

## Risk Parity Funds: A Look At Their Complexity, Structure

Although they are popular, their bond bets draw scrutiny. [By Michael J. Reed](#)



**T**HE “RISK PARITY” APPROACH TO asset allocation, which has grown tremendously as an institutional strategy since first being introduced 17 years ago, is now becoming widely available as an offering for financial advisory clients.

on the underlying philosophy.

This article can only provide a brief introduction to risk parity funds, but it will attempt to give a brief overview of the theory and some insights into how two of the largest risk parity fund managers construct their portfolios.

to invest more money in low-risk assets than in high-risk assets,” they write. “As a result, even if return-per-unit-of-risk is higher, the total aggressiveness and expected return is lower than that of a traditional 60/40 portfolio. Risk parity investors address this problem by applying leverage to the risk-balanced portfolio to increase its expected return and risk to desired levels.”

Because bonds almost always have lower volatilities than equities (except when there is hyperinflation or danger of a government default), the risk-balancing effect of the risk parity approach will be to weight bonds more highly than stocks. Even incorporating commodities and sometimes credit asset classes, as most risk parity portfolio managers do, does not change the relative weightings too much. The result is a portfolio with an unlevered expected return much more like bonds than stocks, although significantly lower risk than

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The idea behind a risk parity portfolio is that it equalizes risk allocation throughout a portfolio by overweighting lower volatility asset classes. Because such a portfolio’s construction differs dramatically from conventional asset allocation, advisors interested in using these funds should spend some time educating themselves and their clients

Each asset class in this approach has an equal amount of risk. In their recent paper, “Leverage Aversion and Risk Parity,” in the *Financial Analysts Journal*, AQR founder Clifford Asness, Andrea Frazzini and Lasse Pedersen describe the strategy this way: It means to be diversified by risk, not dollars.

“To diversify by risk, we generally need

the 60/40 traditional asset allocation.

So, why the interest in risk parity portfolios? The answer lies in the use of leverage. In their paper, Asness, Frazzini and Pedersen show that, since 1926, a risk parity portfolio of bonds and equities has an excess return over the risk free rate of 2.20% while the “market” portfolio (the market-value-weighted portfolio of all investable assets in those classes) has had an excess return of 3.84%. However, if the risk parity portfolio is levered using the risk-free rate to match the 15% annual volatility of the market portfolio, its excess return jumps to 7.99%. They show similar results over a shorter time period from 1973, with a risk parity portfolio that includes commodities and credit asset classes in addition to stocks and bonds. Additionally, they explore the impact of the leverage margin rates on the performance and still find that the risk parity portfolio outperforms, though not quite as dramatically.

So can risk parity portfolios really produce higher mean annual returns for the same amount of risk? Until recently, this anomaly had not been explained within the context of modern portfolio theory or the capital asset pricing model. According to Asness, Frazzini and Pedersen, published results indicate that it is the aversion to leverage that creates the market inefficiency that allows risk parity portfolios to outperform. Essentially, an investment manager without leverage has only one way to increase expected returns, which is to increase his allocation to riskier assets (such as equities), thus lowering his Sharpe ratio and moving the return-to-risk profile away from the efficient frontier.

By balancing the risk across the asset classes, the risk parity manager starts with a portfolio much closer to the historically estimated efficient frontier. Leverage can then be used to increase the expected return of the portfolio while maintaining essentially the same Sharpe ratio.

While the academic arguments for risk parity investing are still being published, various practitioners have put the principles to use since 1996. The two largest institutional managers are Bridgewater

Associates, with more than \$50 billion in the strategy, and AQR, which had \$21.8 billion in it at the end of 2012. Interestingly, both firms used the product only internally at first to manage wealth for their principals. Several other institutional managers have also used the strategy, and retail funds for the individual investor and smaller institutions became available in 2009 with the arrival of the Invesco Balanced Risk Allocation Fund (ABRZX). AQR followed in 2010 with the AQR Risk Parity Fund (AQRIX).

The original Bridgewater offering, predating the term “risk parity,” is named the “All Weather Fund,” for its ability to protect assets in all economic cycles. Scott Wolle, a manager on the Invesco fund, describes the philosophy behind risk parity investing as “identifying different economic outcomes and defending against those outcomes.” Both Wolle and Michael Mendelson, an AQR portfolio manager, view risk parity funds as a core portfolio holding. They do not recommend, however, using the funds as a replacement for traditional 60/40 balanced funds. Instead, they view them as a complement to 60/40 funds, since risk parity portfolios have higher Sharpe ratios and diversification benefits.

After 2007 and 2008, of course, many investors are understandably wary of leverage.

“The risk of leverage is forcible deleveraging,” says Mendelson. “Leverage always has the risk of being forced out of positions.” If the investor is concerned that the manager “cannot manage leverage, don’t do risk parity.”

Just as index investing becomes complicated when you choose indexes, so does risk parity when you choose strategies. The approaches can be significantly different, depending on the provider. Which indices should be used for each of the asset classes? Since the funds are global, which equity, bond, credit and commodity markets should be included? Should credit even be an asset class, given its high correlation with equities? How is the leverage managed? For those asset classes you can’t get through exchange-traded futures, how are the positions collateralized? Also, as Mendelson points out, manager opin-

ions vary about whether the leverage of the portfolio should be adjusted as market conditions change to minimize the variation of the risk over time. Mendelson estimates that 25% of the diversification benefit of AQR’s risk parity funds comes from performing this last adjustment, while the other 75% of the improvement over 60/40 portfolios comes from the risk balancing between asset classes.

The two largest retail fund managers of balanced risk funds, Invesco and AQR, do have some significant differences in their portfolio management. For example, AQR only does a strategic asset allocation, weighting each asset class in inverse proportion to the estimated future volatility of the asset class and adjusting the leverage to achieve the targeted overall portfolio risk level. Invesco also balances the risk and leverage to achieve an 8% targeted annual volatility, but overlays a tactical asset allocation to incorporate the portfolio managers’ views on future macroeconomic trends in inflation, economic growth and creditworthiness. According to Wolle, the tactical asset allocation has improved the performance of the fund by about 200 basis points since its inception, while taking no more than 2% annual tracking risk.

Besides the differences between managers in their use and adjustments to leverage, another important consideration for investors is the risk estimate being balanced between asset classes. Both Mendelson and Wolle agree it is difficult to forecast the future correlations between asset classes. Because of this difficulty, AQR relies predominantly on volatility forecasts in choosing its weightings. Wolle, meanwhile, says the “time frame of volatility and correlations is important” and that “Invesco uses longer-term estimates” of both in its strategy.

As risk parity funds have increased in popularity and size, critics have become concerned that investors are herding into a leveraged bond bet at a time the bull bond market could be facing imminent demise. Mendelson and Wolle understand these objections, but both say their firms have put significant research into understanding and quantifying the

<p>risks associated with risk parity investing in a bond bear market. Both also clarify that their funds are not explicitly leveraging their bond positions, but leveraging the fund as a whole to produce a risk level appropriate for their investors' preferences. Mendelson says AQR has done an extensive historical examination going back into the 1920s and has not found an increase in bond risks when yields were lower. Invesco, meanwhile, produced a white paper by Wolle examining whether a spike in sovereign debt yields could have a deleterious impact on bond prices—and asking how such a spike would impact other asset classes in a risk-balanced portfolio. (One interesting finding in Wolle's research is that bond futures, with their variety of settlement options, actually outperform on-the-run Treasuries in distressed bond markets.)</p>	<p>As a relatively new offering in retail investing, risk parity or risk-balanced strategies are attracting both significant assets and meaningful questions about their complexity and structure. While it is true that risk parity managers typically use derivatives and leverage, and that they usually have some commodities holdings, to classify the funds as alternatives is a bit of a stretch, since by far the most exposure is in long traditional bonds and equities.</p> <p>Both Wolle and Mendelson compare them to traditional 60/40 balanced funds. They emphasize that they invest mostly in exchange-traded futures, and have less than 1% of their assets exposed to counterparty risk. Both managers also emphasized that risk parity strategies are best used to complement traditional asset allocation because of their diversification benefits and explicit risk-balancing characteristics.</p>	<p>The diversification and risk characteristics of the strategy have historically offered a smoother risk/reward payoff under a variety of economic conditions.</p> <p>That historical performance may prompt some return-chasing among eager investors. But Mendelson emphasizes that the strategy should be used not alone but in tandem with 60/40 funds, for two important reasons:</p> <p>Risk parity “investing is not way, way better than traditional allocation, and there is not an infinite capacity for risk parity.” <b>FA</b></p> <p><b>MICHAEL J. REED</b>, formerly a senior managing director in Morgan Stanley's process driven trading department, is founder of MJ Reed Investment Consulting. He has successfully managed multi-million dollar portfolios for individuals and small institutions for more than 10 years.</p>
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**Investment Objective**

The Fund's investment objective is to provide total return with a low to moderate correlation to traditional financial market indices.

**Invesco Balanced-Risk Allocation Fund Fund Class A Shares**

Average Annual Total Returns (%) as of December 31, 2012

Period	Max Load 5.50%	NAV
Inception (6/2/09)	10.65	12.40
3 Years	9.18	11.25
1 Year	4.48	10.56

*Performance quoted is past performance and cannot guarantee comparable future results; current performance may be lower or higher. Visit [invesco.com/performance](http://invesco.com/performance) for the most recent month-end performance. Performance figures reflect reinvested distributions and changes in net asset value (NAV). Investment return and principal value will vary so that you may have a gain or a loss when you sell shares. Performance shown at NAV does not include applicable front-end sales charges, which would have reduced the performance.*

**About risk**

The Commodity Futures Trading Commission (CFTC) has recently adopted amendments to certain CFTC rules, and is promulgating new rules, which will subject the Fund and its wholly-owned subsidiary to regulation by the CFTC. The Fund and its wholly-owned subsidiary will be required to operate subject to applicable CFTC requirements, including registration, disclosure and operational requirements. The Fund also will be subject to CFTC requirements related to processing derivatives transactions and tracking exposure levels to certain commodities. Compliance with these additional requirements will increase Fund expenses. Certain of the requirements that would apply to the Fund and its wholly-owned subsidiary have not yet been adopted, and it is unclear what the effect of those requirements would be on the Fund if they are adopted. The Adviser believes that it is possible that compliance with CFTC regulations, if they are adopted as proposed, may adversely affect the ability of the Fund to achieve its objective.

The Fund's investments in commodity-linked notes may involve substantial risks, including risk of loss of a significant portion of their principal value. In addition to risks associated with the underlying commodities, they may be subject to additional special risks, such as the lack of a secondary trading market and temporary price distortions due to speculators and/or the continuous rolling over of futures contracts underlying the notes. Commodity-linked notes are also subject to counterparty risk, which is the risk that the other party to the contract will not fulfill its contractual obligation to complete the transaction with the Fund.

The Fund's significant investment exposure to the commodities markets, and/or a particular sector of the commodities markets, may subject the Fund to greater volatility than investments in traditional securities, such as stocks and bonds. The commodities markets may fluctuate widely based on a variety of factors, including changes in overall market movements, domestic and foreign political and economic events and policies, war, acts of terrorism, changes in domestic or foreign interest rates and/or investor expectations concerning interest rates, domestic and foreign inflation rates and investment and trading activities of mutual funds, hedge funds and commodities funds. Prices of various commodities may also be affected by factors such as drought, floods, weather, livestock disease, embargoes, tariffs and other regulatory developments. The prices of commodities can also fluctuate widely due to supply and demand disruptions in major producing or consuming regions. Because the

Fund's performance is linked to the performance of volatile commodities, investors should be willing to assume the risks of potentially significant fluctuations in the value of the Fund's shares.

Changes in the value of two investments or asset classes may not track or offset each other in the manner anticipated by the portfolio managers. Because the Fund's investment strategy seeks to balance risk across three asset classes and, within each asset class, to balance risk across different countries and commodities, to the extent either the three asset classes or the selected countries and commodities are correlated in a way not anticipated by the portfolio managers the Fund's risk allocation process may not succeed in achieving its investment objective.

Counterparty risk is the risk that the other party to the contract will not fulfill its contractual obligations, which may cause losses or additional costs to the Fund.

The issuer of instruments in which the Fund invests may be unable to meet interest and/or principal payments, thereby causing its instruments to decrease in value and lowering the issuer's credit rating.

The dollar value of the Fund's foreign investments will be affected by changes in the exchange rates between the dollar and the currencies in which those investments are traded.

The performance of derivative instruments is tied to the performance of an underlying currency, security, index, commodity or other instrument. In addition to risks relating to their underlying instruments, the use of derivatives may include other, possibly greater, risks. Derivatives involve costs, may be volatile, and may involve a small initial investment relative to the risk assumed. Risks associated with the use of derivatives may include counterparty, leverage, correlation, liquidity, tax, market, interest rate and management risks. Derivatives may also be more difficult to purchase, sell or value than other investments. The Fund may lose more than the cash amount invested on investments in derivatives. Investors should bear in mind that, while the Fund intends to use derivative strategies, it is not obligated to actively engage in these transactions, generally or in any particular kind of derivative, if the Adviser elects not to do so due to availability, cost, market conditions or other factors.

The prices of securities issued by foreign companies and governments located in developing/emerging markets countries may be affected more negatively by inflation, devaluation of their currencies, higher transaction costs, delays in settlement, adverse political developments, the introduction of capital controls, withholding taxes, nationalization of private assets, expropriation, social unrest, war or lack of timely information than those in developed countries.

An investment by the Fund in exchange-traded funds generally presents the same primary risks as an investment in a mutual fund. In addition, an exchange-traded fund may be subject to the following: (1) a discount of the exchange-traded fund's shares to its net asset value; (2) failure to develop or maintain an active trading market for the exchange-traded fund's shares; (3) the listing exchange halting trading of the exchange-traded fund's shares; (4) failure of the exchange-traded fund's shares to track the referenced asset; and (5) holding troubled securities in the referenced index or basket of investments. Exchange-traded funds may involve duplication of management fees and certain other expenses, as the Fund indirectly bears its proportionate share of any expenses paid by the exchange-traded funds in which it invests. Further, certain of the exchange-traded funds in which the Fund may invest are leveraged. The more the Fund invests in such leveraged exchange-traded funds, the more this leverage will magnify any losses on those investments.

Exchange-traded notes are subject to credit risk, including the credit risk of the issuer, and the value of the exchange-traded note may drop due to a downgrade in the issuer's credit rating, despite the underlying market benchmark or strategy remaining unchanged. The value of an exchange-traded note may also be influenced by time to maturity, level of supply and demand for the exchange-traded note, volatility and lack of liquidity in the underlying market, changes in the applicable interest rates, changes in the issuer's credit rating, and economic, legal, political, or geographic events that affect the referenced underlying market or strategy. Exchange-traded notes are also subject to counterparty risk.

The Fund's foreign investments may be affected by changes in a foreign country's exchange rates, political and social instability, changes in economic or taxation policies, difficulties when enforcing obligations, decreased liquidity, and increased volatility. Foreign companies may be subject to less regulation resulting in less publicly available information about the companies.

Interest rate risk refers to the risk that bond prices generally fall as interest rates rise; conversely, bond prices generally rise as interest rates fall. Specific bonds differ in their sensitivity to changes in interest rates depending on their individual characteristics, including duration. This risk may be magnified due to the Fund's use of derivatives that provide leveraged exposure to government bonds.

Leverage exists when the Fund purchases or sells an instrument or enters into a transaction without investing cash in an amount equal to the full economic exposure of the instrument or transaction and the Fund could lose more than it invested. Leverage created from borrowing or certain types of transactions or instruments may impair the Fund's liquidity, cause it to liquidate positions at an unfavorable time, increase volatility or otherwise not achieve its intended objective. The Fund's significant use of derivatives and leverage could, under certain market conditions, cause the Fund's losses to be more significant than other mutual funds and, in extreme market conditions, could cause a complete loss of your investment.

The Fund may hold illiquid securities that it may be unable to sell at the preferred time or price and could lose its entire investment in such securities. The Fund's significant use of derivative instruments may cause liquidity risk to be greater than other mutual funds that invest in more traditional assets such as stocks and bonds, which trade on markets with more market participants.

The investment techniques and risk analysis used by the Fund's portfolio managers may not produce the desired results. Because the Fund's investment process relies heavily on its asset allocation process, market movements that are counter to the portfolio managers' expectations may have a significant adverse effect on the Fund's net asset value. Further, the portfolio managers' use of instruments that provide economic leverage increases the volatility of the Fund's net asset value, which increases the potential of greater losses that may cause the Fund to liquidate positions when it may not be advantageous to do so.

The prices of and the income generated by the Fund's securities may decline in response to, among other things, investor sentiment, general economic and market conditions, regional or global instability, and currency

and interest rate fluctuations.

The Fund is non-diversified and can invest a greater portion of its assets in a small number of issuers or a single issuer. A change in the value of the issuer could affect the value of the Fund more than if it was a diversified fund.

By investing in the Subsidiary, the Fund is indirectly exposed to risks associated with the Subsidiary's investments. The Subsidiary is not registered under the Investment Company Act of 1940, as amended (1940 Act), and, except as otherwise noted in this prospectus, is not subject to the investor protections of the 1940 Act. Changes in the laws of the United States and/or the Cayman Islands, under which the Fund and the Subsidiary, respectively, are organized, could result in the inability of the Fund and/or the Subsidiary to operate as described in this prospectus and the SAI, and could negatively affect the Fund and its shareholders.

The tax treatment of commodity-linked derivative instruments may be adversely affected by changes in legislation, regulations or other legally binding authority. If, as a result of any such adverse action, the income of the Fund from certain commodity-linked derivatives was treated as non-qualifying income, the Fund might fail to qualify as a regulated investment company and be subject to federal income tax at the Fund level. The Fund has received private letter rulings from the Internal Revenue Service confirming that income derived from the Fund's investments in the Subsidiary and a form of commodity-linked note constitutes qualifying income to the Fund. However, the Internal Revenue Service has suspended issuance of any further private letter rulings pending a review of its position. Should the Internal Revenue Service issue guidance, or Congress enact legislation, that adversely affects the tax treatment of the Fund's use of commodity-linked notes, or the Subsidiary, it could limit the Fund's ability to pursue its investment strategy. In this event, the Fund's Board of Trustees may authorize a significant change in investment strategy or Fund liquidation. The Fund also may incur transaction and other costs to comply with any new or additional guidance from the Internal Revenue Service.

The Fund may invest in obligations issued by U.S. Government agencies and instrumentalities that may receive varying levels of support from the government, which could affect the Fund's ability to recover should they default.

The Fund may have investments that appreciate or decrease significantly in value over short periods of time. This may cause the Fund's net asset value per share to experience significant increases or declines in value over short periods of time.

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**NOT FDIC INSURED | MAY LOSE VALUE | NO BANK GUARANTEE**

**Before investing, investors should carefully read the prospectus and/or summary prospectus and carefully consider the investment objectives, risks, charges and expenses. For this and more complete information about the fund(s), investors should ask their advisors for a prospectus/summary prospectus or visit [invesco.com/fundprospectus](http://invesco.com/fundprospectus).**

Note: Not all products, materials or services available at all firms. Advisors, please contact your home office.

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