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**Robust analysis of default intensity.** (English) Zbl 1254.91635  
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Summary: The problem of robust estimation and multivariate outlier detection of the term structure of default intensity is considered. Both the multivariate Vasicek and CIR models, embedding the Kalman filter algorithm in a forward search context, are used to estimate default intensity. The focus is not on the estimation of credit models including jumps, but on the automatic detection of masked multiple outliers in multivariate time series. Both simulated and real market credit spread time series are analyzed. In order to make inference on outliers, confidence envelopes which are virtually independent of the estimated parameters are introduced. The output is not only a unique default intensity term structure curve, as often used in the financial literature, but a robust confidence interval within which default intensity is likely to stay.

**MSC:**

**91B84** Economic time series analysis

**62P05** Applications of statistics to actuarial sciences and financial mathematics

**62M10** Time series, auto-correlation, regression, etc. in statistics (GARCH)

Cited in 4 Documents

**Keywords:**

forward search; outlier; Kalman filter; term structure of default intensity

**Software:**

SsfPack

**Full Text:** [DOI](#)

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