EFFECTIVE WORKING CAPITAL MANAGEMENT

IN THE TEXTILE INDUSTRY:

(A CASE STUDY OF AREWA TEXTILE PLC)

BY

FELIX EDEWOR AIMUAN
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DECLARATION

I hereby declare that this project is original and a product of my study. All materials used have been acknowledged accordingly in the references.

SIGNATURE: _____ DATE: 29/11/99

FELIX E. AIMUAN

CERTIFICATION

This project report entitled, **EFFECTIVE WORKING CAPITAL MANAGEMENT IN THE TEXTILE INDUSTRY: A CASE STUDY OF AREWA TEXTILE PLC** by FELIX EDEWOR AIMUAN, meets the regulations governing the award of the degree of Master of Business Administration (MBA) of Ahmadu Bello University, Zaria and is approved for its contribution to knowledge and literary presentation.

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MEMBER SUPERVISORY COMMITTEE	DATE
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DEAN POST GRADATE SCHOOL	DATE

DEDICATION

This project is dedicated to my late grand mother, MADAM AIGBONA ENERIBHOLO who God used to mould my life and those who never had the opportunity to develop themselves academically.

ACKNOWLEDGMENT

It is not of him that wills nor of him that runs. It is of God that shows mercies. This project will not have been possible without the grace of God. To God, therefore, I am greatly indebted for giving me the will, the strength and the ability to write this project.

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ABSTRACT

Crucial to the survival of a company is the efficient and effective management of the resources at its disposal during any given period and among the most important of these resources is working capital.

Working capital management is based mainly on the concept of liquidity. Liquidity is the ability to realise value in money, taking into consideration the time necessary to convert an asset into money and the degree of certainty of the price to be realised for the asset. Liquidity management helps to avoid the probability of insolvency. It means proper sources of finance bearing in mind costs and benefits. The essence of liquidity management has been set out as safety, liquidity and profitability to which can now be added the management of risk.

Sound financial management, therefore, is represented by the effectiveness with which the organisation has been able to manage the components of the receivables, marketable securities and cash and current liabilities. These components need attention to generate operation efficiencies as represented by greater profitability.

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CHAPTER ONE

1.1 AN OVERVIEW OF WORKING CAPITAL MANAGEMENT

Crucial to the survival of an enterprise is the efficient and effective management of the resources at its disposal during any given period and among the most important of these resources is the working capital.

1.1.1 THE CONCEPT OF WORKING CAPITAL

There has been differing definitions of working capital among scholars. Brealay and Myers (1981:547) define working capital simply as short term or current assets and liabilities. But Weston and Brigham (1979:107) on the other hand, view it as "a firm's investment in short term assets". This definition omitted current liabilities which are important components of the working capital. Current liabilities represent short term financial obligations that have to be met out of available short term (or current) assets.

Working capital represents the excess of current assets over current liabilities. Current assets are assets that can be converted into cash within one year. Stocks are needed for continuous production or supply to customers. Debtors arise as a result of credit sales while creditors arise as a result of credit purchases. No business operates in isolation and these days, it is not possible to transact all business activities on cash and carry basis.

A business buys goods on credit and pays wages in arrears and it sells goods on credit to customers - individuals or business entities. These transactions necessitate the provision of funds while settlement is awaited, and creditors conversely supply finance until their settlement. It will be proper to say then that working capital means the components that determine the continuity of the organisation e.g. cash, marketable securities, debtors and stock.

1.1.2 MANAGEMENT OF WORKING CAPITAL

It is a misnomer to talk of managing working capital. It is the components of working capital that are managed. Working capital management is not only concerned with the operation and control of working capital but with how it is financed. When we talk of investment in assets and financing the general focus has always been on fixed assets and long term financing. Little or no attention was paid to the components of working capital. A split has now evolved between consideration of current assets - short term financing. Current assets are assets normally converted into cash within one year.

Working capital management can be described as involving the administration of these assets namely cash and marketable securities, debtors and stocks and the administration of current liabilities. On the other hand, administration of fixed assets (assets normally not converted to cash within one year) is usually considered to fall within the realm of capital budgeting whereas the administration of long term financing involves capital structure considerations. The introduction of financing into the working capital concept is significant in

identifying the sources of its financing. Working capital can be financed by long and short term loans, shareholders' funds or through credit facilities. Working capital can be viewed in general term as gross working capital as the totality of current assets and net working capital as the excess of current assets over current liabilities. If net working capital is defined as the excess of current assets over current liabilities a reasonable (logical) conclusion is that net working capital represents the portion of short term assets that is financed from medium - and - long term sources. But if current assets equal current liabilities, it means that there is no net working capital. Total short term resources just equal total short term sources of finance as represented by current liabilities

1.2 STATEMENT OF THE PROBLEM

The split between fixed capital and working capital is very unfortunate. It has tended to cloud the valuation of the firm as a whole. A typical finance manager is saddled with the responsibility of the day-to-day management of current assets and liabilities. Working capital management in any business enterprise is intended to solve a number of problems. One of such problems is the determination of the size of financial resources that would be invested in different forms of current assets - current asset structure problem. The second problem is how these different terms of current assets should be financed - current asset financing problem. The final problem relates to

relative composition of current and non-current assets in the asset structure - current/non-current asset composition problems.

The differences in the nature of current assets and fixed assets are always used to justify the separation in treatment of current and fixed assets. Fixed assets involve the commitment of funds to specific asset over an extended period of time during which the asset is thought to have limited marketability. On the other hand, current assets are often viewed as a continuum of possible investment levels as opposed to investment in a specified accounts receivables or inventory.

A study of this nature would have entailed going to the basics of finance but the time required for submission of the study and lack of finance have placed some constraints on a very detailed study. Added to the above constraints, is the non availability of comprehensive materials on topics like the implication of the devaluation of the Naira on working capital management covered in chapter two. We have to resort to the old biblical advice of precept upon precept, line upon line, a little here and a little there, to be able to come up with that section.

1.3 PURPOSE AND SIGNIFICANCE OF THE STUDY

Often times, very little attention is paid to the management of the components of working capital and where attention is paid at all, some components are emphasised at the expense of others. This has resulted in the loss of significant profits. In the same vein, some companies are either under trading or over trading without knowing it. A company at either of the extremes cannot be said to be financially healthy. A study of this nature will serve as an eye opener to companies in the handling of their working capital. Profitability is affected by the level of working capital.

1.4 SCOPE OF THE STUDY

Although the study has the textile industry in view, the focus was on four major textile companies in Kaduna with emphasis on Arewa Textiles Plc. The study covered the accounting periods of 1990 to 1995. The annual reports and accounts of the company were used.

1.5 LIMITATIONS OF THE STUDY

In the process of undertaking this study, various limitations were encountered some of which are:

(I) Time: The time for the submission of this project was very limited as a project of this nature needs time and attention to achieve a meaningful result.

(ii) Finance: There is no meaningful thing we do today that does not require finance. So this study is not an exemption. The economic downturn in the country has made easy access to finance a difficult task. This therefore, limited the ability of this researcher in collecting the needed data and information.

(iii) The Nature of the Study: This research is focused on an industry that is not a very familiar terrain. It is unique with its peculiarities. Time has to be taken to learn a bit of the operating system of the company used as a case study.

(iv) Response From Respondents: Getting timely responses from the respondents was not an easy task. Several trips had to be made to some of these respondents. In an attempt not to give out vital information about their organisation, some respondents were not forthcoming especially during personal interviews.

(v) Lack of Necessary Documents (Reports): As old as the textile industry is in Nigeria today, one would have thought that journals and/or magazines on the industry will be readily available. But this is not the case. We have to resort to examining the annual accounts and report of the individual companies which was cumbersome.

1.6 PLAN OF THE STUDY

The project is divided into five chapters. Chapter one takes a cursory look at the concept of working capital. It considers the statement of the problem, the

purpose and significance of the study, the scope, limitations and place of the study and the definitions of terms. The chapter ended with the optimum level of working capital.

Chapter two focuses on literature review. The chapter looks at the components of working capital, cash planning and liquidity control and the implication of the devaluation of the naira on working capital management.

Chapter three considers research methodology, accounting for the sources of data, both primary and secondary data and method of collection.

Chapter four is dedicated to data presentation and analysis, focusing on the working capital management in Arewa Textiles Plc (1990 to 1995), historical background of the company and financial profile of the company for the period considered.

Chapter five contains summary, conclusion and recommendations of the study.

1.7 DEFINITION OF TERMS/CONCEPTS

1.	DEVALUATION	It is a deliberate step taken to lower the value of a local currency in exchange for other nations' currencies.
2.	EXCHANGE RATE	This refers to the rate at which the local currency exchanges for other currencies.
3.	HEDGING	This is making the financing maturity of an asset being financed to follow its cashflow characteristics.
4.	OVERTRADING	This means over stretching the resources beyond the elastic point.
5.	PRECAUTIONARY MOTIVE	It refers to the need to hold cash or stock to meet any contingencies in future.
6.	SPECULATIVE MOTIVE	To hold cash or stock to take advantage of opportunities for making profit as they arise in future.
7.	STOCK OUT	It means to run out of stock for production or for sale to customers.
8.	TRANSACTION MOTIVE	To hold cash or stock in the ordinary course of business by a firm.
9.	UNDER TRADING	This is a situation where a company is not making full of use of its resources.

1.8 OPTIMUM LEVEL OF WORKING CAPITAL

The level of working capital affects profitability. Management must therefore balance the requirement for a higher Return On Capital Employed (ROCE) by increasing short term debts to finance current assets against the risk of insolvency. The decision as to how working capital should be financed is therefore likely to vary with management's attitude towards risk.

It may be meaningless to separate the various components of working capital management from the more fundamental decisions of investment and financing. In practice, we have seen companies separate working capital management from other aspect of financial management. In recent years, sophisticated models have been developed to help determine the acceptable levels of cash, stock and debtors management. By this, the benefits associated with a particular level of current asset are balanced against the risk adjusted cost of maintaining it. While the models provide efficient decision rules, virtually all of them optimize in a partial equilibrium sense. It is necessary to understand current asset and liability decisions in the light of the overall valuation of the firm. The decisions reached in these areas determine the amount of working capital the firm maintains.

Bank and cash balances are needed to meet the lag in payment which occurs between the expense incurred in purchasing and the payment received for sales. Bank loans or overdraft may be required where there is insufficient cash available. Current liabilities are often a cheap source of finance (e.g.

creditors and amount owing on taxation do not usually carry any interest cost and overdraft interest is an allowable charge for tax purpose). A company may decide that in a bid to make higher profits, it is worth accepting the risk of insolvency by increasing current liabilities to a high level (e.g. by taking the maximum credit possible from suppliers).

To be able to determine the financial health of an enterprise, the following liquidity ratios have to be computed.

1.8.1 CURRENT RATIO

This measures the relationship between current assets and current liabilities. A ratio of 2:1 is generally accepted as being ideal. This shows that one half of current assets should be financed by long term funds. But in practice, the ratio can be varied, depending on the circumstances of an individual company or organisation.

1.8.2 QUICK OR ACID TEST RATIO

To arrive at this ratio, all stocks are eliminated from current assets. The ratio measures the ability of a company to settle its debts as they fall due and a ratio of 1:1 is considered healthy enough for an organisation.

The optimum level is that level of working capital which avoid both over-capitalization and under-capitalization. This level depicts extreme cases of excess working capital or inadequate working capital.

1.9 OVER TRADING (UNDER CAPITALIZATION)

A company is said to be over trading or under capitalised when it tries to conduct a volume of business over and above that for which it is financially equipped to do. It means the resources of the company have been stretched beyond the elastic point. This can be extremely dangerous in the long run for the company. Essentially over-trading or under capitalization results in short term borrowings being used to finance long term investments whether in fixed or current assets (stock).

Mismanagement does not only occur when funds are fraudulently withdrawn but when funds are invested wrongly too. This was the problem finance houses had which led to their demise. There is no doubt that this development will create a liquidity problem and the company had used up all its day to day expenses (e.g. wage creditors). The situation is likely to lead to losses (Bank overdraft charges becoming very high) and in extreme create problems for management in finding cash to meet its financial commitments.

1.9.1 SYMPTOMS OF OVERTRADING

Some features listed below are the symptoms of overtrading or under capitalization.

1. A poor current and quick ratios caused by:

    a) Excessive creditors or bank overdrafts.

b) High stock levels (the business having acquired large amounts of stock on credit or by increasing its overdraft in anticipation of an increase in production and sales).

2) A high stock to net current assets ratio.

3) Bank overdraft consistently at the limit.

4) New fixed assets on hire purchase.

5) Fall in profit margin as a result of cash discounts given to debtors in order to reduce the collection period.

6) Loss of trade and cash discounts for always exceeding the credit period given by trade creditors.

1.9.2 SOLUTION TO OVER TRADING

1. Increased earnings retention and consequently reduction in dividends.
2. Issue of long term capital -shares and debentures.
3. Acquisition of assets to meet company's requirements.
4. Efficient working capital management

1.10 UNDER TRADING OR OVER CAPITALIZATION

Conversely, a company could be over capitalised or could be under trading. This is a situation when a company is not making full use of its resources. The amount of capital employed in the business is too great for the volume of trading being undertaken hence there is idle capacity.

1.10.1 SYMPTOMS OF UNDER TRADING

A company whose resources are under utilized will have the following symptoms:

1) There will be excessive stocks and debtors.
2) There will be idle cash which would have been invested either in short term securities or long term investment.
3) Idle machine capacity cannot be ruled out.
4) A lower return on capital employed than expected
5) Long term funds unnecessarily tied up instead of being invested elsewhere to earn interests.
6) Raising funds without regard to the scale of production and the amount of working capital employed.
7) Inefficient working capital management such that working capital carried is in excess of the company's requirements.

1.10.2 SOLUTION TO UNDER TRADING

1. Assets not required should be sold
2. Redemption of long term capital-debentures, preference share capital etc.
3. Efficient working capital management
4. Declaration of higher dividends as to reduce cash available and reduce rate of earnings retention.

5. Diversification of production/market strategies.

Over capitalization with respect to working capital should not exist at all if there is an efficient management. The warning signals of excessive working capital would be poor accounting ratios.

A company should try to avoid the two extreme positions discussed above and the following ratios can assist in judging whether the investment in working capital is reasonable or not.

a) **Sales/Working Capital**: The volume of sales as in multiple of the working capital investment should indicate whether in comparison with past years or with similar companies, the total volume of working capital is too high.

b) **Liquidity Ratio**: A current ratio in excess of 2:1 or a quick ratio in excess of 1:1 may indicate over investment in working capital.

c) **Turnover Periods** (Working capital cycle): The amount tied up in working capital is equal to the value of raw materials, work in progress, finished goods and debtors less creditors. This will affect directly the liquidity of the business. The operating cycle may be expressed as a period of time.

i) Raw material stocks are obtained from suppliers;

ii) Eventually the trade creditors are paid and cash is therefore paid

out.

iii) Raw materials are held in stock until they are issued to production (work in progress). At this time, additional creditors (for labour and other expenses) may be incurred.

iv) On completion of production, the finished goods are held in stock until sold perhaps on credit.

v) Cash is received, eventually, when the debt is collected.

The operating cycle or working capital cycle is, therefore, the period between the payment of cash to creditors (cash out) and the receipt of cash from debtors (cash in). The period is expressed in days, weeks or months. Excessive turnover periods for stock and debtors or a low period of credit taken from suppliers would indicate whether the volume of stocks or debtors is unnecessarily high or the volume of creditors is too low.

The turnover periods may be calculated as follows:

I Raw Material Stock Turnover:

$$\frac{\text{Average Raw Material Stock}}{\text{Purchase Per Annum}} \times 365$$

ii Work in Progress Stock Turnover:

$$\frac{\text{Average Work in Progress}}{\text{Cost of Production per Annum}} \times 365$$

iii Finished Goods Stock Turnover:

$$\frac{\text{Average Stock of Finished Goods}}{\text{Cost of Sales Per Annum}} \times 365$$

iv Debtors Turnover Period

$$\frac{\text{Average Debtors}}{\text{Sales Per Annum}} \times 365$$

v Creditors Turnover Period

$$\frac{\text{Average Trade Creditors}}{\text{Credit Purchase Per Annum}} \times 365$$

As the turnover periods for stocks and debtors get longer and as payment period to creditors becomes shorter:

a) the operating cycle will lengthen

b) the investment in working capital will increase.

A knowledge of the operating cycle would also help management in cash budgeting and also financial planning especially where sales and production are subject to seasonal variations.

1.11 WORKING CAPITAL ANALYSIS

A change (increase or decrease) in working capital may result from:

a) A change in the level of activity or volume of business of an organisation and sales is normally used as a yardstick.

b) A change in operating cycle. The proportion of change in working capital due to a change in sales is expected since additional working capital must be used to finance an increase in sales (and a proportionate increase is assumed). On the other hand, the proportion of change in working capital resulting from a change (increase or decrease) in operating cycle is normally attributed to management (inefficient or efficient of working capital).

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

Current assets include cash, marketable securities, receivables and inventories. These assets allow the firm to operate from day to day, to pay employees, provide credit to customers and to ensure that goods are available for production or sales. Current assets make up more than 40% of the average firm's total assets, hence the need for proper management of current assets to achieve the firm's long term financial health.

The decision on working capital affects the shareholders' wealth just the same way the decision on capital investment affects their wealth. The decision on working capital depends on the same logic as other financial decisions. The following questions are very pertinent in working capital management:

- How should cash surpluses be invested?
- How should the firm grant credit or increase credit to customers?
- What level of stock should the firm maintain?
- What are the benefits and costs of holding too much or too little stock?
- Should the firm take advantage of cash discount offered by its suppliers?
- What type of short term financing should the firm use (Bank loan or supplier credit)?.

Managing a firm's working capital in essence is managing the firm's investment in current assets. We are mainly concerned with managing the firm's liquidity which entail managing two related aspects of the firm's operations.

- Investment in current assets
- Use of short term or current liabilities.

2.1.1 MANAGING CURRENT ASSETS

The greater a firm's investment in current assets, the greater its liquidity. In order to increase its liquidity, a firm may decide to invest additional funds in cash or marketable securities. Such decision involves a trade off, since such assets earn little or no return. The firm thus finds that it can reduce its risk of illiquidity only by reducing its overall return on invested funds.

Investing in current assets and particularly in marketable securities, does have a favourable effect on liquidity, but it also has an unfavourable effect on the firm's rate of return earned on invested funds. The risk-return trade off involved in holding more cash and marketable securities, therefore, is one of added liquidity versus reduced profitability.

2.1.2 MANAGING CURRENT LIABILITIES

The second operation of the firm that determine its net working capital relates to the use of current versus long term debt. The firm also faces a risk-return trade off. All things being equal, the greater the firm's reliance on short term debt or current liabilities in financing its assets investments, the lower will be its liquidity. On the other hand, the use of current liabilities offers some very real advantage in that they can be less costly than long term financing and they provide the firm with a flexible means of financing its fluctuating needs for assets.

2.1.3 ADVANTAGES OF CURRENT LIABILITIES

1. **Flexibility:**

   Current liabilities offer the firm a flexible source of financing. They can be used to match the timing of a firm's needs for short term financing. For instance, a firm may need funds for a three month period during each year to finance a seasonal expansion in stock for which a three month loan can provide substantial cost savings over a long term loan (even if the interest rate on short term financing is higher). But the use of long term debt in this circumstance means borrowing for the entire year rather than for the period when the funds are needed, which increases the amount of interest the firm must pay.

2. **Interest Cost**

In general terms, interest rates on short term debt are lower than on long term debt for a given borrower. This relationship is referred to as the term structure of interest rates. This is the relationship between a debt security's rate until the debt matures. It is also known as the yield to maturity. The term structure, reflects observed rates or yields on similar securities, except for the length of time until maturity at a particular moment in time. The term reflects the rates of interest applicable to a given borrower at a particular point in time. It will not, for instance describe the rates of interest available to another borrower or even those applicable to the same borrower at a different point in time.

2.1.4 DISADVANTAGES OF CURRENT LIABILITIES

A firm is subjected to a greater risk of illiquidity when it uses current liabilities or short term debt as opposed to long term debt for two reasons.

a) Short term debt due to its very nature, must be repaid or rolled over more often, and so it increases the possibility that the firm's financial condition might deteriorate to a point where the needed funds might not be available.

b) There is the uncertainty of interest costs from year to year. A firm borrowing, for example, during a six month period each year to finance a seasonal expansion in its current assets might incur a different rate of interest each year. This rate reflects the current rate of interest at the time of the loan, as well as the lender's perception of the firm's riskiness. If fixed rate long term debt were used, the interest cost would be known for the entire period of the loan agreement.

A firm can reduce its risk of illiquidity through the use of long term debt at the expense of a reduction in its return on invested funds. The risk-return trade off involves an increased risk of illiquidity versus increased profitability.

2.1.5 APPROPRIATE LEVEL OF WORKING CAPITAL

Managing a firm's net working capital (its liquidity) has been shown to involve simultaneous and interrelated decisions regarding investment in current assets and use of current liabilities. Interestingly, a guiding principle exists that can be used as a benchmark for the firm's working capital policies. This is the hedging principle or principle of self-liquidating debt. This principle provides a guide to the maintenance of a level of liquidity sufficient for a firm to meet its maturing obligations on time.

2.1.6 HEDGING PRINCIPLE

The hedging principle is one possible rule of the thumb for guiding a firm's debt maturity financing decisions. The principle states that financing maturity should follow the cash-flow producing characteristics of the asset being financed. Simply put, the hedging principle involves matching the cashflow generating characteristics of an asset with the maturity of the source of financing used to finance its acquisition. For example, a seasonal expansion in inventories, should be financed with a short term loan or current liability. The rationale underlying the rule is that funds are needed for a limited period of time, and when that time has passed, the cash needed to repay the loan will be generated by the sale of the extra inventory items. Obtaining the needed funds from a long term source (longer than one year) would mean that the firm would still have the funds after the inventories they help to finance had been sold. This would mean the firm having excess liquidity which it will either hold in cash or invest in low-yield marketable securities until when the seasonal increase in inventories occurs again and the funds are needed. This would result in an overall lowering of the firm's profits. When hedging principle is followed, the firm's debt will be self-liquidating because the assets being financed will generate sufficient cash to retire the debt as it falls due.

KASHIM IBRAHIM

2.2 MANAGEMENT OF CASH AND MARKETABLE SECURITIES

The importance of cash to an organisation cannot be over emphasized. As blood is to the human life so is cash to business operation. Cash refers to the currency and coins a firm has on hand in petty cash drawers, in cash register (tills), or in current account at the various commercial banks.

Cash is the basic input needed to keep the business running on a continuous basis. It is also the ultimate output expected to be realized by selling the goods and services provided by an organisation. Cash shortage will disrupt the firm's operations while excess cash will simply mean holding idle cash which has a cost and which is not contributing anything towards the firm's profitability. An enterprise should balance holding insufficient cash and excess cash. As observed above, idle cash will contribute nothing to the profitability of the enterprise while insufficient cash will inhibit operations thereby reducing profit. Therefore, a major function of the Financial Manager is to maintain a sound cash position.

Cash management involves the managing of:

i) Cash flows into and out of the business.

ii) Cash flows within the business.

iii) Cash balances held by the firm at a point in time.

Cash management assumes more importance than other current assets because cash is the most significant and the least productive asset that a firm holds. It is significant because it is used to pay the firm's obligations. But it is unproductive being idle and therefore the aim of cash management should be to maintain adequate cash position, to keep the firm sufficiently liquid and to use the excess cash in some profitable way e.g. investing in marketable securities.

Marketable securities are investments held in money market instruments such as:

i) treasury bills
ii) commercial papers
iii) bankers acceptances
iv) certificates of deposits
v) bankers' unit funds
vi) time deposits and call money.

These are security investments a firm can quickly convert into cash balances. Most firms in Nigeria tend to hold marketable securities with very short maturity periods - less than one year. This is based on sound business reasoning as there is no law that forbids that marketable securities should not be held in long term investment. Marketable securities are sometimes

referred to as near cash or near cash assets because by nature, they can be turned into cash in a short period of time. Taken together cash and marketable securities are known as liquid assets.

The firm's cash balance is a reservoir that rises with cash inflows and decreases with cash outflows. Any non-financial firm desires to minimise its cash balances consistent with meeting its financial obligations in a timely manner.

Holding too much cash which financial analysts refer to as excess cash, results in a loss of profitable opportunities to the firm. For instance, a textile manufacturer is not in business to build up its cash reservoir. Rather, it wants to manage its cash balance in order to maximize its financial returns to enhance the shareholders' wealth. The emphasis here is to learn how to effectively manage the firm's cash and marketable security investments. It is difficult to predict cash flows accurately and there is no perfect coincidence between inflows and outflows of cash hence the importance of cash management.

2.2.1 STRATEGIES FOR CASH MANAGEMENT

In order to resolve the uncertainty about cash flow prediction and lack of synchronization between cash receipts and payments, the firm should develop some strategies for cash management. The firm should evolve strategies

regarding the following four facets of cash management.

I) **Cash Planning**: Cash inflows and outflows should be planned to project cash surplus or deficit for each period of the planning period. Cash budget should be prepared for this purpose.

ii) **Managing The Cashflows:** The flow of cash i.e. inflow and outflow, should be properly managed. The inflows of cash should be accelerated while as far as possible the outflows should be decelerated.

iii) **Optimum Cash Level:** The firm should decide about the appropriate level of cash balances. The cost of excess cash and danger of deficiency should be matched to determine the optimum level of cash balances.

iv) **Investing Idle Cash:** The idle cash or precautionary cash balances should be properly invested to earn profits. The firm should decide about the division of such cash balances between bank deposits and marketable securities.

2.2.2 CONVERTING NAIRA INTO WORKING ASSETS

As pointed out earlier on in this chapter, cash is not an asset as long as it remains idle, but a liability, a wasted opportunity, unless it is earning money

for its owner. Cash, someone once remarked, is one of the most misunderstood, misidentified and wasted commodities in the business world. There is this common belief that a cash rich company is a profitable company, that cash is equivalent to profits and that a strong cash position is a primary form of financial insurance. Infact the most misleading belief is that cash is a working asset. Cash is indeed an asset only when it is put to use.

Accounting principles to the contrary regard cash as a frozen asset first like any unused piece of machinery. Indeed cash that is idle or unused penalizes the organisation either with lost income from unmade investments or in interest charges on funds it borrows to take up the slack.

2.2.3 CASH FLOW PROCESS

A firm has different external sources of finance available to it. Funds can be obtained in the capital market from the sales of securities such as debentures, preference shares, and ordinary shares or by entering into non-marketable debt contracts with lenders such as commercial banks. The cash inflows from these sources are not regular. They tend to be episodic: the financing arrangements that give rise to them are effected at wide intervals. The reason is that external financing contracts usually involve huge sums of money stemming from a high major need identified by the company's management and these do not occur everyday. For example, a company may want to

launch a new product which may require plant expansion to provide added productive capacity.

In many organisations, the financial officer responsible for cash management also controls the transactions that affect the firm's investment in marketable securities. As excess cash becomes temporarily available, investment in marketable securities are purchased. When cash is in short supply, a portion of the marketable securities portfolio is liquidated.

The main sources of cash to the firm arise from internal operations and occur on a more regular basis. Receipts come from debtors collections and direct cash sales of finished goods. Apart from buying marketable securities, a firm experiences cash out flows through:

(I) Payment of dividends to preference and ordinary shareholders;

(ii) Meeting interest requirements on debt contracts;

(iii) Repaying principal borrowed from creditors;

(iv) Buying the firm's own shares in the capital market for use in executive compensation, plans or as an alternative to paying a cash dividend;

(v) Paying tax liabilities;

(vi) Acquisition of fixed assets;

(vii) Purchase of inventories to ensure steady flow of finished goods.

2.2.4 MOTIVES FOR HOLDING CASH

John Maynard Keynes in a classic economic treatise, identified three motives for holding cash by firms or economic units. We now look at the motives one after the other.

(a) TRANSACTIONS MOTIVE

Cash is required in the ordinary course of business by a firm. This motive requires a firm to hold cash to conduct its business in the ordinary course. The firm needs cash primarily to meet payments for purchases, wages, operating expenses, taxes, dividends etc. The need to hold cash will not arise if there were perfect synchronization between receipts and payments - enough cash is received when payment has to be made. But cash receipts and payments are not perfectly synchronized. Sometimes cash receipts exceed cash payments while at other times, cash payments are more than cash receipts. For those periods when cash payments exceed cash receipts, the firm should maintain some cash balance to be able to make the required payments. The relative amount of transactions cash held is significantly affected by the industry in which the firm operates. For transactions purposes, a firm may invest it's cash in marketable securities. If revenues can be forecast to fall within a tight range of outcomes then, the ratio of cash and near cash to total assets will be less for the firms than if the prospective cash inflows is expected to vary over a wide range. If cash inflows are certain in a particular period, the management can take

steps to synchronise cash inflows with cash outflows. Usually, the firm will purchase the securities whose maturity corresponds with some anticipated payments, such as dividends, taxes or purchase of a fixed asset in future. However, the transactions motive mainly refers to holding of cash to meet anticipated payments whose timing is not perfectly matched with cash receipts.

b) PRECAUTIONARY MOTIVE

It refers to the need to hold cash to meet any contingencies in future. Cash is held as a buffer stock to liquid assets. It provides a cushion or buffer to withstand some unexpected emergency. The precautionary amount of cash depends upon the predictability of cashflows. If cashflows can be predicted with accuracy, less cash will be maintained against an emergency. The amount of precautionary cash will be maintained against an emergency. The amount of precautionary cash is also influenced by the firm's ability to borrow at short notice when the need arises. The stronger the ability of the firm to borrow at short notice, the less the need for precautionary balance. The precautionary balance may be kept in cash and marketable securities. Marketable securities play an important role here. The amount of cash set aside for precautionary reasons is not expected to earn profit on it. Such funds should be invested in high liquid and low risk marketable

securities. Good banking relationships and established lines of credit can reduce the need to keep cash on hand. This unused borrowing power obviates somewhat the need to invest in precautionary balances. In any case, it is advisable that precautionary balances should, thus be held more in marketable securities and relatively less in cash.

c) SPECULATIVE MOTIVE

This motive relates to the holding of cash for investing in profit making opportunities as and when they arise. The opportunity to make profit may arise when the security prices change. The firm will hold cash, when it is expected that interest rates will rise and security prices will fall. Securities can be purchased when the interest rate is expected to fall; the firm will benefit by the subsequent fall in interest rates and increase in security prices. The firm may also speculate on materials' prices. If it is expected that material prices will fall, the firm can postpone materials purchasing and make purchases in future when prices actually fall. Cash is held for speculative purposes in order to take advantage of potential profit making situations by some firms.

By and large, business firms do not engage in speculations. Thus primary motives for holding cash and marketable securities are the transactions motive and the precautionary motive.

2.2.5 CASH MANAGEMENT OBJECTIVES AND DECISIONS

A firm's cash management programme must be concerned with minimizing the firm's risk of insolvency. For our purpose, the term insolvency describes the situation where the firm is unable to meet its financial obligations as they fall due. In such a situation, the company is technically insolvent in that it lacks the necessary liquidity to make prompt payment on its current asset. The firm must decide the amount of transaction and precautionary balances to be held. This depends upon the following factors.

(I) The expected cash inflows and outflows based on the cash budget and forecasts, encompassing long and short range cash needs of the firm.

(ii) The degree of deviation between the expected and actual net cash flows.

(iii) The maturity structure of the firm's liabilities.

(iv) The firm's ability to borrow at short notice in the event of any emergency.

(v) The philosophy of management regarding liquidity and risk of insolvency.

(vi) The efficient planning and control of cash.

All these factors analysed together, will determine the appropriate level of the transactions and precautionary balances.

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2.2.6 POLICY FOR CASH MANAGEMENT

Every business enterprise ought to develop a policy for its cash flow planning. The outlines of such a policy would be as follows:

(I) The business should be able to match its cash outflows with cash inflows even when it is growing.

(ii) The pace of growth of the business should not outstrip the ability of the business to finance the additional assets that it needs to support the growth.

(iii) There should be a policy for dividend payments that the business should try to adhere to, and so a policy for retained profits as a source of funds.

(iv) There should be a policy for debt gearing. To what extent should growth be financed by additional long term or short term debt?

(v) There should be some identifiable assets such as property or investment which could be sold off for cash should the need to do so become unavoidable.

(vi) There ought to be efficient management control over inventories, receivables and payables.

(v) A distinction should be made between essential capital expenditure and postponable fixed assets replacements so that decisions can be made when necessary about shelving certain capital expenditure (projects).

2.2.7 CASH PLANNING AND LIQUIDITY CONTROL

The Need for Cash Planning and Control

The world and indeed Nigeria are going through economic turbulent times. Galloping inflation, fluctuating foreign exchange, falling incomes are all visible signs of the turbulence we are all experiencing today. In turbulent times, liquidity is more important than earnings. A business can survive long period of earnings or low revenues if it has adequate cashflow and financial strength. But no organisation can survive without liquidity no matter the level of its earnings. Cash is to business as blood is to the body.

From the foregoing the importance of adequate cash planning and liquidity control cannot be over emphasised. Indeed, there is no point in increasing efficiency if the issue of solvency is ignored and the company runs out of cash. To ensure solvency, a firm must have enough cash to meet financial obligations as they fall due.

To control cash flows, it is first necessary to have a plan of the company's expected operation over the relevant future interval of time. Such a plan will include a forecast of sales as well as a set of the projected company balance sheet and profit and loss statements. These plans reflect management expectation with respect to their company's activities. Plans lead to effective control when they are used as the basis for operations.

2.2.8 CASHFLOW FORECASTING TIME HORIZONS

Cash planning as a technique to plan for and control the use of cash relies heavily on making a forecast of the firm's cash positions based on its future receipts and disbursements. To ensure proper planning there should be long term, medium term and short term forecasts.

The long term forecast is usually prepared for periods of time longer than one year and based on long term forecasts. Typically developed to look ahead for up to five years, the long term forecast can be broken down by year, or two year components detailed by quarters. The five year time span is generally the maximum realistic forecast period due to the greater level of uncertainties involved. The long term forecast helps a company prepare for growth because it predicts long term financing requirements in the light of business goals. This forecast considers the state of the economy, money supply and such factors as expected consumer habits. It allows for long term policy formulation; as well as a protracted sense of financial health given simulated courses of action and fund flows.

The major uses of the long term cash forecast are:

I) It indicates a company's future financial needs, especially for its working capital requirements.

ii) It helps to evaluate proposed capital projects. It pinpoints the cash required to finance these projects as well as the cash to be generated

by the company to support them.

iii) It helps to improve corporate planning. Long term cash forecasts compel each division to plan for the future and to formulate projects carefully.

The medium term forecast is basically a control tool and keeps a company grounded in the financial realities of business enterprise. A market power play that promises a sensational profit picture can be quickly sobered up with the financial prospective that the medium term forecast provides. Potential cashflow arises can be diagnosed and dealt with. This look ahead can also give the Treasury Manager room to strategically plan short term borrowing; he can shop for the best rates among his lending banks when he knows what he needs, when and how he can pay for it.

The short term forecast typically involves time periods of less than one month. It is comparatively easy to make short term forecasts. The important uses of carefully developed short term forecasts are:

I) It helps to determine operating cash requirements

ii) It helps to anticipate short term financing.

iii) It helps to manage money market investments.

iv) Planning reductions of short and long term debt.

v) Scheduling payments in connection with capital expenditure programmes

vi) Planning forward purchases of inventories

vii) Checking accuracy of long range cash forecasts.

viii) Taking advantage of cash discount offered by suppliers

ix) Guiding credit policies.

2.2.9 CASH BUDGET

A cash budget involves a forecast of future cash receipts and cash disbursements of the firm over various intervals of time. It reveals to the treasury manager the timing and amount of expected cash inflows and outflows over the period studied. With this information, a firm is better able to determine its future cash needs, plan for the financing of these needs and exercise control over the cash and liquidity of the firm.

The cash budget is only as useful as the accuracy of the forecasts that are used in the preparation. The greater the possible dispersion of actual results from those estimated, the more allowance that must be made for the unexpected swings in cashflow. A firm whose cashflows are subject to much uncertainty should provide either a cash cushion, ready borrowing power or both to tide it over in period of adverse cash developments.

2.2.10 DEVIATIONS FROM EXPECTED CASHFLOWS

Actual cashflows may deviate from the expected cashflows even with the best estimates. To take into account possible deviations from the expected cashflows, it may be necessary to prepare alternative cash budgets on the assumption of the "worst possible" eventualities. By planning the "worst possible" management should be able to prepare contingency measure in advance thereby to appreciate better the key features of the cash budget which are necessary to prevent the emergencies from arising.

Alternatively, a financial model could be constructed with numerous variables and the sensitivity of cashflow forecasts to change in estimates for these variables could be analysed.

Finally, a knowledge of the possible outcomes for the cash position will enable a more accurate estimate to be made of:

i) the minimum cash balances;

ii) the borrowing power necessary in order to provide a satisfactory margin of safety since unforeseen deficits are difficult to finance at short notices and advanced planning is desirable.

2.2.11 DETERMINING THE MINIMUM (OPTIMUM) CASH BALANCE

Determining the optimum level of cash for a firm is not an easy task. A firm that maintains too little cash runs the risk of cash insolvency while the one that maintains too much cash is likely to miss opportunities to earn profits. Here we want to look at the techniques for actual determination of the cash balance.

One simple technique of determining the optimum level of cash balance is using the following ratio:

$$\frac{\text{Expected Cash Balance}}{\text{Expected Current Assets}}$$

A high ratio, say 20%, would indicate a large volume of cash and a corresponding high level of liquidity. It would also suggest that management is not bothering to manage its cash and is about to waste its resources. Idle cash reserves have an opportunity cost which grows to substantial proportions when the quantity of cash held is large. A large cash to current asset ratio can be taken as a sign of poor cash management. The circumstances which require large cash balances are likely to be indicated well in advance and sound financial management will ensure a suitable supply with recourse to excessive permanent cash balances.

Another equally useful way to determine the optimum cash required is to examine the volume of sales per period in relation to the opening cash balance of the period. The ratio of sales per period to cash balance measures the number of times the initial cash balance is turned over during the particular month, quarter, half-year or year.

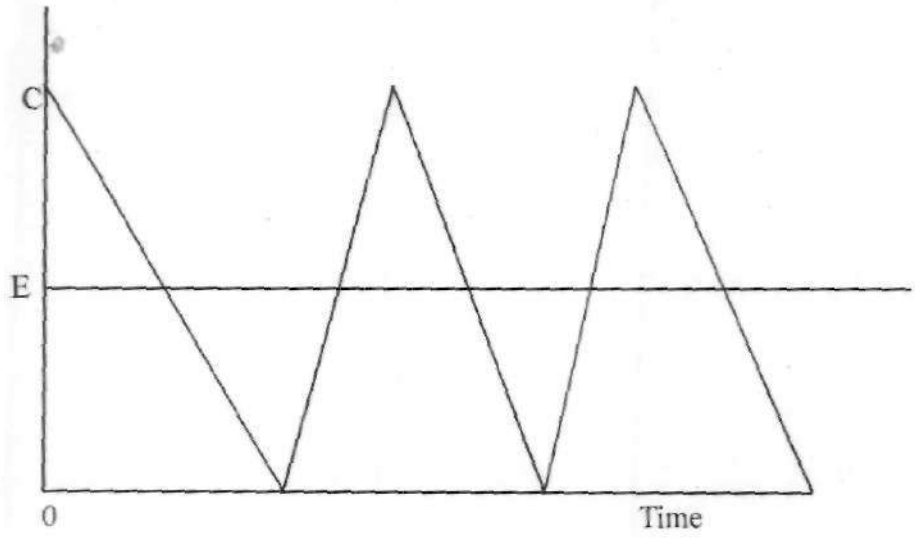
$$\text{Turnover of cash in sales} = \frac{\text{Sales Per Period}}{\text{Initial Cash Balance}}$$

This rate of turnover of cash in sales is a measure of efficiency in the use of cash as well as a measure of a company's liquidity. The higher the rate of cash turnover, the greater the efficiency of cash usage. A company which can increase the velocity of cash passing through its operations can expand its sales volume without adding extra cash. Alternatively, it can decrease the amount of cash in hand if sales are not growing. In either case, the cost of maintaining cash relative to sales falls and the lower the cost the greater will be the profit on those sales. Although a low level of liquidity is frequently viewed with some concern, low liquidity is a result of an efficient use of resources.

A third measure for the determination of the optimum cash balance is the ratio of total cash handled to the opening balance. Total cash handled is the total sources and uses of funds.

Under conditions of certainty, one simple model for determining the optimal cash balance to hold is the Economic Order Quantity (EOQ) used in inventory management. In the model, the carrying cost of holding cash, the interest foregone on marketable securities, is balanced against the fixed cost of transferring marketable securities to cash, or vice versa.

The diagram below illustrates the use of inventory model in cash management. C = The optimal level of cash.



In the diagram above, it is assumed that the firm has a steady demand for cash over some period of time, say one month. The firm obtains cash during the period by selling marketable securities. Suppose it starts out with C naira in cash, and when this amount is expended, it replenishes it by selling C naira of marketable securities. Thus, the transfer of funds from securities to cash occurs whenever cash touches zero. The purpose is to determine the amount of cash which minimise total cost - the sum of fixed costs associated with

transfers and the opportunity cost of earnings foregone by holding cash balances. The larger the cash held, the smaller the average investment in security and earnings from them - opportunity of interest foregone. However, large cash balance results in fewer transfer, and the lower the transfer costs.

2.3 ACCOUNTS RECEIVABLE AND INVENTORY MANAGEMENT

Accounts receivable and inventory make up a large portion of the firm's assets; they actually compose on average 26.5% and 4.88% respectively, of a typical firm's assets. In fact, in several industries, like the textile industry, accounts receivable and inventory make up a larger percentage of the firm's assets.

Thus because of their sheer magnitude any changes in their levels affect profitability. For instance, an increase in account receivable - additional extension of trade credit, not only results in higher sales, it also requires additional financing to support the increased investment. The costs of credit investigation and collection efforts are increased as well as chance of bad debts. A larger investment in inventory leads to more efficient production and speedier delivery hence increased sales. However, additional financing is required to support the increase in inventory and the handling and carry costs.

In studying the management of these current assets, we begin by examining

account receivable management, focusing on its importance, what determines investment in it, and what the decision variables are and how we determine them. The next thing is to take up the inventory management, examine its importance, and talk on order quantity and order point problems which combine to determine the level of investment in inventory.

2.3.1 ACCOUNTS RECEIVABLE MANAGEMENT

Credit management is assuming a very significant role in the operation and management of business enterprises today. All firms by their very nature, sell either goods or services. Although some of these sales will be for cash, a large portion will involve credit. Increasingly, business is transacted on credit basis. Virtually, all balance sheets include accounts receivable among the current assets and accounts payable among the current liabilities. Both account receivable and accounts payable reflect credit transactions by the firm.

Many firms would prefer to do business on cash and carry basis, but competition in the business environment has led many firms (especially during period of normal economic condition) to do part or all of their business on a credit basis. Credit is the ability of a consumer or organisation to obtain goods, services, real assets and even cash in exchange for a promise to pay later. Credit is thus a medium of exchange although of limited acceptance to the seller since not all promises to pay later are of equal quantity.

The purpose of having accounts receivable is to increase sales and hence increase profits; if a firm could have the same volume of sales without having receivables, there would be no point in selling on account. Since there is an inter-relationship between sales policy and the extension of credit, the establishment of the level of receivables is a top management decision. The importance of efficient managing of receivable cannot be over-emphasised. This is because cashflows from sales cannot be invested until the account is collected and control of receivables takes an added advantage, efficient collection determines both profitability and liquidity of the firm.

2.3.2 SIZE OF INVESTMENT IN ACCOUNTS RECEIVABLE

The size of the investment in accounts receivable is determined by several factors:

i) the percentage of credit sales to total sales affects the level of accounts receivable held. Although this factor certainly plays a major role in determining a firms' investment in account receivable, it is generally not within the control of the financial manager.

ii) the nature of business and type of product involved e.g. durability and cost tend to determine the blend between credit sales and cash sales.

iii) the level of sales is also a factor in determining the size of the investment in accounts receivable. Very simply, the more sales, the greater account receivable. As the firm experiences seasonal and

permanent growth in sales, the level of investment in accounts receivable will naturally increase. Although the level of sales affects the size of the investment in accounts receivable, it is not a decision variable for the financial manager.

iv) The size of the firm giving the credit and its financial resources.

v) Competition in some industries is keener than in some others and in Nigeria today, it is hard to find a firm that is monopolistic in nature. So the practice of competitors in this area will determine the level of credit sales being offered by a firm.

vi) The average period between sales and collections. The average collection period is partially dependent upon economic conditions - during a recession or a period of extremely tight money control (like we are currently experiencing in Nigeria), customers may be forced to delay payment - but it is also dependent upon a set of controllable factors or credit policy variables. Included in this factor specifically are the terms of sales, the quality of customer and collection efforts. The terms of sales specify both the time and period during which the customer must pay and the terms, such as penalties for late payments or discount for early payments.

The type of customer or credit policy also affects the level of investment in

account receivable. For instance, the acceptance of poorer credit risks and their subsequent delinquent payments may lead to an increase in accounts receivable. The strength and timing of the collection efforts can affect the period for which past due accounts remain delinquent, which in turn affects the level of accounts receivable. Collection and credit policy decisions may further affect the level of investment in accounts receivable causing changes in sales level and in the ratio of credit sales to total sales.

As we examine the credit decision , we must try to remember that our goal is not to minimize losses but to maximize profits. Although we will spend a good deal of time trying to sort out these customers with the highest probability of default, this analysis is only an input into a decision based on shareholders' wealth maximization. Essentially, a firm with a high profit margin can tolerate a more liberal credit policy than a firm with a low profit margin.

2.3.3 THE THREE FOLDS IN CREDIT MANAGEMENT

In managing credit, the firm should bear the following in mind:

I) Credit should be extended by the firm in so far as it enhances sales and the profitability from those sales.

ii) Credit ought to be managed in such a way that the firm's investment in

accounts receivable is protected, and is consistent with other investments which are made.

iii) The credit and collection activities of the firm must be co-ordinated with the total cashflow of the firm in order to ensure a continuity in operations.

The Major credit policy variables are:

I) Credit standards, or the maximum riskiness of acceptable credit accounts.
ii) Credit period or the length of time for which credit is granted
iii) Discounts given for each payment and
iv) The firm's collection policy.

Specially, a credit policy identifies the authority to make credit decisions, the exact terms of credit sales to all types of consumer and commercial customers, and guidelines for selecting credit customers. Therefore, the management of accounts receivable or customer trade credit is usually thought of as being split of two functions:

a) Credit analysis, and
b) Collection procedures

Credit analysis involves a thorough initial study of the debtor and, ideally, periodic re-evaluations of his status.

We can now look at the major credit policy variables in details.

2.3.4 CREDIT STANDARDS

A firm will never have bad debts if it extends credit sales to only the strongest of customers and it will not incur much in way of expenses for a credit department. On the other hand, it will probably be losing sales, and the profit foregone on these lost sales could be far larger than the costs it has avoided. Consequently, the determination of the optimal credit standard involves equating the marginal costs of credit to marginal profits on the increased sales.

Marginal costs here are those costs associated with the quality of the marginal accounts, or credit quality costs such as the followings:

i) default, or bad debt losses,

ii) higher investigation and collection costs, and

iii) if less credit worthy customers delay payment longer than stronger customers higher costs of capital tied up in receivables.

The best way to define credit quality is in terms of probability of default. These probability estimates are, for the most part, subjective estimates, but credit rating is a well established practice, and a good credit manager can make reasonably accurate judgements of the probability of default by different classes of customers. As the probability of default increases, it becomes more important to identify which of the possible new customers would be a poor risk.

Default costs also vary directly with the quality of the customer. As the customer credit rating declines, the chance that the account will not be paid on time increases. In the extreme case, payment never occurs. Thus, taking on less credit worthy customer results in increases in default costs. Collection costs also increase as the quality of the customer declines. More delinquent accounts force the firm to spend more time and money collecting them. On the whole, the decline in customer quality results in increased costs of credit investigation, collection and default.

2.3.5 THE FIVE CS OF CREDIT

In order to evaluate the credit risk, credit managers consider the five Cs of credit:

a) ***Character***: This refers to the possibility that a customer will try to honour his obligations. This factor is of considerable importance, because every credit transaction implies a promise to pay. Experienced credit men frequently insist that the moral factor is the most important.

b) ***Capacity:*** This is a subjective judgement of the ability of the customer to pay up. This is gauged by his past record, supplemented by physical observation of the customer's plant or store and business methods.

c) ***Capital:*** It is measured by the general financial position of the firm as indicated by a financial ratio analysis, with special emphasis on the tangible net worth of the enterprise.

d) ***Collateral:*** This is represented by assets that the customer may offer as a pledge for security of the credit extended to him.

e) ***Conditions:*** These refer to the impact of general economic trends on the firm or to special developments in certain areas of the economy that may affect the customer's ability to meet his obligations.

It should be clearly understood that the five "Cs" of credit represent the factors by which the credit risk is judged. Information on these terms is obtained from the firm's previous experience with the customer, supplemented by a well-developed system of information gathering groups.

There are two major external sources where information about customers could be sought. They are:

I) The Work Credit Association: By periodic meetings of local merchants and by correspondence, information on experience with creditors is exchanged.

ii) The Work Credit Reporting Agencies: This is an area that is yet to be developed in Nigeria. Agencies in this type of business provide factual data that can be used by the credit manager in his credit analysis. An individual firm can translate its credit information into risk classes, grouped according to the probability of loss associated with sales to a customer.

2.3.6 TERMS OF CREDIT

A starting point in credit policy is to decide on the appropriate credit terms to offer potential customers. The terms may well differ from product to product and market to market. One determining factor in setting terms for commercial credit is the length of time necessary for the customer's payment to be converted into cash.

The terms of credit identify the possible discount for early payment, the discount period and the total credit period. The terms are generally stated in the form a/b net c, indicating that the customer can deduct a percent if the account is paid within b days, otherwise, the account must be paid within c days. Thus, for example, trade credit terms of 2/10, net 30 indicates that a 2 percent discount can be taken if the account is paid within 10 days, otherwise it must be paid within 30 days. If a customer fails to pay within the discount

period, he foregoes the discount but have use of the money for 30 days. However failure to take the discount represents a cost to the customer. Although the terms of credit vary radically from industry to industry, they tend to remain relatively uniform within any particular industry.

A company before granting credit should be able to determine the type of customer that should qualify for trade credit using the information available to it. Several costs are always associated with extending credit to less credit worthy customers (high risk firms or individuals). First, as the probability of default increases, it becomes more important to identify which of the possible new customers would be a poor risk. When more time is spent investigating the less credit worthy customer, the costs of credit investigation assume a new dimension. Default costs also vary directly with the quality of customer. As the customer's credit rating declines, the chance that the account will not be paid on time increases. In the extreme case, payment never occurs. Thus taking on less credit worthy customers results in increases in default costs. It is tempting to look at the credit decision as a single 'Yes' or 'No' decision based on some simple formula. However, simply to look at the immediate future in making a credit decision would be a mistake. If extending a customer credit means that the customer may become regular customer in the future, it may be appropriate to take a risk that otherwise would not be prudent. In effect, our goal is to ensure that all cashflows affected by the decision at hand are considered not simply the most immediate cashflows.

2.3.7 CREDIT PERIOD

This refers to the period between receipts of goods by a customer and the time payment is made for the goods. Lengthening the credit period stimulates sales, but there is a cost to tying up funds in receivables. Determining the optimal credit period involves locating that period when marginal profits on increased sales are exactly offset by the cost of carrying the higher amount of accounts receivable. If the incremental profit (sales minus all direct production, selling and credit costs associated with the additional sales) exceeds the cost of financing, the additional accounts receivables in this decision is acceptable which shows that the change in credit policy is profitable. But if the reverse is the case then the decision is not worthwhile.

2.3.8 CASH DISCOUNTS

The essence of granting cash discount is to speed up early payments of accounts receivables. If a firm changes its terms from "net 30" to "2/10 net 30", it may well attract customers who want to take discounts, thereby increasing gross sales. Also, the average collection period will be shortened, as some old customers will pay more promptly to take advantage of the discount. Offsetting these benefits is the cost of the discount taken. The optimal discount is established at the point where costs and benefits are exactly offsetting.

2.3.9 CREDIT COLLECTION POLICY

The key to maintaining control over collection of accounts receivable is the fact that the probability of default increases with the age of the account. Thus, control of accounts receivable focuses on the control and elimination of past due receivables. One common way of evaluating the current situation is ratio analysis. The financial manager can determine whether or not accounts receivables are under control by examining the average collection period, the ratio of receivables to assets, the ratio of credit sales to receivables (called the accounts receivable turnover ratio), and the amount of bad debts relative to sales over time. Steps can also be taken to prepare the aging of accounts receivables to provide a breakdown in both Naira and in percentages of the proportion of receivables that are past due.

Collecting accounts receivables begin with timely mailing of invoices. It includes the systematic monitoring and record keeping for the many customers who pay promptly. There are additional steps that may be taken for those customers who do not pay promptly. There are several procedures available to a credit manager, who must judiciously decide when, where and to what extent pressure should be applied to delinquent accounts. Management collection activity should be based on a careful comparison of likely benefits and costs.

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a) One inexpensive procedure is to do nothing but hope that the customer will eventually pay. However, the added credit cost of delayed payments is the time value of the firm's investment in the product or materials sold to the delinquent buyer. There may also be a reluctance to wait because of a belief that the chances of collecting an over due account may actually decrease with time.

b) Another relatively inexpensive procedure is to periodically send duplicate copies of the original invoices to the buyer to serve as a reminder that the bill is yet to be paid.

c) Collection letters probably are the most frequently used procedure because of their time, cost and the flexibility with which the credit manager can deliver the message to the delinquent customer.

If the above procedures are not successful, then the manager may resort to stronger but more expensive procedures, such as:

d) Personal telephone calls can serve to get the attention of a slow payer. Telephone calls can consist of a routine reminder, or serve to initiate a constructive counselling of the customer by the supplier firm.

e) Another procedure is to inform the customer that unless payment is received by a certain date, a draft will be forwarded to the customer's bank. This approach serves to enlist a third party (i.e. the banker) in the collection process.

f) The use of collection agencies is another procedure which can be effective, but at some cost (as much as 20% to 50% on all accounts) to the seller - both in terms of the delinquent payment and any future business with the same credit customer.

g) Withholding supplies until the account is brought up to date. The disadvantage in this is that the customer may go to other sources of supplies even though he has not settled the outstanding accounts.

h) If the difficulties are due to real cash problems of the customer, it may be sensible to negotiate extended payment terms rather than see the customer fail and almost certainly receiving nothing. Small weekly payments are one possibility - perhaps on standing order.

i) Usually, the last resort but also expensive is a formal legal action through solicitors. Apart from the solicitors fees, it can cause an incalculable business damage.

Again, a direct trade off exists between collection expenses and lost goodwill on one hand, and non-collection of accounts on the other hand, and this trade off is always part of making the decision.

2.3.10 FORMULATING A POLICY FOR CREDIT CONTROL

Several factors should be considered by management when a policy for credit control is formulated. These include:

a) The administrative costs of accounts receivable collection.

b) The procedure for controlling credit to individual customers and also credit collection.

c) The amount of extra capital required to finance an extension of total credit. There might be an increase in accounts receivables, inventories and accounts payables and the net increase in working capital must be financed.

d) The cost of the additional finance required for any increase in the volume of accounts receivables (or the savings from a reduction in accounts receivables). This cost might be bank overdraft interest, or the cost of long term funds (e.g. loan stock or equity).

e) Any savings or additional expenses in operating the credit policy (e.g. the extra work and extra chasing of slow payers).

f) The ways in which credit policy can be implemented for example:

   i) Credit can be eased by giving customers a longer period in which to settle their account. The cost of credit would be the resulting increase in accounts receivables;

   ii) a discount can be offered for early payment. The cost of the credit policy would then be the cost of the discounts.

g) The effect of easing credit might be to:

i) encourage a higher proportion of bad debts.

ii) increase sales volume. Provided that the extra gross contribution from the increase in sales exceeds the increase in fixed cost expenses, bad debts, discounts and the finance cost of an increase in working capital, a policy to relax credit terms would be profitable.

2.3.11 CREDIT POLICY CHANGES:

The Use of Marginal or Incremental Analysis

Changes in credit policy involve direct trade offs between costs and benefits. When credit policies are eased, sales and profits from customers increase. Conversely, easing credit policies can also involve an increase in bad debts, additional funds tied up in accounts receivables and inventory, and additional costs from customers taking cash discounts. Since most firms do not really have a choice of selling on credit or only for cash, the more important decision for credit managers and their staff is when to change the credit policy of the firm over time.

The policy could be changed when the increased sales generate enough in the way of new profit to more than offset the increased costs associated with the change. Determining whether this is so is the job of marginal or incremental analysis. In general, there are three categories of changes in both policies that a firm can consider:

I) a change in the risk class of the customer;

ii) a change in the collection process, or

iii) a change in the discount term.

A return on investment framework is appropriate for comparing alternatives. The reason is that a return on investment framework properly focuses on the investment which a firm makes in accounts receivable. It also allows the credit manager to systematically consider potential sales and profits alternative credit terms including cash discounts, and bad debt expenses.

2.3.12 HOW TO CONSERVE CREDIT SALES AGAINST LOSS

Before the sales is made the following precautions can be taken:

a) Using the line of credit: This is an informal advance commitment by a creditor to extend credit up to a specified/designated maximum amount. The line of credit is good for a specified period of time, such as six months or one year.

b) Obtain reports on the financial strength and integrity of buyers through credit investigation agencies.

c) Use commercial credit insurance, an arrangement between an insurance company and a business firm under which the firm is guaranteed indemnification against abnormal credit losses arising from a failure of business customers to pay.

d) A seller may diminish the risk to himself by having the purchaser pledge as collateral the property so purchased, or the seller may retain title to these goods until the buyer has paid for them.

e) Take special steps to protect accounts receivables against loss - take specific precautions to keep credit sales records in a place that is fire resistant and beyond the reach of malicious mischief makers.

It is important to understand that the goal of accounts receivable management is to set credit terms, grant credit to customers, monitor payment pattern and apply necessary collection procedures so as to increase organisational profitability.

2.4 IMPROVING LIQUIDITY THROUGH CREDIT CONTROL

Credit control is more than credit collection hence the credit controller should participate in the management of an organisation. Too often the credit control is left with a busy accountant with one or two clerical staff maintaining the ledger and making routine phone calls.

The Cost of Credits

In Nigeria today, the bank lending rate stands at 21% per annum. The cost of giving credit for a credit sale of N8,000,000 for 2 months for instance, will be:-

$$\frac{0.21}{12} \times 2 \times 8{,}000{,}000 = \text{N}280{,}000$$

Payments to terms, within one month, therefore, costs 1.75% and each additional month's credit taken adds 1.75% to the vendor's costs. The only cost that can be truly recognised and passed on is in the granting of discount for immediate payment and the charging of interest for delayed payment.

2.4.1 THE EFFECT OF CREDIT ON LIQUIDITY

Liquidity can be defined as the ease and speed by which a company 's assets can be turned into cash sufficient to meet its current liabilities. Raw materials have to be turned into finished goods to be able to generate sales for ultimate generation of cash and it is unprofitable to hold large cash balances. Accounts receivables are the prime factors in determining a firm's liquidity. An asset becomes valueless if it is not put to use to produce profit. In the case of accounts receivable, the frequency of its turn over determines its contribution to profit.

The rate of a firm's cashflow determines its ability to meet its financial commitments. Wages and salaries, rent, water and electricity bills, factory expenses, raw materials and components, hire purchase payments have to be paid out of revenue. A cashflow problem will arise if revenue is not arriving fast enough because accounts receivables are too high. In time of inflation, the problem is made worse especially as some suppliers will resort to frequent price increases and insist on prompt payment.

One of the principal objectives of credit management is to achieve the highest possible accounts receivable figures for the shortest possible time. This means that the lower the credit period given, the higher the number of times of the accounts receivables turnover.

2.4.2 MEASUREMENT OF ACCOUNTS RECEIVABLES

It is necessary for a company to be able to determine the level of accounts receivables it wishes to maintain. This is in relation to the level of sales the company is able to achieve. Different methods are used to measure accounts receivables depending either on the average day's sales principle or on the working back principle or a combination of the two. Whatever method is adopted, the following features are essential:

- Valid month-to-month comparisons must be possible
- Fluctuations in sales volume must not distort the trend.

a) **Accounts Receivables:** It is easy to produce a budget for accounts receivables based on the yearly sales forecast using the accounts receivables turnover rate. This will require only simple amendments to reflect sales forecast and the final sales invoiced.

b) Another useful measurement by which credit performance can be judged is a periodic (usually monthly) age analysis of accounts receivable balances. The intention of this analysis is two fold. First, it

will reveal how much money is tied up on overdue accounts. This analysis could be as shown below:

Period	Value	%
Current	□xx	40
1st overdue month	xx	26
2nd overdue month	xx	10
3rd overdue month	xx	4
4th overdue month	xx	4
5th overdue month	xx	4
6th overdue month	xx	12
	□xx	100

The second purpose of the age analysis is to identify those customers with particularly old or large balances who should be requiring priority attention from the credit department.

2.4.3 THE QUALITY OF ACCOUNTS RECEIVABLES

A firm's liquidity is largely determined by the quality of its accounts receivables. Quality here has two aspects - risk and age. Some industries have a history of high-risk receivables while others rarely incur bad debts. Every firm should decide what level of risk it is prepared to accept if it is to remain both competitive and profitable in its industry. All receivables should be capable of conversion into cash in a short time as possible. This requires tight control on overdue accounts since the older a debt becomes, the less certain are the prospects of collecting it.

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2.4.4 THE EFFECT OF CREDIT ON PROFIT

Extended credit is frequently used to promote sales especially in time of competition. But credit has to be used rightly. The real cost of credit should be recognised and included in the calculations of profit. The expected additional profit generated by increased sales must be seen to out weigh the additional cost of financing longer credit. The higher the financing costs, the greater the effect on profit and the more doubtful the value of boosting sales by long credit. A company which has to borrow money to finance an increase in accounts receivable level can easily see its profits wiped out by interest charges.

This danger is present even without granting long credit. In times of dire or scarce money, it is normal to find companies looking for the cheapest form of finance - extended credit which is not agreed but first taken. Small firms tend to suffer particularly from this at the hands of their large customers. Principally because small firms are generally unwilling or unable (through lack of management attention) to press their customers to the same extent that large companies can.

2.5 INVENTORY MANAGEMENT

Inventory management involves the control of the assets that are produced to be sold in the normal course of the firm's operations. Inventory refers to the aggregate of those items of tangible personal property which can be categorised into:

a) ***Raw Materials Inventory:*** This consists of basic materials purchased from other firms to be used in the firm's operations. They are items to be currently consumed in the production of goods and services to be available for sale. Items identified as raw materials vary from industry to industry because one firm's finished product is another firm's raw material. In a textile company, items such as lint, chemicals and dye stuff, sizing materials, fuel and oil, consumables etc could be classified as raw materials.

All manufacturing firms by determination maintain a raw materials inventory. Its purpose is to uncouple the production function from the purchasing function - that is, to make these two functions independent of each other, so that delays in delivery of raw materials do not cause production delays. In the event of a delay in delivery, the firm can satisfy, its need for raw materials by liquidating its inventory.

b) ***Work In Process Inventory***

This type of inventory consists of partially finished goods requiring additional work before they become finished goods. They are in the process of production for sale. Work in process could be in different degrees of completion and process costing will be useful in valuing this inventory. It will not be out of place to say that it is mid-way between raw materials and finished goods. Work in process inventory helps the

firm to avoid shut down of operations in case of break down in one of the processes of operations.

c) ***Finished Goods Inventory***

The ultimate aim of any manufacturing company is to produce finished goods for sale. Finished goods inventory consists of goods on which the production has been completed but are yet to be sold. Finished goods are items held for sale in the ordinary course of business. The purpose of finished goods inventory is to uncouple the production and sales functions so that it is not necessary to produce the goods before a sale can occur - sales can be made directly out of inventory. In the textile industry, for instance, people would not buy from a dealer who made them wait for weeks or months, when another dealer could fill the order immediately.

The essence of carrying inventories is to uncouple the operations of the firm - to make each function of the business independent of each other - so that delays or shut down in one area do not affect the production and sale of the final product. As business grows more inventory problems are expected and they should be tackled with much care. Inventories have been called the "grave yard of business" because they have frequently been the prime cause of business failure. Sometimes they are either allowed to grow too widely and

to impossible size with contingent loss of liquidity or they are wrongly over costed. Because production shutdowns result in increased costs, and because delays in delivery can cause loss of customers, the management and control of inventory are important duties of the financial manager.

Decision making in investment in inventory involves a basic trade off between risk and return. The risk is that if the level of inventory is too high, the various functions of business do not operate independently, and delays in production and customer delivery can result. The return results because reduced inventory investment saves money. As the size of inventory increases, storage and handling costs as well as the required return on capital invested in inventory rise. Therefore, as the inventory a firm holds is increased, the risk of running out of inventory is lessened, but inventory expenses rise.

2.5.1 NEED FOR INVENTORIES

Production and delivery of goods are not instantaneous, otherwise, there would be no need for inventories except as a hedge against price changes. But with the advent of computers, automation and scientific management, the manufacturing and merchandising process still do not function quickly enough to avoid the need for having inventories. Therefore, inventories must be maintained so that the customers may be serviced promptly or at least quickly

enough so that they don't turn to other sources of supply. In turn, production operations cannot flow smoothly without having inventories of work in process, direct materials, finished parts and supplies.

Inventories serve as a cushion:

a) to absorb planning errors and unforseen fluctuations in supply and demand;

b) to facilitate smooth production and marketing operations;

c) to ensure that sufficient goods are available to meet anticipated demand;

d) to absorb variations in demand and production;

e) to provide a buffer between production process. This is applicable majorly to work-in-process inventories which effectively decouple operations;

f) to take advantage of bulk purchasing discounts;

g) to meet possible shortages in future;

h) to absorb seasonal fluctuations in usage or demand;

I) to enable production process to flow smoothly and efficiently;

j) to serve as a necessary part of the production process e.g. the maturing of whiskey;

k) inventory is seen as a deliberate investment policy particularly in times of inflation or possible shortage.

Inventories accumulate for other less praise worthy reasons, typical of which are the following:

a) obsolete items are retained in inventory;

b) poor or non-existent inventory control resulting in over-large orders, replenishment orders being out of phase with production;

c) inadequate or non-existent inventory records

d) poor liaison between the production control, purchasing and marketing departments;

e) sub-optimal decision making e.g. the production department must increase work in process inventories unduly so as to ensure long production runs.

2.5.2 INVENTORY MANAGEMENT TECHNIQUES

For any asset, cash, physical plant or inventories, there is an optimum. For instance, cash balances may be too large or too small. The principal cost of having too much cash is the sacrifice of earning; idle cash earns nothing and to have too little cash may be lost discounts on purchase or cause harm to one's credit standing which can not be quantified. It then follows that for every asset class, there is a conceptual optimum investment that when considered with optimum levels in other asset classes, helps to maximize long run profits.

The importance of effective inventory management is directly related to the size of the investment in inventory. This becomes necessary because a large proportion of a firm's assets is tied up in inventory and effective management of these assets is essential to the goal of the shareholders wealth maximization. To control the investment in inventory, management must solve two problems: the order quantity problem and the order point problem.

Before we discuss these problems which management needs to solve, it is pertinent to point out here that in controlling inventories, it is necessary to establish a policy and limits in which the inventory is to be kept. There must be accumulated data showing actual conditions and trends, both relating to the established policy.

2.5.3 ORDER QUANTITY PROBLEM

The order quantity problem involves determining the optimal order size for an inventory item given its expected usage, carrying costs and ordering costs. The Economic Order Quantity (E.O.Q) model attempts to determine the order size that will minimize total inventory costs. It assumes that: Total Inventory Cost = Total Carrying Costs Plus Total Ordering Costs. The carrying costs on inventory include the required rate of investment in inventory in addition to warehouse or storage costs, wages for those who operate the warehouse, and

costs associated with inventory shrinkage. Thus carrying costs include both real cashflows and opportunity costs associated with having funds tied up in inventory. In the same vein, the ordering costs incurred are equal to the ordering costs per order times the number of orders.

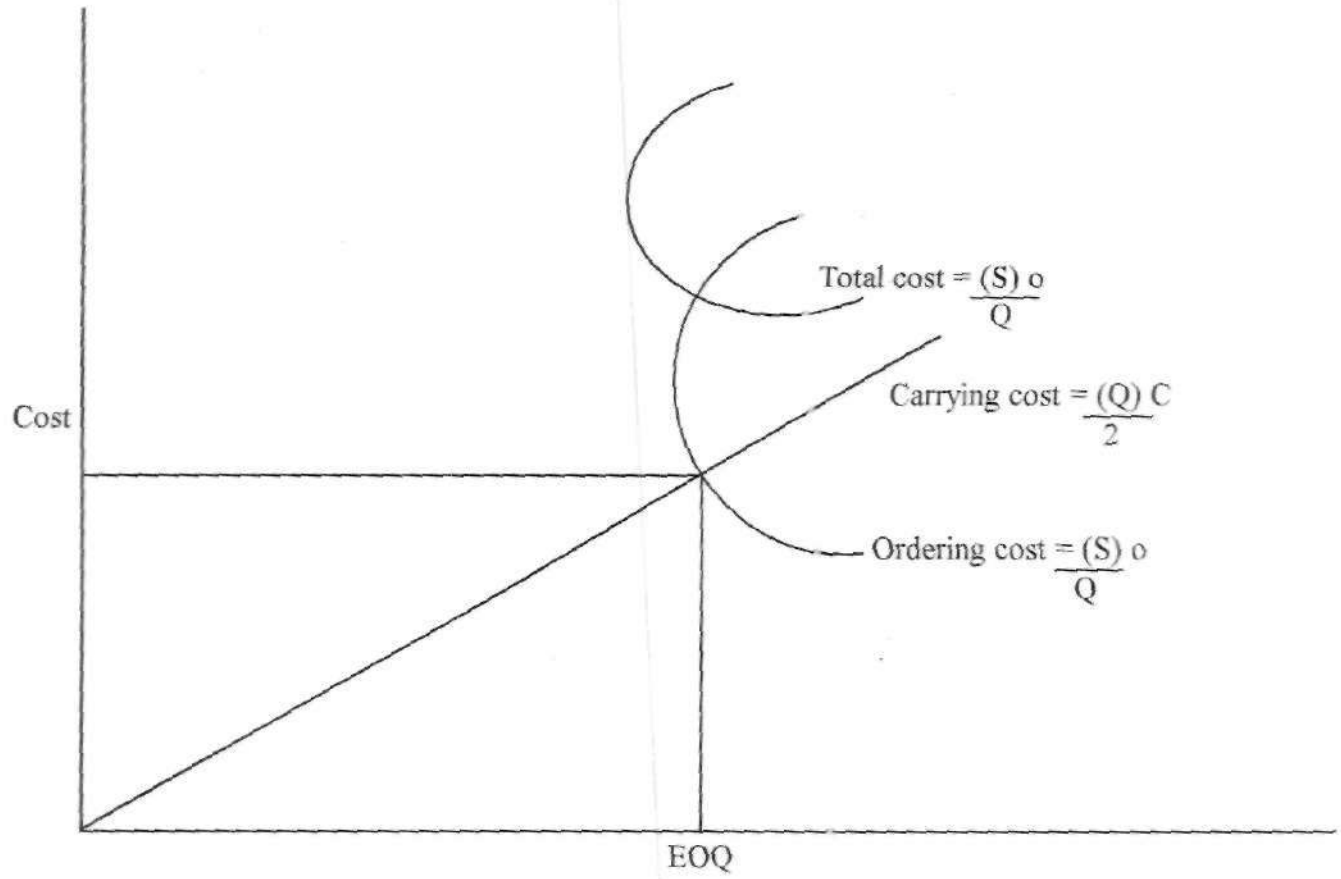
We are in effect, looking for the ordering size, Q, which provides the minimum total costs. This is the optimal value of Q called the Economic Order Quantity (EOQ) and it can be found by this formula:

$$Q = \sqrt{\frac{2C_oD}{C_c}}$$

Where: C_o = Ordering cost
D = Demand (usage)
C_c = Carrying cost

or graphically as shown below:

Q = Ordering size
S = Demand or Usage
O = Ordering cost
C = Carrying cost



If a company decides to hold low inventory this will mean increasing the number of orders and the ordering costs will be high while the carrying costs will be low. But conversely, the ordering costs will be low as the number of orders is reduced while the carrying cost will be high. But the economic order quantity is achieved at the point where ordering costs line intersects the carrying cost line.

2.5.4 EXAMINATION OF THE ECONOMIC ORDER QUANTITY (EOQ) ASSUMPTIONS

Despite the fact that the Economic Order Quantity (EOQ) model tends to yield quite good results, there are weaknesses in the model associated with several of its assumptions. When its assumptions have been drastically violated, the

Economic Order Quantity model can generally be modified to accommodate the situation. The model's assumptions are as follows:

a) Constant or Uniform Demand. Although the Economic Order Quantity model assumes constant demand, demand may vary from day to day. If demand is stochastic - that is, not known in advance, the model must be modified through the inclusion of a safety stock.

b) Constant Unit Price. The inclusion of variable prices resulting from quantity discounts can be handled quite easily through a modification of the original Economic Order Quantity model redefining total costs and solving for the Optimum Order Quantity.

c) Constant Carrying Costs. Unit carrying costs may vary substantially as the size of the inventory rises, perhaps decreasing because of economies of scale or storage efficiency or increasing as storage space runs out and new warehouses have to be rented. This situation can be handled through a modification in the original model similar to the one used for variable unit price.

d) Constant Ordering Costs. Although this assumption is generally valid, its violation can be accommodated by modifying the original Economic Order Quantity model in a manner similar to the one used for variable unit price.

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e) Instantaneous Delivery. If delivery is not instantaneous which is generally the case, the original Economic Order Quantity model must be modified through the inclusion of a safety stock; that is, the inventory held to accommodate any unusually large and unexpected usage during the delivery.

f) Independent Orders. If multiple orders result in cost savings by reducing paper work and transportation costs, the original Economic Order Quantity must be further modified. Although this modification is somewhat complicated, Special Economic Order Quantity models have been developed to deal with it.

The above assumptions show the limitations of the basic EOQ model and the ways in which it can be modified to compensate for them. An understanding of the limitations of the Economic Order Quantity model provides the financial manager with more of a base for making inventory decisions.

2.5.5 ORDER POINT PROBLEM

The two most limiting assumptions - those of constant or uniform demand and instantaneous delivery ; are dealt with through the inclusion of safety stock which is the inventory held to accommodate any unusually large and unexpected usage during delivery time. The decision on how much safety

stock to hold is generally referred to as the Order Point Problem, that is, how low should inventory be depleted before it is reordered?

The order point problem can be translated into two components, the delivery time stock, that is the inventory needed between the order date and the receipt of the inventory ordered; and the safety stock. Thus the order point is reached when inventory falls to a level equal to the delivery time stock plus the safety stock.

Two factors go into the determination of the appropriate order point:

I) the procurement or delivery time stock; and

ii) the safety stock desired.

As a result of constantly carrying safety stock, the average level of inventory increases. Before the inclusion of safety stock, the average level of inventory was equal to EOQ/2 but after the inclusion of safety stock, average inventory is now:

$$\frac{EOQ}{2} + \text{Safety stock}$$

In general, several factors simultaneously determine how much delivery time stock and safety stock should be held. First, the efficiency of the replenishment system affects how much delivery time stock is needed.

Because the delivery time stock is the expected inventory usage between ordering and receiving inventory efficient replenishment of inventory would reduce the need for delivery time stock.

The uncertainty surrounding both the delivery time and the demand for the products affects the level of safety stock needed. The more certain the patterns of these inflows and outflows, the less the safety stock required. In effect, if these inflows and outflows are highly predictable, then there is little chance of any stock out occurring. However, if they are unpredictable, it becomes necessary to carry additional safety stock to prevent unexpected stockouts.

The safety margin desired also affects the level of safety stock held. If it is a costly experience to run out of inventory, the safety stock held will be larger than it should otherwise be. If running out of inventory and the subsequent delay in supplying customers result in strong customer dissatisfaction and the possibility of loss of future sales, then additional safety stock is necessary.

A final determination is the cost of carrying additional inventory, in terms of both the handling and storage costs and the opportunity costs associated with the investment in additional inventory. Simply put, the greater the costs, the smaller the safety stock. The determination of the level of safety stock involves a basic trade off between the risk of stock out resulting in possible

customer dissatisfaction and lost sales, and the increased costs associated with carrying additional inventory.

2.5.6 INFLATION AND ECONOMIC ORDER QUANTITY

Inflation affects Economic Order Quantity model in two major ways. First, although the EOQ model can be modified to assume constant price increases, often major price increases occur only once or twice a year and are announced ahead of time. If this is the case, the EOQ may lose its applicability and may be replaced with anticipatory buying - that is, buying in anticipation of a price increase to secure the goods at a lower price. Of course, as with most decisions, there are trade offs. The costs are the added carrying costs associated with the inventory. The benefits, of course, come from buying at lower price. The second way inflation affects the Economic Order Quantity model is through increased carrying costs. As inflation pushes interest rates up, the cost of carrying inventory increases. In our EOQ model, this means that C increases, which results in a decline in Q, the optimal economic order quantity.

$$Q = \sqrt{\frac{2C_oD}{C_c}}$$

Where: C_o = Ordering cost

D = Demand (usage)

C_c = Carrying cost

5.7 JUST-IN-TIME INVENTORY CONTROL

The just-in-time inventory control system is more than just an inventory control system. It is a production and management system. Not only is inventory cut down to a minimum, but the time and physical distance between the various production operations are also reduced. In addition, management is willing to trade off costs to develop close relationship with suppliers and promote speedy replenishment of inventory in return for the ability to hold less safety stock.

The idea behind the system is that the firm should keep a minimum level of inventory on hand relying on suppliers to furnish parts, "Just-in-time" for them to be assembled. Although large inventories may not be a bad idea when interest rates are high they become very costly.

Although, the just-in-time system does not at first appear to bear much of a relationship to the Economic Order Quantity model, it simply alters some of the assumptions of the model with respect to delivery time and ordering costs and draws out the implications. Actually, it is just a new approach to the Economic Order Quantity model that tries to produce the lowest average level of inventory possible. If we look at the average level of inventory as defined by the EOQ model, we find it to be

$$\text{Average Inventory} = Q = \sqrt{\frac{2C_oD}{\frac{C_c}{2}}} + \text{safety stock}$$

The just-in-time system attacks this equation in two places. First by locating inventory supplies in convenient locations, laying out plants in such a way that it is inexpensive and easy to unload new inventory shipments and computing the inventory order system, the cost of ordering new inventory is reduced. Secondly, by developing a strong relationship with suppliers located in the same geographical area and setting up restocking strategies that cut time, the safety stock is also reduced. The philosophy behind the just-in-time inventory system is that the benefits associated with reducing inventory and delivery time to a barest minimum through adjustment in the EOQ model will more than off set the costs associated with the increased possibility of stock outs.

2.5.8 AUTOMATED INVENTORY - PRODUCTION CONTROL

Some companies make simple products with only a few parts. Such companies do not have much of an inventory problem. If they produce against orders which permit a fairly generous time lead, they have practically no problem at all. But a company making several extremely complex products, each of which requires several components parts, has a very severe inventory problem.

Any failure to anticipate precisely the parts required, the time at which they will be required and the quantity that will be required can cause production breakdown and failure to meet orders on time. Yet engineering changes can result in obsolete of any given part of the finished product on a short notice, so carrying huge inventories of parts is not the answer. Of course, large inventories are a heavy drag on capital in any event. Hence the reason that the more technical the product a company makes, and the more subject to constant design change and improvement, the more the company needs to control its parts inventory as carefully as possible.

The new system to be developed and installed must have the three concepts in mind in evolving its action programme:

I) Control cannot be exercised over something that has happened in the past. Control is a concept of the future.

ii) To control is to manage.

iii) Inventory control, production control and scheduling are interrelated manufacturing control functions, which taken together and encompass nearly all of manufacturing management.

2.5.9 INVENTORY COSTS

As pointed out earlier in this chapter, inventory represents an investment by an organisation whether as a result of deliberate policy or through inefficient inventory management . The cost of holding inventory must be related to the benefits to be gained just like other investments. To do this effectively, the costs must be identified and this can be done in three categories - cost of holding inventory, cost of obtaining inventory and stock out costs.

I) ***Cost of Holding Inventory***

These costs also known as carrying costs, include the following:

a) Interest on capital invested in inventory;
b) Storage charges (rent, lighting, heating, refrigeration, air conditioning etc);
c) Store staffing, equipment maintenance and running costs;
d) Handling costs;
e) Audit, stock taking or perpetual inventory costs;
f) Insurance, security etc;
g) Deterioration and obsolescence;
h) Pilferage, vermin, damage etc.

ii) ***Costs of Obtaining Inventory***

These costs are sometimes called ordering costs and they include the following:

a) the clerical and administrative costs associated with the

Purchasing, Accounts, and Goods Received Departments;

b) transportation costs;

c) where goods are manufactured internally, the set up and tooling costs associated with each production run.

iii) ***Stockout Costs***

These are the costs associated with running out of stock. The avoidance of these costs is the basic reason why inventories are held in the first instance. These costs include the following:

a) Lost contribution through the lost sale caused by stock out;

b) Loss of future sales because customers go elsewhere;

c) Loss of customer goodwill;

d) Cost of production stoppage caused by stockouts of work in process or raw materials;

e) Labour frustration over production stoppage;

f) Extra costs associated with urgent, often small quantity and replenishment of purchases.

2.5.10 OBJECTIVE OF INVENTORY CONTROL

The sum total of inventory control is to maintain inventory level so that the combined costs as detailed above are at a minimum. We can do this by establishing when to order and how many to order. Management tries to avoid two dangers by imposing limits to the control of inventory levels. The

dangers are:

a) inadequate inventories which could disrupt production thereby losing sales;

b) excessive inventories which culminate into unnecessary carrying costs and the risk of obsolescence.

The optimum inventory level lies somewhere between the two danger points. The management takes steps to balance these two extremes.

2.5.11 CONTROLLING INVENTORY ADDITIONS

The first in inventory control is to set limits as to maximum and minimum quantity of goods to be stored. A limit has to be set as to normal purchases or manufacturing lot quantity. Where the quantity reaches the re-order point, an addition can be initiated by an inventory clerk. The important problem is always the adjustment of the inventory size to the level of production or sales demand, it is common to provide for a review of the acquisition by a specified senior executive. This can be mostly applied by manufacturers in controlling their raw materials and finished goods.

The second approach is the application of the budget concept. In retail businesses a budgeted purchase allowance is established on the basis of expected sales, actual inventory quantities and budgeted end of period inventory.

Inventory could be held for the following reasons/motives:

- Speculative

- Transaction
- Precautionary.

Many Nigerian businessmen apply speculative purchasing. In such cases, the businessmen are not in full control of the movement of such business. As they are not sure of the demand of the customers, the principal raw materials or goods are speculative and no hedge is available. There is little choice left for the management. In this case, responsibility for purchasing rests upon the organisation. Decision to buy or not to buy is based not only upon existing inventory and expected sales, but also upon market conditions over a longer period.

Another approach used by many Nigerians is the one done to meet definite sales or production order of an item not stocked. Most concerns find the need for such purchases either regularly as a matter of policy to avoid stocking slow moving items or occasionally to meet a special unusual requirement.

2.6 IMPLICATION OF DEVALUATION OF THE NAIRA ON WORKING CAPITAL MANAGEMENT

2.6.1 WHAT IS DEVALUATION?

This is a deliberate step taken to lower the value of local currency in exchange for other nations' currencies e.g US dollar and British Pound Sterling. Exchange rate devaluation by an economy conceptually creates both

substitution effect and income effect. The devaluation of a domestic currency reduces the prices of domestic tradeable goods relative to the price of foreign goods. This induces increased demand by foreign consumers for the products of the country (substitution effect). The increase in the exchange rate reduces the real income of the domestic consumers and increases the real income of the foreign consumers (income effect). The real income effect thus reinforces the substitution effect to stimulate export response when a country devalues its currency.

The currencies of the various economies are traded continuously against one another on the foreign exchange market. The amount of the domestic currency required to obtain a unit of a foreign currency is called exchange rate. The exchange rate is a principal trade variable in the determination of export and import responses at any point in time. The exchange rate should in principle, be left to the vagaries of the market forces of demand and supply. In practice, however, no government ever really hands off completely the determination of the exchange rate. It is common for authorities to fix the exchange rate at some level which is often different from the competitive market rates.

2.6.2 HISTORY OF EXCHANGE RATE IN NIGERIA SINCE 1986

The Federal Military Government under General Ibrahim B. Babangida made efforts in 1986 to adopt a realistic exchange rate of the naira through several

institutional arrangements such as the Second Tier Foreign Exchange Market (SFEM), Dutch Auction System, Interbank Foreign Exchange Market (IFEM) and lately the Autonomous Foreign Exchange Market (AFEM). This was one of the strategies to achieve the specific objectives of the Structural Adjustment Programme (SAP) introduced in June 1986.

The Structural Adjustment Programme (SAP) has as its focal point a market determined foreign exchange rate. Hitherto the demand for forex was far in excess of the available supply and the quantity of forex was subject to arbitrary rationing. The Structural Adjustment Programme (SAP) established a floating exchange rate mechanism tied to market determined forces. The system was introduced in phases and consisted of two tiers. The first tier was an officially administered rate, which applied to all public service transactions. The second tier rate, applied to all other market transaction, was determined by auction - the second tier foreign exchange market under the aegises of the Central Bank of Nigeria (CBN) and was funded by oil revenue. The reform sought to curtail demand for imports, encourage capital inflows and non-oil exports and eliminate the distortions imposed by the import licensing system - but above all to provide a realistic rate for the domestic currency.

When the reform was imposed in September 1986, the second tier exchange rate system led to a 66% devaluation. In October that year, the auction method was changed and the amount of foreign currency available was increased. The naira again appreciated by 45%. The exchange rate then

remained stable for several months. In July 1987, the market determined (second tier) exchange rate was unified with the official first tier rate, and the second tier foreign exchange market was replaced with the Foreign Exchange Market (FEM), nonetheless, two separate exchange rates existed. Every two weeks the Central Bank determined an auction rate for banks, the government official foreign exchange dealers, and some importers. All other purchasers obtained foreign exchange at an interbank rate determined by market forces. In the later half of 1987, the gap between the auction rate and the parallel market rate widened, reaching more than 50% by early 1988. Despite the growing gap between the official auction rate, which was an attempt to suppress depreciation, and the interbank market rate, which responded freely to market signals, both rates depreciated. The principal determinants were the rapid expansion of the money supply and the fiscal impact of the reflationary budget of 1988. Yet by early 1988, tighter fiscal money policies helped to reverse the trend.

Then in 1989, the government replaced the auction with the interbank foreign exchange market, allowing the Central Bank of Nigeria to determine the exchange rate on a daily basis. In the first quarter of 1991 both the auction and the interbank rates depreciated quite sharply and the gap between the two widened considerably. The immediate cause was the higher public spending which came as a result of pressures arising from a mini oil boom in 1990 - 1991 that permitted a large increase in money supply. The Central

Bank's role in the bidding process led to a brief appreciation in the nominal rate between late 1991 and early 1992 and the gap between the official rate (N9.80 per US dollar) and the parallel market rate (N18.50 per US dollar) widened. In March 1992, the Central Bank finally realised its goal - a uniform exchange rate system. Unification reduced the politically unpopular intervention in foreign exchange sales by the Central Bank.

The exchange rate reform has been so far a successful programme. What has been most remarkable is the sustained devaluation of the naira's external value between 1986 and 1992. From 1988 to 1992, the quarterly average of the naira exchange rate per US dollar depreciated by 27%, 58%, 61%, 67% and 83% over the 1987 base period. The depreciation has been so rapid and it has been very difficult to attain a realistic exchange rate. The reason for the rapid depreciation is connected with the unmet demand for foreign exchange. The demand - supply gap expanded rapidly from a mere $360 million in the first ten months of the second-tier foreign exchange market to $15 billion in 1989 and $17.5 billion in 1990. Much of this demand has been speculations generated by the monetary expansion and the controlled interest rate policies.

The crucial determinants of this continuous decline is the monetary policy contrary to the structural adjustment programme goals on paper, an expansionary monetary supply continued - banks failed to comply with credit limits, the government engaged in deficit spending (financing), and further, it

imposed a cap on interest rates which encouraged the private sector to bid for foreign exchange with loan money.

2.6.3 THE MARCH 1995 FOREIGN EXCHANGE MARKET REFORMS

The reforms devalued the naira from N22 to N80 per dollar with the expectation that the naira will get stabilized at a point to be determined by the forces of supply and demand. But that expectation has in recent times been threatened by the development in the Autonomous Foreign Exchange Market (AFEM). At the parallel forex market, a dollar exchanged for N86 and the naira has failed to improve beyond this level. The supply of dollars at the Autonomous Foreign Exchange Market (AFEM) is pegged at $100 million mark a week. But the weekly demand is always in excess of this figure. The Central Bank of Nigeria tries to narrow the margin between the rates at AFEM and the parallel forex market through its intervention. But the harder it tries, the wider the margin. Reduction of liquidity in the economy has not helped matters.

2.6.4 THE NAIRA'S DOWN-HILL JOURNEY

The Business Times of 25th May, 1998 reported that of recent, the exchange rates stood at N90 for US $1 and N146 and N46 for Pound Sterling and Deutsche Mark respectively. This was attributed to the uncertainty surrounding the present political atmosphere in the country which was having very devastating effects on the nation's economy. This has gone to fuel inflation in the economy as a result of increase in the prices of goods and services

(because manufacturers would like to shift the burden of forex cost to the final consumers of their products).

Causes of this massive depreciation could be attributed to:

1. High demand for dollars with a corresponding low supply of dollars.
2. Capital flight owing to investors' divestment in the face of political uncertainty.
3. High cost of doing business in Nigeria. The depreciation of the naira is not good for the economy as it would reduce investors' confidence in the economy.
4. Panic buying of dollars. At the last intervention in AFEM in May 1996, total demand for forex rose to $100 million from $68.62 million following the devaluation of the naira by CBN by 50k.

2.6.5 EXCHANGE RATE MANAGEMENT

By mid-1986, the naira became highly over valued. The black market was N3 to US$1 against the official rate of N1 to $1.

Exchange rate reform was carried out in phases. Secondary foreign exchange market (December 1985), unified foreign exchange market (July 1987), Interbank foreign exchange market (December 1988); abolition of foreign exchange auction (March 1992).

Overall progress in foreign exchange reform was good, but lack of reforms in fiscal policies and monetary control nullified the progress to some extent. Excess liquidity, weak implementation capacity, and interest group pressure were causes of the government's failure to stabilise the exchange rate and domestic inflation.

2.6.6 IMPLICATION OF THE DEVALUATION OF NAIRA ON THE WORKING CAPITAL IN THE TEXTILE INDUSTRY

The Nigerian currency Naira was competing favourably with other currencies of the world until June 1986 when the Federal Government was advised to devalue the naira. Since then the value has never been stable. This set in a vicious cycle in uncontrollable devaluations, galloping production costs, falling standards of living, sky rocketing demands for wage increases - a vicious cycle that may have drastic consequences for working capital management in the textile industry.

Before 1986, US dollar was exchanging for N0.998. But today, the official exchange rate is N22 for a dollar while at the open market a dollar sells for N90. Pound Sterling sells for N146. A Nigerian army General once remarked that before 1986, you required a pocket full of naira to buy a trailer load of goods. Today, you need a trailer load of Naira to buy a basket full of goods. Nigeria has been engulfed by spiral inflation. The cost of doing business has

gone up with the introduction of the Autonomous Foreign Exchange Market (AFEM). Given the high dependence of our textile industry on imports generally, the adjustment of the naira exchange value has resulted in devastating impact on cost of doing business.

Every right thinking member of the society wonders why Nigeria since 1986, has embarked upon these frantic and most destructive devaluations of the naira. This was done with sub-political motives without any national economic reasons. In desperation, however, we may look into the purchasing power parity theory for a possible or remote excuse. The theory states that the exchange rate of a currency is directly related to the internal purchasing power of the currency vis-a-vis the external purchasing power of the relevant foreign currencies. This means for instance, that if N1000 could buy a kilogram of lint in Nigeria and $200 in New York, then the exchange rate between the two currencies should be about N5 to $1. The purchasing power of the naira in 1986 for instance before the commencement of the frenetic devaluation far readily corresponds to the official exchange rate than the alarming rates of the naira today.

For effective working capital management there should be a proper planning for the components of working capital, stock, marketable securities, debtors, cash, creditors, short term loan and dividends payable. Unstable exchange rate inhibit planning for these components. At this point, it is necessary to look at the effect of the devaluation of the naira briefly on each component.

a) **STOCK**

The textile industry relies on importation of cotton lint, chemicals and other machine spare parts. The naira was depreciated to enhance the prices of export products. However, the depreciated naira exchange rate has resulted in higher prices of these imported inputs. This requires more naira to be able to meet production demand. The effect of this is that the amount of naira to be paid for the same quantity of raw materials and goods purchased will now increase. Another problem with stock is the problem of valuation - method of stock valuation to minimise the distortions in the stock figures. Apart from the high cost as well as contraction of imports, there is the problem of inadequate liquidity which has lengthen the lead time.

The government has tried to make the exchange rate at the Autonomous Foreign Exchange Market (AFEM) to catch up with the rate at the parallel market. The danger in doing this is that once the government depreciates the naira at the Autonomous Foreign Exchange Market, those rates will also react and move upward direction. This development is capable of making cost of production higher since most of the raw materials in the textile industry are imported. Ultimately, the consumers would bear the higher prices for the goods manufactured. Stocks are mounting up in the warehouses of many textile companies as a result of dwindling disposable income of many Nigerians.

Many Nigerian textile companies have no direct access to the sources of raw materials in international market. They have to rely on their foreign technical partners who quote prices that are grossly out of tune with what obtains in international markets. These partners source raw materials from their subsidiaries elsewhere in the world only to ship them down to Nigeria after topping a percentage of the market price as their commission.

In January 1997, the Federal Government lifted ban on importation of textile materials. According to the government, it is to enable local producers to compete favourably with their foreign counter parts and to encourage the production of quality fabric capable of meeting international standards. The industry is faced with:

1. High rate of smuggling of textile materials
2. Importation of second-hand clothes into the country.
3. Obsolete machines that need replacement with modern technology.
4. High import content as high as 60% (cotton, dye stuff, chemicals, machine, machinery and spare parts). The well being of the industry depends squarely on the level of prosperity of the economy.

(b) **MARKETABLE SECURITIES**

Planning is very vital to the survival of any organisation. It is the starting point for any business that desires to succeed. During the regime of stable exchange rate, a company is able to forecast when it will have excess cash and plan to invest in short term securities

(marketable securities), or when it needs cash to meet financial obligations as they fall due and plans ahead to meet this need.

But unstable foreign exchange rate could cause illiquidity or excess liquidity depending on whether the naira is depreciating or appreciating . As the naira depreciates against other nations' currencies, more naira will be needed to meet foreign commitment and companies may resort to selling their marketable securities at a discount to be able to raise the needed cash while on the other hand, a rise in naira value will lead to a situation of excess liquidity as people begin to sell foreign exchange to avoid making losses. You will see that low demand for cash will cause the money market to be flooded with cash - idle cash for that matter. The entire financial system including the foreign exchange market and the capital market will be fundamentally affected by this development.

At the moment, the deposit rate is below six percent while the lending rate still hovers around twenty percent. The manufacturers seem to be losing from both ends through this development as income from deposits drop while the cost of investments (capital) remains high. Declining interest rate has forced investors to divert their deposits to the capital market which means investing in short term marketable securities is not very encouraging. Excess liquidity leads to a continuous rise in foreign exchange demand, a development that

may put pressures on the external sector. The interest rate has been forced down and this has encouraged borrowing to purchase foreign exchange.

C ACCOUNTS RECEIVABLES

Nigerian companies, including those in the textile industry, sell good export finished goods to other countries of the world for which payments are made later. The exporting company may wish to exchange the foreign currency to obtain naira. It will therefore ask its bank to purchase the foreign currency from it. Since the exporter is selling currency to the bank, the bank is buying the currency at the prevailing exchange rate. Because of instability in the exchange rate the company faces what is called foreign exchange risk.

Foreign exchange risk is the principal risk faced by all organisations whose operations require foreign exchange - the losses arising from fluctuations in exchange rate. The exchange rates between currencies are continuously changing and the lack of stability creates uncertainty about what foreign exchange income will be when it is received or what foreign exchange payments will cost when they have to be made. Foreign exchange movements create the risk of unforseen losses for a company and so foreign exchange risk management can be a crucial element of a corporate treasurer's functions.

In the face of devaluation, an exporter could respond to the devaluation in different ways:

I) When an exporter decides to take on the exchange risk and invoice foreign customers in their own currency, using pricing policy to reduce the risk.

ii) A company can anticipate adverse exchange rate movements by building an extra profit margin into the selling price to act as a cushion in the event that exchange rates do in fact move adversely.

iii) An export or import contract might be given a currency protection clause, whereby sales prices in the foreign currency are adjusted if the exchange rate moves outside a defined range.

The Federal Government through the 1995 Foreign Trade and Exchange policy directed that:

I) Repatriation of non-oil export proceeds and other inflows shall be held in Domiciliary Accounts maintained with Authorized Dealers in Nigeria. The banks shall continue to maintain two types of Domiciliary Accounts namely Export Domiciliary Account and Ordinary Domiciliary Accounts. The holders of the Domiciliary accounts shall continue to have easy access to the funds maintained therein subject to the existing guidelines.

ii) Exporters and other foreign exchange owners are permitted to sell their export proceeds and other foreign currencies to Authorized Dealers at autonomous rates. Moreover, exporters are allowed to sell their export proceeds to banks other than those where they maintain Export Domiciliary Accounts.

d) **CREDITORS/LENDERS**

The Nigerian companies as earlier observed, import raw materials in some cases on credit. They also take foreign loans for their operations. By the 1995 Foreign Trade Policy, all government transactions with the Central Bank of Nigeria shall be at the official exchange rate of N22 to a dollar. However, commercialised companies like Arewa Textile Plc, shall source their funds in the Autonomous Foreign Exchange Market (AFEM) at the prevailing exchange rate. The implication of this is that a company will require more naira value to settle foreign trade creditors when the naira depreciates. The government had also in 1995 directed that industrial project promoters to repay foreign currency dominated loans they obtained from government specialised development finance institutions at the rates prevailing in the Autonomous Foreign Exchange Market (AFEM) irrespective of the rate that obtained when such loans were procured. This meant that the loan beneficiaries were forced to repay their loans at between N85 and N75 which obtained in the Autonomous Foreign Exchange Market since 1995 when the directive was issued by the Federal Government.

But through the 1998 budget breakdown, government reviewed the blanket policy and directed that foreign currency dominated loans procured by small and medium scale enterprises from either National Economic Recovery Fund (NERFUND) or Nigerian Export/Import Bank (NEXIM) on or before 31st December, 1994 would henceforth be repaid at the official rate of N22 to a dollar. The small scale industries have found it extremely difficult to repay these loans since the introduction of AFEM and the burden of repayment had disturbed the growth of the industrialists. This incentive will leave some of the projects with a sizeable chunk of their export proceeds (for those of them exporting their products) which they can reinvest to improve upon the quality of their products and or reduce costs.

But this concession is not available to big companies like Arewa Textiles Plc who are required to repay their foreign loans at the Autonomous Foreign Exchange Market rates which at the moment move between N88 and N90 to a dollar. This policy will no doubt reduce the working capital available to the industry - textile industry.

2.6.7 FOREIGN EXCHANGE MANAGEMENT BY FINANCE MANAGER

Foreign exchange management as an important aspect of the finance manager's job in several companies, includes:

I) making adequate plans for the foreign exchange needs of the

organisation;

ii) investing export proceeds received in foreign currency until the funds are needed. This will generally be by way of interest bearing deposits in domiciliary accounts held with a Nigerian bank;

iii) determining the appropriate timing of the purchase or sale of foreign exchange so as to minimise the exchange rate fluctuations;

iv) managing the foreign exchange risk;

v) controlling the usage of any foreign currency required.

2.6.8 FACTORS AFFECTING EXCHANGE RATES

Factors that could influence the exchange value of the Naira against any foreign currency include:

I) the supply and demand for the foreign currency;

ii) the rate of inflation - global inflation rate and its effect on the domestic rate of inflation;

iii) Local economic conditions including:

a) domestic interest rates,

b) growth in gross domestic product;

c) growth in exports;

iv) the political environment in Nigeria and in the foreign country;

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v) international confidence in the Naira reflecting international confidence in the domestic economic management policies.

2.7 FINANCING WORKING CAPITAL

Working capital could be financed by long term, medium and short term finance. The net working capital (current assets less current liabilities) represents the position of working capital financed through long term finance. It must be borne in mind that cost of long term finance (dividend to shareholders and interest to debenture holders) are higher than the cost of short term finance. Hence it is advisable that the major part of working capital be financed through short term funds.

By convention all sources of financing that must be repaid within one year are considered to be short term, those that must be repaid in one to ten years are medium term and all sources with maturities longer than ten years are classified as long term.

2.7.1 SHORT TERM FINANCING.

The two issues involved in managing a firm's use of short term financing are:

i) The quantum of short term financing a firm can use ; and

ii) The specific sources of short term financing a firm can select.

As earlier pointed out, hedging principle of working capital management can help to tackle the first issue above. The hedging principle describes the process of matching temporary needs for funds with short term sources of financing and permanent needs with long term sources. Temporary needs for funds arise in response to a temporary need for current assets. These include assets that the firm does not plan to hold throughout the indefinite future. Permanent needs for funds arise in conjunction with a permanent need for certain assets plus the firms' minimum level of investment in current assets. Short term methods of financing are suitable for funding shortage in working capital.

The objective of this sub-heading is to answer the second issue raised above: how the finance manager selects the sources of short term credit. In general, three basic factors should be considered in selecting a source of short term credit.

l) The effective credit.

ii) The availability of the credit in the amount selected and for the period when financing is required and

iii) The influence of the use of a particular credit source on the cost and availability of other sources of financing.

2.7.2 SOURCES OF SHORT TERM CREDITS.

Short term credit sources can be divided into two broad groups: unsecured and the secured. Unsecured sources include all those sources that have as their security only the lender's faith in the ability of the borrower to repay the funds when due. Secured sources on the other hand involve the pledging of specific assets as collateral in the event , the borrower defaults in the payment of the principal sum or interest. The principal sources of collateral include accounts receivable and inventories.

2.7.3. ACCRUED WAGES AND TAXES:

Most businesses pay their employees periodically (weekly, bi-weekly or monthly). By this, firms accrue a wages payable account that is in essence, a loan from their employees. For instance, if the wage expense of Arewa Textile PLC is □450,000 per week and it pays its employees monthly, then by the end of a four week month, the firm will owe the employees N1.8 million in wages for services they have already performed during the month. Consequently, the employees finance their efforts through waiting a full month for payment.

In the same vein, firms generally make half yearly income tax provisional payments for their estimated half yearly tax liability. This means that the firm

has the use of the tax monies it owes based on the half yearly profits up through the end of the half year. In addition, the firm pays sales taxes and withholding (income) taxes for its employees on a deferred basis. The longer the period that the firm holds the tax payments, the greater the amount of financing they provide. It must be borne in mind that these sources of financing rise and fall spontaneously with the level of the firm's sales. That is, as the firm's sales increase so do its labour expense, sales taxes collected and income tax. Consequently, these accrued expense items provide the firm with automatic or spontaneous sources of finance.

2.7.4 TRADE CREDIT

It provides one of the most flexible sources of short term financing available to a firm. Trade credit is a primary source of spontaneous, or on demand financing - it arises spontaneously with the firm's purchases. To arrange for credit the firm needs only place an order with one of its suppliers.

When granting trade credit, the following factors may have to be considered.

I) Nature of product e.g. perishability;

ii) Financial position of the seller;

iii) Motive of the seller e.g. to capture a greater share of the market;

iv) Financial position of the buyer;

v) Cash discounts.

2.7.5 CREDIT TERMS AND CASH DISCOUNTS

Trade credit is cost free where discount is not provided for early payment. The costs of making maximum use of trade credit include:

I) the loss of supplier's good will

ii) loss of any available cash discounts for early payment of debts. The lost discount becomes penalty for not paying early enough.

The effective annual cost of not taking the cash discount can be quite severe and this cost can be calculated as follow:

$$\frac{d}{100 - d} \times \frac{365}{t}$$

where: d is the size of the discount e.g. a 5% discount means d =5

t is the reduction in the payment period in days which would be necessary to obtain the early payment discount.

2.7.6 STRETCHING ON TRADE CREDIT

Some firms that use trade credit engage in a practice called stretching of trade accounts. The practice involves delaying payments beyond the prescribed credit period, not just the discount period. This happens when a firm is faced with shortage of cash. The danger here is that continue violation of trade credit terms can cause bad blood between the seller and buyer which can

eventually lead to a loss of credit. However, for short periods, and at infrequent intervals, stretching offers some advantages.

2.7.7 ADVANTAGES OF TRADE CREDIT

As a source of short term financing, it has a number of advantages.

I) trade credit is conveniently obtained as a normal part of the firm's operations;

ii) no formal agreements are generally involved in extending credit. The transaction is based on mutual trust,

iii) the amount of credit extended expands and contracts with the needs of the firm hence it is classified as spontaneous, or on demand source of financing.

2.7.8 BANK CREDIT

Commercial banks provide unsecured short term credit in two basic forms - lines of credit and transaction loans (notes payable). Maturities of both types of loans are usually one year or less, with rates of interest depending on the credit worthiness of the borrower and the level of interest rates in the economy as a whole.

2.7.9 LINE OF CREDIT

This is generally an informal agreement or understanding between the borrower and the bank as to the maximum amount of credit that the bank will provide the borrower at anyone time. Under this type of agreement there is no legal commitment on the part of the bank to provide the stated credit. In a revolving credit agreement, which is a variant of this form of financing, a legal obligation is involved. The line of credit agreement generally covers a period of one year corresponding to the borrower's fiscal year.

Lines of credit generally do not involve fixed rates of interest, instead they state that credit will be extended at say ½ percent over prime or some other spread over the bank's prime rate. Lines of credit usually require that the bank maintains a minimum balance in the bank throughout the loan period, called a compensating balance. This required balance (which can be stated as a percent of the line of credit or the loan amount) increases the effective cost of the loan to the borrower, unless a deposit balance equal to or greater than this balance requirement is ordinarily maintained in the bank.

2.7.10 TRANSACTION LOAN

This type of loan is made for specific purpose and most individuals associate this loan with bank credit. The loan is obtained by signing a promissory note. The loan is very similar to a line of credit regarding cost, term to maturity and

compensating balance requirements. In both instances, commercial banks often require that the borrower clean up its short term loans for a 30 - 45 day period during the year. This means, very simply, that the borrower must be free of any bank debt for the stated period. The purpose of such a requirement is to ensure that the borrower is not using short term bank credit to finance a part of its permanent needs for funds.

2.7.11 COMMERCIAL PAPER

Commercial paper which is simply a short term promise to pay is used by the largest and most credit worthy companies. The maturity of this credit source is generally six months or less. The interest rate on commercial paper is generally slightly lower (0.5% to 1%) than the prime rate on commercial bank loans.

The cost of commercial note issue is made up of two components:

I) the interest rate (coupon rate) e.g. 15% per annum

ii) the issuing house commission (usually 1/4% to ½%) flat on the amount raised.

The interest is usually paid in advance (e.g. up front) so that the issuer receives the net proceed of the issue. As a result, the effective yield to the investor (and hence the effective cost to the issuer) will be higher than the coupon rate.

Commercial notes are not as flexible as bank overdrafts as a source of finance because fixed sums have to be borrowed for fixed periods. However, it is usually quicker and easier to obtain funds by way of commercial paper than overdraft. In most cases as well, commercial note is cheaper than bank credit.

Several advantages accrue to the use of commercial paper such as:

I) Interest Rate: commercial paper rates are generally lower than rates on bank loans and comparable sources of short term financing.

ii) Compensating Balancing Requirement: No minimum balance requirements are associated with commercial paper. However, issuing firms usually find it desirable to maintain lines of credit agreements sufficient to back up their short term financing needs in the event that a new issue of commercial paper cannot be sold or an outstanding issue cannot be repaid when due.

iii) Amount of Credit: commercial paper offers the firm with very large credit needs of a single source for all its short term financing. Because of loan restrictions placed on the banks by the regulatory authorities, obtaining the necessary funds from a commercial bank might require dealing with a number of institutions.

iv) Prestige: Because it is widely recognised that only the most credit worthy borrowers have access to the commercial paper market, its use signifies a firm's credit status.

Using commercial paper for short term financing, however, involves a very important risk - the commercial paper market is highly impersonal and denies even the most credit worthy borrower any flexibility in terms of repayment. When bank credit is used, the borrower has someone with whom he or she can work out any temporary difficulties that might be encountered in meeting a loan deadline. This flexibility does not exist for the user of commercial paper.

2.7.12 SECURED SOURCES

Secured sources of short term credit have certain assets of the firm pledged as collateral to secure the loan. Upon default of the loan agreement, the lender has first claim to the pledged assets in addition to its claim as a general creditor of the firm. Hence the secured credit agreement offers an added margin of safety to the lender. Sources of secured short term financing are discussed below.

2.7.13 ACCOUNT RECEIVABLE LOANS

Generally, a firm's receivables are among its most liquid assets. For this reason they are considered by many lenders to be prime collateral for a secured loan. Two basic procedures can be used in arranging for financing based on receivables.

a) **Pledging Accounts Receivable**

Under the pledging arrangement, the borrower simply pledges accounts receivable as collateral for a loan obtained from either a commercial bank or a finance company. The amount of the loan is stated as a percentage of the face value of the receivables pledged. If the firm provides the lender with a general line on its receivables, then all of the borrower's accounts are pledged as security for the loan. This method of pledging is simple and inexpensive. However, because the lender has no control over the quality of the receivables being pledged, it will set the maximum loan at a relatively low percent of the total face value of the accounts.

b) **Pledging Invoices**

Another approach to pledging accounts receivable is the borrower presenting specific invoices to the lender as collateral for a loan. This method is somewhat more expensive in that the lender must assess the credit worthiness of each individual account pledged; however, given this added knowledge the lender will be willing to increase the loan as a percent of the face value of the invoices.

2.7.14 FACTORING ACCOUNTS RECEIVABLE

This involves the outright sale of a firm's accounts to a financial institution called a factor. A factor is defined as a doer or transactor of business for another. As a firm, it acquires the accounts receivables of other firms. The factoring institution may be a commercial finance company that engages solely in the factoring of receivables (known as an old line factor) or it may be a commercial bank. The factor in turn bears the risk of collection and for a fee, services the accounts. The fee is stated as a percentage of the face value all receivables factored. The factor does not make payment for factored accounts until the accounts have been collected or the credit terms have been met. But the firm (the owner of the accounts receivables) can borrow money from the factor, using the factored accounts as collateral if it needs an immediate payment for its factored account.

2.7.15 INVENTORY LOANS

They provide another source of security for short term secured credit. The amount of the loan that can be obtained depends on both the marketability and perishability of the inventory. Some items such as raw materials (grain, oil, lumber, lint and chemicals), are excellent sources of collateral, because they can easily be liquidated. Other items, such as work-in-process inventories, provide very poor collateral because of their lack of marketability.

2.7.16 BILL OF EXCHANGE

Another form of short term sources of finance is the Bill of Exchange. It is defined by the Bill of Exchange Act 1882 as an unconditional order in writing, addressed 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 to bearer.

There are three parties to a bill - the drawer i.e. the party who draws the bill and signs, the drawee i.e the party to whom the bill is addressed and the payee, the party to whom the bill is expressed to be payable. A drawee accepts a bill by signing his name across the face of it and thereby becomes the acceptor. Until the drawee becomes the acceptor, he is not liable on the bill.

The use of bills payable and discounting of bills receivable helps to overcome a cash shortage. But they can be very expensive. The cost of this depends upon the credit worthiness of the customers and the nature of the trade concerned.

2.7.17 INVOICE DISCOUNTING

This is related to factoring and many factors will provide an invoice discounting service. It is the purchase of a selection of invoices, at a discount. The invoice discounter does not take over the administration of the client's sales ledger, and the arrangement is purely for the advance of cash. A client should only want to have some invoices discounted when there is a temporary shortage of cash.

There is an element of credit protection in the invoice discounting service, but its real purpose is to improve the client's cash flow. Since the factor (invoice discounter) does not control debt administration, and relies on the client to collect the debts it is a more risky operation than factoring proper and so a factor might only agree to offer an invoice discounting service to reliable well established companies.

We will not go into the discussions of medium and long terms financing of working capital here. In passing we can just mention the sources of medium and long terms finances which are:

	Medium Term		**Long Term**
a)	Venture capital	a)	Owners' funds
b)	Hire purchase	b)	Debentures
c)	Unit trust	c)	Loans.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

Before we think of collection of data and the sources and methods for collecting such data, it must be clear in our mind what we intend to achieve. We have the responsibility as far as this study is concerned, to collect data capable of providing the necessary solutions to the problems on hand. When we have a thorough understanding of the problems on ground and their complexities, we can plan and carry the study to a successful completion. This is possible when we take steps to synchronise the statement of the problem within the design to be used in its solution.

We want to be able to find out if the management of this company attaches importance to effective control of working capital, to see if there are deliberate policies to keep working capital at the optimum level to avoid over or under trading.

3.2 SOURCES OF DATA

This study seeks to draw its data from both primary and secondary sources.

3.2.1 PRIMARY DATA

The primary data was collected from both the key officers and schedules officers of the companies visited especially the Arewa Textiles Plc.

3.2.2 SECONDARY DATA

The secondary data was collected from the Nigerian Stock Exchange, Kaduna, Central Bank of Nigeria. Others include financial newspapers and magazines, journals and the company's audited reports and accounts.

3.3 METHODS OF DATA COLLECTION

Various methods are available for collecting data in normal course of administrative purposes. For the purpose of this study, the under listed methods were used to collect data.

3.3.1 PERSONAL INTERVIEW

Personal interview creates opportunity for a researcher to note the apparent reluctance or evasiveness of the respondent and the possibility of misinterpreting any question is not there. Personal interviews were held with some key staff of the company and other relevant scheduled officers. The questions were largely structured to cover a wide range of activities.

3.3.2 QUESTIONNAIRE

To be able to obtain written responses from respondents, a questionnaire was prepared and circulated to key officers in the company. The questionnaire was structured to cover the following areas:

a) General

b) Inventory Management

c) Accounts Receivables

d) Marketable securities

e) Cash

f) Accounts payable.

3.3.3 REFERENCE TO COMPANY'S ANNUAL REPORTS

The secondary data needed for the calculation of ratios was largely got from the company's annual reports and accounts for a period of six years (1990 - 1995). This data was supplemented with data from the Nigerian Stock Exchange.

3.4 CONCLUSION

This chapter deals with the types of and sources of data, as well as the methods of data collection.

Two types of data are involved in this study - the primary and secondary data. Whereas the secondary was got from the audited annual reports and accounts of the company, the primary data was got through questionnaire and personal interview.

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

4.1 HISTORICAL BACKGROUND

There is no gainsaying that textile manufacturing has always served as the leading edge of the industrial take off in almost all developing economies, primarily because it produces to meet a basic human need. It provides employment opportunity for a large unsophisticated labour force, and it provides a significant import substitution opportunity.

It is therefore not surprising that automated textile manufacturing was first established in Nigeria since the mid 1950s and indeed represented one of the early efforts of establishing the modern sector of the Nigerian economy.

As a result of the successful implementation of the first ventures, the Nigerian delegation which visited Japan in 1960 under the leadership of the late Alhaji Ali Akilu, the then Secretary and Head of the Civil Service of Northern Nigeria, muted the idea of setting up another textile mill in Kaduna.

Suffice it to say that the above vision gave birth to Arewa Textiles Limited in 1963 and it commenced production in April 1965. It started with an installation of barely 400 looms and 10,000 spindles, then, production facilities later

expanded to 1764 looms and over 55,000 spindles giving an installed clothes production capacity of over 4,000 million metres a month. Production capacity did not only expand but the company was able to fully integrate its operations and achieved some measure of diversification of its product line.

The company started production in 1965 with baft and shirting. It went ahead to add an African Prints line in 1971, introduced polyester and dress prints in 1975 and in 1982, launched super prints. To support this growth, the company's paid up share capital was raised from N1.4m (£700,000) at inception to N50m in 1992 with the following share holding as at 1995:

	Shareholders	No of Shares	Naira Equivalent	Percentage %
A.	Overseas Investors			
1.	Overseas Spinning Investment Co. Ltd	12,389,140	24,772,280	49.55
2.	International Finance Company	1,829,420	3,658,840	7.32
3.	Kuwait Investment Company	181,440	362,880	0.73
		14,400,000	28,800,000	57.60
B.	Nigerian Corporate Investors			
4.	Northern Nigeria Investments Ltd	1,404,931	2,809,862	5.62
5.	A.K. Holdings Ltd	7,500	15,000	0.03

	6.	Arewa United Stores Ltd	30,000	60,000	0.12
	7.	Bank of the North Ltd	25,000	50,000	0.10
	8.	Dantata Investments	125,000	250,000	0.50
	9.	Gombe Transport & Trading Co. Ltd.	4,200	8,400	0.02
	10.	Kaduna Industrial & Finance Co. Ltd.	225,000	450,000	0.90.
			1,821,631	3,643,262	7.29
C.	Other Nigerians		3,493,943	6,987,886	13.97
D.	Arewa Textile Staff		5,284,426	10,568,852	21.14
	Grand Total		25,000,000	50,000,000	100.0

Today, Arewa Textile Plc is one of the leading textile companies in the West African sub-region. As can be seen above, the share holding of the company cuts across national boundaries, corporate bodies and individuals. The main activities of the company are spinning, weaving and printing of textiles which are sold directly to its major distributors located in Kano and Zaria. The company does not have direct retail outlets.

The company has come a long way in its modernization exercise as it has recently refurbished some of the aging machines in Spinning, Weaving, Printing and Finishing Departments. With this in place, it is confident that it would be in a position to introduce a new line of products that will enhance a higher share of the market in the very near future.

4.2 FINANCIAL PROFILE OF AREWA TEXTILE PLC (1990 - 1995)

The financial profile of the company for the period covered by this study is shown in Appendix A below. The profile shows that the company is a growth company. This is in spite of the decline in the pre-tax profit in 1995. Although sales in 1995 stood at N1,018,649,000, the pre-tax profit stood at N38,433,000. Increases in manufacturing and operating costs must have accounted for this decline in profit.

As pointed out earlier in the introduction, the acceptable working capital and liquidity ratios are 2:1 and 1:1 respectively. But this company has on the average ratios of 2.

The company needs to increase on its cash position by reducing investment in stocks.

4.2.1 THE STRUCTURE OF CURRENT ASSETS

As may be observed in Appendix B below, there are three major forms in which the company holds its resources intended for use in meeting short term financial obligations. Between 1990 and 1994, a considerable amount of the company's resources was invested in inventories. Indeed, in 1991 and 1993 over 70% of the total investment in current assets was in inventories. But in

1995, the investment was spread almost equally over the three major forms of current assets namely inventory (35.9%); accounts receivables (32.3%) and cash and Bank (31.2%) respectively.

The inventories are held mainly in three components, namely, raw materials and work in progress, technical inventories and spares and finished goods. These three forms serve two basic purposes. Raw materials and work in progress enable production to be carried out economically, while the other components ensure that customers' orders are met promptly and thus avoid loss of goodwill.

Management of inventories seeks to ensure that too much inventory is not held to avoid the firm's capital being tied down instead of being profitably invested elsewhere and that too little inventory is not held to fail to satisfy the customer's demands and consequently, incur stock out costs. It must be borne in mind that there are no free funds. Therefore, in inventory management the tendency would be to avoid the two extreme cases observed above and to move towards the optimum level of inventory holding. A number of models which explain how this optimum level is attained and what problems are involved in doing so have been formulated by such scholars as Hanssman (1962) and Naddor (1966).

Cash and Bank balances constitute the second major form in which short term resources are held. The basic economic reasons for holding resources in this form are transactional, precautionary and speculative motives. These motives are fully discussed under cash management. Here again it is pertinent to point out that there has to be a balance between liquidity and profitability in its management. Holding cash and bank balances in excess of what is required amounts to a sacrifice of the opportunities for their profitable use (e.g. investment in interest-yielding short term marketable securities). On the other hand, holding too little cash creates for the organisation problems of liquidity. Just like inventory, there has to be a trade-off between the benefits and costs of liquidity which constitutes one aspect of cash management. Related to this is the need to ensure efficient collection and disbursement of cash and bank balances.

From Appendix B below, it will be observed that the company invested on the average 19% per annum on cash and bank balances between 1990 and 1993 and 33% between 1994 and 1995 respectively. The company seems to be maintaining constant cash and bank balances in line with its needs. You will also observe that the company did not invest in marketable securities in spite of the fact that there was a significant increase in cash and bank balances from 19% to 33%. This may be as a result of speculative and transactionary motives since cotton season is between November and April while purchase of cotton lint is at its peak in May to July.

Accounts receivable and prepayments constitute the third major form in which current assets are held which average 12% per annum of the total investments in short term resources. It is also necessary here that a proper balance is maintained between liquidity and profitability. The longer the terms of credit granted to debtors, the more attractive the sales which leads to increased profit. But this could mean a possible strain on the firm's liquidity and risk of bad debts. The observed trend in Appendix B between 1990 and 1994 seems to show a well articulated debt management policy in the company which has maintained investment in debt at around 12% of total investments in current assets. It shows that sales are almost on cash basis. But this component increased to 32% in 1995 with a corresponding increase in sales in that year which goes to buttress the fact that the longer the credit period given to customers, the higher the sales value.

4.2.2 FINANCING OF CURRENT ASSETS

Appendix C shows the short term sources from which the company finances investments in current assets. All through the period being considered, trade creditors and accruals had been the major source of short term finance of current assets. In 1990, about 49% of the total funds come from this source. This rose to 76% in 1994 but declined to 42% in 1995. Creditors as a source of finance, have no cost attached to them apart from loss of goodwill. This is discussed in details under sources of short term finance of current assets.

Another major sources of short term finance is cotton loans which stood at 20% in 1990 and rose to 37% in 1995. Use is also made of other short term sources which include bank overdraft, tax provision and proposed dividends.

4.2.3 PERCENTAGE OF CURRENT ASSETS FINANCED FROM MEDIUM AND LONG TERM SOURCES

Appendix D shows the percentage of current assets financed from medium and long sources. This is the financial significance of net working capital. It will be observed that 36% of the investment in current assets came from medium and long term finance while 64% came from short term sources in 1990. This gradually increased to 59% in 1995 apart from a decline in 1993.

The relationship between current assets and current liabilities is usually of interest to financial analysts as a measure of the ability of the relevant enterprise to meet its short term financial obligations as they fall due from short term sources. To assess this, they use the ratio of current assets to current liabilities as a key indicator - current ratio companies are expected to have at least a current ratio of 2:1 to be considered as having a sound working capital position.

A look at Appendix A would show that the highest current ratio for this company was 2.5:1 in 1995 whereas other years' ratios were below the acceptable ratio of 2:1. We can not say for sure that the company was in a weak working capital position for those years. But it was in danger of insolvency if its current liabilities were to consistently exceed its current assets. There would not be any justification to say that the current ratio should be 2:1 without knowing what obtains in other companies in the sector to which it belongs. Time series and cross-sectional analyses are often used to provide more useful information on a firm's short term financial strength than an arbitrarily determined ideal ratio.

Liquidity ratio is another indicator used to measure a company's short term financial strength. This ratio excludes inventories from current assets. After the deduction of inventory from current assets, we are left with liquid assets which explains liquidity ratio. Inventories will first have to be converted into accounts receivables then into cash and this becomes available for meeting current liabilities.

Just as in current ratio, there is an ideal liquid ratio. This is usually considered to be 1:1. The argument here is that the company should be able to generate enough liquid resources (cash and marketable securities) to meet its current

liabilities as they fall due without having to first convert inventories into cash. This would tend to imply that as shown in Appendix A this company is in a weak liquidity position since its liquid ratio is less than the acceptable ratio of 1:1 from 1990 to 1994. But the liquidity position picked up in 1995.

We have to be careful not to be misled by this so called acceptable ratio because there is also the overdraft element. It is possible that the company might have arranged for overdraft from its bankers on terms which would permit its use as a medium term source of finance. If this arrangement has been made, only that portion that needs to be repaid during the year would appear among that period's current liabilities.

4.2.4 CURRENT/NON-CURRENT ASSET COMPOSITION

The size of a company's working capital is determined by the proportion of current assets in the total asset structure.

From Appendix E below, it would seem that Arewa Textiles Plc has adopted a policy whereby not less than seventy per cent of its total assets would be held in the form of current assets. In 1990 to 1992 over 90% of the total assets were held in current assets. Although in 1993, the proportion of current assets to total assets fell to 69%, by 1994 the ratio has increased to 81% and

82% in 1992. This is explained by the type of business the company is doing which requires that a greater proportion of its assets be in the form of current assets.

The nature of the company's operations necessitates the availability, in adequate amounts of short term resources to meet short term financial commitments and plough back the surplus to finance future growth. The funds are turned over more quickly than if they had been invested in non-current assets and thus places the company in a better position to take advantage more readily of any profitable opportunity that arises than would have been the case if the current/non-current asset proportion had been reversed. If there were such a situation, profitable opportunities emerging would have to be financed either through the issue of additional shares or debentures, or sale of assets to raise needed funds each of which would entail additional costs.

The company's policy seems to agree with the general view in the literature on working capital advocating greater investment in current assets than fixed assets on the grounds that higher total profits are more likely to be generated by funds invested in current assets than in fixed assets. This comes about, not only because the former are less risky but also because as several of them can be undertaken within a single financial year, they will tend to earn

more in total than investment in fixed assets. Thus, Clarkson and Elliot (1969:133) have argued that "for a particular level of working capital turnover, the lower the proportion of fixed assets, the greater will be flow of funds and the resulting profit".

It is not every company, however, that will benefit from this type of policy. For companies whose operations and earnings require the use of heavy plant and equipment, there would hardly be any economic argument to support such a policy. But where the company's main earnings arise from operations where the fixed assets are almost fully depreciated, though still very much in use, it would seem that more funds should be allocated to investments in current assets than in fixed assets.

Management of business enterprises should be guided by the aim of ensuring optimal allocation of funds between current assets and fixed assets at any given period. Optimality would be determined by the relative profitability between investments in these two groups of assets.

4.3 OPERATING CYCLE

The operating cycle of Arewa Textiles Plc is shown in Appendix F We assume here that the company's sales for the period under review was neither

seasonal nor sporadic. In 1990, the cycle was 92 days and it increased to 94 days in 1995. To be able to appreciate this little change, it is important to highlight the contribution or effect of each component of the working capital to the cycle.

4.3.1 RAW MATERIAL STOCK TURNOVER

Raw materials stayed for 120 days in 1990 before being used. In 1994 raw materials were held for 143 days but decreased to 79 days in 1995. The implication of this is that the management of Arewa Textiles took deliberate steps to reduce the volume of raw materials being held.

4.3.2 WORK IN PROGRESS STOCK TURNOVER

In the case of work in progress stock turnover, inventory was held for between 18 and 21 days before conversion into finished goods. There was consistency in the volume of work in progress inventory held during the period.

4.3.3 FINISHED GOODS STOCK TURNOVER

Finished goods stayed in stock for 27 days in 1990 before they were sold. In 1993 the number of days reduced to 7 days and increased to 11 days in 1995. This shows that almost all the goods produced in a year were sold.

4.3.4 DEBTORS TURNOVER

Debtors took four days in 1990 to pay for goods purchased from the company. This increased to about 6 days in 1995. It means the company sold goods almost on cash basis during the period. This was as a result of deliberate policy to produce to order. Bad debt will be very insignificant because of this policy.

4.3.5 CREDITORS TURNOVER

The company took 78 days credit from creditors in 1990, 64 days in 1991, 43 days in 1993, 46 days in 1994. But in 1995, the number of days reduced to 22 which means that the company made purchases almost on cash basis. As the credit period from suppliers shorten, so the operating cycle increases.

4.4 POSITION IN THE INDUSTRY

Arewa Textiles Plc is one of the largest textile companies in the industry. Its market share is very high as its trading activities cut across national boundaries in the West Africa sub-region. It has combined modern production technology with adequate marketing strategies. One can safely say that the company is a leader in the industry.

4.5 PLAN FOR WORKING CAPITAL

The top management of the company is involved in planning for working capital. This is done through the annual budget of the company and the Treasury Manager sees to its implementation. To avoid dysfunctional decisions on working capital, Departmental Heads get involved in the planning and there is constant dialogue between Finance, Purchasing, Production and Sales Departments.

4.5.1 IMPORTATION OF RAW MATERIALS

Arewa Textile Plc has foreign technical partners who help in sourcing for raw materials in the international markets. The company sources for foreign exchange at the Autonomous Foreign Exchange Market (AFEM) thereby buying foreign exchange at the rate prevailing in the market at the time of purchase. Since the rate in the Autonomous Foreign Exchange Market fluctuates, it is difficult to know with certainty the quantum of naira that will be required for such importation. We cannot also rule out a possible loss in foreign exchange exposure.

4.5.2 FINANCING WORKING CAPITAL

Working capital is financed either by long term funds or a combination of long and short term funds. In the case of this company, it is financed partly by long

term capital and short term funds. The firm seems not to be under any stress in meeting financial obligations to current creditors as they fall due since its working capital is majorly financed by long term capital. The company has life line arrangement with one or two banks which has not been utilized.

Added to this is the foreign loan taken from the International Finance Corporation. The loan was taken when the exchange rate was N22 to US $1. But the repayment of the loan started after the introduction of the autonomous foreign exchange market which means it is being repaid at the prevailing rate at AFEM. This means a very high outflow of cash from the company. This is not a very healthy situation liquidity wise for the company, unless it will use part of its exports to settle the loan.

4.5.3 INVENTORY CONTROL

Inventory is held for transaction and precautionary motives. Other raw materials have no peak period. But cotton lint has a buying peak period and this is be tween April and August. The company maintains a perpetual inventory control system. This has in no small measure helped to identify slow and fast moving items in stock thereby preventing the problems of stock out or excess stock. Finished goods are produced to order which means low stock of finished goods. This has reduced the cost of carrying inventory.

4.5.4 ACCOUNTS RECEIVABLE

The accounts receivable is very low compare to the level of sales. Although all sales were not on cash basis, the company maintains a very sound credit policy. Cash discount is given to debtors to encourage them to continue to settle their accounts on time. The credit policy is formulated by the top management and sales department implements the policy while accounts department keeps records for each customer. At regular intervals, the sales department circularises the customers based on the information received from accounts department. The company has not had an occasion to resort to legal means to recover outstanding debts.

4.5.5 CASH MANAGEMENT

Just like inventory, the firm holds cash for two motives - transactional and precautionary. Receipts are paid into the bank on a daily basis. This helps in preventing the accounts going into red. The optimal level of cash is determined in relation to the level of sales. The company has had occasion to have excess cash. But this excess cash was not invested on marketable securities. This is not very advisable for the company because all fund has cost attached to it.

4.6 STATEMENT OF SOURCES AND APPLICATIONS OF FUNDS

Appendix G (I) shows the statement of sources and application of funds for the period under review. This statement is one of the techniques to interpret the accounts of a business by comparing the financial structure at different dates and to relate the actual changes to the profit or loss made in the intervening periods.

From the statement, we are able to identify the sources of funds of the company and how the funds have been applied as follows for the period.

4.6.1 SOURCES OF FUNDS

Profits generated from operations

Owners' capital

Short term loan

Sales of fixed assets

Modernisation loan

Decrease in working capital.

4.6.2 APPLICATION OF FUNDS

Purchase of fixed assets

Repayment of loan

Payment of dividends

Payment of tax

Capital work in progress

Increase in working capital

The statement gives an insight to the strength and weakness of the financial position of the enterprise. For instance, between 1990 and 1994, there was a constant decrease in account payable until 1995 when the company witnessed an increase. Profit needs not necessarily be matched by an increase in cash. Profit means revenue less expenses incurred to earn the revenue. In the same vein, closing cash balance is opening cash balance plus all receipts minus payments (whether or not they relate to that period).

4.7 THE COMPANY'S MINIMUM (OPTIMUM) CASH BALANCE

Cash is to a business what blood is to human life. No business can succeed without cash. To keep excess or too little cash is not ideal. There is that optimal level of cash that a company can keep. The under listed cash ratios were computed from the company's annual reports and accounts.

4.7.1 CASH TURNOVER RATIO

This ratio measures the relationship between sales revenue for a year and the average cash balance held during the year. Appendix H shows the ratios for 1990 to 1995 for Arewa Textiles Plc. Between 1990 and 1993, average cash balance held increased as the sales revenue increased. But in 1994 and 1995, the company witnessed a decline in the ratios in spite of the fact that sales volume increased further.

Although the sales generated from the given cash balances measure the activity of cash in the business, there is nothing in the cash turnover ratio which tells us how effective this activity has been as far as the generation of further cash is concerned. A company with a high sales revenue may in fact be losing cash in the operation.

4.7.2 CASH GENERATION RATIO

This ratio measures the relationship between the Net cash generated in operational activity during the period and average cash balance held during the period. The ratios for 1990 to 1995 for this company, are shown in Appendix I. The firm generated 50% cash internally in 1990, 78% in 1991, 90% in 1993. But in 1994 the business was only able to internally generate 57% of the cash and only 25% in 1995. It can therefore be said that the company was effective in generating cash internally in 1990 to 1993. But not so in 1994 and 1995.

If the managerial objectives are survival of the organisation in the short run and profitability and growth in the long run, then an essential part of corporate finance management is the management of the current assets in such a way that liquid resources are available when the current liabilities are due for payment. The survival of the firm is threatened if the organisation is unable to meet its obligations to current creditors.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 SUMMARY

Working capital management involves managing the company's liquidity which in turn involves managing (a) the firm's investment in current assets (b) its use of current liabilities. Each of these problems involves risk-return trade offs. For instance, investing in current assets reduces the firm's risk of liquidity at the expense of lowering its overall rate of return on its investment in assets. In the same vein, the use of long term sources of financing working capital enhances the firm's liquidity while reducing its rate of return on assets. In all, there is no gainsaying that what is actually involved in the management of working capital is not far from:

- provision of funds to finance current assets;
- determination of optimum level of working capital to keep;
- monitoring the level of working capital to ensure that the optimum level is not exceeded;
- specific controls over the individual elements or components of working capital - inventory, account receivables, marketable securities, cash and accounts payables.

5.2 CONCLUSION

Today's business environment has become so sophisticated that important issues like working capital cannot be left to guess work. The increasing complexity of operations in the textile industry has dictated a vast increase in responsibility of the firms in the industry to manage their scare resources profitably. This step serves to maximise the profitability of the firms within the limits of prudent risk.

No business can succeed without adequate allocation of resources to the components of the working capital. There has to be deliberate policy from the top management in this regard to avoid dysfunctional decisions. For instance, the sales department will desire large stock of finished goods to be able to meet customers' demand. To ensure continuous production, the production department will want large stock of raw materials. These two requirements may mean tying down the much needed cash. But the involvement of the top management in this decision on working capital will help to determine the optimal level of working capital.

Investment in working capital is as important as investment in fixed assets. As steps are taken from time to time to ensure that these investments in fixed assets are on course, attention should also be paid to working capital

management to ensure that savings in one or two working capital components are not lost through other components.

The whole essence of working capital management is liquidity which means the ability to realise value in money, the most liquid assets. There are two dimensions to liquidity: (1) the time necessary to convert an asset into money; (2) the degree of certainty associated with the conversion ratio or price realised from the asset. Cash and marketable securities are the most liquid assets. Liquidity management therefore involves determining the total amount of these two types of assets the firm will hold. It is implied here that the firm holds constant its credit policies and procedures, its inventory management and control and the administration of its fixed assets for decisions here affect the overall liquidity of the firm.

5.3 RECOMMENDATIONS

After all said and done, a study of this nature will be incomplete without making recommendations. We therefore proffer the under listed recommendations for government and actors in the industry to consider.

5.3.1 CONSISTENT GOVERNMENT POLICIES

The textile industry is affected by economic, monetary and fiscal policies of the government. In the 1998 annual budget, the federal government

increased the custom duties on the importation of some textile raw materials. This was after opening the borders for the free importation of finished textile materials. One would say that these policies are at variance with the steps taken to encourage indigenous firms to export their products. The government should continue to pursue consistent policies.

5.3.2 PURCHASE OF FOREIGN EXCHANGE

The textile industry's importance to national development is no longer in doubt. The firms in the industry buy foreign exchange at the AFEM ruling rate at the time of purchase. Government should allow the firms to buy foreign exchange at the government rate of N22 to the US $1. This will make the products in the industry to be available at affordable prices and to compete favourably in the foreign market.

5.3.3 CASH MANAGEMENT

Cash management is the most important function and one that is capable of significant contribution to the dynamic management of business affairs. As for any asset, the more efficient the use made of cash, the smaller the necessary investment therein.

At certain times, cash balances may be above needed levels. It is often to the advantage of a firm to invest excess cash balances until they are needed. To this end, the manager of the cash account must be familiar with the types of investments available and the methods by which these investments can be made. Ordinarily, temporary excesses of cash are invested in high quality short term obligations such as treasury bills, commercial papers, bankers' acceptances, bank certificates of deposit, and other highly liquid short term obligations.

5.3.4 MANAGEMENT OF ACCOUNTS RECEIVABLES

Accounts and notes receivables are the second most liquid form of assets of the firm. These receivables come into being as a result of credit sales and constitute one of the largest assets of most firms. Studies have shown that one of the determinable causes of bankruptcy is the inability to collect receivables. Skillful administration of the receivable account is therefore of prime importance to the business.

The goal of this management is not simply to minimise losses on receivables but to contribute to the overall profitability of the company. The very reason for credit sales is to expand sales volume and if too tight a vein is maintained by the Credit Manager in the approval of customer credit purchase many sales may be lost that would otherwise contribute to the profits of the firm. It is the

responsibility of the credit management to effect a strategic balance between preservation of the investment in receivables and maximizing of profitable sales.

5.3.5 INVENTORY MANAGEMENT

Although the finance function typically has complete control of cash and receivables management, it plays only supportive role in inventory management. Inventory accumulation is primarily a purchasing and production function, but the finance function must make payment for the inventories. To this end, there is the need for close co-operation between the purchasing and finance functions. At times where there is extreme pressure on cash resources, the Finance Manager may subsequently influence the timing and extent of purchases. Ordinarily however, such cooperation is manifested by a constant exchange of information concerning cash position and inventory accumulation plans.

5.3.6 MANAGEMENT OF CURRENT LIABILITIES

Obligations of the business that must be satisfied within a period of one year are classified as current liabilities.

Accounts payables are derived primarily from the purchase of goods by a business on credit terms. Careful administration of accounts payable requires

that discounts offered by the suppliers be taken but that payments be scheduled in such a manner that as little advance payment as possible is made.

5.3.7 WORKING CAPITAL

Net current assets are required to turn the wheels of the business - to make it possible to carry on functions such as production and sales. The more roundabout these functions are, the longer it takes to bring cash back into circulation. A measure of this delay is the working capital cycle.

The company should seek to reduce the cycle time. This will be possible by a change in credit policy, or diversification in the manufacture or sales of products and by taking more days from creditors.

5.3.8 MONITORING THE MOVEMENT IN WORKING CAPITAL

The management should continue to monitor the movement in the working capital. This involves paying attention to factors or indicators of working capital problems so that symptoms of possible problems are tackled before things get out of control and corrective measures can be taken.

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This can be done by paying attention to:

- ratio analysis
- operating cycle
- working capital analysis
- funds flow statement.

5.3.9 INVESTIGATE EFFECTS OF OTHER ELEMENTS ON CASH

It is not enough to just investigate the level of cash balances and overdrafts. It should be borne in mind that cash is affected by the movement in inventories, accounts receivables and account payables in the short term and capital inflows and outflows in the long term. This will become apparent when consideration is given to the major elements which influence liquid resources and in particular, the time for which these elements require to be financed or the assistance which they give in financing working capital.

5.3.10 FORECASTING LIQUIDITY

Central to the continued existence of business is the availability of cash to meet liabilities as they fall due. There is therefore the need to prepare cash forecasts on a regular basis. This helps to be certain about the availability of cash and how to manage it. One way to ensure liquidity is to maintain large cash balances or arrange necessary borrowing facilities that may be

expensive. But none of these approaches will result in optimal profitability. Therefore, in order to minimize idle cash balances, and reduce cost of funds thereby improving results, the company needs to have reliable cash forecasts.

5.3.11 MANAGEMENT OF FOREIGN EXCHANGE RISK

All organisations whose operations require foreign exchange face one principal risk and that is the risk of losses arising from fluctuations in the exchange rate. This is because exchange rates between currencies change continually and this lack of stability creates uncertainty about what foreign exchange payments will cost when they have to be made. Foreign exchange movements create the risk of unforeseen losses for a country. The management of foreign exchange risk can be a crucial element of a corporate treasurer's functions.

To effectively manage this risk, the company should set up a committee to continuously determine the corporate approach toward foreign exchange problems and of advising management on specific foreign exchange situations.

APPENDIX A

FINANCIAL PROFILE OF AREWA TEXTILE LTD

1990 - 1995

	1990 N'000	1991 N'000	1992 N'000	1993 N'000	1994 N'000	1995 N'000
Turnover	154,627	202,210	389,334	559,319	703,356	1,018,649
Pre-Tax Profit	12,622	15,161	31,147	45,140	52,580	38,433
Capital Employed	40,944	48,303	90,910	113,255	155,569	173,270
Fixed Assets	7,553	7,404	10,300	113,504	111,319	172,689
Current Assets	127899	137,520	249,289	254,495	478,298	809,070
Current Liabilities	80,079	82,048	142,243	170,185	260,154	328,849
Net Working Capital (a)	45,820	55,472	107,046	84,310	218,144	480,221
Working Capital Radio (b)	1.56:1	1.7:1	1.75:1	1.50:1	1.84:1	2.46:1
Liquidity Ratio (c)	0.51:1	0.5:1	0.67:1	0.4:1	0.9:1	1.58:1

a - Excess of current assets over current liabilities

b - Ratio of current assets to current liabilities

c - Ratio of liquid assets (i.e assets minus stock) to current liabilities

SOURCE: Computed/Compiled from Annual Reports and Accounts.

APPENDIX B

STRUCTURE OF AND INVESTMENT IN CURRENT ASSETS

% OF INVESTMENT IN CURRENT ASSET

TYPE OF CURRENT ASSET	1990	1991	1992	1993	1994	1995
Stocks & WIP	67.2	75.3	61.8	73.4	50.8	35.9
Debtors & payments	15.2	7.1	16.2	6.2	14.2	32.3
Staff Loans	0.4	0.3	0.3	0.5	0.6	0.6
Cash and Bank	17.2	17.3	21.7	19.9	34.4	31.2
TOTAL	100	100	100	100	100	100

SOURCE: Computed From Annual Reports & Accounts.

APPENDIX C

SHORT TERM FINANCING OF CURRENT ASSET

% OF INVESTMENT IN CURRENT ASSET

SOURCE OF FINANCE	% OF FINANCE FROM EACH SOURCE					
	1990	1991	1992	1993	1994	1995
Creditors and Accruals	48.8	64.8	54.7	56.8	75.6	42.1
Cotton Loans	20.1	7.9	23.4	22.7	12.9	37.3
Taxation	13.2	14.1	11.9	15.9	7.32	8.1
Proposed Dividend	2.0	3.4	2.0	4.3	2.8	2.3
Bank Overdraft	15.9	9.8	8.0	0.3	1.4	-
Current Maturities on Long Term	-	-	-	-	-	-
TOTAL	100	100	100	100	100	100

SOURCE: Computed From Annual Reports & Accounts.

APPENDIX D

PERCENTAGE OF CURRENT ASSETS FINANCED FROM MEDIUM AND LONG TERM SOURCES

YEAR	CURRENT ASSETS N'000 A	CURRENT LIABILITIES N'000 B	NET WORKING CAPITAL N'000 (A - B)	NET WORKING CAPITAL AS A % OF CURRENT ASSETS $\frac{A-B}{A} \times 100$
1990	127,899	82,079	45,820	36
1991	137,520	82,048	55,472	40
1992	249,289	142,243	107,046	43
1993	254,495	170,185	84,310	33
1994	478,297	260,154	218,143	46
1995	809,070	328,849	480,221	59

APPENDIX E

CURRENT AND NON-CURRENT ASSETS

YEAR	TOTAL ASSETS N'000	CURRENT ASSETS N'000	NON-CURRENT ASSETS N'000	CURRENT ASSETS AS A % OF TOTAL ASSETS %
1990	135,452	127,899	7,553	94
1991	144,924	137,520	7,404	95
1992	259,689	249,389	10,300	96
1993	367,999	254,495	113,504	69
1994	589,616	478,297	111,319	81
1995	981,759	809,070	172,689	82

SOURCE: Computed from Annual Reports and Accounts

APPENDIX F

OPERATING CYCLES - AREWA TEXTILES PLC

	1990 N'000	1991 N'000	1992 N'000	1993 N'000	1994 N'000	1995 N'000
Raw material stock turnover	44,860 x 35 136,354 =120	47,906 x 365 128,221 =136	71,763 x 365 262,524 =100	103,606 x 365 334,791 =113	116,646x365 298,356 =143	108296x365 496,840 =79
WIP Stock turnover	7,787 x 365 145,327 =19	11,040 x 365 187,294 =21	15,849 x 365 297,621 =19	21,498 x 35 439,828 =18	31,070 x 35 571,458 =20	40755 x 365 866,284 =20
Finished goods stock T/over	10,778 x 365 145,327 = 27	10,078 x 365 187,794 = 20	6,523 x 35 297,621 =8	8,511 x 365 439,828 =7	16,286 x 35 571,458 =10	25366 x 365 866,284 =11
Debtors Turnover	1,754 x 365 154,627 =4 - 170	1,726 x 365 202,210 =3 - 180	3,821 x 365 389,334 =3 - 130	5,747 x 365 539,319 =4 - 142	6,809 x 365 703,356 =3 - 176	17906 x365 10,186,49 =6 - 116
Creditors Turnover operating circle	29139 136354 x 365 = 78 92	22,491 x 365 128,221 =64 116	26,734 x 365 262,524 =37 93	39,709 x 365 334,791 =43 99	37,807 x 365 298,356 =46 130	30118 x 365 496,840 =22 94

APPENDIX G (I)

STATEMENTS OF SOURCES AND APPLICATION OF FUNDS

FOR THE YEARS ENDED 31ST MARCH, 1990 TO 1995

SOURCES OF FUNDS	1990 N'000	1991 N'000	1992 N'000	1993 N'000	1994 N'000	1995 N'000
Profit for the year before tax	12,622,2401	15,160,97020	31,146,70738	45,139,91055	52,579,7117	38,433,157
Items not involving movement of funds						
Add: Depreciation	1,582,272	1,644,946	1,735,458	2,072,776	9,177,666	13,697,463
Prior Year Adjustment - Tax	-	1,179,556	-	-	-	-
Less: Profit on Sales of Fixed Assets	(60,556)	(31,188)	-	(2,552)	(319,994)	(72,497)
Internally Generated Funds	14,143,956	17,954,284	32,882,165	47,210,134	61,437,383	52,058,123
Externally Generated Funds						
Cash Received from share capital	6,877,927	2,424,613	3,087,460	21,515,786	-	-
Short Term Loan - Cotton	16,500,000	9,807,548	33,282,485	38,600,000	33,624,366	89,038,626
Sales of Fixed Assets	60,634	31,200	-	2,552	319,994	72,500
Modernization Loan	-	-	-	49,980,000	79,380,000	341,040,000
	23,438,561	12,263,361	36,369,945	110,098,338	113,324,360	430,151,126
Total Funds Generated	37,582,517	30,217,645	69,252,110	157,308,472	174,761,743	482,209,249

APPENDIX G (II)

	1990 N'000	1991 N'000	1992 N'000	1993 N'000	1994 N'000	1995 N'000
LESS: Applications of Funds						
Purchase of Fixed Assets	52,183	1,495,553	4,232,164	5,244,919	6,994,425	75,067,415
Short Term Loan Repayment - Cotton	10,000,000	19,840,000	6,467,548	33,282,485	38,600,000	-
Depreciation	1,679,234	1,995,530	2,351,408	2,356,449	7,279,088	7,279,088
Payment of Dividends	2,537,720	5,424,168	5,297,762	5,424,859	10,900,000	5,765,725
Payment of Tax	-	-	400,000	100,029,974	-	-
Capital work in progress						
	14,738,777	**28,755,251**	**18,748,882**	**146,338,686**	**63,773,513**	**88,112,228**
NET INCREASE IN FUNDS	22,843,740	1,462,394	50,503,228	10,969,786	110,988,230	394,097,021
INCREASE/DECREASE IN WORKING CAPITAL						
Increase/Decrease in inventories						
Increase in Accounts Receivables	33,327,454	17,586,975	50,606,806	32,618,677	56,356,419	47,609,541
Increase in Accounts Payables	2,644,721	(7,423,077)	9,107,013)	(2,563,162)	53,963,202	194,884,479
	(6,957,513)	(15,614,155)	(35,958,380)	(26,599,523)	(109,670,683)	59,623,733
	29,014,662	**(5,450,257)**	**23,755,439**	**3,455,983**	**648,938**	**302,117,753**

	1990 N'000	1991 N'000	1992 N'000	1993 N'000	1994 N'000	1995 N'000
Movements In Net Liquid Funds						
Increase/(Decrease) in Cash & Bank	6,575,694	1,882,241	30,142,601	(3,334,074)	113,482,886	88,278,797
Decrease/(Increase) in Bank O/draft	(12,746,616)	5,030,410	(3,394,812)	10,847,877	(3,143,594)	3,700,4712
	6,170,922	**6,912,651**	**26,747,789**	**7,513,803**	**110,339,292**	**91,979,268**
NET INCREASE IN WORKING CAPITAL	22,843,740	1,462,394	50,503,228	10,969,786	110,988,230	394,097,021

APPENDIX H

Cash Turnover Ratio = Sales Revenue For the Year / Average Cash Balance Held during the Year

1990	=	154,626,646 / 24,993,233	=	6.2:1
1991	=	202,210,191 / 22,900,586	=	8.8:1
1992	=	389,333,834 / 38,913,007	=	10:1
1993	=	559,319,468 / 52,317,271	=	10.7:1
1994	=	703,356,178 / 107,391,677	=	6.5:1
1995	=	1,018,649,082 / 208,272,518	=	4.9:1

APPENDIX I

Cash Generation Ratio = Net Cash Generated in Operational Activity During the Period / Average Cash Balance Held during the Year

1990	=	14,143,9566 / 24,993,233	=	0.56:1
1991	=	17,954,2841 / 22,900,586	=	0.78:1
1992	=	32,882,165 / 38,913,007	=	0.84:1
1993	=	47,210,134 / 52,317,271	=	0.9:1
1994	=	61,437,383 / 107,391,677	=	0.57:1
1995	=	52,058,123 / 208,272,518	=	0.25:1

APPENDIX J

AHMADU BELLO UNIVERSITY

ZARIA

DEPARTMENT OF BUSINESS ADMINISTRATION

Dear Sir/Madam

For the partial fulfilment for the award of Masters of Business Administration (MBA), I am conducting a research on the Working Capital Management in the textile industry.

It will be appreciated if you endeavour to answer the following questions by indicating 'Yes' or 'No' and comments where applicable.

Without prejudice, the information shall be used for academic exercise only and will be treated with utmost confidentiality.

Signature Date

QUESTIONNAIRE

A. GENERAL SECTION

1. Name of Organisation: . . . . . .
2. Position in your organisation: . . . . . .
3. Sex: Male or Female
4. What is the size of your company?

- ☐ Small
- ☐ Medium
- ☐ Large

5. Is your company a leader in the industry?

☐ Yes ☐ No.

6. Do you plan your working capital?

☐ Yes ☐ No.

7. Whose responsibility is it to effectively manage your working capital?

a) Top Level Management

b) Treasury Manager

c) All Departmental Heads

8. How do you avoid dysfunctional decisions as far as working capital is concerned?

a) Through dialogue

b) Through training

c) None of the above

9. Does your company have foreign technical partners?

☐ Yes ☐ No.

B **FINANCING**

10. How do you finance working capital?

a) Loans

b) Share capital

c) Current liabilities

11. Do you have access to external funds at short notices?

☐ Yes ☐ No.

12. Do you have foreign loans/

☐ Yes ☐ No.

13. If 'YES, for how long have you had the loan?

☐ 3-5years ☐ 6-10years ☐ 11-15years

14. Has repayment of the loan started?

☐ Yes ☐ No.

15. If 'YES' , at what rate are you repaying the loan?

☐ AFEM Rate ☐ Government Rate of N22 to US $1

C. INVENTORY

16. What are the motives for holding inventory?

☐ Transaction motive

☐ Precautionary motive

☐ Speculative motive

17. What type of inventory control method do you adopt?

- ☐ Perpetual inventory control
- ☐ Automated inventory control
- ☐ Others . . . . . .

18. Have you ever run out of stock?

☐ Yes ☐ No.

19. If 'YES, how did you survive the stock out?

a) Through emergency purchases

b) Inventory loans from other companies

c) Production stoppage

20. How do you avoid stock out?

- ☐ Through planned supplies
- ☐ Through speculative buying

21. Is purchase of raw materials seasonal?

☐ Yes ☐ No.

22. If 'YES', when is your buying peak? Indicate the period: . . . . . .

23. Do you produce to order?

☐ Yes ☐ No.

24. Do you take advantage of cash discount from creditors?

☐ Yes ☐ No.

D. ACCOUNTS RECEIVABLES

25. What is the level of your credit sales?

☐ Very large ☐ Very minimal

26. Who formulate credit policy of your company?

☐ Top Management

☐ Sales Department

☐ Finance Department

27. Do you allow cash discount for early payment of accounts receivable?

☐ Yes ☐ No.

28. Are all sales on cash basis?

☐ Yes ☐ No.

E. CASH

29. Which days of the week do you bank your receipts?

☐ Everyday

☐ Mondays and Thursdays Sales Department

☐ Mondays, Wednesdays and Fridays

30. How do you determine optimal level of cash?

- ☐ In relation to the level of sales
- ☐ The use of EOQ
- ☐ By guess work

31 Have you ever run out of cash?

☐ Yes ☐ No.

32. If 'YES' how did you manage the cash shortage?

- ☐ Bank overdraft
- ☐ Advance payment from account receivables.

33. What are your motives for holding cash?

- ☐ Transaction motive
- ☐ Speculative motive

34. Do you import raw materials?

☐ Yes ☐ No.

35. If 'YES' , at what exchange rate do you buy foreign currencies?

☐ AFEM Rate ☐ Government Rate of N22 to US $1

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