Markets Value
20 Portfolios
DFA Emerging Markets Value
MSCI Emerging Markets Value NR
Universe Median
68% Confidence Interval
eV Emg Mkts All Cap Value Equity Net

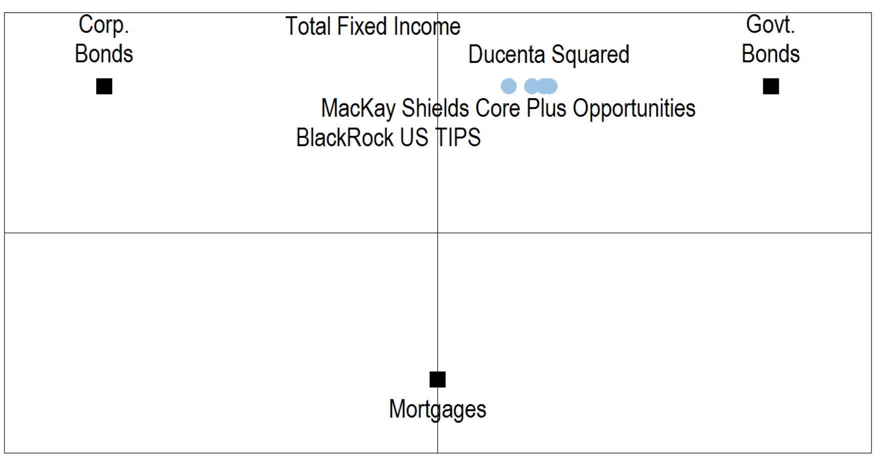

Annualized Return vs. Annualized Standard Deviation
5 Years Ending September 30, 2020
Annualized Return
20.0
15.0
10.0
5.0
0.0
-5.0
-10.0
0.0
5.0
10.0
15.0
20.0
25.0
Annualized Standard Deviation
MSCI Emerging Markets Value NR
DFA Emerging Markets Value
18 Portfolios
DFA Emerging Markets Value
MSCI Emerging Markets Value NR
Universe Median
68% Confidence Interval
eV Emg Mkts All Cap Value Equity Net


Rolling 3 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 3 Year Excess Performance vs. MSCI Emerging Markets Value NR
Universe Upper Quartile
Universe Median
Universe Lower Quartile
10.00
5.00
0.00
-5.00
-10.00
Exc & Roll Ret
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
Year

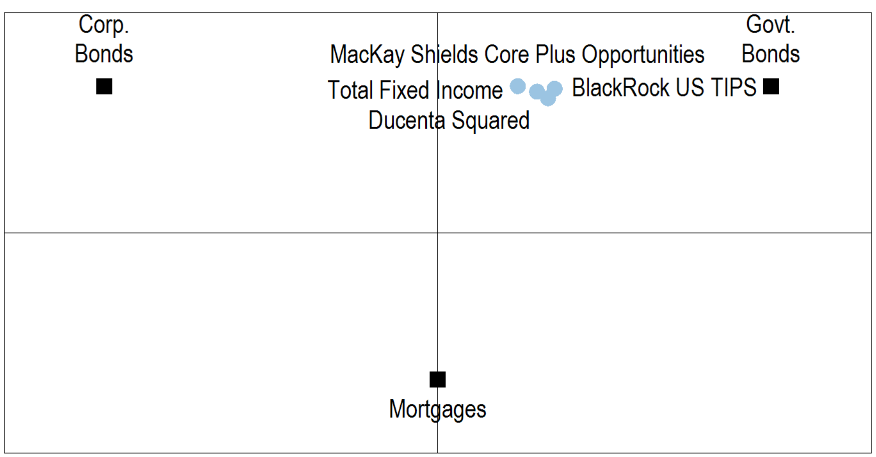

Rolling 5 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 5 Year Excess Performance vs. MSCI Emerging Markets Value NR
Universe Upper Quartile
Universe Median
Universe Lower Quartile
10.00
5.00
0.00
-5.00
-10.00
Exc & Roll Ret
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
Year

	Market Value	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015
Total Fixed Income	**239,487,909**	**1.9**	**7.7**	**1.9**	**8.2**	**5.6**	**4.9**	**4.3**	**9.5**	**-0.8**	**4.3**	**4.8**	**-0.6**
BBgBarc US Aggregate TR		*0.6*	*6.8*	*0.6*	*7.0*	*5.2*	*4.2*	*3.6*	*8.7*	*0.0*	*3.5*	*2.6*	*0.6*
InvMetrics Public DB Total Fix Inc Net Rank		*38*	*5*	*38*	*5*	*12*	*29*	*25*	*32*	*59*	*62*	*43*	*59*
Ducenta Squared	99,351,603	1.3	7.3	1.3	7.7	5.7	5.1	4.8	9.9	-0.1	4.3	4.8	0.9
BBgBarc US Aggregate TR		*0.6*	*6.8*	*0.6*	*7.0*	*5.2*	*4.2*	*3.6*	*8.7*	*0.0*	*3.5*	*2.6*	*0.6*
eV US Core Plus Fixed Inc Net Rank		*75*	*28*	*75*	*29*	*27*	*30*	*29*	*45*	*23*	*74*	*41*	*12*
MacKay Shields Core Plus Opportunities	96,974,048	1.9	7.5	1.9	7.9	5.5	4.8	--	9.7	-1.0	4.5	4.7	--
BBgBarc US Aggregate TR		*0.6*	*6.8*	*0.6*	*7.0*	*5.2*	*4.2*	*--*	*8.7*	*0.0*	*3.5*	*2.6*	*--*
eV US Core Plus Fixed Inc Net Rank		*31*	*26*	*31*	*27*	*46*	*51*	*--*	*54*	*75*	*62*	*47*	*--*
BlackRock US TIPS	43,162,257	3.1	9.4	3.1	10.3	5.9	4.7	3.6	8.5	-1.2	3.2	4.8	-1.3
BBgBarc US TIPS TR		*3.0*	*9.2*	*3.0*	*10.1*	*5.8*	*4.6*	*3.6*	*8.4*	*-1.3*	*3.0*	*4.7*	*-1.4*
eV US TIPS / Inflation Fixed Inc Net Rank		*62*	*26*	*62*	*25*	*33*	*38*	*18*	*53*	*36*	*47*	*43*	*30*

Fixed Income Style Map
3 Years Ending September 30, 2020



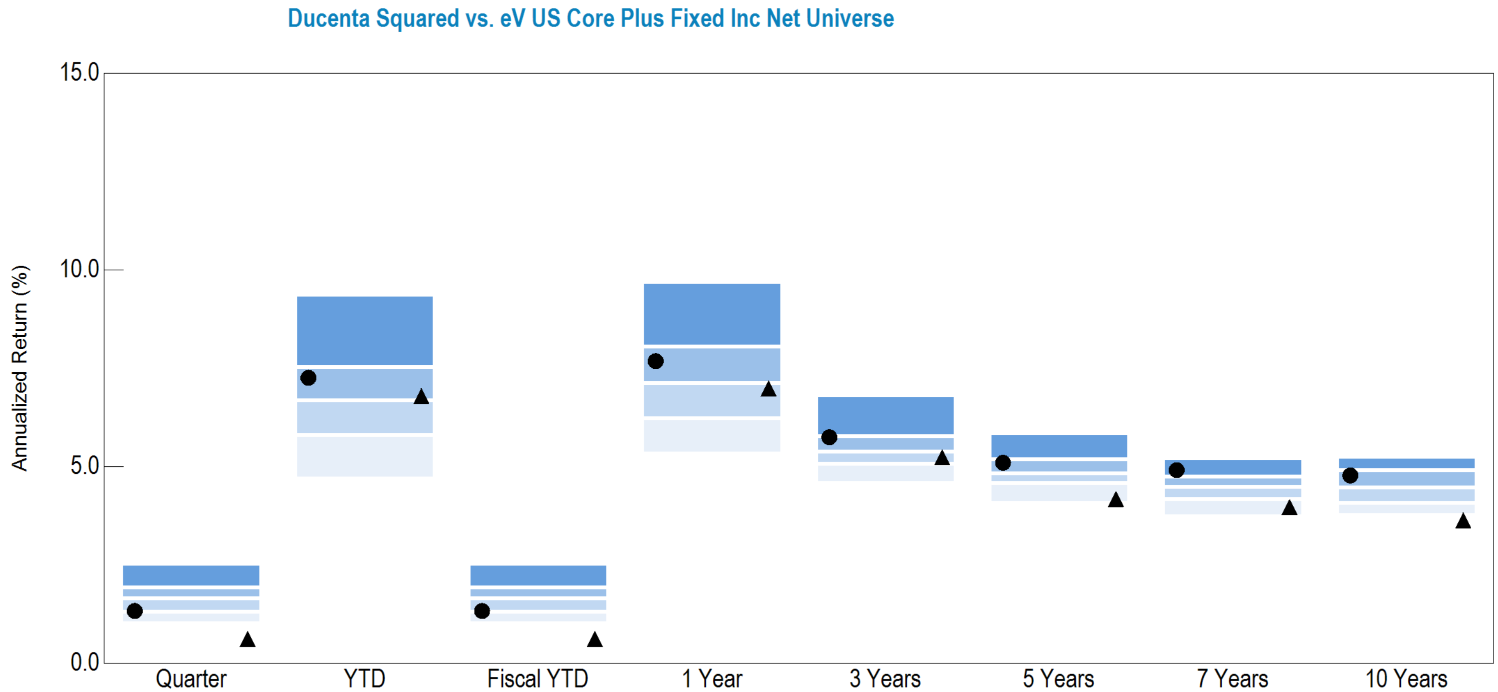
Fixed Income Style Map
5 Years Ending September 30, 2020



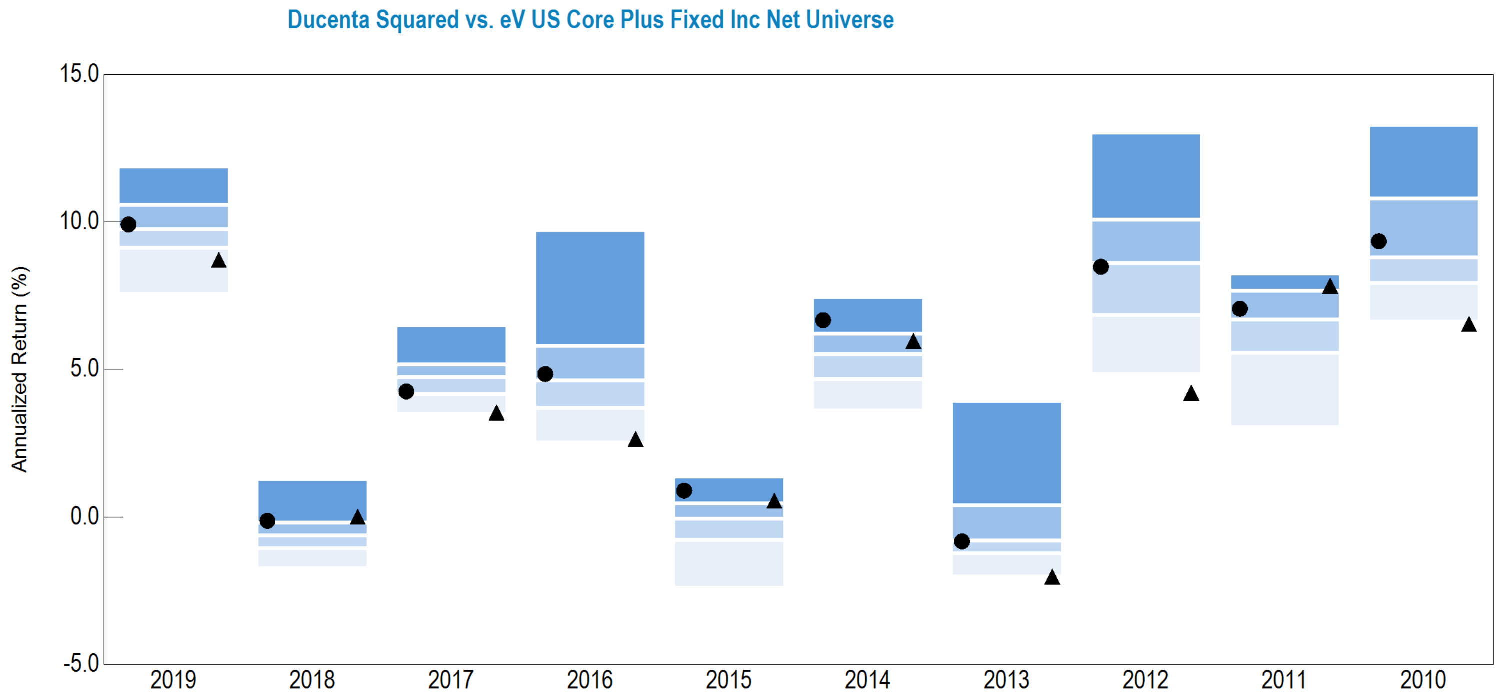
	Market Value	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015
Total Fixed Income	**239,487,909**	**1.9**	**7.7**	**1.9**	**8.2**	**5.6**	**4.9**	**4.3**	**9.5**	**-0.8**	**4.3**	**4.8**	**-0.6**
BBgBarc US Aggregate TR		*0.6*	*6.8*	*0.6*	*7.0*	*5.2*	*4.2*	*3.6*	*8.7*	*0.0*	*3.5*	*2.6*	*0.6*
Ducenta Squared	99,351,603	1.3	7.3	1.3	7.7	5.7	5.1	4.8	9.9	-0.1	4.3	4.8	0.9
BBgBarc US Aggregate TR		*0.6*	*6.8*	*0.6*	*7.0*	*5.2*	*4.2*	*3.6*	*8.7*	*0.0*	*3.5*	*2.6*	*0.6*
MacKay Shields Core Plus Opportunities	96,974,048	1.9	7.5	1.9	7.9	5.5	4.8	--	9.7	-1.0	4.5	4.7	--
BBgBarc US Aggregate TR		*0.6*	*6.8*	*0.6*	*7.0*	*5.2*	*4.2*	*--*	*8.7*	*0.0*	*3.5*	*2.6*	*--*
BlackRock US TIPS	43,162,257	3.1	9.4	3.1	10.3	5.9	4.7	3.6	8.5	-1.2	3.2	4.8	-1.3
BBgBarc US TIPS TR		*3.0*	*9.2*	*3.0*	*10.1*	*5.8*	*4.6*	*3.6*	*8.4*	*-1.3*	*3.0*	*4.7*	*-1.4*

Correlation Matrix
Last 5 Years

	Total Fixed Income	Ducenta Squared	MacKay Shields Core Plus Opportunities	BlackRock US TIPS	BBgBarc US Aggregate TR
Total Fixed Income	1.00	--	--	--	--
Ducenta Squared	0.99	1.00	--	--	--
MacKay Shields Core Plus Opportunities	0.99	0.97	1.00	--	--
BlackRock US TIPS	0.89	0.85	0.84	1.00	--
BBgBarc US Aggregate TR	0.87	0.91	0.81	0.78	1.00

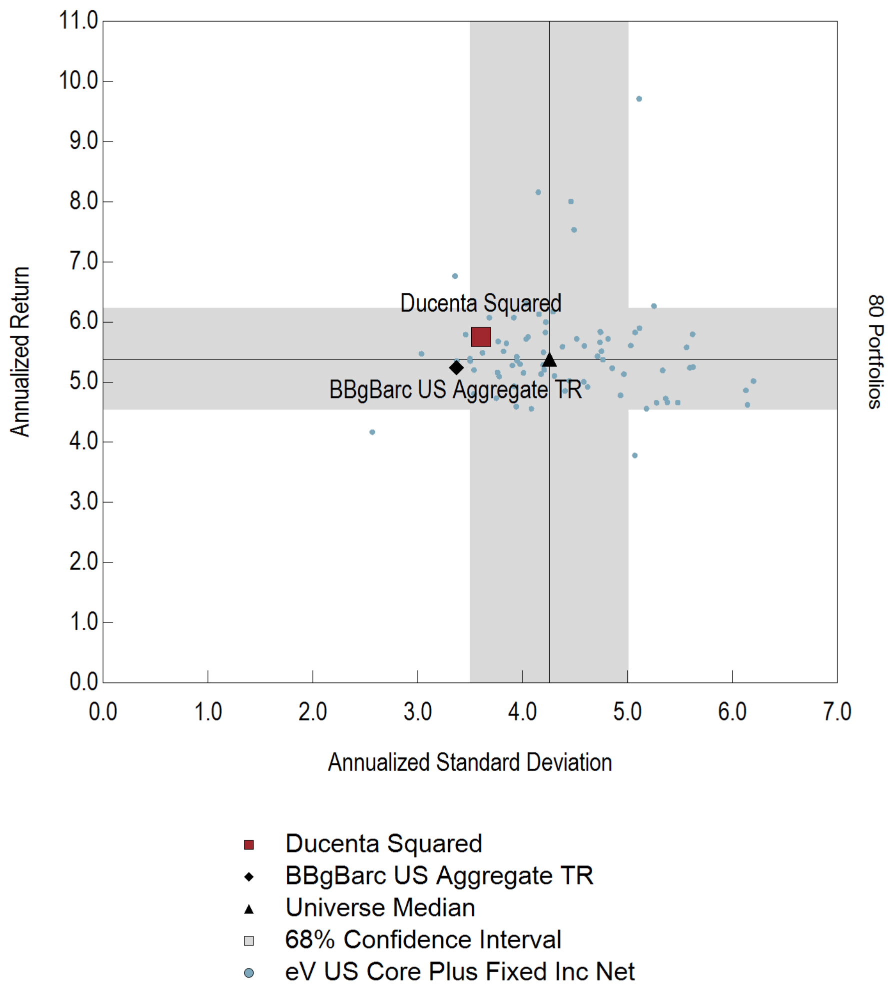


	Return (Rank)															
5th Percentile	2.5		9.4		2.5		9.7		6.8		5.8		5.2		5.2	
25th Percentile	1.9		7.5		1.9		8.1		5.8		5.2		4.8		4.9	
Median	1.7		6.7		1.7		7.1		5.4		4.8		4.5		4.5	
75th Percentile	1.3		5.8		1.3		6.2		5.1		4.6		4.2		4.1	
95th Percentile	1.0		4.7		1.0		5.3		4.6		4.1		3.7		3.8	
# of Portfolios	86		86		86		85		80		77		73		70	
● **Ducenta Squared**	1.3	(75)	7.3	(28)	1.3	(75)	7.7	(29)	5.7	(27)	5.1	(30)	4.9	(14)	4.8	(29)
▲ **BBgBarc US Aggregate TR**	0.6	(99)	6.8	(46)	0.6	(99)	7.0	(56)	5.2	(62)	4.2	(92)	4.0	(88)	3.6	(97)

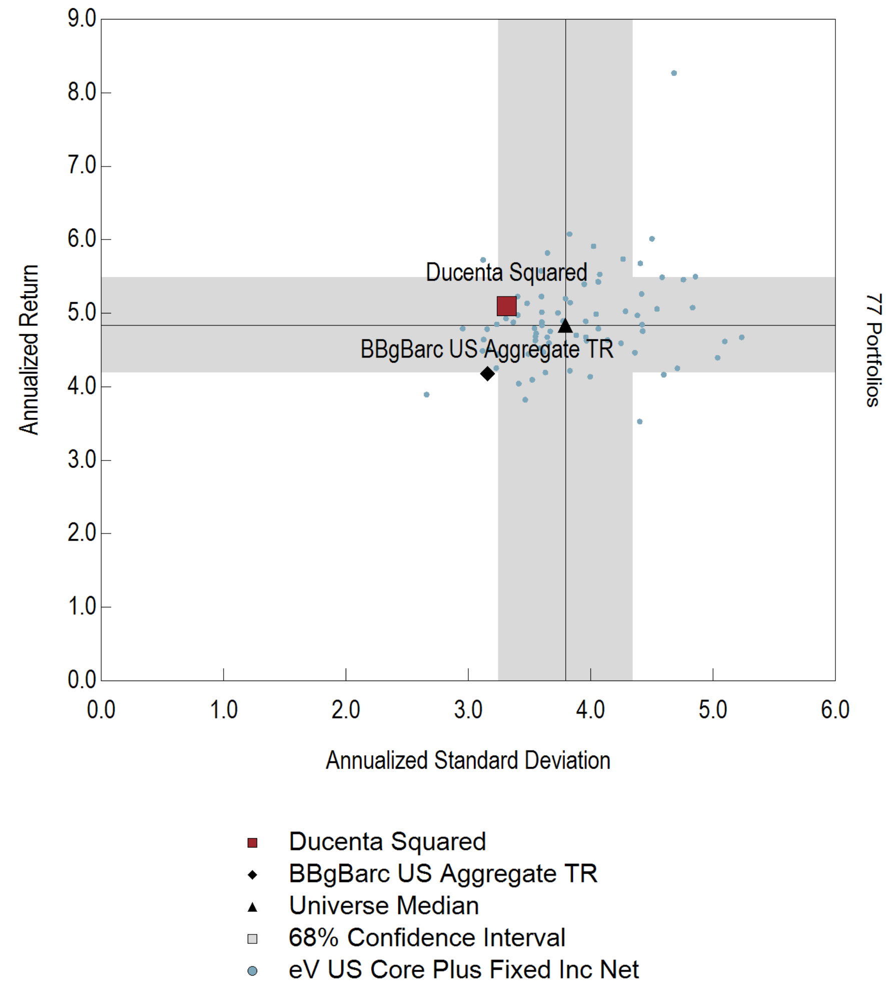


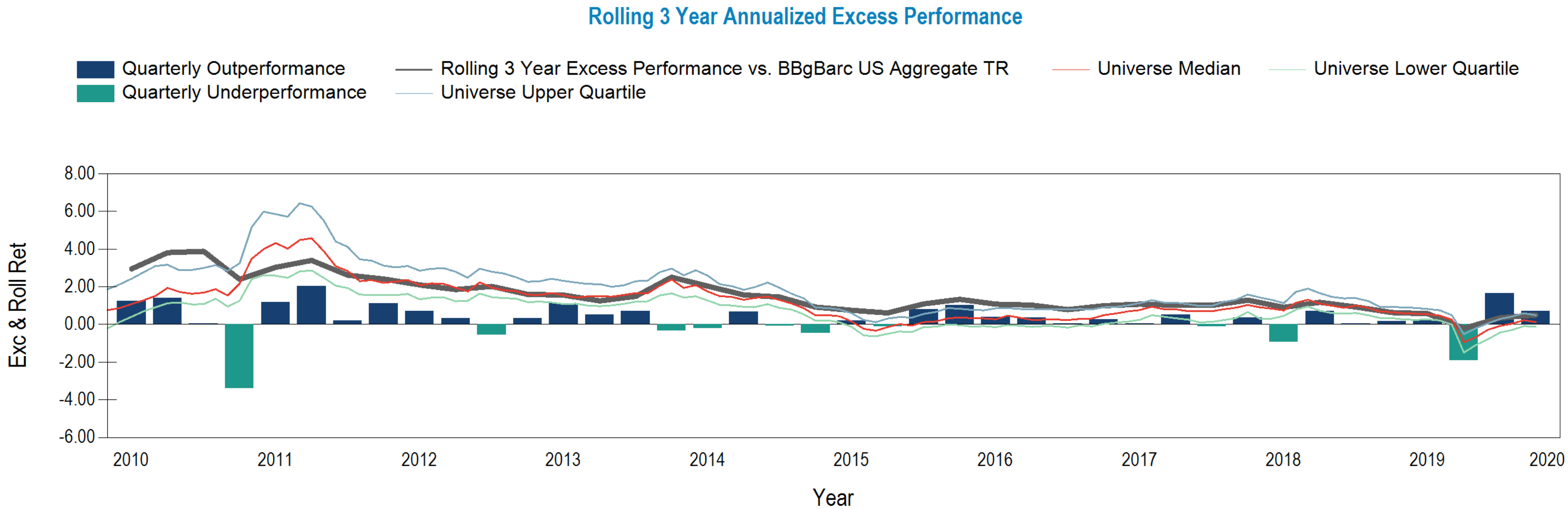
	Return (Rank)																			
5th Percentile	11.9		1.3		6.5		9.7		1.4		7.4		3.9		13.0		8.2		13.3	
25th Percentile	10.6		-0.2		5.2		5.8		0.5		6.2		0.4		10.1		7.7		10.8	
Median	9.8		-0.6		4.7		4.6		-0.1		5.5		-0.8		8.6		6.7		8.8	
75th Percentile	9.1		-1.0		4.2		3.7		-0.8		4.7		-1.2		6.9		5.6		7.9	
95th Percentile	7.6		-1.7		3.5		2.5		-2.4		3.6		-2.0		4.9		3.0		6.6	
# of Portfolios	86		77		80		84		71		71		65		64		54		61	
● Ducenta Squared	9.9	(45)	-0.1	(23)	4.3	(74)	4.8	(41)	0.9	(12)	6.7	(17)	-0.8	(53)	8.5	(54)	7.1	(40)	9.3	(44)
▲ BBgBarc US Aggregate TR	8.7	(85)	0.0	(21)	3.5	(95)	2.6	(93)	0.6	(22)	6.0	(35)	-2.0	(96)	4.2	(96)	7.8	(17)	6.5	(96)

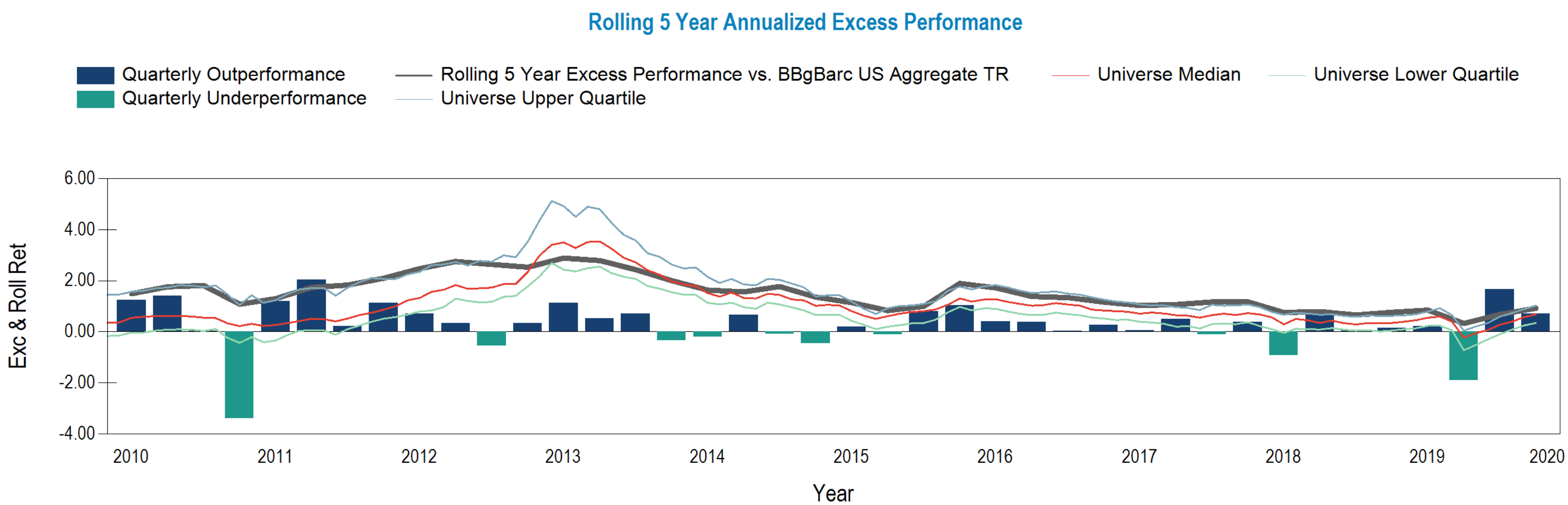
Annualized Return vs. Annualized Standard Deviation
3 Years Ending September 30, 2020

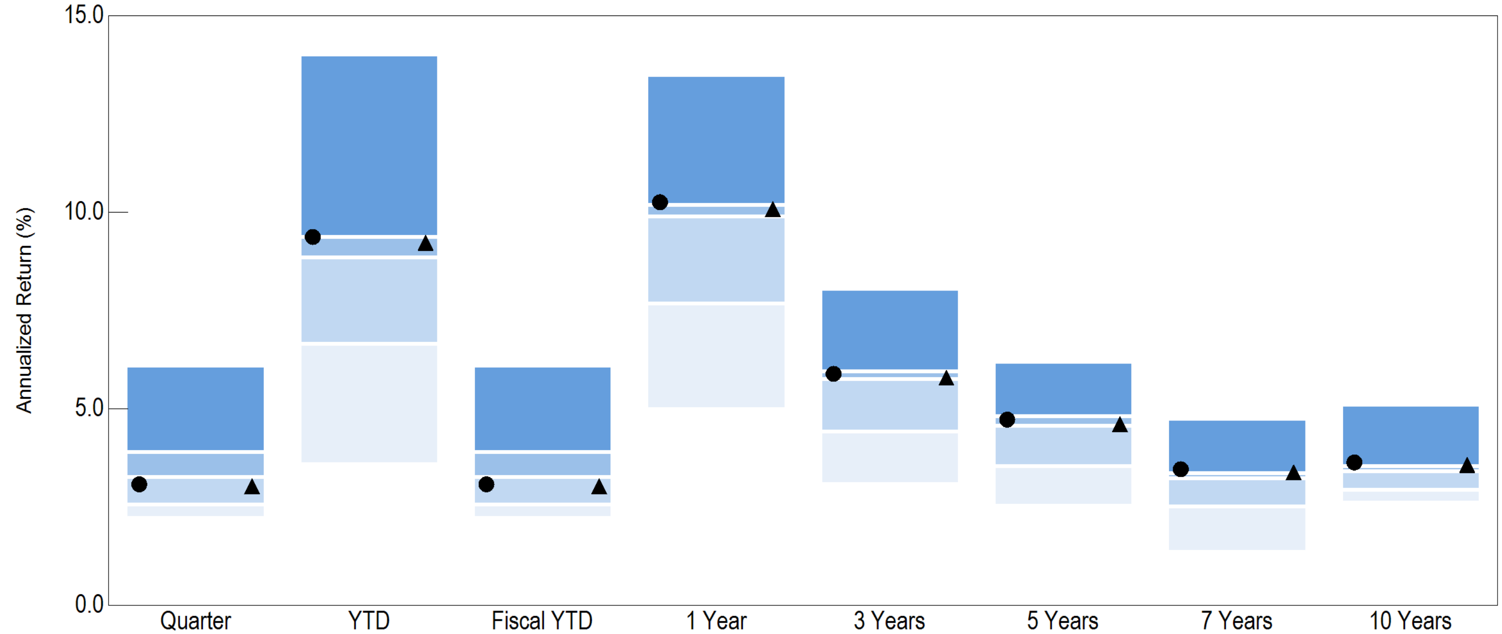


Annualized Return vs. Annualized Standard Deviation
5 Years Ending September 30, 2020

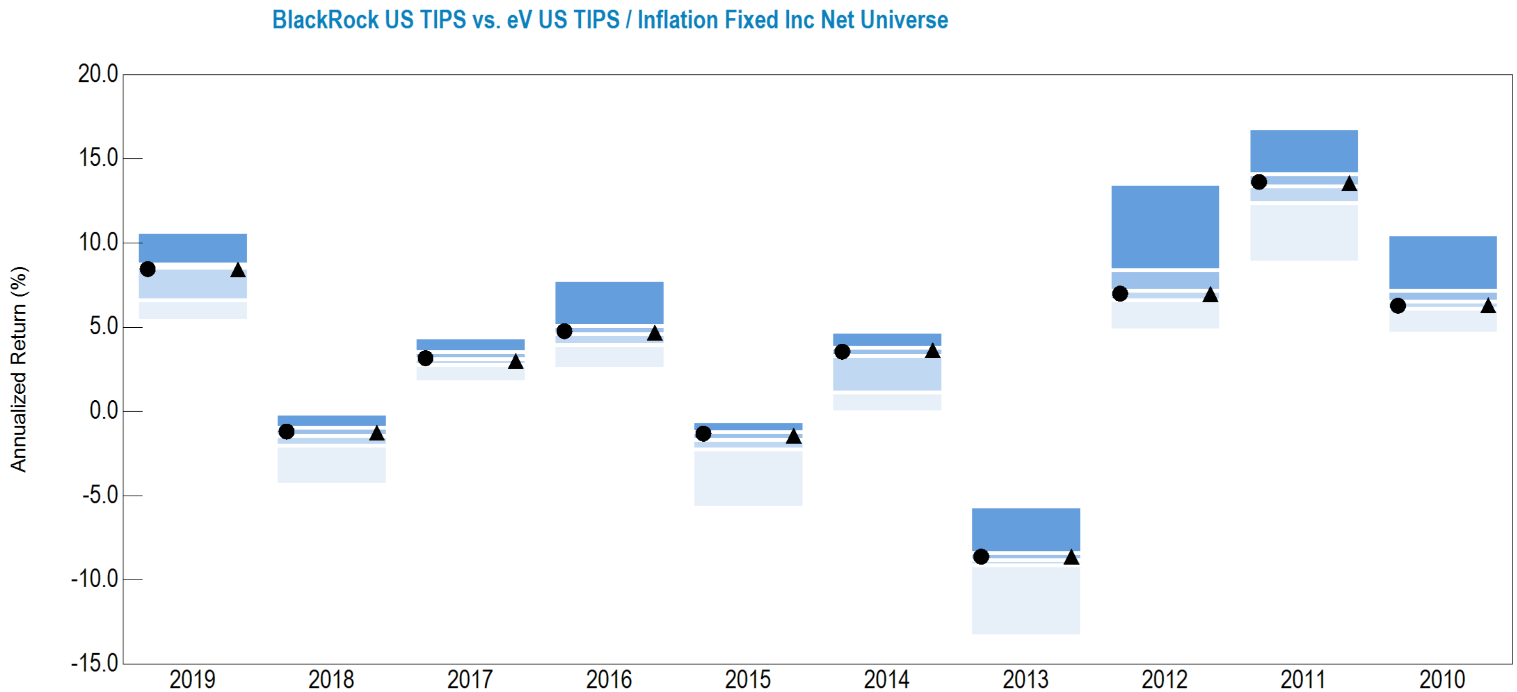



Rolling 3 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 3 Year Excess Performance vs. BBgBarc US Aggregate TR
Universe Upper Quartile
Universe Median
Universe Lower Quartile
Exc & Roll Ret
8.00
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
Year


Rolling 5 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 5 Year Excess Performance vs. BBgBarc US Aggregate TR
Universe Upper Quartile
Universe Median
Universe Lower Quartile
Exc & Roll Ret
6.00
4.00
2.00
0.00
-2.00
-4.00
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
Year

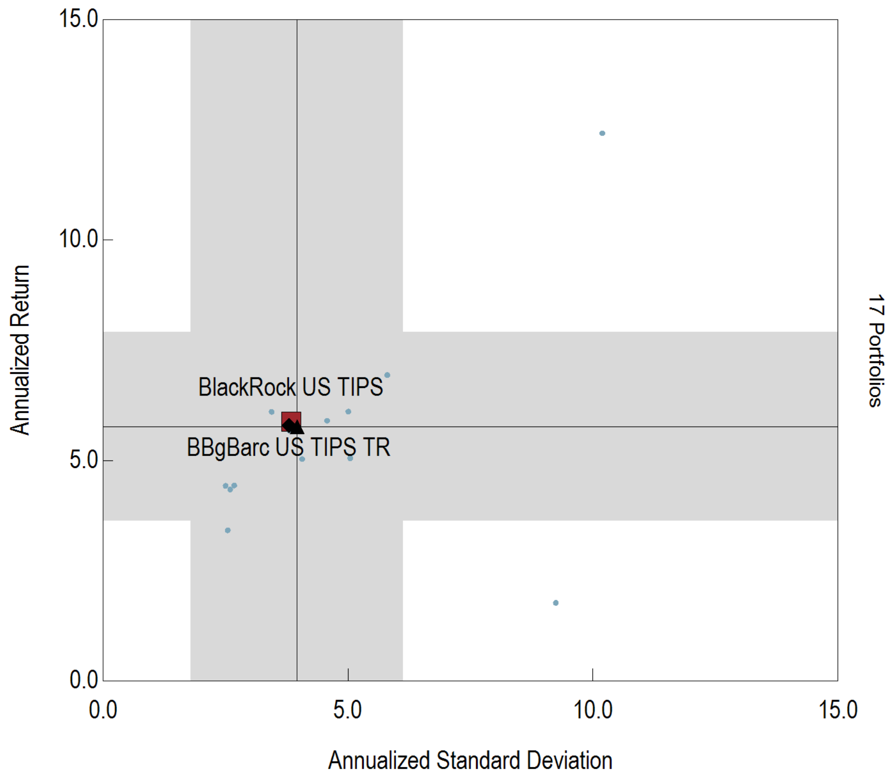


Return (Rank)	Quarter		YTD		Fiscal YTD		1 Year		3 Years		5 Years		7 Years		10 Years	
5th Percentile	6.1		14.0		6.1		13.5		8.0		6.2		4.7		5.1	
25th Percentile	3.9		9.4		3.9		10.2		6.0		4.8		3.4		3.6	
Median	3.3		8.9		3.3		9.9		5.8		4.6		3.2		3.4	
75th Percentile	2.6		6.7		2.6		7.7		4.4		3.6		2.5		2.9	
95th Percentile	2.2		3.6		2.2		5.0		3.1		2.5		1.4		2.6	
# of Portfolios	18		18		18		17		17		17		15		12	
● **BlackRock US TIPS**	3.1	(62)	9.4	(26)	3.1	(62)	10.3	(25)	5.9	(33)	4.7	(38)	3.5	(15)	3.6	(18)
▲ **BBgBarc US TIPS TR**	3.0	(63)	9.2	(39)	3.0	(63)	10.1	(34)	5.8	(38)	4.6	(46)	3.4	(23)	3.6	(23)



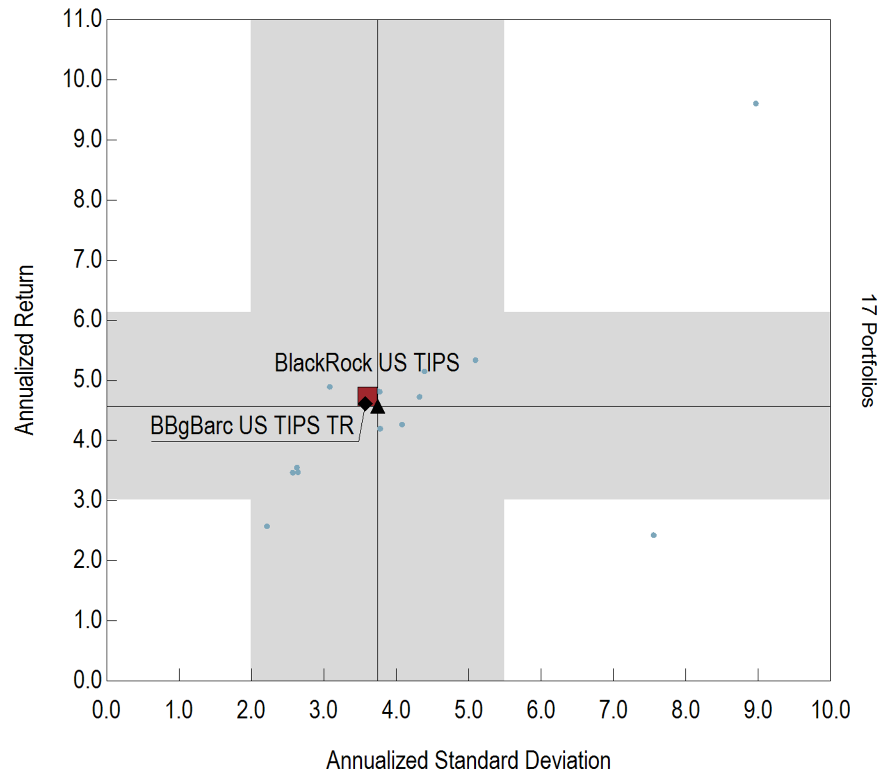
Return (Rank)	2019		2018		2017		2016		2015		2014		2013		2012		2011		2010	
5th Percentile	10.7		-0.1		4.4		7.8		-0.6		4.7		-5.6		13.5		16.8		10.5	
25th Percentile	8.7		-0.9		3.5		5.1		-1.2		3.8		-8.4		8.4		14.1		7.2	
Median	8.5		-1.4		3.1		4.6		-1.6		3.3		-8.8		7.2		13.4		6.5	
75th Percentile	6.6		-2.0		2.8		3.9		-2.2		1.2		-9.1		6.6		12.4		6.1	
95th Percentile	5.4		-4.3		1.7		2.5		-5.7		0.0		-13.3		4.8		8.9		4.6	
# of Portfolios	19		21		20		22		22		24		19		17		16		13	
● BlackRock US TIPS	8.5	(53)	-1.2	(36)	3.2	(47)	4.8	(43)	-1.3	(30)	3.6	(39)	-8.6	(44)	7.0	(61)	13.6	(38)	6.3	(70)
▲ BBgBarc US TIPS TR	8.4	(54)	-1.3	(39)	3.0	(57)	4.7	(49)	-1.4	(33)	3.6	(37)	-8.6	(44)	7.0	(62)	13.6	(40)	6.3	(70)

Annualized Return vs. Annualized Standard Deviation
3 Years Ending September 30, 2020

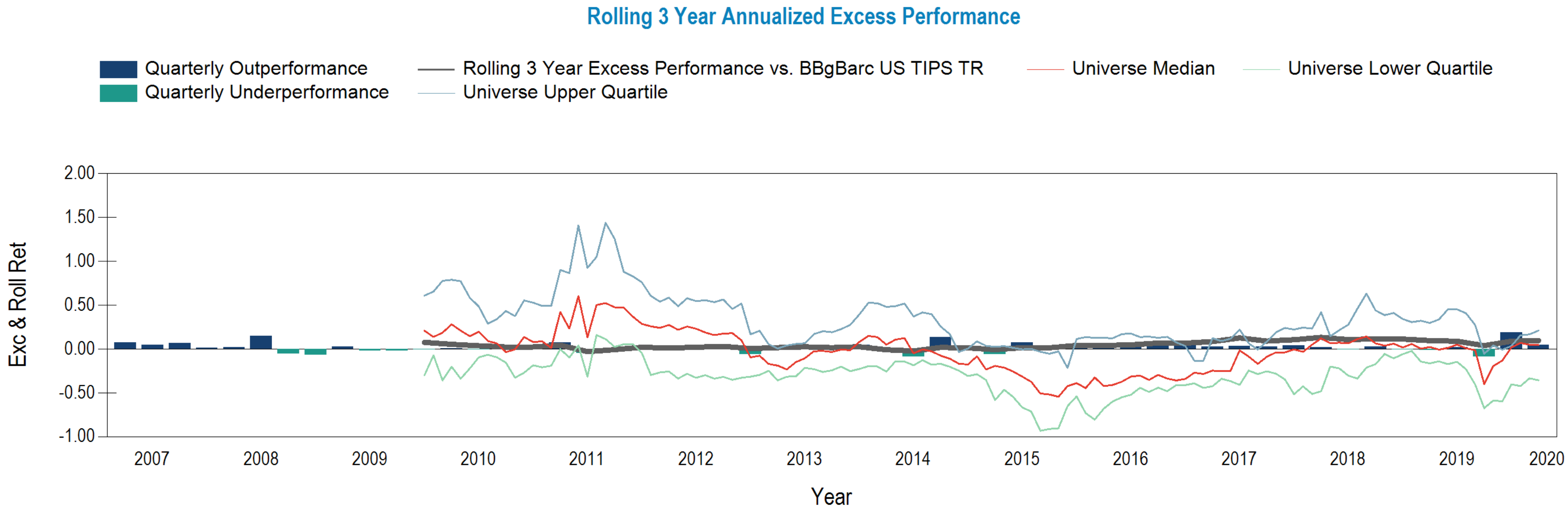


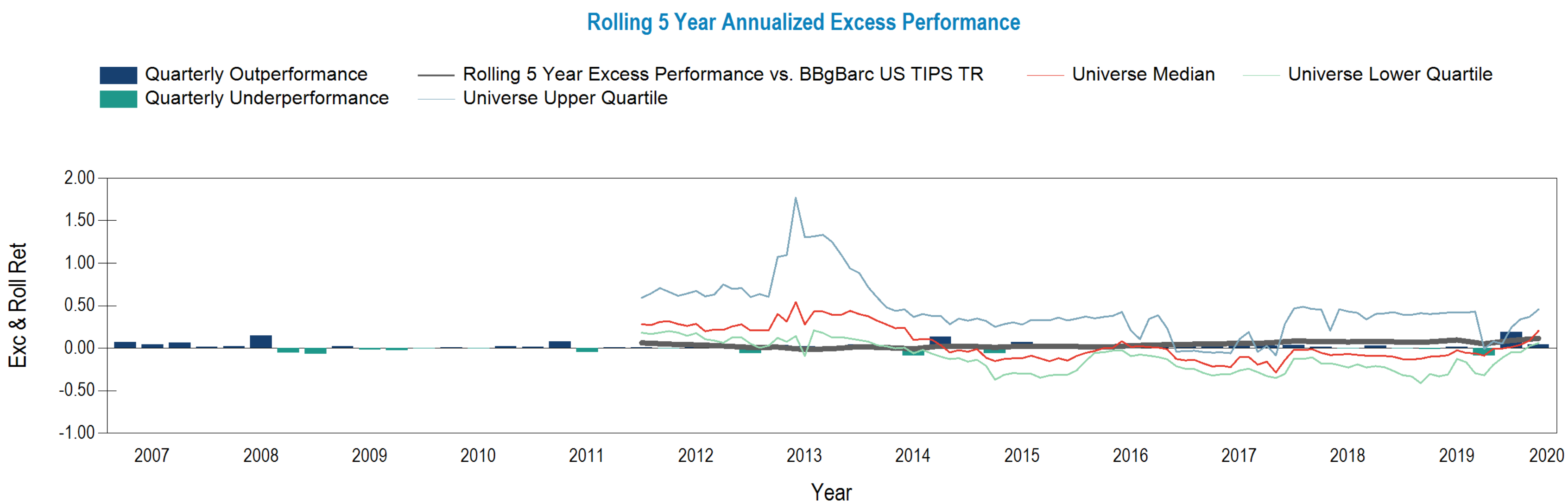
- BlackRock US TIPS
- BBgBarc US TIPS TR
- Universe Median
- 68% Confidence Interval
- eV US TIPS / Inflation Fixed Inc Net

Annualized Return vs. Annualized Standard Deviation
5 Years Ending September 30, 2020



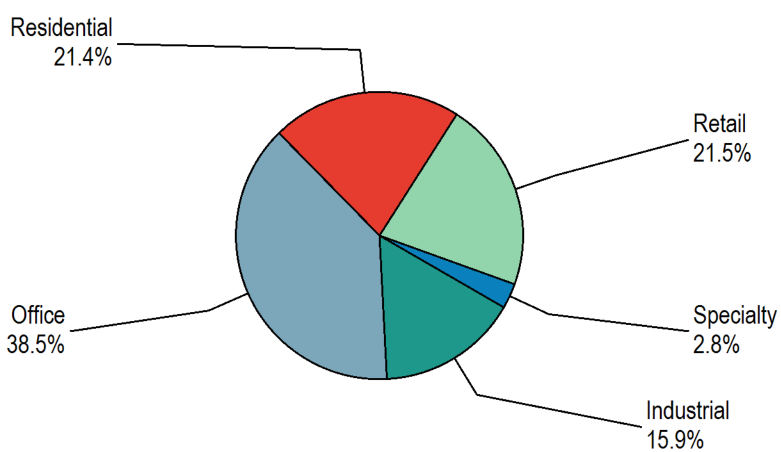
- BlackRock US TIPS
- BBgBarc US TIPS TR
- Universe Median
- 68% Confidence Interval
- eV US TIPS / Inflation Fixed Inc Net


Rolling 3 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 3 Year Excess Performance vs. BBgBarc US TIPS TR
Universe Upper Quartile
Universe Median
Universe Lower Quartile
Exc & Roll Ret
2.00
1.50
1.00
0.50
0.00
-0.50
-1.00
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
Year

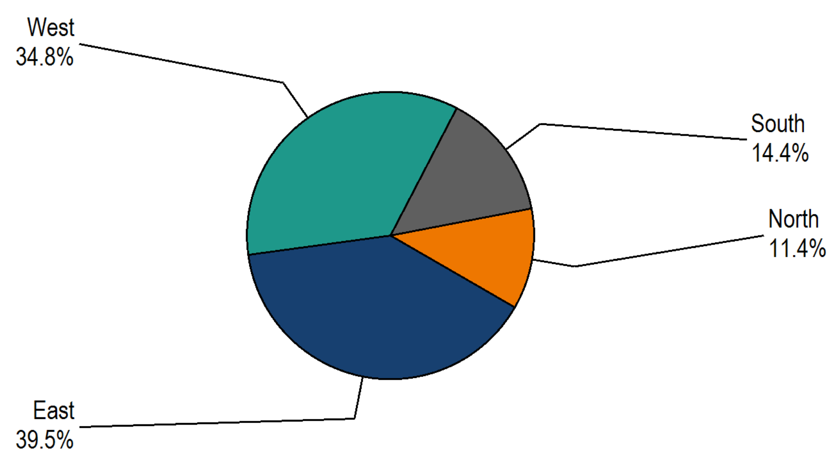

Rolling 5 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 5 Year Excess Performance vs. BBgBarc US TIPS TR
Universe Upper Quartile
Universe Median
Universe Lower Quartile
Exc & Roll Ret
2.00
1.50
1.00
0.50
0.00
-0.50
-1.00
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
Year

	Market Value	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015
Total Real Estate	**97,716,535**	**-0.9**	**-0.4**	**-0.9**	**1.4**	**4.8**	**5.8**	**9.3**	**5.7**	**7.5**	**5.8**	**6.5**	**15.0**
NCREIF Property Index		*0.7*	*0.5*	*0.7*	*2.0*	*5.1*	*6.3*	*9.4*	*6.4*	*6.7*	*7.0*	*8.0*	*13.3*
ASB Real Estate	28,507,758	-1.9	-1.2	-1.9	-0.4	3.4	4.5	--	3.0	6.6	4.0	4.6	16.2
NCREIF Property Index		*0.7*	*0.5*	*0.7*	*2.0*	*5.1*	*6.3*	--	*6.4*	*6.7*	*7.0*	*8.0*	*13.3*
NCREIF ODCE Net		*0.3*	*-0.7*	*0.3*	*0.5*	*4.3*	*5.7*	--	*4.4*	*7.4*	*6.7*	*7.8*	*13.9*
Clarion Lion	29,288,033	-1.8	-2.3	-1.8	-0.3	4.9	6.4	10.1	6.8	8.6	7.9	8.0	14.6
NCREIF Property Index		*0.7*	*0.5*	*0.7*	*2.0*	*5.1*	*6.3*	*9.4*	*6.4*	*6.7*	*7.0*	*8.0*	*13.3*
NCREIF ODCE Net		*0.3*	*-0.7*	*0.3*	*0.5*	*4.3*	*5.7*	*9.3*	*4.4*	*7.4*	*6.7*	*7.8*	*13.9*
ARA American Strategic Value Realty	37,959,143	0.6	1.6	0.6	3.9	--	--	--	7.8	--	--	--	--
NCREIF Property Index +2%		*1.2*	*2.0*	*1.2*	*4.0*	--	--	--	*8.5*	--	--	--	--
NCREIF ODCE +2%		*1.0*	*1.4*	*1.0*	*3.4*	--	--	--	*7.4*	--	--	--	--
1221 State St. Corp	1,961,601	0.0	0.0	0.0	7.9	2.6	4.9	1.6	7.9	0.0	0.0	17.5	0.0

Property Type Allocation
Allocation as of September 30, 2020



Geographic Diversification
Allocation as of September 30, 2020



ARA American Strategic Value Realty funded 1/4/2018.

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.

Manager Line Up

Manager	Inception Date	Data Source	Manager	Inception Date	Data Source
BlackRock Russell 3000	12/10/2015	J.P. Morgan	1221 State Street Corp	9/30/2008	ICERS/Union Bank
BlackRock International Equity	7/3/2003	J.P. Morgan	Cash	-	J.P. Morgan
DFA Emerging Markets Value	1/11/2007	J.P. Morgan	HarbourVest IX-Buyout	2011[1]	HarbourVest
Harding Loevner	7/5/2016	Harding Loevner	HarbourVest IX-Credit	2011[1]	HarbourVest
Bradford & Marzec Fixed (Tortoise Capital)	12/1/1992	J.P. Morgan	HarbourVest International VI	2008[1]	HarbourVest
MacKay Shields Core Plus Ops	3/2/2015	CITCO	Harbourvest IX-Venture	2011[1]	HarbourVest
BlackRock US TIPS	4/11/2007	J.P. Morgan	Harbourvest 2017 Global	2017[1]	HarbourVest
ASB Real Estate	12/31/2012	ASB Real Estate	Harbourvest 2018 Global	2018[1]	HarbourVest
Clarion Lion	12/31/2006	Clarion Lion	Harbourvest 2019 Global	2019[1]	HarbourVest
Portfolio Advisors	10/31/2017	Portfolio Advisors	KKR Mezzanine	2010[1]	KKR
TSSP Adjacent Opportunities Partners	4/16/2020	Sixth Street	PIMCO BRAVO	2011[1]	PIMCO
Sixth Street Diversified Credit	5/29/2020	Sixth Street	ARA American Strategic Value Realty	01/04/2018	ARA

[1]Represents fund vintage year.

Policy & Custom Index Composition

Policy Index (1/1/2020-Current)	29% Russell 3000, 24% MSCI ACWI ex USA Gross, 27% BBgBarc Aggregate, 10% NCREIF Property,1% Russell 3000, 2%BBgBarc Aggregate, 4% Private Equity Benchmark, 3% Private Credit Benchmark.
Policy Index (10/1/2018-12/31/2019)	29% Russell 3000, 24% MSCI ACWI ex USA Gross, 27% BBgBarc Aggregate, 10% NCREIF Property, 5% Russell 3000 +3% (Lagged), 5% BBgBarc High Yield +2% (Lagged).
Policy Index (10/1/2016-9/30/2018)	29% Russell 3000, 24% MSCI ACWI ex USA Gross, 27% BBgBarc Aggregate, 5% NCREIF Property, 5% NCREIF Property +2%, 5% Russell 3000 +3% (Lagged), 5% BBgBarc High Yield +2% (Lagged).
Policy Index (7/1/2014-9/30/2016)	29% Russell 3000, 25% MSCI ACWI ex-US (Gross), 30% Barclays U.S. Aggregate, 6% NCREIF Property Index, 5% Bloomberg Commodity Index, 5% Russell 3000 +3% (Lagged).

Private Equity Benchmark and Private Credit Benchmarks are equal to the actual private equity and private credit returns, respectively.

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: Portfolio Return - [Risk-free Rate + Portfolio Beta x (Market Return - 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: Portfolio Excess Return / 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.

Disclaimer

This report contains confidential and proprietary information and is subject to the terms and conditions of the Consulting Agreement. It is being provided for use solely by the customer. The report may not be sold or otherwise provided, in whole or in part, to any other person or entity without written permission from Verus Advisory, Inc., (hereinafter Verus) or as required by law or any regulatory authority. The information presented does not constitute a recommendation by Verus and cannot be used for advertising or sales promotion purposes. This does not constitute an offer or a solicitation of an offer to buy or sell securities, commodities or any other financial instruments or products.

The information presented has been prepared using data from third party sources that Verus believes to be reliable. While Verus exercised reasonable professional care in preparing the report, it cannot guarantee the accuracy of the information provided by third party sources. Therefore, Verus makes no representations or warranties as to the accuracy of the information presented. Verus takes no responsibility or liability (including damages) for any error, omission, or inaccuracy in the data supplied by any third party. Nothing contained herein is, or should be relied on as a promise, representation, or guarantee as to future performance or a particular outcome. Even with portfolio diversification, asset allocation, and a long-term approach, investing involves risk of loss that the investor should be prepared to bear.

The information presented may be deemed to contain forward-looking information. Examples of forward looking information include, but are not limited to, (a) projections of or statements regarding return on investment, future earnings, interest income, other income, growth prospects, capital structure and other financial terms, (b) statements of plans or objectives of management, (c) statements of future economic performance, and (d) statements of assumptions, such as economic conditions underlying other statements. Such forward-looking information can be identified by the use of forward looking terminology such as believes, expects, may, will, should, anticipates, or the negative of any of the foregoing or other variations thereon comparable terminology, or by discussion of strategy. No assurance can be given that the future results described by the forward-looking information will be achieved. Such statements are subject to risks, uncertainties, and other factors which could cause the actual results to differ materially from future results expressed or implied by such forward looking information. The findings, rankings, and opinions expressed herein are the intellectual property of Verus and are subject to change without notice. The information presented does not claim to be all-inclusive, nor does it contain all information that clients may desire for their purposes. The information presented should be read in conjunction with any other material provided by Verus, investment managers, and custodians.

Verus will make every reasonable effort to obtain and include accurate market values. However, if managers or custodians are unable to provide the reporting period's market values prior to the report issuance, Verus may use the last reported market value or make estimates based on the manager's stated or estimated returns and other information available at the time. These estimates may differ materially from the actual value. Hedge fund market values presented in this report are provided by the fund manager or custodian. Market values presented for private equity investments reflect the last reported NAV by the custodian or manager net of capital calls and distributions as of the end of the reporting period. These values are estimates and may differ materially from the investments actual value. Private equity managers report performance using an internal rate of return (IRR), which differs from the time-weighted rate of return (TWRR) calculation done by Verus. It is inappropriate to compare IRR and TWRR to each other. IRR figures reported in the illiquid alternative pages are provided by the respective managers, and Verus has not made any attempts to verify these returns. Until a partnership is liquidated (typically over 10-12 years), the IRR is only an interim estimated return. The actual IRR performance of any LP is not known until the final liquidation.

Verus receives universe data from InvMetrics, eVestment Alliance, and Morningstar. We believe this data to be robust and appropriate for peer comparison. Nevertheless, these universes may not be comprehensive of all peer investors/managers but rather of the investors/managers that comprise that database. The resulting universe composition is not static and will change over time. Returns are annualized when they cover more than one year. Investment managers may revise their data after report distribution. Verus will make the appropriate correction to the client account but may or may not disclose the change to the client based on the materiality of the change.