

Asymmetric Price Transmission within the Portuguese Stock Market

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ABSTRACT

The financial market is characterised by movements in the stock prices that typically depend on a number of factors, both exogenous and endogenous. These movements may be upwards or downwards in response to changes in the predictors. However, the magnitude of positive and negative responses may differ for similar positive and negative variations in the predictors. In this case, the estimation of traditional cointegration models may not capture the full gamut of micro effects in the short run. In addition, there may be problems in finding cointegrating vectors when the variables incorporate such type of behaviour. The usual estimators may be inefficient and the estimated parameters will become imprecise.

This paper uses threshold autoregressive (TAR) and momentum threshold autoregressive (M-TAR) models to address the problem of asymmetry within the Portuguese stock market. The TAR and M-TAR models were initially developed by Enders and Granger (1998). These asymmetric error correction models extend the original cointegration models developed by Engle-Granger (1987) and Johansen (1996) to deal with this problem. It is well known that tests for unit roots and cointegration all have low power in the presence of asymmetric adjustment. In part, this can be corrected by using the Enders and Siklos M-TAR modification of the EG (2001) testing procedure.

We apply this methodology to the Portuguese stock market covering a period where positive and negative oscillations occur with certain frequency. We found some evidence that when we do not account for asymmetry our results appear to be somewhat imprecise when compared with the results of the models that account for it.