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On the no-arbitrage condition in option implied trees

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Abstract

The aim of this paper is to discuss the no-arbitrage condition in option implied trees based on forward induction and to propose a no-arbitrage test that rules out the negative probabilities problem and hence enhances the pricing performance. The no-arbitrage condition takes into account two main features: the position of the node in the tree and the relation between the dividend yield and the risk-free rate. The proposed methodology is tested in and out of sample with Italian index options data and findings support a good pricing performance.