

Guide to Management Information Systems for Microfinance Institutions in Mali

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by

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ACRONYMS

APIM	Association de Professionnelle Institutions de Microfinance
BCEAO	Banque Centrale des Etats de l’Afrique de l’ouest
CANEF	Centre d’Appui Nutritionnel et Economique aux Femmes
CGAP	Consultative Group To Assist the Poorest
CVECA	Caisse Villageoise d’Epargne et de Crédit Autogérée
GGLS	Group Guarantee Savings and Loan (Save Project)
MIS	Management Information System
MBP/MISM/EF	Micro enterprise Best Practices “Management Information Systems for Microfinance – An Evaluation Framework”
SFD	Système Financier Décentralisé (mutuelle and non-mutuelle)

LES PERSONNES RENCONTRÉES

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EXECUTIVE SUMMARY

This guide is funded by USAID and implemented by Weidemann Associates, Inc. as a component of the Computerized MIS for Microfinance program. The program operates in Mali and is designed to strengthen Mali's Micro Finance Institutions with the use of effective automated accounting, loan portfolio, deposit management and overall management information systems (MIS). USAID and Weidemann Associate's are committed to technical assistance and institutional and organizational strengthening of the *Association de Professionnelle Institutions de Microfinance* (APIM Mali) and Malian SFDs.

This segment of the program determines MIS requirements for the different types and sizes of SFDs operating in Mali and collects data to evaluate computer systems being used by some of these SFDs. The data collected has been analyzed into this comprehensive guide for use by the different categories of SFDs in selecting the most appropriate microfinance software for their MIS. The guide is based on a scope of work from Weidemann Associates Inc. and follows guidance in the Micro enterprise Best Practices "Management Information Systems for Microfinance – An Evaluation Framework" (MBP/MISM/EF).

The study was conducted in two parts. In the first part, nine SFDs 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 were evaluated and included in this guide. These 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 SFDs' requirements.

Of the seven systems first evaluated, SiBanque2, is the system most highly recommended for global use. Microbanker2 system follows close behind. Sibanque2 meets the most functional and technical requirements but is not yet installed in production mode and therefore not field proven. Microbanker 2 meets most functional and technical requirements and is adapted to the field. Microbanker 2, however, is a DOS based system and does not display in today's standard Windows Graphic User Interface (GUI). In addition, Microbanker lacks adequate technical support in Mali. Sibanque's support base is in France, is relatively dependable, but the SFD must join the Sibanque network to use this software. Therefore, although these systems are recommended they are recommended with these important reservations.

Because the best of the systems first evaluated met only 77% of the MFI requirements, Weidemann Associates Inc., later conducted a study of three Microfinance software used outside of Mali that could be used by MFIs in Mali. Weidemann Associates Inc chose Mercury, a proven system used to manage credit unions primarily in the US and Bank 2000 and its upgrade Bankers Realm, used to manage banks and MFIs in East Africa and India, for this assessment. When these systems were assessed, using the same evaluation criteria used for the other systems in this guide, we found that Bankers Realm and Bank 2000 meets 90% of the MFI's requirements and Mercury meets 77% of the requirements. Although these systems are stronger, they are English based and more expensive than Sibanque2. The

assessment of these three systems, are included in this guide as an upgrade to the first publication of the guide.

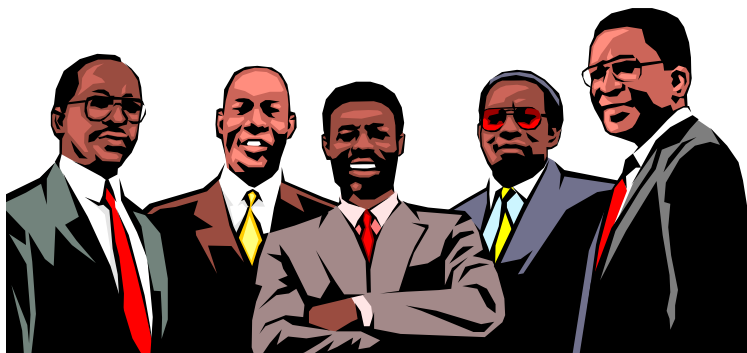
No system surveyed meets 100% of the guide's grading criteria. It is possible that there are systems used in or out of Mali that would better meet the established criteria. It is also possible that the systems discussed in this guide may be upgraded to meet required standards. The guide therefore serves 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, 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.

INTRODUCTION

The object of this guide is to aid SFD working in Mali in selecting systems that manage their microfinance operations. Depending on what type of SFD you represent, you will be shown which system best suits the needs of that type of SFD. Detailed information is provided for those who wish to observe how these recommendations were made.

A qui est destiné ce guide

Ce guide est destiné aux dirigeants des Systèmes Financiers Décentralisés aux Mali qui désirent s'informatiser ou qui cherchent à changer de système informatique. The guide is written in language that may be understood by general managers, financial managers, and information system professionals.



The object is to use this guide to aid in making sound decisions when choosing between the systems, or in deciding if these systems would meet the institution's needs. The simplicity of financial and information system terms is also meant to encourage communication between financial and information persons in making a joint decision.

Comment utiliser ce guide

The guide is the product of a detailed study made of requirements of SFDs working in Mali and of systems in place, selected for this study. These systems are identified in the next section.

Ce guide comprend quatre grandes parties :

1. L'identification des besoins des différents types de SFD et les identification de des systèmes informatiques existants au Mali pour gère la micro finance. This section identifies and give brief information on the software selected and the classification of SFD's for study and presentation in the guide,
2. L'étude des systèmes informatiques et la comparaison des systèmes informatiques entre eux et avec les besoins des types de SFD. This provides narrative, summary analysis and findings from the authors, complete with recommendation on which systems are recommended for particular types and sizes of SFDs.
3. Commentaire de nos conclusions et constats sur chaque système. These comments provide specific information by topic
4. La comparaison des coûts d'acquisition et des prix des systèmes informatiques avec les instructions pour l'acquisition des différents systèmes.

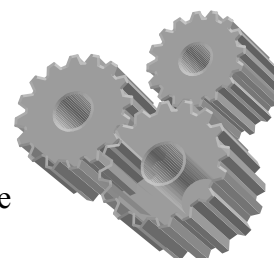


The guide is organized to help the reader as a quick reference or a detailed source of analysis. In this respect, summaries, narratives, and the authors recommendations are placed in the front of the guide. After reading the first sections of the guide and based on the author's recommendations, a quick decision can be made in selecting the software that meets the needs of a particular SFD. More detailed tables by system and SFD categories are placed in the annexes. These tables may be used to research particular concerns are met by the system under consideration.

Les besoins des types de SFD sont identifiés selon certains critères :

- L'étude des systèmes informatiques selon les critères susvisés permet de voir dans quelle mesure, ils répondent aux besoins des différents types de SFD.
- La comparaison des systèmes informatiques permet de mettre en évidence les forces et les faiblesses de chaque système au regard de chacun des critères susvisés.
- La comparaison des coûts et prix permet mettre en évidence le rapport qualité prix.
- Les instructions pour l'acquisition donnent les contacts à prendre pour l'acquisition de ces logiciels.

Different formulas are used to establish these criteria. These methods are in Table 1 and explained at the beginning the Summary and Narrative sections to show the logic behind the evaluation of information collected and presented: We recommend that you use this chart to determine how the percentage grades presented in the guide are determined



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 1 Scoring Guide

Data evaluated and presented in this guide are organized under three levels:

Categories Topics (and sub topics) Measurement Criteria
Specific areas presented under the Categories and Topics are as follows:

1 La saisie des données

- a. Plan comptable
- b. Compte individuel
- c. Client
- d. dossier de prêt
- e. enregistrement des opérations
- f. Conditions d'échelle
- g. Agence

2 Les fonctions et flexibilité

- a. comptabilité
- b. gestion du portefeuille
- c. gestion des dépôts
- d. système d'information clientèle
- e. Possibilité d'extension et de développement institutionnel
- f. Flexibilité par rapport aux clients et comptes
- g. Flexibilité du type d'institution
- h. Flexibilité de la méthode d'octroi des prêts
- I. Flexibilité du type d'intérêt sur les prêts
- J. Flexibilité par rapport aux types de dépôt
- k. Flexibilité par rapport aux types de paiement
- l. Flexibilité des fréquences des échéances
- m. Flexibilité de multi – agence et /ou multi-régions
- n. Flexibilité des langues
- o. Flexibilité multi-devises

3. Facilité d'utilisation et convivialité

- a. Convivialité
- b. Interface de l'utilisateur

4. Les états à produire

- a. Documents généraux
- b. Etats BCEAO et ratios CGAP
- c. Génération d'états

5 L'administration et l'appui

- a. sécurité
- b. back-up et récupération
- c. Tolérance d'erreurs et robustesse
- d. Procédure de fin de période
- e. Structure d'appui et de maintenance
- f. Contrôle de la version et mise à jour

6 La conformité aux normes

- a. La conformité aux normes comptables
- b. La conformité aux normes réglementaires

7 Spécifications techniques et robustesse

- a. Technologie et architecture
- b. Performance

8. Coûts



In using the guide, the reader would become aware that the guide demonstrates functional and technical aspects of the SFD automation requirements, technical aspects and the cost. 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 :

- La saisie des données
- Les fonctions et flexibilités
- Le reporting (différents états produits)
- La conformité aux normes comptables et réglementaires

Technical:

- La convivialité et la facilité d'utilisation
- La gestion et l'assistance
- Les spécifications techniques et précisions

Costs :

- Les coûts et prix

In summary you may use this guide in four ways:

- **Start reading from the front until you are 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 made.**
- **Go to specific sections as a reference to search for particular references.**

1. IDENTIFICATION DE SYSTEMS ET BESOINS

Identification et classement des institutions examinées :

Les systèmes évalués comprennent :

- **Amadeus** : est développé par la Banque Africaine de Développement, testé à Piyeli,
- **Bank 2000** : was initiated by MACO Systems, a US firm, then transferred to developers in India and is currently distributed by Software Strategies of Kenya and used by numerous banks and MFIs in India and Est Africa.
- Bankers Realm is a Windows upgrade to Bank 2000, and is used by at least 4 banks in Kenya.
- **CVECA Pays Dogon** : est un système spécifique développe par un informaticien du nom de Jean Babin
- Mercury: is developed by Computer Consultants Corp, a US firm operating in the state of Utah, to manage loan a savings portfolios of credit unions in the US, the Carabean and Latin America.
- **Microbanker 2** : est developpe par la FAO et utilise par Piyeli
- **Microbanker 1** : est developpe par la FAO et utilise par Kondo Jigima
- **Nyèta Musow** : est un système spécifique developpe par un informaticien du nom de Jean Babin
- **Sibanque 1 et Sibanque 2**: sont utilises par Kafo Jiginew et Jemeni

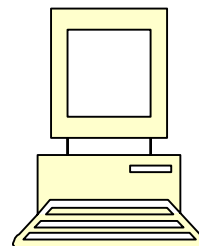


Table 2 shows under which category of SFD the systems fall.

Type d'institution	Description	Système
Mutuelle Multi niveaux	Corporation de Fédérations	<i>inexistant au Mali</i>
Mutuelle Fédération	Comprend des institutions ayant deux ou plusieurs Unions de caisses mutuelles	Sibanque 1 Sibanque 2 Microbanker 1 Mercury Bankers Realm Bank 2000
Mutuelle Association	Union de caisses mutuelles	<i>No systems were found that manages this type of SFD</i>
Caisse individuelle	Caisse individuelle	<i>No systems were found that manages this type of SFD</i>
Grande Non Mutuelle	Réseau de caisses	CVECA Pays Dogon
Petite Non Mutuelle (crédit de solidarité)	Institutions faisant des crédits aux groupes de solidarités	MicroBanker 2 Amadeus Nyèta Musow

Table 2 Distribution of SFDs

Identification des besoins types de systèmes financiers décentralisés (SFD)

This study evaluates these systems based on standard international and national requirements for microfinance systems. The study observed that there were very few differences in the system requirements between the different categories of mutuelles and non-mutuelles. In general, most of the requirements identified were needed by all categories of SFDs.

In exceptional cases, such as where small mutuelles indicate that they do not need language and currency flexibility, it may be argued that they would in fact need these capabilities in time. For instance, a small non-mutuelle may be currently at the level where all transactions are done locally with local currency. Even donor funds in foreign currencies will be converted by the donor agency and passed along to the small non-mutuelle. Although the small SFD would not need this system function, they may grow to appreciate this flexibility in the system. To clarify, a function such as this will not be taken out of a system, because it is not needed at the time.

We feel that SFD MIS software system needs to be capable of expanding into managing loans, deposits and an expanding amount of client information as it grows and responds to the needs of its clients. The rest of the needs come with the common economic and regulatory environment that SFDs in Mali work in. For instance:

- La saisie des données : most fields are needed to accommodate different client configurations, product design and accounting plan.
- Les fonctions et flexibilités : growth call for flexibility in accommodating new functions economic considerations as well as reducing components of the systems to add on branches with limited functions.
- Le reporting (différents états produits) : Reporting changes with the addition of donors, clients, and government regulations.
- La conformité aux normes comptables et réglementaires : The accounting system in the West African region recently changed and may change again.
- La convivialité et la facilité d'utilisation : A system that is logical and easy to use means a system that will well serve the organization providing efficiency, comprehension and convenience.
- La gestion et l'assistance : A sound support base, both internal and external is important to the smooth functioning of the software and its adaptability to growth of the organization and business environmental changes.
- Les spécifications techniques et précisions : The operating environment, the design and robustness of the software is required to keep the software operating cost efficiently and in optimum performance.

Les besoins des différents types de SFD sont donnés dans le tableau ci-dessous. Chaque fois qu'une croix (ou lettre X) est marquée devant un type de SFD, l'élément représente un besoin pour lui.

Identification des besoins	Mutuelles Multi-niveaux	Mutuelle association	Mutuelle Fédération	Mutuelle individuelle	Non Mutuelle grande	Non Mutuelle petite
1.1 La saisie des données						
a. Plan comptable	X	X	X	X	X	X
b. Compte individuel	X	X	X	X	X	X
c. Client	X	X	X	X	X	X
d. dossier de prêt	X	X	X	X	X	X
e. enregistrement des opérations	X	X	X	X	X	X
f. Conditions d'échelle	X	X	X	X	X	X
g. Agence	X	X	X		X	X
1.2. Les fonctions et flexibilité						
a. comptabilité	X	X	X	X	X	X
b. gestion du portefeuille	X	X	X	X	X	X
c. gestion des dépôts	X	X	X	X	X	X
d. système d'information clientèle	X	X	X	X	X	X
e. Possibilité d'extension et de développement institutionnel	X	X	X	X	X	X
f. Flexibilité par rapport aux clients et comptes	X	X	X	X	X	X
g. Flexibilité du type d'institution	X	X	X	X	X	X
h. Flexibilité de la méthode d'octroi des prêts	X	X	X	X	X	X
I. Flexibilité du type d'intérêt sur les prêts	X	X	X	X	X	X
J. Flexibilité par rapport aux types de dépôt	X	X	X	X	X	X
k. Flexibilité par rapport aux types de paiement	X	X	X	X	X	X
l. Flexibilité des fréquences des échéances	X	X	X	X	X	X
m. Flexibilité de multi – agence et /ou multi-régions	X	X	X		X	X
n. Flexibilité des langues	X		X		X	
o. Flexibilité multi-devises	X	X	X	X	X	
1.3. Facilité d'utilisation et convivialité						
a. Convivialité	X	X	X	X	X	X
b. Interface de l'utilisateur	X	X	X	X	X	X

Identification des besoins	Mutuelles Multi-niveaux	Mutuelle association	Mutuelle Fédération	Mutuelle individuelle	Non Mutuelle grande	Non Mutuelle petite
1.4. Les états à produire						
a. Documents généraux	X	X	X	X	X	X
b. Etats BCEAO et ratios CGAP	X	X	X	X	X	X
c. Génération d'états	X	X	X	X	X	X
1.5 L'administration et l'appui						
a. sécurité	X	X	X	X	X	X
b. back-up et récupération	X	X	X	X	X	X
c. Tolérance d'erreurs et robustesse	X	X	X	X	X	X
d. Procédure de fin de période	X	X	X	X	X	X
e. Structure d'appui et de maintenance	X	X	X	X	X	X
f. Contrôle de la version et mise à jour	X	X	X	X	X	X
1.6 La conformité aux normes						
a. La conformité aux normes comptables	X	X	X	X	X	X
b. La conformité aux normes réglementaires	X	X	X	X	X	X
1.7. Spécifications techniques et robustesse						
a. Technologie et architecture	X	X	X	X	X	X
b. Performance	X	X	X	X	X	X
1.8. Coûts						

Table 3 SFD Requirement

2. SUMMARY AND NARATIVES OF SYSTEMS AND COMPARISONS :

2.1 Résumé sur l'analyse de Système

The guide targets, seven systems used in Mali and three systems used outside of 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. Each measurement criteria under the topics and category was rated from 1 to 5 and given an objective priority weight between 1 to 3 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 ratings in all measurements would receive a 100%, regardless of the priority assigned to the measurement criteria. Based on this study, the systems examined received the following scores:

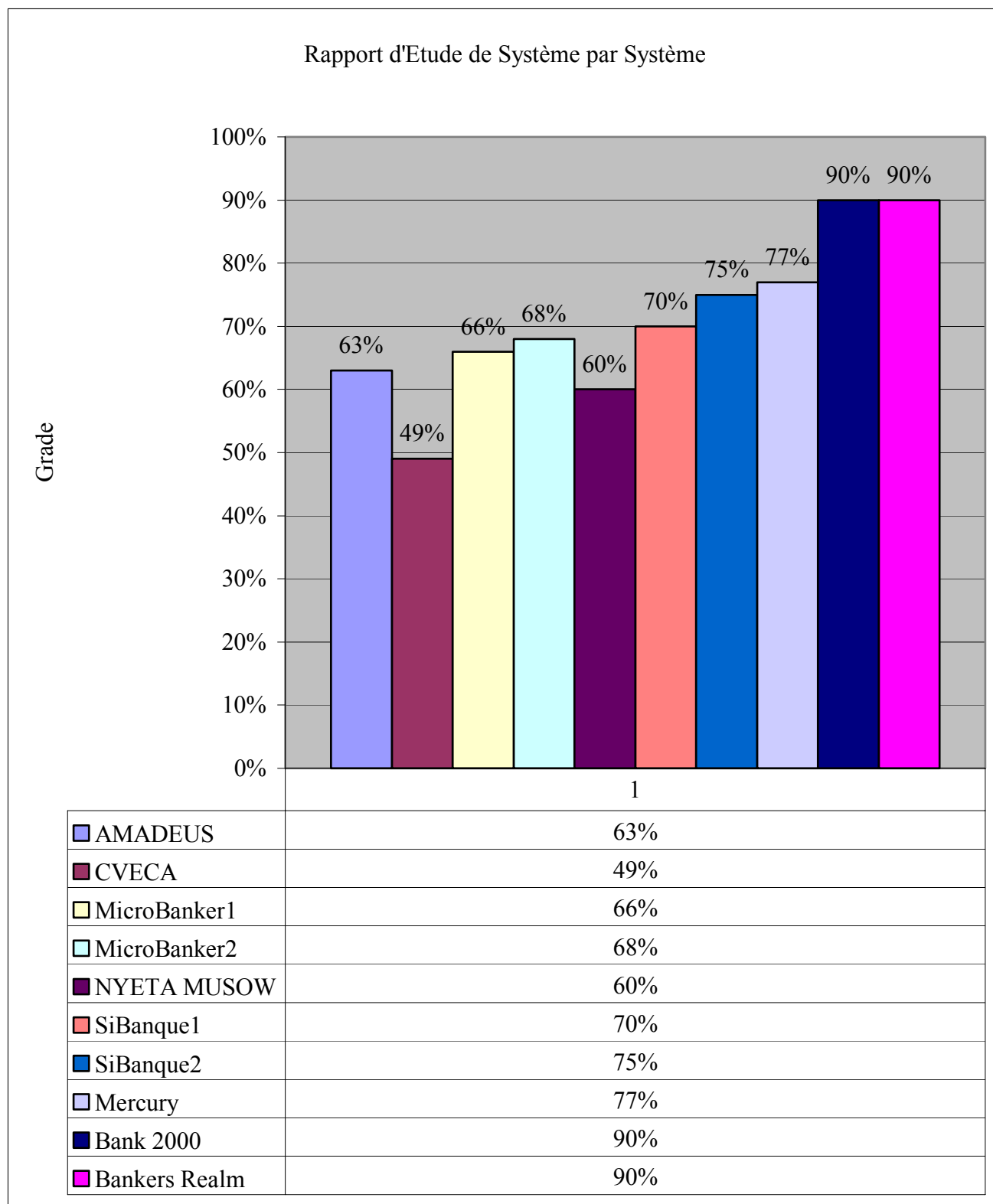
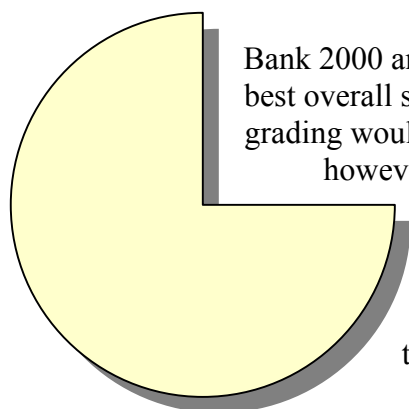


Table 4 Systems Study



Bank 2000 and Bankers Realm are therefore graded the highest, or the best overall systems. Sibanque2 and Mercury follow close behind. This grading would not mean that this is the best system suited for all SFDs, however, each SFD should evaluate the software according to its criteria before the final selection. The following section gives an analysis for particular SFDs.

Following is a table by of each system demonstrating how the system was rated by category.

System Summary by Category

Resume des systems par Category										
Category	AMA	B00	BRL	CVC	MRY	MB1	MB2	NYM	SB1	SB2
Les données à saisir dans le système	67%	88%	89%	42%	84%	80%	81%	70%	77%	78%
Les Fonctions et flexibilités	63%	99%	97%	29%	80%	71%	74%	44%	65%	73%
Convivialité et facilité d'utilisation	51%	96%	99%	46%	89%	44%	45%	50%	59%	65%
Reporting	73%	95%	97%	48%	86%	78%	77%	71%	72%	86%
Conformité aux normes L'administration et l'assistance	73%	93%	93%	51%	50%	72%	72%	66%	83%	87%
Les spécifications techniques et exactitudes	46%	92%	93%	31%	88%	60%	65%	31%	60%	47%
LesCoûts	61%	98%	99%	74%	93%	56%	63%	75%	58%	81%
Total:	63%	90%	90%	49%	77%	66%	68%	60%	70%	75%

Table 5 Systems Summary by Category

Legend:

AMA = Amadeus
MRY = Mercury
SB1 = Sibanque1

B00 = Bank 2000 **BRL** = Bankers Realm **CVC** = CVECA Pays
MB1 = Microbanker1 **MB2** = Microbanker2 **NCT** = Nyeta Musow
SB2 = Sibanque2



- *Tables in this section also show how each system is graded by category to derive the grades in the table above.*
- *Narratives follow in section 3 that further explain particular concerns about each system by category.*
- *Annex 1 contains a table that shows the comparison between systems by topics.*
- *Annex 2 contains seven tables which show the topic ratings for each system*

2.2 Rapport d'Etude de Système par Catégorie

	<i>Grade</i>
<i>AMADEUS</i>	63%
1 Les données à saisir dans le système	67%
2 Les Fonctions et flexibilités	63%
3 Convivialité et facilité d'utilisation	51%
4 Reporting	73%
5 Conformité aux normes	73%
6 L'administration et l'assistance	46%
7 Les spécifications techniques et exactitudes	61%
8 Les coûts	71%
<i>Bank2000</i>	90%
1 Les données à saisir dans le système	88%
2 Les Fonctions et flexibilités	99%
3 Convivialité et facilité d'utisation	96%
4 Reporting	95%
5 Conformité aux normes	93%
6 L'administration et l'assistance	92%
7 Les spécifications techniques et exactitudes	98%
8 LesCoûts	56%
<i>Bankers Realm</i>	90%
1 Les données à saisir dans le système	89%
2 Les Fonctions et flexibilités	97%
3 Convivialité et facilité d'utisation	99%
4 Reporting	97%
5 Conformité aux normes	93%
6 L'administration et l'assistance	93%
7 Les spécifications techniques et exactitudes	99%
8 LesCoûts	52%
<i>CVECA</i>	49%
1 Les données à saisir dans le système	42%
2 Les Fonctions et flexibilités	29%
3 Convivialité et facilité d'utilisation	46%
4 Reporting	48%
5 Conformité aux normes	51%
6 L'administration et l'assistance	31%
7 Les spécifications techniques et exactitudes	74%
8 Les coûts	74%

<i>Mercury</i>	77%
1 Les données à saisir dans le système	84%
2 Les Fonctions et flexibilités	80%
3 Convivialité et facilité d'utisation	89%
4 Reporting	86%
5 Conformité aux normes	50%
6 L'administration et l'assistance	88%
7 Les spécifications techniques et exactitudes	93%
8 LesCoûts	48%
<i>MicroBanker1</i>	66%
1 Les données à saisir dans le système	80%
2 Les Fonctions et flexibilités	71%
3 Convivialité et facilité d'utilisation	44%
4 Reporting	78%
5 Conformité aux normes	72%
6 L'administration et l'assistance	60%
7 Les spécifications techniques et exactitudes	56%
8 Les coûts	67%
<i>MicroBanker2</i>	68%
1 Les données à saisir dans le système	81%
2 Les Fonctions et flexibilités	74%
3 Convivialité et facilité d'utilisation	45%
4 Reporting	77%
5 Conformité aux normes	72%
6 L'administration et l'assistance	65%
7 Les spécifications techniques et exactitudes	63%
8 Les coûts	68
<i>NYETA MUSOW</i>	60%
1 Les données à saisir dans le système	70%
2 Les Fonctions et flexibilités	44%
3 Convivialité et facilité d'utilisation	50%
4 Reporting	71%
5 Conformité aux normes	66%
6 L'administration et l'assistance	31%
7 Les spécifications techniques et exactitudes	75%
8 Les coûts	74%

<i>SiBanque1</i>	70%
1 Les données à saisir dans le système	77%
2 Les Fonctions et flexibilités	65%
3 Convivialité et facilité d'utilisation	59%
4 Reporting	72%
5 Conformité aux normes	83%
6 L`administration et l`assistance	60%
7 Les spécifications techniques et exactitudes	58%
8 Les coûts	86%
<i>SiBanque2</i>	75%
1 Les données à saisir dans le système	78%
2 Les Fonctions et flexibilités	73%
3 Convivialité et facilité d'utilisation	65%
4 Reporting	86%
5 Conformité aux normes	87%
6 L`administration et l`assistance	47%
7 Les spécifications techniques et exactitudes	81%
8 Les coûts	86%

Table 6 System Grades by category

2.3 Résumé de la comparaison besoins et possibilités des systèmes

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 at the chart and determine that a specific system would best meet their requirements. They would further examine the detailed category analysis of how every system studied responds to their SFD's requirements.



The study of systems requirements for this guide was based on international standards provided by Weidemann Associates and further modified and added to, in consideration of specific concerns unique to Mali and West Africa. These requirement standards are the topics and category for this guide.



These standards were then used to evaluate whether every different type of SFD studied needed or did not need the items in the category. If the category item was needed by the particular SFD, the category was given a 1 value. This value was then used to determine whether the systems in the study meet the needs of the SFD. Functions in the systems which

were not needed were not considered and graded and functions which were needed were graded based on the strengths derived from the study of the individual system. The systems receiving the highest grades in the items needed by particular SFDs therefore received the highest grades. In this evaluation a system that received all 5s rates in all items needed by a particular SFD would receive a 100% even if it was graded less in areas that were not needed.

Le tableau ci-dessous montre dans quelle mesure les systèmes étudiés répondent aux besoins des différents types de SFD. Le tableau fait ressortir les notes obtenues (en pourcentage des besoins) par chaque système pour les différents types de SFD.

Résumé de Besoins SFD par rapport des Systèmes

SDF	AMA	BOO	BRL	CVC	MRY	MB1	MB2	NYM	SBI	SB2
Mutuelle association	63%	90%	90%	49%	77%	66%	68%	60%	70%	75%
Mutuelle Federation	63%	90%	90%	49%	77%	66%	68%	60%	70%	75%
Mutuelle individuelle	64%	90%	91%	49%	78%	66%	68%	60%	70%	76%
Mutuelles Multi-niveaux	63%	90%	90%	49%	77%	66%	68%	60%	70%	75%
Non Mutuelle grande	63%	90%	90%	49%	77%	66%	68%	60%	70%	75%
Non Mutuelle petit	64%	89%	90%	49%	78%	66%	69%	60%	70%	75%
Total:	63%	90%	90%	49%	77%	66%	68%	60%	70%	75%

Table 7 Résume de Besoins SFD par rapport des Systèmes

Legend:

AMA = Amadeus
MRY = Mercury
SB1 = Sibanque1

B00 = Bank 2000
MB1 = Microbanker1
SB2 = Sibanque2

BRL = Bankers Realm
MB2 = Microbanker2
NCT = Nyeta Musow

CVC = CVECA Pays

Again, Sibanque2 and Sibanque 1 maintain the lead as the systems that best match the overall needs of SFDs in Mali. This chart is a quick and direct reference to the system that best suits the SFD. For instance, a Mutual Association will see that Sibanque 2 meets their requirements, is easier to use than other systems, can produce reports in whatever format that the SFD chooses, conforms to the BCEAO and accounting norms and costs no more than other systems, though technical support is weaker than other systems at present.

2.4 Ratings of SFD Requirements to Systems by Category.

The table, below further explains how every system studied responds to the SFDs requirements sorted by category. For example a Mutual Association will see that Sibanque 2 meets their requirements, is easier to use than other systems, can produce more reports than the other systems in whatever format that the SFD chooses, conforms to the BCEAO and accounting norms and is competitively priced although technical support is weaker than other systems at the present.

Résumé de Besoins SFD par Catégorie

	<i>AMA</i>	<i>B00</i>	<i>BRL</i>	<i>CVC</i>	<i>MRY</i>	<i>MB1</i>	<i>MB2</i>	<i>NYM</i>	<i>SB1</i>	<i>SB2</i>
Mutuelle association	63%	90%	90%	49%	77%	66%	68%	60%	70%	75%
1 Les données à saisir dans le système	67%	88%	89%	42%	84%	80%	81%	70%	77%	78%
2 Les Fonctions et flexibilités	63%	99%	97%	29%	80%	71%	74%	44%	65%	73%
3 Convivialité et facilité d'utilisation	51%	96%	99%	46%	89%	44%	45%	50%	59%	65%
4 Reporting	73%	95%	97%	48%	86%	78%	77%	71%	72%	86%
5 Conformité aux normes	73%	93%	93%	51%	50%	72%	72%	66%	83%	87%
6 L'administration et l'assistance	46%	92%	93%	31%	88%	60%	65%	31%	60%	47%
7 Les spécifications techniques et exactitudes	61%	98%	99%	74%	93%	56%	63%	75%	58%	81%
8 LesCoûts	71%	56%	52%	74%	48%	67%	68%	74%	86%	86%
	AMA	B00	BRL	CVC	MRY	MB1	MB2	NYM	SB1	SB2
Mutuelle Federation	63%	90%	90%	49%	77%	66%	68%	60%	70%	75%
1 Les données à saisir dans le système	67%	88%	89%	42%	84%	80%	81%	70%	77%	78%
2 Les Fonctions et flexibilités	63%	99%	97%	29%	80%	71%	74%	44%	65%	73%
3 Convivialité et facilité d'utilisation	51%	96%	99%	46%	89%	44%	45%	50%	59%	65%
4 Reporting	73%	95%	97%	48%	86%	78%	77%	71%	72%	86%
5 Conformité aux normes	73%	93%	93%	51%	50%	72%	72%	66%	83%	87%
6 L'administration et l'assistance	46%	92%	93%	31%	88%	60%	65%	31%	60%	47%
7 Les spécifications techniques et exactitudes	61%	98%	99%	74%	93%	56%	63%	75%	58%	81%
8 LesCoûts	71%	56%	52%	74%	48%	67%	68%	74%	86%	86%

	AMA	B00	BRL	CVC	MRY	MB1	MB2	NYM	SB1	SB2
Mutuelle individuelle	64%	90%	91%	49%	78%	66%	68%	60%	70%	76%
1 Les données à saisir dans le système	74%	93%	94%	45%	88%	77%	78%	68%	76%	77%
2 Les Fonctions et flexibilités	65%	98%	98%	26%	80%	74%	75%	42%	68%	77%
3 Convivialité et facilité d'utilisation	51%	96%	99%	46%	89%	44%	45%	50%	59%	65%
4 Reporting	73%	95%	97%	48%	86%	78%	77%	71%	72%	86%
5 Conformité aux normes	73%	93%	93%	51%	50%	72%	72%	66%	83%	87%
6 L'administration et l'assistance	46%	92%	93%	31%	88%	60%	65%	31%	60%	47%
7 Les spécifications techniques et exactitudes	61%	98%	99%	74%	93%	56%	63%	75%	58%	81%
8 LesCoûts	71%	56%	52%	74%	48%	67%	68%	74%	86%	86%
	AMA	B00	BRL	CVC	MRY	MB1	MB2	NYM	SB1	SB2
Mutuelles Multi-niveaux	63%	90%	90%	49%	77%	66%	68%	60%	70%	75%
1 Les données à saisir dans le système	67%	88%	89%	42%	84%	80%	81%	70%	77%	78%
2 Les Fonctions et flexibilités	63%	99%	97%	29%	80%	71%	74%	44%	65%	73%
3 Convivialité et facilité d'utilisation	51%	96%	99%	46%	89%	44%	45%	50%	59%	65%
4 Reporting	73%	95%	97%	48%	86%	78%	77%	71%	72%	86%
5 Conformité aux normes	73%	93%	93%	51%	50%	72%	72%	66%	83%	87%
6 L'administration et l'assistance	46%	92%	93%	31%	88%	60%	65%	31%	60%	47%
7 Les spécifications techniques et exactitudes	61%	98%	99%	74%	93%	56%	63%	75%	58%	81%
8 LesCoûts	71%	56%	52%	74%	48%	67%	68%	74%	86%	86%
	AMA	B00	BRL	CVC	MRY	MB1	MB2	NYM	SB1	SB2
Non Mutuelle grande	63%	90%	90%	49%	77%	66%	68%	60%	70%	75%
1 Les données à saisir dans le système	67%	88%	89%	42%	84%	80%	81%	70%	77%	78%
2 Les Fonctions et flexibilités	63%	99%	97%	29%	80%	71%	74%	44%	65%	73%
3 Convivialité et facilité d'utilisation	51%	96%	99%	46%	89%	44%	45%	50%	59%	65%
4 Reporting	73%	95%	97%	48%	86%	78%	77%	71%	72%	86%
5 Conformité aux normes	73%	93%	93%	51%	50%	72%	72%	66%	83%	87%
6 L'administration et l'assistance	46%	92%	93%	31%	88%	60%	65%	31%	60%	47%
7 Les spécifications techniques et exactitudes	61%	98%	99%	74%	93%	56%	63%	75%	58%	81%
8 LesCoûts	71%	56%	52%	74%	48%	67%	68%	74%	86%	86%
	AMA	B00	BRL	CVC	MRY	MB1	MB2	NYM	SB1	SB2
Non Mutuelle petit	64%	89%	90%	49%	78%	66%	69%	60%	70%	75%
1 Les données à saisir dans le système	67%	88%	89%	42%	84%	80%	81%	70%	77%	78%
2 Les Fonctions et flexibilités	66%	98%	98%	25%	84%	75%	78%	42%	68%	73%
3 Convivialité et facilité d'utilisation	51%	96%	99%	46%	89%	44%	45%	50%	59%	65%
4 Reporting	73%	95%	97%	48%	86%	78%	77%	71%	72%	86%
5 Conformité aux normes	73%	93%	93%	51%	50%	72%	72%	66%	83%	87%
6 L'administration et l'assistance	46%	92%	93%	31%	88%	60%	65%	31%	60%	47%
7 Les spécifications techniques et exactitudes	61%	98%	99%	74%	93%	56%	63%	75%	58%	81%
8 LesCoûts	71%	56%	52%	74%	48%	67%	68%	74%	86%	86%
Total:	63%	90%	90%	49%	77%	66%	68%	60%	70%	75%

Table 8 Résumé de Besoins SFD par Catégorie

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

Note:

- Narratives follow in section 3, which further explain particular concerns about each system by topic.
- In addition les six (6) tableaux suivants in ANNEX 3 donnent pour chaque type de SFD les détails on and grades on each category par les différents systèmes étudiés au regard des besoins des SFD

2.5 Constats Conclusions et recommandations

Parmi les systèmes analysés, Bank 2000/Bankers Realm, Mercury, MicroBanker et SiBanque viennent en tête avec des degrés de satisfaction des besoins des systèmes financiers décentralisés allant de 74% pour la première version de MicroBanker à 85% pour la deuxième version et 70% pour la première version de SiBanque à 85% pour la dernière version, Bank 2000 and Bankers Realm both score 90% and Mercury 77%, selon le type de SFD.

Ensuite viennent Amadeus avec un degré de satisfaction compris entre 66% et 74%, Nyèta Musow (55% et 60%) et CVECA Pays Dogon (36% et 40%).

Les fonctionnalités et flexibilités de chaque système sont données dans le rapport . Because these are the five top systems, nous allons donner ici les forces et faiblesses des deux premiers systèmes à savoir MicroBanker et SiBanque. Bank2000 and Bankers Realm will be discussed together since Bankers Realm is the Windows upgrade of Bank 2000.

Bank 2000 and Bankers REalm

Forces

Bank 2000 and Bankers Realm are very strong systems, designed and proven to manage banking business. The systems are have very advanced features and functions for managing loans and saving portfolios and information for its client base.

- Bankers Realm, is expecially strong as a management decision making system.
- Il permet de produire de façon quotidienne, le journal des opérations, la balance générale des comptes, la balance auxiliaire des prêts et des dépôts, les intérêts courus non échus.
- Il permet de gérer autant de types de prêts que l'on désire, les paiements anticipés, en retard, partiels et les trop perçus, les impayés et les rééchelonnements de crédit.
- Il permet de faire des crédits aux clients individuels et aux groupes.



- Il permet de calculer les intérêts précomptés (système d'escompte), post comptés, les commissions et frais et les pénalités de retard.
- Il permet de gérer les échéances constantes, les échéances avec amortissement constant en capital et des échéances uniques.
- Il permet de différer le paiement d'une échéance, d'accorder une période grâce et le rééchelonnement d'un crédit déjà accordé.
- Il permet de gérer les échéances hebdomadaires, et mensuelles.
- Le diviseur pour le calcul des intérêts peut être 360 , 365 ou 52 semaines.
- Il permet de gérer autant de types de dépôts que l'on désire, les comptes d'épargne avec ou sans les livrets, les comptes courants, les découverts.
- Il permet de gérer les informations par agent de crédit.
- Bank 2000 is written in FoxPro and Bankers Realm is written in Visual Basic. Both systems are well organized and the screens for inputting and reporting on data are available directly and/or sequentially.
- Even though Bank 2000 is written in FoxPro, which does not come with a secure database. Bank 2000 is delivered with its databases encrypted with C+ utility for security against entry with data management software.
- The systems provides for different levels of access restricting users to specific activities.
- Detailed system and training manuals are provided. These, however, needs translation to French.
- Bank 2000 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 and the graphic user interface in Bankers Realm, though sophisticated, is comfortable to the user. Bank 2000 is a DOS system, but still permits the user to full use of the mouse, similar to Windows programs.
- The systems perform very sophisticated and functional audit trail, and instantly notifies the management hierarchy of intruder violations.

Faiblesses

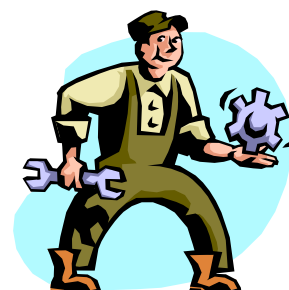
- Bank 2000 and Bankers Realm do not permit bi-weekly and bi-monthly posting or support 332 days a year.

- Il ne permet pas de produire les annexes BCEAO.
- Il ne permet pas de calculer automatiquement les provisions selon les règles de la BCEAO.
- Il ne permet pas de faire des tris selon l'adresse, le sexe, la profession.
- Il ne permet pas pour un client individuel de dire qu'il appartient à tel groupe ou à telle association de groupe.
- Bank 2000 is written in Fox Pro and does not provide modern windows interface such as color diversity.
- The users guide must be translated to French and written in a manner that is better understood by users holding different functional positions in the MFI
- Unless a support base is established in Mali, it will take some effort to obtain immediate support for the system since the support base is in a foreign country (Kenya and India).
- The installation process will require substantial work to localize the Software. This activity will be at the vendor's expense, but the MFI will be expected to cover the cost of the visit; airfare, lodging and per diem.
- The systems may become slow to generate reports and listings when more data is added and should affect rapid access to data on data entry screens especially since they are designed to maintain data for immediate historical access. Data degradation depends on the volume and accumulation of data and may be avoided if unused records are archived periodically.

Mercury

Forces

Mercury is one of the leading computer systems used in the US to manage credit unions. In this respect, it contains very strong capabilities in managing savings accounts such as checking, retirement accounts, certificate of deposits, and other club accounts, loans and dividends from share accounts. The system is quite modern, is written in Visual basic with SQL server database and takes advantage of many high technology features



- Il permet de produire de façon quotidienne, le journal des opérations, la balance générale des comptes, la balance auxiliaire des prêts et des dépôts, les intérêts courus non échus.
- Il permet de gérer autant de types de prêts que l'on désire, les paiements anticipés, en retard, partiels et les trop perçus, les impayés et les rééchelonnements de crédit.

- The system easily permits members to transfer funds between multiple accounts
- Il permet de calculer les intérêts précomptés (système d'escompte), post comptés, les commissions et frais et les pénalités de retard.
- Il permet de gérer les échéances constantes, les échéances avec amortissement constant en capital et des échéances uniques.
- Il permet de différer le paiement d'une échéance, d'accorder une période grâce et le rééchelonnement d'un crédit déjà accordé.
- Il permet de gérer les échéances hebdomadaires, bimensuelles et mensuelles.
- Le diviseur pour le calcul des intérêts peut être 360 , 365 ou 52 semaines.
- Il permet de gérer autant de types de dépôts que l'on désire, les comptes d'épargne avec ou sans les livrets, les comptes courants, les découverts.
- Il permet de gérer les informations par agent de crédit.
- Mercury is written in Visual Basic and is well organized. The screens for inputting, and reporting on data are available directly and/or sequentially with switch buttons that show related and detailed information immediately when they are clicked.
- The systems provides for different levels of access restricting users to specific activities.
- The systems contains a very extensive and easy to use on line help sytem. It, however, needs to be translated to French.
- Mercury requires at least Windows 2000 as a minimum requirement and may requires sophisticated hardware configuration.
- Data in entry screens is displayed rapidly on the screens.
- Mercury contains a large assortment of reports and facilites for both front and back office management.
- The system is delivered with SQL Server database which is a very secure database.

Faiblesses

- Il ne permet pas de produire automatiquement les annexes BCEAO.
- The system is designed specifically for credit unions, and much of the approach used is exclusively for credit unions operating in the US.

- Mercury will not easily manage loans made to groups such as is required for Mali. The MFI will have to use the system's management of department and shared accounts.
- Mercury will not support payment frequencies from its members, once every four weeks.
- Il ne permet pas de calculer automatiquement les provisions selon les règles de la BCEAO.
- Il ne permet pas de faire des tris selon l'adresse, le sexe, la profession.
- Il ne permet pas de gérer les membres individuels d'un groupe lorsque celui-ci est le client.
- Il ne permet pas pour un client individuel de dire qu'il appartient à tel groupe ou à telle association de groupe.
- Il n'est ni multi- agence, ni multidevise.
- Il ne permet pas de bloquer l'épargne forcée.
- Training in to use Mercury would significant efforts to translate the training manuals, or the users must know English.
- Mercury's user interface is in English and will have to be translated to French. This will require substantial investments.
- Unless a support base is established in Mali , it will be relatively difficult to obtain immediate support for the system since the support base is in the US. The support team, however, is highly proficient.
- Installation of Mercury is expected to be difficult. The installation will involve a large degree of localization, which would involve even the business, logic, to make the system compatible to the French accounting system and to the Generally Accepted Accounting Principles 491 (GAAP) and the International Accounting Standards (IAS).
- Mercury does not use the accrual system.
- The system does notify file and access violations and does not have enough self-auditing facilities.
- The system is expected to become slow to generate reports and listings when more data is added and should impact rapid access to data on data entry screens. Data degradation depends on the volume and accumulation of data and may be avoided if unused records are archived periodically.

Microbanker

Forces

MicroBanker est un système de gestion intégré de la comptabilité générale, des prêts, des dépôts et de système d'information clientèle.



- Il permet de produire de façon quotidienne, le journal des opérations, la balance générale des comptes, la balance auxiliaire des prêts et des dépôts, les intérêts courus non échus.
- Il permet de gérer autant de types de prêts que l'on désire, les paiements anticipés, en retard, partiels et les trop perçus, les impayés et les rééchelonnements de crédit.
- Il permet une liaison entre le compte dépôt forcé et le compte de prêt.
- Il permet de faire des crédits aux clients individuels et aux groupes.
- Il permet de calculer les intérêts précomptés (système d'escompte), post comptés, les commissions et frais et les pénalités de retard.
- Il permet de gérer les échéances constantes, les échéances avec amortissement constant en capital et des échéances uniques.
- Il permet de différer le paiement d'une échéance, d'accorder une période grâce et le rééchelonnement d'un crédit déjà accordé.
- Il permet de gérer les échéances hebdomadaires, bimensuelles et mensuelles.
- Le diviseur pour le calcul des intérêts peut être 360 , 365 ou 52 semaines.
- Il permet de gérer autant de types de dépôts que l'on désire, les comptes d'épargne avec ou sans les livrets, les comptes courants, les découverts.
- Il permet de gérer les informations par agent de crédit et par quartier.
- Microbanker2 is written in CLIPPER and is well organized and the screens for inputting, and reporting on data are available directly and/or sequentially
- The system provides for different levels of access restricting users to specific activities.
- Detailed system and training manuals are provided.
- 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.

Faiblesses

- Il ne permet pas de produire automatiquement le bilan, le compte de résultat, les soldes intermédiaires de gestion et les annexes BCEAO.
- Il ne permet pas de calculer automatiquement les provisions selon les règles de la BCEAO.
- Il ne permet de faire automatiquement la consolidation des bilans et comptes de résultats de plusieurs entités.
- Il ne permet pas de faire des tris selon l'adresse, le sexe, la profession.
- Il ne permet pas de gérer les membres individuels d'un groupe lorsque celui-ci est le client.
- Il ne permet pas pour un client individuel de dire qu'il appartient à tel groupe ou à telle association de groupe.
- Il ne permet pas de gérer les recettes et les dépenses d'un client ainsi que les crédits contractés ailleurs.
- Il n'est ni multi-agence, ni multidevise.
- Il ne permet pas de bloquer l'épargne forcée.
- Il ne permet pas de suspendre la pénalité de retard.
- 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.
- 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 there is not enough training available to use the system.
- It is relatively difficult to obtain immediate support for the system since the support base is in a foreign country (Italy) and foreign support bases are mostly in the Far East. There is representation in Africa, but this representation is in East Africa and not in the West Africa region.

- In the past Microbanker has proven difficult to install. It took a significant amount of time and expense to install the software, migrate data, test and trouble shoot in the SFD interviewed.
- The system does not adequately notify file and access violations and has no self-auditing facility besides audit trail on transaction.
- The system is expected to become slow to generate reports and listings when more data is added and should impact rapid access to data on data entry screens. Data degradation depends on the volume and accumulation of data and may be avoided if unused records are archived periodically.

Sibanque2

Forces

Sibanque est un système de gestion intégré de la comptabilité générale, des prêts, des dépôts et de système d'information clientèle.



- Il permet de produire de façon quotidienne, le journal des opérations, la balance générale des comptes, la balance auxiliaire des prêts et des dépôts, le bilan, le compte de résultat, les soldes intermédiaires de gestion, les intérêts courus non échus.
- Il permet de calculer automatiquement les provisions selon les règles de la BCEAO.
- Il permet de gérer autant de types de prêts que l'on désire, les paiements anticipés, en retard, partiels et les trop perçus, les impayés et les rééchelonnements de crédit.
- Il permet une liaison entre le compte dépôt forcé et le compte de prêt.
- Il permet de bloquer l'épargne forcée.
- Il permet de faire des crédits aux clients individuels et aux groupes.
- Il permet de calculer les intérêts post comptés, les commissions et frais et les pénalités de retard.
- Il permet de suspendre les pénalités de retard.
- Il permet de gérer les échéances constantes, et des échéances uniques.
- Il permet de différer le paiement d'une échéance, d'accorder une période grâce et le rééchelonnement d'un crédit déjà accordé.
- Il permet de gérer les échéances mensuelles.
- Le diviseur pour le calcul des intérêts peut être 360
- Il permet de gérer autant de types de prêts que l'on désire, les comptes d'épargne avec ou sans les livrets, les comptes courants, les découverts.
- 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.

Faiblesses

- Il ne permet pas de produire automatiquement les annexes BCEAO.
- Il ne permet pas de faire automatiquement la consolidation des bilans et comptes de résultats de plusieurs entités.
- Il ne donne pas de sortir des indicateurs par agent de crédit et par quartier.
- Il ne permet pas de gérer les échéances avec amortissements constants en capital
- Il ne permet pas de gérer les échéances hebdomadaires et bimensuelles.
- Il ne permet d'utiliser le diviseur de 365 jours et 52 semaines.
- Il ne permet pas de faire des tris selon l'adresse, le sexe, la profession.
- Il ne permet pas de gérer les membres individuels d'un groupe lorsque celui-ci est le client.
- Il ne permet pas pour un client individuel de dire qu'il appartient à tel groupe ou à telle association de groupe.
- Il ne permet pas de gérer les recettes et les dépenses d'un client ainsi que les crédits contractés ailleurs.
- Il n'est ni multi- agence, ni multi devise.

- Sibanque's plan of accounts is limited to 9 characters, since the software is limited to one branch. Exports to spreadsheets are required when consolidating other branches.
- Sibanque1 is not yet capable of archiving old unused data or performing full and incremental backups.
- The system does not adequately notify file and access violations and has no self-auditing facility besides audit trail on transaction.
- The system 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.

2.5 Recommendations



Bank Realm is best for MFIs that require sophisticated loan and deposit management automated functions since it is the strongest system assessed. This system is also good for MFIs that do not require these functions, since they may opt to purchase and use only those functions that they currently require. Additional functions may be added with growth.

Nous recommandons Microbanker aux Systèmes Financiers décentralisés qui font des prêts avec des échéances hebdomadaires, bimensuelles ou uniques et qui souhaitent des indicateurs de performance par agent de crédit.

Sibanque est recommandé pour les institutions qui ont des échéances mensuelles ou uniques.

Il est recommandé dans les deux cas d'exporter les balances dans un tableur ou un système de gestion de base de données (Access, quick pro, lotus approach) pour faire la consolidation et élaborer les annexes BCEAO et les ratios du CGAP.

In this modern Microsoft computing environment, we hesitate to recommend systems that are written for the older DOS environment. MicroBanker 1 and 2, Sibanque1 and Bank 2000 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. Bankers Realm, Mercury and Sibanque2, since they are written for the Windows environment are then the logical technical recommendation. Although are based on the older proven systems, and substantial technical and functional enhancements have been added, the systems are 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. Bankers Realm and Mercury are new systems, but have been installed in the institutions working in the US and Kenya.

Microbanker 1 and 2 are installed and in use by SFDs in Mali. Original installations were difficult, lengthy and expensive, especially if data migration and major modifications are required of the system. Our most important reservation is on support. If Microbanker is selected the SFD must understand that immediate support cannot be expected since there is no support base in West Africa. Fortunately, with e-mail communications simple errors, may be corrected. Finally Microbanker has announced that they are working to develop a windows version of Microbanker. This version should be ready for field-testing in 2001.

Microbanker has an extended system that permits the SFD to modify up to 20% of the source code. This facility is very useful for the SFD since it is virtually impossible to build custom microfinance software for all microfinance operations in the world. Thus it is recommended that SFDs look for and consider this function, although more expensive, since it is useful in closer adapting the software to all of the functions of the institution. In addition, external report generators may also be used to expand the functionality of the recommended software. Report generators such as FoxPro and Crystal Report writers are affordable ways to upgrade the existing systems to complete the automation of the MIS and reporting for internal requirements and externally to BCEAO & CAS/SFD.

Delete: (Because we are not 100% satisfied with the systems used in Mali, the study will continue to look at others systems in use elsewhere. We will first look at systems that are in use in the region and extend our search to look at software used in other African nations, and even microfinance software used in the United States.)

3.1 Commentaires d'ES Systemes

Le Système Amadeus

The Amadeus system is tested by Piyelli as a possible replacement for Microbanker. This system is also a DOS system, but is menu driven with mouse capabilities. Although the system's functions were tested, little can be said for its actual performance in production, since it was observed only in a test environment.

La saisie des données

- a. Plan comptable Amadeus gère les numéros, les libellés du plan comptable de la BCEAO ainsi que les codes postes du bilan et du compte de résultat.
- b. Les comptes individuels Il gère les numéros des comptes individuels, leurs libellés, numéros clients, numéro de plan comptable, dates de création, date d'échéance et conditions d'échelles. Cependant, il n'y a pas de champs pour les découverts, les devises et l'agence
- c. Les clients Il n'y a pas de numéro client différent de celui du compte de dépôts. Toutefois à la création du compte, il permet de saisir les noms et prénoms des clients, leurs adresses, dates de naissance, lieux de naissance, sexe, En revanche, il n'y a pas de champs prévus pour enregistrer les membres de groupes de solidarités, les recettes, les dépenses, le nombre d'employés, les prêts contractés ailleurs, les agents de crédit chargés de la gestion des clients et de leurs comptes de dépôts et prêts ..
- d. Les dossiers de prêts Il gère les numéros des dossiers de prêts, leurs libellés, les comptes de dépôts attachés aux prêts, les montants débloqués, le taux d'intérêts, le nombre d'échéances, le type de périodicité, la date de déblocage, la date de premier remboursement, la date de dernier remboursement et le code produit. Toutefois, il n'y a qu'un seul champ pour le montant du crédit qui est supposé être le même à l'octroi et au déblocage.
- e. Enregistrement des opérations Amadeus gère la date d'opération d'une transaction, son montant, le numéro de compte d'imputation, le sens débit crédit, le numéro de pièce ainsi que le libellé de la transaction. Cependant, il n'est pas prévu de champ pour la date de valeur ainsi que pour le code service permettant d'imputer les charges et les produits par centre de coût et de profit
- f. Les conditions d'échelle Les conditions d'échelle sont gérées mais sans les taxes dont les systèmes financiers décentralisés sont exonérés au Mali pour le moment.
- g. Le code agence L'agence n'est pas du tout gérée ; Amadeus est mono agence

Les fonctions et flexibilités

- a. comptabilité Amadeus a un système intégré de gestion de comptabilité, des prêts et des dépôts.
Il gère les journaux, les grand livres, les balances. Cependant, il ne permet pas de calculer le cash flow et d'éclater les produits et les charges par sources et centre de coûts et de profits .
Il ne gère pas les intérêts courus non échus, la paie et les immobilisations.
- b. Gestion du Amadeus gère les types de prêts, la liaison des dépôts de garantie avec

portefeuille crédit	<p>les prêts, les impayés, les paiements anticipés, en retard, partiels, les trop perçus.</p> <p>Cependant, il ne permet pas d'effectuer deux ou plusieurs débloquages sur le même prêt, de même qu'il ne permet pas de faire un scoring des crédits et les cautions. Le calcul de la provision ne peut se faire automatiquement selon la règle de provisionnement de la BCEAO.</p>
c. Gestion des dépôts	<p>Amadeus permet de gérer beaucoup de types de dépôts, l'historique des dépôts.</p> <p>Il ne permet pas de gérer les cartes de retrait ainsi que les taxes (IRVM) sur les intérêts servis aux déposants dont les clients des SFD sont exonérés pour le moment.</p>
d. Système d'information clientèle	<p>Il permet de gérer le comportement du client en matière de crédit, de dépôts et d'historique.</p> <p>Cependant, malgré la présence de champs pour enregistrer l'adresse, le sexe, la profession, on ne peut faire des tris selon ces champs.</p> <p>En outre, s'il peut gérer les clients individuels et les groupes, il ne peut gérer les membres lorsque le client est un groupe et les groupes lorsque le client est un individu.</p> <p>Amadeus affiche un message pour prévenir d'un double emploi éventuel lorsqu'il trouve que les nom et prénom du client à créer sont déjà dans Amadeus. Cette mesure peut être contournée en répondant par oui ou non.</p>
e. Possibilité d'extension et de développement institutionnel	<p>Amadeus permet de passer d'une organisation informelle à une organisation de type informel. Mais il ne peut gérer les demandes de dépôts, cartes de crédits, hypothèques, lignes de crédits et autres en plus des services standards de micro-finance</p>
f. Flexibilité par rapport aux clients et aux comptes	<p>Il permet à un client d'avoir plusieurs comptes de prêts et un seul compte de dépôts.</p> <p>Cependant, il ne permet pas de trier les informations sur le client par le sexe, l'état civil, la profession</p>
g. Flexibilité du type d'institution	<p>Il permet de gérer les institutions de micro finance et les coopératives de dépôts et de crédits.</p> <p>Cependant, il ne peut convenir aux banques car beaucoup de services tels que le change manuel, les positions de changes, la gestion des engagements par signature etc. ne sont pas gérés.</p>
h. Flexibilité de la méthodologie d'octroi des prêts	<p>Amadeus gère les clients individuels, les groupes de solidarité avec des prêts aux groupes, les caisses villageoises avec des prêts individuels, les caisses villageoises avec les prêts aux groupes.</p> <p>Cependant, il ne gère pas des groupes de solidarité avec des prêts individuels.</p>
i. Flexibilité du type d'intérêts sur les prêts	<p>Amadeus gère les intérêts sur le capital restant dû, les intérêts précomptés, les intérêts capitalisés, les commissions.</p> <p>Il ne permet pas de calculer les pénalités de retard et l'application de taux variables.</p>
j. Flexibilité par rapport au type de dépôts et d'épargne	<p>Amadeus gère l'épargne avec ou sans livret, les dépôts à terme, les dépôts volontaires et forcés (dépôts de garantie).</p> <p>Cependant, il ne gère pas les découverts.</p>
k. Type d'intérêts sur les dépôts	<p>Amadeus calcule les intérêts sur le solde journalier.</p> <p>Mais il ne peut pas calculer les intérêts sur les soldes minimum journalier. Minimum mensuel, minimum trimestriel, moyen journalier et</p>

- moyen mensuel.
- l. Flexibilité des types de remboursements Amadeus gère les prêts à échéances constantes, les prêts à échéance unique, les amortissements constants en capital mais pas les échéances irrégulières..
Il accepte les paiements en espèces en chèque, mais pas les cartes de crédits et autres.
Il permet les paiements différés d'échéance et les période grâce ainsi que le rééchelonnement.
Il ne permet pas le calcul de pénalités de retard,
- m. Flexibilité des fréquences des échéances Amadeus gère les échéances hebdomadaires, bimensuelles, mensuelles, toutes les quatre semaines mais il ne gère pas les échéances journalières et bihebdomadaires.
Le nombre de jours pris en compte pour le calcul des intérêts est 365 jours, 360 jours et 52 semaines.
Il ne gère pas 332 jours et 50 semaines.
- n. Flexibilité de multi - agence et/ou multi – régions Amadeus gère une agence et permet de gérer les informations par quartier, mais il ne permet pas de consolider les données de plusieurs agences .
- o. Flexibilité des langues Amadeus existe en versions française et anglaise mais plusieurs langues ne peuvent pas être simultanément utilisées par l'utilisateur.
- p. Flexibilité de multi- devises Amadeus ne gère que le franc CFA.

Convivialité et facilité d'utilisation

- a. convivialité Training for Amadeus is provided by the developer located in Togo who is available to visit the site. Training would require at least one week depending on the operators' computer skills. The system was evaluated in test mode and therefore difficult to judge its dependability. Error messages are available, but technical in nature. The operator or technician's ability to correct most errors is limited, and support is from the developer in Togo.
- b. interface de l'utilisateur This system is a DOS based system. Color is limited to black gray and white and the graphics are minimal. The system is menu driven with use of the keyboard and although DOS based, upgraded to use the mouse. Access to different levels of operation is available. The system flows logically but operators find access to some of the screens different to the approach used in Microbanker.

Reporting (différents états à produire)

- a. Documents généraux Amadeus permet de produire le journal, le grand livre, la balance générale des comptes, la balance auxiliaire des dépôts, des prêts ainsi que le relevé de compte, le solde des comptes et les états sur la qualité du portefeuille.
Il ne permet pas de tirer les performances par agent de crédit et de faire des projections de cash flow.
- b. Etats BCEAO et ratios CGAP Amadeus permet la production du bilan, du compte de résultat, des soldes intermédiaires de gestion et quelques annexes BCEAO.
Cependant, il ne fait pas la ventilation des crédits, des dépôts entre hommes et femmes, les recouvrements attendus au cours de l'exercice, le montant recouvré au cours de l'exercice, le montant cumulé des

octrois de crédit, les taux de remboursement et de recouvrement. Il fournit des éléments qu'il faut retraiter pour élaborer les ratios du CGAP

- c. Génération d'états Amadeus permet la génération d'états standards mais la génération d'états spécifiques ou définis par l'utilisateur est limitée

La conformité aux normes comptables et réglementaires

- a. La conformité aux normes comptables Amadeus est conforme aux normes comptables tant internationales que françaises pour l'essentiel. Cependant, les intérêts étant comptabilisés à l'encaissement, il y a là un risque de violation du principe de séparation des exercices lorsque les intérêts se chevauchent sur deux années.
- b. La conformité aux normes réglementaires Amadeus répond aux normes réglementaires de la BCEAO, mais on ne peut affirmer qu'il est facilement adaptable à un changement de réglementation

2.3.5.6 La gestion et l'assistance

- a. La sécurité The system notifies the user of some file and access violations, has a basic self-auditing facility, and uses audit trail on transactions. It provides different levels of access restricting users to specific activities. The system is password protected, but does not limit use to certain times of the day, or prompt the user to change passwords on a regular basis. The system is not protected against direct access with other software to view and change the data files. Offsite storage of records must be done by copying data files with an external software to an external storage device.
- b. Sauvegarde et restauration The system does not save incomplete records. Therefore the user must restart the transaction if the system crashes. The system is not yet capable of archiving old unused data. This will cause the system to slow down as more data is added. The system performs full backups and restores the backups efficiently.
- c. Tolérance d'erreurs et robustesse The system does not notify the users of incomplete transactions and often freezes in the process, not providing time to react.
- d. Procédure de fin de période At the end of the reporting period, the system is supposed to handle interest posting and compounding, late fees and penalties, close the books in preparation for reporting and the report generation cycle. However, because the system is in test mode this could not be verified. The system moves transactions from the journal to the general ledger on a daily basis.
- e. Structure d'appui et de maintenance System and training manuals are not provided. External support from the developers is limited to a one person developer who so far has responded well to request. Support from an internal technical support person is a requirement.
- f. Contrôle de la version et mise à jour Version control is well managed by the system. The system should be installed in tandem with existing software. The source code is not available to the SFD and is maintained off site in Togo

Spécifications techniques et précisions

- a. Technologie et The system is developed using tradition methodology and the

architecture	developer controls the source code. The system is client based linking functions to clients rather than products. The software is programmed in Clipper, a older DOS based development language, which is not currently widely supported. The system uses Dbase IV file structures. The system operates on PC with DOS available and requires minimal configuration of hardware. The system evaluated operates in a stand-alone workstation and has to be configured to work in a network environment.
b. Performance	The system does not require as much space on the storage drive as a windows system and very little space per client and additional transactions. Data (in entry screens, reports and listings) is displayed rapidly on the screen.
Number and Date Management	The system accepts dates in 2 digit format and converts it to 4 and manages dates well for Y2K compliance. The system allows for up to 10 digits for numbers.

The Bank 2000 System

The Bank 2000 system is a proven decentralized banking system. The system was first developed by MACCO of San Diego in 1989 for Indian banking clients, and is represented by Software Strategies in Kenya for the African market. Bank 2000 is a DOS system that has evolved since its first Kenya rollout in 1994, to a highly accommodating system by adapting to the change and enhancement requests from of its clients. Software Strategies has installed, and supports Bank 2000 in 14 banks and 2 MFIs in Kenya (K Rep Kenya Rural Enterprise Program and Equity Building Society) and 1 in Rwanda. The Bank 2000 clientele interviewed considers the software a highly efficient and versatile financial management tool. Software Strategies has expressed interest in vending and supporting French versions of this product to MFIs and banks in West Africa, and in particular, Mali. Bank2000 also serves as the building block of Software Strategies' new and similar Windows version called Bankers Realm.

Bank 2000 integrates institutions' client loan tracking and saving operations with internal accounting operations, to include budget management and cash flow projections. The software is highly sophisticated and while mostly used to manage banking back and front office operations, is adaptable, without programming modifications, to the management of smaller Microfinance institutions in Mali. A parent institution may use the system to manage branch activities since the system accepts batch transmissions and paper input submitted by the branches.

Bank 2000 is a FoxPro application and the developers used C+ to encrypt its database for security. The data tables used by Bank 2000 are exportable in ASCII format for transfer to database management software and spreadsheets such as lotus and Microsoft Access, Excel and other dBase formats. The system has extensive reporting capabilities. To access the data for additional custom report creation, tools such as Report Writer and Crystal Report Writer may be used.

La saisie des données - 88%

- a. Plan comptable 96% The plan of account field used in Bank 2000 can accommodate up to 21 characters. The plan of account is divided between branch, account type, and account number.
- b. Les comptes individuels 94% Individual accounts are set up to accommodate the client's pertinent information such as account number, client number, account plan, creation date, modification date, currency code, and agency code. Bank 2000 requires that appropriate bank management authorize new accounts and clients. The system needs the donor and interest rate codes. Although there is no interest code in the individual account setup, the system uses the Account Special Conditions module to suspend interest and penalty calculations by the individual client to affect all clients' loan accounts.
- c. Les clients 72% Bank 2000 collects and reports individual client numbers, combined client first and last names, address, date of birth, and sex. Place of birth will have to be added to the system. The system identifies solidarity groups, but needs fields that identify the groups' income, expenses, the role of members, employment number, other loans and credit agency. This information may, however, be added in the notes field.
- d. Les dossiers de prêts 99% The management of loan files is quite extensive. The system manages accounts' from their original balance on their opening date to their first reimbursement date, to last payment date. The system performs interest rate calculations, produces user editable repayment schedules, delinquency calculations and manages linkages to frozen amounts. The system needs a field to enter the issued check number. The user can edit an individual's repayment schedule within the system. This permits the user to also suspend an individual's loan payments at this level, and adjust the interest rate within an individual's loan account.
- e. Enregistrement des opérations 97% Bank 2000 processes transaction amounts, dates, and linkages to account numbers. It assigns these transactions as debits and credits to the GL, and tracks balances to individual accounts. The system provides note fields to insert comments at each transaction. There are provisions for applying a value date to transactions, to accommodate in-house delays for entering payments into the system.
- f. Les conditions d'échelle 60% Rate conditions are setup under the product definition module. The definition includes, among others, the product code, name and parent agency. In the product definition module, it is possible to modify interest rates of products while the product is already affected to accounts. If such a case arises the MFI would not have to create a new product, then refinance these accounts with this

new product, since once the product is modified, all accounts in that product will be updated.

- g. Le code agence 100% Detailed setup information permits the entry of information specific to the financial institution. The system may be adapted to branch agencies using a hierarchy of branches with multiple combinations of products with multiple interest rates. The system permits access to different agency information through the agency code in the chart of account structure. These branches may be restricted, by the system's security, to use only products approved by the headquarter office. The system permits sub branches to produce reports and balance sheets that reflect the sub branch's information and to produce reports and balance sheets that reflect only the loan activity at their level. Sub branches can be defined as branches and access all necessary system functions.

Functionality and Expandability

- a. comptabilité 96% Bank 2000 integrates institution management with its loan and deposit portfolio tracking functions and permits non-portfolio deposits and expenses, which directly affect the proper accounts. The system tracks and reports on these non-portfolio transactions. The chart of account map is consistent yet flexible and user definable, providing for 19 characters and up to 9 levels that map to the GL. The system traces cash flow and revenues by GL account and is able to perform cost/profit analysis by product, branch and clients. All accounts have provision accounts linkages, tracked in reporting. The system provides detailed GL management, trial balances and a full range of standard financial reports, such as balance sheets, income statement, and cash flow analyses. Bank 2000 does not provide a payroll module. Instead, the system accepts payroll expenses, from a separate system, as non-portfolio expenses. The system accommodates treasury functions. The system supports the cash and accrual system depending on the MFI's requirements. Before delivery, the developer may install either the cash or accrual system, allowing the application to use either cash or accrual systems with the use of parameters.
- b. Gestion du portefeuille crédit 96% Bank 2000 manages different user defined loan products, unpaid balances, anticipated payments, late, partial, over payments, co-maker-cosigner and guarantor cross references. Bank 2000 accepts collateral entries and provides for forced deposits linked to loan products. It permits loan refinancing and credit scoring. It easily tracks historical data on loans, in detail and summary format. The system's Client Portfolio screen accepts data entry to track loan-officer performance. The system identifies and traces loan officer activities by active portfolio, delinquencies, the number of clients, etc.. The system contains good delinquency management facilities. The loan-delinquency management facility calculates loan-loss provisions, and permits the user to define the loan-loss provision

rates according to the duration of the delinquency. Bank 2000 also provides correct portfolio aging mechanisms. Bank 2000 needs more automation to proactively inform the users of potential problems such as delinquency, cash standing, and productivity. These issues, however, are generated in standard reports. It uses a flexible delinquency calculation methodology that considers the value-date. The system performs credit scoring and has the capability to process advanced functionalities such as credit cards and smart cards. Bank 2000 will accommodate the application of X% of the interest charged to the client to be withheld for taxes. The MFI may also switch off this function when the government exempts small MFI transactions from this taxation ruling. Bank 2000 maintains separate files for guarantors through linkage at the account GNA level. It is possible to trace the amount of loans that a specific guarantor guarantees, to prevent a guarantor from over extending his/her resources since the system permits the MFI to track all guarantors, as recorded, by codes.

c. Gestion des dépôts
99%

Bank 2000 permits the modification of deposits in the loan cycle. It provides detailed historical deposit information, and handles numerous integrated account types. It permits different types of saving accounts with flexible deposit management to include voluntary deposits and forced savings, using linked portfolio management. The systems allows for advanced functionality in making transactions such as ATM, wire transfer and smart cards. The system sustains dormant or inactive accounts. The system provides for joint accounts and provides next of kin information, but stays away from identifying beneficiaries in case of death since the developers feel that this is a legal matter. Tax withholding is available, but may have to be adjusted for Mali. The system, however, allows for X% of the interest earned by the account holder to be deducted for tax withholding. Bank 2000 will also exempt this measure at any particular period since small MFI's may be exempt from withholding taxes on clients' interest.

d. Système d'information
clientèle 94%

Client information is readily available in Bank 2000. Basic client information is available at the top of the screens above more detailed account information. The system tracks client information at various Microfinance levels and maintains some solidarity group information, with note spaces provided for others. It maintains historical data on all clients, until the institution decides to remove the data. Aggregation of customer data by gender, region, area, and economic activity is available. The system needs additional fields, however, to fully compose this aggregation. The system also provides basic guarantor tracking, permits transfers between accounts, and tracks client activity. The system will warn the user if a duplicate client is to be added, but will accept the duplicated client.

e. Possibilité d'extension Bank 2000's open approach permits new products and services

et de développement institutionnel 100%	such as demand deposit, credit cards, mortgage loans, lines of credit, money transfers and even letters of credits. The developers designed Bank 2000 to serve banks. Yet, smaller Microfinance institutions may use the system, and the system grows with the institution. The system is designed for a large client loads, and has reported no difficulties in supporting multiple terminals and users.
f. Flexibilité par rapport aux clients et aux comptes 100%	Bank 2000 is customer vs. account centric. The system permits multiple savings and loan accounts linked to a single client. The system accepts pertinent customer information such as contact, gender, marital status and business activity and is quite proficient in tracking detailed account information for the client.
g. Flexibilité du type d'institution 100%	Bank 2000 has the capacity to serve full service banks, limited-service banks, cooperative savings and credit, Microfinance institutions, limited liability companies, foundations or trust, and other organizations. System adjustments may be required for signature and manual processing to serve banks in Mali.
h. Flexibilité de la méthodologie d'octroi des prêts 100%	Bank 2000 is designed to processes multiple lending methodologies such as loans to individual clients and clients with joint accounts simultaneously. The system has been configured, over time, to process Microfinance activities such as loans to solidarity groups with individual loans, solidarity groups loans, village banks with individual loans, and village banks with group loans.
i. Flexibilité du type d'intérêts sur les prêts 100%	Bank 2000 manages a wide array on interest types. These interest types include flat, declining balance, discounted rates, capitalized (or compounded) and variable and stepped rate. The system cannot manage capitalized interest. The system also calculates commissions, fees, and penalties for late payments, considering the value date.
j. Flexibilité par rapport au type de dépôts et d'épargne 100%	Flexibility in Savings and deposit account types: Bank 2000 accommodates passbook savings. The system provides for term deposits, overdraft account, current accounts, group activities, and group insurance.
k. Type d'intérêts sur les dépôts 99%	The system handles multiple deposit interest types to include day of deposit to day of withdrawal, minimum daily balance, minimum monthly balance, minimum quarterly balance, average daily balance, average monthly balance, and may be configured or hard coded to accept other user definable deposit interest types. These interest types may be set up for various payments schedules.
l. Flexibilité des types de remboursements 100%	Bank 2000 may be set up to manage the full range of required repayment schedules. It manages irregularities in payments and delinquencies. The system does accept multiple modes of payment to include, cash, check, money order, credit card, smart card and direct deposit. It permits the suspension of payment, grace periods,

deferred payments and refinancing.

m. Flexibilité des fréquences des échéances 91% Bank 2000 supports payments on a daily, weekly, monthly basis, but does not support payments that are semi-monthly, biweekly or once every four weeks. Payment schedules may be configured on a 365 and 360 but not a 332 days per year basis. The system handles 50 and 52-week schedules. Bank 2000 accepts pre-payments, late payments, under payments and over payments.

n. Flexibilité de multi - agence et/ou multi – régions 100% Bank 2000 has the mechanism for separating information on a branch level, mechanisms for aggregating office level data, and reporting on these levels. Updates to head offices may be instantaneous depending on system networking configurations used. The systems is set up perform bank and internal transfers in Kenya and may be done so in Mali, if the technology permits.

o. Flexibilité des langues 100% Bank 2000 provides English, French and Hungarian (Magyar) user interface. Switching between French and English is easy from the screen. The user easily maintains wording in French and English that is used on the system's screen interface to present data labels, menus, and messages.

p. Flexibilité de multi-devises 100% The system supports local currencies and accepts payments and disbursements in different currencies. In addition, the system uses good exchange exposure calculation facilities, and handles the risks due to the revaluation of foreign exchange.

Conviviality and easiness of use 96%

a. convivialité 78% The developer recommends two weeks of training for users already versed in accounting and/or banking. The client may opt for training at his/her location or at the Software Systems office in Nairobi Kenya. Bank 2000 had quality online and written manuals, but which may be better adapted to institutional positions. These training aids also require translation to French. Setup, transactions and reports operations in the system are direct and easy to use. Error messages are present, and direct the user through correction and recovery using clear language. The system is not likely to crash if users do something unexpected.

b. interface de l'utilisateur 93% The Bank 2000 system is a DOS based FoxPro application with very good user interface, physical appearance, layout and logic and menus. F keys are available throughout the system on many screens to display linked, sequential, and background information. The screens flow logically and consistently and appropriate information is displayed for each. Automated means are provided for posting batches. The language used is consistent and messages are written in financial, verses technical language. The use of color is well used to guide data entry and information gathering. The keyboard and mouse may be used to access all major functions.

Reporting 95%

a. Documents généraux 99% Bank 2000 provides extensive reporting of savings, loan, and overhead tracking data. Amongst others, journal, daily ledger, general account balance, auxiliary balance sheet for deposits and loans, statements, daily delinquency reports, and portfolio quality reports are produced by the system. Reporting is done in consolidated as well as separate formats. Budget reporting, cash flow projections, branch office and loan officer performance reports are also provided by Bank 2000. Prior to some of its reports, Bank 2000 allows the user to enter a number of reporting parameters. In addition, custom reporting is available to the user if Crystal Report Writer or Report Writer is procured and configured to access the systems' data.

b. Etats BCEAO et ratios CGAP 90% Bank 2000 does not contain ratios and reports specific to Mali' BCEAO and CGAP requirements. The developer, however, will provide any report format requested during the localization period of installation and as part of the support agreement. Ad-hoc reports are easy with the parameters provided and custom reporting to meet country specific requirements is viable with Crystal Reports.

c. Génération d'états 97% Bank 2000 provides a large variety of financial reports and annexes. The system provides easy daily report generation; advance batch report processing, and a great deal of canned reports. The systems exports reports to ACCESS, EXCEL and other database management and spreadsheet software for further reporting calculations and output. Custom queries with added natural English queries are also available

Standards and compliance 93%

a. La conformité aux normes comptables 89% Bank 2000 does not claim to meet Mali's legal requirements, but the developers may adapt the program to do so. The system conforms to GAAP 491: 491(Generally Accepted Accounting Principles) and the I*IAS (international Accounting Standards). The system may also be adapted to the French Accounting system by changing the arrangements of debits and credits.

b. La conformité aux normes réglementaires 50% Bank 2000 is designed to respond to Mali's government and central bank requirements and is not programmed to create Central bank reports. The reports, however, may be adapted to do so. Adapting the system to meet these requirements would require adding new standard reports to the application.

Administration and Support 92%

a. La sécurité 99% Bank 2000 manages different levels of user access with functions reserved for specific user levels based on user permissions and

types. User passwords are used, and the system may be set up to prompt users to change passwords on a regular basis and limit time of day access. The system data is protected from direct attacks and back door entry to the data by encrypting the data in using C+ encryption. Audit trail and a systems violation log is provided, as part of Bank 2000's self-auditing program, and the system has a sophisticated way of automatically notifying the entire management chain of file violations. Off and on site data storage of records is provided using the systems back up and file export functions as well as other software and peripherals on the operating system.

b. Sauvegarde et restauration 100%

Bank 2000 has online functions to store completed transactions such as balances and statements safely, and to restore this information if necessary. Backup is automatic within the system at the end of the day or any other scheduled time interval, but may be done at any time. Full and/or incremental backups and recovery are possible and may be done in a reasonable amount of time. Restarting the system after power failures or crashes may be successfully done without duplication, or lost data. On recovery, the system provides a polite and detailed note to the user, informing of the interrupted transaction, if any. Bank 2000 has archival facilities for offloading old, unused data to prevent the database from growing exponentially.

c. Tolérance d'erreurs et robustesse 93%

If on a networked system, Bank 2000 will remain on line if access to the host server is broken. The system will not complete a transaction if all required information is not complete. The system handles all errors gracefully and provides the users adequate time and information to react correctly.

d. Procédure de fin de période 73%

Bank 2000 posts transactions from the journal to the general ledger on a daily basis. At the end of the reporting period, Bank 2000 performs correct interest posting and compounding, late fee and penalty calculations, moves transaction from the journal to the general ledger, closes the books and prepares for the end of period reporting. Report generation may be launched for daily, weekly, monthly, quarterly, yearly and cycles defined by the MFI.

e. Structure d'appui et de maintenance 91%

Software Strategies has been in business for more than 10 years. The organization has reached the financial strength necessary to fully support its products. Currently the organizations has installed and supports 400 + computer systems. Bank 2000's support office is located in Nairobi, Kenya. Technical response is available from a 24-hour hotline and response to the average technical problem is within a two to 4 hours. Sixty, various technical support staff, are currently available to support the application. Software strategies will vend the source code to interested MFI and will provide some assistance in supporting source code changed by users. The organization will accept change requests and works with its clients

to build a better product. Software Strategies will do the installation of Bank 2000, and provide assistance in data conversions, customization, training and intensified start up support. Software Strategies judges that it would not be too difficult to establish a satellite support office in Mali that would be capable of providing a great deal of the HQ base support services, if the basic technical skills exist.

- f. Contrôle de la version et mise à jour 98% Bank 2000's developers provide highly professional source code maintenance. Clear versioning of the software is done so that the developer knows what versions of the software are in production and what functions are supported in each version. Enhancements from client change requests are added to the core software and provided to all users in frequent upgrades. Software Strategies uses parallel installation when installing new and subsequent versions of the software, testing the new installation against the old for a prescribed period, until sound installation can be certified.

Spécifications techniques et précisions 98%

- a. Technologie et architecture 93% Bank 2000 is designed to perform on a preferably Novel networked and stand alone architecture. The system is written in FoxPro using traditional technology, runs on PC platforms requiring at least DOS installed with any windows version, and is xbase/dBase compatible. The system uses manual source code control. The system is designed to be client or member-centric vs. loan product-centric.
- b. Performance 100% Bank 2000's user interface is relatively quick depending of the function and amount of data to be processed. Screens for entering transactions display quicker than screens that display reports. Report generation is based on the speed on the PC and the amount of transaction data being processed. Multiple users do not slow down the system, and only minimal performance degradation is noticed as the size of the database grows. The empty system requires 10 MB of data after initial installation and before adding clients, grows by 4 KB with each client added, and grows by five with each loan and saving product added.
- c. Nombre et Date de gestion 100% The system is Y2k compliant and permits up to 19 digits (17 digits plus 2 decimals) in for managing numbers

The Bankers Realm System

The Bankers Realm (BR) system is a new centralized/decentralized Visual Basic banking system, based on the Bank 2000 system, after 1 year plus (15-20 man years) in development. MACCO of San Diego first developed the Bank 2000 system in 1989 for Indian banking clients. Bank 2000 and BR is now represented by Software Strategies (SS) in Kenya for the

African market. SS has installed and supports Bank 2000 in 14 banks and 2 MFIs in Kenya. Two commercial banks have upgraded to BR since October 2000. BR is not yet translated to French. SS, however, has expressed interest in vending and supporting French versions of this product to MFIs and banks in West Africa, and in particular, Mali. The software may be translated to French within one week of receiving an order for a French version. BR runs on Windows NT and Lynx platforms, is delivered with MS SQL Server database.

The BR system is a Windows version of the Bank 2000 system with several substantial enhancements. It is designed to provide custom dashboard information for various levels of users and serves as an excellent executive decision making database. The system features easy graph creation and custom configuration for trends and comparisons. Authorized persons can drag and drop clients from one solidarity group to another, bringing all pertinent information with the move. An on line assistant parrot icon is provided primarily for on line help but does other task such as prompts to add accounts to the favorite listing. The Parrot will also inform of security violations. The system contains an address bar for direct Internet access and access to the on-line help system. Special account conditions or requests for automated processes can be set up for clients or accounts to include conditional messages such a notification of exchange rate opportunities, fund transfer, and excess funds transfers to an interest bearing account (sweep in sweep out functionality). Advanced query feature that accepts a natural language command to design the query is available on all reports. The system also contains signature, fingerprint and picture imaging for clients and for collateral items and equipment (serial number imprints). The user may graphically structure the chart of accounts, using ProtoView tree view (explorer type) menu for reporting purposes without having to remember codes. The Extra Information icon will give detailed information on loan and deposit accounts, etc. The developers designed the system to make minimal use of the mouse in data entry screens. This maintains the same work speeds to which Bank 2000 operators have become accustomed. The BR system is open to branches using Bank2000, allowing easy batch transfers and total data transfer when upgrading from Bank 2000 to BR.

In centralized and decentralized modes, BR integrates institutions' client loan tracking and saving operations with internal accounting operations, to include budget management and cash flow projections. The software is a highly sophisticated innovative tool and while mostly used to manage banking operations, is adaptable, with the application of select modules, to the management of smaller Microfinance institutions.

BR uses MS SQL database for high security protection of the data. The system uses a three tier architecture, split between the user interface, business design (source code) and database. The source code and database is protected from the user interface by a firewall. SQL server database tables, used in BR, are directly exportable to database management software and spreadsheets such as Lotus and Microsoft Excel, Access and other dBase formats. The system has extensive reporting capabilities. To access the data for additional custom report creation Crystal Report Writer may be used.

La saisie des données - 89%

- a. Plan comptable 96% The plan of account field used in BR can accommodate up to 21 characters. The plan of account is divided between branch, account type, and account number.

- b. Les comptes individuels 94% Individual accounts are set up to accommodate the client's pertinent information such as account number, client number, account plan, creation date, modification date, currency code, and agency code. BR requires that appropriate bank management authorize new accounts and clients. The system does not use donor and interest rate codes since the automated financial systems are moving away from the code concept with the advent of graphical navigation in Windows products. Although there is no interest code in the individual account setup, the system uses the Account Special Conditions module to suspend interest and penalty calculations by the individual client to affect all of the clients' loan accounts.
- c. Les clients 78% BR collects and reports individual client numbers, combined client first and last names, address, date of birth, and sex. Place of birth has been added to the system. The system identifies solidarity groups, but still needs fields that identify the groups' income, expenses, the role of members, employment number, other loans and credit agency. This information may, however, be added in the notes field.
- d. Les dossiers de prêts 99% The management of loan files is quite extensive. The system manages accounts' from their original balance on their opening date to their first reimbursement date, to last payment date. The system performs interest rate calculations, produces user editable repayment schedules, delinquency calculations and manages linkages to frozen amounts. The system needs a field to enter the issued check number. The user can edit an individual's repayment schedule within the system. This permits the user to also suspend an individual's loan payments at this level, and adjust the interest rate within an individual's loan account.
- e. Enregistrement des opérations 97% BR processes transaction amounts, dates, and linkages to account numbers. It assigns these transactions as debits and credits to the GL, and tracks balances to individual accounts. The system provides note fields to insert comments at each transaction. There are provisions for applying a value date to transactions, to accommodate in-house delays for entering payments into the system.
- f. Les conditions d'échelle 60% Rate conditions are setup under the product definition module. The definition includes, among others, the product code, name and parent agency. In the product definition module, it is possible to modify interest rates of products while the product is already affected to accounts. If such a case arises the MFI would not have to create a new product, then refinance these accounts with this new product, since once the product is modified, all accounts in that product will be updated.
- g. Le code agence 100% Detailed setup information permits the entry of information specific

to the financial institution. The system may be adapted to branch agencies using a hierarchy of branches with multiple combinations of products with multiple interest rates. These branches may be restricted, by the system's security, to use only products approved by the headquarter office. The system permits sub branches to produce reports and balance sheets that reflect the sub branch's information and to produce reports and balance sheets that reflect only the loan activity at their level. Sub branches can be defined as branches and access all necessary system functions.

Functions and flexibility 97%

a. comptabilité 97%

BR integrates institution management with its loan and deposit portfolio tracking functions and permits non-portfolio deposits and expenses, which directly affect the proper accounts. The system tracks and reports on these non-portfolio transactions. The chart of account map is consistent yet flexible and user definable, providing for 19 characters and up to 9 levels that map to the GL. The system traces cash flow and revenues by GL account and is able to perform cost/profit analysis by product, branch and clients. All accounts have provision accounts linkages, tracked in reporting. The system provides detailed GL management, trial balances and a full range of standard financial reports, such as balance sheets, income statement, and cash flow analyses. BR does not provide a payroll module. Instead, the system accepts payroll expenses, from a separate system, as non-portfolio expenses. The system accommodates treasury functions with added options for notes and other denominations. The system supports the cash or accrual system, depending on the MFI's requirements. Before delivery, the developer may install either the cash or accrual system, allowing the application to use either cash or accrual systems with the use of parameters.

b. Gestion du portefeuille crédit 97%

BR manages different user defined loan products, unpaid balances, anticipated payments, late, partial, over payments, co-maker-cosigner and guarantor cross references. BR accepts collateral entries and provides for forced deposits linked to loan products. It permits loan refinancing and credit scoring. It easily tracks historical data on loans, in detail and summary format. The system's Client Portfolio screen accepts data entry to track loan-officer performance. The system identifies and traces loan officer activities by active portfolio, delinquencies, the number of clients, etc. The system contains good delinquency management facilities. The loan delinquency management facilities calculates loan-loss provisions, and permits the user to define the loan-loss provision rates according to the duration of the delinquency. BR also provides correct portfolio aging mechanisms. BR proactively informs the users of potential problems such as delinquency, cash standing, and productivity. It uses a flexible delinquency calculation methodology that considers the value-date. The system

performs credit scoring and has the capability to process advanced functions such as credit cards and smart cards. BR will accommodate the application of X% of the interest charged to the client to be withheld for taxes. The MFI may also switch off this function when the government exempts small MFI transactions from this taxation ruling. BR maintains separate files for guarantors through linkage at the account GNA level. It is possible to trace the amount of loans that a specific guarantor guarantees, to prevent a guarantor from over extending his/her resources since the system permits the MFI to track all guarantors, as recorded, by codes.

c. Gestion des dépôts
99%

BR permits the modification of deposits in the loan cycle. It provides detailed historical deposit information, and handles numerous integrated account types. It permits different types of saving accounts with flexible deposit management, to include voluntary deposits and forced savings using linked portfolio management. The systems allows for advanced functionality in making transactions such as ATM, wire transfer and smart cards. The systems sustains dormant or inactive accounts. The system provides for joint accounts and provides next of kin information, but stays away from identifying beneficiaries in case of death since the developers feel that this is a legal matter. Tax withholding is available, but may have to be adjusted for Mali. The system, however, allows for X% of the interest earned by the account holder to be deducted for tax withholding. BR will also exempt this measure at any particular period since small MFI's may be exempt from withholding taxes on clients' interest?

d. Système d'information
clientèle 94%

Client information is readily available in BR. Basic client information is available at the top of the screens above more detailed account information. The system tracks client information at various Microfinance levels and maintains some solidarity group information, with note spaces provided for others. It maintains historical data on all clients, until the institution decides to remove the data. Aggregation of customer data by region, area, and economic activity is available. The system needs additional fields, however, to fully compose this aggregation. The system also provides basic guarantor tracking, permits transfers between accounts, and tracks client activity. The system will warn the user if a duplicate client is to be added, but will accept the duplicated client. BR developers find that this is justifiable, since this allows a member to belong to different solidarity groups.

e. Possibilité d'extension
et de développement
institutionnel 100%

BR's open approach permits new products and services such as demand deposit, credit cards, mortgage loans, lines of credit, money transfers and even letters of credits. The developers designed BR to serve banks. Yet, smaller Microfinance institutions may use the system, and the system grows with the institution. The system is designed for large client loads, and has reported no

difficulties in supporting multiple terminals and users.

- f. Flexibilité par rapport aux clients et aux comptes 100% BR is customer vs. account centric. The system permits multiple savings and loan accounts linked to a single client. The system accepts pertinent customer information such as contact, gender, marital status and business activity and is quite proficient in tracking detailed account information for the client.
- g. Flexibilité du type d'institution 100% BR has the capacity to serve full service banks, limited-service banks, cooperative savings and credit, Microfinance institutions, limited liability companies, foundations or trust, and other organizations. System adjustments may be required for signature and manual processing to serve banks in Mali.
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- i. Flexibilité du type d'intérêts sur les prêts 100% BR manages a wide array on interest types. These interest types include flat, declining balance, discounted rates, and variable and stepped rate. The system cannot manage capitalized interest. The system also calculates commissions, fees, and penalties for late payments, considering the value date.
- j. Flexibilité par rapport au type de dépôts et d'épargne 100% BR accommodates passbook savings. The system provides for term deposits, overdraft accounts, current accounts, group activities, and group insurance.
- k. Type d'intérêts sur les dépôts 99% The system handles multiple deposit interest types to include day of deposit to day of withdrawal, minimum daily balance, minimum monthly balance, minimum quarterly balance, average daily balance, average monthly balance, and may be configured or hard coded to accept other user definable deposit interest types. These interest types may be set up for various payments schedules.
- l. Flexibilité des types de remboursements 100% BR may be set up to manage the full range of required repayment schedules. It manages irregularities in payments and delinquencies. The system does accept multiple modes of payment to include, cash, check, money order, credit card, smart card and direct deposit. It permits the suspension of payment, grace periods, deferred payments and refinancing.
- m. Flexibilité des fréquences des échéances 91% BR supports payments on a daily, weekly, monthly basis, but does not support payments that are semi-monthly, biweekly or once every four weeks. Payment schedules may be configured on a 365 and 360 but not a 332 days per year basis. The system handles 50 and 52 week schedules. BR accepts pre-payments, late payments,

- under payments and over payments.
- n. Flexibilité de multi - agence et/ou multi - régions 100% BR has the mechanism for separating information on a branch level, mechanisms for aggregating office level data, and reporting on these levels. Updates to head offices may be instantaneous depending on system networking configurations used. The systems is set up perform bank and internal transfers in Kenya and may be done so in Mali, if the technology permits.
- o. Flexibilité des langues 100% BR is currently written with a French interface. The software is already set up to translate easily since all screen labels and messages are stored in a database. Switching to French would mean only translating these entries and toggling to French. The translation process is expected to take 1 week. The user may then easily maintain wording in French, English or any other language. The natural English query function will not be translatable.
- p. Flexibilité de multi-devises 100% The system supports local currencies and accepts payments and disbursements in different currencies. In addition, the system uses good exchange exposure calculation facilities, and handles the risks due to the revaluation of foreign exchange.
- Conviviality and ease of use 99%
- a. convivialité 98% The developer recommends two weeks of training for users already versed in accounting and/or banking. The client may opt for training at his/her location or at the Software Systems office in Nairobi Kenya. BR had quality online and written manuals, but which may be better adapted to institutional positions. These training aids also require translation to French. Setup, transactions and reports operations in the system are direct and easy to use. Error messages are present, and direct the user through correction and recovery using clear language. The system is robust and not likely to crash if users do something unexpected.
- b. interface de l'utilisateur 100% The BR system is a Windows Visual Basic application with excellent graphic user interface, physical appearance, layout and logic and menus. Drop down menus and icons are available throughout the system to display linked, sequential, and background information. The screens flow logically and consistently and appropriate information is displayed for each. Automated means are provided for posting batches. The language used is consistent and messages are written in financial, verses technical language. The use of color guides data entry and information gathering. The keyboard and mouse may be used to access to all major functions.
- Reporting: 97%
- a. Documents généraux 100% BR provides extensive reporting of savings, loan, and overhead tracking data. Amongst others, the system produces the journal,

daily ledger, general account balance, auxiliary balance sheet for deposits and loans, statements, daily delinquency reports, portfolio quality reports. Reporting is done in consolidated as well as separate formats. Budget reporting, cash flow projections, branch office and loan officer performance reports are also provided by BR. Before all of its reports, BR allows the user to enter a number of reporting parameters using a design screen and a natural English query function. In addition, custom reporting is available to the user if Crystal Report Writer is procured and configured to access the systems' data.

b. Etats BCEAO et ratios CGAP 90% BR does not contain ratios and reports specific to Mali' BCEAO and CGAP requirements. The developer, however, will provide any report format requested during the localization period of installation and as part of the support agreement. Ad-hoc reports are easy with the parameters provided and custom reporting to meet country specific requirements is viable with Crystal Reports.

c. Génération d'états 100% BR provides a large variety of financial reports and annexes. The system provides easy daily report generation; advance batch report processing, and a great deal of canned reports. The systems exports reports to ACCESS, EXCEL and other database management and spreadsheet software for further reporting calculations and output. Custom queries with added natural English queries are also available

Standards and Compliance 93%

a. La conformité aux normes comptables 89% BR does not claim to meet Mali's legal requirements, but the developers may adapt the program to do so during the localization period and at no extra cost. The system conforms to the Generally Accepted Accounting Principles 491 (GAAP 491) and the International Accounting Standards (IAS). The system may also be adapted to the French Accounting system by changing the arrangements of debits and credits.

b. La conformité aux normes réglementaires 96% BR is not designed to respond to Mali's government and central bank requirements and is not programmed to create Central bank reports. The reports, however, may be adapted to do so. Adapting the system to meet these requirements would require adding new standard reports to the application. This process may be done by the developer as part of the support and localization agreement and at no extra charge.

Administration and Support 93%

a. La sécurité 100% BR manages different levels of user access with functions reserved for specific user levels based on user permissions and types. User passwords are used, and the system may be set up to prompt users to change passwords on a regular basis and to limit time of day

access. The system data is protected from direct attacks and back door entry to the data by using SQL server sealed database and a fire wall between the user interface, source code and database. Audit trail and a systems violation log is provided, as part of BR's self-auditing program, and the system has a sophisticated way, using the Parrot icon, of automatically notifying the entire management chain of file violations. The system protects customers by using account signature graphics, pictures and biometrics. Off and on-site data storage of records is provided using the systems back up and file export functions as well as other software and peripherals on the operating system.

b. Sauvegarde et restauration 100%

BR has online functions to store completed transactions such as balances and statements safely, and to restore this information if necessary. Backup is automatic within the system at the end of the day or any other scheduled time interval, but may be done at any time. Full and/or incremental backups and recovery are possible and may be done in a reasonable amount of time. Backups and recoveries are slower than the Bank 2000 system, since the system's Windows architecture requires more resource management. Restarting the system after power failures or crashes may be successfully done without duplication, or lost data. On recovery, the system provides a polite and detailed note to the user, informing of the interrupted transaction, if any. BR has archival facilities for offloading old, unused data to prevent the database from growing exponentially.

c. Tolérance d'erreurs et robustesse 100%

BR will remain on line in a network system if access to the host server is broken. Because BR is a client server system, it allows the user to update information on the client workstation, for upload to the database on the server once again linked to the server. The system will not complete a transaction if all required information is not complete. The system handles errors gracefully and provides the users adequate time and information to react correctly.

d. Procédure de fin de période 73%

BR posts transactions from the journal to the general ledger on a daily basis. At the end of the reporting period, BR performs correct interest posting and compounding, late fee and penalty calculations, moves transaction from the journal to the general ledger, closes the books and prepares for the end of period reporting. Report generation may be launched for daily, weekly, monthly, quarterly, yearly and cycles defined by the MFI.

e. Structure d'appui et de maintenance 90%

Software Strategies has been in business for more than 10 years. The organization has reached the financial strength necessary to fully support its products. Currently the organization has installed and supports 400 + computer systems. BR's support office is located in Nairobi, Kenya and India. Technical response is available from a 24-hour hotline and response to the average technical problem is within a two to 4 hours. Sixty, various

technical support staff, are currently available to support the application. Software strategies will vend the source code to interested MFI and will provide some assistance in supporting source code changed by users. The organization will accept change requests and works with its clients to build a better product. Software Strategies will do the installation of BR, and provide assistance in data conversions, customization, training and intensified start up support. Software Strategies judges that it would not be too difficult to establish a satellite support office in Mali that would be capable of providing a great deal of the HQ base support services, if the basic technical skills exist. Currently user manual are in French, but will be translated without additional charges.

- f. Contrôle de la version et mise à jour 98%
- BR's developers provide highly professional source code maintenance. Clear versioning of the software is done so that the developer knows what versions of the software are in production and what functions are supported in each version. Enhancements from client change requests are added to the core software and provided to all users in frequent upgrades. Software Strategies uses parallel installation when installing new and subsequent versions of the software, testing the new installation against the old for a prescribed period, until sound installation can be certified. Historically SS has sent out software upgrades to its system subscribers as often as once a month, but generally on a six month basis.

Spécifications techniques et précisions 99%

- a. Technologie et architecture 100%
- BR is a Client server system designed to perform on networks (preferable) or stand alone architecture. BR is provided with MS SQL server database but is compatible with any RDBMS database. The system is designed to run on PC Pentium III servers and P II workstations. The system runs on a Windows NT or LYNEX operating system. BR operates on a Windows NT or TCP/IP (internet access) network. The system is written in Visual Basic, using object-oriented technology and "source save" source code control. The system is designed to be client-centric vs. loan product-centric.
- b. Performance 98%
- BR's user interface is relatively quick, depending of the speed of the hardware and the amount of data to be processed. Screens for entering transactions display quicker than screens that display reports. Report generation is based on the speed on the PC and the amount of transaction data being processed. Report generation may be notably slower in a Windows (as compared to DOS) environment because of the added Windows resources to be managed. Multiple users do not slow down the system, and only minimal performance degradation is noted as the size of the database grows. The empty system requires 30-35 MB of storage

space before adding clients and accounts. The SQL server database grows by increments of 10 MB making it difficult to measure growth increments after adding a client or loan and savings product.

c. Nombre et Date de gestion 100% The system is Y2k compliant and permits up to 19 digits (17 digits plus 2 decimals) in for managing numbers.

Le Système CVECA PAYS DOGON

Similar to Nyèta Musow the CVECA PAYS DOGON system is written in MS Access and specifically for CVECA PAYS DOGON. Unless the SFD is similar to CVECA PAYS DOGON, adaptation would be too difficult even though MS Access is widely supported in Mali. Support for this program is also limited and errors and technical blockages are frequent. The same person developed both CVECA PAYS DOGON and Nyèta Musow.

La saisie des données

- a. Plan comptable CVECA PAYS DOGON gère les numéros, les libellés du plan comptable de la BCEAO ainsi que les codes postes du bilan et du compte de résultat.
- b. Les comptes individuels CVECA PAYS DOGON ne gère pas les comptes individuels.
- c. Les clients CVECA PAYS DOGON ne gère pas les clients
- d. Les dossiers de prêts CVECA PAYS DOGON ne gère pas les dossiers de prêts.
- e. Enregistrement des opérations CVECA PAYS DOGON gère la date d'opération d'une transaction, son montant, le numéro de compte d'imputation, le sens débit crédit, le numéro de pièce ainsi que le libellé de la transaction. Cependant, il n'est pas prévu de champ pour la date de valeur ainsi que pour le code service permettant d'imputer les charges et les produits par centre de coût et de profit
- f. Les conditions d'échelle Il ne gère pas de conditions d'échelle .
- g. Le code agence CVECA PAYS DOGON ne gère pas de code agence.

Les fonctions et flexibilités

- a. comptabilité CVECA PAYS DOGON n'a pas un système intégré de gestion de comptabilité ; en effet il ne gère pas les prêts et des dépôts. Il ne permet pas de calculer le cash flow et d'éclater les produits et les charges par sources et centre de coûts et de profits . Il ne gère pas les intérêts courus non échus, la paie et les immobilisations.
- b. Gestion du portefeuille crédit CVECA PAYS DOGON ne gère pas le portefeuille crédit.
- c. Gestion des dépôts CVECA PAYS DOGON ne gère pas les dépôts.
- d. Système d'information clientèle CVECA PAYS DOGON ne gère pas les systèmes d'information clientèle.
- e. Possibilité d'extension En tant que système de gestion de la comptabilité générale, il

et de développement institutionnel	permet de passer d'une organisation informelle à une organisation de type informel.
f. Flexibilité par rapport aux clients et aux comptes	Il ne permet pas de gérer les clients et les comptes individuels.
g. Flexibilité du type d'institution	En tant que système de gestion de la comptabilité générale, il permet de gérer des informations minimum relatives aux institutions de micro finance, coopératives de dépôts et de crédits, banques.
h. Flexibilité de la méthodologie d'octroi des prêts	CVECA PAYS DOGON ne gère pas les crédits.
i. Flexibilité du type d'intérêts sur les prêts	CVECA PAYS DOGON ne gère pas les crédits.
j. Flexibilité par rapport au type de dépôts et d'épargne	CVECA PAYS DOGON ne gère pas les dépôts.
k. Type d'intérêts sur les dépôts	CVECA PAYS DOGON ne gère pas les dépôts.
l. Flexibilité des types de remboursements	CVECA PAYS DOGON ne gère pas les crédits.
m. Flexibilité des fréquences des échéances	CVECA PAYS DOGON ne gère pas les crédits.
n. Flexibilité de multi - agence et/ou multi - régions	CVECA PAYS DOGON ne gère pas agences et les régions.
o. Flexibilité des langues	CVECA PAYS DOGON existe uniquement en version française. Il ne peut pas gérer plusieurs langues .
p. Flexibilité de multi-devises	CVECA PAYS DOGON ne gère que le franc CFA.

Convivialité et facilité d'utilisation

a. convivialité	Training for CVECA PAYS DOGON is provided by a single vendor from France when he visits the SFD. Training lasts approximately one week depending on the operator's level of skill. Error messages are difficult to understand by the user or systems technician. The operator or technician find it difficult to correct errors and are usually forced to wait for outside assistance.
b. interface de l'utilisateur	This system is a MS Windows based system. The color scheme aids in manipulating the system. The system is menu driven and maximizes use of the keyboard and mouse. Access to different levels of operation is not available to the operator. The system flows logically and is simple in nature. No on line help is available.

Reporting (différents états à produire)

a. Documents généraux	CVECA PAYS DOGON permet de produire le journal, le grand livre, la balance générale des comptes. Il ne permet de gérer la balance auxiliaire des dépôts, des prêts, le relevé de compte, le solde des comptes.
b. Etats BCEAO et ratios	CVECA PAYS DOGON permet la production du bilan, du compte

- CGAP de résultat, des soldes intermédiaires de gestion .
Il ne permet de produire d'annexes BCEAO
Il peut fournir des éléments qu'il faut retraiter pour élaborer les ratios du CGAP
- c. Génération d'états CVECA PAYS DOGON permet la génération d'états standards mais la génération d'états spécifiques ou définis pas le l'utilisateur est limitée

La conformité aux normes comptables et réglementaires

- a. La conformité aux normes comptables CVECA PAYS DOGON est conforme aux normes comptables tant internationales que françaises pour l'essentiel.
- b. La conformité aux normes réglementaires CVECA PAYS DOGON répond aux normes réglementaires de la BCEAO, mais on ne peut affirmer qu'il est facilement adaptable à un changement de réglementation

2.3.7.6 La gestion et l'assistance

- a. La sécurité The system does not adequately notify file and access violations and has no self-auditing. It does not provide for different levels of access restricting users to specific activities. The system is password protected, and does not limit use to certain times of the day, or prompt the user to change passwords on a regular basis. The system, because it is written in MS Access does not provide the security necessary to protected against direct access with other software to view and change the data files. Offsite storage of records may be done by backing up the entire system into an external device. Because of the size of the file, zip drive backups will be necessary.
- b. Sauvegarde et restauration The system does not save backups until complete, therefore avoiding duplication of data if restarting after a system crash. The system is not yet capable of archiving old unused data. The system does not perform full and incremental backups.
- c. Tolérance d'erreurs et robustesse The system does not notify the users of incomplete transactions. The system and handles most errors by providing information necessary to react, but it is not well protected against unexpected keystrokes.
- d. Procédure de fin de période At the end of the reporting period, the system is not programmed to handle interest posting and compounding, late fees and penalties. It does perform books closure in preparation for reporting and the report generation cycle. The system moves transactions from the journal to the general ledger on a daily basis, but this is not an automated process.
- e. Structure d'appui et de maintenance Adequate, but lengthy system and training manuals are not provided. External support from France is available and the system developer's response time is not dependable (approximately two weeks) and expensive, but usually available via e-mail. Support from an internal technical support person is a requirement.
- f. Contrôle de la version Version control is performed by the system developer and may not

et mise à jour be systematic. The system should be installed in tandem with existing software. The source code is not available to the SFD and is maintained off site in France.

Spécifications techniques et précisions

- a. Technologie et architecture The system is developed using object oriented technology and the developer controls the source code. The system is client based, linking functions to clients rather than products. The software is programmed in MS, a very widely used application development language. Wide support for ACCESS is available in Mali. The system uses Visual Basic/SQL/ and Access supported file structures. The system operates on PCs with Windows 95 as a minimum requirement and requires minimal configuration of hardware. The system evaluated operates in a stand-alone workstation and has to be configured to work in a network environment.
- b. Performance The system requires substantial space on the storage drive as a windows system and moderate space per client and additional transactions. Data in entry screens is displayed rapidly on the screens, but the user must sometimes wait for reports and listings. 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.
- Number and Date Management The system manages dates well for Y2K compliance and allows for up to 15 digits for numbers.

The Mercury System

The Mercury credit union/banking system is in the advanced stages of development by Computer Consulting Corporation (CCCorp). Mercury is a Windows system and an advanced release of the older CCCorp Director. Director is a DOS banking system that has been used by financial institutions in the US, Caribbean and Latin America for at least 20 years. Mercury is installed in production mode in 11 institutions, in the US, and is considered a highly efficient financial management tool.

Mercury integrates institutions' client loan tracking and saving operations with internal accounting operations, but does not yet perform budget, asset, or payroll management. The software is highly sophisticated and may be easily used to manage banking operations, yet adaptable, with programming modifications, to the management of smaller Microfinance institutions in Mali. The system may be used by a parent institution to manage branch activities, and will accept batch transmissions submitted by branches. The data tables used by Mercury are exportable and compatible with Microsoft Access, Excel and dBase formats. The system has extensive reporting capabilities and Crystal Report Writer may be purchased to access the data for additional custom report creation.

La saisie des données – 84%

- a. Plan comptable 84% The plan of account field used in Mercury can accommodate up to

19 characters. User-defined transaction codes for different account types, such as deposits, withdrawals, cash in and out share etc., may be set up. The interest rate can be set up in the individual account and is editable if the user has the security to edit it. It is not possible at this time to suspend interest calculations

b. Les comptes individuels 83%

Individual accounts are set up to accommodate the member's pertinent information such as account number, name, ID number (SSN), gender, date of birth, and address. There is a possibility that the system's use of department classification may be adapted to classify village groupings. Shares, loans, and joint account information is directly available from the individual account information. Loan status information such as active/dormant, open and closed dates, activity dates, and other transaction activity are also readily available.

c. Les clients 77%

Mercury manages individual, joint and co-maker information and provides fields for customer information, their names, addresses, dates of birth, and sex. Birth places are not registered, and the system is not directly set up to manage members of solidarity groups, their incomes, expenses, business activities, number and names of members etc. Extensive system configuration may be required to accommodate this requirement

d. Les dossiers de prêts 97%

The management of loan files is quite extensive. The system manages the number of loans in various accounts as defined by the institution and their linkages to deposits, forced savings, interest rates, payment schedules, delinquencies, detailed payment information and product codes. The user can edit the repayment schedule and suspend the loan payments by changing the next due date. The user can also adjust the interest rate within an individual loan account.

e. Enregistrement des opérations 94%

The system processes and marks all transactions with dates, linked to account numbers, assigns these transactions as debits and credits to the GL, and tracks balances to individual accounts. Facilities are also provided for inserting comments at each transaction. There are no provisions for value date and tracking loan products by cost center and profit.

f. Les conditions d'échelle 60%

It is possible to modify the interest rates of products while the product is already affected to accounts. If such a case arises, the user would run a query to modify rates across the board to, in effect, refinance these accounts with the new product.

g. Le code agence 96%

Detailed setup information permits the entry of information specific to the credit union. The system adapts to branch agencies using a hierarchy of offices/departments. These levels contain multiple levels of interest rates for different products called tiers. Sub levels can be restricted to use only products approved by the headquarter

office through the system's security functions. These sub levels, however, cannot produce reports and balance sheets that reflect sub branch information and loan activity at their level.

Les fonctions et flexibilité 80%

a. comptabilité 83%

Mercury integrates institution management with its loan and deposit portfolio tracking functions and permits non-portfolio deposits and expenses. Mercury contains detailed payroll, deposits and check writing functions. The GL account management structure permits nine level of GL accounts that track assets, liabilities, equity, income, expenses, etc. Posting with automated balancing facilities and a full range of standard financial reports are available. The system may not be able to handle the treasury requirements for Mali without special configuration. Mercury uses the cash versus accrual system. MFIs would have to use a manual process to apply the accrual system.

b. Gestion du portefeuille crédit 81%

Mercury manages different user defined loan products, unpaid balances, anticipated payments, late, partial, over payments, co-maker-cosigner and guarantor cross references. Mercury does not provide for forced deposits, but all members in the system must maintain a savings account. It permits loan refinancing and credit scoring. Historical data on loans are easily tracked in detail and summary. Loan officer activities may be identified by the person entering information into the system and each loan transaction has the Loan Officer code linked to it. In addition, the system produces reports that track loan officer performance. Special arrangements, however, will have to be made to track the activities of field agents used in Mali's MFIs who do not have access to the system. In Mali, X percentage of the interest charged to the client is added to be paid by the client and withheld for taxes. Mercury, however, would not accommodate this. Separate files are not maintained for guarantors lined to accounts

c. Gestion des dépôts 93%

Mercury permits the modification of deposits in the history of the loan cycle, provides detailed historical deposit information, and handles numerous account types. It permits different types of saving accounts with flexible deposit management. The systems allows for advanced functionality in making transactions such as ATM, wire transfer and smart cards. Tax withholding is available, but may have to be tailored for Mali. Currently interest is deducted for tax withholding when payments are received. The system would not permit the MFI to exempt members from this measure at any particular period. This would be necessary since the government may rule that small MFI's exempt tax withholding from clients' interest. The systems does provides for dormant and inactive accounts.

d. Système d'information Member information is readily available in Mercury. Basic client

clientèle 55%	information is always available on the screen and account information with good historical tracking is available under various access tabs. Tracking village group information may be difficult to do without major system adjustments. Aggregation of customer data by region, area, economic activity is not readily available, but may be composed using a report manager and added data fields. The system also provides basic guarantor tracking, permits transfers between accounts, tracks client activity, and protects against duplicates.
e. Possibilité d'extension et de développement institutionnel 93%	Mercury's open approach allows the system to support new products and services. It has the capacity to serve sophisticated banking systems, but may have to be considerably adapted to fit Microfinance institutions and the requirements for countries outside of the US. The system is designed for a large client loads, and has reported no difficulties in supporting multiple terminals and users.
f. Flexibilité par rapport aux clients et aux comptes 90%	Mercury is customer vs. account centric. The system starts with members and permits multiple savings, shares, and credit member accounts. The system accepts pertinent customer information such as contact, gender, but is short of others such as birthplace and group related activity. However, it is quite proficient in tracking detailed account information.
g. Flexibilité du type d'institution 83%	Mercury has the capacity to serve full service banks, limited-service banks, cooperative savings and credit, and Microfinance institutions. Requirements for signature and manual processing may limit the system's ability to serve banks in Mali. It is also not set up to serve limited liability companies, foundations and trusts.
h. Flexibilité de la méthodologie d'octroi des prêts 71%	Mercury is designed to process loans to individual clients and clients with joint accounts. Loans to solidarity groups with individual loans, solidarity groups loans, village banks with individual loans, village banks with group loans and other arrangements would require using the system's joint account processing or reconfiguring the systems to accept these conditions.
i. Flexibilité du type d'intérêts sur les prêts 74%	Mercury manages a wide array of interest types. The interest types include flat, declining balance, and variable and stepped rate. The system does not manage capitalized interest, and is limited in managing discounted rates, commissions and fees.
j. Flexibilité par rapport au type de dépôts et d'épargne 72%	Mercury does not manage passbook savings. The system provides for term deposits (I.e. certificates of deposit), demand deposits, overdraft account and current accounts. Group activities such as savings and insurance would require special configuration. Mercury will also accept cash, check and wire transactions such as direct deposit.

- k. Type d'intérêts sur les dépôts 100% The system handles multiple deposit interest types to include day of deposit to day of withdrawal, minimum daily balance, minimum monthly balance, minimum quarterly balance, average daily balance, average monthly balance, and may be configured to accept other user definable deposit interest types. These interest types may be set up for various payments schedules.
- l. Flexibilité des types de remboursements 91% Mercury may be set up to manage a wide array of repayment schedules. It manages irregularities in payments and delinquencies. The system does accept multiple modes of payment, except for money order. It permits the suspension of payment, grace periods, deferred payments and refinancing.
- m. Flexibilité des fréquences des échéances 94% Mercury supports payments on a daily, weekly, biweekly, semi-monthly, monthly basis, but does not support payments once every four weeks. Payment schedules may be configured on a 365 and 360 days per year basis. The system does not handle 50-week schedules. Mercury accepts pre-payments, late payments, under payments and over payments.
- n. Flexibilité de multi-agence et/ou multi-régions 96% Mercury has the mechanism for separating information on a department basis and mechanisms for aggregating office level data, reporting on an office or area basis. Updates to head offices may be instantaneous depending on system networking configurations used. The systems is set up perform bank and internal transfers in the US and may be done so in Mali, if the technology permits.
- o. Flexibilité des langues 60% Mercury is currently written with English user interface and in the financial language used by US institutions. The system's screen interface that presents data labels, menus, and messages may be translated to French, but with substantial investment.
- p. Flexibilité de multi-devises 40% The system is written to use US dollars, but may be configured to accept CFA. Modifications to accept a variety of foreign currencies will call for a larger investment.

Convivialité et facilité d'utilisation 89%

- a. convivialité 86% Two to three days of training is required for users already well versed in accounting and/or banking. Training may be provided on user site or at the CCCorp headquarters in Salt Lake City Utah by the CCCorp training staff. Mercury had high quality online and written manuals. Setup, transactions and reports in the system are direct and easy to use. Although error messages are present, error correction is not very easy. The system is capable of crashing if users do something unexpected.
- b. interface de l'utilisateur 91% The Mercury system is a Window application and has very good Graphical user interface with very attractive physical appearance, layout and logic and menus. Drill-down buttons are available on many screens to display linked background information. The

screens flow logically and consistently and appropriate information is displayed for each. Automated means are provided for posting batches. The language used is consistent and messages are written in financial, versus technical language. The use of color is well used to guide data entry and information gathering. The keyboard and mouse may be used to access to all major functions

Reportage (différents états à produire) 86%

- a. Documents généraux 90% Mercury provides extensive reporting of savings, loan, and overhead tracking data. Amongst others, journal, daily ledger, general account balance, auxiliary balance sheet for deposits and loans, statements, daily delinquency reports, portfolio quality reports are produced by the system. Reporting is done in consolidated as well as separate formats. Budget reporting, cash flow projections, branch office and loan officer performance reports are not fully provided by Mercury. Prior to most of its reports, Mercury allows the user to enter a great variety of reporting parameters. This help to greatly widen the range or reporting options. In addition, custom reporting is available to the user if Crystal Report Writer is procured and configured to access the systems' data.
- b. Etats BCEAO et ratios CGAP 79% Specific reports such as BCEAO ratios and CGAP reports are not produced by Mercury. These reports, however, may be designed and produced using an external report generator. This exercise will still be difficult, since some of the demographic data, required for these reports, are not designed into the data collection interface. To fully produce meaningful BCEAO ratios, these fields would have to be added into the system.
- c. Génération d'états 89% Mercury provides a large variety of financial reports and annexes. The system provides easy daily report generation; advance batch report processing, and a great deal of standard reports. Ad-hoc reports are easy with the parameters provided and custom reporting to meet country specific requirements is viable with Crystal Reports. Reports may be exported to ACCESS spreadsheets for further reporting calculations and output.

La conformité aux normes comptables et réglementaires 50%

- a. La conformité aux normes comptables 53% Mercury does not claim to meet Mali's legal requirements, or conforms to GAAP 491: 491 (Generally Accepted Accounting Principles) and the I*IAS (international Accounting Standards), or the French Accounting system, but may be adapted to do so by adding missing data collection field and accommodating the business logic to reflect these accounting standards
- b. La conformité aux normes réglementaires 47% Mercury was not designed to respond to Mali's government and central bank requirements and is not programmed to create Central bank reports. Adapting the system to meet these requirements may

require substantial modifications.

2.3.1.6 La gestion et l'assistance 88%

- a. La sécurité 83% Mercury manages different levels of user access with functions reserved for specific user levels based on user permissions and types. User passwords are used, but the system does not prompt users to change passwords on a regular basis, or limit time of day access. The system data is protected from direct attacks and back door entry. Audit trail and a systems violation log is provided, as part of Mercury's self-auditing program, but the system does not automatically notify the administrator of file violations. Off and on site data storage of records is provided using the systems back up and file export functions.
- b. Sauvegarde et restauration 84% Mercury has functions to store completed transactions such as balances and statements safely, and to restore this information if necessary. Backup is not automatic within the system at the end of the day or any other scheduled time interval, but may be done at any time. Full and incremental backups and recovery are possible and may be done in a reasonable amount of time. Restarting the system after power failures or crashes may be successfully done without duplication, or lost data. Mercury has archival facilities for offloading old, unused data to prevent the database from growing exponentially.
- c. Tolérance d'erreurs et robustesse 77% If on a networked system, Mercury will remain on line if access to the host server is broken. The system will not complete a transaction if all required information is not complete. Currently the system does not handle all errors gracefully and provide users adequate time and information to react correctly.
- d. Procédure de fin de période 100% Mercury posts transactions from the journal to the general ledger on a daily basis. At the end of the reporting period, Mercury performs correct interest posting and compounding, late fee and penalty calculations, moves transaction from the journal to the general ledger, closes the books and prepares for the end of period reporting. Report generation may be launched for daily, weekly, monthly, quarterly, yearly and cycles defined by the MFI.
- e. Structure d'appui et de maintenance 83% CCCorp has been in business for 24 years. The organization has reached the financial strength necessary to fully support its products. Currently 660 of its older DOS based Director systems have been installed throughout the United States, the Caribbean and Latin America. Eleven of the newer Mercury systems have been installed in US credit unions. Mercury's support office is located in Salt Lake City, Utah, the USA. Technical response is available from a 24-hour hotline and response to the average technical problem is within a ½ hour. Twelve technical support staff are

currently available. Mercury will provide access to source code and screens which permit translating the labels and messaging to French. CCCorp will provide some assistance in supporting source code changed by the user. The organization will accept change requests and works with its clients to build a better product. CCCorp will do the installation of Mercury, and provide assistance in data conversions, customization, training and intensified start up support. CCCorp judges that it would not be too difficult to establish a satellite support office in Mali that would be capable of providing a great deal of the HQ base support services, if the basic technical skills exist.

f. Contrôle de la version et mise à jour 98% Mercury's developers provide highly professional source code maintenance. Clear versioning of the software is done so that the developer knows what versions of the software are in production and what functions are supported in each version. CCCorp uses parallel installation when installing new and subsequent versions of the software, testing the new installation against the old for a prescribed period, until sound installation can be certified.

Spécifications techniques et précisions 93%

a. Technologie et architecture 100% Mercury is designed to perform on networked, stand alone, and client/server architecture. The system is written in Visual Basic using object oriented technology and runs on PC platforms requiring at least Windows 2000 or Windows NT. The system is designed to be client or member-centric vs. loan product-centric.

b. Performance 78% Mercury's user interface is relatively quick depending of the function and amount of data to be processed. Screens for entering transactions display quicker than screens that display reports. Report generation is based on the speed on the PC and the amount of transaction data being processed. Multiple users do not slow down the system, and only minimal performance degradation is noticed as the size of the database grows. The empty system requires at least 24 MB of data after initial installation and before adding clients. The system uses SQL server database, which grows by 10MB increments.

c. Nombre et Date de gestion 100% The system is Y2k compliant and permits up to 19 digits in for managing numbers.

Le Système MicroBanker1

We found Microbanker 1 in use only by the Financial Manager at Kondo Jigima. It is a DOS based software. The organization has used this application since 1991 and currently manages reporting for 24,000 clients. The user finds the application limited since it cannot be used in to manage loan tracking at individual branches. No support for this software is available.

La saisie des données

- a. Plan comptable MicroBanker1 gère les numéros, les libellés du plan comptable de la BCEAO ainsi que les codes postes du bilan et du compte de résultat.
- b. Les comptes individuels Il gère les numéros des comptes individuels, leurs libellés, numéros clients, numéro de plan comptable, dates de création, date d'échéance et conditions d'échelles, les découverts. Cependant, il n'y a pas de champs pour, les devises et l'agence
- c. Les clients Il gère les numéros des clients, leurs noms et prénoms, leurs adresses, dates de naissance, sexe et de leurs comptes de dépôts et prêts ; Toutefois, il n'y a pas de champs prévus pour enregistrer les agents de crédit chargés de la gestion des clients , les membres de groupes de solidarités, les recettes, les dépenses, le nombre d'employés, les prêts contractés ailleurs et les lieux de naissance.
- d. Les dossiers de prêts Il gère les numéros des dossiers de prêts, leurs libellés, les comptes de dépôts attachés aux prêts, les montants débloqués, le taux d'intérêts, le nombre d'échéances, le type de périodicité, la date de déblocage, la date de premier remboursement, la date de dernier remboursement et le code produit. Toutefois, il n'y a qu'un seul champ pour le montant du crédit qui est supposé être le même à l'octroi et au déblocage.
- e. Enregistrement des opérations MicroBanker1 gère la date d'opération d'une transaction, son montant, le numéro de compte d'imputation, le sens débit crédit, le numéro de pièce ainsi que le libellé de la transaction. Cependant, il n'est pas prévu de champ pour la date de valeur ainsi pour le code service permettant d'imputer les charges et les produits par centre de coût et de profit
- f. Les conditions d'échelle Les conditions d'échelle sont gérées et les taxes dont les systèmes financiers décentralisés sont exonérés au Mali pour le moment.
- g. Le code agence L'agence n'est pas du tout gérée ; MicroBanker1 est mono agence

Les fonctions et flexibilités

- a. comptabilité MicroBanker1 a un système intégré de gestion de comptabilité , des prêts et des dépôts.
Il gère les journaux, les grand livres, les balances, les intérêts courus non échus. Cependant, il ne permet pas de calculer le cash flow et d'éclater les produits et les charges par sources et centre de coûts et de profits .
Il ne gère pas la paie et les immobilisations.
- b. Gestion du portefeuille crédit MicroBanker1 gère les types de prêts, la liaison des dépôts de garantie avec les prêts, les impayés, les paiements anticipés, en retard, partiels, les trop perçus ; les cautions étant renseignées à titre indicatif.
Cependant, il ne permet pas d'effectuer deux ou plusieurs déblocages sur le même prêt, de même qu'il ne permet pas de faire un scoring des crédits. Le calcul de la provision ne peut se faire automatiquement selon la règle de provisionnement de la BCEAO.
- c. Gestion des dépôts MicroBanker1 permet de gérer beaucoup de types de dépôts, l'historique des dépôts ainsi que les taxes (IRVM) sur les intérêts servis aux déposants dont les clients des SFD sont exonérés pour le moment..
Il ne permet pas de gérer les cartes de retrait
- d. Système d'information clientèle Il permet de gérer le comportement du client en matière de crédit, de dépôts et d'historique.
Cependant, malgré la présence de champs pour enregistrer l'adresse, le sexe, la

- profession, on ne peut faire des tris selon ces champs.
En outre, s'il peut gérer les clients individuels et les groupes, il ne peut gérer les membres lorsque le client est un groupe et les groupes lorsque le client est un individu.
Enfin, il n'y a un système permettant d'éviter de codifier doublement le même client.
- e. Possibilité d'extension et de développement institutionnel
MicroBanker1 permet de passer d'une organisation informelle à une organisation de type informel. Mais il ne peut gérer les demandes de dépôts, cartes de crédits, hypothèques, lignes de crédits et autres en plus des services standards de micro-finance
- f. Flexibilité par rapport aux clients et aux comptes
Il permet à un client d'avoir plusieurs comptes prêts et de dépôts.
Cependant, il ne permet pas de trier les informations sur le client par le sexe, l'état civil, la profession
- g. Flexibilité du type d'institution
Il permet de gérer les institutions de micro finance et les coopératives de dépôts et de crédits.
Cependant, il ne peut convenir aux banques car beaucoup de services tels que le change manuel, les positions de changes, la gestion des engagements par signature etc. ne sont pas gérés.
- h. Flexibilité de la méthodologie d'octroi des prêts
MicroBanker1 gère les clients individuels, les groupes de solidarité avec des prêts aux groupes, les caisses villageoises avec des prêts individuels, les caisses villageoises avec les prêts aux groupes.
Cependant, il ne gère pas des groupes de solidarité avec des prêts individuels.
- i. Flexibilité du type d'intérêts sur les prêts
MicroBanker1 gère les intérêts sur le capital restant dû, les intérêts précomptés, les intérêts capitalisés, les commissions et frais ainsi que les pénalités de retard et les taux variables.
- j. Flexibilité par rapport au type de dépôts et d'épargne
MicroBanker1 gère l'épargne avec ou sans livret, les dépôts à terme, les dépôts volontaires et forcés (dépôts de garantie), les découverts.
- k. Type d'intérêts sur les dépôts
MicroBanker1 calcule les intérêts sur le solde journalier ainsi que sur le taux minimum journalier.
Mais il ne peut pas calculer les intérêts sur les soldes minimum mensuel, minimum trimestriel, moyen journalier et moyen mensuel.
- l. Flexibilité des types de remboursements
MicroBanker1 gère les prêts à échéances constantes, les prêts à échéance unique, les amortissements constants en capital, les échéances irrégulières.
Il accepte les paiements en espèces en chèque, mais pas les cartes de crédits et autres.
Il permet les paiements différés d'échéance et les période grâce ainsi que le rééchelonnement.
Il ne permet pas la suspension des pénalités de retard,
- m. Flexibilité des fréquences des échéances
MicroBanker1 gère les échéances hebdomadaires, bimensuelles, mensuelles, toutes les quatre semaines mais il ne gère pas les échéances journalières et bihebdomadaires.
Le nombre de jours pris en compte pour le calcul des intérêts est 365 jours, 360 jours et 52 semaines.
Il ne gère pas 332 jours et 50 semaines.

- n. Flexibilité de multi - agence et/ou multi - régions
MicroBanker1 gère une agence et permet de gérer les informations par quartier, mais il ne permet pas de consolider les données de plusieurs agences .
- o. Flexibilité des langues
MicroBanker1 existe en versions française et anglaise mais plusieurs langues ne peuvent pas être simultanément utilisées par l'utilisateur.
- p. Flexibilité de multi-devises
MicroBanker1 ne gère que le franc CFA.

Convivialité et facilité d'utilisation

- a. convivialité
Training for Microbanker systems is provided by FOA support units in Italy in a one week period. Training would require at least one week but not enough training is provided. The system is dependable and seldom crashes. Error messages are usually understood in house by the on site systems technician. The operator or technician may correct most errors, and support, though slow is available from Italy for correcting other errors.
- b. interface de l'utilisateur
This system is a DOS based system. Color is limited to black gray and white and the graphics are minimal. The system is menu driven with use of the keyboard only. The mouse cannot be used to manipulate the system. Access to different levels of operation has been well developed. The system flows logically and the operators have become quite accustomed to it. Multiple manual operations, however are necessary to do regular print operations.

Reporting (différents états à produire)

- a. Documents généraux
MicroBanker1 permet de produire le journal, le grand livre, la balance générale des comptes, la balance auxiliaire des dépôts, des prêts ainsi que le relevé de compte, le solde des comptes et les états sur la qualité du portefeuille. Toutefois, il ne sort pas les performances par agent de crédit et ne permet pas de faire des projections de cash flow.
- b. Etats BCEAO et ratios CGAP
MicroBanker1 ne permet pas la production du bilan, du compte de résultat, des soldes intermédiaires de gestion BCEAO.
Il en facilite cependant la production grâce aux balances produites.
Il permet la production des annexes BCEAO telles que les recouvrements attendus au cours de l'exercice, le montant recouvré au cours de l'exercice, le montant cumulé des octrois de crédit, les taux de remboursement et de recouvrement.
Cependant, il ne fait pas la ventilation des crédits, des dépôts entre hommes et femmes,
Il fournit des éléments qu'il faut retraiter pour élaborer les ratios du CGAP
- c. Génération d'états
MicroBanker1 permet la génération d'états standards mais la génération d'états spécifiques ou définis pas le l'utilisateur est limitée

La conformité aux normes comptables et réglementaires

- a. La
MicroBanker1 est conforme aux normes comptables tant internationales que

conformité aux normes comptables
 françaises.
 b. La conformité aux normes réglementaires
 MicroBanker1 répond aux normes réglementaires de la BCEAO, mais on ne peut affirmer qu'il est facilement adaptable à un changement de réglementation

2.3.4.6 La gestion et l'assistance

- a. La sécurité
 The system notifies the user of file and access violations and has a basic self-auditing facility and uses audit trail on transactions. It provides for different levels of access restricting users to specific activities. The system is password protected, but does not limit use to certain times of the day, or prompt the user to change passwords on a regular basis. The system is not protected against direct access with other software to view and change the data files. Offsite storage of records is done copying data files to external storage devices.
- b. Sauvegarde et restauration
 The system does not save records until complete, therefore avoiding duplication of data if restarting after a system crash and prompts user to complete transactions before closing. The system is not capable of archiving old unused data. The system performs incremental backups and restores the backups efficiently and prompts the user to perform scheduled backups at the end of the day.
- c. Tolérance d'erreurs et robustesse
 The system notifies the users of incomplete transactions and handles errors by providing information necessary to react.
- d. Procédure de fin de période
 At the end of the reporting period, the system properly handles interest posting and compounding, late fees and penalties, closes books in preparation for reporting and the report generation cycle is launched. The system moves transactions from the journal to the general ledger on a daily basis.
- e. Structure d'appui et de maintenance
 Adequate, but complex system and training manuals are provided. External support from the developers is limited and technicians usually respond within two to five days. Support from an internal technical support person is a requirement.
- f. Contrôle de la version et mise à jour
 Version control is well managed by the system developers and the exact version in use is clear to the users. The system should be installed in tandem with existing software. The source code is not available to the SFD and is maintained off site in Italy.

Spécifications techniques et précisions

- a. Technologie et architecture
 The system is developed using tradition methodology and the developer controls the source code. The system is client based linking functions to clients rather than products. The software is programmed in Clipper, a older DOS based development language, which is not currently widely supported. The system uses Dbase IV file structures. The system operates on PC with DOS available and requires minimal configuration of hardware. The system evaluated operates in a stand-alone workstation and has to be configured to work in a network environment.
- b.
 The system does not require as much space on the storage drive as a windows

Performance	system and very little space per client and additional transactions. Data (in entry screens, reports and listings) is displayed rapidly on the screen. The system does, however become significantly slower with more added data.
Number and Date Management	The system accepts dates in 2 digit format but manages dates well for Y2K compliance and allows for up to 13 digits for numbers.

Le Système MicroBanker2

MicroBanker 2 is used by Piyeli in a real front office capacity, with at least two operators using the system to process loan transactions. 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 the accountant finds it limited, and the computer technician is concerned about continued support and wishes for an upgrade.

La saisie des données

- a. Plan comptable MicroBanker2 gère les numéros, les libellés du plan comptable de la BCEAO ainsi que les codes postes du bilan et du compte de résultat.
- b. Les comptes individuels Il gère les numéros des comptes individuels, leurs libellés, numéros clients, numéro de plan comptable, dates de création, date d'échéance et conditions d'échelles, les découverts. Cependant, il n'y a pas de champs pour, les devises et l'agence
- c. Les clients Il gère les numéros des clients, leurs noms et prénoms, leurs adresses, dates de naissance, sexe, les agents de crédit chargés de la gestion des clients et de leurs comptes de dépôts et prêts ; Toutefois, il n'y a pas de champs prévus pour enregistrer les membres de groupes de solidarités, les recettes, les dépenses, le nombre d'employés, les prêts contractés ailleurs et les lieux de naissance.
- d. Les dossiers de prêts Il gère les numéros des dossiers de prêts, leurs libellés, les comptes de dépôts attachés aux prêts, les montants débloqués, le taux d'intérêts, le nombre d'échéances, le type de périodicité, la date de déblocage, la date de premier remboursement, la date de dernier remboursement et le code produit. Toutefois, il n'y a qu'un seul champ pour le montant du crédit qui est supposé être le même à l'octroi et au déblocage.
- e. Enregistrement des opérations MicroBanker2 gère la date d'opération d'une transaction, son montant, le numéro de compte d'imputation, le sens débit crédit, le numéro de pièce ainsi que le libellé de la transaction. Cependant, il n'est pas prévu de champ pour la date de valeur ainsi que pour le code service permettant d'imputer les charges et les produits par centre de coût et de profit
- f. Les conditions d'échelle Les conditions d'échelle sont gérées et les taxes dont les systèmes financiers décentralisés sont exonérés au Mali pour le moment.
- g. Le code agence L'agence n'est pas du tout gérée ; MicroBanker2 est mono agence

Les fonctions et flexibilités

- a. comptabilité MicroBanker2 a un système intégré de gestion de comptabilité , des prêts et des dépôts.

- Il gère les journaux, les grand-livres, les balances, les intérêts courus non échus. Cependant, il ne permet pas de calculer le cash flow et d'éclater les produits et les charges par sources et centre de coûts et de profits .
Il ne gère pas la paie et les immobilisations.
- b. Gestion du portefeuille crédit
MicroBanker2 gère les types de prêts, la liaison des dépôts de garantie avec les prêts, les impayés, les paiements anticipés, en retard, partiels, les trop perçus ; les cautions étant renseignées à titre indicatif.
Cependant, il ne permet pas d'effectuer deux ou plusieurs débloquages sur le même prêt, de même qu'il ne permet pas de faire un scoring des crédits. Le calcul de la provision ne peut se faire automatiquement selon la règle de provisionnement de la BCEAO.
- c. Gestion des dépôts
MicroBanker2 permet de gérer beaucoup de types de dépôts, l'historique des dépôts ainsi que les taxes (IRVM) sur les intérêts servis aux déposants dont les clients des SFD sont exonérés pour le moment..
Il ne permet pas de gérer les cartes de retrait
- d. Système d'information clientèle
Il permet de gérer le comportement du client en matière de crédit, de dépôts et d'historique.
Cependant, malgré la présence de champs pour enregistrer l'adresse, le sexe, la profession, on ne peut faire des tris selon ces champs.
En outre, s'il peut gérer les clients individuels et les groupes, il ne peut gérer les membres lorsque le client est un groupe et les groupes lorsque le client est un individu.
Enfin, il n'y a un système permettant d'éviter de codifier doublement le même client.
- e. Possibilité d'extension et de développement institutionnel
MicroBanker2 permet de passer d'une organisation informelle à une organisation de type informel. Mais il ne peut gérer les demandes de dépôts, cartes de crédits, hypothèques, lignes de crédits et autres en plus des services standards de micro-finance
- f. Flexibilité par rapport aux clients et aux comptes
Il permet à un client d'avoir plusieurs comptes prêts et de dépôts.
Cependant, il ne permet pas de trier les informations sur le client par le sexe, l'état civil, la profession
- g. Flexibilité du type d'institution
Il permet de gérer les institutions de micro finance et les coopératives de dépôts et de crédits.
Cependant, il ne peut convenir aux banques car beaucoup de services tels que le change manuel, les positions de changes, la gestion des engagements par signature etc. ne sont pas gérés.
- h. Flexibilité de la méthodologie d'octroi des prêts
MicroBanker2 gère les clients individuels, les groupes de solidarité avec des prêts aux groupes, les caisses villageoises avec des prêts individuels, les caisses villageoises avec les prêts aux groupes.
Cependant, il ne gère pas des groupes de solidarité avec des prêts individuels.
- i. Flexibilité du type d'intérêts sur les prêts
MicroBanker2 gère les intérêts sur le capital restant dû, les intérêts précomptés, les intérêts capitalisés, les commissions et frais ainsi que les pénalités de retard et les taux variables.
- j. Flexibilité par rapport au type de dépôts
MicroBanker2 gère l'épargne avec ou sans livret, les dépôts à terme, les dépôts volontaires et forcés (dépôts de garantie), les découverts.

- et d'épargne
- k. Type d'intérêts sur les dépôts
MicroBanker2 calcule les intérêts sur le solde journalier ainsi que sur le taux minimum journalier.
Mais il ne peut pas calculer les intérêts sur les soldes minimum mensuel, minimum trimestriel, moyen journalier et moyen mensuel.
- l. Flexibilité des types de remboursements
MicroBanker2 gère les prêts à échéances constantes, les prêts à échéance unique, les amortissements constants en capital, les échéances irrégulières.
Il accepte les paiements en espèces en chèque, mais pas les cartes de crédits et autres.
Il permet les paiements différés d'échéance et les période grâce ainsi que le rééchelonnement.
Il ne permet pas la suspension des pénalités de retard,
- m. Flexibilité des fréquences des échéances
MicroBanker2 gère les échéances hebdomadaires, bimensuelles, mensuelles, toutes les quatre semaines mais il ne gère pas les échéances journalières et bihebdomadaires.
Le nombre de jours pris en compte pour le calcul des intérêts est 365 jours, 360 jours et 52 semaines.
Il ne gère pas 332 jours et 50 semaines.
- n. Flexibilité de multi - agence et/ou multi - régions
MicroBanker2 gère une agence et permet de gérer les informations par quartier, mais il ne permet pas de consolider les données de plusieurs agences .
- o. Flexibilité des langues
MicroBanker2 existe en versions française et anglaise mais plusieurs langues ne peuvent pas être simultanément utilisées par l'utilisateur.
- p. Flexibilité de multi-devises
MicroBanker2 ne gère que le franc CFA.

Convivialité et facilité d'utilisation

- a. convivialité
Training for Microbanker systems is provided by FOA support units in Italy in a one week period. Training would require at least one week but not enough training is provided. The system is dependable and seldom crashes. Error messages are usually understood in house by the on site systems technician. The operator or technician may correct most errors, and support, though slow is available from Italy for correcting other errors.
- b. interface de l'utilisateur
This system is a DOS based system. Color is limited to black gray and white and the graphics are minimal. The system is menu driven with use of the keyboard only. The mouse cannot be used to manipulate the system. Access to different levels of operation has been well developed and has the capacity for detailed configuration. The system flows logically.

Reporting (différents états à produire)

- a. Documents généraux
MicroBanker2 permet de produire le journal, le grand livre, la balance générale des comptes, la balance auxiliaire des dépôts, des prêts ainsi que le relevé de compte, le solde des comptes et les états sur la qualité du portefeuille ainsi les performances par agent de crédit.
Toutefois, il doit pouvoir permettre de faire des projections de cash flow .
- b. Etats BCEAO et ratios CGAP
MicroBanker2 ne permet pas la production du bilan, du compte de résultat, des soldes intermédiaires de gestion BCEAO.
Il en facilite cependant la production grâce aux balances produites.

Il permet la production des annexes BCEAO telles que les recouvrements attendus au cours de l'exercice, le montant recouvré au cours de l'exercice, le montant cumulé des octrois de crédit, les taux de remboursement et de recouvrement.

Cependant, il ne fait pas la ventilation des crédits, des dépôts entre hommes et femmes,

Il fournit des éléments qu'il faut retraiter pour élaborer les ratios du CGAP

- c. Génération d'états MicroBanker2 permet la génération d'états standards mais la génération d'états spécifiques ou définis par l'utilisateur est limitée

La conformité aux normes comptables et réglementaires

- a. La conformité aux normes comptables MicroBanker2 est conforme aux normes comptables tant internationales que françaises.

- b. La conformité aux normes réglementaires MicroBanker2 répond aux normes réglementaires de la BCEAO, mais on ne peut affirmer qu'il est facilement adaptable à un changement de réglementation

2.3.4.6 La gestion et l'assistance

- a. La sécurité The system notifies the user of some file and access violations and has a basic self-auditing facility and uses audit trail on transactions. It provides for detailed levels of access restricting users to specific activities. The system is password protected, but does not limit use to certain times of the day, or prompt the user to change passwords on a regular basis. The system is not protected against direct access with other software to view and change the data files. Offsite storage of records may be done within the system but not all data is transferable.
- b. Sauvegarde et restauration The system does not save incomplete records. Therefore the user must return and complete records if the system crashes. The system is capable of archiving old unused data. The system performs full and incremental backups and restores the backups efficiently and prompts the user to perform scheduled backups at the end of the day.
- c. Tolérance d'erreurs et robustesse The system notifies the users of incomplete transactions and handles errors by providing information necessary to react.
- d. Procédure de fin de période At the end of the reporting period, the system properly handles interest posting and compounding, late fees and penalties, closes books in preparation for reporting and the report generation cycle is launched. The system moves transactions from the journal to the general ledger on a daily basis.
- e. Structure d'appui et de maintenance Adequate, but complex system and training manuals are provided. External support from the developers is limited and technicians usually respond within two to five days. Support from an internal technical support person is a requirement. Microbanker2 has an extended version in which 20 percent of the system's source code is provided from FAO if a programmer experienced in Clipper is available to assist the SFD to customize the code.
- f. Contrôle de la version et mise à jour Version control is well managed by the system developers and the exact version in use is clear to the users. The system should be installed in tandem with existing software. The source code is not available to the SFD and is

maintained off site in Italy.

Spécifications techniques et précisions

- a. Technologie et architecture The system is developed using tradition methodology and the developer controls the source code. The system is client based linking functions to clients rather than products. The software is programmed in Clipper, a older DOS based development language, which is not currently widely supported. The system uses Dbase IV file structures. The system operates on PC with DOS available and requires minimal configuration of hardware. The system evaluated operates in a stand-alone workstation and has to be configured to work in a network environment.
 - b. Performance The system does not require as much space on the storage drive as a windows system and very little space per client and additional transactions. Data (in entry screens, reports and listings) is displayed rapidly on the screen. The system does, however become significantly slower with more added data.
- Number and Date Management The system accepts dates in 2 digit format but manages dates well for Y2K compliance and allows for up to 16 digits for numbers.

Le Système Nyèta Musow

The Nyèta Musow system is written in MS Access and specifically for Nyèta Musow. Unless the SFD is similar to Nyèta Musow, adaptation would be too difficult even though MS Access is widely supported in Mali. Support for this program is also limited and errors and technical blockages are frequent.

La saisie des données

- | | |
|----------------------------------|--|
| a. Plan comptable | Nyèta Musow gère les numéros, les libellés du plan comptable de la BCEAO ainsi que les codes postes du bilan et du compte de résultat. |
| b. Les comptes individuels | Nyèta Musow gère les numéros de comptes individuels, les numéros clients, les dates de création et d'échéance et les conditions d'échelle d'intérêts.
Il ne gère pas les codes bailleurs de fonds, les montants de découvert, les code devise et code agence.. |
| c. Les clients | Nyèta Musow est conçu pour gérer uniquement quelques informations relatives au groupe de solidarité à savoir le numéro de groupe, le quartier où le groupe est localisé et la date d'adhésion ainsi que l'agent de crédit chargé de suivi du client.
Il ne gère pas de nom et prénom client, (il n'y a pas de nom pour le groupe), de date et lieu de naissance, l'association de groupe de solidarité, le sexe, les recettes et les dépenses du client, les prêts contractés ailleurs par le client . |
| d. Les dossiers de prêts | Nyèta Musow gère les numéros des dossiers de prêts, leurs libellés, des montants prédéfinis, un taux d'intérêts prédéfini, des nombres d'échéances prédéfinis et des types de périodicité prédéfinis, les dates de déblocage, de premier remboursement et de dernier remboursement et le code produit.
Il ne gère pas les comptes de dépôts garantissant les prêts, des montants non prédéfinis, des taux d'intérêts non prédéfinis, des nombres d'échéances non prédéfinis, des types de périodicité non prédéfinis. |
| e. Enregistrement des opérations | Nyèta Musow gère la date d'opération d'une transaction, son montant, le numéro de compte d'imputation, le sens débit crédit, le numéro de pièce ainsi que le libellé de la transaction.
Cependant, il n'est pas prévu de champ pour la date de valeur ainsi que pour le code service permettant d'imputer les charges et les produits par centre de coût et de profit |
| f. Les conditions d'échelle | Il gère des conditions d'échelle prédéfinis sans les taxes dont les systèmes financiers décentralisés sont exonérés au Mali pour le moment. |
| g. Le code agence | Nyèta Musow gère les quartiers où sont localisés les clients, mais il n'y a pas de code agence permettant de gérer individuellement tous les comptes. |

Les fonctions et flexibilités

- | | |
|-----------------|---|
| a. comptabilité | Nyèta Musow a un système intégré de gestion de comptabilité , |
|-----------------|---|

des prêts et des dépôts mais l'intégration est indirecte c'est à dire que la mise à jour n'est pas automatique, il faut la mise à jour de la comptabilité de façon manuelle.

Il gère les journaux, les grand livres, les balances. Cependant, il ne permet pas de calculer le cash flow et d'éclater les produits et les charges par sources et centre de coûts et de profits .

Il ne gère pas les intérêts courus non échus, la paie et les immobilisations.

- b. Gestion du portefeuille crédit Nyèta Musow gère les types de prêts, les impayés par date , les paiements anticipés (lorsque ce paiement anticipé n'est individuel), en retard, partiels, les trop perçus. Cependant, il ne permet pas la liaison des dépôts de garantie avec les prêts, d'effectuer deux ou plusieurs débloquages sur le même prêt, de même qu'il ne permet pas de faire un scoring des crédits et les cautions. Le calcul de la provision ne peut se faire automatiquement selon la règle de provisionnement de la BCEAO.
- c. Gestion des dépôts Nyèta Musow permet de gérer uniquement deux types de dépôts : l'épargne individuelle et les fonds de groupe ainsi que les historiques par groupe et par semaine. Il ne permet pas d'identifier le membre du groupe titulaire de l'épargne individuelle, ni de gérer les cartes de retrait ainsi que les taxes (IRVM) sur les intérêts servis aux déposants dont les clients des SFD sont exonérés pour le moment.
- d. Système d'information clientèle C'est le nombre de pénalités payées par le client qui permet de connaître le comportement du client en matière de crédit. L'historique des dépôts est donnée de façon hebdomadaire et par groupe.
- Nyèta Musow donne les encours et les échéances par quartier.
- Il permet de donner, par animatrice, le nombre de crédit, le montant des crédits et le montant moyen des crédits. Il ne donne pas les encours et impayés par animatrice. De même, il ne donne pas des informations selon le sexe, la profession, En outre, il ne gère pas les clients individuels..
- e. Possibilité d'extension et de développement institutionnel Le système Nyèta Musow est spécifique, il n'est pas adapté pour passer d'une organisation informelle à une organisation de type informel. De même, il ne peut pas gérer les demandes de dépôts, cartes de crédits, hypothèques, lignes de crédits et autres en plus des services standards de micro- finance
- f. Flexibilité par rapport aux clients et aux comptes Il permet à un client d'avoir plusieurs comptes de prêts et d'avoir deux types de dépôts (épargne individuelle et fonds de groupe). Cependant, il ne permet pas de trier les informations sur le client par le sexe, l'état civil, la profession
- g. Flexibilité du type d'institution S'il est modifié, il peut permettre de gérer les institutions de micro finance et les coopératives de dépôts et de crédits. Cependant, il ne peut convenir aux banques car beaucoup de services tels que le change manuel, les positions de changes, la

- gestion des engagements par signature etc. ne sont pas gérés.
- h. Flexibilité de la méthodologie d'octroi des prêts Nyèta Musow gère les groupes de solidarité avec des prêts aux groupes, les caisses villageoises avec les prêts aux groupes. Cependant, il ne gère pas les clients individuels, les caisses villageoises avec des prêts individuels, des groupes de solidarité avec des prêts individuels.
- i. Flexibilité du type d'intérêts sur les prêts Nyèta Musow gère les intérêts sur le capital restant dû, les pénalités de retard. Il ne permet pas les intérêts précomptés, les intérêts capitalisés, les commissions et l'application de taux variables.
- j. Flexibilité par rapport au type de dépôts et d'épargne Nyèta Musow gère l'épargne individuelle par groupe et les fonds de groupe. Cependant, il ne gère pas les dépôts à terme, les découverts.
- k. Type d'intérêts sur les dépôts Nyèta Musow calcule les intérêts sur les soldes hebdomadaires. Mais il ne peut pas calculer les intérêts sur les soldes minimum journalier, minimum mensuel, minimum trimestriel, moyen journalier et moyen mensuel.
- l. Flexibilité des types de remboursements Nyèta Musow gère les prêts à échéances constantes, les prêts à échéance unique, le calcul de pénalités de retard. Il accepte les paiements en espèces, mais pas les chèques, les cartes de crédits. Il ne permet pas les amortissements constants en capital, les échéances irrégulières, les paiements différés d'échéance, les période grâce et le rééchelonnement
- m. Flexibilité des fréquences des échéances Nyèta Musow gère les échéances hebdomadaires, et mensuelles. mais il ne gère pas les échéances journalières, bihebdomadaires, bimensuelles, toutes les quatre semaines. La base de calcul des intérêts est de 52 semaines. Il ne gère pas 365 jours, 360 jours, 332 jours et 50 semaines.
- n. Flexibilité de multi-agence et/ou multi-régions Nyèta Musow permet de gérer les prêts et les dépôts par quartier mais il ne permet pas de gérer les charges et les produits par agence et de consolider les données de plusieurs agences .
- o. Flexibilité des langues Nyèta Musow existe uniquement en versions française. Il ne peut pas gérer plusieurs langues .
- p. Flexibilité de multi-devises Nyèta Musow ne gère que le franc CFA.

Convivialité et facilité d'utilisation

- a. convivialité Training for Nyèta Musow is provided by a single vendor from France when he visits the SFD. Training lasts approximately one week depending on the operator's level of skill. Error messages are difficult to understand by the user or systems technician. The operator or technician find it difficult to correct errors and are usually forced to wait for outside assistance.
- b. interface de l'utilisateur This system is a MS Windows based system. The color scheme aids in manipulating the system. The system is menu driven and maximizes use of the keyboard and mouse. Access to different levels of operation is not available to the operator. The system flows logically and is simple in nature. No on line help is

available.

Reporting (différents états à produire)

- a. Documents généraux Nyèta Musow permet de produire le journal, le grand livre, la balance générale des comptes, la balance auxiliaire des dépôts, des prêts ainsi que le relevé de compte, le solde des comptes sur une base hebdomadaire et par groupe, les impayés par date. Il permet de donner, par animatrice le nombre de prêts, les montants de prêts et le solde moyen. Il ne permet pas de tirer les impayés et les encours par animatrice, de faire des projections de cash flow.
- b. Etats BCEAO et ratios CGAP Nyèta Musow permet la production du bilan, du compte de résultat, des soldes intermédiaires de gestion et quelques annexes BCEAO comme les recouvrements attendus au cours de l'exercice, les montants recouverts, le montant cumulé des octrois de crédit. Cependant, il ne fait pas la ventilation des crédits, des dépôts entre hommes et femmes. Il fournit des éléments qu'il faut retraiter pour élaborer les ratios du CGAP
- c. Génération d'états Nyèta Musow permet la génération d'états standards mais la génération d'états spécifiques ou définis pas le l'utilisateur est limitée

La conformité aux normes comptables et réglementaires

- a. La conformité aux normes comptables Nyèta Musow est conforme aux normes comptables tant internationales que françaises pour l'essentiel. Cependant, les intérêts étant comptabilisés à l'encaissement, il y a là un risque de violation du principe de séparation des exercices lorsque les intérêts se chevauchent sur deux années.
- b. La conformité aux normes réglementaires Nyèta Musow répond aux normes réglementaires de la BCEAO, mais on ne peut affirmer qu'il est facilement adaptable à un changement de réglementation

2.3.6.6 La gestion et l'assistance

- a. La sécurité The system does not adequately notify file and access violations and has no self-auditing. It does not provide for different levels of access restricting users to specific activities. The system is password protected, and does not limit use to certain times of the day, or prompt the user to change passwords on a regular basis. The system, because it is written in MS Access does not provide the security necessary to protected against direct access with other software to view and change the data files. Offsite storage of records may be done by backing up the entire system into an external device. Because of the size of the file, zip drive backups will be necessary.
- b. Sauvegarde et restauration The system does not save backups until complete, therefore avoiding duplication of data if restarting after a system crash. The system is not yet capable of archiving old unused data. The system does not perform full and incremental backups.

- c. Tolérance d'erreurs et robustesse The system does not notify the users of incomplete transactions. The system and handles most errors by providing information necessary to react, but it is not well protected against unexpected keystrokes.
- d. Procédure de fin de période At the end of the reporting period, the system is programmed to handle interest posting and compounding, late fees and penalties, books closure in preparation for reporting and the report generation cycle. The system moves transactions from the journal to the general ledger on a daily basis, but this is not an automated process.
- e. Structure d'appui et de maintenance Adequate system and training manuals are not provided. External support from France is available and the system developer's response time is not dependable (approximately two weeks) and expensive, but usually available via e-mail. Support from an internal technical support person is a requirement.
- f. Contrôle de la version et mise à jour Version control is performed by the system developer and may not be systematic. The system should be installed in tandem with existing software. The source code is not available to the SFD and is maintained off site in France.

Spécifications techniques et précisions

- a. Technologie et architecture The system is developed using object oriented technology and the developer controls the source code. The system is client based, linking functions to clients rather than products. The software is programmed in MS Access, a very widely used application development language. Wide support for Access is available in Mali. The system uses Visual Basic/SQL/ and Access supported file structures. The system operates on PCs with Windows 95 as a minimum requirement and requires minimal configuration of hardware. The system evaluated operates in a stand-alone workstation and has to be configured to work in a network environment.
- b. Performance The system requires substantial space on the storage drive as a windows system and moderate space per client and additional transactions. Data in entry screens is displayed rapidly on the screens, but the user must sometimes wait for reports and listings. 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.
- Number and Date Management The system manages dates well for Y2K compliance and allows for up to 15 digits for numbers.

Le Système SiBanque1

Sibanque1 is a DOS based system in use by Faso Jiginew, a mutuelle federation for a number of year. The software is used in a front office capacity to manage its loan transactions and in a back office capacity to enter loan information for numerous member, but individual mutuals, as a service to these SFDs. This SFD experienced problems related to data migration when first installing the software, but have grown comfortable with the system. They are however limited in writing custom reports. Faso Jiginew is in the process of testing Sibanque 2 and expect to upgrade to this software to gain the advantage of the Windows GUI and custom reports.

La saisie des données

- a. Plan comptable Sibanque1 gère les numéros, les libellés du plan comptable de la BCEAO ainsi que les codes postes du bilan et du compte de résultat. Sibanque1 gère the numbers, the libellés of the accountant plan of the BCEAO as well as the codes post report and result account.

- b. Les comptes individuels Il gère les numéros des comptes individuels, leur libellés, numéros clients, numéro de plan comptable, dates de création, date d'échéance et conditions d'échelles. Cependant, il n'y a pas de champs pour les découverts, les devises et l'agence

- c. Les clients Il gère les numéros des clients, leurs noms et prénoms, leurs adresses, dates de naissance, lieux de naissance, sexe ; Toutefois, il n'y a pas de champs prévus pour enregistrer les membres de groupes de solidarités, les recettes, les dépenses, le nombre d'employés, les prêts contractés ailleurs, l'agent de crédit qui est chargé du suivi du client.

- d. Les dossiers de prêts Il gère les numéros des dossiers de prêts, leurs libellés, les comptes de dépôts attachés aux prêts, les montants débloqués, le taux d'intérêts, le nombre d'échéances, le type de périodicité, la date de déblocage, la date de premier remboursement, la date de dernier remboursement et le code produit. Toutefois, il n'y a qu'un seul champ pour le montant du crédit qui est supposé être le même à l'octroi et au déblocage.

- e. Enregistrement des opérations SiBanque1 gère la date d'opération d'une transaction, son montant, le numéro de compte d'imputation, le sens débit crédit, le numéro de pièce ainsi que le libellé de la transaction. Cependant, il n'est pas prévu de champ pour la date de valeur ainsi que pour le code service permettant d'imputer les charges et les produits par centre de coût et de profit

- f. Les conditions d'échelle Les conditions d'échelle sont gérées mais sans les taxes dont les systèmes financiers décentralisés sont exonérés au Mali pour le moment.

- g. Le code agence L'agence n'est pas du tout gérée ; SiBanque1 est mono agence

Les fonctions et flexibilités

- a. comptabilité SiBanque1 a un système intégré de gestion de comptabilité , des prêts et des dépôts.
Il gère les journaux, les grand livre, les balances ainsi que les intérêts courus non échus
Cependant, il ne permet pas de calculer le cash flow et d'éclater les produits et les charges par sources et centre de coûts et de profits.
Il ne gère pas la paie et les immobilisations.
- b. Gestion du portefeuille crédit SiBanque1 gère les types de prêts, la liaison des dépôts de garantie avec les prêts, les impayés, les paiements anticipés, en retard, partiels, les trop perçus, les cautions internes, les cautions externes étant renseignées à titre indicatif.
Cependant, il ne permet pas d'effectuer deux ou plusieurs débloques sur le même prêt, de même qu'il ne permet pas de faire un scoring des crédits. Le calcul de la provision ne peut pas se faire automatiquement selon la règle de provisionnement de la BCEAO.
- c. Gestion des dépôts SiBanque1 permet de gérer beaucoup de types de dépôts, l'historique des dépôts.
Il ne permet pas de gérer les cartes de retrait et les taxes (IRVM) sur les intérêts servis aux déposants dont les clients des SFD sont exonérés pour le moment.
- d. Système d'information clientèle Il permet de gérer le comportement du client en matière de crédit, de dépôts et d'historique.
Cependant, malgré la présence de champs pour enregistrer l'adresse, le sexe, la profession, on ne peut faire des tris selon ces champs.
En outre, s'il peut gérer les clients individuels et les groupes, il ne peut gérer les membres lorsque le client est un groupe et les groupes lorsque le client est un individu.
Enfin, il n'y a pas un système permettant d'éviter de codifier doublement le même client.
- e. Possibilité d'extension et de développement institutionnel SiBanque1 permet de passer d'une organisation informelle à une organisation de type informel. Mais il ne peut gérer les demandes de dépôts, cartes de crédits, hypothèques, lignes de crédits et autres en plus des services standards de micro- finance
- f. Flexibilité par rapport aux clients et aux comptes Il permet à un client d'avoir plusieurs comptes prêts et de dépôts.
Cependant, il ne permet pas de trier les informations sur le client par le sexe, l'état civil, la profession.
- g. Flexibilité du type d'institution Il permet de gérer les institutions de micro finance et les coopératives de dépôts et de crédits.
Cependant, il ne peut convenir aux banques car beaucoup de services tels que le change manuel, les positions de changes, la gestion des engagements par signature etc. ne sont pas gérés.

- h. Flexibilité de la méthodologie d'octroi des prêts SiBanque1 gère les clients individuels, les groupes de solidarité avec des prêts aux groupes, les caisses villageoises avec des prêts individuels, les caisses villageoises avec les prêts aux groupes. Cependant, il ne gère pas des groupes de solidarité avec des prêts individuels.
- i. Flexibilité du type d'intérêts sur les prêts SiBanque1 gère les intérêts sur le capital restant dû, les intérêts précomptés, les intérêts capitalisés, les commissions et frais ainsi que les pénalités de retard. Cependant il ne gère pas les taux variables.
- j. Flexibilité par rapport au type de dépôts et d'épargne SiBanque1 gère l'épargne avec ou sans livret, les dépôts à terme, les dépôts volontaires et forcés (dépôts de garantie). Cependant, il ne gère pas les découverts.
- k. Type d'intérêts sur les dépôts SiBanque1 calcule les intérêts sur le solde journalier. Mais il ne peut pas calculer les intérêts sur les soldes minimum journalier, minimum mensuel, minimum trimestriel, moyen journalier et moyen mensuel.
- l. Flexibilité des types de remboursements SiBanque1 gère les prêts à échéances constantes, les prêts à échéance unique. Cependant il ne gère pas les échéances irrégulières, les amortissements constants en capital. Il accepte les paiements en espèces en chèque, mais pas les cartes de crédits et autres. Il permet la suspension des pénalités de retard, les paiements différés d'échéance et les période de grâce ainsi que le rééchelonnement.
- m. Flexibilité des fréquences des échéances SiBanque1 gère les échéances mensuelles, mais il ne gère pas les échéances journalières, hebdomadaires, bihebdomadaires, bimensuelles et toutes les 4 semaines. Le nombre de jours pris en compte des intérêts est 360 jours. Il ne gère pas 365 jours, 332 jours, 50 semaines et 52 semaines.
- n. Flexibilité de multi - agence et/ou multi - régions SiBanque1 gère une agence, mais il ne permet pas de consolider les données de plusieurs agences et d'éclater les données d'une agence par bureau ou par zone..
- o. Flexibilité des langues SiBanque1 existe en versions française et anglaise mais plusieurs langues ne peuvent pas être simultanément utilisées par l'utilisateur.
- p. Flexibilité de multi- devises SiBanque1 ne gère que le franc CFA.

Convivialité et facilité d'utilisation

- a. convivialité Training for SiBanque1 is provided by the vendor in France, and/or by a visiting consultant to the site. Training lasts one to two weeks depending on the operator's level of skill. The system is dependable and seldom crashes. Error messages are usually understood in house

by the operators or the on site systems technician. The operator or technician may correct most errors, and support is available from France for correcting other system errors.

- b. interface de l'utilisateur
- This system is a DOS based system. Color is limited to black gray and white and the graphics are also very basic. The system is menu driven with use of the keyboard only. The mouse cannot be used to manipulate the system. Access to different levels of operation has not been well developed. The system flows logically and the operators have become quite accustomed to it and find it a rapid and helpful tool.

Reportage (différents états à produire)

- a. Documents généraux
- SiBanque1 permet de produire le journal, le grand livre, la balance générale des comptes, la balance auxiliaire des dépôts, des prêts ainsi que le relevé de compte, le solde des comptes et les états sur la qualité du portefeuille. Toutefois, il ne fait pas des projections de cash flow et les performances par agent de crédit.
- b. Etats BCEAO et ratios CGAP
- SiBanque1 permet la production du bilan, du compte de résultat, des soldes intermédiaires de gestion et quelques annexes BCEAO. Cependant, il ne fait pas la ventilation des crédits, des dépôts entre hommes et femmes, les recouvrements attendus au cours de l'exercice, le montant recouvré au cours de l'exercice, le montant cumulé des octrois de crédit, les taux de remboursement et de recouvrement. Il fournit des éléments qu'il faut retraiter pour élaborer les ratios du CGAP
- c. Génération d'états
- SiBanque1 permet la génération d'états standards mais la génération d'états spécifiques ou définis par l'utilisateur est limitée

La conformité aux normes comptables et réglementaires

- a. La conformité aux normes comptables
- SiBanque1 est conforme aux normes comptables tant internationales que françaises.
- b. La conformité aux normes réglementaires
- SiBanque1 répond aux normes réglementaires de la BCEAO, mais on ne peut affirmer qu'il est facilement adaptable à un changement de réglementation

2.3.1.6 La gestion et l'assistance

- a. La sécurité
- The system does not adequately notify file and access violations and has no self-auditing facility besides audit trail on transaction. It does provide for different levels of access restricting users to specific activities. The system is password protected, but does not limit use to certain times of the day, or prompt the user to change passwords on a regular basis. The system is not protected against direct access with other software to view and change the data files. Offsite storage of

records is done by backing up the records within the system then copying the backup to external storage devices.

- b. Sauvegarde et restauration
The system does not save backups until complete, therefore avoiding duplication of data if restarting after a system crash. The system is capable of archiving old unused data. The system performs full and incremental backups and restores the backups efficiently, but does not force scheduled backups.
- c. Tolérance d'erreurs et robustesse
The system notifies the users of incomplete transactions and handles errors by providing information necessary to react.
- d. Procédure de fin de période
At the end of the reporting period, the system properly handles interest posting and compounding, late fees and penalties, closes books in preparation for reporting and the report generation cycle is launched. The system moves transactions from the journal to the general ledger on a daily basis.
- e. Structure d'appui et de maintenance
Adequate, but lengthy system and training manuals are provided. External support from France is available and technicians usually respond within two days from experienced system developer. Support from an internal technical support person is a requirement.
- f. Contrôle de la version et mise à jour
Version control is well managed by the system developers but the exact version in use is not clear to the users. The system should be installed in tandem with existing software. The source code is not available to the SFD and is maintained off site in France.

Spécifications techniques et précisions

- a. Technologie et architecture
The system is developed using tradition methodology and the developer controls the source code. The system is client based linking functions to clients rather than products. The software is programmed in Clipper, a older DOS based development language, which is not currently widely supported. The system uses Dbase IV file structures. The system operates on PC with DOS available and requires minimal configuration of hardware. The system evaluated operates in a stand-alone workstation and has to be configured to work in a network environment.
- b. Performance
The system does not require as much space on the storage drive as a windows system and very little space per client and additional transactions. Data (in entry screens, reports and listings) is displayed rapidly on the screen. The system does, however become significantly slower with more added data.
- c. Number and Date Management
The system manages dates well for Y2K compliance and allows for up to 10 digits for numbers.

Le Système SiBanque2

SiBanque 2 est installé, seulement depuis le mois d'août 2000 à Jemeni et à Kafo Jiginew ; Les personnes rencontrées ne maîtrisent pas tout à fait toutes les fonctionnalités du système à la date de l'étude. Certaines informations données par la personne chargée de son installation n'ont pas pu être vérifiées et confirmées par les utilisateurs.

La saisie des données

- | | |
|----------------------------------|--|
| a. Plan comptable | Sibanque2 gère les numéros, les libellés du plan comptable de la BCEAO ainsi que les codes postes du bilan et du compte de résultat. |
| b. Les comptes individuels | Il gère les numéros des comptes individuels, leur libellés, numéros clients, numéro de plan comptable, dates de création, date d'échéance et conditions d'échelles, les découverts et le code devises. Cependant, il n'y a pas de champs seulement pour le code agence |
| c. Les clients | Il gère les numéros des clients, leurs noms et prénoms, leurs adresses, dates de naissance, lieux de naissance, sexe ; Toutefois, il n'y a pas de champs prévus pour enregistrer les membres de groupes de solidarités, les recettes, les dépenses, le nombre d'employés, les prêts contractés ailleurs, l'agent de crédit qui est chargé du suivi du client. |
| d. Les dossiers de prêts | Il gère les numéros des dossiers de prêts, leurs libellés, les comptes de dépôts attachés aux prêts, les montants débloqués, le taux d'intérêts, le nombre d'échéances, le type de périodicité, la date de déblocage, la date de premier remboursement, la date de dernier remboursement et le code produit. Toutefois, il n'y a qu'un seul champ pour le montant du crédit qui est supposé être le même à l'octroi et au déblocage. |
| e. Enregistrement des opérations | SiBanque2 gère la date d'opération d'une transaction, son montant, le numéro de compte d'imputation, le sens débit crédit, le numéro de pièce ainsi que le libellé de la transaction. Cependant, il n'est pas prévu de champ pour la date de valeur ainsi que pour le code service permettant d'imputer les charges et les produits par centre de coût et de profit |
| f. Les conditions d'échelle | Les conditions d'échelle sont gérées mais sans les taxes dont les systèmes financiers décentralisés sont exonérés au Mali pour le moment. |
| g. Le code agence | L'agence n'est pas du tout gérée ; SiBanque2 est mono agence |

Les fonctions et flexibilités

- | | |
|-----------------------------------|---|
| a. comptabilité | SiBanque2 a un système intégré de gestion de comptabilité , des prêts et des dépôts.
Il gère les journaux, les grand-livres, les balances ainsi que les intérêts courus non échus et le calcul automatique des dotations aux provisions. Cependant, il ne permet pas de calculer le cash flow et d'éclater les produits et les charges par sources et centre de coûts et de profits.
Il ne gère pas la paie et les immobilisations. |
| b. Gestion du portefeuille crédit | SiBanque2 gère les types de prêts, la liaison des dépôts de garantie avec les prêts, les impayés, les paiements anticipés, en retard, partiels, les trop perçus, les cautions internes, les cautions externes étant renseignées à titre indicatif.
Cependant, il ne permet pas d'effectuer deux ou plusieurs déblocages sur le même prêt, de même qu'il ne permet pas de faire un scoring des crédits. Le calcul de la provision peut se faire automatiquement selon |

- la règle de provisionnement de la BCEAO.
- c. Gestion des dépôts SiBanque2 permet de gérer beaucoup de types de dépôts, l'historique des dépôts.
Il ne permet pas de gérer les cartes de retrait et les taxes (IRVM) sur les intérêts servis aux déposants dont les clients des SFD sont exonérés pour le moment.
- d. Système d'information clientèle Il permet de gérer le comportement du client en matière de crédit, de dépôts et d'historique.
Comme il est conçu en Système de Gestion de base de Données Relationnelles (SGBDR), il doit pouvoir permettre d'effectuer des tris selon l'adresse, le sexe, la profession.
En outre, s'il peut gérer les clients individuels et les groupes, il ne peut gérer les membres lorsque le client est un groupe et les groupes lorsque le client est un individu.
Enfin, il n'y a pas un système permettant d'éviter de codifier doublement le même client.
- e. Possibilité d'extension et de développement institutionnel SiBanque2 permet de passer d'une organisation informelle à une organisation de type informel. Mais il ne peut gérer les demandes de dépôts, cartes de crédits, hypothèques, lignes de crédits et autres en plus des services standards de micro-finance
- f. Flexibilité par rapport aux clients et aux comptes Il permet à un client d'avoir plusieurs comptes prêts et de dépôts.
Comme il est conçu en Système de Gestion de base de données Relationnelles (SGBDR), il doit pouvoir permettre d'effectuer des tris selon l'adresse, le sexe, la profession, l'état civil etc.
- g. Flexibilité du type d'institution Il permet de gérer les institutions de micro finance et les coopératives de dépôts et de crédits.
Cependant, il ne peut convenir aux banques car beaucoup de services tels que le change manuel, les positions de changes, la gestion des engagements par signature etc. ne sont pas gérés.
- h. Flexibilité de la méthodologie d'octroi des prêts SiBanque2 gère les clients individuels, les groupes de solidarité avec des prêts aux groupes, les caisses villageoises avec des prêts individuels, les caisses villageoises avec les prêts aux groupes.
Cependant, il ne gère pas des groupes de solidarité avec des prêts individuels.
- i. Flexibilité du type d'intérêts sur les prêts SiBanque2 gère les intérêts sur le capital restant dû, les intérêts précomptés, les intérêts capitalisés, les commissions et frais ainsi que les pénalités de retard et les taux variables.
- j. Flexibilité par rapport au type de dépôts et d'épargne SiBanque2 gère l'épargne avec ou sans livret, les dépôts à terme, les dépôts volontaires et forcés (dépôts de garantie) et les découverts et comptes courants.
- k. Type d'intérêts sur les dépôts SiBanque2 calcule les intérêts sur le solde journalier.
Mais il ne peut pas calculer les intérêts sur les soldes minimum journalier, minimum mensuel, minimum trimestriel, moyen journalier et moyen mensuel.
- l. Flexibilité des types de remboursements SiBanque2 gère les prêts à échéances constantes, les prêts à échéance unique.
Cependant il ne gère pas les échéances irrégulières, les amortissements constants en capital
Il accepte les paiements en espèces en chèque, mais pas les cartes de

- crédits et autres.
Il permet la suspension des pénalités de retard, les paiements différés d'échéance et les période de grâce ainsi que le rééchelonnement.
- m. Flexibilité des fréquences des échéances
SiBanque2 gère les échéances mensuelles, mais il ne gère pas les échéances journalières, hebdomadaires, bihebdomadaires, bimensuelles et toutes les 4 semaines.
Le nombre de jours pris en compte des intérêts est 360 jours. Il ne gère pas 365 jours, 332 jours, 50 semaines et 52 semaines.
- n. Flexibilité de multi - agence et/ou multi - régions
SiBanque2 gère une agence, mais il ne permet pas de consolider les données de plusieurs agences et d'éclater les données d'une agence par bureau ou par zone.
- o. Flexibilité des langues
SiBanque2 existe en versions française et anglaise mais plusieurs langues ne peuvent pas être simultanément utilisées par l'utilisateur.
- p. Flexibilité de multi-devises
SiBanque2 ne gère que le franc CFA.

Convivialité et facilité d'utilisation

- a. convivialité
Training for Sibanque2 is provided by the vendor in France, and/or by a visiting consultant to the site. Training lasts one to two weeks depending on the operator's level of skill. The system was evaluated in test mode, crashed and was not able to be recovered when the operator performed unexpected moves. Normal error messages are sometimes understood in house by the operators or the on site systems technician, but some error messages are difficult to comprehend. The operator or technician may correct most errors, and support is available from France for correcting other system errors.
- b. interface de l'utilisateur
This system is a MS Windows based system. The color scheme is very attractive and systematic to aid in manipulating the system The system is menu driven and maximizes use of the keyboard and mouse. Access to different levels of operation is well defined and may be configured by the operator. The system flows logically but may be complex in nature. An on-line help button is available but help information is not fully available.

Reporting (différents états à produire)

- a. Documents généraux
SiBanque2 permet de produire le journal, le grand livre, la balance générale des comptes, la balance auxiliaire des dépôts, des prêts ainsi que le relevé de compte, le solde des comptes et les états sur la qualité du portefeuille.
Toutefois, il ne fait des projections de cash flow et les performances par agent de crédit.
- b. Etats BCEAO et ratios CGAP
SiBanque2 permet la production du bilan, du compte de résultat, des soldes intermédiaires de gestion et quelques annexes BCEAO.
Comme il est conçu en Système de Gestion de base de Données Relationnelles (SGBDR), il doit pouvoir permettre d'effectuer la ventilation des crédits, des dépôts entre hommes et femmes, les recouvrements attendus au cours de l'exercice, le montant recouvré au cours de l'exercice, le montant cumulé des octrois de crédit, les taux de remboursement et de recouvrement.
Il fournit des éléments qu'il faut retraiter pour élaborer les ratios du

- c. Génération d'états CGAP
SiBanque2 permet la génération d'états standards, Comme il est conçu en Système de Gestion de base de Données Relationnelles (SGBDR) et grâce à son « Requêteur » il doit pouvoir permettre d'états spécifiques ou définis par l'utilisateur.

La conformité aux normes comptables et réglementaires

- a. La conformité aux normes comptables SiBanque2 est conforme aux normes comptables tant internationales que françaises.
b. La conformité aux normes réglementaires SiBanque2 répond aux normes réglementaires de la BCEAO, mais on ne peut affirmer qu'il est facilement adaptable à un changement de réglementation

2.3.2.6 La gestion et l'assistance

- a. La sécurité The system does not adequately notify file and access violations and has no self-auditing facility besides audit trail on transaction. It does provide for different levels of access restricting users to specific activities. The system is password protected, but does not limit use to certain times of the day, or prompt the user to change passwords on a regular basis. The system, because it is written in Visual Basic has security necessary to protected against direct access with other software to view and change the data files. Offsite storage of records is done by backing up a single database which contains all of the system records. Because of the size of the file, zip drive backups will be necessary.
- b. Sauvegarde et restauration The system does not save backups until complete, therefore avoiding duplication of data if restarting after a system crash. The system is not yet capable of archiving old unused data. The system does not yet performs full and incremental backups.
- c. Tolérance d'erreurs et robustesse The system does not notify the users of incomplete transactions. The system and handles most errors by providing information necessary to react, but it is not well protected against unexpected keystrokes.
- d. Procédure de fin de période At the end of the reporting period, the system is programmed to properly handle interest posting and compounding, late fees and penalties, books closure in preparation for reporting and the report generation cycle. The system moves transactions from the journal to the general ledger on a daily basis.
- e. Structure d'appui et de maintenance 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. Support from an internal technical support person is a requirement.
- f. Contrôle de la version et mise à jour Version control is well managed by the system developers. The system should be installed in tandem with existing software. The source code is not available to the SFD and is maintained off site in France.

Spécifications techniques et précisions

- a. Technologie et architecture The system is developed using object oriented technology and the developer controls the source code. The system is client based linking functions to clients rather than products. The software is programmed

in Visual Basic, a very modern application development language. 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 operates on PCs with Windows 95 as a minimum requirement and requires minimal configuration of hardware. The system evaluated operates in a stand-alone workstation and has to be configured to work in a network environment.

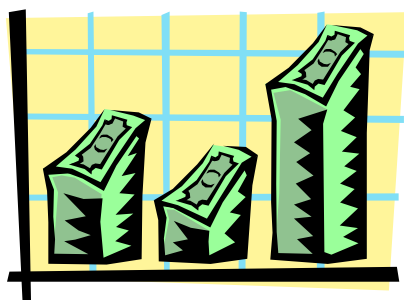
b. Performance

The system requires substantial space on the storage drive as a windows system and moderate space per client and additional transactions. Data in entry screens is displayed rapidly on the screens, but the user must sometimes wait for reports and listings. 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.

Number and Date Management

The system manages dates well for Y2K compliance and allows for up to 15 digits for numbers.

4. LA COMPARAISON DES PRIX:



The **Amadus** systems currently cost \$ 2000 each for 1 to 7 licenses, \$ 1500 each for 8 to 10 licenses and \$1300 each for more than 10 license. It typically takes 5 to 8 days to install and train users at a rate of \$300 per day plus per diem and expenses. There are no extra charges to modify the application but modifications are limited. The only additional cost would be to purchase a computer that costs a minimum of Windows 95 if none is available. An annual

maintenance fee with electronic or off site support cost 10% of the purchase price. Upgrades are furnished under this maintenance fee. If site visits are necessary the owner must pay expenses. There is no documentation cost since this is furnished with the software. We predict 300,000 CFA per month to pay at least two operators to operate the system. There are no additional costs predicted.

Bank 2000 Costs:

Software Solutions will provide Bank 2000 to Mali's MFI based on individual MFI licensing basis. The price to license a the system at a headquarter location is \$45,000. Each branch under the headquarter MFI can then obtain a license for \$25,000. The MFI has the option of reducing the cost by not purchasing some of the software's functions from a menu of functional modules. The absolute bare cost of the software is \$25,000. Bank 2000 is delivered in English and French, but localization apart from language may be required. This purchase price of the software include installation which would involve, 2 weeks for training, one week for customization, two weeks for data migration, 3 days for implementation and support for 1 year. The MFI, however, will be responsible for paying the cost of travel and incidentals for one of Software solutions staff to perform the installation. Travel and incidentals will include airfare to and from Kenya, lodging in Bamako, per diem, and local transportation. Travel and incidentals are estimated at \$6000. Software support after the first year will be billed at 15% of the purchase price. There are no additional administrative costs. The outright purchase of the source code will cost \$500,000 with support after sale. Documentation and on line help is included free of charge. The cost or new releases will have to be re-negotiated at an upgrade price.

Banker Rhelm:

Software Solutions will provide Banker Rhelm to Mali's MFI on individual MFI licensing basis, and preferably as an upgrade to Bank 2000. The Bank 2000 license at a headquarter location is \$45,000 . Each branch under the headquarter MFI can then obtain a license for \$25,000. The price difference between Bank 2000 and BR is and additional \$15,00 for headquarter licenses and \$10,000 for branch licenses. Since migration from Bank 2000 is seamless, SS recommends that organizations start with Bank 2000, then upgrade to BR later. This may be to their financial and technical/ training advantage.. Purchasing BR without Bank 2000 will cost \$70,000 for headquarter use and \$35,000 for branches. The MFI has the option of reducing the cost by not purchasing some of the software's functions from a menu of functional modules. The absolute bare cost of the software is \$25,000. BR is delivered in English and French, but localization, apart from language may be required. This purchase price of the software include installation which would involve, 2 weeks for training, one week for customization, two weeks for data migration, 3 days for implementation and support

for 1 year. The MFI, however, will be responsible for paying the cost of travel and incidentals for one of Software solutions staff to perform the installation. Travel and incidentals will include airfare to and from Kenya, lodging in Bamako, per diem, and local transportation. Travel and incidentals are estimated at \$6000. Software support after the first year will be billed at 18% of the purchase price. There are no additional administrative costs. The outright purchase of the BR source code will cost \$500,000, with support after sale. Documentation and on-line help is included free of charge. The cost of new releases to Bankers Realm will have to be re-negotiated at an upgrade price, but Software Solution currently asks \$15,000 for headquarter upgrades and \$10,000 for branches.

The **CVECA Pays Dogon Nyèta Musow et** systems are donated but cost CFA 390,000 per day to install and maintain. Installation is expected to take at least a month since the system is very specific to the current SFD. 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. There is no documentation cost but no documentation is currently available. Maintenance cost will have to be paid to transfer old data into the system, 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.

Mercury:

CCC Corp will provide Mercury to Mali's on individual MFI licensing basis. The price to license each CMI is \$20,000, providing that at least 5 MFI subscribe to the service to make an investment in localization for Mali. Mercury is delivered in English. It will cost between \$20,000 to \$80,000 for translation and localization of the product. There is no additional cost for access to source code for translation and localization. A minimum support fee of two cents per transaction per year calculated against 75 transactions per member is charged. An institution with 10,000 customers would pay $10,000 \times .02 \times 75 = \text{US\$}15,000$ per year. Additional administrative costs are billed at US\$110.00 per hour or US\$850.00 per day. It would cost approximately \$7,000 per person for training. Documentation and on line help is included free of charge but is estimated at \$6,000 to translate. Data conversion is expected to cost at least \$15,000. The cost of future upgrades is included in the support fee. The cost of new releases will have to be re-negotiated. Translation and localization cost will not be required of MFIs after this service has been performed.

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.

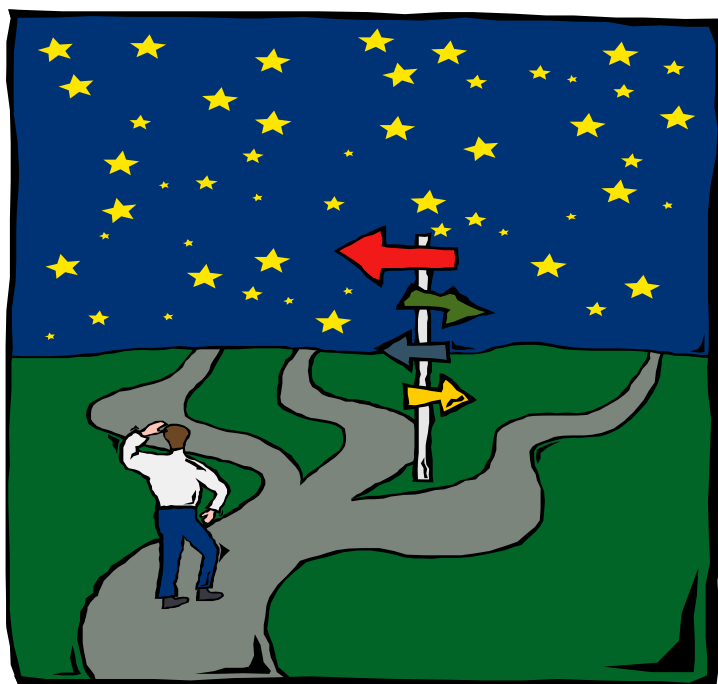
Microbanker's EXTE version, which permits modification of the 20% of the program, code costs 8,000 US\$. In addition, the user must pay site licenses of \$ 400 US\$ per site for the first ten sites, \$ 250 US\$ per site for 11 to 100 sites, and \$200 per site for more than 100 sites. The user may otherwise 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.

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 free. 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 \$US5,000 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.



Le tableau ci-dessous donne les coûts et prix des différents systèmes en milliers de francs CFA :

Les instructions pour l'acquisition



Amadeus :

- Nom du système : Amadeus
- Contact: Martial GOEH AKUE
- Adresse :
- Téléphone: 00 228 04 01 63

- Télécopie : 00 228 21 26 75
- Email : Martialg@Café.tg
- Langage du système : Clipper 5.0

Bank 2000 and Bankers Realm:

- Nom du systèmes Bank 2000 and Bankers Realm
- Contact: Sunit Doshi Managing Director
- Adresse : Software Strategies Limited
3rd Floor, Peponi Plaza Mwanzi Road off Peponi Road
P.O. Box 47745, Nairobi Kenya
- Téléphone: +254 2 351208/09/751666/901, 749152
- Fax : +254 2 749826
- Email : doshi@ssi-kenya.com
- Langage du système : Bank 2000 – Fox Pro
Bankers Realm - Visual Basic

CVECA et Nyèta Musow Pays dogon ::

- Nom du système : Nyèta Musow
- Contact: Jean Babin
- Adresse : 22, rue de la libération
77970 Pecy
France
- Téléphone: 01 64 60 60 79
- Télécopie : 01 64 60 61 81
- Email :
- Langage du système : Visual Basic

Mercury

- Nom du système : Mercury
- Contact: Hugh A. Butler Founder, Chair & CEO
- Adresse : Computer Consultants Corporation
36 South State Street
Beneficial Life Tower Suite 800
Salt Lake City, UT 84111-1401
USA
- Téléphone: 801 531-3600 1-800 RUN-CUCU (786 2828)
- Email : SMTP:hugh@ccc corp.com <http://www.cccorp.com/>
- Langage du système : Visual Basic

MicroBanker :

- Nom du système : MicroBanker
- Contact: Ralph Houtman
- Adresse :
- Téléphone:
- Télécopie :
- Email : Ralph.Houtman@microbanker.org
- ake.olofsson@fao.org
- Langage du système : Clipper

SiBanque :

- Nom du système : SiBanque
- Contact: Yann Gauthier
- Adresse : Centre international du crédit Mutuel (CICM)
88/92, Rue Cardinet
75017 Paris
- Téléphone: 01 44 01 11 90
- Télécopie : 01 44 01 12 75
- Langage du système : Visual Basic / SQL

ANNEX 1 : SYSTEM COMPARISON SUMMARY BY CATEGORY AND TOPIC

ANNEX 2 : RAPPORT D'ETUDE DE SYSTÈME PAR SUJET

ANNEX 3: DETAILED SYSTEM SURVEY REPORT

ANNEX 4: RÉSUMÉ DE BESOINS SFD PAR SUJET

The differences here are very minor, since we found that only that most of the functions were needed by the SFD(s). Please refer to Table 3 SFD Requirement. But note the difference on page 6 where we have determined that Multi- multiples and Multi- devises are not required by Non Mutuelle petit.