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A MODEL FOR PREDICTING THE PERFORMANCE OF A BANK'S MORTGAGE LOAN PORTFOLIO

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ABSTRACT

The health index of a mortgage loan portfolio may be viewed as a measure of the performance associated with that portfolio. Models to measure and predict the behavior of the health index of a mortgage portfolio over time are useful for the management of a bank in its decision making. In a previous study by the authors, a Markov chain model was used to calculate the transition probabilities among the states of a mortgage loan and to define and measure a health index of the loan portfolio. For forecast purposes, it is useful to be able to predict the behavior of a mortgage loan portfolio for a given bank from national and/or regional macroeconomics factors. In this paper, we extend our previous study by developing an empirical model, based on mortgage data from a major bank in China and on national and regional economics factors in China, for predicting the health index of a mortgage portfolio. This and similar models may be used by the bank management for assessing the health of a loan and for decision making.