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Bank Failure prediction in Nigeria: A Survival Analysis Approach

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Abstract

The collapse and failure of a bank could have devastating consequences to the entire banking system and widespread repercussion effect on other banks and the economy as a whole. The main objective of this paper is to determine how bank failure in Nigeria can be predicted far ahead of its occurrence using a survival analysis approach. The paper attempts to identify the financial distress symptoms that can lead to a bank failure by employing the Cox Proportional Hazards Model using financial covariates from financial statements of banks. Panel data covering a period from 2003 to 2011 were analysed. The study shows that survival of banks in Nigeria is mostly influenced by 12 predictor variables that bank regulators could watch out for, to forestall bank distress. The study shows that banks that are high on non-performing loan to total loan plus lease are 43 times more likely to fail than banks that are not. Also, banks with high operating expense to average total assets are 9 times more likely to fail than banks that are not. Another interesting finding is that average survival time for commercial banks in Nigeria is 45 years; while that of merchant banks is 20 years implying that survival time of banks varies significantly according to their specialty in Nigeria. The study therefore recommends that the reform activities of the government should be well thought out and strategies for implementation should be put in place to enhance positive effect on the banking sector in Nigeria.

Key words: Bank failure prediction, Survival Analysis, Nigeria

Introduction

After the global economy recession of 2008/2009, where many international corporation and financial institutions needed a bail out by government to remain in business, many of the banks operating in Nigeria were found to be distressed. Many of the banks have high ratio of portfolio at risk and are gradually unable to meet payment obligations to both depositors and creditors as they fall due, hence, bank distress was inevitable. Bank distress is not a new phenomenon in Nigeria. The first bank distress was recorded in 1930 when the first indigenous bank, Commercial and Industrial Bank established in 1929 went into liquidation with total deposit liabilities of 23,000 British pound sterling. Bad management, lack of trained manpower, inadequate working capital, poor record keeping and accounting system are among the factors that led to its liquidation. More than Eighty years after, those factors still remain major issues facing the banking industry in Nigeria today. A study carried out by the World bank