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## **LINEAR AND NON-LINEAR MARKET MODEL SPECIFICATIONS FOR DEVELOPED AND EMERGING MARKETS**

### **Abstract:**

The way various linear and non-linear qualifications of the market model will be compared in this paper in order to appraise the success of the linear market model when it only permits of the constant beta risk parameter. A number of time-varying market models using state space model are proffered in order to take into consideration the time-varying systematic risk components of co-kurtosis, co-skewness, and beta. This framework's theoretical underpinnings rely Sharpe-Linter-Mossin (1960's) proposition that these models should maximize the investors' expected utility. This paper analyses weekly data from the stock indices of several emerging and developed markets from 2002 to 2012. The findings suggest that time-varying market model approaches, which surpass linear market model qualifications both in terms of in-sample modelling and out-of-sample forecasting procedure for both emerging and developed stock markets, should be favoured.

### **Keywords:**

CAPM, Higher moments, Quadratic and Cubic market models, State Space model, Systematic risk measures

**JEL Classification:** C19, C58, C49