The U.S. economy continued to recover during the third quarter despite a surge in COVID-19 due to the Delta variant. Second quarter GDP (as reported in the 3rd quarter) came in at 6.7%, but the Atlanta Federal Reserve's "GDPNOW" model is pointing towards significantly lower growth for the 3rd quarter. What is not slowing is inflation. Persistently high inflation and slowing growth means a whole generation of investors might have to start googling the word "stagflation". The Federal Reserve (the "Fed") and other central banks continue their fervent defense of interest rate inaction because "inflation is transitory". A wealth of data seems to indicate otherwise, which leads one to ask why the Fed governors want to die on that hill. The Fed's balance sheet is now over \$8.4 Trillion, and governmental deficits continue to remain historically massive (see Figure 1). President Biden's two hallmark spending initiatives totaling roughly \$1 Trillion and \$3.5 Trillion respectively, are mired in both intra-party disagreements and inter-party rancor.

Year-over-year Consumer Price Index (CPI) came in at a 5.3% for August (as reported in September) which marked the 4th consecutive month at 5% or higher. This has not happened since early 1991. Shortages in everything from semiconductors to truck drivers continue to roll through the global economy. Energy prices skyrocketed in the 3rd quarter as did shipping



Source: Bloomberg, Data from 9/30/96 - 9/30/21.





Source: Bloomberg, 9/30/21.

costs, home prices, and food prices (See Figure 2). The squeeze in natural gas prices and petroleum products evoked shades of the energy crisis in the 1970s. One might look at the year-over-year change in lumber prices (-1%) and see that as evidence that the Fed might have a case with their transitory inflation argument; though lumber prices have come off their highs, they are still nearly 50% higher than in December of 2019 (pre COVID-19 crash). More and more, we believe the only way inflation might be viewed as transitory is if one considers the Fed's intervention to stabilize the financial markets since 2008 as transitory.

Returns for major asset classes were generally tepid in the 3rd quarter of 2021. Commodities were a noteworthy exception with the Bloomberg Commodity Index up sharply (+6.59%) bringing year-to-date returns to a stellar (+29.13%). Dow Jones U.S. Real Estate Index was the next best performing asset class (+0.85%). Equity markets were mixed, the S&P 500 Index was up (+0.58%), the MSCI EAFE Index was down (-0.45%) and the MSCI Emerging Markets Index was sharply down (-8.09%). Long-dated U.S. Treasuries were nearly unchanged (+0.10%) despite rising inflation, while high yield bonds were positive (+0.74%). The U.S. Dollar Index rose sharply (+1.94%) (see Figure 3).

Figure 3 Asset Class Returns

	Q3 2021	YTD 2021
U.S. Equities	0.58%	15.92%
International Developed	-0.45%	8.35%
Emerging Markets	-8.09%	-1.25%
U.S. Treasury	0.10%	-7.82%
Real Estate	0.85%	21.30%
Commodities	6.59%	29.13%
High Yield Bonds	0.74%	3.79%
U.S. Aggregate Bonds	0.05%	-1.55%
Bitcoin	25.59%	49.80%
U.S. Dollar	1.94%	4.77%

Source: Bloomberg, 9/30/21.

References to specific companies or securities should not be construed as a recommendation to buy or sell any such security, nor should they be assumed profitable.

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.

Alternative Investments ("alternatives") had a mixed quarter with positive returns in 6 of 10 categories. Low correlation/lower beta strategies on average fared better and given the tepid return in the S&P 500 Index, many categories saw better relative returns. Commodities was the best performing category (+6.59%). Other notable gainers were managed futures (+2.35%), equity market neutral (+1.35%), and credit arbitrage (+1.25%). The worst performers were volatility arbitrage (-0.36%), event driven (-0.21%) and hedged equity (-0.85%) (see Figures 4 and 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 lower 2-year correlations to U.S. equities (less than 0.60), on average, significantly outperformed those strategies that had a higher correlation with U.S. equities. The spread was 260 basis points ("bps") (see Figure 6). Two of three real asset categories had positive returns, with broad commodities leading the way. Gold declined slightly while real estate posted a modest gain (see Figure 7). With continued supply disruptions, ongoing monetary and fiscal stimulus along with economic re-openings, inflation looks to be a bit more structural now, which in our opinion should enhance attractiveness of real assets, particularly commodities.

Figure 4 Alternative Category Performance



Source: Bloomberg, 9/30/21.

Figure 5 Excess Return vs. S&P 500 Index

Category	Q3 2021
Hedged Equity	-1.43%
Macro	-0.77%
Event Driven	-0.79%
Managed Futures	1.77%
Equity Market Neutral	0.77%
Volatility Arbitrage	-0.94%
Distressed/Restructuring	-0.37%
Real Estate	0.27%
Credit Arbitrage	0.66%
Commodities	6.01%

Source: Bloomberg, 9/30/21.

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 lower volatility. These characteristics may allow investors to broaden their investment choices and create more efficient portfolios.

Returns for "Risk On" assets (-0.32% average return) narrowly outperformed the returns for "Risk Off" assets (-0.43% average return). The Chinese Renminbi had the best return in the third quarter and Australian Dollar the worst return (see Figure 8). Focusing on noncurrencies, equities and high-yield bonds had slightly positive returns while long-dated (20 yr. +) U.S. Treasuries eked out a small gain and gold had a small loss. 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.**

Figure 6 Correlations (2yr) & Returns

	S&P 500 Index	Q3 2021
Hedged Equity	0.89	-0.85%
Event Driven	0.80	-0.21%
Real Estate	0.89	0.85%
Commodities	0.55	6.59%
Distressed/Restructuring	0.64	0.21%
Credit Arbitrage	0.66	1.25%
Equity Market Neutral	0.75	1.35%
Volatility Arbitrage	0.62	-0.36%
Managed Futures	0.43	2.35%
Macro	0.47	-0.19%
Lower Correlation Avg TR (<=0.60)		2.92%
Higher Correlation Avg TR (>0.60)		0.32%

Source: Bloomberg, 9/30/21. Correlation of monthly returns over 24 months.

Figure 7 Real Assets

	Q3 2021	YTD 2021
Real Estate	0.85%	21.30%
Commodities	6.59%	29.13%
Gold	-0.74%	-7.45%
Average	2.23%	14.33%

Source: Bloomberg, 9/30/21.

Figure 8 Risk On vs. Risk Off Assets



Despite a significant sell-off in September, returns in the cryptocurrencies sector ended the third quarter sharply higher versus the second quarter (see Figure 9). Bitcoin, the flagship cryptocurrency, rose (+25.59%), while the wider universe of cryptocurrencies, as measured by the Bloomberg Galaxy Crypto Index, gained (+23.02%). Ethereum was up (+32.83%) as was Litecoin (+6.31%). Fed Chairman Jerome Powell has gone on record saying that the U.S. has no plans to ban cryptocurrencies but globally the overall narrative continues to be one of looming oversight and regulation in the not-too-distant future.

Hard economic data continued to point towards an improving economy while sentiment data slipped a bit. The ISM manufacturing indicator ended the quarter at 61.1, while the

Figure 9 Cryptocurrency Returns

	Q3 2021	YTD 2021
BB Galaxy Crypto Index	23.02%	134.44%
Bitcoin	25.59%	49.80%
Ethereum	32.83%	302.21%
XRP (Ripple Digital Assets)	37.31%	318.72%
Litecoin	6.31%	21.86%

Source: Bloomberg, 9/30/21.

Figure 10 Institute for Supply Management (ISM) Data



Source: Bloomberg, Data from 9/30/08 - 9/30/21. Seasonally adjusted (SA). Numbers above 50 indicate an expansion, below 50 indicates a contraction.



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

ISM non-manufacturing indicator services reached its highest level ever (64.1) in July before ending the quarter at 61.9. For both indicators, levels above 50 indicate an expansion (see Figure 10). Unemployment, as measured by the U-3 seasonally adjusted rate, continued to trend downward, falling to 4.8% (see Figure 11). Sentiment, as measured by the University of Michigan Consumer Sentiment Index, slid to levels last seen during the depths of the COVID crisis in 2020. Another sentiment indicator, the Conference Board Consumer Confidence Index, moved sharply lower (see Figure 12). The year-over-year CPI for August came in at 5.3%, well above the Fed's stated goal of 2% (see Figure 13).





Source: Bloomberg, 9/30/78 - 9/30/21.





Baa/BBB rated corporate bonds marginally underperformed 10-year U.S. Treasuries. Fixed income investors did not appear to be concerned about the inflationary pressures building as absolute yields were close to unchanged. Baa/BBB spreads over 10-year U.S. Treasuries yields widened 3 bps (see Figure 14). This spread ended the quarter at the 28th percentile (see Figure 15). The spread between below investment grade corporate bonds (B/CA rated) and BBB rated corporate bonds (investment grade) rose by 36 bps during the quarter to 157 bps, representing the 22nd percentile. While BBB yields barely moved, B/CA rated rose 41 bps (see Figure 16) unwinding almost all the spread tightening experienced in the 2nd quarter.

The Fed had no policy change to rates in the 3rd quarter but at the September FOMC meeting, announced they would begin tapering the \$120 billion asset purchases in the near future, though no specific details or dates were provided. On a non-market note, two Fed governors resigned after it was disclosed they were buying and selling stocks and real estate investment trusts in the midst of the Central Bank's unprecedented bailout of the capital markets. In addition, Fed Vice Chairman Richard Clarida was also getting some scrutiny for moving













millions out of bonds and into stocks during that same time frame. While no clear violations have been identified, the look of impropriety and whiff of insider trading are not particularly encouraging for the country's most powerful financial entity. With the Fed's reputation already under fire for their never-ending capital markets involvement, repeated mantra of "transitory inflation" in the face of starkly contrasting data, and defacto adoption or MMT (Modern Monetary Theory), raising questions of unethical behavior is not a good look.

Despite soaring inflation data in the 3rd quarter, fixed-income yields didn't end up moving much at all. U.S. Treasury 10-year yields rose 2 bps to 1.49% while 30-year yields fell 4 bps to a yield of 2.05%. The yield spread between 30-yr. to 10-yr. U.S. Treasuries narrowed 6 bps to a spread of 56 bps. The Treasury yield curve flattened slightly as the yield spread between 30-yr. Treasuries and T-bills (3 mo. maturity) fell 4 bps, ending the quarter at 201 bps (see Figure 17 and Figure 18). With CPI moving higher and nominal yields mostly unchanged, real yields (nominal yields-CPI) moved further into negative territory across all maturities (See Figure 19).





Source: Bloomberg, 9/30/21.



Figure 18 U.S. Treasury Yield Curve

Source: Bloomberg, 9/30/21.

Figure 19 U.S. Treasury Yield Curve and CPI



Source: Bloomberg, 9/30/21.

Definitions

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

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

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 outstanding 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 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.

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 of 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.

Cryptocurrency is a digital or virtual currency that is secured by cryptography, which makes it nearly impossible to counterfeit or double-spend.

Distressed/Restructuring: 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.

FOMC: Federal Open Market Committee is the committee that decides how to manage monetary policy. **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 owned) 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.

GDPNOW Model: is viewed as a running estimate of real GDP growth based on available economic data for the current measured quarter.

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 min 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.

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.

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.

Risk-On and Risk-Off is an investment setting in which price behavior responds to and is driven by changes in investor risk tolerance. Risk-on risk-off refers to changes in investment activity in response to global economic patterns.

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.

Stagflation: refers to an economy that is experiencing a simultaneous increase in inflation and stagnation of economic output.

U.S. Equities: The S&P 500 Index. An unmanaged index of 500 stocks (currently 505) used to measure largecap 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 is 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.

Yield Spread: The difference in yields on differing debt instruments of varying maturities, credit ratings, issuer, or risk level.

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