WORKING CAPITAL FINANCING UNDER THE STRUCTURAL ADJUSTMENT PROGRAMME (SAP):

A CASE STUDY OF QUOTED MANUFACTURING FIRMS IN NIGERIA

BY

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DEDICATION

TO THE SERVICE

OF ALLAH (S.W.A)

MOST HIGH.

CERTIFICATION

This project report entitled "Working, Capital Financing under Structural Adjustment Programme (SAP)". A Case study of Quoted Manufacturing Firm in Nigeria by A. M. Lawal, meet the requirement for the award of Master Degree in Business Administration of Ahmadu Bello University, Zaria.

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ABSTRACT

The Structural Adjustment Programme (SAP) is a house hold word in, Nigeria. It represents an economic "War" on households and firms who supply the households with goods and services. Two years after the introduction of the structural adjustment programme in 1986, it became obvious that many manufacturing firms had collapsed while some reduced their levels of activity such that plant capacity Utilisation in this sector was input at an average of 32.5 percent. The Manufacturing Association of Nigeria attributed the low capacity utilisation inadequate working capital.

The purpose of this study therefore, is to identify factors that will enhance working capital flow to the manufacturing sector within the context of the structural adjustment programme..

A sample of twenty (20) firms was selected from the Stock Exchange Official list. Data were collected through questionnaires. The variables studied include:

Business operating cycle, volume of Investment in working capital, sales volume, Bank Credits and source of raw materials. Tools of analysis were the simple correlation, Mann-whitney U-Test,

Kendall Coefficient of concordance, percentages and proportions.

Base on the data, collected and tested, we confirmed that there is a positive and significant relationship between business operating cycle and working capital requirement. Our analysis revealed that firms still depend on bank Loans and overdrafts to finance working capital needs while others such as debt - factoring and invoice discounting are yet to be fully exploited.

Base on our findings we have recommended measures that could shorten the manufacturing and operating cycles so as to reduce the quantum of funds required for working capital purpose. We also recommend actions that could be taken by the controlling agencies of government and the Nigeria Stock Exchange which would enhance the flow of short-term funds to the: manufacturing sector.

Such recommendations include, the establishment of Industrial Credit Guarantee Scheme and greater equity participation Commercial Bank in manufacturing ventures.

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CHAPTER 1

1.0 INTRODUCTION

1.1 OVERVIEW

Working Capital has been defined by Samuels and Wilkies (1983) as the excess of Current Liabilities. It represents the investment of a firm's short terms funds in assets which are expected to be realized within one year of trading.

Working Capital is used to finance production, investment in stock, and provide credit to customers.

Firms aim at maximising the wealth of share holders and, in this direction, they strive to earn sufficient returns on their operations. To earn a steady amount of profit requires, among other things, successful sales activity. For this to be achieved, adequate funds must be invested in current assests.

The three main components of working capital - stock, debtors and cash= are required for the day to dayoperation of any manufacturing business.

Two independent surveys by the Central Bank of Nigeria (CBN) and Manufacturers Association of (MAN) reveal that the capacity utilisation in the

manufacturing sector of the Nigeria economy during Structural Adjustment Programme has declined as Follows:

PERCENTAGE CAPACITY UTILIZATION

YEAR	MAN SURVEY	CBN SURVEY
1985	40	42.7
1986	30	36.4
1987	25	40.4

(CBN: Bullion Vol. 12 No.3, 1988)

The Manufacturers Association of Nigeria has attributed the low capacity utilisation in the sector to inadequate Working Capital in the Industries. The escalating prices of Nigerian made goods have attributed more to lack of Working Capital required to finance production to levels where economies of scale could be achieved, than to global inflation or weak value of Naira in the Foreign Exchange Market. It is generally observed that many Industries have grounded to a half due to lack of working capital caused by tight economic measures otherwise called structural adjustment programme.

It is therefore crucial that the problem of working capital finance and management under distorted

economic conditions be brought to focus. Many seminars were held on "Managing Distortions in the Economy". In most of them one of the topic addressed at the at the seminars was the case for working capital.

This research is aimed at taking this problems into greater depth.

The amount of working capital required by a business should depend on its operating circle. Pandey (1979) defines operating circle as the duration of time required to complete the following sequence of events in the case of the manufacturing firm.

a - Conversion of Cash into raw materials

b - Conversion of raw materials into work in progress.

c - Conversion of finished goods debtors and bills receivable through Sale.

d - Conversion of work in Progress into Finish goods.

e - Conversion of debtors and bill receivable into Cash.

It has been suggested that the total turnover for one operating circle can be used as a guide to the optimum level of working capital needs. One other way to approach the problem of calculating working capital needs is to ascertain the funds required to support the extra Naira worth of sales.

Having ascertained the firm's working capital needs,

the options or source of obtaining the funds are many. Example include short term loans, trade credit, factoring, deferred tax payments, bills of exchanges, long term debts and even equity capital.

However, the two most important sources of working capital finance are Bank credit and trade credit, Umoh (1987). Prior to 1985, funds were cheaply available in the Nigerian Economy. Short term credits were easily obtainable from Commercial Banks by way of overdrafts.

Trade Credit was also available although Limited to very large firms which had put in place viable credit policies. But with the advent of the Structural Adjustment Programme (SAP) in 1986, Major Fiscal and Monetary Policy changes share been effected by the Federal Government, and these have greatly retricted the ability of banks to extend credit to business.

According to Umoh, P.N. (1988) SAP was expected to, among other things.

a -Emphasize price mechanism as a means of government demand management policies.

b -Encourage a more realistic rate of exchange for the Naira.

c -Replaces administrative contrals with market forces.

d -Rationalize public enterprise. Accordingly, the Second Tier Foreign Exchange Market (SFEM) was established, followed by a downward adjustment of the Naira. These meansures were aimed at determining the market value of the naira against major World Currencies.

Also, the following measures were taken to decontrol the economy.

a -Reduction in administrative and bureancratic controls

b -Rationalisation of parastatals

c -Promoting efficiency in public sector

d -Elimination of corruption in the economy.

Monetary and credit policies under SAP are tight and designed to:

a -Moderate the inflationary pressures that were likely to arise from the operations of the second tier foregin exchange market.

b -Stimulate domestic financial savings and efficient resources allocation.

c -Encourage foreign capital inflow and increase export earnings from non-oil sources.

d -Stimulate local production of goods and services.

e. -Ensure an improvement in the Balance payments.

Thus, one of the major effects Structural Adjustment Programme (SAP) is cash sqnceze in the econmy coupled with high demand for borrowing. In 1989, the Federal Government decided to withdraw its funds from commercial banks to the Central Bank of Nigeria (CBN), thus worsening the cash situation.

Bank Overdraft has thus become extremely difficult to obtain . At the sametime the harsh effects of the Structural Adjustment Programme (SAP), have forced many firms to fold up and so inter company confidence which is the basis of trade credit has also been greatly eroded.

It is also said in financial circles that the Central Bank of Nigeria (CBN) is planing to mop up some millions of Naira currently in circulation to furthere force prudent fund management in both the public and private sectors.

1.2 STATEMENT OF THE PROBLEMS

With the above setting, it is apparent that working capital is the grease that lubricates the manufacturing system. The fact that a number of business have grounded to a halt due to inadequate working capital suggests a critical problem in this aspect of business financial management. It seems, therefore, that there are certain relationships that are Crucial to the determination of optimum working

capital needs and the sources of financing them in a distorted econmy follows that if this hold true, firms have a utilise such relationships for more effective working capital management.

Also, finance experts seem to agree that short term investments should be financed through short term sources, and capital investment from long term sources. However, it is feared that long term funds are being diverted to satisfying working capital needs. Apart from the cost implications of such decisions, it may also be difficult to replace fixed assest when due. This later problem could spell imminent collapse for more firms.

1.3 OBJECTIVE OF THE STUDY

The economic environment as discussed in the previous sections obviously call for an inquiry into the sphere of working capital financing under structural adjustment programmes, taking a case study of the manufacturing sector with the aim of finding means of improving working capital flow to the sector.

The main objective of this research is to establish the relationships, if any, between business operating circle, sales volumes and investment in working capital as well as between raw material

source and Bank credit as a source of working capital finance.

1.4 SIGNIFICANCE OF THE RESEARCH

This reseach is significant in many respects viz:

a It aims to reveal the strategies for surviving the SAP in terms of corporate financing from which ailing and temporaryfirms can tap and revitalise their operations. This will lead to an increase in the overall productive capacity in the economy

b The research may compel government policy makers to re-address some monetary and fiscal policies under structural adjustment programme to give some protection to manufacturing firms so as to boost production levels in the economy.

1.5 LIMITATIONS

The following were the limitations to this study:

a The population was limited to only manufacturing firms quoted on the Nigerian stock Exchange.
In othere words, the focus was on very large firms. These were about 50 in number as at the time of study in comparision to the thousands of unquoted manufacturing firms in the country. The study was therefore limited in scope.

b The questionaire method adopted as data collection method also has its limitations.
Responses could be very subjective and influenced by respondent's temperament.

c Also, the questionaire itself, though comprehensive, cannot be said to be exhausive for the study of a dynamic area of financial management such as working capital.

d The next limitaion was the cost of executing the project.

1.6 SUMMARY

In this introductory chapter, we have identified the flow of working capital finance. It is therefore, expected that this study will suggest ways of enhancing working capital flow to the manufacturing sector.

Limitations to this study include, the possibility of subjective responses to questions in the questionaire method of data collection, and cost of executing the project.

CHAPTER 2

LITERATURE REVIEW

2.0 INTRODUCTION

As the research focused on working capital finacing under the Structural Adjustment Programme, a review of available literature on the programme itself became necessary so as to put the study in the proper perspective, before discussing the main subject.

2.1 THE ANTECEDENTS OF SAP

According to (CBN) Governor Ahmed- "The 1970' which witnessed the oil boom and profound changes in Nigeria, were characterised by substantial inbalance and distortions in the economy. It was an era of proliferation of public sector Institutions and enterprises and private sector firms which were largely dependent on imported inputs. It was also an era of white elephants-huge and expensive projects doubtful utility or viability".

Consequently with the collapse of the global oil market between 1986, vulnerability of the Nigerian economy to external shocks became clearly manifested. Government revenue dwindled which is caused because of the heavy dependence on oil as foreign exchange earner.

Nnanna revealed in his paper that the contribution of petroleum revenue as a percentage of total Federal Government revenue dropped considerably as indicated below between 1980 and 1982.

1977	5.2%
1978	63.1%
1979	81.4%
1980	25.0%
1981	18.4%
1982	25.2%

Bullion Vol. 14 No.1, 1990

This adverse tredn led to the accumulation of huge domestic and external deficits. Nnanna argues that between 1981 and 1984 "the current account deficit averaged 9.0 percent of the gross domestic product, while the budget deficit was over 6 percent".

Matters were further compounded as these deficits were largely financed by public sector borrowing and steady draw-down on the external reserve. Huge short-term trade debts also accumulated. With the persistent balance of payments problems, external debt crisis, the erosion of International credit worthiness and the acute shortage of raw material and consumer goods, the country was on the verge of collapse.

The economy was characterised by inflation, unemployment, declining productivity, and economic hardship, inflation stood at an average of 18.25% by 1985 and gross domestic product declined by approximately 1.3 percent in real terms. Perhaps, the hardest hit was the urban wage earners whose real income fell by 5.25% by 1984.

(Bullion Vol.14 No.1, 1990)

National Economic Emergency was introduced where wage earners were made to contribute between 2 and 15 kpercent of the basic salaries to government coppers. Also, the importation of rice and wheat were banned by the government. Even though various measures were introduced, but, failed to yield good dividends.

Rather, unemployment level grew higher, essential commodities became very scarce, inflation-continued to rise and the economic hardship reached every household. The situation is partially explained by the fact that no concrete effort was made by the government to diversify its revenue base.

There was then a general call for fundamental structural changes in the economy.

2.2 SAP

With the failure of previous austerity measures, the critical question that confronted the government was how to match increasing demand with.

the low level of resources available in the economy. Consequently, the government put three options before the citizens.

a. - To continue with the austerity measures hoping that things will improve.

b. - Accept an International Monetary Fund(IMF) Structural Adjustment facility of loan with conditionalities.

c. - Reject the IMF loan and its conditionalities but adopt a Nigerian designed and monitored Structural Adjustment Programme.

There was a national debate on the above options at the end of which Nigerians adopted the Nigeria made SAP and, in June 1985, gave the President a blanket approval to restructure the economy. Hence, the advent of SAP in June, 1986.

2.3 AIMS OF SAP

Mr. Ojameruaye states in a paper presented that the major objectives of Nigeria's SAP are to:

a. - restructure and diversify the productive base of the economy in order to reduce dependence on the oil sector and on supports.

b. - achieve fiscal and balance of payments viability over the period.

c. - carry the basis for a substainable non-inflationary growth.

d. -lessen the dominance of unproductive Investments in the public sector, improve the sector's efficiency and Intensify the growth potential of the private sector.

2.4 CORNER-STONES OF SAP

The measures adopted by the Federal Government in June 1986, to restructure the economy include:

a. -the setting up of a Second-Tier Foreign Exchange Market (SFEM)

b. adoption of appropriate fiscal and monetary policies. In this regard credit expansion was discourage while money supply (MI) was also reduced. Fiscal policies include reduction in public expenditure, devaluation of the Naira and removal of oil subsidy.

c. -dismantling of price controls trade and exchange regulation.

d. -Commerciliasation and Privatization of public enterprises.

e. -over-hauling of the administrative structure of the Civil Service.

f. -rationalisation of the Custom Tariff in order to promote domestic production.

2.5 THE IMPACT OF SAP ON THE NIGERIAN ECONOMY

The impact of SAP on the Nigerian Economy is diverse but here attention is focused on the impact on the manufacturing sector.

A major impact of SAP on the manufacturing firms is the acute shortage of working capital which is itself induced by tight monetary policies. This also is the crucial issue that this research is meant to address.

Nnanna also indentifies Infrastructural in adequacy and persistant shortage of raw materials as major factors hampering the output of the manufacturing sector during the SAP period.

(Bullion vol.14 No.1, 1990)

Other adverse impacts of SAP on the manufacturing sector include declining Capacity utilisation and increasing need for credit partly as a result of the weak naira and partly because people used more credit to benefit from the privatisation policy which is being persued by the Federal Government.

For completeness and objectivity, mention must be made of the positive effects of SAP on the manufacturing sector. According to Ahmed -SAP has fostered cost consciousness and maintenance culture. There is also increased localsourcing of raw material whch which is an important index of self-reliance. SAP has also enhanced export competitiveness arising from the realistic adjustment of the Naira exchange rate.

Having taken a brief exploration of SAP and its fall-outs, it is now proper to discuss working capital, its financing and management.

2.6 THE SPHERE OF WORKING CAPITAL

"The capital of a business organisation can be divided into working capital and permanent capital. The former is the capital required for the day to day running of the organisation and for the financing of the current assets of the company. On the other hand, permanent capital is the long term funds needed to acquire the fixed assets of the organisation" -Umoh. This research focused attention on working captial financing under an economic situation characterised by the restrictive monetary and fiscal policies of the Structural Adjustment Programme in Nigeria.

Pandey (1979) discusses two concepts of working capital, gross concept and net concepts. Gross working capital, otherwise simply refered to as working capital, represents an organisation's investment in current assets. Current assets include cash, debtors, stock and such other assets which can be converted into cash within an accounting year. Net working capital refers to the excess of current liabilities.

Samuels and Wilkies (1983) describe working capital as "net current assets". The net working capital concept indicates the liquidity of the organisation and also suggests the extent to which working capital needs may be financed. It covers the question of judicious mix of short term and long-term funds for financing current assets.

Howard (1971) equally defines working capital using the net concept. He refers to working capital as constituting those assets held for current use within a business less the amount due to those who await settlement in the short run for value supplied in whatever form.

Keith V. Smith (1980) states that the concept of working capital is the result of a delay between the moment an expenditure for purchase of raw materials is made and the moment which payments are received for sale of the finished product. "Working capital is thus, the sum of all those expenditures, made prior to collecting sales revenue" Smith (1980). Two types of delay basic to the formation of working capital have been identified by smith as follows:

a. -objective fact such as the production cycle.

b. -subjective delay originating from a decision for example, when to place our order. This delay depends on the quality and quantity of information and the basis of whcih the delay is decided.

Howard (1971) sees working capital as the life blood of a business. Its effective provision can do much to ensure the success of a business while its inefficient management can lead not only to loss of profit but also ot the ultimate down fall of what otherwise might be considered as a promising concern.

Inadequate working capital poses serious dangers to business. It stagnates growth and it becomes increasingly difficult for the business to undertake profitable projects, Pandey (1979).

Furthermore, the business cannot implement its operating plans and if it does, it is fraught with efficiencies.

Little wonder, therefore, that some Nigerian business have folded up, some are ailing, while few that probably had foresight have been able to float on uncomfortably. This research was aimed at seeking solutions to threats posed to manufacturing firms by inadequate working capital due to the Structural Adjustment Programme, SAP.

2.7 NEED FOR WORKING CAPITAL

Every business enterprise requires some amount of working capital to enable it meet day to day financial commitments. To earn a steady amount of profit require successful sale activity since sales do not convert into cash simultaneously, an organisation needs cash to buy more raw materials, pay expenses and meet some unforessen commitments.

According to Pandey (1979), "an adequate amount of funds had to be invested in current assets for a smooth and uninterrupted production and sales process". Because of the circulating nature of current assets, working capital is sometimes referred to as circulating capital.

Smith (1980) argues that it is possible to reduce the quantity of working capital need by improving the information on which the decision defining the subjective delay is based. The better decision may be the result of improved professional ability of the decision maker or more rapid and precise data processing, for example, or both.

2.8 COMPONENTS OF WORKING CAPITAL

Four major components of working capital are cash,debtors, stock, short-term investments Umoh (1987).

a. CASH

According to Samuels and Wilkies (1983), "It is not just sufficient to acquire plant and machinery; a sum of working capital initially in the form of cash must be put aside to pay wages, to buy materials and to meet any other expenses", put another way, there must be sufficient cash to meet the transactions, precautionary and speculative motives of the firm. The time it takes between when a company pays its cost and when it receives the cash from sales indicates the need for cash for transaction purposes. The amount of precautionary balance to hold would depend on the firm's ability to borrow funds at short-notice. A precautionary balance can be satisfied by holding near cash financial assets such as Treasury Bill which mature in a short time (Umoh) (1987).

Holding of cash for speculative motives becomes important in uncertain economic environment such as rapid prices level changes and government interventions. Wright (1970) visualises the ideal cash holding as being where the cash coming in exactly matches the cash being kept in hand. While the ideal situation is not attainable, polices should be in place to keep the departure from the ideal situation to the minimum consistent with smooth servicing of the business day to day cash needs.

Availability of cash enable a firm to take advantage f of cash discount as well as improve the credit worthiness of the firm as it can meet its financial obligations when due.

Generally, the amount of cash required can be estimated by the use of cash budgets. However, the cost of holding such cash must also be put into consideration. These are fixed cost which is the issue cost of the security or the negotiating cost of an overdraft and the variable cost which is the interest to be paid or that could be carried if the cash was invested in short term securities.

DEBTORS:

Debtors constitute a major proportion of current assets all firms. This arises because trade credit is an essential marketing tool in modern business.

Howard (1971) states that the chief incentive towards granting credit facilities is to encourage demand on the part of customers. He however, argues that this benefit must be weighed against the cost of granting credit.

According toWright (1970), the amount of business fund locked up in debtors at any time is determined by the volume of sales and period of time it takes on average to collect the amount duefrom customers.

Three characteristics of book debt are identified, viz:

i. It involves an element of risk. While cash sales is riskless, there is an amount of uncertainty in the receipt of cash from debtors.

ii. It is based on economic value. To the buyer, the economic value in goods an services passes immediately at the time of sales, while the seller expects an equivalent value to be received later on.

iii. It implies futurity. Just like holding of cash, granting of trade credit has its cost implications. The cost of credit includes administrative expenses opportunity cost of the funds tied up and the losses due to bad debt. The leve of credit is also influenced by industry practice and the degree competition.

There has to be a trade - of between cost of credit and benefit of increased sales.

c. **STOCK:**

For manufacturing firms, stock may be broken down into three components, namely, stock of raw materials, stock of semi-finished goods and stock of finished goods.

According to some authors stock and work-in-progress are responsible for over twenty percent of assets employed in the manufactruing industry.

Generally the amount of raw materials kept in stock depends on the volume of expected production, reliability of supply sources and most importantly mode of financing stock.

The greater the expected volume of production, the larger the volume of raw materials instock. This is so since there is a positive relationship between input and out put. Also, the more reliable the source of supply of raw materials, the less stock to hold since new demands can easily be met.

Two main factors that govern the size of inventories to be retained. These are the nature of the business and the relative efficiency of the over all management and control. This agrees with concept of delays crucial to the formation of working capital. Some writers believes that inventory level may be cut by

more frequent ordering, thus reducing stocks. Equally, production lines could be changed to use less stock or less expensive materials but causing change over costs.

Wright (1970) visualises an ideal stock level to be the situation where materials are delivered into factory incorporated into the product, and delivered to the customer first in one day. But since this is unattainable or may be undesirable for a number of reasons, decisions on stock levels should be assessed in terms of the ultimate effect on profitability or return on capital employed.

It has been emphasised that the Structural Adjustment period is one of cash squeeze and tight credit policies. Tho low utilisation of plant capacity as stated earlier is mainly due to firm;s inability to finance stock or raw materials needed for productions. Consequently, how to improve the flow of raw material stock was of great concern of this research.

The stock of semi-finished goods and finished goods are dependedent on the production period and anticipated sales respectively. Wright (1970) identifies the risk in stock of finished product as changes in demand which can result in total or partial loss or value.

Like cash and book debt, stocks are held at a cost. The most obvious cost of raw material stock is identified as the costs of ordering, shipping and storing.

At all times, firms must strive to keep these cost at minimum. This is so because cost minimisation lead to profit minimasation. There are models of optimum level of stock to hold. An popular one is the economic order Quantity (EOQ) model. This is a mthematical model which attempts to determine the level of stock at which all the cost mentioned above are minimised. The (EOQ) is obtained by the formula:

$$EOQ = \sqrt{\frac{2AO}{C}} \qquad \text{where}$$

EOQ = Economic Order Quantity

A = the total annual requirement

O = ordering cost per order

C = Carrying cost per unit

d, **SHORT TERM INVESTMENTS**

Short term investments refer to highly liquid and marketable financial securities such as treasury bills which firms can hold in lieu of cash. Their major advantages are that they yield some return to their holders and are easily turned into cash in times of need.

O Other properties of short-term investments include low default risk, low interest rate risk and low purchasing power risk. The composition of working captial using the "net concept" would include current liabilities such as trade

creditors, accruals, defered taxation, bank over drafts, bills payable which are deducted from the current assets discussed above.

2.9 DETERMINANTS OF WORKING CAPITAL

Various factors influence the working capital needs of companies. The importance of these factors also change from time to time. A few of these factors are discussed as follows:

a. **-NATURE AND SIZE OF BUSINESS**

Trading requires very large sums of money to be invested in working capital. This is because trading firms carry large stocks of a variety of goods to satisfy the various demands of customers.

Manufacturing firms, on which this research was focused, also require huge invest much in working capital because they have to maintain an economic stock of raw materials. On the other hand, public utilities need not investment in working capital because they supply services not product and sometimes they operate strictly on cash basis.

Also, the size of the business affects working capital needs since a firm that operates on a very large scale will need more working capital than a small firm.

b. OPERATING CYCLE

The operating cycle of a manufacturing business begins with the purchase of raw materials and ends with the collection of cash from debtors. Therefore, the longer the operating cycle, the larger will be the firms' working capital requirement, so in order to minimise the investment in working capital by policy of receiving advance payment from their customers.

The operating cycle of a business organisation can be calculated, approximately, in days using the following method by Samuels and Wilies (1983).

1. RAW MATERIALS

Period of turn over of = average value of raw = Material stock.

raw material stock less period of credit granted by suppliers = average level of = creditors

Purchase of raw materials per day

purchase of raw materials per day

2. Period of production = $\frac{\text{average value of work-in-progress}}{\text{average cost of goods sold per day}}$ =

3. Period of turnover of finished goods stock = $\frac{\text{average value of stock of finished goods}}{\text{average cost of goods sold per day.}}$ =

4. Period of credit taken by customers. = $\frac{\text{average value of debtors}}{\text{average value of sale per day}}$

Total operating cycle =

A crucial part of the Operating Cycle is the manufacturing cycle whch is that part of the total cycle that ends with the production of finished goods. An extended manufacturing cycle ites down dunds in the form of inventory and work-in-progress. Where a firm has alternative ways of production, the shortest manufacturing cycle should be adopted.

c. **FIRMS CREDIT POLICY**

A firms credit policy affect its working capital by influencing the level of book debts. The average time it takes to collect debts should be related to the economic factors facing the firm. Thus in periods such as SAP, credit policies have been reviewed by many firms and even suspended by others.

d. **AVAILABILITY OF CREDIT**

Just as a firm grants credit to its customers so it receives credit from its suppliers. A firm will require less working capital finance if it benefits from a liberal credit policy. Credits are also extended to businesses by banks in the normal course of their business. A gain, under SAP, the effectiveness of bank credit as a source of working capital finance is greatly eroded.

e. **GROWTH & EXPANSION ACTIVITIES**

Pandey argues that the working capital needs of a firm increases as it grows in terms of sales. However, it is the increase in working capital that proceeds the growth in sales volume. Under the Structural Adjustment Programme. It has been established that existing plants are under utilised. Therefore working capital needs during the period are not for expansion activities but for greater utilisation of existing plants.

f. **PRICE LEVEL**

Generally, rising price levels will compel a firm to invest more in working capital until such a time that the firms product prices are adjusted to reflect the new price levels. A good financial manager is expected to monitor price levels ahead of time so as to cushion their effects on the business.

g. **DIVIDEND POLICY**

The proportion of profits paid to share holders and that retained by the firm constitute the dividend policy of the firm. Payment of dividend consumes cash, thus reducing the firm's working capital. In periods such as SAP, firms have adjusted their dividend policies by increasing working capital funds.

3.0 WORKING CAPITAL FINANCING

Working Capital Financing is the core of this research, the main focus being the improvement of working capital availability for increased plant capacity utilisation.

Attempts will be made to discuss the common methods of working capital financing but emphasis will be placed on their effectiveness in a grossly distorted economic environment coupled with tight economic policies generally refered to as SAP. The methods could be group into short-term, medium-term and long-term sources.

Samuels and Willies (1983) defines short term finances as funds made available for shor periods of time. It is generally accepted in financial circles that short term financing refer to debt obligation which are repayable within a period of one year. Since working capital refers to debt obligations which are repayable within a period of one year. And Working Capital refers to funds required for the day to day running of the business. It follows that the most appropriate manner of raising such capital is by short term instruments.

According to Weston and Brigham (1974), source of short term financing include trade credit between firms, loans from commercial banks and Commercial paper.

Trade credit and short-term bank loans as the major forms of short term finance. Other methods include factoring. deferred tax payments, bills of exchange and stock financing. These will now be discussed in greater depth.

a. **TRADE CREDIT**

Trade credit represent the value of supplies obtained on credit by a company. Panday (1979) both refer to trade credit as a "spontaneous" source of short term finance. Trade credit arise from the normal business transaction and is cost free where there is no cash discount. It has been argued that every firm is expected to utilise spontaneous sources of finance to the fullest extent.

Weston and Brigham (1974) see trade credit as "Convenient and informal". The use of credit terms shifts the burden of financing business activities back along the line of distribution and productions so that the larger business tend to bear the cost of finance. The use of trade credit, according to Samuels and Wilkies (1983), has increase in recent years partly because of difficulties in borrowing and high interest tates. The rank of trade credit among other sources of working capital finance during the period 1986 to 1990 will be established. The period of credit extended to customers depend on a number of factors viz:

a. -Nature of product. If the merchandise has a higher sales turnover or can easily perish, the length of credit is usually short. For items of low turnover the length of credit would belong.

b. Financial position of the seller- if the seller's liquidity position is weak, he will find it difficult to allow much credit and will prefer early settlement.

c. -Motive of seller - Where a company intends to capture a greater market share in theface of competition, it can offer attractive credit terms as part of a sales promotion exercise.

d. **FINANCIAL POSITION OF BUYER:**

A company that is in weak financial position may not be able to benefit from this source of working capital finance as most sellers would not prefer to deal with this kind of customers.

e. **CASH DISCOUNTS:**

When cash discounts are available, the cost of trade credit may be high. Most companies that are aware of this inherent cost may not use this financing source.

In many industries, credit terms are dictated by trade associations. Also in this period of group-arrangements parent companies offer substantial credit to their subsidiaries. Finally, some companies extend credit to their customers in the proportion they receive credit from their supplies.

B. **BANK CREDIT**

The primary function of Commercial Banks is the extention of credit to worthy customers. Accordingly, by providing credit to canners for example, they will be in a position "to purchase, can, and store the food that may at a later time be sold to retailers and ultimately to consumers. During this interval of time from producer to canner to whole-saler, to retailer and finally to consumer- bank loans have made possible the economic handling of the food crop" (REEDETAL 1984).

This view is also expressed by wrigh (1970). According to wright, "banks are in business to lend money", Banks earn a major part of their income

from the margin between the interest rate paid to depositors and that charged to borrowers. There are three kinds of bank credit, namely overdrafts, advances, and loans,

i Overdraft - overdrafts are granted to current account holders only who may be allowed to draw more than their credit balance on such accounts "pure overdrafts are usually granted to businesses to enable them meet working capital needs". Interest is charged on amount actually overdrawn.

Samuels and Willies (1983) argues that over-draft has the advantages of flexibility in the sense that when the borrowed funds are no longer required, they can easily and quickly be repaid to save further interest payments.

In times of severe credit squeeze such as occasioned by the Structural Adjustment Programme policies, banks are forced to curtail over draft limits. However, accordint to some writers banks are usually more interested in short term lending which is generally renewable at expiry, provided the borrower operated correctly and is still considered a "good risk" by the Bank.

ii. Advances-these are short term accommodation by banks for specified purposes with the source of repayment known to both parties at the time of advance. Example is thecase where an advance is obtained to produce for a special order the settlement of which is to be made by the buyer through the bank that advanced the funds. This is known as account domicilation.

iii. Term loans-this refers to a lump sum facility granted by bank to a customer with fixed interest and schedule of repayment. The borrower can with draw the entire sum on conclusion of the arrangement or may opt-to withdraw piece meal as the need arisees. Nigeria, merchant banks specialise in such lending.

c. **FACTORING**

Samuels and Willies (1983) describes factoring as involving raising funds on the security of the company's debts so that cash in received earlier thanif the company waited for the debtors to pay. Factoring is the purchase of account receivable by the lender without recourse to the borrower.

According to some books the use of this method strengthens the working capital postion of a business without excessive additional expenses. Usually, factors offer three basic services viz:

i. Sales ledger accounting which involves sending out a company's invoices and ensuring the bills are settled.

ii. Credit insurance which is a guarantee against bad debt.

iii. Provision of finance which refer to advancing clients up to 80% of the value of debts they set out to collect.

Factors asses every client before entering into any business with them. This is because they too are in business and so do not see themselves as the last financial resort for companies in difficulties. This research will establish the extent of use of factors to finance working capital needs by manufacturing business in Nigeria.

d. **DEFERRED TAX PAY**

This is all in to trade credit earlier discussed except that the credit is supplied by the tax authorities. Deferred tax payments arises because of the interval that elapses between the earning of profit by the company and the payment of tax due on them, Samuels and Willies (1983).

As long as a company continues to earn stabe or increasing profits, deferred tax payments provide an almost permanent source or short term finance, Page and Canaway (1969). It is also noteworthy that this finance has zero cost.

In Nigeria, miscellaneous tax decrees have been put in place which reduce this source of finsnce to some extent. The finance (miscellaneous provisions) Decree of 1987 permits the mature of jobs carried out. These rates are still low enough to provide some finace in the form of deferred tax payments to profitable companies.

e. Bills of Exchange

The Bills of Exchange Act, 1982, section 3 defines a bill of exchange as: "An unconditional order in writing address by one person to another, signed by the person giving it, requiring the person to whom it is addressed to pay on demand or at a fixed or determinable future time, a sum certain in money to or to the order of a specified person or bearer".

A post-dated cheque is a simple example of a bill of exchange. A cheque signed on 1st March but dated 30th June of the same year, makes the value on the instrument payable in four month's time.

Bills of Exchange are now used mainly inconnection with international trade arrangements. The seller of the goods who now possesses the bill of exchange can obtain cash immediately by discounting the bill at a

bank. It could then be argued that the cost of funds provided by a bill of exchange depends on the rate at which the bill is discounted, Samuels and Willies 1983. The rate at whch bills are discounted could be influenced by factors such as:

a. -The credit standing ofboth drawer and acceptor.

b. -The nature of the transation for which the debt is outstanding.

c. -The number of bills already in circulation connected i with the trade or acceptor.

However, Page and Canaway (1969) argue that the use of bill of Exchange as means of turning business debt into cash has diminished wit the growing use of trade credit, itself the result of increasing size of manufacturing units and of the overdraft system.

F. **STOCK FINANCING**

Two classes of Stock Financing are identified- trust receipts and warehouse financing. "Trust receipts are issued by the borrowing company to acknowledge that it holds its stock or a portion of the stock in trust for the lender." When the borroweing company sells the stock it then units the proceeds to the lender. Under warehouse financing the goods are transferred to a public warhouse where a third party release the goods on the order

of the lender. Goods used in this kind of arrangement are generally durable goods. The essence of stock financing is to provide liquid funds to the borrowing company pending sell of its products and receipt of cash, for a firm that is relatively good. Credit risk, mere exitence of the inventory may be a sufficient basis for receiving an unsecured lan, Western and Brigham (1974).

This research will again tyry to to determine the use of this financing method by manufacturing companies in Nigeria.

3.1 MEDIUM TERM SOURCE OF FUNDS

BANKS TERM LOANS

Banks occupy a pirotal postion in short term and medium term money markets, Weston and Brigham (1974). They provide the marginal credit that allow firms to expend more rapidly than is possible through retained earning and trade credit. The loan itself is generally arranged before it is needed. This is refered to as establishing a line of credit.

Bank term loans are usually issued for a defined period of time unlike overdrafts. The usually carry a higher interest chage because of the period covered and the bankmight want to avoid problems of fluctuations in interest rates in which case, it carries a fixed rate. The collaterals demanded for term loans are usually high. Also there must be proper evaluation of the credit

worthiness of the client and the viability of the projects on which the terrm loans are to be applied. The conditions imposed on banks also apply here but with stiffer variations, for example, no additional funds and in addition may tie the loans to specific assets or projects. Also the issue of risk associate with fluctuation in foreign exchange rates are to be considered.

b. **VENTURE CAPITAL**

This source of finance is normally provided be merchant banks. It is considered risky and rather than provide the funds to theclients and leave client tosum its own operations, the banks may decide to participate in the management of the company. The participation may take the form of equity investment or debenture stocks. However, in such situations, the banks do not intend to hold long term intersts in the company, therefore, the debentures take the form of convertibles or the equity interest will be disposed off after a state period when it has became clear that the client can stand on its footing. It is small firms that particularly need this sort of finance but because of their lack of management talents, inadequate collaterals, insufficient accounting records, such firms cannot have access to this form of finance.

c. **PROJECT FINACE**

This is a new development in our economy and like any other source of finance it requires evaluation ofthe project and the company, through examination offinancial statements and cash flows projections. The peculiar difference in project finance with other forms of finance is that the projects themselves serve as collaterals for the funds. It is important that such projects are readily realisable sincethe intention of this type of finance normally is that the project should be seld liquidating. It is not normal for additional collaterals tobe demanded. This sources is risky and thusvery expensive. They are not patticularly attractive to small firms.

d. **BANKERS ACCEPTANCE (ACCEPTANCE CREDIT)**

This form of finance is similar to bills of exchange. The only difference is that it is a bank which undertakes to liquidate the borrowed funds on maturity in case of a default. It is clear that the evaluation procedures undertaken by the lenders will cover the credit worthiness of the issue's bank.

e. **HIIRE PURCHASE**

To buy on hire purchase is legally to hire the goods until a certain time when an option combat exercised to take over the legal title to the goods. This form of finance spreads the repayments over a wider period than the short

term source. It is usually expensive because the interest repayments are heavily loaded. It could be an indication that the user has liquidity problems.

Usually, there are no forms of collateral demanded exceptions to this are when the amount involved are to large in which case the finance company may require collaterals. The interest expenses tax deductible.

The hire purchase arrangement is normally reflected in the balance sheet of the borrower which affects not only its gearing ration, butalso its ability to raise further funds. It attract captial allowances. Page and Canaway (1969) note regrettably for business that the total hire purchase debt outstanding in respect of trade borrowers is small when compared with that of consumer hire purchase transactions.

f. **EQUIPMENT LEASING**

This is also a new development. the lease could take either of two forms an operating or a finance lease. In both cases an agreements is reached for lease payments for defined period of time. Such payments attracts tax reliefs. The lease assets do not however attract capital allowwhich are available if assets are finance through other sources (eg. bank loans or over drafts).

In finance lease, the intention of the agreement entered into with the lessen is for a transfer of ownership to the lease, after a payment of a nominal amount. The life of such leases is normally longer than for operating leases. In operating leases, the lessor does not here ot dispose off the assets. The intention here is that the lease is an operating assets and by spreading the assets usage over a member of different clients the firm maximise rental income.

g. **SALE AND LEASE BACK**

It is common for companies to sell their assets to obtained much needed funds to finance their projects. The seller enters into a spontaneous contract to also lease back the assets from the buyer. The disposal of such assets could give rise capitla gain tax liability. The sale of such assets transfer ownership to the buyers. The lease payments may be initially low but in long lease back, there may be periodic review changes. The buyer may restrict future alternations to the assets. The vendor also loses the use of the assets as collateral forthe finance.

The sale and lease back arrangement can create problems in the future when it becomes necessary for the company to consider the purchase of the same assets. It is not usually recommended for companies to sell assets which appreciate in value. The benefit

however, to the vendor is the ability to use the sale proceeds profitability. Most companies use this source of finance for expansion through acquisition of other companies.

h. **MORTGAGE OF PROPERTY**

As an alternative to sale and lease back, companies may decide to obtain the much needed finance by pleading their freehold assets as collaterals. The ownership of the assets remains with the borrower although these assets may not be used as collaterals for further finance. The advantages of this is that at the end of the mortgage period the assets will be available for usage as collaterals. The mortgage of property appears to be more expensive initially when sale and lease back. However, towards the end of mortgage period, this facility becomes cheaper, hence it is normally recommended that companies obtain medium term finance through mortgageof property rather than sale and lease back.

3.2 **LONG TERM FUNDS:**

In discussing financing of current assets, Pandey (1979) identifies three types of financing methods, viz: Long term financing, short term finacing and spontaneous financing. He goes further to indicate the important sources of long-term financing as shares, debentures, convertible debentures, preference shares, refaimed earning s and debt from financial institutions.

a. **EQUITY CAPITAL (ORDINARY SHARES)**

The traditional form of capital is equity capital. The holders of this capitla are the owners of the business. They bear a huge portion of the entire risks associated wit the company, hence they expect a higher rate of return than most other provides of finance.

Other features are that they expect and are entitled to a share of the profits of the company in form of dividends, subject to the recommendation of the directors and after all prior claims have been met, Page and Canaway (1969).

The ordinary shareholders have voting powers or rights attached to their investments. They cannot redeem or reclaim their investments except by selling their shares or in the event of liquidation.

Ordinary shares could take the form of preferred, deferred or founders ordinary shares. Preferred ordinary shares usually receive a fixed rate of dividend, before th other ordinary share holders. They may also entitled to further share of profit after their fixed entitlement. Deferred ordinary shares usually are residual recipients after all claims including preferred ordinary shareholders have been settled.

3.3 RAISING OF EQUITY CAPITAL

The methods of raising equity funds which are particularly to quoted companies include:-

1. **PLANNING OF SHARES**

   In this method the shares are offered to a specific group of investors usually insurance Companies, pension funds or any other institutional investors.

2. **OFFER FOR SALE**

   In this method the shares are offered to the public, but through an issuing house. The issuing house undertakes to buy the shares and sells the shares to the public. These house -written shares ifnot bought by the public will be taken over by the issuing house.

3. **PUBLIC ISSUES**

   This method is similar to the offer for sale in the sense that the shares are offered to the public. The only distinction is that the company itself undertakes the marketing of the shares, in some cases, the issuing house serves as an agent. This method is mainly used by well known large.

4. **OFFER FOR SALE BY TENDER**

   Here, the company offers the shares for sale at a minimum price level.

   Application are then requested for the sake of

the shares at prices determined by the various investors. The final price will be the price that will clear all available shares. The stock exchange will ensure that all shares are finally taken inpart the same price.

5. RIGHT ISSUES

A right issue is a further issue of shares to existing shareholders. The terms of the offer ensure that each shareholder relieves the right to an additional number of shares in a fixed proportion to his current share holding. There is therefore no solution in the proportional holding of each shareholder provided that each shareholder accepts his entitlement.

This method avoids issuing costs of finance is to be obtained from the public. If comfirms the financial stability of the company and the price at which the share holders buy the rights issue Page and Canaway (1969) state that most economical issue is the one addressed to existing owners. In some books adds that right issue has the advantage of not disturbing the relative voting rights of individual shareholders.

b. DEBENTURE STOCK

These are loans of a long term. These could

be secured or unsecured. Debenture represents the document whcih acknowledges the indebtness to the company. In practice the term debenture may be restricted to second loans.

1. The main features are:

1. They are not entitle to voting rights.
2. They are fixed interest securities entitled to annual interest payment.
3. These interest are tax deductible
4. They could be redeemable, irredeemable or or convertible.
5. The prinicpal amounts are usually secured on the assets of the company and could have:
   a. Floating charge
   b. Fixed charge
   c. Accombination of a and b.

A floating charge covers all the assets as they exists from time to time excluding assets subjected to a fixed charge. A floating charge does not prevent the company from buying and selling assets in the normal course of their business.

A fixed charge is on one or more specific assets.

If the company fails to say interest, or the principal, or attempts to dispose of a n assets caharge then a receiver may be appointed to take possession of the assets and sell it for the benefit of the debenture holders.

A borrower may redeem a debenture earlier than the due date becuase of any of the following reasons:

1. To take advantages of falling interst rates.
2. To make use of surplus funds.
3. To release assets coveed by a fixed charge for usage as collaterals.

c. CONVERTIBLE DEBENTURES

Debenture stock could also beconvertible in which case the holder has an option to convert the debenture within a given time period into equity stock at a specific price. If this option is not exercised then the debenture will continue its normal term to redemption.

Convertible debenture is issued when the borrower does not wish to increase the share capital at the time but considers that the revenue from the capitla investment being financed from the loan will provide the necessary profits for dividends on the subsequently increase share capitla, Page and Canaway (1969).

3.4 ADVANTAGES ANDDISADVANTAGES OF CONVERTIBLE LOAN STOCK:

q. From the point of view of a borrower, convertible loan stock has the following advantages:

i Provided money is plentiful and the company has good prospects, it will be possible to offer convertible loan stock at alower interest rate than debentures.

ii. If the company is just starting up or is developing a new product so that revenues will initially be small, convertible loan stock provides cheap fixed interest funding, and the conversion date can be planned to consider with the growing availability of profit sufficient to pay acceptable dividends.

iii. When money is in short supply the incentive of a future share in profit may encourage lenders who would not otherwise invest in the company.

iv. If the company is in need of perinanent capitla but the market price of the share iis currently depressed, the issue of convertibleloan stock can be used as a delaying tactics in the hope that the conversion period will coincide with k higher share prices, thus giving the company as much money as possible per share issued.

d. PREFERENCE STOCK

Preference stock is usually a more expensive source of finance than debenture stock. this is becuase debenture stock are less risky and usually have a tax shield. Other features of preference shares are that they are notentitled ot any voting rights normally, and then interest in the company isrepresented bydividend payment and principal

repayment

Prefernce shares could bepreferred or deferred cumulative, participating, redeemable or irredeemable. Cumulative preference shares would have their dividend income accumulative and paid at future dates if the company has liquidity problems. Participating preference share holders are entitled to a fixed dividend income per year plus a further share in any other profits. In some cases, this further share could befixed sum or could be after the ordinary shareholders have been paid a centain dividend. Preferred and deferred prefernce stock have charateristics similar to preferred and deferred ordinary shares.

e. RETAINED EARNINGS

When dividend decison is treated as a financing decision, the net earnings of the firm may afford a source of long term financing. Inthis regard, dividend is only payable solong as there is no profitable investment opportunities. Unlike equality capital, retained earnings does not involve flotation costs. It would appear that during tight economic conditions such as brought about by the Structural Adjustment Programmes, retained earnings is a readily available source of finance.

3.5 CHOICE OF SOURCE

Dandy (1979) identifies Current Assets as comprising permanent current assets and temporarily current assets, and argues that under the matching approach, also known as hedging approach long term financing should be used to finance permanent current assests. He however acknowledges that short term financing may be preferred tolong term finacning o for reasons focost and flexibility, and its risknes a need not be over looked. The justification for the fact that long term financing costs more than short term financing can befound in the liquidity preference theory. The theory says that since lenders are risk overse, and risk generally increase with length of lending time, most lenders would prefer to make short-term loans. The only way to induce lenders to lend for longer periods is to offer them higher interest rates.

The advantages in favour of shor term loans arise from term loans when the need for fund diminishes before expected time. It isthen obvious that there is conflict beween long term and short term financing. The choice between them therefore tests on a trade off between risk and return. The situation stresses the point that adequate assests and finacing mixes are crucial to working captial management.

3.6 SUMMARY

This chapter captures the very ingredients of the Structural Adjustment Programme (SAP) and its effects on the manufacturing sector of the economy.

The sphere of working capital financing and management as explored by previous authors is also discussed in depth. Such details inlude theneed for working capital, its component, its determinants, and the various sources of finance for working capital purposes. The chpter concludes with the issue of choice of sources of finance.

CHAPTER 3

METHODOLOGY

4.0 INTRODUCTION

The topic is "Working Capital financing under Structural Adjustment Programme. A case study of some Quoted Manufacturing Firms in Nigeria".

Working Capital being an important tool for investment decision for every organisation that is why the study will be carried out under critical period of SAP.

In the study, working capital for twenty Manufacturing Companies will be examine and relationships between the various variables will be use to answer our research questions/.

4.1 ORIGIN OF SAP AND ITS IMPACT

Because of Nigerian economic dependence on oil exports, the bulk of government revenues and nearly all foreign exchange comes from petroleum. The phenomenal oil booms of the 1970's boasted the Nigeria economy beyond expectation. As crude oil prices go upwards, the Nigerian economy expands. The economy was flush with foreign exchange, and aver-age real income

more than doubled between 1971 and 1980. Living Standards (as measured by consumption per-capital) also doubled. Oil prices in world markets declines sharply in the early 1980's and then collapse in 1986. Nigerian Export earnings fell from $25 billion in the 1986. The economy was devastated. And with it, Nigerians living standards, which reach their low point in 1986 to 1987.

Apart from oil prices, public policies also influen ced the course of the Nigerian economy. Before 1986. economy mismanagement was pervasive.

Government controls over foreign exchange pricing agriculture, marketing and the distribution of goods and services stifled market forces. Little of the government's oil receipt was invested in the Nigerian productive assets that fielded high returns. This left the economy poorly equipped to withstand the negative shock of collapsing oil prices.

4.2 ADJUSTMENT

SAP came as oil prices hit a new law in 1986, the government took steps to adjust the economy. The thrust of the programme was to limit government spending and to rely more on market forces. It freed up the foreign exchange market, stoopped licensing imports, and eliminated agricultural marketing Boards and parices control, the new approach.

small to compensate for the substantial losses associated with the collapse of oil Price and the terms of trade that Nigeria had suffered. Because living standards remained far below 1980 levels, the SAP recovery did not feel like a recoverry to many Nigerians especially these in urban areas.

But it was a full pledge recover, and it was not dependent on oil price increases. Indeed. Except for a temporary increases in 1990's as a result of the Gulf war, oil prices through out the SAP era stays around $17 per barrel.

Thus, through the movements in oil prices had been one of the major factor in the Nigerian economy's free fall between 1980 and 1986, they did not contribute to its recovery since then.

Yet adjusting to the collapse of oil markets meant loss of jobs, income, and buying power for vocal and important groups. Even more important, the SAP was tarred with the declining living standards that the collapse of oil price hard precipitated worries about foregn debt ehen also became important, as newly reconciled trade arrears from the 1982 to1983 period and the devaluation of the dollar against other major currencies almost doubled Nigerian official debt.

Nigerian government was unable to withstand public pressuress to ease its reform program. For this reason, the SAP policies were unevenly applied, and implementation got worse overtime.

Perhaps the weakest part of Nigeria's adjustment programme was the control of government expenditures. Government spent progressively more easch year particularly on large, often uneconomic investment projects, raising fiscal deficit in the process, excepts in 1989, when spending was cut marginally and in 1990 when a surge of oil revenue kept down the deficit.

By and large, the deficit was financed by printing more naira and circulatting them in the economy. In 1991 and 1992, as the then anticipated democratic transition approached, fiscal deficits rose sharply and the economy was flooded with newly printed naira. As a result, the supply of naira grew faster than the economy. As more and more Naira chased after the same amount of goods and services, each naira because worthless and less in terms of goods and services. This was reflected inrising consumer prices and higher inflation. Those whose income did not rise at the same speed fall across income and purchasing power.

Meanwhile, just as more naira were needed to buy goods, more naira were also needed to buy foreign exchange, such as dollars. In the free market, the price of one dollar rose from 4 naira in 1986 to more than 40 naira in 1993. The close relationship between the amount of naira in the economy (money supply,) the price level, and the evolution of the exchnage rate in parallel markets is os clear.
The recent tightening of controls on the purchase and sale of foreign exchange have kept the official rate officially stable at 22 naira per $1. However, this "stability" has come at a very high price to Nigerian Exporters, their competitive advantage, particularly towards neighbouring countries has largely disappeared.
So becuase of the SAP policy as it affect Nigerian economy likewise Nigerian manufacturing sector.
The working capital financing under structural adjustment programme is therefore, a great task for most companies especially the ones with foreign source of raw materials. In the researchwe shall see how these companies are affected by the SAP policies.

4.3 **RESEARCH QUESTIONS:**

Deriving from the objectives of the research, the following questions became pertinent:

a. - Is there any relationship between Business operating circle and investment in working capital?

b. - Is there any relationship between raw material source and Bank credit to manufacturing firms?

c. --Is there any major alternative source of working

and trade credit?

d. Is there any relationship between investment in working capital and sale volume?

e. Is it likely that firms have resorted to diverting long term funds to financing working capital?

4.4 RESEARCH DESIGN

The research will be conducted using partly questionnaire i.e. survey method to collect the primary data. Secondary data will be collected from CBN (Bullions), MAN Reports, Seminar Papers and related text books.

So in essence primary and secondary data will be jointly use in the research.

A sample of twenty (20) firms will be selected from the Stock Exchange Official list. Data will be collected through questionnaire administered by enumerators. The variables to be studied are business operating cycle, volume of investment in working capital, sale volume, Bank credits and source of raw material.

Tools of analysis are the simple correlation, mann-whitney U-Test, Kendall Coeffficient of concordance, percentages and proportions. Various test will be carried out to find the positive relationships or negative relationship between the variables mention above.

4.5 SUMMARY

The purpose of the study therefore, is to identify factors that will enhance working capital flow tothe manufacturing sector within the context of the structural adjustment programme.

CHAPTER 4

DATA ANALYSIS AND FINDINGS

5.0 INTRODUCTION

In this chapter we attempted to seek solutions to theresearch questions asked at the beginning of the study. In doing this, the data collected were arranged in such ways as to enable the application of appropriate statistical techniques of analysis. Our findings form the basis of the conclusions we shall draw in the next chapter.

5.1 DATA ANALYSIS

The analysis that will follow were designed to enable us test the acceptability or otherwise of the hypothesis put forward in chapter 3. Specifically, these are the relationship,=between business operating cycle investment in working capital. Investment in working capital and sales volume and raw material source and bank credit. The hypothesis are re-stated at theappropriate stages in the course of the analysis.

Other analysis conducted in this chapter relate to certain key questions in the questionnaire which are considered crucial in the discussion of working capital financing and management.

The techniques of analysis include the simple correlation coefficient, Mann-Whitney U-Test Kandall's coefficient of concordance, percentages and proportions.

5.2 THE SIMPLE CORRELATIONA ANALYSIS

The Simple Correlation analysis was employed to analyse the relationships between two sets of viz: Business Operating Cycle (BOC) AND Investment in Working Capital (IWC): AND sales Volume (SVM). The values of the correlation coefficient (r) range form -1 to +1. A magnitude of +1 implies that the variables are perfectly positively correlated while a magnitude of -1 implies perfect negative con correlation. A magnitude of r= 0 indicate zero or no correlation.

The analysis were carried out as shown in appendices C and D, and theresults summarised in a Table as shown below:

Table 4.1 Correlation matrix

	BOC	IWC	SVM
BOC	1.00	0.94	-
IWC	0.94	1.00	0.84
SVM	-	0.84	1.00

Table indicates high correlation of r=0.94 between business operating cycle and investment in working capital, and r=0.84 between

Investment in working capital and sales volume. Bother relationship are positive indicating that as the value of the independent variable increases, so does the value of the depedent variable increase although not perfectly.

These relationships are tested for significance using test formular stated below:

$$t = r \frac{\sqrt{n-2}}{\sqrt{1-r^2}} \quad n-2 \text{ degree of freedom}$$

Where r = Simple Coefficient

n = Number of Cases

n-2 = degree of freedom

The test will be conducted at t = .05

The Mann-Whitney Analysis the Mann-whitney U- test is a non parametric test based on rank order.

To enable this analysis to be conducted, companies with 60% or more local raw materials content were grouped as local and those with 60% or more foreign raw material content as foreign.

This analysis was aimed at testing whether source of raw material had any influence on the amount of credit granted by banks to manufacturing companies.

Table 4.2

Bank Credit and Sources of Raw Materials

S/No	Companies	Bank Credit Nm	Local Source Rank R_2	Foreign Source Rank R_2
1.	A	2	1.5	
2.	B	2		1.5
3.	C	3	3.5	
4.	D	3		3.5
5.	E	4	5.5	
6.	F	5		5.5
7.	G	5		8
8.	H	5		8
9.	I	5		8
10.	J	10		10
11.	K	12	11	
12.	L	17	12	
13.	M	20		13
14.	N	22		14
15.	O	32	15	
16.	P	37		16
17.	Q	42	17	
18.	R	74	18	
			83.5	87.5

$n_1 = 8, \quad n_2 = 10$

$$U_1 = n_1 \; n_2 + n_1 \; \frac{(n_1 + 1)}{2} - R_1$$

$$U_2 = \frac{n_1 n_2 + n_2 (n_2 + 1)}{2} - R_2$$

$$U_1 = 80 + \frac{8 (9)}{2} - 83.5 = 32.5$$

$$U_2 = 80 + \frac{10 (11)}{2} - 87.5 = 47.5$$

This result is tested in section 4.3 by comparing the lower U value with the value of U read from the table at $\alpha = .05$ where $n_1 = 8$ and $n_2 = 10$.

5.3 Kendall Coefficient of Concordance (w)

In determining the relative importance of different sources of working capital finance, the variables were ranked by respondents according to importance with 8 for the most important and 1 for the least important. The Kendall Coefficient of Concordance was then applied to these rankings to determine the degree fo Concordance as well as the relative important of each source.

Eight different sources of working capital finance were ranked by twenty firms. The data for the analysis is as presented in Table 5.1, where:

a = Overdraft
b = Bank shortterm loan
c = Deferred tax Payments
d = Invoice Discounting
e = Billsof exchange
f = Trade Credit
g = Factoring of Debts
h = Retained earnings

Ranking of sources of working capital

Table 5.1

S/NO	Company	a	b	c	d	e	f	g	h
1.	A	8	7	3	1	6	4	2	5
2.	B	7	4	3	1	5	6	2	8
3.	C	7	4	3	2	3	5	1	8
4	D	8	5	3	2	4	6	1	7
5.	E	7	8	3	2	4	5	1	6
6.	F	8	7	3	2	5	6	4	1
7.	G	8	6	2		5	4	1	3
8	H	4	6	3	2	5	8	1	7
9.	I	7	6	3	2	5	4	1	8
10.	J	8	7	4	3	1	5	2	6
11.	K	8	7	3	2	6	5	1	4
12.	L	8	7	3	2	4	5	1	6
13.	M	8	7	3	2	5	6	1	4
14.	N	7	8	6	3	4	5	2	1
15.	O	5	6	7	2	3	8	1	4
16.	P	8	7	3	2	5	6	1	4
17.	Q	7	6	4	2	3	5	1	8
18.	R	7	8	1	2	5	6	3	4
19.	S	7	6	3	2	4	5	1	8
20	T	5	4	6	2	3	7	1	8
		149	127	70	45	85	111	29	110

$$w \left(\frac{12 \quad J \quad R^2}{K \quad N(N^2 - 1)} \right) - \frac{3(N + 1)}{N - 1}$$

Where n = no of sources

k = no of companies

R_j = sum of the ranks of each source

W = Coefficient of Concordance

$$W = \frac{12(1492 * 1272 + 702 + 452 + 1112+2992+1102)-3(8+1)}{2^2 \quad 8(8^2 - 1)}$$

$$= 12 \quad \frac{(777742)}{201600} - \frac{27}{7}$$

$$= 4.63 - 4$$

$$= .63$$

This result is also tested in section 4.3 for signifance of concordance using the test statistic.

$S = (R_j - R_j)^2$, where

R_j = the sum of the ranks for each source of finance

R_j = mean of sum of ranks

5.4 **Other analyses**

(a) Question 3 of part II solicited information on the important sources utilised to raise funds to finance working capital prior to the structural adjustment period.

Question 4 of part II sought similar information during the structural adjustment period.

The responses which are summarised in Table 4.4 indicate that the same three major source were utilised during the periods but in different proportions.

Table 4.4

5.5 **MAJOR SOURCES OF WORKING CAPITAL FINANCE**

Source of Finance	Pre-SAP	During SAP
	%	%
Bank Overdraft	41	50
Short term Loan	27	24
Trade Credit	32	26
	100	100

During the structural adjustment programme, short term loans dropped from 27 per cent to 24 percent. This development can be explained by the cash squeeze experienced by banks during the SAP_period, thus forcing them to grant very short term credits by way of overdrafts. Also, trade credit during the SAP-period must have declined as a result of low liquidity already established in chaper 1. These findings also agree with Umoh (1987)

5.6 (b) **EFFECT OF SAP**

Question 5 and 6 part II sought information on the effect of the structural adjustment programme on the companies.

The responses indicate that to 78% of the companies, the effect of SAP is adverse. The critical areas of business affected by the situation is summarised below.

Table 4.5 Percentage Adverse Effect of SAP on Business Operations.

(a)	Raw Material	- 26
(b)	Foreign Exchange	- 22
(c)	Liquidity	- 17
(d)	Sales Volume	- 15
(e)	Debt Recovery	- 11
(f)	Obtaining Credit	- 9
		100

The adverse effect of the structural adjustment programme of raw materials and foreign exchange goes to further amplify the low plant capacity utilisation in the manufacturing sector.

5.7 (c) USE OF LONG TERM FUNDS

Question 7-10 solicited information on whether or not long term funds were raised during the SAP-period and how they were utilised. This was an attempt to answer the research question whether or not long term funds are diversted to working capital financing.

The responses showed that 10 or 50% of the sample did not raise long-term fund during the period of the remainder, 60% utilised their long term funds to execute thefollowing:

(a) Finance new profit

(b) Purchase fixed assets

The remaining 40% used their long term funds for both working capital and long term purposes as follows:

(a) Increase stock levels

(b) Pay off debts/taxes

(c) Increase liquidity

(d) Purchase fixed assets

(e) Finance new projects

Twenty percent (20) of the firms that raised long term funds utilised them entirely towards working capital purposes.

(d) In response to question 12, thefollowing information was obtained from our sample of 20 companies.

Action	No.of Companies	Proportion
(a) Reduce Produce price	2	0.10
(b) Lower inventory levels	11	0.55
(c) Chase debts more aggressively	19	0.95
(d) Slow down payments to suppliers	11	0.55
(e) Increase speed of stock turnover	15	0.75
(f) Grant cash discount	10	0.50
(g) Receive cash discount	6	0.30

This question aimed at discovering the survival strategies adopted by these firms in a period that has recorded the collapse of many firms. It could be seen that actions (b) to (e) are primarily aimd at reducing the operating cycle which we have earlier analysed to have a positive relationship with investment in working capital,

5.8 HYPOTHESIS TESTING

A hypothesis is tested in order to accept or reject a propostion. In this section we shall test thehypotheses made at the beginning of the study. Testing a hypothesis involves going through the following steps.

(1) Statement of the null and alternative hypothesis

(2) Identification ofthe test statistic and level of significance

(3) Determining the decision rule

(4) Computation of the test statistic

(5) Interpretation of the result

5.9 **The Simple Correlation Analysis Test**

Two relationships were tested using this method viz:

(a) The relationship between Business Operating Cycle and Investment in Working Capital.

(b) The relationship between Investment in Working Capital and Sales Volume.

We shall take these one after the other and shall denote the null hypothesis as H_o and the alternative hypothesis as H_1.

(a) H_o: There is no relationship between Business Operating Cycle and Investment in Working Capital.

(b) H_1: There is a positive relationship between Business Operating Cycle and Investment in Working Capital.

6.0 **Test Statistic**

Being a small sample, the students' t-test was used.

The t-test is defined as:

$$t = r \sqrt{\frac{n-2\ df}{1-r^2}}$$

Where r = correlation coefficient

n = number of firms

df = degree of freedom

6.1 **Decision rule**

The null hypothesis is rejected and thealternative hypothesis accepted if t-computed is greater or equal to the t-value from the table at 0.05 level of significance.

Computation

From the analysis in 4.2.1, the folowing results were obtained.

r' = .94

n = 20

df = 18

$$t = \frac{.94\sqrt{20-2}}{\sqrt{1-.94^2}} \quad \text{at 18 df}$$

$$= \frac{3.99}{.12}$$

$$= 33.25$$

The critical value from the t-table at .05 level with 18 degree of freedom is2.101 using a two failed test.

6.2 **Interpretation**

Since thecomputed t is greater than the t-value from the statistical table, we reject the null hypothesis and accept the alternative hypothesis that there is a positive relationship between business operating cycle and investment in working capital.

(b) H_o: There is no relationship between investment in Working Capital and Sales volume.

H_1: There is a positive relationship between Investment in working capital and Sales Volume.

COMPUTATION OF TEST STATISTIC

$$t = r\sqrt{\frac{n-2}{1-r^2}}$$

n-2 df

From Table 4.1, r = .84, n = 20, df = 18

$$t = .84\sqrt{\frac{18}{1-.84^2}}$$

$$= 29.66$$

Interpretation

The t-computed of 29.66 is again grater than the t-value from the table at .05 level which is 2.101. Thus, the null typpothesis is rejected in favour of the alternative which states that there is a positive relationship between the two variables.

6.3 **Mann-Whitney U-Test**

This test was designed to test whether raw material source has any influence on the amount of credit granted by banks to finance working capital.

H_0: There is no relationship between raw material source and bank credit for financing working capital.

H_1: There is a relationship between raw material source and bank credit for financing working capital.

The analysis of the date for this test carried out in 4.3. gave the U-computed values as:

$$U_1 = 32.5$$

$$U_2 = 47.5$$

The U-value from the table at .05 level with $n_1 = 8$ and $n_2 = 10$

Decision Rule

The null hypothesis is accepted if the computed value of S or X^2 is less than the critical value from the statistical table. In this case the value from the table is read at .05 confidence level where n = 8 and K = 20.

Computation

The sum of ranks are obtained from Table 4.3 where the analysis was carried out.

R_j	$\bar{R}_j$	$R_j - \bar{R}_j$	$(R_j - \bar{R}_j)^2$
149	90.75	58.25	3393
127	90.75	36.25	1314
80	90.75	-20.75	431
45	90.75	-45.75	2093
85	90.75	- 5.75	33
111	90.75	20.25	410
29	90.75	-61.75	3813
110	90.75	19.25	371
			11,858

$$S = \sum (R_j - \bar{R}_j)^2 = 11,858$$

$$X^2 = K(N - 1)W$$

$$= 20(8-1) \quad .63 \quad = 88.2$$

decision Rule

The null hypothesis is rejected if the lower U-computed is less than or equal to the U-value from the table.

Interpretation

Since the lower U-computed of 32.5 is greater than the U-value, of 17 from the table, the null hypothesis is accepted. This means that the source or raw material for the manufacturing process has no influence on the amount of credit granted by banks for working capital financing.

6.4 **kendall Coefficient of Concordance Test**

In order to test the agreement between the ranking of the various sources of working capital finace, the following null and alternative hypothesis were developed.

H_o: There is no concordance among the respondents' ranking of the sources of working capital finance.

H_1: There is concordance among the respondents' ranking of the various sources of working capital finance.

Test Statistic

The test statistic is defined as $S = (R_j - R_j)^2$, where R_j is the sum of the ranks for each source of finance.

An alternative test statistic is $X^2 = K(N-1)W$.

Interpretation

The results of the test can be presented and interpreted as follows:

Kendall Coefficient of Concordance Test at .05 Level of Confidence

K	N	W	S	X^2	From Table
20	8	.63	11855	88.2	28.869

It follows therefore that since X^2 as computed is 88.2, and greater than the X^2 value of 28.869 from the table, we reject the null hypothesis and accept the alternative hypothesis. This means that there is concordance among the respondents' ranking of the various sources of working capital finance. It also shows bank overdrafts as the most significant source of working capital finance which agrees with the findings in 4.2.4.

6.5 Summary

This chapter concerned itself with the analysis of data using the simple correlation coefficient, Mann-Whitney U-test, the Kendall VCoefficient of Concordance, percentages and proportions.

The hypotheses were also subjected to statistical tests such as the t-test, the U-test and the X^2test. All the tests were conducted at 0.05 level of confidence. The results were as follows:

Hypothesis I - This was tested using the t-test for the correlation coefficient. The null hypothesis was rejected in respect of the relationship between operating cycle and investment in working capital.

Hypothesis II - This was tested using the t-test as well. Again the null hypothesis was rejected as there was positive relationship between Investement in working capital and slae volume.

Hypothesis III - This hypothesis was tested using the U-test. The null hypothesis was accepted as there was no relationship between raw material source and bank credit for working capital finance.

The X^2 test was used to test the degree of concordance among respondents' ranking of different sources of working capital fiance. The test revealed that there was concordance in the rankings.

Our analysis revealed that bank overdraft remained the major source of working capital finance during the SAP- period.

The period shows a fall in the use of bank loans and retained earning s to finance working capital.

Seventy-eight percent of the respondents acknowledged that the effect of SAP was adverse to their business especially in the areas of raw material availablility, foreign exchange procurement and liquidity.

Probably arising from the inadequacy of working capital fund, 20% of the firms that raised long term capital utilised it to finance working capital needs.

Generally, firms pursued their debts more aggressively during the SAP-period and tried to increase speed of stock turnove. They also reduced inventory levels.

CHAPTER 5

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

This last chapter is devoted to discussing the study, drawing conclusion form the findings in the previous chapter, and offering some recommendations which will enhance working capital financing and hence plant capacity utilisation in the manufacturing sector.

7.0 DISCUSSION

In this study, our purpose was to under take an empirical survey of the manufacturing sector of the Nigerian economy with or view to findingmmeans of improving working capital flow to the sector. At the commercement of this study plant capacity utilisation was put at below forty percent by both the Manufactureers Association of Nigeria (MAN) and the Central Bank of Nigeria survey.

Through review of related literature a number of variables that could have influence on working capital needs and financing were identified. Derving from these, three hypotheses were formulated and data collected through questionnaires. Empirical analyses were carried out susing the coefficient of correlation, manh whitery U-test and kendell coefficient of concordance. The results of the analyses were tested usiing the + - test the U-test and X^2 at the 0.05 level of significance.

In our simple correlation analysis, we found that length of a business operating cycle has a positive linear relationship with the amount in Naira invested as working capital This analysis revealed on r = 0.94 which was tested and confirmed significant at x =.05. Our analysis also showed a coefficient of correlation of 0.84 between working capital investment and sales volume. A gain this realationship tested significant at x = 0.05

We examined the different sources of raising working capital finance during the period under study, it was clear that firms are still strongly dependent on Bank Credit and trade credit. In a distorted economy where Banks and suppliers themselves are facing severe cash squeeze, not much is expected from these sources.

Shortage of raw materials was identified sas the major adverse effect of the Structural Adjustment Programme on the manufacturing sector. This agrees with the findings of Nnanna (1990). In fact, the chairman of Flour Mills of Nigeria Limited stated in the companies 1990 published accounts that "the company was able to secure only 2160 tons of wheat at very high cost, this quantity representing less than one day's production at full capacity utilisation".

The Structural Adjustment Programme (SAP) has inflicted serious constraints on the manufacturing sector. Seventy eight percent of the sample

reported adverse effects of SAP on their operations with emphasis on raw materials, foreign exchange and liquidity. It is noteworthy here despite government call for sourcing of raw material locally fifty six (56%) percent of the sample studied still depend largely on foreign raw materials.

7.1 CONCLUSION

In conclusion, we found answers to our research questions in chapter four (4) as follows:

a. There is a positive and significant relationship between business operating cycle and working capital investment. It follows that during tight-economic conditions such as imposed by the structural adjustment programme, firms could reduce their working capital needs per cycle by taking actions that would shorten the cycle itself.

b. There is also a positive and significant relationship between investment in working capital and sales volume. We therefore conclude that meansures that would increase production and sales.
Thiscould go along way to boast the recovery process in the economy.

c. Source of raw material has no influence on Bank lending to the manufacturing sector. This indicates a flow in policy becasue since government is laying emphasis on local sourcing of raw materials, it should equally

encourage the Banks to assist these firms realise this dream.

d. Viable alternatives were found to bank and trade credit as sources of working capital finance. These include factoring of dbts and stock financing which are yet to be fully exploited. In our analysis of available sources of finance using the kendall coefficient of concordance, we found that factoring of debts was the least utilised source. With the rapid spiringing up of financial houses in the past decade this avenue becomes more relevant especially as it relate directly to sales.

e. It has been established that long term funds are being diverted wholly to financing working capital needs. This poses grave danger to the industry because apart from the higher cost of long term capital, it may be impossible to replace the fixed assets when due.

7.2 RECOMMENDATIONS

Based on our findings and conclusion, we make the following recommendations which we believe will enhance working capital flow to the manufacturing sector. The anticipated effect of the recommendations are increase capacity utilisation and a boast to the economic recovery process.

1. The firms should also strive to reduce their operating cycles. A shorter operating cycle will release funds tied down in inventory and work in progress. The funds so released will form additional cycles and so raise production levels.
   a. Reducing debtors by quicker collection period.
   b. Reduction of inventory levels.
   c. Shortening of production period.
   d. Repid turnover of finished goods.
   f. Quicker decision via computerisation.
2. Firms should explore avenues other than banks in their bid to raise funds to finance working capital needs. In a situation of serious cash squeeze such as during the SAP-period, cost of such fund is high. It is hereby recommended that more firms should consider factoring of their book debts to finance houses. This will improve their liquidity and also shorten their operating cycles. Also, it is envisage that the cost of factoring will be lower than cost of borrowed funds.
3. The government through the Central Bank of Nigeria should set up an Industrial Credit Guarantee Scheme so as to in operate like Agricultural Credit Guarantee Scheme so as to increase Commercial Bank loans and advances to these large manufacturing firms which are not cared for by the national-economic reconstruction fund. Commercial Bank should be allowed to participate in greater dimension in the

manufacturing sector by increasing their equity participation in such ventures.

The prevailing situation whereby Commercial Banks are allowed a maximum interest of 10% in selected industrial ventures is inadequate to turn the economy round. If Banks have interest in manufacturing ventures, it would be easier for such firms to raise short term loans and over draft for working capital financing.

5. The government should take a study of the raw material needs of the sector so as to identify those that really do not have sufficient local substitues. The Raw Material and Development Council has already acquired sufficient data in this direction. This will enable government consider relief measures to such firms that necessarily have to depend on foreign sources in the next decade.

   Such reliefs could be in the area of trarffs and foreign exchange. Government should also assist the Raw Material Research and Development Council released its objectives in time.

6. The Nigerian Stock Exchange should take urgent steps to discourage the diversion of long term funds to working capital financing. This is because in the long run it will be difficult to replace the fixed assets and this may lead to the collapse of such firms. It is better that a firm maintains low level of production than not to produce at all in future.

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APPENDIX A

Faculty of Administration,
Ahmadu Bello University
Zaria.

Dear Sir/Madam,

QUESTIONNAIRE ON WORKING CAPITAL FINANCING

A study is being carried out on working Capital Financing under the Structural Adjustment Progremme as a part of the requirements for the award of MBA degree in Finance of Ahmadu Bello University Zaria.

The essence of the study is to establish, among other things, current treds in working capital financing and management.

You are please requested to respond as sincerely as possible to the questions. The exercise is strictly academeic and information provide will be treated confidentially.

Thanks for your co-operation

Yours faithfully

A.M. Lawal.

PART 1

1. What product(s) does your company manufacture?

   (a) ---------- (b) ----------

   (c) ---------- (d) ----------

2. How long have you been in business in Nigeria?

   ---------- years.

3. How many branches do you have in Nigeria?

   ----

4. Where do you source your raw materials from?

   Place the percentage as applicable.

   Local Source%

   Foreign

   Both local and foreign

   Local

   Foreign

5. How would you classify your company product(s)?

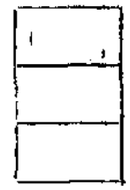
   Please tick as applicable

   Consumer good(s)

   Capital good(s)

   Others.

6. Do you have a parent or subsidary company abroad?

yes. 

No.

7. When was your company quoted on the Nigerian Stock Exchange?

---

8. What is your full production capacity per year?

---

9. What is your current product capacity per year?

---

10. What is the approximate number of your

a. Suppliers? ----------

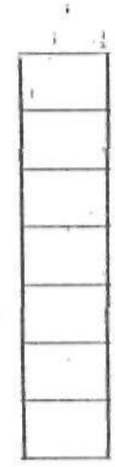
b. Customers? ----------

PART II

1. Please supply the information required below as at of each year under reference using your published Accounts.

	1980 Nm	1981 Nm	1982 NM	1983 Nm	1984 Nm	1985 Nm	1986 Nm	1987 Nm	1988 Nm	1989 Nm
(a) Raw Material Stock										
(b) Work-In-Progress Stock										
(c) Finished goodsStock										
(d) Debtors										
(e) Creditors: Banks Others										
(f) Sales for the Year										
(g) Purchase for the Year										
(h) Cost of gooods sold in the year										
(i) Total Fixed Assets										
(j) Total Current Assets										
(k) Total Current Liabilities										
(i) Earnings per share										
(m) Dividend per share										

2. Rank the following sources of financing your working capital only if you make use of the source (in order of importance with highest = 8 and least =1).



a. Overdraft

b. Bank short term loan

c. Deferred Tax payments

d. Invoice Discounting

e. Bills of Exchange

f. Trade Credit

g. Factoring of Debits

(h) Internally generated funds i.e. profit

3. Which of the above sources did your company use between 1980 and 1985? Begin with the most important.

a	e
b	f
c	g
d	h

4. Which of the above sources did your company afford to utilise during the SAP period - 1986 to 1990 (begin with the most important).

a e

b f

c g

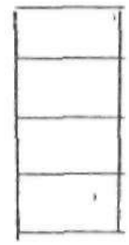
d h

5. Generally, what is the effect of SAP on your company?

Favourable

Adverse

No effect.



6. If adverse, what aspect of your business has the effect been critical?
(Tick as applicable)

a. Liquidity

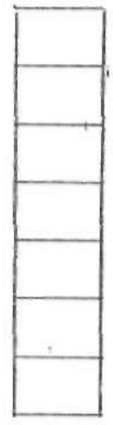
b. Raw material

c. Sales

d. Debts recovery

e. Foreign exchange

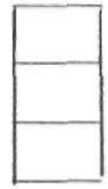
f. Obtaining Credit



7. Have you had cause to borrow on long term basis between 1986 and 1990?

Yes

No.



8. If yes, how was the loan applied? (Tick as applicabl



To increase stock levels

To payoff debts/taxes

To increase liquidity

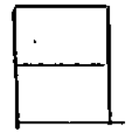
To purchase Fixed Assets

To pay staff salaries

To finance new project(s)

Other (specify)

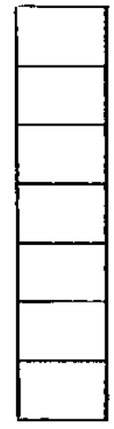
9. Did your company issue additional shares (not - bonus) between the period 1986 and 1990?



Yes

No.

10. If yes, how was the fund applied? (Tick as applicable)



To increase stock levels

To pay off debts/taxes

To increase liquidity

To purchase Fixed Assets

To pay staff salaries

To finance new projects

Other (specify)

II. **Please provide the** following information from your Annual Balance Sheets.

	1980 Nm	1981 Nm	1982 Nm	1983 Nm	1984 Nm	1985 Nm	1986 Nm	1987 Nm	1988 Nm	1989 Nm
(a) Equity Capital										
(b) Long Term Loan- Bank										
Others										
(c) Debentures										
(d) Overdrafts.										

12. Did you carry out the following actions between 1986 and 1990?

(Circle as applicable).

(a)	Reduce price of product	Yes	No
(b)	Lower inventory levels	Yes	No
(c)	Chase debts more aggressively	Yes	No
(d)	Slow down payments to suppliers	Yes	No
(e)	Increase speed of stock turnover	Yes	No
(f)	Grant cash discounts	Yes	No
(g)	Receive cash discounts	Yes	No

APPENDIX B

LIST OF COMPANIES STUDIED

(1) Afprint Nig. Limited

(2) Beecham Limited

(3) Berger Paints Nigeria Ltd

(4) CAPPLC

(5) PZ Industries

(6) Sterling Products Nig. Ltd

(7) Nigerian Textile Mills

(8) NESTLE Food Plc

(9) Nigerian Breweries

(10) Hoechst

(11) Dunlop Nigeria Industries Plc

(12) Nigerian Wire Industry Plc

(13) International Paints W.A. Plc

(14) Empee Textiles

(15) Flour Mills of Nigeria Limited

(16) Guineas Plc.

(17) Nigerian Ropes Plc

(18) Pharma Delco Limited

(19) Studio Press Nigerian Limited

(20) Van Leer Containers Ltd.

APPENDIX C

Company	Plant capacity Utilisation (%)	Raw Material Source	Operating Cycle	Interest inworking Capital	Sales Volume	Bank Credit
Company						
1	82	L	172	145	188	3
2	30	L	138	17	52	4
3	30	L	166	57	92	32
4	20	L	100	57	78	12
5	60	E	100	839	1158	37
6	33	F	152	20	50	-
7	90	F	196	36	73	1
8	50	F	114	59	196	20
9	60	L	100	297	410	42
10	49	F	199	91	286	22
11	60	F	194	100	138	5
12	100	L	150	2	9	2
13	17	F	111	23	29	11
14	70	L	144	19	58	17
15	10	L	100	218	301	4
16	80	L	159	122	462	74
17	29	F	191	9	15	2
18	41	F	168	59	196	20
19	44	F	187	9	19	3
20	20	F	187	28	31	5

APPENDIX D

Computation of Correlation Coefficient (r) between Business Operating Cycle (BOC) and Investment in Working Capital (IWC).

BOC (days)	BOC (x)	FREQ - 0	IWC (y) Nm	Fx (000)	Fy (000)	Fxy (000)	Fx^2 (000)	Fy^2 (000)
100-120	110	6	1493	.66	8.958	2.105	.073	13.3743
120-140	130	1	17	.13	.017	.002	.017	.0003
140-160	150	4	163	.60	.625	.098	.090	.1063
160-180	170	3	209	.51	.627	.107	.087	.1310
180-200	190	66	273	1.14	1.638	.311	.217	.4471
		20	2155	3.04	11.892	2.623	.484	14.059

$$r = \frac{n \sum fxy - \sum fx \sum fy}{\sqrt{[n \sum fx^2 - (\sum fx)^2][n \sum fy^2 - (\sum fy)^2}}$$

$$= \frac{20x2.623 - 3.76x11.892}{\sqrt{[130x.484 - 15.21][20x14.059 - 141.42]}}$$

$$= \frac{7.39}{\sqrt{61.42}}$$

$$= \frac{7.39}{7.84}$$

$$= .94$$

APPENDIX E

Computation of Correlation Coefficient (r) Between Investment in Working Capital (IWC) and Sales Volume (SVM).

IWC	IWC (x)	Freq	Svm (y)	Fx	Fy	Fxy	Fx^2	Fy^2
0-20	10	6	156	60	936	9360	600	146016
20-40	30	4	193	120	772	23160	3600	148996
40-60	50	3	439	150	1317	65850	7500	578163
60-80	70	0	-	-	0	0	0	0
80-100	90	1	286	90	286	25740	8100	81796
100-120	130	1	462	130	462	60060	16900	213444
Over-140	150	4	2057	600	8228	1234200	90000	1692499
		20		1260	12139	1433550	138800	18,112,455

÷9 100 : 1.26,12.14,1433.55,138.8

18112.46

$$r = \frac{n\Sigma fxy - \Sigma fxfy}{\sqrt{[n\Sigma fx^2 - (\Sigma fx)^2][m\Sigma fy^2 - (\Sigma fy)2}}$$

$$= \frac{20x1433.55-15.30}{\sqrt{[20x138.8-1.59][20x18112.46-147.38]}}$$

$$= 28655.7$$

$$\sqrt{2774.41x362101.82}$$

$$= .84$$