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On the Mechanism of CDOs behind the Current Financial Crisis and Mathematical Modeling with Levy Distributions

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ABSTRACT
This paper aims to reveal the mechanism of Collateralized Debt Obligations (CDOs) and how CDOs extend the current global financial crisis. We first introduce the concept of CDOs and give a brief account of the development of CDOs. We then explicate the mechanism of CDOs within a concrete example with mortgage deals and we outline the evolution of the current financial crisis. Based on our overview of pricing CDOs in various existing random models, we propose an idea of modeling the random phenomenon with the feature of heavy tail dependence for possible implements towards a new random modeling for CDOs.

KEYWORDS
Collateralized Debt Obligations (CDOs), Cashflow CDO, Synthetic CDO, Mechanism, Financial Crisis, Pricing Models, Levy Stable Distributions

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