ABSTRACT

This study examines how the linkages among the equity markets of Singapore, Malaysia, Indonesia, Thailand and Philippines change over the period straddling the 1997 Asian financial crisis. The sample period covers from January 1992 to August 2002 and the crisis period is identified as the duration from February 1997 to September 1998.

All the findings obtained suggest a definite change in the patterns of market interdependence, both short-term and long-term, across the periods before, during and after the financial crisis.

The results of the Johansen's multivariate cointegration test indicate that the five ASEAN stock indices share one long-run equilibrium relationship in the pre-crisis period, none in the crisis period and two in the post-crisis period. The crisis period is associated with high volatility, where the directions of the markets are uncertain. Thus, an absence of a long-run linkage among the ASEAN markets is expected. The presence of long-term equilibrium relationship(s) during the non-crisis periods supports the expectation that a geographically or economically linked group of markets would tend to trend together in long-run. When there is any deviation from the long-term equilibrium during the pre-crisis period, the adjustment to clear the inequilibrium is through the Philippine and the Indonesian markets. In the post-crisis period, the adjustment is through all the ASEAN markets, except that of Thailand.

Of the three periods, the degree of pair-wise contemporaneous movements of the market returns is the highest in the crisis period. Relative to the pre-crisis period, there is an increase in the contemporaneous movements among the four markets of Singapore, Indonesia, Thailand and the Philippines during the post-crisis period. In contrast, the co-movements of Malaysia and each of the other four ASEAN markets have weakened considerably. This could be due to the implementation of capital controls by the Malaysian government to prevail over the effects of the financial crisis by insulating the Malaysian economy.

The results of the Granger causality test reveal that there is no clear-cut dominance of any one market during the crisis period. The Malaysian market seems to assume a dominant role during the pre-crisis period, but loses it after the financial crisis. The Singapore and the Thai markets appear to have taken over the leading role. The number of Granger causal relationships decrease from the pre-crisis period to the crisis period, and an almost three-fold increase from the crisis period to the post-crisis period. This shows an increase in market interdependence after the financial crisis.

The variance decomposition and impulse response analyses also reaffirm the above findings. Among the three periods, the highest percentages of forecast error variance are found in the crisis period. In this period, there is also a corresponding increase in the magnitude of responses of all the markets to shocks. This reflects that there is greater sensitivity of each market to movements in other markets during the crisis period.