

# Abstract

This study establishes and tests the following two hypotheses. First, both the world and individual market equity return shocks are subject to their own processes of volatility state switches. Second, in each individual equity market, the correlation with the world market and the  $\beta$  coefficient are different in various combinations of the world and the individual market volatility regimes. Our empirical results are consistent with the following notions. First, the greatest correlation was associated with the individual and world markets in high volatility regimes simultaneously. Second, the maximum  $\beta$  appears in the situation that the individual and world markets were in the high and low variances respectively. Third, the differential  $\beta$  settings from various combinations of volatility states may be one of drivers to the documented abnormal returns.

**Keywords:** Multi- $\beta$  International Capital Asset Pricing Model, Equity Return Volatility, Correlation in International Equity Returns, Abnormal Returns, Markov-switching model