BANKING CRIME ANALYSIS AND THE EFFECTIVENESS OF BANKING SUPERVISION: COMBINING GAME THEORY AND THE ANALYTICAL NETWORK PROCESS APPROACH

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ABSTRACT

A failed bank can spark a deep financial crisis throughout the whole country when ironically it may simply have been triggered by a banking crime perpetrated by an insider, i.e. the banker. Although banking crimes may pose a significant threat to financial sector stability, the potential risk of internal fraud has, hitherto, not been taken into account in banking supervision processes. This paper analyzes the effectiveness of banking supervision to uncover potential risks of banking crimes by combining game theory and the analytical network process approach. In this paper, the author conducts two games with three players; the banker, the bank supervisor and the police. The banker has two strategies: to offend or not to offend. The bank supervisor has two choices: to supervise or not to supervise. The police can choose to enforce or not to enforce. In the first part, the effectiveness of bank supervision is analyzed theoretically using game theory. The effectiveness of banking supervision will depend on the behavior of each player as reflected in their decisions. Further analysis will confirm the previous result using an analytical network process. At this stage, the analytical network process is used to calculate the probability of each strategy being chosen by considering all criteria or sub criteria. Any decision made by one player will influence the other players in choosing their alternative strategies and vice versa.

Keywords: Analytical Network Process, banking crimes, game theory.