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INVESTIGATING THE INTERRELATION BETWEEN SOVEREIGN CDS AND FINANCIAL SERIES USING WAVELET COHERENCE ANALYSIS – CASE OF TURKEY

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ABSTRACT

Purpose- Financial agents pay a great attention to the relationship between credit default swaps (CDS) and other financial assets. Being considered as a financial asset and then as a possible component of a portfolio, CDS's relationship with other financial assets is crucial in order to compose an efficient portfolio which should contain the least correlated assets. Our study, provide a different approach than the bulk of existing literature which consider the relation between returns/levels or between volatilities and their impact on the volatility (leverage effects) as well as volatilities may affect returns/levels/rates in BIST100 by focusing on several economic and financial determinants for the investment horizon of investors and policymakers for their decision-making processes.
Methodology- We investigate the relationship between sovereign CDS spread (level and volatility) and (return/level and volatility) of financial series (bond yield, currency exchange, stock index) by applying wavelet coherence analysis to capture the interrelation between economic and financial determinants during different investment horizons due to the account of the time-frequency domain.
Findings- According to empirical results, firstly, the direction of causality between series depends on the frequency domain. A series may cause the other series at medium term and may be influenced by this second series at short term. Secondly, the relationship between the CDS spread (volatility) and retained financial series changes through time while depending the type of financial asset. Lastly, the interconnectedness between returns/rates/levels is different from the relationship between volatilities and between returns/rates/levels and volatilities.
Conclusion- Our findings show that the CDS 2-year spread and interest rates have a positive relationship most of the time in the medium term, mostly in the 2017-2019 period, while CDS spreads and the USDTRY have similar impacts in the medium and early long term. Despite having previously observed such a positive relationship between CDS and other economic determinants, CDS spreads have a negative impact on stock exchange returns in the medium term, spanning nearly a decade from 2008 to 2016.

Keywords: Time series models, wavelet coherence analysis, sovereign CDS, foreign exchange, bond interest rate, stock market returns
JEL Codes: C22, F31, G12

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