

FOREIGN EXCHANGE RISK MANAGEMENT PRACTICES BY FOREIGN OWNED COMMERCIAL BANKS IN KENYA //

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**A research project presented in partial fulfillment of the requirements for the
degree of Master of Business Administration (MBA- Finance) – Faculty of
Commerce, University of Nairobi.**

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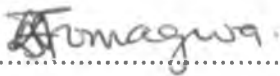


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DECLARATION

This research project is my original work and has not been presented for a degree or any other examination in any university.

Signed 

Date 20/09/05

Mr. Omagwa Job Ombongi

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This research project has been submitted for examination with my approval as a university supervisor.

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DEDICATION

To my parents (Zacharias and Eunice Omagwa) for their love and goodwill. They were called to go beyond the call of duty to sacrifice financially for my studies despite their meagre financial resources.

To Mr. and Mrs. Haron Matwetwe and my dear sisters Maggy and Prisy for their financial support and goodwill in ensuring that all was well with me.

To William Kirui for his never ending love in ensuring that I had comfortable accommodation during my studies.

I have never seen such compassion, hospitality and kindness.

With all my heart,
with all my thanks,
with all my appreciation,
with all my love
for all that you gave me.

ABSTRACT

This research endeavoured to achieve three objectives: to ascertain the foreign exchange risk management practices of foreign owned commercial banks in Kenya, to determine the extent of foreign exchange risk management by the banks and to rank the ascertained practices in order of importance. Empirical evidence was extensively used to link the findings of the study with prescriptions of academic literature. The study focused on the head offices of the twelve foreign owned banks in Kenya out of which nine responded.

The research was an exploratory study carried out as a census survey. Qualitative primary data was used for the study. Self-administered questionnaires were delivered to the treasury departments of the banks using 'drop and pick later' technique. Descriptive statistics were used to analyze the data.

Various inferences were drawn from the findings; the responding banks employed both conventional and bank-specific foreign exchange risk management practices. Most banks considered credit/default risk to be the most critical of all financial risks though empirical evidence shows that foreign exchange risk is the most critical risk for most firms. A strong majority of the banks did not find the Kenyan currency market to be information efficient: speculation and forecasting techniques were extensively used by most of them. The banks' views on market fundamentals and what constitutes foreign exchange risk management best practices had a significant bearing on hedging practices adopted. Regular and systematic appraisal of exchange risk management policies was a common practice amongst most banks. For most banks, foreign exchange risk management systems were governed by guidelines set at the head office (highly centralized foreign exchange risk management systems).

The findings from most banks were similar to empirical evidence but considerably inconsistent with recommendations of literature. Most banks, regardless of their size, extensively utilized most of the conventional hedging instruments. Micro hedge approach, accounting, translation and economic exposure measurement strategies, natural hedging, risk sharing and diversification were some of the most utilized strategies. Transaction exposure was rated as the most critical to most banks when compared to translation and economic exposures. Some hedging practices were considered by most banks to be the more important than others. These include use of forward contracts and foreign currency options as hedging instruments, use of matching/natural hedging strategy and preference of selective hedging strategy instead of hedging all positions immediately. The extent of foreign exchange risk management by the banks was also gauged: it emerged that most banks practiced foreign exchange risk management to some extent.

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TABLE OF CONTENTS

Page

Declaration	i
Dedication	ii
Abstract	iii
Acknowledgements	v

CHAPTER ONE: INTRODUCTION 1

1.1 Background	1
1.2 Statement of the problem	5
1.3 Objectives of the study	6
1.4 Importance of the study	6

CHAPTER TWO: LITERATURE REVIEW 8

2.1 Introduction	8
2.2 The origin and developments in risk management	10
2.3 Importance of financial risk management	12
2.4 Individual biases and their role in risk management	15
2.5 Risk analysis	17
2.6 Foreign exchange exposure	19
2.7 Measurement and management of foreign exchange risk	22
2.8 Empirical studies on financial risk management	25
2.9 Foreign exchange risk management in Kenya	28

CHAPTER THREE: RESEARCH METHODOLOGY 30

3.1 Research design	30
3.2 Population	30
3.3 Data collection	30
3.4 Data analysis	30

CHAPTER FOUR: DATA ANALYSIS AND INTERPRETATION OF FINDINGS 31

4.1 Introduction	31
4.2 General information	31
4.3 Foreign exchange risk management practices	38

CHAPTER FIVE: SUMMARY AND CONCLUSIONS, LIMITATIONS, RECOMMENDATIONS AND SUGGESTIONS FOR FURTHER RESEARCH	62
5.1 Summary and conclusions	62
5.1.1 Summary	62
5.1.2 Conclusions	64
5.2 Limitations	65
5.3 Recommendations	66
5.4 Suggestions for further research	67
REFERENCES	68
APPENDICES	72
APPENDIX 1: POPULATION	72
APPENDIX 2: QUESTIONNAIRE	73
APPENDIX 3: SUMMARY OF RESEARCH FINDINGS	77

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND

Risk management is the process that an organization puts in place to control its financial exposures. According to Li (2003) financial risk is a risk that emanates from the uncertainty of such factors as interest rates, exchange rates, stock prices, and commodity prices. Aggregation of exchange, interest and inflation risks forms financial risk; the three components have a high degree of correlation. Brucaite and Yan (2000) define foreign exchange risk as the magnitude and likelihood of unanticipated changes in exchange rate. According to Shapiro (1996), exchange rate exposure is the degree to which a company is affected by changes in exchange rates. Foreign exchange risk can be further subdivided into three exposures: translation, transaction and economic exposures (Fatemi and Glaum, 2000). Perception of risk, by individuals and at corporate level, is both complex and subjective. It involves an understanding of risk, a perception of loss and gain, cognitive biases, and personality. Despite advances in finance and risk management, a satisfactory method for measuring the total financial risk faced by a business or bank at any time remains elusive (Pickford, 2002).

Foreign exchange risk emanates from international trade and financial activities such as foreign loans, guarantees. Ankrom (1974) is regarded as one of the pioneers of financial risk definition who first used translation, transaction and economic risk. Translation exposure recognizes only items already on an accounting balance sheet. It is the difference between exposed assets and exposed liabilities while transaction exposure is the possibility of incurring gains or losses upon settlement at a future date on transactions already entered into and denominated in a foreign currency. Economic exposure is based on the extent to which the value of the firm, as measured by the present value of its expected future cash flows will change when exchange rate changes (Shapiro, 1996). Brucaite and Yan (2000) indicate that exchange rate risk has received greater attention because it follows changes in the market and less than the others, depends on non-market

factors such as government or central bank interference. Oxelheim and Wihlborg (1997) have designed a model, based on scenario analysis, to test the effect of exchange rate change on a firm's cash flows.

Glaum (2000) observes that in the recent past, risk management has received increased attention in both corporate practice and literature. This greater attention has been triggered by the development of markets for derivative financial instruments. Futures, forward contracts, options, swaps and other complex financial instruments today allow firms to transfer risk to other economic agents who are better able, or are more willing to bear them. Asaf (2004) notes that derivatives such as forwards, futures, options and swaps are specialized off-balance sheet risk management tools that allow firms to hedge many sources of market-wide financial risks. Exchange rate risk could be managed using financial (futures, forwards, options) or commercial instruments and pricing strategies (Brucaite and Yan, 2000). The major growth in the use of derivatives has been fuelled by trends towards securitization and the increased understanding of the role that derivatives can play in unbundling, packaging and transferring risks (Scholes, 1998). Hedging of foreign exchange risk is beneficial when managers are risk averse and their compensation depends on changing values of the firm (Stulz, 1984).

Crabb (2003) indicates that in coping with financial risk, various derivative products have been developed in the past twenty years and are widely used by large corporations. He has defined a derivative as any financial contract whose value is dependent upon the value of some underlying asset. The use of derivatives has led to financial risk management (Li, 2003). There is no uniform approach to financial risk management among companies today. Although current best practices are observed, the financial management objectives and the definitions of what is exposed to financial market risk vary from one organization to another. Consequently, what is hedged is subject to what is recognized as exposure. Both Economics and Finance research have attempted to accurately measure financial risk and determine the appropriate response of the firm to such risk (Crabb, 2003). Developments in financial innovations have increased the need for better risk management.

Despite significant evidence of the existence of financial risk, its scientific analysis has hitherto been dominated by a narrow and limited paradigm (Asaf, 2004).

Since foreign exchange risk emanates from international business, multinational enterprises have a higher exposure to foreign exchange risk as compared to locally owned enterprises. In Kenya, the banking industry is more exposed to this risk than any other industry due to the high magnitude of transactions involving foreign currencies. Muthungu (2003) found out that most of the foreign owned banks were more exposed to this risk than locally owned banks due to correspondent banking activities. It is therefore necessary to ascertain the foreign exchange hedging practices employed by foreign owned banks in Kenya considering that high-profile risk management disasters can adversely affect organizations. Dowd (1998) indicates that Barings bank lost about 1.3 billion dollars due to adverse movements in the derivatives market while Crabb (2003) notes that in the early 1990s, Procter and Gamble Corporation lost over 100 million dollars through speculative use of derivatives. In 1995, Daimler-Benz reported first-half interim losses of DM 1.56 billion that were attributed to exchange rate losses due to the weakening dollar. The company explained that it did not hedge against financial risk because the forecasts it received were too disperse, ranging as they did from DM 1.2 to DM 1.7 per dollar. Therefore, misdirected risk management can lead to huge losses.

Foreign exchange risk can be managed using financial instruments and pricing strategies. Forward contract is the most common instrument used in hedging against transaction exposure; a firm can also borrow money in one currency and then exchange it to another currency after which it uses the money generated from its operations to repay the loan; foreign currency option is another facility that gives the buyer the option (right), but not an obligation, to buy or sell a certain amount of foreign currency or other securities at a fixed price per unit at a specific date or during a certain time period (Eiteman, Stonehill and Moffett, 1997); matching strategy ('natural hedging') is a way to decrease currency exposure by covering cash outflows by inflows in the same currency; risk sharing can also be employed by two contracting firms and diversification strategy whereby a firm can

diversify its operations and making use of funds in more than one capital market and in more than one currency (Brucaite and Yan, 2000). Empirical studies have been carried out to ascertain various salient aspects on the use of derivatives and other risk management strategies to mitigate foreign exchange risk.

Currently, there are twelve foreign owned commercial banks in Kenya which are either 100% foreign owned or foreign owned but locally incorporated by virtue of being partly owned by locals (www.centralbank.go.ke). According to Thuku (2002), ownership structure consists of ownership mix (the composition of shareholding of the firm) and ownership concentration (the degree to which ownership of the firm is concentrated among the various categories of owners). Empirical evidence has shown that the general characteristic of a firm's ownership structure affects its performance; Thuku (2002) found out that banks with higher proportion of foreign ownership performed relatively better than those with a small proportion of foreign ownership. Muthungu (2003) found out that foreign owned banks were more financially stable than locally owned banks. Banks whose shareholding is not fully held by locals (shareholding is either by the government of Kenya or other local entities) are categorized by the Central Bank of Kenya as foreign owned. Foreign owned banks that are not locally incorporated have 100% shareholding held by foreign entities while those that are foreign owned but locally incorporated are partly owned by locals (www.centralbank.go.ke).

Foreign owned commercial banks in Kenya engage in a number of transactions that expose them to foreign exchange risk. They purchase foreign currency to facilitate domestic borrowing, funding by the parent banks, foreign loans to meet domestic demand, correspondent banking relations with banks abroad, customer deposits in foreign currencies, international foreign currency transactions, investments in foreign currencies e.t.c. Considering the strategic role played by the banking sector in the Kenyan economy, there is therefore great need to study the risk management practices employed by the foreign owned banks to hedge against foreign exchange risk.

1.2 STATEMENT OF THE PROBLEM

Today, the economic environment in which firms operate is highly volatile and uncertain. Increased volatility, greater interdependence and new risks have made the structure of risk exposure of banks and other financial institutions more complex (Li, 2003). Increased market globalisation and internationalisation has been reflected in increased exchange rate fluctuations. Smithson (2000) notes that the financial environment is riskier today than it was in the past. The volatility of foreign exchange rates and interest rates has been increasing significantly.

Empirical studies have revealed that of all financial risk exposures, foreign exchange risk has received more attention than interest and inflation rate risks. Exchange rate risk has also been considered to be the most critical of all the financial risk exposures (Brucaite and Yan, 2000). While studying the banking sector in Kenya, Mwangi (2003) made an extraneous finding that 37 out of the 38 commercial banks that responded borrowed funds from overseas (they were either financed by their parent banks or borrowed from commercial banks abroad) hence their exposure to foreign exchange risk; all the 37 commercial banks hedged against the risk.

In Kenya, the banking sector plays a more dominant role in the economy than the capital market. Muthungu (2003) found out that foreign owned banks were more financially stable than locally owned banks. They therefore play a significant role in the banking sector hence the need for them to adopt appropriate foreign exchange risk management strategies considering that most of them have a high magnitude of foreign transactions as compared to locally owned banks. Due to the turbulent business environment in Kenya, foreign exchange rates have fluctuated significantly in the recent past. There is therefore need to find out the hedging practices employed by foreign owned commercial banks in Kenya to mitigate this risk.

Considering the significant role played by the banking sector, misdirected risk management can lead to dire economic consequences; the collapse of one bank can lead to 'bank runs'

which in turn can 'spill over' to other financial sectors like the capital market. Shah (2004) concurs with this view by indicating that due to inter linkages in financial markets, collapse of one financial institution can trigger the collapse of others (even though they may not individually be insolvent), leading to a chain reaction which can have serious consequences for a money-based economy. Adoption of appropriate risk management strategies is therefore an essential ingredient of a successful banking system in Kenya.

Glaum (2000) indicates that empirical evidence has shown that there is a discrepancy between the prescriptions of academic literature on financial risk management and actual corporate practice. Fatemi and Glaum (2000) note that this discrepancy may be driven by the complex nature of the relationship between changes in exchange rates and the value of the firm. Studies have been conducted in Europe and America to link the two. Since great attention has been accorded to foreign exchange risk elsewhere, the only way to ascertain the hedging practices of foreign owned commercial banks in Kenya is by conducting a study hence the need for this research.

1.3 OBJECTIVES OF THE STUDY

1. To ascertain the foreign exchange risk management practices employed by foreign owned commercial banks in Kenya.
2. To find out the extent of foreign exchange risk management by the banks.
3. To rank the ascertained practices in order of importance.

1.4 IMPORTANCE OF THE STUDY

Academicians

This research will make a contribution to the academic literature on the field of foreign exchange risk management in Kenya where very little is known about corporate practice in the banking sector due to few studies in the subject. The findings and conclusions of the study will also make a contribution towards unravelling the intricacies surrounding the discrepancies between academic literature on financial risk management and corporate practice.

Government

The findings of the study will provide some insights to the regulatory body (Central Bank of Kenya) on salient aspects of foreign exchange that adversely affect the banking sector hence being in a position to make timely and appropriate interventions to mitigate the risk.

Commercial banks

The findings of the study will help commercial banks come up with appropriate hedging strategies by analysing how other banks hedge against the risk.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

Financial risk is a very real and significant risk in modern society. The loss of savings through the collapse of a bank could have a devastating blow to individuals and different sectors of the economy. For corporations, financial risk can affect the value of their business investments and financial assets. Although there have been extensive discussion on risks in the physical sciences, such debates in the field of Finance and Economics are relatively rare (Shah, 2004).

The process of risk management comprises of the fundamental steps of incident identification, risk analysis, risk assessment and risk treatment (Binder, 1997); risk audit is a significant aspect of effective risk management too. It is the systematic review of the financial risks facing a company. This review identifies the sources, magnitudes and potential consequences of the financial risks. It further involves a thorough examination of the sources of financial risks in the organization as well as the procedures and processes the organization has for dealing with those risks. The risk audit process allows managers of an organization to develop a scorecard of risks that will aid in prioritization of risks in the future. Buttiner (2001) indicates that successful financial risk management implementation goes through three distinct phases: identifying risk (this involves clearly identifying the financial risks the organization faces and how they interact with each other), measuring risk (this involves measuring risks in different ways depending on how an organization structures its risk management) and managing risk (the organization can adopt either active or passive management techniques).

The early views of risk management led to the creation of risk management departments and risk managers with full responsibilities for identifying, analysing, assessing risks to an organization and implementing risk handling options to deal with negative impacts on business operations. Risk management best practices are a strategy, approach, method,

tool or technique that was particularly effective in helping an organization achieve its objective for managing risk. The primary components of a sound risk management process are: a comprehensive system for measuring different types of risk; a framework for governing risk taking; individual limits, guidelines, and other relevant parameters; and an adequate management information system for monitoring, reporting and controlling risks (Li, 2003).

To avoid conceptual misunderstanding on financial risk management, Buttimer (2001) provides some definitions of key terms. Financial Hedging is the use of financial contracts to reduce the risk borne by an organization; counterparty risk is the risk that one party involved in a trade will not perform its end of the deal. Risk audit is a systematic review of the financial risks facing an organization. This review identifies the sources, magnitudes, and potential consequences of the financial risks. The review will also recommend managerial responses to those risks. Active financial risk management is the use of financial instruments, primarily derivative securities, to control or manage the financial risk of an organization. Passive financial risk management involves managing the financial risk of an organization without the use of derivative securities. Normally this involves the setting of risk limits and then reducing or limiting business activities upon reaching those limits.

2.2 THE ORIGIN AND DEVELOPMENTS IN RISK MANAGEMENT

The subsequent adoption of risk management by Corporations as an effective management tool for identifying and controlling risks associated with all business activities has paved the way for its introduction as a critical function of management. The desire for effective risk management was triggered by some high-profile risk management disasters in the 1990s that also affected banking institutions (Dowd, 1998). Metallgesellschaft (a US subsidiary of MG) lost about 1.3 billion dollars due to fall in oil prices; Orange County lost about 1.7 billion dollars due to rising interest rates. Barings Bank lost about 1.3 billion dollars due to adverse movements in the futures and options market, Sumitomo Corporation lost about 1.8 billion dollars due to unauthorized trades by its chief copper trader. Gibson Greetings Inc. Incurred a 3 billion dollar loss as a result of "unauthorized" interest rate swaps involving 'aggressive forms of derivatives.'

The term 'risk management' first appeared in the 1950s when corporate insurance buyers in the United States attempted to gain better recognition and status of the position by expounding their function and establishing integrated departments, not only responsible for the corporate insurance program but also for property loss and control, industrial safety, accident prevention and the emerging employee benefits risk area. It was proposed that such departments should be headed, not by an insurance manager, but rather a 'risk manager' (GPIIP, 2001).

A major breakthrough in Finance, in terms of risk measurement and management, was made by Markowitz (1952) when he suggested that risk can be measured by standard deviation, and assuming asset return are normally distributed, this opened up a whole series of techniques of risk measurement using standard statistical and mathematical methods. In the development of the portfolio theory, Markowitz's contention was that individuals could reduce the standard deviation of the returns of their assets by holding a portfolio whose securities' returns do not move towards the same direction. He went further to prescribe the basic principles of portfolio construction.

With the popularity of risk management growing in the 1960s the concept was brought to the attention of a wide cross section of insurance buyers and others related professions. The first major company to recognize and implement the concept of risk management was the Canadian firm Massey-Ferguson. Since the Company operated internationally, corporate managers and overseas insurance brokers had to familiarize themselves with this concept, which was to be a significant factor in introducing risk management as a specialist discipline worldwide. Risk management concept subsequently received additional recognition and increased management interest through the American Management Association and with articles published in the Harvard Business Review. Multinational US corporations played a pivotal role in the development of the traditional insurance based risk management practices by applying the concept to their subsidiaries and joint ventures located throughout the world (Eiteman et al., 1997).

An important and substantive change in the direction and focus in risk management occurred in the 1970s, when insurance underwriting companies were unable or unwilling to meet the high demands of insurance due to various economic developments. As a result of the increased demand for liability and general insurance cover, large industrial corporations were placed in a position where they had to retain a significant portion of the risk. At this time, it became evident to senior management that by accepting a greater level of risk in all its business activities it would be necessary to introduce measures to protect the firm's assets and control these risks. Organizations quickly moved beyond insurance buying as a single solution to their Financial and technical risk exposures, adopting alternative methods of risk treatment such as loss prevention, loss control and the implementation of the risk management concept (Beck, 1992).

A further significant strain of risk management appeared in the late 1980s when financial officers, banks, investment firms and financial institutions began to examine new methods to control increasing financial risks in a rapidly changing business environment. To this business sector, risk management focuses on the use of sophisticated financial

management techniques, such as 'currency hedging' and 'interest rate swaps' to control global treasury risks, balance sheet risks and transaction risk.

By 2001, risk management in its numerous forms had a great difficulty in establishing its role and identity as a management practice; its meaning was unclear to the public and also at many levels of management in private and public sector organizations. Due to different perceptions and definitions placed on risk management by individual specialists from varying professional disciplines, their focus was still considered limited since it did not provide the total framework for managing risk in all business functions of an organization (Asaf, 2004).

In the future, risk management in the financial sector will witness more financial innovations and better strategies and tools for risk management. This will provide better insights to a firm's financial exposures. With developments in information technology (telecommunication and computing), firms will be in a position to devise better approaches to risk management due to the benefit of hindsight. Emergence of new risk management instruments and markets will also provide firms with better alternatives to risk management; with maturity of the Internet, new risk management models are likely to emerge. Future technological developments will lead to more effective classification of corporate risks hence improvements in corporate risk management (Li, 2003).

2.3 IMPORTANCE OF FINANCIAL RISK MANAGEMENT

Although the classical financial models of Modigliani & Miller suggest that there is no need for firms to control risks since investors can accomplish this task themselves in a perfect market, the practical aspects of the real world create situations where the firm should practice financial risk management. A number of high-Profile risk management disasters of the 1990s created need for better financial risk management practices: organizations lost billions of shillings due to poor risk management decisions (Dowd, 1998).

The nature and implications of these financial debacles is highlighted below. Metallgesellschaft (a US subsidiary of MG) lost \$1.3 billion by built up very large positions in oil futures in an attempt to hedge some long-term forward contracts it had sold. The fall in oil prices in 1993 then led to very large losses and the German parent company intervened to liquidate the remaining futures positions. The treasurer of Orange County (Bob Citron) invested much of the County's investment pool in highly leveraged derivative instruments that were, in effect, a very large bet on interest rates remaining low. The rise in interest rates in 1994 then inflicted huge losses on the Investment Pool - \$1.7 billion in all leading to the county's bankruptcy. Barings Bank lost about \$1.3 billion through building up huge unauthorized positions in futures and options. The amounts involved exceeded the bank's capital, and adverse movements in these markets forced the bank into bankruptcy. Sumitomo Corporation announced a loss of \$1.8 billion in June 1996 due to unauthorized trades by its chief copper trader, Yasuo Hamanaka. There were many other cases where smaller losses were made in much the same way. These disasters intensified the ongoing debate about risk management practices. Consequently, many risk control measures and concepts such as "Value-at-risk" were introduced to prevent such disasters (Dowd, 1998).

Due to costs of financial distress and managerial risk aversion, Crabb (2003) strongly suggests that firms should take corporate risk management or hedging. If managers are risk averse and their wealth and compensation is primarily driven by the value of the firm, hedging is appropriate. Hedging of foreign exchange risk is beneficial when managers are risk averse and their compensation depends on changing values of the firm. However, misdirected management incentives can be costly: some of the firms that lost huge sums of money in the 1990s, like Procter and Gamble Corporation, made such losses because of speculative use of derivatives.

Stulz (1996) notes that Finance literature has identified four types of gains emanating from financial risk management: reduction of bankruptcy and distress costs, reduction in expected tax payments, reductions in expected payments to stakeholders and reduction in costs of raising funds. If a firm can implement a risk management policy that eliminates

the risk of bankruptcy, it essentially sets the present value of these real resource cost to zero and increases firm value accordingly. To the extent that risk management reduces the risk of financial distress, it reduces the present value of the costs of financial distress and hence increases firm value. Since tax rates differ depending on taxable income, firms would like more income when their tax rates are low and less income when taxes rates are high. Since tax rates increase with taxable income, a risk management programme that reduces the risk of taxable income ends up decreasing expected taxes as well.

Stakeholders and costs of raising funds can also necessitate financial risk management. Whereas shareholders can diversify risks, stakeholders who have a large stake in the success of the firm cannot typically do so. If firm-specific investments are lost due to financial distress, stakeholders like workers will consider jobs in the firm to be less attractive and hence will require a higher wage. They will not be able to create their own risk management programme to hedge this risk due to lack of economies of scale, but the firm will be able to do so for them. If the firm undertakes a risk management programme that reduces financial distress, it will with this reasoning have a lower wage bill. Firms that find themselves in positions where they have to raise funds when highly levered may be unable to do undertake projects they would undertake if they had less leverage. In this case, leverage imposes a real cost on the firm when there are bad cash flow realizations (Stulz, 1996)

Therefore, since we do not live in a perfect world, there exist sound theoretical reasons as to why firms should seek to control financial risk hence a deviation from the ideas of Modigliani and Miller. There exist practical costs that arise from the risk of doing business: these costs can be reduced by hedging and other risk mitigation processes. Large firms have many ways of mitigating risk as compared to small firms that lack the wide variety of risk management options at the disposal of large firms. Small firms could not survive such financial fiascos of the 1990s. By their nature, small firms are unable to diversify extensively. The only financial risk management practice available to all small firms is the

strategy of taking specific financial positions that offset the risk of loss in the firms business and financial operations (Kenyon, 1981).

2.4 INDIVIDUAL BIASES AND THEIR ROLE IN RISK MANAGEMENT.

Douglas and Wildvsky (1982) indicate that one of the oldest and most accepted generalizations in decision theory is that people are generally risk averse. They are also assumed to prefer certainty to uncertainty. However, in practice and against established theory, people are not risk averse for negative prospects, only for positive ones. So we actually are creatures who habitually tolerate risk. When closely analyzing how private individuals make choices, individuals do choose not to be aware of every danger. The institutions in which they live screen some disasters from them. Their social environment sorts and clips the prospects before them. Therefore, refusing to take all dangers into account is not behaving irrationally (Ibid, 1982).

Conventional risk analysis assumes that individuals are free to express their will and that there is no such thing as society. Douglas and Wildavsky (1982:80) point out that this thinking is misleading and potentially harmful:

"In risk perception, humans act less as individuals and more as social beings who have internalised social pressures and delegate their decision-making processes to institutions. They manage as well as they do, without knowing the risks they face, by following Social rules on what to ignore: institutions are their problem simplifying devices."

Thus to assume individual preferences as being rational and consistent also ignores the degree of socialization of individual attitudes to risk and the role institutions play in managing or simplifying these risks. The individual preferences cannot be divorced from ethnical beliefs and value judgments, and if financial risk is to be properly understood, the experts need to go beyond the boundaries of their disciplines (Shah, 2004).

In most cases, the probabilities for risk analysis are uncertain, the set of possible outcomes are unclear, and our perception of both is affected by a host of subjective factors i.e. the perception of risk is a complex and subjective Process. The fear factor and control factor (the extent to which we are in control of events) are two major components of risk that influence our perceptions. In making organizational financial decisions, the two factors are of significant influence (Pickford, 2002).

One major component of risk perception is how we perceive loss and gain. Some individual may emphasize the importance of reputation as well as financial gain. Our perception of risk and our current state of loss or gain influences the extent to which we seek or avoid risk. Emanating from the present theory is a principle that people tend to make different choices under different conditions. When people are in a position of gain, they become increasingly risk averse and unwilling to accept gambles because they wish to hold on to their gains. When people are in a position of loss and as losses increase, they become more risk seeking since they have nothing very much to lose. This asymmetry also applies to financial loss and gains. However, what we perceive as loss and gain is not straightforward. We all have internal reference points that determine whether we perceive an outcome as a loss or gain. These reference points also shift over time. The effects of loss and gain can also operate at the group or team/organizational level (Beck, 1992).

Decision making about risk often departs from the prescriptively rational model: cognitive biases influence much of our everyday thinking (Pickford, 2002). These biases often arise out of heuristics that act as short cuts to enable us to process information quickly or simplify complex situations: they act as rules of thumb. Ones own innate disposition can create preferences that underline characteristic ways of perceiving the risk in ones environment and whether the situation is seen as an opportunity or threat. Therefore, both personal and organizational factors can shape ones perceptions about risk. Illusion of control is a cognitive bias that involves holding beliefs concerning the extent to which we are able to exert control over events in which we are involved and over tasks we undertake. Many of these beliefs arise out of experience. Research has shown that illusion

of control may lead to poor risk management. Managers need to be aware of conditions that encourage this bias (Blommestein, 2000).

Beck (1992) contends further that many of the risks taken by modern society are unknown. The process of risk evaluation on people can only be studied reliably with people. Society is therefore becoming a laboratory. Beck was particularly critical of the isolation of ordinary people from risk evaluation and the influence of scientists in calculation of acceptable levels. Thus, we should be very sceptical of accepting science-based solutions to the problem of risk. He further argues that it is possible that the globalisation of financial markets has led to a proliferation of financial risk. Asaf (2004) also notes that business risk management combines a little of science with a great deal of subjective judgment.

2.5 RISK ANALYSIS

Risk has been addressed from various perspectives (Shah, 2004). These include individual preferences and attitudes to risk; portfolio theory— risk as variance of return, risk reduction through diversification, Beta risk and the Capital Asset Pricing Model; Option volatility and the risk of derivative securities. Others include measuring risk using probability theory – state-preference theory; risk management – hedging strategies, bond duration and volatility; portfolio insurance; difference types of asset risk – e.g. interest rate risk, market risk, credit/default risk etc. These perspectives have addressed various facets of risk.

Stulz (1996) contends that in an efficient market, risk management pays off only if it creates real resource gains for the Corporation. What are these gains? The finance literature has identified four types of gains: reduction in bankruptcy and distress costs, reduction in expected tax payments, reduction in expected payments to stakeholders and reductions in cost of raising funds. Firms that have a lot of capital can make bets without worrying about whether doing so will bring about financial distress. One would therefore not expect these firms to hedge aggressively. In efficient markets, firms do not make money by taking financial positions based on information that is publicly available. Firms should avoid financial positions that could lead them to be financially distressed and unable

to implement their overall strategy if they perform poorly. Firms will sometimes hedge some risks so that they can take more of other risks (Kimball, 2000).

There have been a number of explanations put forward in an attempt to explain why firms differ in risk taking. One answer is that some firms have a comparative advantage and others have none. Incentives also matter. Some firms may have no comparative advantage, yet they take risks because doing so is advantageous for those who take the risks. Tufano (1996) addresses these issues by examining the ability of various hedging theories to predict the exposure to gold prices of gold mining firms. There is little empirical evidence that is convincing on the extent of risk taking by firms. It would therefore be hard to find enough supportive empirical evidence for a number of explanations of risk taking from scholars because of limited data on such investigations (Javiland, Switzer and Tang, 1997).

Derivatives can be used to hedge against risk. Crabb (2003) defines a derivative as any financial contract whose value is dependent upon the value of some underlying asset. Reckless use of derivatives has cost firms large sums of money. In the early 1990s, Procter and Famble Corporation lost over \$100 million through speculative use of interest rate derivatives. In the same year, Gibson Greetings Inc. incurred a \$ 3 million loss as a result of "Unauthorized" interest-rate Swaps involving "aggressive firms of derivatives." Both very large and medium sized firms have incurred large losses from the improper use of derivatives; the small firm could never survive such a loss. Therefore, firms should not speculate with derivatives. Smaller firms with less diversifiable risk choose not to use derivatives because of two main reasons: derivative use is often seen as a sophisticated process that requires an advanced degree, usually in mathematics and the cost of deciding upon and setting derivative positions may be high (Hull, 1989).

Any risk management program should involve four steps; a strategic decision for managing financial price risk must exist. Examples of such strategic purposes include the need to create good managerial incentives, supporting research investments, and supporting capital

investments; the full economic exposure must be identified; only derivatives that match the risk exposure should be used. The company must choose a specific derivative instrument to manage a specific type of risk. Risks affecting cash flow from operations are often best managed with options because cash flows are hard to predict. More predictable asset positions can frequently be managed with forwards and futures and speculation in derivatives should never take place within the firm (Ross, 1996).

2.6 FOREIGN EXCHANGE EXPOSURE

Stockholder value is affected by the financial market risk resulting from adverse changes in interest rates and exchange rates: changes in interest and exchange rates exert considerable influence on the pricing, sourcing and financing aspects of the business. The base currency value of capital invested by a multinational is a function of prevailing exchange rates. Since foreign exchange is often the denominator of both revenues and costs in overseas business, exchange rate movements affect long-term profitability of a firm. This is because exchange rate movements have a built-in structural impact on the consolidated earnings of the company (Smithson, 2000).

Oxelheim and Wihlberg (1997) indicate that financial risks might be broken down into the interest rate, exchange rate and inflation rate risks. Exchange rate risk refers to the magnitude and likelihood of unanticipated changes in exchange rate. Inflation rate risk refers to the magnitude and likelihood of unanticipated changes in inflation rate. Inflation and exchange rate risk taken together forms currency risk. Exchange, interest and inflation changes in the market are very interrelated and usually have a high degree of correlation.

Exchange, interest and inflation rates changes lead to the exchange, interest and inflation rates risks respectively, which aggregated form financial risk. All of the above described financial risks, currency risk, and specifically, exchange rate risk has received the most attention. The main reason why exchange rate risk has received particular attention is that it is, more than any other financial risk, susceptible to market economy variables and government intervention through the central bank. Fluctuations in this risk are easily

predictable and firms can therefore manage the risk more appropriately than for other financial exposures. The risk is therefore more critical to organizations than the other financial exposures (Brucaite & Yan, 2000).

The efficiency of the foreign exchange markets has been subjected to numerous empirical tests in the past. The results of some studies show that it would have been possible to make speculative gains in certain markets over certain periods of time. However, these studies analysed historical exchange rate time series. Economists are extremely doubtful about the possibilities of making predictions of future exchange rate (Taylor, 1995). Unless financial markets are seriously distorted by government restrictions or interventions, it appears to be very difficult indeed to generate profits on the basis of exchange rate forecasts. Therefore, financial managers should analyse very critically whether their firms have access to privileged information or whether they possess superior abilities to analyse the publicly available information. If this is not the case, it is unlikely that speculative activities, including selective hedging, will systematically increase the value of the firm (Dufey and Giddy, 1997).

Despite the critical attitude of the academic literature, exchange rate forecasts have been found out to be the most popular practice among many firms. This means that managers of these firms do not believe that currency markets are information efficient and that they are able to profit systematically from exchange rate forecasts. Cost-free forecasts provided by banks or consultants are the most important source of information for the preparation of the exchange rate forecasts (Glaum, 2000). Most firms have to decide on the degree of centralization of the exchange risk management function. In a totally decentralized system, each corporate unit is responsible for managing its own exposure. In a fully centralized system, risk management is the sole responsibility of the corporate centre.

Shapiro (1996) indicates that currency risk is the degree to which a company is affected by exchange rate changes; accounting exposure is a measure of currency risk arising from the need to convert the financial statements of foreign operations from local currencies to

home currency; the restatement of assets, liabilities, revenues and expenses at new exchange rates will result in exchange gains and losses; economic exposure is another measure of currency risk based on the extent to which the value of the company – as measured by the present value of its expected future cash flows– will change when exchange rates change. He further subdivides economic exposure into transaction exposure (the possibility of incurring gains or losses upon settlement at a future date, on transactions already entered into and denominated in a foreign currency) and real operating exposure (this arises because currency fluctuations together with price changes can alter the amounts and risk ness of a company future revenue and cost streams, i.e. operating cash flows).

Foreign exchange exposure can be broken down into short and long-term exposures. The former is related to cash flow management while the latter is related to capital investment management. Exchange rate exposure is the degree to which a company is affected by exchange rate change while translation exposure is simply the difference between exposed assets and exposed liabilities (Shapiro, 1996). Translation exposure can be seen as a measure of latent risk. Operating exposure, in some sources of literature, "also called as economic exposure, competitive exposure, or strategic exposure," measures the change in the present value of the firm resulting from any change in the future operating cash flows of the firm caused by an unexpected change in the exchange rates; Cash flow exposure might be defined as the extent to which the present value of firm's future cash flow is changed by a given currency appreciation or depreciation (Eiteman et al., 1997).

Transaction exposure emanates from a number of activities. These involve purchasing or selling goods or services whose prices are stated in foreign currencies in credit, borrowing or lending funds when repayment is to be made in foreign currency, being a party to an unperformed foreign forward contract and otherwise acquiring or incurring liabilities denominated in foreign currencies (Ibid , 1997). Both transaction and operating exposure measure the exchange rate change effect on the firm's cash flows. According to Brucaite and Yan (2000), the main difference between operating and transaction exposures are the

following: operating exposure is more focused on accounting cash flows, while transaction exposure is focused on expected cash flow; operating exposure is usually related to the near future, while transaction is with more foreseeing strategies.

According to Brucaite and Yan (2000), operating management hedging strategies include matching (also called "natural hedging" – away to decrease currency exposures by covering cash flows in the same currency), risk sharing (when the seller and buyer agree to share the currency risk in order to keep the long term relationship based on the produce quality and supplier reliability, so they will not destroy the long term relationship just because of the unpredicted exchange rate change) and netting (a system based on re-invoice centre establishment, where each separate subsidiary deals only with its own currency, leaving all the transaction exposure to re-invoicing centre).

2.7 MEASUREMENT AND MANAGEMENT OF FOREIGN EXCHANGE RISK

Firms are exposed to foreign exchange risk if the results of their project depend on future exchange rates and if exchange rate changes cannot be fully anticipated. In order to provide a conceptual framework for corporate risk management, the following three questions have to be asked (Glaum, 2000): Firstly, should firms attempt to manage this type of risk? Secondly, if the firm takes an active stand towards exchange rate risk, how should the firm's exposure to risk be measured? And lastly, after the firm has identified and measured the risks it faces, it then has to decide how its exchange risk management should be organized, which strategy it should adopt and which instruments it should use.

In the traditional, more practically oriented literature, it was generally assumed that firms should adopt a strictly risk averse attitude to financial risks. Theoreticians belonging to the neoclassical school of thought took up a very different attitude. They argued that management of financial risks is unnecessary and potentially even harmful. This spurred a lot of debate with some scholars making a case for corporate risk management. In the recent past, a more detailed discussion of the arguments for and against corporate hedging activities has developed (Blommesten, 2000).

Measurement of exchange risk is an important aspect of foreign exchange risk management. The academic literature generally distinguishes three concepts for measuring the effects of exchange rate changes on the firm. The accounting exposure concept measures the impact parity changes have on accounting profits and on owners' equity. The accounting effects of exchange rate changes do not have any direct impact on firm's cash flows. Therefore it has long been argued that firms should not actively manage their accounting exposures (Dufey, 1972).

Cash flow exposure should be of more concern. The transaction exposure concept concentrates on contractual commitments, which involve the actual conversion of currencies. Transaction exposure can be neutralized ("hedged") fairly easily by setting up counterbalancing positions. For example, a German firm expecting a US-dollar inflow at a known future date can sell these dollars today in the forward market. The effects of exchange rate changes on the receivable and on the forward market position will now cancel each other out, the home currency value of the future cash flow is fixed (US-dollar amount times the forward rate). Instead of using the forward markets the firm can achieve the same effect by borrowing US dollars and converting them into Deutschmarks today; the future dollar revenues will then be used to repay the dollar loan. Alternatively, the firm can buy a put option that will give it the right to sell the incoming dollars at a prearranged rate. In contrast to the forward hedge, the option does not oblige the firm to use this rate for the conversion. The currency option provides the firm with the protection against foreign exchange losses while leaving open the possibility to participate in favourable exchange rate changes (Glaum, 2000).

Academic literature has also pointed out that this exposure concept has its shortcomings too. A number of empirical studies have shown that the theory of purchasing power parity does not hold over the short and medium run (Taylor, 1995). This means that exchange rate changes can lead to changes in the relative prices of inputs and outputs. The relative price changes can affect a firms cash flows and its value. An exchange risk management

approach that limits itself to transaction exposure ignores these fundamental, long-term effects of exchange rate changes.

The economic exposure encompasses all cash flows, no matter whether a currency conversion is involved and regardless of their timing. The firm's economic exposure thus includes its transaction exposures, but it also comprises the expected cash flows of future periods that are not contracted yet. The exposure can be measured by sensitivity analysis, simulation or by regressing the firm's cash flows on the foreign exchange rates (Stulz and Williams, 1997). Although the above-mentioned approaches provide answers to the question of whether firm should manage financial risks at all, they do not provide managers with clear-cut theoretical guidelines on how the firms risk management should be organized in terms of strategies to adopt.

The Value at Risk (VAR) is a popular measure of risk among financial institutions, but its use is fast extending beyond financial institutions. This technique describes risk succinctly: it is intuitively understandable. It is a percentile of a profit-and-loss distribution over a specified horizon; it tries to determine how much the company's underlying cash flows are affected i.e. if the foreign exchange rate moves to a certain level, VAR indicates how much profit/loss the company makes (Dowd, 1998). If the VAR of a certain set of risks is too high, hedging instruments can be used to bring it down to acceptable levels by reducing the standard deviation measure. Value at Risk therefore captures the nature of bad outcomes in a single number; this technique was initially designed to avoid bank disasters (Pickford, 2002). Although extremely attractive, VAR (the magnitude of loss that occurs with some probability) is not consistent with the theory of risk management either (Stulz, 1996).

Crabb (2003) indicates that both Economics and Finance research have attempted to accurately measure risk and determine the appropriate response of firms to risk. In general, the Economics literature focuses on the strategic response of the firm to exchange rate risk, while the Finance literature focuses on securities and hedging techniques that

firms use to lay off exchange rate risk. Ultimately, the most important part of a firm's exchange risk management in practice is its hedging strategy. Researches have shown that most firms hedge against exchange rate risk although some are not significantly exposed to the risk. Some of these firms have been found to follow the strategy to hedge all open positions immediately (Glaum, 2000). Some of these firms follow a fixed rule according to which they always hedge a certain portion of their exposure with forward and/or option contracts, while leaving the remainder exposed.

A large percentage of firms have also adopted the selective hedging strategy. This means that firms hedge only those positions for which they expect a currency loss while leaving open positions for which they expect a currency gain. Such a strategy is based on forecasts of future exchange rate changes. The manager must predict which foreign currency will appreciate and which will depreciate over the time horizon of the open positions. Most firms do not have a fixed rule concerning the time horizon of their hedging activities. Glaum (2000) notes that empirical evidence suggests that European firms are more inclined than US firms to accept open foreign exchange positions based on exchange rate forecasts. The selective hedging strategy is therefore based on the manager's ability to forecast. The manager thus implicitly rejects one of the foundations of modern finance theory, namely, the efficient market hypothesis that claims that financial markets are information efficient and that nobody can make profits from the market.

2.8 EMPIRICAL STUDIES ON FINANCIAL RISK MANAGEMENT

A number of studies have been carried out on financial risk management both in the public and private sector. Buttner (2001) carried out two case studies on the implementation of financial risk management by US government agencies. He found out that the first company was successful in its financial risk management efforts and having both internal and external support for a risk management system was important. In the second case study, he concluded that government can affect financial risk indirectly as well as directly and when the government is using derivatives, it must be careful not 'move' the markets.

There are a number of studies that have been carried out on financial risk management both in the public and private sector. Bailsford, Heaney and Oliver (2001) conducted a study on the use of derivatives in Australian Commonwealth public sector organizations. They sampled Commonwealth organizations in an attempt to find out attitudes towards use of derivatives for hedging. They inferred that the main reason for using derivatives was to reduce risks faced by management. Other reasons were to reduce bankruptcy and taxation. Fatemi and Glaum (2000) found out that a large portion of German firms (88% of responding firms) used derivative instruments. Li (2003) found out that Asian derivative market is in the very early stages of development and Asia as a whole is lagging behind its European counterparts in this sector as much as ten years.

A number of studies have attempted to provide insight into the practices of foreign exchange risk management. Glaum (2000) provides an overview of studies conducted by various scholars on foreign exchange risk management: Glaum and Roth (1993), Batten et al. (1995), Aabo (1999), and Greenwich Treasury Advisors (1999) focused on exchange risk management practices of multinational corporations. Bodnar et al. (1995), Grant and Marshall (1997), Howton and Perfect (1998) and Budnar and Gebhardt (1999) have articulated the use of derivative financial instruments by firms. Yan (2000) found out that transaction exposure was the most important one for the two companies that he studied, their financial risk management policies defined exchange rate risk exposure as their main concern and forward contracts were their main hedging instruments for the two companies.

There have been a number of explanations put forward in an attempt to explain why firms differ in risk-taking. One is that some firms have a comparative advantage and others have none. Incentives also matter. Some firms may have no comparative advantage, yet they take risks because doing so is advantageous for those who take the risks. There is little empirical evidence that is convincing on the extent of risk-taking by firms. It would therefore be hard to find enough supportive empirical evidence for a number of explanations of risk taking from scholars because of limited data on such investigations (Douglas and Wildavsky, 1982).

While studying risk management practices of German firms, Fatemi and Glaum (2001) found out that most of the firms used derivative instruments for hedging purposes and transaction exposure was the foreign exchange exposure that most of the firms were greatly concerned with. The two also found out that the authority and responsibility for risk management was highly centralized in most firms that responded while Bodnar, Martson and Hayt (1998) found that risk management was highly centralized in American firms. Glaum (2000) studied foreign exchange risk management in German non-financial corporations and found out that most of the firms were concerned with managing their transaction exposure, most of them adopted selective hedging strategies based on exchange rate forecasts, the exposure concept favoured by academic literature was of little importance in practice and most managers used forecasting technique since they believed that most financial markets were not information efficient.

Brucaite and Yan (2000) studied the financial risk management practices of two Swedish firms (SKF and Elof Hansson). They found out that forwards were the main instruments used by SKF for exposure hedging, the company's treasury department wholly dealt with financial exposure management while the subsidiaries did not take any exchange risk at all. The organization of foreign exchange risk management was based on the centralization principle and was fully centralized for the Swedish divisions of the SKF Company. The company used forwards as the main instruments for exposure Hedging; the company did not consider translation risk important and therefore did not hedge against the risk. They also found out that transactions exposure was the most important for the two companies.

Dolde (1993) found out that on his extensive survey, 85% of the responding firms used derivatives to manage financial risk. About 90% of the firms that responded said that their view would affect the extent to which they hedged. For the companies surveyed, the focus on foreign exchange risk management was mostly on transaction exposures. He also found out that the use of derivatives was greater for large firms than small firms. Crabb (2003) indicates that the findings of Bailley et al. (2003), Gay et al. (1998), Cecsy et al. (1997),

Graham and Rogers (2002), and those of Nance et al. (1993) are consistent that the use of derivatives is positively correlated with firm size.

2.9 FOREIGN EXCHANGE RISK MANAGEMENT IN KENYA

The 1990s were associated with a greater degree of liberalization of the financial, foreign exchange and domestic goods markets: this was the case with Kenya. Liberalization of the foreign exchange market in Kenya was gradual- from a fixed exchange rate regime to crawling peg before a flexible or floating exchange rate regime was adopted in the 1990s. Various factors influenced exchange rate movements since the exchange rate market was liberalized in 1993. The exchange rate movements in the 1990s could be explained by an exchange rate equation encompassing the interest rate and price differential, as well as current account balance and the net external inflows (Were, Geda, Karingi, and Ndungu, 2001).

These variables interact simultaneously to influence exchange rate changes. Using a correlation formulation, the empirical results show that widening of interest rate differential, improvements in the current account balance and increases in net external inflows are strongly associated with the appreciation of exchange rates. The exchange rate movements are significantly driven by events such as expectations regarding the outcomes of withholding donor funding and other intermittent changes in the Kenyan economy. This partly explains the high volatility of the exchange rates in the 1990s. Changes in the current account balance have a bearing on the exchange rate market; policies that affect exports and imports of goods and services also influence the direction of the market forces in determining the exchange rate movements.

Public capital flows and expectations regarding donor funding influence the direction of the market forces in determining the exchange rate movements. The policy of lowering interest rates is consistent with a depreciation of the exchange rate: interest and foreign exchange rate changes are highly interrelated. This implies that a demand for low interest rate regime must lead to a relatively weak shilling internationally. While the policy of

Maintaining low inflation (through inflation targeting) appears favourable, it also has implications on the exchange rate movements, since the interest rate tends to be the main instrument for stabilizing the exchange rate (Were et al., 2001)

Interrelationship between exchange rate and interest rate differentials present a monetary and fiscal policy dilemma to the Kenyan government. Nominal exchange rate deviates from the perceived long-run equilibrium level determined by the purchasing power parity relationship, and these deviations are governed by the interest rate differential. Interest rate differential widens as the real exchange rate appreciates, and this triggers capital to flow into the country. Domestic inflation will rise as the real exchange rate appreciates, and the influence of foreign inflation will decrease as the exchange rate appreciates. Real interest rate differential and the exchange rate absorb shocks from each other presenting a policy dilemma to the government. The paper shows that closing the gap in the real interest rate differential (that is, lowering the domestic interest rate) will be consistent with a depreciation of the exchange rate. The optimal approach is not to sterilize these capital inflows but to allow exchange rate movements to stabilize them in the medium or long term (Njuguna, 2000).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 RESEARCH DESIGN

This research was an exploratory study carried out as a census survey.

3.2 POPULATION

The population of study consisted of all the twelve foreign owned commercial banks in Kenya (See Appendix 1). Since the population was small, no sampling was done. Foreign owned banks were preferred because most of them have a high magnitude of foreign transactions when compared to locally owned banks. This is mainly due to their correspondent banking activities. Most of the foreign owned banks are therefore highly exposed to foreign exchange risk than locally owned banks. Due to their peculiarities emanating from foreign influence, most of their financial risk management practices are a little more sophisticated than those of locally owned banks because of international experience.

3.3 DATA COLLECTION

Qualitative primary data was used for the study. It was collected through detailed self-administered questionnaires that were constructed using open-ended, closed-end and Likert type questions. The questionnaires were administered to the treasury departments of the twelve banks using a 'drop-and-pick-later' technique. Considering the busy schedule of the respondents, three weeks were allotted for filling the questionnaires.

3.4 DATA ANALYSIS

A comparison of the foreign exchange risk management practices of the responding banks with recommendations of academic literature and empirical evidence was done. To facilitate the comparison, absolute numbers and percentages were used. The essence of comparison was to link practice to theory. To facilitate conceptualization of the research findings, the survey data was further presented in tables, graphs and pie charts. Other descriptive statistics like means were also used to ascertain the extent of the banks' foreign exchange risk management practices.

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION OF FINDINGS

4.1 INTRODUCTION

Twelve banks were selected for the study but only nine responded representing a response rate of 75%. Such a response is high for this kind of study considering the confidentiality attached to banking practices and the fact that most banks, especially in Kenya, are cynical about business research intentions. Due to this fact, three banks did not participate in the research as their policies did not allow them to participate in any form of business research. This could probably be a safety measure to ensure that vital information provided in research does not leak to competitors. The names of responding banks are withheld in this document because of confidentiality of information given. This research endeavoured to ascertain foreign exchange risk management practices of foreign owned banks, the extent of foreign exchange risk management by the banks and ranking the practices in order of importance in an attempt to meet research objectives.

4.2 GENERAL INFORMATION

General information was solicited in order to establish key features of the banks' financial risk management systems. Empirical evidence has shown that there is a link between organizational characteristics and risk management practices. For instance, firms with risk management departments were found to be better financial risk management practitioners. Stulz (1996) found out that large firms used derivatives more often than small firms. Fatemi and Glaum (2000) made similar findings that the use of derivatives increased with the size of the firm.

Brucaite and Yan (2000) indicate that foreign exchange exposure comes from international trade, financial activities, foreign loans, guarantees etc. The banks were asked to indicate transactions that exposed them to foreign exchange risk: most of them indicated that they were exposed to the risk mainly by foreign currency transactions. This compelled them to

finance their operations in different currencies, which in turn led to increase in foreign exchange risk. According to Were et al. (2001), exchange rate changes are significantly influenced by a number of intermittent changes in the economy. A brief overview of the transactions exposing the responding banks to the risk is presented in table one below.

Table 1: Transactions exposing the banks to foreign exchange risk

Banks	Foreign exchange transactions
1	Foreign exchange trading, correspondent banking and lending in foreign currency
2	Speculative dealings
3	Borrowing from foreign banks, placements with foreign branches, FOREX dealings in respect of money transfers and profit translation
4	Exchange of foreign currency
5	All foreign currency denominated transactions e.g. money transmission, letters of credit
6	Purchase of foreign currency
7	Trading in currencies i.e. Spot dealings, Forwards etc.
8	Telegraphic transfers from overseas- buying and selling of foreign currency notes
9	Did not respond

Source: Survey data

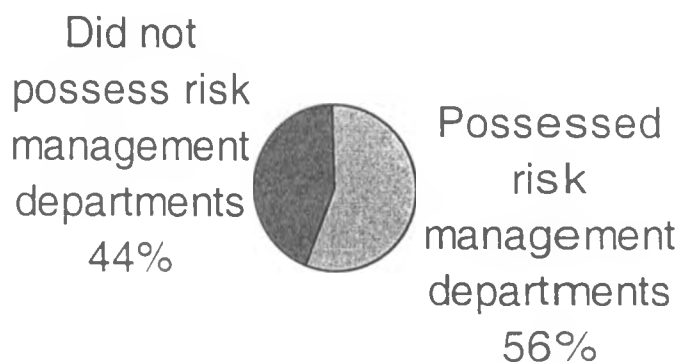
According to expectations, most of the transactions, as evident in table one, are foreign currency denominated. Banks with total assets of more than three billion Kenya shillings had a higher magnitude of transactions exposing them to exchange rate risk than those with total assets of less than three billion Kenya shillings. One bank did not indicate which transactions exposed it to the risk: this could probably be due to the fact that such information would ordinarily be considered confidential.

It was also necessary to ascertain how long the banks had been operating in Kenya. It emerged that most of them had been in the country for long. Seven out of the nine banks had been operating in the country for more than 21 years; one had operated in Kenya for a period of between 11-20 years while the other one had operated for less than ten years. It emerged that banks that had operated in the country for more than 21 years had more advanced foreign exchange hedging techniques: they made use of most of the conventional hedging instruments and strategies more often than the other two banks.

The banks gave various reasons compelling them to borrow funds from overseas. Most of the reasons were geared towards meeting their clients' needs. These included providing loans and advances (credit) to customers in foreign currency, meeting the banks' day-to-day operations and earn interest from the rising interest rates, the need to maintain a certain balance in the banks' accounts and low demand for those who can be advanced the foreign currency credits. However, it was appalling to note that one bank indicated that it did not have any form of transactions that compelled it to borrow funds from overseas while one other bank indicated that the question was not applicable; one other bank did not respond. Considering the fact that most banks in Kenya have low levels of liquid assets, there is need for them to borrow from overseas to meet their domestic needs.

Being in possession of a risk management department is a positive step towards effective financial risk management. It was therefore necessary to ascertain if the banks had risk management departments. It was interesting to note that more than half, five out of nine, of the responding banks had risk management departments. An illustration of the distribution of the responses is presented in figure one below.

Figure 1: Distribution of responses on the possession of risk management departments by the banks



Source: Survey data

From the above survey results, banks that did not have risk management departments were mainly based in Nairobi city and did not have many branches. Generally, they could be classified as small banks. It is possible that they did not find the need to create risk management departments since their exposure to foreign exchange risk was low due to their low magnitude of foreign transactions. It also emerged that their use of conventional financial risk management instruments was quite low. Most of the banks with risk management departments had other branches all over the country, had total assets of more than eight billion Kenya shillings and had been operating in the country for more than 21 years. They were therefore better foreign exchange risk management practitioners since they aggressively traded in derivatives than their counterparts who did not have risk management departments. These findings are similar to those of Crabb (2003) that firms with risk management departments were better financial risk management practitioners.

The banks were also requested to rank three financial risk exposures (credit risk, interest rate risk, foreign exchange risk) in order of importance to them. Three banks indicated that the risks were all important to them; two indicated that credit/default risk was the most

critical risk then followed by foreign exchange risk. Only one bank rated interest rate risk as the most critical; one bank did not respond while one other indicated that the question was not applicable to its practices. Default risk was ranked as the most critical by most banks due to the high levels of default in the banking sector: most banks have huge amounts of non-performing loans. Ranking the risks differently was due to the fact that some risks are considered to be having more impact than others (Shah, 2004). Similarly, what one bank may consider critical is subject to what it views to be the most threatening to its operations: Asaf (2004) notes that what is exposed to financial risk varies from firm to firm.

However, empirical results have shown that foreign exchange risk is one of the financial risks where increased volatility has been reflected to the greatest extent (Brucaite and Yan, 2000); exchange rate risk has been considered to be the most critical among financial risk exposures. This is because exchange rate changes are significantly influenced by a number of intermittent changes in the economy (Were et al., 2004).

Three banks indicated that all the financial exposures were critical to them: there is some empirical evidence in support of such a response. Brucaite and Yan (2000) indicate that exchange, interest and inflation changes in the market are very interrelated and usually have a high degree of correlation and affect the value of a firm negatively. Due to this inter linkage of risks, some banks are therefore bound to consider all the financial exposures to be critical. A comprehensive approach to financial risk management is therefore necessary due to such interactions of various financial risks. At advance levels of risk management are companies that have an enterprise-wide risk management perspective. They have training programmes to help their employees improve their risk management skills. Asaf (2004) concurs with this view by indicating that in today's rapidly changing business climate, there is need for an integrated approach to enterprise-wide risk management for enhancing strategic advantage.

It is recommended that firms should have training programmes on risk management in order to enhance effective financial risk management. Most of the responding banks

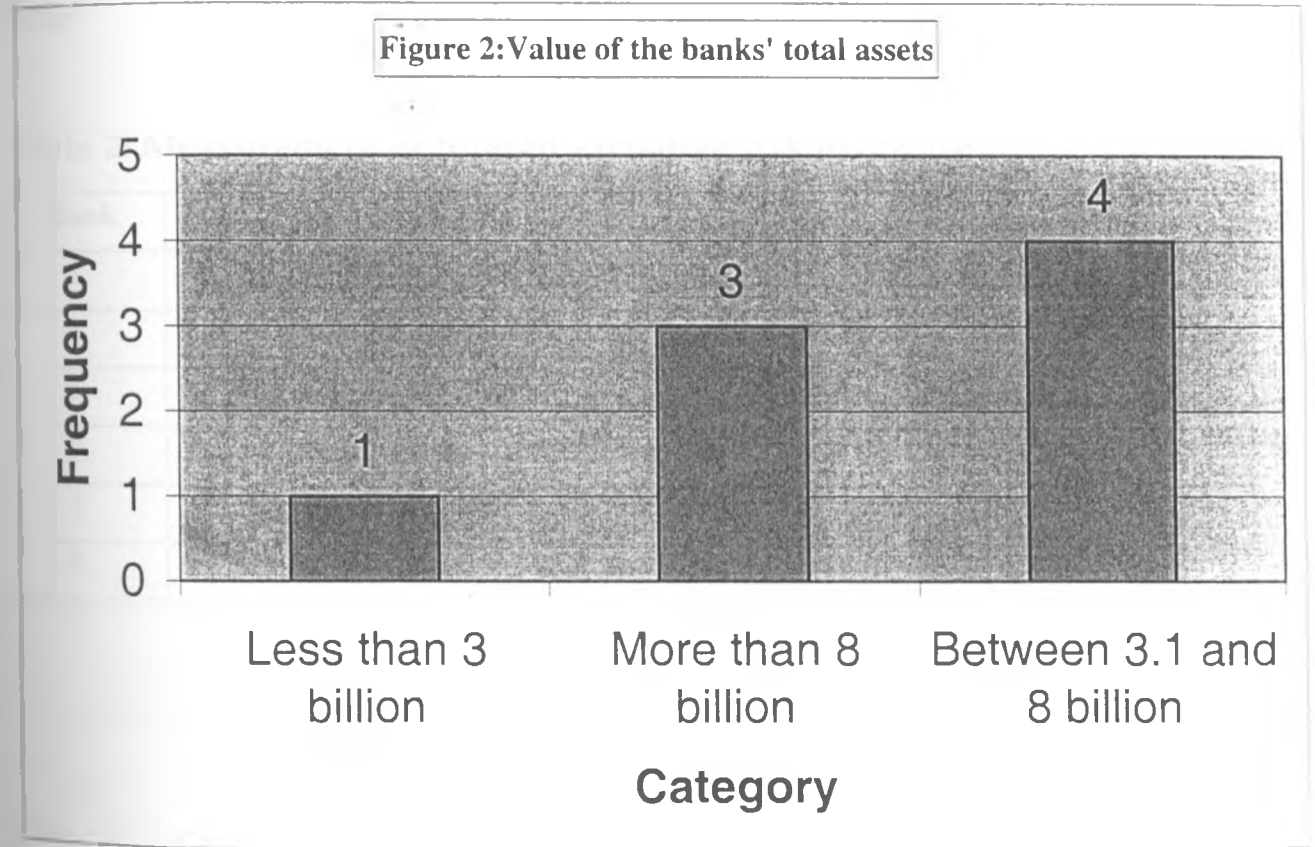
conducted training programmes on risk management: seven banks had training programmes while two did not have such programmes. Considering the increased attention that has been given to financial risk management worldwide, the above responses were an indication that foreign owned banks in Kenya were also directing their efforts to contemporary financial risk management practices. It was also encouraging to note that two of the banks that did not have risk management departments conducted training programmes on risk management. Financial risk management is therefore being given more attention among foreign owned banks in Kenya.

The banks were also requested to indicate which particular currency had the greatest contribution to their foreign exchange risk. Ordinarily, the currency that is most actively traded in would have the greatest contribution to a firm's foreign exchange risk. Eight banks indicated that the US dollar had the greatest contribution to their exchange rate risk while one bank indicated that the Indian Rupee had the greatest contribution to their exchange rate risk. Since most foreign transactions of banks in Kenya are US dollar denominated, most of the responding banks were bound to indicate that the US dollar was the most critical currency to that effect. The other bank was fully owned by the Indian government: it was therefore expected that most of its foreign transactions would be in Indian Rupees. This explains the high contribution of the currency to the bank's exchange rate risk. The bank had total assets of less than 3 billion Kenyan shillings; it could therefore be classified as a small bank. Crabb (2003) indicates that most small firms do not finance in different currencies.

Crabb (2003) indicates that the use of derivatives is positively correlated with firm size. Fatemi and Glaum (2000) made a similar empirical finding that the use of derivatives increases with the size of the firm; Stulz (1996) found out that large firms used derivatives a lot more (of the 530 firms that responded, only 34% used derivatives. Most of these firms were large firms). Crabb's contention was that small firms considered the use of derivatives a sophisticated process requiring advanced academic degree, usually in mathematics. These empirical facts are similar to the findings of this study: large banks

(those with total assets of more than 8 billion Kenyan shillings) used derivatives a lot more than banks with less than 8 billion shillings in total assets.

The banks' total assets were also ascertained leading to a number of inferences. It emerged that all the banks with total assets of more than 8 billion Kenya shillings had risk management departments and traded in derivatives a lot more than the other banks; they also had various branches countrywide. Banks with total assets of between 3.1 and 8 billion Kenya shillings did not actively utilize conventional financial risk management instruments. Only one bank did not respond. A detailed summary of the values of the responding banks' total assets is presented in the figure below.



Source: Survey data

4.3 FOREIGN EXCHANGE RISK MANAGEMENT PRACTICES

There are a number of financial risk management instruments and strategies that have been recommended by academicians: their suggestions have been motivated by empirical findings. The banks were asked a number of questions in an attempt to ascertain various facets of their exchange risk management systems. This sub-section gives a detailed analysis of the responses generated from the responding banks.

According to Glaum (2000), there are three concepts for measuring the effects of exchange rate changes on the firm (accounting exposure concept, transaction exposure concept and economic exposure concept). The banks were requested to indicate how they measured their foreign exchange risk exposure. Responses generated are summarized in table two below.

Table 2: Measurement of foreign exchange risk exposure

Bank	Measurement of foreign exchange risk
1	Weekly exposure reports from branches compiled at the head office
2	Transaction exposure and economic exposure concepts
3	By monitoring and hedging
4	Transaction exposure
5	Measuring everyday for every transaction
6	In terms of how many transactions are passed and who are the clients
7	By maintaining a very controlled foreign exchange exposure limit dictated by its risk management
8	By use of the CBK PRIO statement, country exposure measurement etc.
9	No response

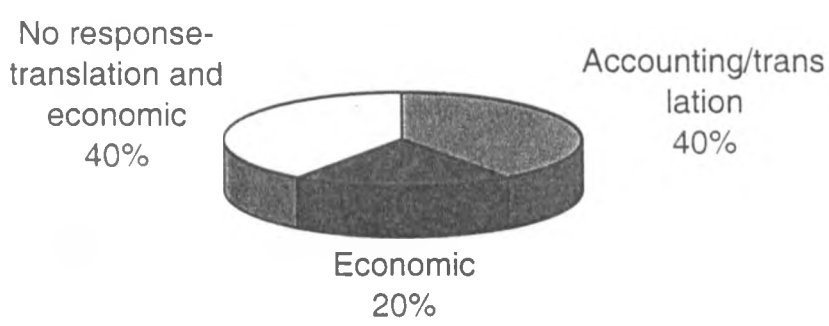
Source: Survey data

Asaf (2004) indicates that there is no uniform approach to financial risk management among companies today. These variations in responses on the measurement of foreign exchange risk are due to lack of a uniform approach. The practice of risk management is

limited and does not correspond to the prescriptions of academic literature. Due to such leeway, firms are not obliged to adopt any specific corporate approved foreign exchange risk measurement practices. Considering that the financial industry in emerging economies is often heavily regulated, many risk management products may not be available in developing countries: the various measurement strategies employed by the responding banks are due to the fact that the financial system in Kenya is an emerging economy. One bank did not respond on how it measured its foreign exchange risk exposure. This could be due to the sensitivity of the practices involved.

Further questions were asked to ascertain other aspects of the banks' exposure measurement practices. The financial institutions were asked whether they hedged against translation and economic exposures. Six banks indicated that they used accounting exposure with three others indicating they used the economic exposure; there were a total of six non-responses as to whether the banks employed translation and economic exposures. The pie chart below presents an overview of the responses.

Figure 3: Hedging against translation and economic exposures



Source: Survey data

Fatemi and Glaum (2000) note that academic literature stresses for many years that accounting exposure is of no consequence; Glaum (2000) concurs with them by contending that accounting concept of exchange exposure is not an appropriate concept to be used in foreign exchange risk management. Despite this empirical evidence, the findings of the current study are different from empirical evidence and literature: most responding banks (six) used accounting exposure concept while three other banks used economic exposure concepts. The fact that only three banks out of the nine hedged against economic exposure can be supported by Glaum (2000) that the central idea of economic exposure concept has no support in corporate practice: economic exposure concept favoured by academic literature is of no importance in practice.

The banks were requested to list the three exposures from the most critical to the least critical. A summary of the responses is presented in the table below.

Table 3: Ranking the three financial exposures

Bank	Ranking the exposures from the most critical to the least critical
1	Transaction, translation and economic
2	Economic, transaction and accounting
3	Economic, transaction and economic
4	Transaction, translation and economic
5	Transaction, economic and translation
6	Currency risk
7	Transaction exposure
8	Transaction, economic and translation
9	Transaction and economic

Source: survey data

Empirical studies have shown that transaction exposure is of most concern than translation and economic exposure. Brucaite and Yan (2000) found out that transaction exposure was the most important for the responding firms: Fatemi and Glaum (2000) made similar

findings too. Glaum (2000) recommends that management of transaction exposure is the centerpiece of corporate exchange risk management; he found out that risk management of German firms focused on the management of transaction exposure. Similarly, the results of the current study reveal that most foreign owned banks considered transaction exposure to be the most critical. These findings are therefore in line with prescriptions of literature and the findings of Glaum (2000), Brucaite and Yan (2000) and those of Fatemi and Glaum (2000). However, since there is no uniform approach to corporate risk management, what is hedged is subject to what an organization considers exposure.

Centralization of the banks' foreign exchange risk management function was also ascertained. Seven banks indicated that their functions were highly centralized (governed by guidelines set at their head offices); one bank indicated that there was a general manual used by all its branches while one other bank indicated that its hedging practices were governed by a centralized dealer (management). Stulz (1996) found out that foreign exchange risk management was a highly centralized function in American firms as well as German multinationals. Brucaite and Yan (2000) found out that management of financial risks and responsibility for all treasury operations were largely centralized in the headquarters' treasury departments; Glaum (2000) also found out that risk management of US firms was highly centralized. This empirical evidence is similar to the findings of this study.

The banks were also requested to indicate which risk management practices and instruments they used in hedging against foreign exchange risk. A summary of their responses is presented in the table below.

Table 4: Foreign exchange risk management instruments and strategies used.

Bank	Financial instruments and strategies used
1	Hedging and development of appropriate spread ratios
2	Spot dealings and avoiding holds
3	Use of scanning machine and dealing with well known customers
4	Use of Forward contracts and Swaps
5	Holding adequate resources (Foreign assets and Foreign liabilities at any time) depending on market movements
6	Forward dealings and cross rates
7	Spot, Forwards, Swaps, Options etc.
8	Using fake currency note detector and exposing the notes to ultra-violet light
9	No responses

Source: survey data

The above results indicate that each bank had its own peculiar hedging instruments and strategies. The variation in practices is basically due to the fact that there are no formal corporate approved risk management practices that must be adopted by firms; due to the leeway in choice of risk management practices, the banks were bound to give various responses that were influenced by their views on what they consider to be 'best practices'. Stulz (1996) and Glaum (2000) views are in support of the findings of this study. The former indicates that most firms' views affect the extent to which they hedge and the use of derivatives to mitigate financial risks while the latter also observes that there are no clear-cut theoretical answers to the question of how corporate risk management should be organized. After a firm has identified and measured the risk it faces, it then decides how its exchange risk management should be organized, which strategy it should adopt and which instruments it should use. Only one bank did not give information on its hedging instruments and practices. It might have considered the information too confidential.

The banks were requested to indicate if they used some conventional hedging instruments to mitigate foreign exchange risk. Their responses are summarized in the table below.

Table 5: Hedging instruments used by the banks.

Instrument	Bank 1	Bank 2	Bank 3	Bank 4	Bank 5	Bank 6	Bank 7	Bank 8	Bank 9
Foreign currency option	Yes	Yes	-	Yes	Yes	-	Yes	-	Yes
Forward contract	Yes	-	-	-	Yes	-	Yes	Yes	Yes
Others	-	-	-	-	Swaps	Spot transac tions	-	-	-

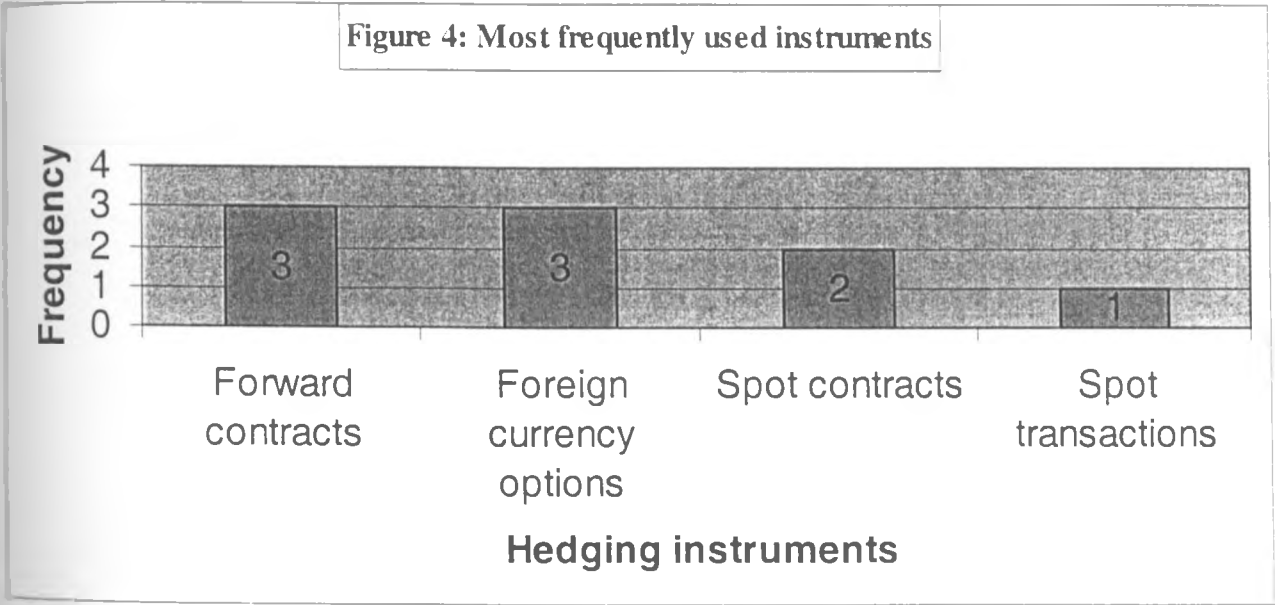
Source: survey data

In overall, six banks used foreign currency options while five used forward contracts. One bank indicated that it used swaps while one other indicated that it used spot transactions. Of all the conventional hedging instruments, only forward contracts were used by most banks.

Crabb (2003) contends that since we do not live in a perfect world, there exist practical reasons (e.g. financial distress costs) as to why risk management should be practiced. Pickford (2002) also notes that financial distress costs are the greatest economic costs necessitating risk management. Fatemi and Glaum (2000) found out that US firms that used financial derivatives were motivated by the dual goal of reducing volatility of cash flows and accounting earnings. The results in table four reveal that most banks used the financial instruments to hedge against foreign exchange risk. Brucaite and Yan (2000) indicate that exchange rate risk could be managed using financial instruments (Futures, Forwards, Options) or commercial instruments (Foreign currency cash flow maturities and amount matching) and pricing strategies. The empirical finding that the use of derivatives increases with the size of the firm does not hold in this case since even the small banks made use of most of the hedging instruments. Although Li (2003) contends that financial

risk management in deveioping economies has a long way to go in terms of availability and utilization of many risk management products, foreign exchange risk mitigation by foreign owned banks in Kenya is developing rapidly: the banks are utilizing the financial instruments to some extent.

It was also necessary to ascertain which of the financial instruments banks most frequently used. Empirical results have shown that some hedging instruments are more utilized by organizations than others: Li (2003) supports this fact by contending that certain types of derivatives are traded actively in public markets. Brucaite and Yan (2000) found out that Forwards were the main instruments used by most firms; Fatemi and Glaum (2000) found out that currency forward contracts was the most frequently used instrument.



Source: survey data

The above responses indicate that both forward contracts and foreign currency options were frequently used by most of the responding firms. These results are similar to those presented in table fine i.e. forward contracts and foreign currency options were the most utilized hedging instruments for most banks. Empirical findings from Europe and America are somehow in line with the findings of the current study save for the fact that most

banks, alongside Forward contracts, equally utilized foreign currency options. How frequent a bank utilizes an instrument depends, to a large extent, on the nature of its transactions and effectiveness of the derivatives to mitigate the financial exposures.

The banks were also requested to respond to various statements relating to their foreign exchange risk management practices. They indicated the extent of applicability of the statements to their foreign exchange hedging practices. Means were used to gauge the extent of applicability of the statements to the banks on a scale of 5 (very large extent) to 1 (not at all). An average mean was ascertained to establish the general extent of applicability of all the practices to all the responding banks. A detailed discussion of the findings is presented in the preceding paragraphs; a summary of the responses and means is illustrated in the table below.

Table 6: Extent to which statements relating to exchange risk management apply to the banks

Statements	Very large extent (5)	Large extent (4)	Some extent (3)	Small extent (2)	Not at all (1)	Responding banks	Means	Ranking
1. Making periodic and systematic assessment of transaction, translation and economic exposure.	5	1	2	-	-	8	4.38	1
2. Hedging with an aim of profiting from exchange rate movements.	2	2	2	-	1	7	3.86	4
3. Forecasting currency fluctuations during planning horizons.	4	1	3	1	-	9	3.89	3
4. Financial decisions being influenced by foreign exchange decisions.	-	-	7	2	-	9	2.78	8
5. Basing hedging decisions on individual currency positions.	4	2	2	1	-	9	4.00	2
6. Setting specific time horizons for hedging decisions.	1	3	-	1	2	7	3.00	7
7. Using derivatives for speculation purposes	-	4	-	2	2	8	2.75	9
8. Having general rules for setting hedging periods	2	1	3	-	1	7	3.43	6
9. Hedging less intensively against exchange rate movements when profits are high.	1	-	2	3	3	9	2.22	11
10. Competitors' risk management practices influencing banks' exchange risk hedging decisions.	2	-	2	3	2	9	2.67	10
11. Correlation of exchange risk to other financial exposures influencing banks risk management decisions.	2	3	4	-	-	9	3.78	5
Average mean							3.34	

Source: survey data

The banks were asked whether they made periodic and systematic assessment of transaction, translation and economic exposures. Scholarly work, like that of Li (2003), recommends that firms should make periodic appraisal of their risk management policies. A mean of 4.38 was obtained from the responses generated: this was an indication that the statements were applicable to most of the banks to a large extent. Glaum (2000) also found out that most firms (80% of the responding firms) periodically measured the success of their exchange rate management policies; Fatemi and Glaum (2000) made similar findings that most firms periodically measured the success of their foreign exchange risk management policies. The above empirical findings are therefore similar to the findings of this study.

To a large extent, most firms hedge with the intention of making profits from exchange rate movements; Stulz (1996) found out that firms try to make a profit by actively managing the financial risks of their businesses. They do not simply hedge passively. Shah (2004) contends that in efficient markets, risk management pays off if it creates real value for the corporation. The financial managers of most of the responding banks believed that since the Kenyan exchange market is not efficient, they could be able to generate above average returns for their banks by actively trading on foreign exchange movements. To that effect, most of the banks forecasted the appreciation and depreciation of relevant currencies during their planning horizons.

Since Kenya is an emerging economy, the high volatility of prices of financial products is bound to create arbitrage opportunities: financial managers can therefore easily 'beat' the market with forecasts. Fatemi and Glaum (2000) support this notion by indicating that forecasts are based on the managers' personal views (in-house heuristics-based forecasts) and forecasts based on technical analysis of the markets. The two authors also found out that most firms used exchange rate forecasts to decide on hedging. These empirical results and findings of this study are therefore a contradiction of efficient markets hypothesis: the ability to forecast appreciation and depreciation of currencies is an indication that the

currency market is not information efficient. Similarly, Glaum (2000) notes that academic literature emphasizes that it is very difficult indeed to make systematically successful exchange rate forecasts.

Stulz (1996) indicates that most firms sometimes actively take positions in financial markets based on their views of exchange rates. Generally, most banks' financial decisions were influenced by their foreign exchange decisions only to some extent. This implies that most banks' financial policies were not significantly influenced by their foreign exchange decisions: there was no strong positive relationship between the two. However, empirical information relating to the impact of foreign exchange decisions on firms' other financial decisions is scanty: it was therefore difficult to make comparisons between the findings of this study and empirical facts.

Glaum (2000) indicates that firms that aim to reduce or eliminate exchange risk can hedge individual foreign exchange positions. Most of the responding banks indicated that they based their hedging activities, to a large extent, on individual currency positions. Empirical evidence has shown that such an approach is much more effective in mitigating financial risks. It serves as a better risk management approach since individual positions are dealt with instead of dealing with various positions together.

Fatemi and Glaum (2000) found out that 42% of the responding firms did not have hard and fast rules for their hedging time horizon while Glaum (2000) found out that most firms did not have a fixed rule concerning the time horizon of their hedging activities. Most responding banks indicated that they set specific time horizons for their hedging activities only to some extent. The results of this study are therefore similar to empirical evidence from Glaum (2000) and Fatemi and Glaum (2000).

Some aspects of the efficiency of the Kenyan currency market were also tested. Although the traditional, more practically oriented literature, assumes that firms should adopt a strictly risk averse attitude to financial risks, some empirical evidence has revealed that

some firms speculate in financial markets in an attempt to make some profits: firms have used derivatives to achieve this. Crabb (2003) further notes that corporations frequently engage in speculative activities; Asaf (2004) found out that most of the companies studied did not use derivatives for speculative purposes. Similarly, most of the responding banks used derivatives to build speculative positions in the currency markets to a limited extent. Considering that speculation can lead to huge financial losses, most companies that lost huge sums of money in the risk management fiascos of the 1990s made speculative gambles that failed, most companies have adopted a more risk averse attitude towards capitalizing on market inefficiencies in an attempt to make profits. However, the financial managers' attitude to risk will influence the firms' view on speculation. The findings of this study are consistent with those of Asaf (2004) and Crabb (2003).

The banks were also asked whether they had general rules for setting their hedging horizons. Due to the leeway in the choice of hedging practices, most responding banks indicated that they employed such rules to some extent. Similarly, Li (2003) contends that many companies that have identified various risks in their business do not have formal policies or strategies to manage these risks within a corporate approved process.

The banks were asked whether during periods of relatively high profits they protected themselves less intensively against unexpected exchange rate changes than they usually did. Most responding banks indicated that they did so only to a small extent. Similarly, Glaum (2000) found out that most responding firms disagreed that in 'good times' they protected themselves less intensively against unexpected exchange rate changes. Since most firms would like to adopt the value maximization approach, they would protect themselves intensively even during periods of high profits.

It was also necessary to ascertain whether the banks' competitors' strategies influenced their risk management practices. Perception of risk, both at individual and organizational level, is complex: it is affected by a host of psychological biases due to subjectivity. Stulz (1996) found out that most responding firms said that their views affected the extent to

which they hedged and that they used derivatives to hedge against financial risks; most of them would take positions in financial markets based on their views. Shah (2004) notes that individuals, even at corporate level, are susceptible to psychological biases; this is motivated by the fact that people have internal reference points that keep on shifting over time due to these biases. The competitors' practices only influenced the responding banks' hedging decisions to a moderate extent. Similarly, Glaum (2003) found out that most firms did not agree that competitors influenced their risk management practices. To avoid inconsistencies in hedging practices and due to the difficulties involved in soliciting competitors' practices, most firms would prefer to maintain autonomy in their risk management practices.

Pickford (2002) suggests that a comprehensive approach to financial risk management is necessary due to interaction of various financial risks. Asaf (2004) shares similar sentiments by contending that in today's rapidly changing business environment, there is need for an integrated approach to enterprise-wide risk management for enhancing strategic advantage. Based on the risk management theory, some firms should hedge all risks, that other firms should not worry about risk at all, and that some firms should worry only about some kinds of risks (Stulz, 1996). Most responding banks indicated that the correlation of foreign exchange risk to other financial risk exposures influenced their risk management decisions to a large extent. Inter linkages of financial risks is therefore evident in the Kenyan banking sector. However, not so much can be ascertained on exchange rate changes in Kenya: empirical studies explaining exchange rate movements in the 1990s are scant (Were et al., 2004).

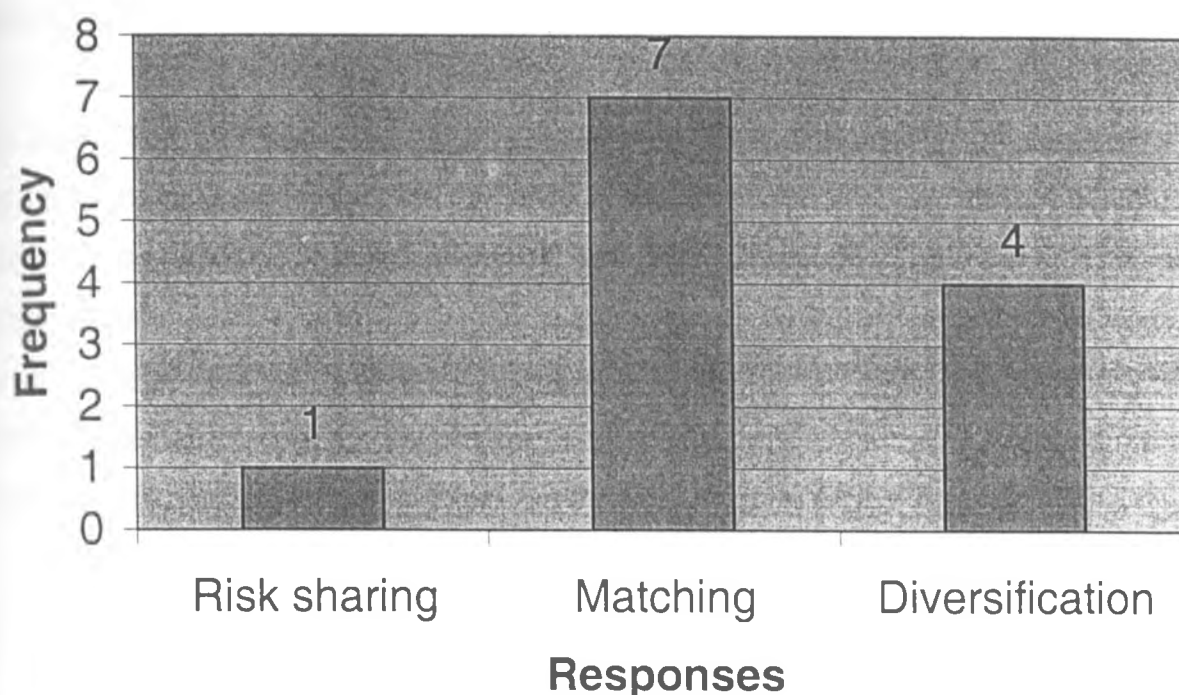
The extent of foreign exchange risk management by the responding banks was determined by calculating the average means of the responses in tables six and seven. All the statements in the two tables addressed various facets of foreign exchange risk management. The banks indicated the extent to which the statements were applicable to them. The responses were rated on a scale of 5 (very large extent) to 1 (not at all).

Responses at the middle of the continuum meant that the statements were applicable to

the banks only to some extent. It emerged that most of the responding banks practiced conventional foreign exchange risk management to some extent: the average means for tables 6 and 7 were 3.34 and 3.69 respectively. Although Li (2003) notes that most of the financial instruments and conventional financial risk management strategies may not be available in financial industry of emerging economies, the results of this study reveal that the banking sector in Kenya is developing: most of the exchange risk management practices are employed by most of the foreign owned banks in Kenya.

Academic literature has recommended some hedging strategies for effective financial risk management: the banks were requested to indicated which ones they employed in mitigating their foreign exchange risk. The results of their responses are presented in the figure below.

Figure 5: Hedging strategies employed

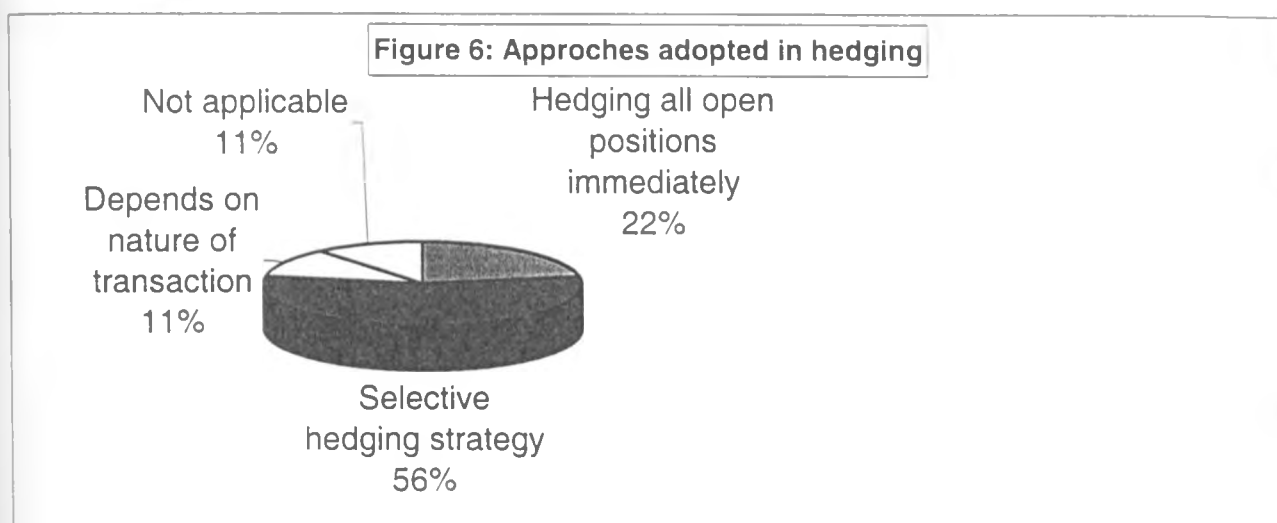


Source: survey data

Glaum (2000) indicates that the most important part of a firm's exchange risk management practice is its hedging strategy. The banks were requested to indicate which strategies they extensively used in mitigating exchange rate risk. Matching strategy (covering cash outflows with cash inflows in the same currency at the same time) was the most utilized strategy by most responding banks (seven out of nine banks); only one bank employed the risk sharing strategy (agreement between two parties to share currency risk). Although diversification (financing in different currencies) is one of the most popular hedging strategies, only four out of the nine responding banks used it. There were a total of ten non-responses to whether the banks employed the three strategies. It was appalling to note that none of the banks indicated whether there were other hedging strategies employed besides risk sharing, matching and diversification. Considering the leeway in choice of financial risk management practices, the banks were bound to have other hedging strategies besides the three: non-responses to the question could have been due

to confidentiality of the practices or failure by the respondents to comprehend the banks' hedging strategies due to the nature of their risk management systems (highly centralized).

The banks' approaches to hedging against open positions during times of imminent losses were also ascertained. Their views on market fundamentals and the financial managers' subjective perceptions of risk determined, to a great extent, the strategies employed by the banks; Glaum (2000) found out that most managers did not believe in the validity of the currency market efficiency hypotheses. He recommends that firms that aim to reduce or eliminate exchange risk can hedge individual foreign currency positions. The responses from the responding banks are presented in the figure below.



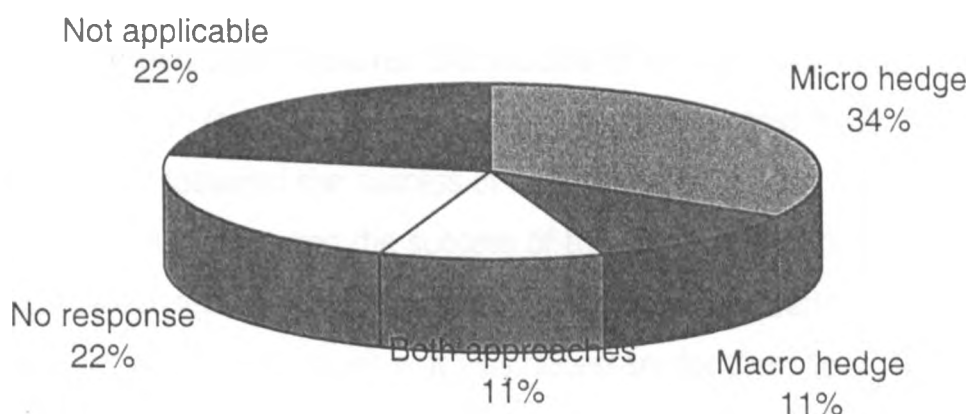
Source: survey data

The selective hedging strategy (hedging only those positions for which firms expect currency losses) has been given more support based on empirical research. Although various companies have employed organization specific strategies, the selective hedging strategy has been found to be the most popular: Glaum (2000) found out that 54% of the responding firms used the selective hedging strategy which is based on the managers' ability to forecast appreciation and depreciation of relevant currencies over their planning horizon thus relying on the believe that currency markets are not information efficient. This

approach is a contradiction of the efficient markets hypothesis. Since financial markets are information efficient, new information is instantaneously incorporated into the prices of financial assets: prices of these assets cannot be extrapolated. The findings of this study are therefore similar to those of Glaum (2000).

There was need to elicit other approaches employed by the banks in hedging against foreign exchange exposures. Although firms have the discretion to employ whichever approach they consider appropriate, empirical findings have shown that both the micro and the macro hedge approaches were used equally. Fatemi and Glaum (2000) found out that item-by-item (micro hedge) approach and the net basis approach were used equally amongst the responding firms; Glaum (2000) indicates that firms followed both micro and macro hedge approaches. However, the results of this study reveal otherwise: the findings are presented in the pie chart below.

Figure 7: Use of micro hedge and macro hedge approaches



Source: survey data

The findings of the study, as inferred from the pie chart above, are different from empirical evidence: the micro hedge approach (hedging individual open currency positions with individual hedge transactions) was the most utilized approach by most banks. Ideally, the micro hedge approach is a better risk management approach since it deals with individual hedge transactions instead of focusing on the net exposure: this could have led most banks to prefer this approach ahead of others. The findings of the current study are therefore different from those of Glaum (2000) and Fatemi and Glaum (2000).

Most of the banks did not provide information on the approaches they adopted: only three banks responded by giving an explanation. One of the banks employed the macro hedge approach by considering the net exposure while the other two used the micro hedge approach; one considered the individual currency exposure while the other searched the

market for the prevailing exchange rate before incorporating their margin and then proceeded to give the customer a certain exchange rate for a deal.

Regular measurement of the success of a firms exchange risk management is an essential ingredient of effective financial risk management. The banks were requested to indicate how often they measured the success of their exchange rate risk management policies. Four banks indicated that they measured the success of their policies daily, two measured the success monthly, two indicated that they measured the success frequently; only one bank indicated that it measured the success of its exchange rate risk management policy yearly. All the banks that measured the success of their exchange rate risk management policy daily had total assets of more than 8 billion shillings. Considering that these four banks had branches all over the country, it was necessary for them to pay much more attention to their exchange risk management policy hence daily measurement of their success. These findings are consistent to those of Glaum (2000) and Fatemi and Glaum (2000). The former found out that most firms (80%) periodically measured the success of their exchange rate management policies while the latter found out that most firms periodically measured the success of their foreign exchange risk management policy.

The banks were also requested to indicate the extent to which statements relating to empirical evidence and academic literature on financial risk management were applicable to them. The essence of these statements was to gauge the extent to which the banks employed various salient financial risk management practices. The banks rated the extent of the statements' applicability on a scale of 5 (very large extent) to 1 (not at all). Means were then calculated to gauge the responses of most banks. The table below gives a summary of the responses and means while a detailed analysis of the responses is presented in the subsequent paragraphs.

Table 7: Statements relating to empirical evidence and literature

Statements	Very large extent (5)	Large extent (4)	Some extent (3)	Small extent (2)	Not at all (1)	Banks	Mean
1. Use of diversification strategy	2	1	3	2	1	9	3.11
2. Use of natural hedging/matching strategy	4	2	3	-	-	9	4.11
3. Identification, measurement and management of risk	3	3	2	1	-	9	3.89
4. Organizations view affecting the extent to which it hedges financial risks	3	3	2	1	-	9	3.89
5. Exchange risk management done to achieve business objectives	3	4	2	-	-	9	4.11
6. Use of VAR to estimate exchange risk	4	1	1	2	-	8	3.88
7. Firms cannot make speculative gains since markets are efficient	1	1	3	2	2	9	2.67
8. Use of accounting and economic exposures concepts as measures of currency risk	3	2	4	-	-	9	3.89

Source: survey data

Diversification is one of the landmarks of risk management. To mitigate foreign exchange rate risk, firms can finance their operations in different currencies that are cheaper than local currencies. Most responding banks indicated that they diversified their operations by making use of funds in more than one capital market and in more than one country to some extent. Interestingly, Crabb (2003) found out that most small firms did not finance their operations in different currencies. Similarly, one of the small responding banks

indicated that it did not finance its operations in more than one capital market while one other bank indicated that it did finance its operations in different currencies but to a small extent. Due to the low magnitude of foreign transactions by small banks, most of them might not find the need to finance their operations in different currencies and in more than one capital market.

Natural hedging (matching) strategy is a popular means of mitigating currency exposure. The banks were requested to indicate the extent to which they employed the matching strategy (a way of decreasing currency exposure by covering cash outflows by inflows in the same currency). It was interesting to learn that most of the responding banks employed the strategy to a large extent. Although Li (2003) contends that financial risk management in developing economies has long way to go (most economies do not have adequate financial risk management products), the findings on this aspect are an indication that developing economies are slowly enhancing their utilization of conventional risk management practices.

Implementing an effective financial risk management system entails adopting a sequence of steps. After an organization has identified the risk that it faces, it then decided how its exchange risk management should be organized and which strategy it should adopt (Glaum, 2000). For most firms, financial risk management implementation involves three distinct phases of identifying risk, measuring risk and managing risk. Buttimer (2001) recommends that firms should strictly adopt the three phases for effective financial risk management. Similarly, most banks indicated that they adopted a comprehensive approach to financial risk management that involved compartmentalization of their financial risk management processes.

Stulz (1996) indicates that most firms sometimes take positions in financial markets based on their views on exchange rates; he found out that such views affected, to a large extent, the hedging practices of the responding firms. Similarly, most of the responding banks indicated that their views affected, to a large extent, the extent to which they hedged

against financial risks considering that each organization has the discretion to adopt hedging practices based on its perception of market risks. Most firms are therefore bound to have hedging practices that are firm specific since most organizations do not believe in the efficiency of currency markets. Shah (2004) notes that the nature and perception of risk is subjective; Brucaite and Yan (2000) indicate that the personal manager's attitude to risk causes a different choice of risk management targets. The findings of this study, on this aspect, are similar to those of the three authors.

Firms practice financial risk management with a purpose. Brucaite and Yan (2000) indicate that the main purpose of hedging foreign exchange risk management is to reduce the volatility of existing position risks caused by the exchange rate movements; Fatemi and Glaum (2000) found out that US firms that used derivatives were motivated by the dual goals of reducing volatility of cash flows and accounts earnings; Pickford (2002) notes that financial risk management hedged financial distress costs. Shah (2004) contends that in efficient markets, risk management pays off if it creates real resource gains for the firms; Stulz (1996) found out that firms try to make a profit by actively managing financial risks hence do not just hedge passively. Similarly, most responding banks indicated that their main reason for practicing exchange risk management was, to a large extent, to achieve business objective. These findings are consistent with the above empirical evidence.

Li (2003) notes that due to high profile risk management disasters of the 1990s, many risk control measures and concepts such as value at risk (VAR) were introduced to prevent such disasters. Asaf (2004) found out that Siemens used VAR to estimate foreign exchange market risk. It was also necessary to ascertain if foreign owned banks in Kenya used the technique to estimate foreign exchange risk. Most of the banks indicated that they used the technique to a large extent. Pickford (2002) indicates that most large financial institutions use VAR to monitor potential losses but notes further that banks are beginning to realize that the concept makes unrealistic assumptions. The findings of this study are an indication that foreign owned banks in Kenya value the technique as a measure of risk despite the reservations expressed by Pickford (2002).

Efficient markets hypothesis holds that financial markets are information efficient and that investors cannot extrapolate prices of financial products due to instantaneous incorporation of new information (Shah, 2004). It was therefore important to find out if the banks could make speculative gains by predicting future exchange rates. Most banks indicated that they could make such gains to a great extent. This is an indication that the Kenyan currency market is not efficient and investors could capitalize on market inefficiencies to make above average returns. However, Glaum (2000) notes that such gains are temporary: he indicates that academic literature emphasizes that it is very difficult indeed to make systematically successful exchange rate forecasts though his empirical results showed otherwise.

Asaf (2004) also recommends that firms should not use financial instruments for speculative purposes; some of the high profile risk management disasters of the 1990s were as a result of speculations in financial markets. Crabb (2003) concurs with Asaf that speculation in derivatives should not take place within the firm. However, Glaum (2000) contends differently that derivatives can also be used to build up speculative positions in financial markets besides being used for hedging against existing risk. Considering the fact that Kenya is an emerging economy, inefficiencies in the financial system are bound to be high hence the responses from most banks that speculative gains could be made through prediction of future exchange rates. The findings of the study, on this aspect, are similar to those of Glaum (2000) but different from recommendations of Asaf (2004) and Crabb (2003).

Applicability of conventional measures of currency risk was also tested. Accounting exposure concept and economic exposure concepts are common measures of currency risk by financial institutions. It was prudent to find out if foreign owned banks in Kenya were using the concepts. Most banks indicated that they used the two measures to a large extent. However, Glaum (2000) expresses reservations about the two measures. He contends that the economic exposure concept, favoured by academic literature, is of little importance in practice. He points out further that accounting exposure concept is not considered an appropriate concept to be used in foreign exchange risk management by

academicians. The use of economic exposure concept by most responding banks is in line with the prescriptions of academic literature but contrary to some empirical evidence. The use of accounting exposure concept by most banks is in contradiction with the recommendations of literature. However, there is scanty empirical evidence to prove whether the concept is popular in corporate practice.

CHAPTER FIVE

SUMMARY AND CONCLUSIONS, LIMITATIONS, RECOMMENDATIONS AND SUGGESTIONS FOR FURTHER RESEARCH

5.1 SUMMARY AND CONCLUSIONS

5.1.1 SUMMARY

To achieve the three research objectives, questionnaires were delivered to the head offices of the twelve banks. Only nine responded. Most responses were adequate save for a few non-responses to some 'sensitive' questions. Comparison of the responding banks' practices with academic literature and empirical evidence led to various inferences. Due to the fact that most conventional financial risk management practices and terminologies are not applicable in emerging economies, some of the responses were not comprehensive enough: in some cases, respondents could not fully apprehend some salient financial risk management terminologies. Most banks used most conventional foreign exchange risk management practices.

Since there are no formal corporate approved financial risk management practices, some hedging instruments and strategies were bank-specific though most of them were conventional. Empirical evidence, especially from Europe, and literature were extensively utilized in the endeavour to link theory and corporate practice. It emerged that most banks considered the Kenyan currency market to be inefficient hence being able to take individual positions with intentions of making financial gains; speculative gains could be achieved by predicting future exchange rates. Foreign borrowing was considered necessary because of increased clients' needs. Financial risk management had gained increased attention amongst most banks since a strong majority of them had risk management departments and training programmes about the same. Seven out of the nine responding banks had highly centralized risk management systems. The banks' views greatly influenced their

practices; quite a number of hedging practices were based on forecasts. Most banks used derivatives to build speculative positions in the foreign exchange market. Banks that had operated in the country for long had more apt foreign exchange risk management practices. It also emerged that most banks practiced exchange risk management in order to achieve business objectives.

A number of other inferences were drawn regarding the banks' foreign exchange risk management practices. There was no strong relationship between the size of the banks and use of derivatives though empirical evidence suggests otherwise; most banks rated credit/default risk as the most critical risk though empirical results indicate that exchange rate risk is the most critical; some banks indicated that all financial risks were critical to them; both Forward contracts and Foreign currency options were frequently utilized hedging instruments by most banks.

Most banks employed various exposure measurement practices. It emerged that a strong majority of the banks did a periodic and systematic assessment of their exposure measurement strategies; besides accounting, transaction and economic exposure concepts, most banks had other foreign exchange exposure measurement strategies that were peculiar to each bank. Transaction exposure was considered the most critical by most banks; natural hedging/ matching strategy was employed by most banks to a large extent while risk sharing and diversification strategies were used by a few banks and to a small extent. It was also ascertained that selective hedging strategy was the most popular for most banks. Contrary to empirical evidence, micro hedge approach was the most utilized practice by most banks. A strong majority of the banks regularly measured the success of their foreign exchange rate risk management policies. To a large extent, Value at Risk (VAR) was used as a risk estimate technique by most banks. Generally, most of the findings were consistent with empirical evidence.

5.1.2 CONCLUSIONS

The conclusions of the study were based on the three research objectives. Most responding banks employed a number of conventional foreign exchange risk management practices; quite a number of banks had their own bank-specific practices based on their views of what constitutes exchange risk best practices. To a great extent, the research objectives were achieved.

Based on research data, most foreign exchange hedging practices were influenced by the banks' views on the currency market fundamentals. The practices ascertained include: forecasting, speculating and taking individual positions in the currency markets with an aim of making financial gains, carrying out training programmes on financial risk management and use of specific financial instruments to hedge against foreign exchange risk. Most banks carried out regular and systematic assessment of exposure measurement strategies and their exchange risk management policies in general. A number of banks made use of accounting, transaction and economic exposure measurement strategies; matching, risk sharing, diversification and selective hedging strategies were extensively used by most banks. It also emerged that most banks extensively used the micro hedge approach though empirical evidence shows that most firms equally used both the micro and macro hedge approaches. Although some scholars have expressed reservations about the use of Value at Risk (VAR) as a risk estimate technique, most banks used it extensively.

Most banks carried out foreign exchange risk management to some extent. Tables six and seven were specifically designed to ascertain the extent of exchange risk management by the banks; testing the applicability of other practices was one other way to gauge the extent of foreign exchange risk management by the banks. The average means of the responses from the two tables were 3.34 and 3.69 indicating that the banks practiced exchange risk management to some extent.

Most banks, to some extent, utilized quite a number of other practices. These include: making periodic and systematic assessment of exposures, forecasting currency

movements, basing hedging decisions on individual currency positions and the correlation of foreign exchange risk with other financial risks, use of natural hedging/matching strategy and the micro hedge approach. Identifying, measuring and managing risk was a common practice amongst most banks. Most responding banks based their financial risk management decisions on their individual views; forward contracts and foreign currency options were used more often than other hedging instruments. The use of Value at Risk (VAR) as a foreign exchange risk estimate technique is a common practice amongst most banks.

Most banks considered some practices to be more important than others. Those considered best practices were more prevalent amongst most banks. It emerged that credit/default risk was considered the most important financial exposure though empirical evidence shows that most organizations are concerned with foreign exchange risk; transaction exposure was considered the most critical when compared to translation and economic exposures. Of all hedging instruments, foreign currency options and forward contracts were the most frequently used; natural hedging/ matching strategy was the most utilized strategy than risk sharing and diversification. Most banks preferred the selective hedging strategy as compared to hedging all open positions immediately.

5.2 LIMITATIONS

The questionnaires were supposed to be filled by Chief Financial Officers of the banks. Due to their busy schedules, most of them delegated that task to their subordinates, some of whom were not fully conversant with some salient exchange risk management practices of their banks. This fact had an adverse bearing on the quality of responses.

Considering that Kenya is an emerging economy, some financial risk management practices and terminologies are not applicable in the country's banking industry. Clarifications for some questions were therefore necessary. Since questionnaires were used as the data collection technique, there was no room for such clarifications. This adversely affected the

quality of responses and interviews could have probably been used to give such clarifications.

Most of the banks did not have specific foreign exchange risk management practices. Quite a number of them had ad hoc and bank-specific practices. It was therefore difficult to generalize some findings considering variations in responses. In such cases, conventional practices were not adopted by most of the banks.

Most of the responding banks were small in terms of asset base: they were not highly exposed to foreign exchange risk since their foreign transactions were limited though diverse. Due to the low magnitude of foreign transactions, some of the conventional foreign exchange risk management practices were not adopted. Due to this fact, it was difficult to achieve the research objectives effectively.

Three of the banks declined to participate in the research while most of the responding banks did not take the exercise seriously since it took longer than expected to fill the questionnaires. This had an adverse impact on the conclusions and achievement of research objectives. Generalization of the research findings could have been more authentic had the three participated.

5.3 RECOMMENDATIONS

Academicians will benefit from the findings of this study. They should critique the findings of this study and compare them to other empirical studies in order to gauge the level of foreign exchange risk management amongst foreign owned banks. They will be able to give further recommendations on other foreign exchange risk management facets that were not adequately analyzed by this study. Considering the limitations of this study, some questions designed to capture objectives of the study could not be answered comprehensively: academicians should therefore strive to fill such gaps.

It emerged that most banks based their foreign exchange hedging decisions on speculations and forecasts of currency market fundamentals. This implies that most banks do not consider the Kenyan currency market to be information efficient. Since most of the risk management fiascos of the 1990s were as a result of speculations in financial markets, the regulatory body (Central Bank of Kenya) should intervene and manipulate market fundamentals to eliminate such inefficiencies. The findings of this study can provide such insights.

As a census survey, the findings of the study provide useful comparisons of various facets of exchange risk management practices; a detailed analysis of the link between theory and practice is well documented. Commercial banks in Kenya can get such insights on exchange risk management best practices of foreign owned banks by accessing the findings of this study. This will enable the banks appraise their own foreign exchange risk management practices.

5.4 SUGGESTIONS FOR FURTHER RESEARCH

Future researchers should endeavour to ascertain the effectiveness of the chosen foreign exchange risk management practices of the foreign owned banks. Besides focusing on foreign owned banks, researchers should also attempt to ascertain foreign exchange risk management practices of locally owned banks as well.

Due to complexities and intricacies involved in banking practices, future studies of this nature should be conducted through interviews with the Chief Financial Officers themselves and questionnaires where possible. This will provide more authentic responses since senior bank officers are better placed to apprehend their banks' practices than their subordinates.

Although empirical evidence suggests that foreign exchange risk is the most critical of all the financial risks, it emerged that credit/default risk was the most critical in this study. Future research should attempt to ascertain the credit risk management practices of foreign owned banks and the effectiveness of such practices.

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APPENDICES

APPENDIX 1: POPULATION

Foreign owned institutions in terms of Shareholding

i). Foreign owned not locally incorporated

1. Citibank N.A.
2. Bank of Africa
3. Habib Bank A.G. Zurich
4. Bank of India
5. Habib Bank

ii). Foreign owned but locally incorporated institutions (Partly owned by locals)

1. Barclays Bank of Kenya Ltd.
2. Standard Chartered bank Limited
3. Development Bank of Kenya Ltd. –
4. Stanbic Bank Ltd.
5. Bank of Baroda Ltd.
6. Diamond Trust Bank Kenya Ltd.
7. K-Rep Bank Ltd.

Source: www.centralbank.go.ke/bankinfo/shareholding/html

APPENDIX 2: QUESTIONNAIRE

The questionnaire seeks to ascertain the foreign exchange risk management practices employed by foreign owned commercial banks in Kenya.

SECTION A: GENERAL INFORMATION

1. Which transactions expose your bank to foreign exchange risk?.....
.....
.....
2. How long has your bank been operating in Kenya? Less than 10 years ☐
Between 11 and 20 years ☐ More than 21 years ☐
3. What compels your bank to borrow funds from overseas?.....
.....
.....
4. Does your bank have a risk management department? Yes ☐ No ☐
5. Rank the following financial exposures (interest rate risk, credit/default risk, foreign exchange risk and others) in order of importance to your bank?
1.
2.
3.
4.
5.
6.
7.
6. Which particular currency has the greatest contribution to your banks foreign exchange risk?.....
7. Does your bank have training programmes on risk management? Yes ☐ No ☐
8. What is the value of your bank's total assets? Less than 3 billion shillings ☐
Between 3.1 to 8 billion shillings ☐ More than 8.1 billion shillings ☐

SECTION B: FOREIGN EXCHANGE RISK MANAGEMENT PRACTICES

1. Foreign exchange exposure can be measured through accounting exposure concept (exposure arising from the purpose of consolidation to convert the financial statements of foreign operations from local currencies involved to home currency), transaction exposure concept (exposure arising from commitments which involve the actual conversion of currency) and economic exposure concept (hedging against the volatility of future cash flows as a result of future changes in foreign exchange rates). How does your bank measure foreign exchange risk exposure?.....

.....

2. Please indicate by ticking whether your bank hedges against the following exposures:

Accounting/translation exposure ☐ Economic exposure ☐

1. Foreign exchange risk involves transaction exposure, translation exposure and economic exposure. Kindly rank the three exposures from the most critical to the least critical for your bank.....

2. Which risk management practices and instruments does your bank use to mitigate foreign exchange risk emanating from conversion from one currency to another?.....

5. How centralized is your banks foreign exchange risk management function i.e. are your foreign exchange hedging practices governed by guidelines set by the head office or your branches have the discretion to make foreign exchange hedging decisions independently?.....

6. Kindly tick the financial instruments used by your bank to hedge against foreign exchange risk?

Foreign currency option ☐

Forward contract ☐

Others (Please indicate).....

7. Which of the above instruments is the most frequently used?.....

Below are statements relating to foreign exchange risk management. Kindly rank (by ticking) the extent to which the statements apply to your bank on a scale of 5-1.

Statements	Very large extent (5)	Large extent (4)	Some extent (3)	Small extent (2)	Not at all (1)
1. Banks makes periodic and systematic assessment of transaction, translation and economic exposure.					
2. Banks hedge with an aim of profiting from foreign exchange rate movements.					
3. Banks forecast appreciation and depreciation of relevant currencies during their planning horizons.					
4. A banks financial decisions are influenced by its foreign exchange decisions					
5. Banks base their hedging activities on individual currency positions.					
6. Banking institutions set specific time horizons for their hedging activities.					
7. Banks use derivatives to build up speculative positions in the currency markets.					
8. Banks have general rules for setting their hedging periods					
9. During periods of relatively high profits, banks protect themselves less intensively against unexpected change rate changes than they usually do.					
10. The (perceived) risk management practices of a bank's major competitors influence its own foreign exchange hedging decisions.					
11. The correlation of foreign exchange risk to other financial risk exposures influences a banks risk management decisions.					

8. Which of the following hedging strategies does your bank employ?

☐ . Risk sharing (agreement between two parties to share currency risk)

☐ . Matching (covering cash outflows with cash inflows in the same currency at the same time)

☐ . Diversification (financing in different currencies)

Others (please specify).....

9. Do you hedge all open positions immediately or you hedge only those positions for which you expect a currency loss while leaving open positions for which you expect a currency gain?.....

10. Do you employ the micro hedge approach (hedging individual open currency positions with individual hedge transactions) or the macro hedge approach (considering the net exposure i.e. cash outflows less cash inflows of the same time horizon) or both?.....

Kindly explain approach.....

.....

11. How often does your bank measure the success of its exchange rate risk management policy?

Below are statements relating to empirical evidence and academic literature on financial risk management. Kindly indicate on a scale of 5 to 1 (by ticking) the extent to which the statements apply to your bank.

Statements	Very large extent (5)	Large extent (4)	Some extent (3)	Small extent (2)	Not at all (1)
1. Diversification strategy involves diversifying operations by making use of funds in more than one capital market and in more than one country					
2. Natural hedging (matching strategy) is a way of decreasing currency exposure by covering cash flows by inflows in the same currency					
3. Financial risk management implementation goes through three distinct phases: identifying risk, measuring risk and managing risk					
4. An organizations view affects the extent to which it hedges against financial risks					
5. The main reason for practicing foreign exchange risk management is to achieve business objectives					
6. Value at Risk (VAR) is a technique used by financial institutions to estimate foreign exchange risk					
7. Currency markets are information efficient: organizations cannot make speculative gains through predicting future exchange rates					
8. Accounting exposure concept and economic exposure concepts are measures of currency risk used by financial institutions					

THANK YOU FOR YOUR ASSISTANCE IN FILLING THE QUESTIONNAIRE.

APPENDIX 3: SUMMARY OF RESEARCH FINDINGS

SECTION A: GENERAL INFORMATION

1. Transactions exposing banks to foreign exchange risk.

- Trading in currencies i.e. spot dealings, forwards etc.
- Telegraphic transfers from overseas and trading in foreign currency
- Foreign exchange trading and correspondent banking
- Speculative dealings
- Borrowing from foreign banks, placements with foreign branches, foreign exchange dealings in respect of money transfers and profit translation.
- Exchange of foreign currency
- All foreign currency denominated transactions
- Purchase of foreign currency.

2. How long the banks had operated in Kenya.

- Less than 10 years: one bank
- Between 11-20 years: one bank
- More than 21 years: seven banks

3. What compelled the banks to borrow funds from overseas.

- Provision of loans and advances to customers in foreign currency.
- To meet day-to-day operations and also earn interest from the rising interest rates.
- This is driven by various customer requirements
- Cost factor and low demand for those who can be advanced the foreign currency credits
- One bank indicated it did not have any such transactions while two others did not respond.
- The fact that there is need to maintain a certain balance in the banks accounts.

4. Possession of risk management departments.

- Five banks possessed risk management departments.
- Four banks did not possess risk management departments.

5. Ranking financial exposures in order of importance. Responses per bank are presented below.

- Interest rate risk, exchange rate risk, credit risk and others
- All risks are equally important
- Foreign exchange risk
- Credit risk, interest rate risk and exchange risk.
- Credit risk, exchange rate risk, interest rate risk and others.

6. Currency with the greatest contribution to the banks exchange rate risk.

- Eight banks indicated the US dollar
- One bank indicated the Indian Rupee

7. Ascertaining whether the banks have training programmes on risk management.

- Seven banks had such programmes.
- Two banks did not have such programmes.

8. Value of the banks total assets.

- Less than 3 billion Kenya shillings: one bank
- Between 3.1 and 8 billion shilling: four banks
- More than 8 billion shillings: three banks
- One bank did not respond

SECTION B: FOREIGN EXCHANGE RISK MANAGEMENT PRACTICES.

1. Measurement of foreign exchange exposure through accounting, transaction and translation exposures.

- By monitoring and hedging
- By maintaining a very controlled foreign exchange exposure limit dictated by the banks risk management.
- By use of the CBK PRIO statement, country exposure measurement e.t.c.
- Weekly exposure reports from branches completed at the head office
- Transaction and economic exposure concepts
- In terms of how many transactions are passed and who are the customers
- Transaction exposure
- Measures everyday for every transaction.
- One bank did not respond

2. Whether the banks hedged against Accounting/translation and economic exposures.

- Six banks hedged against accounting/translation exposure
- Two banks hedged against economic exposure

3. Ranking the three exposures (transaction, translation and economic exposures) from the most critical to the least critical. Responses per bank are presented below.

- Transaction, translation and economic
- Translation, transaction and economic
- Transaction, economic and translation
- Transaction, economic and translation
- Currency risk
- Transaction exposure
- Economic, transaction and accounting
- Economic, transaction and translation
- Bank 9: transaction, translation and economic

4. Risk management practices and instruments used to mitigate exchange risk emanating from conversion from one currency to another.

- Hedging and development of appropriate spread ratios
- Spot dealings and avoiding holds
- Forward contracts and Swaps
- Dealing with known customers only and use of scanning machines
- Holding adequate resources (foreign assets and foreign liabilities at any time) depending on market movements
- Forward dealings and cross rates
- Spot, Forwards, Swaps and Options e.t.c.
- Exposing the notes on ultraviolet light and using fake currency detectors.
- One bank did not respond

5. Centralization of the banks' risk management functions.

- Centralized- seven banks
- Practices governed by centralized dealer (by management)
- There is an operations manual that is used by all branches

6. Financial instruments used by banks to hedge against exchange rate risk.

- Foreign currency option- six banks
- Forward contract- five banks
- Swaps- one bank
- Spot transactions- one bank
- One bank did not indicate the financial instruments it used to hedge

7. Most frequently used hedging instruments.

- Foreign currency options- three banks
- Forward contract- three banks
- Spot contracts- one bank
- One bank used spot transactions while one other bank did not respond

Extent to which statements relating to exchange risk management were applicable to the banks

Statements	Very large extent (5)	Large extent (4)	Some extent (3)	Small extent (2)	Not at all (1)	Total number of Responding banks
1. Making periodic and systematic assessment of transaction, translation and economic exposure.	5	1	2	-	-	8
2. Hedging with an aim of profiting from exchange rate movements.	2	2	2	-	1	7
3. Forecasting currency fluctuations during planning horizons.	4	1	3	1	-	9
4. Financial decisions being influenced by foreign exchange decisions.	-	-	7	2	-	9
5. Basing hedging decisions on individual currency positions.	4	2	2	1	-	9
6. Setting specific time horizons for hedging decisions.	1	3	-	1	2	7
7. Using derivatives for speculation purposes	-	4	-	2	2	8
8. Having general rules for setting hedging periods	2	1	3	-	1	7
9. Hedging less intensively against exchange rate movements when profits are high.	1	-	2	3	3	9
10. Competitors' risk management practices influencing banks' exchange risk hedging decisions.	2	-	2	3	2	9
11. Correlation of exchange risk to other financial exposures influencing banks risk management decisions.	2	3	4	-	-	9

8. Hedging strategies employed by the banks.

- Risk sharing- only one bank used the strategy
- Matching – seven banks used the strategy
- Diversification- four banks used the strategy
- None of the banks indicated it had used any other strategy apart from the three

9. Ascertaining whether the banks hedged all open positions immediately or hedging was on the basis of only those positions a currency loss was expected.

- All open positions- two banks
- Only when a currency loss is expected- five banks
- One bank indicated that it depends on the nature of transaction
- One bank indicated that the question was not applicable to it

10. Use of micro hedge approach, macro hedge approach or both.

- Micro hedge approach- three banks
- Macro hedge approach- one bank
- Both- one bank
- No response- four banks

11. How often the banks measured the success of their exchange rate risk management.

- Yearly- one bank
- Monthly- two banks
- Quarterly- one bank
- Daily- three banks
- Frequently- two banks

Statements relating to empirical evidence and academic literature on financial risk management

Statements	Very large extent (5)	Large extent (4)	Some extent (3)	Small extent (2)	Not at all (1)	Total number of responding banks
Use of diversification strategy	2	1	3	2	1	9
Use of natural hedging/matching strategy	4	2	3	-	-	9
Identification, measurement and management of risk	3	3	2	1	-	9
Organizations view affecting the extent to which it hedges financial risks	3	3	2	1	-	9
Exchange risk management done to achieve business objectives	3	4	2	-	-	9
Use of VAR to estimate exchange risk	4	1	1	2	-	8
Firms cannot make speculative investments since markets are efficient	1	1	3	2	2	9
Use of accounting and economic measures concepts as measures of currency risk	3	2	4	-	-	9