Meta-model for a large credit portofolio

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Abstract

We expose a Meta-model for a large sum of indicator functions which depend on a common random factor. It is built from the chaos expansion with respect to this common random factor. We then propose a Gaussian approximation for the chaos coefficient which relies on a Central Limit Theorem established in this work. From a practical view point the Large sum of indicators can be seen as a Loss function in Cedrit Risk for which we propose a numerically efficient simulation using the Meta-model.

Keywords: Metamodel, Chaos Decomposition, CLT

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