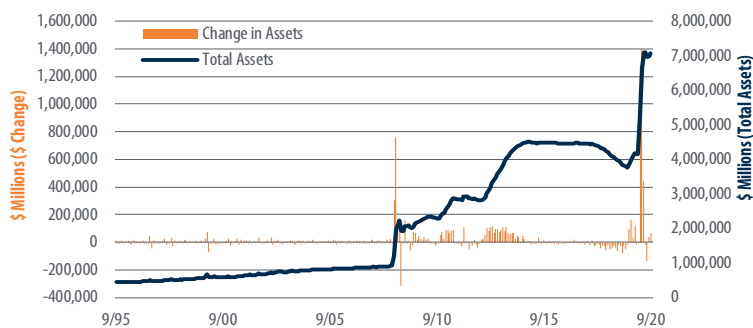


The third quarter of 2020 was a continuation of multiple trends from the second quarter: strong capital market returns, continued injections of liquidity from global central banks, supportive rhetoric and action from the Federal Reserve (the “FED”), calls for more fiscal stimulus and generally positive economic and sentiment data. The economic recovery looked to be more “K-shaped” in which part of the economy has done reasonably well and part of the economy saw no improvement or declined, thus prompting calls for targeting lower income levels in the next round of fiscal assistance. The U.S. federal budget deficit for the fiscal year ending 2021 is projected to be over \$3 trillion with total debt exceeding the entire U.S. GDP. Neither side of the political aisle seems particularly concerned about this and so the grand Modern Monetary Theory (MMT) experiment continues. Special purpose acquisition companies (SPAC) or “blank check companies” continued to have a moment as several came to market with investors in a quasi frenzy to give them funding, while technology and growth dominated style returns in the zero interest-rate policy (ZIRP) environment.

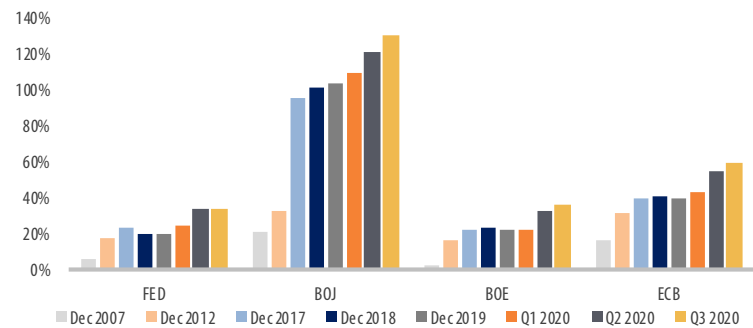
For the FED averse and free market purists, it looks like it’s going to be a long time, if ever, before the capital markets return to the less nationalized/FED welfare version that existed pre-2008. The motto of today’s investors could easily be a riff on the Romanian motto “nihil sine Deo” (nothing without God), updated to “nihil sine FED”. Forget fundamentals or merit-based investing, sentiment now is all about FED liquidity and congressional spending. Unfortunately, that also comes with a side effect of the government effectively picking winners and losers which should be concerning to taxpayers given the lengthy and dubious track record of governmental success in that arena. After dipping slightly in July and August, the Federal Reserve’s balance sheet moved above \$7 trillion (see Figure 1), pushing Central Bank Assets as a percentage of GDP to a record 34.10%. A similar trend can be seen across the other major central banks (see Figure 2).

Figure 1 Federal Reserve Balance Sheet



Source: Bloomberg, Data from 9/30/95 - 9/30/20.

Figure 2 Central Bank Balance Sheet as a % of GDP



Source: Bloomberg, Data from 12/31/07 - 9/30/20.

Returns for major asset classes were strong in the third quarter. With unprecedented levels of financial liquidity still flooding financial systems and central bankers doing their best to court inflation, it’s not a surprise that commodities and commodity related markets experienced a broad and sharp increase, or that the U.S. dollar continued its decline. Emerging markets led the way with the MSCI Emerging Markets Index up 9.56% followed by Commodities, up 9.07%. The S&P 500 Index was up 8.93% and the MSCI EAFE Index was up 4.80%. Long-dated U.S. Treasuries were nearly unchanged at 0.16% while high-yield bonds were up 4.54% as capital flowed into the riskier fixed income sector. The U.S. Dollar fell sharply, down -3.60% (see Figure 3).

Alternative Investments (“alternatives”) had a solid quarter with positive returns in every category. Higher correlation/higher beta strategies, which had done well in the second quarter, continued to lead the way (see Figure 4). Commodities were the best performing category (+9.07%) followed by hedged equity (+5.78%) and credit arbitrage (+5.72%). Managed futures (+1.45%), equity market neutral (+1.12%) and macro (+1.00%) all lagged the wider alternatives category. Despite strong returns in a number of categories, only commodities outpaced the S&P 500 Index, as equities have been a significant beneficiary of ongoing easy monetary and fiscal policies (see Figure 5).

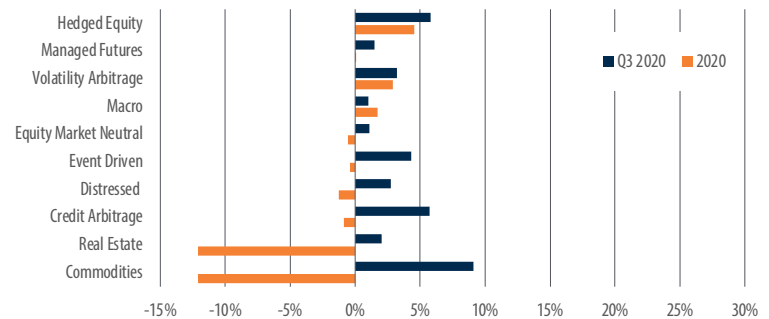
Traditionally, managed futures and macro strategies are viewed as having lower correlations to equities because they are generally diversified across a variety of markets and often employ shorting as part of their approach. Strategies that had higher 2-year correlations to U.S. equities (greater than 0.60), on average, significantly outperformed those strategies that had a lower correlation with U.S. equities. The spread was 303 basis points (“bps”) (see Figure 6). Real assets had positive returns across the board (see Figure 7). Commodities took the lead (+9.07%)

Figure 3 Asset Class Returns

	Q3 2020	YTD 2020
U.S. Equities	8.93%	5.57%
International Developed	4.80%	-7.09%
Emerging Markets	9.56%	-1.16%
U.S. Treasury	0.16%	21.82%
Real Estate	2.07%	-12.08%
Commodities	9.07%	-12.08%
High Yield Bonds	4.54%	-0.08%
U.S Aggregate Bonds	0.62%	6.79%
Bitcoin	17.05%	27.78%
U.S. Dollar	-3.60%	-2.60%

Source: Bloomberg, 9/30/20.

Figure 4 Alternative Category Performance



Source: Bloomberg, 9/30/20.

All charts shown herein are for illustrative purposes only and not indicative of any investment. The performance illustrations exclude the effects of taxes and brokerage commissions or other expenses incurred when investing. **Past performance is not indicative of future results** and there can be no assurance past trends will continue in the future. An investor cannot invest directly in an index. See last page for definitions of asset class indexes and other terms discussed herein.

benefitting from a strong up swing in sentiment regarding the likelihood of inflation as well as the Federal Reserve's shift in policy which would accept the economy running hotter for longer before moving rates off near zero. Gold (+5.89%) continued its march up, as investors not only heard the FED promise low rates for several years, but also considered the likelihood that stimulus injections have no foreseeable end in sight. While residential home sales were on fire, several other sectors such as office real estate, apartments, shopping and hotels have been struggling during the pandemic, nevertheless real estate managed positive returns (+2.07%).

Managed futures, commodities, and macro strategies have historically shown low correlation and beta to stocks and bonds over the course of a market cycle, thus they may serve as potentially strong portfolio diversifiers. Strategies such as credit arbitrage, event driven, hedged equity, et al., which have historically had higher correlations with equities and bonds, may provide attractive risk/return profiles through potentially lower volatility. These characteristics may allow investors to broaden their investment choices and create more efficient portfolios.

Figure 5 Excess Return vs. S&P 500

Category	Q3 2020
Hedged Equity	-3.15%
Macro	-7.93%
Event Driven	-4.62%
Managed Futures	-7.48%
Equity Market Neutral	-7.81%
Volatility Arbitrage	-5.69%
Distressed	-6.16%
Real Estate	-6.86%
Credit Arbitrage	-3.21%
Commodities	0.15%

Source: Bloomberg, 9/30/20.

Figure 6 Correlations (2yr) & Returns

	S&P 500	Q3 2020
Hedged Equity	0.95	5.78%
Event Driven	0.82	4.31%
Real Estate	0.81	2.07%
Commodities	0.75	9.07%
Distressed	0.69	2.77%
Credit Arbitrage	0.65	5.72%
Equity Market Neutral	0.69	1.12%
Volatility Arbitrage	0.75	3.24%
Managed Futures	0.26	1.45%
Macro	0.50	1.00%
Lower Correlation Avg TR (<=0.60)		1.23%
Higher Correlation Avg TR (>0.60)		4.26%

Source: Bloomberg, 9/30/20. Monthly returns over 24 months.

Figure 7 Real Assets

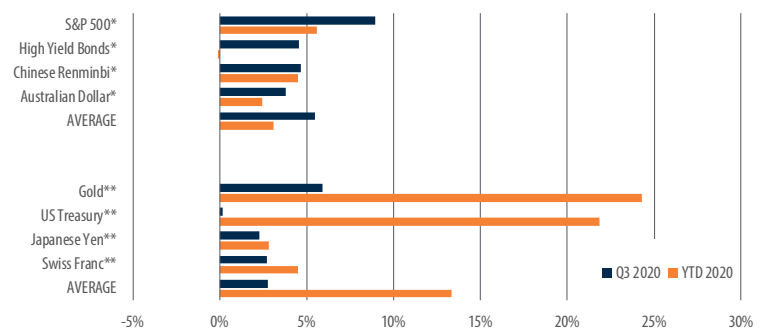
	Q3 2020	YTD 2020
Real Estate	2.07%	-12.08%
Commodities	9.07%	-12.08%
Gold	5.89%	24.29%
Average	5.68%	0.04%

Source: Bloomberg, 9/30/20.

Returns for "Risk On" assets (+5.48% average return) considerably outperformed the returns for "Risk Off" assets (+2.76% average return). The S&P 500 Index had the best return in the third quarter and U.S. Treasuries the lowest return (see Figure 8). Focusing on non-currencies, equities and high-yield bonds outperformed gold and long dated (20 yr. +) U.S. Treasuries by an average of over 674 bps, though year-to-date, gold and Treasuries have outperformed by 2,306 bps. Alternatives have historically provided significant diversification benefits when paired with a portfolio of traditional assets, in addition to both competitive absolute returns and attractive risk-adjusted returns. Please Note: Alternative investments may employ complex strategies, have unique investment and risk characteristics that may not be suitable for all investors.

Returns in the cryptocurrencies sector were very strong in the third quarter (see Figure 9). Bitcoin, the flagship cryptocurrency, was up 17.05%, while the wider universe of cryptocurrencies, as measured by the Bloomberg Galaxy Crypto Index, rose 32.31%. Ethereum soared 58.07%, while Litecoin was up 11.51% and Ripple was up 35.99%. The Singapore-based KuCoin Cryptocurrency

Figure 8 Risk On vs. Risk Off Assets



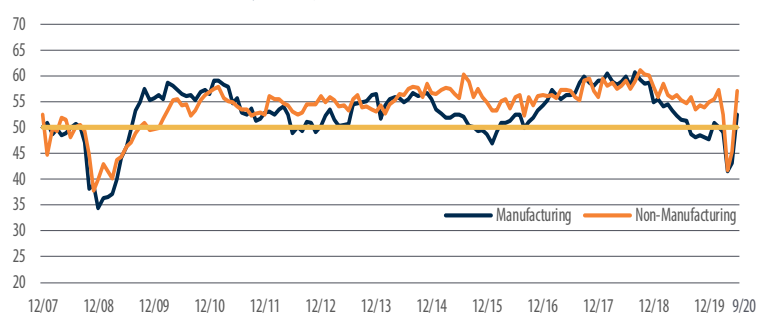
Source: Bloomberg, 9/30/20. \*Considered to be "Risk On" asset class. \*\*Considered to be "Risk Off" asset class.

Figure 9 Cryptocurrency Returns

	Q3 2020	YTD 2020
BB Galaxy Crypto Index	32.31%	29.11%
Bitcoin	17.05%	27.78%
Ethereum	58.07%	75.75%
Ripple	35.99%	-7.71%
Litecoin	11.51%	-0.28%

Source: Bloomberg, 9/30/20.

Figure 10 Institute for Supply Management (ISM) Data

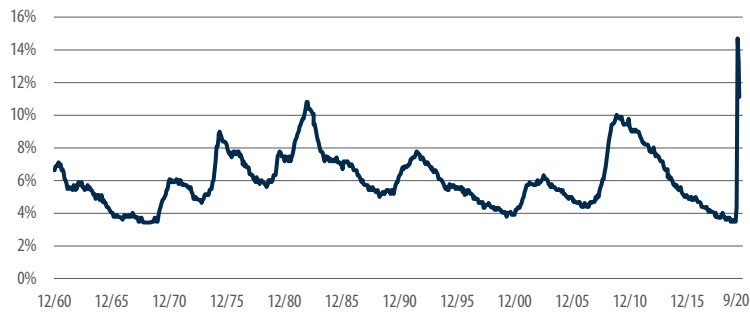


Source: Bloomberg, Data from 12/31/07 - 9/30/20. Seasonally adjusted (SA). Numbers above 50% indicate an expansion, below 50% indicates a contraction.

Exchange was hacked and had over \$200MM in cryptocurrencies stolen in September. KuCoin quickly announced that it had an insurance fund to cover all losses for users which could serve as a template to instill confidence and stability in the sector. Other positive news came from the bitcoin futures market. Bitcoin futures trading on the CME saw a 36% increase in volume traded and futures trading on the Bakkt platform saw just over a 340% increase in volume from the previous quarter.

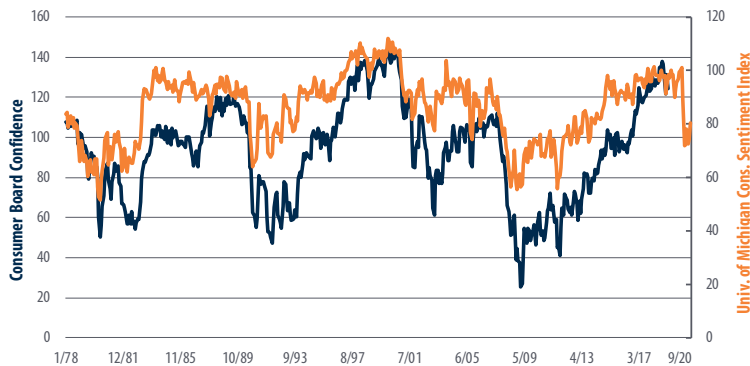
As economies reopened, testing expanded, and development of new approaches to both prophylactics and treatment of the COVID-19 virus, economic indicators reversed declines from earlier in the year. The ISM manufacturing indicator moved strongly into expansion territory, ending the quarter at 55.4. The ISM non-manufacturing indicator (services) was up slightly and finished at 57.8 (see Figure 10). For both indicators, levels below 50 represent a contraction. Unemployment, as measured by the U-3 seasonally adjusted rate, continued to trend downward and dropped below 8%, though there is concern that a declining labor participation rate may be masking some weakness in the unemployment data (see Figure 11). As states pushed forward to get economies moving, hope for more trillion dollar stimulus packages to come, sentiment, as measured by the University of Michigan Consumer Sentiment Index, climbed steadily to reach

**Figure 11** U.S. Unemployment Rate (U-3)



Source: Bloomberg, Data from 12/31/60 - 9/30/20. Seasonally adjusted (SA).

**Figure 12** Economic Measures of Sentiment



Source: Bloomberg, 1/31/78 - 9/30/20.

**Figure 13** U.S. CPI Y Urban Consumers YoY NSA

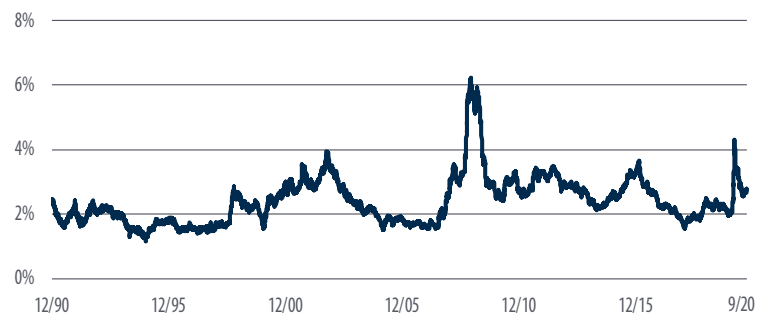


Source: Bloomberg, 12/31/90 - 8/31/20 (most recent data available), not seasonally adjusted (NSA).

80.4. Another sentiment indicator, the Conference Board Consumer Confidence Index, also moved higher ending at 101.8 (see Figure 12). The year-over-year (YoY) consumer price index (CPI) looks to have bottomed in the second quarter and had a consistent upward trajectory during the third quarter (see Figure 13). U.S. initial jobless claims continued to show a downward trend, though levels are still more than double levels seen in 2018 and 2019.

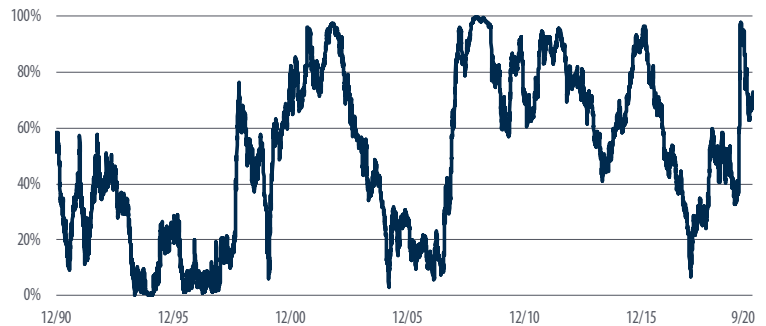
Baa/BBB rated corporate bonds slightly outperformed 10-year U.S. Treasuries as investors sought out yield yet remained cautious about duration exposure. Baa/BBB over 10-year U.S. Treasuries yields narrowed 18 bps (see Figure 14). Treasury yields widened 3 bps with the majority of the spread change driven by falling corporate yields. This spread ended the quarter at the 72nd percentile (see Figure 15). The spread between below investment grade corporate bonds (B/CA rated) and investment grade (BBB rated corporate bonds) fell by over 121 bps during the quarter to 289 bps, representing the 66th percentile. While BBB yields fell 15 bps, B/CA rated narrowed 136 bps reflecting a strong desire to by investors to buy riskier assets (see Figure 16).

**Figure 14** BAA Corp Credit Spread over 10-Yr U.S. Treasury (%)



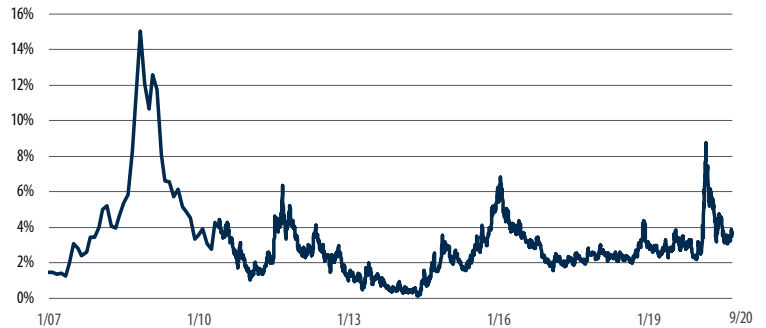
Source: Bloomberg, 12/31/90 - 9/30/20.

**Figure 15** Credit Spread Percentile Rank (%)



Source: Bloomberg, 12/31/90 - 9/30/20.

**Figure 16** B/CA Credit Spread over BBB (US Corp) (%)



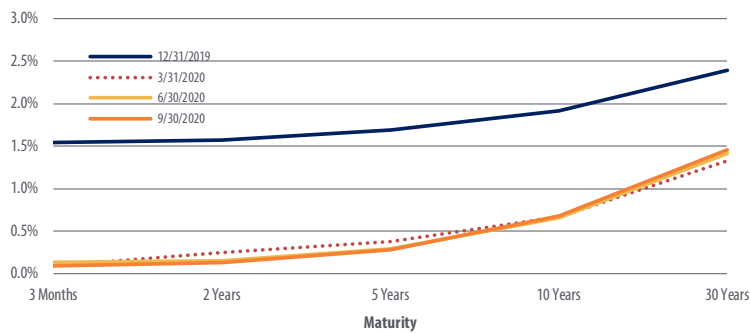
Source: Bloomberg, Data from 12/31/10 - 9/30/20.

With rates near their zero lower bound, the FED made no changes to interest rates in the third quarter but did continue its monthly purchase of \$80 billion in securities. More significantly, the FED announced a major change to its monetary policy at its annual Jackson Hole symposium. The change alters how the FED manages monetary policy in relationship to its dual mandates of stable prices and full employment. Going forward, we believe the FED will define stable prices as an “average” price level and will view unemployment at the bottom of the social economic ladder rather than as an aggregate number. Both changes effectively allow the FED more discretion to ignore quantitative data, encourage inflation, and to keep rates suppressed for longer than would be warranted by previous guideposts. While the merits of the change are debatable, it is not lost on fiscal hawks that the explosion in borrowing and spending would face a most unpleasant reckoning were rates to rise anytime soon. FED governors also repeatedly called for additional rounds of fiscal stimulus in size to prevent the economy from backtracking and causing long lasting harm to various segments of the economy. Interestingly, there was little concern mentioned regarding the FED’s soaring balance sheet, the Federal

deficit or the impact of extended ZIRP on a growing senior population highly dependent on investment income to fund retirement.

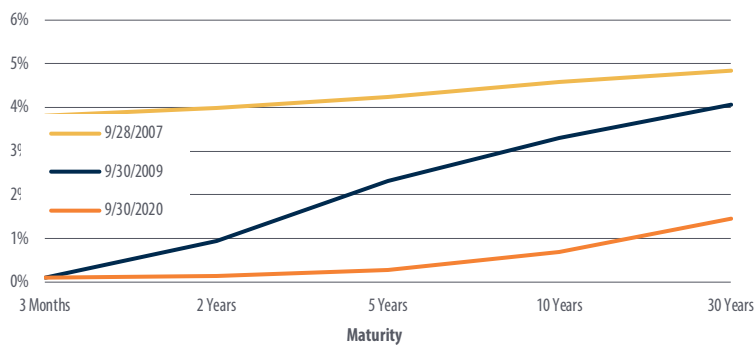
Changes along the yield curve were minor during the third quarter. U.S. Treasury 10-year yields rose 3 bps to 0.69%. The long-end of the U.S. Treasury curve (30 yr. maturity) rose 4 bps to a yield of 1.46%. The yield spread between 30-yr. to 10-yr. U.S. Treasuries widened less than 2 bps to a spread of just over 77 bps. The Treasury yield curve marginally steepened as the yield spread between 30-yr. Treasuries and T-bills (3-mo. maturity) widened out and ended the quarter at 136 bps (see Figure 17). We believe the lack of movement in the government yield is a function of the FED telegraphing no movement in short rates for the foreseeable future, an active securities purchase program of substantial size with plenty of room to grow, and the often talked about (and frequently denied by FED governors) “yield curve control” that looms in the ether and market participants see as a distinct possibility (see Figure 18). With CPI rebounding from the lows of the second quarter, real yields (nominal yields-CPI) ended negative across the curve with the exception of the 30-year, which yields a mere 11 bps above CPI (See Figure 19).

Figure 17 U.S. Treasury Yield Curve



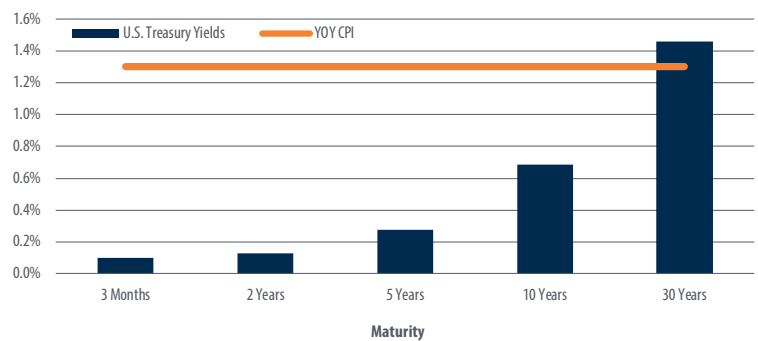
Source: Bloomberg, 9/30/20.

Figure 18 U.S. Treasury Yield Curve



Source: Bloomberg, 9/30/20.

Figure 19 U.S. Treasury Yield Curve and CPI



Source: Bloomberg, Data from 9/30/20.

**Definitions**

**10-Yr Treasury:** Yield of U.S. Treasury securities maturing in approximately 10 years.

**Aggregate Bonds:** The Bloomberg Barclays US Aggregate Bond Index is a broad-based benchmark that measures the investment grade, US dollar-denominated, fixed-rate taxable bond market.

**Australian Dollar:** The return from selling the short currency (USD) to buy the long currency (AUD) and earning interest. The return is calculated by adding the spot return to the interest earned from the long currency position. It is designed to measure the performance of the Australian dollar vs. the U.S. dollar.

**BAA Corp:** Moody's Bond Indices Corporate BAA. Moody's Long-Term Corporate Bond Yield Averages are derived from pricing data on a regularly replenished population of corporate bonds in the U.S. market, each with current outstandings over \$100 million. The bonds have maturities as close as possible to 30 years; they are dropped from the list if their remaining life falls below 20 years, if they are susceptible to redemption, or if their ratings change. All yields are yield-to-maturity calculated on a semi-annual basis.

**Beta:** A measure of price variability relative to the market.

**Bitcoin:** A digital currency using encryption techniques created for use in peer-to-peer online transactions introduced in 2008 by a person or group using the name Satoshi Nakamoto.

**Bloomberg Barclays US Corp B-Ca Capped Index:** The Bloomberg Barclays index measures the performance of the taxable B1 – Ca rated range of the fixed-rate U.S. dollar-denominated corporate bond market. The index is market capitalization weighted and caps individual issuers at 3% of the total market value.

**Bloomberg Galaxy Crypto Index (BGCI):** The BGCI is designed to measure the performance of the largest cryptocurrencies traded in USD.

**CARES Act (The):** A \$2 trillion economic stimulus bill passed by the U.S. Congress and signed into law in March 2020 in response to the economic fallout of the COVID-19 pandemic in the United States.

**Chinese Renminbi:** The S&P Chinese Renminbi Index is designed as a tradable index that replicates the performance of the Chinese Renminbi versus the U.S. Dollar.

**Commodities:** The Bloomberg Commodity Index is made up of exchange-traded futures on physical commodities and represents 20 commodities, which are weighted to account for economic significance and market liquidity.

**Consumer Price Index (CPI):** A measure that examines the weighted average of prices of a basket of consumer goods and services, such as transportation, food, and medical care. It is calculated by taking price changes for each item in the predetermined basket of goods and averaging them. Changes in the CPI are used to assess price changes associated with the cost of living.

**Correlation:** A statistical measure that quantifies the extent to which two or more data series fluctuate together. Values run from -1.0 to +1.0.

**Credit Arbitrage:** Hedge Fund Research HFRI Event-Driven Credit Arbitrage Index. Credit Arbitrage strategies employ an investment process designed to isolate attractive opportunities in corporate fixed-income securities; these include both senior and subordinated claims as well as bank debt and other outstanding obligations, structuring positions with little or no broad credit market exposure. These may also contain a limited exposure to government, sovereign, equity, convertible or other obligations but the focus of the strategy is primarily on fixed corporate obligations and other securities are held as component of positions within these structures.

**Credit Spread:** The difference in yield between two fixed-income instruments with differing credit profiles.

**Distressed:** Hedge Fund Research HFRI Event-Driven Distressed/Restructuring Total Index. Distressed/Restructuring strategies employ an investment process focused on corporate fixed-income instruments, primarily on corporate credit instruments of companies trading at significant discounts to their value at issuance or obliged (par value) at maturity as a result of either formal bankruptcy proceeding or financial market perception of near term proceedings.

**Emerging Markets:** The MSCI Emerging Markets Index captures large and mid cap representation across Emerging Markets (EM) countries. The index covers 85% of the free float-adjusted market capitalization in each country.

**Equity Market Neutral:** Hedge Fund Research HFRI Equity Hedge Equity Market Neutral Index. Equity Market Neutral strategies employ sophisticated quantitative techniques of analyzing price data to ascertain information about future price movement and relationships between securities, select securities for purchase and sale. Equity Market Neutral Strategies typically maintain characteristic net equity market exposure no greater than 10% long or short.

**Ethereum:** Ethereum is a platform that offers programming code of any decentralized application. It has been linked to payment style transactions. Ether is the cryptocurrency issued through open-source code executed on thousands of nodes.

**Event Driven:** Hedge Fund Research HFRI Event-Driven (Total) Index. Investment Managers who maintain positions in companies currently or prospectively involved in corporate transactions of a wide variety including but not limited to mergers, restructurings, financial distress, tender offers, shareholder buybacks, debt exchanges, security issuance or other capital structure adjustments.

**Gold:** The return of the gold spot price as quoted as U.S. dollars per Troy Ounce.

**Hedged Equity:** Hedge Fund Research HFRI Equity Hedge (Total) Index. Investment Managers who maintain positions both long (positions that are owned) and short (positions that are owed) in primarily equity and equity derivative securities. Hedged Equity managers would typically maintain at least 50%, and may in some cases be substantially entirely invested in equities, both long and short.

**High-Yield Bonds:** The Bloomberg Barclays US High Yield Very Liquid Index (VLI) is a component of the US Corporate High Yield Index that is designed to track a more liquid component of the USD-denominated, high yield, fixed-rate corporate bond market. The US High Yield VLI uses the same eligibility criteria as the US Corporate High Yield Index, but includes only the three largest bonds from each issuer that have a minimum amount outstanding of USD500mn and less than five years from issue date.

**International Developed:** The MSCI EAFE Index is designed to represent the performance of large and mid-cap securities across 21 developed markets, including countries in Europe, Australasia and the Far East, excluding the U.S. and Canada. The index is a free-float weighted equity index.

**Japanese Yen:** The return from selling the short currency (USD) to buy the long currency (JPY) and earning interest. The return is calculated by adding the spot return to the interest earned from the long currency position. It is designed to measure the performance of the Japanese yen vs. the U.S. dollar.

**Litecoin:** A peer-to-peer cryptocurrency and open source software project similar to Bitcoin, Litecoin uses blockchain technology to process transactions. Litecoin, referred to as an alt-coin can process blocks faster than Bitcoin, uses a different mining algorithm and has larger supply.

**Long/Short:** "Long" and "short" are investment terms used to describe ownership of securities. To buy securities is to "go long." The opposite of going long is "selling short." Short selling is an advanced trading strategy that involves selling a borrowed security. Short sellers make a profit if the price of the security goes down and they are able to buy the security at a lower amount than the price at which they sold the security short. A put gives the holder the right to sell the underlying asset at a specified price on or before expiration.

**Macro:** Hedge Fund Research HFRI Macro (Total) Index. Investment Managers which trade a broad range of strategies in which the investment process is predicated on movements in underlying economic variables and the impact these have on equity, fixed-income, hard currency and commodity markets.

**Managed Futures:** BarclayHedge US Managed Futures Industry Top 50 (BTop 50) Index. The Index seeks to replicate the overall composition of the managed futures industry with regard to trading style and overall market exposure.

**Overnight Repurchase Agreements:** A repurchase agreement (repo) is a form of short-term borrowing for dealers in government securities. In the case of a repo, a dealer sells government securities to investors, usually on an overnight basis, and buys them back the following day at a slightly higher price. That small difference in price is the implicit overnight interest rate.

**Real Estate:** The Dow Jones US Real Estate Index is designed to track the performance of real estate investment trusts (REITs) & other companies that invest directly or indirectly in real estate through development, management or ownership, including property agencies.

**Ripple:** Known as XRP, Ripple is a cryptocurrency that can be used on open source distributed ledger created by the company Ripple. It is built upon the principles of blockchain as an on-demand option for faster cross border payments.

**Swiss Franc:** The return from selling the short currency (USD) to buy the long currency (CHF) and earning interest. The return is calculated by adding the spot return to the interest earned from the long currency position. It is designed to measure the performance of the Swiss franc vs. the U.S. dollar.

**U.S. Equities:** The S&P 500 Index. An unmanaged index of 500 stocks (currently 505) used to measure large-cap U.S. stock market performance.

**U.S. 30-Yr Treasury Yield:** Yield of U.S. Treasury securities maturing in approximately 30 years.

**U.S. Dollar:** The U.S. Dollar Index (USDX) indicates the general international value of the U.S. dollar. The USDX does this by averaging the exchange rates between the USD and major world currencies. The ICE US computes this by using the rates supplied by some 500 banks.

**U.S. Treasury:** The ICE U.S. Treasury 20+ Years Bond Index is part of a series of indices intended to assess U.S. Treasury issued debt. Only U.S. dollar denominated, fixed-rate securities with minimum term to maturity greater than twenty years are included.

**U.S. Treasury Bill (T-Bill)** is a short-term U.S. government debt obligation backed by the Treasury Department with a maturity of one year or less.

**Volatility Arbitrage:** Hedge Fund Research HFRI Relative Value Volatility Index. Volatility strategies trade volatility as an asset class, employing arbitrage, directional, market neutral or a mix of types of strategies, and include exposures which can be long, short, neutral or variable to the direction of implied volatility, and can include both listed and unlisted instruments. Directional volatility strategies maintain exposure to the direction of implied volatility of a particular asset or, more generally, to the trend of implied volatility in broader asset classes. Arbitrage strategies employ an investment process designed to isolate opportunities between the price of multiple options or instruments. Volatility arbitrage positions typically maintain characteristic sensitivities to levels of implied and realized volatility, levels of interest rates and the valuation of the issuer's equity, among other more general market and idiosyncratic sensitivities.

**ZIRP:** A zero interest-rate policy (ZIRP) is when a central bank sets its target short-term interest rate at or close to 0%.

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The information presented is not intended to constitute an investment recommendation for, or advice to, any specific person. By providing this information, First Trust is not undertaking to give advice in any fiduciary capacity within the meaning of ERISA, the Internal Revenue Code or any other regulatory framework. Financial professionals are responsible for evaluating investment risks independently and for exercising independent judgment in determining whether investments are appropriate for their clients.