

**Access to Microfinance & Improved Implementation of Policy Reform
(AMIR Program)**

Funded By U.S. Agency for International Development

**Computerization of Ahli Microfinance Company
& Jordan Credit Company**

Final Report

**Deliverable for SMI Component- 3.1.1 MIS Software RFP
Trip 1 - Needs Assessment - Assisting MFI Lending Program
Contract No. 278-C-00-98-00029-00**

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List of Acronyms

AMC	Ahli Microfinance Company
AMIR	Access to Microfinance and Implementation of Policy Reform
CHF	Co-operative Housing Foundation
JCC	Jordan Credit Company
JNB	Jordan National Bank
JWDS	Jordan Women Development Society
MFI	Microfinance Institution
MIS	Management Information System
NHF	Noor Al Hussein Foundation
SMI	Sustainable Microfinance Initiative
SQL	or SEQUEL—Structured English Query Language—a universal database query language

Jordan National Bank and the Noor Al Hussein Foundation are each creating a microfinance institution—the Ahli Microfinance Company and the Jordan Credit Company, respectively. The consultant's main tasks, as identified by AMIR, were to

- Write a management plan to procure and install a management information system for accounting and portfolio tracking in the two microfinance institutions. This plan was to take into account AMIR's preferred strategy of finding a common management information system for all USAID-sponsored microfinance enterprises in Jordan, and one that could be marketed world-wide.
- Develop a package of *Request for Proposal* documents for the procurement of such a management information system.

After reviewing Ahli Microfinance Company's and Jordan Credit Company's business plans and pertinent documents as well as speaking to representatives of these and other organizations, the consultant came to the following conclusions:

- No microfinance product fits the needs of every microfinance institute, and AMIR should not expect to create one. (See Appendix X, Differences in Microfinance Handling.)
- Ahli Microfinance Company and the Jordan Credit Company first need to decide whether to create a custom management information system now or postpone this step until later.

Developing a custom management information system now would be easier for the Ahli Microfinance Company, which has access to Jordan National Bank's computer system. The Jordan Credit Company, however, has no access to an established computer network, so this step would be difficult now.

- Bankware 2000, a Jordanian software house, is developing a custom management information system for the Cooperative Housing Foundation. On initial analysis and apart from the fact that it is a loan tracking only—without an integrated G/L, the system appears to be too demanding in terms of hard ware and personnel support and is not, at this stage, an advisable alternative for the start up MFIs. Such a solution is only feasible if the customer base has grown beyond 10 to 15,000 clients and the number of branches gone up to 10 or more.

However, as soon as this program is installed at the Cooperative Housing Foundation, the consultant will thoroughly analyze the program for potential implementation in the new microfinance institutions.

- The consultant advises using an off-the-shelf management information system for the first three years. Although such a program might have limitations, it could handle all the microfinance institution's present information needs, and would be operational by November 1999.
- The off-the-shelf system will be evaluated six months after it becomes operational (May 2000). This evaluation will most likely lead to a detailed *Request for Proposal* for a more powerful management information system.

1.0 INTRODUCTION

Both Jordan National Bank (JNB) and Noor Al Hussein Foundation (NHF) are creating microfinance institutions (MFIs)—Ahli Microfinance Company (AMC) and Jordan Credit Company (JCC), respectively. Each of these new MFIs intends to achieve financial self-sustainability within five years: the management information system (MIS) used by each MFI will be a critical factor in achieving this goal. Initially neither MFI will require a complex MIS solution, although future developments may demand a more sophisticated system. This document outlines a plan that will enable the MFIs to achieve operational goals in the most efficient way possible by selecting and implementing an appropriate MIS. The document also proposes a plan to ease the transition to more suitable MISs, if necessary, at a later date.

2.0 Computerization ESSENTIALS

2.1 Connecting Branches to a Head Office

Because this document makes frequent use of the terms *file-server* and *client-server*, a brief review of their meaning is useful.

A file-server application is one that resides in the workstation and accesses data-files on the server. The server only handles the read and write operations on the data-files. On the other hand, a client-server separates data processing into client and server components. Because the server runs an application independently, the database remains protected. The client has data-processing capabilities through validation procedures in data-entry screens. Client-servers increase performance and security, but they require more maintenance.

There are many possible arrangements for a computer infrastructure operating between branches and the head office. The following are four options, listed in order of increasing complexity and cost. The first three arrangements require a file-server application, while the fourth requires a client-server application. For each option, the head office receives data either by means of a dial-up connection or diskettes.

1. Each branch has a stand-alone computer for tracking loans, and the head office does the accounting. This arrangement is most useful during the start-up phase of an organization.
2. Each branch has a small peer-to-peer¹ network where a data-entry clerk enters loan and accounting data. The supervisor/branch manager has access to the data from a second computer. Data is not protected because anyone who starts up the computer has access to the files. The head office can have a peer-to-peer network, but a Novell (3.12 or 4.0) or WindowsNT network would be more effective. This arrangement is useful for about the first 3 years of organizations such as AMC and JCC.
- 3 Each branch has a Novell (3.12 or 4.0) or WindowsNT network with a dedicated server and two or more workstations. Data is safer than in the first two arrangements because is not available without logging on to the server, however data is accessible from outside the

¹ A peer-to-peer network is the simplest form of network where each workstation is connected to the others, allowing users access to each others' hard drives.

application. The head office has the same kind of network as the branches. This arrangement is useful if the number of network users grows to 3 or more.

- 4 Each branch has a Novell (3.12 or 4.0), WindowsNT, or Unix network with an Oracle database and two or more workstations. Loan tracking and accounting data cannot be accessed without logging on to the network and starting the application with the proper access rights. The head office has the same kind of network as in the branches. This arrangement is useful if each branch has 10,000 loans or more, and the organization as a whole has 10 or more branches.

Options 1, 2 and 3 need a file-server application, option 4 requires a client-server application.

If - in situation 2 and 3 - the branch needs to query the corporate database at Head Office or Head Office needs to query the branch database located at the branch, the whole database has to be transferred from one office to the other. In option 4 the query is processed at the server where the database resides and only the result of the query is transferred from Head Office to branch or vice versa. Normally there is no need for either one to query the other's database. It is only useful if the MFI wants to offer its clients the service of repaying a loan in another branch than where the loan was taken originally.

From the point of view of organisational development, a startup MFI has different requirements to those of an MFI with 15,000 clients. A loan tracking program that is suited for the last situation, will be over-kill in the first. On the other hand a spreadsheet solution that does what it should do in a small MFI, won't work with 15,000 clients.

2.2 The Computerization Process in General

A custom-made MIS, and involves the following stages:

Feasibility Study

An inventory is taken of the user's information needs and specific processes related to their work. The result will determine which areas can be addressed by computerization. A rough schedule and cost estimate follow, and a project team including the chief of the department where the computerization will take place, one or two users, and the (external) analyst/developer, is assembled. This team reports to the general manager/director after each stage of development.

Data Analysis

This defines functional specifications of the program, including content of all input data, content of all output reports (on screen, printed, or as files), menu items, backup and recovery utilities, re-index utility, nature of the program (multi-user or single-user), user access, and company logo.

This - and the next stage - are often under-estimated. The client wants the programmer to start programming as soon as possible. But, like building a house, if you don't build it according to a plan, it will be very unstable. In this and the next phase the plan is developed. Both stages take about 20% of the total time needed to create the product.

System Design

This specifies the system requirements: development tool to be used (Dbase, Foxpro, Access, etc.), operating system (DOS, Windows, Novell, etc.), and hardware requirements (RAM memory, processor, printers, etc.). The consultant then creates a database dictionary and defines the database structure (tables, fields, field characteristics, relations, indexes, etc.). Finally, the consultant defines all screens with their function and a list of items (labels, textboxes, list-boxes or combo-boxes, check boxes, save and cancel buttons, etc.).

Programming

Before programming begins, the future users preview prototypes of the data entry screens to avoid having to make changes later. Programming will then proceed according to the agreed-upon specifications.

Conversion of Old Data

If existing data is to be computerised, additional complications may arise: is the data available in a manual form or is it computerised? How reliable is the data? How relevant is the data? From which point in time should we start putting data into the computer? What do we do with data that was created in a former system with functions that are no longer valid? What do we do with errors found? See here some of the problems that have to be resolved.

Testing

The testing phase is critical in the life cycle of an application. Any application comes with bugs, even the most sophisticated application. Bad testing results in shortening the life cycle of the application. The users find lots of bugs, get dissatisfied, become disinterested and finally throw the application away. This should not happen. The more time that is spent on testing the application, the brighter its future. For some applications half the development time is spent on testing!

The company that ordered the application, should be involved in the testing and should have enough time to test the later day-to-day work. Testing should be done thoroughly!

Testing is often split between testing the screen objects at the software house for just a couple of days and testing the correctness of the in/output at the company's site.

Implementation

During this stage, the software house will provide training for several MFI users (who in turn will train their colleagues), technical manuals, and user's manuals.

Revision

This is the last step after implementation. Revisions will correct bugs in the system, and address additional information needs (new report facilities, changes in existing report and screen formats, additional controls, etc.) or changes in the hardware (from single-user to multi-user, changes of platforms, introduction of wide area networks, etc.).

3.0 THE COMPUTERIZATION OF THE AHLI MICROFINANCE COMPANY AND THE JORDAN CREDIT COMPANY**3.1 MIS Considerations**

In developing an MIS strategy, the following needs to be taken into account.

Infrastructure

AMC and JCC will each have a head office and two branches. Initially AMC will operate out of JNB branches, which use a Unix-based network. AMC will most likely use this JNB banking system, so their microfinance software must run on a Unix network. On the other hand, JCC will not have access to any established computer networks.

Workload

According to projected MFI activity², there will be at least 10000 data entries required per month—an amount of work that necessitates hiring a data entry clerk³. For this arrangement one computer per branch would be sufficient for the MIS.

The MIS must have the capability to respond to the following standards and procedures options:

a) Group Approach

Both AMC and JCC will initially focus on individual loans, but may want to make group loans at a later date. Allowing group leaders to handle their own administration would free the MFIs from having to track the loan repayments of every group member. This would both simplify the MIS and reduce the amount of data entry.

b) Accounting

Access to Microfinance and Implementation of Policy Reform (AMIR) advocates integrating two applications—loan tracking and accounting. Although such an endeavor is possible, it would be better if loan tracking and accounting were part of one single application, then data-retrieval from both sources would be much easier.

c) Interest

Both AMC and JCC intend to collect interest at a flat rate up front. The MIS should be flexible enough to alter this formula.

d) Repayment Schedule

² Each branch has 6 loan officers, each loan officer has a portfolio of 150 loans (after 16 months), and the supervisor has 75 additional loans, totalling approximately 1000 loans.

³ At a similar Jordanian MFI, one data-entry person spends 60% of her time administering 500 outstanding loans.

The MIS should be able to accommodate payments made weekly, biweekly, monthly, quarterly, semiannually, or in full when the loan is due.

e) Write Off

The MIS should be flexible enough to adjust the period for writing off loans.

f) Reporting

The MIS should be able to generate reports on three different time lines and in a variety of formats as shown overleaf

Report Title:	Needed by:	Frequency:	Report Due on:	Period Covered:
Dues Report	Loan Officer	Weekly	Start of the week	This Week
Repayments Report	Loan Officer	Weekly	Start of the week	Last Week
Reminder Letters	Loan Officer	Daily	Every Day	Any arrears \geq x days
Transaction Report	Branch Manager	Daily	Every Day	The same day
Loan Application Report	Branch Manager	Weekly	Start of the week	Applications in Queue
Loan Disbursements	Branch Manager	Weekly	Start of the week	Last Week
Repayments Report by Loan Officer	Branch Manager	Weekly	Start of the week	Last Week
Indicators Report	Branch Manager	Monthly	Start of the week	Last month
Ageing Report	Branch Manager	Monthly	Start of the week	Last month
Staff Incentives	Branch Manager	Monthly	Start of the week	Last month
Cash Flow Statement	Branch Manager	Monthly	Start of the week	Last month
Projected Cash Flow	Branch Manager	Monthly	Start of the week	Last month and next 3 months
Trial Balance	Branch Manager	Monthly	Start of new month	Last month and last quarter
Income and Expense Statement	Branch Manager	Monthly	Start of new month	Last month and last quarter
Actual to Budget Income and Expense Statement	Branch Manager	Monthly	Start of new month	Last month and last quarter
Balance Sheet	Branch Manager	Monthly	Start of new month	Last month and last quarter

Options not available in the MIS

The (draft) Request for Proposal contains some basic requirements that would limit the scope of this MIS.

- Loans can only be given to individuals or groups, not businesses⁴
- No savings balance is needed as collateral for a loan
- Information on savings balances is not available from within the program
- Disbursement in installments is not possible
- Loan officers/supervisors don't decide which defaulters are penalized
- Loan officers/supervisors don't decide which loans are written off

3.2 Current Loan Tracking Programs in Use in Jordan

All though this consultancy addresses the immediate needs of JNBMC and JCF, we will start with a look at what all MFI's are using in Jordan.

MFI	MIS	Company	Platform	Remarks
CHF (Cooperative Housing Foundation)	Micro 2000 (not in use as yet), planned for May 1999	Bankware	Oracle	an adapted version of Bankware 2000, not complete yet, no accounting module
SAVE/JWDS	An in-house built MIS, back-office	-	Access	Is nearing its practical limits
NHF (Noor Al Hussein Foundation) c.q. JCF (Jordan Credit Foundation)	None	-	-	-
JNB (Jordan National Bank) c.q. JNBMC (JNB Micro-finance Company)	Bankware 2000	Bankware	Oracle	Bankware is still working on porting this program from Informix to Oracle.

Bankware 2000 is a product developed by a Lebanese company and marketed and supported by Bankware in Jordan. It was originally developed in Informix. Bankware is 'translating' this to Oracle. Bankware 2000 runs on a Unix or WindowsNT network and requires an Oracle database. Based on this application, Bankware is producing a micro-finance derivative - also for a Unix or WindowsNT network with an Oracle database - called Micro 2000. By April 15, 1999 the program is supposed to be delivered for CHF. Implementation will take 1 month.

SAVE/JWDS is using it's own home-made system. It is an Access application that has been developed and updated as the micro-finance activities grew. A couple of reports have to be generated by exporting data from Access to Excel. SAVE/JWDS is not unhappy with the system, but might be interested if something superior becomes available.

⁴ Business loans are not a priority for AMIR, and allowing business loans would unnecessarily complicate the program. This limitation could be overcome by counting business loans as personal loans to the director of the business.

3.3 Risk Analysis for Off-the-Shelf Software vs. A Custom MIS solution

For optimum performance the MFI should consider the complexity of its loan-tracking programs to its requirements—excessively complex or excessively simple programs are counterproductive. If, due to financial or time constraints, the MIS program cannot meet the desired specs, the reporting features, which can be added later, should be cut back. It is more difficult to adjust data entry features, so these should not be compromised.

Implementing off-the-shelf software entails the following risks and problems:

- a) Support is often inaccessible.
- b) Data errors can't be fixed within the program and
- c) Double administration for loan tracking and accounting requires excessive data entry.

The following solutions will address these issues:

- a) In order to avoid support problems the program should be relatively simple.
- b) Because of the potential for fraud, the MFI manager must know how to fix errors from outside the program. This requires a thorough understanding of the database, the tables, and the fields.
- c) Data may be entered into both the loan tracking and accounting systems. This improves control but increases the data entry load. Alternatively the loan and accounting administrations can be connected. This would reduce the amount of data entry, but at a cost to data control.

The performance risks involved with developing a custom-made application are:

- a) The software house does not produce a quality product.
- b) The analysis report is flawed, and
- c) The program contains too many bugs to be operational.

The following solutions will address these issues:

- a) Identifying a reputable software house.
- b) Getting a second opinion on the analysis report, and
- c) Guaranteeing a testing period during which the software house repairs all bugs free of charge, and within a set period of time.

3.4 Custom MIS: Now or Later?

AMC and JCC can either build a custom-made MIS now or later. Building one now would require a very flexible—and thus complex—MIS that would require continuous modifications as loan policies change. Postponing a customized MIS would require the use of manual administration or off-the-shelf software until the custom MIS is built. The pros and cons of each option appear below:

	Now	Later
Functionality	Potentially limited in the long term because it is based on start-up requirements, which are likely to change as the institution matures	Will meet long-term needs because it is developed after policies have solidified
Reporting	Initial reporting is feasible and reports can be produced on time	Initial reporting will be delayed and possibly impeded
Cost	More expensive because MIS should be more flexible and because of modifications as policies change.	Less expensive, MIS need not be as flexible, changes in policies will not be so frequent.

Chances of success	<p>Less likely because:</p> <ol style="list-style-type: none"> 1. Management capacity of MFI's is limited at startup 2. MIS will be more complex because of higher flexibility and will thus have more bugs 3. MIS will be modified regularly because of policy changes which might make the MIS a patchwork 4. Introduction of MIS comes at a stage when users go through a lot of changes already and might be less willing to accept the inconveniences of a new MIS 5. 	<p>More likely because:</p> <ol style="list-style-type: none"> 1. Management knows better what is needed 2. MIS will be less complex and probably have less bugs 3. Policy changes will occur on a less frequent basis and modifications of MIS are less needed 4. Organisation will be in a more stable situation and users will be more likely to have patience with an incorrectly working MIS
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4.0 Conclusion

The JNBMC's major shareholder is a bank and JNBMC will be starting its life in the branches of JNB. It could make full use of JNB's client-server environment for its micro-finance transactions. Especially as a local company - Bankware - will have a loan tracking product available - Micro 2000 - that is created for this environment.

However, the dependence of JNBMC on a heavy JNB computer infrastructure - a Unix server and Oracle database - is not an advisable alternative. With an average of 1500 annual loans for the first 4 years, the costs per loan would be just too high. From the point of view of costs involved and also with regard to the

technical know-how required to keep such a system in the air, this setup is not recommended. Such a solution is only feasible if the customer base has grown beyond 10 to 15,000 clients and the number of branches gone up to 10 or more.

JCF on the other hand, originates in NHF, a local NGO. It has no experience at all with computer networks or a MIS. It would be an enormous overkill to install a client-server network of 20,000 US Dollar per branch (hardware costs only) and expect NHF to manage the network as well as the micro-finance software.

The consultant advises the following growth path.

Stage	Period	Operations per Branch	MIS
Start-Up	April to October 1999	Less than 100 loans per month	Manual loan tracking/accounting done at the head office
First Stage	November 1999 to May 2001	Up to 1,000 loans active loans.	Off-the-shelf loan tracking and accounting software on a peer-to-peer branch network
Second Stage	June 2001	More than 1,000 loans per month	Custom-made software on file-server network
Third Stage	To be determined	More than 10,000 loans per month	Custom-made software on client-server network

The following schedule will make an off-the-shelf loan tracking and accounting software package operational by November 1999, thus completing the start-up period.

April/May:

April 9 to April 30	Research available options
April 30	Report findings
May 09 to May 13	Show demo and trial versions to AMIR, AMC, and JCC
May 16 to May 20	Review Micro 2000 at Cooperative Housing Foundation (CHF)
May 22 to May 28	Make final decision and order software

September/October:

1 week	Train MIS users from AMC and JCC	
3 weeks	Configure and test the programs with users from AMC and JCC,	
	Develop operational procedures and write operations manual	1 week
		Train data entry personnel

However, after a full evaluation of Bankware's Micro 2000 program, to be installed at CHF during May 1999, we will submit an implementation schedule for a more complex file/client server solution for AMC and JCC.

After six months of operation, the consultant can evaluate this solution and update the RFP. The consultant can then develop a custom-made solution during the period of June 2000 to May 2001. By the

time activity in the branches grows to more than 1000 active loans per branch, the custom-made software should be ready. A Novell or WindowNT file server will replace the peer-to-peer network at the branches, and the new software will be installed. The old MIS should continue as a backup until the testing period is finished.

4.1 Hardware Requirements

Head office:

- one portable computer for the General Manager,
- four desktop computers (for the secretary, the MIS manager, the accountant, and the credit manager), and
- one laser printer.

These computers will constitute a local area network, preferably WindowsNT, and will require the following items:

- one dedicated server,
- one hub, and
- cabling.

Branch offices:

- two desktop computers (for the supervisor and the data entry clerk), and
- one laser printer.

Both of these computers will be in a peer-to-peer network. Because loan officers will work in the field, they won't need computers at the office.

Appendices

Appendix 1

Differences in Micro-finance Handling

AMIR wants to develop an MIS that suits AMC, JCC, and as many other MFIs as possible. Such a universal micro-finance approach has not yet been created, and this stands to reason. The micro-finance industry is still developing, and there are so many different working methods that it would be extremely difficult to unify all the different methodologies and approaches. As an illustration of this, the table below lists some of the operational alternatives used by different MFIs. It would be nearly impossible to integrate all these different options into a single application. Furthermore, due to the complexity of such an endeavor the potential for bugs would be tremendous.

Reporting Item	Operational Alternatives
Clients	Individuals Groups Businesses
Loan Assessment	Character assessment Business assessment Collateral Guarantors References Previous repayment behavior Savings behavior Membership Participation in group meetings
Loans to Group Members	Loan given to all group members Loan given to a portion of the group
Repeat Loans	Clients qualify for a second loan before the first is paid off Clients don't qualify for a second loan until the first is paid off
Loan Tracking of Group Members	Done by the MFI Done by the group (MFI only tracks the group loan)
Installments	None (interest is calculated on day of repayment) Daily Weekly Biweekly Monthly Quarterly Semiannually Annually Paid in full at the end of period
Grace Period	None Number of days Number of weeks Number of months
Interest Calculation	Flat rate discounted Add on Declining balance, based on 360 to 365 days

	Based on a number of weeks Based on a number of months
Interest Payment	Taken at disbursement Mad with first installment Made in equal parts with every installment
Commissions	None One Several, e.g., application fee, ledger fee, processing fee, commission
Calculation of Commissions	As percentage of loan amount As a flat rate As a combination
Payment of Commissions	Before disbursement At disbursement In equal parts with installments
Loan Disbursement	Cash Check To bank account To internal savings account
Repayments	Cash Check From internal savings account
Arrears	Loan in arrears if payment is a certain number of days late Loan in arrears if client didn't pay during the period the installment was due
Aging	30 days 90 days 180 days 360 days Measured in weeks or months
Prepayments	Possible Not possible
Prepayments reduce interest	Yes No
Loan termination	Possible Not possible before maturity date
Loan termination changes interest charges	Yes No
Accounting	Cash basis Accrual basis Both
Cash Handling	Loan officers handle cash Loan officers don't handle cash
Savings	No savings tracking Clients save with the MFI Clients save with an external institution
Collateral	Savings serve as collateral Other collateral required No collateral required
Guarantors	Guarantor(s) required No guarantor(s) required
Loan Provision	None

	A percentage of arrears A percentage of principal in arrears
Value of Penalties	None Flat amount per day Flat per installment Percentage of principal in arrears Percentage of principal and interest in arrears Percentage of principal and interest and penalties in arrears
Frequency of adding penalties	None Daily Weekly Monthly Per instalment missed, up to a maximum of days
Write Off	Never After 90 days in arrears After 180 days in arrears After 1 year in arrears At discretion of loan officer
Booking of provision	Booked against the provision costs Booked against the revolving fund account (balance account)
Staff Incentive System	None Related to repayment rates Related to value of portfolio Related to number of loans in portfolio Related to some combination of these items
Loan Re-Scheduling	Not possible Possible only against current terms (installment period and interest rate) Any terms possible
Loan Re-Financing	Possible in a variety of ways Not possible

Appendix 2 Terms of Reference

I. Overview

The macroeconomic picture in Jordan has been sluggish in recent years. Average annual growth is

estimated to have been between .8% and 3% over the last three years. However, the budget deficit has decreased from eight percent of GDP to four percent, and external debt has been reduced from 140 percent of GDP to under 100 percent. In addition, the government of Jordan continues to work toward opening the economy to foreign and domestic private sector investment. Recent achievements include reducing corporate and personal income tax rates, reducing export duties and lifting restrictions on foreign ownership of business.

Despite these successes, Jordan's economy continues to face a number of challenges. Although Jordan's economic growth rate is respectable, the country does not create enough new jobs to absorb those entering the labour force or make a dent in the country's large unemployment problem.

The Access to Microfinance And Improved Implementation Of Policy Reform (AMIR) was designed to respond to these economic challenges and to USAID/Jordan's strategic objective of "increase economic opportunity for Jordanians" through private sector growth to benefit the economically disadvantaged nation-wide. Special emphasis is placed on increasing access to financially sustainable microcredit for women and the rural poor living in disadvantaged, under served communities. AMIR is a broad-based private sector development initiative with components focusing on microfinance, economic policy reform and improved service delivery capability for business associations.

Chemonics International, Inc. and a consortium of Jordanian and international subcontractors have been awarded a USAID contract for the implementation of AMIR over four years (1998-2002) through the following three components:

- 1) **Sustainable Microfinance Initiative (SMI).** The SMI component will facilitate the development of a financially sustainable microfinance industry in Jordan based on internationally accepted microfinance best practice. In order to achieve this, AMIR will promote linkages between NGOs and commercial banks, foster the adoption of modern management techniques, facilitate the implementation of sustainable financial and information systems and procedures, and sponsor training and technical assistance to build the portfolios of microfinance services of these institutions and profitably expand their base of micro- and small-enterprise customers.
- 1) **Improved Implementation of Policy Reform (IIPR).** The IIPR component will focus on improving the implementation of policy reform, investment promotion, increased public awareness and policy analysis. This component will co-ordinate and collaborate with the GOJ Ministries of Trade and Investment, Planning and Finance, the Customs Department and the Investment Promotion Corporation.
- 1) **Business Association Initiative (BAI).** The BAI component will focus on organisational development, policy analysis and advocacy, membership development, improvement of service offerings and public relations in order to improve the operating performance and financial viability of a variety of private business associations in Jordan.

The consultancy governed by this scope of work fulfils various activities specified under **3.1.1 Assist MFI Lending programs** of the SMI component of AMIR's year two work plan.

II. Specific Challenges to be addressed by this Consultancy

In Jordan, sustainable microfinance using internationally accepted best practices is being pursued in only two microfinance institutions in Jordan, the Cooperative Housing Foundation (CHF) and SAVE/JWDS, both of which are major recipients of USAID funding. The AMIR Program seeks to expand this number by launching sustainable microfinance programs through additional NGOs and commercial banks. AMIR's implementation strategy is based on the establishment by participating NGOs and commercial banks of autonomous, private shareholding subsidiaries dedicated to providing

sustainable microfinance services in keeping with recognized technologies referred to as "best practices".

To manage microfinance lending sustainable, each subsidiary must have an effective management information system (MIS), and to receive AMIR funding, these MIS systems must be capable of reporting data in a format necessary for fulfilling USAID's own reporting requirements to AID/Washington. All of this data will have to be routed via the AMIR Program for consolidation with similar data from CHF and SAVE/JWDS, prior its delivery to USAID. The efficiency of collecting and consolidating this data would be greatly improved if all of these programs employed compatible, if not largely identical, MIS systems. This need for compatibility is an important consideration in this scope of work and for the ultimate design of any MIS employed by new microfinance program subsidiaries.

These subsidiaries will be lending institutions and will not take savings deposits directly because of the additional fiduciary responsibilities, and attendant Central bank regulations, associated with deposits. However, savings generations are an important aspect of the AMIR program, and one of the key indicators that must be reported upon. Therefore, to enable the incorporation of savings schemes into the AMIR-sponsored MFI programs, it is expected that the subsidiaries will require, or at least encourage, their loan clients to build savings in accounts at reputable Jordanian banks. These banks may, in the case of commercial bank subsidiaries, be "related" to the lending institution. Therefore, the MIS systems employed by AMIR-sponsored microfinance institutions must be sufficiently robust to incorporate these "off-balance sheet" savings schemes into their data reporting.

In addition to CHF and SAVE/JWDS, two other institutions have expressed initial commitment to provide sustainable microfinance lending services, Noor Al Hussein Foundation (NHF), one of Jordan's leading NGOs whose patron is Her Majesty Queen Noor, and the Jordan National Bank (JNB), one of Jordan's leading commercial banks. Another bank, the Bank of Jordan, may also be interested in pursuing such a program. The JNB has a well-developed MIS for its banking operations, and has the technical support staff to maintain it. Led by a smart, energetic young marketing graduate, the NHF's microfinance initiative will be starting its subsidiary from scratch, and therefore has no MIS in place.

Both the JNB and NHF are in the process of applying for AMIR grant funding which will cover a contribution to the start up and on-going operational costs of these subsidiaries, and the cost of technical assistance and training in three critical areas as follows:

- 1) Organisational development
- 2) MIS
- 3) Management and loan officer training

The consultancy governed by this scope of work will initiate the process of developing an MIS system that:

- 1) Will routinely generate rapid loan monitoring data consistent with "best practices";
- 2) Will accommodate reporting on "off balance sheet" savings programs;
- 3) Can be incorporated into the operations of the aforementioned new subsidiaries and any which may subsequently evolve;
- 4) Will be compatible with the operations of CHF and SAVE/JWDS;
- 5) Generate all of the statistical data required by USAID/Amman.

A number of microfinance management information systems are in use around the globe. Most are purpose-built for specific institutions, but some, like MicroBanker, are more generic packages, which can be tailored by the user to their own circumstances. The Chemonics microfinance project on the West Bank employed a purpose-built program designed by EQI (Egypt), but this program is a loan-reporting module only, and does not incorporate accounting capabilities. The SAVE/JWDS MIS is purpose-built for that program (although, there are indications that SAVE/JWDS might be interested in adopting a new MIS as the one they currently use may be nearing its practical limits.) A Lebanese company called Bankware 2000, with operations in Jordan, provides the MIS system for the banking operations of JNB. This system is being adapted for use by CHF in its program (which includes participation by JNB), but the adapted version, called Micro 2000, is not currently complete and does not have an accounting module. The precise stage of development of Micro 2000 is not known with certainty at this writing, but Micro 2000, does appear to have attributes which other products may not have in total such as:

- it will be bi-lingual (English/Arabic);
- it will include both loan tracking and accounting modules;
- it is being developed on the robust Oracle platform;
- there is local technical support available;
- it is expected to be compatible with the MIS software used by the JNB; and
- it is being developed for the CHF program.

III. Objective and Expected Results of this Consultancy

The objectives, and the expected results, of this consultancy are as follows:

- 1) A package of "Request for Proposal" documents which will govern the competitive procurement of a management information system (MIS) for deployment at AMIR-sponsored subsidiary microfinance institutions which meet the challenges specified in II. above;
- 1) A list of computer hardware specifications which are compatible with the MIS being procured and with the "best practice" operational needs of the microfinance subsidiaries envisioned;
- 1) A management plan for the procurement and installation of the MIS software and hardware described in 1. and 2. above which minimizes the performance risk anticipated in the MIS software procurement and which facilitates the most expeditious installation of operational MIS systems in the envisioned subsidiaries.

IV. Tasks of the Consultant

The tasks the Consultant will perform under this Scope of work shall include, but not be limited to, the following:

A. General Tasks of the Consultant. The Consultant shall:

1. arrange through the reporting channels specified in section VIII. below to be introduced to USAID at the beginning of the consultancy, and during the course of that introduction agree jointly with AMIR and USAID/Jordan the following:
 - a. A schedule of periodic briefings, if deemed necessary, throughout the course of the

- consultancy, and
 - b. A date, time and place for a pre-exit debriefing near the end of the consultancy;
2. throughout the consultancy, ensure good communication with AMIR management and, if appropriate, the management of any host country organizations with whom the consultant is working. The consultant should provide verbal updates to the AMIR management at least weekly;
 3. ensure that AMIR management is informed immediately of any material problems which will compromise the integrity of the consultancy, its data or its implementation time frame; and
 4. ensure that he/she carries to Jordan his/her own IBM compatible portable computer for use in implementation of the consultancy.

B. Tasks Related to Understanding the Challenge(s) Specified in Section II above.

1. Review the following attached documentation:
 - a. the JNB's pre-feasibility report;
 - b. the JNB, NHF and SAVE/JWDS business plans, if available;
 - c. the draft specifications CHF's microfinance program in the south of Jordan;
 - d. the specifications for the SAVE/JWDS program, if available;
 - e. other documentation as may be necessary to fully understand the data reporting requirements for successful management of sustainable microfinance programs.
2. In addition to the aforementioned interviews with USAID and AMIR management, interview the microfinance management of the following organizations:
 - a. JNB
 - b. NHF
 - c. CHF
 - d. SAVE/JWDS
 - e. Bankware 2000
 - f. other organizations, such as possibly the Bank of Jordan, which may be relevant to the MIS under development.

C. Tasks Related to Addressing the Challenge(s) Specified in Section II above. After having accomplished the tasks specified in B. above, the Consultant shall:

1. Develop a package of "Request for Proposal" documents which will govern the procurement of a management information system (MIS) to be deployed at AMIR-sponsored subsidiary microfinance institutions and which:
 - a. are compatible with USAID procurement regulations;
 - b. incorporate specifications that will lead to the development of:
 - i. will routinely generate rapid loan monitoring data consistent with managing a microfinance program according to "best practices";
 - ii. will accommodate reporting on "off balance sheet" savings programs;
 - iii. can be incorporated into the operations of the aforementioned new subsidiaries and any which may subsequently evolve;
 - iv. will be compatible with the operations of CHF and SAVE/JWDS;
 - v. generate all of the statistical data required by USAID/Amman.

2. To develop the specifications for the computer hardware necessary to implement such an operating system in the envisioned microfinance subsidiaries.
3. Specify a management plan for AMIR for the successful procurement and installation of the MIS software and hardware at the envisioned microfinance subsidiaries. This must include the highlighting of areas of performance risk which could lead to significant delays or cost overruns in the deployment of the procured MIS software. This may involve the specification of subsequent modifications to this scope of work to accommodate additional tasks related to the supervision of the work of the selected MIS software development firm and/or the installation of MIS software and/or hardware at the subsidiaries.
4. Recommendation clauses which should be incorporated in the contract that will govern the work of the selected MIS software development firm that will protect the AMIR Program against those elements of performance risk identified in 3. above.

Reporting Tasks. The Consultant shall write a report, which will include, but not be limited to, the following:

1. An executive summary specifying the primary findings and recommendations of consultant for accomplishing the objectives of the consultancy and thereby addressing the challenges specified Section II. above;
2. A main body of text which contains greater detail on the findings and recommendations of the consultant related to understanding the challenges and objectives of the consultancy (in other words, description of important findings gleaned from reading background materials and from conducting interviews);
3. A series of appendices including, but not limited to, the following:
 - a. The package of “ A Request for Proposals” documents specified in C.1. above;
 - b. The list of hardware specifications specified in C.2. above;
 - c. The procurement and deployment management plan specified in C.3. above;
 - d. The “ performance risk” recommendations specified in C.4. above;
 - e. A list of documents read during the course of the consultancy;
 - f. A list of individual interviewed during the course of the consultancy;
 - g. Any other documentation and other information which is relevant to the consultancy.

Prior to departure from Jordan, the Consultant shall deliver the report in draft to the AMIR Program office as follows:

- a. Four draft copies on plain white paper;
- b. On a 3 2" diskette in Word Perfect 6.1 format.

Within one week of receiving comments on the draft report from the AMIR Program office, the Consultant shall produce a final report and deliver it to AMIR Program office (via Chemonics International, Inc. headquarters in the case of U.S.-based consultants) in the following manner, unless otherwise specified in writing:

- a. On a 3 2" diskette in Word Perfect 6.1 format;
- b. As an attachment in Word Perfect 6.1 format via E-mail to pbittner@chemonics.com, dbrown@chemonics.com, ymustafa@chemonics.com and swade@chemonics.com.

V. Supervision and Reporting Lines

Unless otherwise specified in writing, the consultant will report to the Component Leader, SMI component, of the AMIR program or in his absence the Project Director.

VI. Time frame for the Completion of the Consultancy

<u>Activity</u>	<u>Duration</u>	<u>Start Date</u>
Review material prior to arrival at post	5 days	2/7
Travel to post:	1 day	2/13
Work at post	15 days	2/14
Return from post	1 days	3/2
Finalize Report	5 days	3/4

VII. Work Schedule and Location

The consultant shall organize his/her time in a manner consistent with successful execution of this consultancy, but in any case shall work no less than 8-hours per day. Unless otherwise specified in writing, the consultant's place of work shall be the AMIR project office, for which the work hours are 08:30 to 16:30 hours, Sunday-Thursday, and a 6 day work week and holiday work are authorized.

VIII. Consultant Qualifications

The consultant will have at least 10 years experience in developing and implementing management and financial MIS solutions in commercial banking. Experience in microfinance MIS solutions would be a distinct advantage. Knowledge of USAID procurement procedures would be desirable.

Appendix 3 Recommended MIS Contract Clauses

In order to reduce risks, responsibilities, tasks, budgets and deadlines should be clearly stated.

On-time Delivery

To reduce risks, the contractor will be required to deliver the program before or at a certain date. A penalty will be charged of 10% of the contract sum for every 15 days that the delivery is late. A delay of 45 days will cancel the contract.

Bugs

A bug is defined as a programming error that causes an error message - originating in the developer's environment - to show up or that causes an error in the output (e.g. a wrong calculation). The software developing firm should guarantee that bugs - as long as they are reproducible - will be repaired free of charge within a period of 5 working days. Sometimes software firms try to limit the period in which they provide this service for free. It's a matter of negotiating power, but at least a minimum of 6 months is necessary.

Support

During the testing phase and also afterwards in a maintenance contract, support should be bound to a time limit for reacting to a call. This may vary from a few days to a few hours and the price tag increases with the shorter intervention period. The need for a shorter period also varies according to the development of the MFI. For a start, a 2 day intervention period might be acceptable. Once the MFI is in full business,

this period might seem forever (especially if the application can't start anymore).

Source Code

Another 'hot' item is the source code. Normally the company ordering the development of specific software does not receive the source code of the program. The reason is that the software firm uses the more general parts of this software over and over again, for other clients as well. If all the source code would have to be written afresh, an application would become too expensive. On the other hand the ordering company doesn't want to be dependent on the first software firm that wrote the code. If this firm goes bankrupt, where does that leave her?

Some solution might be possible with regards to the code that is exclusively written for one single client. The source code could be sold to this client as it will not be used by other customers as well. The more general source code of functions and procedures however, won't be sold. The ordering company can get these files only in a compiled version. It is a question of negotiating these things.

Appendix 4

Checklist Loan Tracking Software

I. Overall Score (Scale of 1 = Bad to 5 = Excellent)

- A. Ease of Use
- B. Features
- C. Technical issues
- D. Support
- E. Type of Institution this program is best suited for
- F. Review based on

II. Ease of Use

- A. Installation process
- B. Documentation
- C. Tutorials
- D. Error handling
- E. Help screens
- F. Interface :
 - 1. Attractiveness
 - 2. Pop-up lists
 - 3. Search procedures

III. Features

- A. Languages :
 - 1. Existing languages
 - 2. Possibility of adding new languages

- A. Setup option :
 - 1. Control width of data fields
 - 2. Comments

- A. Accounting issues :
 - 1. Loan products :
 - a. Separation of loan products
 - b. Flexibility of loan parameters
 - c. Principal repayment methods
 - d. Grace periods
 - 2. Portfolio management
 - a. Aging
 - b. Definitional issues
 - c. Loan writeoffs
 - d. Fund accounting of portfolio
 - e. Disaggregate by loan officer
 - f. Disaggregate by branch
 - 3. Savings
 - a. Can handle multiple Sav. Products
 - 1. assbooks
 - 2. erm deposits
 - b. Interest payment methods
 - c. Block savings for loanees

- 4. Transfer savings to cover loan
 - a. Fee structure
 - b. Interest calculation
 - c. Fee calculation
- 5. General issues
 - a. Audit trails
 - b. Links into accounting packages
 - c. Cash flow projections
 - d. Setting up account periods
 - e. Closing periods
 - f. Multiple currencies
- A. Non-Portfolio features
 - 1. Socio-economic data
 - 2. Impact data
 - 3. *User-definable fields*
 - 4. Additional program modules be linked to the MIS
- A. Reports :
 - 1. Existing reports :
 - a. Types of reports
 - b. Appropriate for various levels of management
 - c. Can dis-aggregate by loan officer
 - d. Can dis-aggregate by branch
 - 2. Flexibility to design new reports
 - 3. Print control options :
 - a. Print preview
 - b. Types of printers supported
 - c. Width of reports
 - 4. Graphs
- F. Methodology Issues :
 - 1. Individual/Solidarity Group/Village Banking
 - 2. Multiple methodologies
- G. Security :
 - 1. Passwords
 - 2. Authorization
 - 3. Modifying data
 - 4. Manipulation of data files outside of MIS
- H. Safety :
 - 1. Backup procedures
 - 2. Blackout recovery
 - 3. Archiving old data

IV. Computer technical issues

- A. Programming language
- B. Data storage format
- C. Can data be accessed by other products
- D. Network Issues :
 - 1. Multiple computers
 - 2. Branch office handling : between branches, merging of data
- A. Operating system
- B. Memory issues
- C. Hard disk space

- D. Speed issues with large database

V. Support

- A. Requests for modifications to program
 - 1. at what costs
- A. Bug fixing
- B. Training
 - 3. on-site
 - 4. somewhere else
- E. Cost issues
 - 6. purchase price
 - 7. support costs

VI. Background

- A. Who designed the program
- B. How long in development and use
- C. Who uses the program and where
- D. References

Appendix 5**Overview of Current Micro-Finance Software Programs**

(From <http://www.verkoyen.org/mfsoftw.html>)

- Anchor Commercial:** Has a loan tracking system that is leased at US 150\$/month.
- AutoBank:** Supplied by Tara Systems in Nigeria. It is created in Oracle and quite expensive (\$ 110,000). According to recent information no longer supported.
- BancoSol:** Bancosol is the ACCION affiliate in Bolivia. Bancosol has developed a DBase compiled MIS. It is only in use with Bancosol. Available in Spanish only and at \$ 30,000.
- Banker II:** From BankTec, a high-end commercial bank system. No more information available.
- Better Banking System:** From DataPool WBBS, Sweden. No information available.
- CLAMS:** This program has been developed by World Relief. It is designed to work according to the Village Banking methodology of World Relief, which is very specific. Therefore it cannot easily be implemented in other institutions. Options/settings are very limited. Also there are several bugs with the program and support seems very difficult.
- Client Loan Portfolio Program:** This is a loan tracking program developed in Clipper by Combined Computer Processes Ltd. It is Dos based. It has no provisions for saving nor for accounting. Only groups are handled. The program is in use by 6 micro-finance institutions in Jamaica, South Africa, Tanzania, Uganda (Ugafode), Zambia, Zimbabwe (Zambuko). They are all affiliates of Opportunity International.
- Credit Department:** The Credit Department for Windows is intended to bridge the gap between company sales and financial systems. It imports data from a sales program by ASCII files.
- CUSA:** No information available.
- Cybex:** Costs about \$ 50,000. No further information available.
- CMS:** This program has been developed by Urban Systems. It is written in Paradox for Windows. Only individual lending is supported, not group lending nor savings. Documentation is very thorough. The program as it is, is still very weak and needs further development. In use with only a single micro-finance institution.
- Diameter:** No information available.

pse Loan Management Systems: This is a product of Sun Systems. It is a DOS-based program that can be linked into the high-end Sun General Ledger. The program has not

been developed for micro-financing, although you could use it for this. Currently no micro-finance institution is using it yet. The system is very expensive (about \$50,000 per site). The program does not handle savings.

- eMerge:** (Before available under the name: Micro Finance 2000) has actually two products:
eMerge FIRST (for entry-level users) and eMerge ADVANCED (for mature micro-finance institutions, small banks, building societies and non-bank Fis). These are products of DBS Consult, Cape Town. Created in Progress for the Windows95/98/NT operating systems. Integrated savings, loans and accounting system. Email: info@emerge.com.
- FAS:** This is an old, DOS-based system, developed in Cobol. It is only in use in the USA. A single user version goes for \$ 5,000.
- FCS:** A program for syndicated bank loans (money management firms, banks, insurance companies, investment brokers).
- GMS Accounting:** GMS Accounting has a very basic loan tracking module, besides several other accounting packages. The loan tracking module was developed in Basic, which is not fast in data-processing. The usefulness of the program is therefore limited to a few hundred loans. Email: gms@gmsactg.com.
- IACCS:** Stands for Integrated Accounting System for Coops, is a loan tracking and accounting system developed in the Philippines and used by several local financing cooperations.
- IFS:** No information available.
- IPC Loan Package:** This loan tracking software is developed by Interdisciplinary Project Consulting (Florida, USA and Frankfurt, Germany). It handles client's assessment data as well as loan contracts, repayment plans, reminders and numerous analysis based on criteria like economic sector, neighbourhood or region, loan size, arrears by number of days and/or by loan officer. Daily statements can be produced for the bookkeeping. It is written in Clipper and C and available in English, Spanish and Russian.
- LFS MicroBank System:** A product of Luso Financial Systems. It includes the modules credit administration, credit appraisal, deposits, current accounts, administration of collateral, cash management, accounting and management information. Runs on Novell, Windows NT and Unix networks. Supported databases are: XBase, SQL Server or Oracle. Installed in several S&L institutions in El Salvador and in some commercial banks in Bosnia and Herzegovina. Available in English and Spanish.
- Loan Ledger+:** This product is offered by DISC in the USA. It claims it has the most widely used loan portfolio system in the USA with 700 licensed users. It is also used in some countries in Latin America and Saudi Arabia, although there is only an English version available. This also is a DOS-based version. A Windows version

is being developed. The DOS version is written in Visual Basic and starts at \$ 5,000.

Loan Manager Plus: Developed by TrackitSoft (email: info@trackitsoft.com), comes in 16 and 32 bits versions, created in Visual Basic, storing data in MS Access and can connect via ODBC to any client-server database, has an integrated SQL report writer. Not written for micro-finance where loans to groups are given.

Loan Maximizer: Distributed by Sylvan Computing, is written in C++, has a Windows interface and only available in an English version.
Email: loanmaximizer@sylvanc.com.

Loan Performer: Developed in Visual Foxpro 5.0 for Windows95, which has a very fast database. It handles loans, savings and accounts, has several user levels, reports performance per credit officer, per branch, per geographical area, per business sector, per loan sequence etc. Includes Windows95 Help. Transactions are automatically booked. An extensive description of what the program does is available at <http://www.loanperformer.com> or email info@loanperformer.com.

LOANbase III Plus: A product from Lenders Support Systems, San Diego, USA. Developed in Foxpro 2.5 for DOS. Has a wide variety of loan types.

LoanMaster: Developed by Womens World Banking Kenya, supported by Integrated Systems, Nairobi, Kenya. However it seems the programmer has disappeared with source code so that no modifications can be made. Documentation is non-existent. Costs about \$ 7,500 for a 10-user version.

Mecsim: A product from KimPRO Inc., is still under development
Email: akim@pi.pro.ec.

Microbanker: Developed by the FAO. It is the most advanced on the market with the longest experience. However because of its flexibility also rather complex. It has a steep learning curve, is not user-friendly and documentation is weak. On the other hand it has about 30 experts supporting the product, especially in Asia. There are 2 versions on the market: a cheap standard run-time version and a more expensive advanced version. Microbanker is still a Dos-based product.

Microbanker: Under the same name there is another application created by Citicorp. It's a high-end product, costs \$ 35,000 for the core module and \$ 15,000 for the loans module (single-user). No further information available.

MicroLend: This program has been developed by Women's World Banking Botswana and is only used here. It handles loans, savings and accounting. As a one-site-developed-program, it has no setup options to change certain settings. For instance it handles only monthly repayments, no grace periods, only 2 basic interest rate calculations, etc. It also lacks good documentation.

Nortridge: Offers an old DOS version, written in QuickBasic for \$ 3,000 and a more

modern Windows version at \$ 12,000. Some micro-finance institutions in the USA are using this program.

OBMS: Created in Informix, under Unix only.

PC-Loan Financing Analyzer: This is a loan analyzing tool from 20/20 Software. This utility can perform a basic loan analysis, a payoff analysis and a loan comparison. It is not a loan tracking program. Price: \$ 60. A demo version can be downloaded from the download page at 20/20 Software.

SLM: SLM stands for Small Loans Manager. It has been developed in Paradox for DOS. It only handles loans, no savings, no accounting. It also has very limited settings. It is available in Spanish and English. It costs 500 Pound Sterling. Contact: Nigel Derby.

Star: This is a Dos-based loan tracking system, developed in Paradox. It is in use with Pride-Africa, which has branches in Kenya, Tanzania and Uganda. The program handles only loans for groups (no savings, no accounting) and is 9 years old. Paradox makes it rather slow. It is linked to Salomon4, an accounting package.

Sysmin: Only available in French. Sysmin is based on Ibis, an accounting package developed by SG2 in Ivory Coast. It handles savings and loans.

Tata Consultants: Has an accounting and banking package for \$ 75,000 to \$ 100,000.

Tobas: From Information Architects, Bombay, India. Installed with 15 banks in India. Documentation is poor. Costs about \$ 21,000.

Appendix 6

Impressions of Micro 2000

The consultant had a look at Micro 2000, the product that Bankware is developing for CHF. Micro 2000 is derived from Bankware 2000, the banking program used by JNB. Micro 2000 - as it is ordered by CHF - is only a loan tracking program and doesn't include a general ledger. The program should be delivered by April 15 and implemented by May 15, 1999 (testing included). Bankware - with a staff of 10 developers - is still working on Micro 2000. The consultant has seen the setup, the data-entry screens and the reporting features of the system. Though this was not an extensive study of the program, the general impression was that it could very well serve the needs of (some) MFI's. Some 'tweaking' would be necessary, e.g. inflation rates are not tracked and the language (English or Arabic) is defined at installation. Once installed as an English version, you cannot print an Arabic customer report. The reporting features were still very limited at this stage (viewing date was Feb 25, 1999), with only 3 reports available and almost no parameters to run a report (period, loan officer, loan fund etc). Another limitation is that Micro 2000 is a product that should run in a client-server environment and is not available for a simple multi-user environment or as a standalone product.

Bankware is working on an integrated accounting/loan tracking program with the same name as Micro 2000. This is a product that they want to market for MFI's. Their staff is currently focused on modifications on Bankware 2000 (for JNB) and Micro 2000 (for CHF). Their 'leisure' time will be used for the development of the integrated accounting/loan tracking Micro 2000. Bankware doesn't expect this version to be available before the next millennium.

**Appendix 7
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Appendix 8
Persons interviewed

AMIR:

Steve Wade, Chief of Party
Derek Farwagi, SMI Component leader
Jamil El-Wheidi, SMI Specialist
Ignatio U. Alvizo, Consultant Organization Development
Sadam Sadiki, Consultant Credit Bureau
Terri Kristalsky, Consultant Training

Bank Ware 2000:

Ramy Nahhas, Bank Ware 2000
Raja Anastas, Deputy Assistant General Manager (IT)

CHF:

Raphael Jabba, Program Director

JNB:

Fuad Al Werr, Assistant General Manager
Raja'a Nustas, MIS Manager

Save the Children Federation/JWDS:

Michael B. Austin, Jordan Field Office Director

NHF:

Qais Qatamin, Microfinance Unit Manager

USAID:

Gerald Andersen, Senior Private Sector Advisor