INVESTMENT NEWSLETTER
SECOND QUARTER 2025

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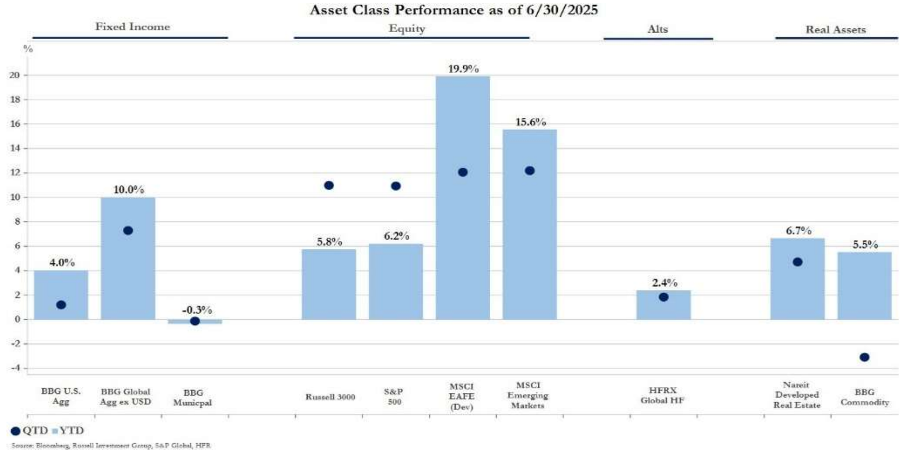
Key Takeaways

- Economic growth has slowed but has not come to an abrupt halt, to the relief of investors. Consumer spending remained supportive in addition to a, potentially temporary, manufacturing recovery.
- Tariff rhetoric and policy have settled significantly since 'Liberation Day' but remain a source of volatility. Selective trade deals have been secured but expect that headlines will continue to impact market uncertainty and serve as a modest headwind to growth. Structural supply chain changes will take longer to implement but could present modest inflationary pressures longer term.
- Geopolitical uncertainty remains elevated despite a seemingly now de-escalated conflict between Israel and Iran. Tensions globally are heightened, suggesting that geopolitical instability may be higher going forward than was experienced over the past economic regime.
- The labor market demonstrated continued resilience, although layoffs are showing some early signs of rising. While still modest, unemployment is becoming more pronounced in certain sectors or portions of the market – such as recent college graduates. Overhangs include tariff and growth-induced uncertainty and potential implications of AI adoption.
- Recent U.S. inflation readings have been mild, hovering around the 2% and 2.5% level for CPI and PCE, respectively. While core figures are near target levels, heightened levels of geopolitical uncertainty and continued tariff policy leave potential risks skewed to the upside.
- This backdrop has left the Fed with a wait-and-see stance translating to a hesitancy to cut rates during the past several FOMC meetings despite significant political pressure. Several cuts are still expected before the close of the year with an implied policy rate in the mid-3s at the time of this writing, according to Bloomberg.
- Bond market yields and volatility have settled relative to earlier in the year. Assuming inflation is structurally higher this cycle (albeit modestly so), and a reasonable term premium, the Treasury 10-year appears near equilibrium between 4 and 4.5%. Dissipating headwinds should present a more constructive backdrop for fixed income going forward and better align investor returns with starting yields.
- Taxable bonds performed admirably so far in 2025 while also offering stability during earlier market volatility. Municipals have been more challenged, suffering from heavy issuance and investor outflows. Underperformance, relative to treasuries, contributed to more compelling valuations, potentially setting the stage for a recovery in the second half.
- The second quarter offered a welcome rally in the equity markets, in many cases recouping much of the losses realized over Q1. International equity markets, especially developed, remain a standout performer, also benefiting from a weakening U.S. Dollar.
- Private equity deal activity and exits remained sluggish although there are some signs that the IPO market is thawing. A calming of conditions should be supportive of transactions. Secondary volumes are likely to reach record levels as institutions pare back exposure. The need for rebalancing and liquidity by institutions should translate to more compelling entry discounts for secondary-oriented strategies, potentially benefiting investors.
- A strong recovery in risk assets over the second quarter has pushed valuations back to elevated levels, despite a considerably volatile backdrop. On the margin, this could tilt the opportunity set in the favor of more defensive assets and stresses the importance of widespread diversification.
- A risk-appropriate investment allocation that can withstand potential future volatility is the best defense against future market uncertainty and preserving the ability to lean into pockets of opportunity when they are presented.



Economy

Entering the second half of 2025, the GDPNow estimate for real U.S. GDP growth is 2.6% for the second quarter and 1.4% for the year as the U.S. economy continues to demonstrate resilience in the face of a narrowing set of growth drivers and a complex macroeconomic backdrop. Despite the base case of continued growth, plenty of downside risks remain. Tariffs are pressuring corporate margins as firms have been unable to completely pass on cost increases to consumers. Geopolitical instability, particularly in the Middle East, and strained global perceptions of U.S. trade policy are weighing on international demand. Domestically, the resumption of student loan collections and rising debt burdens among lower-income households could potentially constrain consumption and be a headwind to growth.

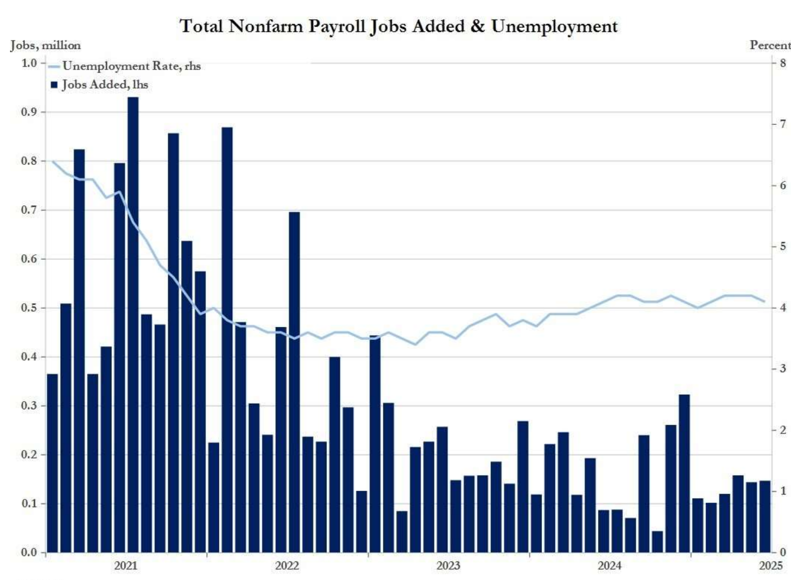
In Q2 2025, corporate sentiment weakened amid rising policy uncertainty and tariff-related pressures, with business confidence surveys showing a sharp decline. Despite this, actual investment activity, particularly in AI-related capital expenditures, remained robust. On the consumer side, sentiment rebounded in June, increasing for the first time in six months. The Michigan Consumer Sentiment Index rose 16.3% to 60.7 in June, marking its highest level since February, but still reflects historically low levels of optimism. A resilient labor market partially drove the uptick in consumer sentiment. Despite private job growth cooling and immigration restrictions tightening labor supply, wage growth, particularly among white-collar workers, remains robust. Disposable income is outpacing spending, pushing the savings rate from 3.5% to 4.5%, suggesting households are cautious but still capable of supporting growth in the consumer-driven U.S. Economy.

Despite widespread calls entering the year for U.S. dollar strength to persist in 2025, the greenback has tumbled 10.7% against its global peers through June according to the U.S. Dollar Index (DXY), marking its worst first half in fifty years. Historically, capital inflows into U.S. assets have supported the dollar, but rising debt levels and persistent trade deficits could erode investor confidence. While higher interest rates might attract fixed income investment, it could be offset by elevated inflation and concerns about fiscal sustainability. While the recent passage of President Trumps' One Big Beautiful Bill brought some clarity to fiscal policy, some of its provisions, particularly the extension of tax cuts, could potentially widen the federal deficit substantially. Even with increased tariff revenues, some economists estimate the federal deficit will exceed 6% of GDP in both fiscal 2026 and 2027. Over the longer term, some forecasts have the debt-to-GDP ratio surging from just under 98% in 2024 to over 120% in the next ten years.

The deadline for trade deals, previously set for July 9th, was recently extended to August 1st. The delay allows additional time for negotiations with key trading partners, including Japan, South Korea, and the European Union, to avoid the steep reciprocal tariffs originally announced on April 2nd. Despite the extension, the administration has stated that the August 1st deadline is firm, signaling a "take it or leave it" stance, with tariffs set to take effect unless deals are promptly finalized. Markets saw an uptick in volatility after the announcement as investors cautiously hope for deals to be announced.

U.S. Labor Market Remains Resilient

- Recent data paints a mixed but slightly positive picture of the U.S. labor market with solid job growth and demand but some signs of private sector caution.
- The most recent ADP report indicated private employers cut 33,000 jobs in June, well below the 100,000 gain expected, indicating softness in private sector hiring.
- On the other hand, job openings surprised to the upside, rising from 7.4M in April to 7.8M in May, and the U.S. beat the 110,000 estimate by adding 147,000 jobs in June, which suggests continued strength in labor demand.
- Initial weekly jobless claims came in at 233,000, lower than the 240,000 expected, and the unemployment rate dropped to 4.1%, better than the forecasted 4.3%.
- Taken together, the data suggests resilience in the broader job market, though some sectors remain tight and certain demographics, like recent college graduates, are experiencing heightened levels of unemployment.

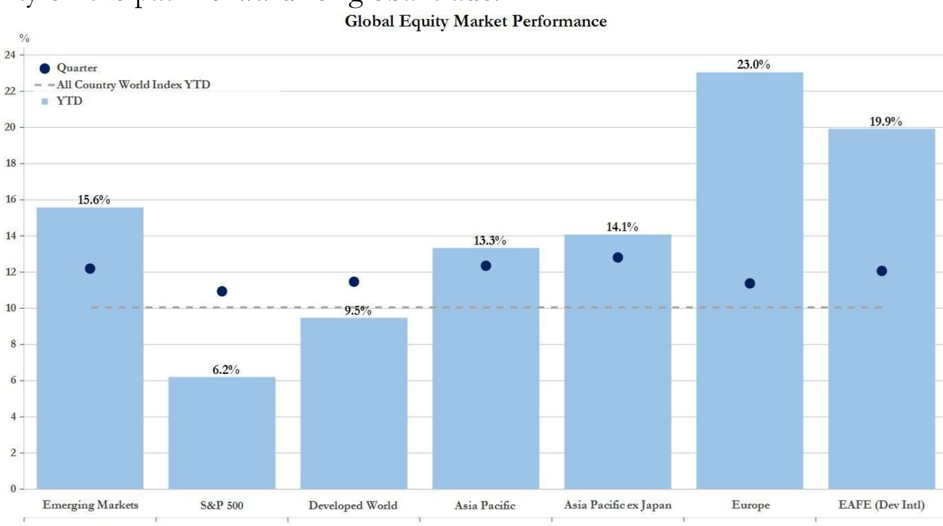


Equity Markets

Global equity markets delivered strong gains in the second quarter of 2025, overcoming significant volatility sparked by geopolitical tensions and abrupt shifts in U.S. trade policy. After falling 1.21% in Q1, the MSCI ACWI Index, a broad gauge of global equities, rose 11.7% in Q2 and is now up 10.3% YTD. International equities had another strong quarter and continue to outpace U.S. stocks YTD, partially driven by a weakening U.S. dollar.

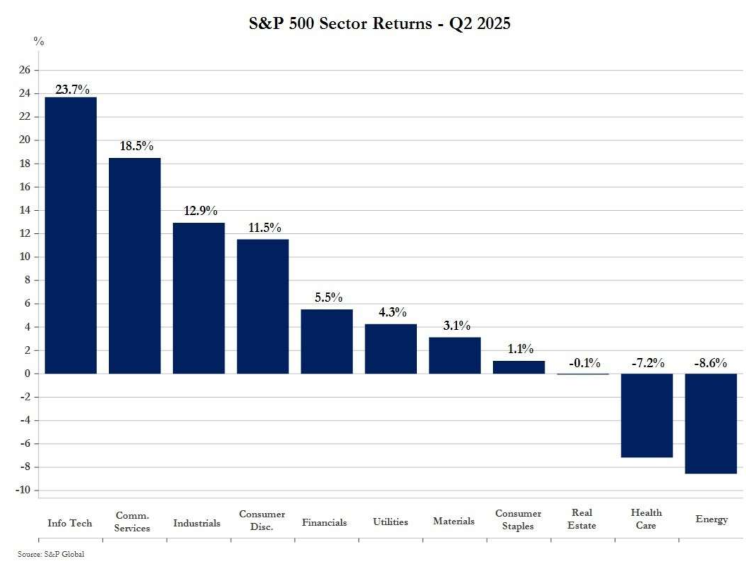
The S&P 500 posted a total return of 10.9% for the quarter, rebounding sharply from a steep April drawdown, and is now up 6.2% YTD. The quarter's volatility was triggered by President Trump's reciprocal tariff announcement on April 2nd, which led to a rapid 12% drop in the S&P 500 over the following week as markets reacted to the unexpectedly broad scope of the tariffs. The selloff was compounded by rising Treasury yields and investor fears of a global trade war. However, the administration's subsequent decision to pause the tariffs for 90 days and initiate trade negotiations with China helped stabilize sentiment. By May, risk appetite returned, bolstered by a strong corporate earnings season and improving economic data, leading to a full recovery and new record highs for the index by quarter-end.

Growth stocks dramatically outperformed value stocks in Q2 2025. The 'Magnificent 7' mega-cap tech stocks returned over 18%, outpacing the rest of the S&P 500 by nearly 14 percentage points. In contrast, value stocks and more defensive, quality-focused strategies lagged, as investors favored speculative, high-growth names amid easing trade tensions and strong earnings reports. Within options markets, overall implied volatility remains historically low, though there has been a noticeable pickup in skew—investors are paying relatively more for puts and downside protection than calls and upside participation, suggesting a degree of caution beneath the surface and a desire to hedge against risks of unsuccessful trade negotiations, Fed surprises, geopolitical flare-ups, or earnings disappointments tied to narrowing margins driven by tariffs. Markets will likely remain on edge until August 1st, President Trump's latest deadline for negotiations, as investors continue to wait for clarity on the path forward for global trade.



Sector Whipsaws in Highly Concentrated S&P 500

- Information technology and communication services led the S&P 500's V-shaped recovery in Q2 after lagging in Q1, while energy and health care fell from top performers in Q1 into deep negative territory in Q2, weighing down the index.
- Ongoing trade negotiations and the August 1st tariff deadline may cause continued market volatility and sector whipsaws.
- The S&P 500 concentration is at an extreme, with the top 10 companies, many of which are in the information technology and communication services sectors, making up nearly 40% of market capitalization and a record-high share of earnings, highlighting the need for proper equity portfolio diversification.

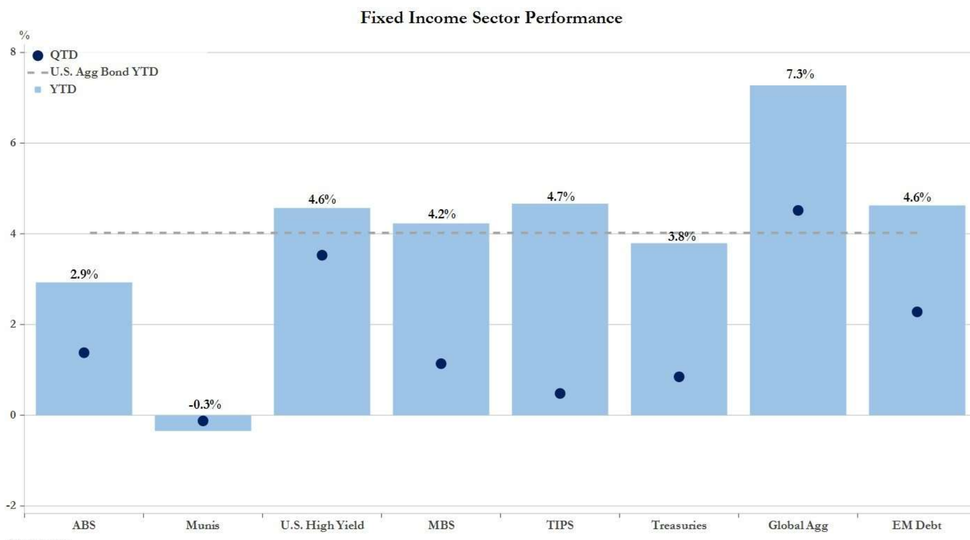


Fixed Income Markets

Following a strong Q1, fixed income markets delivered more muted gains in the second quarter as the asset class faced elevated volatility and rising yields. Investor sentiment declined due to renewed concerns over the U.S. fiscal outlook and softening global demand for dollar-denominated debt. The Treasury yield curve steepened meaningfully in response to President Trump's One Big Beautiful Bill, which could add an estimated $3 to $5 trillion to the federal deficit over the next decade, excluding any potential offsets from tariffs. These fiscal concerns contributed to a 20 bp increase in 30-year Treasury yields during the quarter. The spread between 10- and 2-year Treasury yields widened from 34 to 56 bps, reflecting increased demand for longer-duration securities.

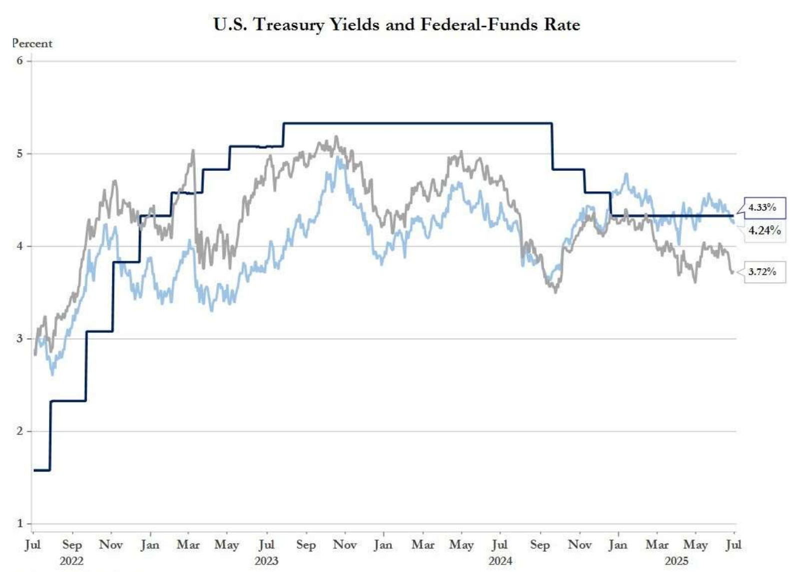
As yields moved higher, returns across most fixed income sectors moderated. The Bloomberg U.S. Aggregate Bond Index posted a 1.21% gain in Q2, buoyed by a strong June that reversed May losses. High yield credit outperformed, with the Bloomberg U.S. Corporate High-Yield Index advancing 3.5% as spreads tightened by 57 basis points—the most significant compression across fixed income sectors. Emerging market debt also delivered strong results, returning 2.3% for the quarter, driven by a sharp tightening in spreads during June.

Conversely, municipal bonds and long-duration assets underperformed in Q2. Despite record issuance and a steepening curve, the municipal market struggled, with high-yield issues weighing on index performance. Year-to-date tax-exempt issuance reached $285 billion, up 18% from the record pace set in 2024. Globally, the Bloomberg Global Aggregate Index led all major fixed income benchmarks with a 4.5% return in Q2. European government bonds outperformed their U.S. and Japanese counterparts as the European Central Bank implemented two rate cuts, lowering its deposit rate to 2.0%. European bond yields declined by 17 basis points during the quarter, and tightening credit spreads contributed to the region's strong performance.



FOMC Remains on Hold

- The Federal Funds Rate currently stands at 4.25%–4.50%, down from its peak of 5.50% reached a year ago, reflecting the Federal Reserve's gradual shift in policy stance amid evolving economic conditions.
- The Fed has maintained a steady policy rate since December, adopting a patient approach as Core PCE inflation remains elevated at 2.7%—above the 2% target—while labor market strength persists, evidenced by May's stronger-than-expected nonfarm payroll gain of 147,000 jobs.
- With the full impact of new tariffs still unfolding, and fiscal and trade policies in flux, the Fed is expected to remain cautious. Futures imply a 77% chance of a September rate cut.



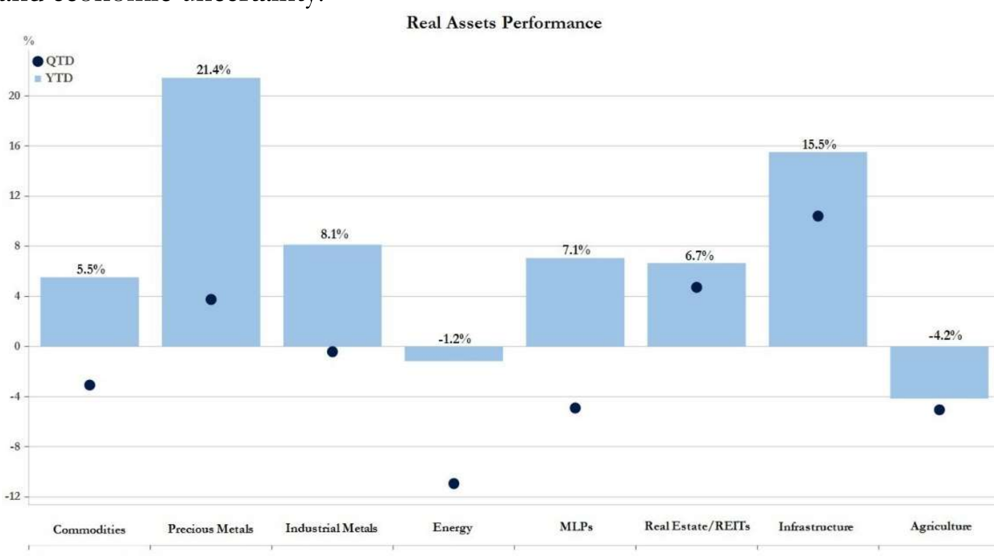
Real Assets

Precious metals delivered another strong quarter and continue to lead the real asset sector year-to-date. This sustained outperformance was fueled by persistent demand for safe-haven assets as geopolitical tensions and tariff-related uncertainties remain top of mind for investors. Gold, in particular, extended its impressive rally, reaching new all-time highs and building on its strong momentum from 2024.

Industrial metals, on the other hand, posted mixed Q2 results. Despite improved supply conditions, uneven global demand ultimately led the subsector to finish largely unchanged. Copper, widely regarded as a bellwether for industrial activity, saw modest gains early in the quarter but lost momentum as construction and manufacturing demand softened across major markets, though it surged in early July after President Trump announced a potential 50% tariff on the metal.

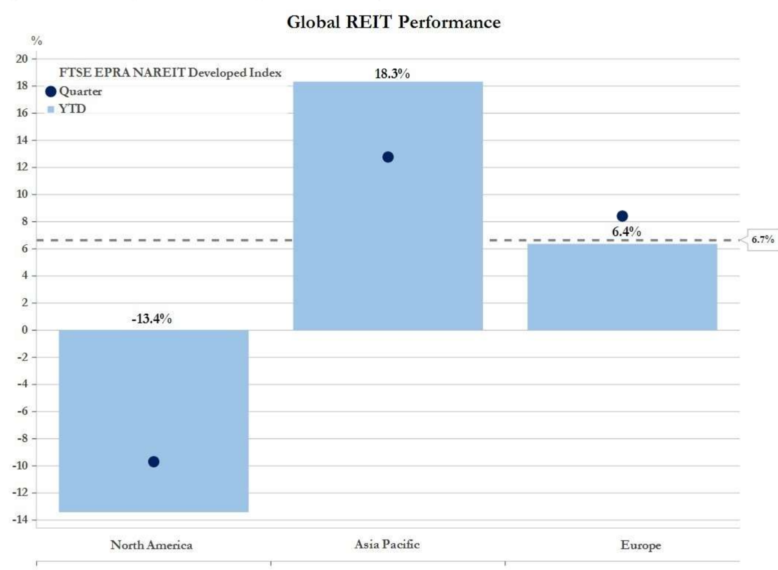
Energy stocks, meanwhile, encountered significant headwinds and underperformed the broader equity market by a wide margin. Persistent geopolitical risks and concerns over slowing industrial activity in leading economies weighed heavily on the sector. Oil prices remained range-bound, providing little support, while natural gas prices proved highly volatile, further increasing earnings uncertainty for both integrated energy firms and exploration and production companies.

In sharp contrast, infrastructure stocks demonstrated notable resilience and outperformance in Q2 2025. Despite a challenging macroeconomic backdrop marked by market volatility, trade disputes, and policy uncertainty, listed infrastructure emerged as a relative safe haven for investors—a notable reversal after years of lagging broader equities. Several factors contributed to this robust performance, including significant capital inflows into digital infrastructure, such as AI-driven data centers, and renewable energy projects. The sector's defensive characteristics, particularly stable cash flows and inflation-linked revenues, have made infrastructure increasingly attractive to investors seeking protection amid ongoing geopolitical and economic uncertainty.



REITS Deliver Mixed Results in Q2

- Regional disparities led to mixed results for REITs in Q2, though the index added 4.7% and is now up 6.7% YTD.
- Europe and Asia contributed positively while North America was the main detractor as both the U.S. and Canada posted negative returns, reflecting weaker sentiment in the regions' real estate equities.
- U.S. data center and healthcare REITs have shown relative strength, while office and retail remain under pressure from structural shifts.
- A key driver of the mixed performance was declining long yields in most developed and emerging markets, but that tailwind was less pronounced in the U.S. where yields remain higher.



Alternatives

Private equity demonstrated notable resilience in the first half of 2025, outperforming public markets as its lower correlation helped cushion portfolios against public market drawdowns, underscoring the critical role that private alternatives can play in capital preservation during periods of heightened market volatility. Distribution challenges, however, remain a persistent concern across private equity. While the momentum in M&A and deal activity that began in late 2024 continued into the first quarter, it stalled by April as market participants reassessed the landscape amid ongoing policy uncertainty, evolving interest rate expectations, and geopolitical disruptions. Although total distributions have increased in absolute dollar terms, distributions as a percentage of NAV have fallen to the low teens, well below the historical average of 25%. Against this backdrop, the secondary market has emerged as a bright spot. Fund managers have been focused on acquiring high-quality stakes at attractive discounts by providing much-needed liquidity to institutions seeking to rebalance their portfolios.

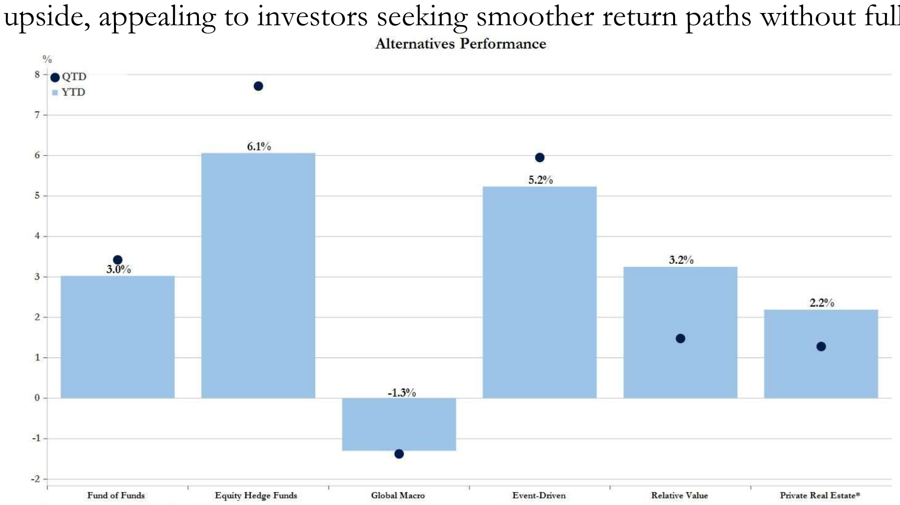
Private credit continued to deliver stable performance in Q2, continuing to offer yields of 9%+ despite modestly tighter spreads. Floating-rate loans are common in the space and can serve as an effective hedge against both inflation and duration risk. Demand for private credit remains robust as LPs increasingly prioritize predictable, income-generating assets amid slower distributions from other private investments.

On the regulatory front, a proposed bill would expand the Section 199A deduction to include BDC dividends, potentially lowering the tax rate on BDC dividend income from 37% to 28.5%. This change could spur new BDC formation and support higher valuations. Separately, another bill seeks to broaden the definition of Accredited Investor to include professional licenses, education, and job experience, potentially unlocking greater access to private markets for individual investors. Both measures have passed the House and are awaiting Senate approval.

Private infrastructure investments have also delivered solid results through the second quarter. Sectors such as energy, power, and digital infrastructure, particularly data centers, have benefited from increased investor interest driven by surging AI demand and regional energy security concerns. Recent valuation corrections have created more attractive entry points for long-term investors, and high levels of dry powder, combined with pent-up M&A demand and public infrastructure funding gaps, suggest continued momentum in the asset class.

In private real estate, early signs of recovery have emerged following a period of correction and repricing that began during the COVID era. While macroeconomic conditions remain complex, sector fundamentals have stabilized: occupancy rates are generally healthy, and operating income has supported a rebound in performance, especially in industrial, logistics, and select residential segments. Valuations appear to have bottomed, offering potentially attractive entry points for long-term investors. The outlook for private real estate remains cautiously optimistic, though regional disparities and policy risks warrant continued attention.

Within hedge funds, strategies with a defensive or opportunistic tilt offered relative stability amid rising macro uncertainty. Merger arbitrage strategies continued to find idiosyncratic alpha opportunities, especially as deal spreads widened due to regulatory scrutiny and extended timelines. Macro-oriented hedge funds navigated cross-asset volatility with tactical positioning, particularly around rate expectations, commodities, and global FX. Meanwhile, hedged equity strategies, particularly those employing buffer or defined outcome approaches, helped limit downside in choppy markets while still capturing modest equity upside, appealing to investors seeking smoother return paths without fully exiting risk assets.



Growth	6/30/2025	3/31/2025
GDP Growth	2.6%*	-2.4%
U.S. Leading Economic Indicator (YoY%)	-4%**	-3.5%
Unemployment Rate (%)	4.1%	4.2%
Initial Claims (Weekly as of 6/27/25, thousands)	232.0	219.0
Industrial Production (YoY%)	0.6%**	1.4%
Consumer Sentiment	60.7	57.0
ISM Manufacturing Index	49.0	49.0
ISM Non-Manufacturing Index	50.8	50.8
Retail Sales (YoY%)	3.3%**	3.1%
Building Permits (mil)	1.39**	1.46

Inflation	6/30/2025	3/31/2025
Headline CPI (YoY)	2.4%	2.4%
Core CPI (YoY)	2.8%	2.8%
Core PCE (YoY)	2.7%	2.8%
Forward Breakeven Inflation Expectation (5-year)	2.4%	2.3%

*GDP Now estimate as of 7/9/2025
**As of 5/30/2025
Source: Bloomberg and Federal Reserve Bank of Atlanta

Market Sentiment	6/30/2025	3/31/2025
MOVE Index	90.3	101.4
VIX Index	16.7	22.3
National Financial Conditions Index (NFCI)	-0.51	-0.40

Rates & Credit Conditions	6/30/2025	3/31/2025	10-Year Average
3-M U.S. Treasury	0.3%	0.2%	2.0%
10-YR U.S. Treasury	1.4%	1.8%	2.6%
Spreads over 10-YR U.S. Treasuries (bps)			
U.S. Corporate Investment Grade	134	335	116
U.S. Corporate High Yield	519	593	406
U.S. Municipal	18	205	-11

Federal Reserve Economic Projections	2025	2026	2027
Real GDP (YoY%)	1.4%	1.6%	1.8%
PCE Price Index (YoY%)	3.0%	2.4%	2.1%
Core PCE (YoY%)	3.1%	2.4%	2.1%
Unemployment %	4.5%	4.5%	4.4%

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.
U.S. Dollar Index (DXY)	The U.S. Dollar Index (DXY) is an index of the value of the United States dollar relative to a basket of foreign currencies, often referred to as a basket of U.S. trade partners' currencies. The Index goes up when the U.S. dollar gains "strength" (value) when compared to other currencies.

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.