

Asset Correlation Implied by Historical Default Data

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December 9, 2003

Abstract

This paper discusses how to estimate default and asset correlation given historical default data. A statistical best fit for asset correlation is done for A, BBB, BB, B, CCC rating classes. It starts with a one-factor model in which the correlation with the systematic risk factor equals the asset correlation between two firms. In the empirical part, asset correlations are estimated by Maximum Likelihood Estimation, from time series with S&P data for A, BBB, BB, B, CCC classes, which are considered as homogenous portfolios. Default correlations are calculated afterwards. In the theoretical part of this paper, the small sample performance of Maximum Likelihood Estimation is analyzed by Monte Carlo simulation and the Bootstrap method.

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