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ENVIRONMENTAL PROFILE OF SELECTED EUROPEAN COUNTRIES AND KEY BANKING INDICATORS - A CAUSALITY APPROACH

Abstract:

The study investigates the presence of unilateral or bilateral causality relationship between country-level environmental indicators (as a component of the ESG) and main banking system indicators represented by profitability, solvency, liquidity, efficiency, credit quality and savings ratio, as well as bank concentration. Five indicators belonging to the environmental dimension of the ESG are considered, related to food security, carbon emissions and pollution, and respectively energy sources and energy security. In line with the warnings issued by European authorities regarding the potential of environmental risks to be exacerbated by the physical adverse effects of climate change, we conducted the statistical analysis with an exclusive focus on European Union countries that exhibit a temperate climate profile. Granger causality test is employed in a country-by-country approach to assess the relationship between banking system and environmental indicators, in terms of a cause - effect framework. Findings outline a significant relationship in terms of causality between country-level environmental indicators and banking system indicators. Interestingly, two out of the five environmental indicators (agriculture, forestry, and fishing value added, and respectively CO₂ emissions) are always included in at least one causal relationship with banking system indicators, for every country in the sample. The influence of environmental indicators on banking activity (unidirectional) is most pronounced and precedes banking changes especially in Spain and Portugal, with Italy positioning at the bottom of the ranking. Another result points that banking indicators in most countries considered are particularly sensitive to previous changes in the carbon emissions level, in the production of electricity and energy consumption from polluting sources such as coal or fossil fuels. In terms of bilateral causality occurrence, Greece, Portugal and Spain witness most of them. The variables most often included in the causal interplay are related on one hand to CO₂ emissions and agriculture, forestry, and fishing value added, and on the other hand to bank credit to bank deposits (a proxy for bank liquidity) and bank cost to income ratio (a proxy of the operational efficiency).

Keywords:

environment; CO₂ emissions; renewable energy; fossil fuel energy, electricity production from coal; agriculture, forestry, and fishing; banking system; Granger causality

JEL Classification: G21, Q59