

# PERFORMANCE THINKING & TECHNOLOGIES

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## Alternative Fund Research – Part I

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*Is Alternative Allocation The New Risk-Parity Strategy?*

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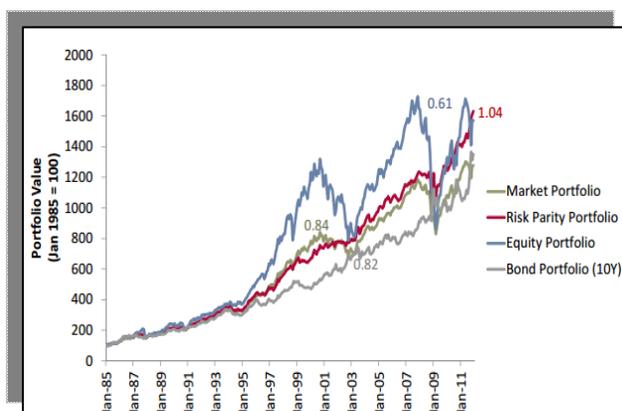
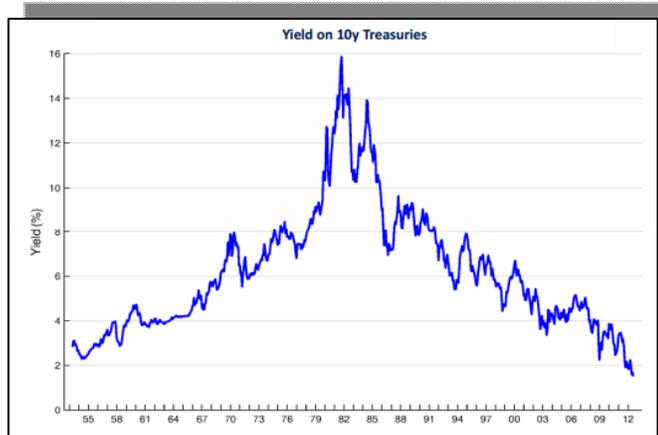
3Q2013

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## Risk Parity – From the 1990’s to today

Risk Parity strategies have been effective and popular strategies since the early 1990’s as diversification benefits enabled risk parity strategies to make money in most environments. However, the tide may be going out for risk parity strategies as rising interest rate environments impact their ability to use leverage to boost returns.

While investors wonder if this is the ebb of risk parity strategies, the number of alternative mutual funds and ETF/ETNs continues to rise. This raises the following question. If both risk parity and alternative funds provide diversification and downside protection, can allocation to alternative funds provide risk parity like returns? In other words, are alternative funds the new risk parity strategies?



Risk Parity portfolio consists of 8.8% MSCI USA Small Cap, 10.7% MSCI USA, 10.6% MSCI USA Value, 10.8% MSCI USA Growth, and 59.1% Fixed Income (CITI 10+ Govt Bond Index). Market Portfolio is 60% Equity MSCI USA IMI and 40% Fixed Income. Sharpe Ratios 85 – 2011. Source 2013 MSCI Barra

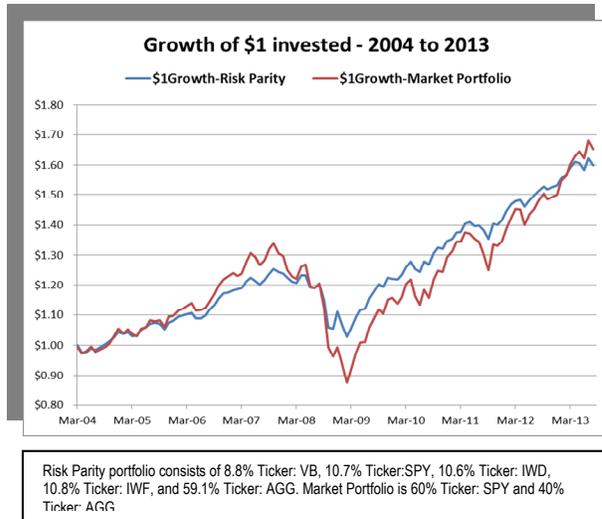
Historically, as shown by the MSCI Barra graph below, risk parity strategies have weathered market downturns and delivered returns above a standard 60% equity/40% bond market portfolio. However, as interest rates have risen starting in 2Q2013, risk parity strategies have been hit hard. The graph below shows two risk parity strategies, one managed by AQR and the second managed by Invesco. Both funds have taken significant hits since May 2013 with the funds down 6.45% and 3.21% YTD respectively.



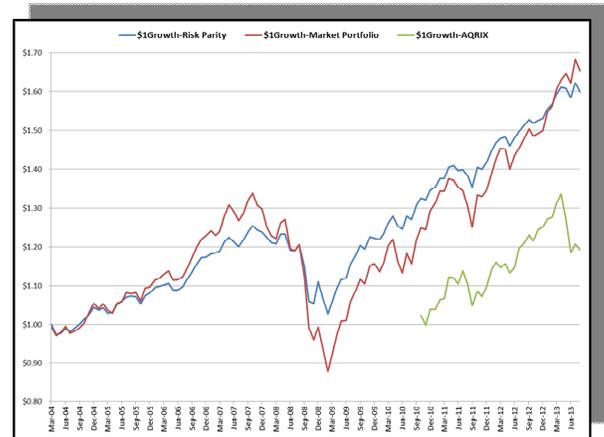
## Bootstrap comparison: Risk Parity vs Alternative+ Portfolio

The graph below shows growth of a \$1 invested since March 2004 for a passive, non-levered risk parity portfolio as compared with a 60% equity/40%bond market portfolio. As expected, the risk-parity portfolio lowers downside risk via diversification and maintains a greater return until 2Q2013. The market portfolio closes the gap and then overtakes the risk parity portfolio only due to the extended bull market from 3Q2012 to 1Q2013.

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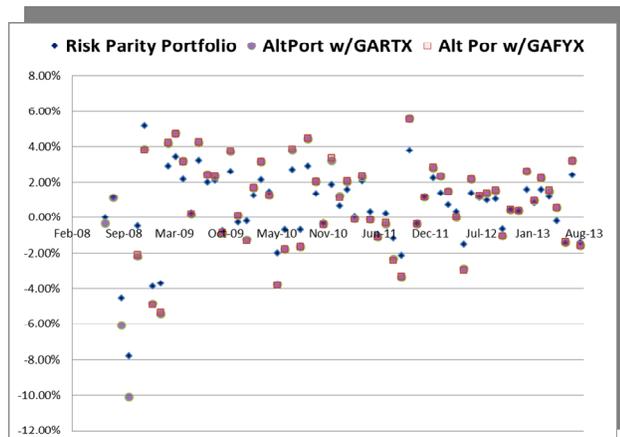
As the growth comparison is based on a passive, non-levered risk parity strategy, a chart of AQR’s Risk Parity strategy is also included as AQR uses both leverage and active management. The inception of this mutual fund is in 2010 so the chart is from October 2010 until August 20, 2013. The reversal in May 2013 markedly stands out in this graph.



Investment in alternative funds that provide absolute and low correlation to equity returns should also provide downside protection and a risk/return structure similar to risk parity strategies. Alternative funds and ETFs have become increasingly popular as a method to provide hedge fund like returns without the 2/20 administrative costs of hedge funds. Many of these funds started trading post-crisis and therefore don’t have a long track record. However, indices such as Hedge Fund Research’s Global Hedge Fund Index (HFRX) may provide a proxy measure for aggregate level performance.

For purposes of this research, two alternative funds were chosen. The first is the Natixis ASG Global Alternatives Fund (Ticker: GAFYX). The second is Goldman Sachs Absolute Return Tracker Fund (Ticker: GARTX). GAFYX is an absolute return fund that seeks to provide capital appreciation consistent with a portfolio of hedge funds. Similarly, GARTX also seeks to provide returns consistent with investment in a basket of hedge funds. Both GAFYX and GARTX began trading in 2008.

Two alternative portfolios were created. Alternative portfolio1 has a 40% allocation to Fixed Income (AGG), 40% allocation to equities (SPY), and 20% to the alternatives fund (GARTX). Alternative portfolio2 has a 40% allocation to Fixed Income (AGG), 40% allocation to equities (SPY), and 20% to the alternatives fund (GAFYX). A 20% allocation to alternatives came through reduction of the 60% equity allocation in the market portfolio. The basis of only decreasing the equity allocation is that, historically, returns from a basket of hedge funds have a higher correlation with equities than bonds. Likewise, a basket of hedge funds also should provide downside protection when applied to equity investments.

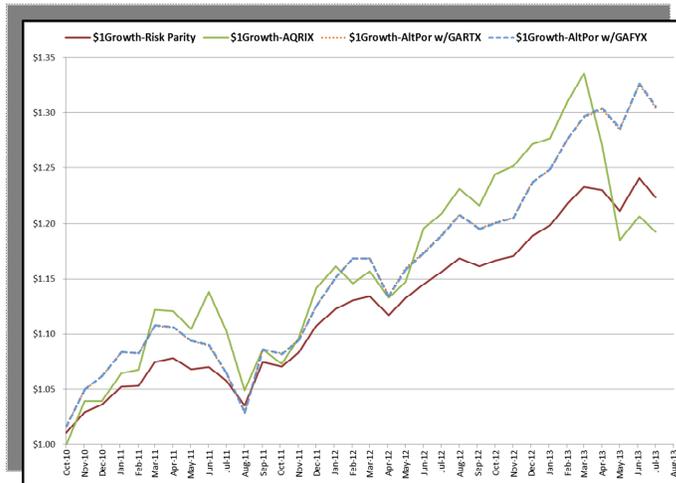


Since both GAFYX and GARTX began trading in 2008, comparisons to risk parity portfolios are only from 2008 until August 2013. The first comparison is a Scatter Plot of returns. Correlations of the risk parity to

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the alternative portfolio returns are extremely high and correlation of the risk parity portfolio to the alternative component GARTX and GAFYX are 0.6 and 0.88.

Interestingly, correlation of the AQR fund (AQRX) to GARTX and GAFYX are much lower (0.22, 0.38) which points to the effect of active management of a risk parity strategy. The \$1Growth charts shows how closely a passive risk parity and alternative portfolio have moved together since 2010.



These graphs again show the large relative valuation drop in an active risk parity strategy (AQRX) starting in May 2013 as compared to the relative stability to an alternative+ portfolio.

## ***Does this prove that alternative+ portfolios are the new risk parity strategies?***

No. However, this does infer that alternative portfolios can provide passive risk parity like returns. In theory, they should also provide downside protection as well. That said, more statistical comparisons and analysis should help to determine if alternative+ portfolios will have the effectiveness and popularity of risk-parity strategies.

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## ABOUT US:

Performance Thinking & Technologies, Inc. (PTT) helps funds and asset managers with investment operations. We solve the difficult problems in investment operations, risk, and technology so funds can maintain their focus on the capital markets.

PTT's service model enables the following client benefits:

- Highly Experienced Investment Resources
- Specialty-skills in Analytics, Modeling, & Risk
- Deep Technical Knowledge and Knowledge Transfer Program



Figure 2 – PTT Operational Task Groups

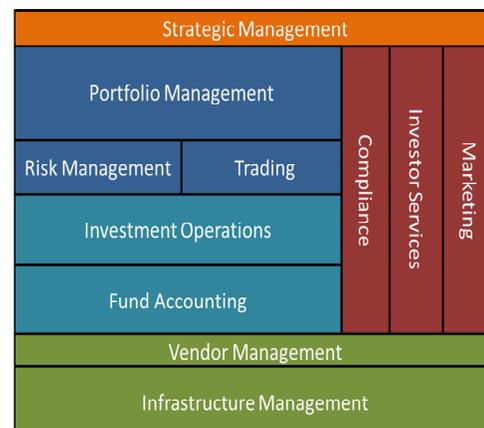


Figure 1 – PTT Investment Operational Domains

PTT's offerings include:

- Simulation, Performance, & Risk Analysis
- CxO For Hire – Assistance in Strategic Fund Management
- System, Process, & Infrastructure Consulting
- Reporting, Dashboards, & Analytics Platforms

PTT's client engagements cross the spectrum of investment operations. Some of our recent engagements include:

- Pioneering work in visual risk dashboards and deep visualizations
- Model and valuation of portfolio risk via use of VaR, r-Dex, and Monte Carlo simulation
- Development of portfolio and hedge optimization models via Optimization Software
- Upgrades to Portfolio Management and Order Management Systems
- Form PF analysis & creation
- Development of a cloud-based data warehouse and operational dashboards

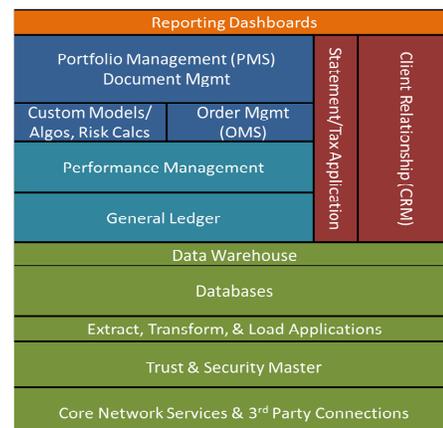


Figure 3 - Investment Systems