

FOCUS ON MANAGED FUTURES

MANAGED FUTURES AND INTEREST RATES: A 30-year Look Back

May 2018

HOW DO MANAGED FUTURES PERFORM WHEN INTEREST RATES ARE RISING?

Managed futures is an investment strategy that is generally known to perform well in crisis periods, often associated with recession and falling interest rates. Accordingly, we are often asked whether managed futures do well in a rising interest rate environment. We have long believed that managed futures can perform well in rising interest rates relative to traditional asset classes. With the Fed currently on a rate-rising cycle, we now put that view to a more formal test.

Two overarching reasons drive our premise: First, rising interest rates tend to be an indicator of strong economic conditions. This generally bodes well for trends in equities and various commodities, such as energy and metals. Persistent trends are the lifeblood of managed futures. Second, fixed income tends to underperform, as interest rates' inverse relationship with bond prices creates a headwind for positive total returns. In a portfolio with balanced exposure to both equities and fixed income, equities may therefore benefit, while fixed income may underperform. We believe that managed futures exposure has the potential to offset this performance gap.

As shown in *Figure 1*, over the last 30-plus years we have been in a broad fixed-income bull market, driven by falling interest rates from high single-digit 10-year Treasury yields to less than 2.0%. One may not think of performing a rising-rate analysis in this extended period of falling interest rates. However, the key idea that drove us to explore this question further is broad bull market. In the last 30 years, we have certainly been through a few economic expansions and recessions, and have been through commensurate interest rate adjustments (both up as well as down) implemented by the US Federal Reserve.

**Matt Osborne**

Founder and Chief Investment Officer

Matt Osborne has 30 years of finance, international business, and investment industry experience. As the founder and chief investment officer (CIO) of Altegris, Matt is responsible for product development and is co-portfolio manager of several Altegris award-winning investment funds. Mr. Osborne is a senior member of the Altegris Investment Committee, responsible for qualification, approval, and ongoing review of all firm investment strategies and managers on the Altegris platform.

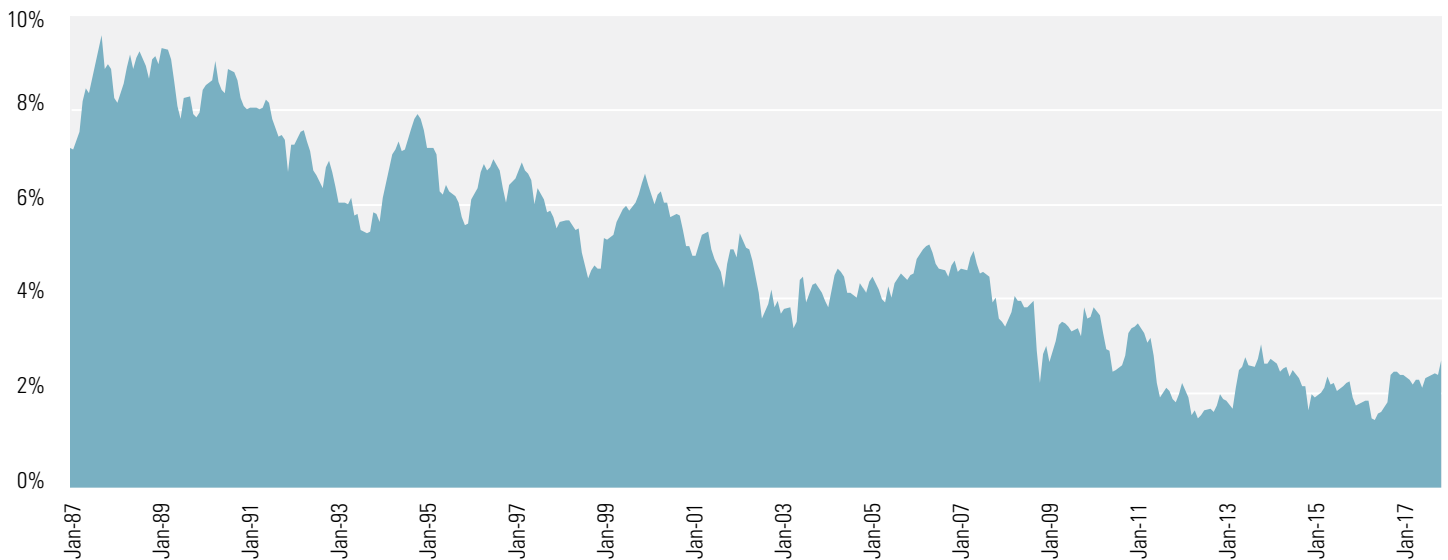
Prior to founding Altegris, Matt was the director of research for the managed investments division of Man Financial, with responsibility for manager selection and research. Previously, Matt had a 12-year career with a preeminent family office in his native New Zealand. In his role as senior investment manager, he was responsible for formulating investment policies and implementing a global asset allocation program that specialized in alternative investment strategies, such as hedge funds, managed futures, and private equity funds.

Mr. Osborne has significant trading expertise in equities, fixed income, foreign currencies, global futures, and options, among several other securities. Matt holds FINRA Series 3, 7, 24, and 63 licenses.

FIGURE 1.

BROADLY FALLING INTEREST RATES—PUNCTUATED BY RISING PERIODS

Federal Reserve Annualized 10-year Yield (USGG 10-YR Index) | Jan 1, 1987–Jan 1, 2018



The last 30 years has seen a broad bull market in US Treasuries, but this has nonetheless been punctuated by short rate rises.

Source: US Federal Reserve.

OBJECTIVELY ANSWERING THE QUESTION— HISTORICAL INTEREST RATE RISES AND ASSET CLASS PERFORMANCE

We focus our analysis on the short duration portion of the yield curve, as the Federal Reserve has historically had more direct influence on this segment of the curve (via its adjustment of the target federal funds rate), and it has been one of the most actively and visibly used monetary policy tools during the last 30 years.¹

Observing the historical yield of the 90-day US interest rate as shown in *Figure 2*, we indeed see that in the prior three decades there were four periods before the current environment where the Federal Reserve markedly increased interest rates (at least a two-percentage-point adjustment).² In fact, the four shaded periods add up to 98 months—or more than eight years of total interest rate rising environments.

We then decided to examine how various asset classes performed during these periods. We used the BTOP50 Index to measure managed futures, as it is the index with the longest history, going back to 1987. We also used the S&P 500 Index and the Bloomberg Barclays US Aggregate Index as the traditional asset class indexes. With the rising interest rate periods and asset classes identified, we then created annualized, time-weighted returns that linked these four periods together for each asset class. This created a single annualized return for each of the three indexes over the 98-month period of increasing interest rates, the results of which are shown in *Table 1*.

Past performance is not indicative of future results.

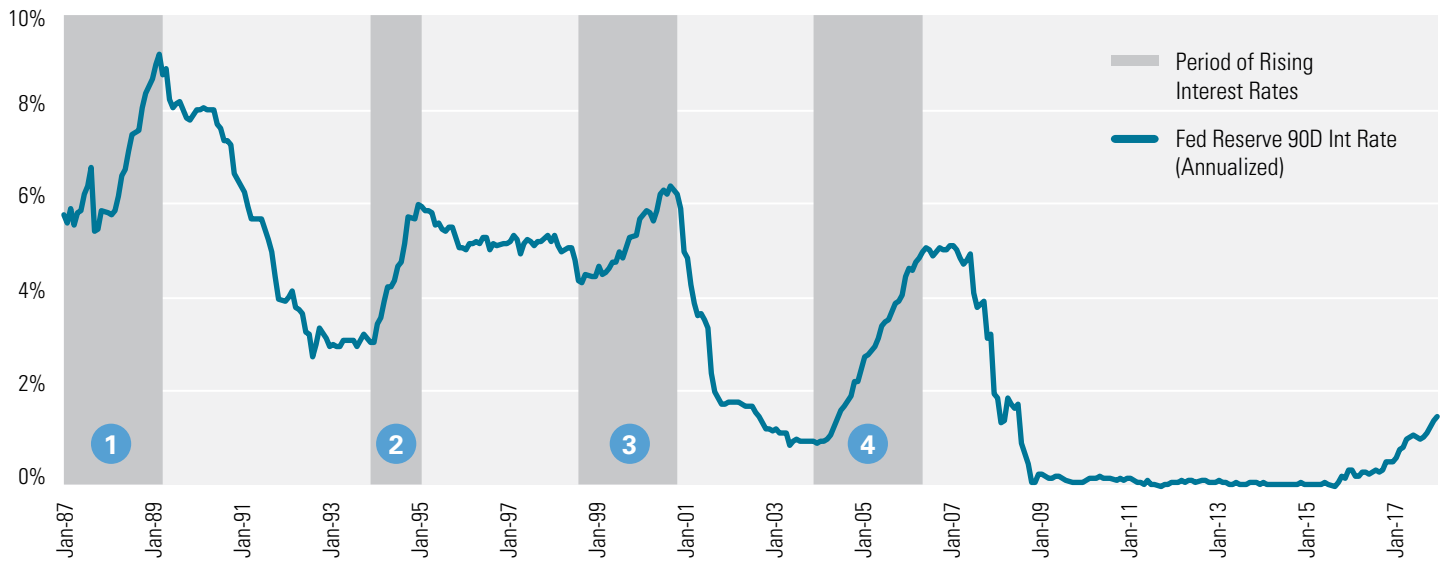
¹ Quantitative easing (QE) has been the primary driver of interest rate moves within the last decade since the 2008 global financial crisis. Target-rate adjustments were actively used in the decades prior. Source: US Federal Reserve and Federal Reserve Bank of St. Louis.

² Astute and experienced readers may notice that the rate-rise periods coincided with periods of stock market and economic growth, whether it was the dot-com bubble of the late '90s and early 2000s, or the stock-market rally of the mid-2000s.

FIGURE 2.

US T-BILL HISTORICAL 90-DAY NOMINAL YIELD

Rising and Falling Short-term Interest Rates



The prior three decades had four periods before the current environment where the US Federal Reserve markedly increased interest rates. The shaded areas represent rising interest rate periods where rates increased at least 2.0%. *Source: US Federal Reserve.*

As we hypothesized, equity markets showed strong performance during this time, posting double-digit returns. Managed futures, however, achieved an admirable second place, with annualized returns of more than 9% during the same time frame. As we suspected, fixed income lagged, though still returned positive figures. These results confirm that a historical allocation to managed futures in a diversified, balanced portfolio would have been additive to returns in these environments.³

TABLE 1.

RIISING INTEREST RATE ENVIRONMENT SUMMARY

Total Time-weighted Annualized Return
98 total months: 01/31/87–06/30/06

Managed futures	Equities	Fixed income
Barclays BTOP50 Index	S&P 500 Total Return (TR) Index	Barclays US Aggregate Bond Index
9.1%	11.6%	4.0%

Source: Bloomberg.

Past performance is not indicative of future results.

³ Allocations above 70% to equities and below 30% to fixed income would have outperformed managed futures. However, most recommendations for balanced portfolios recommend a 60% equity and 40% fixed income allocation.

THE INVERSE—WHAT DID PERFORMANCE LOOK LIKE DURING FALLING INTEREST RATE PERIODS?

As discussed earlier, managed futures is often regarded as a crisis-risk offset investment strategy. However, there is no single hypothesis here, as falling interest rates sometimes—but not always—signal a recession. We would expect bonds to outperform, as the headwind previously mentioned becomes a tailwind, and generally bonds appreciate with falling yields. Equities may be mixed; recessionary periods may have negative returns as investors may sell equities and buy fixed income in the search for less risky investments. At the same time, falling interest rate periods may also be episodes of market enthusiasm for risky assets through expanded credit and lower borrowing costs (such as the mid '90s).

We examined all interest rate periods prior to 2009 where rates went down. Essentially, we used all the periods from 1989 to 2009 (up to the global financial crisis) that are shaded in gray in *Figure 3*.⁴ Similar to the first analysis, we created a single time-weighted annualized return for each of the three indexes, and present the results in *Table 2*.

The results were generally in line with what we expected—fixed income outperformed equities, and equities posted an overall modest positive return, likely punctuated with periods of negative returns. However, managed futures

outperformed both asset classes—and substantially outperformed equities. This was likely driven by two factors: (1) Managed futures' ability to have long and short positioning. In bear markets, managed futures can capture the corrections and generate positive returns, whereas most common equity indexes cannot; and (2) Managed futures' ability to invest across asset classes, and thus trend-followers were also able to participate in the fixed income markets' bull-run during these periods.

TABLE 2.
FALLING INTEREST RATE ENVIRONMENT SUMMARY

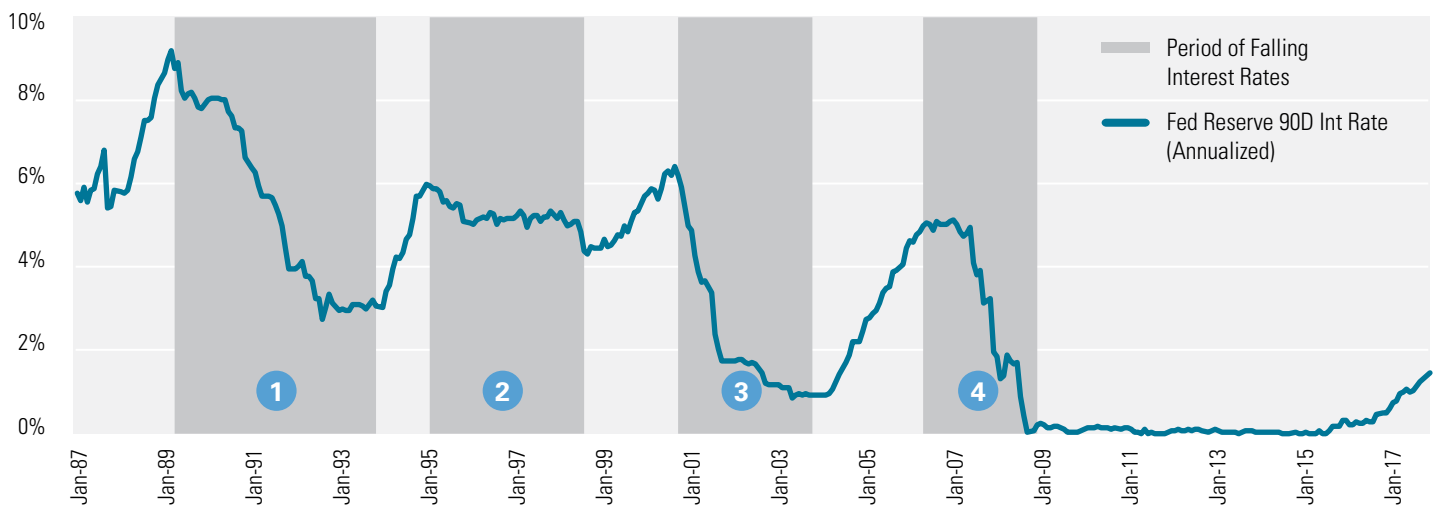
Total Time-weighted Annualized Return
158 total months: 05/31/89–12/31/08

Managed futures Barclays BTOP50 Index	Equities S&P 500 Total Return (TR) Index	Fixed income Barclays US Aggregate Bond Index
11.3%	6.3%	9.3%

Source: Bloomberg.

FIGURE 3.
FALLING INTEREST RATE PERIODS PRIOR TO THE GLOBAL FINANCIAL CRISIS

US T-bill Historical 90-day Nominal Yield



The shaded areas represent falling interest rate periods where rates fell after a rate increase of 2.0%. Source: US Federal Reserve.

Past performance is not indicative of future results.

⁴ We excluded, and analyzed separately, the period after the 2008 global financial crisis, as this was a flat, zero percent interest-rate period.

THE FLAT INTEREST RATE PERIOD POST-CRISIS: FEW TRENDS TO FOLLOW

Finally, we decided to review how these indexes performed during the unprecedented, zero percent interest rate environment of the last few years. After the global financial crisis and subsequent recession, the US Federal Reserve decided to proactively encourage economic growth. One of the measures the Fed implemented was to drop its target federal funds rate to 0.0%, where it remained for the following six years, as shown in *Figure 4*.

We know that equity markets experienced an impressive bull run during this time, as they recovered from low relative valuations during the crisis and companies generated record profits in the ensuing years. Credit markets were likely modest, as the zero-percent interest rate environment removed the positive contribution from falling rates, and only left credit improvement as the sole method of appreciation. Managed futures managers struggled, however, and posted only slightly positive returns during this time, as shown in *Table 3*.

We believe that there were two primary factors that drove this underperformance. First, trend-following managers look for trends, or momentum, across all asset classes in the managed futures space, including a variety of commodities, fixed income, and currencies. Although equities clearly showed a persistent trend, managers prefer not to concentrate into one asset class—otherwise (and especially

in this case) they would look like equity funds during bull markets. Managed futures managers, therefore, continued to have exposure across most asset classes, which were generally trendless throughout this entire period.

Second, the period is marked by an extraordinary expansion of the balance sheets by central banks around the world such as the US Federal Reserve, the European Central Bank, and the Bank of Japan. These central banks purchased a variety of fixed income assets (in the order of trillions of dollars), and several findings have suggested that these large-scale interventions, although successful in stimulating the economy via pushing long-term rates lower, may also have had substantial second

TABLE 3.

FLAT INTEREST RATE ENVIRONMENT SUMMARY

Total Time-weighted Annualized Return

78 total months: 01/31/09–07/31/15

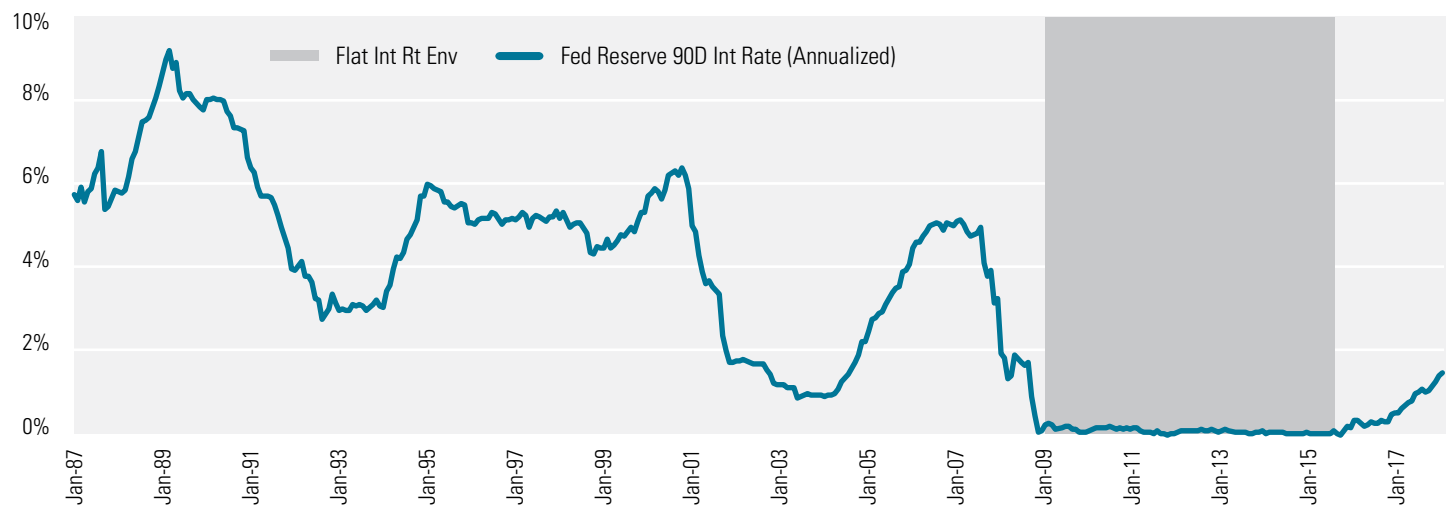
Managed futures Barclays BTOP50 Index	Equities S&P 500 Total Return (TR) Index	Fixed income Barclays US Aggregate Bond Index
1.0%	16.2%	4.4%

Managed futures managers struggled during a period where equity markets posted substantial gains. *Source: Bloomberg.*

FIGURE 4.

THE ZERO PERCENT INTEREST RATE PERIOD: POST-CRISIS

Hitting Rock Bottom, and Staying There



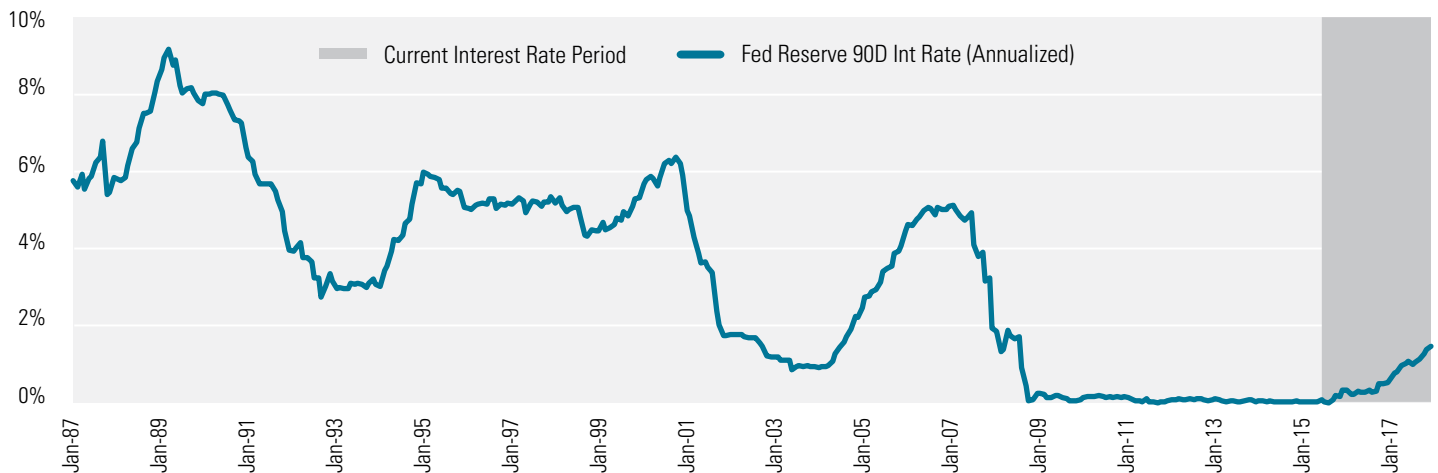
Zero percent interest rates for over six years after the global financial crisis. *Source: US Federal Reserve.*

Past performance is not indicative of future results.

FIGURE 5.

THE CURRENT INTEREST RATE PERIOD

US T-bill Historical 90-day Nominal Yield



The shaded area represents the most recent interest rate environment. A rising interest rate trend commenced in September 2015, as represented by the Fed's 90-day rate. *Source: US Federal Reserve.*

order effects—not only driving a substantial portion of equity returns, but also potentially influencing foreign exchange rates.⁵ In such a unique environment, it has been challenging for trend managers to find diverse investment opportunities across all asset classes.

CURRENT RISING INTEREST RATE ENVIRONMENT THROUGH TODAY: A TURNING POINT?

The current interest-rate environment began nearly three years or 33 months ago, in September 2015, as highlighted in *Figure 5*. History has shown that managed futures tend to perform well in rising interest rate environments, and we expect that the current rate rising period may follow through with history. Although managed futures have admittedly underperformed at the outset of the current period (declining -3.1% annualized from September 2015 through March 2018), we also believe that factors that have generally favored managed futures have also begun to strengthen recently. These factors may signal a turning point for managed futures managers that more closely align the global market and economic backdrop with longer-term historical norms.

Primarily, the era of quantitative-easing intervention by central banks in financial markets is coming to an end. We believe that with this period behind us, markets across all asset classes will be driven by fundamental and economic

forces and not monetary policy forces. In fact, one factor that may support this thesis is the return of volatility to equity markets. With both higher volatility and higher interest rates, markets may start demanding a higher risk premium, which in turn may create the opportunity for (both bullish and bearish) trending markets and low correlations across asset classes that managed futures thrive in.

Additionally, the current rate-rising cycle is forecast by the Fed to last at least through the end of 2019, which may mean a continued headwind for fixed income markets. Equity markets face their own challenge: relative valuations (measured with the cyclically adjusted P/E ratio or CAPE ratio) for US stocks are at the third highest valuation in more than 100 years, and are currently just under the levels that preceded the Great Depression.⁶ Historically, low single-digit or negative annual returns have followed in the 10 to 20 years after high CAPE ratios—which may further dampen the appeal for substantial, long-term allocation to equities.⁷

We have seen that managed futures strategies have performed well during periods of both rising and falling interest rates over the past 30 years, but not in flat interest rate environments. We believe that there is real potential for managed futures investors to once again see the benefits of active portfolio diversification by allocating capital to these strategies as we return to an era of fluctuating rates. ■

Past performance is not indicative of future results.

⁵ Anna Cieslak and Annette Vissing-Jorgensen, "The Economics of the Fed Put" (Elsevier, April 2017).

⁶ Robert J. Shiller, *Irrational Exuberance* (Crown Business, 2006) and the Cowles Foundation for Research in Economics at Yale University.

⁷ *Ibid.* The CAPE ratio is a data metric created by Robert J. Shiller, Sterling Professor of Economics at Yale University.

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All investments carry a certain degree of risk including the possible loss of principal. Complex or alternative strategies may not be suitable for everyone and the value of any portfolio will fluctuate based on the value of the underlying securities. Investing in debt or fixed income securities involves market risk, credit risk, interest rate risk, derivatives risk, liquidity risk, and income risk. As interest rates rise, bond prices typically fall. Below investment grade, distressed, or high yield debt securities are considered speculative and are subject to heightened liquidity, default, and credit risks.

INDEX DESCRIPTIONS

An investor cannot invest directly in an index. Moreover, indices do not reflect commissions or fees that may be charged to an investment product based on the index, which may materially affect the performance data presented.

US Stocks: S&P 500 Total Return Index. The S&P 500 Total Return Index is the total return version of S&P 500 index. The S&P 500 index is unmanaged and is generally representative of certain portions of the US equity markets. For the S&P 500 Total Return Index, dividends are reinvested on a daily basis and the base date for the index is January 4, 1988. All regular cash dividends are assumed reinvested in the S&P 500 index on the ex-date. Special cash dividends trigger a price adjustment in the price return index.

US Bonds: Barclays Capital US Aggregate Bond Index. The Barclays Capital US Aggregate Bond Index represents securities that are SEC-registered, taxable, and dollar denominated. The index covers the US investment grade fixed rate bond market, with index components for government and corporate securities, mortgage pass-through securities, and asset-backed securities. These major sectors are subdivided into more specific indices that are calculated and reported on a regular basis. These specific indices include the Government/Credit Index, Government Index, Treasury Index, Agency Index, and Credit Index.

Trend Following: BTOP50. The BTOP50 Index seeks to replicate the overall composition of the managed futures industry with regard to trading style and overall market exposure. The BTOP50 employs a top-down approach in selecting its constituents. The largest investable trading advisor programs, as measured by assets under management, are selected for inclusion in the BTOP50. To be included in the BTOP50, the following criteria must be met: Program must be open for investment; Manager must be willing to provide daily returns for the index; Program must have at least two years of trading activity; Program's advisor must have at least three years of operating history; and the BTOP50's portfolio will be equally weighted among the selected programs at the beginning of each calendar year and will be rebalanced annually.

GLOSSARY

The following terms have been used in this article and the definitions below are for informational purposes only.

Annualized Return. A geometric average of the excess amount (above or below the initial investment) earned by an investment, adjusted to a yearly basis.

Bull Market. A bull market is a financial market of a group of securities in which prices are rising or are expected to rise. The term "bull market" is most often used to refer to the stock market but can be applied to anything that is traded, such as bonds, currencies, and commodities. Bull markets are characterized by optimism, investor confidence, and expectations that strong results should continue, usually for months or years. Generally speaking, a bull market happens when (stock) prices rise by 20 percent, usually after a drop of 20 percent and before a 20 percent decline. Since they are difficult to predict, bull markets can typically only be recognized once they've happened.

CAPE Ratio. The CAPE ratio is a valuation measure that uses real earnings per share (EPS) over a 10-year period to smooth out fluctuations in corporate profits that occur over different periods of a business cycle. The ratio is generally applied to broad equity indices to assess whether the market is undervalued or overvalued. While the CAPE ratio is a popular and widely-followed measure, several leading industry practitioners have called into question its utility as a predictor of future stock market returns. The CAPE ratio, an acronym for Cyclically Adjusted P/E (i.e. Price-Earnings) ratio, was popularized by Yale University professor Robert Shiller. It is also known as the Shiller P/E ratio.

P/E Ratio. The price-earnings ratio (P/E ratio) is the ratio for valuing a company that measures its current share price relative to its per-share earnings. The price-earnings ratio is also sometimes known as the price multiple or the earnings multiple.

ABOUT ALTEGRIS

Altegris is an investment research firm, with deep expertise in alternative manager selection, structuring unique solutions, and providing portfolio management and oversight. Beginning with an analysis of the current and anticipated investment environment, our solutions are based on themes that we believe solve the most important client needs. For more information about the Altegris family of alternative solutions, visit www.altegris.com.

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