A COMPREHENSIVE MODEL FOR MANAGING CREDIT RISK ON HOME MORTGAGE PORTFOLIOS

Abstract

Managing credit risk in financial institutions requires the ability to forecast aggregate losses on existing loans, predict the length of time that loans will be on the books before prepayment or default, analyze the expected performance of particular segments in the existing portfolio, and project payment patterns of new loans. Described in this paper are tools created for those functions in a large California financial institution. A forecasting model with Markovian structure and nonstationary transition probabilities is used to estimate the life of a mortgage. These models are integrated into a system that allows analysts and managers to depict the expected performance of individual loans and portfolio segments under different economic scenarios. With this information, analysts and managers can establish appropriate loss reserves, suggest pricing differentials to compensate for risk, and make strategic lending decisions.

Full citation: