DIPARTIMENTO DI METODI E MODELLI PER L'ECONOMIA IL TERRITORIO E LA FINANZA MEMOTEF



## GAMMA-HEDGING IN SYNTHETIC CDO (SCDO) STRUCTURES

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## **ABSTRACT**

This paper presents a theoretical and numerical framework where the Gamma-Hedging of a Multi-Name Synthetic Collateralized Debt Obligation (SCDO) is defined. Gamma is numerically calculated in order to compute the Profits and Losses shape of each tranche. A further analysis which has been developed is the understanding and quantification of the impact of a joint shift of both Credit Default Swap (CDS) spread and default correlation under different recovery rates. The model used for the purpose of this work is the One-Factor-Copula and the main assumption considered is a finite and homogeneous portfolio.

Classification JEL

## Keywords

Synthetic Collateralized Debt Obligation, Gamma-Hedging, Credit Default Swaps, One-Factor-Copula, Correlation.

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