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## Too Good to Be True? Risk Management Pitfalls

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### Market Insights from:

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Risk management is an essential element of portfolio management, as investors seek portfolios that meet long-term objectives with the least risk. Broadening the field of potential investments provides diversification and, if done effectively, reduces portfolio volatility.

At the same time, an expanded array of investment options presents unique challenges, as each new asset class and investment strategy under consideration must be analyzed for both return potential and risk attributes. The accuracy of forward-looking return and risk assumptions for all asset classes and strategies will determine the success of the aggregate portfolio. Here are some of the pitfalls of risk mitigation efforts and the challenges of broadening portfolio diversification:

### 1. Historical returns for asset classes and strategies are helpful but not sufficient

While historical returns represent a good starting point in asset allocation, they are not sufficient. Excessive dependence on past performance can amount to data mining, a trap that will fail most of the time. Market evolution and the non-stationarity of market structure and returns are the enemies of data mining.

#### *Example: Risk Parity Strategies*

At their core, Risk Parity strategies seek to construct a diversified portfolio by focusing on risk contributions across different asset classes, using leverage to overweight assets with relatively low volatility but attractive returns per unit of risk while reducing exposure to higher risk assets. For example, if traditionally low risk treasury bonds are priced to provide a greater return per unit of risk than equities, a risk parity approach will implement a leveraged position of treasury bonds with comparable risk to equities to potentially offer a higher return.

To be sure, the risk adjusted performance of treasury bonds is outstanding when the time frame is an extended period of disinflation beginning with a pricing structure of abnormally high real returns for bonds. However, recent years have been the opposite experience for treasury bonds. We had central bank intervention that priced treasury bonds to negative real returns, followed by expansive government spending, accelerating inflation, and consequent restrictive monetary policy. A reliance on past data led to disaster for risk parity portfolios, as market conditions changed, and previously accepted risk-adjusted return assumptions no longer held true.

Risk parity portfolio construction is based on sound principles but is dependent on successful forecasting of risk-adjusted returns. Reliance on data-mined historical returns has been disastrous.

### 2. Economic risk premium versus alpha dependence

In developing forward-looking return expectations, a distinction must be made between returns generated by economic risk premiums versus returns coming from manager alpha. An allocator confident in their ability to identify managers with superior alpha generating skills will be comfortable investing in strategies in which

manager alpha is the dominant source of return. An allocator with less confidence in manager selection may choose asset classes whose returns are largely dependent on economic risk premium.

*Example: Managed futures strategies*

To the extent a managed futures portfolio displays no particular bias over time toward long versus short exposures, the portfolio will capture minimal economic risk premium. Returns will be heavily dependent on manager alpha.

Arguments have been made for the existence of permanent market anomalies and such anomalies have been labeled “alternative risk premium.” The idea that market anomalies represent a form of risk premium is tenuous. Markets change and market behavior is not stationary. An allocation to this type of strategy is dependent on identifying managers with superior alpha generating skill.

### **3. Put option replication is a cost and not a source of return**

Put options provide portfolio protection at a cost. While very few institutional portfolios directly purchase put options, many invest in long-short equity hedge funds which utilize active rebalancing that closely resembles put option replication.

*Example: Long-short equity hedge funds*

The major prime brokers track the collective positioning and behavior of a large number of long-short equity hedge funds. What is observed is average net equity exposure in the neighborhood of 45-50%, with this increasing as equity markets rise and falling as equity markets decline. This pattern of change in net equity closely resembles the pattern one would see with a put option replication overlay. An investor in a basket of long-short equity hedge funds would see a return from the following sources:

- The net equity exposure
- An implied interest rate on the remaining portfolio close to but under the Fed Funds rate. This will be a benefit in a period of high short term interest rates but hurt performance when short rates have been reduced close to zero by central banks as they have in recent years
- The equity alpha generated by the manager’s stock selection
- The put replication overlay would be a cost to the portfolio over most time frames
- Fees and fund expenses are an additional cost

Because of the embedded costs, long-short equity hedge funds are heavily dependent on manager alpha. Thus, the skill of the allocator in identifying managers with strong alpha generating skills will largely determine the success of the allocation.

### **Summary**

Broadening the portfolio opportunity set for risk mitigation offers benefits but comes with unique challenges. The allocator must demonstrate success forecasting risk-adjusted adjusted returns for a greater number of portfolio choices. Challenges include overcoming mistakes emanating from data mining, dealing with shifting market structure, and understanding the relative importance of economic risk premium and alpha generation in individual asset classes and investment strategies.

*Notes/Sources:*

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