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EVOLUTION OF CARBON ALLOWANCES PRICES AND ITS RELATIONSHIP WITH ENERGY COMMODITIES PRICES

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Abstract

Several research works focused on the evolution of the European Union Allowances (EUAs), traded on the EU ETS, and the Certified Emissions Reductions (CERs), from a time series scheme. However, the question whether basic factors affect the EUAs and CERs prices remained partially unresolved; previous works showed that the price evolution is better explained when a model based on other factors is used than a purely autoregressive model, but the forecasting is improved by the inclusion of time series characteristics. In this paper, combining a multivariate state-space model and T^2 control charts, the relationship between EUAs and CERs prices series and the effects of two types of exogenous variables was analysed: the energy commodities prices (gas, coal and brent) and monetary factor (euro-dollar exchange rate and euribor). Based on Spanish daily data from February 2009 to December 2010, our findings highlight that the own dynamics, the energy commodities prices and the monetary factors can adequately explain CERs and EUAs price dynamics.

Key words: carbon dioxide emissions, certified emission reductions, emission trading scheme, energy commodities prices, European Union allowances

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