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In the fourth quarter of 2024, alternative investments ("alternatives"), on average, had slightly negative returns with Real Estate being a large negative outlier as interest rates moved significantly higher. The Federal Reserve (the "Fed") continued the path of lowering the Federal Funds Rate, choosing to cut 25 basis points at each of its meetings in the quarter. The U.S. Treasury curve steepened significantly as short maturities followed the decline in Fed Funds Rate, while yields 5 years and longer rose precipitously to completely unwind the rally in rates of the third quarter. Intermediate and long rates are now at levels above where they began 2024. Higher rates are likely the result of significant revision in expected Fed action and bond market participants way of co-opting the Fed's "higher for longer" mantra. The economic picture domestically remains positive if not spectacular, in our view. Recent inflation data has trended upward, and money supply growth ("M2") has been positive but concerns over faltering growth in China may be keeping longer-term inflation expectations in check.

With Republicans winning control of both chambers of Congress and the White House, markets soared in expectation of a more benign, if not ebullient investing environment, despite President Trump's promise of large and extensive tariffs "day one." Coming into the fourth quarter, U.S. equity valuations (S&P 500® Index and NASDAQ 100) had already breached the 90th percentile on several measures and the rally further stretched those valuations which evoke the Dot.com years. The Russell 2000® Index looks more reasonably valued, but hardly cheap by historical measures (see Figure 1). Looking to the bond market since 1990, the spread of BBB rated bonds to the U.S. Treasury 10 year sits above the 98th percentile. Another challenge is the soaring federal debt payments which have exploded as massive deficit spending of the past decade or so is colliding with higher interest rates. Speaking of the deficit, in the last government fiscal year, it hit $1.8 trillion, the 3rd largest amount ever; the Covid years of 2020 and 2021 being the largest. The current fiscal year is not starting off on an encouraging note as the current deficit numbers are up 39% year-over-year. While there is plenty of rhetoric around deep spending cuts and establishing a Department of Government Efficiency (DOGE) that would serve as the tip of the spear, recent history has shown neither party to be aligned with fiscal discipline and conservatism. Talk is cheap, and what politician is willing to have their constituents face the financial ax to any substantial degree? Valuation alone has historically been a very poor timing mechanism for the shorter horizons consistent with the typical investor. However, we believe having the fiscal trident of skyrocketing government debt payments, extreme equity and bond valuations and historic spending deficits staring one in the face should give investors considerable pause regarding their risk positioning.

Figure 1 U.S. Equity Valuation Ratio Percentile	S&P 500 Index	Nasdaq 100 Index	Russell 2000 Index
Price to Sales	96.60%	97.80%	88.20%
Price to Earnings	88.00%	85.20%	92.50%
Price to EBITDA	95.70%	92.50%	85.70%
Price to Book Value	99.00%	93.40%	38.40%
Price to Cash Flow	98.80%	94.90%	48.40%
Price to Free Cash Flow	83.10%	94.90%	59.00%

Source: Bloomberg. Data as of 12/31/2024. **Past performance is not indicative of future results.**

Commentary Continued on Next Page

Alternatives delivered positive performance in 4 out of 10 categories but averaged -0.71% for the quarter as Real Estate skewed average returns to the downside. Global Macro was the best performing category (+2.68%). Other notable gainers were Convertible Arbitrage (+1.88%) and Event Driven (+1.62%). Real estate was the worst performing category (-7.78%) along with Multi-Strategy (-3.51%). Only Global Macro outperformed the S&P 500® Index, which is not too surprising as the long-only equity benchmark was a standout among traditional assets, most of which delivered sizable negative returns. The average underperformance vs the S&P 500® Index was -312 basis points. Nine out of 10 alternative categories outperformed the Bloomberg U.S. Aggregate Bond Index. The average outperformance was +354 basis points (Figure 2 and Figure 3). For the calendar year 2024, 8 out of 10 alternative categories delivered positive returns.

Figure 2 Alternatives Performance	Q4 2024	YTD
Global Macro	2.68%	-4.11%
Convertible Arbitrage	1.88%	6.33%
Event Driven	1.62%	6.38%
Managed Futures	1.22%	-7.41%
Equity Market Neutral	-0.01%	5.66%
Commodities	-0.45%	3.12%
Fixed Income Arbitrage	-1.08%	7.34%
Equity Long/Short	-1.67%	2.49%
Multi-Strategy	-3.51%	2.35%
Real Estate	-7.78%	6.10%

Figure 3 Alternatives Performance (Over/Under) Q4 2024	vs S&P 500	vs BB Agg
Global Macro	0.27%	2.95%
Convertible Arbitrage	-0.53%	1.99%
Event Driven	-0.79%	4.69%
Managed Futures	-1.19%	6.86%
Equity Market Neutral	-2.42%	3.05%
Commodities	-2.86%	-0.45%
Fixed Income Arbitrage	-3.48%	4.28%
Equity Long/Short	-4.08%	1.39%
Multi-Strategy	-5.92%	5.74%
Real Estate	-10.19%	4.94%
Average	-3.12%	3.54%

Traditionally, managed futures and macro strategies are viewed as having lower correlations to equities because they are 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 502 basis points (Figure 4). Real assets were negative across the board as interest rates moved sharply higher (Figure 5).

Figure 4 Correlations (2yr) & Returns	Correlation to S&P 500® Index	Q4 Return
Real Estate	0.86	-7.78%
Equity Long/Short	0.86	-1.67%
Convertible Arbitrage	0.57	1.88%
Equity Market Neutral	0.39	-0.01%
Fixed Income Arbitrage	0.35	-1.08%
Event Driven	0.26	1.62%
Multi-Strategy	0.14	-3.51%
Commodities	0.12	-0.45%
Global Macro	0.07	2.68%
Managed Futures	-0.17	1.22%
Lower Correlation Avg TR (≤0.60)		0.30%
Higher Correlation Avg TR (>0.60)		-4.73%

Figure 5 Real Assets Returns	Q4 2024	YTD 2024
Real Estate	-7.78%	4.86%
Commodities	-0.45%	5.38%
Gold	-0.38%	27.22%
Average	-2.87%	12.49%

Data from 1/31/23 - 12/31/24. Correlation of monthly returns over 24 months.

Past performance is not indicative of future results. Source for all charts: Bloomberg. As of 12/31/2024.

Commentary Continued on Next Page

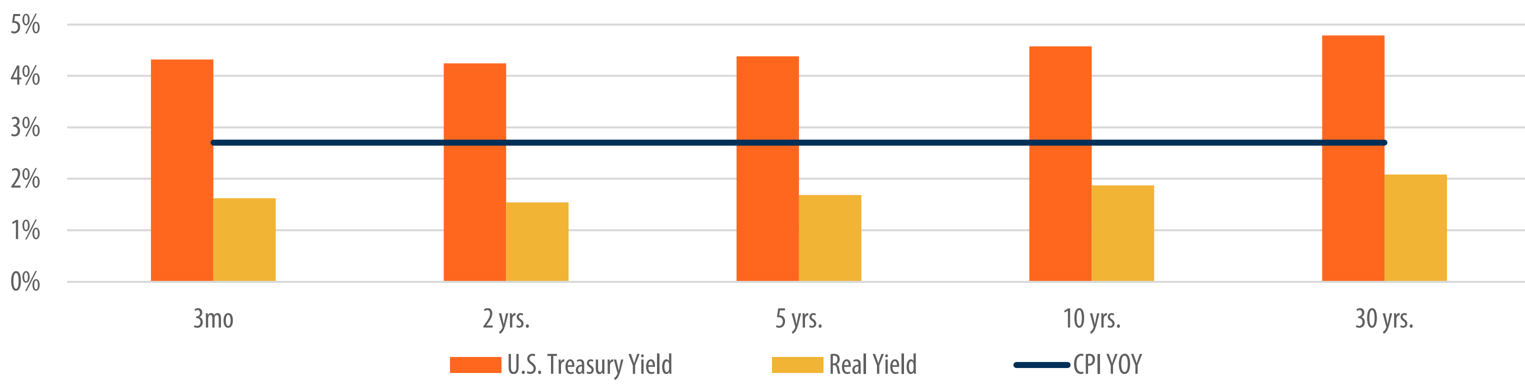
Cryptocurrencies rallied in the 4th quarter as the incoming Trump administration is viewed as extremely favorable in its disposition to digital currencies. The Bloomberg Galaxy Crypto Index rose +35.97%. Bitcoin was up +46.92%, Ethereum and Litecoin also rose double digits (+28.04%, +53.84%). Ripple was up an astounding +253.6% (Figure 6). The triple digit rise is likely due to expectations that a new more friendly SEC will drop its lawsuit against the sponsor of Ripple, the launch of a Ripple stablecoin, and expectations that a Ripple ETF (if approved) will drive demand. Security remains a significant problem for the sectors with malevolent actors (some speculated to be state sponsored) continuing to become more sophisticated and brazen in their attacks.

Returns for major asset classes were mostly negative in the 4th quarter of 2024. U.S equities we up (+2.41%), but were the exception globally. Emerging markets and international developed markets were down sharply (-8.01%, -8.11%, respectively) which effectively erased all the third quarter gains likely on tariff concerns. U.S. Treasuries similarly fell (-9.55%) as did the broader bond market (-3.06%) economic data remained upbeat and inflation a bit more stubborn than expected. High Yield bonds were essentially unchanged (-0.02%). Commodities were down marginally (-0.45%) (Figure 7). Other than at the front of the yield curve, real rates jumped sharply higher as yields soared and dwarfed the increase in the Consumer Price Index ("CPI"). Real rates remain positive across the entire treasury curve (Figure 8).

Figure 6 Cryptocurrency Returns	Q4 2024	YTD 2024
XRP (Ripple Digital Assets)	235.84%	238.39%
Litecoin	53.84%	40.56%
Bitcoin	46.92%	120.46%
BB Galaxy Crypto Index	35.97%	65.95%
Ethereum	28.04%	46.63%

Figure 7 Asset Class Returns	Q4 2024	YTD 2024
Bitcoin	46.92%	120.46%
U.S. Dollar	7.65%	7.06%
U.S. Equities	2.41%	25.02%
High Yield Bonds	-0.02%	7.65%
Commodities	-0.45%	5.38%
U.S Aggregate Bonds	-3.06%	1.25%
Real Estate	-7.78%	4.86%
Emerging Markets	-8.01%	7.50%
International Developed	-8.11%	3.82%
U.S. Treasury	-9.55%	0.00%

Figure 8 U.S. Treasury Yields and CPI



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, and may not be suitable for all investors.

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.

Source for all charts: Bloomberg. As of 12/31/2024.

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.*

Definitions

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

Coinbase: An online platform for buying, selling, transferring, and storing cryptocurrency.

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.

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

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: The Credit Suisse AllHedge Equity Market Neutral Index is a subset of the Credit Suisse AllHedge Index that measures the aggregate performance of equity market neutral funds. Equity market neutral funds typically take both long and short positions in stocks while seeking to reduce exposure to the systematic risk of the market (i.e., a beta of zero is desired). Equity Market Neutral funds typically seek to exploit investment opportunities unique to a specific group of stocks, while maintaining a neutral exposure to broad groups of stocks defined for example by sector, industry, market capitalization, country, or region. The index has a number of subsectors including statistical arbitrage, quantitative long/short, fundamental long/short and index arbitrage. Managers often apply leverage to enhance returns.

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: The Credit Suisse AllHedge Event Driven Index is a subset of the Credit Suisse AllHedge Index that measures the aggregate performance of event driven funds. Event driven funds typically invest in various asset classes and seek to profit from potential mispricing of securities related to a specific corporate or market event. Such events can include: mergers, bankruptcies, financial or operational stress, restructurings, asset sales, recapitalizations, spin-offs, litigation, regulatory and legislative changes as well as other types of corporate events. Event driven funds can invest in equities, fixed income instruments (investment grade, high yield, bank debt, convertible debt and distressed), options and various other derivatives. Many managers may use a combination of strategies and adjust exposures based on the opportunity sets in each subsector.Gold: The return of the gold spot price as quoted as U.S. dollars per Troy Ounce.

Fixed Income Arbitrage: The Credit Suisse AllHedge Fixed Income Arbitrage Index is a subset of the Credit Suisse AllHedge Index that measures the aggregate performance of fixed income arbitrage funds. Fixed income arbitrage funds typically attempt to generate profits by exploiting inefficiencies and price anomalies between related fixed income securities. Fixed income arbitrage funds seek to limit volatility by hedging out exposure to the market and interest rate risk. Strategies may include leveraging long and short positions in similar fixed income securities that are related either mathematically or economically. The sector includes credit yield curve relative value trading involving interest rate swaps, government securities and futures; volatility trading involving options; and mortgage-backed securities arbitrage (the mortgage-backed market is primarily U.S.-based and over-the-counter).

Global Macro: The Credit Suisse AllHedge Global Macro Index is a subset of the Credit Suisse AllHedge Index that measures the aggregate performance of global macro funds. Global macro funds typically focus on identifying extreme price valuations and leverage is often applied on the anticipated price movements in equity, currency, interest rate and commodity markets. Managers typically employ a top-down global approach to concentrate on forecasting how political trends and global macroeconomic events affect the valuation of financial instruments. Profits can be made by correctly anticipating price movements in global markets and having the flexibility to use a broad investment mandate, with the ability to hold positions in practically any market with any instrument. These approaches may be systematic trend following models, or discretionary.

Inflation is the decline of purchasing power of a given currency over time.

High-Yield Bonds: The Bloomberg 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 Equity: The Credit Suisse AllHedge Long/Short Equity Index is a subset of the Credit Suisse AllHedge Index that measures the aggregate performance of long/short equity funds. Long/short equity funds typically invest in both long and short sides of equity markets, generally focusing on diversifying or hedging across particular sectors, regions or market capitalizations. Managers typically have the flexibility to shift from value to growth; small to medium to large capitalization stocks; and net long to net short. Managers can also trade equity futures and options as well as equity related securities and debt or build portfolios that are more concentrated than traditional long-only equity funds.

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.

Monetary Policy: Is the tool used by central banks to influence the money supply, and with it, the economy at large.

Multi-Strategy: The Credit Suisse AllHedge Multi-Strategy Index is a subset of the Credit Suisse AllHedge Index that measures the aggregate performance of multi-strategy funds. Multi-strategy funds typically are characterized by their ability to allocate capital based on perceived opportunities among several hedge fund strategies. Through the diversification of capital, managers seek to deliver consistently positive returns regardless of the directional movement in equity, interest rate or currency markets. The added diversification benefits may reduce the risk profile and help to smooth returns, reduce volatility and decrease asset-class and single-strategy risks. Strategies adopted in a multi-strategy fund may include, but are not limited to, convertible bond arbitrage, equity long/short, statistical arbitrage and merger arbitrage.

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.

Real Yield: or Real Interest Rate has been adjusted to remove the effects of inflation to reflect the real cost of funds to the borrower and the real yield to the lender or to an investor.

Recession: Is a significant decline in economic activity that lasts longer than a few months.

Ripple Digital Assets: 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.

U.S. 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.

U.S. Equities: The S&P 500® Index. An unmanaged index of 500 companies used to measure large-cap U.S. stock market performance.

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 Yield: Yield of U.S. Treasury securities maturing in approximately 3 months, 2 years, 5 years, 10 years, or 30 years.

Year-over-Year (YoY): is a calculation that helps compare growth over the previous 12 months and automatically negates the effect of seasonality.