Bankruptcy Prediction Based on First-Passage Models with Markovian Credit Migration

Cheng-Der Fuh
National Central University and Academia Sinica

Abstract

In this paper, we develop a bankruptcy prediction framework that could be used in the study of rating systems. A hybrid model with credit migration is proposed, which could not only capture the differences in bankruptcy probabilities of firms with different ratings, but also of firms within the same rating. Moreover, we derive explicitly computable approximations for the expected bankruptcy time and the tail probabilities of the bankruptcy time, and further applied them to the evaluation of rating systems' performances. Numerical results are also presented.