

AUTOMATED LOAN DISBURSEMENT MANAGEMENT SYSTEM FOR COOPERATIVE SOCIETIES

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ABSTRACT

The concept of web application has been applied differently in most computing field. This involves utilization of global network (internet) or computing devices to undertake the task that are being handled by people. It is a pertinent factor in a profitable and soundly run financial institution. Financial transactions through manual system are prone to errors and unimagined complexities, making it so difficult a task maintaining all entries of users account, search records of activities, handle loan deduction errors and generate reports. Computers running automated system are targeted towards eradicating the menace hence making the underlying activities efficient and providing the fast response needed. This underscores my interest in deploying a dynamic system that will manage the loan scheme of a named organization. The system essentially manages both short-term and long term loans, and keeps track of cash inflow and outflow of a cooperative society among others. It utilized SQL Server database architecture at the back end with HTML at the front end. his makes it user friendly and highly interactive. The Object Modeling Technique (OMT) is adopted for the analysis and design of the loan software. Interactions with operators and stakeholders and through observation of records of activities /events of time, aided the gathering of the required information. Automatic loan management system is an innovation, which is bound to bring swift changes in routine cultural loan practices of cooperative societies as it promotes efficiency and productivity. A pragmatic system bundles with several competent capabilities to eliminate data inconsistency and redundancy as well as ensuring data integrity and security, with guaranteed fast retrieval response time.

Keywords: Automated, Rural SACCOS, Loans, Borrowers, Nigeria.

INTRODUCTION

The history of cooperative societies started with the art of people coming together to contribute money to meet their immediate or future needs. Traditional co-operative institutions are commonly known in English as ‘contribution society’ but in Nigeria however, they are variously termed ‘Esusu’ by the Yorubas, ‘Dashi’ by the Nupes, ‘Osusu’ by the Ogojas, ‘Adashi’ by the Hausas, ‘Isusu’ by the Igbos, ‘Asun’ by the Ishans and ‘Etoto’ by the Ibibios. The history of cooperative societies shows that they have been in existence for a long time and ageless institutions of cooperatives practiced it in the spirit of trust and friendship with in a community.

They are our own version of the cooperative thrift and credit societies. However, as time progressed, structure was introduced into these practices and is today referred to as Modern Cooperative. History of cooperative societies tells us that the Modern Cooperative movement originated in England in 1844 during the industrial revolution as a

result of the great human suffering, degradation and misery workers all over Europe experienced, a group of 28 artisans working in the cotton mills in the town of Rochdale decided to pool their scarce resources together due to these economic conditions just so they could afford basic goods at lower prices. This act gave birth to Rochdale Equitable Pioneers which is the first recognized cooperative society that was registered in the history of cooperative in Nigeria. Today, it is regarded as the prototype for modern cooperative societies and like all things introduced to us by the Western world, Modern Cooperatives came to Nigeria in 1933 when the British Government appointed a panel with Mr. C.F. Strickland as the head and gave him a reference: "To study in details, the culture of the people and the geographical and economic conditions of the country with a view to recommending the types of cooperatives most suited to Nigerians."

The job of Mr. Strickland's team was to find out what kind of cooperatives suited Nigerians the most, putting into consideration our culture, geography and economy. His findings and the panel's recommendation resulted in the cooperative society's ordinance of 1935, which led to subsequent establishment of cooperative societies of all types. In essence, it's in order to say that documented history of cooperative societies started in 1935. The arrival of computer technology has salvaged mankind from the dark ages imposed by non-availability of technological know-how and requisite skills for undertaking tasks. Today, technological dynamics can be applied in virtually all facet of human endeavor to beat down complexities with relative ease and achieve maximum productivity even faster. In some Nigerian Institutions, employees voluntarily join any of the different workers union welfare and loan schemes or associations available based on their job classification on assumption of duty. In Federal University of Benin, Edo State there are different Unions, Associations and Cooperative society. Their members are all fulltime staff of the Institutions who follow the due process to register as a member. Equally, non-staff of the polytechnic can also be registered under separate conditions. These bodies have their various welfare and loan schemes, in which members saves certain amount of money monthly in any of the welfare scheme, from their monthly salaries. Each welfare scheme, through elected representatives, may use part of the money saved by members to do business of different kinds in other to realize some level of profit which is then shared as dividend to its registered members. Often, employees of the institutions are attracted to their union or cooperative society due to the union's or cooperative society interest rate which is added to the regular deposit made. This is preferable rather than going to banks on regulars bases to save little amounts which has lower interest rates and easier process to obtain back the money to solve their immediate needs like payment of house rent in other to avoid quarrels with landlords or caretakers; payment of children's school fees; poor dietary intake that might result to malnourishment; inaccessibility to adequate medical care; inability to meet with social clubs financial obligations and so on. Employees and their respective welfare are faced with different challenges on the day-to-day operations of the scheme; this is due to the manual workflow system of operations.

The essence of a credit society is to create a pull of fund. It has from its beginning, been charged with designing and building members owned and controlled co-operative Finance System knowing fully well that the greatest handicap to goal attainment is fund. A programmed system is a system designed to take in data and process it using a predefined format thereby generating the expected result. Computerized loan management system is being designed to automate loan disbursement process for members of cooperative societies offering different loan product as well as easier ways to save money and have access to the savings information at any point in time and location. The inherent risks,

inconsistencies and errors associated with manual financial transactions and computations demands the use of automated system for simplicity of operation, accuracy and proven results. Information technology era has provided gateways to streamline the daily financial transactions of various financial institutions. Therefore, such contentious issues that have hindered effectiveness, efficiency and overall performance of the project will be resolved with this new system which will focus on these factors and install the desired flexibility to ensure that credibility and integrity of data is highly maintained, transactions made are managed more effectively and information recorded are searched and found with ease.

- i. The contentious issues being experienced are the registration of all the members with separate profiles.
- ii. The errors sometimes made due to manual computations.
- iii. Improper records keeping due to human nature.
- iv. The inability to generate report of individuals and group members for easy accountability for an Employee.

However, the major work done in this research are savings done through small but regular deposits or Automatic deductions from salaries or wages and also granting of loan at moderate interest rate to its members and stand as surely in procuring of commodity items for their members. The daily operations are governed by set of business processes in which there is interaction between humans and manual information system. Conventionally, these processes have been supported by the exchange of information recorded on paper. This project work enables the sharing, computation and archival of information as work is transferred from one desk to another until the process is fully executed. These tasks are executed when the relevant office receives a request containing the relevant information to be treated in a paper trail during office hours.

- A. This system will have a means to register all members of the cooperative society with their separate profile.
- B. This system will display updates of activities for the cooperative society in case of interested members.
- C. The system will be able to generate reports of each member for easy accountability.
- D. The system will have provision for members to upload their pictures for easy identification.
- E. Effective and prompt accessibility to members without delay, through this, members will have access to information such as new policies, regulations and notification of meetings.

Meanwhile, the significance of the proposed system will give room to a fast effective and reliable information processing system, high level accuracy in the financial management of cooperative funds such as;

- i. Loan processing and disbursement of funds.
- ii. Creates automated loan application software that can capture the required loan data elements only once, keep such information secure throughout the loan process.
- iii. Effective and prompt cooperative society information management.
- iv. This project will also be of great importance to the academicians who would obtain relevant information pertaining to their area of study. Therefore it is hoped that this study hence will form the basis for further research on a similar subject. Convert the previous hand to hand system of obtaining and granting loans into a computerized less stressful form.

This general study outlook will be limited to what is obtaining in LAPO NGO a subsidiary of LAPO MFB LTD and this is confined to their branches in Delta State. However, reference will be made from time to time to certain issues in other co-operative societies operating within same locality and States.

This study will focus principally on the appreciation of computer on the loan management system of the co-operative disbursement process.

2.1 Summary of Literature Review and Knowledge Gap

It is important to note that just a few related research work has been carried out locally, regionally and globally on web based loan management scheme for SACCOs over time. This project will consider the following studies that I find beneficial to my work such as information from previous studies conducted by other researchers, stored in public library, and university libraries and also through browsing from the internet. Such materials are in the form of research papers, journals, thesis and working papers.

2.1.1 Loan Lending

A study by Godwin Egiamueosoe (2007) established the effect of credit default on the growth in turnover of LAPO MFB in Benin found that the lending institutions were performing poorly as a result of poor lending practices. Poor lending practices like lack of due diligence during loan appraisal contribute to poor loan performance hence high default rate which influence financial performance negatively Godwin (2007) Issues in microfinance institutions. The study therefore recommended that financial institutions should focus more on individual loans product and services; employees training be enhanced; and good governance be instituted to set pace for the financial performance since it was of paramount important for the growth of the institution. The study failed to expound on how individual loan products diversification could contribute to the efficiency of loan lending practice of SACCOs in Nigeria.

2.1.2 Loan Monitoring

Wanjiru (2016) explored the factors affecting loan disbursement performance of SACCOs in Kiambu County found that loans were granted from mobilized funds and failure to repay could bring down the financial institutions as they only depended on these funds as the only source of fund hence loan agreement, was very crucial to reduce risks associated. Best practices required that loans were considered to be delinquent if a single payment was not honored at the time stipulated in the loan agreement. The outstanding loan balance was considered past due after one failed to meet one repayment obligation. To control delinquency, immediate action should be taken first to assist first truck and the loan that was reported past due. Loan provisions were on the first line to defend and protect members' savings against identified risks of losses to the SACCO. The Sacco must look for other measures to enforce repayment of the outstanding loan before written off these loans from the books.

2.1.3 Loan Administration

Odunza (2007) studied causes of inefficiency and ineffectiveness in credit administration in Chuna SACCO society limited was due to lack of qualified personnel in the SACCOs; poor internal control systems, insufficient funds for lending;

inadequate training; lack of enhanced technology; and poorly defined management boundaries which allowed credit management committee manipulate the credit policy. The research recommended that SACCOs should source and mobilize more funds for lending through aggressive mobilization from members and external borrowing and allocate these funds to investment with high returns; employ more competent staff; restructure the organizational; introduce more attractive loan products to satisfy members needs and also harmonize interest rates; encourage team work with well-defined boundaries; provide education and training to relevant stakeholders; adopt effective technology, ensure competition with other financial institutions; rebrand the SACCO offices; participate in corporate social responsibility. The research did not explain how credit administration would contribute to efficiency in time management of loan disbursement processes.

Nduwayo (2015) study on the effect of loan management on financial performance of Bank of Kigali found out that there was correlation between loan management and financial performance. The study found out that the loans were well managed, because all indicators considered at that level shown that the employees working in credit department were experienced in credit management, there was professional training organized in order to keep them up to date, they are recognized being independent in loan review, lending procedures and guidelines designed and implemented to improve loan management.

Ajiambo (2013) investigated the way and level in which loan policy correlated with financial of these institutions. The study recommended that SACCOs should frequently review and update their credit policies to enhance proper evaluation of loan applications and ensure that loan applications are appraised and ranked according to merit. Ajiambo (2013) study also recommended that SACCOs to ensure timely loan disbursement to facilitate loan recovery and minimize administrative costs which would lead to growth of SACCOs' wealth. Furthermore, it was recommended that SACCOs should establish delinquent loan provisions that would be adequate to cover bad debts and safeguard SACCO funds and ensure proper recording loan assets to avoid overstating in the books. Additionally, the government should review legal framework for the SACCOs to ensure sound loan policies are put in place for improved financial performance via loan disbursement practice.

Mugambi (2015) explored the influence of Loan recovery practices on SACCO's performance of SACCOs in Mount Kenya Region. The study established that there was need for the SACCO's regulator to enforce the use of a standard set credit policy to mitigate the level of credit risk associated with credit exposure among the SACCOs in the sector and reduce guarantors exposure to these credit risks. Since the guarantors bears the burden of repaying the loan after the borrower defaults to pay other forms of loan security like collateral should be introduced to shift the full loan burden to the borrower and reduce the risk attached to guarantors.

Muchoki(2014) studied the influence of commercial bank loans on financial performance of Savings and Credit Co-Operative Societies in Kisumu, Kenya. The study established that commercial bank loans did not affect Sacco's business since the paired test established a p value of 0.004 h. This can also be reflected by different indicator of growth like increased number of members in the SACCOs, growing amount of loans disbursed and growth of mobilized savings which increased year after the other. It was further established that the competition between banks and SACCOs benefited members due to reduced interest rates in a view of maintaining and remaining is business and retaining market share. This was reflected in the results as was indicated where 51% agreed that

it was now easier to obtain loans from SACCOs. However it was reported that 60% of the respondents were affected by the pro rata requirements set by the SACCOs. Following these findings, the study called on the government to intervene and form an act that could protect the SACCOs an offer equal opportunity to financial institutions for outsourcing for funds.

2.1.4 Loan Security Management

Karagu (2014) study established how financial performance was influenced by different factors in SACCOs in Kenya. The study established that misappropriation of funds influence financial enhancement in SACCOs. The study concluded that SACCO's internal control system and the internal audit department needed to be improved. It was also established that the financial performance of these organizations was influenced by the investment decisions instituted. It also emerged that prudent projects were in forefront whenever better returns were to be achieved in the organizations. It was also found that in order to cup defaulting in the loans there was need to introduce collateral securities to enhance loan recovery strategies and discourage delinquency in SACCOs. According to Karagu,(2014) members withdrawal affects Sacco's performance adversely. In order to compete with other organizations such as Micro finance Institutions, the study recommended the introduction of more products in SACCOs.

Mutua, (2016) investigated effect of credit risk management and the performance of SACCOs in Kuje, kaduna where he found that there existed a strong positive relationship between loan default and financial performance of SACCOs. Mutua, (2016) also found that there was positive relationship between loan policy in mitigation of risks and loan portfolio performance of SACCOs and there was still a strong positive relationship between credit monitoring and loan disbursement performance of SACCOs. The study recommended improvement in internal controls so as to enhance on loan monitoring and there should be a continuous review of loan policy to realize current trends. It also recommended on the limit of the borrower's age to mitigate the risks associated in lending practices.

Meanwhile, the Role of Co-operative Loans in Rural Finance: Evidence from LAPO NGO co-operative society Delta State, Nigeria. This project examines how computerizing the loan disbursement process made by co-operative societies in rural areas would meet the financial needs of their members both far and near and, by extension, the role of the co-operative lending in rural finance. The study makes use of primary data from three focus group discussions comprising forty two members selected randomly from three co-operatives in two local government areas. Data was analyzed using tables of numbers, questionnaire and quotations from participants. The study found that the financial needs of the members were met through loan granting at reduced interest rates without the pledging of fixed and financial assets as collateral but was also faulty as a result of poor documentation and record keeping for references purpose. The low interest rate on loans reduces the likelihood of members patronizing money lenders and of possible loan defaults. The personal guarantor arrangement greatly enhanced the inter-personal relationship among members enabling them to provide support to members in trouble and reducing their individual poverty level. However, there may be need for emergency loans that can be repaid over a short period of time to ease the financial burden of the members and enhance social and financial capital.

2.2 Analysis of the Existing system

Ideally, any cooperation society would basically draw her income from membership registration fee and routine saving contribution of the members over the months. This savings are separated into project and ordinary savings. The ordinary savings which is a fixed amount is mandatory for every member and it is non-refundable, while the project savings is according to the varying business capabilities of members which can be re-embossed as condition applies.

These contributions are however traded with through giving of loans and stocking goods so as to enhance the financial income of the society and from whence they calculate the benefit of an individual based on the amount so contributed on a monthly or yearly basis.

2.2.1 Weakness of the Existing System

The idea behind embarking on this task is to solve the problems associated with the old system of savings scheme management which include the following:

- i. Data redundancy: Presently in the old system the probability of making errors in recording the data containing every transaction being made by the members of the cooperative society is high.
- ii. Data insecurity: In the old system due to the fact that the data is being stored manually on files, security of these important files is not assured because there can easily be a break-in in the offices where the files are located.
- iii. Inaccurate record: In the old system because the present saving scheme is being operated manually, the presence of bulky files makes it hard to maintain the records which can lead to inaccurate record keeping.
- iv. Difficulty in data retrieval and modification: Due to the presence of bulky files in the old manual system, data retrieval about a particular member's transaction would be difficult to retrieve especially if there is little time being set out for a report to be derived from these records.
- v. Lack of data integrity: Presence of bulky files in this old system can lead to excess scattering of files which would make the accessing of a particular file more difficult and time consuming to do just the arrangement to achieve this.

2.2.2 Analysis of the Proposed System

Every data both texts and images required for input into this system must be properly formatted.

System Analysis and data preparation in this context means manipulation of system information and data into a form suitable for further analysis and processing. It is a process that involves many different tasks and which cannot be fully automated. Many of the system analysis activities and routine are tedious, and time consuming. It has been estimated that system analysis accounts for 60% to 80% of the time spent on a data mining project. System analysis is essential for successful proposed system design. Poor quality data typically result in incorrect and unreliable data mining results. In preparation of the data used in this project, it is done so that in the course of analyzing system from different perspectives and summarizing it into useful information, it will be simpler and easier. All data used in the course of this project are data that deals with quality control methods. Meanwhile, it is important to also prepare users by making them know the kind of data that is needed while using the new system. They will be told where to input numeric values and where to input alphanumeric values and so on. The users are also

told the necessary information needed of them whenever they come for transaction. If after preparing the data, and the users are not prepared to, is as good as not doing any work.

2.2.2.1 Advantages of the Proposed System.

The new system is expected to solve the problems of the old system. The advantages of this new System include.

- a. To maintain consistency in access mode at the information desk.
- b. To reduce redundancy in information captured from the members for the loan management scheme.
- c. To protect member's privacy concerns.
- d. To increase correspondence among members.
- e. To calculate automatically and generate report easier and faster especially in cases of limited time.

3.1 Result Discussed

This section covers a detailed documentation of how the system has been developed in a step-by-step manner. It clearly illustrates the implementation process, describes the interfaces and features of the entire system. It also covers the components and unit testing as well as the integration of the system. Software component testing involves integrating one or more system components functions or features and then testing this integrated system. The working process of the Loan automation applications software is also discussed. Component testing involves Validation and Verification. Validation is the test phase which answers the question 'did we build the right system?' to ensure that the end product suits the need of the customers.

This phase employed the use of prototypes, which is a copy of an object, made on a smaller scale than the original. Prototypes have been used to gather requirements from the users and the prototype was subjected to tests till a functional system was evolved.

Verification phase answers the question 'did we build the system right?' by subjecting the application to quality control activities throughout its life cycle to ensure that interim deliverables meet their input specification. The system has been verified to meet input specifications from users by verifying login details among others. The software has several components, which were integrated and tested for functionality. They include Home Page, News Page, Service Page, About Us Page, Contact Us Page, Make Loan Page, Pay Loan Page, Check Account Page, Change Password Page, Inbox Page, and Admin Content Management system Page. After implementing the codes to meet the specification requirement, the entire system was tested. The system components that were tested include database, process, interface and the server for the system. In testing the database, it was ensured that the database captures the specified fields according to their respective attributes, and that the storage and retrieval functions responded properly. All the tables carrying the bugs reports and projects were easily accessible by the system administrator. In process testing, the system was started and ensured to work acceptably well, all necessary links working and linking to intended locations. Other features such as the comments sending from the clients to the admin and vice versa were tested and ensured that messages sent were meaningful. In interface testing, it was ensured that there was a link for user who does not really know how to navigate around the system, and all links were ensured to lead appropriate page providing enriched user experience. Almost all of the functions of the application run on the WAMP server, which is responsible for communicating with web browser. MySQL

relational database server stores the information the application requires, and PHP was used as a middleware. Figure 5 represents the architecture of the system.

5.1 Summary

As a result of angular utility costs, computer technology is been developed to more efficiently control energy use such systems are designed to reduce the use of space consumption in cantonments/Armory, particularly when occupied. Much of the technological development taking place in the Loan processing and management system in communication where high speed computer and the lower costs of the necessary hardware are providing opportunity that is not available previously.

We can expect that in future years such system will become more and more sophisticated through more complete integration with other Loan processing and management.

5.2 Conclusion

From the discussion of the findings arising therefore, I thus name computer as an efficient machines and computer center as efficiency centers.

There is no doubt that loan management is the core of all banking activities and its success or failure guarantees the bank profitability, liquidity and safety of deposits in order to meet customers demand from fraud as a result of all embracing the important nature of loan from major source of financial management cannot be over emphasized. The effectively harness this sector called application of computer to achieve optimum result.

5.3 Recommendation

I advise future potential readers who might be interested in this topic in the nearest future to use programming language such as DotNet or visual basic etc.

From the analysis of the several benefit of computer to loan management, I am making the following recommendations arrived at improving loan management particularly in LAPO NGO and these also may be useful to most MFB Banks in the country.

Due to the importance of loan to the financial institution and the entire economy, the use of computer for its credit management is highly recommended.

5.3.1 Application Areas

- i. Tracking customers information and their loan in the bank
- ii. Registering and Account opening for customers
- iii. Recording of customers transaction information
- iv. Tracking of customers repayment history

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