



Investing at the Zero Bound: A Role for Alpha in a Balanced Risk Portfolio

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The current zero bound environment combined with lackluster global growth will present investors with difficult investment decisions in the coming years. Existing asset allocation strategies have some inherent weaknesses. Traditional 60/40 portfolios concentrate risk in equities and threaten investors with material drawdowns. We believe that passively managed risk parity allocations can alleviate these concerns. However, most remain heavily tilted towards bonds. This “low-rate/low-growth” environment, where rates could stay lower, introduces a potential paradigm shift towards ever-diminishing upside bonds returns, damaging investors that are materially overweight the asset. The introduction of an actively-managed component, specifically a multi-strategy, market-neutral hedge fund, into a balanced risk investment allocation can potentially offer competitive returns to investors at more favorable levels of volatility. Because a multi-strategy fund opportunistically invests in different asset classes across different horizons, the overall balanced risk portfolio are often less correlated to broader market movements, and can enhance performance and minimize drawdowns as markets evolve.

Today, the ‘zero bound’, negative real rates environment is unprecedented and dominated by distortional effects owing to easy monetary policy by central banks around the world. Expected global growth, in both developed and emerging markets, is not encouraging and the divergent policies at major central banks looks to further complicate matters in the years ahead. Nevertheless, investors must make capital allocation decisions during these difficult times. Portfolios must be able to adapt to an

ever-changing financial landscape, ensuring they are well suited to the risks ahead.

For decades, a portfolio resembling a 60% equity/40% bond asset allocation was considered sufficiently diverse for many long-term investors. After all, the benefits of diversification have been well indoctrinated. In recent years, however, investors have become savvy to the importance of the allocation of risk, rather than capital, within their portfolios. From a contribution to risk perspective, the amount of equity risk in the

traditional 60/40 allocation is alarming. In fact, over the past ten years, the vast majority of risk in a traditional 60/40 portfolio came from equities – far from diversified. For example, in late 2008, when equity markets tumbled and drove down performance of 60/40 portfolios, the 40% allocation to bonds did not save the day. In fact, a proxy 60/40 portfolio incurred a substantial drawdown during that time. Given today's investment landscape, these antiquated “rule-of-thumb” allocations seem quaint at best.

It's easy to see the appeal of a balanced risk portfolio which directly addresses these concerns. Enter the risk parity fund. Risk parity seeks to equalize risk across asset classes. Over the last ten years, such risk parity funds benefited from an environment with yields caught in a secular down trend, despite noteworthy fluctuations in equity prices. Unfortunately, these balanced risk portfolios have their own potential drawbacks in a zero bound environment. In recent years, investors in traditional risk parity funds have witnessed first-hand the detriment of holding levered long positions in bonds with little room for upside during broader equity market selloffs.

In this piece, we discuss the merits and shortcomings of traditional 60/40 and risk parity strategies in more detail. We conclude with the proposal that an alpha-generating portfolio could be an attractive addition to a risk-weighted allocation comprised of long-only exposures to equities, sovereign bonds and corporate debt. An investment that blends risk parity asset allocation with an allocation to a non-correlated, low volatility multi strategy hedge fund could potentially mitigate drawdowns and steer investors clear of the lurking risks associated with holding levered long-only bonds at the zero bound.

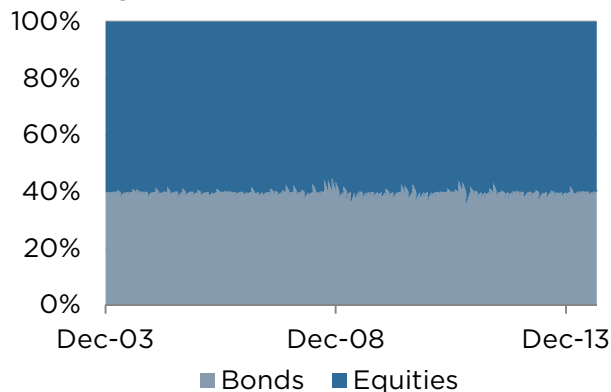
Traditional Asset Allocation: The 60/40 Approach

One of the most common traditional asset allocation strategies is the 60/40 strategy. Proponents of this strategy emphasize the general tendency for equities to perform well over the long run. Unfortunately, despite the elegant simplicity of this approach ([Exhibit 1](#)), little consideration is usually given to the allocation and diversification of risk ([Exhibit 2](#)). Indeed, while 60/40 allocations provide outsized returns during bull markets, they often realize significant drawdowns during bear markets and periods of economic instability.

Bear markets are devastating to 60/40 strategies. There have been 13 bear markets in US equities since the end of the Second World War, with an average annual return of -18.3% and an average drawdown of -30.1% over approximately 20 months. Most recently, a proxy 60/40 portfolio incurred a -31.4% drawdown during the 2008 Financial Crisis. Drawdowns interrupt the compounding of returns and delay wealth accumulation, eroding principal required to generate desirable levels of income later in life. Generally, the strategy incurs significant drawdowns because its portfolio risk is heavily concentrated in the equity component, potentially accounting for roughly 90% of the entire portfolio's risk compared with its capital weight of 60%. After all, equities historically have been two to three times more volatile than fixed income securities. During tail events, component risk may rise even higher.

Exhibit 1:

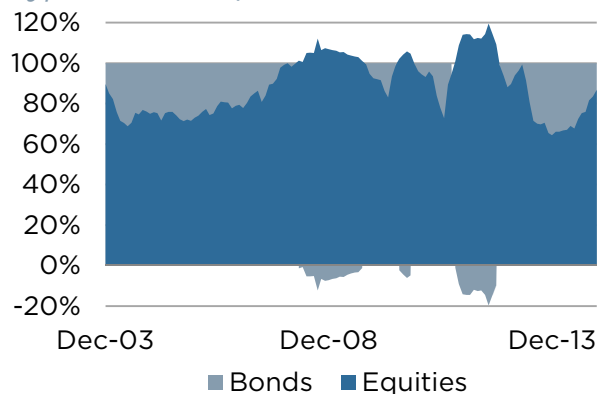
Hypothetical 60/40 Portfolio Weights (monthly rebalance)¹



Source: Weiss Multi-Strategy Advisers LLC, Bloomberg.

Exhibit 2:

Hypothetical 60/40 Contribution to Risk¹



Source: Weiss Multi-Strategy Advisers LLC, Bloomberg.

2008 Returns	-13.3%
Max Drawdown (2004 – 2014)	-31.4%
Avg. Drawdown (2004 – 2014)	-1.1%
Equities Contribution to Risk (median)	87%
Bonds Contribution to Risk (median)	13%

¹ Internal research. The bond component of the hypothetical portfolio is represented by the iShares 20+ Year Treasury Bond ETF ("TLT"). The equity component of the portfolio is represented by the total returns of SPDR S&P 500 ETF ("SPY"). Rebalanced monthly.

Conventional Balanced Risk: The Risks of Risk Parity

To address the shortcomings of concentrated portfolio risk in the traditional 60/40 allocation, risk parity investing seeks to achieve superior diversification, usually across equities, government bonds, corporate debt and commodities. Risk parity allocation stresses each component's contribution to risk rather than its specific dollar amount. It is also a passive strategy; security weights are not influenced by forecasted prices. Each of the portfolio's holdings is expected to generate returns or help to minimize drawdowns throughout the economic cycle. Proponents believe that the investor will realize attractive, and less volatile, returns over the long-term.

As a result of its emphasis on volatility, the risk parity allocation increases exposure to bonds in order to equalize the contribution to risk from other asset classes. It then uses *long-only* leverage, further overemphasizing the strategy's exposure to bonds, in order to achieve returns that compare favorably with those of the traditional 60/40 strategy. This leverage can be substantial; according to Russell Investments, conventional risk parity managers exhibited gross notional exposures ranging from 102% to 284% of the invested capital, with a median gross exposure of 173% at the end of 2012². Using a 10% risk target, it's not uncommon for a risk parity manager to exceed 200% cumulative exposure.

Risk parity funds, however, benefited from an unprecedented multi-decade period of positive bond performance. Years of falling interest rates have bolstered the idea that the strategy is "riskless"; most risk parity portfolios remain heavily tilted towards bonds. Interest rates are at historic lows (**Exhibit 3**) and lackluster global economic

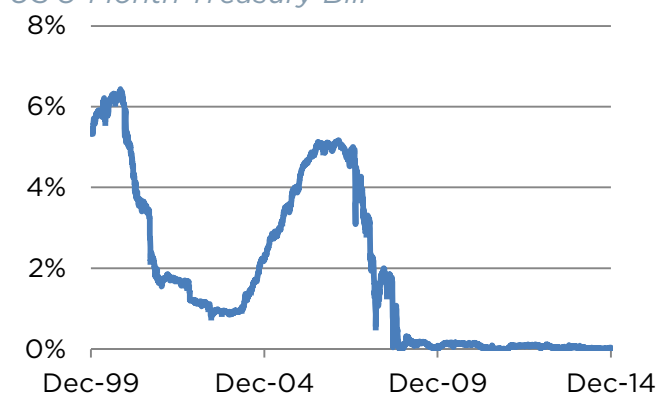
² "Risk Parity," *Russell Investments*, July 2013, p. 2.

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growth is likely to keep them perched near the zero bound for longer than many in the investment community may believe. This “low-rate/low-growth” environment, where rates could stay lower, introduces a potential paradigm shift towards ever-diminishing upside returns, potentially damaging investors that are materially overweight bonds. In this scenario, we believe that traditional risk parity could significantly underperform 60/40 allocations that contain greater equity exposure.

Exhibit 3:

US 3-Month Treasury Bill



Source: Bloomberg.

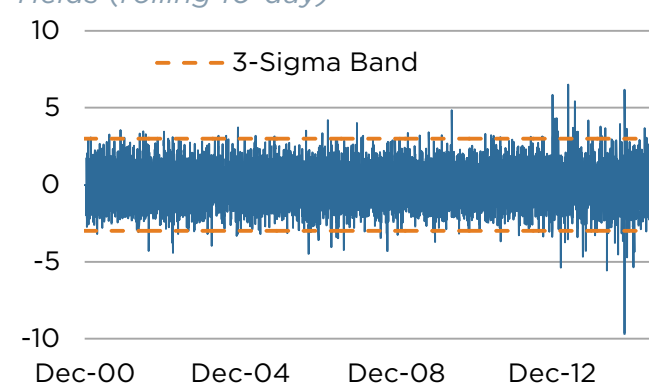
Inflation is another concern that could easily overwhelm bond exposure and impact strategy returns, particularly if commodities do not rally contemporaneously. For example, when interest rates skyrocketed in the 1970s, the spike in commodity prices would have bailed out treasury and corporate bond weakness. Going forward, while wage and cost inflation may be observed domestically, low growth concerns elsewhere in the world may conspire to hamper future commodity price gains. Furthermore, with today’s record low short term interest rates, returns on short term treasury bills cannot compare to the double-digit rates of return they earned in the 1970s.

Thus, the bond market’s historical perception as a safe haven may be threatened. Convexity, or the degree to which a bond’s price changes as a result of

changes in its yield, has increased dramatically in the years since the financial crisis. This presents a troubling risk for bond investors because prices are now significantly more levered to yield movements.³ In other words, the consequences of a sudden gap higher in rates may be damaging to a strategy known for having minimal drawdowns. As shown below, intraday volatility for treasury bonds has increased dramatically in the past two years ([Exhibit 4](#)).

Exhibit 4:

Intraday Sigma Events: US Govt 10-Year Yields (rolling 10-day)



Source: Weiss Multi-Strategy Advisers LLC, Bloomberg.

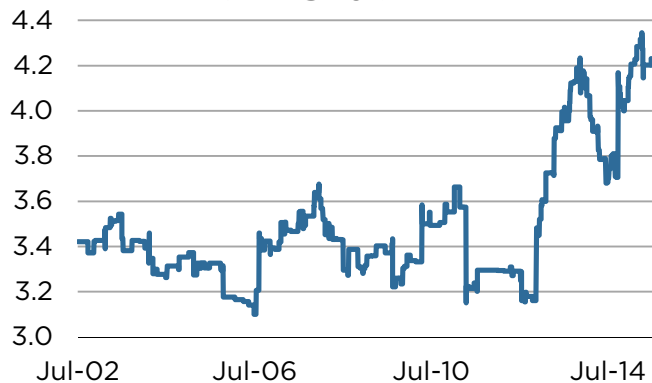
	Jan 2003 – Nov 2012	Dec 2012 – Present
Avg. Count of Sigma Events > +/- 3 Per Year	6	16
Total Count of Sigma Events > +/-5	0	8

And it gets worse. In addition to the increased frequency of statistically significant, or “tail”, events, the magnitude of these events has increased as well ([Exhibit 5](#)). These occurrences subject the investor to greater than expected risk in the levered long bond positions of conventional risk parity portfolios.

³ For example, the 30-Yr Treasury Bond’s dollar value of a basis point was \$13.98 in June 2007 compared to \$21.80 in January 2015, or 1.56x higher.

Exhibit 5:

Average Sigma during Tail Events: US Govt 10-Year Yields (rolling 1-yr)



Source: Weiss Multi-Strategy Advisers LLC, Bloomberg.

The recent performance of a simulated basket of equal-weighted leading risk parity mutual funds reminds us of the challenges that face the strategy in the new economic environment (**Exhibit 6**). The basket suffered drawdowns of -14.4%, -6.3% and -4.4% in the past two years alone⁴. The evidence suggests that those funds' days of being deemed less volatile could be behind them.

Exhibit 6:

Risk Parity Composite Index (Proprietary)



Source: Weiss Multi-Strategy Advisers LLC, Bloomberg.

⁴ The Risk Parity Composite Index is a hypothetical equal-weighted, total return basket comprised of leading publicly traded risk parity mutual funds. Details are provided on page 10.

Max Drawdown

May – June 2013	-14.4%
Aug – Oct 2014	-6.3%
Nov – Dec 2014	-4.4%

Lastly, at inflection points, increased volatility could underweight position exposures in a risk parity strategy, counter to a value-driven investment approach. Successful, forward-looking managers of active portfolios frequently take the opposite viewpoint: the resulting asset depreciation often provides an ideal opportunity to increase exposure at a more attractive price.

A Better Balanced Risk Strategy? Just Add Alpha.

As noted above, risk parity is an inherently passive investment strategy because forecasted returns do not play a role in the construction of the portfolio. The strategy, along with other passive investment allocations, has garnered widespread popularity in recent years, driven in part by lackluster active fund manager performance. News outlets have highlighted that 2014 was an active fund manager's worst performance in more than a decade^{5,6}.

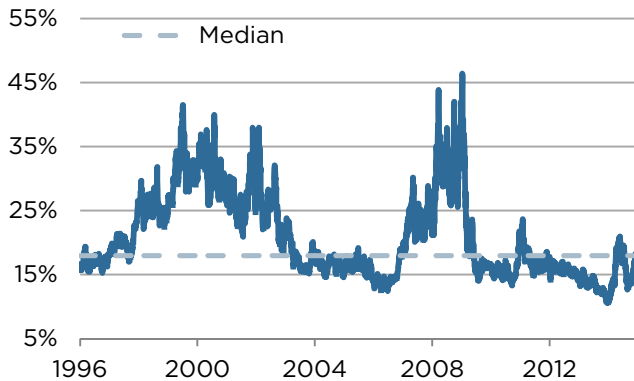
While we do not dispute these observations, stock market returns continue to be closely intertwined, making it difficult for active managers to identify and profit from the spread between over and undervalued companies. Return dispersion has spent the better part of the last four years below its median value of the past 19 years (**Exhibit 7**).

⁵ "Fewer Active Managers Beat Market than at Any Time in Decade," *Financial Times*, November 9, 2014.

⁶ "Torrid Times for Active Fund Managers," *Financial Times*, November 16, 2014.

Exhibit 7:

Return Dispersion (daily cross-sectional standard deviation of 6-month returns of S&P 500)

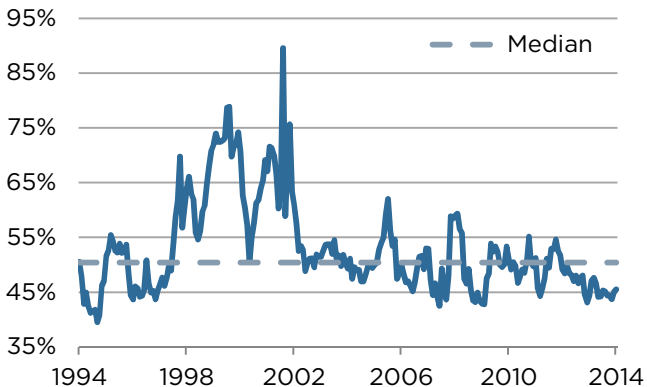


Source: Weiss Multi-Strategy Advisers LLC, Standard & Poor's Capital IQ.

Valuation dispersion in the US equity markets is resting at 35 year lows ([Exhibit 8](#)). In their 2015 outlook, Goldman Sachs devotes much attention to this subject because “mutual and hedge funds typically underperform during low dispersion regimes.”⁷

Exhibit 8:

S&P 500 Valuation Dispersion (winsorized E/P LTM standard deviation as a % of median)



Source: Standard & Poor's Capital IQ.

It turns out, however, that introducing a non-correlated, active component to a risk parity portfolio in a risk-weighted manner has

the potential to offer substantial benefits to the investor. It may seem like an odd time to promote the addition of an active management component into a passive allocation strategy that has historically performed well without it. However, institutional investors know that basing investment decisions on backwards-looking observations rarely deliver long-term investment success.

“Active + Passive” may not sound like much of a revelation, but its implications within a risk-weighted portfolio are profound. We believe that such a portfolio has the potential to increase risk diversification while minimizing average drawdowns. Additionally, leverage is only applied within the active, market-neutral component by experienced portfolio managers accustomed to trading through multiple market cycles. Its inclusion allows investors to avoid an asset allocation that levers exposure to long-only bonds positions in order to generate competitive returns.

Unlike conventional risk parity portfolios that passively rebalance as volatility and correlations evolve, active portfolio managers constantly update their risk-reward opportunities on a real-time basis. Thus, the overall strategy has the potential to detect and adapt to changing economic environments before trailing market measures adjust. Furthermore, as mentioned earlier, a risk parity allocation has the natural tendency to sell holdings of assets that realize spikes in volatility, typically when asset classes drop sharply. An actively managed portfolio offers the potential to opportunistically mitigate this effect when it is advantageous to do so. In other words, portfolio managers can introduce on a discretionary basis a more value-driven investment approach to the overall portfolio by exploiting falling prices at turnings points when valuations become more attractive.

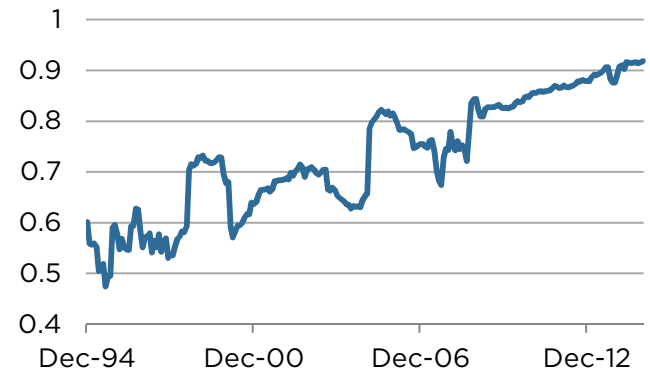
⁷ “2015 US Equity Outlook: Low Return and Low Dispersion”, Goldman Sachs Portfolio Strategy Research, November 19, 2014.

The concept of adding alpha sounds simple, but not all alpha is equal. Investors have some options here. Hedge funds are a natural source of alpha that seek to both preserve capital and deliver absolute returns. As mentioned above, increasing dispersion and volatility create opportunities for portfolio managers. However, hedge funds vary considerably in terms of diversification, turnover and volatility. We use the term “diversification” broadly here. It encompasses not only a portfolio’s mix of holdings, but also its variation in investment horizons, systematic sources of risk and the degree to which it provides or takes liquidity.

Long/short equity hedge funds sound like they might fit the bill. But their returns are now extraordinarily correlated with the broader market, as measured by the S&P 500 ([Exhibit 9](#)). Correlations began to race higher after 2008 and now reside at 20 year highs near 90%. The annualized excess returns of those same long/short equity hedge funds suggest that portfolio managers’ alpha has trended down since the turn of the millennium in 2000 and was actually negative for much of 2011 and 2012 ([Exhibit 10](#)). Because of this high correlation to the broader equity market, long/short equity hedge funds may not be the best vehicle to increase overall diversification. These findings are worrisome.

Exhibit 9:

Correlation of HFRI Equity Hedge Index with S&P 500 (Rolling 60 Months)



Source: HFRI, Standard & Poor's Capital IQ.

Exhibit 10:

Annualized Excess Return of HFRI Equity Hedge Index (after equity market, Size, Value and Momentum, rolling 60-month)



Source: HFRI, Standard & Poor's Capital IQ.

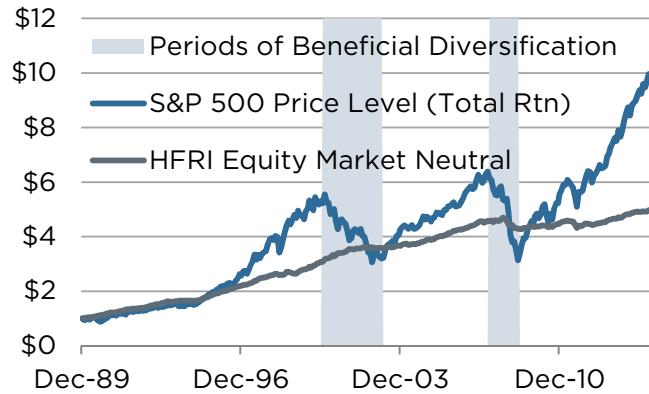
A market-neutral hedge fund tends to be far less correlated to broader market movements. These funds have the potential to offer periods of substantial diversification ([Exhibit 11](#)). Multi-strategy, market-neutral funds invest in different asset classes across different horizons. Importantly, some managers can be mean-reverting and liquidity-providing in nature, while others can be more momentum-based and liquidity-taking. Some strategies may be fundamentally driven, while others may be more trade-oriented. Furthermore, a multi-

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strategy fund can opportunistically reallocate capital across strategies to enhance alpha as market environments evolve.

Exhibit 11:

HFRI Equity Market Neutral Index vs S&P 500
TR: Periods of Beneficial Diversification



Source: HFRI, Standard & Poor's Capital IQ.

A subtle, but material, advantage to using a multi-strategy hedge fund in this context, as opposed to other fund of fund alternatives, is the negative impact on returns from netting risk. Unlike funds of hedge funds, some multi-strategy funds absorb the netting risk instead of passing them on to the investor. Netting risk occurs any time there is more than one strategy (and PnL) in a fund. Suppose, for example, a fund consists of an equal allocation between two strategies. If Strategy A was to have an up year while Strategy B had a down year of an equal amount, the investor would still be obligated to pay the performance fees on the gains of Strategy A, despite realizing zero net gains. Ideally, hedge funds deliver absolute returns and preserve capital, generally with a benchmark of cash plus a risk premium. However, in today's zero bound, low dispersion environment where attractive returns are harder to attain, the drag introduced by netting risk becomes proportionately more significant.

Lastly, due to the greater diversification across strategies, a multi-

strategy fund usually realizes less volatile, bond-like returns. This attribute is highly coveted in a broader risk-weighted portfolio as its inclusion organically reduces the allocation to bonds. Consequently, such a portfolio in and of itself can offer an attractive risk-return profile and does not require the substantial application of top-down leverage which may come to plague traditional risk parity strategies in the years ahead.

Using Alpha within a Balanced Risk Portfolio

An investment landscape dominated by low growth, low interest rates and low dispersion presents a challenging dilemma for investors. Avoiding major drawdowns is a critical concern as central bank policy decouples and the U.S. transitions away from a negative real rate environment. The weathered 60/40 portfolio offers uncomfortably high levels of concentrated risk at times. Prevailing implementations of newer risk-weighted strategies are strongly susceptible to sharp moves in rates due to long-only leverage needed to produce competitive returns. Thus, traditional asset allocations have material shortcomings that may not adequately address the needs of investors in the years ahead. The inclusion of opportunistic, non-correlated, risk-controlled alpha in the form of a multi-strategy fund that offers bond-like returns, however, could be the elegant solution.

*Weiss Multi-Strategy Advisers LLC
offers non-traditional risk parity solutions.
Please feel free to reach out for additional
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IMPORTANT INFORMATION AND DISCLOSURES:

USE OF THE SPDR S&P ETF TRUST ("SPY") AND THE ISHARES 20+ YEAR TREASURY BOND ETF ("TLT") AS A PROXY FOR A TRADITIONAL 60/40 PORTFOLIO. The performance data presented should be considered to be simulated or hypothetical. Simulated or hypothetical performance results have certain inherent limitations. Unlike actual performance results, simulated results do not represent actual trading in respect of Traditional 60/40. Instead, they represent data taken from a theoretical portfolio consisting of 60% SPY as a proxy for equities and 40% TLT as a proxy for bonds. The simulated portfolio was rebalanced each month-end back to a 60%/40% allocation. ETF expense ratios are included in the returns but transaction costs are not. Since the performance presented does not represent the performance of an actual investment portfolio, the results may under- or -over compensate for the impact, if any, of certain factors, such as leverage, liquidity, assets under management and expenses. Simulated investment results in general are also subject to the fact that they are designed with the benefit of hindsight. The SPY is an exchange-traded fund that tracks the S&P 500 Index. It holds predominantly large-cap U.S. stocks and its dividends are reinvested on a quarterly basis. The holdings are weighted by market capitalization. The TLT is an ETF that seeks to track the investment results of an index composed of U.S. Treasury bonds with remaining maturities greater than twenty years. These ETFs do not reflect the same fees or expenses than those of other Traditional 60/40 proxies, other risk parity proxies or actively managed diversified hedge fund strategies, and may and will invest in different securities than those reflected in the ETFs. Sector, industry, security and country exposures, volatility and risk characteristics will also differ. Traditional 60/40 data is provided for reference purposes only, and other portfolios may or may not achieve performance similar to or better than Traditional 60/40.

USE OF CONVENTIONAL RISK PARITY COMPOSITE PERFORMANCE: The composite performance presented were derived using equally-weighted notional positions in the following publicly traded risk parity mutual funds: AQR Risk Parity Fund-I (AQRIX), Columbia Adaptive Risk Allocation-A (CRAAX), INV Balanced Risk Allocation-B (ABRBX), AMG FQ Global Risk Balance-I (MMAFX), Putnam Dynamic Risk Allocation-B (PDRBX), Salient Risk Parity Fund-A (SRPAX) and AQR Risk Parity II HV-I (QRHIX). The foregoing risk parity mutual funds (i) do not include transactional costs, and (ii) do not reflect the same fees or expenses than those of other risk parity proxies or those of actively managed diversified multi-strategy managers, each of which may and will invest in different securities than those reflected in the above mutual funds. Sector, industry, security and country exposures, volatility and risk characteristics will also differ. Proxy data is provided for reference purposes only. Such simulated data has inherent limitations because it is generated with the benefit of hindsight.

CHART 3: USE OF THE USGG3M INDEX (US GENERIC GOVERNMENT T 3 MONTH YIELD): Yields are yield to maturity and pre-tax. The rates are comprised of Generic United States on-the-run government 3-month bill indices.

CHART 4: USE OF THE USGG10YR INDEX (US GENERIC GOVERNMENT 10 YEAR YIELD): Yields are yield to maturity and pre-tax. The rates are comprised of Generic United States on-the-run government 10 notes indices.

CHARTS 9-10: DESCRIPTION OF THE HFRI EQUITY HEDGE (TOTAL) INDEX AND THE S&P 500: The HFRI Equity Hedge Index tracks investment managers who maintain positions both long and short in primarily equity and equity derivative securities. A wide variety of investment processes can be employed to arrive at an investment decision, including both quantitative and fundamental techniques; strategies can be broadly diversified or narrowly focused on specific sectors and can range broadly in terms of levels of net exposure, leverage employed, holding period, concentrations of market capitalizations and valuation ranges of typical portfolios. Equity Hedge managers would typically maintain at least 50% exposure to, and may in some cases be entirely invested in, equities, both long and short. The index is not directly investible and is net of all fees. The S&P 500 is widely regarded as the leading gauge of large cap U.S. equities. There is over USD 7 trillion benchmarked to the index, with index assets comprising approximately USD 1.9 trillion of this total. The index includes 500 leading companies and captures approximately 80% coverage of available market capitalization.

CHART 11: DESCRIPTION OF THE HFRI EQUITY MARKET NEUTRAL INDEX AND THE S&P 500: The HFRI Equity Market Neutral strategies employ sophisticated quantitative techniques of analyzing price data to ascertain information about future price movement and relationships between securities, select securities for purchase and sale. These can include both factor-based and statistical arbitrage/trading strategies. Factor-based investment strategies include strategies in which the investment thesis is predicated on the systematic analysis of common relationships between securities. In many but not all cases, portfolios are constructed to be neutral to one or multiple variables, such as broader equity markets in dollar or beta terms, and leverage is frequently employed to enhance the return profile of the positions identified. Statistical Arbitrage/Trading strategies consist of strategies in which the investment thesis is predicated on exploiting pricing anomalies which may occur as a function of expected mean reversion inherent in security prices; high frequency techniques may be employed and trading strategies may also be employed on the basis on technical analysis or opportunistically to exploit new information the investment manager believes has not been fully, completely or accurately discounted into current security prices. Equity Market Neutral Strategies typically maintain characteristic net equity market exposure no greater than 10% long or short. The index is not directly investible and is net of all fees. The S&P 500 is widely regarded as the leading gauge of large cap U.S. equities. There is over USD 7 trillion benchmarked to the index, with index assets comprising approximately USD 1.9 trillion of this total. The index includes 500 leading companies and captures approximately 80% coverage of available market capitalization.

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