April 22, 2019

Yield Curve Inversions and Your Portfolio

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Global Asset Allocation Strategist

Key takeaways

- *The recent Treasury yield curve inversion fueled investor questions about the U.S. economy and their portfolios.*
- *We believe that inversions of the 1-year to 10-year Treasury yield curve are most predictive of a U.S. recession.*

What it may mean for investors

- *Overreacting to an inversion by making major portfolio changes could lead to missed opportunities for potential late-cycle gains; acting too late could leave an investor overexposed to risk assets when a recession nears.*

Much has been made of the recent inversion in the U.S. Treasury yield curve (when short-term interest rates rose above longer-term rates). In late March, the Federal Reserve (Fed) lowered its forecasts for U.S. economic growth and inflation, while signaling that additional rate hikes likely are off the table for the remainder of 2019. Although intermediate-term Treasury yields had been inverted for a while, the Fed's recent pivot from a tightening mode to a more neutral, and dovish, stance sent longer-dated U.S. Treasury yields lower. This interest-rate decline caused a temporary inversion in 3-month to 10-year Treasury yields, and an inversion between 1-year to 10-year yields. This is important—as the Treasury yield curve can be a reliable indicator for weakening economic conditions—inverting before the past six U.S. recessions. As of mid-April, several of the yield curves had slightly steepened (moved out of inversion). That may be a sign that investors are still unsure about the magnitude of the economic slowdown and when the next recession may occur.

As noted in Wells Fargo Investment Institute's April report titled *The Predictive Power of Yield Curve Inversions*, yield curve inversions do not cause recessions, but they can help to signal a problem in the economy.[1] In addition, our analysis found that the yield curve inversion indicator is not foolproof and does not predict the exact timing of a downturn. In fact, there was a false positive in August 1998, when the Treasury yield curve inversion was not followed by a recession. The data also reveal that the time from inversion to recession can vary, ranging from 19 to 93 weeks. This inconsistent timing makes it important to look at a variety of indicators when seeking to predict a recession.

Asset Group Overviews

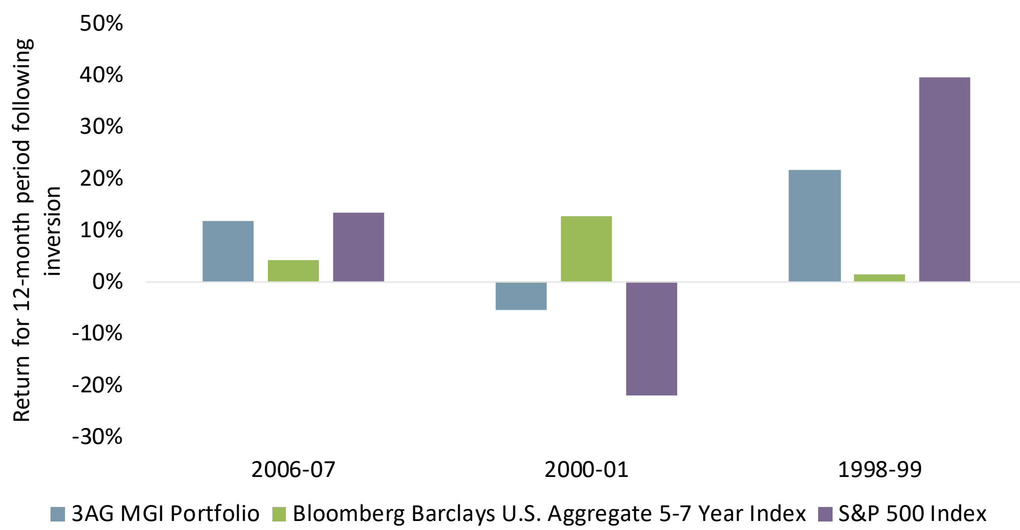
[1] Wells Fargo Investment Institute, Fixed Income In Depth Report, "The Predictive Power of Yield Curve Inversions", April 3, 2019.

Yield Curve Inversions and Your Portfolio

Equity markets have had mixed results following yield curve inversions, but they clearly can have positive returns following inversions. Looking at the past 12 inversions for the 3-month to 10-year Treasury yield curve, the S&P 500 Index's average return was 4.2% over the following year. However, of the 12 occurrences, more than half coincided with positive equity returns 12 months later.

We also examined the performance of a diversified portfolio allocation following yield curve inversions. Given the relatively short history of many of the asset class benchmarks included in our diversified portfolio allocations, we were only able to study the last three 10-year minus 3-month Treasury yield curve inversions (1998, 2000, and 2006). Again, the results were mixed, with positive performance one year later in two of the three instances (Chart 1). A diversified portfolio allocation captured much of the equity upside in 1998-1999 and in 2006-2007, while minimizing the equity market downside in 2000-2001. The only asset classes that were positive in all three periods were defensive in nature, including cash alternatives, short-term bonds, intermediate-term bonds, real estate investment trusts (REITs), and Relative Value hedge funds.

Chart 1. Twelve-month return following the past three yield-curve inversions



Source: Morningstar Direct, April 10, 2019. *For illustrative purposes only. Performance results for the 3 Asset Group (3AG) Moderate Growth & Income (MGI) Portfolio are hypothetical.* Index returns do not represent investment performance or the results of actual trading. Index returns reflect general market results, assume the reinvestment of dividends and other distributions and do not reflect deduction for fees, expenses or taxes applicable to an actual investment. An index is unmanaged and not available for direct investment. **Hypothetical and past performance do not guarantee future results.** Information should not be interpreted as a forecast or as an indication of how an actual investment may perform following an inversion in the yield curve. Please see disclosures for the composition of the 3AG MGI Portfolio, the definitions of the indices and for the risks associated with the representative asset classes.

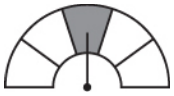
As noted above, a yield curve inversion can provide false signals, which may diminish its predictive power. Therefore, our fixed-income team has set specific parameters around magnitude and timing to help increase its reliability. This includes an inversion of at least 25 basis points[2] in the 1-year to 10-year Treasury yield curve and/or an inversion lasting for 4 consecutive weeks. Once these trigger points have been met, the team believes that a recession is likely within the next 18 months. Although we did see a slight yield-curve inversion in late March, these thresholds have not yet been met. Nonetheless, the bond market is hinting at the potential for slower growth or even a contraction down the road—the challenge is determining how far down the road.

[2] One hundred basis points equal 1%.

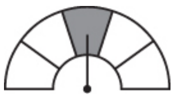
Yield Curve Inversions and Your Portfolio

Overreacting to a yield curve inversion by making major portfolio changes could lead to missed opportunities for potential late-cycle gains, while acting too late could leave an investor overexposed to risk assets when an economic recession nears. We believe that the best late-cycle investment strategy is to maintain (and regularly rebalance) a diversified mix of asset classes that can participate as the economy grows and help to absorb shocks as the economy slows or contracts.

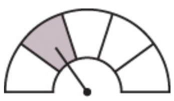
Ken Johnson, CFA, Investment Strategy Analyst; **Audrey Kaplan,** Head of Global Equity Strategy



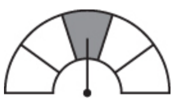
Neutral
U.S. Large Cap Equities



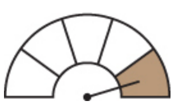
Neutral
U.S. Mid Cap Equities



Unfavorable
U.S. Small Cap Equities



Neutral
Developed Market
Ex-U.S. Equities



Most Favorable
Emerging Market Equities

Lean in toward cyclical sectors

Cyclical sectors have outperformed year to date (YTD), and we expect that trend to continue (after a challenging fourth quarter). These sectors tend to move with the ebb and flow of the U.S. economy. While economic-growth expectations for 2019 have slowed, we believe that a paused Fed, a strong U.S. labor market, and global stimulus (particularly in China) create an environment in which these multinational firms should perform well. In addition, the consumer has remained resilient, as reflected in sentiment surveys that still hover near post-recession peaks. A resilient consumer can translate into higher spending on discretionary purchases such as luxury items, automobiles, and travel and leisure. All of these areas support the profitability of a cyclical sector like Consumer Discretionary.

With risk of an imminent recession now subdued, investors are leaning more heavily into cyclical sectors. The chart below exemplifies this point. Since the market bottom in December 2018, the Consumer Discretionary sector has handily outperformed Consumer Staples. In fact, the top three S&P 500 sectors YTD are all cyclical—Information Technology, Consumer Discretionary, and Industrials. These are all sectors that we favor.

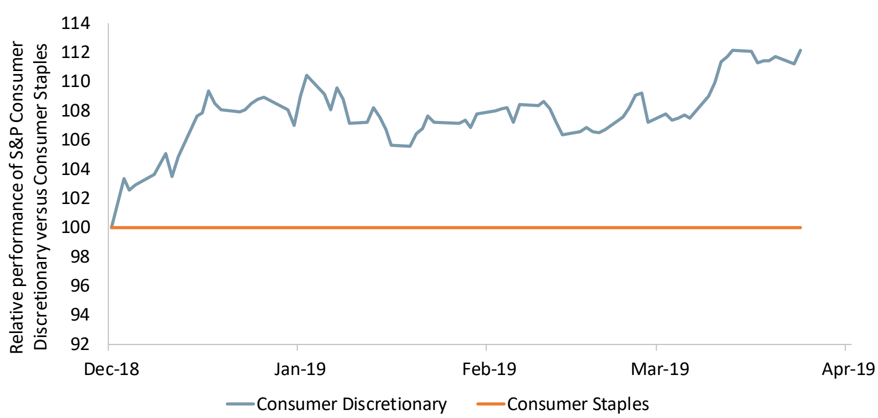
With our 2.1% U.S. gross domestic product (GDP) growth forecast for 2019, we expect these sectors to continue performing well. Based on our sector Pillar model, cyclical sectors rank in the top tier of the Growth Pillar,[3] with Consumer Discretionary ranked first. We maintain our lean toward cyclicals—and expect them to outperform defensive sectors as global sentiment improves.

Key takeaways

» The top three sector returns YTD are for cyclical sectors. These include Information Technology, Consumer Discretionary, and Industrials.

» Although our 2019 GDP growth expectation has slowed to 2.1%, we believe a paused Fed, strong U.S. labor market, and global stimulus should continue to benefit cyclical sectors.

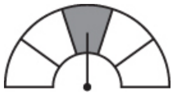
Relative performance of S&P 500 Consumer Discretionary versus Consumer Staples



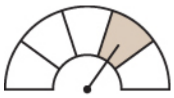
Sources: Bloomberg, Wells Fargo Investment Institute, April 16, 2019. The Consumer Staples sector is indexed to 100 as of December 24, 2018. *For illustrative purposes only.* The S&P 500 Sector Indices measure the performance of the widely-used Global Industry Classification Standard (GICS®) sectors and sub-industries. Each index comprises those companies included in the S&P 500 that are classified as members of their respective GICS sectors. The S&P 500 is a market capitalization-weighted index composed of 500 stocks generally considered representative of the US stock market. An index is unmanaged and not available for direct investment. **Past performance is no guarantee of future results.**

[3] Our Growth Pillar attempts to identify sectors with above-average growth prospects and with growth potential that is not reflected in the current price. It compares sectors using a composite revision ratio, the forecast for next 12 months' earnings growth and the dividend growth trend.

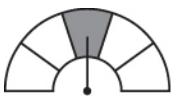
Brian Rehling, CFA
Co-Head of Global Fixed Income Strategy



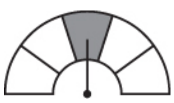
Neutral
U.S. Taxable Investment Grade Fixed Income



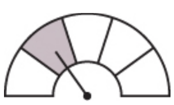
Favorable
U.S. Short-Term Taxable Fixed Income



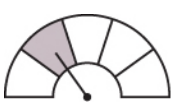
Neutral
U.S. Intermediate Term Taxable Fixed Income



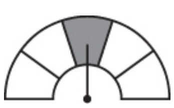
Neutral
U.S. Long-Term Taxable Fixed Income



Unfavorable
High Yield Taxable Fixed Income



Unfavorable
Developed Market Ex.-U.S. Fixed Income



Neutral
Emerging Market Fixed Income

An income option

We recently reduced our emerging market debt guidance from favorable to neutral—while holding our high-yield debt guidance at unfavorable. This may lead some investors to question where to turn for income opportunities in today's market. For investors focused on income generation, we remain favorable on the preferred sector; however, the sector is susceptible to price declines if markets adopt a risk-off stance.

For the majority of investors, we believe the main attraction in owning preferred securities should not be price appreciation; rather, the focus should be on income generation. Since the beginning of 2019, the S&P U.S. Preferred Stock Index has had a total return of 9.3%. This is the best return for this period among all of the fixed-income classes and sectors that we track. We urge investors to not expect a repeat performance in the quarters ahead. Instead—as noted—the focus should be on income generation. In today's market, a preferred stock sector yield of 5.5%-6.0% could be expected.

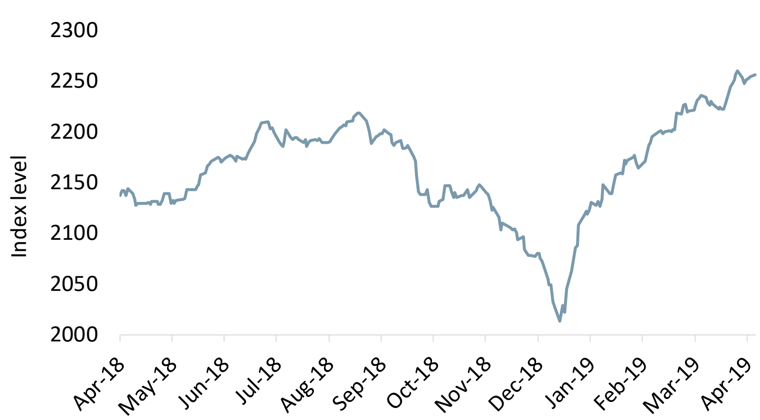
Investors should expect preferred securities to be one of the more volatile fixed-income classes, and this volatility must be accepted as a trade-off for the higher yields that historically have characterized this sector. We recommend focusing on long-term income generation when purchasing preferred securities, and we strongly recommend that investors consider a professional manager to oversee their preferred allocations. We currently have a favorable view of the preferred-security sector.

Key takeaways

» Given preferred securities' higher volatility, we recommend that exposure be diversified among a variety of issuers, sectors, and structures. We strongly recommend that investors consider a professional manager to oversee their preferred allocations.

» Investors should not purchase preferred-stock allocations without a full understanding of the sector's risks.

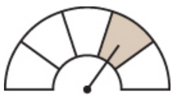
S&P U.S. Preferred Stock Total Return Index



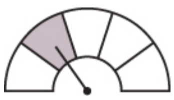
Source: Bloomberg, April 15, 2019. *For illustrative purposes only.* S&P U.S. Preferred Stock Index measures the performance of various segments of the U.S. preferred stock market. Preferred stocks are a class of capital stock that pays dividends at a specified rate and has a preference over common stock in the payment of dividends and the liquidation of assets. An index is unmanaged and not available for direct investment. **Past performance is no guarantee of future results.** Please see the end of this report for the risks associated with this asset class.

Austin Pickle, CFA
Investment Strategy Analyst

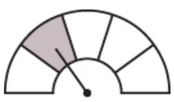
"Be true to your work, your word, and your friend."
--Henry David Thoreau



Favorable
Commodities



Unfavorable
Private Real Estate



Unfavorable
Public Real Estate

Iran oil sanctions—an update

In May 2018, the U.S. administration announced that it would withdraw from the Iran nuclear deal and reimpose Iranian oil sanctions, effective in November 2018. The U.S. imposed the sanctions, but it also granted six-month waivers to eight countries: China, India, Turkey, South Korea, Japan, Taiwan, Greece, and Italy. With these waivers set to expire in less than two weeks, we wanted to provide an update.

The sanctions have proven very effective in limiting Iran's oil exports. Prior to the May 2018 announcement, Iranian oil exports had climbed to nearly 2.5 million barrels per day. Since then, Iran's oil exports have been cut in half. Of the eight countries to receive waivers, only four used them and continued to import oil from Iran: China, India, Turkey, and Japan. As of March 2019, these four countries accounted for more than 80% of Iran's total oil exports (see chart).

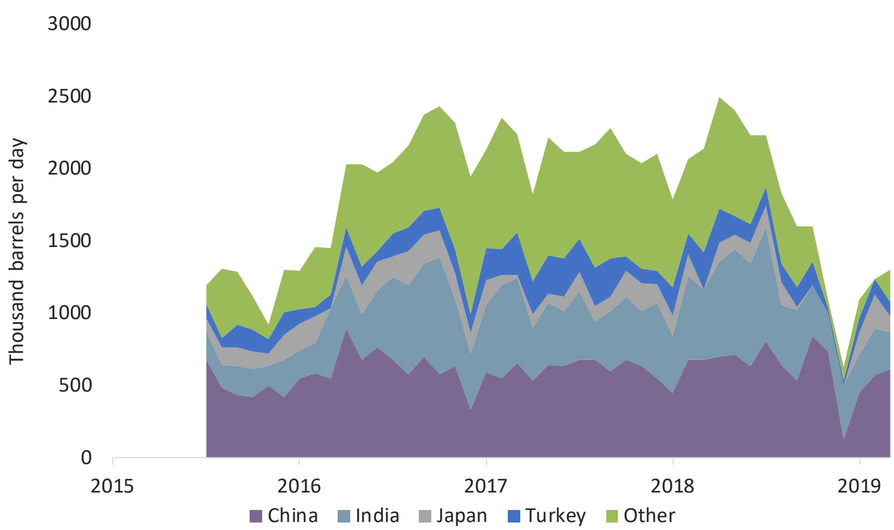
With the recent labeling of the Iran Revolutionary Guard as a terrorist group, it makes sense to us that the Trump Administration will soon end exemptions on allies buying Iranian oil. The exemption extensions come due on May 2, 2019. If this comes to fruition, oil prices should benefit, but we don't expect a huge price surge. Oil prices already have had a great run—with West Texas Intermediate (WTI) oil moving from $45 to $65, so far in 2019—and President Trump likely will reach out to other oil producing countries to help pick up the production deficit left by Iran. Our $65 WTI year-end 2019 target remains unchanged.[4]

Key takeaways

» Iranian oil sanction waivers are set to expire in less than two weeks.

» The Trump Administration likely will end exemptions soon, on allies buying Iranian oil. Oil prices should benefit, but we don't expect a huge price surge.

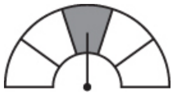
Iran crude-oil exports by country



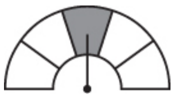
Sources: Bloomberg, Wells Fargo Investment Institute; April 16, 2019. Monthly data: July 31, 2015 – March 31, 2019.

[4] The $65 year-end target is the midpoint of our $60-70 WTI year-end target range.

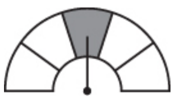
Xinxin Liu
Global Alternative Investment Strategist



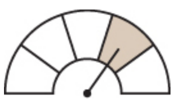
Neutral
Private Equity



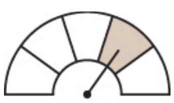
Neutral
Hedge Funds-Macro



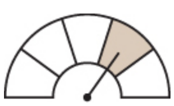
Neutral
Hedge Funds-Event Driven



Favorable
Private Debt



Favorable
Hedge Funds-Equity Hedge



Favorable
Hedge Funds-Relative Value

Alternative investments, such as hedge funds, private equity, private debt and private real estate funds are not suitable for all investors and are only open to "accredited" or "qualified" investors within the meaning of U.S. securities laws.

Diversifying with opportunities in natural resources

Sophisticated investors have been turning to alternative investments for diversification as they focus on overall portfolio results. Natural resource investments are one of many private capital strategies that offer good diversification potential. These investments may be made in oil and gas, metal and mines, water, timberland, and farmland.

Institutional investors have continued to commit capital to natural resources for portfolio diversification. Preqin reported that $93 billion was raised by unlisted natural resources funds in the first half of 2018, representing the highest amount since 2012.

Energy remains dominant among private natural resource investments. Preqin data indicates that 96% of 2018 capital commitments in natural resources was made in energy funds. Private investments are generally shielded from oil-price volatility, yet public-market moves and events like the recent, high-visibility California utility bankruptcy do have some impact on private funds' performance.

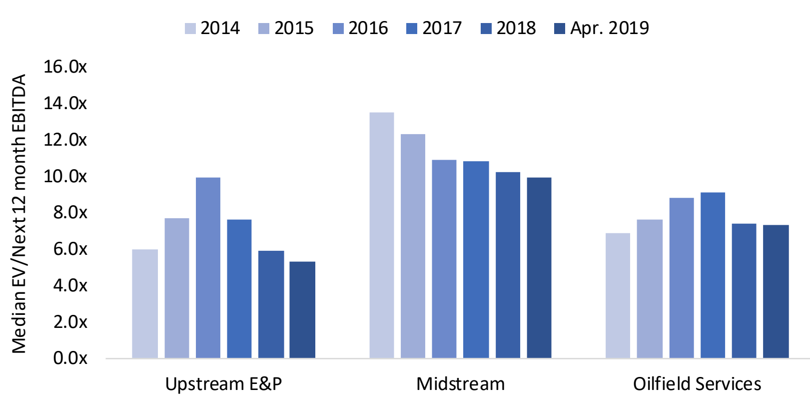
Contrary to the rising valuation in broad private equity over the past decade, the private transaction prices in the energy sector showed signs of a downtrend in recent years. This lower valuation, driven by negative sentiment toward the sector, can be observed in all subsectors, including upstream exploration and production (E&P), midstream, and oilfield services. Fund managers may be able to capitalize on this lower entry point. As a private capital investor, the fund manager can work closely with the management of their portfolio companies on improving profitability. Further, certain specialized fund managers have demonstrated the ability to turn a distressed company around and generate strong returns for their investors.

Key takeaways

» Institutional investors often turn to private investments in natural resources for diversification.

» Lower valuation in the energy sector, driven by recent negative sentiment, may present buying opportunities in this space.

Valuations at multi-year lows may offer compelling buying opportunities



Source: Capital IQ, April 2019. Chart shows the median multiples of the enterprise value (EV) over the estimated earnings before interest, taxes, depreciation, and amortization (EBITDA) for the next 12 months in private transactions of energy companies. *For illustrative purposes only.* The EV/EBITDA ratio is a very commonly used metric for estimating business valuations. It compares the value of a company, inclusive of debt and other liabilities, to actual cash earnings exclusive of the non-cash expenses.

Risk Considerations

Each asset class has its own risk and return characteristics. The level of risk associated with a particular investment or asset class generally correlates with the level of return the investment or asset class might achieve. **Stock markets**, especially foreign markets, are volatile. Stock values may fluctuate in response to general economic and market conditions, the prospects of individual companies, and industry sectors. **Foreign investing** has additional risks including those associated with currency fluctuation, political and economic instability, and different accounting standards. These risks are heightened in emerging markets. **Small- and mid-cap stocks** are generally more volatile, subject to greater risks and are less liquid than large company stocks. **Bonds** are subject to market, interest rate, price, credit/default, liquidity, inflation and other risks. Prices tend to be inversely affected by changes in interest rates. **High yield (junk) bonds** have lower credit ratings and are subject to greater risk of default and greater principal risk. The **commodities** markets are considered speculative, carry substantial risks, and have experienced periods of extreme volatility. Investing in a volatile and uncertain commodities market may cause a portfolio to rapidly increase or decrease in value which may result in greater share price volatility. **Real estate** has special risks including the possible illiquidity of underlying properties, credit risk, interest rate fluctuations and the impact of varied economic conditions.

There are special risks associated with investing in preferred securities. Preferred securities are subject to interest rate and credit risks. Interest rate risk is the risk that preferred securities will decline in value because of changes in interest rates. Credit risk is the risk that an issuer will default on payments of interest and principal. Preferred securities are generally subordinated to bonds or other debt instruments in an issuer's capital structure, subjecting them to a greater risk of non-payment than more senior securities. In addition, the issue may be callable which may negatively impact the return of the security. Preferred dividends are not guaranteed and are subject to deferral or elimination.

Sector Risks

Sector investing can be more volatile than investments that are broadly diversified over numerous sectors of the economy and will increase a portfolio's vulnerability to any single economic, political or regulatory development affecting the sector.

Risks associated with the *Consumer Discretionary* sector include, among others, apparel price deflation due to low-cost entries, high inventory levels and pressure from e-commerce players; reduction in traditional advertising dollars; increasing household debt levels that could limit consumer appetite for discretionary purchases; declining consumer acceptance of new product introductions; and geopolitical uncertainty that could impact consumer sentiment. *Consumer staples* industries can be significantly affected by competitive pricing particularly with respect to the growth of low-cost emerging market production, government regulation, the performance of overall economy, interest rates, and consumer confidence. Risks associated with **Industrials** include the possibility of a worsening in the global economy, acquisition integration risk, operational issues, failure to introduce to market new and innovative products, further weakening in the oil market, potential price wars due to any excesses industry capacity, and a sustained rise in the dollar relative to other currencies. Risks associated with the **Technology** sector include increased competition from domestic and international companies, unexpected changes in demand, regulatory actions, technical problems with key products, and the departure of key members of management. Technology and Internet-related stocks smaller, less-seasoned companies, tend to be more volatile than the overall market.

Alternative investments, such as hedge funds, private equity/private debt and private real estate funds, are speculative and involve a high degree of risk that is suitable only for those investors who have the financial sophistication and expertise to evaluate the merits and risks of an investment in a fund and for which the fund does not represent a complete investment program. They entail significant risks that can include losses due to leveraging or other speculative investment practices, lack of liquidity, volatility of returns, restrictions on transferring interests in a fund, potential lack of diversification, absence and/or delay of information regarding valuations and pricing, complex tax structures and delays in tax reporting, less regulation and higher fees than mutual funds. Hedge fund, private equity, private debt and private real estate fund investing involves other material risks including capital loss and the loss of the entire amount invested. A fund's offering documents should be carefully reviewed prior to investing.

Hedge fund strategies, such as Equity Hedge, Event Driven, Macro and Relative Value, may expose investors to the risks associated with the use of short selling, leverage, derivatives and arbitrage methodologies. Short sales involve leverage and theoretically unlimited loss potential since the market price of securities sold short may continuously increase. The use of leverage in a portfolio varies by strategy. Leverage can significantly increase return potential but create greater risk of loss. Derivatives generally have implied leverage which can magnify volatility and may entail other risks such as market, interest rate, credit, counterparty and management risks. Arbitrage strategies expose a fund to the risk that the anticipated arbitrage opportunities will not develop as anticipated, resulting in potentially reduced returns or losses to the fund.

Index Definitions

Three Asset Group (3AG) Portfolio composition is as follows: Bloomberg Barclays U.S. Treasury Bills (1-3M): 3%, Bloomberg Barclays U.S. Aggregate (1-3Y): 4%, Barclays U.S. Aggregate (5-7Y): 16%, Bloomberg Barclays U.S. Aggregate (10+Y): 7%, JPM GBI Global Ex-US: 3%, Bloomberg Barclays U.S. Corporate High-Yield Bond: 6%, JPM EMBI Global Index: 5%, Public Real Estate FTSE EPRA/NAREIT Developed: 5%, S&P 500: 21%, Russell Midcap®: 9%, Russell 2000®: 8%, MSCI EAFE: 6%, MSCI Emerging Markets: 5%, Bloomberg Commodity: 2%

Bloomberg Barclays 1-3 Month U.S. Treasury Bill Index includes all publicly issued zero-coupon U.S. Treasury Bills that have a remaining maturity of less than 3 months and more than 1 month, are rated investment grade, and have $250 million or more of outstanding face value. In addition, the securities must be denominated in U.S. dollars and must be fixed rate and non-convertible.

Bloomberg Barclays U.S. Corporate High Yield Index covers the universe of fixed-rate, noninvestment-grade debt.

Bloomberg Barclays U.S. Aggregate 1-3 Year Bond Index is unmanaged and is composed of the Barclays U.S. Government/Credit Index and the Barclays U.S. Mortgage-Backed Securities Index, and includes Treasury issues, agency issues, corporate bond issues, and mortgage-backed securities with maturities of 1-3 years.

Bloomberg Barclays U.S. Aggregate 5-7 Year Bond Index is unmanaged and is composed of the Barclays U.S. Government/Credit Index and the Barclays U.S. Mortgage-Backed Securities Index, and includes Treasury issues, agency issues, corporate bond issues, and mortgage-backed securities with maturities of 5-7 years.

Bloomberg Barclays U.S. Aggregate 10+ Year Bond Index is unmanaged and is composed of the Barclays U.S. Government/Credit Index and the Barclays U.S. Mortgage-Backed Securities Index, and includes Treasury issues, agency issues, corporate bond issues, and mortgage-backed securities with maturities of 10 years or more.

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