

Microbanking: the Philippines

ABSTRACT

Economic growth in rural communities in the developing world depends on reliable access to savings and credit; rural financial institutions (RFIs) dealing in small transactions need to be developed to offer a cost-effective service for rural communities. In the past decade, advances in computer technology and banking software and falling hardware prices have had a significant impact on rural banks, which can now be computerized with stand-alone microcomputer systems that make them efficient, customer-friendly and financially viable.

In the Philippines, rural banks were characterized by slow, repetitive and inefficient administration. Staff time was spent on manually kept account ledgers and interest calculations. Single transactions involved several processes, leading to inefficient customer service, inaccurate and out-of-date information and unsound management decisions.

In September 1987, the Food and Agriculture Organization of the United Nations (FAO) initiated the FAO MicroBanking System, known as MicroBanker, in the Philippines, with the aim of enhancing efficiency and cost-effectiveness in RFIs dealing with small transactions. The low-cost software was designed to run on personal computer (PC) equipment, initially to process savings accounts, time deposits and loan accounts. Modules were subsequently added covering current accounts, general ledger and customer information. The focus is on reducing costs through improved staff performance in small banks. MicroBanker's biggest advantage is flexibility: it can cater for a single teller installation or up to ten teller windows in the same office. It is a front-office system, so data can be entered at the time of the transaction. Such an automated banking system helps management maintain and supervise business by providing up-to-date information on portfolios and operations.

The system was initially installed in a pilot rural bank, where costs were quickly reduced, operations were rationalized and customer services improved. Interest in the system grew rapidly. The Rural Bankers Association of the Philippines (RBAP), assisted by the Central Bank, endorsed it and established a support facility to install and service the software. Shortly afterwards, growing demand led to the establishment of a private company, MB Philippines Inc., which installs and supports the system for clients in and outside the Philippines.

Microbanking has been established in the Philippines for a decade: in mid-1999, there were approximately 800 independent and privately owned rural banks in the country, of which over 400 had adopted the system. These banks have paid the full cost of computer hardware, data capture and installation services and are now reaping the benefits of computerized accounts administration. Advances made with microbanking software have given **RFIs** a sense of competitive advantage, despite their small size, and facilities for better decision-making and control.

Implementation, undertaken in clearly defined stages, lasts from a fortnight for small banks to more than three months for larger institutions. One of the lessons of the experience, however, is that successful implementation of microbanking requires strong commitment and involvement by senior management, who must persuade and motivate their employees.

The innovative experience of microbanking in the Philippines has served as a model for other countries in Asia, Africa, Central and Latin America, the Caribbean, Russia and Central and Eastern Europe. The system is currently installed in over 1 200 sites in about **30** countries and numbers are steadily growing. International organizations and donor agencies have collaborated in promoting adoption of the system.

Earlier installations in Asia were tailored to meet the needs of individual institutions. In 1994, FAO introduced a standard runtime version of the system with software suitable for a range of needs. Work on improving the basic software has continued since then in order to improve effectiveness and broaden outreach in the developing world. These advances and formation of private-sector companies providing specialized support promise to play a crucial role in improving banking services for low-income people throughout the developing world. Conversion to a Windows operating system started in late 1998 in a joint venture with the German Agency for Technical Cooperation (GTZ). The new product is expected to be ready for marketing in early 2001.

INTRODUCTION

In July 1987, FAO approved project TCP/RAS/6754, Strengthening the Savings and Credit Operations of Rural Financial Institutions through the Appropriate

³⁷ Countries in which the FAO MicroBanking System is now operating include:

- Asia: Bangladesh, Bhutan, Cambodia, Indonesia, Laos, the Maldives, Nepal, the Philippines, Sri Lanka, Thailand, Viet Nam;
- Africa: Republic of Congo, Kenya, Malawi, Mali, Senegal, Swaziland, Tanzania, Uganda, Zimbabwe;
- Central/Latin America and the Caribbean: Haiti, Jamaica, Mexico, Nicaragua, Peru;
- Russia/Central and Eastern Europe: Albania, Latvia, Lithuania, Republic of Moldova, Russian Federation.

Use of Microcomputers. The main objective was to develop a low-cost computer system for RFIs that would:

- handle savings, loan and time-deposit transactions efficiently and cost-effectively;
- assist management with maintenance and supervision of bank operations through accurate, up-to-date information on portfolios and operations.

The project addressed the need for assistance sought by several Asian countries that had recognized the importance of savings and credit facilities in rural areas as a way of improving economic activities. Dealing with many small savings and loan transactions and operating, maintaining and supervising numerous small accounts manually was cumbersome, costly and error-prone. A computer system was needed that could rationalize the operations of RFIs, increase accuracy and reduce costs.

Project TCP/RAS/6754 became operational in September 1987, leading to the development of FAO's MicroBanker. It was originally developed as a software package for a stand-alone PC to cover computerized processing of savings accounts, time deposits and loan accounts. Other rural banking operations were later integrated into the system. Current and cheque account and general ledger modules were added to MicroBanker as RFI's requirements expanded. The system was further enhanced to run a local area network (LAN) accommodating several tellers/officers operating the system simultaneously. In the Philippines, a facility connecting MicroBanker with automated teller machines was developed and implemented.

MicroBanker, officially named the FAO MicroBanking System, is a low-cost banking software for banking operations which can run on a PC. It has been installed largely at the cost of users in over 1 200 sites in about 30 countries. FAO views the system as a human resources development programme to improve banking efficiency and reduce costs, an especially important factor when dealing with small-scale transactions in scattered rural locations.

In October 1988, a related FAO project started, TCP/RAS/8854, to train computer programmers in each country where pilot test sites were operational and to allow for national support for pilot sites. In the Philippines, the TCP/RAS/8854 project was geared to train programmers and staff of the Central Bank of the Philippines as trainers of end-users. Selected staff were given three weeks of classroom training in the design and programming of the microbanking system. Simultaneously, other Central Bank trainers received three weeks of training on system operation and functions. Both groups were assigned to study the system further, particularly programme compilation and end-user documentation, in preparation for rollout.

Microbanking in the Philippines is firmly established and has been used by financial institutions for ten years. Its subscribers include rural banks, credit cooperatives and thrift banks.

PRE-INNOVATION

Before implementation of FAO's MicroBanker, rural banks were performing operations and services through routine manual activities. Most employee time was spent in manual record-keeping of account ledgers and interest calculations. Customer service was inefficient because of the several manual processes involved in a single transaction. Passbooks were printed on typewriters. Reporting was tedious, given the voluminous report requirements of the Central Bank and other regulatory and supervisory entities. Inaccurate and untimely information was often produced because of the inefficiency of manual data maintenance, resulting in poor management decisions.

INTRODUCING INNOVATION

Full implementation of the FAO MicroBanking System in the Philippines started in 1989 under the project to provide technical assistance to the Government of the Philippines through the Central Bank to install low-cost banking software in RFIs.

The software was designed to cater for the requirements of small rural banks. It was originally a user-friendly, menu-driven software package to handle savings and time deposits and loan transaction processing. The system has now evolved into a full rural banking software package with the incorporation of a general ledger, current and cheque accounts and automated teller machine connections.

The software received a warm reception from the rural banking industry and quickly became highly popular. The Philippines was able to build an infrastructure for installation and support of the software through the Rural Bankers Research and Development Foundation, Inc. (**RBRDFI**), in cooperation with the Central Bank and supported financially and technically by the United States Agency for International Development (**USAID**) and **FAO**. Since then, RBRDFI, the counterpart of **FAO** in the Philippines, has been successful in running a financially viable operation without subsidy from **FAO** or other donor agencies.

MicroBanker has been brought to **RFIs** around the world through collaborations involving:

- **FAO**;
- the United Nations Development Programme (**UNDP**);
- **USAID**;

- GTZ;
- the Japanese Development Aid Agency;
- the Asia-Pacific Rural and Agricultural Credit Association (APRACA);
- the African Rural and Agricultural Credit Association (AFRACA);
- the Development of Malawian Enterprises Trust (DEMAT);
- Development Alternatives, Inc. (DAI).

THE IMPLEMENTATION PROCESS

The following procedures are carried out prior to software installation:

Feasibility study. An assessment is made of the suitability of the microbanking system in a particular institution and availability of local hardware supplies and maintenance services. Local programming capabilities are considered. Recommendations are made as to a pilot site, purchase of computer equipment, recruitment of programmers and support staff and design of training programmes. The feasibility study typically takes two weeks.

System requirements analysis. Specific needs are identified with respect to the RFI's operations and report requirements.

System customization. Programme design, coding and testing are carried out, followed by debugging, which may be required after modifications and/or enhancements identified in requirements analysis.

Establishment of a pilot site. This stage includes selection of computer equipment and hardware vendors, design of accounts data sheets, transcription of information into the data sheets, conversion from manual to computer data and staff training. Account balances are then captured into the computer. This is always carried out on bank premises, because most of the information is confidential. Once the information is validated, the bank is ready to start the operation, usually accompanied by a parallel run.

MicroBanker master plan. Following the pilot, a master plan is prepared for large-scale implementation of the system. This includes recommendations and cost estimates for hardware and software, personnel requirements, training needs assessment and work and management plans.

Implementation of MicroBanker in rural banks in the Philippines is carried out in stages, taking from two weeks for small banks to more than three months for larger banks. A detailed description of each activity is given below.

Activities involved in implementation

Requirements analysis. Because the operations of one bank may differ from others, the requirements of individual banks must be identified before preparations can start. The requirements analysis focuses on the deposit, credit and general

ledger accounts, with emphasis on loans. There are many account types, instalment schemes and procedures in loan operations. The requirements analysis can usually be accomplished during the first visit. The chief accountant and savings and loans bookkeepers must be available for interview. Based on a thorough evaluation, the installation programmer will be able to configure the software to suit the bank's needs.

Preparation and distribution of data sheets. Based on the findings in the requirements analysis, a loan accounts data sheet is designed and deposit accounts data sheets are provided.

Transcription of data sheets. Data sheets need to be filled out to conflate different source documents in one form. The information can be entered into the computer during this process. Without a data sheet, capture on the computer is slow and cumbersome because information comes from different sources. Staff are instructed how to fill out these data sheets. The loan data sheet in particular requires individual instruction.

Purchase of computer equipment. Computer hardware should be installed and configured earlier, so as not to delay installation.

Static data capture. After data sheets have been completed, the information is entered into the computer.

Validation of data and preparation of subsidiary ledgers. After static data capture is completed, data must be printed and checked for errors. Subsidiary ledger cards must be updated with the new account numbers assigned by the system.

Training of rural bank staff in MicroBanker operations. It is recommended that a minimum of three staff be trained to use the system.

Update of manual ledgers and account balancing. This is the most tedious task in the installation process. Staff must carry out the following activities:

- manual ledgers are sorted and classified, e.g. past due loans transferred to the past due ledger;
- an accurate run-up of account balances (trial balance) is done after the transfer of cards;
- outstanding accrued interest, penalties and charges for each account are computed and noted.

Balance capture. This involves entry of the most recent account balances into the computer, and is done on bank premises.

Start of live operations. This involves the utilization of MicroBanker, usually accompanied by a parallel run, in order to check the accuracy of the programme and the data entered during the fixed and balance capture.

After-installation service. During the first week of live operations, data

inconsistencies and erroneous interest computations are anticipated. These can be traced back to:

- transcription errors in filling out data sheets;
- fixed data capture errors;
- errors during balance capture;
- misunderstandings between installation programmers and bank staff, resulting in incomplete or incorrect system configuration.

To solve the latter problems and rectify data file inconsistencies, installation programmers remain in the bank to render technical support and assistance. A week is normally sufficient.

POST-INNOVATION

Several improvements were observed after implementation of MicroBanker. Bank personnel were spared routine manual tasks and assigned to more productive activities such as loan collection and deposit mobilization. With manual processes replaced by computers, bank staff were able to accomplish their duties more efficiently. Customer service has greatly improved. In particular, waiting time has been reduced by more than 60 percent. Savings interest calculations, which used to take several days, have been cut to a few minutes. Manual typewriters have been replaced by high-speed printers, making reporting fast, accurate and prompt.

With these improvements in bank operations, the system has provided banks with a sense of competitive advantage and the facilities for better decision making and control.

The **FAO MicroBanking System** is a unique banking software package offering full teller transaction processing facilities, account consolidation, trial balancing, interest calculations and reporting. The system maintains computerized ledgers and supports a variety of options for passbook printing and transaction validation. Clients are attracted by better and faster service and the improvements have cut overtime expenses and transaction costs. More importantly, the system provides management with the information needed for efficient administration and control.

The pilot rural bank in the Philippines was able to rationalize its office operations and, through redeployment, double field staff from three to six by reducing office staff from six to three. As a result, and using customer information provided by the system, the bank was able to double collection of past due loans within 18 months.

This experience resulted in consultants recommending that MicroBanker be the standard software for all rural banks in the Philippines. The RBAP, with assistance

from the Central Bank, endorsed the system and subsequently propagated it through its technical arm, RBRDFI.

In collaboration with the MicroBanker project, RBRDFI decided to establish a body of programmers able to install and service MicroBanker in the Philippines. Demand for the banking software soon extended to banks which were not part of the federation, however, and a different solution had to be found. It had become necessary to establish the support structure outside the Rural Bankers' Association (**RBA**). Some of the skilled programmers from the RBA MicroBanker group, together with outside investors, established a private company called MB Philippines Inc. (MBPhil) to install and support MicroBanker within the Philippines and overseas. The firm, which comprises mainly very young programmers, faced initial difficulties but work now appears to be progressing. In early 1999, a major step was taken by uniting RBRDFI and MBPhil in one organization called MB Philippines. Shareholders in this new company are rural banks and technical staff working in the company.

The formation of private companies providing specialized support plays a crucial role in improving banking services for lower-income people in the developing world. Similar arrangements have been encouraged in other countries.

LESSONS LEARNED

In recent years, economies of scale in rural bank computerization have shifted away from large banks and branches, previously necessary to justify the huge investment in mainframe and mid-range computers, towards small banks and branches that can be computerized through software operating on a single PC. With current technology, it is cheaper and more efficient to computerize ten banks with 5 000 customers each than to computerize one bank with 50 000 customers. This change should have strong implications for future bank and branch expansion policies in central and regional banks.

Governments of developing countries must recognize that rapid developments in computer technology, falling computer hardware prices and available banking software can and should have an impact on policies in rural banking. Low-cost computer technology makes small banks highly efficient and financially viable. Computerization should act as an incentive for rural banks to expand branch networks while reducing the size of existing offices. This should be taken into consideration in planning the establishment or expansion of branch networks. Computerization should be an integral component from the outset in establishing RFI, to ensure that banking and accounting procedures, staffing policies, incentive schemes and training programmes are fully optimized. RFI must take advantage of the capabilities of computer systems in reorganizing the way business works.

Before implementing a new microbanking system, RFI managers and staff should be aware of the changes that will occur in the organization. Management must give full attention to training. Unless top management supports the project from planning to implementation, the endeavour will fail.

Computerization projects are often implemented without sufficient involvement of senior management, so decisions that could streamline and modernize operations are not made. Because computerization affects a large proportion of employees, and because of their natural wariness of change, support from senior management is needed to carry through the necessary changes. Successful implementation of the FAO MicroBanking System can only be achieved if there is a desire to computerize within an institution, particularly among top management, who invariably must persuade and motivate their employees.

Countries with high unemployment, such as the Philippines, should use computer systems not to displace human resources but rather to redeploy staff in more productive activities and to increase business volume.

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General Information

Title of innovative experience: FAO MicroBanking System	
Sponsoring organization/institution: —	
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