Constructing International Equity Portfolio for BRIC Nations using Modified Global CAPM Returns

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Abstract

International portfolio diversification allows a reduction in risk, relative to intra-national diversification, by offsetting individual country risk factors and hence reduces portfolio systematic risk to the 'world' risk factors alone. Paper illustrates the case of international diversification for four emerging markets namely, Brazil, Russia, India, and China using standard mean variance portfolio optimization method. Traditional mean variance optimization method requires calculation of historical returns, variances, and covariance for portfolio components. However, historical returns, variances and covariance are not the best predictor of future returns of the underlying assets, and thus it results into suboptimal portfolio of the underlying assets. To overcome this limitation paper construct a portfolio using a theoretical asset pricing model, namely Global CAPM. The Global CAPM uses U.S. treasury rates for risk free rate ($R_f^{\$}$), and MSCI World Index is used as a proxy for market return. The Global CAPM is further adjusted for country specific political risk factors for all the four countries under study using sovereign yield spread.

Key Word: Global CAPM, International Diversification, Portfolio Optimization, Emerging Markets.

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