

Credit Rating System in the Banking Sector

MSc. In INFORMATION SYSTEMS

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Abstract: (Summary of Work Undertaken)

The project involved the development of a Credit Rating System to be used in the banking sector. It went through the following phases: -

A research was conducted on how banks go about rating prospective borrowers. A sample of five banks was visited, two of which are multinational and the other three are local banks. Due to time and resource constraints, the research of how the credit rating process is done was restricted to Nairobi only. From the research, it was found out that, all the banks visited have a manual way of rating their customers. However, the manual method can be subdivided into two categories, which are: -

- i) Structured method that uses a manual score sheet.
- ii) Unstructured method which is based on a panel of approximately four credit staff having a session to brainstorm on a prospective customer's application for a facility. By the end of the session, a decision is reached on whether the customer gets the facility or not.

A research was also conducted over the Internet to find out how the problem of credit rating has been addressed by other financial institutions internationally.

A lot of research and reading was done on the general problem of credit rating and the usage of Expert systems in the financial sector. It was found out that despite the maturity of Expert systems around the world and the usage of the same in other disciplines, e.g. *MYCIN* (Rule based, goal driven and explanations in the diagnosis of certain infections) or *ONCOGIN* (Interviewer + reasoner, consultation and data processing for routine treatment of cancer patients) in the medical fraternity, the banking sector is yet to explore this area. This was thus a motivating drive to have the expert systems penetrate the banking sector in this country, which has traditionally relied on conventional transaction based systems.

A project scope was hence defined to automate the structured method concentrating on the corporate sector. This was done using an Expert system shell namely Kappa.

The system was tested in three phases, which addressed the functionality of the system, a simulation of a real life situation in-order to compare its results with the manual results and a test review with the Experts.

- The functionality testing addressed the system specifications and the actual operations of the system.
- The simulation of a real life situation was done using known cases. Three samples from each lending category i.e. a bad lending, a good lending and a new application, were used from three of the visited banks. The results got from these tests were found to be in line with the actual principles of lending.
- In reviewing the Credit Rating System with the experts, it was found quite efficient in the task of credit rating as it reduced the time taken in manual credit rating of a prospective customer by approximately 70%. The performance of the credit.

Finally out of this venture a Credit Rating System Ver. 1.0 has been released which should be enhanced in future to be more efficient and versatile so as to accommodate various banks' ways of undertaking credit rating exercise.