

## Modelling the Dynamics of Corporate Bonds Spreads with Asymmetric GARCH Models

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**Abstract :** This paper can be considered as a new perspective to analyse credit spreads. A comprehensive empirical analysis of conditional variance of credit spreads indices is performed using various GARCH models. Based on a comparison between traditional and asymmetric GARCH models with alternative functional forms of the conditional density, we intend to identify what macroeconomic and financial factors have driven daily changes in the US Dollar credit spreads in the period from January 2011 through January 2013. The results provide a strong interdependence between credit spreads and the explanatory factors related to the conditions of interest rates, the state of the stock market, the bond market liquidity and the exchange risk. The empirical findings support the use of asymmetric GARCH models. The AGARCH and GJR models outperform the traditional GARCH in credit spreads modelling. We show, also, that the leptokurtic Student-t assumption is better than the Gaussian distribution and improves the quality of the estimates, whatever the rating or maturity.

**Keywords :** corporate bonds, default risk, credit spreads, asymmetric garch models, student-t distribution

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