

# Quarterly Considerations

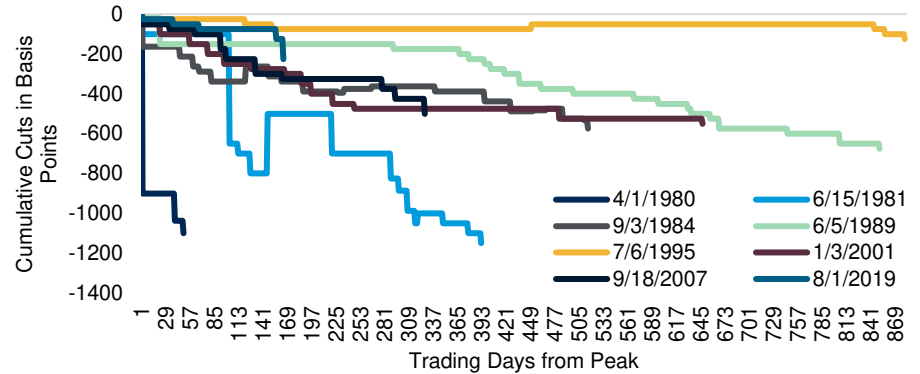
## Q3 2024

## Market Themes

1. The Federal Reserve has embarked on the latest cutting cycle, with an initial cut of 50 basis points at its September meeting. Uncertainty remains on the ultimate timing and quantity of future cuts.
2. Financial markets, on average, have performed well following the onset of an interest rate cutting cycle. We believe opportunities within fixed income and small cap equities remain, while concentration remains within the large cap space.
3. Market volatility will likely remain elevated as we head into the presidential election. Investing based on a particular political party is rarely effective. Those who have stayed invested regardless have been rewarded.

## Historical Federal Reserve Cutting Cycles

The path of lower Federal Funds Rates have varied widely over time, but since the 1980s, the average cutting cycle has lasted approximately 22 months with roughly 600 basis points of cumulative cuts.



Sources: FactSet, FOMC, Fiducient Advisors. As of September 30, 2024.

### 1-Year Performance Following the First Rate Cut of Cycle

Federal reserve cutting cycles, on average, have resulted in favorable results for areas of the market such as fixed income and small cap equities. This may present attractive investment opportunities outside of U.S. large cap in today's market environment.

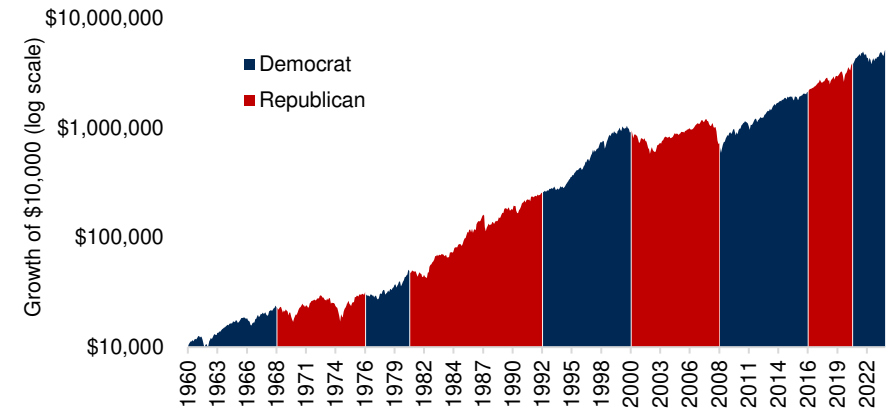
First Rate Cut	4/1/80	6/15/81	9/3/84	6/5/89	7/6/95	1/3/01	9/18/07	8/1/19	Avg
S&P 500	40.1	-10.7	18.2	16.8	23.0	-8.8	-20.0	12.0	8.8
Russell 2000	72.1	-20.6	15.7	0.4	20.9	6.9	-11.6	-4.6	9.9
Bbg Agg Bond	13.0	14.9	24.2	9.4	3.3	7.0	6.0	10.1	11.0
U.S. Dollar				-0.1	0.1	0.1	0.0	-5.2	-1.0

Sources: FactSet, FOMC, Morningstar, Fiducient Advisors. As of September 30, 2024.

Performance is the following 1-year period from the first rate cut date.

### Staying Invested Rewards Long-Term Investors

Investors who stayed invested regardless of political party have been rewarded with portfolio values 10x greater than those investing only under a particular party.



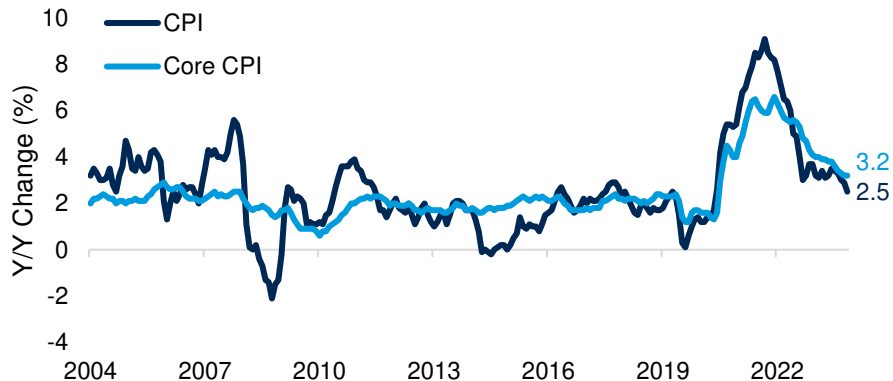
Sources: Schwab Center for Financial Research, Morningstar. Data from January 1, 1961 to December 31, 2023. See disclosures for additional information and definitions.

See disclosures for list of indices representing each asset class. Past performance does not indicate future performance and there is a possibility of a loss. Indices cannot be invested in directly. This report is intended for the exclusive use of clients or prospective clients of MPS LORIA. The information contained herein is intended for the recipient, is confidential and may not be disseminated or distributed to any other person without the prior approval of MPS LORIA. Any dissemination or distribution is strictly prohibited. Information has been obtained from a variety of sources believed to be reliable though not independently verified. Any forecasts represent future expectations and actual returns; volatilities and correlations will differ from forecasts. This report does not represent a specific investment recommendation. Please consult with your advisor, attorney and accountant, as appropriate, regarding specific advice. Past performance does not indicate future performance and there is a possibility of a loss.

## Economic Review

### U.S. Inflation

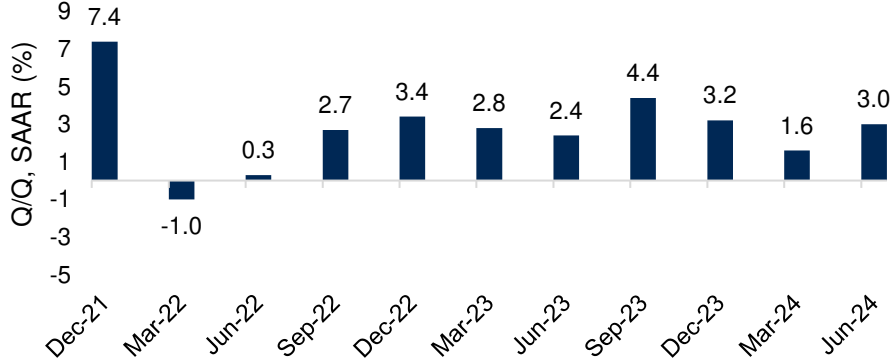
Inflation is trending toward the Federal Reserve's 2% target, with U.S. CPI falling to the lowest level since 2021. The Fed acknowledged the progress made on one half of its dual mandate of price stability and full employment.



Sources: FactSet, BLS. As of August 30,

### U.S. Real GDP Growth

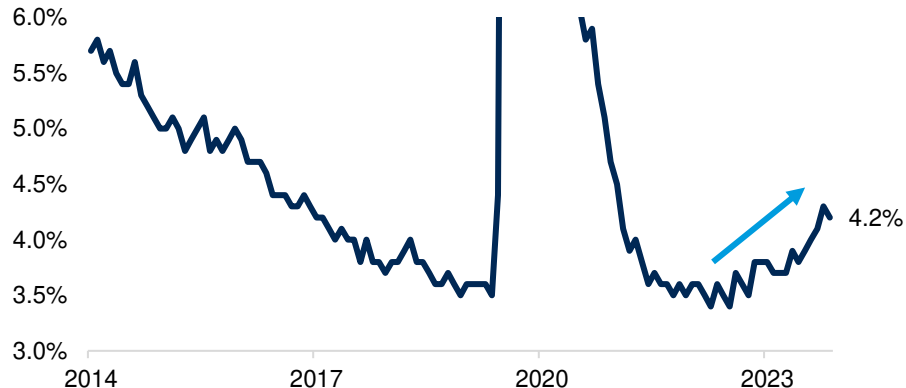
The U.S. economy remains resilient growing 3% in the second quarter. Despite a cooling in the labor market, the consumer remains relatively healthy and corporate fundamentals are positive. However, rising delinquencies, the dock worker strike, potential tariffs, and other uncertainties may weigh on future growth.



Sources: FactSet, BEA. As of September 30, 2024.

### U.S. Unemployment Rate

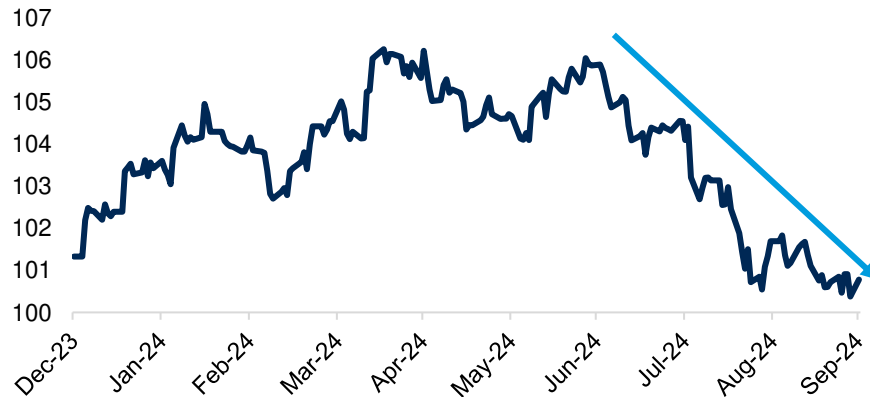
The U.S. labor market is cooling, and U.S. unemployment remains above 4%. Labor market data over coming months will likely play an increasingly important roll in the Federal Reserve's next interest rate decisions.



Sources: FactSet, DOL. As of August 30, 2024. Note, the unemployment rate was over 10% for a period of time in 2020, but is not shown due to scaling of y-axis.

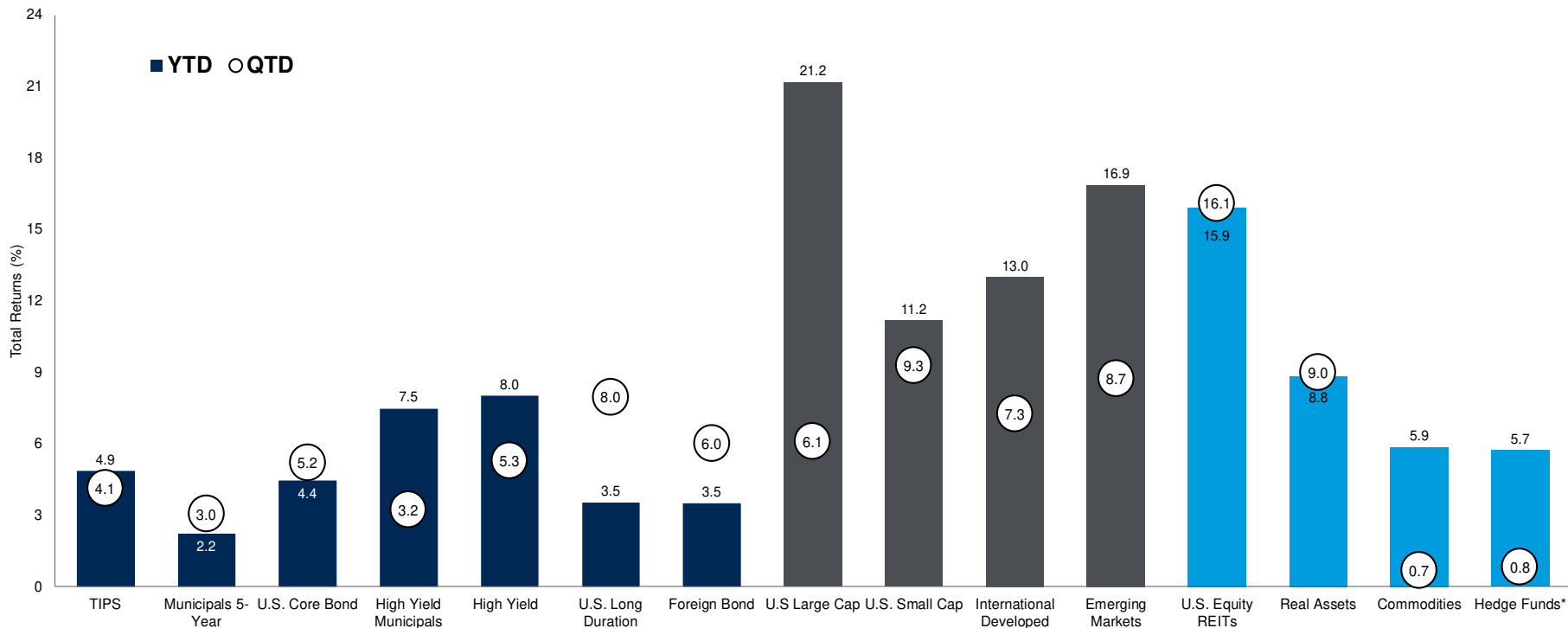
### U.S. Dollar Index (DXY)

Falling interest rates and easing central bank activity pushed the U.S. dollar approximately 5% lower during the quarter. A falling dollar may help spur U.S. exports, but ultimately makes goods abroad more expensive for the U.S. consumer.



Sources: FactSet. As of September 30, 2024.

## Asset Class Returns



Source: Morningstar Direct. As of September 30, 2024. \*Hedge fund returns as of August 31, 2024.

### Fixed Income (3Q 2024)

- + The Federal Reserve cut its target rate by 50 basis points at its September meeting, as the inflation backdrop has progressed closer to the Fed's target and the labor market has started to show signs of weakness. Longer duration assets, the most sensitive to lower interest rates, performed best in the quarter.
- + The high yield market continues to generate strong returns as investor expectations grow for the prospect of a soft-landing scenario.
- + The U.S. dollar fell during the period, providing an added tailwind for non-USD debt.

### Equity (3Q 2024)

- + Areas of the equity market less exposed to the concentrated names in U.S. large cap outperformed in the third quarter. U.S. small cap had a strong return, benefitting from both lower interest rates and less exposure to concerns about the monetization of AI.
- + Central bank activity in Europe also provided a boost to international developed markets.
- + Emerging markets outperformed developed markets during the period. Investor optimism surrounding the recent stimulus package in China helped fuel strong performance for the region.

### Real Asset / Alternatives (3Q 2024)

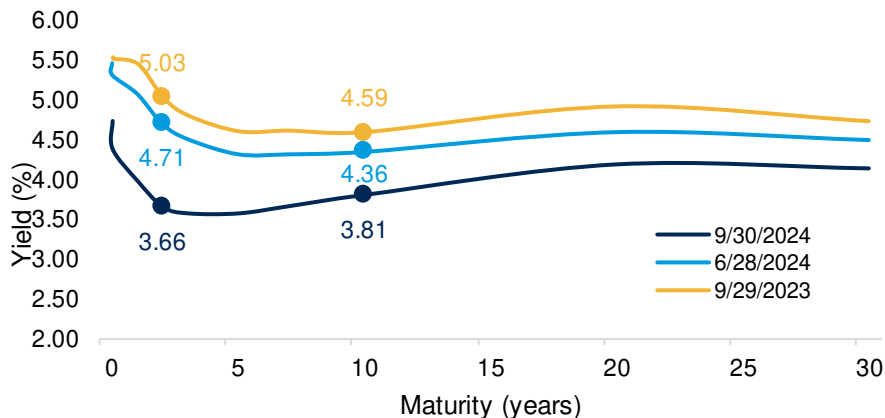
- + Equity REITs had a strong quarter, producing double digit results and bringing the asset class into positive territory year-to-date. The falling interest rate environment and market expectations for the Fed to continue to cut interest rates fueled the asset class.
- + Commodities eked out a modest gain, driven from the metals sub-sectors. Energy lagged due to declining oil prices – a rare move amidst rising military tensions in the middle east.
- + Real assets performed well during the quarter. Much of the gain came from infrastructure and timber.

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# Fixed Income Market Update

## U.S. Treasury Yield Curve

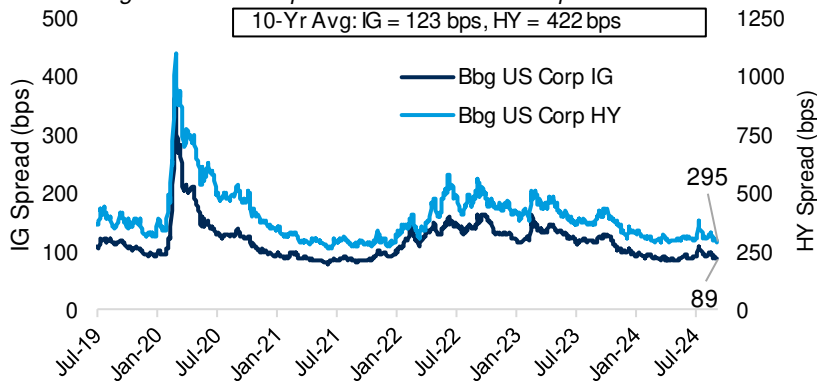
The yield curve moved lower as the Fed began to cut interest rates. The curve steepened as a result and the spread between the 2-year and 10-year yield moved into positive territory for the first time since 2022.



Source: FactSet. As of September 30, 2024.

## Corporate Market Spreads – Trailing 5 Years

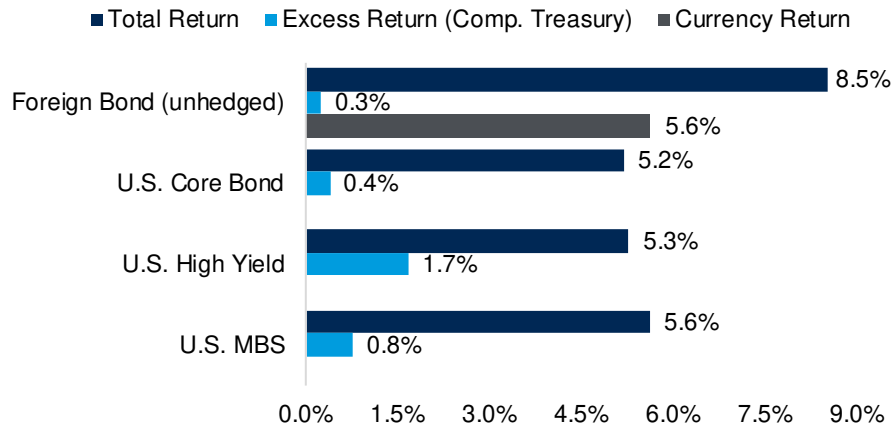
Valuations remain elevated (tighter spreads) within the corporate credit market. Continued demand, favorable fundamentals and increasing optimism around a soft-landing scenario have provided a tailwind for corporate credit.



Source: FactSet. As of September 30, 2024.

## Index Performance Attribution (3Q 2024)

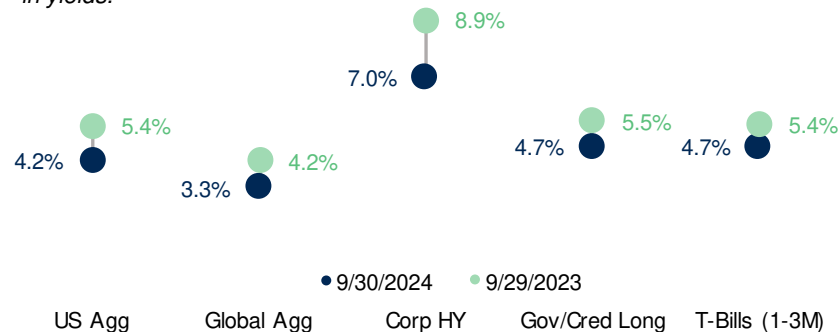
Most sectors outperformed comparable Treasuries during the quarter. Foreign bonds benefited from a falling U.S. dollar, while credit sectors had the additional tailwind from spread compression.



Source: FactSet. As of September 30, 2024.

## Current Yield-to-Worst vs. 1 Year Ago

The environment has shifted and while yields remain attractive across fixed income sectors, they are lower than they were a year ago. Both spread compression, which has impacted high yield the most, and lower rates have contributed to the decline in yields.



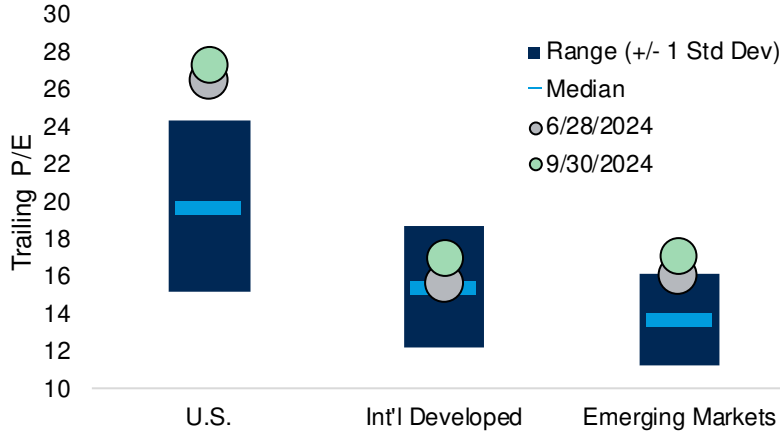
Source: FactSet. As of September 30, 2024. Based on respective Bloomberg Index.

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## Equity Market Update

### Equity Valuations (Trailing PE – Last 15 Years)

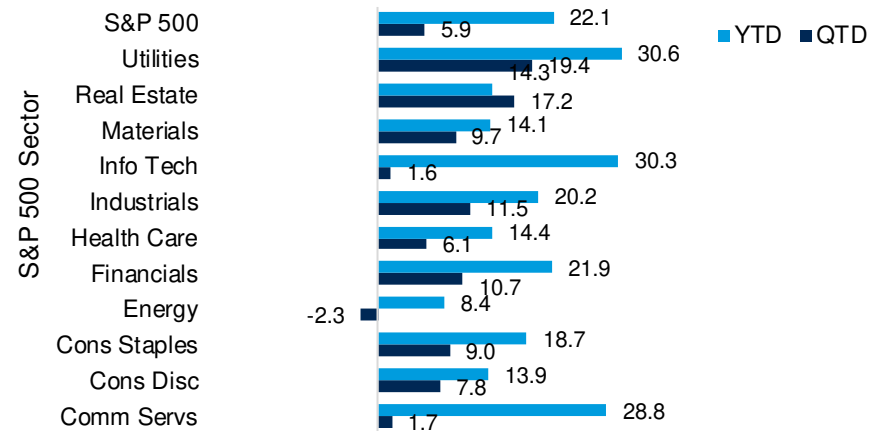
Equity valuations moved higher in the third quarter on the back of favorable price movement. Large cap domestic equity valuations remain stretched, driven by a select few names concentrated at the top of the benchmark.



Source: FactSet. As of September 30, 2024.

### U.S. Equities – Return by Sector (3Q 2024)

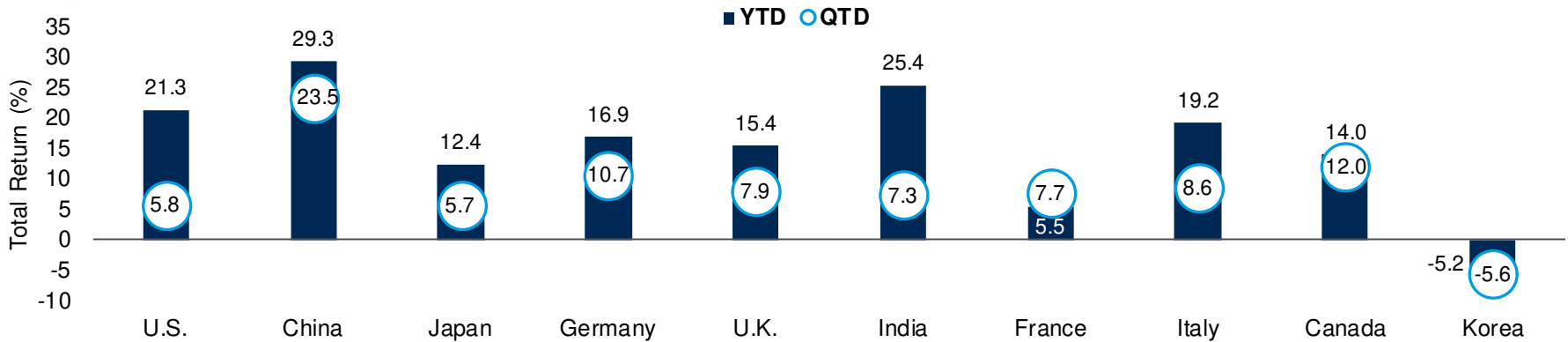
Almost all sectors were in positive territory in the third quarter, with energy the lone negative standout. Returns were more widely distributed among sectors as the AI craze from early in the year cooled off in the third quarter.



Source: Morningstar Direct. As of September 30, 2024. Total Returns.

### Select Country Returns (%)

Many of the largest economies had positive gains during the third quarter. China was among the top performing countries due to optimism surrounding the economic stimulus package being implemented. Interest rates moved lower in Europe as well, and policy rate cuts from the ECB and the Bank of England provided a tailwind for the regions.



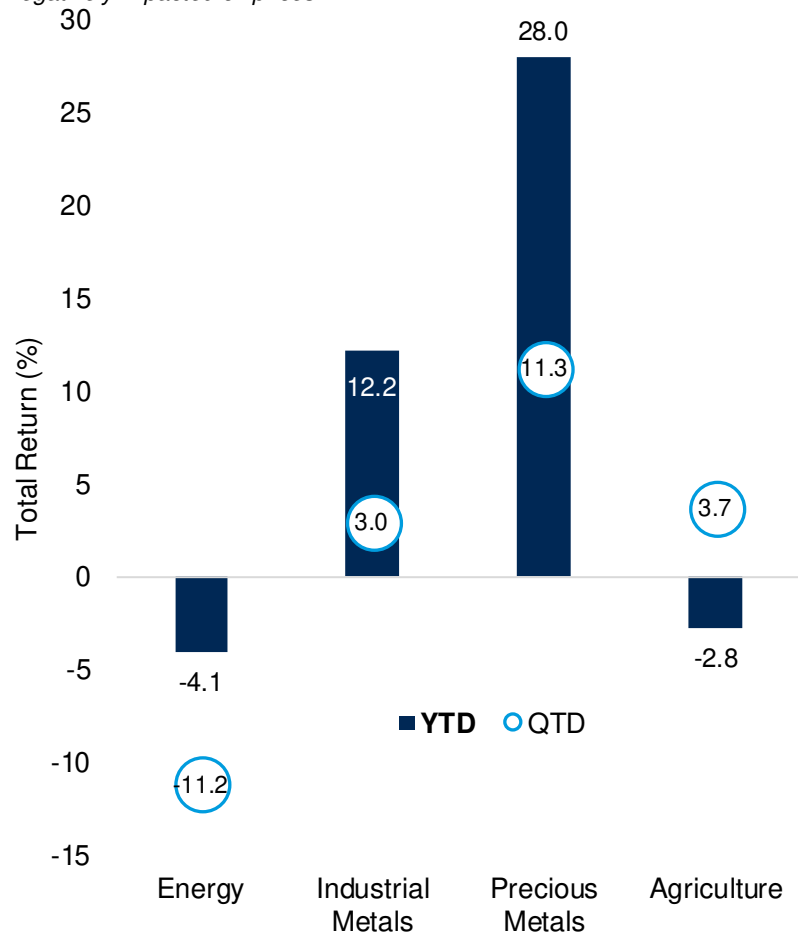
Source: Morningstar Direct. As of September 30, 2024.

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## Real Assets Market Update

### Commodity Performance (3Q 2024)

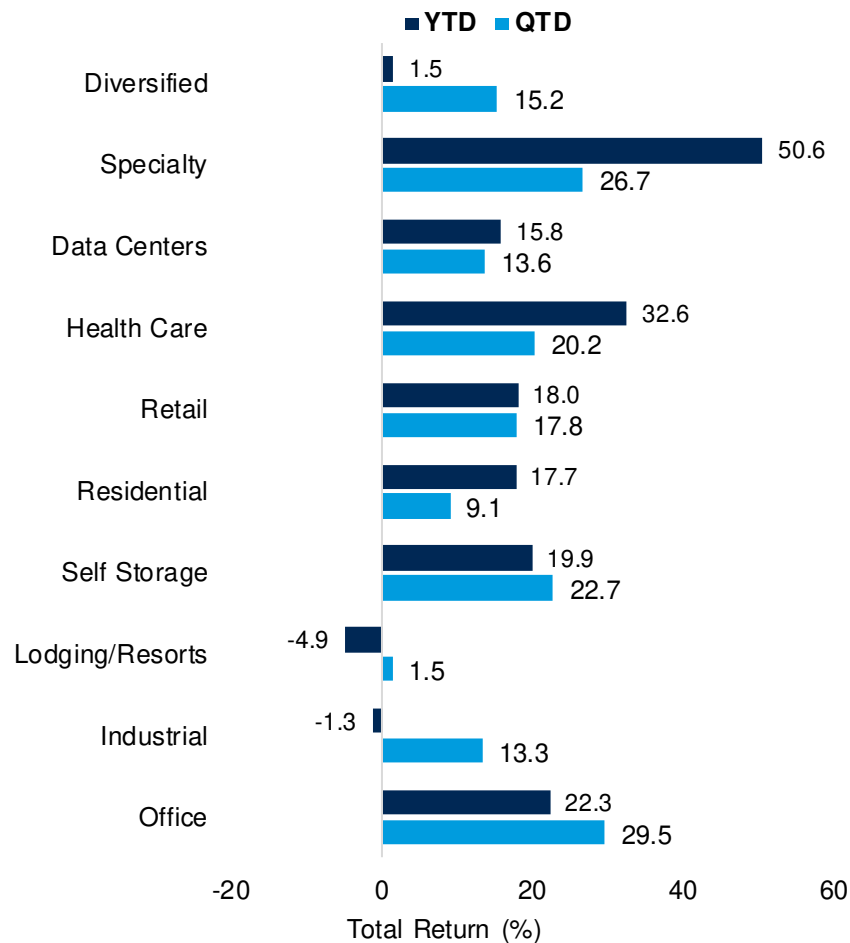
Commodities were modestly positive during the third quarter, with mixed results from underlying sub-sectors. Precious metals was the leader as gold prices moved higher. Concerns about a slowing global economy and OPEC+ adding to supply negatively impacted oil prices



Source: Morningstar Direct. As of September 30, 2024.

### REIT Sector Performance (3Q 2024)

REITs had a strong quarter in the declining interest rate environment. The office sub-sector rebounded and was among the top performing areas. Longer lease assets within the specialty sub-sector, which are more sensitive to interest rate changes, benefitted as well.



Source: Morningstar Direct. As of September 30, 2024.

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# The Case for Diversification

2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	YTD 2024	10 Years (Ann)
U.S. Equity REITs 30.1	U.S. Equity REITs 3.2	U.S. Small Cap 21.3	Emerging Markets 37.3	High Yield Munis 4.8	U.S. Large Cap 31.5	U.S. Small Cap 20.0	U.S. Equity REITs 43.2	Commodities 16.1	U.S. Large Cap 26.5	U.S. Large Cap 21.2	U.S. Large Cap 13.1
High Yield Munis 13.8	Municipals 5-Year 2.4	High Yield 17.1	International Dev. 25.0	Municipals 5-Year 1.7	U.S. Equity REITs 26.0	U.S. Large Cap 18.4	Commodities 27.1	Municipals 5-Year -5.3	International Developed 18.2	Emerging Markets 16.9	U.S. Small Cap 8.8
U.S. Large Cap 13.7	High Yield Munis 1.8	U.S. Large Cap 12.0	U.S. Large Cap 21.8	Foreign Bond 0.5	U.S. Small Cap 25.5	Emerging Markets 18.3	US Large Cap 26.5	Hedge Funds -5.6	U.S. Small Cap 16.9	U.S. Equity REITs 15.9	U.S. Equity REITs 7.8
Core Bond 6.0	U.S. Large Cap 1.4	Commodities 11.7	EM Debt (unhedged) 15.2	Core Bond 0.0	International Dev. 22.5	TIPS 11.0	US Small Cap 14.8	High Yield -11.2	U.S. Equity REITs 13.7	International Developed 13.0	International Developed 5.7
Balanced 5.1	Core Bond 0.6	Emerging Markets 11.2	U.S. Small Cap 14.6	TIPS -1.3	Emerging Markets 18.4	Balanced 8.8	International Dev. 11.3	EM Debt (unhedged) -11.7	High Yield 13.4	U.S. Small Cap 11.2	Balanced 5.4
U.S. Small Cap 4.9	Hedge Funds -0.3	EM Debt (unhedged) 9.9	Balanced 13.6	High Yield -2.1	Balanced 17.5	International Dev. 7.8	Balanced 9.8	TIPS -11.8	Balanced 12.8	Balanced 11.0	High Yield 5.0
TIPS 3.6	International Dev. -0.8	U.S. Equity REITs 8.5	High Yield Munis 9.7	Hedge Funds -4.0	High Yield 14.3	Core Bond 7.5	High Yield Munis 7.8	U.S. Core Bond -13.0	EM Debt (unhedged) 12.7	High Yield 8.0	High Yield Municipals 4.5
Hedge Funds 3.4	TIPS -1.4	Balanced 7.6	Hedge Funds 7.8	U.S. Large Cap -4.4	EM Debt (unhedged) 13.5	Hedge Funds 7.1	TIPS 6.0	High Yield Municipals -13.1	Emerging Markets 9.8	High Yield Municipals 7.5	Emerging Markets 4.0
Municipals 5-Year 3.2	Foreign Bond -2.3	TIPS 4.7	High Yield 7.5	U.S. Equity REITs -4.6	High Yield Munis 10.7	High Yield 7.1	Hedge Funds 5.7	Foreign Bond -14.2	High Yield Municipals 9.2	Commodities 5.9	Hedge Funds 3.5
Foreign Bond 2.9	Balanced -3.3	Foreign Bond 3.2	Foreign Bond 6.5	Balanced -5.8	Core Bond 8.7	Foreign Bond 7.0	High Yield 5.3	International Dev. -14.5	Foreign Bond 7.0	Hedge Funds 5.7	TIPS 2.5
High Yield 2.5	U.S. Small Cap -4.4	High Yield Munis 3.0	U.S. Equity REITs 5.2	EM Debt (unhedged) -6.2	TIPS 8.4	High Yield Munis 4.9	Municipals 5-Year 0.3	Balanced -14.9	U.S. Core Bond 5.5	TIPS 4.9	U.S. Core Bond 1.8
Emerging Markets -2.2	High Yield -4.5	Core Bond 2.6	Core Bond 3.5	U.S. Small Cap -11.0	Hedge Funds 7.8	Municipals 5-Year 4.3	Core Bond -1.5	U.S. Large Cap -19.1	Hedge Funds 4.4	EM Debt (unhedged) 4.9	Municipals 5-Year 1.8
International Dev. -4.9	Emerging Markets -14.9	International Dev. 1.0	Municipals 5-Year 3.1	Commodities -11.2	Commodities 7.7	EM Debt (unhedged) 2.7	Emerging Markets -2.5	Emerging Markets -20.1	Municipals 5-Year 4.3	U.S. Core Bond 4.4	Foreign Bond 1.1
EM Debt (unhedged) -5.7	EM Debt (unhedged) -14.9	Hedge Funds 0.5	TIPS 3.0	International Dev. -13.8	Foreign Bond 6.3	Commodities -3.1	Foreign Bond -4.2	U.S. Small Cap -20.4	TIPS 3.9	Foreign Bond 3.5	EM Debt (unhedged) 0.6
Commodities -17.0	Commodities -24.7	Municipals 5-Year -0.4	Commodities 1.7	Emerging Markets -14.6	Municipals 5-Year 5.4	U.S. Equity REITs -8.0	EM Debt (unhedged) -8.7	U.S. Equity REITs -24.4	Commodities -7.9	Municipals 5-Year 2.2	Commodities 0.0

Sources: Morningstar, FactSet. As of September 30, 2024. \*Periods greater than one year are annualized. Total returns in U.S. dollars. Hedge Funds as of August 31, 2024.

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# Financial Markets Performance

**Total Return as of September 30, 2024**  
Periods greater than one year are annualized  
All returns are in U.S. dollar terms

<b>Global Fixed Income Markets</b>	<b>QTD</b>	<b>YTD</b>	<b>1YR</b>	<b>3YR</b>	<b>5YR</b>	<b>7YR</b>	<b>10YR</b>	<b>15YR</b>
Bloomberg 1-3-Month T-Bill	1.4%	4.1%	5.5%	3.6%	2.3%	2.2%	1.6%	1.1%
Bloomberg U.S. TIPS	4.1%	4.9%	9.8%	-0.6%	2.6%	2.9%	2.5%	3.2%
Bloomberg Municipal Bond (5 Year)	3.0%	2.2%	7.6%	0.4%	1.3%	1.7%	1.8%	2.4%
Bloomberg High Yield Municipal Bond	3.2%	7.5%	17.4%	1.0%	3.1%	4.5%	4.5%	5.7%
Bloomberg U.S. Aggregate	5.2%	4.4%	11.6%	-1.4%	0.3%	1.5%	1.8%	2.6%
Bloomberg U.S. Corporate High Yield	5.3%	8.0%	15.7%	3.1%	4.7%	4.7%	5.0%	6.9%
Bloomberg Global Aggregate ex-U.S. Hedged	3.5%	4.2%	9.8%	0.6%	0.6%	2.3%	2.6%	3.2%
Bloomberg Global Aggregate ex-U.S. Unhedged	8.5%	2.8%	12.3%	-4.4%	-1.9%	-0.8%	-0.5%	0.2%
Bloomberg U.S. Long Gov / Credit	8.0%	3.5%	17.2%	-6.2%	-2.0%	1.0%	2.3%	4.2%
<b>Global Equity Markets</b>	<b>QTD</b>	<b>YTD</b>	<b>1YR</b>	<b>3YR</b>	<b>5YR</b>	<b>7YR</b>	<b>10YR</b>	<b>15YR</b>
S&P 500	5.9%	22.1%	36.4%	11.9%	16.0%	14.5%	13.4%	14.1%
Dow Jones Industrial Average	8.7%	13.9%	28.8%	10.0%	11.8%	11.9%	12.0%	13.0%
NASDAQ Composite	2.8%	21.8%	38.6%	8.8%	18.8%	16.9%	16.1%	16.6%
Russell 3000	6.2%	20.6%	35.2%	10.3%	15.3%	13.7%	12.8%	13.8%
Russell 1000	6.1%	21.2%	35.7%	10.8%	15.6%	14.2%	13.1%	14.0%
Russell 1000 Growth	3.2%	24.5%	42.2%	12.0%	19.7%	18.2%	16.5%	16.5%
Russell 1000 Value	9.4%	16.7%	27.8%	9.0%	10.7%	9.5%	9.2%	11.2%
Russell Mid Cap	9.2%	14.6%	29.3%	5.7%	11.3%	10.5%	10.2%	12.5%
Russell Mid Cap Growth	6.5%	12.9%	29.3%	2.3%	11.5%	11.9%	11.3%	13.2%
Russell Mid Cap Value	10.1%	15.1%	29.0%	7.4%	10.3%	8.8%	8.9%	11.6%
Russell 2000	9.3%	11.2%	26.8%	1.8%	9.4%	7.4%	8.8%	10.6%
Russell 2000 Growth	8.4%	13.2%	27.7%	-0.4%	8.8%	7.6%	8.9%	11.1%
Russell 2000 Value	10.2%	9.2%	25.9%	3.8%	9.3%	6.6%	8.2%	9.8%
MSCI ACWI	6.6%	18.7%	31.8%	8.1%	12.2%	10.2%	9.4%	9.6%
MSCI ACWI ex. U.S.	8.1%	14.2%	25.4%	4.1%	7.6%	5.4%	5.2%	5.5%
MSCI EAFE	7.3%	13.0%	24.8%	5.5%	8.2%	6.0%	5.7%	6.0%
MSCI EAFE Growth	5.7%	12.3%	26.5%	1.9%	7.7%	6.7%	6.6%	6.9%
MSCI EAFE Value	8.9%	13.8%	23.1%	8.9%	8.3%	5.0%	4.6%	4.9%
MSCI EAFE Small Cap	10.5%	11.1%	23.5%	-0.4%	6.4%	4.2%	6.2%	7.1%
MSCI Emerging Markets	8.7%	16.9%	26.1%	0.4%	5.7%	3.7%	4.0%	4.2%
<b>Alternatives</b>	<b>QTD</b>	<b>YTD</b>	<b>1YR</b>	<b>3YR</b>	<b>5YR</b>	<b>7YR</b>	<b>10YR</b>	<b>15YR</b>
Consumer Price Index*	0.3%	1.4%	2.6%	4.8%	4.2%	3.6%	2.8%	2.5%
FTSE NAREIT Equity REITs	16.1%	15.9%	34.7%	5.1%	5.5%	7.0%	7.8%	10.4%
S&P Real Assets	9.0%	8.8%	18.6%	3.5%	4.9%	4.9%	4.2%	5.9%
FTSE EPRA NAREIT Developed	16.3%	12.6%	30.2%	1.4%	2.4%	4.3%	5.0%	7.1%
FTSE EPRA NAREIT Developed ex U.S.	17.0%	8.6%	25.0%	-3.3%	-1.0%	1.4%	2.3%	4.3%
Bloomberg Commodity Total Return	0.7%	5.9%	1.0%	3.7%	7.8%	4.9%	0.0%	-0.4%
HFRI Fund of Funds Composite*	0.8%	5.7%	8.6%	2.2%	5.1%	4.2%	3.5%	3.6%
HFRI Asset Weighted Composite*	-0.3%	5.0%	6.7%	3.6%	4.4%	4.0%	3.6%	4.6%

Sources: Morningstar, FactSet. As of September 30, 2024. \*Consumer Price Index and HFRI indexes as of August 31, 2024.

See disclosures for list of indices representing each asset class. Past performance does not indicate future performance and there is a possibility of a loss. Indices cannot be invested in directly. This report is intended for the exclusive use of clients or prospective clients of MPS LORIA. The information contained herein is intended for the recipient, is confidential and may not be disseminated or distributed to any other person without the prior approval of MPS LORIA. Any dissemination or distribution is strictly prohibited. Information has been obtained from a variety of sources believed to be reliable though not independently verified. Any forecasts represent future expectations and actual returns; volatilities and correlations will differ from forecasts. This report does not represent a specific investment recommendation. Please consult with your advisor, attorney and accountant, as appropriate, regarding specific advice. Past performance does not indicate future performance and there is a possibility of a loss.

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When referencing asset class returns or statistics, the following indices are used to represent those asset classes, unless otherwise noted. Each index is unmanaged, and investors can not actually invest directly into an index:

TIPS: Bloomberg US Treasury US TIPS TR USD  
Municipals 5-Year: Bloomberg Municipal Bond 5 Year (4-6) TR USD  
U.S. Core Bond: Bloomberg US Aggregate Bond TR USD  
High Yield Municipals: Bloomberg HY Muni TR USD  
High Yield: Bloomberg US Corporate High Yield TR USD  
U.S. Long Duration: Bloomberg U.S. Long Government/Credit TR USD  
Foreign Bond: Bloomberg Global Aggregate ex-USD TR USD (50/50 blend of hedged and unhedged)  
EM Debt (unhedged): J.P. Morgan GBI-EM Global Diversified Composite Unhedged TR USD  
U.S. Large Cap: Russell 1000 TR USD  
U.S. Small Cap : Russell 2000 TR USD  
International Developed: MSCI EAFE NR USD  
Emerging Markets: MSCI Emerging Markets NR USD  
U.S. Equity REITs: FTSE Nareit Equity REITs TR USD  
Real Assets: S&P Real Assets TR USD  
Commodities: Bloomberg Commodity TR USD  
Hedge Funds: Hedge Fund Research HFRI Fund of Funds Composite USD  
Foreign Bond Unhedged: Bloomberg Global Aggregate ex USD TR USD unhedged  
U.S. MBS: Bloomberg US MBS (30Y) TR USD  
Balanced: 18% U.S. Large Cap, 6% U.S. Small Cap, 5% U.S. Equity REITs, 16% International Developed, 4% High Yield, 8% Emerging Markets, 3% TIPS, 33% U.S. Core Bond, 4% Foreign Bond, 3% Commodities, 0% EM Debt (unhedged).

Equity valuations are based on trailing 12-month P/E ratios for S&P 500 Index (U.S.), MSCI EAFE Index (Int'l Developed), and MSCI EM Index (Emerging Markets)

S&P 500 sector performance based on the following indices: S&P 500 Sec/Commun Services TR USD, S&P 500 Sec/Financials TR USD, S&P 500 Sec/Energy TR USD, S&P 500 Sec/Industrials TR USD, S&P 500 TR USD, S&P 500 Sec/Health Care TR USD, S&P 500 Sec/Cons Disc TR USD, S&P 500 Sec/Utilities TR USD, S&P 500 Sec/Cons Staples TR USD, S&P 500 Sec/Materials TR USD, S&P 500 Sec/Information Technology TR USD, S&P 500 Sec/Real Estate TR USD

Equity country returns based on the following indices: U.S.: MSCI USA NR USD, China: MSCI CHINA NR USD, Japan: MSCI Japan NR USD, Germany: MSCI Germany NR USD, United Kingdom: MSCI NR USD, India: MSCI India NR USD, France: MSCI France NR USD, Italy: MSCI Italy NR USD, Canada: MSCI Canada NR USD, Korea: MSCI Korea NR USD, Energy:

Commodity Performance based on the following indices: Energy: Bloomberg Sub Energy TR USD, Industrial Metals: Bloomberg Sub Industrial Metals TR USD, Precious Metals: Bloomberg Sub Precious Metals TR USD, Agriculture: Bloomberg Sub Agriculture TR USD

REIT sector performance is based on the following indices: FTSE Nareit Equity Health Care TR, FTSE Nareit Equity Lodging/Resorts TR, FTSE Nareit Equity Office TR, FTSE Nareit Equity Data Centers TR, FTSE Nareit Equity Diversified TR, FTSE Nareit Equity Specialty TR, FTSE Nareit Equity Retail TR, FTSE Nareit Equity Residential TR, FTSE Nareit Equity Industrial TR, FTSE Nareit Equity Self Storage TR

Marketable Alternatives indices used include HFRI Fund of Funds Composite Index, HFRI Asset Weighted Composite Index, HFRI Equity Hedge (Total) Index – Asset Weighted, HFRI Event Driven (Total) Index – Asset Weighted, HFRI Macro (Total) Index – Asset Weighted, HFRI Relative Value (Total) Index – Asset Weighted. HFRI Fund of Funds Composite Index is not asset weighted.

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## Material Risks & Limitations

**Fixed Income** securities are subject to interest rate risks, the risk of default and liquidity risk. U.S. investors exposed to non-U.S. fixed income may also be subject to currency risk and fluctuations.

**Cash** may be subject to the loss of principal and over longer period of time may lose purchasing power due to inflation.

**Domestic Equity** can be volatile. The rise or fall in prices take place for a number of reasons including, but not limited to changes to underlying company conditions, sector or industry factors, or other macro events. These may happen quickly and unpredictably.

**International Equity** can be volatile. The rise or fall in prices take place for a number of reasons including, but not limited to changes to underlying company conditions, sector or industry impacts, or other macro events. These may happen quickly and unpredictably. International equity allocations may also be impact by currency and/or country specific risks which may result in lower liquidity in some markets.

**Real Assets** can be volatile and may include asset segments that may have greater volatility than investment in traditional equity securities. Such volatility could be influenced by a myriad of factors including, but not limited to overall market volatility, changes in interest rates, political and regulatory developments, or other exogenous events like weather or natural disaster.

**Private Equity** involves higher risk and is suitable only for sophisticated investors. Along with traditional equity market risks, private equity investments are also subject to higher fees, lower liquidity and the potential for leverage that may amplify volatility and/or the potential loss of capital.

**Private Credit** involves higher risk and is suitable only for sophisticated investors. These assets are subject to interest rate risks, the risk of default and limited liquidity. U.S. investors exposed to non-U.S. private credit may also be subject to currency risk and fluctuations.

**Private Real Estate** involves higher risk and is suitable only for sophisticated investors. Real estate assets can be volatile and may include unique risks to the asset class like leverage and/or industry, sector or geographical concentration. Declines in real estate value may take place for a number of reasons including, but are not limited to economic conditions, change in condition of the underlying property or defaults by the borrow.

**Marketable Alternatives** involves higher risk and is suitable only for sophisticated investors. Along with traditional market risks, marketable alternatives are also subject to higher fees, lower liquidity and the potential for leverage that may amplify volatility or the potential for loss of capital. Additionally, short selling involved certain risks including, but not limited to additional costs, and the potential for unlimited loss on certain short sale positions.

## Disclosures – Index & Benchmark Definitions

### Index & Benchmark Definitions

#### Fixed Income

- **Bloomberg 1-3 Month U.S. Treasury Bill Index** is designed to measure the performance of public obligations of the U.S. Treasury that have a remaining maturity of greater than or equal to 1 month and less than 3 months.
- **Bloomberg U.S. Aggregate Index** covers the U.S. investment grade fixed rate bond market, with index components for government and corporate securities, mortgage pass-through securities, and asset-backed securities.
- **Bloomberg Global Aggregate ex. USD Indices** represent a broad-based measure of the global investment-grade fixed income markets. The two major components of this index are the Pan-European Aggregate and the Asian-Pacific Aggregate Indices. The index also includes Eurodollar and Euro-Yen corporate bonds and Canadian government, agency and corporate securities.
- **Bloomberg U.S. Corporate High Yield Index** covers the universe of fixed rate, non-investment grade debt. Eurobonds and debt issues from countries designated as emerging markets (sovereign rating of Baa1/BBB+/BBB+ and below using the middle of Moody's, S&P, and Fitch) are excluded, but Canadian and global bonds (SEC registered) of issuers in non-EMG countries are included.
- **Bloomberg US Government/Credit 1-3 Year Index** is the 1-3 year component of the U.S. Government/Credit Index, which includes securities in the Government and Credit Indices. The Government Index includes treasuries and agencies, while the credit index includes publicly issued U.S. corporate and foreign debentures and secured notes that meet specified maturity, liquidity, and quality requirements.
- **Bloomberg US Government/Credit Long Index** is the Long component of the U.S. Government/Credit Index, which includes securities in the Government and Credit Indices. The Government Index includes treasuries and agencies, while the credit index includes publicly issued U.S. corporate and foreign debentures and secured notes that meet specified maturity, liquidity and quality requirements.
- **Bloomberg US Treasury Inflation Protected Securities Index** consists of Inflation-Protection securities issued by the U.S. Treasury.
- **Bloomberg Muni Index** is a rules-based, market-value-weighted index engineered for the long-term tax-exempt bond market. Bonds must be rated investment-grade by at least two ratings agencies.
- **Bloomberg High Yield Municipal Bond Index** covers the universe of fixed rate, non-investment grade debt.
- **Bloomberg Intermediate U.S. Gov't/Credit** is the Intermediate component of the U.S. Government/Credit index, which includes securities in the Government and Credit Indices. The Government Index includes treasuries and agencies, while the credit index includes publicly issued U.S. corporate and foreign debentures and secured notes that meet specified maturity, liquidity, and quality requirements.
- **JPMorgan GBI-EM Global Diversified** tracks the performance of local currency debt issued by emerging market governments, whose debt is accessible by most of the international investor base.

#### Equity

- **The S&P 500 Index** is a capitalization-weighted index designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing all major industries.
- **Russell 3000 Value Index** measures the performance of those Russell 3000 companies with lower P/B ratios and lower forecasted growth values.
- **Russell 3000 Index** is a market-cap-weighted index which consists of roughly 3,000 of the largest companies in the U.S. as determined by market capitalization. It represents nearly 98% of the investable U.S. equity market.
- **Russell 3000 Growth Index** measures the performance of those Russell 3000 companies with higher P/B ratios and higher forecasted growth values.
- **Russell 1000 Value Index** measures the performance of those Russell 1000 companies with lower P/B ratios and lower forecasted growth values.
- **Russell 1000 Index** consists of the largest 1000 companies in the Russell 3000 Index.
- **Russell 1000 Growth Index** measures the performance of those Russell 1000 companies with higher P/B ratios and higher forecasted growth values.
- **Russell Mid Cap Value Index** measures the performance of those Russell Mid Cap companies with lower P/B ratios and lower forecasted growth values.
- **Russell Mid Cap Index** measures the performance of the 800 smallest companies in the Russell 1000 Index.
- **Russell Mid Cap Growth Index** measures the performance of those Russell Mid Cap companies with higher P/B ratios and higher forecasted growth values.
- **Russell 2000 Value Index** measures the performance of those Russell 2000 companies with lower P/B ratios and lower forecasted growth values.
- **Russell 2000** consists of the 2,000 smallest U.S. companies in the Russell 3000 index.
- **Russell 2000 Growth Index** measures the performance of the Russell 2000 companies with higher P/B ratios and higher forecasted growth values.
- **MSCI ACWI (All Country World Index) ex. U.S. Index** captures large and mid-cap representation across Developed Markets countries (excluding the United States) and Emerging Markets countries. The index covers approximately 85% of the global equity opportunity set outside the U.S.
- **MSCI ACWI Index** captures large and mid cap representation across Developed Markets and Emerging Markets countries. The index covers approximately 85% of the global investable opportunity set.
- **MSCI EAFE IMI Index** is an equity index which captures large, mid and small cap representation across Developed Markets countries around the world, excluding the U.S. and Canada. The index covers approximately 99% of the free float-adjusted market capitalization in each country.
- **MSCI EAFE Value Index** captures large and mid cap securities exhibiting overall value style characteristics across Developed Markets countries around the world, excluding the US and Canada. 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.
- **MSCI EAFE Index** is an equity index which 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.

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## Disclosures – Index & Benchmark Definitions

- **MSCI EAFE Growth Index** captures large and mid cap securities exhibiting overall growth style characteristics across Developed Markets countries around the world, excluding the US and Canada. 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.
- **MSCI EAFE Large Cap Index** is an equity index which captures large cap representation across Developed Markets countries around the world, excluding the US and Canada. The index covers approximately 70% of the free-float adjusted market capitalization in each country.
- **MSCI EAFE Small Cap Index** is an equity index which captures small cap representation across Developed Markets countries around the world, excluding the US and Canada. The index covers approximately 14% of the free float adjusted market in each country.
- **MSCI ACWI (All Country World Index) ex. U.S. Index** captures large and mid-cap representation across Developed Markets countries (excluding the United States) and Emerging Markets countries. The index covers approximately 85% of the global equity opportunity set outside the U.S.
- **MSCI Emerging Markets IMI Index** captures large, mid and small cap representation across 24 Emerging Markets countries. The index covers approximately 99% of the free-float adjusted market capitalization in each country.
- **MSCI Emerging Markets Value Index** captures large and mid-cap securities exhibiting overall value style characteristics across 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.
- **MSCI Emerging Markets Index** captures large and mid-cap representation across Emerging Markets countries. The index covers approximately 85% of the free-float adjusted market capitalization in each country.
- **MSCI Emerging Markets Growth Index** captures large and mid-cap representation across Emerging Markets 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.
- **MSCI Emerging Markets Index** captures large and mid-cap representation across Emerging Markets countries. The index covers approximately 85% of the free-float adjusted market capitalization in each country.
- **MSCI Emerging Markets (EM) Small Cap Index** includes small cap representation across Emerging Markets countries. The index covers approximately 14% of the free float-adjusted market capitalization in each country. The small cap segment tends to capture more local economic and sector characteristics relative to larger Emerging Markets capitalization segments.
- **Ibbotson US Large Cap Stock Index** is comprised of the same components as the S&P 500 from 1957 to present. For years prior to 1957, the index has the same components as the S&P 90 (the S&P 90 was the original S&P index created in 1928 – it didn't start tracking 500 companies until 1957).

### Alternatives & Miscellaneous

- **S&P Real Asset Index** is designed to measure global property, infrastructure, commodities, and inflation-linked bonds using liquid and investable component indices that track public equities, fixed income, and futures. In the index, equity holds 50% weight, commodities 10%, and fixed income 40%.
- **FTSE Nareit Equity REITs Index** contains all Equity REITs not designed as Timber REITs or Infrastructure REITs.
- **FTSE EPRA Nareit Developed Index** is designed to track the performance of listed real estate companies and REITS worldwide.
- **FTSE EPRA Nareit Developed ex US Index** is a subset of the FTSE EPRA Nareit Developed Index and is designed to track the performance of listed real estate companies and REITS in developed markets excluding the US.
- **Bloomberg Commodity Index** is calculated on an excess return basis and reflects commodity futures price movements. 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 Alerian MLP Index** is a float adjusted, capitalization-weighted index, whose constituents represent approximately 85% of total float-adjusted market capitalization, is disseminated real-time on a price-return basis (AMZ) and on a total-return basis.
- **HFRI Asset Weighted Composite Index** is a global, asset-weighted index comprised of single-manager funds that report to HFR Database. Constituent funds report monthly net of all fees performance in US Dollar and have a minimum of \$50 Million under management or \$10 Million under management and a twelve (12) month track record of active performance. The HFRI Asset Weighted Composite Index does not include Funds of Hedge Funds. The constituent funds of the HFRI Asset Weighted Composite Index are weighted according to the AUM reported by each fund for the prior month.
- **HFRI Fund of Funds Composite Index** is a global, equal-weighted index of all fund of hedge funds that report to the HFR Database. Constituent funds report monthly net of all fees performance in U.S. Dollars and have a minimum of \$50 million under management or a twelve (12) month track record of active performance.
- **HFRI Equity Hedge Index** is an index of Investment Managers who maintain positions both long and short in primarily equity and equity derivative securities. Strategies can be broadly diversified or narrowly focused on specific sectors and can range broadly in terms of levels of net exposure, leverage employed, holding period, concentrations of market capitalizations and valuation ranges of typical portfolios. EH managers would typically maintain at least 50% exposure to, and may in some cases be entirely invested in, equities, both long and short. Constituent funds report monthly net of all fees performance in US Dollar and have a minimum of \$50 Million under management or \$10 Million under management and a twelve (12) month track record of active performance.
- **HFRI Event Driven Index** is an index 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. Constituent funds report monthly net of all fees performance in US Dollar and have a minimum of \$50 Million under management or \$10 Million under management and a twelve (12) month track record of active performance.

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## Disclosures – Index & Benchmark Definitions

- **HFRI Macro Index** is an index 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. Constituent funds report monthly net of all fees performance in US Dollar and have a minimum of \$50 Million under management or \$10 Million under management and a twelve (12) month track record of active performance.
- **HFRI Relative Value Index** is an index of Investment Managers who maintain positions in which the investment thesis is predicated on 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 range broadly across equity, fixed income, derivative or other security types. Constituent funds report monthly net of all fees performance in US Dollar and have a minimum of \$50 Million under management or \$10 Million under management and a twelve (12) month track record of active performance.
- **US Private Equity Index** is a horizon calculation based on data compiled from 1,482 US private equity funds, including fully liquidated partnerships, formed between 1986 and 2022.
- **US Buyout Index** is a horizon calculation based on data compiled from 1,070 US buyout funds, including fully liquidated partnerships, formed between 1986 and 2022.
- **US Growth Equity Index** is a horizon calculation based on data compiled from 412 US growth equity funds, including fully liquidated partnerships, formed between 1986 and 2022.
- **US Venture Capital Index** is a horizon calculation based on data compiled from 2,322 US venture capital funds, including fully liquidated partnerships, formed between 1981 and 2022.
- **Real Estate Index** is a horizon calculation based on data compiled from 1,305 real estate funds, including fully liquidated partnerships, formed between 1986 and 2022.
- **U.S. Dollar Index** measures the value of the dollar relative to a basket of U.S. trade partners' currencies. It is a weighted geometric mean of the dollar's value relative to other currencies.
- "Staying Invested Rewards Long Term Performance" page 3 chart methodology – Chart shows the growth of \$10,000 invested in the Ibbotson US Large Stock Index on January 1, 1961 through December 31, 2023. January returns in inauguration years are assumed to be under the party that is being inaugurated. The first two scenarios are what would occur if an investor only invested when one particular party was president. The third scenario is what would occur if an investor had stayed invested throughout the entire period. Returns include reinvestment of dividends and interest. The example is hypothetical and provided for illustrative purposes only. Indexes are unmanaged, do not incur management fees, costs, and expenses and cannot be invested in directly.

### Additional Information

- Equity sector returns are calculated by S&P, Russell, and MSCI for domestic and international markets, respectively. S&P and MSCI sector definitions correspond to the GICS® classification (Global Industry Classification System); Russell uses its own sector and industry classifications.
- MSCI country indices are free float-adjusted market capitalization indices that are designed to measure equity market performance of approximately 85% of the market capitalization in each specific country.
- Currency returns are calculated using FactSet's historical spot rates and are calculated using the U.S. dollar as the base currency.

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