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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.

Keywords:

delta hedging | gamma hedging | bucket hedging | interest rate derivatives

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