COMPARISON OF IMPLIED VOLATILITY INDEX WITH SPECIAL REFERENCE TO INDIA

ABSTRACT

A key challenge for emerging economies is their interdependence with the developed economies. To reduce this interdependence and to progress towards self-reliance, it is necessary to understand the emerging markets’ dependence in terms of macroeconomic integration, financial market spillovers, co-movements and correlations. Understanding the dependence provides valuable inputs to the investors, risk managers and to the policy makers. In this context, this study investigates the interaction effect between selected implied volatility indices and its time-varying conditional correlations among developed and emerging economies. This study employs daily data from March 2009 to October 2015. The study uses implied volatility indices data from developed markets like US, Germany, Switzerland, Euronext, Hong Kong, Japan and India from the emerging markets list. Macroeconomic variables like gold, oil and federal fund rate are used to understand the volatility transmission from the macroeconomic environment to financial markets. The paper employs various econometric models like ARCH, EGARCH, Threshold GARCH, Vector autoregressive model (VAR) model and Markov Switching dynamic regression model for the analysis. The results found an asymmetric risk return relationship between Nifty 50 returns and the Indian implied volatility index (IVIX). The study found evidence of regime switching behavior of the Indian implied volatility index and is characterized by two states. There exists a high degree of synchronicity between IVIX and VIX of developed markets during the bear market situation. Hence, there are very limited opportunities to hedge the risk by diversifying the investments to these markets during high volatility state. The VAR results found unidirectional spillover from oil to IVIX. The financial analysts, risk managers and the investors
should observe external economic environment very closely to protect their portfolios from potential spillovers. The policy of oil price deregulation has to be carefully monitored.