FINAL REPORT
ON THE
COMPUTERIZED MICROFINANCE MANAGEMENT INFORMATION SYSTEMS FOR MALI

For
USAID/Mali
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By

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EXECUTIVE SUMMARY

The Computerized Microfinance MIS report for the Mali program is funded under the USAID MicroServe Indefinite Quantity Contract, and implemented by Weidemann Associates, Inc. in Mali. The Mali program is designed to strengthen Micro Finance Institutions (MFIs) in Mali with the use of effective automated accounting, loan portfolio, deposit management and overall MIS. This segment of the program collects data to determine MIS requirements for the different types and sizes of MFIs operating in Mali, to evaluate the existing microfinance computer systems being used by these MFIs, compare their features to standard requirements, and present these finding in a Guide to assist MFIs in choosing the best fitting computer system. The assignment is an important part of USAID and Weidemann Associates Inc.'s commitment to technical assistance and institutional and organizational strengthening of the Association de Professionelle Institutions de Microfinance in Mali (APIM). APIM represents more than 50% of Mali's MFIs. The assignment is based on a scope of work from Weidemann Associates Inc. and follows guidance from the Micro enterprise Best Practices "Management Information Systems for Microfinance – An Evaluation Framework" (MBP/MISM/EF).

Abdourhamane Toure, as the national consultant and micro finance expert, and I, Robert Wilson, as international MIS consultant, performed the assignment in accordance with the SOW. In the first phase of the assignment we designed, field-tested and adjusted the survey to collect technical and functional information on the automated systems used by the MFIs. Abdourhamane continued to collect functional information while I returned to the US. I later revisited Mali to assemble and evaluate the data collected then compose the guide. At the end of this assignment, the data has been collected and analyzed into a comprehensive guide as a final deliverable. The guide is formatted for use by MFIs under diverse categories in selecting the most appropriate microfinance MIS. The guide is annexed to this report.

In the first and second phases of the assignment, Nine MFIs were surveyed using guidance from the MBP/MISM/EF. The MBP/MISM/EF was further adjusted to include functional requirements unique to Mali. The survey, evaluation, and guide is designed based on this blended framework of 8 categories, 40 topics, and 667 measurement criteria, covering functional, technical and cost criteria. Seven of the nine computer systems surveyed are evaluated and included in the final guide. The two systems not included in the guide, were omitted because they were not complete enough to be considered marketable systems. The remaining seven systems are evaluated using a scoring system that rates each measurement criteria and grades this criteria according to a given importance or priority. The percentage grades from the measurement criteria are then summarized into associated topics and categories. A hierarchical listing of the framework's categories with their associated topics is used to survey requirements for different sizes and types of SFD. The systems are then matched against this listing to determine to what degree they meet the different MFIs' requirements.

Of the seven systems evaluated, SiBanque, although not installed in production mode, ranks the highest, and is the system most recommended for use in the various MFIs. Microbanker2 system follows close behind. Microbanker2 is proven in the filed, but is a DOS based system and we are reluctant to recommend it for installation to MFIs.

No system surveyed meets 100% of the functional, technical criteria, or optimum level. This is especially so for service support. It is possible that there are systems used in or out of Mali that would better meet the established criteria. It is also possible that the systems discussed in this guide may be upgraded to meet required standards. AS suggested by James Hochschw, the guide therefore serves as a framework that may be added to and refined as additional systems are introduced and reviewed, additional needs are identified, and/or existing systems are upgraded or reevaluated. The guide may remain open until there is a more complete array of options incorporated in the guide. In this respect the guide is part of an ongoing process as automated MF MIS systems evolve in Mali.

The MIS systems guide is the principle delivery of this assignment. This guide has been completed to include all of the survey results, conclusions, recommendations and guidance for MFIs. The activities performed during the period of this assignment, and final finding, by national counterpart Abdourhamane Toure and I are detailed in this report.

ACCOMPLISHMENTS

During the preparation phase, the international and national consultant worked together to design the data collection format and field-tested these instruments while collecting the MIS related information for the survey. When the international consultant returned to Mali, the assignment was completed by evaluating data collected and producing the guide. In so doing, Abdourhamane Toure and Bob Wilson:

- Outlined the guide and final report to focus our activities for producing a successful guide.

- Reviewed and finalized the system requirements and the research on existing systems survey sheets, developed from the MBP/MISM/EF guide. The sheets are updated and include BCEO and client concerns mostly by adding a separate category to collect specific information to be entered into the system.

- Developed a Data Collection/Analysis Tool (alias DCAT) that was used to design and produce uniform data collection survey sheets for the assignment. The DCAT has been programmed to accept numerically transposed and narrative data on MFI requirements, and the computer systems used. This ACCESS based tool was later updated and used to evaluate this quantitative data to match requirements and compare systems to then produce reports for the guide and final report. In addition, spreadsheets developed by Toure were used to cross check the data.

- Matched the six proposed MFI categories to systems targeted for the study to cover the maximum variation in sizes and types of MFIs. Nine MFIs are targeted as Mutual Federation, Mutual Association (Union), Large Non Mutual and Small Non Mutual categories. No MFIs for the Multi Level Mutual, since nonexistent, and individual mutual categories are targeted. (See Table 1)

- Scheduled and received interviews as introductory visits with nine of these institutions while collecting data on their requirements functions and computer systems.

- Collected requirements and technical data on nine systems used by the types and sizes of MFIs, using the survey sheets. These systems are as follows:

MFI	**Type**	**Location**	**System:**
Kafo Jiginew	Mutual Federation	Koutiala	Sibanque 1
Jemeni	Mutual Federation	Bamako	Sibanque 2
Kondo Jigima	Mutual union	Bamako	Microbanker 1.
Piyeli	Small Non Mutual	Bamako	MicroBanker and Amadeus
GGLS	Solidarity	Bougouni	manual system

CANEF	Small Non Mutual	Bamako	CANEF system
Jigiyaso Ba	Small Non Mutual	Bamako	Lotus application
Nyèta Musow	Solidarity	Mopti	Nyèta Musow
CVECA Pays Dogon	Village Network	Mopti	CVECA Pays Dogon

Table 1

- Collected technical information on all of the computer systems targeted for the research using the finalized survey sheets.
- Completed the research on the functional components for loan tracking and accounting in systems used by the selected MFIs. The uniform survey forms for the data collection assignment were used to collect data at these MFIs.
- Finalized DCAT application to evaluate data, loaded the data into the system, cleaned and crossed checked the data and produced final reports for inclusion in the guide.
- Wrote the first draft of the guide. This first draft was left in Mali on my departure.
- Prepared this first draft of the report for this assignment for presentation to USAID and Weidemann Associates, Inc.
- Submitted the draft report to USAID/Mali in a debriefing on the 27th of October before leaving Mali.
- Submitted the draft report and guide to Weidemann Associates, Inc/VA for review and feedback.
- Provided APIM with a debriefing on the process of the study using the first draft of this report and guide
- Met with Weidemann Associates, Inc/VA on the 9th of November in a debriefing and to discuss feedback on the guide and draft report.
- Completed the final version of the guide for translation and publishing.
- Completed this final report for submission to Weidemann Associates, Inc on the 20th of November with the final version of the guide.

FINAL OBSERVATIONS:

Preliminary observations are made based on finding while conducting the survey on the technical or computerized portion or the survey. These findings were later verified or modified when the final analysis of data was made during the second visit. The data on the actual functional micro financial strengths and weakness of these systems have been collected and are considered in these finding. Following are some of the most important observations:

- The study has determined that Sibanque 1 surpasses all of the other applications in strength and applicability. Microbanker is second in strength and applicability. Whereas Microbanker is proven software with much functional strength, it is a DOS based software, with a bad history of support and from a technical point of view, difficult to recommend to MFIs in this MS Windows era. On the other hand Sibanque2 is a modern Visual basic software developed from the developer's experience with Sibanque1, but this software is only in the first stage of implementation in Mali and has not yet been used in production. In addition Sibanque software is only available to institutions that accept to join the Sibanque network of banks, based in Paris. In this respect, our recommendations for these systems are not without these major reservations.

- Functional capabilities of the system rate much higher than technical concerns. The systems meet basic functional requirements such as loans and savings data collection processing and reporting. They are lower in areas such as flexibility for expansion, adaptability to other levels of the institutions and reporting outside of the institution.

- Training is a major concern to MFIs using the systems that were evaluated. In many cases, the visiting systems developer, only, gives training, and essential staff members are not adequately trained to pass the software's operating knowledge along. Training of one or two key staff members in the installation and use of the software is mandatory to ensure smooth operations and to facilitate problem identification and reporting.

- Support by developers after installation is a major issue. In all cases the developer maintains proprietary ownership of the source code for the application provided. Maintenance support can be a nightmare for the end-users. They are sometimes forced to wait weeks for a response and weeks again for a resolution to a given problem. This situation has improved substantially for those institutions with access to e-mail communication.

- There is concern for local support. Foreign-based developers have developed and continue to service software without local partnerships that could provide in-country support.

- Some of the systems researched were written with compiled programming (Clipper, Visual Basic, and SQL). Although these programming languages provide additional security and features, the source code for the applications developed by these software is not available at the user sites. Whereas the source code and front door access is well

protected, back door access to data in systems written in Clipper and ACCESS remains unprotected.

- The systems are not thoroughly integrated with fixed asset accounting and other organizational functions. Integrated facilities are also needed to perform and link to functions such as employee performance, workload, varying statistics, and payroll.

- A few of the systems are DOS based applications, which have fallen out of date and which are possibly without local support. Users however have acclimated to these systems. Although there is little technical reason to upgrade these systems to a Windows environment, it will not be appropriate to recommend these systems to other MFIs.

- The systems are generally limited in their design. The systems provide basic loan and savings functions, but some systems are inflexible in designing new products. The systems all produce custom or canned reports. Most, however, cannot be made to produce different variations of output, or keep up with changing reporting requirements without programming enhancements from the developer. These systems are therefore limited in producing user defined reports and reports required by donors and BCEAO. The systems may be run on PC computing equipment on the MS DOS platform but one system inspected limited output to a narrow range of dot-matrix printers.

- The systems are not configured to cross or integrate across MFI category lines. Some systems may be used in only one level of the organization. In addition the systems in use do not provide for integration between branch levels within the organization, APIM, banks and government regulatory bodies (BCEAO).

- The plan of account field is not sufficiently long in any of the systems to accommodate organizational expansion or flexibility to include branch levels and other codes such as location business types etc. to adequately track expanded loan and savings activity

- Parallel installations norms were violated in some instances causing installation delays and re-keying. Data migration remains a concern for most institutions that wish to acquire or change to new automated systems.

- The systems do not contain automated means of electronically transferring data and depend on manual or external facilities for transmitting data within and beyond organizational boundaries.

- MFIs recognize system shortcoming and are seeking upgrades and alternatives.

- It has been difficult to obtain fixed prices and support cost consideration from the application developers. Some of the costing information contained in the guide and report was provided by end-users, and therefore may not be up to date and fixed quotations. The pricing structures vary considerably between the different organizations, and it is difficult to establish an equitable field of comparison. In Sibanqu's case, the institution must be a member of the Sibanque network to obtain the software, and at no cost.

- Some of the systems evaluated (CVACA, Nyeta Musow and Jigiyaso Ba) contain functions that are very specific to the institution that they support and would be quite difficult to modify to suit all institutions.

- Microfinance applications can be easily contained on existing PC hardware. There is no need for mainframe computing or any special peripheral devices. Archiving unused data and providing sufficient PC disk space to contain the volume of customer records are sufficient measures to meet the MFIs' requirements.

- Data migration is an important concern as many MFIs have already started collecting data electronically, by spreadsheet, data management software or other software application. When a new software is selected data migration can be a nightmare for these MFIs. Despite vendor promise of easy change over, data migration often requires tedious re-keying, error correcting, and testing. When external vendors are involved in this process, it becomes very costly to the MFI.

DATA COLLECTION AND ANALYSIS PROCESS:

The guide targets, seven systems used in Mali and evaluate these systems in accordance to the list of standard requirements for quality computer systems.

The study of systems for this guide was performed by equally evaluating all of the systems under identical categories, topics and measurement criteria. This guidance, taken from the Micro enterprise Best Practices "Management Information Systems for Microfinance – An Evaluation Framework" (MBP/MISM/EF), is provided by Weidemann Associates, Inc. The measurement criteria, topic and category listing were further upgraded to serve more specific needs of Mali's MFIs, adding value to the framework. Efforts are also being made to make a special review of the source databases to determine data relation and integration required. These documents then served as the basis for both the needs analysis and the system survey and evaluation.

The category and topics guidance was first used to discuss needs with the MFIs chosen. Very few, only five areas from the topic listing were not required of the different MFIs interviewed. For the sake of automating the analysis process, all topics needed, were given a variable of 1.

Secondly, the measurements criteria listing, combined with the topic and category table is used as the basis of uniform survey sheets that were used in the interview process with the MFI to guide in collecting data on the computer systems for analysis. The data was then entered into the DCAT system for analysis and into spreadsheets for crosschecking.

To perform the evaluation of the computer systems of data obtained at the measurements criteria level, each measurement criteria under the topics and category is rated from 1 to 5 and given a weight from1 to 3. This priority rating is based on the importance to the user, and the knowledge and experience of the examiners. The system receiving the highest rates in the highest priority measurements therefore received the highest final grades. In this examination and evaluation, a system that received all 5 in all measurements would receive a 100%, regardless of the priority assigned to the measurement criteria. The individual grades from the measurement criteria level were then rolled as averages to the topic level, taking into consideration the net value of the priority rating.

The ratings obtained from evaluating the computer systems were then matched against the requirements that use the same category and topic format. As before mentioned, topic areas that were needed by the MFI were given a 1. When the system rating were matched against this data, items that were rated with a 1 were considered and items which were left blank, or not needed were not considered. In the case of a Mutual Federation that required all of the items within the category and topic areas, the full system rating was maintained. On the other hand the individual mutual that did not need agency information, did not consider this item in the match and therefore their grade for the systems that provided this went up slightly.

The following scoring guide may be used to better visualize how scoring was done in this survey:

SCORING GUIDE					
Systems:					
	Priority	Priority Value	Rate		Grade in %
Measurement Criteria (MC)	1-3	1 =1, 2 =.50 3 =.25	1-5 From User Interview		Rate X Value
Topic	1-3	" "			Average MC Grade X Value
Category	1-3	" "			Average Topic Grade X Value
Requirements:					
	Priority	Value	Rate	Grade	
Topic	1 if required			Systems Topic Grade if required	
Category	1			Average Topic Grade	

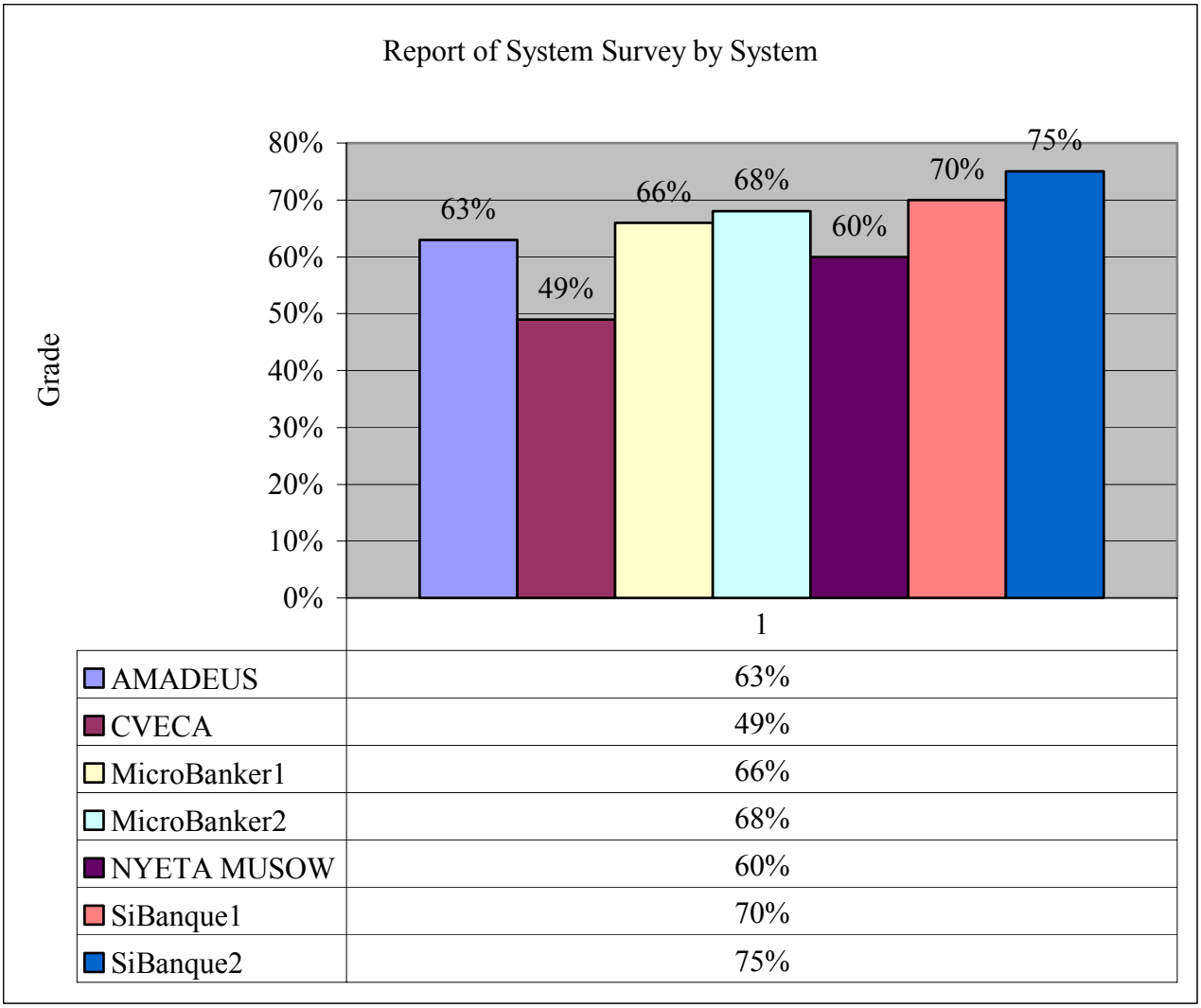
Table 2 Scoring Guide

The evaluation tool DCAT was used to produce the survey sheet, and perform the evaluation. Any modification observed or needed may be entered into DCAT to reproduce reports reflecting the change.

RESULTS:

Information on the requirements, functions, and technical ability of the computer systems identified for this study was collected on uniform collected during interviews with data entry agents, accountants, computer support technicians and other officials. This information was analyzed to produce the results in this section.

Systems survey evaluation:
In this analysis the results of each system surveyed was analyzed to produce the following results:



AMADEUS	63%
CVECA	49%
MicroBanker1	66%
MicroBanker2	68%
NYETA MUSOW	60%
SiBanque1	70%
SiBanque2	75%

This summary report identifies Sibanque2, the Visual Basic system as the best overall system, followed by MacroBanker1. Following is a report, by category, that further demonstrates how these finding were compiled:

System Results by Category

AMADEUS	***63%***
1 Data entry into the system	**67%**
2 Functionality and Expandability	**63%**
3 Usability	**51%**
4 Reporting	**73%**
5 Standards and Compliance	**73%**
6 Administration and Support	**46%**
7 Technical Specifications and Correctness	**61%**
8 Cost	**71%**
CVECA	***49%***
1 Data entry into the system	**42%**
2 Functionality and Expandability	**29%**
3 Usability	**46%**
4 Reporting	**48%**
5 Standards and Compliance	**51%**
6 Administration and Support	**31%**
7 Technical Specifications and Correctness	**74%**
8 Cost	**74%**
MicroBanker1	***66%***
1 Data entry into the system	**80%**
2 Functionality and Expandability	**71%**
3 Usability	**44%**
4 Reporting	**78%**
5 Standards and Compliance	**72%**
6 Administration and Support	**60%**
7 Technical Specifications and Correctness	**56%**
8 Cost	**67%**
MicroBanker2	***68%***
1 Data entry into the system	**81%**
2 Functionality and Expandability	**74%**
3 Usability	**45%**
4 Reporting	**77%**
5 Standards and Compliance	**72%**
6 Administration and Support	**65%**
7 Technical Specifications and Correctness	**63%**
8 Cost	**68%**

System Results by Category

NYETA MUSOW		***60%***
1	**Data entry into the system**	**70%**
2	**Functionality and Expandability**	**44%**
3	**Usability**	**50%**
4	**Reporting**	**71%**
5	**Standards and Compliance**	**66%**
6	**Administration and Support**	**31%**
7	**Technical Specifications and Correctness**	**75%**
8	**Cost**	**74%**
SiBanque1		***70%***
1	**Data entry into the system**	**77%**
2	**Functionality and Expandability**	**65%**
3	**Usability**	**59%**
4	**Reporting**	**72%**
5	**Standards and Compliance**	**83%**
6	**Administration and Support**	**60%**
7	**Technical Specifications and Correctness**	**58%**
8	**Cost**	**86%**
SiBanque2		***75%***
1	**Data entry into the system**	**78%**
2	**Functionality and Expandability**	**73%**
3	**Usability**	**65%**
4	**Reporting**	**86%**
5	**Standards and Compliance**	**87%**
6	**Administration and Support**	**47%**
7	**Technical Specifications and Correctness**	**81%**
8	**Cost**	**86%**

Table 3 System Grades by category

As was previously observed, functional requirements rank significantly higher than technical considerations. Further breakdowns by topic and measurement criteria may be found in the appendices.

REQUIREMENTS RESULTS:

To complete the analysis for the guide, the results of the systems surveyed are matched against the requirements for the MFIs and produce the following results:

Cross Tabulation Summary of MFI Requirement by Systems

	AMA CVC	*NYM*	*MB1*	*MB2*	*SB1*	*SB2*
Mutual association	**63% 49%**	**60%**	**66%**	**68%**	**70%**	**75%**
Mutual Federation	**63% 49%**	**60%**	**66%**	**68%**	**70%**	**75%**
Individual Mutual	**64% 49%**	**60%**	**66%**	**68%**	**70%**	**76%**
Multi Level Mutual	**63% 49%**	**60%**	**66%**	**68%**	**70%**	**75%**
Large Non Mutual	**63% 49%**	**60%**	**66%**	**68%**	**70%**	**75%**
Small Non Mutual	**64% 49%**	**60%**	**66%**	**69%**	**70%**	**75%**
Total :	**63% 49%**	**60%**	**66%**	**68%**	**70%**	**75%**

Table 4

Again, Sibanque2 and Microbanker2 maintain the lead as the systems that best match the overall needs of the MFI. A chart of this nature serves a very quick and direct reference for the guide. The guide recommends that the SFD study the summary chart to determine the computer system that best suits their needs. For instance, a Mutual Association will look a chart and determine that a specific system would best meet their requirements. They would further examine the following detailed category analysis of how every system studied responds to their MFIs requirements.

Summary of Requirements by Categories

	AMA	*CVC*	*NYM*	*MB1*	*MB2*	*SB1*	*SB2*
Mutual Association	**63%**	**49%**	**60%**	**66%**	**68%**	**70%**	**75%**
1 Data entry into the system	67%	42%	70%	80%	81%	77%	78%
2 Functionality and Expandability	63%	29%	44%	71%	74%	65%	73%
3 Usability	51%	46%	50%	44%	45%	59%	65%
4 Reporting	73%	48%	71%	78%	77%	72%	86%
5 Standards and Compliance	73%	51%	66%	72%	72%	83%	87%
6 Administration and Support	46%	31%	31%	60%	65%	60%	47%
7 Technical Specifications and Correctness	61%	74%	75%	56%	63%	58%	81%
8 Cost	71%	74%	74%	67%	68%	86%	86%

	AMA	*CVC*	*NYM*	*MB1*	*MB2*	*SB1*	*SB2*
Mutual Federation	**63%**	**49%**	**60%**	**66%**	**68%**	**70%**	**75%**
1 Data entry into the system	67%	42%	70%	80%	81%	77%	78%
2 Functionality and Expandability	63%	29%	44%	71%	74%	65%	73%
3 Usability	51%	46%	50%	44%	45%	59%	65%
4 Reporting	73%	48%	71%	78%	77%	72%	86%
5 Standards and Compliance	73%	51%	66%	72%	72%	83%	87%
6 Administration and Support	46%	31%	31%	60%	65%	60%	47%
7 Technical Specifications and Correctness	61%	74%	75%	56%	63%	58%	81%
8 Cost	71%	74%	74%	67%	68%	86%	86%

	AMA	*CVC*	*NYM*	*MB1*	*MB2*	*SB1*	*SB2*
Individual Mutual	**64%**	**49%**	**60%**	**66%**	**68%**	**70%**	**76%**
1 Data entry into the system	74%	45%	68%	77%	78%	76%	77%
2 Functionality and Expandability	65%	26%	42%	74%	75%	68%	77%
3 Usability	51%	46%	50%	44%	45%	59%	65%
4 Reporting	73%	48%	71%	78%	77%	72%	86%
5 Standards and Compliance	73%	51%	66%	72%	72%	83%	87%
6 Administration and Support	46%	31%	31%	60%	65%	60%	47%
7 Technical Specifications and Correctness	61%	74%	75%	56%	63%	58%	81%
8 Cost	71%	74%	74%	67%	68%	86%	86%

	AMA	*CVC*	*NYM*	*MB1*	*MB2*	*SB1*	*SB2*
Multi Level Mutual	**63%**	**49%**	**60%**	**66%**	**68%**	**70%**	**75%**
1 Data entry into the system	67%	42%	70%	80%	81%	77%	78%
2 Functionality and Expandability	63%	29%	44%	71%	74%	65%	73%
3 Usability	51%	46%	50%	44%	45%	59%	65%
4 Reporting	73%	48%	71%	78%	77%	72%	86%
5 Standards and Compliance	73%	51%	66%	72%	72%	83%	87%
6 Administration and Support	46%	31%	31%	60%	65%	60%	47%
7 Technical Specifications and Correctness	61%	74%	75%	56%	63%	58%	81%
8 Cost	71%	74%	74%	67%	68%	86%	86%

	AMA	*CVC*	*NYM*	*MB1*	*MB2*	*SB1*	*SB2*
Large Non Mutual	**63%**	**49%**	**60%**	**66%**	**68%**	**70%**	**75%**
1 Data entry into the system	67%	42%	70%	80%	81%	77%	78%
2 Functionality and Expandability	63%	29%	44%	71%	74%	65%	73%
3 Usability	51%	46%	50%	44%	45%	59%	65%
4 Reporting	73%	48%	71%	78%	77%	72%	86%
5 Standards and Compliance	73%	51%	66%	72%	72%	83%	87%
6 Administration and Support	46%	31%	31%	60%	65%	60%	47%
7 Technical Specifications and Correctness	61%	74%	75%	56%	63%	58%	81%
8 Cost	71%	74%	74%	67%	68%	86%	86%

	AMA	*CVC*	*NYM*	*MB1*	*MB2*	*SB1*	*SB2*
Small Non Mutual	**64%**	**49%**	**60%**	**66%**	**69%**	**70%**	**75%**
1 Data entry into the system	67%	42%	70%	80%	81%	77%	78%
2 Functionality and Expandability	66%	25%	42%	75%	78%	68%	73%
3 Usability	51%	46%	50%	44%	45%	59%	65%
4 Reporting	73%	48%	71%	78%	77%	72%	86%
5 Standards and Compliance	73%	51%	66%	72%	72%	83%	87%
6 Administration and Support	46%	31%	31%	60%	65%	60%	47%
7 Technical Specifications and Correctness	61%	74%	75%	56%	63%	58%	81%
8 Cost	71%	74%	74%	67%	68%	86%	86%
Total:	**63%**	**49%**	**60%**	**66%**	**68%**	**70%**	**75%**

Table 5 Summary of Requirements by Category

Additional details are provided in the appendices to review how the finding for the chart above was compiled.

COMMENTS ON RESULTS:

The guide provides comments on all of the systems, but because Sibanque2 and Microbanker2 are the leading systems, the report and guide also provide the following comments. These comments detail these systems' strengths, weaknesses, and cost to support our recommendations.

Microbanker:

The MicroBanker2 system manages general accounting, loans, deposits and applied client information. The system is written in Clipper a DOS based program. In the Piyeli, an accountant uses the system to process the organizations reporting and a computer technician is available in house for support. The operators are comfortable with the system, but he accountant finds it limited, and the computer technician is concerned about continued support and anticipates an upgraded system.

Strengths

Functionally, the system performs many of the required functions. The system performs daily entries, operations journal, general balance, auxiliary balances for loans and deposits in interest and non-interest bearing accounts. It manages whatever loan product that may be composed, payments due, late payments, partial payments, unpaid credits and unrecoverable dues. The system permits linkages between forced deposits and loan accounts. It manages loans and savings for individuals and groups. It calculates interests rates, commissions and penalties. It manages constant maturity dates, maturity dates with constant capital amounts and unique maturity dates. It allows payment different from maturity dates, and provides grace periods. It manages weekly, bi monthly and monthly. Maturity dates and interests calculation of can be based on 360, 365 days or 52 weeks. It manages information by credit agent on a quarterly basis.

Technically the system is relatively sound and proven in the field. It is not complicated to use and agents who become familiar with the system find it easy to use and dependable.

Weaknesses

Microbanker2 does not automatically produce the annual report, the accounts of results, intermediate management balances and annexes for BCEAO. Nor does it automatically calculate ratios according to BCEAO regulations or annual account statements for multiple entities. The system is not programmed to sort by addresses, sex and professions. The system identifies individuals and groups and cannot trace individuals within groups or track an individual's who is already a member of a group or allow an individual customer to join in a group. It is neither multi level or multi language. It does not allow blocked forced savings accounts, or suspend late penalties.

From a technical perspective, although the screens are logical, the sequence and processing ability could be better. Too many keystrokes and manual operations are required for a single process such as printing various slips. The system is written in Clipper for a DOS environment and does not provide modern Windows interface, color, and the use a mouse. The system is not entirely secure. Because the system is written in Clipper it is easy to access and manipulate the source databases with various data management and spreadsheet tools from outside of the system. This is despite the fact that the front door of the system is protected by passwords and different levels of access are controlled in the system.

Users of Microbanker complain that they have not received enough training to to maximize use of the system. It is relatively difficult to obtain immediate support for the system since the support base is in a foreign country.

Cost

The **Microbanker** systems currently cost $800 for every branch that it serves. Installation and customization can take anywhere from 2 weeks to 4 or 5 months for the DOS system and may cost from $10,000 to $60,000 depending on the volumes and complexity. In countries where national experts have been trained the cost of modifications may be less, ranging from $1,000 to $5,000. The buyer is entitled to a 90 days after sale warranty support from one of the authorized support providers by fax or e-mail. Data migration also increases the cost considerably depending on the amount and configuration of the original data. Remote support is available and ranges from $2,000 per year and up. The only additional cost would be to purchase a computer that hosts a minimum of Windows 95 if none is available. There is no documentation cost and user manuals and systems specifications come with the software. It costs 50 percent of the base price to upgrade the software to a subsequent version if this upgraded is requested 12 months after first purchase. We predict 300,000 CFA per month to pay at least two operators to operate the system. There are no additional costs predicted.

Microbanker's EXTE version permits modification of the 20% of the program's source code and costs 8,000 US$. In addition, the user must pay site licenses of $ 400 US$ per site for the first ten sites, $ 250 US$ per site for 11 to 100 sites, and $200 per site for more than 100 sites. The user may otherwise choose to pay 50,000 US$ for the right to install the software in an unlimited number of sites, i.e. branches of the same institution or, as the case may be, of similar institutions.

Sibanque2

The Sibanqe2 system is also an integrated system that manages general accounting, loans, deposits and applied client information. The system is written in Visual Basic and is a Windows based program. SiBanque2 has been installed since August 2000 in Jemeni and in Kafo Jiginew MFIs in test mode for final installation at the beginning of the 2001. Training by the developers has been provided, but most of the functions have not yet been mastered**.**

Strengths

The system performs daily entries, operations journal, general balance, auxiliary balances for loans and deposits in interest and non-interest bearing accounts, annual statements, and intermediary management balances. It manages whatever loan product that may be composed, payments due, late payments, partial payments, unpaid credits and unrecoverable dues. The system permits linkages between forced deposits and loan accounts. It permits blocked forced savings accounts. It calculates interests rates, commissions and penalties. It suspends late penalties. It manages constant and unique maturities. It allows payment different from maturity dates, and provides grace periods. It permits differed maturity payments, accords grace periods and refinancing a loan in effect. Interests calculation of can be based on 360 days

Sibanque2 is written in Visual Basic and operates as modern Microsoft Windows software, and is quite attractive. Though a bit complex, Sibanque2 it is well organized and the screens for inputting, and reporting on data are available directly and/or sequentially with the use of windows menus. The system, because it is written in Visual Basic has security necessary to protect against direct access with other software to view and change the data files. It does provide for different levels of access, restricting users to specific activities. Adequate, but lengthy system and training manuals are provided. External support from France is available and an experienced system developer will usually respond within two days, but support from an internal technical support person is a requirement. The system operates on PCs with Windows 95 as a minimum requirement and requires minimal configuration of hardware. Data in entry screens is displayed rapidly on the screens, but the user must sometimes wait for reports and listings.

Weaknesses

Sibanque2 does not automatically produce BCEAO ratios or consolidate annual account for many entities. It does not manage loan agent activity. It does not mange maturities weekly or bi-weekly. It does not use a 365 day or 52 week divisor. It does not allow sorting or seeking by address, sex or profession. The system identifies individuals and groups and cannot trace individuals within groups or track an individual affiliated with a group. It does not manage external accounts for customers nor is it multi-level or multi-currency.

The system is not yet capable of archiving old unused data or performing full and incremental backups. The system does not adequacy notify file and access violations and has no self-auditing facility besides audit trail on transaction. The system and handles most errors by providing information necessary to react, but it is not well protected against unexpected keystrokes and crashed going into unrecoverable mode when testing. Wide support for Visual Basic may not be yet available in Mali. The system uses Visual Basic/SQL/ and Access supported file structures. The system is expected to become slow

to generate reports and listings when more data is added, but this should not impact rapid access to data on data entry screens.

Cost

The **Sibanque** systems do not require the institution to purchase the software. The institution must instead become part of the Sibanque network and receive the software for fee. There are no charges to modify the application but modifications are limited. The only additional cost would be to purchase a computer that hosts a minimum of Windows 95 if none is available. We estimate 500,000 CFA per year to cover the cost of maintenance. Approximately $ 5,000 would be needed to pay for the technician who installs and trains the software. There is no documentation cost or costs to convert the system from the old to the new. We predict 300,000 CFA per month to pay at least two operators to operate the system. There are no additional costs predicted.

RECOMMENDATIONS

Microbanker2 is recommended for MFIs who make loans with weekly monthly and bi monthly maturity dates and who wish to track credit agents' performances. Sibanque is recommended for institutions that have unique or monthly maturity dates. In both cases balances must be exported to a spreadsheet or other data management software (Access Quick, Pro, Lotus approach), to do consolidations, or prepare BCEAO annexes and CGAP ratios, and other custom reporting.

In this modern Microsoft computing environment, we hesitate to recommend systems that are written for the older DOS environment. MicroBanker 1 and 2, plus Sibanque1 are written for the DOS environment only. These systems, however have been installed and in use for a long period of time and have proven to be technically sound, and meet most the basic functional requirements. Sibanque2, since it is written for the Windows environment is then the logical technical recommendation. Although this system is based on the older proven Sibanqu1, and substantial technical and functional enhancements have been added, the system is not yet in use in Mali. Sibanque2 is in the first stages of the implementation process and has been delivered to two institutions for testing. The guide's support for Sibanque2 is therefore based on test demonstrations and not on its actual field base performance.

In the process of this exercise, we have subtly encouraged MFIs to look into MIS alternatives and exposed them to possibilities. Overall we feel that it is important to continue to encourage dialogue between MFI and support institutions that benefit their operations. APIM serves as a catalyst in this respect and we recommend working with this organization to bring MFIs, system developers, donors, government regulators, and banks together to discuss the MFI automation needs in Mali. This forum should be in pursuit of standard MFI systems that can be used at all levels of MFIs, in multi locations with linkages to other MFI, centralized credit bureau, and to banks and government.

Another next step recommended would be to continue to look at software that exist outside of Mali, that can be applied directly, or with minor modifications to be used by Mali's MFIs.

To add value to the analysis done on the existing programs, especially if Sibanque or MicroBarker are being seriously considered, we recommend talking directly to the developers of the software to obtain a more precise, or other view, of the software's abilities. Discussion with the developers could add value to understanding the software in areas such as the extent of installations, intricacies of the pricing structure, the extent of the support base, future developments (new versions planned), recommended uses, adaptability, associated versions, etc.

Training is critical to the sound installation of the any software chosen. Training is critical to efficiently use the software and to take advantage of all of its functions. It is also critical in passing along skills to other users. Training is critical to keeping the software up and running. Generally, problems will be encountered in using even the most sophisticated software. If the well-trained end-user is able to report accurately on the nature of the problem, solutions may be provided in less time and for less cost.

Service support is a very important aspect, especially in Mali, where local programming support is still limited. Most software vendors will provide software without source code. This protects the product against harmful tampering, but at the same time restricts repairs and system enhancements to the developer. A system error, whether programming or data based, could create down time to the detriment of the organization. To minimize the possibility of this dilemma, the system selected should be simple in design and robust. The system must also be programmed to recognize every conceivable data error and report this is clear language to the user with instructions for correcting the error. The users must be trained to recognize these errors. The developer's record for support should be thoroughly scrutinized. Finally the organization should enter into a long term contract with the developer for help desk support after the warranty and installation period has expired.

Microbanker provides 20% of the source code with its extended version. This gives the user some flexibility in further customizing the software or modifying it to fit particular organizational functions. We recommend applying this concept to any vendor selected, by requiring the vendor to provide all or a meaningful percentage of the code to the MFI. This option works only if the MFI had access to a professional developer who understands the programming language and the software.

At this time, we hesitate recommend a centrally based server sharable by different MFI through direct modem or especially Internet linkages. Although this would make issues related to data sharing easier, the telephone infrastructure and Internet servers in Mali are too overburdened to depend on. It would be better, if data sharing is required to package, files, for example, at days end, and transfer them over the Internet or with the use of diskettes.

The following points were raised in meeting with Zahia Lolila and James Hochschw and should be considered as next steps that would benefit the MIS support program for MFIs in Mali:

- The need to examine source database information such as client profiles used by the systems, and requirements for database relationships, linkages and data integration.

- Future needs of the MFI in regards to facilities such as smart cards, ATM machines, credit bureaus, etc.

- The evolution of facilities such as linkages to banks for checking, direct deposit transactions, and check clearing.

- The MFI needs to produce custom reports and queries and the tools i.e. (Crystal Report Writer), the training required to use these tools, and the possibility of linking these tools to existing and future software.

- Although most institutions in Mali did not look at multi currencies as a requirement, it should be made mandatory in the micro finance automation systems.

- Continued study of cost requirements behind software to fully determine what is necessary to have software installed and maintained for MFIs

These following points were raised from feedback from Weidemann Associates Inc. are recommended as follows:

- Major issue: do we select one of the systems surveyed? This would mean recommending an older proven but inadequate and DOS system, that would be difficult to modify to meet exact requirements, versus waiting for either SiBanqe or Microbanker to come online as a Windows product with sufficient flexibility to meet all needs and reporting requirements.
- As a next step, the study may be improved to focus on better evaluating major problem areas, and expanded to review software in use in other countries that may be adapted to meet Mali's requirements.
- We still need to find a proven system that meets the needs of MFIs in Mali with minor modifications, a good support base, affordable cost, especially for autonomous operations, and other major issues that this survey has uncovered..

2. How could the process be improved the next time?
Developers should also be interviewed. They have more knowledge of the system than end users, since end users are limited to the extent of the training acquired and functions that they are accustomed to.

- As mentioned above the survey could be improved to better highlight important functions that have been brought forward.

3. Do you think other groups/MFIs/donors in Mali would be interested in what has been done this assignment, (i.e., the applicability of his work to others).

- Yes other MFI donors will be interested in the study and guide and should be given a copy of the guide and possibly the report. USAID had mentioned working closely with other donors in this and other sectors so it may be even advisable to hold a debriefing with the other donors when the study and guide is complete.

4. What is needed by the National (Micro finance Specialist) and International (MIS Specialists) to cross function in the study and MFI MIS system support?

- The national consultant has done the data collection on two of the systems assessed in Mali following the guidance. He has proven very effective in collecting the data on the systems, and would have to evaluate its value and prioritize and observe other critical elements that are related to the technical ability of the software.

The international consultant would need more exposure to the functional capabilities, and access to system reports, and historic findings on systems studied.

5. The rating system and how to weight different items to make it a more accurate measure of the appropriateness and viability of the assessment systems in the context of the country for/in, which they are evaluated.

- The ratings system should remain flexible and modifiable to add categories to highlight major issues. Some of the measurement criteria that are out dated, redundant or not important or applicable may be deleted or skipped.

6. How to best evaluate the user cost of different systems.
The collection of measurement criteria in the framework's cost analysis may be modified as follows for clarity and to bring to date:

1. Base price and license to include technical documentation
2. Installation, and training cost to include training manual.
3. On-site rate/plan for data migration, maintenance, and modifications.
4. Off-site rate/plan for data migration, maintenance and modifications.
5. Off-site tech support (help desk) rate if any.
6. Software, network and equipment requirements over PC, standard DeskJet/Laser printer and UPS
7. Cost of source code if permissible
8. Upgrade cost and terms

7. How we can go beyond evaluating systems in Mali to expand upon this study to include other systems not yet in use in Mali that we maybe could be involved in bringing into Mali and/or other countries in West Africa. (E.g. the Computer Consulting Corporation Credit Union Software that is used in 20% of US credit unions and others in Central America and the Caribbean and Software Solutions in Kenya, which we know has a bank software adapted to MFIs and in French, a similar software is South Africa but has support problems, etc..

- We could carefully identify these systems and visit the developers and customers using these systems and use an improved version of this study to evaluate the software. It more likely that an adaptable system that comes closer to meeting the 100 percent optimum level in the evaluation used will be found.

8. What LOE would you envision to implement the development of the MIS system for GGLS recommended in your report?
A developer that is experienced in developing financial programs in ACCESS or Visual Basic may be envisioned.

In both the preliminary and final debriefings, USAID/Mali suggested centralized coordination of MIS inituitiatives through APIM.

We support APIM as a centralized coordinating body for MFI MIS. We do recommend evaluating their capacity to do so and shoring up their ability. Their role as a MIS coordinating body may be in the capacity of advising on the selection of automated MIS systems, becoming a source for technical and functional standards, and in general becoming the major point of contact for MFI MIS automation. MIS coordination by a centralized body such as APIM could then become the catalyst for launching future work in micro finance banking automation.

THE GUIDE PRODUCED

The reason for creating the guide is to aid MFIs working in Mali in selecting systems that manage their micro finance operation. The approach adopted in designing and writing the guide is for the MFI to use the guide as a functional and technical reference, depending on the type of MFI in which his or her institution is categorized. From this point of view, the reader will be shown which system best suites the institution's needs.

The information in the guide ranges from narrated observations with supporting summary tables to detailed tables of finding. The guide may therefore be used an information source to help in deciding and finding an information system to a technical references covering the functional and technical capacities of the systems studied. In this respect, summaries, narratives, and the authors' recommendations are placed in the front of the guide. After reading the first sections of the guide, and based on the authors' recommendations, a quick decision can be made in selecting the software that meets the needs of a particular MFI.

More detailed tables are placed in following sections of the guide. These tables may be used to verify that particular concerns are met by the system under consideration. The detailed references also provide supporting documentation, informing readers on how the finding and recommendation in the guide were made. To demonstrate these points and for the MFI official to obtain the maximum benefit from the guide, the guide provides information on who should use the guide and how it should be used.

The guide is written in language that can be understood by general mangers, financial managers, and information system professionals working in the MFIs. The object is to use this guide to aid them in making a sound decision when choosing between these systems, or in deciding if these systems would meet their needs. To aid in this measure, both the financial and computer language has been toned to increase dialogue between the financial and information officers in making their decisions.

The guide is the product of the detailed study made of requirements of MFIs working in Mali, and of systems in place, selected for this study. To best transfer the findings of the study, the guide is organized to show MFI requirements identified, results of the micro finance computer systems evaluated, how these systems compare to each other, and how and what components of these systems meet the MFI requirements. The guide is therefore composed of these sections:

Section 1: Identifies and give brief information on the software selected and the classification of MFIs for study and presentation in the guide,

Section 2: Provides narrative, summary analysis and findings from the authors, complete with recommendation on which systems are recommended for particular MFI.

Section 3: Contains tables with specific comments within the various topics to provide answers to questions.

Section 4: Contains tables of the ratings given to every system at the category level.

Section 4: Contains tables by MFI of the ratings given to every system in determining how much of the MFIs needs are satisfied by the system.

ANNEXES: contain more detailed tables of the findings

Data evaluated and presented throughout the guide are organized under three levels; Categories, Topics and Measurement Criteria.

Identical categories and topics references are used throughout the guide when demonstrating systems and MFI requirement evaluations. Measurement criteria used in field interviews are in the guide's annex. The results of the finding collected as measurement criteria are rolled up into the topic tables and further summarized into the category tables. Cross tabulation tables are also used within the guide to show different views to aid in decision making, understanding the finding, and determining how the various systems meet the needs of particular MFIs.

The guide demonstrates requirements established for the MFIs by providing the topic listing as a comprehensive list of the requirements by placing an "X" for items that are required for the particular MFI. The guide also explains the criteria used to obtain the ratings in the guide. Different formulas are used to establish these criteria. These methods are explained at the beginning of the summary and narrative sections of the guide to show the logic behind the evaluation of information collected and presented. The object is to provide the MFI with a tool to understand the reasoning used to obtain the rating presented, the basis of the rating and the linkages between the different evaluation tables in the guide. The list of requirements serves as a basis for build on future requirements. The listing also provides the MFI was a base to adjust the ratings established, should they disagree with any one particular aspect of the findings in the guide.

In comparing the systems studied, the guides comparison of these data processing systems demonstrates the degree of strengths and weaknesses using data collected from the system in used by fellow MFI agents, and not from commercial marketing claims. In addition, the breakdown of issues contained in the format's categories and topics provides the MFI officials with issued to consider when evaluating the software they are currently using, the systems in this guide or other systems that they may be developing or acquiring.

The guide provides information for acquiring the software evaluated in the guide. The information collected to compare finite cost considerations provides an important source of concerns to consider when acquiring systems.

Users of the guide are made to understand that the information may be regarded from a functional, technical, and cost perspective in relation to their MFIs automation requirements. SFD officials may therefore focus on their area of interest when using the guide. These different aspects are focused under different categories of the study as follows:

Functional:

Source data information

Functionality and Expandability
Reporting
Standards and Compliance

Technical:

Usability
Administration and Support
Technical Specifications and Correctness

Costs:

Pricing Structure

The guide summarizes four ways that the MFI official may use the document. It suggest that the reader:

- Start reading from the front until satisfied with the system to select
- Follow only functional, technical or costing trails.
- Read the entire guide to understand how finding and recommendations made up front were derived.
- Go to specific sections as a reference to search for particular references.

ANNEX 1 – GUIDE TO SELECTING MFI SYSTEMS IN MALI

(This is in a separate report.)

ANNEX 2 - REVIEW OF GGLS MANUAL PROCEDURES

DRAFT REVIEW OF
Save 4the Children GGLS Bouginie
For Weidemann Associates, Inc.

By Robert E Wilson II Friday, September 08, 2000
International MIS Consultant

INTRODUCTION

Save the Children's GGLS program is based in Bouginie in southern Mali. GGLS started in 1995, is a solidarity micro-credit-lending program, and currently administers one credit product. The GGLS program is currently supported by Save the Children's funds but is in the process of privatizing and becoming a localized micro credit institution. The program will start the registration process in September 2000 and expects to become a local institution in January 2001. After becoming indigenous, GGLS will increase its credit products to three, to include a voluntary saving program.

Under contract with Weidemann Associates Inc., I visited the program site on August 30, 1999 and met with:

Patrick Conners, Save Mali's Deputy Director
Adama Camara, GGLS Program Coordinator
Adama Diarra, Charge de Program
Lasine Kone, Branch Coordinator,
Tagara Moussa, Chief Financial Officer

I later met with Ms. Bintou Niang, Save's Technical Advisor for Credit on return to Bamako.

GGLS is structured under Save's Program office in Bamako. It is composed of a program headquarters in Bougani and two program branches in the program zones. The branch offices are staffed with the Branch Coordinator Supervisors and field credit agents.

Save has previously expressed the need to Weidemann Associates Inc. for integrated software that will manage the program's operations (accounting) and the program's credit tracking operations. The program's personnel currently use a manual system, which consist of paper forms and reports and Excel spreadsheets. This visit focused on assessing their credit tracking system in preparation for an automated credit tracking application and a subsequent accounting application that would to be integrated with the credit tracking system.

I found the manual process basic and refined. Although basic in nature, the manual process is nearing the end of its effectiveness as more clients currently (5,000 to 6000 individual members) are added to the micro credit program and more demands are placed on managing the MFI. The program members express increasing difficulty in keeping track of loans, maintaining credibility in accuracy and generating management and financial reports, in addition to reports that are required of the organization. There is also the expressed need to reduce the volume of paperwork required of the field agents and supervisors, freeing them up to work with the clients on developing their economic activities.

The program's manual system can be transformed into automated processes using MS Access as the programming software to develop an application that is easy to use, adaptable, flexible and easily maintainable. Programming with Visual Basic, However would offer better system security and more functions

This is a brief report of the program's existing manual system and basic requirements for the automated credit tracking system as well as a preliminary statement of interest to provide the program with an automated credit tracking and accounting system.

EXISTING MANUAL SYSTEM

The branch field credit agents are responsible for motivating the population in organizing credit associations and credit groups to participate in the program credit's program. All credit groups are composed of 6 women and are under the auspices of a credit association, which is composed, of 5 persons, representing a maximum of 8 groups.

Product Description:

The program's current single loan product is described as follows:

- Client group must be composed of 6 women.
- On loan request approval the group must deposit a 2% management fee to the program.
- Each woman in the group receives 5,000 to 27,000 CFA in loans initially and increased access to micro-credit funds after the first successful loan cycle.
- The loan period is for 6 months
- A simple flat annual interest rate of 25% or 12.52% for the six-month period is charged.
- The group is forced to save 10% of the loan, to be held by the program and reimbursable after completion of the credit cycle. This saving is also used to guarantee repayments.
- Loans are reimbursed monthly (on a given date or particular week of the month)
- Women in the group guarantee their members' delinquent payment by paying on their behalf.
- A .5% fee is also collected to aid paying off loans left by deceased members.
- Loan reimbursements are therefore equal to the principle + interest + forced savings.
- If a group want to continue after the first successful loan cycle, they may only withdraw 50% of their savings or withdraw all of the savings and keep the same level of credit.

Credit Acquisition Process

The credit acquisition process for this credit product works as follows:

- A group of 6 women are organized into a client credit group.
- The women identify economic activities for credit.
- The field agent trains/brief the group in micro-credit loan management.
- The women present their plan/credit request to the credit association for approval.
- The credit association approves loan requests based on viability, history and qualification, and rejects or modifies the credit request for approval.
- The credit association submits approved loan request to the visiting GGLS field agent.
- The field agent accepts, rejects or modifies the loan request.
- The field agent produces a contract to include a loan repayment schedule.
- The contract is signed between the Branch Coordinator, the group and the association.
- The field agent collects the 2% management fee.

- The field agent submits the management fee, loan request and contract along with other loan requests and contracts to the program office.
- The accountant packages all loan requests and contracts for a given field agent, writes a bank check and gives the batch to the Program Coordinator for review and to sign the check.
- The Program Coordinator manually adds all of the contracts to verify the check amount and signs the check.
- The field agent receives the check all loan amounts, is issued a receipt and cashes this check in a local bank.
- The field agent returns the loan amounts in cash to the group and collects a receipt of payment from the groups, signed by the group's president.
- In general, all members of the group must be present when the group to receive its loan.

Loan repayments:

- On the contracted loan repayment schedule the field agent meets with the group(s) and loan association, collects the credit repayment, and issues a receipt.
- Field Agents produce a manual report on a form indicating all loan repayments collected.
- Supervisors at the two branch offices summarize this report
- The Field Agents bring in cash collected, receipts, and itemized reports to the program office after not more that 1week.
- The Accountant at the program office collects the cash, receipts and reports, and issues a receipt to the Field Agent, make manual entries in the program journal, makes electronic entries into an Excel spreadsheet journal, and make manual entries into the group's profile sheet.
- The two branch offices submit the manual summary reports of credit transaction on paper forms to the program office on a monthly basis. These reports are manually compared to entries in the program office's journal.

Additional Operations

Following are additional operations especially associated with program accounting:

- Operating funds received from Save in Bamako, bank deposits and withdrawals and operational disbursements are entered into the program journal and general ledger along with loans paid out and repayments received.
- The program uses information collected in the Excel journal to prepare monthly quarterly and annual reports, verify the manual ledgers, and query information.
- The program office generally does not hold any more that 5,000,000 in its safe at any given time. Cash collected in excess of this is deposited into the bank (BNDA) and entered into the manual and Excel journal with a deposit slip.
- No banking benefits (interests are received but small bank fees are paid)
- No blocked account is maintained.
- Bank reconciliation is done monthly

AUTOMATED APPLICATION REQUIREMENTS:

A preliminary analysis of the GGLS automated application requirements was conducted during this visit using the Microenterprise Best Practices "Management Information Systems for

Microfinance – an Evaluation Framework" guide and additional environmental norms. Following are the results of this analysis:

Functionality and Expandability

Functional completeness appropriateness and integration:

- ***Accounting package:*** Require basic, even off the shelf, accounting package to track income and operational expenses such as payroll, that integrates with the savings and loan tracking system and generates a moderate range of financial reports.
- ***Portfolio tracking:*** Required to track client loan portfolios electronically that match forms maintained by clients for printout only for trouble shooting, permits product definition, monitors forced savings and fees, segregates field agent activities, and manage delinquencies.
- ***Deposit monitoring*** required to monitor variable forced and voluntary client savings and bank deposits.
- ***Customer Information system:*** Necessary to maintain easily accessible unique customer profiles containing full group information and limited individual information, loan and repayment history, and economic activity.

Expandability and institutional growth: This should be designed for growth that acquires additional products to include voluntary savings, sustain transfer from an NGO to indigenous institution, and append additional branches and clients.

Flexibility:

- ***Customer-centric vs. account-centric:*** Requires customer centric design, allowing groups to potentially have more than one account such as a savings account, and permitting client profiles associated with various accounts.
- ***Institutional types:*** This is required since the GGLS envisions becoming an indigenously managed solidarity group with a flexible mandates.
- ***Lending methodologies:*** Lending methodology should be limited to lending to groups, and potentially to individuals and village banks.
- ***Loan interest types:*** Flexibility is needed for different products and penalties for late payments.
- ***Savings and deposit account types:*** Flexibility is required to cover anticipated voluntary savings products.
- ***Deposit interest types:*** This is needed to manage potential blocked accounts.
- ***Payment types:*** Necessary to manage irregular payments, variable term configurations, prepayments, payment methods (check cash) and other modifications such as penalty suspension, loan payment deferment, grace periods, refinancing, and reconfiguration of groups.
- ***Payment frequencies:*** The program especially requires flexibility in monthly vs. once every four-week payment configurations because of client illiteracy.
- ***Multiple branches or regions:*** The system should have to capacity to add additional branches but is only required to operate in one vicinity.
- ****Multiple languages:*** This function is not needed unless the system is designed to produce special forms in the local language for client use.

- ***Multiple currencies:*** Currently, this is not needed since the West Africa CFA is the only currency used in the nation and closest bordering states.

Usability

Ease of use and user friendliness: The system should be easy to use and straightforward, containing on line help, user documentation, error correction facilities, robust and requiring minimal training (1weeek) on site by developer who could pass training instruction responsibilities to a trainer on the program

User interface: Windows interface for PCs is required with attractive physical appearance using logical sequential flow of screen, colors and/or menu drivers, in French language directed at operators, and with independent keyboard and mouse assess throughout.

Reporting

Reports:

- ***Management reports:*** Required to provide high level (summary) information such as key statistics, programming, and staff performance and work load, and budget reports for management decision making.
- ***Operational reports:*** Needed to provide access to asset, payroll, petty cash, and check disbursement and receipt information in operational accounting.
- ***Client reporting:*** This should detail principle due and paid, outstanding portfolio, interest due and paid, savings due and paid, late payments, risk portfolios/write-off, payment schedules by group, rural/village urban/neighborhood, association, field agent, branch office and program office:
- ***Financial reports:*** Necessary for managing journals, ledgers, trial balance, financial statements, and audits.
- ***BCAO ratio reports:*** Reports on rations such as savings to loans saving to portfolio, etc. are required annually by the central bank for all operating MFI.
- ***CGAP reports:*** These reports and not essential required, but program leaders would like to have them as management information.
- ***Specific reports for partners:*** These reports should be in n specific formats as requested by partners and donors.
- ***Custom self-design reports:*** These types of reports are equipped for ad-hoc reporting using programmed flexible configuration, and or direct access the application's database using programmable reporting tools such as ACCESS or Crystal Report Writer.
- ***Queries:*** The staff would like the ability to query database for on-line research using Access query tools.

Report generation: The program requires that all to specific reports are generated on demand, daily, weekly, monthly, quarterly, bi-annually, annually or historically. Transferable report data, (to spreadsheet and word processor), and reports generated in A4 for distribution. Electronic transfer of report for distribution within and outside of the organization is also desirable.

Standards and Compliance

Accounting soundness and standards: The application provided should be designed based on the French accounting system, and meet Mali's legal requirements. Accounting facilities should be provided to access on line ledgers, post partial and late payments, differentiate between current and delinquent loans, and accrual versus cash. The application should handle post interest and principal due and cease to accrue interest on late repayments.

Governmental and supervisory adherence: In meeting the needs of a registered MFI the application is required to adhere to government regulations and be modifiable to accept changes in regulations and the central bank (BCAO).

Administration and Support

Security: The application is required to be password protected and provide different levels of access for editing and viewing. All transactions should be stamped with the registered user and the system should provide a audit log of all transactions and security violations. For additional security, time of day restrictions should be provided and facilities should be provided to easily store data off the system.

Backup and recovery: On line facilities to back up and restore full, incremental, and archived data is required.

Fault tolerance and robustness: The system is required to handle errors by informing the user in lay language and to safely abort transactions. The system should be sufficiently robust to avoid rupture should the user do something unpredictable.

End of period processing: At the end of prescribed periods, the system is required to accurately post interest, calculate late fees, close the books, and prepare for end of period reporting. The application should move transactions from the journal to the general ledger on a daily basis.

Support infrastructure and maintenance: Support and maintenance is required from the developer or from responsible professionals in the near vicinity. The source code should be left on site for this purpose. Change request should be carefully though out before the source code is modified. User manuals and training documentation is required for user reference, training, and code modifications.

Version control and upgrade strategy: Parallel installation in required. The initial installation and moderate to major modifications should run in parallel with the manual procedures or the existing system respectively until accuracy is confirmed. The program office should ensure that this source code is backed and kept separately catalogued before any enhancements or modifications are made, should recovery be necessary. New versions should be tracked, marked clearly on the application, and catalogued.

Technical Specifications and correctness

Technology and architecture: The system is required to operate on a stand alone basis, adaptable to a MS Network environment, using MS Access database structure, on a PC platform acceptable to a minimum configuration, using MS windows interface. The program will be developed using MS Access objects, macros and Visual Basic built in code.

Performance: Performance will depend largely on the existing hardware disk storage and memory capacity. The program however will be required to use efficient screen and database design to reduce drag, increase performance and protect data access in a multi user environment. The application is required to minimize the amount of space needed when empty and for every new product, client, and transaction.

Number and date handling: The application is required to provide for a minimum of 13 numeric characters and process years in 4-digit configuration.

Cost

Pricing and cost: The software is expected to be provided at minimal initial cost, without licensing fees, but with proprietary protection. The same minimal cost considerations are expected for future enhancements, network configuration, off and on-site support, training, documentation, conversion, and new upgrades.