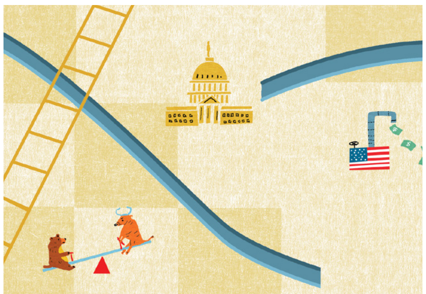
M&T Bank | Wilmington Trust

Summer 2025

Capital Perspectives

# State of Play: Midyear Check in on the Gameboard



**Tony Roth**
Chief Investment Officer

**At the beginning of the year, we outlined our expectations for the economy and markets and drew an analogy to the classic boardgame, Chutes and Ladders. We identified sets of risks to the upside (ladders) and downside (chutes), but we knew that the state of play would depend greatly on details unbeknownst at the time.**

As we move into the second half of the year, the gameboard is taking shape while remaining dynamic. And our views are evolving along with the gameboard. Clouds have formed on the economic horizon since the start of the year, but companies are doing what they do best—adapting and finding ways to be more efficient—and this is being reflected in strong earnings growth and an equity market at all-time highs. Volatility in the economy and markets will likely stay elevated in the second half of the year, particularly as economic activity slows, but we think the market will largely look through a possible second half of 2025 recession to a reacceleration of economic growth in 2026. For now, a full allocation to equities remains appropriate as we are mindful that further market gains in the absence of trade clarity equate to greater downside risk. However, the recent strength in equity markets has caused portfolios to drift from tactical targets, with equities drifting above our neutral target and fixed income drifting below. We are taking this opportunity to fully rebalance portfolios back to target.

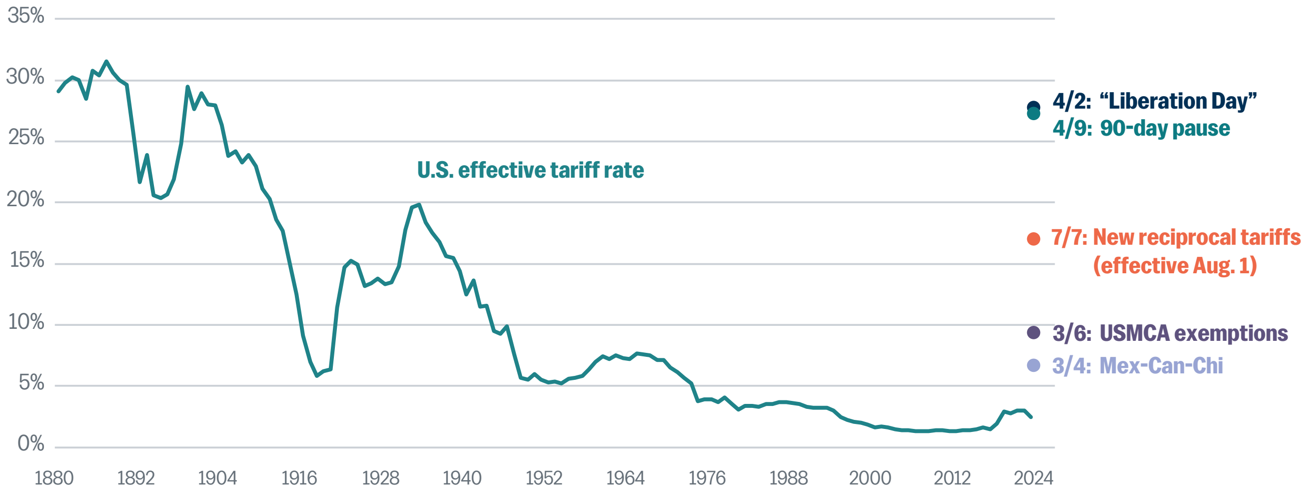
### The chutes

Since April, the primary chute—tariffs—had elongated, then shrunk, and now elongated again as we have passed the end of the 90-day pause on "Liberation Day" tariffs. It remains to be seen if the tariff rates announced following the 90-day pause will stick or continue to change as negotiations and trade deals emerge. In our estimation, the 10% tariff rates that were in place during the 90-day pause are likely the floor, and the Liberation Day tariff rates are the ceiling. The 17.5% effective tariff rate is based on current policy and could bleed higher unless the administration succeeds in laying new trade frameworks with our major trading partners (Figure 1).

Figure 1

**The effective tariff rate could increase in absence of favorable trade deals**

U.S. Effective Tariff Rate (%)




Data as of July 7, 2025. Sources: Yale Budget Lab, WTIA.

The sheer magnitude of the tariffs being issued on all major trading partners, if operative for long, will be a headwind to the economy, and we expect it to manifest more in the growth data than in inflation. In terms of growth, tariffs are hitting consumer and business confidence, which in conjunction with a slowing labor market will mute consumer spending. Potentially as damaging as the tariffs themselves is the uncertainty businesses are facing. Businesses generally will not make costly and time-intensive investments or labor expansion plans in an environment with such continuing "headline risk" at the economic level. The stop-and-go, back-and-forth nature of the tariff announcements could also undermine any goal of redirecting supply chains to the U.S. or trade allies. In other words, the tariff chute risks paralyzing business investment and economic growth as we await clarity and certainty on the end state for trade relationships.

We are seeing the impact of tariffs on the inflation data, but not in the way many expected. Since the beginning of the year, we have held the out-of-consensus view that tariffs would not be inflationary over the medium term. So far, the evidence supports our case. The June Consumer Price Index (CPI) release showed core inflation increasing 2.9% year over year but just 0.2% month over month. Underneath that headline reading, goods prices increased in tariffed categories like household furnishings and appliances, apparel, and recreation commodities. However, consumers are facing a looser job market, less savings, and significant inflation fatigue, so we anticipate that they will offset higher goods prices by pulling back on spending in services such as dining out, entertainment, and travel. Housing, another critical component of the inflation index, continues to show disinflationary pressures and is likely to drag inflation closer to the Federal Reserve's (Fed) target, paving the way for three 25 basis point (or bps) rate cuts from the Federal Open Market Committee by year end.

## Market resilience

So far, the market is digesting the risks presented by the chutes, and we don't think it's due to complacency. Rather, investors increasingly recognize the negotiating pattern of the administration and the adaptability of companies, as well as, increasingly, the fear of missing out (FOMO) on market momentum that has built since April 9.

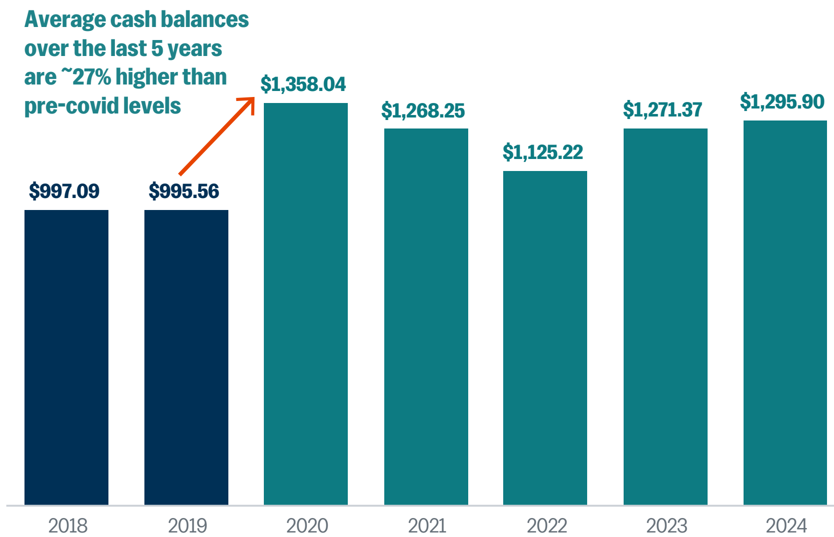
We know the economy and the market do not move in lockstep in real time. The stock market discounts economic activity in the future. Even though we place 50/50 odds of a recession over the next 12 months, if we do have a recession, we expect it to be short-lived and shallow. The market will likely look through a slowing of consumer spending in the second half of 2025 and price in reaccelerating growth in the first half of 2026. After all, corporate balance sheets are very healthy, and large companies are sitting on cash levels approximately 25% higher than pre pandemic (Figure 2).

We are also seeing strength in technology's secular growth story. Businesses may be forced to cut costs and slow the pace of hiring as they figure out how much of the tariff hit they can absorb in their bottom lines. At the same time, technology is one area we consistently hear companies are not willing to skimp on. Whether it's cybersecurity, cloud infrastructure, or AI, cutting spending in these areas risks falling behind the competition. This is helping to drive earnings growth and resiliency for large-cap tech companies, making them a potentially defensive investment in an otherwise slowing economy. Since the tech sector makes up 32% of the S&P 500 and consistently outpaces earnings of the rest of the market, this group alone is contributing heavily to equity market momentum.

Figure 2

**Corporate balance sheets are healthy**

Aggregate corporate cash balances (in $bns)




Data as of December 31, 2024. Sources: Bloomberg, WTIA. Corporate cash includes cash equivalents. Calculation excludes companies in the financial and real estate sectors.

## One big beautiful...ladder?

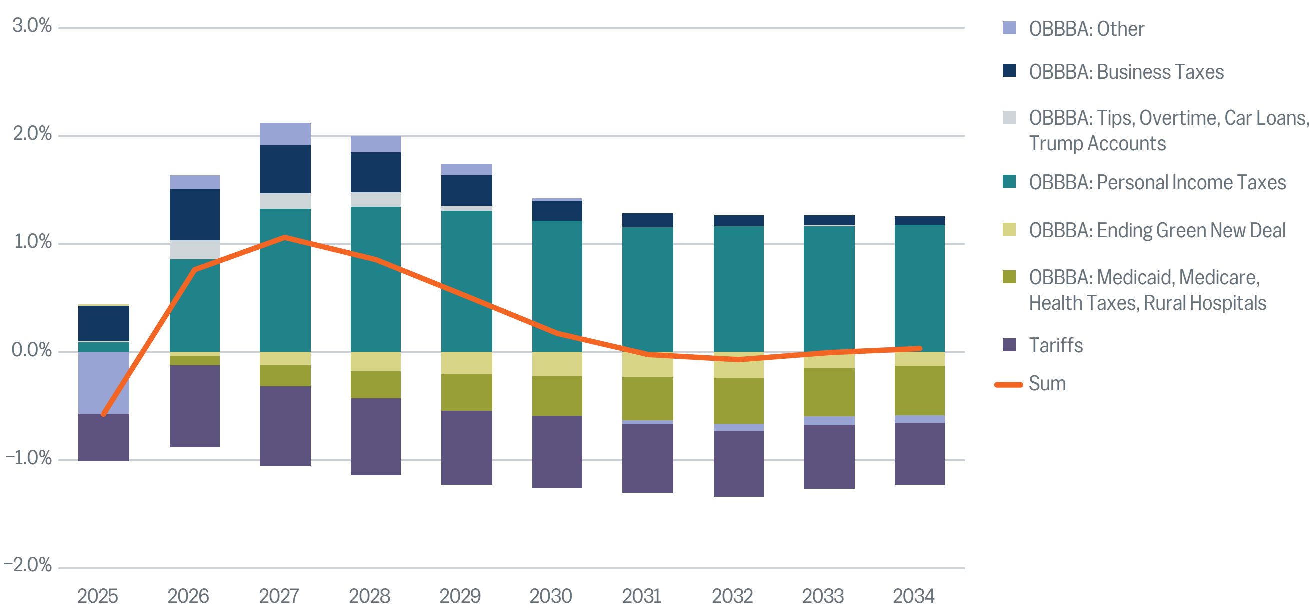
The One Big Beautiful Bill Act (OBBBA) is, in our view, a ladder, but not one that will take us all the way up the gameboard like investors may have fancied at one point. First, the new law adds stimulus to consumers and businesses in 2026, but a large chunk of the bill is dedicated to extending the 2017 tax cuts, which we believe have been priced into the market and will not result in a change in consumers' after-tax income. There are some stimulative tax provisions such as an increased state and local income tax (SALT) deduction, an increased child tax credit, and a deduction for income earned from tips. These are partially offset by cuts to green energy credits, Medicaid, and food-assistance programs but all-in the bill is expected to provide a net positive stimulus to gross domestic product (GDP) in the initial years.

The OBBBA also adds to the deficit (Figure 3), which will place upward pressure on long rates and, over time, increase the crowding-out effect of higher deficits. When we net the cost of the tax and spending provisions against expected revenue collection from tariffs, we see the combination of the two policies adding to the deficit in years 2026-2030 (before making any "dynamic" adjustments for the impacts of economic growth or higher interest rates). The bond market has seen only modest volatility associated with the OBBBA. We assess that this is because the bulk of the cost is associated with the extension of the 2017 Tax Cuts and Jobs Act personal tax provisions, most of which were anticipated regardless of who won the 2024 election.

Figure 3

**OBBBA to add stimulus, and the deficit, in early years**

Net impact on deficits of One Big Beautiful Bill Act and newly-introduced tariffs (% of GDP)




Sources: Congressional Budget Office (CBO), WTIA.

Notes: GDP projections from CBO January 2025 projections. Tariffs assumed to be evenly distributed from May 2025 to end of projection period.

Figure 4

**Asset class positioning**

High-net-worth portfolios with private markets*


*Private markets are only available to investors that meet Securities and Exchange Commission standards and are qualified and accredited. We recommend a strategic allocation to private markets but do not tactically adjust this asset class.

Data as of 7/21/2025.

Positioning reflects our monthly tactical asset allocation (TAA) versus the long-term strategic asset allocation (SAA) benchmark. For an overview of our asset allocation strategies, please see the disclosures.

The OBBBA does provide longer ladders for businesses. The full, immediate, and permanent expensing of capital expenditures provides tremendous support for capital investment, a key component of GDP growth. At present, trade-related volatility and low business confidence are hindering investment, but if tariff headlines subside and clarity is obtained on final trade policy, companies will be well positioned to use these expensing provisions to invest in buildings, equipment, and software.

An additional ladder worth mentioning but not associated directly with the OBBBA is the regulatory environment. A combination of lighter and more business-friendly regulation should support heavily regulated industries like financials and energy, as well as technology. We are seeing a pickup in mergers & acquisitions (M&A) deal value, though volume remains low. We think we will see an increase in M&A deal volume and IPO activity in the second half of the year.

## Stay invested, be on alert

At this time, we remain fully allocated to equities in portfolios (Figure 4). Earnings growth remains solid, tech revenues look resilient, and businesses are sitting on elevated levels of cash. We also expect Fed rate cuts to ease some of the burden on consumers and small businesses.

**Tony Roth**
Chief Investment Officer

As alluded to above, we are mindful of growing asymmetry in risk vs. reward as equity valuations continue to climb in the face of a souring economic outlook. We place recession odds at 50/50 and for now expect investors to look through a short, shallow slowdown. However, the S&P 500 has rallied 26% since April 8, and is back around all-time high price levels and, for many companies, price-to-earnings valuations. It is becoming increasingly difficult to find value in the equity market.

We are willing to pay up for higher-quality stocks with sustainable earnings power, including technology stocks. International stocks outperformed U.S. stocks in the first half of the year, but we do not expect a repeat in the second half of the year. In our view, U.S. stocks are more expensive than international peers for a reason. Greater productivity and more favorable regulation should allow U.S. stocks to outshine again, particularly with a weaker dollar helping the earnings power of U.S. multinationals.

While we are making no changes to our tactical asset allocation positioning, market movements have caused portfolio allocations to drift from targets. Rebalancing can be a powerful tool when implemented in a diligent, consistent manner, as it involves trimming the “winners” and buying back the “losers.” This inherently contrarian behavior not only keeps our clients’ portfolios on target, but it can also add value in volatile markets like we are experiencing this year. Equities, specifically international developed, have performed well, and a rebalance will result in trimming back some of this exposure in many client accounts. On the flip side, fixed income has significantly underperformed equities, and that asset class has drifted below target. A rebalance will shore up this exposure. The game Chutes and Ladders, much like investing, is not a linear journey. We will certainly see additional volatility in the second half of the year, but we expect to continue making our way up the gameboard, recognizing that both chutes and ladders are just part of the game.

Tony

# Disclosures

Wilmington Trust is a registered service mark used in connection with various fiduciary and non-fiduciary services offered by certain subsidiaries of M&T Bank Corporation including, but not limited to, Manufacturers & Traders Trust Company (M&T Bank), Wilmington Trust Company (WTC) operating in Delaware only, Wilmington Trust, N.A. (WTNA), Wilmington Trust Investment Advisors, Inc. (WTIA), Wilmington Funds Management Corporation (WFMC), Wilmington Trust Asset Management, LLC (WTAM), and Wilmington Trust Investment Management, LLC (WTIM). Such services include trustee, custodial, agency, investment management, and other services. International corporate and institutional services are offered through M&T Bank Corporation's international subsidiaries. Loans, credit cards, retail and business deposits, and other business and personal banking services and products are offered by M&T Bank. Member, FDIC.

Wilmington Trust Investment Advisors, Inc., a subsidiary of M&T Bank, is a U.S. Securities & Exchange Commission-registered investment adviser providing investment management services to Wilmington Trust and M&T affiliates and clients. Registration with the SEC does not imply any level of skill or training. Additional Information about WTIA is also available on the SEC's website at https:// adviserinfo.sec.gov/.

The information in Capital Perspectives has been obtained from sources believed to be reliable, but its accuracy and completeness are not guaranteed. The opinions, estimates, and projections constitute the judgment of Wilmington Trust and are subject to change without notice. This commentary is for information purposes only and is not intended as an offer or solicitation for the sale of any financial product or service or as a recommendation or determination that any investment strategy is suitable for a specific investor. Investors should seek financial advice regarding the suitability of any investment strategy based on the investor's objectives, financial situation, and particular needs. The investments or investment strategies discussed herein may not be suitable for every investor.

Investing involves risks and you may incur a profit or a loss. Past performance does not guarantee future results. Diversification does not ensure a profit or guarantee against a loss. There is no assurance that any investment strategy will succeed.

These materials are based on public information. Facts and views presented in this report have not been reviewed by, and may not reflect information known to, professionals in other business areas of Wilmington Trust or M&T Bank who may provide or seek to provide financial services to entities referred to in this report. As a result, M&T Bank and Wilmington Trust do not disclose certain client relationships with, or compensation received from, such entities in their reports.

**Any investment products discussed in this commentary are not insured by the FDIC or any other governmental agency, are not deposits of or other obligations of or guaranteed by M&T Bank, Wilmington Trust, or any other bank or entity, and are subject to risks, including a possible loss of the principal amount invested.**

Some investment products may be available only to certain "qualified investors"—that is, investors who meet certain income and/or investable assets thresholds.

Alternative assets, such as strategies that invest in hedge funds, can present greater risk and are not suitable for all investors.

Any positioning information provided does not include all positions that were taken in client accounts and may not be representative of current positioning. It should not be assumed that the positions described are or will be profitable or that positions taken in the future will be profitable or will equal the performance of those described.

Indices are not available for direct investment. Investment in a security or strategy designed to replicate the performance of an index will incur expenses, such as management fees and transaction costs that will reduce returns.

**An overview of our asset allocation strategies:**
Wilmington Trust offers seven asset allocation models for taxable (high-net-worth) and tax-exempt (institutional) investors across five strategies reflecting a range of investment objectives and risk tolerances: Aggressive, Growth, Growth & Income, Income & Growth, and Conservative. The seven models are High-Net-Worth (HNW), HNW with Liquid Alternatives, HNW with Private Markets, HNW Tax Advantaged, Institutional, Institutional with Hedge LP, and Institutional with Private Markets. As the names imply, the strategies vary with the type and degree of exposure to hedge strategies and private market exposure, as well as with the focus on taxable or tax-exempt income.

Model Strategies may include exposure to the following asset classes: U.S. large-capitalization stocks, U.S. small-cap stocks, developed international stocks, emerging market stocks, U.S. and international real asset securities (including inflation-linked bonds and commodity-related and real estate-related securities), U.S. and international investment-grade bonds (corporate for Institutional or Tax Advantaged, municipal for other HNW), U.S. and international speculative grade (high-yield) corporate bonds and floating-rate notes, emerging markets debt, and cash equivalents. Model Strategies employing nontraditional hedge and private market investments will, naturally, carry those exposures as well. **Each asset class carries a distinct set of risks, which should be reviewed and understood prior to investing.**

**Allocations:**
Each strategy group is constructed with target policy weights for each asset class. Wilmington Trust periodically adjusts the policy weights' target allocations and may shift from the target allocations within certain ranges. Such tactical allocation adjustments are generally considered on a monthly basis in response to market conditions.

# **Disclosures** Continued

The asset classes and their current proxies are:

- Large–cap U.S. stocks: Russell 1000® Index
- Small–cap U.S. stocks: Russell 2000® Index
- Developed international stocks: MSCI EAFE® (Net) Index
- Emerging market stocks: MSCI Emerging Markets Index
- U.S. inflation-linked bonds: Bloomberg US Treasury Inflation Notes TR Index Value Unhedged*
- International inflation-linked bonds: Bloomberg World ex US ILB (Hedged) Index
- Commodity-related securities: Bloomberg Commodity Index
- U.S. REITs: S&P US REIT Index
- International REITs: Dow Jones Global ex US Select RESI Index
- Private markets: S&P Listed Private Equity Index
- Hedge funds: HFRX Global Hedge Fund Index
- U.S. taxable, investment-grade bonds: Bloomberg U.S. Aggregate Index
- U.S. high-yield corporate bonds: Bloomberg U.S. Corporate High Yield Index
- U.S. municipal, investment-grade bonds: S&P Municipal Bond Index
- U.S. municipal high-yield bonds: 60% Bloomberg High Yield Municipal Bond Index / 40% Municipal Bond Index
- International taxable, investment-grade bonds: Bloomberg Global Aggregate ex US
- Emerging bond markets: Bloomberg EM USD Aggregate
- Cash equivalent: 30-day U.S. Treasury bill rate

**All investments carry some degree of risk.** Return volatility, as measured by standard deviation, of asset classes is often used as a proxy for illustrating risk. Volatility serves as a collective, quantitative estimate of risks present to varying degrees in the respective asset classes (e.g., liquidity, credit, and default risks). Certain types of risk may be underrepresented by this measure. **Investors should develop a thorough understanding of the risks of any investment prior to committing funds.**

**Quality ratings** are used to evaluate the likelihood of default by a bond issuer. Independent rating agencies, such as Moody's Investors Service and Standard & Poors, analyze the financial strength of each bond's issuer. Ratings range from Aaa or AAA (highest quality) to C or D (lowest quality). Bonds rated Baa3 or BBB and better are considered **Investment Grade.** Bonds rated Ba1 or BB and below are **Speculative Grade** (also **High Yield**.)

**Limitations on use:**
This publication is intended to provide general information only and is not intended to provide specific investment, legal, tax, or accounting advice for any individual. Although information contained herein was prepared from sources believed to be reliable, before acting on any information included in this publication you should consult with your professional advisor or attorney.

Third-party trademarks and brands are the property of their respective owners.

CFA® Institute marks are trademarks owned by the Chartered Financial Analyst® Institute.

Reference to the company names mentioned in this presentation is merely for explaining the market view and should not be construed as investment advice or investment recommendations of those companies.

# Glossary

**30-day U.S. Treasury bill rate Bank of America Merrill Lynch U.S. 3-Month Treasury Bill Index** measures the performance of a single U.S. Treasury bill added to the index at the beginning of the month and held for a full month; the issue is replaced with a newly selected issue at each month-end and the index will often hold the Treasury bill issued at the most recent three-month auction, it is also possible for a seasoned six-month bill to be selected.

**Alpha** is the excess return of an investment, relative to the return of a benchmark index.

**Atlanta Fed GDPNow** is a nowcasting model for gross domestic product (GDP) growth that synthesizes the bridge equation approach relating GDP subcomponents to monthly source data with factor model and Bayesian vector autoregression approaches. The GDPNow model forecasts GDP growth by aggregating 13 subcomponents that make up GDP with the chain-weighting methodology used by the US Bureau of Economic Analysis.

**Basis points** refers to a common unit of measure for interest rates and other percentages in finance. One basis point is equal to 1/100th of 1%, or 0.01%, or 0.0001, and is used to denote the percentage change in a financial instrument.

**Beta** is a measure of how an individual asset moves when the overall stock market increases or decreases. Thus, beta is a useful measure of the contribution of an individual asset to the risk of the market portfolio when it is added in small quantity.

**Bloomberg Agriculture Subindex Total Return (BCOMAGTR)**, formerly known as Dow Jones-UBS Agriculture Subindex Total Return (DJUBAGTR), is a commodity group subindex of the Bloomberg CITR composed of futures contracts on coffee, corn, cotton, soybeans, soybean oil, soybean meal, sugar and wheat and reflects the return on fully collateralized futures positions and is quoted in USD.

**Bloomberg Commodity Index** is composed of futures contracts and reflects the returns on a fully collateralized investment in the BCOM; it combines the returns of the BCOM with the returns on cash collateral invested in 13 week (3 Month) U.S. Treasury Bills.

**Bloomberg Commodity Total Return index** (BCOMTR) is composed of futures contracts and reflects the returns on a fully collateralized investment in the BCOM and combines the returns of BCOM with the returns on cash collateral invested in 13 week (3 Month) U.S. Treasury Bills.

**Bloomberg Dollar Spot Index** tracks the performance of a basket of 10 leading global currencies versus the U.S. Dollar. It has a dynamically updated composition and represents a diverse set of currencies that are important from trade and liquidity perspectives.

**Bloomberg Energy Subindex Total Return** (BCOMENTR), formerly known as Dow Jones-UBS Energy Subindex Total Return (DJUBENTR), is a commodity group subindex of the Bloomberg CITR composed of futures contracts on crude oil, heating oil, unleaded gasoline and natural gas and reflects the return on fully collateralized futures positions and is quoted in USD.

**Bloomberg Global Aggregate Bond Index** measures the performance of global investment-grade fixed-rate debt markets, including the U.S., Pan-European, Asian-Pacific, Global Treasury, Eurodollar, Euro-Yen, Canadian, and investment-Grade 144A index-eligible securities.

**Bloomberg Industrial Metals Subindex Total Return Index (BCOMTNT)**, formerly known as Dow Jones-UBS Industrial Metals Subindex Total Return (DJUBINTR), is a commodity group subindex of the Bloomberg CITR composed of longer-dated futures contracts on aluminum, copper, nickel and zinc and reflects the return on fully collateralized futures positions and is quoted in USD.

**Bloomberg Municipal Bond Index** covers the four main sectors of the USD-denominated long-term tax-exempt bond market: state, and local, general obligation bonds, revenue bonds, insured bonds, and pre-refunded bonds.

**Bloomberg Precious Metals Subindex Total Return (BCOMPRTR)**, formerly known as Dow Jones-UBS Precious Metals Subindex Total Return (DJUBPRTR), is a commodity group subindex of the Bloomberg CITR composed of futures contracts on gold and silver. It reflects the return on fully collateralized futures positions and is quoted in USD.

**Bloomberg U.S. Aggregate Index** measures the performance of the entire U.S. market of taxable, fixed-rate, investment-grade bonds. Each issue in the index has at least one year left until maturity and an outstanding par value of at least $250 million.

**Bloomberg US Credit Index** measures the investment grade, US dollar-denominated, fixed-rate, taxable corporate and government related bond markets. It is composed of the US Corporate Index and a non-corporate component that includes foreign agencies, sovereigns, supranationals and local authorities.

**Bloomberg U.S. High Yield Corporate Index**, formerly Lehman Brothers U.S. High Yield Corporate Index, measures the performance of taxable, fixed-rate bonds issued by industrial, utility, and financial companies and rated below investment grade. Each issue in the index has at least one year left until maturity and an outstanding par value of at least $150 million.

**Bloomberg U.S. Mortgage Backed Securities Index** measures the performance of investment grade fixed-rate mortgage-backed pass-through securities of GNMA, FNMA, and FHLMC.

**Bloomberg US Treasury US TIPS TR USD index** measures the performance of rules-based, market value-weighted inflation-protected securities issued by the U.S. Treasury. It is a subset of the Bloomberg US Treasury Inflation-Linked Bond Index (Series-L), which measures the performance of the US Treasury Inflation Protected Securities (TIPS) market. Federal Reserve holdings of US TIPS are not index eligible and are excluded from the face amount outstanding of each bond in the index.

**Call risk:** Call risk is the possibility that an issuer may redeem a fixed income security before maturity (a call) at a price below its current market price. An increase in the likelihood of a call may reduce the security's price.

**Cambridge Global Private Equity Index** is a horizon calculation based on data compiled from 2,354 private equity funds, including fully liquidated partnerships, formed between 1986 and 2019. All returns are net of fees, expenses, and carried interest.

# **Glossary** Continued

**Consumer price index** measures the price of consumer goods and how they're trending and is a tool for measuring how the economy as a whole is faring when it comes to inflation or deflation.

**Coupon, coupon rate, or coupon payment** is the annual interest rate paid on a bond, expressed as a percentage of the face value and paid from issue date until maturity.

**Credit risk:** Fixed income securities carry the risk of default, which means that the security issuer fails to pay interest or principal when due. Many fixed income securities receive credit ratings from services such as Standard & Poor's and Moody's Investor Services, Inc. These services assign ratings to securities by assessing the likelihood of issuer default. Lower credit ratings correspond to higher credit risk.

**Dow Jones Global ex. US Select RESI Index** tracks the performance of equity real estate investment trusts (REITs) and real estate operating companies (REOCs) traded globally, excluding the U.S.

**Drawdown** is a peak-trough decline during a specific period for an investment, trading account, or fund and is usually quoted as the percentage between the peak and the subsequent trough.

**Drift** occurs when an asset or investment diverges significantly from its objective or investment style, such as market capitalization. It can result naturally from capital appreciation in one asset relative to others in a portfolio, a change in a fund's management, or a manager who begins to diverge from the portfolio's mandate. It can be corrected by rebalancing the fund to optimal weights.

**Duration risk** is the risk associated with the sensitivity of a bond's price to a one percent change in interest rates. The higher a bond's duration, the greater its sensitivity to interest rates changes.

**Equity risk premium** is the extra return that's available to equity investors above the return they could get by investing in a riskless investment like T-Bills or T-Bonds or cash.

**ESG** is a strategy that integrates environmental, social, and governance (ESG) factors into the investment process may avoid or sell investments that do not meet criteria set forth by the investment manager. Such investments may perform better than investments selected utilizing ESG factors.

**Event-driven hedge fund strategies** attempt to take advantage of temporary stock mispricing before or after a corporate event takes place. An event-driven strategy exploits the tendency of a company's stock price to suffer during a period of change.

**Federal funds rate** is the interest rate at which depository institutions lend reserve balances to other depository institutions overnight on an uncollateralized basis.

**Global intangible low-taxed income (GILTI)** is a category of income that is earned abroad by U.S.-controlled foreign corporations (CFCs) and is subject to special treatment under the U.S. tax code.

**Gold** can be significantly affected by international monetary and political developments as well as supply and demand for gold and operational costs associated with mining.

**Headline inflation** is a measure of the total inflation within an economy, including commodities such as food and energy prices, which tend to be much more volatile and prone to inflationary spikes.

**HFR® (HedgeFundResearch) Indices** are the established global leader in the indexation, analysis and research of the hedge fund industry. They are broadly constructed indices designed to capture the breadth of hedge fund performance trends across all strategies and regions.

**HFRX Absolute Return Index and the HFRX Global Hedge Fund Index** represent the overall composition of the hedge fund universe and comprise all eligible hedge fund strategies and selects constituents that characteristically exhibit lower volatilities and lower correlations to standard directional benchmarks of equity market and hedge fund industry performance.

**HFRX Global Hedge Fund Index** is designed to be representative of the overall composition of the hedge fund universe and are asset weighted based on the distribution of assets in the hedge fund industry.

**Inflation-linked bonds** are a specific type of index-linked securities that are tied to the costs of consumer goods as measured by the Consumer Price Index (CPI) or another index. Their values increase during inflationary periods, which reduces the risk of uncertainty.

**Interest rate risk:** Prices of fixed income securities rise and fall in response to changes in the interest rate paid by similar securities. Generally, when interest rates rise, prices of fixed income securities fall. However, market factors, such as the demand for particular fixed income securities, may cause the price of certain fixed income securities to fall while the price of other securities rise or remain unchanged. Interest rate changes have a greater effect on the price of fixed income securities with longer durations. Duration measures the price sensitivity of a fixed income security to changes in interest rates.

**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 purchasing managers at more than 300 manufacturing firms and is considered to be a key indicator of the state of the U.S. economy.

**ISM Non-Manufacturing Index** is an economic index based on surveys of more than 400 non-manufacturing (or services) firms' purchasing and supply executives and is part of the ISM Report On Business—Manufacturing (PMI) and Services (PMI).

**ISM Services Prices Paid Index** is a diffusion index calculated by adding the percent of responses indicating they paid more for inputs plus one-half of those responding who paid the same; resulting in a single number that is seasonally adjusted.

**LIBOR** is the average interbank interest rate at which a selection of banks on the London money market are prepared to lend to one another.

**Long, or a long position**, describes an investor's expectation of a holding's future value. A position that the investor expects will rise in value and plans to hold for a long period of time is often described as "held long." It is the opposite of short, or a short position.

**M2 money supply** is a measure of the money supply that includes cash, checking deposits, and other types of deposits that are readily convertible to cash such as CDs.

**Macro hedge fund strategies** generally focus on financial instruments that are broad in scope and move based on systemic or market risk (not security specific). In general, portfolio managers who trade within the context of macro strategies focus on currency strategies, interest rates strategies, and stock index strategies.

## **Glossary** Continued

**The Magnificent Seven** refers to the companies commonly recognized for their market dominance, their technological impact, and their changes to consumer behavior and economic trends: Alphabet (Google), Amazon, Apple, Meta (formerly Facebook), Microsoft, NVIDIA, and Tesla.

**MSCI AC Asia ex Japan Index** captures large- and mid-cap representation across two of three developed markets countries (excluding Japan) and nine emerging markets countries in Asia. The index covers approximately 85% of the free float-adjusted market capitalization in each country.

**MSCI All Country World Index** (ACWI) is a stock index designed to track broad global equity-market performance. Maintained by Morgan Stanley Capital International (MSCI), the index comprises the stocks of about 3,000 companies from 23 developed countries and 26 emerging markets.

**MSCI China Index** captures large- and mid-cap representation across China A shares, H shares, B shares, Red chips, P chips and foreign listings (e.g. ADRs). The index covers about 85% of this China equity universe. Currently, the index includes large-cap A and mid-cap A shares represented at 20% of their free float adjusted market capitalization.

**MSCI EAFE Growth Index** captures large- and mid-cap securities exhibiting overall growth style characteristics across developed markets countries around the world, excluding the U.S. and Canada.

**MSCI EAFE Index** is an equity index which captures large and mid-cap representation across 21 Developed Markets countries around the world, excluding the U.S. and Canada. With 902 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

**MSCI EAFE® (net) Index** measures the performance of approximately 20 developed equity markets, excluding those of the United States and Canada; total returns of the index are net of the maximum tax withholding rates that apply in many countries to dividends paid to non-resident investors.

**MSCI Emerging Markets (net) Index** captures large- and mid-cap representation across 27 emerging markets countries. With 1,407 constituents, the index covers approximately 85% 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 U.S. and Canada.

**MSCI Emerging Markets Index** captures large- and mid-cap representation across 26 emerging markets countries. The index covers approximately 85% of the free float-adjusted market capitalization in each country.

**MSCI Europe Index** captures large- and mid-cap representation across 15 developed markets (DM) countries in Europe. The index covers approximately 85% of the free float-adjusted market capitalization across the European DM equity universe.

**MSCI Japan Index** is designed to measure the performance of the large- and mid-cap segments of the Japanese market. The index covers approximately 85% of the free float-adjusted market capitalization in Japan.

**MSCI United Kingdom Index** is designed to measure the performance of the large- and mid-cap segments of the UK market. The index covers approximately 85% of the free float-adjusted market capitalization in the UK.

**Personal consumption expenditures** is the primary measure of consumer spending on goods and services in the U.S. economy and is the primary engine that drives future economic growth.

**Price-to-earnings (P/E) ratio** measures a company's current share price relative to its earnings per share (EPS).

**Producer Price Index (PPI)** is a family of indexes measuring the average change in selling prices received by domestic producers of goods and services.

**Real estate investment trusts**, or REITs, are companies that own, operate, or finance income-generating real estate. Similar to mutual funds, REITs pool the capital of numerous investors, allowing them to earn dividends from real estate investments without having to buy, manage, or finance properties themselves.

**Relative value hedge fund strategies** cover a variety of low-volatility trading strategies with the consistent theme of attempting to reduce market risk, i.e., the manager seeks to generate a profit regardless of which direction the markets are moving. All relative value strategies minimize market risk by taking offsetting long and short positions in related stocks, bonds, and other types of securities.

**Reverse optimization** uses risk estimates and optimal portfolio weights (asset allocations) to derive the forward-looking returns that generate the highest expected risk-adjusted return for the portfolio; in contrast, traditional optimization uses risk estimates and forward-looking return assumptions to derive the portfolio weights (asset allocations) that generate the highest expected risk-adjusted return for the portfolio. Reverse optimization can be used to test or validate market outcomes in addition to (not as a replacement for) other methods of analysis.

**Risk assets** refers to assets that are not risk-free, such as currencies, equities, and other financial instruments. Treasuries are not included.

**Russell 1000® Index** measures the performance of the 1,000 largest companies in the Russell 3000 Index, representing approximately 92% of the total market capitalization of the Russell 3000 Index.

**Russell 1000 Growth** is a market capitalization-weighted index that measures the performance of the large-cap growth segment of U.S. equity securities; it includes the Russell 1000 index companies with higher price-to-book ratios and higher forecasted growth values.

**Russell 1000 Value** is a market capitalization-weighted index that measures the performance of the large-cap value segment of U.S. equity securities; it includes the Russell 1000 index companies with lower price-to-book ratios and lower expected growth values.

**Russell 2000® Index** measures the performance of the 2,000 smallest companies in the Russell 3000 Index, which represents approximately 8% of the total market capitalization of the Russell 3000 Index.

# **Glossary** Continued

**S&P 493** is a term that was coined to reference the index S&P 500 excluding the "Magnificent Seven" (M7) of Alphabet, Amazon, Apple, Meta (formerly Facebook) Platforms, Microsoft, Nvidia, and Tesla.

**S&P 500 index** measures the stock performance of 500 large companies listed on stock exchanges in the U.S. and is one of the most commonly followed equity indices.

**S&P Developed Property index** defines and measures the investable universe of publicly traded property companies domiciled in developed markets. The companies in the index are engaged in real estate related activities, such as property ownership, management, development, rental and investment.

**S&P Listed Private Equity Index** comprises the leading listed private equity companies that meet specific size, liquidity, exposure, and activity requirements. The index is designed to provide tradable exposure to the leading publicly-listed companies that are active in the private equity space.

**S&P Municipal Bond Index** is a broad, market value-weighted index that seeks to measure the performance of the U.S. municipal bond marke

**S&P US REIT Index** measures the investable U.S. real estate investment trust market and maintains a constituency that reflects the market's overall composition.

**Short-duration Treasury securities** are backed by the full faith and credit of the U.S. government. They typically mature in one year or less.

**Short, or short position**, refers to a trading technique in which an investor sells a security with plans to buy it later; it is used when an investor expects the price of a security to fall in the short term.

**Stagflation** is persistent high inflation combined with high unemployment and stagnant demand in a country's economy.

**Tail risk** is the probability that the asset performs far below or far above its average past performance. Investors are most concerned with "left" tail risk, or the likelihood that observations fall three standard deviations below the average expected return.

**Taxable equivalent yield (TEY)** = the pretax yield that must be received on a taxable security to provide the holder the same after-tax yield as that earned on a tax-exempt security. The TEY = muni yield/1- highest tax rate.

**Value sectors or stocks**, generally refer to those trading at levels perceived to be below their fundamentals.

**Yield curve** plots yields (interest rates) of bonds having equal credit quality but differing maturity dates. The slope of the yield curve gives an idea of future interest rate changes and economic activity.

**Yield to maturity** is the estimated total return on a bond if the bond is held until it matures.

**Yield to worst** measures the lowest possible yield that can be received on a bond with an early retirement provision and must always be less than yield to maturity because it represents a return for a shortened investment period.