UNIVERSITI TEKNOLOGI MARA

# MODELLING STOCK INDEX AND STOCK INDEX FUTURES INTERDEPENDENCE: A MULTIVARIATE ANALYSIS ON DEVELOPED AND EMERGING MARKETS

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# ABSTRACT

This study tries to investigate the domestic and international markets interdependence between stock index and stock index futures in developed and emerging markets. Data of daily closing price of stock index and settlement price of stock index futures from developed and emerging countries namely the US, the UK, Japan, Brazil, South Africa and Malaysia are selected as variables in this study. The data is collected for period of 1 January 1999 to 31 December 2007 and used to estimate the multivariate VAR-EGARCH Model. The study reports that there are feedback effects on return and volatility relationships between the stock index markets and stock index futures markets in all countries investigated. Results also indicate that there are significant negative asymmetric effects on the volatility of markets in developed countries but positive asymmetric effects on the Malaysian markets' volatility. In addition, the analysis on the volatility behaviour reveals that volatilities of all markets studied are highly persistence. Furthermore, the empirical models estimated show that the international developed and emerging markets have no significant effects to the domestic futures contracts relationships with its underlying assets. The investigation on the correlation of spot markets with its futures contracts discovers that the futures markets are highly correlated with its spot markets. The analysis on the international markets interdependence found that there are significant international first moment and second moment interdependences between stock index and stock index futures in developed and emerging countries selected. Besides that, there is no single country that can be considered as the main information producer among countries studied. Overall, the return and volatility spillovers effects from developed markets to the emerging markets are stronger compared to the market interdependence run from emerging markets to the developed markets. The international correlation analyses find out that moderate correlation among the developed countries and low correlation between the emerging markets. Additionally, the outcomes from the international correlational analysis disclose that countries in the similar region tend to have higher correlation compared to the countries in the different region.

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