Abstract

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Levy Processes in Credit Risk – An overview

In this presentation we survey the use of Levy Processes in Credit Risk. We deal with firm value models driven by jump processes. First hitting times are linked with default events and we illustrate CDS pricing and fitting for a series of popular examples. We also show how Levy process can be used in multivariate credit derivatives modelling of CDOs. We elaborate on alternatives to the Gaussian copula and formulate Levy driven copulas and show the impact of this in a base correlation framework. We argue that the Levy base correlation is much flatter than its Gaussian brother and discuss the advantages of this. Finally, we show the impact on gap risk on using Levy processes for exotic structured credit products like CPPIs and CPDOs. We discuss the risk present in these products and show why these products were doomed to go wrong.