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Delta, gamma and bucket hedging of interest rate derivatives

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Abstract

The paper describes a framework for delta and gamma hedging an interest rate portfolio using a multifactor form of the Heath et al. (1992) model. A formal description of bucket hedging is given along with a discussion of some of the issues surrounding the choice of bucket lengths. Given that a small number of factors can describe the evolution of the term structure, the bucket deltas are defined in terms of these factors. The hedging of corporate bonds is also addressed.

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