WILMINGTON TRUST

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Capital Perspectives

Monthly investment analysis and insights from Wilmington Trust Investment Advisors

ON THE RECORD

Navigating Inflationary Crosscurrents

In this issue:

Tony Roth
Chief Investment Officer

On behalf of the entire investment team at Wilmington Trust, I would like to welcome our new clients, formerly of People's United Advisors, a part of People's United Bank, to our monthly flagship publication.

I was fortunate enough to spend much of spring break with my wife and two daughters on a boat. Our family has a lot of experience sailing, so we feel very at home on the water, but I strangely developed an acute case of land sickness when I returned home. Was it the lack of rolling motion or instead the disorientation I experienced returning to a very different rate and markets environment from what I left behind just a week earlier?

A few days back at my desk and the Bloomberg terminal seemed to settle my vertigo, which turned out to be well justified, as April ended up being the worst month for the S&P 500 since the onset of the pandemic—as well as closing out the worst quarter for bonds in about four decades. The tech-heavy Nasdaq Composite returned its worst month since 2008, and through April, the index had corrected 23% from its all-time high. The carnage continued this week. First-quarter U.S. GDP and the Consumer Price Index (CPI) hit 8.5% on a year-over-year (y/y) basis. This is the closest the U.S. economy has come to stagflation since the 1970s.

Notwithstanding this raft of troubling data, we see the economy as reasonably healthy, based on the continuing strength of consumer and business spending alike. Moreover, given current dynamics, we expect inflation to decelerate sharply over the balance of this year. While this tempts us to take advantage of the market drawdowns to deploy cash back into equities, in our view this would be premature. There remain two exogenous risks—specifically the Ukrainian war and the Chinese zero-tolerance-COVID policy—either of which could act to quickly reaccelerate the path of global inflation.

Continued

Figure 1

Historic rise in mortgage rates to cool housing market

30-year mortgage rate

Data as of April 29, 2022.

Source: Bloomberg.

Line represents the Bankrate.com U.S. home mortgage 30-year fixed national average.

We are beginning to see an encouraging combination of increasing labor participation and plateauing demand for workers, which should alleviate wage pressures.

Baseline expectation for inflation

We have been resolute—if not a bit early—in calling for a peaking of and gradual decline in inflationary pressures. This outlook has understandably been met with some skepticism, but as our Chief Economist Luke Tilley outlined in a recent Wilmington Wire post, we are seeing early signs that support this thesis on both the demand and supply sides of the equation.

- **Demand.** The runup in goods prices was driven largely by unprecedented consumer demand during the pandemic. This consumption was enabled by historic fiscal stimulus resulting in record excess savings. Those savings have dwindled for most households and are now lower than pre-COVID levels for those in lower-income tiers. While they remain elevated for the highest-income tier, at this level, excess cash has little impact on consumption. In addition, some measures of consumer sentiment are near the lowest on record, suggesting consumers will further slow spending on goods and services in future quarters. The housing market is also showing evidence of coming off the boil after the fastest increase (on a percent change basis) in the 30-year mortgage rate on record[1] (Figure 1).

- **Supply.** We are now seeing stockpiles at ports—outside of China—dissipating and shipping costs falling. Looking under these trends, we note that the tight labor markets that had contributed to logistical backlogs across the supply chain are now easing. We anticipate the combination of increasing labor participation and plateauing demand for workers to alleviate shortfalls within the supply chain.

Our base case is for inflation to gradually decline to 4.5% y/y (as measured by the CPI) by year end. This would represent a steep drop from current levels, one we expect would elicit a more dovish response from the Fed than that currently priced

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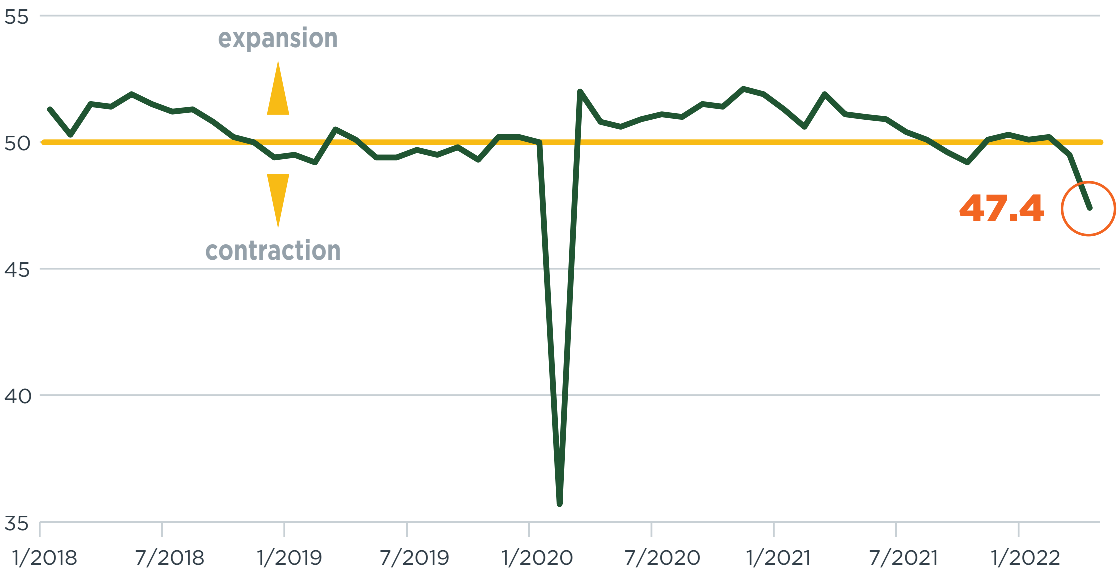
[1] As measured by 5-month change in the Bankrate.com 30-year fixed mortgage rate national average as of April 29, 2022 (Source: Bloomberg).

Figure 2

China PMIs tank on resurgence of COVID cases and economic lockdowns

China Purchasing Managers Index



Data as of April 2022.

Source: Macrobond.

Levels above 50 represent an expansion and levels below 50 represent a contraction.

Planting shortfalls would exacerbate and prolong food inflation, an important component of household spending and one that is seeing price increases at a rate of 8.8% y/y as of March.

into markets. Specifically, after May's Federal Open Market Committee meeting, fed funds futures are presently expecting the Fed to raise rates approximately 2% by the end of the year to bring the fed funds rate close to the Committee's estimation of "neutral" (a policy rate that neither stimulates nor contracts the economy). We do not think the Fed will go quite that far if inflation is slowing as rapidly as we anticipate.

Market crosscurrents

As noted, two critical global circumstances could significantly deteriorate the picture for supply chains. The first is the war in Ukraine, which risks deepening structural cracks in the commodity complex the longer it lasts. Ukraine, a major agricultural exporter, could see land planted this spring (e.g., maize, sunflower) reduced by a third, and yield from wheat harvests planted in the fall reduced by a similar amount.[2] Shortfalls would exacerbate and prolong global food inflation, an important component of household spending and one that is seeing price increases at a rate of 8.8% y/y as of March[3]. Recovery of semiconductor supply is being pushed out, and shortages could be with us through 2024, as Intel CEO Pat Gelsinger suggested in a recent post-earnings interview. In addition, as relates to Europe's energy vulnerabilities, the worst-case scenario is slowly unfolding. The European Union (EU) appears to be moving to cut off all Russian oil by the end of this year. And Russia has now cut off natural gas supplies to Poland and Bulgaria due to their refusal to meet Putin's ruble-based payment demands. Both oil and natural gas market dynamics are threatening to acutely elevate energy prices abroad and at home. This outcome would dramatically alter our relatively dovish inflation expectations for the worse.

Rolling lockdowns through China have been a stark reminder that the disease can still disrupt economic activity and financial markets. Whereas the U.S. is moving beyond the pandemic to an endemic state (i.e., living with the virus), China has

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[2] According to *The Guardian,* https://www.theguardian.com/environment/2022/apr/02/global-food-price-fears-as-ukraine-farmers-forced-to-reduce-crop-planting.

[3] As of March 31, for the Food category of the Consumer Price Index, measured y/y. Source: Bureau of Labor Statistics.

Figure 3

Emerging market equities appear cheap compared to U.S. equity valuations

(P/E) ratio of the S&P 500 index divided by P/E ratio of the MSCI EM Index

Data as of April 29 2022.

Source: Bloomberg.

The line is calculated by dividing the price-to-earnings (P/E) ratio of the S&P 500 Index by the P/E ratio of the MSCI EM Index.

As relates to Europe's energy vulnerabilities, the worst-case scenario is unfolding. The EU appears to be moving to cut off all Russian oil by the end of this year.

doubled down on its zero-tolerance-COVID policy at the expense of the economy's recovery (Figure 2). The reason for this is simple: Due to poor vaccine quality and disappointing immunization levels, the Chinese population is far more vulnerable to the latest set of COVID strains than virtually any Western country. Consequently, case growth has been greater and more widespread, for example, affecting two of China's largest cities: Beijing and Shanghai. Lockdowns have been more targeted in an attempt to avoid long-lasting shutdowns of manufacturing facilities and ports. Case growth appears to be slowing, and cities reporting daily new cases have fallen from nearly 100 to fewer than 50.[4] Nonetheless, there is no doubt that these latest COVID strains are endemic throughout China and it is virtually impossible to predict the extent of additional lockdowns as the year transpires.

By contrast, China is expected to increase support for the economy through fiscal, monetary, and regulatory policy easing ahead of the Chinese Communist Party's National Party Congress in November. This is an incredibly important political event, occurring only twice a decade and offering President Xi Jinping an opportunity to solidify an unprecedented third term. Disruption or postponement of that event, or a deteriorating economy for the balance of the year, are simply not options for policymakers. A statement from the Communist Party's Politburo on April 29 confirmed policymakers' stance on both containing COVID and stabilizing the economy.

[4] Source: Gavekal Research, TheDailyShot.com.

Continued

Don't miss the latest episode of Capital Considerations, *The Real Deal on Rates, Yields, and Bonds* where Tony and our Head of Fixed Income Manager Research and Strategy Tom Pierce explore how inflation has affected bond yields, and what it means for the market.

Indeterminate outcome—patience in allocating excess cash

When we assess these risks, the outcome looks indeterminate. We expect the inflationary environment to shave off some growth from our original 2022 U.S. economic forecast, but still expect 2.4% for the year. A slightly less hawkish Fed than the market is pricing, along with a robust labor market, are expected to extend the economic cycle beyond our 12-month tactical investment horizon. However, recession risks have risen, and if the exogenous inflationary risks discussed above escalate, we could be inclined to revise down our GDP forecast.

First-quarter earnings season is providing a microcosm of the macroeconomic environment, and we are witnessing in real time the tension between downward revisions to growth expectations and investor appetite for risk assets in a world where real rates are turning positive.[5] Earnings results are coming in better than average, with 80% of companies reporting earnings above expectations halfway through the season.[6] However, generally management is tempering expectations for the second quarter and beyond. Higher inflation is already leading to consumer demand destruction, particularly as regards discretionary spending. For example, maybe four or more different streaming services are not needed after all. To wit, shares of Netflix have fallen 43% after reporting a contracting subscriber base in its April 19 earnings release. Profit margins for the S&P 500 appear to have peaked but remain elevated at 12%.[7] Some companies, including those in the restaurant and consumer staples spaces, have shown pricing power resilience. As excess savings deplete, we will learn the durability of this trend.

At the same time, many highly valued growth stocks have been in free fall, with the Nasdaq Composite down 13% in a single month. Investors are grappling with uncertainty around earnings growth in a post-pandemic world, coupled with a higher interest-rate environment that continues to pressure valuations. The repricing of Fed activity and inflation expectations have led the 10-year Treasury yield to a new post-pandemic high of 3%. Short-term momentum suggests the 10-year could continue to climb higher, but in our view is likely to level off around 3% later this year. As suggested earlier, that has us contemplating the opportunities presented by the most beaten-up parts of the market—including growth stocks and investment-grade bonds. The risk versus reward of holding excess cash could begin to shift in the coming weeks in favor of other assets.

For now, we are exercising discipline. After gradually reducing equity risk earlier this year, we are sitting with a neutral allocation to U.S. and international developed market stocks and a slight overweight to emerging markets (EM) stocks. In addition to the expectation for Chinese policymakers to support growth, higher commodity prices are supporting many EM economies. A more dovish Fed and plateauing of the U.S. dollar could benefit EM equities. And, as we have discussed in prior issues of *Capital Perspectives,* EM equities remain incredibly cheap relative to their own history and when compared to the historical relationship with U.S. equities (Figure 3).

5 As of May 2, 2022, as measured by the difference between the nominal 10-year Treasury yield and 10-year breakeven rate for TIPS. Source: Bloomberg.

6 According to Factset Earnings Insight, as of April 29, 2022.

7 According to Factset Earnings Insight, as of April 29, 2022.

Continued

Figure 4

High-net-worth portfolios with private markets*

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

Data as of May 1, 2022.

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.

*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 we do not tactically adjust this asset class.

**Taxable high-yield bonds are not included in the strategic asset allocation benchmark for tax-sensitive portfolios primarily invested in municipal bonds. In this case, the Investment Committee saw an opportunity to invest in short-term, taxable leveraged loans (high yield) for both taxable and nontaxable portfolios.

The last four months have represented one of the worst periods for high-quality, long-duration fixed income that we have ever seen. However, fixed income remains an important component of diversified portfolios. For now, we retain an underweight to the asset class, but as rates move higher, investment-grade fixed income should become more enticing.

Volatility is never comfortable, no matter how many times we are told (by ourselves or others) that it is a normal part of investing. But regardless of where markets move next, we believe profoundly that, as has always been the case in the past, patience and composure will reward investors. We make relatively small adjustments to portfolios throughout the tumult with the knowledge that, as long-term investors, we will likely be compensated for our conviction in the economy and markets to demonstrate powerful growth over the long term.

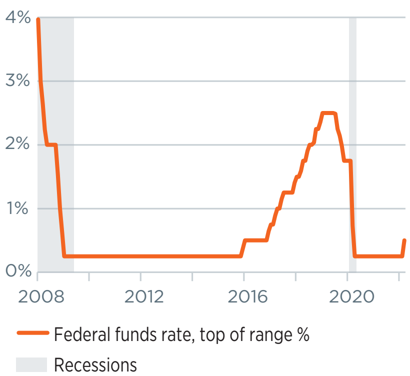
Best,

Tony

Fixed Income Investing in a Rising Rate Environment

Randy Vogel, CFA
Head of Fixed Income,
Wilmington Trust
Investment Advisors

Figure 1
Historical federal funds rate



Data as of March 3, 2022.
Sources: Macrobond, Federal Reserve, WTIA.

Following the onset of the global pandemic, the Federal Reserve (the Fed) reduced its benchmark rate to zero, leading to an extended period of low rates. Now, with inflation running at its highest level in decades, the Fed raised its benchmark interest rate 0.25%, with the market anticipating another 1.50% increase through the end of 2022.* While rising rates present unique challenges to bond investors, there are strategies for adapting to this evolving vista.

Anatomy of rising interest rates

Interest rates have been at historical lows since the Fed implemented an unprecedented policy of monetary easing in response to the credit crisis that began to unfold in 2008. A decade later, as the Fed has begun to move toward monetary policy normalization, investors may now be confronting an unfamiliar economic and investment landscape marked by rising interest rates and rekindled inflation (Figure 1).

Interest rates rarely change direction for a single reason, and the path they travel isn't always a straight and predictable one. Still, there are several key influences that affect the direction of interest rates, which warrant close monitoring, including:

- **Fed policy:** The central bank controls short-term interest rates by setting the federal funds rate, and will raise or cut it depending upon its view of economic growth and inflation.** For example, if the Fed believes strong economic growth could become inflationary, it will seek to dampen that growth by raising rates. Conversely, if the Fed believes economic growth is slowing, it will seek to increase growth by cutting rates.
- **Economic conditions:** Similar to any product or service, interest rates rise or fall based on prevailing demand and supply. A healthy economy will typically translate into greater demand for consumer and business borrowing. This increased demand will tend to push interest rates higher. Conversely, a slowing economy will tend to reduce the need or desire for borrowing, often resulting in falling interest rates.
- **Inflation:** The Fed carefully watches the rate of inflation since one of its chief goals is to maintain stable prices. An accelerating inflation rate may be an indicator of an overheating economy. Additionally, investors' expectations of future inflation are a central factor in determining the long-term yields necessary to offset the perceived risk of inflation.

* As of April 2022.

** For definitions of important fixed income terms, see the glossary on page 14.

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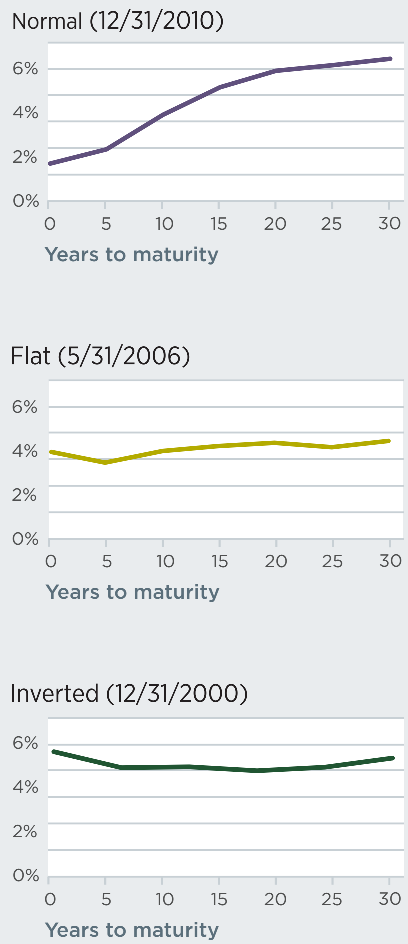
Figure 2
Types of yield curves



Source: Bloomberg.

When tracking inflation, the media and investors focus on the Consumer Price Index (CPI), which measures the average change in prices over time that consumers pay for a basket of goods and services. However, the Fed's preferred measure is the Personal Consumption Expenditures (PCE) index in determining its inflation outlook, as it is a broader measure of goods and services whose components constantly shift to reflect changing spending patterns.

- **Fiscal policy:** Whether through increased spending, tax cuts, or both, the federal government's fiscal policy can be crafted to stimulate economic activity. While expansionary fiscal policies are generally employed to combat recession, their use in times of healthy economic growth can be an inflation catalyst.
- **The bond market:** The Fed may hold command over short-term rates, but it is the bond market that sets longer-term rates through the pricing mechanism of an open market of buyers and sellers. The prices (and associated yields) of bonds will be tied to the relative equilibrium established between supply and demand.

There are a number of factors that affect the supply-demand equilibrium. For instance, widening federal deficits will increase the supply of debt, which can send yields higher, absent any increase in demand. Conversely, a falling U.S. dollar may reduce the demand for bonds from overseas buyers or increase inflation, which can also trigger higher yields.

The intersection of inflation, rising interest rates, and bond prices

Interest rates and bond prices have an inverse relationship, meaning when interest rates rise, bond prices will decline. How much they decline depends on the magnitude of interest rate increases and very often on the length of a bond's term to maturity or duration. Future inflation expectations can also affect bond prices since inflation erodes the purchasing power of future interest payments. If investors believe that inflation will rise in the future, they will demand higher yields, causing bond prices to fall.

Typically, yields will be higher the longer the bond's maturity in order to compensate investors for the added risk of an uncertain interest rate future. Thus, the yield curve (i.e., the line that connects short-, intermediate-, and long-term bond yields) will ordinarily slope upward as it moves longer out on the time horizon (Figure 2).

There are occasions, however, when the yield curve flattens (yields are roughly the same regardless of length of maturity) or becomes inverted (long-term yields are lower than short-term yields). A flat or inverted yield curve can develop when the Fed and the bond market have opposing views about where inflation and the economy are headed. For instance, the Fed may raise the federal funds rate in response to a perceived acceleration in inflation or economic growth. However, if investors believe inflation is not a threat or that economic growth will slow in the future, yields in the bond market for longer-term securities may fall or remain stable. These two opposing outlooks may eventually result in a flat or inverted yield curve.

Continued

There is no single profile of a rising rate environment. Small incremental increases over an extended period of time will more easily allow the markets to adjust, while larger increases over a shorter time period could prove more disruptive.

From an equity investor's perspective, rising yields may not necessarily be bad. If rising rates are the result of accelerating economic activity, then any such economic growth should increase corporate earnings, which should in turn support higher stock prices. That being said, higher yields may be a risk to continued economic growth, which could lead to declining stock prices. Moreover, should an inverted yield curve develop, equity investors may see this as an indication of a coming recession, as the former has historically led to the latter.

Navigating a rising rate environment

There is no single profile of a rising rate environment. Small incremental increases over an extended period of time will more easily allow the markets to adjust, while larger increases over a shorter time period could prove more disruptive. Additionally, different bond types and maturities may react differently depending upon the state of other economic and financial variables.

Though escalating interest rates are a fundamental risk to bond values, it remains essential not to overlook other risks embedded in different types of bonds. Some of the risks include:

Credit risk: This concerns the possibility that the bond's issuer may default on interest payments or not be able to repay the bond's face value at maturity.

Call/prepayment risk: A bond issuer retains the right to "call," or take back the bond before the maturity date, which could impact one's expected future cash flow; and if a bond is called when interest rates are low, the investor faces reinvestment risk as well (see below).

Inflation risk: This is centered around the fact that a bond's returns may not keep pace with rising prices, potentially eroding purchasing power of cash flow from securities**.**

Interest rate risk: This is the risk that a bond's price will fall when interest rates rise.

Liquidity risk: The greater the spread between the bid and ask price (the most a buyer is willing to spend and the least amount at which a seller is willing to sell), the lower the liquidity and the higher the liquidity risk that a bondholder may have to sell a security below its true value.

Reinvestment risk: When reinvesting the income received from securities, it is beneficial to have a higher interest rate; reinvestment risk is the risk that interest rates will decrease.

Continued

If there is a positive aspect to higher interest rates, it is that investors will begin earning higher current income on their bond investments.

Consequently, when building a bond portfolio, investors need to factor in multiple variables and their relative correlation to one another, along with the prevailing economic and financial conditions. There is no one-size-fits-all strategy. Instead, bond investors need to pursue a dynamic, multidimensional strategy that considers:

- **Managing bond durations:** Shortening a bond portfolio's overall duration will help mitigate the loss of principal inherent in a higher rate environment but does not come free of charge; an investor will need to sacrifice some interest income.
- **Evaluating interest rate sensitivity:** Different bond types have different sensitivities to increases in interest rates, and portfolios need to be reshaped to reflect that.
- **Owning bonds with lower correlations:** Different bond market sectors may be less correlated to one another and to Treasuries. Intelligently balancing these less correlated bond types in a portfolio can help reduce risk.
- **Assessing credit spreads:** Credit spreads between Treasuries and different bond sectors will narrow or widen based on the perception of relative risk. Bonds with a wide yield differential relative to Treasuries help offset the impact of price declines.
- **Analyzing issuer leverage:** As interest rates move up, companies with higher leverage may be in greater danger of a credit rating cut, which could lead to disproportionate principal losses. Avoiding issuers that may have too much outstanding debt can help protect against avoidable losses. Higher rates can impact a company's sales or its cost of financing, stressing its ability to pay future interest payments. Accordingly, issuers with deteriorating prospects should be bypassed for investment or discarded from current holdings.

Though rising interest rates represent an adverse environment for fixed income portfolios, the benefits of the asset class remain in place. In any market cycle, bonds can offer a number of important advantages in an investor's portfolio, including current income, protection against overall portfolio volatility, and principal preservation. If there is a positive aspect to higher interest rates, it is that investors will begin earning higher current income on their bond investments.

Investment strategies to consider in a rising rate environment

There are a number of ways that investors can protect against the risks of rising interest rates and capitalize on these changing market conditions:

1. **Rotate bond holdings to short-term duration bonds**
   By selling long-duration bonds and replacing them with shorter-duration bonds, investors can lessen the adverse price impact that rising rates will have on long-duration securities. This strategy also affords investors the flexibility to eventually move back into higher-yielding long-term bonds as the risk of climbing rates recedes.

Continued

The value of active bond management

While the Fed has clearly signaled that it remains committed to increasing rates, it is less clear how the bond market will respond. Will changes in long-term rates parallel those in short-term rates? How will higher rates affect the different bond sectors? How should bond holdings be positioned along the yield curve?

The level of uncertainty in bond markets has introduced heightened risk to investors, making the case for active bond management even more compelling.

There are a number of ways active bond management can bring value to investors, including:

- **Reducing a portfolio's sensitivity to interest rates:** Protecting against principal loss due to rising rates may be achieved by managing a portfolio's duration or its position along the yield curve, as well as tilting holdings toward bond sectors that are less sensitive to rising yields.
- **Employing strategies to capitalize on rising rates:** There are techniques to take advantage of increasing rates, including rotating holdings toward floating rate notes, executing interest rate swaps, and exploiting the credit spread opportunities that prevail among bond sectors.
- **Managing credit risk:** An in-depth analysis of cash flow, business operations, tangible assets, and the financial leverage of bond issuers helps avoid investment in bonds whose issuer may encounter difficulty in making future interest and principal repayments.
- **Ascertaining bond structure and market liquidity:** The coupon and maturity are important elements when evaluating bonds for investment, but so is a bond's ranking in the capital structure of the company and the market liquidity of the issue.
- **Identifying value opportunities:** The size of the bond market and the vagaries of the bond issuance calendar may create opportunities for portfolio managers to uncover bonds that they believe offer unique value and capital appreciation potential. Additionally, active managers will frequently have access to new issues before the broader market, occasionally at discounted prices.
- **Managing currency risks:** For global bonds, currency fluctuations are an added level of risk, which active management can help mitigate.
- **Accessing robust intellectual capital resources:** The investment decisions of a portfolio manager are informed by the collective knowledge and experience of a team of bond strategists, credit analysts, and traders, and supported by proprietary analytical tools.

Individual investors typically do not have the resources, purchasing power, or the time to effectively manage a bond portfolio. Nor are passively managed bond index investments equipped to provide the benefits of active management. Indeed, by their very definition, bond index mutual funds or exchange-traded funds are unable to dynamically respond to the opportunities or dangers that emerge from the shifting currents that characterize a rising interest rate environment. Instead, they are forced to stick to the investments comprising the bond index it is designed to mirror, regardless of any changes in market realities.

Short-duration bonds may reduce the risk of principal loss, but they do not eliminate it. Moreover, by shifting into short-duration bonds, investors may forsake some current interest income by investing in lower-yielding bonds.

2. **Create a bond ladder**

   A bond ladder is a portfolio of individual bonds held in equal amounts over a series of different maturities. As the shortest-duration bonds mature, the proceeds are invested into bonds on the far end of the bond ladder. This continuous process of rolling over the proceeds into new holdings at the longer end of the maturity range helps investors to programmatically capture higher yields as rates rise.

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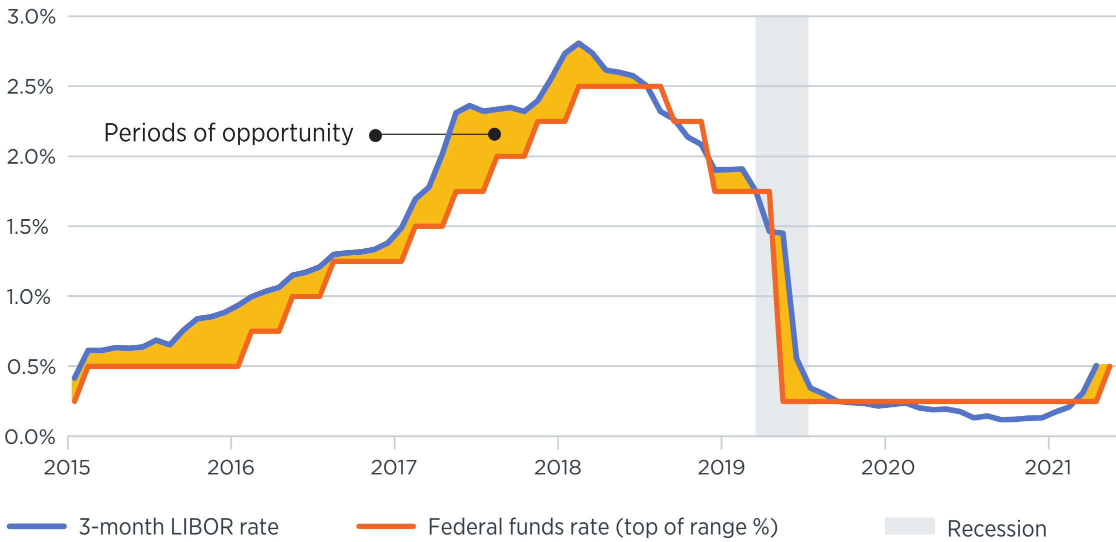
Figure 3

The disparity between LIBOR and fed funds rates %

The greater the dislocation, the greater the cash flow, which aides in principal preservation from investing in floating-rate securities.



As of March 1, 2022.

Source: Bloomberg.

Past performance cannot guarantee future results.

Prior to the financial crisis, LIBOR rates tended to move closely with other money market rates including Treasury and Overnight Indexed Swap (OIS) rates. Beginning in 2007, however, spreads of term LIBOR rates over many other money market rates began to widen sharply and became much more variable. In 2017, the Alternative Reference Rates Committee (ARRC) approved the Secured Overnight Financing Rate (SOFR) as the replacement for LIBOR in the United States. This benchmark is based on the rates U.S. financial institutions pay each other for overnight loans. LIBOR will be discontinued by June 2023.

Historically, the 3-month LIBOR rate has tended to move in advance of the federal funds rate, creating opportunities for investors.

Since it is difficult to determine the path of interest rates and the pace of change, the bond ladder removes the need to time the market by maintaining a continuous turnover of bonds along the maturity timeline. A bond ladder does not eliminate interest rate risk, and should interest rates fall, reinvestment of the proceeds will be at a lower rate. Constructing such a portfolio does require a substantial investment commitment, and returns may be dragged down by portfolio turnover expenses, such as commissions or the bid-ask spread.

3. Shift holdings into variable rate bonds

A variable rate bond is a security whose interest payments are tied to an interest rate or some other index. Owning a variable rate instrument may protect investors from principal loss since their interest payments will likely increase as interest rates move higher.

There are several ways to invest in variable rate instruments, e.g., investment-grade floating-rate corporate bonds and bank loan securities—a portfolio of business loans made by banks whose interest rate is periodically reset; typically, every 30, 60, or 90 days. Bank loan securities are rated below investment grade and carry a higher credit risk than investment-grade floating rate corporate bonds.

Continued

Floating rate securities are typically tied to the London Interbank Offered Rate (LIBOR), a global benchmark for short-term interest rates. Historically, the 3-month LIBOR rate has tended to move in advance of the federal funds rate, creating opportunities for investors (Figure 3).

4. Sell bonds, move to cash

Investors who are inclined to avoid any principal loss may want to sell their holdings and move them into cash-equivalent instruments, such as money market funds or bank deposits. This strategy may protect the investor from losses, but it can come at the cost of a sharp reduction in current interest income.

This approach may also eliminate an important buffer of protection against volatility in an investor's overall portfolio. It may seem counterintuitive that bonds, whose prices will decline as rates rise, can continue to blunt overall portfolio volatility. However, it must be remembered that bond prices tend to rise during times of stock market stress, helping to offset the declines suffered in the stock portion of a portfolio.

The most appropriate strategy for individual investors will depend on their investment objectives, risk tolerance, and a variety of other factors. In fact, for many, the appropriate strategy may be one that combines two or more elements of the aforementioned approach.

Building an intelligently designed bond portfolio is not a set-it-and-forget-it exercise. As financial and market conditions change, so must a bond portfolio adapt.

If you have any questions regarding your bond investments, or would like to talk about how to reorient your portfolio to a rising interest rate environment, reach out to your advisor.

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Glossary of important fixed income terms

Average maturity
The average time a bond portfolio's holdings will take to be fully payable. Interest rate fluctuations have a greater impact on the value of a portfolio holding bonds with longer average lives.

Coupon
The interest payment made on a bond, usually paid twice a year. A $1,000 bond paying $65 per year has a $65 coupon, or a 6.5% coupon rate. Bonds that pay no interest are said to have a "zero coupon."

Current yield
The yearly coupon payment divided by the bond's price, stated as a percent. For example, let's say a newly issued $1,000 bond paying $65 has a current yield of 6.5%. Current yield can fluctuate: If the price of the bond dropped to $950, the yield would rise to 6.84%.

Duration
Although stated in years, duration is not simply a measure of time. Duration signals how much the price of a bond is likely to fluctuate in response to changes in interest rates. The higher the duration number, the more sensitive a bond will be to changes in interest rates.

Federal funds rate
The overnight rate at which depository institutions, such as banks and credit unions, lend money to one another.

Fixed-rate bond
A bond with an interest rate that remains constant or fixed during the life of the bond.

Floating-rate bond
A bond with an interest rate that fluctuates, or floats, usually in tandem with a benchmark interest rate during the life of the bond.

High-yield bond
A bond issued by an issuer that is considered a credit risk by a Nationally Recognized Statistical Rating Organization, as indicated by a low bond rating (e.g., "Ba" or lower by Moody's Investors Services, or "BB" or below by Standard & Poor's Corporation). Because of this risk, a high-yield bond generally pays a higher return (yield) than a bond with an issuer that carries lower default risk. High-yield bonds are also sometimes referred to as "junk" or speculative bonds.

Investment-grade bond
A bond whose issuer's prompt payment of interest and principal (at maturity) is considered relatively safe by a nationally recognized statistical rating agency as indicated by a high bond rating (e.g., "Baa" or better by Moody's Investors Service, or "BBB" or better by Standard & Poor's Corporation).

Maturity date
The date when the principal amount of a bond, note, or other debt instrument is typically repaid to the investor, along with the final interest payment.

Real rate of return
The rate of return minus the rate of inflation. For example, if you are earning 6% interest on a bond in a period when there is 2% inflation, 4% would be your real rate of return.

Yield
The return earned on a bond, expressed as an annual percentage rate.

Yield curve
A yield curve is a graph showing the relationship between yield (on the y- or vertical axis) and maturity (on the x- or horizontal axis) among bonds of different maturities of the same credit quality.

Yield to call (YTC)
The rate of return you receive if you hold the bond to its call date and the security is redeemed at its call price. YTC assumes interest payments are reinvested at the yield-to-call date.

Yield to maturity (YTM)
The overall interest rate earned by an investor who buys a bond at the market price and holds it until maturity. Mathematically, it is the discount rate at which the sum of all future cash flows (from coupons and principal repayment) equals the price of the bond.

ASSET CLASS OVERVIEW

Equities

Andrew H. Hopkins, CFA
Head of Equity Research

AS OF APRIL 30, 2022	Month	Last 3 months	Trailing 12-month return
S&P 500 index	-8.72%	-8.17%	0.20%
Russell 2000 Index	-9.91%	-7.82%	-16.90%
MSCI EAFE Index	-6.47%	-7.53%	-8.15%
MSCI Emerging Markets Index	-5.56%	-10.45%	-18.33%

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

U.S. equity markets continued to suffer in April as a result of bleaker prospects for China's supply-chain challenges due to COVID shutdowns; the Russia–Ukraine war; and an active Fed promising more aggressive near-term rate hikes to help temper the inflation rate. Despite these issues—as well as higher input and transportation costs resulting in price inflation—earnings reports thus far continue to come in ahead of expectations with both current and forward earnings estimates moving higher. With the S&P 500 index down 11.68% year to date and rising earnings estimates, the interest rate outlook is triggering a reexamination of the market's valuation multiple. The growth rate is returning to normal after the unusually high growth rates of last year in the wake of the pandemic recovery.

The S&P 500 declined 7.19% in September 2021 while the more cyclical Russell 2000 Index lost 7.87%. At the same time, the Russell 1000 Value Index saw a decrease of 3.60% while the Russell 1000 Growth Index lost 10.76%. The best performance came from consumer staples, real estate, utilities, energy, health care, and basic materials, which reflected a mix of cyclical and defensive outperformance. Underperforming sectors included communication services, technology, and consumer discretionary. Valuation is at the high end of historical averages with a 2022 P/E multiple of 19x, which is adding to the vulnerability of the market in a rising rate environment.

What's changing

Equity markets are being confronted by the prospects of higher interest rates and relatively full valuations such that any possibility of a future recession is putting pressure on valuations, particularly in sectors that enjoyed high rates of growth during the COVID crisis. The peak recovery is behind the market now while lingering higher costs and pricing for most goods manufacturers are likely to pressure demand levels. Service companies are also being hit by rising employee costs, which is escalating inflation concerns. During the current reporting period, most companies responded and have worked through the supply-chain issues and inflated costs by raising prices. Equities earnings estimates continue to push modestly to the upside as companies have generally been able to offset cost increases with pricing.

What we expect

Now that the Fed appears to be moving more quickly to lift rates and reduce its balance sheet by moderating bond purchases, the equity market is likely to be more volatile as the impact from these moves are expected to reverberate in the economy. Much of the dislocation caused by supply-chain issues are expected to be largely cured sometime in 2022, resulting in better availability of products, which may help relieve part of the current inflation threat. Unemployment rates have continued to decline but labor is still in short supply and the impact of wage inflation to fill open jobs has increased cost pressure on many companies. Amid what we expect to be a quickened pace of interest rate hikes and a less accommodative Fed along with full equity valuations, we expect the market to remain skittish and look for valuations to be better supported by earnings growth.

Investment Positioning

Portfolio targets effective May 1, 2022, for high-net-worth clients with Hedge Funds

Growth & Income

	Strategic Asset Allocation (long term)	Tactical Asset Allocation (short term)
Equities		
U.S. Large Cap	31.5%	Neutral
U.S. Small Cap	5.5%	Neutral
International Developed	16.0%	Neutral
Emerging Markets	5.5%	Overweight
Fixed Income		
U.S. Investment Grade–Tax-Exempt	28.5%	Underweight
High-Yield–Tax-Exempt	2.0%	Neutral
High-Yield-Taxable	0.0%	Overweight
Real Assets		
U.S. Inflation-Linked Bonds	1.0%	Underweight
Global REITs	1.5%	Neutral
Other	1.5%	Neutral
Nontraditional Hedge	5.0%	Underweight
Cash & Equivalents	2.0%	Overweight
Total	100.0%	

Note: Totals may differ slightly from the allocation building blocks due to rounding.

TAA, or Tactical Asset Allocation, represents our *current recommendation* for each model strategy.

SAA, or Strategic Asset Allocation, represents our *current benchmark* allocation for each model strategy.

This material is for informational purposes only and is not intended as an offer or solicitation for the sale of any financial product or service or a recommendation or determination that any investment strategy is suitable for a specific investor. Opinions, estimates, and projections constitute the judgment of Wilmington Trust and are subject to change without notice. Allocations presume a long-term investment horizon. Wilmington Trust's 2022 Capital Markets Forecast is available on www.wilmingtontrust.com/cmf-2022 or upon request from your Investment Advisor. There is no assurance that any investment strategy will be successful. Investing involves risks and you may incur a profit or a loss.

For an overview of our asset allocation strategies, please see the disclosures.

Source: WTIA.

Investment Positioning

Portfolio targets effective May 1, 2022, for high-net-worth clients with Private Markets*

Growth & Income

	Strategic Asset Allocation (long term)	Tactical Asset Allocation (short term)
Equities		
U.S. Large Cap	24.3%	Neutral
U.S. Small Cap	4.3%	Neutral
International Developed	11.6%	Neutral
Emerging Markets	4.1%	Overweight
Fixed Income		
U.S. Investment Grade–Tax-Exempt	24.7%	Underweight
High-Yield–Tax-Exempt	2.0%	Neutral
High-Yield–Taxable	0.0%	Neutral
Real Assets		
U.S. Inflation-Linked Bonds	0.9%	Underweight
Global REITs	1.3%	Neutral
Other	1.3%	Neutral
Nontraditional Hedge	6.0%	Underweight
Private Markets	17.5%	Neutral
Cash & Equivalents	2.0%	Overweight
Total	100.0%	

Note: Totals may differ slightly from the allocation building blocks due to rounding.

TAA, or Tactical Asset Allocation, represents our *current recommendation* for each model strategy.

SAA, or Strategic Asset Allocation, represents our *current benchmark* allocation for each model strategy.

* Private markets are only available to investors that meet Securities and Exchange Commission standards and are qualified and accredited.

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For an overview of our asset allocation strategies, please see the disclosures.

Source: WTIA.

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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.**

Continued

Disclosures Continued

Allocations:
Each strategy is constructed with target weights for each asset class. Wilmington Trust periodically adjusts the target allocations and may shift away from the target allocations within certain ranges. Such tactical adjustments to allocations typically are considered on a monthly basis in response to market conditions. 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/Barclays US Government ILB Index; international inflation-linked bonds: Bloomberg/Barclays World exUS ILB (Hedged) Index; commodity-related securities: Bloomberg Commodity Index; U.S. REITs: S&P US REIT Index; international REITs: Dow Jones Global exUS Select RESI Index; private markets: S&P Listed Private Equity Index; hedge funds: HFRI Fund of Funds Composite Index; U.S. taxable, investment-grade bonds: Bloomberg/Barclays U.S. Aggregate Index; U.S. high-yield corporate bonds: Bloomberg/Barclays U.S. Corporate High Yield Index; U.S. municipal, investment-grade bonds: S&P Municipal Bond Index; U.S. municipal high-yield bonds: Bloomberg/Barclays 60% High Yield Municipal Bond Index / 40% Municipal Bond Index; international taxable, investment-grade bonds: Bloomberg/Barclays Global Aggregate exUS; emerging bond markets: Bloomberg/Barclays EM USD Aggregate; and cash equivalents: 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**.)

Paragon
Paragon® is a portfolio analysis, risk assessment, and goal optimization tool. The Paragon report uses hypothetical examples in conjunction with forecasts for inflation, economic growth, and asset class returns, volatility, and correlation and provides you with general financial planning information and to serve as one tool in helping you develop a strategy for pursuing your financial goals. It is not intended to provide specific legal, investment, accounting, tax or other professional advice. For specific advice on these aspects of your investments, you should consult your professional advisors.

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

ESG
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.

DEFINITIONS

Alpha is a measure of performance on a risk-adjusted basis. The excess return of a strategy relative to the return of the benchmark index is a strategy's alpha.

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 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

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Disclosures Continued

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.

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 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 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.

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.

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.

The federal funds rate is the target overnight inter-bank lending interest rate set by the Fed.

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.

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.

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.

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.

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.

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 US and Canada. With 902 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.

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

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.

Continued

Disclosures Continued

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 approximately 2,000 smallest-cap American companies in the Russell 3000 Index, which is made up of 3,000 of the largest U.S. stocks.

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.

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

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