

Non Parametric Estimation of Interest Rates Derivatives in Europe

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Previous finance research has shown the convenience of nonparametric estimation of interest rate dynamics. The aim of this study is to develop a nonparametric valuation of bonds and to compare the results with the actual prices in the market. We focus on bonds belonging to European countries – we study the Spanish and Italian cases – that are part of the monetary union. A particular feature of these countries, that we incorporate in our nonparametric calculations, is the convergence of interest rates. With the nonparametric estimation of the underlying interest rates processes we proceed to estimate the market price of risk and the prices of bonds and we compare our estimations to actual prices of bonds. The errors are smaller than those reported on the parametric literature. In our sample bond prices do not seem to be significantly affected by risk premiums.

Keywords: Nonparametric, bond prices, market price of risk.

JEL Classifications: C14, G12

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