OPTIMAL HEDGE RATIO AND HEDGE EFFECTIVENESS: AN EMPIRICAL ANALYSIS OF THE INDIAN CAPITAL MARKET

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ABSTRACT

This comprehensive research is to determine the optimal hedge ratio and hedge effectiveness and assesses the efficiency of hedging strategies in the Indian capital market, with a focus on comparing time series models for assets like Nifty 50 traded on National Stock Exchange (NSE), Gold traded on the Multi Commodity Exchange (MCX), USD-INR, and EUR-INR. By employing both static (OLS) and dynamic (diagonal VECH) models, the study seeks to identify the most effective minimum variance hedge ratios and to evaluate how these models reduce variance under different market scenarios. The findings present a complex picture: the diagonal VECH model provides superior hedging effectiveness for the EUR and USD due to their sensitivity to international market fluctuations, the OLS model is more effective for domestically influenced assets like Nifty and Gold. This observation challenges the conventional belief that dynamic models are universally superior across all asset types. The results highlight the importance of selecting a hedging model which should consider the unique characteristics of each asset and the conditions of its respective market. This investigation not only advances scholarly discussions on hedging efficacy in developing markets but also offers valuable insights for investors looking to minimize risks amid economic volatility.

Keywords: NSE; Optimal hedge ratio; Hedge effectiveness; Diagonal VECH; Minimum variance