Ideas @ Edelweiss Multi Strategy Funds – Equity Factor Models

Stephen Ross developed the arbitrage pricing theory (APT) for common stocks in 1976 as an extension to the CAPM. The APT states that the return on a stock is equal to the risk free rate plus a linear combination of exposures to N-unknown factors. The N-factors could be the market (CAPM), macroeconomic (inflation, GDP growth etc.) fundamental (P/B, Return on Equity etc.) or even technical (Price momentum). The APT has spawned an entire research base and industry of equity factor models that posit to explain excess returns on equities and is the intellectual foundation of exotic beta.

However, the APT misses the basic point that equities are inherently a non-linear asset class. Common stock is a call option on the enterprise value of the firm, Companies demonstrate operating leverage, Growth opportunities can be non-linear in winner-take-all markets, Companies can grow through adjacent markets and through M&A, Stock returns can be boosted with financial leverage. I could go on and on, but the basic premise is that using a linear approximation for a non-linear asset class is the equivalent of using a procrustean bed. It is then no surprise that the out-of-sample risk -adjusted performance of linear equity factor models has been mediocre. The techniques of Graham & Dodd, Buffett & Munger, Klarman and many other value investors is more apt for common stocks even though may seem to be less mathematically elegant or fit to publish in the *Journal of Finance*.

Further more, in an emerging market like India, factor loadings can be notoriously unstable rendering APT style models of little practical use. The APT is useful for identifying style trends and for making an academic case for new influences on stock prices but a blind application to real world money is likely to leave the user disappointed.