

# Investment Newsletter

## Fourth Quarter 2024

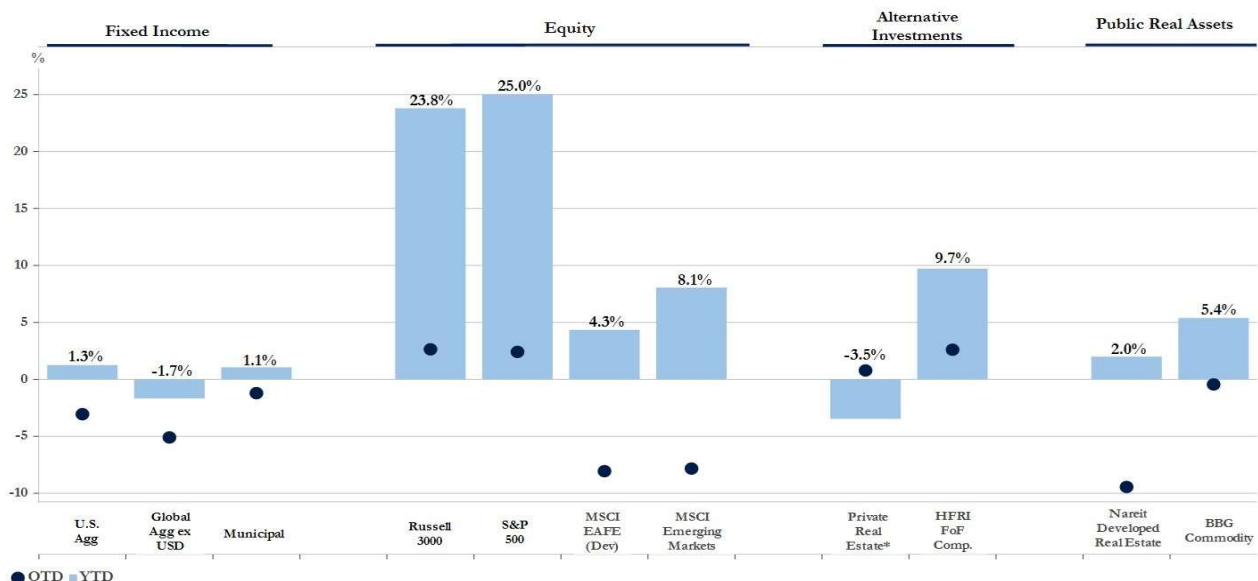


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### Key Takeaways

- 2024 was the second consecutive year that defied expectations. Growth remained resilient, inflation was manageable, and risk assets performed favorably. Strong results from the past two years have set higher expectations to meet in 2025.
- The Fed kicked off its easing cycle by cutting its policy rate three times throughout the year, lowering the 5.5% target rate upper bound to 4.5%. It is uncertain how aggressive the Fed will be in lowering rates going forward as we approach a new neutral rate, as inflation has the potential to resurface.
- U.S. economic growth further decoupled from other major nations globally, driven by a persistently resilient consumer. European and Asian economic momentum subsided based on a variety of factors including political turmoil (ex. Europe) and real estate crisis (ex. China).
- Strong results across most equity markets pushed valuations higher – especially for U.S. large-caps. Despite some head fakes, trends of outperformance from recent years extended into 2024 including U.S. over international, large over small, and growth over value.
- Conservative fixed income assets had modestly positive returns as higher yields were partially offset by losses from duration when rates rose. 2024 results are a testament to the importance of higher starting yields and the risk/reward skews favorably for less credit sensitive fixed income.
- More credit sensitive fixed income assets, such as high yield, delivered impressive returns, benefiting from increasingly tight credit spreads and higher starting yields. On a go forward basis, such narrow spreads present a more limited opportunity set susceptible to downside surprises.
- Political establishments and macroeconomic trends (ex. globalization, multilateralism) are being tested globally, contributing to increased instability. As the rulebook is partially rewritten, it will contribute to elevated change and create both opportunities and dislocations.
- Outside of the economy, market dynamics are shifting with the ETF vehicle increasingly becoming the wrapper of choice, even for active strategies. Capital has continued to flow into private market opportunities as the democratization of alternative investments persists. We believe both dynamics are positive for investors and should create compelling investment opportunities in the future.
- 2023 and 2024 presented a supportive time for markets with positive returns and lower than typical levels of volatility. With an average correction of roughly 14% in the S&P 500 Index since 1980, higher levels of volatility and drawdown are probable going forward. It's critical to ensure portfolios are appropriately allocated relative to goals and risk tolerances entering the new year.

Asset Class Performance as of 12/31/2024



## Economy

The U.S. economy remained resilient in 2024, surpassing growth expectations and outpacing many other developed economies. After growing an annualized 1.4%, 3.0%, and 2.8% in the first three quarters of the year, GDPNow is forecasting an additional 2.7% of annualized real GDP growth in the fourth quarter. Consumer spending remains robust, fueled by strong wage growth, higher savings, and improving consumer confidence, while an increase in labor productivity boosted output. Manufacturing, on the other hand, remains a concern as the ISM manufacturing index contracted in December for the 25th time out of the last 26 months.

The U.S. Dollar finished 2024 near its yearly high, posting a 7.1% gain for the year as measured by the dollar index (DXY). A key driver was interest rate differentials, as the gap between U.S. rates and those of key trading partners widened, making dollar-denominated assets more attractive. A slower-than-expected pace of Fed rate cuts, along with potential new trade restrictions under the Trump administration, may lead to continued strength in the near-term.

Looking ahead to 2025, the outlook for the U.S. remains mostly positive though the consensus among strategists is that the pace of growth is likely to slow compared to the robust performance of 2024. Monetary policy will be a key factor as the Fed is expected to gradually reduce interest rates, though uncertainty around where the new neutral rate will land is keeping markets on edge. Fiscal policy will also play a meaningful role, as the implementation of the Trump administration's economic policies, including increased tariffs and larger deficits, could offset other drivers of growth like deregulation. Inflation and labor market dynamics will continue to be closely watched by the FOMC and market participants alike, as they have been since the Fed started hiking interest rates in March 2022.

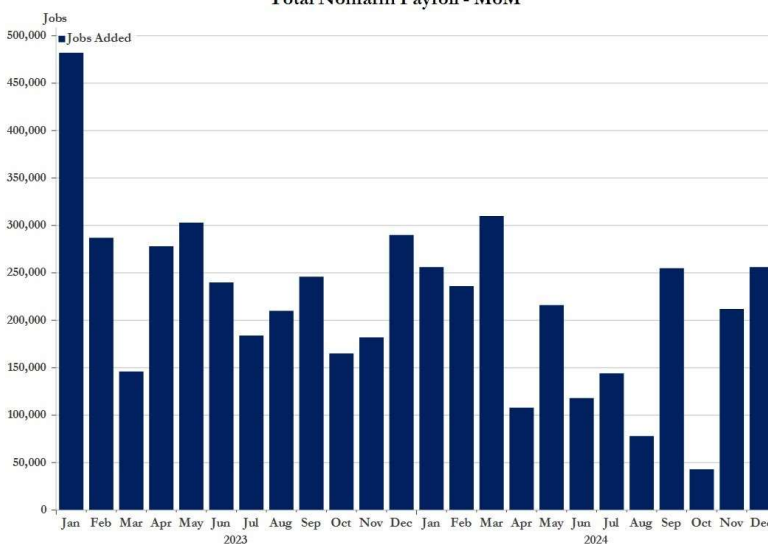
### U.S. Labor Market on Solid Footing at Year End

- According to the Bureau of Labor Statistics, the U.S. economy added 256,000 jobs in December, well above the consensus estimate of 165,000 and a sizable increase from the 212,000 added in November.
- Wage growth was largely in line with expectations, up 0.3% for the month and 3.9% compared to the prior year, though slightly below the 0.4% and 4.0% seen a month earlier.
- Unemployment fell from 4.2% in November to 4.1% in December, while the July figure was revised down 0.1%.
- The strength of the report pushed out bets on when the FOMC will act next, with many strategists predicting there will be no cuts during the January, March and May meetings, leaving investors waiting until at least June.

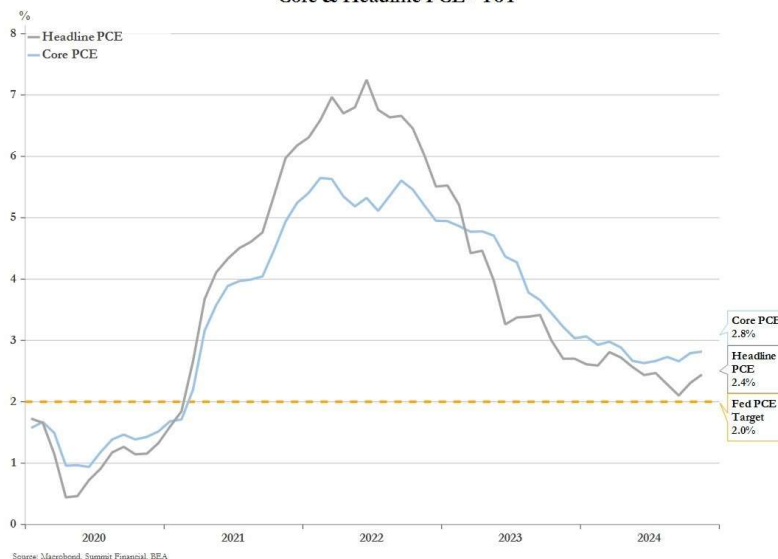
### Inflation Ticks Down But Remains Sticky

- The headline PCE price index, the Fed's preferred gauge of inflation, increased 0.1% in November, indicating a 2.4% year over year inflation rate.
- The figure remains well above the Fed's 2.0% target, but came in below the consensus estimate of 2.5%.
- The readings showed a minimal increase across goods prices but a 0.2% rise in services from the month prior.
- Housing, one of the stickier components of inflation, showed signs of cooling in November, rising just 0.2% after a 0.4% increase in October.
- Markets will be closely watching the December report, due in the second half of January, for further insight into the potential number and cadence of rate cuts in 2025.

Total Nonfarm Payroll - MoM



Core & Headline PCE - YoY

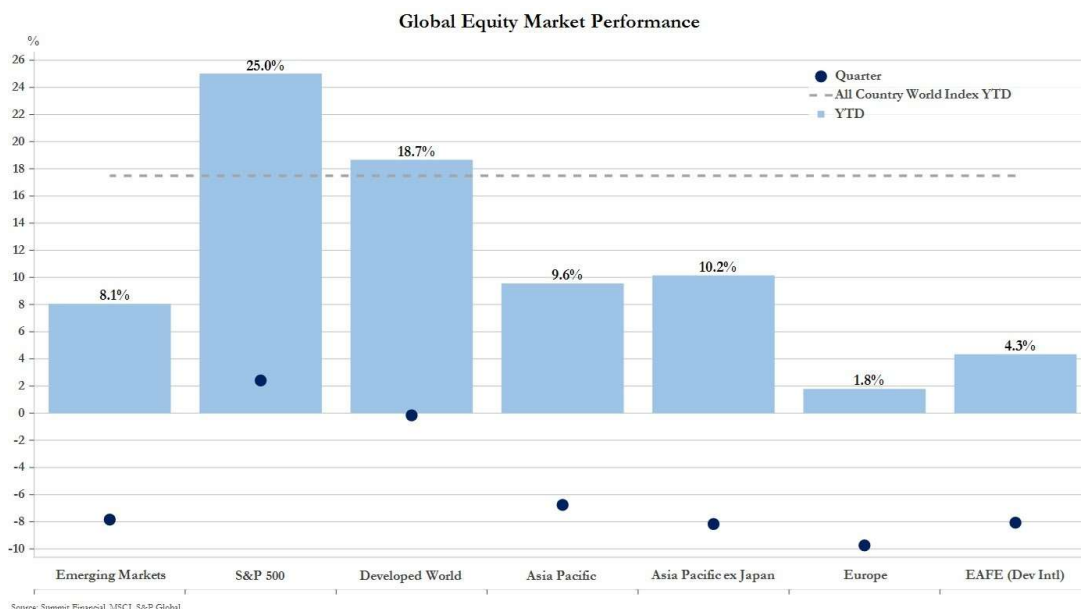


## Equity Markets

The S&P 500's 25.0% return for 2024 marks only the ninth time the index has posted back-to-back 20%+ returns since 1928. The composition of returns for 2024, however, looked vastly different than 2023 as there was a mid-year sector rotation and market broadening. It was a slow year for international markets as both the MSCI EAFE and MSCI Emerging Markets Indices posted single digit returns for the year, hampered by a rough fourth quarter. The divergence between U.S. and International markets was driven by a steadily resilient U.S. economy and a strengthening Dollar, although international markets seem poised for 2025 as valuations are more appealing than U.S. markets. Growth persisted and outperformed value, continuing the trend since 2022, backed by the continued advancement of Artificial Intelligence.

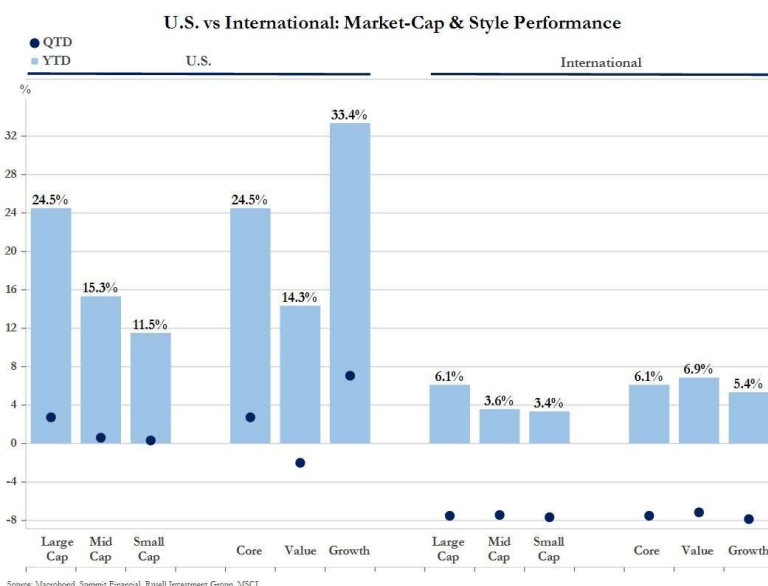
Some of the uncertainty heading into Q4 of 2024 has subsided as a quick and decisive election triggered a broad rally in equity markets. Large-cap tech drove the market again in 2024. The Magnificent 7 now account for more than 33% of the S&P 500 Index, and the group outperformed the broad index once again. Although concentrated and expensive, S&P 500 earnings are expected to grow between 13% and 17%, which may keep the bull market alive throughout the year.

Overall, volatility was mild in 2024, outside of spikes in August and mid-December. Equity markets may react harshly to negative news due to high current valuations, which may increase volatility in 2025. A strong economy and potentially favorable fiscal policies are tailwinds for equities, while the inflation picture and Fed rate cutting schedule could be headwinds if inflation remains elevated.



### Divergence Between U.S. and International Returns Continues Through 2024

- The U.S. outperformed its international counterparts across market-caps and styles in Q4 and 2024 as a whole, driven by stronger economic and earnings growth.
- Dividends are a much larger contributor to total returns for international stocks. The dividend yield for the EAFE index is ~3.20% versus ~1.3% for the S&P 500, giving investors a larger buffer during market drawdowns.
- Valuations are also supportive for international equities as the MSCI ACWI ex U.S. Index is trading at a P/E ratio of ~15 versus ~28 for the S&P 500.
- Though pro-U.S. fiscal policies and a strengthening dollar may continue to act as headwinds for international companies heading into 2025.

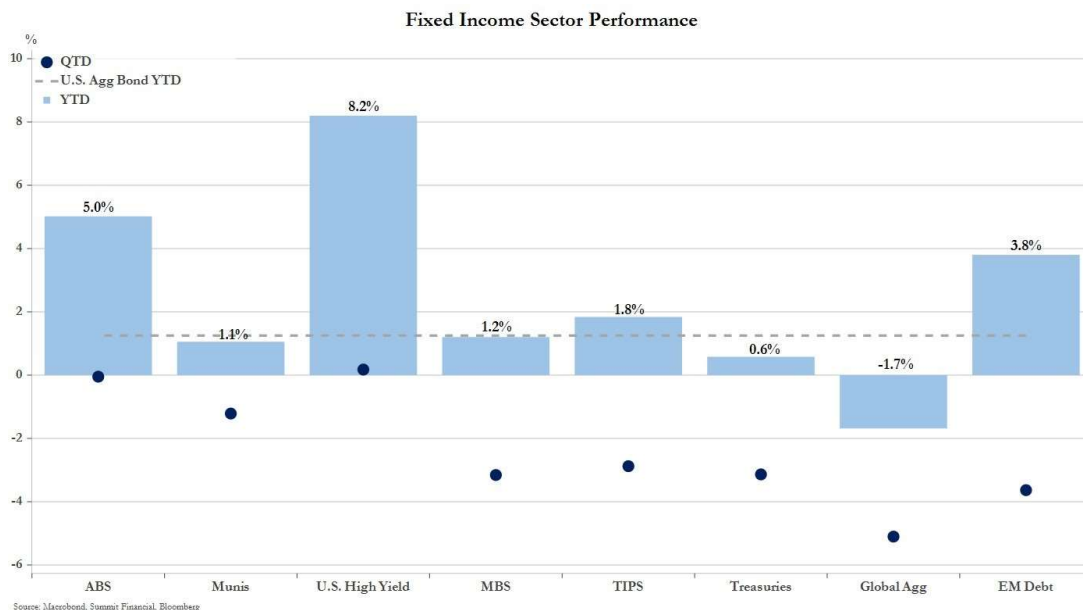


## Fixed Income Markets

Treasury yields, aside from 0- to 2-year maturities that comprise the short end of the yield curve, moved sharply higher in Q4 and ultimately rose across most of the curve in 2024. The Fed held its policy rate in the 5.25-5.50% range for most of the year before beginning its highly anticipated easing cycle in September, which culminated in 100 bps of cuts by year-end. The cuts helped the yield curve move toward a more normalized shape as the spread between 2- and 10-year yields increased from -37bps to +34bps, ending a record 26-month inversion. Markets responded favorably to the less restrictive rate environment, but recent economic data reflecting a strong labor market, a resilient economy, and sticky inflation have raised doubts as to how much further the Fed can lower short-term rates in 2025.

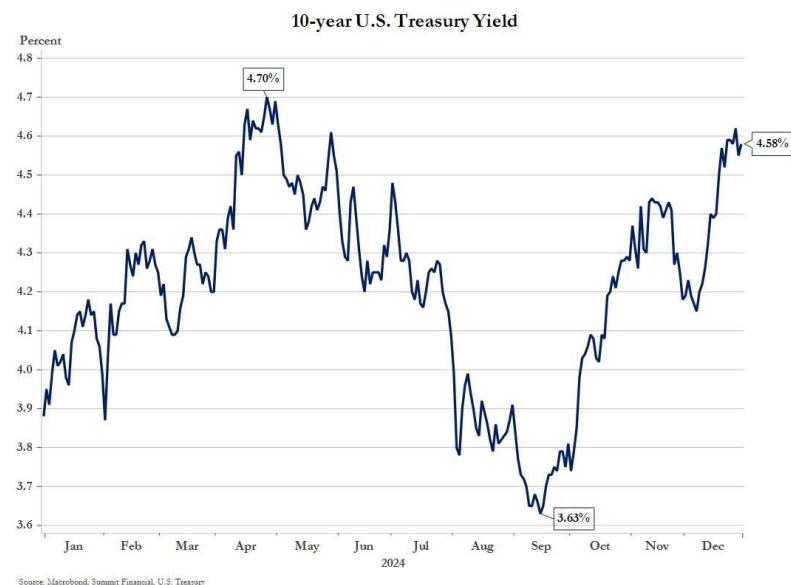
Credit spreads, already historically tight, narrowed further in Q4 and cemented broad-based tightening for the year across fixed income. Despite higher rates leading to price declines later in the year, strong income production from the bond market buoyed total returns. Many sectors managed to finish the year in positive territory, though fixed income performance was largely underwhelming in 2024. Higher-risk sectors like U.S. High Yield and Emerging Market Debt were bright spots, meaningfully outperforming more conservative fixed income assets.

Heading into 2025, the rising yields of 2024 offer investors historically attractive income levels to start the new year which should provide a reliable source of return and a cushion against expected market volatility, especially for investment grade issues and Treasuries. However, valuations in risk assets, including tight spreads within credit sensitive fixed income sectors, increases the potential fallout from any negative shocks in the year ahead.



### 10-year Treasury Yields Volatile in 2024

- The yield on 10-year U.S. Treasuries, often used as a reference point for mortgage rates and investor sentiment towards the economy, see-sawed throughout 2024.
- After beginning the year at 3.88%, it rose to a peak of 4.70% in mid-April, reflecting resilient economic growth and inflation remaining higher than expected.
- It fell over the ensuing five months as economic data softened and expectations of Fed rate cuts began to rise, hitting a low of 3.63% just prior to the Fed's initial 50bp cut in September.
- Following the initial cut, and despite additional 25bp cuts in November and December, it rose 95bps to end the year at 4.58%, driven by an outlook of higher economic growth, inflation, and federal deficits that could keep rates higher for longer.



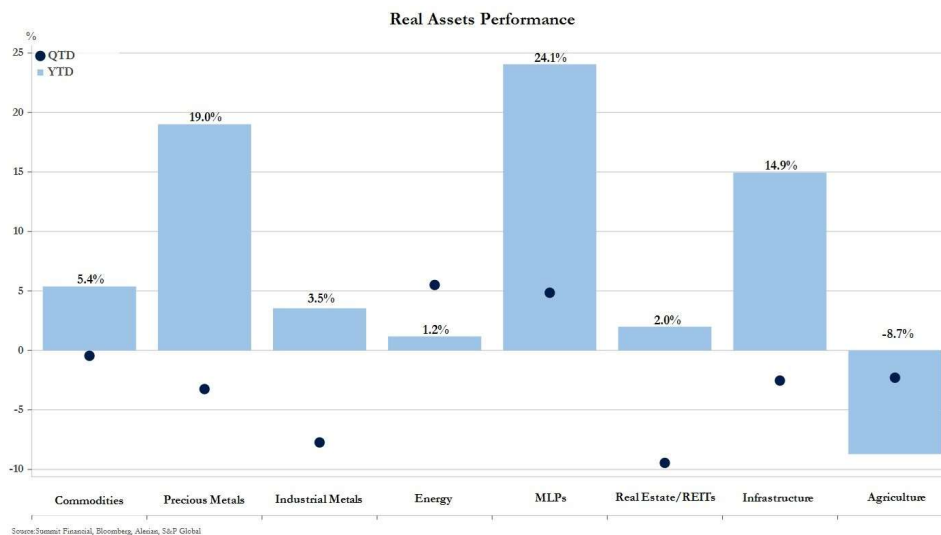


## Real Assets

Despite a challenging fourth quarter, real assets had a solid overall performance in 2024. Most sectors saw a slowdown in Q4 besides Energy (+5.5%) and MLPs (+4.8%). MLPs had the best performance in 2024 up 24.1%, marking the fourth year in a row that the index saw gains over 20%. However, Energy only managed a modest 1.2% return for 2024, as oil prices were significantly influenced by Chinese demand and U.S. shale producers wary of ramping up production. These trends are likely to persist in 2025, alongside increasing challenges on the path of energy transition. Speaking of demand, China played a pivotal role in driving oil price fluctuations this year. Nearly every report on oil price changes featured concerns over “Chinese demand,” unless focused on Middle East supply-side disruptions. Chinese demand growth disappointed expectations, failing to sustain the double-digit growth rates that traders had hoped for.

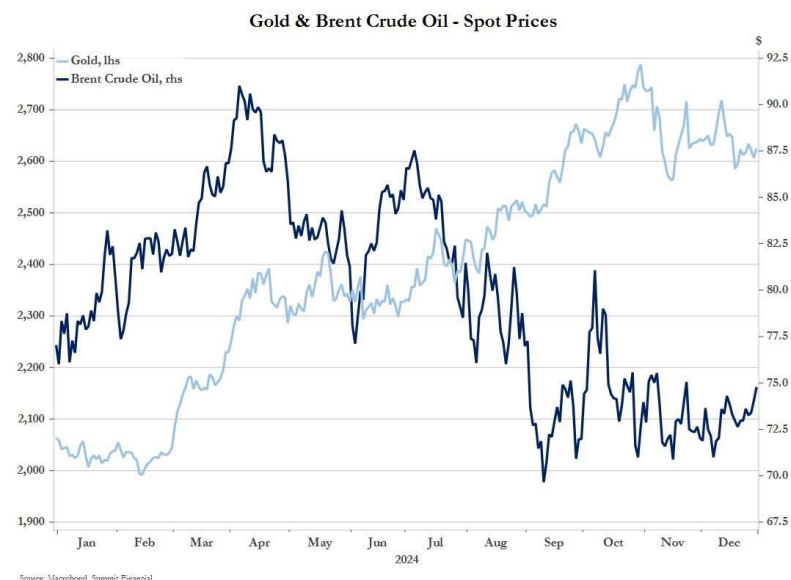
The commodities market was a rollercoaster in 2024, finishing up 5.4% for the year. Several commodities hit historic highs, while others experienced significant volatility due to geopolitical, economic, and environmental factors. Gold and silver were standout performers, achieving record highs and helping precious metals finish the year with a 19.0% gain. After a challenging start to the year, industrial metals got a mid-year boost from growing demand driven by the artificial intelligence and green energy sectors. The momentum, however, was short-lived and began to wane by July as muted global manufacturing activity and weak economic data from China dampened prices, though the sector did close the year in positive territory. Bitcoin, the largest cryptocurrency, was a top performer in 2024. Prices surged nearly 125%, ending the year around \$94,000 after starting in the \$40,000 range. The election results were a performance driver as the new administration is expected to embrace deregulatory policies that would spur crypto demand.

REITs gained 2.0% for the year despite a particularly challenging December that led to a sharp 9.5% Q4 decline. The industrial, timberland, and telecommunications sectors were the hardest hit, each posting double-digit losses for the year.



### 2024 a Banner Year for Gold

- Concerns about the U.S. fiscal outlook drove strong performance in gold, which closed the year with a 27.1% return, outpacing the S&P 500 and every other major asset class.
- Rising geopolitical tensions, increasing gold demand in Asia, and robust central bank purchases pushed gold to record highs.
- Broadly, commodity prices are largely expected to decline in 2025 due to a sluggish global economic outlook and a strengthening U.S. Dollar.
- Gold, on the other hand, is poised to continue its rally according to industry experts, as increased tariffs and elevated trade tensions may continue to drive demand from investors seeking a safe haven asset.



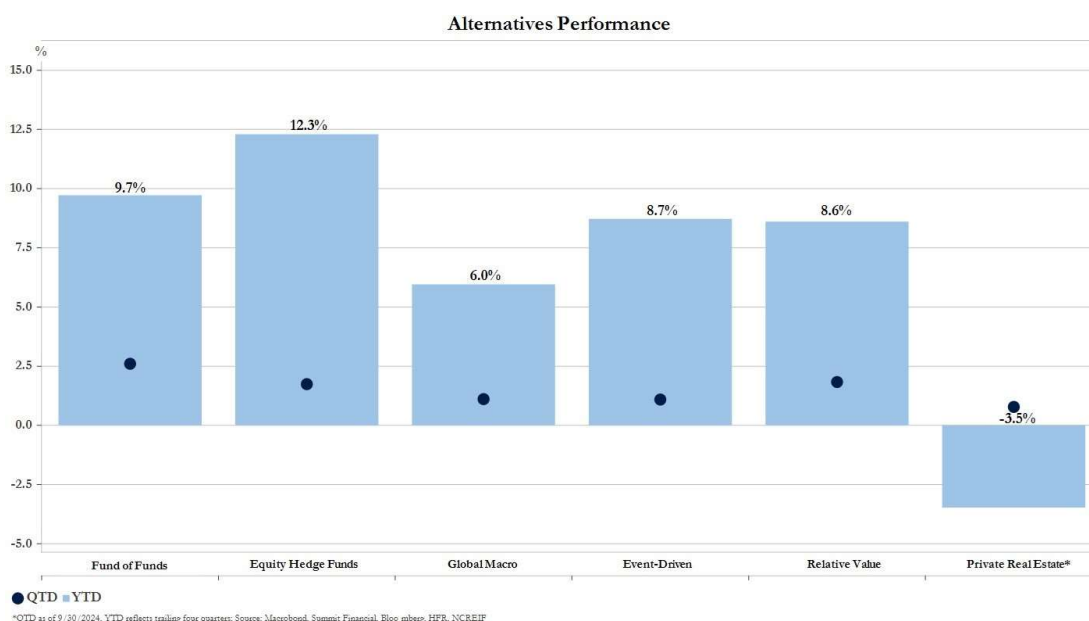
## Alternatives

Private Equity has weathered a difficult macro environment marked by higher interest rates and overall tighter financial conditions as well as a challenging regulatory landscape. Private companies have benefitted from the resilience of global economic growth, robust public equity markets and exposure to secular growth trends such as AI. Many GPs are focused on adding value through organic business growth and operational improvements rather than financial engineering. The slowdown in deal activity and exits which has been a drag the prior two years showed signs of abating in 2024 and prospects for a more favorable regulatory environment and a resurgence in M&A and IPO activity bode well for the future. Exits have been dominated by smaller companies, a trend also seen in the growing secondary market which has seen the largest supply in small and mid-sized buyouts. Private equity, which typically offers a return premium, has been underperforming public equity and a higher for longer interest rate environment will keep pressure on valuations. However, the stretched valuations of public companies and the potential for elevated market volatility support a private equity allocation for investors that can accept the limited liquidity and complexity of the asset class.

Private Real Estate underperformed other private asset classes and public real estate in 2024 but shows signs of stabilization. Triggered by the sharp rise in interest rates and the collapse of the office sector, real estate has experienced the sharpest decline in prices since the Global Financial Crisis. Steady income and healthy rental growth in many sectors have buoyed some real estate funds. Cap rates have moderated and the spread over 10-year Treasuries is in line with the long-term average. Debt financing is now more plentiful, and deal volume picked up during the year, particularly in Europe. Deal activity has also picked up in the infrastructure sector including renewable energy and data centers. Investor demand for real estate and infrastructure remains below peak levels from a few years ago, partially due to rebalancing by institutional investors that are overallocated to the asset classes. Declining global interest rates, inflation-sensitive cash flows and supply shortages in some sectors should support valuations going forward.

Direct Lending continues to deliver low double-digit yields. Returns are expected to moderate closer to long-term averages as interest rates ease and competition increases amongst private lenders and banks. Yields on new issues have materially fallen for larger and mid-market companies. Credit stress in the direct lending and leveraged loan sectors has not yet materialized based on default rates and coverage ratios, but there has been an uptick in loan modifications dominated by pricing changes that will lower future interest payments and subsequently yields. Concern over lax underwriting standards has mostly impacted the larger middle market segment while the percentage of “covenant-lite” loans with fewer restrictions on the borrower has actually declined for smaller companies. There has been increased activity in asset-backed credit which is also experiencing disintermediation from the banking system and provides exposure to a diverse universe of collateral with uncorrelated cash flows. Risk-adjusted returns for private credit remain attractive relative to other asset classes.

Hedge Funds had a mixed year and over the long-term have struggled to add value on a risk-adjusted basis. Equity Hedge strategies navigated spikes in stock market volatility to remain the top performing strategy. Global Macro suffered from multiple drawdowns in the face of interest rate and currency volatility amid an uncertain policy environment.



Growth	12/31/2024	9/30/2024
GDP Growth	2.7%*	3.1%
U.S. Leading Economic Indicator (YoY%)	-3.5%**	-4.7%
Unemployment Rate (%)	4.1%	4.1%
Initial Claims (Weekly as of 12/27/24, thousands)	211.0	225.0
Industrial Production (YoY%)	-0.90%**	-0.75%
Consumer Sentiment	74.0	70.1
ISM Manufacturing Index	49.3	47.2
ISM Non-Manufacturing Index	54.1	54.9
Retail Sales (YoY%)	3.8%**	2.0%
Building Permits (mil)	1.49**	1.43

Inflation	12/31/2024	9/30/2024
Headline CPI (YoY)	2.7%**	2.4%
Core CPI (YoY)	3.3%	3.3%
Core PCE (YoY)	2.8%**	2.7%
Forward Breakeven Inflation Expectation (5-year)	2.5%	2.1%

\*GDP Now estimate as of 1/9/2024

\*\*As of 11/30/2024

Source: Bloomberg and Federal Reserve Bank of Atlanta

Market Sentiment	12/31/2024	9/30/2024
MOVE Index	98.8	94.6
VIX Index	17.4	16.7
National Financial Conditions Index (NFCI)	-0.60	-0.56

Rates & Credit Conditions	12/31/2024	9/30/2024	10-Year Average
3-M U.S. Treasury	4.3%	4.6%	1.6%
10-YR U.S. Treasury	4.6%	3.8%	2.5%
Spreads over 10-YR U.S. Treasuries (bps)			
U.S. Corporate Investment Grade	76	94	112
U.S. Corporate High Yield	292	321	413
U.S. Municipal	-83	-46	-2

Federal Reserve Economic Projections	2024	2025	2026
Real GDP (YoY%)	2.5%	2.1%	2.0%
PCE Price Index (YoY%)	2.4%	2.5%	2.1%
Core PCE (YoY%)	2.8%	2.5%	2.2%
Unemployment %	4.0%	4.3%	4.3%

## Definitions

Term	Definition
CBOE Volatility Index (VIX)	The CBOE Volatility Index (VIX) reflects the market's real-time expectation of 30-day forward-looking volatility. It is created by the Chicago Board of Options Exchange (CBOE).
National Financial Conditions Index (NFCI)	The Chicago Fed's National Financial Conditions Index (NFCI) provides a comprehensive weekly update on U.S. financial conditions in money markets, debt and equity markets, and the traditional and "shadow" banking systems
Consumer Confidence Index	The Consumer Confidence Index is a measure based on a survey administered by The Conference Board that reflects prevailing business conditions and likely developments for the months ahead. This monthly report details consumer attitude, buying intentions, vacation plans, and consumer expectations for inflation, stock prices, and interest rates.
Consumer Price Index	The Consumer Price Index (CPI) is a measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services.
Core Inflation	Core Inflation is a measure of economic inflation that excludes food and energy
Headline Inflation	Headline Inflation is a measure of the total economic inflation that includes food and energy prices
ISM Manufacturing Index	The ISM Manufacturing Index, also known as the purchasing managers' index (PMI), is a monthly indicator of U.S. economic activity based on a survey of executives covering all North American Industry Classification System's businesses in the manufacturing sector.
ISM Non-Manufacturing Index	The ISM Non-Manufacturing Index is a monthly indicator of U.S. economic activity based on a survey of executives covering all North American Industry Classification System's businesses in the services (or non-manufacturing) sector.
Leading economic indicators (LEI)	Leading economic indicators (LEI) are statistics that precede economic events. They predict the next phase of the business cycle.
Merrill Lynch Option Volatility Estimate Index (MOVE Index)	The MOVE index, or Merrill Lynch Option Volatility Estimate Index, is a gauge of interest rate volatility in the U.S. Treasury market. It is calculated from options prices, which reflect the collective expectations of market participants about future volatility. The index measures the implied volatility of U.S. Treasury options across various maturities
OECD Composite leading indicators (CLIs)	The OECD Composite leading indicators (CLIs), designed to anticipate turning points in economic activity relative to trend
Personal Consumption Expenditures Price Index (PCE)	Personal Consumption Expenditures Price Index (PCE) is a measure of the prices that people living in the United States, or those buying on their behalf, pay for goods and services. The PCE price index is known for capturing inflation (or deflation) across a wide range of consumer expenses and reflecting changes in consumer behavior
The Federal Funds Rate	The Federal Funds Rate is the target interest rate range at which commercial banks borrow and lend their excess reserves to each other overnight, which is set by the Federal Open Market Committee (FOMC)
Treasury Bill (T-Bill)	A 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;
U-3 unemployment rate	The U-3 unemployment rate is the most commonly reported rate in the United States, representing the number of unemployed people actively seeking a job
United States Industrial Production	United States Industrial production refers to the output of industrial establishments and covers sectors such as mining, manufacturing, electricity, gas and steam and air-conditioning. This indicator is measured in an index based on a reference period that expresses change in the volume of production output;
Consumer Sentiment	Consumer Sentiment is represented by The University of Michigan Consumer Sentiment Index which rates the relative level of current and future economic conditions.
Building Permits	Building Permits measures the change in the number of new building permits issued by the government. Building permits are a key indicator of demand in the housing market.
Retail Sales	Retail sales are an economic metric that tracks consumer demand for finished goods. This figure is a very important data set as it is a key monthly market-moving event. Retail sales are reported each month by the U.S. Census Bureau and indicate the direction of the economy.
Industrial Production	Industrial production refers to the output of industrial establishments and covers sectors such as mining, manufacturing, electricity, gas and steam and air-conditioning. This indicator is measured in an index based on a reference period that expresses change in the volume of production output.
Initial Claims	Initial claims refers to the government report on the number of workers applying for unemployment benefits for the first time following job loss.

## Disclaimer

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Label	Index	Index Description
U.S. Agg	Bloomberg U.S. Aggregate Bond Index	The Bloomberg U.S. Aggregate Bond Index is a broad-based flagship benchmark that measures the investment grade, U.S. dollar-denominated, fixed-rate taxable bond market. The index includes Treasuries, government-related and corporate securities, MBS (agency fixed-rate pass-throughs), ABS, and CMBS (agency and non-agency).
Global Agg ex USD	Bloomberg Global Aggregate Index	The Bloomberg Global Aggregate Index is a flagship measure of global investment grade debt from twenty-four local currency markets. This multi-currency benchmark includes Treasury, government-related, corporate, and securitized fixed-rate bonds from both developed and emerging markets issuers.
Municipal	Bloomberg Municipal Bond Index	The Bloomberg Municipal Bond Index covers the U.S. dollar-denominated long-term tax-exempt bond market. The index has four main sectors: state and local general obligation bonds, revenue bonds, insured bonds, and pre-refunded bonds.
Russell 3000	Russell 3000 Index	The Russell 3000 Index measures the performance of the largest 3,000 U.S. companies representing approximately 98% of the investable U.S. equity market. It is constructed to provide a comprehensive, unbiased, and stable barometer of the broad market and is completely reconstituted annually to ensure new and growing equities are included.
S&P 500	S&P 500 Index	The S&P 500 Index is a market capitalization-weighted index of 500 widely held stocks often used as a proxy for the stock market. It measures the movement of the largest issues. Standard and Poor's chooses the member companies for the 500 based on market size, liquidity, and industry group representation. Included are the stocks of eleven different sectors.
MSCI EAFE (Dev)	MSCI EAFE Index	The MSCI EAFE Index (Europe, Australasia, Far East) captures large- and mid-cap representation across developed markets countries around the world, excluding the U.S. and Canada. The index covers approximately 85% of the free float-adjusted market capitalization in each country.
MSCI Emerging Markets	MSCI Emerging Markets Index	The MSCI Emerging Markets Index captures large- and mid-cap representation across emerging markets countries across the world. The index covers approximately 85% of the free float-adjusted market capitalization in each country.
HFRI FoF Comp.	HFRI Fund of Funds Composite Index	The HFRI Fund of Funds Composite Index is an equally weighted hedge fund of funds benchmark composed of global constituent funds. The underlying constituents are typically diversified among multiple managers and styles to provide a comprehensive representation of the hedge fund of funds investment space.
Nareit Developed Real Estate	FTSE EPRA/NAREIT Developed Index	The FTSE EPRA/NAREIT Developed Index is designed to track the performance of listed real estate companies and REITs worldwide. Index constituents are free float-adjusted, subject to liquidity, size, and revenue screening for inclusion.
BBG Commodity	Bloomberg Commodity Index	The Bloomberg Commodity Index reflects commodity futures price movements and is calculated on an excess return basis. The index rebalances annually weighted 2/3 by trading volume and 1/3 by world production, and weight-caps are applied at the commodity, sector, and group level for diversification. The roll period typically occurs from the 6th-10th business day based on the roll schedule.
Developed World	MSCI World Index	The MSCI World Index captures large- and mid-cap representation across developed markets countries. The index covers approximately 85% of the free float-adjusted market capitalization in each country.
Asia Pacific	MSCI AC Asia Pacific Index	The MSCI AC Asia Pacific Index captures large and mid cap representation across 5 Developed Markets countries and 8 Emerging Markets countries in the Asia Pacific region. With 1,537 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.
Asia Pacific ex Japan	MSCI AC Asia Pac ex. Japan	The MSCI AC Asia Pacific ex Japan Index captures large and mid cap representation across 4 of 5 Developed Markets countries (excluding Japan) and 9 Emerging Markets countries in the Asia Pacific region. With 1,312 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.
Europe	MSCI Europe Index	The MSCI Europe Index captures large- and mid-cap representation across developed markets countries in Europe. The index covers approximately 85% of the free float-adjusted market capitalization across the European developed markets equity universe.
Comm. Services	S&P 500 Communication Services	The S&P 500® Communication Services comprises those companies included in the S&P 500 that are classified as members of the GICS® communication services sector.
Info Tech	S&P 500 Information Technology	The S&P 500® Information Technology comprises those companies included in the S&P 500 that are classified as members of the GICS® information technology sector.
Consumer Disc.	S&P 500 Consumer Discretionary	The S&P 500® Consumer Discretionary comprises those companies included in the S&P 500 that are classified as members of the GICS® Consumer Discretionary sector.
Industrials	S&P 500 Industrials	The S&P 500® Industrials comprises those companies included in the S&P 500 that are classified as members of the GICS® industrials sector.
Materials	S&P 500 Materials	The S&P 500® Materials comprises those companies included in the S&P 500 that are classified as members of the GICS® materials sector.
Energy	S&P 500 Energy	The S&P 500® Energy comprises those companies included in the S&P 500 that are classified as members of the GICS® energy sector.
Real Estate	S&P 500 Real Estate	The S&P 500® Real Estate comprises those companies included in the S&P 500 that are classified as members of the GICS® Real Estate sector.
Financials	S&P 500 Financials	The S&P 500® Financials comprises those companies included in the S&P 500 that are classified as members of the GICS® financials sector.
Consumer Staples	S&P 500 Consumer Staples	The S&P 500® Consumer Staples comprises those companies included in the S&P 500 that are classified as members of the GICS® consumer staples sector.
Health Care	S&P 500 Health Care	The S&P 500® Health Care comprises those companies included in the S&P 500 that are classified as members of the GICS® health care sector.
Utilities	S&P 500 Utilities	The S&P 500® Utilities comprises those companies included in the S&P 500 that are classified as members of the GICS® utilities sector.
ABS	Bloomberg US Asset-Backed Securities Index	The Bloomberg US ABS Index is a broad-based flagship benchmark that measures the investment grade, US dollar-denominated, fixed-rate taxable bond market. The index only includes ABS securities.
U.S. High Yield	Bloomberg U.S. Corporate High-Yield Index	The Bloomberg U.S. Corporate High-Yield Index measures the U.S. dollar-denominated, high yield, fixed-rate corporate bond market. Securities are classified as high yield if the middle rating of Moody's, Fitch, and S&P is Ba1/BB+/BB+ or below. Bonds from issuers with an emerging markets country of risk, based on Barclays EM country definition, are excluded.
MBS	Bloomberg U.S. Mortgage-Backed Securities Index	The Bloomberg Mortgage-Backed Securities Index tracks fixed-rate agency mortgage-backed pass-through securities guaranteed by Ginnie Mae (GNMA), Fannie Mae (FNMA), and Freddie Mac (FHLMC). The index is constructed by grouping individual TBA-deliverable MBS pools into aggregates or generics based on program, coupon, and vintage.
TIPS	Bloomberg U.S. Treasury Inflation Notes 1-10 Year Index	The Bloomberg U.S. Treasury Inflation Notes 1-10 Year Index measures the performance of the U.S. Treasury Inflation-Protected Securities (TIPS) market with less than 10 years to maturity. TIPS are inflation-protected bonds (IPBs) that are issued by the U.S. Treasury. Their face value is pegged to the CPI and adjusted in step with changes in the rate of inflation.
Treasuries	Bloomberg U.S. Treasury Index	The Bloomberg U.S. Treasury Index measures U.S. dollar-denominated, fixed-rate, nominal debt issued by the U.S. Treasury. Treasury bills are excluded by the maturity constraint but are part of a separate Short Treasury Index. STRIPS are excluded from the index because their inclusion would result in double-counting.
EM Debt	Bloomberg Emerging Markets Tradeable Debt Index: Total Return	This index measures the performance of emerging market debt on a total return basis



Label	Index	Index Description
Precious Metals	Bloomberg Precious Metals Subindex	Formerly known as Dow Jones-UBS Precious Metals Subindex (DJUBSPR), the index is a commodity group subindex of the Bloomberg CI. It is composed of futures contracts on gold and silver. It reflects the return of underlying commodity futures price movements only and is quoted in USD.
Industrial Metals	Bloomberg Industrial Metals Subindex	Formerly known as Dow Jones-UBS Industrial Metals Subindex (DJUBSIN), the index is composed of futures contracts on aluminum, copper, nickel and zinc. It reflects the return of underlying commodity futures price movements only. It is quoted in USD.
Energy	Bloomberg Energy Subindex	Formerly known as Dow Jones-UBS Energy Subindex (DJUBSEN), the index is a commodity group subindex of the Bloomberg CI. It is composed of futures contracts on crude oil, heating oil, unleaded gasoline and natural gas. It reflects the return of underlying commodity futures price movements only and is quoted in USD.
MLPs	Alerian MLP Index	The Alerian MLP Index is a float-adjusted, capitalization-weighted index whose constituents earn most of their cash flow from midstream activities involving energy commodities. It tracks energy infrastructure Master Limited Partnerships (MLPs).
Real Estate/REITs	FTSE EPRA/NAREIT Developed Index	The FTSE EPRA/NAREIT Developed Index is designed to track the performance of listed real estate companies and REITs worldwide. Index constituents are free float-adjusted, subject to liquidity, size, and revenue screening for inclusion.
Infrastructure	S&P Global Infrastructure Index	The S&P Global Infrastructure Index is designed to track 75 companies from around the world chosen to represent the listed infrastructure industry while maintaining liquidity and tradability. To create diversified exposure, the index includes three distinct infrastructure clusters: energy, transportation, and utilities.
Agriculture	Bloomberg Agriculture Subindex	Formerly known as Dow Jones-UBS Agriculture Subindex (DJUBSAG), the index is a commodity group subindex of the Bloomberg CI. It is composed of futures contracts on coffee, corn, cotton, soybeans, soybean oil, soybean meal, sugar and wheat. It reflects the return of underlying commodity futures price movements only and is quoted in USD.
Fund of Funds	HFRI Fund of Funds Composite Index	The HFRI Fund of Funds Composite Index is an equally weighted hedge fund of funds benchmark composed of global constituent funds. The underlying constituents are typically diversified among multiple managers and styles to provide a comprehensive representation of the hedge fund of funds investment space.
Equity Hedge Funds	HFRI Equity Hedge Index	The HFRI Equity Hedge Index is an equally weighted hedge fund benchmark composed of investment managers who maintain both long and short positions, primarily in equity and equity derivative securities. Equity hedge managers typically maintain at least 50% exposure to, and may in some cases be entirely invested in, equities, both long and short.
Global Macro	HFRI Macro Index	The HFRI Macro Index is an equally weighted hedge fund benchmark composed of 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. Managers employ a variety of techniques, both discretionary and systematic analysis, combinations of top-down and bottom-up theses, quantitative and fundamental approaches, and long- and short-term holding periods.
Event-Driven	HFRI Event-Driven Index	The HFRI Event-Driven Index is an equally weighted hedge fund benchmark composed of 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. Event-driven exposure includes a combination of sensitivities to equity markets, credit markets, and idiosyncratic, company-specific developments.
Relative Value	HFRI Relative Value Index	The HFRI Relative Value Index is an equally weighted hedge fund benchmark composed of investment managers who maintain positions in which the investment thesis is predicated on the realization of a valuation discrepancy in the relationship between multiple securities. Managers employ a variety of fundamental and quantitative techniques to establish investment theses, and security types can range broadly across equity, fixed income, derivative, or other security types.
Private Real Estate	NCREIF Property Index	The NCREIF Property Index is a quarterly, unleveraged composite total return for private commercial real estate properties held for investment purposes only. Constituents include operating apartment, hotel, industrial, office, and retail properties.
U.S. Large Cap	Russell 1000 Index	The Russell 1000 Index measures the performance of the large-cap segment of the U.S. equity universe. It is a subset of the Russell 3000 Index representing approximately 90% of the total market capitalization of that index. It includes approximately 1,000 of the largest securities based on a combination of their market cap and current index membership.
U.S. Mid Cap	Russell Midcap Index	The Russell Midcap Index measures the performance of the mid-cap segment of the U.S. equity universe. The Russell Midcap Index is a subset of the Russell 1000 Index. It includes approximately 800 of the smallest securities based on a combination of their market cap and current index membership. The Russell Midcap Index represents approximately 31% of the total market capitalization of the Russell 1000 companies.
U.S. Small Cap	Russell 2000 Index	The Russell 2000 Index measures the performance of the small-cap segment of the U.S. equity universe. It is a subset of the Russell 3000 Index representing approximately 10% of the total market capitalization of that index. It includes approximately 2,000 of the smallest securities based on a combination of their market cap and current index membership.
U.S. Core	Russell 1000 Index	The Russell 1000 Index measures the performance of the large-cap segment of the U.S. equity universe. It is a subset of the Russell 3000 Index representing approximately 90% of the total market capitalization of that index. It includes approximately 1,000 of the largest securities based on a combination of their market cap and current index membership.
U.S. Value	Russell 1000 Value Index	The Russell 1000 Value Index measures the performance of the large-cap value segment of the U.S. equity universe. It includes those Russell 1000 companies with lower price-to-book ratios and lower forecasted growth values.
U.S. Growth	Russell 1000 Growth Index	The Russell 1000 Growth Index measures the performance of the large-cap growth segment of the U.S. equity universe. It includes those Russell 1000 companies with higher price-to-book ratios and higher forecasted growth values.
International Large Cap	MSCI All Country World ex. U.S. Index	The MSCI All Country World ex U.S. Index captures large- and mid-cap representation across developed and emerging markets countries, excluding the U.S. The index covers approximately 85% of the global equity opportunity set outside the U.S.
International Mid Cap	MSCI All Country World ex. U.S. Mid Cap Index	The MSCI ACWI ex USA Mid Cap Index captures mid cap representation across 22 Developed Markets (DM) and 24 Emerging Markets (EM) countries*. With 1,208 constituents, the index covers approximately 15% of the free float-adjusted market capitalization in each country.
International Small Cap	MSCI All Country World ex. U.S. Small Cap Index	The MSCI ACWI ex USA Small Cap Index captures small cap representation across 22 of 23 Developed Markets (DM) countries (excluding the US) and 24 Emerging Markets (EM) countries*. With 4,263 constituents, the index covers approximately 14% of the global equity opportunity set outside the US.
International Core	MSCI All Country World ex. U.S. Index	The MSCI All Country World ex U.S. Index captures large- and mid-cap representation across developed and emerging markets countries, excluding the U.S. The index covers approximately 85% of the global equity opportunity set outside the U.S.
International Value	MSCI All Country World ex. U.S. Value Index	The MSCI ACWI ex USA Value Index captures large and mid cap securities exhibiting overall value style characteristics across 22 Developed and 24 Emerging Markets countries*. The value investment style characteristics for index construction are defined using three variables: book value to price, 12-month forward earnings to price and dividend yield.
International Growth	MSCI All Country World ex. U.S. Growth Index	The MSCI ACWI ex USA Growth Index captures large and mid cap securities exhibiting overall growth style characteristics across 22 Developed Markets (DM) countries and 24 Emerging Markets (EM) countries*. The growth investment style characteristics for index construction are defined using five variables: long-term forward EPS growth rate, short-term forward EPS growth rate, current internal growth rate and long-term historical EPS growth trend and long-term historical sales per share growth trend.