Asset Allocation Under Acute Uncertainty – The RIsk Neutral Portfolo

Uncertainty and the Futility of Having A View.

Financial markets are highly uncertain today. As the great workout of 2008 continues to unfurl, the interplay of politics and policy on economics has blunted the traditional methods of fundamental analysis and asset allocation.

While the investor who is able and willing to invest in hedge funds can still make a decent return without being forced into taking inordinate risk, the investor in traditional asset classes is faced with high uncertainty as to the returns prospects of equity and debt investments. In response to this more uncertain landscape, we approach the problem of a long term policy portfolio from a simpler, and arguably simplistic approach seeking a portfolio construction that is more parsimonious and which uses only the information we have and are confident about, and disregarding the information we have not or are less confident about.

The Construction of the Risk Neutral Portfolio.

We consider a world where we can invest in equities, bonds, commodities and absolute return alternative investments. We have excluded less liquid asset classes such as real estate and private equity.

- We will not impose any expectations for the asset class returns, only that they are positive.
- We have chosen to arbitrarily assume a long term mean of 4% p.a. This has no bearing on the actual calculation, it is a convenient and reasonable number. The point of making all ex ante expected returns equal is that we provide no expectations to the optimization problem.

- We have expectations as to correlations based on historical correlations and we amend these according to our understanding of asset class inter-dependencies.
- We have expectations for volatilities based not on historical volatilities but based on the levels of volatilities at which the asset class becomes a concern to us.
- Note that we have used substantially higher correlations between fixed income and all other asset classes as we believe that the sensitivity of fundamentals and asset prices are considerably greater now than ever.

Correlation Table:

Asset Allocation Table:

Asset Allocation Chart:

While the allocation to bonds looks inordinately large it is in fact contributing the same marginal risk to the portfolio as the 3% commodities allocation or the 10% equity allocation. The whole point of this exercise is that each asset class is contributing the same amount of risk to the portfolio. We chose this by design since we had no prior view on the relative performances of the asset classes.

Extensions:

We can extend the methodology to building an equity portfolio, a fixed income portfolio and indeed an alternatives portfolio. By iteratively separating the portfolio to its components and applying the risk neutral methodology, then reconstructing the portfolio, one can arrive at an efficient portfolio which is view agnostic.

Equity Asset Allocation Chart: (This can obviously be performed with more sub-categories as desired.)

Fixed Income Asset Allocation Chart: (This can obviously be performed with more sub-categories as desired.)

Putting it all together:

The Use of the Risk Neutral Portfolio:

1. You should use the Risk Neutral Portfolio if don’t have view or if you do but you don’t have a lot of confidence about it.
2. Undoubtedly, you will have a view. The Risk Neutral Portfolio is a minimum variance portfolio around which your tactical views can be built. Tactical trades can be appended to the Risk Neutral Portfolio to express your tactical view.
3. The current environment favors this approach whereby a stable core portfolio is held to fund tactical trades which tend to be short duration in nature to capture event driven opportunities. Cash is a poor core portfolio as inflation risk has increased with successive rounds of debt monetization

(QE).

4. To scale your level of risk, there is no need to adjust the relative allocations. For a conservative, lower risk portfolio, a positive amount of cash should be held together with the Risk Neutral Portfolio. For a more aggressive, higher risk portfolio, a negative amount of cash should be held together with the Risk Neutral Portfolio (i.e. leverage should be applied.)
5. The Risk Neutral Portfolio is best populated with appropriately chosen Funds. Direct securities are cumbersome to manage and require constant management, monitoring and rebalancing to handle index changes, bond maturities, corporate actions.