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November | 2023

Capital Perspectives

Monthly investment analysis and insights from Wilmington Trust Investment Advisors

ON THE RECORD

What Questions Are Top of Mind for Investors?

In this issue:

Tony Roth
Chief Investment Officer

It has been a challenging year for investors, with the economy surpassing expectations at every turn. The latest evidence is the U.S. gravity-defying third quarter, which clocked the fastest GDP print since the fourth quarter of 2021. Meanwhile, the stock market took a breather in the third quarter while rates surged. Recently, equities have rallied strongly alongside bonds on signs that the economy may be slowing enough to prompt the Fed to actually start cutting rates but not so much that a recession emerges (also known as a "Goldilocks" economy). Fortunately, we are continually meeting with clients, business owners, and investors throughout our footprint. These interactions offer tremendous insight into local economic conditions and risks. With the economy and the Fed at such pivotal points, I wanted to use this month's letter to address the most common and pressing questions on the minds of our clients.

Question 1. Are we out of the recessionary woods?

Answer: We place a roughly 60%–65% probability on a soft landing, given encouraging improvement in inflation and a resilient consumer. There is still an uncomfortably high 25% probability on a mild recession taking place in 2024.

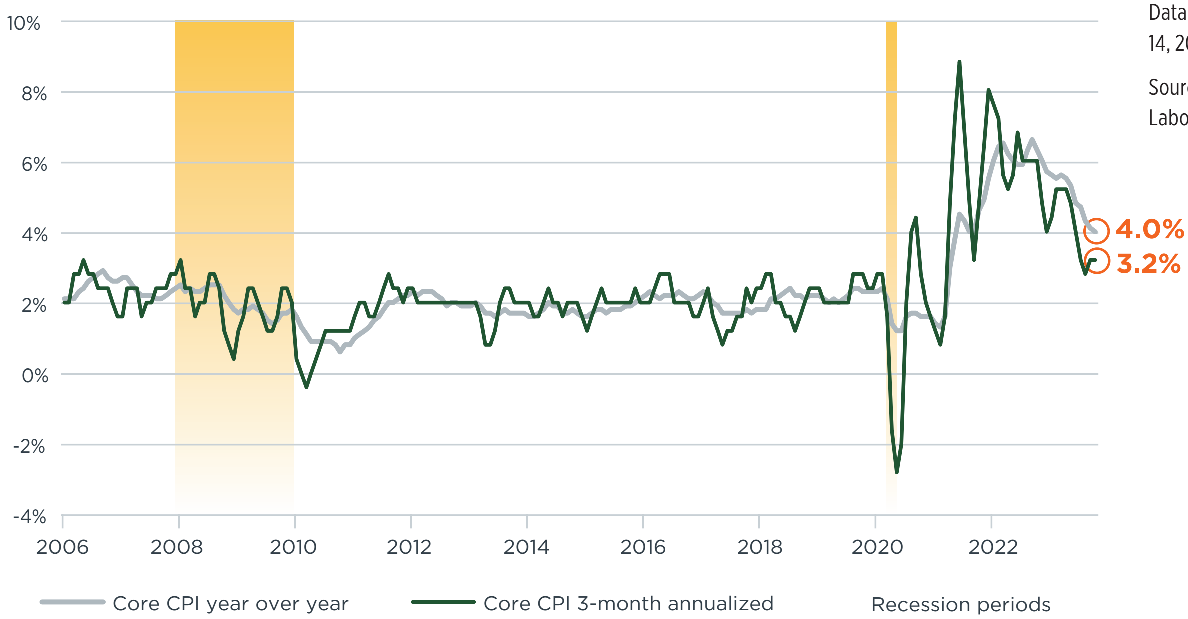
The last few months have delivered evidence of slowing inflation alongside a resilient consumer, which has shifted the narrative away from recession toward a soft landing. Of paramount importance is the trajectory of core inflation, which continues to descend toward the Fed's target (Figure 1). The U.S. consumer

Continued

Figure 1

Inflation descending to Fed's target

Core CPI y/y and 3-month annualized



Data as of November 14, 2023.

Sources: Bureau of Labor Statistics, WTIA.

There is still about a 25% probability that growth rolls over entirely, leading to a mild recession. After all, while a Goldilocks economy is possible, its attainment is a small needle to thread.

delivered a stellar showing in the third quarter even as inflation slowed. Consumer activity is expected to slow considerably as the labor market normalizes and excess savings dwindle. Headwinds are now building in the form of credit costs, housing affordability, and student loan repayments.

We believe we can say with confidence that the 4.9% GDP print from the third quarter will not be repeated (and it may even be revised down) over the next year. We expect the next two quarters to deliver below-trend growth that supports the disinflationary trend, all while maintaining the economic expansion. The modest uptick in the unemployment rate is a function of a softening job market and increased labor market participation, which should give the Fed comfort that wage costs will not present a problem going forward.

However, there is still about a 25% probability that growth rolls over entirely, leading to a mild recession. After all, while a Goldilocks economy is possible, its attainment is a small needle to thread. We are monitoring a slowing of the services economy, as evidenced by the ISM Services PMI falling to 51.8 (above 50 indicating expansion). Credit delinquencies, on both the consumer (credit and auto loans) and business side, are increasing. While a normal part of a slowing economy, these trends also precede a recession. We will continue to monitor the credit arena closely for any signs that the trend could signal worse than a slowing economy.

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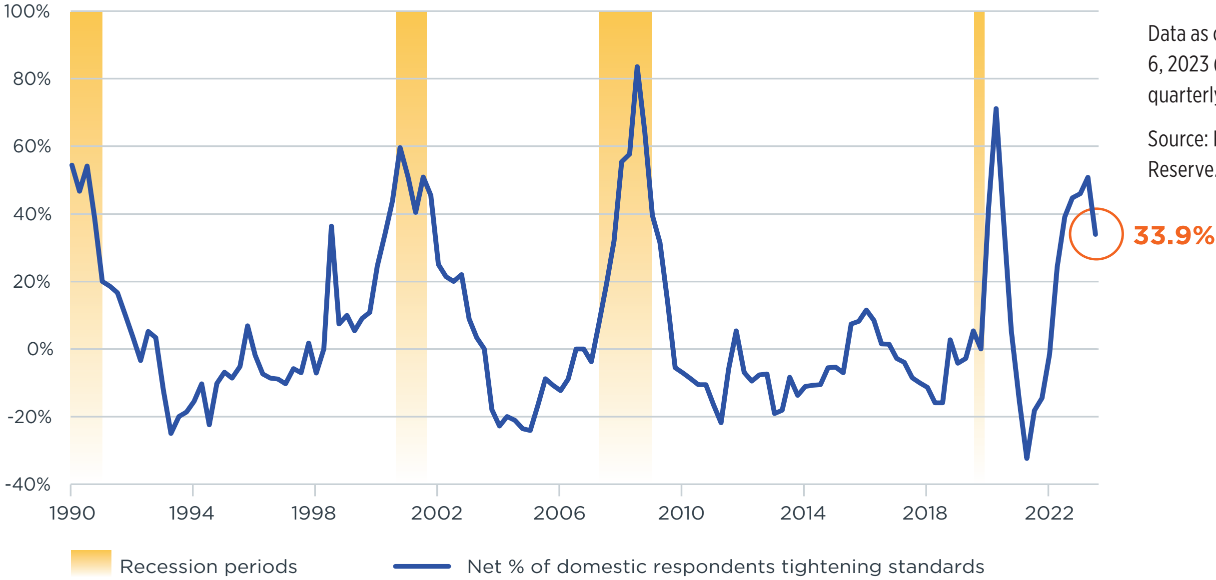
Figure 2

Banks tightening lending standards in real estate

Senior Loan Officer Survey, commercial real estate, net % of banks tightening standards



Data as of November 6, 2023 (reported quarterly).

Source: Federal Reserve.

Question 2: What is the outlook for commercial real estate?

Answer: We are closely monitoring the commercial real estate (CRE) sector, with particular focus on weakness within the office sector. At this time, we see some continued headwinds for the overall asset class, but as is the case for real estate, location and quality matter. We also see some encouraging trends in non-office sectors. Last, as with all investments, each asset must be evaluated in light of its unique characteristics.

CRE concerns began to broaden during the period of bank stress earlier this year, and many banks with exposure to this sector have increased loan-loss reserves and tightened lending standards (Figure 2). What had been seen as mainly a postpandemic, urban office ground zero has started to spill over more broadly to other forms of commercial real estate. As evidence of this trend, through the third quarter of this year, CRE transaction volumes have slowed to a quarterly pace of $82 billion, a 54% y/y decline.[1] Some softening is occurring in the non-multifamily CRE space, with the share of loans behind on payments increasing modestly from 0.5% to 0.8% in the span of a year (as of the third quarter of 2023).[2]

Office does remain the primary concern, as occupancy rates seem to be stabilizing at just 50% of prepandemic levels.[3] Quality is key. The newest and highest quality office buildings in New York City (NYC), for example, are capturing record-high rents. Some estimate that class A+ buildings in aggregate will see a relatively modest price decline of 15%–20%, but lower-quality buildings in NYC and San Francisco have recently traded at 50%–80% discounts to prepandemic values. Properties in the Sun Belt, including cities like Tampa, Orlando, and Dallas, remain strong and have seen vacancy rates rise by less than 1% over the last two years. Also, only around 15% of office loans on bank balance sheets are set to mature

[1] "Commercial Real Estate Investment Volume Continues to Fall | CBRE," CBRE, October 31, 2023.

[2] Goldman Sachs Global Investment Research "COMMERCIAL REAL ESTATE RISKS," October 9, 2023.

[3] Kastle Systems - Data Assisting in Return to Office Plans, KASTLE, November, 2023.

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Reduced diversification benefit from owning a combination of stocks and bonds can occur during periods of rapidly rising inflation, stagflation (low/negative growth and high inflation), or elevated interest rate volatility, when large and violent moves in rates can push stock and bond returns in the same direction.

in the next two years, helping to minimize the potential near-term impact to the overall economy.[4]

Within the multifamily space, a record number of new units are in development, which could weigh on property values and rents. Funding challenges have also spread from the office sector to multifamily.[5] Yet fundamentals for retail, industrial, and hospitality remain relatively sound.[6] U.S. consumers have proven to be resilient amid a strong labor market and they continue to spend on travel, with U.S. hotel occupancy rates expected to reach 63% in 2023, up just 0.7% y/y.[7] Luxury hotels, in particular, have held up, with vacancy rates declining by 6% over the last two years.[8]

In aggregate, CRE is an area we expect to see continued weakness. However, we do not believe the office sector will materially impair the overall economy, and we are seeing encouraging trends in other sectors. Also important to note: Bank excess capital requirements have increased considerably since the global financial crisis and we believe that the spate of bank failures earlier this year largely represents an isolated event. In our view, the market has already weeded out those banks with the greatest idiosyncratic risks that are not broadly present in the industry today. Moving forward, we expect the disorderly industry failures of 2023 to eventually give way to orderly industry consolidation which will further strengthen the overall banking ecosystem.

3: What are the portfolio implications of the increased correlation between stocks and bonds?

Answer: The traditional 60/40 stock/bond portfolio has been tested by increased correlations between stocks and bonds. We expect a higher-than-normal correlation to persist into 2024 as inflation and rates normalize. However, once the Fed's inflation target is in reach—or the economy tips into recession—stocks and bonds should return to their typical historical relationship.

Over long periods of time, stocks and bonds have exhibited a low correlation of just 0.1,[9] but the relationship is not stable. There are periods where stocks and bonds have been almost perfectly correlated and times when these asset classes are very inversely correlated. Since 2022, the correlation between stocks and bonds has averaged 0.7 and was above 0.8 as of the end of October. This means an investor has experienced a reduced diversification benefit from owning a combination of stocks and bonds. This can occur during periods of rapidly rising inflation, stagflation (low/negative growth and high inflation), or elevated interest rate volatility, when large and violent moves in rates can push stock and bond returns in the same direction.

In our base case soft landing scenario, the Fed will likely begin to cut rates in 2024. In this environment, we expect both stocks and bonds to perform well, thereby benefiting investors from increased correlations. Once inflation normalizes, the fed funds rate settles back toward the neutral rate, and economic growth slows to trend, we would expect a return to a lower correlation between stocks and bonds, delivering the diversification that investors have come to expect.

[4] Goldman Sachs Global Investment Research "COMMERCIAL REAL ESTATE RISKS," October 9, 2023.

[5] https://www.cbre.com/insights/briefs/cotw-debt-funding-gap-arises-in-multifamily-sector, CBRE, October 25, 2023.

[6] 2023 U.S. Real Estate Market Outlook Midyear Review | CBRE, CBRE, September 2023.

[7] US Hospitality Directions: hotel industry report: PwC, PwC, November 2023.

[8] Goldman Sachs Global Investment Research "COMMERCIAL REAL ESTATE RISKS," October 9, 2023.

[9] Rolling 6-month correlation of monthly returns of the S&P 500 Total Return Index and the Bloomberg US Agg Total Return Index, as of October 31, 2023. Sources: Bloomberg, WTIA.

Continued

Figure 3

Current positioning

High-net-worth portfolios with private markets*

	Tactical tilts	← – Neutral + →	Positioning
Equities	U.S. Large Cap	○○○●○○○	**Underweight**
	U.S. Small Cap	○○●○○○○	
	International Developed	○○●○○○○	
	Emerging Markets	○○○●○○○	
Fixed Income	Investment Grade	○○○○●○○	**Overweight**
	Tax-Exempt High Yield	○○○●○○○	
Real Assets	Global REITs	○○○●○○○	**Neutral**
	Other/Commodities	○○○●○○○	
Alternatives	Equity Long/Short Hedge	○○○●○○○	**Neutral**
Private Markets*	Equity/Debt/Real Estate	○○○●○○○	**Neutral**
Cash		○○○○●○○	**Overweight**

Equity factor tilts	← – N + →
Value	○○○●○○○
Growth	○○○●○○○
Momentum	○○○●○○○
Low volatility	○○●○○○○
Quality	○○○○●○○
Size	○○●○○○○

* 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 November 1, 2023.

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.

We're counting down to our 2024 Capital Markets Forecast, *U.S. Economic Exceptionalism: Can the reign continue?*

In it, we explore the makings of exceptionalism, and provide our expectations for the economy and equities in the year to come.

Look for the report to be released in mid-December.

Concluding remarks

The economic outlook remains uncertain, and while we are cautiously optimistic that a soft landing will be achieved, we are not taking our eyes off the ball. We retain a slight underweight to equities across U.S. small cap and international developed (Figure 3), where valuations are attractive on an absolute and relative basis (to U.S. large cap) but the necessary catalysts for a re-rating are elusive. Further, analyst earnings expectations for U.S. large caps are optimistic when considered alongside our outlook for U.S. GDP growth of 1%–1.5% in 2024. The risk versus reward of fixed income remains attractive, given current yields and our expectations for rates to decline. We are holding slightly excess levels of cash and looking for opportunities to deploy that cash in coming months, most likely into U.S. equities if in fact the stock market reverses as softer economic data are reported in the coming months.

As our 2024 Capital Markets Forecast is expected to be released in the middle of next month, we will not publish a December issue of *Capital Perspectives*.

Wishing you a festive holiday season and a very happy new year.

Best,

Tony

ASSET CLASS OVERVIEW

Municipal Fixed Income

Dan Scholl
Head of Municipal Fixed Income

	AS OF OCTOBER 31, 2023		
	Month	YTD	Trailing 12-month return
S&P Municipal Bond Index	-1.13%	-2.19%	2.36%
S&P Municipal High Yield Index	-2.18%	-1.36%	3.86%
S&P Municipal Bond New York Index	-1.17%	-1.99%	2.87%
S&P Municipal Bond California Index	-1.17%	-2.20%	2.54%

Sources: FactSet, Bloomberg. Investing involves risks and you may incur a profit or a loss. Past performance cannot guarantee future results. Indices are not available for direct investment.

What we are seeing now

While starting the year with a positive return in the first quarter of this calendar year, municipals have struggled as the Fed raised rates by 100 basis points (1.00%) to its current target level of 5.50% since the beginning of 2023 to combat inflation and a surprisingly resilient jobs market. Additionally, investors are requiring a higher term premium to hold longer U.S. Treasuries due to rising inflation expectations and a reaction to the Fed's current "higher for longer" mantra.

The rise in rates has continued to lift municipal yields higher causing negative price performance. However, the rise has caused municipal yields to reach their peak in the last 15 years, according to Bloomberg—within basis points of the peak during the 2008 financial crisis. One would also have to look back to 1999 to find a historical period when overall yields were significantly higher. Adding to the level of higher yields this fall is the seasonal decrease in demand from reinvested maturities and coupons coming due and an increase in the supply as municipalities try to issue debt before the holidays and the new year approach. While overall supply is down by 10% year to date versus the same period last year, the supply relative to demand has caused yields to move slightly higher.

All of the factors above have led to a municipal market where investors have been able to lock in an attractive 4% and higher after-tax yields across the credit and maturity spectrum. Moreover, the yield curve is inverted to flat on the front end causing the long intermediate section of the yield curve (~10–15 years in maturity) to represent a very good value.

What's changing

Given the value in municipals, we are beginning to see investors allocate more to the asset class. Taxable money market yields have peaked around 5% and T-bills continue to be attractive, but the after-tax value of locking in a 4% tax-free yield is equal to a taxable equivalent yield of 6.7% for an investor in the highest tax bracket. We know from history that bond markets will try to anticipate the Fed's next moves—typically between three to 13 months ahead. If the Fed decides to reverse course and begin cutting rates, money market yields will decline along with the declining Fed target rate—and investors face reinvestment risk of declining yields/income levels. For tax-advantaged investors, locking in a 4% tax-free yield may be attractive to protect against reinvestment risk; and, if rates stay higher for longer, municipal yields could stay in this range or move higher, thereby generating more income for municipal holders. In either scenario, we think it is prudent for investors to consider municipals. (Please see our recent Wilmington Wire blog post for a deeper examination.)

What we expect

We also know from history that when the yield curve moves from an inverted status (short-term rates are higher than long-term rates) and steepens (short-term rates are lower than longer-term rates), municipals can perform well. Over the last five hiking cycles, the return on municipals for the 12-month period following the last rate hike averaged between 6%–9%[1] depending on the type of strategy. While most of those cycles (going back 40 years) had higher starting yield levels, a steepening curve would be advantageous for most investors. Additionally, fund flows into the municipal asset class have been tepid this year (down $12 billion year to date through October 31).[2] If asset allocators and/or investors increase their allocations to municipals, we expect returns to be very attractive as increasing demand causes yields to decrease. At the very least, municipal investors can benefit from more tax-free income.

1 Data as of September 30, 2023. Source Municipal Market Advisors, LLC.

2 Source: J.P. Morgan.

Disclosures

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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.

Continued

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**.)

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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.

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.

The 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.

The 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.

The 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.

The 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.

The 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

The 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.

The 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.

The 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.

The 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.

The 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.

The 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.

The 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.

The 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.

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.

Continued

Glossary Continued

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.

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 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.

Continued

Glossary Continued

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.

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.

The 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.

Continued

Glossary Continued

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.

The 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.