

**A SURVEY OF CREDIT RISK MANAGEMENT PRACTICES  
BY PHARMACEUTICAL MANUFACTURING COMPANIES  
IN KENYA**

**By Beatrice Nduku Muteru**

**D61/P/7225/04**

**PREPARED IN PARTIAL FULFILLMENT OF THE  
REQUIREMENT FOR THE AWARD OF THE DEGREE OF  
MASTERS IN BUSINESS ADMINISTRATION, SCHOOL OF  
BUSINESS, UNIVERSITY OF NAIROBI.**

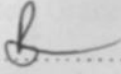


**OCTOBER, 2007**

# DECLARATION

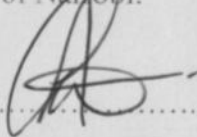
This Research Project is my original work and has not been submitted for a degree in any other university.

Muteru, Beatrice Nduku  
Reg. No D61/P/7225/04

Signed:  ..... Date: 1/11/07 .....

This Research Project has been submitted for examination with my approval as university supervisor.

Mrs Angela Kithinji  
Lecturer,  
Department of Finance and Accounting,  
School of Business,  
University of Nairobi.

Signed:  ..... Date: 03/11/2007 .....

## DEDICATION

My husband John Kabiru for the encouragement and guidance he gave me throughout the project and especially when the going got tough.

My daughters Grace and Lena who were patient and persevered a lot throughout the course; the quality time they missed with mummy.

My supervisor A.Kithinji whom I found dedicated and encouraging.

May God bless you all mightily.

# ACKNOWLEDGEMENT

PAGE

I am grateful to my entire family for the moral support, patience and encouragement during the course of my MBA study.

Special thanks go to my supervisor A.Kithinji who offered me the direction and guidance I needed to transform my idea into this project. My gratitude also goes to my lecturers and colleagues who supported me in one way or another.

Many thanks to the pharmaceutical firms which provided the data for this project.

May the good God bless you all abundantly.



# TABLE OF CONTENTS

PAGE

DECLARATION .....	i
DEDICATION .....	ii
ACKNOWLEDGEMENT .....	iii
TABLE OF CONTENTS .....	iv
TABLE OF ABBREVIATIONS .....	vii
LIST OF TABLES .....	viii
ABSTRACT .....	ix
CHAPTER ONE .....	1
1.0 INTRODUCTION .....	1
1.1 Background .....	1
1.1.2 Industry Overview * .....	2
1.1.3 Credit Risk Management .....	3
1.2 Statement of the Problem .....	5
1.3 Objectives of the study .....	7
1.4 Importance of the Study .....	7
CHAPTER TWO .....	9
2.0 LITERATURE REVIEW .....	9
2.1 Introduction .....	9
‡ 2.2 Risk Management .....	10
2.3 Credit Derivatives .....	13
2.4 Credit Policy Objectives .....	15
* 2.5 The Six C's of Credit Risk Assessment and Evaluation .....	18
2.6 Functions of a Credit Department .....	20
‡ 2.7 Pharmaceutical Companies and Credit Provision .....	21
‡ 2.8 Types of Risks faced by Pharmaceutical Companies .....	24
2.9 Credit Control Policy and Risk Management in the Pharmaceutical Industry .....	28
2.10 Credit Appraisal Criteria in Pharmaceutical Companies .....	29
‡ 2.10.1 Measuring Credit Risk: .....	29
2.10.2 Qualitative Models .....	30
2.10.3 Credit Scoring Models .....	30
2.10.4 Newer Models .....	30
2.11 Review Of Past Studies .....	31

CHAPTER THREE .....	32
3.0 RESEARCH METHODOLOGY .....	32
3.1 Research Design .....	32
3.2 Population.....	32
3.3 Sampling.....	32
3.4 Data Collection Method.....	32
3.5 Data Analysis.....	33
CHAPTER FOUR .....	34
4.0 DATA PRESENTATION, ANALYSIS AND INTERPRETATION.....	34
4.1 Data collected and analysed .....	34
4.2 Background Information of the Firms Studied.....	35
4.2.1 Physical location of the firms .....	35
4.2.2 Ownership of the firms .....	35
4.2.3 Nature of the business.....	35
4.3 Credit Control Policy .....	36
4.3.1 Factors considered in establishing a credit control policy.....	36
4.3.2 Existence of a credit policy manual.....	36
4.3.3 Credit Policy Objectives.....	37
4.3.4 Practices considered in managing credit risk exposure.....	37
*4.3.5 Organisation of credit control activities.....	38
4.3.6 Personnel involved in credit risk assessment .....	38
4.4 Credit Appraisal.....	39
4.4.1 Frequency of review of credit policy.....	39
4.4.2 Credit appraisal process.....	39
4.4.3 Ways used to create credit risk awareness to employees .....	40
4.4.4 Use of the 6 C's in Credit appraisal.....	40
4.5 Organisational Performance (2002 to 2006) .....	41
4.5.1 Business performance.....	41
4.5.2 Long term strategy on credit.....	41
4.6 Business Environment Factors .....	41
4.6.1 Business environment.....	41
4.6.2 Credit period .....	42
4.6.3 Defaulting on debt repayment .....	42
4.6.4 Difficult to pay customers .....	42
4.6.5 Credit approval .....	43
4.6.6 Importance of various risks to the firm .....	43
4.6.7 Use of credit derivatives .....	44

4.6.5 Credit approval.....	43
4.6.6 Importance of various risks to the firm.....	43
4.6.7 Use of credit derivatives .....	44
CHAPTER FIVE .....	45
5.0 SUMMARY OF FINDINGS AND CONCLUSIONS, RECOMMENDATIONS, LIMITATIONS OF THE STUDY AND SUGGESTIONS FOR FURTHER RESEARCH.....	45
5.1 Summary of Findings and Conclusions .....	45
5.1.2 Conclusions.....	47
5.2 Recommendations.....	48
5.3 Limitations of the Study.....	48
5.4 Suggestions for Further Research .....	49
References.....	50
Appendix A.....	54
Appendix B.....	55

## TABLE OF ABBREVIATIONS

### LIST OF TABLES

	Page
1. IFRS: International Financial Reporting Standards.	
2. WHO: World Health Organisation	
3. KEMSA: Kenya Medical Supplies Agency	34
4. MNC: Multi National Corporations	35
5. MFI: Micro Finance Institutions	
3. 4.3 Factors considered when establishing a credit control policy	36
4. 4.4 Reason for not having a credit manual	37
5. 4.5 Credit Policy Objectives	37
6. 4.6 Practices used in managing credit risk exposure	38
7. 4.7 Organisation of credit control activities	38
8. 4.8 Personnel involved in credit risk assessment	39
9. 4.9 Frequency of review of credit policy	39
10. 4.10 Credit Appraisal Process	39
11. 4.11 Ways used to create credit risk awareness in employees	40
12. 4.12 Use of the 6C's in credit appraisal	40
13. 4.13 Organisational performance	41
14. 4.14 Credit period analysis	42
15. 4.15 Dealing with debt defaulters	43
16. 4.16 Credit appraisal	43
17. 4.17 Importance of Risk	43

## LIST OF TABLES

<b>Tables</b>	<b>Page</b>
1. 4.1 Response rate	34
2. 4.2 Location of the firms	35
3. 4.3 Factors considered when establishing a credit control policy	36
4. 4.4 Reason for not having a credit manual	37
5. 4.5 Credit Policy Objectives	37
6. 4.6 Practices used in managing credit risk exposure	38
7. 4.7 Organisation of credit control activities	38
8. 4.8 Personnel involved in credit risk assessment	39
9. 4.9 Frequency of review of credit policy	39
10. 4.10 Credit Appraisal Process	39
11. 4.11 Ways used to create credit risk awareness to employees	40
12. 4.12 Use of the 6C's in credit appraisal	40
13. 4.13 Organisational performance	41
14. 4.14 Credit period analysis	42
15. 4.15 Dealing with debt defaulters	43
16. 4.16 Credit approval	43
17. 4.17 Importance of Risks	43



## ABSTRACT

The pharmaceutical industry in Kenya consists of manufacturers, distributors and retailers, who all actively support the Ministry of Health and other key players in developing the health sector.

Kenya spends about 8% of its GDP on health. The pharmaceutical sector consists of about 20 licensed concerns including local manufacturing companies and large multinational corporations, subsidiaries or joint ventures. Most are located within Nairobi and its environs.

Trade credit is created whenever a supplier offers terms that allow the buyer to delay payment. This study seeks to identify credit risk management practices adopted by pharmaceutical manufacturing firms in Kenya. The study documents the rich variation in interfirm credit terms and credit policies.

Primary data was collected by use of a questionnaire while secondary data was collected from brochures, supplements and other relevant publications. Data was analysed using descriptive statistics such as percentages and tabulations.

The study found out that the two most important factors considered in establishing a credit policy are the financial stability of the customer and the existing credit policy.

Majority of the firms (78%) do not have a credit policy manual.

The most widely used credit risk management practices are use of debt collectors (72%), letters of credit (50%), credit insurance (25%), and factoring of debt (5%). In dealing with difficult to pay customers, most firms (95%) put the account on hold and stopped future sales till the account was settled, (80%) engaged services of debt collectors, (43%)



resorted to selling on cash basis.

## CHAPTER ONE

### 1.0 INTRODUCTION

The 6C's model of credit appraisal was widely used by all the firms studied: character was practised by 100% of the firms followed by contribution (86%). Capacity, conditions and capital ranked 72%.

## CHAPTER ONE

### 1.0 INTRODUCTION

#### 1.1 Background

In today's environment of intense competitive pressures, volatile economic conditions, rising bankruptcies and defaults, and increasing levels of consumer and commercial debt, an organisation's ability to effectively monitor and manage its credit risk could mean the difference between success and survival. Increasingly, this is not only true for financial institutions, but for organisations in almost every industry. From identifying and correctly pricing risk in the customer acquisition process to measuring risk throughout the customer lifecycle, to determining capital allocations and regulatory requirements and finally to the timely and effective collection process; credit risk management is a continuous cycle that is at the heart of an organisation's ability to stay competitive (Altman, 2002).

Credit risk management issues continue to occupy the agendas of boards of directors in companies today. In today's environment, companies are looking for assistance in identifying and managing risk throughout their organisations (Duffie & Singleton, 2003).

Credit risk can be defined as the potential that a borrower or counter party will fail to meet its obligations in accordance with agreed terms. Organisations therefore proceed to identify, manage and reduce (mitigate) the risk (Basel, 1999).

Credit risk management is the process of evaluating risk in an investment. When the risk has been identified, investment decisions can be made and the risk vis a vis return balance considered from a better position. Credit risk can be reduced by monitoring the behaviour of clients who intend to apply for credit in the business. These clients may be businesses or

individuals(Altman, 2002).

Credit control is a management discipline, which seeks to maximize sales and profit by preventing or minimising bad debts while maintaining strong liquidity and reduced financial costs through prompt payment by customers. The principle of credit control rely very much on information and knowledge of a particular customer, which all sales personnel should have in their possession when they initiate a new application of dealing with customers (Altman 2002).

According to Clarke (1999) awarding credit is a journey, the success of which depends on the methodology applied to evaluate and to award the credit. This journey starts from the application for credit through acquisition of credit sales and ends at the time the debt is fully paid.

### 1.1.2 Industry Overview

Kenya spends about 8% of its GDP on health. Per capita expenditure per person stood at about US\$ 11 per person in 2003. Out of this US\$ 6 came from budgetary resources, which also included donor contributions and the balance of US\$ 5 came from mainly out-of-pocket expenditure. This expenditure fell far below the WHO's recommended US\$ 34 per capita (Economic Survey, 2004).

The pharmaceutical industry consists of three segments namely the manufacturers, distributors and retailers. All these play a major role in supporting the country's health sector, which is estimated to have about 4,557 health facilities countrywide. This study will focus on credit risk management practices adopted by the pharmaceutical manufacturers since the supply chain begins with manufacturers (Central Bureau of Statistics and Ministry of Planning, 2003).

### 1.1.3 Credit Risk Management

Kenya is currently the largest producer of pharmaceutical products in the COMESA region, supplying about 50% of the regions' market. Out of the region's estimated 50 recognised pharmaceutical manufacturers; approximately 30 are based in Kenya. These firms collectively employ over 2,000 people, about 65% of who work in direct production (Economic Survey, 2004).

The legislation which regulates the pharmaceutical and health sector in Kenya is complicated. One of the most important effects in the sector is the control of the Ministry of Health over pricing and product license. In most of the situations, the State is not only the control mechanism but also the most important customer through Kenya Medical Supplies Agency (KEMSA). KEMSA buys 30% of the drugs in the Kenyan market through an open-tender system and distributes to government medical institutions. The key payers in the industry include MNC's like GlaxoSmithKline, Bayer, Aventis, Pfizer, local establishments like Dawa Pharmaceuticals Ltd, Cosmos Pharmaceuticals among others (Central Bureau of Statistics and Ministry of Planning, 2003).

The pharmaceutical industry is very competitive characterised by price wars, returns are in excess of 20% of investment which is lucrative. Government policies dictate the price structure. The price structure is not sustainable; it would especially favour those who produce at reasonable prices. To remain competitive in the market the firms have adopted credit sales as a competitive strategy and thus credit risk management is of vital importance in the industry (Central Bureau of Statistics and Ministry of Planning, 2003).

### 1.1.3 Credit Risk Management

It is the responsibility of management to set up a credit administration team to ensure that

13

once credit is granted it is properly maintained and administered. Procedures for measuring a firm's overall exposure to credit risk as well as stringent internal rating system should be adequate. All companies that do not currently have independent risk management structures must immediately set up units that will concentrate fully on the risk management function. This risk management function within an institution should report directly to the board, to ensure independence (Basel, 1999).

The importance of credit risk management has never been more important with the current high default rates and bankruptcies; but, there was heightened interest even before the current scenario. Indeed in 1999, at the end of the benign credit cycle, banks, regulators and financial market practitioners were spending considerable time on this subject due to: increased emphasis on sophisticated risk management techniques in a challenging environment, refinements in credit scoring techniques, establishment of relatively large databases of defaults, recoveries and credit mitigations, development of offensive credit risk mitigation techniques such as securitisations, credit derivatives and credit insurance products (Altman, 2002).

An interesting development in the corporate world over the past decade has been credit risk-specifically the mechanisms for transferring and managing credit risk such as credit default swaps, credit linked notes and collateralized loan obligations. Two of the pioneers of research in this area, Darrell Duffie and Kenneth J Singleton, have provided us with an integrated analysis aimed at pricing, measurement and management of credit risk (Acharya, 2005).

An important element of credit risk management is stress testing. This involves identification of possible events or future changes that could have a negative impact on the firm's credit



portfolio and the firm's ability to withstand the changes. The areas to examine critically are economic or industry changes, market risk events and liquidity conditions.

Credit quality problems, in the worst case, can result in a firm's insolvency. They can also result in such a significant drain on capital and net worth that they adversely affect a firm's growth prospects and ability to compete with other firms (Saunders, 2002).

One aspect of financial risk that has proven difficult to hedge, however, has been that of credit risk facing firms. Financial and industrial corporations have every incentive to improve their modelling and trading of credit risk. The explosive growth of credit derivatives market has distributed credit risk through the financial system, packaged in new forms. An expanding credit risk market raises possibilities for corporate treasurers wishing to minimise exposure to credit risk (Freeman et al, 2006).

Pharmaceutical firms use various techniques of mitigating credit risk. The most common are collateral, guarantees, netting off of loans against deposits of the same counter-party; this is especially used by large multinational pharmaceutical corporations which engage in intercompany trade. The payments are netted off against the receipts and the balance is paid thus reducing the credit risk. Credit insurance, factoring, debt collection, surety bonds, and letter of credit are others techniques widely used. While use of these techniques will reduce or transfer credit risk, other risks may arise which include legal, operational, liquidity and market risks (Smith and Stultz, 1985).

## 1.2 Statement of the Problem

The importance of the pharmaceutical industry in the economy cannot be overemphasized; the problems facing the industry hence cannot be ignored. Credit risk management is one major



problem that continues to dominate agendas in the board meetings of pharmaceutical firms.

Large multinational pharmaceutical firm's sells their products through wholesalers, in addition to hospitals, the government, pharmacies or other groups. These sales are on credit basis. A firm is exposed to a concentration of credit risk in respect of these credit sales such that if one or more of the wholesalers is affected by financial difficulty, it could materially and adversely affect the firm's financial results (Campbell, 2006).

This project proposal sets out to specifically address the areas pertinent to credit risk management in the pharmaceutical industry which include: establishing an appropriate credit risk environment; operating under a sound credit-granting process, maintaining an appropriate credit administration, measurement and monitoring process; and ensuring adequate controls over credit risk. Although specific credit risk management practices may differ among firms depending upon the nature and complexity of their credit activities, a comprehensive credit risk management program will address these four areas. It is important to manage credit risk of the firm to maximise business opportunities with customers, dilute the concentration of exposure and reduce losses (Fatemi & Fooladi, 2006).

Reliance on subjectivity when making decisions to extend credit to clients is a major problem.

This happens when credit is extended to parties that do not qualify for credit.

The high level of bad debts in the pharmaceutical industry is a challenge to many firms which is evidence that firms are faced by a big risk of their credit. Almost 100% of the sales in a pharmaceutical firm are credit sales and hence the exposure (Economic Survey, 2004).

Turnover is high in the pharmaceutical industry today and so are bad-debts which are a reality that needs to be addressed. Owing to the increasing variety in the types of counterparties and the ever-expanding variety in the form of obligations, credit risk management has jumped to

the forefront of risk management activities carried out by firms in the non-financial services industry (Fatemi & Fooladi, 2006).

This study is designed to shed light on the current practices of the pharmaceutical firms.

Corporations have, in recent years, grown comfortable with the idea of using traditional derivative products to hedge their exposure to, for example, interest rate and foreign exchange risk. Credit risk, on the other hand, has proven a more difficult to hedge. Whilst avenues for the management of credit risk do exist, for example, by the use of traditional insurance products and letters of credit, such means are not always convenient (Freeman & Cox, 2006).

Research has been carried out on credit risk management practices in financial institutions like banks, Sacco's and Micro Finance Institutions in Kenya (Mwirigi, 2006). However no known research has been undertaken on credit risk management practices in the pharmaceutical industry in Kenya.

This study seeks to assess credit risk management methods employed by pharmaceutical companies in Kenya and possibly establish if a relationship exists between the methods employed and the level of customer defaults.

### 1.3 Objectives of the study

To identify the credit risk management practices adopted by pharmaceutical firms in Kenya.

### 1.4 Importance of the Study

**Pharmaceutical industry:** The industry will obtain information on credit management in the country and the strategies that need to be employed to solve these problems. The most widely used and effective practices will be highlighted by the study. This information will be especially useful to future investors in the industry.

**The Government:** the Government will obtain information on general credit management in the country and what problems the pharmaceutical industry faces and probably come up with a policy that will promote the growth of the industry. The study may encourage the government to fund research in the area.

**Academicians:** in addition to contributing to the body of knowledge, the research will also help in continuity as far as doing further research is concerned.

**Regulatory body:** Pharmacy and Poisons Board.

**Corporate Managers:** they will consider using credit derivatives to manage their credit risk exposure and thus add more value to the firm.

## CHAPTER TWO

### 2.0 LITERATURE REVIEW

#### 2.1 Introduction

Allowing customers' time to pay their debts has great benefits but also carries costs and risks. Credit terms get sales moving more than 'cash only' terms would allow and enables sellers to compete creatively with credit offers and promotions. The downside is the risk of not being paid for the wealth transferred to customers, either on time or at all. Meanwhile until customers pay, the interest on the funds borrowed by the seller severely depletes the net profit margin. Selling on credit terms is a practice which has been widely adopted by pharmaceutical companies in Kenya and globally (Saunders, 2002).

#### 2.2 Risk Management

The expertise used by companies to sell their goods and services should always be matched by adequate resources in managing the credit granting process. Basically, credit granting exists to facilitate sales but credit sales are pointless without due payment, therefore the sales and credit functions must work together to achieve the well-known objective of 'maximum sales unpaid for the minimum length of time (Morgan, 2002).

The reporting lines for credit management in the pharmaceutical industry have been the subject of heated debate amongst credit managers for many years. As a function which on the face of it handles money, it has long been held that credit management sits more comfortably within finance or accounting. There are those who argue that promoting profitable sales places it squarely in the sales area, and that reporting to the sales director is more natural. Nevertheless the credit manager is undoubtedly the bridge between finance and sales

(Morgan, 2002).

Trade credit is the largest source of short-term financing for many corporations. In general companies engage in activities in which they have comparative advantage. Financial institutions such as are looked at as having comparative advantage in making loans. Why, then, do manufacturers regularly extend credit to customers in addition to producing and selling their products? There are several motives for companies to extend credit to their customers rather than requiring cash sales with buyers obtaining credit elsewhere; Cost advantage- this is more likely extended if the seller has a cost advantage over competing lenders. Market power- trade credit is more likely to be offered the greater the returns from exploiting market power through effective price discrimination. Taxes- if the financing qualifies as an instalment loan under the tax code, the seller books manufacturing profit over the life of the loan rather than at the date of sale, thereby reducing the present value of its taxes (Shehzad, 1994).

## 2.2 Risk Management

According to Stanley (2006), corporates face a number of credit risk exposure that could be managed with credit derivatives: the most obvious credit exposures are accounts receivable from customers. Note that while such exposures are potentially large, they tend to be short-lived. As applied to corporate finance, risk management is a technique for measuring, monitoring and controlling the financial or operational risk on a firm's balance sheet.

The Basel II framework breaks risks into market risk (price risk), credit risk and operational risk and also specifies methods for calculating capital requirements for each of these components.

Credit risk management literature focuses on identifying equilibrium scenarios in which a firm minimises the total variability of its cash flows (Smith and Stultz, 1985). The role of risk



management is to mitigate the costs associated with cash flow volatility that result from capital market imperfections, thus creating value for shareholders.

For pharmaceutical companies a larger or more strategic exposure to their customers comes in the form of longer-term supply contracts. Consider the risk involved in manufacturing large stocks of a certain drug for a distributor or a large hospital and the potential effects of a credit down grade of such large 'customers' on their suppliers (Smith and Stultz, 1985).

Other than credit derivatives, there are a number of tools corporates could use to manage these exposures, but each of them has drawbacks:

**Credit Insurance:** The corporate could purchase a contract from a multiline insurance company that provides for reimbursement of losses if the firm's customers prove unable to meet its payables. However, to be paid under an insurance contract, the company must provide evidence of loss, a process that can involve costly delays and even litigation. Moreover, most credit insurance contracts require the insured to retain some of the credit risk (first loss position) to guard against moral hazard. Insurers also typically reserve the right to revoke coverage if a rating agency downgrades the insured company. Finally, credit insurance coverage is generally available for no longer than one year at a time (which means, among other things, that a sudden, unexpected down grade could create problems when the contract comes due for renewal (Smith and Stultz, 1985).

**Factoring:** A factoring company might be willing to accept the credit risk associated with receivables outright. However, the price the factoring company will pay represents a significant discount from their present value (Singleton and Duffie , 2003).

**Debt collection:** Debt collectors, also known as credit controllers or collection agents, are



responsible for recovering bad debts or late payments. Credit controllers usually work in the credit control department of a business, chasing late payments from the company's and customers. Debt collectors or collection agents usually work for third party collection agencies, and they may collect money from businesses (known as commercial collection) or from individuals (consumer collection). (Singleton and Duffie , 2003).

**Surety Bonds and Securitization:** These effectively involve the sale of the firm's receivables to a financial intermediary that in turn packages them into a security for other investors. But the discounts tend to be significant, and so are the costs associated with converting such assets into securities. And most of the longer-term exposures do not lend themselves to either of these two solutions (Smith and Stultz, 1985).

**Netting off:** this is where loans are netted of against deposits of the same counter-party. This is especially good at mitigating against foreign intercompany debts (Smith and Stultz, 1985).

**Letters of Credit:** Pharmaceutical firms can also issue Letters of Credit to mitigate against credit risk. The LC can also be the source of payment for a transaction, meaning that an exporter will get paid by redeeming the letter of credit. Letters of credit are used nowadays primarily in international trade transactions of significant value, for deals between a supplier in one country and a wholesale customer in another. The parties to a letter of credit are usually a beneficiary who is to receive the money, the issuing bank of whom the applicant is a client, and the advising bank of whom the beneficiary is a client. Since nowadays almost all letters of credit are irrevocable, (i.e. cannot be amended or cancelled without prior agreement of the beneficiary, the issuing bank and the confirming bank, if any). However, the applicant is not a party to the letter of credit. (Singleton and Duffie , 2003).

## 2.3 Credit Derivatives

Smithson and Gregory (2000), defines a credit derivative as a contract to transfer credit risk from one counter-party to another. This simple statement requires us to consider the source of the risk and the method of transfer. Early forms of credit derivative were *financial guarantees*. Some common forms of credit derivatives are credit default swap and total return swap.

According to Freeman & Cox (2006), the credit derivatives market is rapidly developing. Whilst the range of available instruments and their application continues to increase, the market still lacks, at the time of writing, the transparency and liquidity of more traditional, exchange-traded instruments. No attempt is made here to consider all of the available instruments and applications of credit derivatives for the corporate user. Rather, we illustrate the potential usefulness of these instruments by focusing in on two particular kinds of instrument: the credit default swap and the total return swap. Since they are traded over-the-counter, credit derivatives can be tailored to suit the particular needs of the purchaser (Smithson and Gregory, 2000).

The credit default swap or CDS has become the main engine of the credit derivatives market, offering liquid price discovery and trading on which the rest of the market is based. It is an agreement between a protection buyer and a protection seller whereby the buyer pays a periodic fee in return for a contingent payment by the seller upon a credit event happening in the reference entity. The contingent payment usually replicates the loss incurred by creditors of the reference entity in the event of its default. It covers only the credit risk embedded in the asset, risks arising from other factors such as interest rate movements remaining with the buyer. CDS effectively allows the owner of an underlying credit security to pass the risk of default to a buyer of the CDS (Freeman and Cox ,2006).

A total return swap (also known as Total Rate of Return Swap) is a contract between two counterparties whereby they swap periodic payments for the period of the contract. Typically, one party receives the total return (interest payments plus any capital gains or losses for the payment period) from a specified reference asset, while the other receives a specified fixed or floating cash flow that is not related to the creditworthiness of the reference asset, as with a vanilla Interest rate swap. The payments are based upon the same notional amount. The reference asset may be any asset, index or basket of assets (Freeman and Cox, 2006).

The TRS is simply a mechanism that allows one party to derive the economic benefit of owning an asset without use of the balance sheet, and which allows the other to effectively "buy protection" against loss in value due to ownership of a credit asset. The essential difference between a total return swap and a credit default swap) is that the credit default swap provides protection against specific credit events. The total return swap protects against the loss of value irrespective of cause, whether default, widening of credit spreads or anything else (Freeman and Cox, 2006).

The market for credit derivatives has been, and still is, dominated by banks and insurance companies, who trade credit risk among themselves with incentives to distribute and diversify risk, gain additional yield and to manage their capital requirements under Basel accords. There is no exchange-organised market for credit derivatives; transactions are conducted "over-the-counter", and there is consequently less liquidity, standardisation, and transparency than is encountered with standard exchange-traded derivatives (Smithson and Gregory, 2000).

Indeed, it is perhaps this very fact, coupled with the complexity of pricing credit derivatives, which has discouraged many corporate treasurers from considering such instruments. Add to

this, the public suspicion of derivatives in general, generated by the conspicuous failures of corporations such as Enron, and it is not entirely surprising to see that the corporate take-up of such instruments has been slow. Nevertheless, credit derivatives present a unique opportunity for corporate managers to add a new dimension to their efforts to manage risks. The current state of affairs with regard to corporate acceptance of credit derivatives can be likened to that of the management of currency and interest rate risk in the late 1980s. The potential for the growing future use of credit derivatives by corporate treasurers is clear. For example, a 1995 US survey of non-financial corporations revealed that 52 per cent of respondent firms were concerned about managing their credit risk. Of these, 18 per cent expressed a "high" concern. Indeed, many firms are already actively managing credit risk. (Freeman and Cox, 2006). An Enron survey conducted by Accenture found that 36 per cent of companies buy credit insurance, 32 per cent use letters of credit and 14 per cent use credit derivatives to manage credit risk. Whilst non-financial companies have adopted an interested but cautious approach to credit derivative use, the overall level of trading in the credit derivatives market has roughly doubled in each of the past few years. This activity mostly comprises banks and other financial institutions for which credit risk is now an important facet of risk management, but it also comprises a growing number of non-financial firms as the market starts to provide the comfort levels that their finance directors require (Smithson and Gregory, 2000).

## 2.4 Credit Policy Objectives

A credit policy is the blueprint used by a business in making its decision to extend credit to a customer. The primary goal of a credit policy is to avoid extending credit to customers who are unable to pay their accounts. The credit policy for some larger businesses can be quite formal, involving things such as: specific documented guidelines, customer credit

applications, and credit checks. The credit policy for most small businesses tends to be quite informal and lacks the items found in the formal credit policy of a larger business. Many small business owners rely on their instincts as their credit policy (Miller, 2002).

The credit policy has a direct effect on the cash flow of a business. A credit policy that is too strict will turn away potential customers, slow sales, and eventually lead to a decrease in the amount of cash inflows to the business. On the other hand, a credit policy that is too liberal will attract slow paying (even non-paying) customers; increase the business's average collection period for accounts receivable, and eventually lead to cash inflow problems. A good credit policy should help attract and retain good customers, without having a negative impact on the cash flow.

Miller (2002) advocates that there are at least four reasons to have a written credit policy, and they each add to the productivity of the entire organization.

First, the responsibility of managing receivables is a serious undertaking. It involves limiting bad debts and improving cash flow. With outstanding receivables often being a firm's major asset, it is obvious that a reasoned and structured approach to credit management is necessary.

Second, a policy assures a degree of consistency among departments. By writing down what is expected, the arms of the company (whether marketing, production, or finance) will realize that they have a common set of goals. Conversely, a written policy can delineate each department's functions so that duplication of effort and needless friction are avoided (Miller, 2002).

Third, it provides for a consistent approach among customers. Decision making becomes a logical function based on pre-determined parameters. This simplifies the decision process and



yields a sense of fairness that will only improve customer relations (Miller, 2002).

Finally, it can provide some recognition of the credit department as a separate entity, one which is worthy of providing input into the overall strategy of the firm. This allows the department to be an important resource to upper management. It is evident that developing a policy is more than a necessity as it is an opportunity to improve the efficiency of an entire organization (Miller, 2002).

Finally, we must remember that a policy is not a static document. It should be reviewed periodically to reflect changing circumstances. One might even consider making this part of the document itself by adding this final sentence:

'This Policy will be reviewed on an annual basis' (Miller, 2002).

According to Bedser (1999) a key area where clear, enforceable procedures are vital is when managing excesses; that is when an exposure exceeds the limit. A credit manager – rather than the relationship manager that deals directly with the customer – must take responsibility for approving an excess, to avoid any conflict of interests. There should also be an escalation process in place so that exceptionally large excesses are referred to the head of credit rather than to individual credit managers. Senior management should be informed – on at least a weekly basis – of all excesses, and should ensure an appropriate course of action is taken, normally via a formal summary report.

### The Six Cs of Credit Risk Assessment and Evaluation

Credit risk monitoring and implementing a credit policy should not be the responsibility of the credit department alone. Senior management and members of the board must also take responsibility. They need to be able to understand the key issues quickly, which requires a clear presentation of the information. They should receive summary printed reports, and

should be encouraged to use on-line systems capable of accessing the underlying information, to investigate any specific concerns rapidly and easily (Bedser, 1999).

Too often, these basic principles are being ignored because companies are either not fully aware of the risks they are running or are not able to control those risks. For too long, in credit risk management, firms have relied on the knowledge inside people's heads, but this approach is no longer adequate. Robust global systems, which can facilitate the setting of limits, undertake all the necessary calculations and provide the triggers for monitoring are essential. The skills of good quality credit personnel will remain important, especially in the credit approval process and in taking the correct actions when problems arise. The ideal solution is a mixture of the right system, the right advice to help implement that system and the right people in the firm to get the best out of the system, together with a coherent credit policy and clear procedures for its application (Bedser, 1999).

A firm's credit policy may be:

**Lenient:** This is where the firm extends trade credit liberally even to those whose credit worthiness is questionable. This leads to higher sales, high profits assuming full collections of the debts owed.

**Stringent:** This is where credit is restricted to carefully determined customers, through a thorough credit appraisal system. This minimises costs and losses from bad debts however, it may reduce earnings from credit, profitability and cash flow (Mutuma, 2003).

## 2.5 The Six C's of Credit Risk Assessment and Evaluation

To evaluate the credit risk, credit managers in any industry should consider the six C's of credit: character, capacity, capital, collateral, condition and contribution (Weston & Copeland, 1995). The six C's help the pharmaceutical firms to decrease the risk of default, as they get to know their customers. The six C's according to Weston & Copeland are:

**Character:** character has to do with the probability that a customer will try to honor obligations. This factor is of considerable importance, because every credit transaction implies a promise to pay. Will the creditor make an honest effort to pay the debts, or is this credit applicant likely to get away with something? Experienced credit managers frequently insist that character is the most important issue in credit evaluation. A persons or company's character can be determined through: personal interview, reference from people who know the client well, personal knowledge of the client and record of past performances.

**Capacity:** capacity describes a subjective judgment of the customer's ability to pay. It is gauged by the customers past business performance record, supplemented by physical observation of the plant or store and business methods. According to Mwirigi (2006) a client's capacity can be determined by retrieving his sources of income and netting off the commitments. In the case of a company, an analysis of the audited accounts for the past three years could reveal the surplus available in the form of retained earnings and dividend payouts or drawings that will be available to service the loan (Weston & Copeland, 1995).

**Collateral:** collateral is represented by assets offered by the customer as a pledge for security of the credit extended (Weston & Copeland, 1995).

**Conditions:** condition has to do with the impact of general economic trends on the firm or special developments in certain areas of the economy that may affect the customer's ability to meet the obligation. Is the commercial, socio-economic, technological and political environment conducive to a successful sale of the product? (Weston & Copeland, 1995).

**Capital:** capital 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

(Weston & Copeland, 1995).

**Contribution:** is the client committed to the project at hand? In the case of financial institutions advancing credit, is the customer willing and able to make contribution? Is he able to raise the mandatory deposit required in the case of a mortgage loan or is the deposit borrowed from a third party making the project 100% loan financed? If the client is having difficulty raising the deposit, he is likely to be unable to pay his installments regularly (Weston & Copeland, 1995).

The six C's of credit represent the factors by which credit risk is judged. Information on these items is obtained from a number of sources, including the firm's prior experience with the customer, audited financial statements for previous years, credit reporting agencies or the customer's commercial bank. Statistical techniques, especially regression analysis and discriminant analysis, have been used with some success in judging creditworthiness. These methods work best when individual credits are relatively small and a large number of borrowers are involved, as in retail credit, consumer loans and mortgage lending (Weston & Copeland, 1995).

## 2.6 Functions of a Credit Department

For many years, credit control or credit management was regarded in many firms as simply collecting debts. In recent years the role of credit management has become significantly more extensive. The aim of good credit management is the maximisation of profitable sales over the shortest acceptable period and with the minimum of bad debts losses.

According to Schuster (1999), the core functions of a credit department are five-fold:

**Establishment of credit terms and limits:** taking into account the risk involved and liaising

closely with sales.

Assessment of credit risk: trying to find ways of accepting and controlling all business, including high risk opportunities.

Monitoring and control of debt: ensuring that agreed terms are adhered to, all high risk customers are kept under control, and action is taken promptly to resolve any queries or disputes.

Maintenance of the sales ledger: ensuring that the customer master file is up-to-date and accurate, and that payments and other adjustments have been applied promptly and accurately.

Collection of payment: in a manner which creates the optimum cash inflow while at the same time ensuring continuity of business (Credit Analysis-Simon & Schuster, 1999).

Credit risk management is the process of identifying risk in an investment. When the risk has been identified, investment decisions can be made and the risk vs. return balance considered from a better position. The main approach to reducing credit risk is by monitoring the behavior of clients who wish to apply for credit in the business. These clients may be businesses or individuals (Saunders, 2006)

## 2.7 Pharmaceutical Companies and Credit Provision.

A pharmaceutical company is a commercial business licensed to research, develop, market and/or distribute drugs, most commonly in the context of healthcare. They can deal in generic and/or brand medications. They are subject to a variety of laws and regulations regarding the patenting, testing and marketing of drugs, particularly prescription drugs. From its beginnings at the start of the 19th Century, the pharmaceutical industry is now one of the most successful and influential, attracting both praise and controversy. Most of today's major pharmaceutical companies were founded in the late 19th and early 20th centuries (Duffie and



Singleton, 2003).

Trade credit is created whenever a supplier offers terms that allow the buyer to delay payment. Smith, Chee & Smith, (1999) assert that unless transactions between firms occur instantaneously, payment arrangements are, in effect, credit terms. This arrangement happens every day within the pharmaceutical industry where the high cost of drugs cannot allow for cash payments. Sales growth of existing products and launch of new products are key drivers of a pharmaceutical firm's business performance.

Credit-constrained firms have no more access to bank funding and are forced to restrain their activity. However firms may switch to another form of external finance known as trade credit. Research show that, in both US and Europe, trade credit represents a significant part of a firms' external funding and that the use of trade credit is much increased during periods of monetary contractions ( Mateut Simona, 2005).

According to Berger and Udell (1998), in 1993, 15.78% of the total assets of small US businesses were funded by trade credit. Similarly, Rajan and Zingale (1995) document that, in 1991, trade credit represented 17.8% of total assets for American firms, 22% for UK firms, and more than 25% for firms in countries such as Italy, France and Germany.

The literature on credit-market imperfections ranks trade credit as more expensive than bank credit. An indicator of trade credit unattractiveness is the lost earnings, when customers do not use the early payment discount.

The transactions motive theories of trade credit suggest that providing trade credit by pharmaceutical firms reduces the costs of administering invoices between suppliers and buyers undertaking regular exchanges of goods and services (Nilsen, 2002). Pharmaceutical

firms face strong seasonalities or uncertainties in the demand for their products and may have to build large inventories in order to maintain their production levels. By offering trade credit, firms may be able to manage their inventory positions better and reduce warehousing costs.

Credit provision plays a vital role in the operations of a pharmaceutical firm by acting as a cash management tool (Ferris, 1999 and Nilsen, 2002). By delaying the payments for purchases, a firm may be able to better match the timing of cash receipts from sales with the cash outlays for the costs of the goods purchased.

There also exists a 'quality guarantee' theory that postulates that trade credit is a necessary tool when there is uncertainty about the quality of the products provided by the seller (DeLoof and Jegers, 1996). Suppliers without a reputation in the product market can attest to the quality of their products by bearing the cost of financing them until the buyer can ascertain the product quality by himself.

Price discrimination is another way in which trade credit plays a role in the pharmaceutical industry. Trade credit reduces the effective price to the low-quality buyers, because credit terms are usually invariant to the credit quality of the buyer.

Firms with a high margin between sales and variable costs have a strong incentive to make additional sales without cutting the price to existing customers (Brennan, 1988 and Rajan, 1997).

The financing advantage theories suggest that the firm providing credit has an advantage over other credit providers in assessing the creditworthiness of his clients, can better monitor his clients and can enforce repayment of the credit (Chee *et al* 1999 ; Nilsen, 2002). This gives the firm a three fold advantage with respect to financial institutions in extending credit to a buyer.

## 2.8 Types of Risks faced by Pharmaceutical Companies

There are risks and uncertainties in the pharmaceutical business which may affect future performance including expected growth. According to Campbell (2006), the following factors could cause the pharmaceutical firm's actual results to differ materially from expected and historical results.

**Risk that Research and Development will not deliver commercially successful new products:**

Continued development of commercially viable new products is critical to the firm's ability to replace sales of older products that decline upon expiration of exclusive rights and to increase overall sales. Developing new products is a costly, lengthy and uncertain process. A new candidate product can fail at any stage of the process and one or more late stage product candidates could fail to receive regulatory approval. New product candidates may appear promising in development, but after significant investment, fail to reach the market or have only limited commercial success as a result of efficacy or safety concerns, difficulty or excessive costs to manufacture etc (Campbell, 2006).

**Risk of loss or expiration of patents or marketing exclusivity:** Efforts by the manufacturers of generic products may involve challenges to the validity of a patent or assertions that the alternative compounds do not infringe on a firm's patent. This infringement could adversely affect a firm's turnover and margins (Campbell, 2006).

**Risk of substantial adverse outcome of litigation and government investigations:** Unfavorable resolution of government proceedings may have a material adverse effect on a firm's financial results. The firm has to make material provisions in its books of accounts (Campbell, 2006).

**Risk of competition, price controls and limitation on sales:** The pharmaceutical industry is faced by immense competition among and between large international firms that manufacture original/propriety products and producers of generic pharmaceuticals. Generic products often enter the market upon expiration of patents or data exclusivity periods of a firms' products. This leads to a dramatic loss of sales and reduces revenues and margins for propriety products. Pharmaceutical products are subject to price controls or pressures and other restrictions in many markets. The Kenyan government intervenes directly in setting prices .The Kenyan government being a major purchaser of pharmaceutical products, has the economic power to exert substantial pressure on prices or the terms of access to formularies. A firm cannot predict whether existing controls will increase or new controls will be introduced that will reduce the firms margins or affect adversely it's ability to introduce new products profitably (Galai, 2000).

**Regulatory controls:** a firm must comply with a broad range of regulatory controls on testing, approval, manufacturing and marketing of its pharmaceutical products. These controls affect the cost of product development, the time the products take to reach the market and the uncertainty of successfully doing so. Stricter regulatory controls also heighten the risk of withdrawal by regulators of approvals previously granted which would reduce revenues and can result in product recalls and product liability lawsuits (Campbell, 2006).

**Risk of interruption of product supply:** The manufacture of pharmaceutical products and their constituent materials requires compliance with good manufacturing practice regulations. In Kenya all the pharmaceutical firms manufacturing sites are subject to review and approval by the Food and Drug Authority. Compliance failure by suppliers of key materials or even a firm's own manufacturing facilities could lead to product recalls and seizures, interruption of

production and delays in the approvals of new products pending resolution of manufacturing issues. Non-compliance can also result in fines and disgorgement of profits (Campbell, 2006).

**Risk from environmental liabilities:** The environmental laws of Kenya impose actual and potential obligations on a pharmaceutical firm to remediate contaminated sites. Failure to manage properly the environmental risks could result in additional remedial costs that could materially and adversely affect the firm's operations (Galai, 2000).

**Risk of Reliance on Information Technology:** Most large pharmaceutical firms are increasingly dependent on information technology systems, including Internet based systems, for internal communications with customers and suppliers. Any significant disruption of these systems, whether due to computer viruses or other outside incursions, could materially and adversely affect the firm's operations (Galai, 2000).

**Risk of Taxation:** Large multinational pharmaceutical firms have subsidiaries spread world wide. The effective tax rate on a firm's earnings benefit from the fact that a portion of its earnings is taxed at more favourable rates in some jurisdictions outside the parent company's. In Kenya the largest pharmaceutical company, GlaxoSmithkline is a subsidiary of GlaxoSmithkline Plc whose head office is in the UK where tax laws are not as favourable. (Galai, 2000).

**Risk of Global Political and Economic conditions:** Large multinational pharmaceutical firms conduct a substantial portion outside the parent company's home. Fluctuations in foreign



exchange rates may materially affect the group's results. The group has no control over changes in inflation, interest rates or other economic factors affecting the business or the possibility of political unrest, legal and regulatory changes or nationalization in jurisdictions which the group operates (Campbell, 2006).

Accounting Standards: With the adoption of the International Financial Reporting Standards (IFRS), changes in the market valuation of certain financial instruments will be reflected in a firm's reported results before those gains or losses are actually realized and could have significant impact on the profit and loss statement in any given period (Campbell, 2006).

Risk of 'inventing diseases': Researchers at Newcastle University in Australia said firms were putting healthy people at risk by medicalising conditions such as menopause. But the pharmaceutical industry has always denied it invented diseases (Galai, 2000).

Risk from concentration of credit sales to wholesalers: Large multinational pharmaceutical firm's sells their products through wholesalers, in addition to hospitals, pharmacies or other groups. These sales are on credit basis. A firm is exposed to a concentration of credit risk in respect of these credit sales such that if one or more of the wholesalers is affected by financial difficulty, it could materially and adversely affect the firm's financial results (Campbell, 2006).

## 2.9 Credit Control Policy and Risk Management in the Pharmaceutical Industry

According to Mwirigi, (2006), there is need for an effective credit control policy to manage credit risk. Hence in order to ensure a fairly healthy credit management program, with minimal expensive bad debts and minimized credit risk, a company strives to establish an effective credit control and lending policy. Surprisingly, a few companies do not have any such policy and even more worrying, many of the companies with credit control policies still fail to operate the policies so much so that the companies' debts soar and seriously affect the companies' very existence, in terms of profitability and a healthy cash flow (CBK Survey, 2001).

Credit management and policy are the basis for making decisions on extending credit. Such decisions involve credit standards, credit limit, credit terms and the determination of who shall receive credit. A framework should exist for evaluating decisions on changing credit policies (Weston & Copeland, 1995).

Trade credit, which is the focus of this paper, involves a joint commodity- financial transaction whereby the exchange of goods is separated in time from the exchange of money (Lee and Stowe, 1993). In effect, goods or services are exchanged for a loan, which is subsequently exchanged for cash. Typically, credit policy includes the specification of credit goals and a range of policies covering such activities as credit risk screening, credit limits, payment terms, monitoring, and collection and funding.

Credit policy formulation also considers the organisation structure of the credit function for example, whether to decentralise or create a separate credit subsidiary and other corporate

contextual variables such as age of the buyer firm, frequency of transactions, product quality, selling channel and industry sector (Pike and Cheng, 2001).

According to Smith, Chee & Smith, (1999) ,credit policy is multi-faceted. There are two basic forms of trade credit: the simpler form, net terms, specifies that full payment is due within a certain period after delivery. For example, 'net 30' means full payment is due 30 days after invoice; after that the buyer is in default. Invoicing normally occurs either around the date of delivery or at the end of a billing cycle. The more complex form of credit, two part terms has three basic elements: the discount percentage, the discount period and the effective interest rate. The most common two-part terms are '2/10 net 30'. This means a 2% discount for payment within 10 days and a net period ending on day 30. As with net terms; the buyer is in default if payment is not made by the end of the net period.

## 2.10 Credit Appraisal Criteria in Pharmaceutical Companies

### 2.10.1 Measuring Credit Risk:

To calibrate the default risk exposure of its credit and investment decisions, a corporate manager needs to measure the probability of borrower default. The ability to do this largely depends on the amount of information the manager has about the borrower. The availability of more information along with the lower average cost of collecting such information, allows corporate managers to use more sophisticated and usually more quantitative methods in assessing default probabilities (Saunders, 2002).

Different models have been employed to assess the default risk on trade credit: these vary from the relatively qualitative to the highly quantitative. Further, these models are not mutually exclusive in that a corporate manager may use more than one to reach a credit

pricing decision.

Saunders (2002) analysed the credit risk models in three broad groups;

Qualitative models, Credit scoring models and Newer models.

### 2.10.2 Qualitative Models

In the absence of publicly available information on the quality of borrowers, the corporate manager has to assemble information from private sources- such as credit files-and/or purchase such information from external sources- such as credit rating agencies. This information helps a manager make an informed judgment on the probability of default and price the debt correctly. However a number of key factors enter into the credit decision. These include (1) *borrower-specific* factors that are idiosyncratic to the individual borrower and (2) *market-specific* factors that have an impact on all borrowers at the time of the credit decision. The corporate manager then weights these factors to come to an overall credit decision. Because of their reliance on the subjective judgment of the manager, these models are often called expert systems (Saunders, 2002).

### 2.10.3 Credit Scoring Models

Credit scoring models use data on observed borrower characteristics either to calculate the probability of default or to sort borrowers into different default risk classes. To employ credit scoring models in this manner, the manager must identify objective economic and financial measures of risk for any particular class of borrower. For corporate debt, financial ratios such as the debt-equity ratio are usually key factors. After data are identified, a statistical technique quantifies or scores the default risk probability or default risk classification (Saunders, 2002).

### 2.10.4 Newer Models

One market -based method of assessing credit risk exposure and default probabilities is to

analyse the risk premium inherent in the current structure of yields on corporate debt or loans to similar risk-rated borrowers (Saunders, 2002).

## RESEARCH METHODOLOGY

### 2.11 Review Of Past Studies

Mwirigi (2006) carried out an assessment of credit risk management techniques adopted by Microfinance institutions in Kenya. He ascertained that a significant number of Micro Finance Institutions (92.5%) have credit management policies as a basis for objective credit risk appraisal and that most MFI's used the 6 C's criteria and used all the C's in appraising their borrowers in the following order: capacity/completion, contribution, character, reasonableness, condition and finally collateral.

Majority of the MFI's ranked credit risk (80%) as the most important risk followed by interest rate risk (62.5%), market risk (57.5%) and foreign exchange risk (40%).

Abedi (2000) found out that liquidity risk and credit risk are the most important risks that banks in the USA face. The study established that the most important risk MFI's face was credit risk followed by interest rate risk and technological risk, and that they used swaps followed by forwards, futures and lastly options to manage risk.



## CHAPTER THREE

### 3.0 RESEARCH METHODOLOGY

#### 3.1 Research Design

The study employed a survey design.

#### 3.2 Population

The target population of interest was the 20 pharmaceutical manufacturing firms operating in Kenya. The population of registered pharmaceutical manufacturing firms in Kenya was provided by the pharmaceutical industry regulator in Kenya, Pharmacy and Poisons Board. The Board regulates the Practice of Pharmacy and the Manufacture and Trade in drugs and poisons. The list comprises firms engaged in the production of propriety /original products as well as those engaged in the manufacture of generic drugs.

#### 3.3 Sampling

The questionnaire was distributed to the Finance Manager or Credit Controller of the selected firm.

The Finance Manager was selected because he is involved in the process of formulating the credit policy of the firm and also ensuring that the credit policies are implemented.. The credit controller is charged with the actual implementation of credit policies.

#### 3.4 Data Collection Method

The names and addresses of Pharmaceutical manufacturing firms in Kenya were obtained from the Pharmacy and Poisons Board.

Primary data was collected using a semi-structured questionnaire, administered to the Finance Managers or Credit controller. The drop and pick later approach was used in this study and thus considered an appropriate method because it gives respondents time to complete the questionnaire and gives the researcher an opportunity to review the questionnaire before picking to ensure completeness of the responses.

Secondary data was collected from brochures, supplements, newspapers and other relevant publications of Pharmaceutical firms.

### 3.5 Data Analysis and analysed

Data was analyzed using descriptive statistics such as percentages and tabulations with the help of the SPSS Package which is a statistical and data management package for analysts and researchers. The analysis was carried out on the credit risk management practices of different pharmaceutical firms when offering trade credit.

Comparative analysis was done to identify any differences in practices used by the Pharmaceutical firms.

Some respondents gave various reasons like confidentiality of the information, lack of authorization from management to complete the questionnaire, fear that the information would be leaked out to competitors and that their workload was too much to spare time to complete the questionnaire.

Secondary data was obtained from brochures to provide more information on the business of

Table 4.1 Response Rate

Category	No. of firms	Sample (n)	Returned Questionnaires (y)	Not returned (z)
Pharmaceutical firms	20	20	14	6

Sample: y=Returned questionnaires (70%), z= Not returned questionnaires (30%)

Appendix 1 Data

## CHAPTER FOUR

### 4.0 DATA PRESENTATION, ANALYSIS AND INTERPRETATION

This chapter presents the analysis of the data collected and interpreted on the assessment of credit risk management practices adopted by pharmaceutical firms in Kenya.

It is evident that the pharmaceutical manufacturing is in the hands of the private sector. All the 20 firms engaged in the manufacturing business in Kenya are privately owned.

#### 4.1 Data collected and analysed

Data was collected from 20 firms engaged in the business of pharmaceutical manufacturing. Out of the 20 targeted firms, 14 responded. This represents a response rate of 70% which is considered adequate to form a basis for valid conclusions regarding the credit risk management practices adopted by pharmaceutical manufacturing firms in Kenya. Table 4.1 below shows an overview of data collected.

Firms that did not respond gave various reasons like confidentiality of the information; required authorisation from management to complete the questionnaire, fear that the information would be leaked out to competitors and that their workload was too much to spare time for a questionnaire.

Secondary data was obtained from brochures to provide more information on the business of the firms.

Table 4.1 Response Rate

Population	No. of firms	Sample (t)	Returned Questionnaires(y)	Not Returned(t-y)
Pharmaceutical firms	20	20	14	6

Key: t=sample; y=Returned questionnaires (70%); t-r= Not returned questionnaires (30%)

Source: Research Data

## 4.2 Background Information of the Firms Studied

### 4.2.1 Physical location of the firms

The firms studied are located all over the country with a high concentration in Nairobi's Industrial Area. Table 4.2 below depicts this information.

Table 4.2 Location of the firms

No of firms	Physical Location	%
17	Nairobi	85%
1	Mombasa	5%
1	Eldoret	5%
1	Thika	5%
Total 20		

*Source: Research Data*

As indicated above 85% of the firms are located in Nairobi, 5% in Mombasa, 5% in Eldoret and 5% in Thika.

### 4.2.2 Ownership of the firms

All the firms studied are privately owned. The government has established itself as a great buyer of the pharmaceutical products; this explains why it is not engaged in the actual production.

### 4.2.3 Nature of the business

All the firms studied (100%) indicated that they were engaged in the manufacture of pharmaceutical products. These range from over the counter drugs to prescription medicines, intravenous fluids, antibiotics, anti-retrovirals. Some are also engaged in the production of health drinks and oral care products.

## 4.3 Credit Control Policy

### 4.3.1 Factors considered in establishing a credit control policy.

In response to the ranking of factors to consider in establishing a credit control policy, majority indicated that they mostly considered financial stability of the customer (100%), the existing credit policy (100%), state of the economy (75%), general trend of credit extended by the firm (72%) and lastly considered was the overhead costs (50%). Table 4.3 below illustrates this data.

Table 4.3 Factors considered when establishing a credit control policy.

Factor	Most considered %	Least considered %
Financial stability of customer	100	0
State of Economy	75	25
General trend of credit extended to your firm	72	28
Overhead costs	50	50
Existing credit policy	100	0

Source: Research Data

### 4.3.2 Existence of a credit policy manual

Majority of the firms studied (78%) do not have credit policy manuals and various reasons were given for not having one in place. This is not a good trend because a credit policy manual is the blueprint used by a business in making its decision to extend credit to customers. The primary goal of a credit policy manual is to avoid extending credit to customers who are unable to pay their accounts.

The firms that have a credit manual listed the following as the most important contents of the credit manual: establishment of credit limits, establishment of credit period, and credit rating of customers.

The firms that do not have a credit policy gave the following reasons as ranked below:



Table 4.4 Reasons for not having a credit manual.

Ranking %	Too complicated to develop	Not necessary	Too costly to develop	Too rigid
Most Considered	33%	58%	10%	58%
Least Considered	67%	42%	90%	42%

Source: Research Data

As indicated in the above table 58% considered credit manuals as not necessary, 58% considered them too rigid, 33% considered it too complicated to develop and only 10% considered it too costly to develop.

### 4.3.3 Credit Policy Objectives

When asked to rank the credit policy objectives of the firm, majority of the respondents considered minimising credit costs as the most important objective (100%), elimination of bad customers was ranked at (90%), tool to gain competitive advantage was ranked at 21%. Most respondents did not consider earning interest as a major credit policy objective and it ranked (8%).

Table 4.5 Credit Policy Objectives.

Credit Policy Objectives	Mostly Considered	Least Considered
Minimising credit costs	100%	0%
Eliminate bad customers	90%	10%
Tool to gain competitive advantage	21%	79%
Earn interest from this surplus	8%	92%

Source: Research Data

### 4.3.4 Practices considered in managing credit risk exposure.

When respondents were asked about the practices they adopted to manage credit risk exposure, a majority of debt collection services (72%), while 50% used letters of credit.

Credit insurance was used by 25% of the respondents. Netting off and use of Surety bonds and securitisation were unpopular among the respondents because none used these methods (0%).

This information is illustrated in the table below.

This trend is an indication that services of debt collectors are relied upon by pharmaceutical manufacturing firms.

Table 4.6 Practices used in managing credit risk exposure

Practice considered	Mostly considered	Least considered
Debt collection services	72%	28%
Factoring of Debt	5%	95%
Credit Insurance	25%	75%
Surety Bonds & Securitisation	0%	100%
Letters of Credit	50%	50%
Netting off	0%	100%

Source: Research Data

#### 4.3.5 Organisation of credit control activities.

Majority of the respondents (72%) indicated that credit control activities are organised as a unit within a department whereas only (28%) have separate credit departments. This is an indication that lending is not a key function of the pharmaceutical firms as compared to the financial institutions. This information is illustrated in the table below.

Table 4.7 Organisation of Credit Control Activities.

	No. of respondents	Percentage
A unit within a department	10	72%
Within a separate department	4	28%
Other	0	0%
TOTAL	14	100%

Source: Research Data

#### 4.3.6 Personnel involved in credit risk assessment

The respondents were asked to indicate the personnel in the firm who are involved in credit risk assessment. The response given was that the departmental heads and the credit managers were (100%) fully involved whereas the Chairman and the Credit committee were least involved.

Table 4.8 Personnel involved in credit risk assessment

Personnel	Most involved	Least involved
Chairman	10%	90%
Managing Director/General Manager	57%	43%
Departmental Head	100%	0%
Credit manager/Finance Manager	100%	0%
Credit Committee	28%	72%
Any Other	22%	78%

Source: Research Data

## 4.4 Credit Appraisal

### 4.4.1 Frequency of review of credit policy

50% of the respondents indicated that the credit policy is reviewed yearly whereas the remaining 50% indicated that the review is carried out quarterly. This shows the importance attached to the process of credit policy review in the pharmaceutical industry.

Table 4.9 Frequency of review of credit policy

	No. of respondents	Percentage
Yearly	7	50%
Half Yearly	0	0%
Quarterly	7	50%
Other	0	0%
Total	14	100%

Source: Research Data

### 4.4.2 Credit appraisal process

Majority of the respondents (71%) indicated the credit appraisal process is objective while only (29%) assert that the process is rather subjective.

Table 4.10 Credit Appraisal Process

Ranking	No. of respondents	Percentage
Objective	10	71%
Subjective	4	29%
Total	14	100%

### 4.4.3 Ways used to create credit risk awareness to employees

The respondents (95%) indicated that regular meetings is the most widely used method of creating credit risk awareness to employees, followed by both regular training and use of line managers (80%).

The credit manual was least used as a means of creating credit risk awareness to the employees and it scored a mere 10%.

This information is illustrated in the table below.

Table 4.11 Ways used to create credit risk awareness to employees

Method	Mostly used	Least used
Regular meetings	95%	5%
Regular training	80%	20%
Use of line managers/supervisors	80%	20%
Credit manual	10%	90%
Any other	20%	80%

Source: Research Data

### 4.4.4 Use of the 6 C's in Credit appraisal

It was established that the 6C'S model of credit appraisal is widely used by the pharmaceutical firms. It emerged that collateral whose usage was 50%, was the least preferred factor. Character was preferred by all (100%) the respondents followed by contribution which scored 86%.

Capacity, conditions and capital all ranked at 72% in usage. This is an indication that the 6C's is widely used to reduce risk of default. Table 4.12 Use of the 6 C's in Credit appraisal

Factor	Mostly used		Least used	
	Frequency	Percentage	Frequency	Percentage
Character of borrower	14	100%	0	0%
Capacity/completion	10	72%	4	28%
Collateral/security	7	50%	7	50%
Conditions	10	72%	4	28%
Capital	11	72%	3	28%
Contribution	12	86%	2	14%

Source: Research Data

## 4.5 Organisational Performance (2002 to 2006)

### 4.5.1 Business performance

The pharmaceutical firms studied being privately owned did not want to provide information on their financial performance. However they attributed various factors as the key drivers to their performance. Majority of the firms (95%) attributed improved debt collection methods as the most contributors to performance followed by improved credit appraisal (95%). These factors are analysed in the table below.

Table 4.13 Organisational Performance

Factor	Most contributed	Least Contributed
Improved debt collection methods	95%	5%
Customer not willing to repay debt	20%	80%
Charged high interest on late debt payments	15%	85%
Poor economic conditions	27%	73%
Improved credit appraisal	95%	5%
Any other	21%	79%

Source: Research Data

### 4.5.2 Long term strategy on credit

All the firms studied (100%) indicated that their organisations have a long term strategy to continue extending trade credit to customers. This shows that credit sales despite the default rate, increase sales volumes.

## 4.6 Business Environment Factors

### 4.6.1 Business environment

All the respondents (100%) indicated that the environment in which pharmaceutical firms operate in is highly turbulent and that the firms react to the environment very proactively.



## 4.6.2 Credit period

From the data collected, the credit period granted depended on the nature of the customer. Customers like the government who are Tender based customers have a credit period of as long as 150 days.

Table 4.14 Credit period analysis

Credit period	No. of respondents	Percentage
15 days	0	0%
30 days	6	43%
45 days	3	21%
60 days	4	29%
90 days	3	43%
Any other	7	50%

Source: Research Data

## 4.6.3 Defaulting on debt repayment

All the respondents (100%) considered a customer to have defaulted in debt repayment when his invoice falls overdue by 90 days.

## 4.6.4 Difficult to pay customers

Most of the firms studied (95%) put the accounts of difficult to pay customers on hold and stop future sales till the accounts are settled.

(80%) of the respondents prefer to engage the services of debt collectors in dealing with difficult to pay customers. None of the respondents will leave the difficult to pay customer alone to decide when to pay. Institution of court proceedings and writing off the debt were least done and they ranked 21% and 20 % respectively.

Table 4.15 Dealing with debt defaulters

Action	Most done	Least done
Use debt collectors to recover debt	80%	20%
Institute court proceedings	21%	79%
Leave them alone to decide when to pay	0%	100%
Write off debt	20%	80%
Put account on hold and stop future sales	95%	5%
Sell on cash basis only	43%	57%

Source: Research Data

#### 4.6.5 Credit approval

Among the firms studied the function of approving credit limits is done by various managers within the organisation. However 72% of the respondents indicated that the Finance Director has to be involved regardless of the credit amount.

Table 4.16 Credit approval

	No of respondents	Percentage
Managing Director	5	38%
Credit Manager	7	50%
Sales Manager	6	43%
Finance Director	10	72%

Source: Research Data

#### 4.6.6 Importance of various risks to the firm

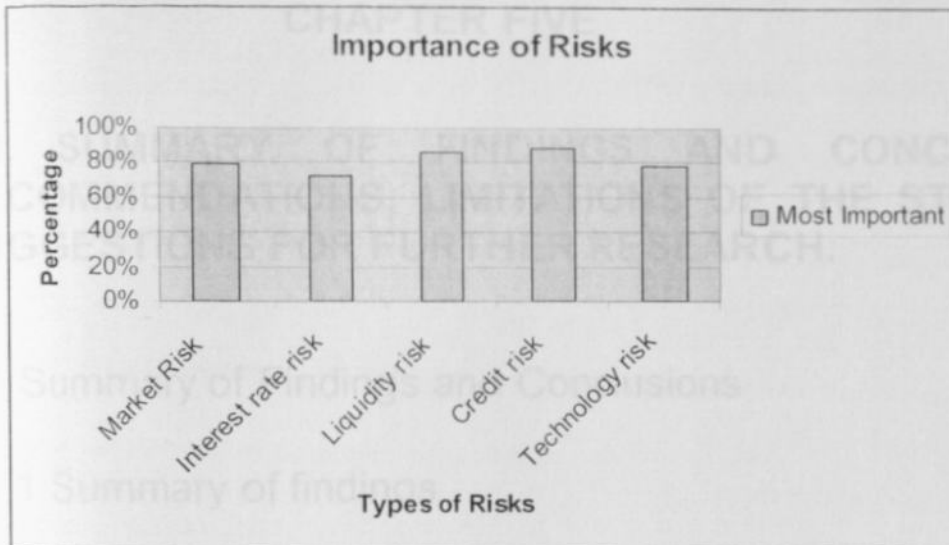
When asked to state the importance of the various risks, credit risk emerged as the most important (88%), followed by liquidity risk (86%), then by market risk (79%), technology risk (78%) and lastly by interest rate risk (72%).

Table 4.17 Importance of Risks

Type of Risk	Most Important	Least Important
Market Risk	79%	21%
Interest rate risk	72%	28%
Liquidity risk	86%	14%
Credit risk	88%	12%
Technology risk	78%	22%

Source: Research data

This information is graphically illustrated below.



Source: Research data

#### 4.6.7 Use of credit derivatives

All the respondents indicated that they did not use credit derivatives to manage credit risks. This shows that the market for credit derivatives namely credit default swaps and total return swaps is not fully developed in Kenya. Some firms (28%) prefer to use bank guarantees to manage credit risk.

## CHAPTER FIVE

### 5.0 SUMMARY OF FINDINGS AND CONCLUSIONS, RECOMMENDATIONS, LIMITATIONS OF THE STUDY AND SUGGESTIONS FOR FURTHER RESEARCH.

#### 5.1 Summary of Findings and Conclusions

##### 5.1.1 Summary of findings

The objective of this research was to identify the credit risk management practices adopted by pharmaceutical firms in Kenya. Primary data was collected by use of a questionnaire administered to 20 firms engaged in pharmaceutical manufacturing in Kenya. This primary data was supplemented by secondary data obtained from company brochures and by visiting the websites of the firms on the internet. The data was analysed by use of the SPSS and presented in the form of tables, percentages and graphs.

The research findings indicate that:

All the 20 firms studied indicated that they were involved in the manufacture of pharmaceutical drugs. Most of the firms (85%) are located in Nairobi. Out of those located in Nairobi, 90% of the firms are in Nairobi's Industrial Area where there is a high concentration of industries and hence proximity to the supply of raw materials.

The two most important factors considered in establishing a credit control policy are the financial stability of the customer and the existing credit policy. They were considered by 100% of the respondents. State of the economy was considered by 75% of the respondents.

Majority of the firms (78%) do not have a credit policy manual. 58% of these firms stated that they did not have a credit policy because it was too rigid and unnecessary.

A significant number of the respondents (100%) indicated the most important credit policy objective as being minimising credit costs whereas (90%) indicated eliminating bad customers as a major objective of credit policy. Earning interest from the overdue accounts did not feature as a credit policy objective.

Most firms studied (72%), considered debt collection services as the widely used practice in managing credit risk exposure in their firms. Letters of credit was used by 50% of the respondents whereas netting off and use of surety bonds were not used by any of the respondents.

Most firms (72%) have the credit control activities organised as a unit within a department whereas the rest indicated that they had separate credit departments. This is an indication that credit control as a department has not been given the importance it deserves since having it as a separate department give it independence and reduces reliance on subjectivity.

The departmental heads and credit managers were fully involved in credit risk assessment as indicated by all the firms (100%).

Review of the credit policy was practised yearly by 50% of the firms and the other 50% practised it quarterly.

Majority of the respondents (71%) indicated that the credit appraisal process is objective while only (29%) found it rather subjective.

Holding regular meetings was the most widely used method of creating credit risk awareness to employees. This was used by 95% of the respondents.



Most of the firms used the 6C's model of credit appraisal in the following order: character (100%), contribution (86%), capacity, conditions and capital each scored (72%) whereas collateral was least used with a score of 50%.

All the respondents (100%) indicated that the environment in which pharmaceutical firms operate in is highly turbulent and that the firms react proactively to the environment. The industry is generally characterised by rapid product innovations, technological advancements and huge capital investments.

In dealing with difficult to pay customers, (95%) of the respondents mostly put the accounts on hold and stopped future sales till the accounts were settled followed by (80%) who engaged the services of debt collectors.

Majority of the respondents ranked credit risk (88%) as the most important risk faced by the firm followed by liquidity risk (86%), market risk (79%), technology risk (78%) and finally interest rate risk (72%).

It emerged that the use of credit derivatives is not practiced by any of the firms studied in managing credit risk exposure.

### 5.1.2 Conclusions

The most widely used credit risk management practices are use of debt collectors (72%), letters of credit (50%), credit insurance (25%), and factoring of debt (5%). In dealing with difficult to pay customers, most firms (95%) put the account on hold and stopped future sales till the account was settled, (80%) engaged services of debt collectors, (43%) resorted to selling on cash basis.

Most firms do not use credit manuals in credit risk appraisal. This is trend that needs to change because the manual provides objective guidelines and thus reduce the risk of default.

Credit risk is the most critical risk and therefore how well it is managed could greatly affect the performance of the firm.

The Finance Director has to be involved in the credit approval process regardless of the credit amount.

## 5.2 Recommendations

The pharmaceutical firms should encourage use of a credit manual as basis for filtering out bad customers. Lack of credit manual probably explains why majority of the respondents indicated the credit appraisal process was objective.

### Suggestions for Further Research

The firms should consider use of the more robust practices in managing credit risk like netting off, factoring of debt and credit insurance. Netting off will be especially important to multinational pharmaceutical firms which are engaged in inter-company trading with the parent company.

Pharmaceutical firms are encouraged to practice use of credit derivatives in their bid to reduce credit risk. Credit derivatives present a unique opportunity for corporate managers to add a new dimension to their efforts to manage risks.

## 5.3 Limitations of the Study

It was very difficult to convince the firms to fill in the questionnaire as they regarded most of the information requested as confidential. Some said the approval of the Managing Director was required before they could fill the questionnaire. This further delayed the time allocated to

get back the questionnaire.

Some of the firms refused to accept the questionnaire due to the fear that company information could land in the hands of their competitors. This was worsened by the fact that all the firms to be studied are privately owned and they did not want any publicity.

It was a problem convincing some respondents that the results of the report would be used solely for academic purposes.

The credit risk management practices in the pharmaceutical industry have not been researched on in Kenya and therefore it was difficult to obtain reference material.

## 5.4 Suggestions for Further Research

There is need to carry out a study on reasons why the pharmaceutical manufacturing firms do not use Credit Derivatives to manage their credit risk.

Liquidity risk ranked as 86% among the major risks affecting the pharmaceutical firms. Research could be carried out on the impact of this risk on the operations of the firm. Liquidity risk ranked second in importance after credit risk.

Majority of the respondents (71%) indicated that the credit appraisal process is objective: research can be carried out to find out why there is subjectivity in the process.

Research on the impact of selling on cash basis can be carried out. This may eliminate debts but sales volumes could be adversely affected.

## REFERENCES

- Abedi, C (2000):- Sources of Finance Available to Small Scale Enterprises in Nairobi, Kenya .Unpublished MBA Project, University of Nairobi.
- Alexandre & Wagner (2002): An Extended Analytical Approach to Credit Risk Management. Economic Notes 31 (2), 237–253.Blackwell Publishers.
- Ali Fatemi, Iraj Fooladi (2006): Credit Risk Management: A survey of Practices. Conceptual Paper published by Emerald Group Publishing Limited.
- Basel Committee (1999): Risk in the Banking Industry. Published by the Basel Committee.
- Chee K & Smith R (1999): Evidence on the Determinants of Credit Terms Used in Interfirm Trade. Journal of Finance . Blackwell Publishers.
- Clarke CJ & Survirvarma(1999): Strategic Risk Management: The New Competitive Long Range Planning. Volume 32. Published by Elsevier Ltd.
- Copeland, T E., Weston, J.F (2005): Financial Theory and Corporate Policy. Boston: Pearson Addison Wesley.
- Deloof, M and Jegers, M. (1996): Trade Credit, Product quality, and Intragroup Trade: Financial Management. Journal of Business Finance & Accounting Volume 26. Emerald Group Publishing Limited.
- D.Duffie, K.J.Singleton (2003): Credit Risk. Princeton University Press, Princeton.
- Daniel E. McCarty, Jerome S. Osteryoung, Frederick W. Siegel (1981): A Model Linking the Account Receivable Accept-Reject Decision for Individual Customers to the Firm's Overall Credit Policy. Dominated Financial Environment: The Case of Finnish Small Firms. New Jersey: Prentice Hall.

- Edward I Altman (2002): Managing Credit Risk: A Challenge for the New Millennium. Economic Notes 31 (2), 201–214. Blackwell Publishers.
- Freeman, Cox & Wright (2006): Credit Risk Management: The Use of Credit Derivatives by Non-Financial Corporations. Managerial Finance Volume 32 Number 9 2006 pp. 761-773. Emerald Group Publishing.
- Glen Arnold (2002): Corporate Financial Management. Prentice Hall
- Henri Loubergé, Harris Schlesinger (2005): Coping with Credit Risk. The Journal of Risk Finance .Volume: 6 Issue: 2 Page: 118 – 134. Emerald Group Publishing Limited.
- J.Mao & Sarndal (1974): Controlling Risk in Accounts Receivable Management. Journal of Business Finance & Accounting 1 (3), 395–403. Blackwell Publishing, Inc.
- John Hitchins, Davies, Rivett, Hogg (2002): Credit Derivatives: Regulating in the Jungle. Volume: 10 Issue: 1 Page: 27 – 32. MCB UP Ltd
- Jyrki Niskanen ,Mervi Niskanen (2006) : The Determinants of Corporate Trade Credit Policies in a Bank. John Wiley & Sons, Inc.
- Galai D, M.Crouhy, D.Galai R.Mark (2000): Risk Management. McGraw-Hill.
- Mutuma J (2003): A Research Survey Focusing on the 6 C's of Credit Risk Appraisal and the Level of Non-performing Loans of Commercial Banks in Kenya. Unpublished MBA Thesis-University of Nairobi
- Nilsen, J (2002): Trade Credit and the Bank Lending Channel. Journal of Money, Credit and Banking. Volume:10 Issue 3.
- Paul Rienstra-Munnicha, Calum G. Turvey (2002): The Relationship Between Exports, Credit Risk and Credit Guarantees. Canadian Journal of Agricultural Economics Vol 45.



Paul Van der Maas, (2001): Active Loan Portfolio Management Through the Use of Credit Derivatives. Volume: 9 Issue: 1 Page: 47 – 52. MCB UP Ltd.

Pike R & Cheng N.M (2001): Credit Management: An Examination of Policy Choices, Practices and Late Payment In UK Companies. Blackwell Publishers.

Petersen, M and Rajan R(1997) : Trade Credit: Theories and Evidence. Review of Financial Studies. Journal of Finance. *Long Limited*.

Schnitzer M, Campbell Pryde (2006): A Note on XBRL and the Promise of Modular Accounting. McGraw Hill.

Saunders A.(2002) : Financial Institutions Management: A Modern Perspective. McGraw Hill.

Shehzad L. Mian, Clifford W. Smith Jr. (1994): Extending Trade Credit and Financing Receivables. Morgan Stanley Publication.

Simona Mateut (2005): Trade Credit and Monetary Policy Transmission. Journal of Economic Surveys. Blackwell Publishing Ltd.

Stultz S (1985) :-Basic Concepts in Risk Management. McGraw Hill.

Smithson C & Mingle G (2006): The Promise of Credit Derivatives in Non-Financial Corporations. Journal of Applied Corporate Finance 18 (4), 54–60. Blackwell Publishing.

Steven V. Mann (2002): Optimal Control of Credit Risk. Journal of Applied Corporate Finance 18. Blackwell Publishing.

Walia T S (1984): Credit Policy of a Firm as a Tool for Strategic Planning. Morgan Stanley Publication.

Thygerson K.J (1995): Management of Financial Institutions. Harper Collins College Publishers.

Viral Acharya (2005): Credit Risk: Pricing, Measurement, and Management. *Economica* 72 (285), 181–182. Blackwell Publishing.

Winer, B.S (2000). The Exploitation of Relationships in Financial Distress: The Case of Trade Credit. Emerald Group Publishing Limited.

	ADDRESS
1	BOX 42549 NAIROBI
2	BOX 32040 NAIROBI
3	BOX 52131 NAIROBI
4	BOX 41433 NAIROBI
5	BOX 16633 NAIROBI
6	BOX 40411 NAIROBI
7	BOX 90134 MOMBASA
8	BOX 78392-005007 NAIROBI
9	BOX 30467-00100 NAIROBI
10	BOX 40374-00100 NAIROBI
11	BOX 42875-00100 NAIROBI
12	BOX 43912 NAIROBI
13	BOX 540 THIKA
14	BOX 1287-00606 NAIROBI
15	BOX 47211 NAIROBI
16	BOX 4367 ELDORET
17	BOX 44431 NAIROBI
18	BOX 69512 NAIROBI
19	BOX 30172-00100 NAIROBI
20	P.O. BOX 30221-00100 NRB

## APPENDIX A

### LIST OF REGISTERED PHARMACEUTICAL MANUFACTURING FIRMS IN KENYA.

#### COMPANY INFORMATION

NO	FIRM	ADDRESS
1.	BETA HEALTHCARE INTERNATIONAL	BOX42569 NAIROBI
2	BIODEAL LABORATORIES	BOX 32040 NAIROBI
3	BULK MEDICALS LIMITED	BOX 33331 NAIROBI
4	COSMOS LIMITED	BOX 41433 NAIROBI
5	DAWA LIMITED	BOX 16633 NAIROBI
6	ELYS CHEMICAL INDUSTRIES	BOX 40411 NAIROBI
7	GALAXY PHARMACEUTICALS LIMITED	BOX 90134 MOMBASA
8	GLAXOSMITHKLINE LIMITED KENYA	BOX 78392-005007 NAIROBI
9	INFUSION KENYA LIMITED	BOX 30467-00100 NAIROBI
10	KAM PHARMACY LIMITED	BOX 40374-00100 NAIROBI
11	LABORATORY & ALLIED LIMITED	BOX 42875-00100 NAIROBI
12	MAC'S PHARMACEUTICAL	BOX 43912 NAIROBI
13	MEDISEL-K LTD	BOX 540 THIKA
14	NORBROOK KENYA	BOX 1287-00606 NAIROBI
15	PHARMACEUTICAL MANUFACTURING CO (K)	BOX47211 NAIROBI
16	PIOCHEM LTD	BOX 4367 ELDORET
17	REGAL PHARMACEUTICALS LTD	BOX 44421 NAIROBI
18	SPHINX PHARMACEUTICALS	BOX 69512 NAIROBI
19	TWIGA CHEMICAL INDUSTRIES	BOX 30172-00100 NAIROBI
20	BAYER EAST AFRICA LTD	P.O.BOX 30321-00100 NRB.

**STUDY QUESTIONNAIRE**

**NOTE:** The information in this questionnaire will be treated confidentially and will not be used for any purpose other than academic.

**COMPANY INFORMATION**

1. Name of your organisation (optional).....
2. Year of establishment.....
3. Location of main office.....
4. When the Institution was established.....
5. Position of the respondent.....
6. Please list the products that your manufactures.....  
 .....  
 .....

**CREDIT CONTROL POLICY**

5. Which among the following factors do you consider in establishing a credit control policy? Please tick appropriately.

	Least considered		most considered		
	1	2	3	4	5
➤ Existing credit policy	( )	( )	( )	( )	( )
➤ Overhead costs	( )	( )	( )	( )	( )
➤ General trend of credit extended by your organisation.	( )	( )	( )	( )	( )
➤ The state of the economy	( )	( )	( )	( )	( )
➤ Financial stability of customer	( )	( )	( )	( )	( )
➤ Any other, specify	( )	( )	( )	( )	( )

6. i) Do you have a credit policy manual? Yes..... No.....

If yes please list the major contents of your credit manual.

- a) .....
- b) .....
- c) .....

ii) If not tick appropriately the reasons why you do not have the manual.

	Least reason		most reason		
	1	2	3	4	5
➤ Too complicated to develop	( )	( )	( )	( )	( )
➤ Not necessary	( )	( )	( )	( )	( )
➤ Too costly to develop	( )	( )	( )	( )	( )
➤ Too rigid	( )	( )	( )	( )	( )
➤ Any other, specify	( )	( )	( )	( )	( )

7. Please indicate your credit policy objectives by ticking appropriately in the elements below.

	Least considered		most considered		
	1	2	3	4	5
➤ Minimising credit costs	( )	( )	( )	( )	( )
➤ Eliminate bad customers	( )	( )	( )	( )	( )
➤ A competitive tool to gain	( )	( )	( )	( )	( )
➤ Competitive advantage	( )	( )	( )	( )	( )
➤ Earn interest from this surplus	( )	( )	( )	( )	( )
➤ Any other, specify	( )	( )	( )	( )	( )

8. Which practices among the following do you consider when managing credit risk exposure?

Least considered      most considered



Year	1	2	3	4	5
➤ Debt collection services	( )	( )	( )	( )	( )
➤ Factoring of Debt	( )	( )	( )	( )	( )
➤ Netting off	( )	( )	( )	( )	( )
➤ Credit Insurance	( )	( )	( )	( )	( )
➤ Surety Bonds and Securitisation	( )	( )	( )	( )	( )
➤ Letters of Credit	( )	( )	( )	( )	( )
➤ Any other, specify.....	( )	( )	( )	( )	( )

9. How is your credit control activities organized? (Tick as appropriate)

- Within a separate department ( )
- A unit within a department ( )
- Any other, specify ( )

10. Who are involved in credit risk assessment in your organisation?

	Least involved      most involved				
	1	2	3	4	5
➤ Chairman	( )	( )	( )	( )	( )
➤ Managing Director/General Manager	( )	( )	( )	( )	( )
➤ Departmental Head	( )	( )	( )	( )	( )
➤ Credit Manager/Finance Manager	( )	( )	( )	( )	( )
➤ Credit Committee	( )	( )	( )	( )	( )
➤ Any other, specify	( )	( )	( )	( )	( )

## CREDIT APPRAISAL

11. How regularly do you review your credit policy?

- Quarterly ( )
- Half yearly ( )

- Yearly ( )
- Other, specify ( )

12. Would you describe your credit appraisal process as objective or subjective?

- ( ) Objective ( ) Subjective

13. What ways do you employ to bring credit risk awareness to employees?

	Method least used			Method most used	
	1	2	3	4	5
➤ Regular meetings	( )	( )	( )	( )	( )
➤ Regular training	( )	( )	( )	( )	( )
➤ Using the line managers/supervisors	( )	( )	( )	( )	( )
➤ Credit manual	( )	( )	( )	( )	( )
➤ Any other, specify	( )	( )	( )	( )	( )

14. Which aspects among the following do you consider helpful in making the evaluation of credit risk systematic?

	Least considered					most considered				
	1	2	3	4	5	1	2	3	4	5
➤ Character of borrower <i>(Customer willingness to repay, past repayment experience, high credit discipline, past performance in repayment).</i>	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
➤ Capacity/Completion <i>(Cash in bank, projected cash earnings business skills).</i>	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
➤ Collateral/Security <i>(Assets, capital invested in the business, size of security, cash in the bank)</i>	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
➤ Conditions	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )

(Poor economic conditions, high credit discipline

interest rates prevailing in the economy)

➤ Capital

(Projected cash flow, reasonableness of cash flow)

➤ Contribution

(Assets, capital invested in the business and  
commitments to do business correctly)

## ORGANISATIONAL PERFORMANCE

15. Kindly provide below your business performance during the following years.

	2002	2003	2004	2005	2006
• Turnover (KES)					
• Operating profit(KES)					
• Net profit margin					

16. What do you think contributed to this performance?

	Least contributed		most contributed		
	1	2	3	4	5
➤ Improved debt collection methods	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
➤ Customer not willing to repay debt	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
➤ Charged high interest on late debt payments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
➤ Poor economic conditions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
➤ Improved credit appraisal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
➤ Any other, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17. Does your organisation have a long-term strategy to continue extending trade

credit to customers? Please tick where appropriate.

Yes ( ) No ( )

## BUSINESS ENVIRONMENT FACTORS

18. How do you describe your business environment?

Turbulent                      Very Stable

1      2      3      4      5

( )    ( )    ( )    ( )    ( )

19. How do you react to your business environment?

Most proactively                      Very proactively

1      2      3      4      5

( )    ( )    ( )    ( )    ( )

20. What is your credit period? Tick as appropriate.

➤ 15 days ( )    30 days ( )    45 days ( )    60 days ( )    90 days ( )

➤ Any other, specify.....

21. When does your organisation decide that a customer has defaulted in debt repayment? Tick as appropriate.

➤ Invoice overdue by 45 days ( )

➤ Invoice overdue by 90days ( )

➤ Invoice overdue by 1 year ( )

➤ Invoice overdue by btn1-2 years ( )

➤ Invoice over 2 years old ( )

➤ Any other, specify.....

22. How does your organisation deal with 'difficult-to-repay-on-time' customers?

Least done                      Most done

1      2      3      4      5

- Use debt collectors to recover the debt ( ) ( ) ( ) ( ) ( )
- Institute court proceedings ( ) ( ) ( ) ( ) ( )
- Leave them alone to decide when to pay ( ) ( ) ( ) ( ) ( )
- Write the debt off and declare it as bad debt ( ) ( ) ( ) ( ) ( )
- Put the account on hold and stop future sales ( ) ( ) ( ) ( ) ( )
- Sell on cash basis ( ) ( ) ( ) ( ) ( )
- Any other, specify.....

23. Who approves the amount of credit extended to a customer? Tick appropriately.

- | Amount of credit | Approving authority   |                    |                        |
|------------------|-----------------------|--------------------|------------------------|
| ➤ Upto 500,000   | Managing Director ( ) | Credit Manager ( ) | Area Sales Manager ( ) |
| ➤ 500,000-1M     | Managing Director ( ) | Credit Manager ( ) | Area Sales Manager ( ) |
| ➤ 1M-1.5M        | Managing Director ( ) | Credit Manager ( ) | Area Sales Manager ( ) |
| ➤ 1.5M-2M        | Managing Director ( ) | Credit Manager ( ) | Area Sales Manager ( ) |
| ➤ Over 2M        | Managing Director ( ) | Credit Manager ( ) | Area Sales Manager ( ) |

24. How important are the risks listed below to your organisation?

- |                           | Least important      Most important |     |     |     |     |
|---------------------------|-------------------------------------|-----|-----|-----|-----|
|                           | 1                                   | 2   | 3   | 4   | 5   |
| ➤ Market risks            | ( )                                 | ( ) | ( ) | ( ) | ( ) |
| ➤ Interest rate risks     | ( )                                 | ( ) | ( ) | ( ) | ( ) |
| ➤ Liquidity risks         | ( )                                 | ( ) | ( ) | ( ) | ( ) |
| ➤ Credit risks            | ( )                                 | ( ) | ( ) | ( ) | ( ) |
| ➤ Technology risks        | ( )                                 | ( ) | ( ) | ( ) | ( ) |
| ➤ Any other, specify..... |                                     |     |     |     |     |

25. Does your firm use the following credit derivatives in managing credit risk?



	Least used		Most used		
	1	2	3	4	5
➤ Credit default swaps	( )	( )	( )	( )	( )
➤ Total return swap	( )	( )	( )	( )	( )
➤ Any other options .....					

**THANK YOU FOR YOUR TIME**