

**PROJECT VITA/PEP
INTEREST RATE STUDY**

Prepared for:

**VOLUNTEERS IN TECHNICAL ASSISTANCE, INC.
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LIST OF ACRONYMS AND ABEREVIATIONS

ADB	African Development Bank
ANW	Average net worth
AWC	Average working capital
BDF	Banque de France
BDL	Brasseries de Logone
BDT	Banque de Développement du Tchad
BEAC	Banque des Etats de l'Afrique Centrale
BGT	Boissons et Glacières du Tchad
BMBT	Banque Meridien BIAO Tchad
BTCD	Banque Tchadienne de Crédit et de Dépôts
BROT	Brot Für Die Welt
CARE	CARE
CNC	Conseil National du Cré it
COBAC	Commission Bancaire de l'Afrique Centrale
CT	Cotontchad/Société Cotonnière du Tchad
DEP	Depreciation
DS	Debt service
FB	Financial Bank du Tchad
GORC	Government of the Republic of Chad
IUS	Informal Urban Sector
MCT	Manufacture de Cigarettes du Tchad
NCF	Net cash flow
NM	Net margin
ONDR	Office National du Développement Rural
OPIT	Office de Promotion Industrielle du Tchad
OXFAM	OXFAM
PADS	Programme d' Action et de Développement Social (Banque Mondiale)
PDC	Programme Décentralisé d' Intervention
PMDR	Programme Multi-Sectoriel de Développement Rural
PNUD	United Nations development Programme
PVO	Private Voluntary Organization
RAD	Recherche, Action, Développement
SIMAT	Société Industrielle de Matériel Agricole
SONASUT	Société Nationale Sucrière du Tchad
TCA	Taxe sur le Chiffre d' Affaires
TDC	Taxe sur la Distribution du Crédit
USG	United States Government
USAID	United States Agency for International Development
VITA/PEP	Volunteers in Technical Asssitance/Projet d' Entreprises Privées
WB	World Bank

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EXECUTIVE SUMMARY

The terms of reference for the interest rate study were approved by the USAID mission in N' Djaména and detailed several major points to be covered in the study, namely:

- inventory of financial institutions in Chad and the definition of their approach to lending, including the rate of interest they charge to their customers;
- sources of financing in the area of agricultural development;
- overview of credit in the informal sector;
- trend of demand for VITA/PEP loans and the ability of its borrowers to service their obligations at varying rates of interest;
- sustainability for VITA/PEP as a self sufficient financial institution.

MAJOR FINANCIAL INSTITUTIONS

Financial Bank Tchad (FB) is essentially a deposit institution. The Bank invests the short term funds it receives from its clients in Chad on European money markets. The rates of interest on deposits are negotiable.

The other banks, namely Banque Tchadienne de Crédit et de Dépôts (BTCDD), Banque de Développement du Tchad (BDT), and Banque Méridien BIAO au Tchad (BMBT), make loans to well-established borrowers who can satisfy their stringent requirements for providing adequate collateral and submitting acceptable financing studies. The Government of the Republic of Chad (GORC) is a key shareholder in these banks that extend mostly short and some medium term credit. Société Cotonnière du Tchad or COTONTCHAD (CT, the GORC agency responsible for producing and marketing cotton products) accounts for 45 percent of BTCDD and BMBT assets. Other clients include a small number of well established borrowers. In spite of their cautious approach to lending, these banks experience substantial unpaid loans of up to 25 percent of their outstanding loans. These banks rarely extend credit to small and medium enterprises and neglect micro enterprises. These borrowers are deemed unacceptable because of their high handling costs and excessive risks.

The rate of interest they charge to their clients is determined by the rediscount rate set by Banque des Etats de l'Afrique Centrale (BEAC) which is the central banking institution for Chad and five other member states. At present, the rediscount rate is 11.50 percent and BEAC allows a maximum spread of 5.50 percentage points to reflect increased credit risks. Banks generally add an overdraft fee of 3 percent and levy the TCA and TDC taxes owed GORC. The net effect is a rate of interest ranging from 18.23 percent for CT which is a preferred borrower and is exempt from the TDC tax as opposed to 25.53 percent for other clients.

These rates on loans compare with rates of 7.75 percent on savings accounts and 7.75 to 9 percent on time deposits.

SOURCES OF FINANCING IN AGRICULTURAL DEVELOPMENT

The major sources of short and medium term credit to agricultural producers and village associations are as follows:

- CT jointly with Office National de Développement Rural (ONDR) grants credit in kind covering improved agricultural inputs to some 200,000 selected contract growers. Loans cover a period of up to 18 months and the annual rate of interest is 14.66 percent;
- ONDR extends medium term credit to agricultural producers for the acquisition of plows and animal traction equipment. Rates range from 4.21 to 7.39 percent per annum;
- Recherche, Action, Développement (RAD) which is part of the Project Multi-Sectoriel de Développement Rural (PMDR) funded by Caisse Francaise de Développement (CFD) just started a program for financing agricultural inputs and equipment at the village level. For loans with a maturity of less than one year, no interest is charged. For loans to be repaid over a period of one year or more, a flat fee of 6 percent is to be paid over the life of the loan; and,
- CARE used to make short term loans of up to four months to 26 groups of onion growers in the Cheddra area. In 1992, loans amounted to 1,450,000 FCFA. Prior to the termination of this USAID funded program in April 1993, the rate of interest was 10 percent per annum.

SOURCES OF CREDIT IN THE INFORMAL SECTOR

- VITA/PEP is becoming a major factor in the financing of small and micro enterprises in Chad. Since the inception of the project in 1984, \$4.7 million have been disbursed and VITA/PEP is the only large scale lender to the informal sector in N'Djamena and Moundou. The rate of interest is 13 percent on all loans plus a 4 percent flat fee;
- Oxfam has a small scale credit program for women in urban areas. Over the past six years, Oxfam lent 3,500,000 FCFA or \$14,000 to 26 groups of women. The average loan size is 25,000 FCFA for a duration of six months and no interest rate is charged; and,

credit is widespread in the informal sector, which accounts for the major portion of the actively employed population. A survey was conducted among producers, intermediaries and wholesalers of millet and onions, money lenders, retail merchants at the market level and other participants. The cost of credit in the informal sector is very high and typically ranged from 184 to 3000 percent. Additionally, a survey was made among tontines (a form of rotating savings scheme), pari-ventes and azoumas which are social events aimed at raising funds for mutual help, savings and other purposes. Given the current depressed economic conditions prevailing in Chad, these various schemes are quite popular and are instrumental in mobilizing savings in the informal sector.

DEMAND FOR VITA/PEP LOANS

The demand for VITA/PEP loans is quite strong. Applications for loans totaled 326 in calendar year 1991, 1340 in 1992 and 2300 in the first three quarters of 1993. Applications received by the project during the third quarter of 1993 were 1190 compared to 318 for the same period in 1992. This acceleration of the demand for loans has taken place with the assistance of a limited promotion program. This reflects three key facts :

- the project has been able to serve an increasing number of repeat borrowers;
- the project is attracting an increasing number of micro enterprises; and,
- the beneficial impact of the opening of a second office in Moundou in the third quarter of 1991.

Not only is the demand for VITA/PEP loans strong but the project has been demonstrating its ability to process a higher volume of disbursements over the past thirty months. The ratio of loan disbursements to applications received has an upward trend: 0.13 in 1991, 0.47 in 1992, and 0.62 during the first three quarters of 1993.

Furthermore, there is ample room for potential growth in the demand for VITA/PEP loans. On the basis of 1992 disbursements of 577 loans, the project's estimated N'Djaména market share for financial services to small and micro enterprises was only 4 percent .

Consequently, the demand for loans in the informal sector clearly exceeds the supply. Furthermore, VITA is the only structured supplier of financial services to the informal sector. All indications shows VITA/PEP is operating in a seller's market.

PROFITABILITY AND DEBT SERVICING CAPACITY OF VITA/PEP BORROWERS

Profitability is generally measured by the ratio of net margin over net worth. To measure debt servicing capability, one must differentiate between loans with a maturity of 6 months or less (generally micro loans) and those with a maturity of one year or longer (usually loans to small and medium size enterprises). For the former, debt serving capability is measured by the ratio of working capital over principal and interest. For the latter, the ratio is net cash flow (net margin plus depreciation minus living expenses) over principal and interest. A survey of the financial data of VITA/PEP borrowers was conducted. It included 50 micro borrowers and 16 small and medium size enterprises. The ratios of profitability and debt servicing capacity were computed at various interest rates ranging from 13 to 40 percent.

The results of the survey are summarized below:

	<u>Micro Loans</u>	<u>Small/Medium Enterprises</u>
Profitability		
13%	0.80	1.10
40%	0.80	1.08
Debt service capacity		
13%	4.12	2.38
40%	3.66	1.85

Source: VITA/PEP, N'Djamena

These figures underscore a comfortable margin of safety for potential increases in the interest rate charged by VITA/PEP. These figures also suggest that as far as micro and small enterprises are concerned, the key issue is to give better access to credit facilities rather than a lower rate of interest. This approach is borne out by several examples in other countries. Probably, the most successful bank serving the needs of the very small and low income farmers is the Grameen Bank (GB) in Bangladesh. GB is profitable and charges an interest rate of 25 percent. The Community and Enterprise Development project in Senegal otherwise known as the Kaolak project charged a rate of interest of 24 percent in 1987. These higher rates make it possible to pay for time consuming services associated with loans to small scale enterprises. At present, VITA/PEP provides such services without compensation.

SUSTAINABILITY OF VITA/PEP LENDING OPERATIONS

For VITA/PEP to become a viable financial institution, it must be able to meet its operating expenses and equipment costs, write off unrecoverable loans and have enough liquid resources to achieve the projected cumulative disbursements of \$4.6 million in the third quarter of 1993 to \$16.8 million by June 1998. VITA's ability to meet this challenge will depend on being able to generate increasing revenue through higher interest rates and reducing expenses.

If the rate is maintained at its current level of 13 percent VITA/PEP will never become operationally self sufficient. If this situation persists, the project will run the risk of being terminated by international donors who will certainly have doubts as to the validity of any further assistance to the project. If rates were increased to 24 percent for SME and micro, it appears that fee and interest revenues would cover operating costs but not loan losses and depreciation, by 1997. When interest rates are maintained at 24 percent for SME loans and increased to 36 percent for micro and loan fees are increased to six percent of principal, projections indicate that variable and fixed costs and loan losses, but not depreciation, would be covered by interest and fee income by 1997. The operating expense assumptions are based on the estimate that 80 percent of VITA/PEP local operating expenses relate to providing lending services and 15 percent relate to technical assistance. Therefore, lending expenses are placed at 85 percent of actual and projected local expenses based on the assumption that 15 percent of operating expenses could be saved if all technical assistance activities were discontinued.

VITA/PEP could conceivably start the process of becoming a Chadian financial institution during the last half of the current decade.

provided additional means could be devised to achieve one or more of the following:

- Reduce operating expenses
- Reduce loan losses
- Reduce equipment needs, that is, depreciation
- Increase Revenues through interest, loan fees or other income sources.

The exact operating (i.e., bank versus finance corporation) and legal structure of this institution would have to be carefully defined.

The issue of writing off unrecoverable loans is critical. Assuming interest at 24 percent for SME and 36 percent for micro, 6 percent incidence of unpaid loans for SME and 3 percent for micro, write-offs would exceed operating income through most of the period studied. Thus, special attention ought to be paid to this problem. Provisions for unrecoverable loans should be set aside following an audit of VITA/PEP accounts by qualified certified public accountants. One possible solution within the next two to three years or earlier would be the creation of a loan guaranty fund when VITA becomes a Chadian financial institution.

Another issue challenging VITA/PEP will be the mobilization of resources in order to support the growth of its lending activities. Besides principal reflows, VITA/PEP will have to continue its reliance on donors' contributions to the loan fund. By 1998, several options will be open to the new financial institution such as soliciting equity and/or long term concessional credit lines from the African Development Bank (BAD), the small business window of the International Finance Corporation (IFC) in Nairobi, Banque Européenne d'Investissement (BEI), the Africa Fund and others.

Furthermore, VITA/PEP as it exists today and as it will evolve into a viable financial institution ought to be able to operate in a favorable business and regulatory environment. Yet, some clouds are emerging on the horizon. BEAC appears to be rigid in its position that since it is donor funded, VITA/PEP should not be entitled to higher interest rates. BEAC also appears to be intent on controlling VITA/PEP and is preparing the draft of a decree implementing such controls. It is not clear how a donor-funded project whose status is defined by bilateral and other international agreements would fall within the purview of the control by BEAC, the National Credit Council (NCC) and the Commission Bancaire (COBAC). Further, BEAC views the future of the project as becoming a commercial bank and would impose the same kind of controls to VITA/PEP. These controls which are quite appropriate for large commercial banks may well be inappropriate to the unique character and objectives of VITA/PEP, which may find a different form of organization more effective. Instead, the future organization could be a smaller but another kind of financial institution (e.g., a finance corporation) which would not receive deposits and would not use rediscount facilities and would continue to serve SME's and micro enterprises as well as individuals.

Finally, the new institution ought to enjoy full GORC support through temporary fiscal exemptions and other incentives such as reduced taxes on credit as befits a new financial venture. If such conditions can prevail, VITA/PEP could become an excellent example of a viable Chadian financial institution successfully taking over the activities of a donor funded project.

SECTION I. REMARKS ON CHADIAN BANKS

This section will focus on a brief review of the commercial banks, their lending policy, and an explanation of the interest rate mechanisms in the Republic of Chad.

A. LENDING POLICIES

In line with traditional conservative lending, banks in Chad prefer to make short term loans, which is quite understandable in a very fluid and constantly changing environment. Furthermore, they rely almost exclusively on capital and collateral but pay only secondary attention to character and competence and generally ignore cash flow. Consequently, banks do business with a small number of borrowers they consider safe risks. These clients include CT, les Brasseries du Logone (BDL), la Société Nationale Sucrière du Tchad (SONASUT), la Manufacture des Cigarettes du Tchad (MCT), Boissons et Glacières du Tchad (BGT), la Société Tchadienne d'Assurance et de Réassurance (STAR), and some exporters of gum Arabic. Although, in 1989, The Caisse Centrale de Coopération Economique (CCCE that has now become CFD) and BEI placed two credit lines (approximately \$4 million) for extending credit to small and medium enterprises, BTCO and BMBT left these credit lines virtually unused. Loans to small and medium enterprises are incompatible with the strict conditions of these banks.

B. BMBT

BMBT is the largest bank in Chad with total assets of 27,271,000,000 FCFA as of December 31, 1991. Total loans including overdrafts were 21 billion FCFA. This compared with deposits of approximately 13 billion FCFA and capital resources including reserves of 846 million FCFA. Thus, BMBT appears to be somewhat over-loaned and facing potential under-capitalization problems. For the fiscal year 1991, BMBT had a net profit after taxes were 110 million FCFA which reflected a provision for bad loans of 500 million FCFA that compared to questionable loans of 3.3 billion FCFA.

C. BTCO

BTCO is minority owned by Crédit Lyonnais of France. As of December 31, 1991 BTCO had total assets of 23,470,000,000 FCFA. Total outstanding loans amounted to 14.4 billion FCFA. This compared with total deposits of 15.3 billion FCFA that yielded a satisfactory loan to deposit ratio. As was the case for BMBT, the capital base of the bank with 976 million FCFA of paid-in capital and reserves was thin. For the fiscal year 1991, net profit after taxes was 46 million FCFA. This low level of profit was due to the write-off of 816 million FCFA for bad loans. According to management, all loans deemed unrecoverable are fully written off.

D. BDT

This bank remained closed during most of the 80's and resumed operations in 1991. No financials were available but discussions with management yielded significant information about the condition of the bank. BDT reopened with the assistance of a 500,000,000 FCFA grant for

the renovation of the office building and the acquisition of office equipment. Additionally, the bank negotiated a concessional credit line of 1.5 billion FCFA with BAD for operating purposes. Besides its mission as a development institution focusing on the extension of medium term credit to mid-size enterprises, BDT also provides short term credit facilities to COTONTCHAD and to growers of gum Arabic. BDT operations yielded a profit of 540 million FCFA for the period 1990-92 broken down as follows:

- 240 million from recovery of bad loans which had been written off;
- 150 million from investment income; and,
- 150 million from operating profit.

BDT has made minimum use of BEAC rediscount facilities since its operating strategy over the past three years has been the recovery of bad loans. The bank is currently negotiating a 5 billion FCFA concessional credit line that will make it possible to accommodate the increased demand for loans, especially from CT. Eventually, the GORC is expected to reduce its majority share holding in BDT. As of May 1993, BDT had a dual interest rate structure. For medium term loans, the bank charged a base rate of 14.50 percent plus a 1 percent management fee and a 1 percent commitment fee on the dispersed balance, yielding an effective rate of 16 percent excluding taxes. Short term rates excluding taxes ranged from 17.50 to 18.25 percent. At that time, BDT was approximately 1 percentage point below commercial banks with respect to short term credit.

BDT offers its borrowers a unique service. It has a department whose mission is to conduct financing studies for its clients. The cost of this service ranges from 100,000 FCFA for loans of up to 5,000,000 FCFA or 2 percent for the loan amount. For loans above 100,000,000 FCFA, the cost of the service is 325,000 FCFA. Such fees are much lower than those of local consultants.

E. FINANCIAL BANK

Total assets are currently in the 2.5 billion FCFA range. As indicated earlier, Financial Bank Tchad, which is headquartered in Switzerland--is essentially a deposit bank. However, it is gradually building a loan portfolio. It is discounting short term notes under export letters of credit covering shipments of gum Arabic and extends short term loans 90 to 120 days to well established companies. Rates of interest on discount and overdraft operations are 1 percentage point below those of BTCDC and BMBT.

F. RATE OF INTEREST

The rate of interest practiced by banks serving the needs of the formal sector calls for some brief comments. The rediscount rate established by BEAC bears little or no relation to the cost of living in Chad. It was increased to 13 percent last February following an actual deflation of 2.3 percent in 1992. Instead the changes in the rediscount rate in Central Africa reflect those by central banks in Europe, especially BDF (Banque De France). Following the lowering of rediscount rates from 9 to 7.50 percent by BDF last may, BEAC revised its own rate

downward to 11.50 percent. BEAC generally keeps its rate above BDF to prevent a massive outflow of funds to France and the excessive use of BEAC rediscount window by banks in Chad and member states.

A maximum spread of 5.50 percentage points is allowed by BEAC for the ceiling of 17 percent by commercial banks. This is artificially narrow and does not fully reflect the range of credit risks confronting commercial banks especially as they relate to medium size enterprises, which are therefore largely by passed by the credit delivery system. To a large extent, rates of interest in Chad mirror the high priority given by the GORC to cotton production and exports of cotton derived products. By comparison, in the United states, the current Federal Reserve discount rate is 3 percent, the prime rate is 6 percent, the rate for 30 year Treasury Bond is under 7 percent and the rate on credit card financing ranges from 14 to 19 percent.

Finally, interest rates in Chad include a substantial tax component as shown below:

1	BEAC rediscount rate	11.50 %
2	Maximum spread	5.50
3	Base rates	11.50 - 17 %; 12.50 % for Coton Tchad
4	Overdraft commission	3.00%
5	Taxe sur le chiffre d'affaires; 17.66% of Sum of Base Rate plus Overdraft Commission	2.73 - 3.53%
6	Taxe de distribution du crédit	2.00% of Outstanding Balance
7	Total cost of money	18.23 - 25.53%

Based on these figures, GORC taxes account for 2.73 percent of principal in the case of COTONTCHAD that pays only the TCA tax and 5.53 percent of principal for other borrowers who are required to pay both taxes.

SECTION II.
SOURCES OF CREDIT IN AGRICULTURAL AND RURAL DEVELOPMENT

Several sources of credit are available to agricultural producers and agricultural communities. Most of these sources of credit are available through GORC. At the same time, Private Voluntary Organizations (PVO) play some role in the delivery of grants and/or credit facilities.

A. INPUTS CREDIT

As part of COTONTCHAD's plan to increase the output and the quality of the cotton crop, a comprehensive agricultural inputs system serving some 200,000 contract growers has been set up jointly with ONDR. While ONDR screens the growers who seek credit, COTONTCHAD purchases and delivers improved agricultural inputs including seeds to growers. The recovery period from the delivery of inputs to harvest time is approximately eighteen months and the rate charged by Cotontchad is 22 percent of the value of the input package over that period. This is equivalent to 14.66 percent per annum. Generally, input credit is more expensive and the Cotontchad credit program confirms this statement as will be shown below.

B. SEASONAL CREDIT

CARE used to have a program of seasonal credit for onion growers in the Cheddra area. Cheddra is known for the quality of its onions. The price of onions trends upward during the rainy season. The CARE credit program enabled groups of onion producers to store their produce and take advantage of more favorable prices. The rate on seasonal loans of up to four months was 10 percent per annum. The program was on a small scale but gained popularity. In 1992, it extended loans of 1,450,000 FCFA to 26 groups. In spite of its success, the CARE program was recently terminated as a result of restructuring priorities at the level of the USAID mission which funded the program.

C. EQUIPMENT CREDIT

ONDR is quite active in the financing of agricultural equipment, especially equipment for animal traction. ONDR has a schedule of prices for cash and credit sales. Interest rates vary depending on the type of equipment. For instance, the current ONDR selling price for a cart with pneumatic tires is 156,000 FCFA. The price of the same equipment over a 30 months' period is 174,800 FCFA payable as follows: a down payment of 43,700 FCFA and three installments of 43,700 FCFA, yielding an annual rate of interest of 4.80 percent. The selling price of a plow is 37,000 FCFA. The price for the same equipment payable over 18 months is as follows: a down payment of 13,700 FCFA plus two installments of 13,700 FCFA yielding a rate of interest of 7.38 percent.

Société Industrielle de Matériel Agricole du Tchad (SIMAT) which is majority owned by the GORC supplies equipment to ONDR and private parties. SIMAT manufactures plows and carts. It also supplies imported tractors, de-hullers, grinders, and pumps. Sales to ONDR are based on a "cahier des charges" (Contractual Reference Document) and are on a cash basis. Bills are paid within 60 to 90 days of delivery. There is a 14 percent penalty clause in the event payment takes place after the agreed

upon date, but the clause is never invoked. With respect to sales to private parties, SIMAT prefers cash sales. However, it will in some cases allow a 50 percent down payment and the balance payable in 2 to 3 months subject to the availability or guaranty of a bank (usually 3 percent).

D. MIXED INPUTS/EQUIPMENT CREDIT

CFD recently introduced the RAD program in the Massenya sub-region. RAD is part of PMDR that operates in the department of Chari-Baguermi. RAD's approach is to analyze and prioritize inventory needs at the village level. Each village is investigated by an agronomist and a sociologist. RAD intervenes in the communities where ONDR extends credit and promotes the use of agricultural inputs and equipment. Since its inception in February 1993, RAD has made 23 loans to village groups. Loans have ranged from 35,000 to 698,000 FCFA. These loans have covered pumps, bicycles horses, animal traction equipment, sewing machines, and inputs. RAD does not charge any interest for loans with a maturity of less than one year. With respect to loans of more than one year, the interest rate is 6 percent irrespective of the maturity date. Loans are made on the basis of a joint and several obligation. RAD resources are modest at 55 million FCFA for the next two years. At the same time, it should be noted that CFD sponsors a special program (Crédit Décentralisé d' Intervention) which donates pumps to villages.

E. INFRASTRUCTURE AND RELATED FINANCING FACILITIES

BROT FÜR DIE WELT (BROT) or Bread for the World is affiliated with the Evangelist Church of Germany. BROT has been active in Chad since 1985. It has granted funds to rural communities for infrastructure development as well as the purchase of cattle and agricultural equipment. BROT's experience with grants used for purpose other than infrastructure development has proved disappointing and has led to decision to focus exclusively on the financing of infrastructure and humanitarian projects.

In 1992, BROT made grants of 200,000,000 FCFA over a three year period broken down as follows:

Aid to the handicapped	50,000,000
Aid to the blind	15,000,000
Aid to the deaf	20,000,000
School construction	40,000,000
Construction and operation of hospital and dispensaries	70,000,000

Rural communities are expected to contribute at least 10 percent of the total costs in labor and kind. All projects are of the self help type. BROT insists on tree planting. A large number of these projects involve well drilling. BROT works closely with SECADEV that provides estimates.

SECTION III.
SOURCES OF CREDIT AND SAVINGS MOBILIZATION IN THE INFORMAL SECTOR

This section will discuss the importance of the informal sector in Chad, and highlight the result of a survey of small merchants, money lenders and other users or suppliers of credit in the informal sector. We will also review some informal savings mobilization schemes used by urban residents, especially housewives.

A. IMPORTANCE OF INFORMAL URBAN SECTOR

As may be expected, the informal sector is well and alive in major cities in Chad. According to a 1989 World Bank estimate, the informal urban sector (IUS) accounts for 23 percent of the total urban population in Chad and 75 percent of the total labor force. Based on an estimated population of 5.1 million inhabitants in 1986, this means that 1.38 million or 27 percent resided in cities, yielding an estimated informal sector of some 317,000 persons. At the same time, only 14,298 salaried employees working for 1180 enterprises were registered. These figures included the six major enterprises in the country that employed 6291 persons. In addition to these employees, one should include 20,000 civil servants and 30,000 members of the armed forces. This would yield a maximum active labor force of 70,000 workers employed in the formal sector. Yet, Chad has a total estimated labor force of some 2,000,000 persons in rural and urban areas. The foregoing suggests very clearly that the informal urban sector in Chad is the rule rather than the exception.

B. METHODOLOGY

VITA is one of many--albeit a major one--institutions serving the credit needs of the small and micro enterprises which comprise the informal urban sector. These needs are served by wholesalers, money lenders, and a myriad of suppliers. Additionally, the informal sector has devised several ingenious mechanisms to mobilize savings. During the author's stay in Chad, VITA/PEP used the services of two local consultants, Mme Habiba Idriss and Mr. Gassoumian Simon, specialized in opinion polls and attitude surveys. Questionnaires were prepared and pretested. Interviews were conducted in N' Djaména, Lina, Dagarmasso, and Koundoul. This survey was not meant to be a scientific one and no estimate of the level of confidence is provided. However, responses were consistent and in line with those found in readings on the informal sector in other African countries. The primary purpose of the survey was to identify the practice of interest at various stages of distribution and the qualification of the rate by comparing the data on prices for cash, credit sales, and purchases.

C. RESULTS OF SURVEY

C. 1. Importance of Interest in Millet Distribution

Millet was selected on account of its importance in the Chadian diet. The producer usually sells his millet on a consignment basis to a "revendeur" or intermediary who picks up the bagged millet at the farm. There is no cash payment. The producer and the intermediary agree on a price of 3000 FCFA per bag of 100 kilograms and a commission of 250 FCFA.

Thus, the farmer will receive a net price of 2750 FCFA per bag to be paid within 2 to 14 days or an approximate period of 10 days. The intermediary transports the millet to the market in N' Djaména where he sells it to wholesalers at an average price 3500 FCFA per bag. The cost to the intermediary is 2750 plus 250 FCFA in transport. Thus the intermediary's profit is 500 FCFA. Additionally, he receives a commission of 250 FCFA for the sale of the millet to the wholesaler. This commission is nothing but interest and amounts to 9.10 percent for 10 days or 327.27 percent per annum.

At the next stage along the distribution chain, the wholesaler sells the bag of millet for 3750 to 4000 FCFA. This sale is on credit and the payment to the wholesaler is to take place within four days. The wholesaler's profit margin has a built-in interest component. Assuming a price of 3750 FCFA per bag, this profit margin/interest is 250 FCFA or 7.14 percent for 4 days equivalent to an annual rate of 642.86 percent.

C. 2. Importance of Interest in Distribution of Onions

Onion is another staple in the diet of Chadian families. The producer brings his onions to the market which are then delivered to an intermediary on consignment for an average period of five days. The intermediary dictates prices to the producer, in this case 3000 FCFA per bag minus a commission of 250 FCFA. Thus, the producer actually pays an interest of 250 FCFA for five days equal to 9.09 percent equivalent to an annualized rate of 654.54 percent.

When the intermediary sells it to the wholesaler, he incurs no cost. Further, he is in a position to control prices to the wholesaler. He seldom sells onions at 3000 FCFA per bag and generally sells at a higher price. In periods of scarcity, the price to the wholesaler can go as high as 7000 FCFA per bag. In addition to the commission/interest he receives from the producer, the intermediary enjoys a profit margin which is quite attractive.

The wholesaler sells it to the retailer on the market on credit. The selling price is 4000 FCFA per bag and is to be paid over four days. The credit price is reportedly 250 FCFA higher than the cash price and has a built in interest of 6.66 percent for 4 days equivalent to 599.40 per annum.

The retailer makes cash sales to consumers at 4200 FCFA per bag. He frequently cuts his price to the consumer to speed up his turnover and pay the wholesaler who will in turn settle with the intermediary who in turn will be in a position to pay the producer. While the intermediary and the wholesaler collect high profit margins and interest in a very short time, the producer has to wait for his payment until the trading cycle is concluded.

C. 3. Importance of Credit for Makers/Sellers of "Beignets" (Fritters)

Beignets are widely consumed in urban areas. Ten makers and sellers of beignets were contacted. All of them sell on a cash basis. However, three of them reported they use credit for the purchase of flour and oil.

One merchant reported she purchased her flour on credit for 7250 FCFA per bag of 50 kilos versus a cash price of 7000 FCFA. The difference between the credit and the cash price is interest. In this case, the interest is 3.57 percent for 7 days or 183.67 per year.

Another stated she buys her cooking oil on credit for seven days at a price of 7500 FCFA per carton of 12 bottles instead of the cash price of 7000 FCFA. In this case, the interest is 7.14 for seven days or 367.3 percent per annum.

The last one indicated that she buys her flour and her cooking oil on credit for a period of four days. With respect to flour purchased on credit a 7500 FCFA per bag versus 7000 FCFA on a cash basis, the rate of interest is 7.14 percent for four days or 642.60 percent per annum. With respect to cooking oil, the annual rate of interest is 450 percent.

Obviously, these three merchants are paying a very high rate of interest on their credit purchases. They probably have little or no choice. Access to credit is very important to them and causes them to say that "my suppliers are kind."

C.4. Rates of Interest Charged by Money Lenders

Money lenders enjoy a booming business in N'Djaména these days. Civil servants have not been paid for several months and banks no longer extend them any credit. Thus, they must resort to money lenders who are willing to assume some risks in exchange for a very high profit.

The first money lender who was interviewed is a trader who makes small loans to civil servants for one week. A typical loan would be for 5000 FCFA. The amount to be repaid is 7500 FCFA equal to 50 percent in one week or 2571.42 percent on an annual basis. Depending on the borrower, the rate may be halved.

The second money lender, also a trader, deals with civil servants who are well known to her. She makes larger loans for up to one month at lower rates. A loan for 100,000 FCFA must be repaid at 125,000 FCFA. The annual rate is 300 percent. Similarly, a loan for 100,000 FCFA over two weeks or a month must be repaid at 150,000 FCFA. If the loan is for two weeks, the rate is 1300 percent per year. If the loan is for one month, the annual rate is 650 percent. The money lender is certainly conscious that her risk taking must be compensated. She is essentially guided by a fixed amount which she considers her due, but she does not appear to be conscious of the time element in the value of money.

The third lender is a widow who does not lend money but sells fabric to female civil servants over a two month period. She is also guided by a fixed amount of money which she considers her due irrespective of the amount of money involved in the sale transaction. She quoted two instances of credit sales: one was for 20,000 FCFA over two months versus 17,500 FCFA on a cash basis. Her interest was 85.71 percent on an annual basis. Another credit sale was for 30,000 versus 27,500 FCFA on a cash basis. Although the amount of interest was identical, the rate was 54.54 percent per annum.

C. 5. Interest Charged by Charcoal Traders

In Chad, the most common fuel is charcoal. Three charcoal traders were interviewed in N'Djaména.

The Charcoal Sales Cooperative in N'Djaména buys all its charcoal on a cash basis. It sells charcoal for cash at 1200 FCFA per bag or on credit for 3 days at 1500 FCFA. The actual rate of interest is 3000 percent per annum.

A retailer in N'Djaména sells on cash basis but buys cash or on credit. When he buys cash, he pays 1400 FCFA per bag and when he buys on credit for three days, he pays 1500 FCFA per bag. The rate of interest he is charged is equivalent to 857 percent per year.

Finally, an individual with a horse and a cart sells charcoal door to door either on a cash basis for 1400 FCFA per bag or on credit for three days at 1500 FCFA. The interest he earns is also 857 percent per year.

C. 6. Interest Charged by Blacksmiths

Blacksmiths are quite active. They make a wide range of articles ranging from trunks to kitchen pots. Some sell on credit or on a cash basis and some buy their supplies, mostly corrugated iron and aluminum, either way. Three blacksmiths were interviewed.

The first manufacturer who sells kitchen pots neither buys nor sells on credit.

The second manufacturer who sells medium and large size trunks does cash or on a credit basis. Medium size trunks sell on credit for one week for 2500 FCFA as compared to 2000 FCFA cash. In this case, the rate of interest is 1285.71 percent per annum. Sometimes credit will be extended for two weeks but the selling price does not change and the annual interest rate is reduced to 642 percent. Larger size trunks sell for 6250 FCFA on credit for one week as compared to 6000 FCFA on a cash basis. This yields an annual rate of interest of 214.28 percent.

The third manufacturer sells his production of kitchen pots on a cash basis. However, he buys his aluminum for cash at 350 FCFA per kilogram and occasionally on credit for one week at 400 FCFA. The annual interest rate he is charged is 734.70 percent.

C. 7. Interest Charged in Fish Distribution

The sample included four situations around Houndouma within 30 kilometers from N'Djaména and within N'Djaména.

One fisherman sold his catch of small fish locally in the village. His cash price is 3000 FCFA per cuvette (pan) compared to 4000 FCFA to be paid over 4 days. The difference corresponds to an annual interest rate of 3000 percent.

One small retailer on the market reported, he purchases fish at 50,000-55,000 FCFA per crate when he pays cash and 55-60,000 FCFA when he buys on credit over four days. The rate of interest he pays ranges from 818 to 900 percent per year. He sells cash for 75,000 FCFA or on credit for four days for 90,000 FCFA per crate, i.e., 15000 FCFA over the cash price. The interest he earns is equal to 1800 percent per year.

Another retailer reported she bought fish from fishermen cash for 40,000 FCFA per crate and paid 45,000 FCFA for a credit purchase to be paid over four days. The interest she pays is equal to an annual rate of 1125 percent. All her sales are on a cash basis.

Finally, a retailer with adjunct restaurant facilities buys her fish products cash for 40,000 FCFA per crate or 45,000 FCFA on credit for four days. The interest she is charged by her supplier is equal to an annual rate of 1125 percent. All her sales are on a cash basis.

C. 8. Concluding Remarks

Although interest rates are quite usurious, there exists a strong demand for credit in the informal urban sector. Access to credit facilities is quite important and actually prevails over the actual cost of credit which is often not evident to the user. However, undesirable the current situation may be, the credit system in the informal sector keeps it operating and without it, the informal urban sector would collapse or a new system would have to be devised. Given the high demand for this type of widespread and unsecured credit of an extremely short duration, it is by no means certain that an alternative system would feature substantially lower rates of interest.

D. SAVINGS MOBILIZATION IN THE INFORMAL SECTOR

In spite of a difficult environment, the informal sector has developed a flexible and effective system to mobilize whatever savings exist through tontines, pari-ventes and azoumas.

D.1. Tontines

Tontines are the local equivalent of rotating savings and credit associations (ROSCA's) found in several developing countries around the world. Tontines consist of informal groups of up to twenty members. They intermediate among their members according to a standard but flexible formula by accumulating small individual contributions paid at regular intervals (weekly or monthly) and then distributing equal awards in turn to each member until all members have received an award. Contributions are non interest bearing and credit distributions are reimbursed through monthly installments. Tontines have been quite popular for some time as they enable members to save funds for various purposes such as purchase of land, acquisition of a motorcycle, and meeting the expenses of a wedding. Tontines were used traditionally by housewives. Recently, tontines have expanded into other circles.

Tontines are reported to be widespread among civil servants whose salaries have not been paid for several months. Tontines are an efficient method to mobilize savings among the poor. They are based on discipline through periodic contributions, accountability of each member and the trust and confidence between individual members.

D.2. Pari-Ventes

This formula is frequently used by women who organize festivities for which invitations are sent to a large number of friends and acquaintances. The sponsor of the event usually rents a large bar facility with a dance floor. The sponsor must request the authorization from the municipality and pay a fee of 21,000 FCFA. Additionally, she must buy food and pay a fee for the renting of the facility. The owner of the bar usually allows the sponsor to buy beverages (soft drinks, beer, and whisky) at the wholesale price that are sold to guests at a substantially higher price. The sponsor also buys food products that are sold to guests.

The profits from the sale of drinks and food are expected to yield a surplus. In one instance, the sponsor incurred an expense of 306,000 FCFA and grossed 406,000 FCFA and thus earned a profit of 100,000 FCFA which was used to buy clothing and jewelry. Pari-ventes are often used as a form of mutual help to raise money for needy families. Sometimes,

pari-ventes are organized jointly with the award of funds under a tontine arrangement. The recipient of an award for a tontine is able to supplement her award with the profit derived from a pari-vente sponsored event. It is estimated that at least ten pari-vente affairs are sponsored every week around N'Djaména. The frequency of pari-ventes has increased recently. However, it is also reported they are not as profitable as they used to be.

D.3 Azoumas

Azouma is the Arabic word for invitation. This is a typically Moslem institution under which an open house party is organized in a private home for a young lady. These events are frequently advertised over the radio. There is no charge for food or drinks. However, contributions are actively solicited from guests and are openly acknowledged. The success of the azouma is function of the contributions received from guests. Although guests may not always be forthcoming, the azouma formula can be quite profitable. In one instance, a young lady spent 77,000 FCFA on food and beverages but contributions amounted to 250,000 FCFA. Proceeds were used for the purchase of veils and jewelry. The same young lady is contemplating to have an other azouma so she can finance a trip to Mecca.

As is the case with pari-ventes, azoumas can be held concurrently with the award meeting of a tontine. The sponsor can accumulate her award from her tontine and the profit from the azouma. One such event yielded a total net amount of 300,000 FCFA. The sponsor stated she will purchase a motorcycle. She plans to have another azouma for her next award from the tontine so she can buy a "concession" or land to build a family home.

**SECTION IV.
TRENDS FOR THE DEMAND OF VITA/PEP LOANS**

This section will focus on the following aspects of the demand for VITA/PEP loans:

- progress of the loan volume from 1984 to date;
- acceleration of the loan demand as evidenced by loan applications received over the past nine quarters and the project's ability to meet this demand;
- rapid growth of micro loans; and,
- estimated market share of VITA/PEP vis-a-vis the informal urban sector.

A. LENDING ACTIVITY 1984-1993

After a good start in 1984 and 1985, the number of loans dropped significantly in 1986 and 1987 (excluding the 70 micro loans disbursed in Bongor). This reflects the trying times of the war. It did not pick up until 1990. In spite of the depressed economic condition of the country, VITA/PEP has seen a rapid acceleration as shown in Table 1.

Table 1. VITA/PEP Loans Disbursed 1984 - 1993

Calendar Year	Number of Loans Disbursed	Value of Loans Disbursed (FCFA)	Value of Loans Disbursed (\$US)
1984 (Six Months)	19	40,079,000	94,647
1985	48	128,294,390	294,297
1986 *	88	43,325,347	129,259
1987	12	21,571,000	72,292
1988	21	36,678,000	124,886
1989	47	143,564,334	452,011
1990	51	141,891,950	533,165
1991	310	237,163,000	861,510
1992	729	319,761,000	1,230,426
1993 (Nine months)	1,432	209,861,215	774,318
Total	2,758	1,322,189,237	4,566,812

* Includes the following loans disbursed in Bongor:

1986	70	3,007,347	9,320
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Source: VITA/PEP, N'Djamena

It is worth noting from the inception of the project through June, 1990, the project loaned 484 million FCFA essentially to small and medium

size enterprises. Between July 1990 through September 30, 1993, the project loaned 837,972,715 FCFA mostly (79 percent) to small and medium size enterprises (SME) and also to micro enterprises. As of September 30, 1993, VITA/PEP had disbursed at least 2,758 loans in the amount of 1,322,189,237 FCFA equivalent to US \$4,566,812.

B. ACCELERATION OF LOAN APPLICATIONS AND DISBURSEMENTS

During the first three years of the project, 237 loan applications were received in N'Djaména. By comparison, in the first three quarters of 1993, 2300 applications were received in N'Djaména and Moundou. Loan applications have accelerated sharply since the beginning of 1992 as evidenced in Table 2 below.

The N'Djaména and the Moundou offices have been receiving an increasing number of loan applications. Although the project is getting limited but valuable assistance from CARE, with respect to the identification of potential borrowers, it is not actively promoting its lending services. VITA/PEP is currently loaning to an increasing number of first time clients who are referred by word of mouth and attracted by VITA/PEP's low interest rate. The project resulted in an increasing number of repeat borrowers who have had a good payment record and can request increasingly higher loans. The opening of the project's second office in Moundou has had a beneficial impact. When the office opened, thanks to the active public relations campaign by the préfet, 2872 inquiries were reported by the office staff. This backlog resulted in strong demand in Moundou in 1992 that received 474 applications that year and 322 applications during the first three quarters of 1993. Loan applications in Moundou were reduced during the second quarter, 1993, due to civil disturbances in the area. Applications received in N'Djaména remained at a high level: 1046 in 1992 and 1978 during the first quarters of 1993.

Table 2
Loan Application and Disbursements, 1992-1993

Calendar Year 1992	Q1	Q2	Q3	Q4
Applications Nbr	264	333	318	605
Disbursements Nbr	118	139	161	311
Disbursements \$000	309.7	276.8	250.1	394.0
Calendar Year 1993				
Applications Nbr	460	650	1,190	
Disbursements Nbr	351	451	630	
Disbursements \$000	197.5	280.8	296.0	

Source: VITA/PEP, N'Djaména.

VITA/PEP maintains a high level of disbursements relative to loan applications. During the third quarter of 1993, the project disbursed an average of 210 loans per month. In the early years of the project, the loan disbursements to loan applications ratio ranged from 0.12 to 0.10. In 1992 the ration improved to 69%, but due to a massive increase in loan demand, decreased to 0.52 during the first three quarters of 1993.

C. RAPID GROWTH OF MICRO LOANS

When Phase III of the project started on July 1990, it was decided in addition to its traditional clientele of small and medium size enterprises to which VITA/PEP extended loans ranging from 300,000 FCFA to 10,000,000 FCFA, the project would also make loans of up to 300,000 FCFA to micro enterprises. This policy has proved quite successful. Although micro loans are time consuming, the repayment experience has been quite good. Within this context, it should be noted that most micro loans are made to women entrepreneurs or women's groups who account for 80 percent of such loans. The comparison of loans to micro and small business for the fiscal year ended on June 30, 1992 and the current fiscal year is quite revealing as shown in Table 3.

Table 3. Loans To Micro Enterprises
July 1991 Through September, 1993

	July 1991 through <u>June 1992</u>	July 1992 through <u>June 1993</u>	July 1993 through <u>September 1993</u>
<u>Number of Loans Disbursed</u>			
SME	95	95	20
Micro	382	1,179	610
<u>Volume of Disbursements (\$000)</u>			
SME	901	780	131
Micro	130	342	165
Total	1,031	1,122	296
Micro as % Total	13%	30%	56%

Source: VITA/PEP. N'Djaména.

Data presented in Table 3 shows that the proportion of micro loans relative to total lending facilities continues to increase. As far as the future is concerned, it should be pointed out that a number of micro clients will graduate to the status of SME's. Therefore, this category of loans will benefit from such likely changes. This trend bodes well for VITA/PEP in the next four to five years.

D. VITA/PEP ESTIMATED MARKET SHARE OF THE N'DJAMENA INFORMAL URBAN SECTOR

There exist a large number of small and micro businesses in N'Djaména. There are bakers, tailors, small restaurants, taxi drivers, truckers, photographers, tradesmen, retail merchants on the market, charcoal vendors, blacksmiths, beauty salons, and many others. Based on the estimate prepared in 1988 by the Taxation Directorate, there would be approximately 12,900 such businesses in the city. These businesses are quite active. If one accepts this estimate, it is possible to estimate VITA/PEP's share of the market it serves with loans. Last year, VITA/PEP disbursed 577 loans in N'Djaména. This means it would have served the needs of 4 percent of the businesses operating in the urban informal sector of the capital. In all probability, the estimated market share is

even lower since there were a good number of repeat micro loans for less than six months. Although not every business in N'Djaména would qualify for a VITA/PEP loan, the foregoing suggests there exists ample room for the project to increase its lending activities in N'Djaména.

E. CONCLUDING REMARKS

All available indicators point to a strong demand at the present time and a continued strong demand in the foreseeable future in N'Djaména and Moundou. The situation in both cities is typical of a seller's market where the demand exceeds the supply of loans and financial services to the urban informal sector participants.

SECTION V.
PROFITABILITY AND DEBT SERVICING CAPABILITY
OF VITA/PEP BORROWERS

This section consists of brief comments on methodology followed by a sensitivity analysis vis-a-vis several rates of interest on the profitability and debt servicing capacity of VITA/PEP's borrowers. Also a comparison will be made between the interest rates charged by the project and those charged by similar or institutions in other parts of the world.

A. COMMENTS ON METHODOLOGY

VITA/PEP has extensive financial records of its borrowers that are well adapted to their condition. In lieu of financial audited statements that could be hardly expected from small and micro enterprises in Chad, an estimated balance sheet, profit and loss statements, and a cash flow are prepared for the two-week period prior to loan disbursement. These documents are updated when the loan is disbursed. In addition, an estimated statement of operations and cash flow are prepared for a two week period during the repayment term of the previous loan in order to measure the impact of the first loan and the merits of providing a new loan. The end of loan and the post disbursement financial documents were compared to measure the average profitability and debt servicing capability of VITA borrowers over the life of their loans.

For the purpose of this report, profitability has been measured by the ratio of net margin over average net worth. To measure debt servicing capacity, it is necessary to distinguish between loans with a maturity of six months or less (micro loans) and those with a maturity of one year or longer (small and medium size businesses). For the former, the debt servicing capacity is the ratio of average working capital over principal and interest. For the latter, the ratio is net cash flow which is net margin plus depreciation minus living expenses over principal and interest. These ratios are commonly used by banks.

Profitability and debt servicing capability were sensitized at several rates of interest: the current rate of 13 percent, 20 percent, 25 percent, 30 percent, 35 percent, and 40 percent. The sample for micro enterprises included 50 borrowers and the other covered 16 small and medium size businesses. Detailed data are available in Annex II.

B. SENSITIVITY ANALYSIS OF MICRO ENTERPRISES

All borrowers in the sample were repeat clients of VITA/PEP. In each case the second loan was 25 to 50 percent higher than the initial loan. For analysis purposes, the borrowers were broken down by different categories corresponding to the amount of their obligations. The average profitability (NM/ANW) and debt serving capacity (AWC/DS) are summarized in Table 4.

Table 4
Average Profitability and Debt Servicing Capacity

Interest %		13	20	25	30	40
Loan Size	NM/ANW	0.94	0.94	0.94	0.94	0.94
30-70,000						
FCFA	WC/DS	4.54	3.72	3.62	3.57	3.44
Loan Size	NM/ANW	0.75	0.75	0.75	0.75	0.75
70-150,000						
FCFA	WC/DS	4.43	4.21	4.18	4.08	3.90
Loan Size	NM/ANW	0.60	0.60	0.60	0.60	0.60
150-300,000						
FCFA	WC/DS	3.81	3.67	3.58	3.50	3.34

Based on loan documentation provided by VITA/PEP, N' Djaména.

The following calculation was used to calculate the rows entitled "WC/DS" in Table 4. above, and tables entitled Micro Enterprise Debt Service in ANNEX II.:

Average Working Capital (AWC) / Debt Service

AWC is the average of working capital (current assets minus current liabilities) before the loan is disbursed and working capital after the loan is repaid.

Debt Service is the total of principal and interest payments.

Three major conclusions may be derived from the data presented in Table 4.:

1. An increase in the interest rate charged to micro enterprises does not materially increase the amount required to service their short-term debts (interest and principal). The interest rate can go up from the current level of 13 percent to 40 percent and the debt servicing capacity is reduced from a ratio of 4.54 to a minimum ratio of 3.34 to one. The minimum still represents a very comfortable margin of safety at every loan level.
2. The corollary is that borrowers at every level could easily absorb higher interest rates. Of the fifty borrowers included in the sample, one had a marginal debt coverage ratio and two others were clearly deficient with respect to their ability to service their loan. These two borrowers had initially borrowed amounts of 80,000 FCFA and the new loans were increased to 117,000 FCFA. The coverage ratios for their second loans range from 0.72 to 0.54 and 0.68 to 0.51 respectively. The main reason for the deficiency is not the increase in interest rates but the loan amount resulting in excessive principal and interest payments relative to the borrowers' resources.
3. The return on the borrowers' equity is high. It averages between 0.94 and 0.60 in inverse proportion to the amount of the loan. There existed only one case where the return on equity was as low as 0.17. Yet, the same borrower had a debt servicing coverage of 6.0 or higher depending on the interest rate. High returns on equity are

frequently observed in smaller business based on a rapid inventory turnover and fair to good net margins. This is precisely the case with the majority of micro enterprises who borrow for only a few months to build their inventory in order to take advantage of seasonal price fluctuations (e.g., cereals and onions).

C. SENSITIVITY ANALYSIS OF SMALL AND MEDIUM SIZE ENTERPRISES

Ten of the 16 borrowers in the sample had borrowed more than once. Only one of them was one month past due. The other 6 clients were first time borrowers and their payment record ranged from prompt payment (2) to late payments from 2 to 9 months. One of the possible explanations for this situation is that women only account for 12 percent of SME borrowers which is the reverse for micro loans. Women entrepreneurs are generally more punctual in the handling of their obligations. Another explanation is the economic malaise in Chad. Finally, although several of the prompt payers had maturities ranging from 7 to 19 months, there exists a definite risk associated with longer maturities as evidenced by the figures in Table 5.

Table 5. Loan Maturity and Payment Lateness

<u>Loan Maturity</u>	<u>Payment Lateness as of June 1993</u>
40 months	4 months
36 months	2 months
16 months	9 months
12 months	2 months

Source: VITA/PEP, N' Djaména.

For analysis purposes, borrowers were broken down in several categories based on their loan amounts. The average profitability (NM/ANW) and debt servicing capacity are presented in Table 6.

Table 6. Average Profitability and Debt Servicing Capacity

<u>Interest %</u>		<u>13</u>	<u>20</u>	<u>25</u>	<u>30</u>	<u>40</u>
500-1,000,000 FCFA	NM/ANW	1.03	1.02	1.02	1.02	1.02
	NCF/DS	5.60	5.35	5.17	4.88	4.67
1-2,000,000 FCFA	NM/ANW	1.22	1.21	1.20	1.19	1.18
	NCF/DS	0.95	0.87	0.81	0.76	0.74
2-8,500,000 FCFA	NM/ANW	1.22	1.20	1.18	1.17	1.15
	NCF/DS	2.06	1.90	1.79	1.66	1.53

Based on loan documentation provided by VITA/PEP, N' Djaména.

The following calculation was used to calculate the lines entitled "NCF/DS" in Table 6., above, and the tables in Annex II entitled Small/Medium Size Enterprise Debt Service:

Net Cash Flow / Debt Service

Net Cash Flow is net margin (net profit) plus depreciation minus family living expense.

Several conclusions may be inferred from the data contained in Table 6., above:

1. The debt servicing capacity ratio is quite adequate (4.67 plus) among clients who borrowed between 500,000 and 1,000,000 FCFA. It remains superior to 1.53 at 40 percent for those who borrowed between 2,000,000 and 8,500,000 FCFA. The problem is for the group of five clients who borrowed between 1 and 2,000,000 FCFA. Of these three were clearly deficient and had ratios inferior to one and inferior to zero. Another one was marginal and only one borrower had a very adequate debt coverage ratio of 3.03 plus. It is quite significant that two of them had a negative net cash flow and that one of them was nine months past due. Some of the first time borrowers' ability to handle their obligations may have been overestimated. Traditionally, VITA/PEP has encountered more problems with SME loans and first time borrowers represent higher credit risks.
2. The corollary is that repeat borrowers with a good payment record certainly can bear higher interest costs without any problem. First time borrowers who settle their obligations in a timely manner also have the financial ability to pay higher rates of interest. Others who have an inadequate cash flow and experience lateness in handling their payments cannot obviously bear higher interest rates. Of course, hindsight tells that they should not borrow from the project.
3. The profitability is quite satisfactory and does not fluctuate widely by loan amount category. At the same time, the average return on equity ranges from a low of 1.02 at 40 percent interest to a high of 1.22 at 13 percent interest. The lowest return on equity for a single borrower was 0.63 which is respectable. Consequently, higher rates of interest would not significantly affect the profitability and debt servicing capacity of credit-worthy SME borrowers. Stricter credit criteria for SME loans would probably be in order.

D. COMPARISON WITH OTHER INFORMAL SECTOR FINANCING INSTITUTIONS

At present, not only is the rate of interest of 13 percent lower than that of commercial banks and the cost of credit in the informal sector in Chad, but it is also low in comparison to the rate of projects and institutions serving the financing needs of the informal sector in several parts of the world. The VITA Micro-Enterprises project in Bangui charges monthly fees of 4 percent per month covering interest and service fees. In Senegal, the Kaolak project funded by USAID charged an interest rate of 24 percent in 1988. This rate was 10 percent higher than that of the commercial banks. The differential was aimed at compensating the project for the many services rendered to its micro clients and the

ensuing high cost of loan transactions. Finally, the Grameen Bank serves very small and very poor farmers in Bangladesh and charges a rate of interest of 25 percent which accounts for the services offered to its borrowers. Grameen Bank is reported to be profitable.

VITA/PEP provides many services to its clients such as loan application preparation, management and accounting advice during the life of the loan. These services are time consuming. In addition, VITA/PEP must monitor the payment of its loans and this is an especially costly activity with respect to small and micro borrowers. Yet, unlike these other projects or institutions VITA/PEP is compensated only to a very limited extent, through its four percent loan fee. With respect to credit in the informal sector or to poorer borrowers, the ease of access to credit and the level of services provided by the lender are at least as important, if not more important, than a lower rate of interest combined with limited services and stiff collateral requirements as is the case with commercial banks who purposely do not deal with SME and Micro enterprises.

**SECTION VI.
SUSTAINABILITY OF VITA/PEP AS A VIABLE FINANCIAL INSTITUTION**

This section will review the following topics:

- definition of financial self sufficiency;
- scenarios of projected operating income/loss based on several interest rates and loan fee rates charged by VITA/PEP;
- unpaid and unrecoverable loans; adequacy of resources to handle anticipated increase in loan demand; and,
- legal and regulatory issues associated with the establishment of a new Chadian financial institution.

A. DEFINITION OF SELF SUFFICIENCY

If VITA/PEP is to become a viable financial institution after more than ten years of operations as a donor funded project, there ought to exist the prospect of future financial sufficiency within a reasonable time. At present, income from interest and loan fees is insufficient to cover operating costs. Income barely covers fixed costs that account for one third of total operating expenses. In the case of VITA/PEP, financial viability defined in a conventional fashion will require that income will be sufficient to:

- cover all operating costs,
- write off a reasonable percentage of unrecoverable loans and make sound provisions for such loans,
- acquire equipment and other capital goods, and
- enjoy adequate resources and/or have access to capital and concessional long term credit lines in order to meet the anticipated growth in lending activities.

This change in VITA/PEP's operating mode will depend on its ability to generate additional revenues mostly through higher interest rates. To a lesser extent, VITA may be able to improve its operating efficiency and contain some of its operating expenses. The terms of reference of this interest rate study focused exclusively on the opportunities to increase revenues.

B. SCENARIOS OF NET PROFIT AND LOSS

The VITA/PEP project provides both lending services and Technical Assistance to SME and micro clients. It is unrealistic to expect that the interest and loan fee revenue generated through the lending activity will support both the lending and the technical assistance activities. Therefore, in the future, VITA/PEP will need to consider dividing project activities into lending-related and technical assistance-related activities. The lending activities would be taken over by the lending institution that VITA/PEP is to become. The lending institution could be created when interest and fee revenues were sufficient to cover all costs including operating expenses, loan losses and depreciation.

The technical assistance activities would continue to be provided through a donor-supported project as long as donors were willing to fund it. The purpose of the side-by-side approach is to insure that the financial institution will continue to operate after donors discontinue their financial support. VITA/PEP management estimates that providing lending services accounts for 85 percent of current project operating expense and technical assistance, the remaining 15 percent.

Three revenue scenarios giving different rates of interest and fees have been retained for the purpose of this study. They are as follows:

Actual Revenue Scenario

Interest Rate: SME and Micro 13%
Fee Rate: SME and Micro, 4% of principal.

Low Revenue Scenario

Interest Rate: SME and Micro 24%.
Fee Rate: SME and Micro, 4% of principal.

High Revenue Scenario

Interest Rate: SME 24%, and Micro 36%
Fee Rate: SME and Micro, 6% of principal.

The assumptions with respect to lending activity operating expenses and loan losses are as follows:

Operating Expenses: 85% of actual and projection.
Loan Losses: SME 6.0%, Micro 3.0% of principal disbursed.

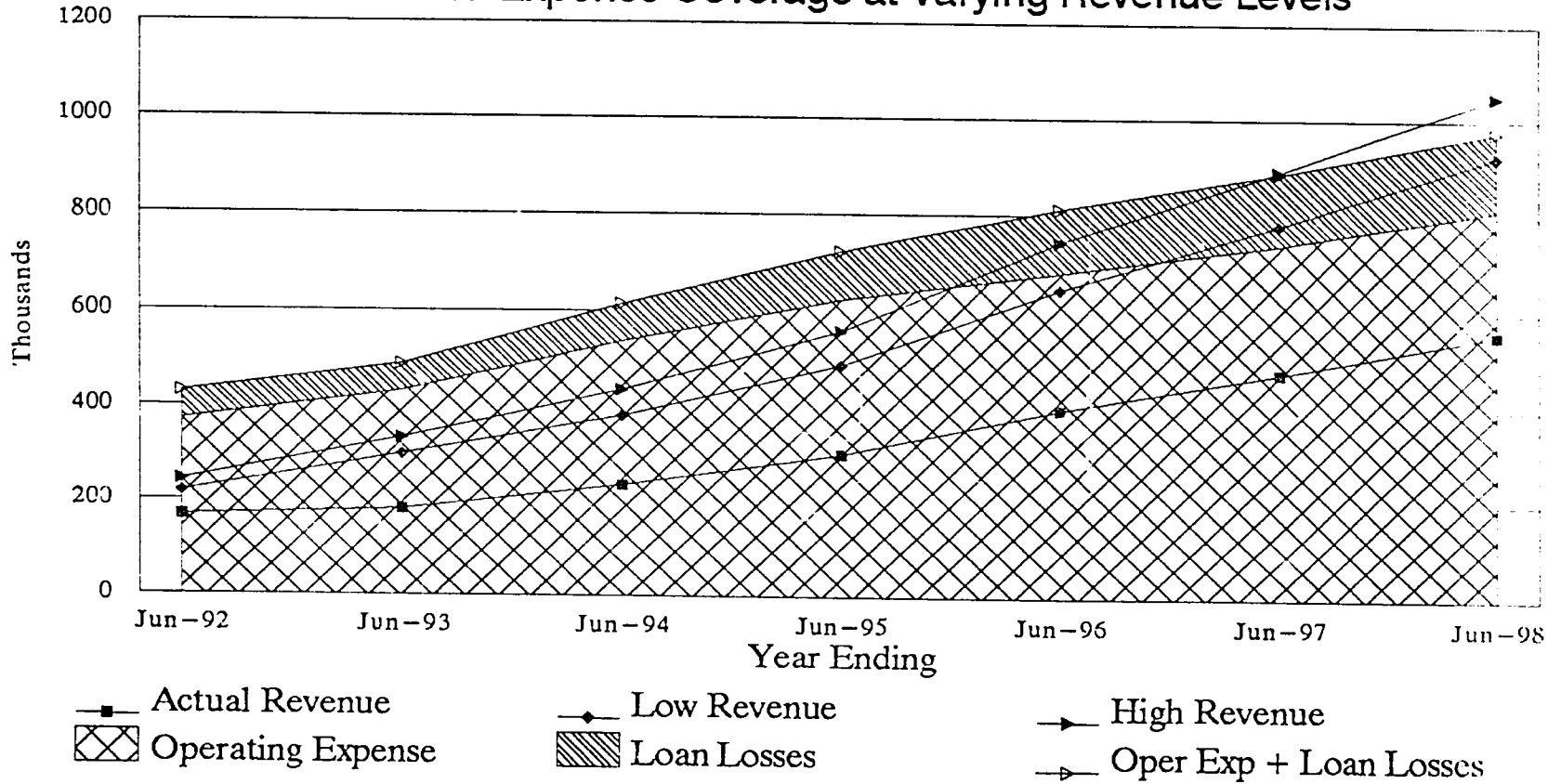
The three revenue projections for the above scenarios are shown by lines in the following chart. The operating expense and loan loss figures are represented in the hatched area of the chart. Projected operating expenses at 85 percent of actual and projected are shown in the cross-hatched area. Loan loss levels at 6.0 percent for SME and 3.0 percent for micro are shown by the fine double-hatched (upper) area of the chart. The objective is to show how well varying revenue levels cover projected costs. Supporting data on projected revenues, operating costs and loan losses are provided in Annex III.

Under the Actual Revenue scenario, the project will never be able to stand on its own and international donors will have to continue funding operations, equipment costs and the loan fund. The gap between revenues and total expenses including loan losses first widens, then remains relatively constant over time. Given the context of international assistance programs at this time, it would be unrealistic to expect the continuation of the same largesse on the part of the bilateral (USAID) and multilateral donors who are currently funding the project. This scenario is clearly unattractive.

With the Medium Revenue Scenario, that is, interest rates at 24 percent for both SME and Micro, the prospects for VITA/PEP are brightening. Operating costs would be covered in 1997. Total costs, however, would not be covered during the period under this scenario. Although this would be a step in the right direction, it would not provide for the creation of a viable financial institution.

Under the High Revenue Scenario, with rates of 24 percent for SME

Chart 1. Expense Coverage at Varying Revenue Levels



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loans and 36 percent on micro loans and loan fees of six percent, a small profit after loan losses would be generated in 1997. At best, this would yield some funds to cover depreciation expenses, thus meeting some capital expenditures for equipment and vehicles. This would leave the project little leeway to cover the cost of higher unpaid loans and/or the interest for concessional credit lines that would be required to sustain the new financial institution. Under this scenario, sustainability could not be achieved until after 1997.

The expense scenarios mentioned above do not include depreciation. The total cost of VITA/PEP's fixed assets is roughly \$500,000. Assuming an average life of five years, depreciation expense would be roughly \$100,000 per year. Even the High Revenue scenario does not provide sufficient cushion to allow a reasonable profit after covering all operating expenses, loan losses and depreciation.

The financial institution that VITA/PEP will become must find means to strengthen its balance sheet and to negotiate concessional credit lines with a variety of international lenders for the purpose of adding liquidity resources to the loan fund. Under the High Revenue and Expense Scenario, the project would be on its way to becoming an independent financial institution by 1998. The goal to transform a donor funded lending project into a viable Chadian financial institution may be achieved by the end of the decade if additional means can be found to reduce expenses and generate revenue.

C. UNRECOVERABLE AND UNPAID LOANS

Unpaid and past due loans are monitored very closely by the management of the project who monitors them on a monthly basis. As of December 31, 1992, loans in the amount of \$472,999 were considered unrecoverable and reported as such. This amount covers loans all the way to the beginning of the project. Although the condition of these loans is well known and documented, there does not exist any inclusive audited statement certifying the integrity of the loan portfolio and other VITA/PEP accounts. It would seem reasonable to budget and request an audit of the project within the next fiscal year so that adequate amounts can be written off for loans deemed unrecoverable. The overall financial condition of VITA/PEP will be strengthened as a result of this process. Such an audit is made more urgent by the possibility of turning the project into a stand alone institution during the next five years. Subsequently, the project should be audited on an annual basis.

As seen in Chart 1. and Annex III., loan loss estimates range from \$58,000 in 1992 to \$163,000 in 1998. It is very important to bring down the rate of unpaid loans. Aggressive recovery methods are likely to yield some results. Another possible solution is the creation of a loan guaranty fund to be operated with fees collected from borrowers into a dedicated pool. This possibility ought to be carefully assessed, at least before VITA/PEP is turned into a stand alone financial institution.

D. MAINTAINING ADEQUATE RESOURCES FOR LENDING

Table 7. represents a projection of the availability of VITA/PEP's lending resources through 1998. Special attention ought to be paid to the period 1994-1998 which would constitute the fourth and final phase of the project as envisioned by USAID.

During its first six years of operation, 1984 through 1990, VITA/PEP received loan funding totaling \$658,000 from USAID and the sale of Public Law 480 commodities donated to the Government of Chad. Since that time it has received an additional \$1,050,000 of funding through the World Bank-financed Projet d'Action Sociale (PADS) project. An additional \$500,000 is to be received from the PADS project before the end of June 1994.

Between 1994 and 1997, the lending activity of VITA/PEP measured in terms of cumulative disbursements is expected to increase from \$5. million to \$16.2 million. This increase will be made possible by accelerating reflows reflecting the impact of higher short term micro-lending vis-a-vis total loans and by obtaining additional World Bank contributions to the loan fund. It is expected that principal reflow will go from \$900,000 to \$2,000,000 between 1993 and 1998.

Table 7. Projected Loan Fund Needs (\$000)

Year Ending	1992	1993	1994	1995	1996	1997	1998
Beginning Funds on Hand	19	314	377	726	349	-216	-654
Plus: Repayment	776	935	1,143	1,540	1,985	2,389	2,668
Less: Disbursements	-1,031	-1,122	-1,544	-1,917	-2,550	-2,827	-3,118
Plus: Loan Fund Received	550	250	750	0	0	0	0
Ending Funds on Hand	314	377	726	349	-216	-654	-1104

Based on loan documentation provided by VITA/PEP, N'Djamena.

After mid-1995, additional resources will be required. Assuming that VITA/PEP would be already operating as a stand alone financial institution, a call would have to be made for deposits or capital from Chadian investors, and/or outside capital or long term concessional credit lines from such international lenders as the African Development Bank (ADB), the European Investment Bank (EIB), the small business window of the International Finance Corporation (IFC) in Nairobi, the Africa Fund under the aegis of OPIC in the United States and others.

E. LEGAL AND REGULATORY ISSUES ASSOCIATED WITH THE CREATION OF A CHADIAN FINANCIAL INSTITUTION

The anticipated change from a donor funded project to a Chadian financial institution is based on the assumption that the economic climate will continue to improve and that the regulatory environment will be favorable. At this point, only basic alternatives may be outlined for the future of VITA/PEP which could become either another bank or a finance company. Other types of financial institutions such as a credit cooperative may be considered. Obviously, a detailed assessment of the alternative legal and operating structures of the new institution would have to precede its creation. Yet, the impact of some problem areas is already felt or is likely to be felt in the future.

The first has been the refusal by BEAC and the GORC to increase the rates of interest charged by the project. The reason for this denial has been that since the project is donor funded, it is not entitled to the same rate of interest as commercial banks who use their own liquidity or the rediscount window of BEAC. This reasoning is somewhat spurious. At

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least one bank makes extensive use of long term concessional credit lines to finance its operations. Yet, it can charge prevailing interest rates on its short and medium term loans. One could also argue that other banks do not provide the same level of service to their borrowers and that the monitoring of smaller loans is more costly than loans to well-established clients. At the same time, the credit risk which VITA/ PEP is assuming and which commercial banks simply refuse to take should be compensated. Last but not least, if the rate of interest is kept at its current low level of 13 percent, the sustainability of the project in the long run will be seriously questioned by donors.

BEAC management also strongly believes that the project ought to become a bank specialized in the financing of small and medium size businesses. In so doing, it would by-pass the micro enterprises and most of the urban informal sector where VITA/PEP has made some inroads and one could respectfully disagree with the logic of BEAC upper management. Based on this perception and on the fact that VITA/PEP has reached a fair size, albeit minor when compared to commercial banks in Chad, BEAC management thinks that the time has now come to exercise its regulatory control over the operations of VITA/PEP. These controls are defined by the existing regulations covering the standardization of banking regulations and the re-structuring of the banking commissions in each of the Central African member states. Additionally, BEAC in Yaounde has sent the draft of a new regulation creating a National Credit Council (NCC) in each member state. Among other responsibilities, NCC would authorize not only banking institutions but also the creation of credit institutions.

A draft is under preparation by the GORC regarding the revision of Decree No. 20 that is the existing basic text for the regulation of banks in Chad and the revision of the ratios used in the monitoring of banks. Furthermore, BEAC has prepared a standard accounting and reporting format for credit institutions. It is expected that the new regulations would become effective at the end of the first quarter of 1994. In the case of VITA/PEP, it is not clear how this regulatory legislation could be applied to an organization whose status has been clearly defined by a bilateral agreement between the USG, who is the major donor, and the GORC. The other donors participating in the funding of VITA/PEP may conceivably raise similar concerns.

Eventually, after the project evolves into a financial institution, it will fall under the regulatory control of BEAC, NCC, and COBAC. It is hoped that these controls can and will be well adapted to the operations of the financial institution which may not be a bank. Existing regulations and BEAC sponsored regulations are essentially applicable to fairly large commercial banks. Even if VITA/PEP became a bank, some regulations would have to be adapted to reflect the idiosyncrasies of lending to SME's--which are much smaller than those corresponding to the BEAC definition--and micro enterprises. The proposed regulations also deal with the control of banks. Although the expression credit institution is used in the text, no apparent reference is made to credit institutions other than banks. Obviously, specific regulations would have to cover the operations of such institutions.

Finally, the new institution ought to rely on GORC support for the first five years of operations. As befits a new business with an important social and economic mission, the new institution ought to benefit from a temporary income tax holiday. GORC should also recognize the peculiar nature of extending credit to SME's and micro enterprises by levying no TCA and TDC taxes on loans. If such conditions are allowed

to prevail, VITA/PEP could be a prime example of a successful transformation of a donor financed project into a viable and sustainable Chadian financial institution. When this change takes place, it would be appropriate to remember the meaning of the Latin word VITA which means continuity, and resilience. These are the key components of successful economic life and performance.

F. CONCLUSION AND OTHER

VITA/PEP will need to explore many alternatives to improve operating performance. This should include expense reduction and improving revenue generation.

VITA/PEP provides a significant amount of technical assistance to its clients including basic bookkeeping, business and management counselling and financial data preparation and assembly. In order to improve loan officer productivity, VITA/PEP should explore using a separate entity to provide some of these services to its clients. This could involve creating a separate technical assistance project that would operate beside the VITA/PEP project and provide technical assistance (non-banking) services. Another alternative would be greater usage of other NGOs to provide these services.

A factor that could significantly increase VITA/PEP operating expenses would be the devaluation of the currency used in Chad, the Franc de la Communauté Financière de l'Afrique (FCFA). At the present time, it is linked to the french franc at a rate of 50 FCFA to 1 FF. A devaluation of the FCFA would cause a significant increase in the cost of equipment, fuel and other supplies and materials that are produced outside Chad.

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ANNEX II.
DATA ON BORROWERS' PROFITABILITY AND DEBT SERVICING CAPACITY

MICRO ENTERPRISE DEBT SERVICING -- Loan Size: 30,000-70,000 FCFA

Interest	13 %	20 %	25 %	30 %	40 %
1	5.48	5.35	5.26	5.17	5.01
2	3.64	3.55	3.49	3.43	3.31
3	2.26	2.20	2.16	2.12	2.04
4	4.34	4.23	4.16	4.09	3.96
5	1.32	1.28	1.25	1.23	1.17
6	2.47	2.41	2.36	2.32	2.24
7	1.53	1.49	1.16	1.43	1.37
8	2.32	2.26	2.21	2.17	2.09
9	4.98	4.86	4.78	4.70	4.55
10	1.91	1.86	1.82	1.78	1.72
11	1.80	1.74	1.69	1.65	1.57
12	1.50	1.44	1.40	1.36	1.29
13	1.77	1.71	1.66	1.62	1.54
14	24.19	23.53	23.07	22.64	21.81
15	3.79	3.69	3.62	3.56	3.44
16	1.21	1.17	1.14	1.11	1.06
17	1.67	1.62	1.58	1.55	1.49
18	2.53	2.48	2.42	2.37	2.28
Average	4.54	3.72	3.62	3.57	3.44

MICRO ENTERPRISE RETURN ON EQUITY -- Loan Size: 30,000-70,000 FCFA

Interest	13 %	20 %	25 %	30 %	40 %
1	0.75	0.74	0.74	0.74	0.74
2	1.14	1.14	1.14	1.14	1.14
3	0.60	0.59	0.59	0.59	0.59
4	0.80	0.79	0.79	0.79	0.79
5	0.77	0.77	0.77	0.77	0.76
6	0.40	0.39	0.39	0.39	0.39
7	1.25	1.25	1.25	1.25	1.25
8	0.91	0.91	0.91	0.91	0.91
9	0.75	0.75	0.75	0.75	0.75
10	0.90	0.90	0.90	0.90	0.90
11	0.83	0.83	0.83	0.83	0.83
12	1.03	1.03	1.03	1.03	1.03
13	1.27	1.27	1.27	1.27	1.27
14	0.66	0.66	0.66	0.66	0.66
15	0.83	0.83	0.83	0.83	0.83
16	1.93	1.93	1.93	1.93	1.93
17	1.39	1.39	1.39	1.39	1.39

18	0.77	0.77	0.77	0.77	0.77
Average	0.94	0.94	0.94	0.94	0.94

MICRO ENTERPRISE DEBT SERVICING -- Loan Size: 70,000-150,000 FCFA

Interest	13 %	20 %	25 %	30 %	40 %
1	1.93	1.86	1.82	1.77	1.69
2	1.53	1.47	1.43	1.39	1.32
3	2.42	2.33	2.28	2.23	2.12
4	1.48	1.43	1.39	1.35	1.28
5	1.05	1.00	0.97	0.94	0.89
6	6.69	6.50	6.36	6.24	6.50
7	3.15	3.05	2.98	2.92	2.79
8	3.71	3.60	3.52	3.44	3.30
9	5.02	4.87	4.77	4.67	4.48
10	5.45	5.29	5.18	5.07	4.87
11	5.46	5.30	5.18	5.08	4.88
12	2.95	2.85	2.79	2.72	2.61
13	6.37	6.18	6.05	5.93	5.70
14	5.95	5.78	5.66	5.54	5.32
15	4.56	4.42	4.33	4.24	4.07
16	5.37	5.21	5.10	4.99	4.79
17	7.20	7.00	6.85	6.72	6.48
18	9.73	9.36	9.11	8.87	8.43
19	8.93	8.59	8.36	8.14	7.74
20	7.47	7.18	6.99	6.81	6.46
21	8.82	8.48	8.26	8.04	7.64
22	1.57	1.48	1.42	1.36	1.25
23	0.72	0.66	0.63	0.60	0.54
24	0.68	0.63	0.60	0.57	0.51
25	2.61	2.54	2.49	2.44	2.35
Average	4.43	4.21	4.18	4.08	3.90

MICRO ENTERPRISE RETURN ON EQUITY -- Loan Size: 70,000-150,000 FCFA

Interest	13 %	20 %	25 %	30 %	40 %
1	0.97	0.97	0.97	0.97	0.97
2	1.04	1.04	1.04	1.04	1.04
3	0.70	0.70	0.70	0.70	0.70
4	0.46	0.46	0.46	0.46	0.46
5	1.15	1.15	1.15	1.15	1.15
6	1.35	1.35	1.35	1.35	1.35
7	0.17	0.17	0.17	0.17	0.17
8	0.40	0.39	0.39	0.39	0.39
9	0.35	0.35	0.35	0.35	0.35
10	0.29	0.29	0.29	0.29	0.29
11	0.88	0.88	0.88	0.88	0.88
12	1.20	1.20	1.20	1.20	1.20
13	0.92	0.92	0.92	0.92	0.92
14	0.62	0.62	0.62	0.62	0.62
15	0.89	0.89	0.89	0.89	0.89
16	0.92	0.92	0.92	0.92	0.92
17	0.97	0.97	0.97	0.97	0.97

18	0.98	0.98	0.98	0.98	0.98
19	1.05	1.05	1.05	1.05	1.05
20	1.10	1.10	1.10	1.10	1.10
21	1.05	1.05	1.05	1.05	1.05
22	0.08	0.08	0.08	0.08	0.08
23	0.02	0.02	0.02	0.02	0.02
24	0.30	0.30	0.30	0.30	0.30
25	0.86	0.86	0.86	0.86	0.86
Average	0.75	0.75	0.75	0.75	0.75

MICRO ENTERPRISE DEBT SERVICE 150,000-300,000 FCFA

Interest	13 %	20 %	25 %	30 %	40 %
1	3.08	2.96	2.89	2.62	2.68
2	2.10	2.00	1.94	1.88	1.77
3	9.81	9.53	9.34	9.16	8.81
4	2.38	2.27	2.19	2.12	2.00
5	1.84	1.75	1.69	1.63	1.53
6	4.62	4.48	4.38	4.29	4.11
7	2.81	2.72	2.65	2.59	2.48
Average	3.81	3.67	3.58	3.50	3.34

MICRO ENTERPRISE RETURN ON EQUITY -- Loan Size: 150,000-300,000 FCFA

Interest	13 %	20 %	25 %	30 %	40 %
1	1.14	1.14	1.14	1.14	1.14
2	0.44	0.44	0.44	0.44	0.44
3	0.55	0.55	0.55	0.55	0.55
4	0.09	0.09	0.09	0.09	0.09
5	0.86	0.88	0.88	0.88	0.88
6	0.24	0.24	0.24	0.24	0.24
7	0.84	0.83	0.83	0.83	0.83
Average	0.60	0.60	0.60	0.60	0.60

SMALL/MEDIUM SIZE ENTERPRISE DEBT SERVICE -- 500,000-1,000,000 FCFA

Interest	13 %	20 %	25 %	30 %	35 %
1	-1.39	-1.37	-1.36	-1.35	-1.33
2	5.90	5.62	5.43	5.26	4.94
3	12.28	11.81	11.43	10.73	10.41
Average	5.60	5.35	5.17	4.88	4.67

SMALL/MEDIUM SIZE ENTERPRISE RETURN ON EQUITY -- Loan Size: 500,000-1,000,000 FCFA

Interest	13 %	20 %	25 %	30 %	40 %
1	0.66	0.64	0.63	0.63	0.63
2	1.18	1.18	1.18	1.18	1.18
3	1.26	1.25	1.25	1.25	1.25
Average	1.03	1.02	1.02	1.02	1.02

SMALL/MEDIUM SIZE ENTERPRISE DEBT SERVICE -- Loan Size: 1,000,000-2,000,000 FCFA

Interest	13 %	20 %	25 %	30 %	40 %
1	0.96	0.86	0.80	0.75	0.64
2	-0.27	-0.30	-0.32	-0.35	-0.04
3	0.38	0.33	0.29	0.25	0.18
4	0.02	-0.02	-0.05	-0.07	-0.12
5	3.65	3.47	3.35	3.24	3.03
Average	0.95	0.87	0.81	0.76	0.74

SMALL/MEDIUM SIZE ENTERPRISE RETURN ON EQUITY -- Loan Size: 1,000,000-2,000,000 FCFA

Interest	13 %	20 %	25 %	30 %	40 %
1	1.20	1.18	1.18	1.16	1.15
2	0.90	0.90	0.89	0.89	0.89
3	1.15	1.13	1.12	1.10	1.08
4	1.00	0.99	0.98	0.98	0.96
5	1.85	1.84	1.84	1.83	1.81
Average	1.22	1.21	1.20	1.19	1.18

SMALL/MEDIUM ENTERPRISE DEBT SERVICE -- Loan Size: 2,000,000-8,500,000 FCFA

Interest	13 %	20 %	25 %	30 %	40 %
1	1.16	1.05	0.97	0.90	0.77
2	0.66	0.52	0.43	0.06	0.23
3	2.32	2.18	2.09	2.00	1.84
4	4.92	4.56	4.33	4.12	3.74
5	3.80	3.57	3.42	3.28	3.03
6	0.63	0.54	0.48	0.43	0.34
7	1.12	1.02	0.95	0.89	0.78
8	1.85	1.74	1.66	1.59	1.48
Average	2.06	1.90	1.79	1.66	1.53

SMALL/MEDIUM ENTERPRISE RETURN ON EQUITY -- Loan Size: 2,000,000-8,500,000 FCFA

Interest	13 %	20 %	25 %	30 %	40 %
1	1.10	1.09	1.09	1.08	1.07
2	1.70	1.60	1.52	1.45	1.31
3	1.14	1.13	1.13	1.13	1.12
4	1.09	1.09	1.09	1.09	1.08
5	1.24	1.24	1.23	1.23	1.23
6	1.05	1.05	1.04	1.04	1.03
7	1.03	1.02	1.02	1.02	1.02
8	1.37	1.36	1.35	1.35	1.33
Average	1.22	1.20	1.18	1.17	1.15

Source: VITA/PEP, N'Djamena

**ANNEX III.
FUNDAMENTAL ASSUMPTIONS COVERING
PROJECTED REVENUES AND OPERATING COSTS**

I. REVENUES

I.1. Loan Disbursement Volume

Actual through June, 1993. VITA/PEP projections for subsequent years. SME loan size is expected to continue to decline through 1994 as the project makes fewer large SME loans and as micro clients "graduate" to SME. These graduates would be among the smaller SME loans.

I.2. Proportion of SME and Micro Loans

Disbursements of micro loans accounted for 13 percent and 31 percent of total loans during years ending June, 1992 and 1993, respectively. Based on an expected reduction in SME loan size, the micro loan share is expected to increase to 32% of total amounts disbursed by the year ending June 30, 1994. After that time, as loan officer productivity continues to improve and an increased number of micro clients graduate to SME status, SME loans will rebound to 75 percent of the total amount disbursed during the year ending June 30, 1998.

I.3. Interest

Computed on average of accruing balances at the beginning of each year and at the end of each year. VITA/PEP's experience is that 80 percent of SME and 95 percent of micro recoverable loan balances are accruing.

I.4. Fees

Fees vary from the current four percent of principal in the actual scenario to six percent in the high revenue scenario.

I.5. Loan Repayment or Principal Reflow

The increase in micro loan disbursements results in a higher rate of repayments relative to outstanding loans and disbursements. Loan repayment for SME loans is projected at 70% and micro loans at 90% of the previous period's disbursements on a six-month moving average. These percentages are expected to increase as loan disbursements level off in the future, however, the same relationship was used throughout in order to provide a conservative projection.

II. OPERATING COSTS

II.1. Variable and Fixed Costs

Actual costs for the year ending June 30, 1992 and estimated costs for the year ending June 30, 1993 were used. Operating costs were broken down into variable and fixed. Variable costs include local salaries, training, fuel and vehicle operation, office and computer supplies, communications, copier, postage, printing and reproduction and publications. Fixed costs include rent and utilities, maintenance of office and office equipment, plus, vehicle insurance, shipping expenses, bank charges as well as VITA's supervision and overhead for the Moundou office. Moundou expenses in 1993 were estimated at \$120,000. Projected operating expenses are limited to local currency expenses and exclude any VITA/Arlington related cost.

II.2. Project Director

As of July 1, 1993 the current Project Director (Mr. Iven Ose) stepped down and was replaced by Mr. Evariste Kebba, Deputy Director. Mr. Ose is to continue until March 31, 1993 as a technical advisor. The costs of Mr. Ose's presence in Chad are not reflected in projected operating costs in local currency but will be part of VITA's home office personnel expenses in US Dollars. The cost of the Chadian Project Director is included in the "Salaries" line of Operating Expenses.

II.3. Additional Staff

All personnel costs include fringes of up to 25 percent of the base salary. The Deputy Director was recruited in March 1993. A new Assistant Deputy Director will be recruited during the year ending June, 1994 and his costs for that year should be reflected for 3 months. The same will apply to a new collections officer with salary of \$12,000 per year. Two new loan officers will be added in 1993 at the same salary. Additionally, two drivers will be added in 1994 at \$5000 per year. All salaries will be increased annually at the rate of 8 percent. Total staff will increase from the current level of 28 to 34 in 1993 and subsequent years. Personnel costs in 1993 are estimated at \$271,200 with the combined impact of new employees and annual increases. Salary costs are expected to increase to \$358,600 in 1994 and to \$514,100 in 1998.

III.3. Variable Costs

Fuel costs escalated 50 percent during the year ending June, 1993 and have been projected to increase 15 percent per year in subsequent years. This reflects the likely continuation of temporary fuel shortages and high prices.

Office and computer supplies have been projected to increase from \$25,400 in 1993 to \$57,100 in 1998 at an average rate of 20 percent per year. All these products are imported.

The cost of communications actually decreased in 1993 following the introduction of electronic mail and radio communications with Moundou. The cost has been projected to increase at 5 percent per year.

with Moundou. The cost has been projected to increase at 5 percent per year.

The cost of the copier which is used extensively for loan documentation has been projected to double between 1993 and 1998 at an annual rate of 15 percent.

Other variable costs have been projected to increase at the rate of 15 percent per year.

III.4. Fixed Costs

The rent for the N'djamena office is expected to increase 5 percent in 1994. In 1995, a substantial increase from \$57,000 to 80,000 or 32 percent has been projected since it is likely that the project will move to more spacious facilities. An increase of 10 percent per year has been applied to subsequent years.

The rent for the Moundou office was increased 5 percent in 1994 and 10 percent in subsequent years as additional space may be needed.

Maintenance of vehicles, equipment and computers has been increased sharply in 1994 from \$34,100 to \$45,100 that is an increase of 32 percent. It was increased from \$45,000 to \$55,000 in 1995 and will continue to increase at 10 percent annually in subsequent years. This reflects the perception that such costs will increase at a fast pace in the future.

An annual rate of increase of 5 percent has been used to project vehicle insurance and other fixed costs.

VITA's supervision fee increases from \$23,000 in 1994 to \$25,000 in 1995 and remains constant thereafter. Moundou's overhead fee of 13 percent of the Moundou office charged to UNDP changes moderately every year.

Annex III. Table 1. Loan Disbursements, Recoverable and Accruing Loan Balances

S US (FCFA/\$1)	265	Actual Year Ending <u>Jun-92</u>	Actual Year Ending <u>Jun-93</u>	Projected Year Ending <u>Jun-94</u>	Projected Year Ending <u>Jun-95</u>	Projected Year Ending <u>Jun-96</u>	Projected Year Ending <u>Jun-97</u>	Projected Year Ending <u>Jun-98</u>
SME Loan Disbursements – Amount		900,562	779,739	1,052,830	1,352,453	1,847,547	2,078,491	2,323,019
Micro Loan Disbursements – Amount		130,486	342,542	491,321	564,528	703,019	748,528	794,717
Total Loan Disbursements – Amount		1,031,048	1,122,281	1,544,151	1,916,981	2,550,566	2,827,019	3,117,736
Micro Loan Amount % of Total		13%	31%	32%	29%	28%	26%	25%
SME Disbursement Change / Year %		33.7%	-13.4%	35.0%	28.5%	36.6%	12.5%	11.8%
Micro Disbursement Change / Year %		395.6%	162.5%	43.4%	14.9%	24.5%	6.5%	6.2%
Total Disbursement Change / Year %		47.4%	8.8%	37.6%	24.1%	33.1%	10.8%	10.3%
SME Loans Disbursed – Number of Loans		95	95	186	224	288	306	324
Micro Loans Disbursed – Number of Loans		382	1,179	1,628	1,760	2,070	2,088	2,106
Total Loans Disbursed – Number of Loans		477	1,274	1,814	1,984	2,358	2,394	2,430
SME Average Loan Size		9,480	8,208	5,660	6,038	6,415	6,792	7,170
Micro Average Loan Size		342	291	302	321	340	358	377
Average Loan Size		2,162	881	851	966	1,082	1,181	1,283
SME Average Recoverable Loan Balances		881,778	1,174,352	1,396,197	1,793,734	2,359,564	2,916,847	3,514,385
Micro Average Recoverable Loan Balances		37,118	116,904	221,975	292,971	401,733	473,699	549,191
Total Average Recoverable Loan Balances		918,896	1,291,256	1,618,172	2,086,705	2,761,298	3,390,546	4,063,575
SME Accruing Ln Bal/Recoverable Ln Bal		80%	80%	80%	80%	80%	80%	80%
Micro Accruing Ln Bal/Recoverable Ln Bal		95%	95%	95%	95%	95%	95%	95%
Total Accrg Ln Bal/Tot Recov Ln Bal		81%	81%	82%	82%	82%	82%	82%
SME Average Accruing Loan Balances		705,423	939,481	1,116,958	1,434,987	1,887,652	2,333,477	2,811,508
Micro Average Accruing Loan Balances		35,262	111,059	210,876	278,322	381,647	450,014	521,731
Total Accruing Loan Balances		740,685	1,050,540	1,327,834	1,713,310	2,269,298	2,783,492	3,333,239

Annex III. Table 2. Operating Expenses

	Year Ending <u>Jun-92</u>	Year Ending <u>Jun-93</u>	Year Ending <u>Jun-94</u>	Year Ending <u>Jun-95</u>	Year Ending <u>Jun-96</u>	Year Ending <u>Jun-97</u>	Year Ending <u>Jun-98</u>
Variable Operating Expenses							
Salaries	220,900	271,200	358,600	408,200	440,800	476,000	514,100
Fuel	12,300	18,000	28,000	33,600	38,640	44,440	51,100
Office Supplies	22,100	25,400	29,200	33,600	38,700	44,510	57,100
Communications	22,400	20,000	21,000	22,000	23,100	24,300	25,500
Copier	7,400	8,500	9,800	11,100	12,900	14,900	17,100
All Other	6,000	6,900	7,900	9,100	10,500	12,100	13,900
Total Variable Costs	291,100	350,000	454,500	517,600	564,640	616,250	678,800
Fixed Operating Expenses							
Rent - N'Djamena	51,700	54,300	57,000	80,000	88,000	96,800	106,480
Rent - Moundou	13,800	15,180	16,700	18,370	20,200	22,230	24,450
Maintenance	32,500	34,100	45,000	55,000	60,500	66,550	73,210
Vehicle Insurance	5,400	10,000	11,000	12,000	13,000	13,000	14,000
Other Fixed Costs	8,000	8,400	8,800	9,300	9,700	10,200	10,700
Supervision	23,000	23,000	23,000	25,000	25,000	25,000	25,000
Overhead Moundou	11,100	12,900	15,900	18,200	19,600	21,000	22,800
Total Fixed Costs	145,500	157,880	177,400	217,870	236,000	254,780	276,640
Total Operating Expenses	436,600	507,880	631,900	735,470	800,640	871,030	955,440
Lending Expense Percent of Total							
Operating Expense:	85%	371,110	431,698	537,115	625,150	680,544	740,376

Estimates based on data provided by VITA/PEP.

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Annex III. Table 3. Actual and Low Revenue Scenarios

SUS (FCFA/\$1)	265	Year Ending <u>Jun-92</u>	Year Ending <u>Jun-93</u>	Year Ending <u>Jun-94</u>	Year Ending <u>Jun-95</u>	Year Ending <u>Jun-96</u>	Year Ending <u>Jun-97</u>	Year Ending <u>Jun-98</u>
Actual Revenue Scenario								
SME Interest Rev @	13%	120,799	120,103	145,204	186,548	245,395	303,352	365,496
Micro Interest Rev @	13%	5,874	16,913	27,414	36,182	49,614	58,502	67,825
Total Interest Revenue		126,674	137,017	172,618	222,730	295,009	361,854	433,321
SME Fee Revenue @	4%	36,022	31,190	42,113	54,098	73,902	83,140	92,921
Micro Fee Revenue @	4%	5,219	13,702	19,653	22,581	28,121	29,941	31,789
Total Fee Revenue		41,242	44,891	61,766	76,679	102,023	113,081	124,709
Total Revenues		167,916	181,908	234,384	299,410	397,031	474,935	558,030
Operating Expenses	85%	371,110	431,698	537,115	625,150	680,544	740,376	812,124
SME Loan Losses % of Principal	6.0%	54,034	46,784	63,170	81,147	110,853	124,709	139,381
Micro Loan Losses % of Principal	3.0%	3,915	10,276	14,740	16,936	21,091	22,456	23,842
Total Loan Losses		57,948	57,061	77,909	98,083	131,943	147,165	163,223
Total Oper Exp & Loan Losses		429,058	488,759	615,024	723,233	812,487	887,541	975,347
Operating Income (Tot Rev – Oper Exp)		(203,194)	(249,790)	(302,731)	(325,740)	(283,513)	(265,441)	(254,094)
Net Profit (Operating Inc – Loan Losses)		(261,143)	(306,851)	(380,640)	(423,823)	(415,456)	(412,606)	(417,316)
Low Revenue Scenario								
SME interest Rev @	24%	169,301	225,476	268,070	344,397	453,036	560,035	574,762
Micro Interest Rev @	24%	8,463	26,654	50,610	66,797	91,595	108,003	125,215
Total Interest Revenue		177,764	252,130	318,680	411,194	544,632	668,038	799,977
SME Fee Revenue @	4%	36,022	31,190	42,113	54,098	73,902	83,140	92,921
Micro Fee Revenue @	4%	5,219	13,702	19,653	22,581	28,121	29,941	31,789
Total Fee Revenue		41,242	44,891	61,766	76,679	102,023	113,081	124,709
Total Revenues		219,006	297,021	380,446	487,874	646,654	781,119	924,687
Operating Expenses	85%	371,110	431,698	537,115	625,150	680,544	740,376	812,124
Total Loan Losses (6% SME and 3% Micro)		57,948	57,061	77,909	98,083	131,943	147,165	163,223
Total Operating Expense & Loan Losses		429,058	488,759	615,024	723,233	812,487	887,541	975,347
Operating Income (Tot Rev – Oper Exp)		(152,104)	(134,677)	(156,669)	(137,276)	(33,890)	40,743	112,563
Net Profit (Operating Inc – Loan Losses)		(210,052)	(191,738)	(221,578)	(225,352)	(225,600)

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Annex III. Table 4. High Revenue Scenario

SUS (FCFA/S1)	265	Year Ending <u>Jun-92</u>	Year Ending <u>Jun-93</u>	Year Ending <u>Jun-94</u>	Year Ending <u>Jun-95</u>	Year Ending <u>Jun-96</u>	Year Ending <u>Jun-97</u>	Year Ending <u>Jun-98</u>
High Revenue Scenario								
SME Interest Rev @	24%	169,301	225,476	268,070	344,397	453,036	560,035	674,762
Micro Interest Rev @	36%	12,694	39,981	75,915	100,196	137,393	162,005	187,823
Total Interest Revenue		181,996	265,457	343,985	444,593	590,429	722,040	862,585
SME Fee Revenue @	6%	54,034	46,784	63,170	81,147	110,853	124,709	139,381
Micro Fee Revenue @	6%	7,829	20,553	29,479	33,872	42,181	44,912	47,683
Total Fee Revenue		61,863	67,337	92,649	115,019	153,034	169,621	187,064
Total Revenues		243,859	332,794	436,634	559,612	743,463	891,661	1,049,649
Total Operating Expenses	85%	371,110	431,698	537,115	625,150	680,544	740,376	812,124
SME Loan Losses % of Principal	6.0%	54,034	46,784	63,170	81,147	110,853	124,709	139,381
Micro Loan Losses % of Principal	3.0%	3,915	10,276	14,740	16,936	21,091	22,456	23,842
Total Loan Losses		57,948	57,061	77,909	98,083	131,943	147,165	163,223
Total Oper Exp & Loan Losses		429,058	488,759	615,024	723,233	812,487	887,541	975,347
Operating Income (Tot Rev – Oper Exp)		(127,251)	(98,904)	(100,481)	(65,538)	62,919	151,285	237,525
Net Profit (Operating Inc – Loan Losses)		(185,200)	(155,965)	(178,390)	(163,621)	(69,024)	4,120	74,303

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**APPENDIX IV.
LIST OF CONTACTS**

VITA/PEP

- Mr. Evariste Kebba, Project Director
- Mr. Iven Ose, Advisor
- Mr. Yondailaou Salomon, Administrator

USAID, N'DJAMENA

- Mrs. Anne Williams, AID Representative
- Dr. Carole Palma, Outgoing Assistant AID Representative
- Mr. Richard Fraenkel, Incoming Assistant AID Representative
- Mr. Les McBride, Project Officer

BANQUE DES ETATS DE L'AFRIQUE CENTRALE

- Mr. Adam Madji, Directeur National
- Mr. Oumar Outman, Chef de Service du Contrôle et de la Réglementation Bancaire

GOVERNMENT OF the REPUBLIC OF CHAD

- Mr. Miambe Romian, Secrétaire d'Etat, Ministère du Plan
- Mr. Digali Zevhinba, Sociologue, Chef de Secteur Bourgali-ONDR/PMDR
- Mr. Francois Raverdeau, Conseiller RAD- ONDR/PMDR
- Mr. Michel Antoine, Contrôleur Financier, COTONTCHAD
- Mr. Didier Picard, Directeur Général, Société Industrielle de Matériel Agricole du Tchad (SIMAT)
- Mr. Nemndiguema Noj-Hig, Délégué Commercial, SIMAT

PROGRAMME D'ACTION ET DE DÉVELOPPEMENT SOCIAL (PADS)

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- Mr. Doumdé Ngadandé, Administrateur
- Mr. Saradimadji, Coordinateur

BANKS

- Mr. Michel Lhote, Administrateur et Directeur General Adjoint, Banque Tchadienne de Crédit et de Dépôts
- Mr. Hervé Le Hogue, Contrôleur Général, Financial Bank
- Mr. Duprey Philippe Henry, Directeur General, Financial Bank
- Mr. Kerim, Chef du Service Crédit, Banque Méridien BIAO au Tchad
- Mr. Karim Coulibaly, Directeur par intérim, ditto

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- Mr. Abdehadi Taha, Correspondent, BROT FÜR DIE WELT
- Mrs. Monica van Beusekom, Representative, OXFAM
- Mrs. Lisa Diakite, Deputy Director, CARE

CONSULTANTS

- Mr. Gassoumian Simon, Directeur, Bureau pour le Développement Rural
- Ms. Habiba Idriss, Animatrice