SINAPI ABA TRUST:[1] Management Information System Challenges in a Microfinance Institution

Kumasi, Ghana

Introduction

Kojo Asare pulled his car into the parking lot in front of the luxury Kumasi Gardens Hotel and turned off the engine. It was 8:15 am but already the sun was making its way up in the West African sky and the morning cool was giving way to the approaching mid-morning heat of the African interior. On this particular morning, however, it was not the temperature that made Kojo uncomfortable. Kojo was worried about the meeting just ahead of him that morning and its considerable implications for his organization, Sinapi Aba Trust (SAT).

Kojo climbed out of his car and entered the hotel lobby. He greeted the receptionist and immediately went upstairs to the main conference room. The hotel staff were busy setting up for the 9:00 am meeting and they silently went about their work. Oblivious to the bustling hotel workers, Kojo pulled a chair out onto the conference room balcony and, looking out over the panorama of Kumasi's rolling hillside, he sat contemplating his situation.

The Kumasi Gardens Hotel was the venue for the annual Board of Trustees meeting of Sinapi Aba Trust, the number one microfinance institution in Ghana. SAT's Board was evaluating the investments necessary to transform SAT from its current status as a Non-Governmental Organization (NGO) into a formal, regulated Savings and Loan organization (S&L). As SAT's Chief Management Information System (MIS) officer, today Kojo was expected to deliver a report on MIS efforts to-date in support of the transformation and make an assessment and recommendation regarding SAT's ability to make the transition in the desired 3-year timeframe. Given the current economic conditions in the country, Kojo doubted whether they could mobilize the money required to purchase the necessary equipment. Moreover, he was unsure they could find, train, and retain all necessary personnel to complete the changeover. These factors seriously jeopardized the planned transformation of the organization.

Suddenly the conference room door opened and in walked Mr. Kwabena Mensah, leading Ghanaian industrialist and Sinapi's Chairman of the Board. Mr. Mensah was an energetic man who was Ghana's leading producer of cocoa, the country's chief export crop. At 53, Mensah had been recently named as advisor to Ghana's newly elected President. It was his habit to be early for meetings. Seeing Kojo sitting out on the balcony, he walked briskly around the large conference table and, smiling broadly said: "Good morning, Kojo. Nice to see that you're here early." He then noticed the worried look on Kojo's face, and his voice took on a more serious tone. "I trust that you have a clearly laid out recommendation for us today. As you know, we're all counting on your experience to tell us the best way forward. There are some challenging times ahead for Sinapi."

The Microfinance Industry

Sinapi was a microfinance institution (MFI), one of a growing set of institutions around the world that function at the lower end of the economic spectrum offering financial services to clients in the informal sector of the economy not normally served by other financial institutions. MFIs are primarily rural banks, S&Ls, NGOs, Su-su (lending collectives), and Rotating Savings and Credit Associations (ROSCAs). The clients are generally the urban and rural poor whose economic activity falls below the threshold required to attract the interest of formal banking institutions. MFI clientele are predominantly female.

The informal nature of the microfinance industry made it difficult to ascertain the size and scope of the industry. In

1995, the World Bank initiated a study of global microfinance. It compiled a list of nearly 1000 institutions that offered micro-financial services, served at least 1000 clients, and were at least 13 years old. Over 200 institutions responded to a two-page survey questionnaire which revealed basic industry characteristics as of 1995:

- About $7 billion in loans to more than 13 million individuals and groups were outstanding.
- Over $19 billion were mobilized in 45 million active deposit accounts.
- Banks and savings banks were responsible for most of the outstanding loan balance and deposit balance.
- Only 28 credit unions responded to the survey. Credit unions represented 11 percent of the total number of loans in the sample, and 13 percent of the outstanding loan balance.
- Non-Governmental Organizations (NGOs) comprised more than half of the surveyed institutions (150 responses) but accounted for only 9 percent of the total number of outstanding loans and only 4 percent of the outstanding balance.
- NGOs relied on donor funding or concession funds for the majority of their lending while banks, savings banks, and credit unions utilized customer and member deposits and commercial loans for funding.
- NGOs offered the smallest size loans but more social services than banks, savings banks or credit unions. Credit unions and banks were leaders in serving large numbers of clients with small deposit accounts.[2]

Microfinance had an important role to play in economic development of Ghana and Sinapi Aba Trust was expected to be an important player in those efforts.

Ghana

Ghana is located on the West Coast of Africa with a population of 18.4 million and a land area of 238,540 sq km. It is slightly smaller than the U.S. state of Oregon (see Exhibit 1). Politically, Ghana is one of the more stable countries in West Africa.

In 1957, under the charismatic leadership of Dr. Kwame Nkrumah, Ghana became the first country in colonial Africa to gain its independence from Great Britain. Nkrumah followed an openly socialist political and economic program, aligning Ghana with the then Eastern-bloc countries in an effort to steer Ghana away from its colonial past. Nkrumah was the central force behind the drive for African Unity and was principally responsible for the formation of the Organization of African Unity.

Exhibit 1

Map of Ghana

In 1966, Nkrumah was overthrown in a military *coup d'etat* widely believed to have been engineered by Western powers unhappy with Nkrumah's leftist politics. The *coup d'etat* set off a downward economic spiral for the country. After a long series of military coups interspersed with civilian governments, Flt. Lt. Jerry John Rawlings seized power in 1979 and established the Provisional Revolutionary Council or PRC.

In 1981 the constitution was thrown out and political parties were banned. Rawlings' party, the National Democratic Congress (NDC), established itself in power and remained there for 20 years after winning several elections. However, in December 2000, the New Patriotic Party (NPP), whose power-base was the inland cultural capital of Kumasi, won a hard fought election victory and elected as president the opposition party leader, J.A. Kufour, ending the National Democratic Congress's twenty years in power. President Kufour took the oath of office on January 7, 2001, becoming the first elected president in Ghana's history to succeed another elected president.

The Ghanaian Economy

Well-endowed with natural resources, Ghana has twice the per capita output of the poorer countries in West Africa. Ghana is the world's second largest producer of cocoa after Côte d'Ivoire, its next door neighbor. The domestic economy revolves around subsistence agriculture, which accounts for 40% of GDP and employs 60% of the work force, mostly small landholders. In the 1990s gold replaced cocoa as Ghana's leading export.

During the same period, tourism overtook timber as the third highest generator of foreign exchange.

In 1995-97, Ghana made mixed progress through its three-year structural adjustment program arranged in cooperation with the IMF. While annual inflation was brought under control, Ghana's currency unit, the Cedi (symbol ¢), underwent massive devaluation. In 2000 the Cedi virtually collapsed, falling from ¢2,000 per dollar to over ¢7,000 per dollar in less than one year (see Exhibit 2b). In an effort to halt the currency collapse and stem the flow of capital leaving the country to service foreign debt, Ghana's new government agreed in 2001 to join the World Bank's Heavily Indebted Poor Countries (HIPC) initiative. Among its features, HIPC provided for a moratorium on new government loans, and funds previously committed to foreign debt service were to be channeled into an International Monetary Fund (IMF)-controlled program for poverty alleviation in the country. The idea was to redirect debt service money to help the poor.

The Akosombo Dam, located on Lake Volta, the world's largest man-made lake, supplied over 99% of Ghana's electricity. Ghana had two seasons, a dry season or "Harmattan" from November to March, and a rainy season from June to August. Ghana's near total dependence on hydropower caused problems in the dry season when low water levels in the lake led to chronic power shortages.

Sinapi Aba Trust

Sinapi Aba Trust (SAT) was established as a Christian faith-based microfinance institution in 1994 with headquarters in Kumasi, Ghana. SAT's mission was to serve the "poorest of the poor." The name *Sinapi Aba* is a word in Ashanti-Twi, Ghana's most widely spoken traditional language, that literally means "mustard seed." The concept was taken from the biblical passage that explained that, with time and proper care, the tiny mustard seed can become the mighty oak tree. Sinapi believed that by providing small loans to the lowest elements of society, the so-called "micro-entrepreneurs," the poor would be able to improve their living conditions and eventually lift themselves out of poverty. Typical clients are shown in Exhibit 3. SAT sees microfinance as part of their Christian mission. While not a formal requirement for being a client or staff member, the Christian ideal figured prominently in SAT's culture.

Since inception, Sinapi had built a reputation as Ghana's foremost microfinance institution. Attempting to strategically position itself and distinguish it from all other MFIs in Ghana, SAT began establishing branches throughout the country, eventually establishing 16 branches, giving it a presence in all regional capitals. The map in Exhibit 4 (p 9) shows locations of major branches.

Exhibit 3

Sinapi Clients at Training Session

Sinapi was affiliated with Opportunity International (OI), a Christian donor organization based in Chicago, Illinois in the United States. OI supported a global network of 71 microfinance institutions in over 30 countries, five of which were in Africa. OI served as the conduit for funds from the United States Agency for International Development (USAID), the U.S. Government's primary agency for foreign aid funds going to the developing world. USAID granted funds to OI which then administered them through its affiliated organizations such as SAT.

SAT was governed by a seven member Board of Trustees, drawn from local business and political leaders. OI held a seat on the board. The Executive Director who controlled the day-to-day affairs of the organization was also a member of the board. SAT was in the process of selecting a new Executive Director. Sinapi's previous Executive Director had recently been nominated to the post of Regional Director for the Africa Region of OI. In the interim, much of the day-to-day running of the organization was in the hands of the Chief Operations Officer. Exhibit 5 on p. 10 shows Sinapi's organization chart.

Methodology and Loan Products

Clients began the loan process by attending an orientation session designed to explain the loan process and SAT's credit policies. After several such meetings, clients were formed into Trust Banks, groups numbering from 15-35 clients. Clients applied for loans individually and loans were distributed to the entire group at the same time. In most cases, all new clients entered at the Trust Bank level. SAT loans were not collateralized. Although the loans were disbursed individually, Trust Bank members

were responsible for the loan as a whole and were responsible for repaying any defaulted loans of group members. After a successful borrowing record had been established, groups were allowed to advance to higher loan levels. Sinapi offered three loan products to its customers: Trust Banks, Solidarity Groups, and Individual Loans. Sinapi did not offer savings products. Exhibit 6 outlines Sinapi's product offerings.

Sinapi's Loan Approval and Distribution Process

SAT followed a centralized loan approval procedure. After client applications were received, loan supervisors were required to transport the applications physically to SAT's headquarters in Kumasi for approval. Once the application was approved and if funds were available, checks were written. The loan supervisor would then return to the local branch with the check which was then cashed at an affiliated commercial bank and funds were disbursed to clients. On some occasions, applications would be placed in a pouch and forwarded to headquarters on the national bus system. All checks coming from the headquarters for the branches were hand carried by loan supervisors. To facilitate this process, loan supervisors were given 4-wheel drive vehicles to transport the documents and checks back and forth between the branches. The process required from one to two weeks depending upon the supervisor's availability for travel. Exhibit 7 and Exhibit 8 show the loan approval process and associated cost elements.

MFI Performance

MFI performance is characterized by the ability to generate adequate returns on the loan portfolio while holding down costs. Some critical performance measures are as follows:

Exhibit 9 below shows critical aspects of Sinapi's performance over the past five years. First it gives typical microfinance measures of performance, then it presents the organization's income statement and balance sheet.

Exhibit 9

$$\text{Operational Sustainability} = \frac{\text{Operating Income}}{\text{Operational expenses + provision for loan losses}}$$

$$\text{Financial Sustainability} = \frac{\text{Operating Income}}{\text{Operational expenses + financing costs + provision for loan losses + cost of capital}}$$

Donor organizations made funds available in foreign currencies interest free or at concession rates, and they required the funds be repaid in a specified time frame. Donor funds were starting to dwindle and SAT was concerned this trend would continue (see Exhibit 10). Exploring alternatives in the face of the dwindling supply of donor funds, SAT underwent a strategic planning process to determine if they should transform themselves into a formal sector Savings and Loan institution so that funds to lend came from deposits rather than donations or loans. The results of the strategic planning study showed that in order to achieve full financial and operational sustainability, SAT would need approximately 100,000 clients, more than a five-fold increase over its current client base. To handle this growth, SAT would have to make major investments in its IT infrastructure.

Management Information System

From its inception until 2000, SAT relied on a manual process of receipt and ledger books to maintain its records. Generating a statement of financial position was extremely tedious and time consuming work. It often required up to several weeks to prepare a report on the institution's financial position and as such, maintaining control of loan portfolios was difficult. Granting organizations began demanding more timely reporting. In 1998, USAID began pressuring SAT to develop an MIS system. SAT's first attempt to institute a PC-based accounting system was a failure. SAT had contracted a local software company to design a custom-made system, but the development took nearly a year and in the end the system never worked. SAT scrapped it and USAID who had funded the effort became increasingly concerned about Sinapi's recordkeeping and reporting bottlenecks and began working with OI to solve the problem.

Using a grant from USAID, Opportunity International (OI) invested over US$400,000 to develop a software package serving the needs of the microfinance industry called *Micro-Merge*. *Micro-Merge* resulted from a contractor's effort to modify formal banking software used in commercial banks around the world for a microfinance organization. OI's idea was to have it customized for use by microfinance institutions and installed at Sinapi headquarters with the aim of allowing SAT to transform all of its manual records to a computerized format. To demonstrate their concern over the issue, USAID placed on hold a $1 million grant destined for SAT's pool of loans pending SAT's adoption of a functioning data system.

USAID and OI determined that SAT was to be the test case for installing *Micro-Merge* in the entire OI network. A successful deployment at SAT would mean that OI could roll out the system to its other institutions around the world. On the other hand, if Sinapi failed to make a successful conversion, the entire grant of US$1 million originally earmarked for SAT would be jeopardized. Sinapi

was under the gun to perform. As its Chief MIS Officer, the weight fell on Kojo to make sure the conversion to computerized operations went successfully and that the grant money did arrive.

Before Kojo could make a recommendation regarding the system's ability to handle five times the volume, he had to demonstrate it could handle the current client load.

MIS Training

USAID had also funded a consultant for 10 months to work with SAT in making the MIS transition. Among other things, the consultant worked with SAT to train the staff in basic computer skills. The *Micro-Merge* program was a Microsoft Windows-based application and he had to teach that and other Office software to staff members who were not proficient with computers. The consultant taught courses in Microsoft Windows, Word and Excel, from introductory to advanced levels. Each staff member was given a pre-training and post-training assessment to determine their level of improvement. Surveys were self-scored on a 1-5 scale, where 5 indicated the most competence in executing a particular computer function and 1 showed no competence. Survey results appear in Exhibit 11and Exhibit 12.

In addition to basic computer training, all managers and supervisors were trained in the new *Micro-Merge* software package. Because the program was very detailed, training consumed considerable time, which took the organization away from its fundamental job of disbursing and collecting loans. The transformation to an S&L would require the addition of new staff and full software training for all existing and new branch officers. This could significantly disrupt the day-to-day processing, causing a delay in loan collections and a subsequent increase in arrears, a problem that all MFIs sought to avoid.

Hardware Requirements

Working with the USAID MIS consultant, Kojo had developed an estimate of the funding required to provide SAT with the necessary hardware to handle a five-fold increase in its client load. Exhibit 13 shows the estimated cost of equipping SAT branches and headquarters with the necessary computer equipment over a three year period. While they had used very conservative numbers, Kojo was concerned that the expenditures were well beyond what the organization could fund. Additionally they assumed that eventually SAT would transition to handheld PC's for field work. This would bring down the cost of hardware but the technology was still unproven and Kojo was unsure the Board could be convinced that this was the way to go.

As a research project, they had been looking at the possibility of using the internet to transfer data on loan applications. Kojo felt that this might save the organization a lot of money, particularly in processing loan approvals. Together with the consultant, they developed a funding proposal to explore this option on a pilot basis, using two branches as test cases. The wireless internet proposal can be found in Exhibit 14.

Data Conversion for Computerized Portfolio Tracking

Before the *Micro-Merge* system could be installed, all customer data had to be transferred from the manual ledger books to a PC-based software platform. The MIS department worked night and day for four months to accomplish this task. See the photo in Exhibit 15. Over 17 gigabytes of data had to be manually entered by this five-person staff. After three months of high pressure work, fatigue set in. When the MIS department complained of overwork, two loan officers were assigned to assist them.

As the deadline for the start-up of the software approached, USAID dispatched yet another consultant to Sinapi to see how the conversion was going, flying him in from the Philippines to check SAT's progress. When the consultant went through the reports generated by the software, large discrepancies were found in the portfolio positions. The problem was traced back to work done by the two loan officers re-assigned to enter data. Despite thorough software training, they did not have sufficient computer skills to do the work correctly. The consultant gave Sinapi a six-week extension to correct the errors and prove the conversion was a success, otherwise he would have no choice but to report to USAID that the system conversion was a failure.

Sinapi went into overdrive, calling for "All Hands on Deck." The Executive Director cancelled all annual leave and every loan officer was called in to thoroughly review their entire loan portfolio and make sure the system accurately reported their arrears position and portfolio at risk. All loan disbursement activity stopped for two weeks. The MIS team, already haggard from the previous four months of mind-numbing data entry, worked around the clock.

The situation was complicated by the "Harmattan Season" in Ghana. Water levels in the Akosombo Dam were low and the Electricity Company of Ghana (ECG) was having difficulty supplying the country with reliable power. The electricity grid was totally unstable, going off unexpectedly four or five times a day for hours at a time, as the utility ECG struggled to import electrical power from neighboring countries to handle the shortfall from the dam. Each time the power went off, the MIS staff raced out to the back of the two-story building to start the gasoline-powered generator in an effort to keep the servers from crashing and corrupting the database. This had already happened twice and all the work that had been done since the last back-up had to be re-entered.

The deadline for completion was rapidly approaching. USAID was nervous, having gotten the impression from the consultant's preliminary report that Sinapi might not make the deadline. This was now a high stakes venture and there was a lot riding on SAT's successful conversion. With a recent change in Administration in Washington DC, USAID was under pressure to re-allocate the $1 million reserved for Sinapi if Sinapi could not deliver. Time had run out.

On Friday, three days before the Board Meeting, USAID in Washington, DC called Russ Bond, OI's MIS Operations Manager and point man for the *Micro-Merge* conversion, based in Bogotá, Colombia, and told him to travel immediately to Kumasi to assess the situation at SAT and make a recommendation. Short, stocky and hard-nosed, Russ was a no-nonsense manager who did not take failure lightly. Russ would not hesitate to pull the plug if he did not like what he found in Kumasi. Russ boarded the first plane out of Bogotá on Sunday morning bound for London en route to Accra. By 8:00 am Monday morning, he was at the Accra airport in Ghana. Before chartering a taxi for the 270 km drive to Kumasi, he stopped to make a call to Sinapi informing them of his imminent arrival.

Board of Trustees Meeting: Kumasi Gardens Hotel

Kojo still sat quietly on the balcony watching as the remaining Board members filed into the room, greeting each other cheerfully. Kwabena Mensah had gone out to make some business calls and the other Board members, all eminent members of the Ghanaian business and academic community, were busy getting coffee and catching up on the latest business news and political gossip. The recent election had brought to power a new President who came from Kumasi. It seemed that there were big changes in store for the region.

Watching them mingle, Kojo thought about what he had seen early that morning at the MIS Center on his way to the Board meeting. The MIS staff had been there all night, working feverishly to meet the deadline which was only a few days away. They all looked exhausted, especially the female staff who were under pressure from their husbands to stay home and tend to their families instead of working the long hours that the conversion required. He wondered, "Were they going to make the deadline? Did Sinapi have the human capacity required to make the transition to an S&L?"

He also thought back to why he had originally joined Sinapi five years ago. As a Christian-based organization, Sinapi had as its mission to serve the "Poorest of the Poor." He had always felt good about working for an organization that shared his values of helping the poor. He worried that should the organization change to an S&L, it may have to change its focus and begin working with clients who were more financially secure. This would mean effectively abandoning its core value of working on poverty alleviation in the poorest sectors of society. He wondered if he would feel comfortable working for the organization then. Recently he had been approached by a rival organization and invited to join them. But he knew that his departure from SAT would definitely harm the organization.

If SAT remained an NGO, it would certainly face hard economic times due to the loss of grants.

Both paths, becoming an S&L or remaining an NGO, looked equally perilous from Kojo's point of view and he was torn as to which to recommend to the Board. He did not want to appear incompetent and not give a clear recommendation, but he knew that a wrong recommendation could be disastrous for the organization and hurt him personally.

Suddenly Kojo's mobile phone began ringing, interrupting him from his thoughts and making the chatting Board members suddenly aware of his presence on the balcony. Kojo pressed the talk button, silencing the shrill ring that betrayed his presence out on the balcony.

> "Hello?"
>
> "Hello, Kojo. This is Russ Bond."
>
> "Russ, What a surprise! Are you calling from Bogotá?"
>
> "No, Kojo, I'm calling from Accra. I've been sent here by USAID to verify Sinapi's compliance with the MIS system requirement," Russ stated matter-of-factly. "I should be there around noon…" With that, the line went dead.
>
> "Hello?…Hello?!…" – only static.

Kojo did not know if Russ had hung up abruptly or if the line had been dropped, an everyday occurrence with Ghana's mobile phone system. It didn't really matter. This did not look good. Why was Bond here in Ghana?? The deadline was still a few days away. Kojo looked up to find the Board members, all coffee cups in hand, silently staring at him from across the room.

Analysis of Ghana's Inflation

INFLATION OVER 12-MONTHS (YEAR-TO-YEAR) (Pt-to-Pt) Inflation

	1990	1991	1992	1993	1994	1995	1996	1997	1998*	1999*	2000*
JAN	33.0	30.4	8.7	21.5	22.8	35.6	69.2	31.5	19.8	15.3	14.3
FEB	36.0	26.6	7.7	23.0	22.0	38.4	68.0	30.6	19.6	15.0	14.9
MAR	36.1	24.9	7.3	23.3	21.5	43.6	64.8	29.2	20.3	13.7	15.6
APR	36.0	22.3	8.2	23.0	21.1	49.9	60.3	29.1	23.1	10.2	17.5
MAY	35.6	19.8	8.9	23.9	21.0	56.1	54.2	29.6	22.9	9.4	18.7
JUN	36.4	17.3	8.4	26.0	20.9	61.9	48.4	29.0	21.8	10.3	19.8
JUL	39.0	15.3	10.2	25.2	22.3	67.2	42.6	29.2	18.7	12.7	22.1
AUG	40.2	14.6	11.7	25.2	23.7	69.9	39.2	28.2	18.6	12.0	26.6
SEP	41.4	13.2	11.2	26.9	26.1	69.8	36.5	27.7	17.4	11.8	32.3
OCT	39.3	14.0	11.7	26.5	29.4	69.1	34.3	27.4	17.1	12.6	37.4
NOV	37.2	12.9	12.6	26.6	31.7	70.2	33.2	24.2	16.2	13.2	39.5
DEC	35.9	10.3	13.3	27.7	34.2	70.8	32.7	20.8	15.7	13.8	40.5
Average	**37.2**	**18.5**	**10.0**	**24.9**	**24.7**	**58.5**	**48.6**	**28.0**	**19.3**	**12.5**	**24.9**

* New series

YEARLY INFLATION (12-MONTH AVERAGE)

	1990	1991	1992	1993	1994	1995	1996	1997	1998*	1999*	2000*
JAN	25.9	37.0	16.3	11.1	25.0	26.0	62.1	43.7	n/a	n/a	12.4
FEB	26.8	36.0	14.8	12.4	24.9	27.4	64.4	40.9	n/a	n/a	12.4
MAR	27.8	34.9	13.4	13.7	24.7	29.3	65.9	38.2	n/a	n/a	12.6
APR	28.8	33.5	12.3	15.0	24.5	31.9	66.4	36.0	n/a	n/a	13.2
MAY	29.9	32.0	11.4	16.3	24.2	34.9	65.8	34.1	n/a	n/a	14.0
JUN	31.1	30.2	10.7	17.8	23.8	38.5	64.2	32.7	n/a	n/a	14.9
JUL	32.4	28.1	10.3	19.1	23.5	42.4	61.7	31.7	n/a	n/a	15.7
AUG	34.0	25.9	10.0	20.2	23.4	46.4	58.7	30.8	n/a	n/a	17.0
SEP	35.2	23.7	9.9	21.5	23.4	50.1	55.7	30.2	n/a	13.1	18.7
OCT	36.2	21.8	9.8	22.7	23.7	53.4	52.6	29.6	n/a	12.8	20.8
NOV	36.9	20.0	9.8	23.8	24.2	56.5	49.6	28.9	n/a	12.6	22.9
DEC	37.3	18.0	10.0	25.0	24.9	59.5	46.6	27.9	n/a	12.4	25.2
Average	**31.9**	**28.4**	**11.6**	**18.2**	**24.2**	**41.4**	**59.5**	**33.7**	**n/a**	**12.7**	**16.7**

Exhibit 2b

Ghana Gross Domestic Product (billion cedis)

Year	Current Prices	Constant Prices 1993 (Real)	Growth Rates
1993	3,872.50	3,872.50	
1994	5,205.20	3,999.10	3.27
1995	7,752.60	4,160.00	4.02
1996	11,339.20	4,351.20	4.60
1997	14,113.40	4,533.90	4.20
1998	17,295.80	4,746.70	4.69
1999	20,579.08	4,956.90	4.44
2000	27,152.70	5,142.10	3.70

Exhibit 2c

Ghanaian Currency (Cedi) Devaluation

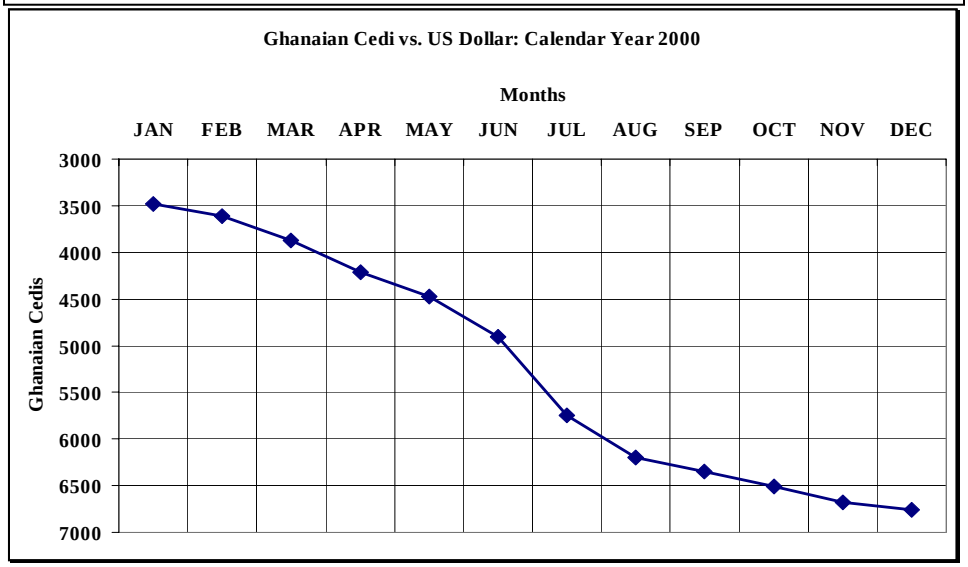

Exhibit 4

Major SAT Branch Locations

Exhibit 5

SAT Organization Chart

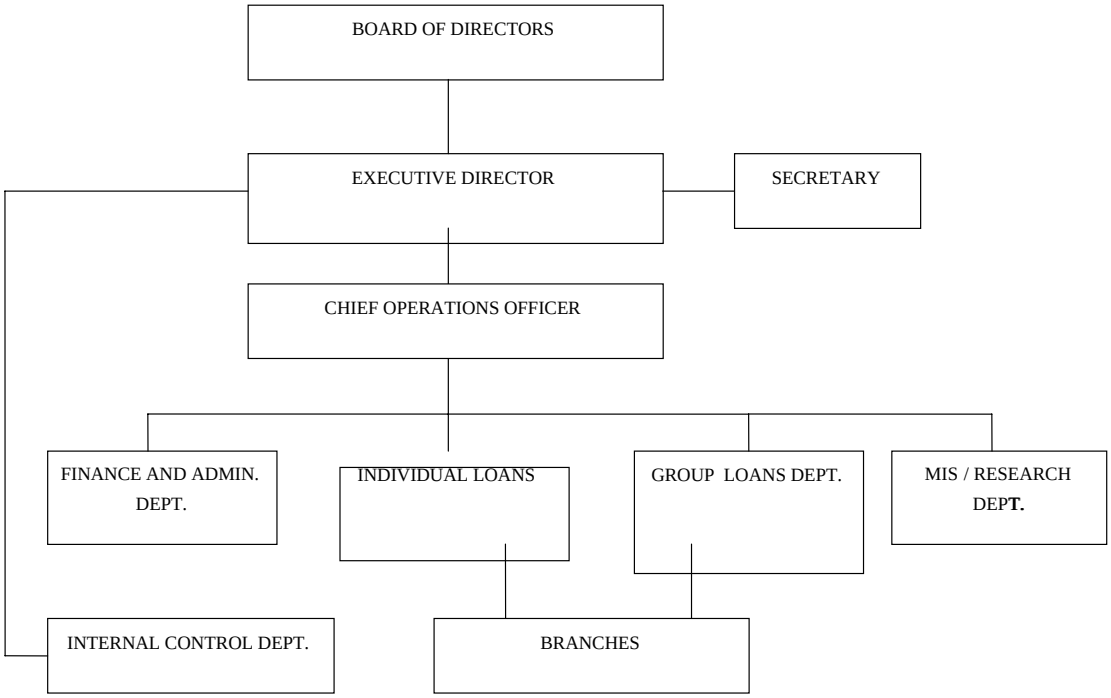

Exhibit 6

SAT's Credit Product Offerings

Product	Cycle	Loan Size (cedis)	Loan Duration (Months)
Group Loans			
Trust Bank (Urban)	1	200,000 – 1 million	4
	2	600,000 – 1.5 million	4-5
	3	600,000 – 2 million	4-6
Trust Bank (Rural)	1	200,000 – 600,000	4
	2	600,000 – 1 million	4-5
	3	600,000 – 1.5 million	4-6
Solidarity Group	4	600,000 – 3 million	6
(Group Size: 8-15)			
Individual Loans			
Tier I	1	200,000 – 1 million	3-6
	2	600,000 – 1.5 million	8 Max
	3	600,000 – 2 million	10 Max.
Tier II	1	3 million – 20 million	1 Year Max.

Exhibit 7

Loan Approval Process

Activity	**Person Responsible**	**Time Duration**
Client Application	Client	1-2 days
Recommendation	Loan Officer	1-2 days
Application Approval	Loan Supervisor	Unspecified (depends on supervisor's travel availability)
Certification	Sector Manager	1-2 days
Payment Voucher and Check Writing	Accounts Department	Unspecified (depends on supervisor's travel availability)
Disbursement	Loan Officers	1 day

Exhibit 8

Cost Elements of Loan Approval Process

Fuel Costs	US$1.30/gal
Number of branches	16
Average number of loan distributions per week per branch	2
Maintenance cost per mile for vehicles	US$ 0.15
Cost of document transport on local busses	20,000 cedis per trip

Exhibit 9a

SAT Performance

	1996	1997	1998	1999	2000
Number of loans	1,741	4,155	7,965	12,088	22,617
Value of Loans (cedi)	701,489,000	2,011,930,500	3,773,983,250	6,079,905,350	12,111,111,333
Operational Sustainability	95%	108%	122%	112%	143.8%
Financial Sustainability	48%	75%	88%	75%	74.0%
Arrears rate	6.30%	5.20%	3.80%	4.0%	5.50%
Portfolio at Risk	6.90%	8.00%	4.40%	5.9%	7.60%
Cost per Loan Made	11%	23%	10%	17%	19%
New Jobs Created	363	1,118	810	2,791	2,854
Jobs Sustained	2,482	4,203	10,503	8,319	14,216
Number of Clients	N/A	N/A	N/A	**10,690**	**17,580**
Number of Trust Banks	N/A	N/A	N/A	268	568
Rural/Urban ratio	N/A	N/A	N/A	61%	62%
Percentage of women	N/A	N/A	N/A	89%	88.50%

N/A = Not Available

Exhibit 9b

SAT Income And Expenditure Account

For the Year Ended December 31

	2000 ¢' 000	1999 ¢' 000	1998 ¢' 000	1997 ¢' 000
REVENUES				
GRANTS RECEIVED	3,616,777	1,624,659	1,281,458	824,005
INVESTMENT INCOME	7,912		-	23,013
OPERATIONAL INCOME	2,292,140	1,173,100	782,119	482,077
OTHER INCOME	786,863	172,148		
	6,703,692	2,969,907	2,063,577	1,329,095
EXPENDITURES				
OPERATIONAL EXPENSES	1,891,090	1,168,674	761,097	454,779
DEPRECIATION	146,025	117,517	68,254	34,596
AUDITORS' REMUNERATION	51,424	16,500	11,990	
	2,088,539	1,302,691	841,341	489,375
EXCESS OF REVENUE OVER EXPENDITURE	4,615,153	1,667,216	1,222,236	839,720
EQUITY IN NET EARNINGS/(LOSS) OF ASSOCIATED COMPANY		3,040		
.	4,615,153	1,670,256	1,222,236	839,720
COMPANY TAX	20,000			
NET INCOME FOR THE YEAR	4,595,153	1,670,256	1,222,236	839,720

ACCUMULATED FUND

YEAR ENDED 31ST DECEMBER

	2000	1999		
BALANCE BROUGHT FORWARD	4,400,272	2,733,689	1,511,453	671,733
CORRECTION IN ACCOUNTING POLICY WITH				
ACCOUNTING FOR INVESTMENT		(3,673)		
OPENING BALANCE AS RESTATED	4,400,272	2,730,016	1,511,453	671,733
NET INCOME TRANSFERRED INCOME STATEMENT				
	4,595,153	1,670,256	1,222,236	839,720
	8,995,425	4,400,272	2,733,689	1,511,453
BALANCE CARRIED FORWARD	4,400,272	2,730,016	1,511,453	671,733

Exhibit 9c

SAT Balance Sheet

As of December 31, 2000

	2000	1999	1998	1997
	¢' 000	¢' 000	¢' 000	¢' 000
FIXED ASSETS				
TANGIBLE FIXED ASSETS	**1,179,171**	**731,504**	**611,274**	**392,034**
INVESTMENT	**123,367**	**67,367**	**68,000**	**68,000**
	1,302,538	**798,871**	**679,274**	**460,034**
CURRENT ASSETS				
CASH AND BANK BALANCE	**2,779,815**	**1,219,260**	**477,092**	**205,338**
DEBTORS AND PREPAYMENTS	**5,462,775**	**2,776,219**	**1,858,263**	**1,136,858**
	8,242,591	**3,995,479**	**2,335,355**	**1,342,196**
TOTAL ASSETS	**9,545,128**	**4,794,350**	**3,014,629**	**1,802,230**
ACCUMULATED FUND AND LIABILITIES				
ACCUMULATED FUND	**8,995,425**	**4,400,272**	**2,733,689**	**1,511,453**
CURRENT LIABILITES				
DEFERRED INCOME	**50,832**	**50,832**		
CREDITORS AND ACCRUED EXPENSES	**167,713**	**68,774**	**66,981**	**66,763**
BANK OVERDRAFT	**200**		**1,146**	
TOTAL CURRENT LIABILITIES	**218,745**	**119,606**	**68,127**	**66,763**
LONG-TERM LIABILITIES				
DEFERRED INCOME	**330,144**	**274,472**	**201,612**	**212,813**
TOTAL LONG-TERM LIABILITIES	**330,144**	**274,472**	**201,612**	**212,813**
TOTAL ACCUMULATED FUND AND LIABILITIES	**9,544,313**	**4,794,350**	**3,003,428**	**1,791,029**

Exhibit 10
Sinapi Donor Funds Received

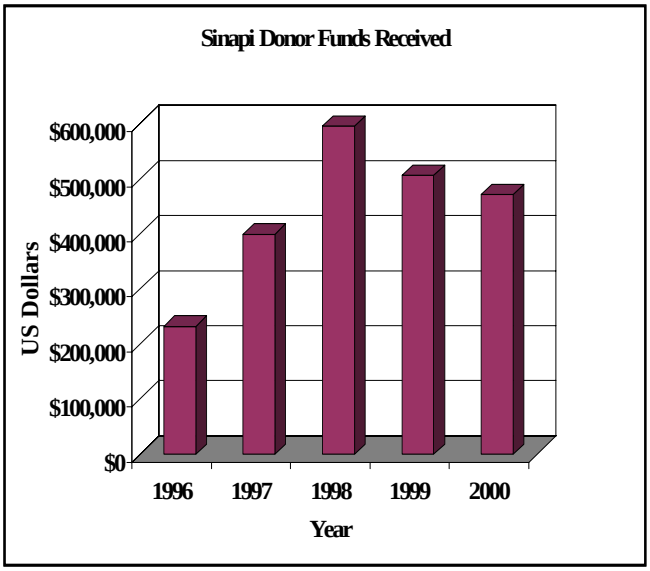

Exhibit 11
SAT Staff Computer Training Requirements

Overall Sinapi Staff Computer Training Analysis	
Pre-Training Average Score	3.7
Post-Training Average Score	4.3
Percent Increase	16.5
Number of Staff Trained	21
No. of Training Hours Conducted	15
Staff-hours Spent in Training*	315
Staff-hours per Percentage Point Score Increase	19.05

*The result of multiplying the number of staff trained times the number of hours of class.

Exhibit 12

Self-Scored Training Results

		Indiv. Loans			Acounts				Admin.		Trust Banks								MIS			
		joseph Awini	Sefa-Boakye	Olivia	Enoch	Edward	Gloria	Anthony Appiah	Christy	Gifty	Peter	Affum	John Buah	Abeena	Maud	Evelyn	Lydia	Comfort	Stella	Samuel	Serian	Thomas Mensah
MICROSOFT WINDOWS PROGRAM																						
Start a program	88	5	4	4	4	5	5	5	5	5	2	4	5	2	2	5	4	2	5	5	5	5
Open an existing document	87	5	4	4	5	5	5	5	5	5	2	4	5	2	2	5	3	1	5	5	5	5
Switch between programs already running	73	3	3	2	4	4	5	5	5	3	2	3	2	2	2	4	3	1	5	5	5	5
Find the Control Panel	67	2	2	2	4	4	5	5	5	3	2	1	2	2	2	4	1	1	5	5	5	5
Find files using "Find" Function	50	1	1	1	2	5	4	4	3	2	2	1	2	2	2	2	1	1	3	5	1	5
Set-up the desktop	64	4	4	1	5	5	5	5	5	1	2	1	2	2	2	1	1	1	4	5	3	5
Create a shortcut	63	4	3	2	3	4	4	5	5	2	2	1	2	2	2	1	2	1	4	5	4	5
Monitor a print job in progress	74	4	3	2	5	5	5	5	5	2	2	1	2	2	4	5	2	1	4	5	5	5
Add new Hardware and software	45	3	2	2	2	1	4	3	1	1	2	1	2	3	2	1	1	1	3	4	2	4
Starting MSWord	99	5	5	5	5	5	5	5	5	5	5	4	5	5	5	5	3	2	5	5	5	5
Open an existing Document , creating a new or	92	4	5	4	4	5	5	5	5	5	5	2	5	5	5	5	1	2	5	5	5	5
Saving and Close a document	94	4	5	4	4	5	5	5	5	5	5	2	5	5	5	5	3	2	5	5	5	5
Editing: copying/cutting and pasting text	83	3	4	2	4	5	5	5	5	5	2	1	5	4	5	4	2	2	5	5	5	5
Formatting text (Bold, underline, aligning text)	85	1	4	2	5	5	5	5	5	5	4	1	5	4	5	5	3	1	5	5	5	5
Changing fonts/font style & font size	89	4	4	2	5	5	5	5	5	5	5	1	5	4	5	5	3	1	5	5	5	5
Inserting numbering and bullets	77	1	4	2	3	4	5	5	5	5	4	1	5	3	5	5	2	1	5	5	2	5
Changing bullets and numbering styles	76	1	3	2	3	4	5	5	5	3	4	1	5	3	4	5	2	1	5	5	5	5
Checking a document for spelling errors	82	4	4	2	4	4	5	5	5	5	4	1	4	5	5	5	2	1	5	5	2	5
Creating and Editing Tables and Columns	73	3	4	2	3	5	5	5	3	1	2	1	4	4	4	5	1	1	5	5	5	5
Inserting headers and footers	76	3	3	2	4	5	5	5	5	1	2	1	5	4	5	4	2	1	5	5	4	5
Setting up the page e.g. margins and paper size	75	2	4	2	3	4	5	5	5	2	2	1	5	4	5	4	1	1	5	5	5	5
Previewing and Printing a document	82	2	2	2	4	5	5	5	5	5	4	1	5	4	5	5	2	1	5	5	5	5
Using mail merge	46	1	2	2	2	4	1	3	2	2	4	1	2	2	2	1	1	1	3	5	1	4
Inserting and editing pictures/objects	57	1	2	1	2	5	4	5	5	2	2	1	3	2	2	1	1	1	3	5	4	5
Opening a spreadsheet	90	4	4	2	4	5	5	5	5	5	5	4	5	5	5	3	3	1	5	5	5	5
Entering data in a cell	89	4	4	4	4	5	5	5	5	5	2	3	4	5	5	5	3	1	5	5	5	5
Moving around the worksheet using the mouse	90	4	4	4	5	5	5	5	5	5	4	1	5	5	5	5	3	1	5	5	4	5
Navigating the worksheet using the keyboard	73	2	4	4	4	5	4	5	1	1	4	1	3	3	4	4	3	1	5	5	5	5
Formatting data (text,numbers,currency, etc)	67	1	3	4	3	5	4	5	3	1	3	1	4	3	4	1	2	1	5	5	4	5
Formatting a worksheet	62	2	3	2	3	5	4	5	3	1	3	1	4	2	2	2	1	1	4	5	4	5
Entering Dates and Times	61	2	3	2	3	5	3	5	3	2	3	1	2	2	2	1	2	1	4	5	5	5
Create Formulas	58	1	4	2	3	4	4	3	3	2	2	1	4	3	3	2	1	1	4	5	2	4
Previewing Worksheets	83	4	3	2	3	5	5	5	5	3	3	1	5	5	5	5	3	1	5	5	5	5
Setting Print Parameters	66	1	4	2	3	5	3	5	5	2	2	1	4	4	4	1	1	1	4	5	4	5
Creating Charts	59	1	2	2	2	4	4	5	3	2	2	1	4	3	3	1	1	1	5	5	4	4
Sorting Data	61	1	3	2	3	5	5	4	3	2	2	1	4	2	3	1	1	1	3	5	5	5
	73.8	2.69	3.39	2.44	3.58	4.61	4.53	4.78	4.25	3.08	2.97	1.5	3.89	3.31	3.67	3.42	1.97	1.14	4.53	4.97	4.17	4.89

Exhibit 13

Projected MIS Expenditures for Savings and Loan Transformation

	Year 1	Year 2	Year 3	TOTAL
Headquarters	$155,970	$24,675	$30,324	$210,969
Branches	$18,559	$117,491	$179,927	$315,977
TOTAL	**$174,529**	**$142,166**	**$210,251**	**$526,946**

Exhibit 15

MIS Staff Performing Massive Data Entry

Exhibit 14

Wireless Internet Proposal Cost Projections

Phase I

Item		Unit Cost	Qty. per Branch	Kumasi	Cost
Hardware and Equipment					
	Router	$ 3,840.00	1	$ 3,840.00	$ 3,840.00
	WirelessTower	$ 800.00	1	$ 800.00	$ 800.00
	Antennae	$ 600.00	1	$ 600.00	$ 600.00
				Subtotal	**$ 5,240.00**
Software					
	Proprietary Software	$ 500.00	1	$ 500.00	$ 500.00
				Subtotal	**$ 500.00**
Labor					
	Engineering Cost	$ 1,137.50	1	$ 1,137.50	$ 1,137.50
	Wireless Equip. Installation	$ 50.00	1	$ 50.00	$ 50.00
	Tower Installation	$ 400.00	1	$ 400.00	$ 400.00
	Management Cost	$ 60.00	50	$ 3,000.00	$ 3,000.00
	Personnell Trainin	$ 100.00	2	$ 200.00	$ 200.00
				Subtotal	**$ 4,787.50**
Administrative Costs					
	Internet Access Co	$ 400.00	12	$ 4,800.00	$ 4,800.00
	Travel (air)	$ 1,500.00	1	$ 1,500.00	$ 1,500.00
	Ground travel	$ 150.00	1	$ 150.00	$ 150.00
	Lodging				$ 300.00
	Cost per night	$ 30.00			
	Number of nights	10			
	Number of persons	1			
				Subtotal	**$ 6,750.00**
			PHASE I SUBTOTAL		**$ 17,277.50**
	VAT 12.5% Value Added Tax				$ 2,159.69
	Contingency 10%				$ 1,727.75
			PHASE I TOTAL		**$ 21,164.94**

Phase II

	Item	Unit Cost	Qty / Branch	Kumasi	Accra	Total
Hardware Cost	High speed Router	$ 3,840.00	1.00	$ 3,840.00	$ 3,840.00	$ 7,680.00
	Tower	$ 500.00	1.00	$ 500.00	$ 500.00	$ 1,000.00
	Wiring	$ 50.00	1.00	$ 50.00	$ 50.00	$ 100.00
					Hardware Subtotal	**$ 8,780.00**
Software	Hi-speed access software	$ 1,000.00	0.20	$ 200.00	$ 200.00	$ 400.00
	Website Development	$ 3,000.00	1.00	$ 3,000.00		$ 3,000.00
	Security Software	$ 1,000.00	1.00	$ 1,000.00		$ 1,000.00
					Software Subtotal	**$ 4,400.00**
High speed Internet access charges		$ 350.00	12.00	$ 4,200.00	$ 4,200.00	**$ 8,400.00**
Labor Costs	Engineering Cost	$ 1,000.00	1.00	$ 1,000.00	$ 1,000.00	$ 2,000.00
	Installation Costs	$ 500.00	1.00	$ 500.00	$ 500.00	$ 1,000.00
					Labor Costs Subtotal	**$ 3,000.00**
Personnel Training	Two per static	$ 200.00	2.00	$ 400.00	$ 400.00	$ 800.00
Management and Consulting		$ 60.00	80	$ 4,800.00	$ 4,800.00	$ 9,600.00
Administrative Costs						
	Travel (air)	$ 1,500.00	2.00	$ 3,000.00		**$ 3,000.00**
	Ground travel	$ 100.00	1.00	$ 100.00	$ 100.00	$ 200.00
	Lodging	$ 25.00	20.00	$ 600.00	$ 500.00	**$ 1,100.00**
	(2 persons for 10 days/site)					**$ 4,300.00**
					Subtotal	**$ 39,280.00**
VAT	12.50%					**$ 4,910.00**
Contingency Costs	10%					**$ 3,928.00**
Total Costs					**Total**	**$ 48,118.00**

ENDNOTES

[1] This case was written by Lumas Kendrick, Jr., of the University of Maryland under the supervision of Professor Richard Linowes of the Kogod School of Business at American University in Washington, D.C. It was produced in conjunction with the Emerging Markets Development Advisors Program (EMDAP) under the sponsorship of the US Agency for International Development (USAID) and managed by the Institute of International Education (IIE). The case is meant to serve as a basis for class discussion.

[2] Joanna Ledgerwood, Mieko Nishimizu and Ian Johnson, The Microfinance Handbook: An Institutional and Financial Perspective, Washington, DC: World Bank, 2001.