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## **Prescribing a Bank Assets-Liabilities Risk Management Model:**

**The case of Bank of Africa Kenya Limited**



## **Abstract**

The tasks of efficiently managing a bank's balance sheet and simultaneously maximizing returns and minimizing risk while being subjected to regulatory and managerial constraints are complicated. Chance management through trial and error approaches only yields sub-optimal results. This dissertation discusses contemporary issues in asset-liability management in the banking industry with a focus on the management of the various risk categories. The asset-liability management strategies in the Kenyan context are examined on the basis of available empirical and theoretical literature with specificity to banks utilizing a case study on a Kenyan Bank subsidiary of a Pan African bank. After reviewing the current framework of Asset-Liability management in the Bank, a goal programming model that minimizes deviations from a set of 22 goals, with the first priority given to the solvency goal, followed by the liquidity goal and then the rest of the goals is constructed. Taking the current balance sheet as a starting point, this paper constructs a multi-objective approach to move from the current balance sheet to the 'optimal' balance sheet while at the same time putting into consideration the constraints facing the bank. The study found that a multi-period approach is preferable in this situation since it incorporates uncertainty into the asset-liability management challenge. This model is versatile and helps the bank optimally structure its assets and liabilities while minimizing risks as opposed to following a historically budgeting process. A Goal programming approach is thus preferred in finding the optimal composition of Bank of Africa Kenya Limited's assets and liabilities.