

Determining the Technology Revolution in Rural Areas of Sri Lanka through Government Banking System

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ABSTRACT

This research study was carried out to find the government contribution of rural development and impact of the technology revolution through banking system. Government organizations try to provide good service to rural community after a miserable war. Among those organizations, state owned commercial bank tries to fulfil financial needs of the rural community. When they provide this they use manual systems as their operational technology. Therefore there are many drawbacks arising from this manual system. The existing system has more barriers to improve banking system at satisfactory level. Therefore this research attempts to identify weaknesses of existing system and find the necessary requirements to provide better service to rural people. Thereby the government can be able to provide a better service to the rural community through an automated banking system.

KEY WORDS: automated system, banking system, rural community

INTRODUCTION

Based on the living area of Sri Lankan community it can mainly categorize into two categories. That is rural community which is 80% and urban community (14%). [J.M.Ameer, (2002)] Although high portion of Sri Lankan community is living in rural areas, this rural people are suffering from several difficulties due to miserable war. Lack of infrastructure facilities, poor education system, and dispossessed health care system are some of such basic difficulties.

Lack of financial facility is one of major root causes among the above difficulties.

Most of the Commercial Banks, Development banks and Regional Development Banks conduct their operations in highly civilized areas of

Sri Lanka but less effort has been taken on distributing operations in rural areas such as North-Eastern provinces.

The bad effects which result from the entire above are the inefficient supply of financial services to the broader and poorer sections of society.

The war which operated during last three decades is over. Rural environment is also suitable to join with modern technology. Therefore, the time is better to reconstruct rural community life style. To do that the government has to play a major role. The government and Non Government Organizations are conducting so many projects and research laboratories to reconstruct their life.

Among those projects, government conducts their financial activities through state owned commercial banks which have an objective to provide quality service to their customers.

There are three parties mainly engaged in the business process of such a state owned commercial bank. The internal parties to do a supportive work for them and they are obligate to do so. This can be shown in figure 1.

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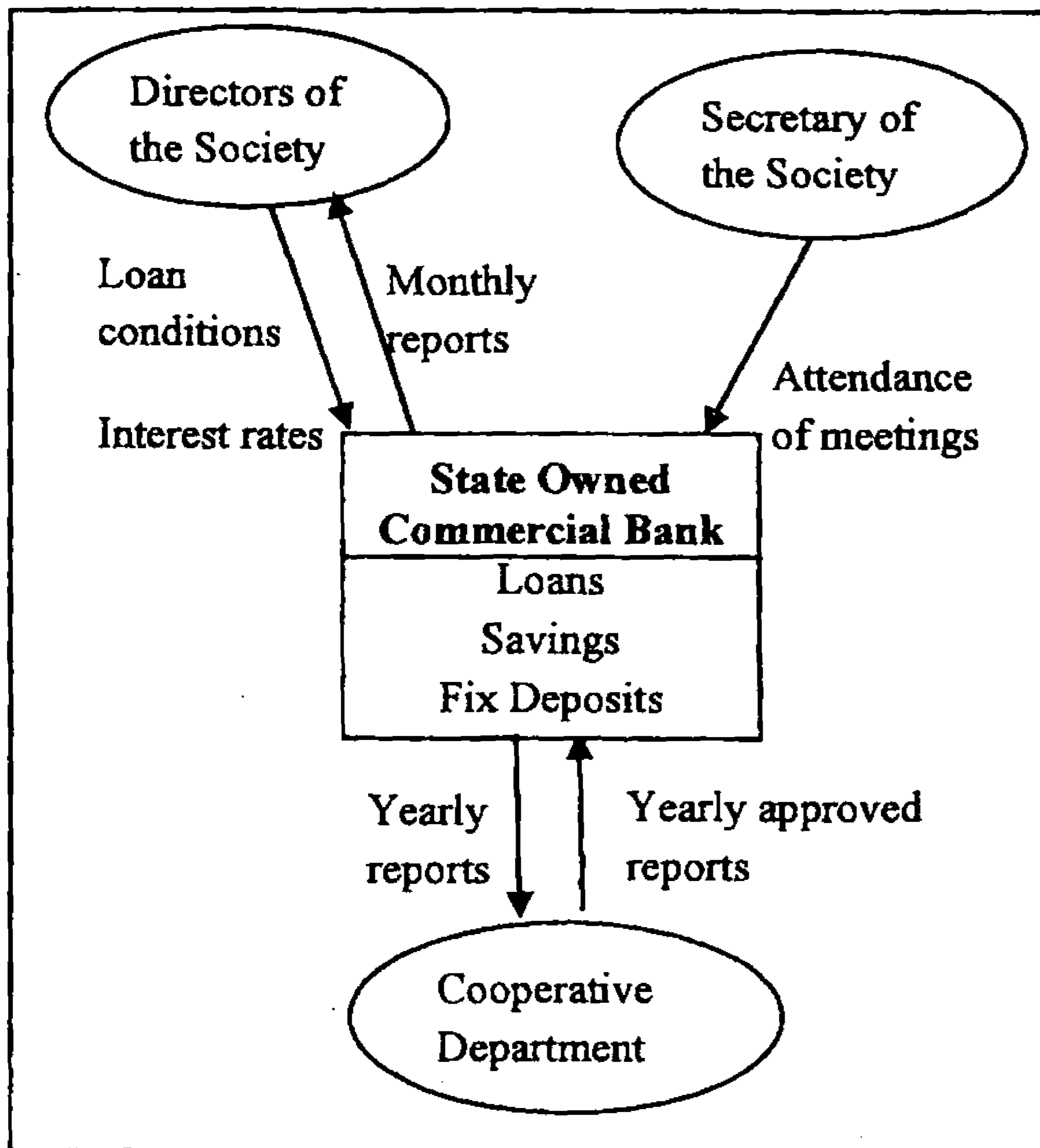


Figure 1: Overview of State Commercial bank's Business Process

High portion of the rural community does not interact with financial activities with the result of many reasons. Among those, fear to interact with financial activities, lack of financial resources and inefficiency of financial services are the main reasons.

In this research, it tries to give better solution for above barriers through an automated system. The benefits that could be obtained from the findings of this research is that, the organizations may be able to have an idea, about the elements that should be in the system and to identify satisfied good service to fulfill customer requirements.

RESEARCH METHODOLOGY

Primary and secondary data are utilized to continue this research. The primary sources of data were gathered through interviews and observations that were carried out in a selected state owned commercial bank. Structured interviews with the management were held to identify

the most important service sections of the bank. Meanwhile an activity sampling was held to collect primary data to identify difficulties of the employees when they provide services. Observations were done at fixed intervals from randomly.

The secondary data include company records such as daily cash book, ledger records and reports. Secondary data was used in the first step of the research that is analyzing the process with the aim of identifying customer growth and future opportunities.

Based on the use of the research design and method, the analysis of the data was performed based on the descriptive methods. In this research, Data Flow Diagram (DFD), Business Activity Model, Level I DFD, Level II DFD and Level III DFD are used to analyze the existing banking system in rural area. These tools were suitable to cover up the main objective of the research that is identify weakness of existing system and find the necessary requirements to provide better service to the rural people.

SYSTEM ANALYSIS

To reduce poverty and provide financial facilities for rural community, bank support to several activities. It can be mainly categorized in to five parts and each category has several transactions. Such categories are General savings, Fix deposits, Loan, Pawning, Insurance and Welfare. However this research was mainly considered only three parts. They are;

General Savings

- Opening an account
- Deposits & Withdrawals
- Interest calculating

Fix Deposits

- Accepting a new fix deposit
- Withdrawing before it is matured
- Withdrawing after it is matured
- Reminding with maturity notices

Loans

- Accepting Loans
 - ✓ Keeping his/her deposits as a guarantee
 - ✓ Keeping his/her property as a guarantee
 - ✓ Membership loans
- Offer a loan to the member
- Collecting money from monthly installments
- Calculating interest for the loans
- Legal actions for lapses

The steps of saving and fixed deposits procedure are the can be shown in Figure 2.

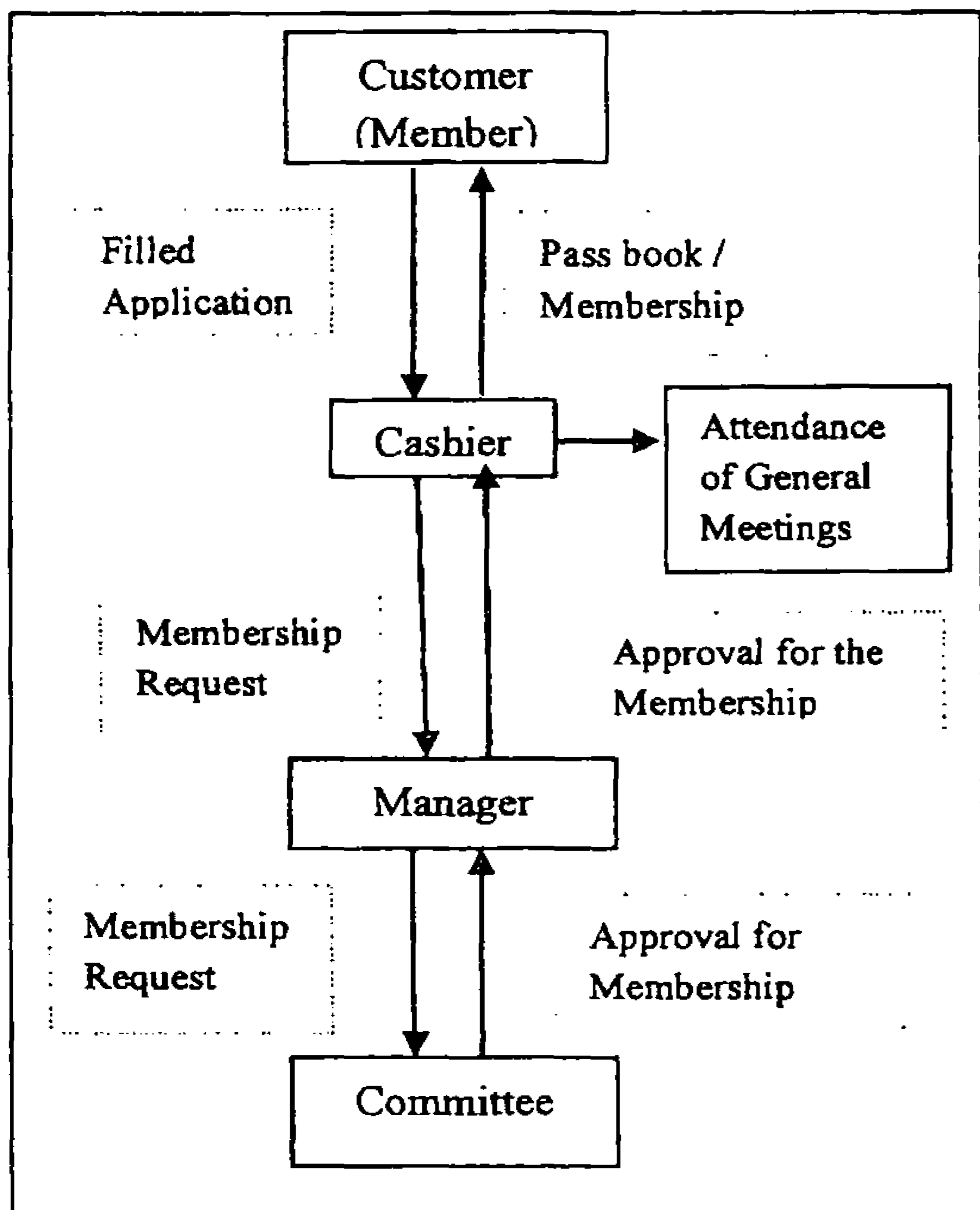


Figure 2: Procedure of saving and fix deposits

To get a loan, customer has to process a several steps. Those steps were shown in figure 3.

After getting a loan, customer may be neglecting the payments. In that case bank follows some steps and those steps were described in Figure 4.

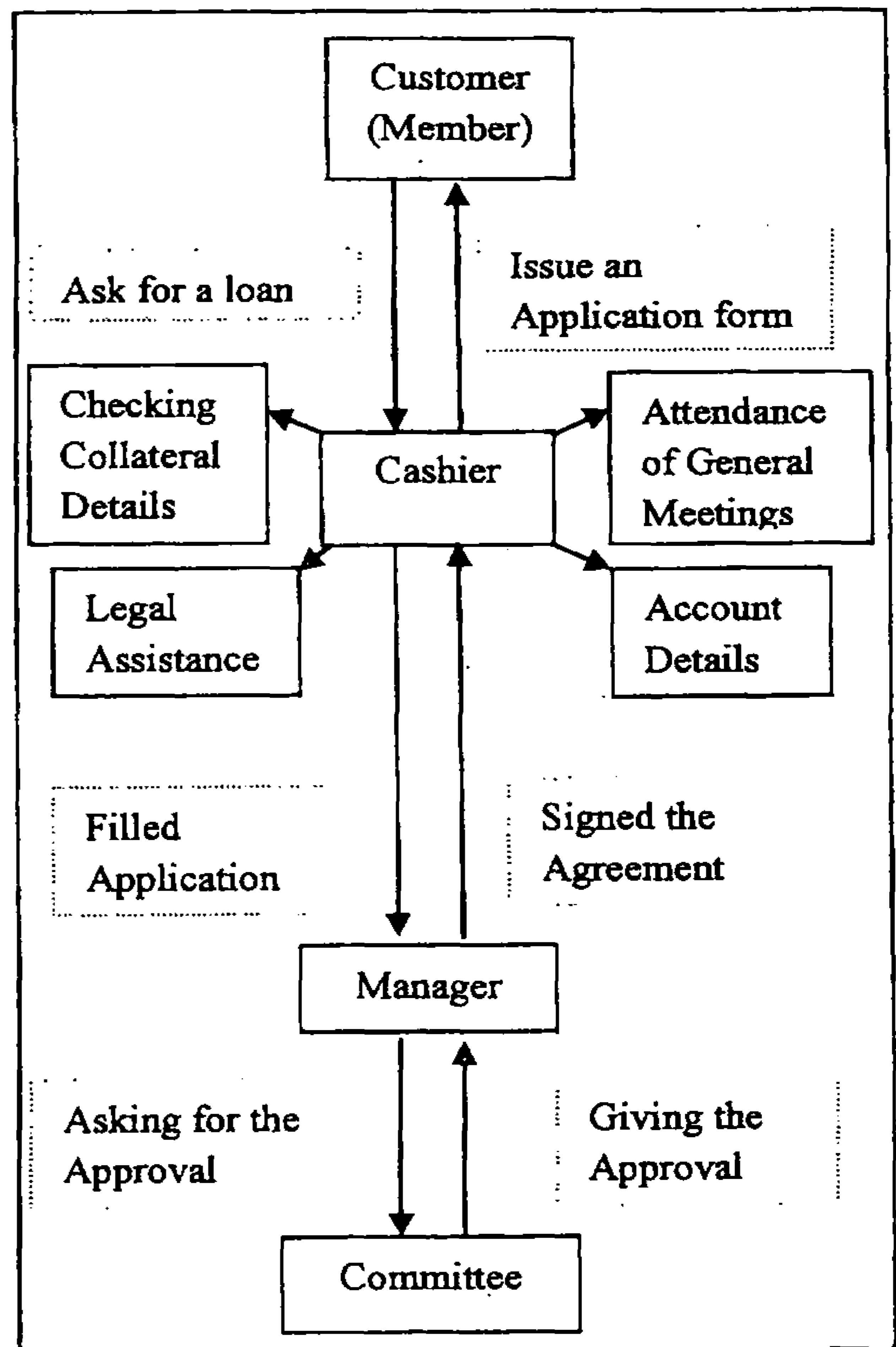


Figure 3: Loan procedure

The bank provides financial services under a manual environment. Still they have not used any modern technology for their services.

With the growth of customers, bank has to face several problems due to traditional technology.

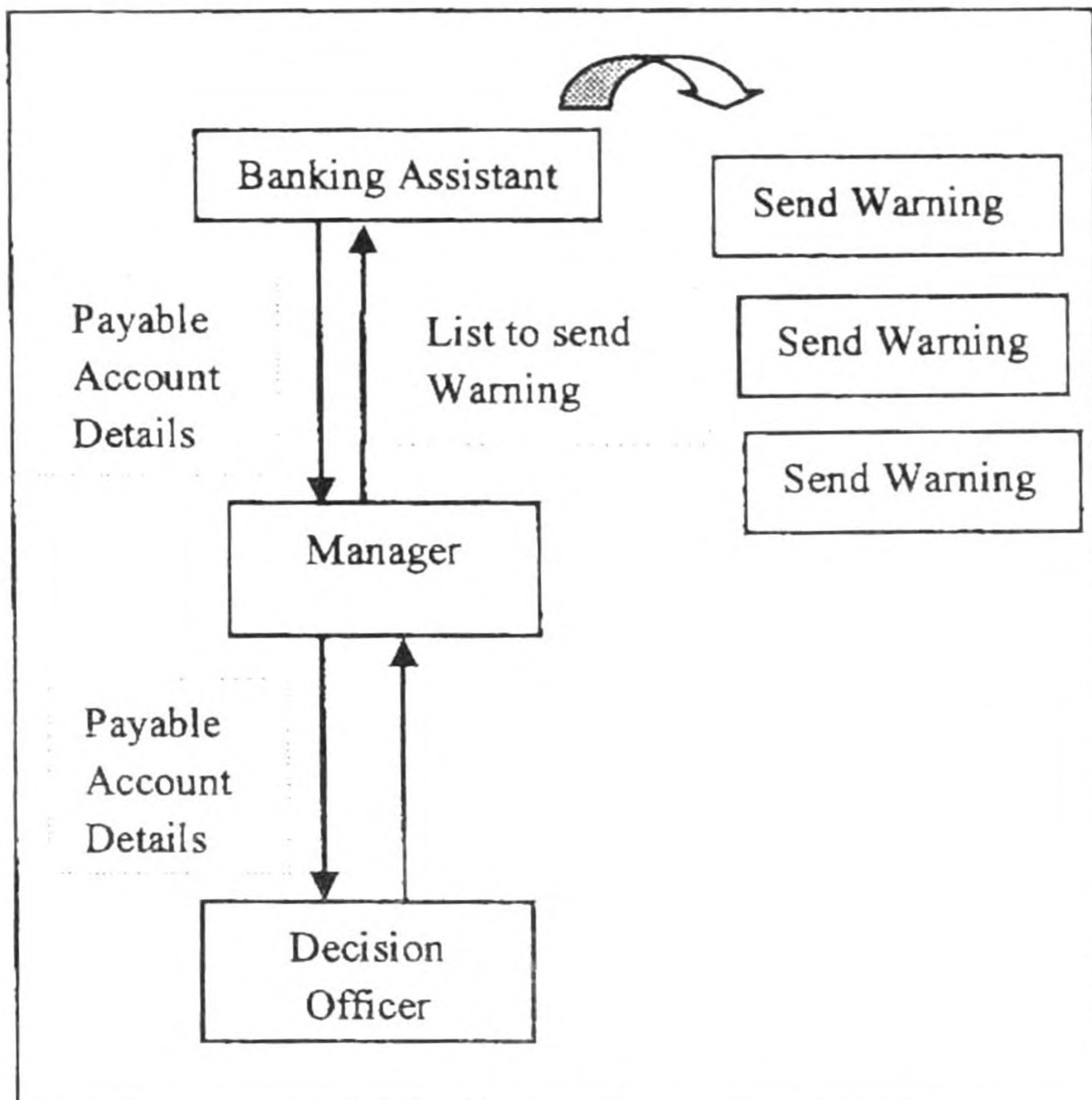


Figure 4: Procedure for neglected loans

Through this research, some issues in existing system can be identified.

That should be addressed in a development project in order to gain more and to survive in the global competition while providing a better service to the public as well. Those are,

- Recording system consist with books
- Heavy work load
- Low customer satisfaction
- Less security and privacy to customers' information
- Less opportunity to grow
- Low level of standardization
- Decision supporting tools

SYSTEM DESIGN

Through the investigation of existing procedure of banking system lot of drawbacks and weaknesses can be identified. To overcome those barriers and fulfill customer requirement as it is, system should be improved. According to the new technology and customer requirements system requirements should be redefined. In this research, lot of requirements can be identified. Requirements can be categorizei

to two parts. That is functional and non-functional.

Functional Requirements

These are the requirements, system should be fulfilled. This is the first part of the requirement catalogue. Value of the system can be enhanced using those requirements. Those requirements can be described under Annex 1.

Non-Functional Requirements

Non functional requirements can be categorized as second part of requirements, and that is not affecting to basic functions of banking system. This part can be considered as additional part of the system. It is not necessary, but valuable. Annex 2 shows the descriptions for Non-functional requirements.

Architectural view

To full fill functional and non-functional requirements, computerized environment provide a better solution. According to the capacity of bank, it can handle using three computers. Each worker has separate computer for handling their functions. Separate computer can be connected through network hub. To establish the proposed system, the bank should provide one server computer, two client computers, pass book printer and network hub.

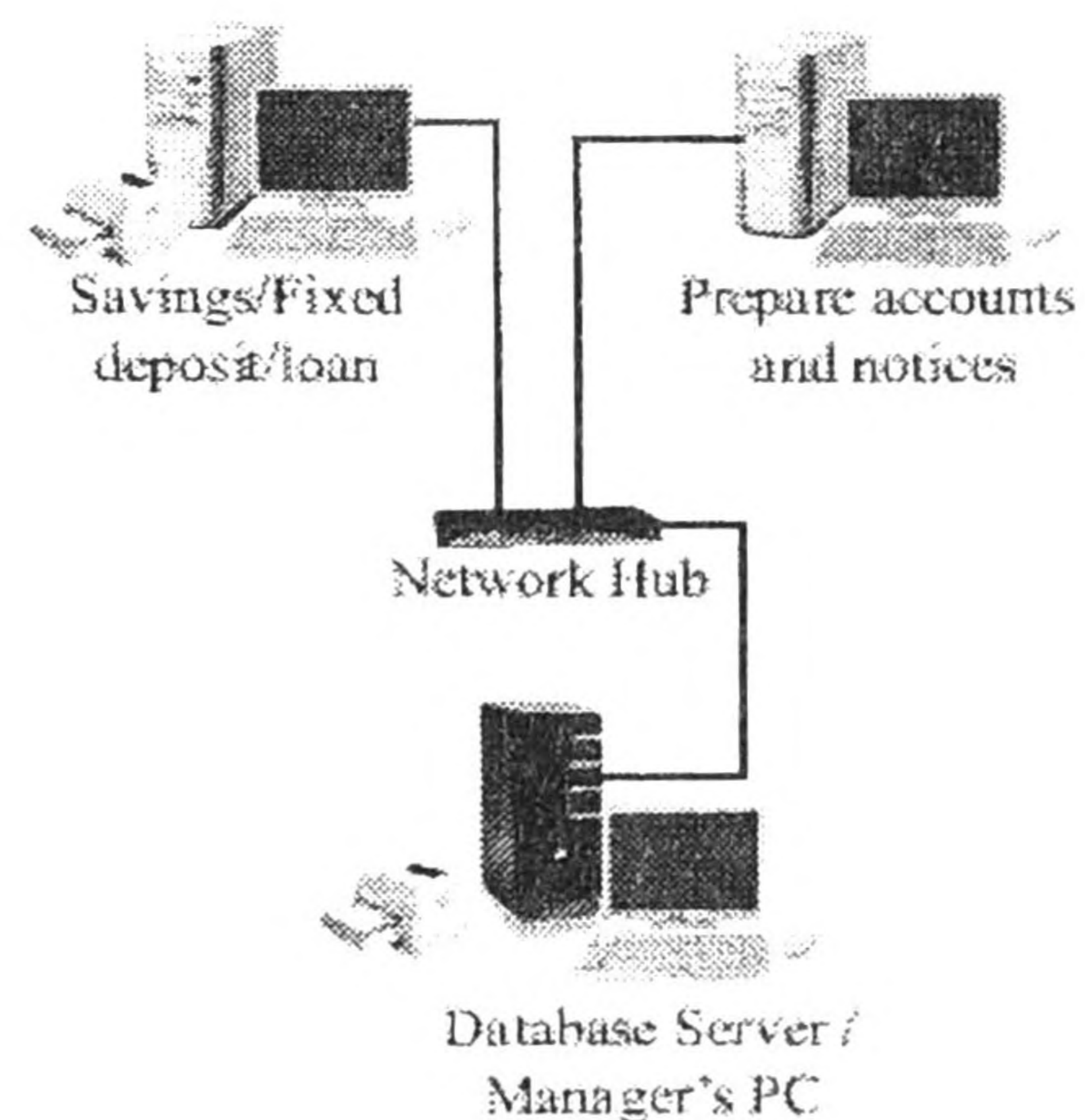


Figure 5: Architectural view of proposed system

RESULT AND DISCUSSION

According to the analysis, existing system has derived lot of problems. Most of the problems can be solved using modern techniques. But automation alone cannot give better solution. Listed below are some of those identified advantages through a computerized system and those are,

- Automates of monthly loan installments paying through Standing Orders will reduce the heavy work load on employees.
- High level of accuracy
- Printing entries in the customers' Passbooks will improve the customer satisfaction.
- Customers' privacy will be improved.
- There will be facilities to take backups and those backups can be restored in an emergency.
- The existing reports can be enhanced and the accuracy and the timeliness will be improved as well.
- Improve the business practice
- Improve interest calculation techniques.
- Improve accuracy and efficiency of transaction processing.
- Rationalization of business process eliminates overheads, non value adding and unnecessary authentication of every transaction through employee empowerment.
- New system will provide tools to measure branch performance monthly, quarterly and annually.
- The system will be capable of generating customers' history reports to help management in members' loan approving process.

- Reduce information redundancy and inconsistency while achieving the time value of information.
- Improve standardization of work.
- Improve customer satisfaction.
- Give some tool to support management decision making.
- The flat-client architecture with centralized database improves the overall performance of the system

CONCLUSION

The main goal of this research is to improve the productivity of Rural Banking system and provide better service to the rural community through government organization. Manual system or Traditional method cannot provide a better solution for banking facilities. Rural people are reluctant to engage with financial activities. It was decreasing the efficiency of the system. Computerized system should be provided much better solution for inefficiency. If the banks change to automation, they can enhance their performance up to 80%.

All drawbacks of manual system are removed from this computerized system. Therefore automated system provides a better solution for the development of financial facilities of poor people.

In addition, government contribution to rural development is vital. Although government used traditional techniques, it provides a tremendous support to development of rural community. In the rural development process, government banking system provides a better solution and plays a major role. Government can be given better solution for rural development through a bank automated system.

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Annex 1: Functional requirement

ID	Requirements
1	Shall be able to set/update system properties
2	Shall be able to assign job roles to users
3	Shall be able to keep information about members
4	Shall be able to check saving, loan and membership details
5	Shall be able to keep new Savings account information
6	Shall be able to update passbook with a printer
7	Shall be able to keep information of deposits
8	Shall be able to keep information of withdrawals
9	Shall be able to keep information of transfer transactions
10	Shall be able to keep new Fixed Deposit information
11	Shall be able to prepare Fixed Deposit Maturity Notice
12	Shall be able to calculate interest according to the time
13	Shall be able to place standing orders to the Savings account
14	The standing order should run automatically and perform the assign task
15	Shall be able to print transaction entries in customer Passbooks
16	Shall be able to issue saving, loan, fixed deposit & membership number
17	Shall be able to calculate loan, savings and

	fixed deposit interest
18	Shall be able to retrieve records about previous loans
19	Shall be able to check the payable loan balance
20	Shall be able to prepare Loan Reminder letters
21	Shall be able to prepare Lapses summary
22	Shall be able to prepare Daily Cash Book report
23	Shall be able to prepare Monthly Status report
24	Shall be able to prepare Monthly Progress report
25	Should be able to prepare General Ledger balance sheet
26	Shall be able prepare yearly report
27	Shall be able to remove the standing orders for loan which have been transferred to loans sent for the court account.
28	Shall be able to prepare daily savings summary.
29	Shall be able to prepare daily loan transfers summary.

Annex 2: Non functional requirements

ID	Requirements
1	Shall provide a user friendly graphical user interface
2	Users should be able to login to the system
3	Users should be able to logoff from the system
4	The Administrator should have the capability of adding new users to the system
5	The Administrator should have the capability of deleting users from the system
6	The Administrator should be able to view login details of other user
7	Should be able to recover transactions after system failures
8	Should be able to add new facilities to the system
9	Users should be given limited powers as needed
10	Shall be able to access system resources concurrently