The Impact of Downside Risk on Expected Return: Evidence from Emerging Economies

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Abstract

This paper investigates the comparative relationship between the downside risk adjusted CAPM (Estrada, 2002), and traditional CAPM (Lintner, 1965; Mossin, 1966; Sharpe, 1964). The premise of the traditional CAPM is that the expected return is based on the incidence of systematic risk (beta), which has been assumed to be homogenous for both the developed, and the emerging stock markets. However, empirical results are not aligned with this assumption, as the basic risk and return relationship happens to be negative, and insignificant in the case of emerging markets. This may be due to the emerging stock markets’ distinct characteristics (i.e. high volatility, low liquidity, and less availability of historical data). To deal with the said issue, extent literature supports the use of the semi-variance methodology (SV-M) for emerging markets, instead of the mean-variance (M-V) method. Therefore, the study referred to the Fama and Macbeth (1973) methodology that was applied over monthly data ranging from June, 2000 to June, 2018. Results indicate that there is a positive relationship between the risks (downside and traditional beta) and the expected return. Moreover, results also reveal that downside risk has more significance and explanatory power as compared to the traditional beta. Hence, under the influence of the above findings, the study suggests using the semi-variance methodology for the calculation of the expected returns in emerging economies. However, the significance of the residuals, and beta square terms in both methodologies clearly indicate that there is a need to adjust and incorporate more risk factors, as well as an element of non-linearity while arriving at a probable risk and return relationship.

Keywords: Mean Variance, Semi-Mean Variance, Downside Risk, Downside CAPM, Traditional CAPM, Fama-Macbeth Regression

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