A SURVEY OF FOREIGN EXCHANGE RISK MANAGEMENT PRACTICES BY FOREX BUREAUS IN KENYA.

BY

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A RESEARCH PROJECT PRESENTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS OF THE DEGREE OF MASTER IN BUSINESS ADMINISTRATION, SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI.
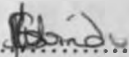
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DECLARATION

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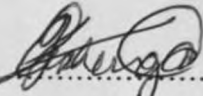
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This research project has been submitted for examination with my approval as a university supervisor.

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DEDICATION

To my parents { *Phineus (Late) and Gladys Ubindi* } for their love and goodwill. They were called to go beyond the call of duty to sacrifice financially for my studies despite of their meager financial resources.

To my brother in-law Mr. Timothy and Knight Lekolool and my brothers, sister and friend Mathew, Martin, Lorraine and Abigael for their financial support and goodwill in ensuring that all was well with me.

To Mr. Kemboi Mark for his never ending love and true friendship during my studies

I have never seen such compassion, hospitality and kindness.

ABSTRACT

This research endeavored to achieve two main objectives: to ascertain the foreign exchange risk exposures faced by forex bureaus in Kenya and to determine the foreign exchange risk management practices they use to mitigate the foreign exchange risks. Empirical evidence was extensively used to link the findings of the study with prescriptions of academic literature.

The research was an exploratory study carried out as a sample survey. The study focused on a sample size of seventy-five forex bureaus out of a population size of ninety-four in Kenya. Only fifty-three forex bureaus responded representing seventy one percent of the sample size study population. Qualitative primary data was used for the study. Self-administered questionnaires were administered to the treasury departments/ financial managers of the forex bureaus using 'drop and pick later' technique. Descriptive statistics were used to analyze the data.

Transactions that exposed forex bureaus to foreign exchange risks were; buying and selling of foreign currencies, cross currency dealings and investing and financing in foreign currencies. The United States dollar, the Sterling pound and the Euro were currencies that were greatly traded and thus had the greatest contribution to foreign exchange risk.

Forex bureaus indicated to face Transaction, Economic and Accounting exposure. Transaction exposure was rated as the most critical compared to the other two form of exposures. Other foreign exchange risks included; forecast risks, market structure, money laundry and currency fraud. Market measures of foreign exchange risks were bench marking, price determination, foreign exchange fluctuations, weekly exposure reports and transaction, economic and accounting exposure concepts. The foreign exchange risk management practices they used to mitigate foreign exchange risk emanating from foreign exchange dealings were; use of forward contracts (most frequently used financial instrument), money market hedge, currency swap, currency option, use of fake currency detector, currency scanning machine, dealing with well known customers and holding

adequate resources in terms of foreign currency assets and liabilities. Hedging strategies used include; diversification, matching and risk sharing. Regular and systematic appraisal of foreign exchange risk management policies was a common practice amongst most of them. Most forex bureaus indicated that their foreign exchange risk management systems were governed by guidelines set by the central bank of Kenya as well as their individual decisions as cases demanded.

The findings from most forex bureaus were similar to empirical evidence but considerably inconsistent with recommendations of academic literature. Forex bureaus, regardless of their size, extensively utilized most of the conventional hedging instruments.

ACKNOWLEDGEMENTS

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CHAPTER ONE: INTRODUCTION

1.1 Background

According to David (1997), foreign exchange risk refers to the likelihood that unexpected change in exchange rates will alter the home currency value of foreign currency cash payments and receipts expected from a foreign source. Oxelheim and Wihlberg (1997) indicate that financial risks might be broken down into 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. Foreign exchange risk is more critical to organizations than the other financial exposures like interest rate risk and default risk (Brucaite & Yan, 2000).

Eugene (1998) defines risk management as a process of identifying events that could have adverse financial consequences and then taking actions to prevent or minimize the damage caused by these events. Glaum (2000) observes that in the recent past, risk management has received increased attention in both corporate practices and literature. This greater attention has been triggered by the development of markets for derivative financial instruments.

According to Central Bank of Kenya (2002), a forex bureau refers to an institution licensed and controlled by the Central Bank of Kenya and charged with the delegation to transact in buying and selling of foreign currency cash; traveler's cheque; personal cheque; banker's drafts and bank transfers. It may also sell Travelers cheques, but must seek and obtain prior approval from the Central Bank of Kenya. Buying and selling of foreign currency cash contributes to over seventy percent of earnings and is therefore considered as the core business. Central Bank of Kenya (2005), documents that Kenya has a total of 94 forex bureaus, all locally owned. Madura (1995) clearly explains that any entity involved in foreign exchange dealings exposes itself to three types of foreign exchange risks namely; Accounting or Translation exposure, Transaction exposure and Economic Exposure. Levi (1983) asserts that the concept of accounting exposure arises from the need to translate accounts that are denominated in foreign currencies into the

home currency of the reporting entity. Transaction exposure occurs when one currency must be exchanged for another, and a change in foreign exchange rates occurs between the time a transaction is executed and the time it is settled. Economic exposure is the degree to which firm's present value of future cash flows are influenced by exchange rate fluctuations (Shapiro, 2002).

Foreign exchange risk management is important to forex bureaus for a number of reasons. First volatile foreign exchange earnings can cause volatile growth and downsizing cycles within a bureau, which is more costly than slow stable growth. The volatility in interest, inflation and exchange rates can have adverse consequences as it can result in untimely bankruptcy and distress costs as well as increase the costs of borrowing funds. Thus hedging can reduce this volatility in cash flows because payments and receipts are forced to fluctuate in accordance with current movements. Secondly, forecasts of exchange rates assist's forex bureaus in making short term financing decisions when they borrow and have access to several different currencies thus the ideal currency should exhibit a low interest rate and weaken in value over the financing period. Forecasts also facilitate short-term investment by ensuring that the ideal currency for deposit exhibits a high interest rate and strengthen in value over the investment period. Capital budgeting decisions are also influenced by future currency values as bureau's attempt to make long time financing decisions (Madura, 1995).

Methods forex bureaus can employ in managing transaction exposure include the use of forward hedge, money market hedge, risk shifting, pricing decisions, exposure netting, currency collars and foreign currency options. Remedies available in managing Economic exposure are; Market management of exchange risk, market selection, pricing strategies, product strategy, production management of exchange risk, planning for exchange rate changes and finally financial management of exchange risk. Translation exposure can be reduced by adjusting fund flows, entering in to forward contracts and exposure netting (Shapiro 2002).

1.2 Statement of the Problem

Li (2003) observes that the economic environment in which firms operate is highly volatile and unpredictable. Increased volatility, greater interdependence and new risks have made the structure of risk exposure of forex bureau's and other financial institutions more complex. The volatility of foreign exchange rates and interest rates has been increasing significantly thus the necessity to have action plans in place to hedge the risk exposures.

David (1997) also notes that under the current system of partly floating and partly fixed exchange rates, investors have experienced significant real and paper fluctuations in earnings due to relative changes in exchange rates. Policies to forecast and react to the exchange rate fluctuations are still evolving as understanding of the functioning of the international monetary system grows, as accounting rules for foreign exchange gains and losses become clarified and as the economic effect of exchange rate changes on future cash flows and market values become recognized.

According to Freund (1966), forex bureau's face a threat of exchange rate fluctuations due to the fact that pressures on the demand and supply sides of foreign exchange markets determine the level of interest and exchange rates in these markets. Whenever the demand for foreign exchange is heavy in relation to the supply the interest rates tend to rise. Conversely falling demand for foreign exchange would tend to cause interest rates to drop in the absence of a corresponding reduction in the available supply. Arise in interest rate devalues a countries currency by increasing the exchange rate which in turn could lead to increased costs of borrowing funds, bankruptcy and distress costs.

Few studies have been conducted to explain exchange rate movements and their corresponding strategies in Kenya. Omagwa (2005) carried out a study on how foreign owned commercial banks in Kenya managed their foreign exchange risk exposure. Ndungu (1997) documented that the exchange rate policy in Kenya has undergone various regime shifts, driven to a large extent by the economic events especially balance of payments crises. Most studies have concentrated in explaining the domestic rate of inflation where the nominal exchange rate enters as one of the explanatory variables

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(Cannetti and Greene 1991, Killick and Mwega 1989, Mwega 1990, Ndungu, 1993).
Considering the important role played by the forex bureaus in fostering a strong financial market, a knowledge gap exists that seeks to narrow down and explain how the bureaus position themselves to mitigate foreign exchange risks. This research is meant to ascertain conclusively the hedging practices and strategies forex Bureaus use to hedge part or all eminent foreign exchange rate risk exposures.

1.3 Objectives of the Study

i   To ascertain the foreign exchange risks faced by forex bureaus in Kenya.

ii   To ascertain the foreign exchange risk management practices used by forex

bureaus to mitigate foreign exchange risk exposures.

1.4 Importance of the Study

i. FOREX BUREAUS

The study will be of great importance to forex bureaus operating within the Kenyan environment which faces a lot of turbulence due to the various risks that they are exposed to like; political risk, business risk and financial risk. The findings would help them know what practices similar firms use to hedge against risks that pose as a threat to their survival in the ever-changing competitive environment.

ii. GOVERNMENT

The study will also bring an insight to the Central Bank of Kenya, which is a key regulatory body in licensing and operation of the forex bureaus. It will be in a position to appreciate the role played by the forex bureaus in the Kenya's economy and hence intervene as well as put policies in place that counteract systematic risks that the bureaus are exposed to.

iii. ACADEMICIANS

The study will also be very helpful in bridging the gap between academic work and real world practice. The findings will be able to establish the correlation that exists between what is taught and global practice and experience.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

Shapiro (2002) asserts that companies today operate within a global, competitive and integrated world economy and can ignore this fact at their own peril. Volatile foreign earnings can cause volatile growth and downsizing cycles within a firm, which is more costly than slow stable growth. Hedging can reduce the firm's volatility of cash flows because the firm's payments and receipts are forced to fluctuate in accordance with current movements. Aliber (1979) documents that exchange risk is a potential gain or loss that occurs as a result of an exchange rate change. It is the effect that unanticipated exchange rate changes have on the value of the firm.

Cornell (1980) asserts that risk is not risk if it is anticipated. In most currencies there are futures or forward exchange contracts whose prices give firms an indication of where the market expects currencies to go. These contracts offer the ability to lock in the anticipated change. The process of risk management comprises of the fundamental steps of incident identification, risk analysis, risk assessment and risk treatment (Von Hagen, 1991). Buttimer (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).

2.2 The origin and developments in risk management

The concept of foreign exchange risk management emanated from the rise of the multinational corporation. Holland (1983) defines a multinational corporation as an enterprise with a global vision that seeks a high degree of international involvement in world product, factor and financial markets. The term 'risk management' first appeared in the 1950s when corporate insurance buyers in the United States of America 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

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the emerging employee benefits risk area A major breakthrough in Finance, in terms of risk measurement and management was made by Melvin (1985) when he suggested that risk can be measured by standard deviation, and assuming asset returns are normally distributed

A further significant development in 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 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 Future technological developments will lead to more effective classification of corporate risks hence improvements in corporate risk management (Li, 2003).

2.2.1 International Monetary Arrangements

According to Madura (1995), major trading nations in the nineteenth century fixed their currency in terms of gold. The exchange rates were therefore fixed and these countries had essentially one common currency. When national gold reserves came under pressure, government's pursued contractionary policies to reduce the impact of trade on reserves. Despite some limitations of this system, the gold standard worked reasonably well until the First World. War disrupted international trade with the result that the main western countries suspended convertibility of their currencies in to gold (Krueger, 1983).

In July 1944, international negotiations were held at Bretton woods, New Hampshire to identify the basis of new monetary system. The participants envisaged an international monetary system that would determine exchange rate parities on the basis of consultations. To this end a new exchange rate system was set up with the US dollar at its center and the International Monetary Fund (IMF) was established to monitor adherence

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to the Bretton Woods agreement. Member nations of the IMF were expected to 'peg' their currencies within a narrow band of internationally agreed parities. The US dollar crisis of 1973 finally finished off Bretton woods when the major currencies abandoned the adjustable peg and floated their currencies against the US dollar. Since then countries have adopted a wide range of exchange rate practices including independent floats, group floating, pegging against a major currency and pegging against a basket of currencies such as the IMF's special drawing rights basket. The January 1976 Jamaica IMF meeting recognized these new exchange rate practices and adopted that the choice of exchange rate arrangement was up to the individual country.

Holland (1983) documents that the main purpose of official intervention in exchange markets by member countries is to counteract disorderly conditions which may consist of disruptive short term movements in a countries exchange rate. One situation in which this is thought to occur is when the bid-offer quote for a currency widens reflecting increased uncertainty about the currency in question.

2.3 Importance of financial risk management
Stulz (1996) documents 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 the firm value accordingly (Meese, 1998).

According to Eaker (1981), many firms refrain from active management of their foreign exchange exposure, even though they understand that exchange rate fluctuations can affect their earnings and value. They make this decision for a number of reasons; first, management does not understand it. They consider any use of risk management tools, such as forwards, futures and options, as speculative. Second, they claim that exposure cannot be measured because currency exposure is complex and can seldom be gauged with precision. Thirdly, they say that the firm *is* hedged. All transactions such as imports or exports are covered, and foreign subsidiaries finance in local currencies. This ignores

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the fact that the bulk of the firm's value comes from transactions not yet completed, so that transactions hedging is a very incomplete strategy. Finally, they assert that the balance sheet is hedged on an accounting basis--especially when the "functional currency" is held to be the dollar. Feiger (1981) argues that Modern principles of the theory of finance suggest prima facie that the management of corporate foreign exchange exposure may neither be an important nor a legitimate concern. It has been argued, in the tradition of the Modigliani-Miller Theorem, that the firm cannot improve shareholder value by financial manipulations: specifically, investors themselves can hedge corporate exchange exposure by taking out forward contracts in accordance with their ownership in a firm. Alder (1982) provides one counter-argument and says that transaction costs are typically greater for individual investors than firms.

Dufey (1972) suggests another line of reasoning suggesting that foreign exchange risk management does not matter because of certain equilibrium conditions in international markets for both financial and real assets. These conditions include the relationship between prices of goods in different markets, better known as Purchasing Power Parity (PPP), and between interest rates and exchange rates, usually referred to as the International Fisher Effect. However, deviations from Purchasing Power Parity and International Fisher Effect can persist for considerable periods of time, especially at the level of the individual firm. The resulting variability of net cash flow is of significance as it can subject the firm to the costs of financial distress, or even default. (Gunter, 1978).

2.4 Choice of exchange rate regime
Castellanos (1990) defines the International monetary system as a set of policies, institutions, practices, regulations and mechanisms that determine the rate at which one currency is exchanged for another. Five market mechanisms for establishing exchange rates are; free float, managed float, target zone arrangement, fixed rate system and the currency hybrid system. In a Free Float, market exchange rates are determined by the interaction of currency supplies and demands. The supply and demand schedule in turn is influenced by price level changes, interest differentials and economic growth.

Madura (1995) contends that a managed Float is where most countries attempt through the central bank intervention to smooth out exchange rate fluctuations. A fixed rate system requires its members to coordinate their monetary policies so as to maintain target exchange rates while the current system of exchange rate determination is a hybrid one with major currencies floating on a managed basis, some currencies freely floating and other currencies moving in and out of various types of pegged exchange rate relationships (Kidwell, 1997).

Early literature based on the seminal work on optimal currency areas (OCA) by Mundell (1961), Kenen (1969), and McKinnon (1963), stressed economic fundamentals related to a country's ability to cope with demand shocks and the usefulness of monetary policy for aggregate demand management. Subsequent authors writing in the tradition of Poole's analysis of monetary policy instruments focused on the type and source of the dominant shocks to which an economy is exposed (Poole, 1970). Building on the work of Barro and Gordon (1983) on Monetary policy credibility, the literature of the 1980s developed the idea that exchange rate pegs could help import credibility of low inflation policies from a foreign central bank (for example Giavazzi and Giovannini, 1989; von Hagen, 1991), a popular justification for Italian and French membership in the European Monetary System. The early empirical literature found that the fundamentals identified by the OCA approach provide some guidance for observed regime choices (Heller, 1978; Dreyer, 1978). Later studies introduced considerations of optimal macroeconomic stabilization, adding proxies for various types of shocks (Melvin, 1985; Savvides, 1990, 1993). These authors find that the presence of domestic nominal shocks raises the likelihood of a currency peg, while real shocks reduce it. More recent empirical literature considers the influence of political and institutional variables on regime choices and suggests that political instability tends to increase the likelihood of flexible exchange rate regimes (Edwards, 1996).

2.4.1 Determinants of exchange rate regime

Three groups of factors affect a country's exchange rate regime choice and include economic fundamentals, variables relating to macroeconomic stabilization, and variables relating to the risk of currency crises. Building on Mundell's work (Mundell, 1961), McKinnon (1963) points to economic size and openness as important fundamentals. He argues that small and open economies are more likely to adopt fixed exchange rate regimes than large and relatively closed economies. Furthermore, a country is more likely to adopt a fixed exchange rate regime if its trade is heavily concentrated on a particular currency area. Kenen (1969) suggests that countries with very concentrated production structures are more likely to adopt flexible exchange rates than countries with highly diversified production.

A final consideration is the development of a country's financial sector. Countries with relatively undeveloped financial sectors often opt for fixed exchange rate regimes, because they lack the market instruments to conduct domestic open market operations and because they wish to shield their fledgling banking industries against large exchange rate movements. Thus, low financial development should increase the probability of adopting fixed exchange rates. Following Poole's analysis of the optimal monetary policy instrument (Poole, 1970), Henderson (1979), McKinnon (1981), and Boyer (1978) argue that fixed exchange rates perform better in terms of output stability in the presence of monetary shocks originating in the domestic economy, while flexible rates perform better in the presence of real shocks (Fratianni and von Hagen, 1992; Giavazzi and Giovannini, 1989; Melitz, 1988).

Fixed exchange rate regimes, when combined with a high degree of capital mobility, are exposed to speculative attacks resulting from fundamental policy inconsistencies (Krugman, 1979; Salant and Henderson, 1978), or self-fulfilling expectations that arise in the context of multiple equilibrium (Obstfeld, 1996). The lesson is that countries should avoid unstable combinations of capital mobility and exchange rate fixity, especially when domestic financial markets are underdeveloped. Important factors that reduce the risk of speculative attacks are the availability of foreign currency reserves to defend a fixed exchange rate, and the consistency of macroeconomic policies.

2.5 Foreign exchange markets

Kidwell (1997) contends that we have the following types of financial markets; Primary markets, where investors are willing to buy financial claims with their surplus savings because they want to earn future returns. Secondary markets let people exchange previously issued claims for cash at will. Organized exchanges and other counter markets provide a physical meeting place and communication facilities for members to conduct their transactions under specific rules and regulations (Begg, 1998; Bruno, 1991, 1993). Financial claims can also be traded over the counter by visiting of phoning an over the counter dealer or by using a computer system that links over the counter dealers. Spot, futures and forward markets also provide markets where securities can be traded. Spot market involves the exchange of securities or other financial claims for immediate payment. A futures market is a market in which people trade contracts for future delivery of securities while a forward contract is a contract for the future delivery of cash in exchange for a foreign currency or a security negotiated and sold over the counter rather than through the exchange. Option markets trade option contracts that call for conditional future delivery of a security or futures contract.

Train (1986) asserts that the foreign exchange market is the mechanism by which a person or firm transfers purchasing power from one country to another, obtains or provides credit for international trade transactions and or minimizes exposure to the risks of changing exchange rates. The foreign exchange market not only links foreign currency flows around the world but they also tie together short-term capital markets in different countries. The foreign exchange market performs the function of transferring purchasing power because international trade and capital transactions normally involve parties living in countries with different national currencies. Whichever currency is used one or more of the parties must transfer purchasing power to or from its national currency. It also provides a third source of credit through specialized instruments like banker's acceptances and letters of credit, which is available to finance international trade. Finally it also serves the sole purpose of minimizing foreign exchange risk by providing hedging facilities for transferring foreign exchange risk to someone else.

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Salant (1978) explains that there are two major types of foreign exchange rate transactions. A spot foreign exchange transaction is one that involves the immediate exchange of currencies at the current or spot exchange rate. A forward foreign exchange transaction is one that involves the exchange of currencies at a specified time in future and at a specified rate or forward exchange rate (Melvin, 1985).

2.5.1 Factors influencing exchange rates

Bruno (1993) documents that an exchange rate measures the value of one currency in units of another currency. Like any other product sold in markets, the price of a currency is determined by the demand for that currency relative to its supply. At any point in time a currency should exhibit the price at which the demand for that currency is equal to supply and this represents the equilibrium exchange rate. The equilibrium rate will change over time as supply and demand schedules change.

Mundell (1961) documents that interest rates determine the value (price) of transactions in money and capital markets as it affects the relationship between spot and forward exchange rates. Factors causing currency supply and demand schedules to change are; inflation with highest levels of actual or expressed inflation being associated with highest levels of interest rates. The intuition behind the positive relationship between interest rates and inflation is that an investor who buys a financial asset must earn a higher interest rate when inflation increases to compensate for the increased opportunity cost of foregone consumption of real goods and services. Real interest rates are the interest rates that would exist on a default free security if no inflation were expected. As such it measures society's relative preferences for consuming today's rather than tomorrow. The higher its preference to consume today the higher is the real interest rate.

Default risk is the risk that a security issuer will default on that security by missing an interest or principal payment. The lower the default risks the lower the interest rate. (Aliber, 1979). Liquidity note is the risk that a security can be sold at a predictable price with low transaction costs on short notice. High liquid assets carry the lowest interest rates ceteris paribus. Special provisions and covenants may be written in to the legal descriptions of a security and also affect interest rates. Term to maturity and special

provisions also affect interest rates. Special provisions provide benefits to the security holder like tax free status and convertibility are associated with lower interest rates and special provisions that provide benefits to the security issuer like collability by which an issuer can retire (call) a security prior to maturity at the present price are associated with higher interest rates (Holland, 1983).

2.5.2 Relationship between inflation, interest rates and exchange rates.

Dukes (1978) explains that exchange rates, interest rates and inflation rates are linked to one another through a classical set of relationships which are important for the nature of corporate foreign exchange risk. These relationships are the purchasing power parity theory, which describes the linkage between relative inflation rates and exchange rates; the international Fisher effect, which ties interest rate differences to exchange rate expectations; and the unbiased forward rate theory, which relates the forward exchange rate-to-exchange rate expectations.

The Purchasing Power Parity (PPP) theory documented by Eaker (1981) states that the rate of change in prices of products should be somewhat similar when measured in a common currency as long as the transportation costs and trade barriers are unchanged. The forms of Purchasing Power Parity include the absolute form or the law of one price, which suggests that prices of similar products of two different countries should be equal when measured in a common currency. The relative form is an alternative version that accounts for the possibility of market imperfections such as transportation costs, tariffs and quotas. This version acknowledges that because of these market imperfections, prices of similar products of different countries will not be necessarily the same when measured in common currency. For purchasing power parity to hold, the exchange rate should adjust to offset the differential in the inflation rates of the two countries. Purchasing power parity suggests that the exchange rate will not remain constant, but will adjust to maintain the parity in purchasing power.

Shapiro (2002) documents that in the real world; the Purchasing Power Parity does not exist for a number of reasons. First exchange rates are affected by other factors in addition to inflation differential like interest rates, income levels and government

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intervention. Secondly the idea behind purchasing power parity theory is that as soon the prices become relatively higher in one country, the other country will discontinue importing and shift to the domestic purchases instead of importing. This shift influences the exchange rate. It may not be so if substitute goods are not available domestically and they may continue to buy the highly priced goods and thus the highly inflated country's currency may not depreciate

According to Feiger (1981) the International Fisher Effect (IFE) states that the interest rate differential will exist only if the exchange rate is expected to change in such a way that the advantage of the higher interest rate is offset by the loss on the foreign exchange transactions. In practical terms, IFE implies that while an investor in a low-interest country can convert his funds into the currency of the high-interest country and get paid a higher rate, his gain (the interest rate differential) will be offset by his expected loss because of foreign exchange rate changes. According to Giddy (1976) the Unbiased Forward Rate Theory is the best and an unbiased estimate of the expected future spot exchange rate.

2.5.3 Forecasting exchange rates

Copeland and Joshi (1996) explain that it is important for firms to forecast exchange rates. This is because of the hedging decisions that multinational corporations are constantly confronted with, as whether to hedge or not hedge future payables and receivables in foreign currency. They are also faced with making short term financing decisions when they borrow while having access to several different currencies. The currency they borrow should ideally exhibit a low interest rate and weaken in value over the financing period. They also have to make short-term investment decisions when they want to establish the currencies for their large deposits. The ideal currency for deposit should exhibit a high interest rate and strengthen in value over the investment period. Capital budgeting decisions are also influenced by future currency values as a Multinational Corporation attempts to determine whether to establish a subsidiary in a given country. Corporations that issue bonds to secure long-term funds and thus may consider denominating the bonds in foreign currency may also undertake long term financing decision. It may also be necessary in the earnings assessment where earnings reported by a subsidiary are consolidated and translated in to the currency representing

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the parent firm's home country (Nydahl, 1999).

Cornell (1980) asserts that there are numerous methods available for forecasting exchange rates and they can be categorized in to four groups namely; the technical forecasting which involves the use of historical exchange rate data to predict future values. For example the fact that a given currency has increased in value over four consecutive days may provide indication of how the currency will move tomorrow. Fundamental forecasting is based on fundamental relationships between economic variables and exchange rates and given current values of these variables along with their historical impact on currency value; corporations can develop exchange rate projections. Its limitations are the uncertain timing of impact, omission of other relevant factors from the model and the change in sensitivity of currency movements to each factor over time. Market based forecasting involves the use of the spot rate which represents the market expectation of the spot rate in the near future. The forward rate moves toward the markets general expectations of the future spot rate. In this sense the forward rate serves as a market based forecast since it reflects the market expectations of the spot rate at the end of the forward horizon while mixed forecasting uses a combination of the forecasting techniques (Madura, 1995)

2.6 Measurement and management of foreign exchange risk.

Dumas (1978) and Adler (1984) defined Foreign exchange exposure as the effect of exchange rate changes on the value of a firm. According to Heckman (1983), the first step in the management of corporate foreign exchange risk is to acknowledge that such risk does exist and that managing it is in the interest of the firm and its shareholders. The next step involves the identification of the nature and magnitude of foreign exchange exposure (Hodder (1982). According to Madura (1995), firms are exposed to three types of foreign exchange exposure namely; Accounting or Translation exposure, Transaction exposure and Economic Exposure. Levi (1983) asserts that the concept of accounting exposure arises from the need to translate accounts that are denominated in foreign currencies into the home currency of the reporting entity. Most commonly, the problem arises when an enterprise has foreign affiliates keeping books in the respective local currency. For purposes of consolidation these accounts must somehow be translated into the reporting currency of the parent company and a decision must be made as to the

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exchange rate that is to be used for the translation of the various accounts (Logue, 1977). The current/non current method of translation divides assets and liabilities into current and non-current categories, using maturity as the distinguishing criterion; only the former are presumed to change in value when the local currency appreciates or depreciates vis-a-vis the home currency. Under the monetary/non monetary method all items are explicitly defined in terms of monetary units and translated at the current exchange rate, regardless of their maturity. Non-monetary items in the balance sheet, such as tangible assets, are translated at the historical exchange rate

A similar but more sophisticated translation approach is the temporal method. Here, the exchange rate used to translate balance sheet items depends on the valuation method used for a particular item in the balance sheet. Thus, if an item is carried on the balance sheet of the affiliate at its current value, it is to be translated using the current exchange rate. Alternatively, items carried at historical cost are to be translated at the historical exchange rate. As a result, this method synchronizes the time dimension of valuation with the method of translation.

According to Logue (1977) Translation exposure can be managed by adjusting fund flows, exposure netting and entering in to Forward contracts by creating a short position in the foreign currency used to measure a subsidiaries income. If the foreign currency depreciates against the home currency, the adverse impact on the consolidated income statement can be offset by the gain on a short position in that currency. If the foreign currency appreciates over the time period of concern, there will be a loss in the short position that is offset by a favorable effect on the reported consolidated earning. However many firms would not be satisfied with a paper gain that offsets a cash loss. Some of the limitations for hedging translation exposure are; inaccurate earnings forecast, inadequate forward contracts for some currencies, accounting distortions and increased translation exposure. Adjusting fund flows involves altering either the amounts or the currencies of the planned cash flows of the parent or its subsidiaries to reduce the firm's local currency accounting exposure. Exposure netting involves offsetting exposures in one currency with exposures in the same or another currency where exchange rates are expected to

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move in such a way that losses or gains on the first exposed position should offset the gains or losses on the second currency exposure.

Levi (1983) defines Transaction exposure as a risk that occurs when one currency must be exchanged for another, and a change in foreign exchange rates occurs between the time a transaction is executed and the time it is settled. He outlines a two-step process involved in measuring this exposure; determining the projected net amount of inflows or outflows in each foreign currency and then determining the overall risk of exposure to these currencies. If a firm decides to hedge in part or all of its transaction exposure it may select from a number of hedging techniques. It can use futures hedge by buying currency futures contract, which entitles them to receive a specified amount in a specified currency for a stated price on a specific date. Madura (1995) explains that purchasing that currency denominating the payables forward can also use forward contracts. For example if a US based firm must pay a Swiss supplier a million francs in thirty days, it can request from a bank a forward contract to accommodate this future payment. The forward contract specifies the exchange rate at which the currencies will be exchanged. A money market hedge involves taking a money market position to cover a future payables or receivables position. It is also the use of international money markets to match future cash inflows and outflows in a given position. Currency call options could also be used. A currency call option provides the right to buy a specified amount of a particular currency at a specified price (exercise price) within a given period of time. Unlike a futures or forward contract, the currency call option does not obligate its owner to buy the currency at that price. Currency put options provide the right to sell a specified amount in a particular currency at a specified price (exercise price) within a given period of time. It could be used by firms to hedge future receivables in foreign currencies since it guarantees a certain price at which the future receivables will be sold (Dumas, 1978).

Shapiro (2002) documents that firms may also opt for a currency swap which is an agreement to exchange one currency for another at a specified exchange rate and date. Banks commonly serve as intermediaries between two parties who wish to engage in a currency swap. A parallel loan or back-to-back loan involves an exchange of currencies at a specified exchange rate and future date. It represents two swaps of currencies, one

swap at the inception of the loan contract and another swap at the specified future date. Leading and lagging represents an adjustment in the timing of payment request or disbursement to reflect future currency movements. Cross hedging can be used by using futures contracts on another currency that is correlated with the one of interest. This occurs when for some reason the common hedging techniques cannot be applied to the first currency. A cross hedge is not a perfect hedge but can substantially reduce exposure. Currency collars provide protection against currency moves outside an agreed upon range while risk sharing involves developing a customized hedge contract embedded in the underlying trade transaction where by you share the risk. Firms could also engage in risk shifting that is an attempt to invoice exports in strong currencies and imports in weak currencies. Exposure netting and a hedging caveat (where they may not hedge at all as it may lock in its dollars of doing business thus putting it at a competitive disadvantage) may also be used (Madura, 1995).

Levi (1983) defines economic exposure as the degree to which a firm's present value of future cash flows can be influenced by exchange rate fluctuations. Transaction exposure is a subset of economic exposure and can be assessed by applying regression analysis to historical cash flow and exchange rate date. A second method involves carrying out sensitivity of earnings to exchange rates by classifying the cash flows in to different income statement items and subjectively predicting each income statement item based on forecasted exchange rates. Adler (1984) contends that economic exposure can be managed by balancing the sensitivity of revenues and expenses to exchange rate fluctuations. To accomplish this, however, the firm must first recognize how its revenues and expenses are affected by exchange rate fluctuations. For some firms revenues are more susceptible and they are not concerned that their home currencies will appreciate against foreign currencies, since the unfavorable effects on revenues will more that offset the favorable effect on expenses. Conversely firms whose expenses are more exchange rate sensitive than their revenues could reduce the exposure by increasing the sensitivity of expenses to exchange rate movements (Makin, 1978). 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.

2.6.1 Forex bureaus and the monetary policy in Kenya.

Few studies have been conducted to explain exchange rate movements in Kenya. Even fewer studies have linked the exchange rate policy and monetary policy. Most studies have concentrated in explaining the domestic rate of inflation where the nominal exchange rate enters as one of the explanatory variables (Cannetti and Greene 1991, Killick and Mwega 1989, Mwega 1990, Ndungu, 1993). Others have estimated a money demand equation where the nominal exchange rate enters as one of the explanatory variables (Adam 1992). Only two of these studies attempt to establish a statistical relationship between money and exchange rates. For example in Cannetti and Greene (1991) money supply growth, inflation and exchange rate among other variables are analyzed in a vector auto regressive model. The authors find that money supply growth drives nominal exchange rate changes without feedback effects. However non of the above studies tries to link the real exchange movements to monetary policy or even directly explain the movements in real or nominal exchange rate.

Central Bank of Kenya (2002), defines a forex bureau as an institution licensed and controlled by the central bank of Kenya and charged with the delegation to transact in buying and selling of foreign currency cash; traveler's cheque; personal cheque; banker's drafts and bank transfers. It may also sell Travelers cheques, but must seek and obtain prior approval from the Central Bank of Kenya. Authorized banks are licensed to buy, sell, borrow or lend in foreign currency or transact any other business involving foreign currency. Authorized dealers are also free to facilitate payments between Kenya residents and non-residents and engage in spot money market and derivative foreign exchange deals (Central Bank of Kenya, 2002). Buying and selling of foreign exchange cash contributes to over seventy percent of earnings by the respective forex bureaus.

According to Central bank of Kenya (2005), Kenya has a total of 94 forex bureaus with the following distribution patterns; 75 are within Nairobi, 12 are in Mombasa, 2 operate in Nakuru and Eldoret, Kisumu, Malindi, Namanga and Lokichogio have one each. The Central Bank of Kenya regulates the financial system and plays a supervisory role with regard to the management of the foreign exchange business. It may be noted that the responsibility of managing foreign exchange business was delegated to the authorized foreign exchange dealers following repeal of the Exchange Control Act effective December 27, 1995. Regulations of foreign exchange dealings in Kenya are contained in Part VI A of the Central Bank of Kenya Act and Legal Notice No. 23 of 28th February, 1996. In managing foreign exchange business, foreign exchange dealers (authorized banks and forex bureaus) need to observe the following principles; the maxim of know your customer must be observed at all times, exercise caution to ensure that cross-border payments are not connected with illegal financial transactions and appropriate money laundering policies should be adopted by all the foreign exchange dealers. New products should be introduced in the market after consultations between the originating foreign exchange dealer and the Central Bank. Finally the foreign exchange dealers (staff) must be officers with a high degree of honesty, integrity, reputation and competence.

As a regulatory mechanism by the Central Bank of Kenya, forex bureaus are required to submit to the Financial Markets Department, Central Bank of Kenya indicative buying and selling Kenya shilling exchange rates every business day before 9.00a.m. In respect to daily foreign exchange inflows and outflows above US$ 10, 000, Form CBK FXBI is to be filled and submitted on the next business day following the date of the transaction to the Financial Markets Department. According to Oxelheim and Wihlberg (1997), Forex bureaus are faced with financial risks that can be broken down into 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. Foreign exchange risk is more critical to organizations than the other financial exposures (Brucaite & Yan, 2000).

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Foreign exchange risk management is important to forex bureaus for a number of reasons. First volatile foreign exchange earnings can cause volatile growth and downsizing cycles within a bureau, which is more costly than slow stable growth. Thus hedging can reduce this volatility in cash flows because payments and receipts are forced to fluctuate in accordance with current movements. Secondly financial risk management enables bureaus, reduce bankruptcy and distress costs, reduce expected tax payments, reduce expected payments to stakeholders and also helps in the reduction in costs of raising funds. Thirdly, forecasts of exchange rates assist forex bureaus in making short term financing decisions when they borrow and have access to several different currencies thus the ideal currency should exhibit a low interest rate and weaken in value over the financing period. Forecasts also facilitate short-term investment by ensuring that the ideal currency for deposit exhibits a high interest rate and strengthen in value over the investment period. Capital budgeting decisions are also influenced by future currency values as bureau's attempt to make long time financing decisions (Madura, 1995). According to the academic literature forex bureaus can manage translation exposure by; adjusting fund flows, entering in to forward contracts and exposure netting. Available remedies for transaction exposure include; forward market hedge, money market hedge, risk shifting, pricing decisions, exposure netting, currency collars and foreign currency options. Economic exposure can be managed by market management of exchange risk, market selection, pricing strategies, product strategy, production management of exchange risk, planning for exchange rate changes and finally financial management of exchange risk (Shapiro 2002).

Ndungu (1997) asserts that the exchange rate policy in Kenya has undergone various regime shifts mostly driven to a large extent by the economic events, especially balance of payments crises. Up to 1974, the exchange rate was pegged to the dollar, after discrete devaluations the peg was changed to the SDR. Between 1974 and 1981, the movement in the nominal exchange rate in relation to the U.S dollar was quite erratic but in general the nominal exchange rate depreciated by about fourteen percent and this depreciation depreciated in the year 1981/1982 with further discrete devaluations. Between 1980 and 1982, the shilling was devalued by about twenty percent in real terms measured against the SDR. After these devaluations the exchange rate regime was changed to a crawling

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Peg in real terms by the end of 1982. This regime lasted until 1990 when a dual exchange rate system was adopted and lasted until October 1993 when after a series of devaluations, the official exchange rate was abolished by merging the official one with the market rate and thus the shilling put to a complete float.

Leland (1998) says that the floating exchange rate system adopted in the 1990s was expected to have several advantages for Kenya. First it would allow a more continuous adjustment of the exchange rate to shifts in the demand for and supply of foreign exchange. Secondly it would equilibrate the demand and supply of foreign exchange by changing the nominal exchange rate rather than the level of reserves. Thirdly it would allow Kenya the freedom to pursue its own monetary policy without having to be concerned about balance of payments effects thus the country would have an independent monetary policy but consistent with exchange rate management. Fourthly under the floating system, external imbalances would be repeated in exchange rate movements instead of reserve movements. Calvo, Reinhart and Vegh (1995) argue that the monetary policy in Kenya is a key determination of the path of exchange rate, inflation and the rate of interest. In addition the fiscal policies and the budget deficit are closely interwoven with the monetary policy. Part of the exchange rate depreciation and accelerating inflation however could be traced to expectations that were at the time being driven by either the fear of policy reversals or perhaps a backlog of demand for both goods and foreign exchange reserves. Public capital flows and expectations regarding donor funding influence the direction of the market forces in determining the exchange rate movements.

2.7 Empirical studies on foreign exchange risk management

Copeland and Joshi (1996) argue that anticipating the consequences of hedging is difficult since so many other economic factors change when foreign exchange rates change. As a Consequence, hedging activity risks being wasteful to the firm's shareholders, and may actually increase exposure. Survey evidence suggests that firms' management perceive hedging as complicated (Alkeba and Hagelin, 1999), hence knowledge on whether hedging is successful is of importance to shareholders. Until recently, little effort has been directed to analyze whether firms are successful or not in reducing risk pertaining to Foreign exchange exposure.

A few recent studies have, however, attempted to answer this question. The foreign exchange exposure of 171 Japanese multinationals was examined by He and Ng (1998). They documented that 25 percent of the firms experienced significant foreign exchange exposure. The extent to which a firm was exposed to foreign exchange risk was linked to the firm's export ratio. He and Ng (1998) also examined the relationship between foreign exchange exposure and variables that were assumed to reflect derivatives usage. The results showed that firms that predicted to hedge had lower foreign exchange exposure, on average, than comparable sample firms.

Nydahl (1999) investigated 47 Swedish firms' foreign exchange exposure. The evidence showed that exposure increased with the fraction of sales classified as foreign. Further, using survey evidence on firms' hedging of foreign assets, Nydahl (1999) examined the association between translation exposure hedging and Foreign exchange exposure. The results indicated that translation hedging reduced the sample firms' foreign exchange exposure.

Allayannis and Ofek (2001) analyzed the link between foreign exchange exposure and the use of currency derivatives for a sample of non-financial S&P 500 firms. They used recently reported information on financial instruments with off balance sheet risk, which firms in the U.S. have been required to report under SFASNo105 since 1991, to investigate whether currency derivatives usage reduced firms' foreign exchange exposure. Their evidence suggested that derivatives usage reduced foreign exchange exposure. Guay (1999) also used U.S. data on derivatives usage that was made available

due to the issue of SFAS No 105. In contrast to the cross-sectional study of Allayannis and Ofek (2001), Guay (1999) examined the change in the risk level for firms surrounding each firm's inception of derivatives usage. Firm risk was found to decrease following the inception.

Wong (2000) investigated the foreign exchange exposure of manufacturing firms in the U.S. to test for an association between foreign exchange exposure and derivative disclosures required by the SFAS No 119 (and its predecessors SFAS No 105 and 107). He documented weak associations between derivative disclosures and foreign exchange exposure and suggested that this can be due to inability in controlling for firms' inherent exposures and shortcomings of the accounting disclosures. Nevertheless, taken together the results of the five studies presented above suggest that the use of currency derivatives may help to reduce firms' foreign exchange exposure.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1   Research design

The research was an exploratory study carried out on sampled forex bureaus in Kenya.

3.2   Population

The population of study consisted of ninety-four forex bureaus operating in Kenya as listed by the Central Bank of Kenya supervisory department as at September 2005 (See Appendix 1). Their distribution patterns in major towns are such that seventy-five operate in Nairobi, twelve in Mombasa, two in Nakuru, one in Eldoret, Kisumu, Malindi, Namanga and Lokichogio.

3.3   Sampling Frame

All the ninety-four forex bureaus registered with the Central Bank of Kenya supervisory department as at September 2005 formed the sampling frame.

3.4   Sample size

Convenience sampling method was used for the survey. Based on location, only the forex bureaus operating in Nairobi formed the sample. In total there are seventy-five bureaus operating in Nairobi representing eighty percent of the study population and as such is a good representative sample. The sampling method was chosen to enhance data collection due to time, cost and other technical implications.

3.5   Data collection

Both qualitative and quantitative primary data was used for the study. It was collected through detailed self-administered questionnaires comprising of open-ended, closed-ended and Likert type questions. The questionnaires were administered to the treasury departments /financial managers of the seventy-five forex bureaus using a 'drop-and-pick-later' technique. Follow-up activities included telephone calls, e-mails and walk-ins. To allow reasonable time to the respondents three weeks was allotted for data collection.

3.6   Data analysis

On receiving the questionnaires, the data collected was thoroughly checked to ensure completeness, consistency, accuracy and uniformity. The data was labeled, coded and keyed into Microsoft Excel for analysis using descriptive statistics techniques. A comparison of the foreign exchange risk management practices of the responding forex bureaus with recommendations of academic literature was done. To meet the first objective of the study, (which was to ascertain the foreign exchange risks forex bureaus face) the sample survey data was analyzed using the following descriptive statistics tools; measures of central tendency and tables of frequencies. To meet the second objective, which aimed at assessing the foreign exchange risk management practices used by forex bureau's in mitigating foreign exchange risk, weighted average response was calculated on the ranking type questions. This was calculated as the sum of the products of the number of respondents and their weight and each corresponding rank divided by the total number of respondents in each category. To facilitate conceptualization of the research findings, the survey data went through further content analysis and the results presented in tables, bar graphs and pie charts.

CHAPTER FOUR: DATA ANALYSIS AND INTERPRETATION OF FINDINGS

4.1 Introduction

Seventy-five forex bureaus were selected for the study but only fifty three responded representing a response rate of 71%. Such a response is high for this kind of study considering the confidentiality attached to foreign exchange risk management practices and the fact that most forex bureaus, especially in Kenya, are cynical about business research intentions. Due to this fact, twenty two forex bureaus 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 precaution to ensure that vital information provided in research does not leak to competitors. The names of responding bureaus are withheld in this document because of confidentiality of information given. This research endeavored to ascertain foreign exchange risk exposures faced by forex bureaus in Kenya and subsequently ascertain the foreign exchange risk management practices they use to mitigate the aforementioned risk exposures.

Figure one represents the population, sample size and response rate.

Source: Survey data

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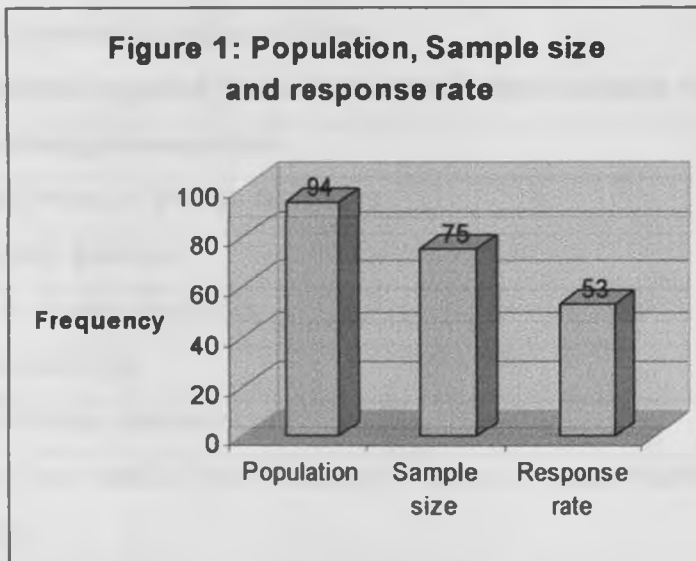
4.2 General information

General information was solicited in to establish key features of the forex bureaus 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. Glaum (2000) also 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 and other transactions. The bureaus 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 Ndungu (1997), the exchange rate policy in Kenya has undergone various regime shifts, driven to a large extent by the economic events especially balance of payments crises.

A brief overview of the transactions exposing the responding forex bureaus to foreign exchange risks is presented in table one below.

Table 1: Transactions exposing forex bureaus to foreign exchange risk.

No.	Foreign exchange transactions
1.	Buying and selling of foreign currencies
2.	Cross currency dealings
3.	Investing in foreign currencies
4.	Speculative dealings
5.	Lending in foreign currency
6.	Borrowing from banks, Forex dealings in respect of money transfers and profit translation
7.	All foreign currency denominated transactions e.g. money transmission.
8.	Trading in currencies i.e. Spot dealings, Forwards etc

Source: Survey data

In table one it can be deduced that most transactions exposing forex bureaus to foreign exchange risk were foreign currency denominated. Bureaus with total assets value of more than twenty one million Kenya shillings had a higher magnitude of transactions exposing them to higher foreign exchange rate risk than those with total assets value of less than twenty million Kenya shillings. Five forex bureaus did not indicate which transactions exposed them to the risk and this could probably be as a result of confidentiality attached to such information.

It was also necessary to ascertain how long the forex bureaus had been operating in Kenya. It emerged that most of them had not been in the country for long. Ten out of the fifty three responding bureaus had been operating in the country for more than 21 years; twenty had been operating in Kenya for a period of between eleven and twenty years while the remaining twenty three had been in operation for less than ten years. This is presented in figure two.

Figure 2

Number of years in operation

More than 21 years, 10, 19%

Less than 10 years, 23, 43%

Between 11 and 20 years, 20, 38%

Source: Survey data

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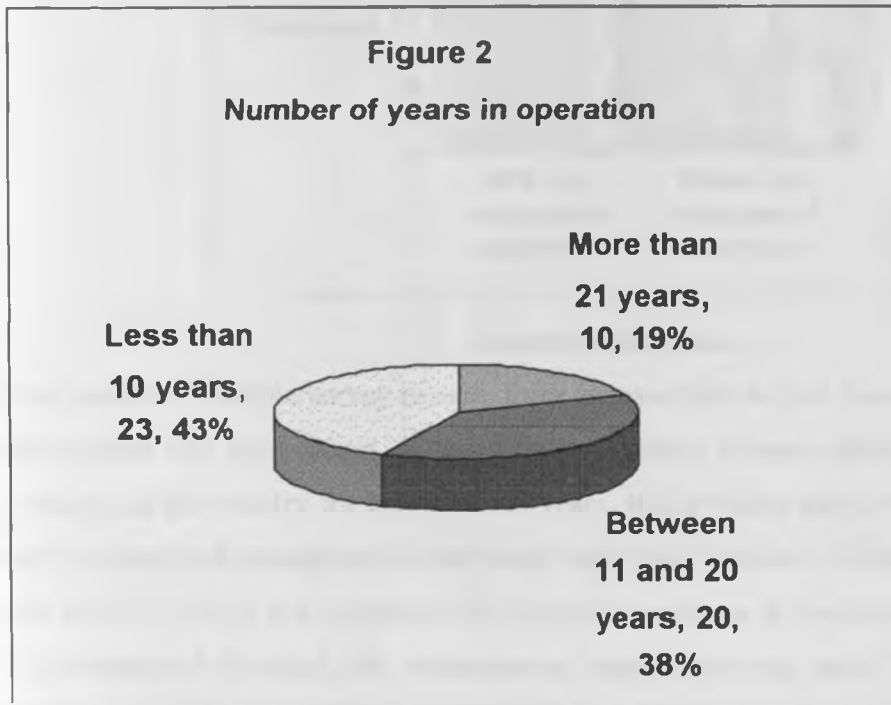
It emerged that forex bureaus that had operated in the country for more than 21 years had more advanced foreign exchange hedging techniques; they made use of most of the conventional hedging instruments and strategies more often than the other bureaus.

Being in possession of a risk management department is a positive step towards effective financial risk management. It was therefore necessary to ascertain if forex bureaus had risk management departments. It was interesting to note that forty out of the fifty three responding bureaus had risk management departments. The thirteen that were without risk management departments had training programs on risk management. This clearly shows that risk management is an essential cornerstone in the success of Forex bureaus. An illustration of the distribution of the responses is presented in figure three.

Figure 3: Possession of risk management department.
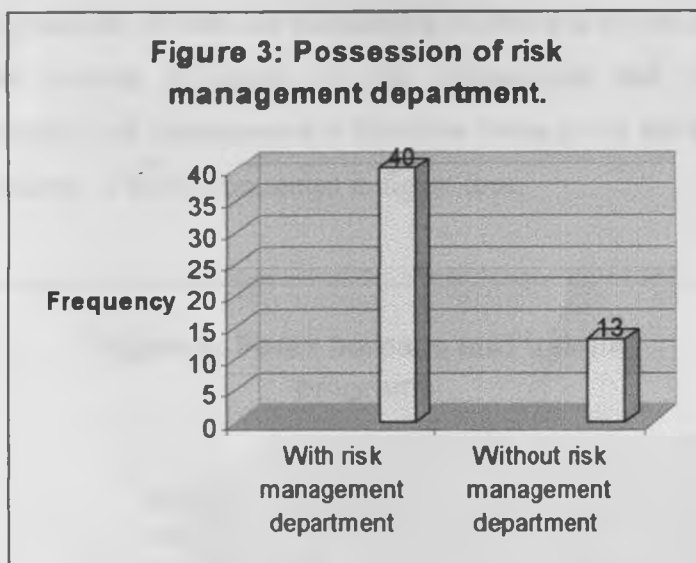
From the above sample survey results, forex bureaus that did not have risk management departments had asset values of less than ten million Kenyan shillings and had been operating in the country for less than ten years. It is possible that they did not find the need to create risk management departments 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 bureaus with risk management departments had total assets value of over twenty one million Kenyan shillings and had been operating in the country for more than eleven 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 He and Ng (1998) who found out that firms that predicted to hedge had lower Foreign exchange exposure, on average, than comparable sample firms.

It is recommended that firms should have training programs on risk management in order to enhance effective financial risk management. Most of the responding forex bureaus conducted training programs on risk management. Forty-three had training programs while ten did not have such programs. Considering the increased attention that has been given to financial risk management worldwide, the above responses were an indication that Forex bureaus in Kenya were also directing their efforts to contemporary financial risk management practices. It was also encouraging to note that the ten forex bureaus that did not conduct training programs on risk management had risk management departments. Financial risk management is therefore being given more attention among forex bureaus in Kenya. This is represented in figure four.

Figure 4: Forex bureaus and training programs
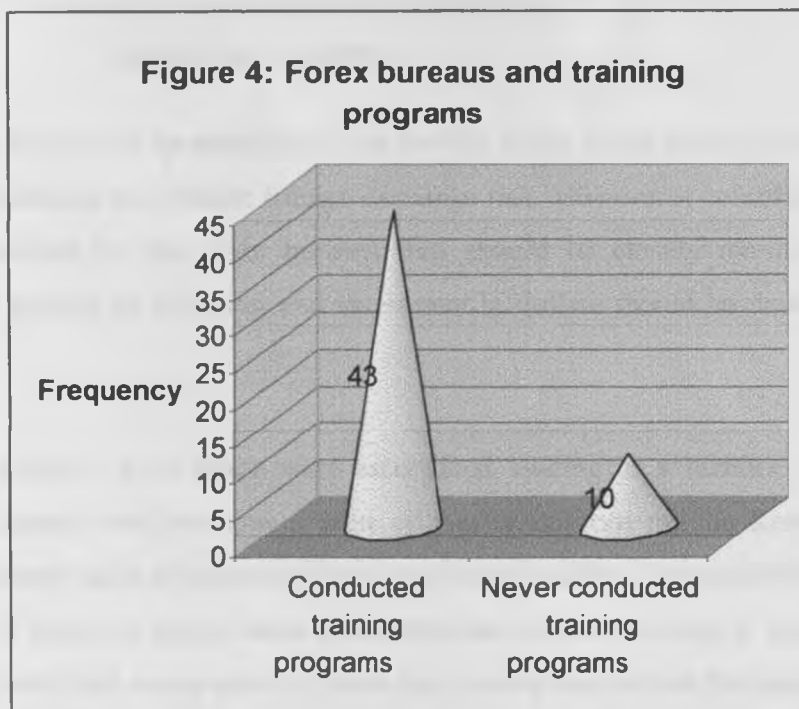
Source: survey data

The forex bureaus 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 would have the greatest contribution to a firm's foreign exchange risk. Thirty five forex bureaus indicated that the US dollar had the greatest contribution to their exchange rate risk; ten indicated the Pound while eight indicated the Euro as having the greatest contribution to their exchange rate risk. This is represented below in figure five.

Figure 5: Currency contribution to foreign exchange risk

Euro, 8, 15%

Pound, 10, 19%

Dollar, 35, 66%
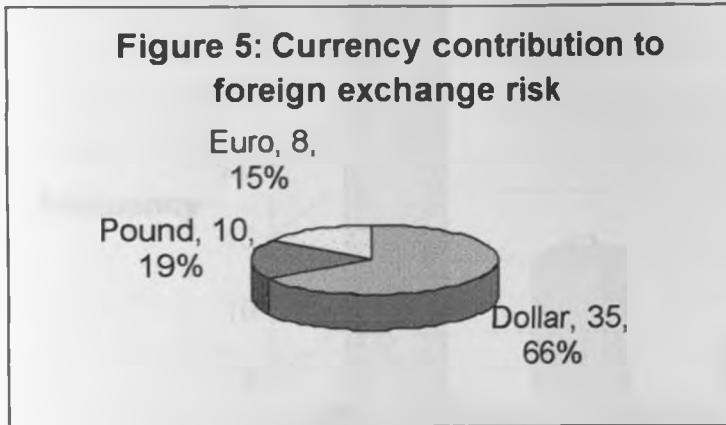
Source: survey data

From figure five it can be established that the US dollar is the actively traded currency hence contributes to the greatest foreign exchange risk. However it contributes greatly to revenues received by the forex bureaus thus should be closely monitored and any decisions as regards to financing and investment in dollars should be done with utmost care.

The Forex bureaus' total assets were ascertained leading to a number of inferences. Thirty five bureaus had total assets value of over twenty one million Kenyan shillings; twelve had assets value of between eleven and twenty million Kenyan shillings while the remaining six had total assets value of less than ten million shillings. It emerged that all the bureaus with total assets value of more than twenty one million Kenyan shillings had risk management departments and traded in derivatives a lot more than the other forex bureaus. Forex bureaus with total assets of below ten million Kenya shillings did not actively utilize conventional financial risk management instruments.

A detailed summary of the values of the responding forex bureaus' total assets is presented in figure six.

Figure 6: Value of forex bureau total assets
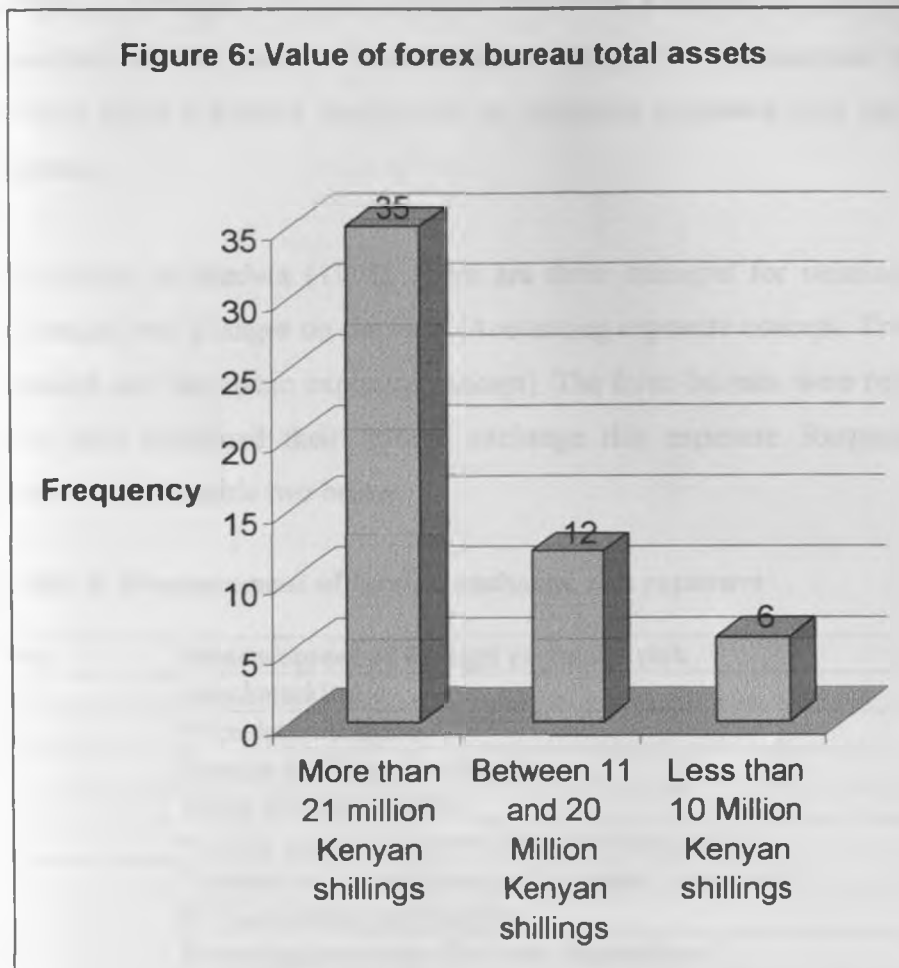
Source: Survey data

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 forex bureaus were asked a number of questions in an attempt to ascertain various facets of their foreign exchange risk management systems. This sub-section gives a detailed analysis of the responses generated from the responding forex bureaus.

According to Madura (1995), 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 forex bureaus 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

No.	Measurement of foreign exchange risk
1.	Benchmarking
2.	Price determination
3.	Foreign exchange fluctuations
4.	Value of money traded
5.	Weekly exposure reports from the head office
6.	Translation, Transaction and economic exposure
7.	By monitoring and hedging
8.	Measuring everyday for every transaction
9.	In terms of how many transactions are passed and who are the clients
10.	By use of the CBK PRIO statement, country exposure measurement etc.

Source: Survey data

Shapiro (2002) 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

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responding forex bureaus were due to the fact that the financial system in Kenya is an emerging economy.

Another question was asked to ascertain the foreign exchange risk exposures forex bureaus face. Table three gives a list of the exposures.

Table 3. Exposures faced by forex bureaus.

No.	Type of exposure
1.	Accounting, Transaction and Economic exposure
2.	Forecast risks
3.	Market structure
4.	Money laundry
5.	Currency fraud activities

Source: survey data

The forex bureaus were asked whether they hedged against translation, transaction and economic exposures. Twenty eight bureaus indicated that they hedged transaction exposure, twenty two hedged economic exposures while three indicated to hedge against accounting exposure. Few forex bureaus could have indicated to hedge against translation exposure due to the fact that all of them are locally owned and do not have foreign subsidiaries thus are to a greater extent affected mainly by transaction and economic exposure. The figure below presents an overview of the responses.

Figure 7: Hedging against Accounting, Transaction and Economic exposure

Source: Survey data

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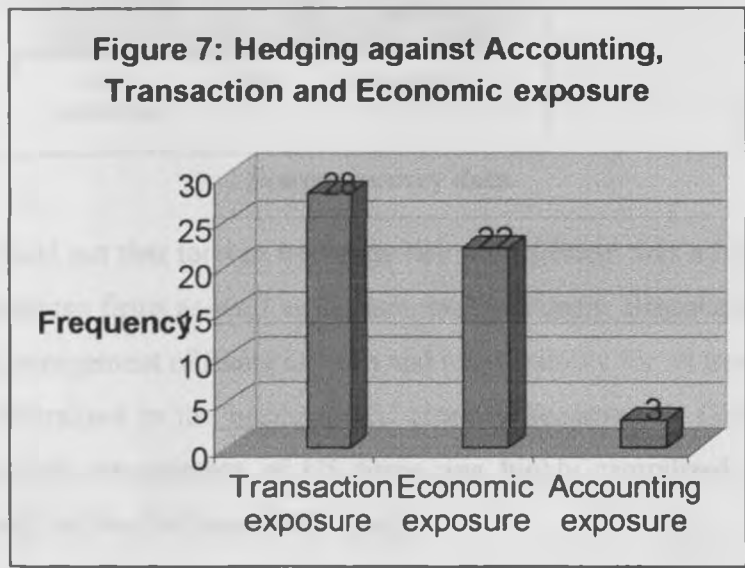
Forex bureaus were also requested to indicate the foreign exchange risk management practices they used to mitigate foreign exchange risk emanating from foreign exchange dealings. The bureaus indicated to use forward contracts, money market hedge, currency option and currency swaps They did not indicate the use of pricing decisions, exposure netting, currency collars or foreign currency options as other remedies they take. This explains why accounting measures may not necessarily be an indication of economic reality.

Centralization of the forex bureaus' foreign exchange risk management function was also ascertained. Ten forex bureaus indicated to use guidelines only set by the central bank of Kenya, Six indicated to make hedging decisions independently as cases demanded. However thirty seven forex bureaus indicated to use central bank guidelines while at the same time making independent decisions as cases demanded. The variation in responses could be as a result of each forex bureau being a separate entity from one another and governed by different policies and business objectives. This is illustrated in figure eight.

Figure 8: Centralization of risk management function
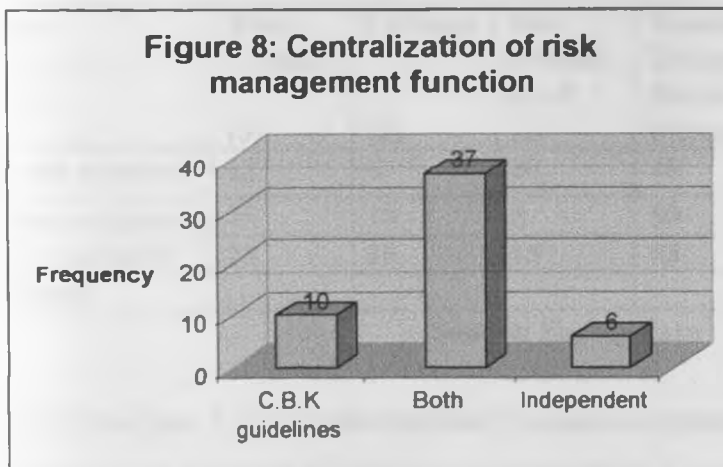
Source: survey data

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 forex bureaus were also asked on how often they measured the success of its exchange risk management policy. Fifty percent of the forex bureaus indicated that they did it once at the end of the month by doing stock revaluation to see on the realized profit or loss on exchange rates. Twenty percent did it at the end of two weeks, ten percent every day while twenty percent never responded to this question. This could probably have been due to confidentiality attached to this research question.

Forex bureaus were also asked to indicate whether they hedged their positions against Transaction, Economic and Accounting exposures and subsequently indicate the extent to which it affected their bureau. They rated the extent of the statements' applicability on a scale of 3 (Most critical) to 1 (not critical at all). Means were then calculated to gauge the responses. 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 4: The extent to which foreign exchange risk affects forex Bureaus.

ements	Most Critical (3)	Critical (2)	Not critical at all (1)	Number of Responding Forex bureaus	Means	Ranking
ranslation exposure	12	6	30	48	1.63	3.
ransaction exposure	35	10	5	50	2.6	1.
onomic exposure	23	15	15	53	2.15	2.
rage Mean					2.13	

Source: Survey data

From table four it can be observed that Transaction exposure with a mean of 2.6 (Critical) is ranked first followed by economic exposure with a mean of 2.15. Translation exposure with a mean of 1.63 is seen not to be critical compared to the other forms of foreign exchange risk exposure. Li (2003) observes that the economic environment in which firms operate is highly volatile and unpredictable. Increased volatility, greater interdependence and new risks have made the structure of risk exposure of forex bureau's and other financial institutions more complex. The volatility of foreign exchange rates and interest rates has been increasing significantly thus the necessity to have action plans in place to hedge the risk exposures. It can be inferred from the findings that translation exposure could have been ranked last due to the fact that all the forex bureaus are locally

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owned and have no foreign subsidiaries. As a result the risk resulting from consolidating foreign accounts to home currency values is so minimal though losses occur due to fluctuation of interest and exchange rates on its assets denominated in foreign currencies

Forex bureaus were also requested to indicate which risk management practices and instruments they used in hedging against foreign exchange risk. They were also requested to indicate how often they used them. They rated the extent of applicability on a scale of 4 (Most frequently used) to 1 (not used at all). Means were then calculated to gauge the responses. Table five gives a summary of the responses and means while a detailed analysis of the responses is presented in the subsequent paragraphs.

Table 5: Foreign exchange risk management instruments and strategies used.

Statements	Most frequently used (4)	Moderately used (3)	Occasionally used (2)	Not used at all (1)	Forex bureaus		
1. Money market hedge	20	14	7	4	45		
2. Currency swap	17	9	2	12	40	3.025	4
3. Foreign currency option	15	19	10	3	47	2.98	6
4. Forward contract	25	17	9	-	51	3.31	2
5. Others (Please specify)							
a) Use fake currency detector	30	15	8	-	53	3.42	1
b) Use scanning machine	20	17	6	7	50	3.00	5
c) Deal with well known customers	15	9	5	23	52	2.31	8
d) Holding adequate resources	17	8	9	14	48	2.58	7
Average Mean						2.97	

Source: survey data

From table five it can be observed that forex bureaus ranked first the use of fake currency detectors as a hedging strategy (moderately used with a mean of 3.42). This could have been as a result of over the counter buying and selling of foreign currencies, which is mainly there core business. Use of forward contracts was ranked second with a mean of 3.31 indicating that most forex bureaus hedged their future positions as regards to its future payables and receivables. However dealing with well-known customers was ranked the last with a mean of 2.31 indicating that it was occasionally used and not a widely practiced hedging strategy. 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. The responses are represented in figure nine.

Figure 9: Frequently used financial instruments
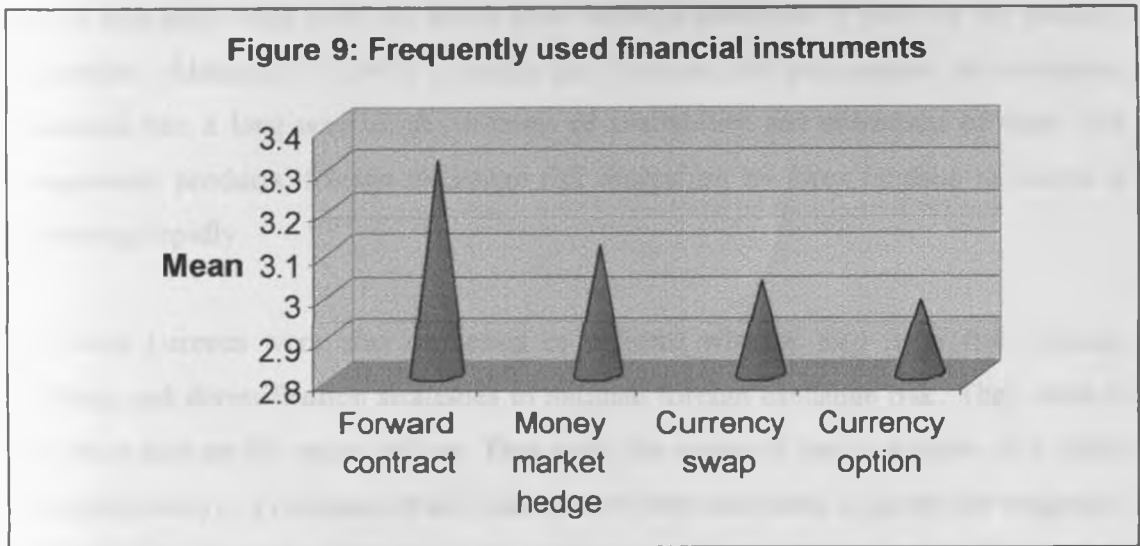
Source: survey data

Brucaite and Yan (2000) found out that Forwards were the main instruments used by most firms; Glaum (2000) found out that currency forward contracts was the most frequently used instrument. The above results also indicate that each forex bureau has its own peculiar hedging instruments and strategies. The variation in practices is 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 forex bureaus were bound to give various responses that were influenced by their views on what they considered 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 use 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.

Brucaite and Yan (2000) indicate that exchange rate risk could be managed using financial instruments (Futures, Forwards, and 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 forex bureaus made use of most of the hedging instruments. Although Li (2003) contends that financial risk management in developing economies has a long way to go, in terms of availability and utilization of many risk management products, foreign exchange risk mitigation by forex bureaus in Kenya is developing rapidly.

The forex bureaus were also requested to indicate whether they used risk shifting, matching and diversification strategies to mitigate foreign exchange risk. They were to rank them also on the extent of use. They rated the extent of use on a scale of 4 (Most frequently used) to 1 (not used at all). Means were then calculated to gauge the responses. 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 6: Use of risk shifting, matching and diversification strategies

Statements	Most frequently used (4)	Moderately used (3)	Occasionally used (2)	Not used at all (1)	Number of responding Forex bureaus	Means	Ranki
1. Risk shifting	10	4	11	20	45	2.09	3
2. Matching	20	11	10	6	47	2.96	2
3 Diversification	28	17	6	-	53	3.30	
Average mean						2.78	

Source: survey data

In table six it can be observed that forex bureaus most frequently use diversification strategy as opposed to risk shifting and matching. It can be inferred that they prefer investing and financing in a portfolio of currencies to spread and reduce the total diversifiable risk. Matching revenues and cost is another strategy they occasionally practice. This is represented in figure ten.

Figure 10: Frequency in use of risk shifting, diversification and matching strategies
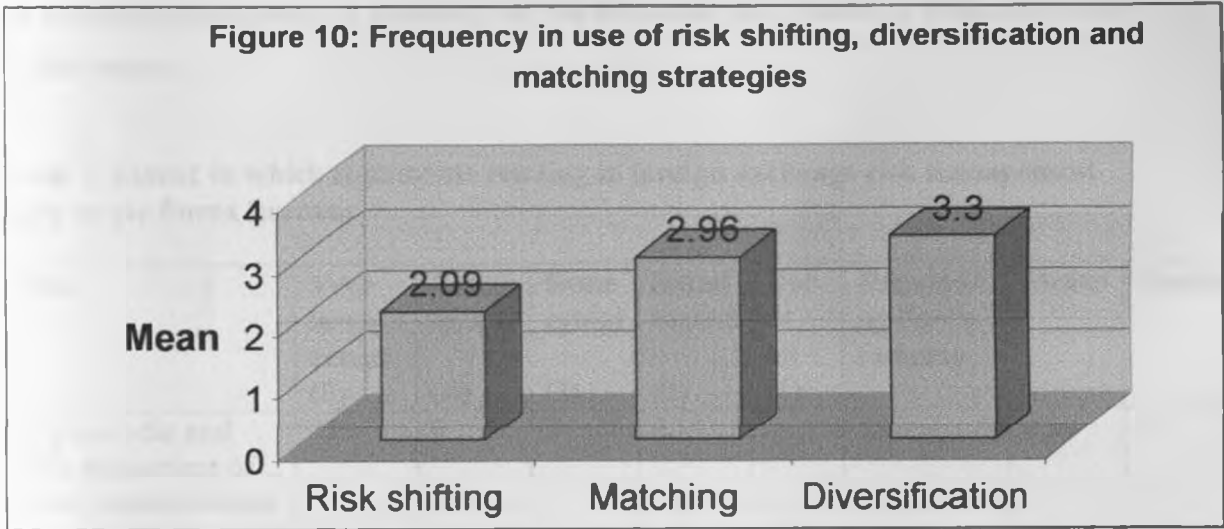
Source: survey data

Forex bureaus 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 forex bureaus 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. A detailed discussion of the findings is presented in the preceding paragraphs; a summary of the responses and means is illustrated table number seven.

Table 7: Extent to which statements relating to foreign exchange risk management apply to the Forex bureaus

Statements	Very large extent (5)	Large extent (4)	Some extent (3)	Small extent (2)	Not at all (1)	Responding Forex bureaus	Means	Ranking
1. Making periodic and systematic assessment of transaction, translation and economic exposure.	33	9	5	6	-	53	4.30	2
2. Hedging with an aim of profiting from exchange rate movements.	30	12	6	-	2	50	4.36	1
3. Forecasting currency fluctuations during planning horizons.	30	8	6	6	2	52	4.12	4
4. Financial decisions being influenced by foreign exchange decisions.	27	9	7	-	10	53	3.81	5
5. Basing hedging decisions on individual currency positions.	34	3	11	5	-	53	4.25	3
6. Using derivatives for speculation purposes	15	10	-	10	14	49	3.04	7
7. Having general rules for setting hedging periods	18	7	14	10	4	53	3.47	6
Average mean							3.91	

Source: survey data

From table seven it can be observed that most forex bureaus ranked hedging with an aim of profiting from exchange rate movements first with a mean of 4.36. Stulz (1996) found out that firms try to make profits by actively managing the financial risks of their businesses. Wong (2000) 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 forex bureaus believed that the Kenyan foreign exchange market is not efficient thus they could generate above average returns for their forex bureaus. To that effect, most forex bureaus 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. 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. He also found out that most firms used exchange rate forecasts to decide on hedging. The 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.

Glaum (2000) indicates that firms that aim to reduce or eliminate exchange risk can hedge individual foreign exchange positions. Most of the responding forex bureaus 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. Glaum (2000) found out that 42% of the responding firms did not have hard and fast rules for their hedging time horizon. Most responding forex bureaus indicated that they set specific time horizons for their hedging activities only to some extent. The findings of this study are therefore similar to those of Glaum (2000).

Forex bureaus were asked whether during periods of relatively high profits they protected themselves less intensively against unexpected exchange rate changes than they usually did. Most 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.

Forex bureaus 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 they employed various salient financial risk management practices. They 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. Table eight gives a summary of the responses and means while a detailed analysis of the responses is presented in the subsequent paragraphs.

Table 8: 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)	Forex bureaus	Mean	Ranking
1. Use of diversification strategy	32	10	8	2	1	53	4.32	2
2.Use of natural hedging/matching strategy	24	12	3	8	4	51	3.86	4
3.Identification, measurement and management of risk	23	13	10	1	3	50	3.96	3
4. Exchange risk management done to achieve business objectives	30	14	2	3	-	49	4.44	1
5. Firms cannot make speculative gains since markets are efficient	20	11	8	2	13	53	3.49	5
Average mean							4.01	

Source: survey data

Table eight gives a highlight on the risk management practices forex bureaus employ in the financial market. They ranked managing exchange risk for business objectives first with a mean of 4.44. 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 foreign exchange rate movements. 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 and Stulz (1996) found out that firms try to make profits by actively managing financial risks hence do not just hedge passively. Diversification as one of the landmarks of risk management was ranked second with a mean of 4.32. To mitigate foreign exchange rate risk, firms can finance their operations in different currencies that are cheaper than local currencies. Most responding forex bureaus indicated that they diversified their operations by making use of funds in more than one

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currency. They 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 note that most of the responding forex bureaus 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 decides how its exchange risk management should be organized and which strategy it should adopt (Glaum, 2000). For most forex bureaus, financial risk management implementation involved 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.

CHAPTER FIVE: SUMMARY AND CONCLUSIONS.

5.1 Summary

To achieve the two research objectives, questionnaires were administered to the treasury departments / financial managers of the sampled forex bureaus using a drop and pick later technique. The response rate was seventy one percent (fifty three out of the seventy five). Most responses were adequate save for a few non-responses to some 'sensitive' questions. Comparison of the responding forex bureaus 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.

It was interesting to note that most forex bureaus had been in operation for a period of less that ten years while only a few had been operating for more than twenty one years. This clearly indicates that the environment they operate in is so volatile and taking positions in the financial market is a key factor in their success. Since there are no formal corporate approved financial risk management practices, some hedging instruments and strategies were forex bureau specific though quite a number of them were conventional. Empirical evidence and academic literature, especially from Europe and America, was extensively utilized in the endeavor to link theory and corporate practice. It emerged that most forex bureaus considered the Kenyan foreign exchange market to be inefficient hence being able to take individual positions with intentions of making financial gains by predicting future exchange rates. Financial risk management has gained increased attention amongst most forex bureaus since a strong majority of them had risk management departments and training programs about the same. Most forex bureaus used derivatives to build speculative positions in the foreign exchange market. Forex bureaus that had operated in the country for long had more apt foreign exchange risk management practices. It also emerged that most forex bureaus practiced foreign exchange risk management in order to achieve business objectives.

A number of other inferences were drawn regarding the forex bureaus foreign exchange risk management practices. There was a strong relationship between the size of the forex bureau and use of derivatives. Most forex bureaus with asset values of over twenty one million Kenyan shillings used derivatives to a greater extent than those with asset values of less than ten million Kenyan shillings. Both forward contracts and money market hedge were frequently utilized hedging instruments by most forex bureaus. Diversification and risk matching were also the most frequently used strategies by forex bureaus in the Kenyan volatile economy.

Most forex bureaus employed various exposure measurement practices. It emerged that a majority of the forex bureaus did a periodic and systematic assessment of their exposure measurement strategies. Besides accounting, transaction and economic exposure concepts, most of them had other foreign exchange exposure measurement strategies that were peculiar to each forex bureau which comprised of bench marking, price determination, foreign exchange fluctuations and weekly exposure reports. Transaction exposure was considered the most critical by most forex bureaus followed by economic exposure and accounting exposure to a lesser extent. Other foreign exchange risks they faced included; forecast risks, market structure, money laundry and currency fraud. The foreign exchange risk management practices they used to mitigate foreign exchange risk emanating from foreign exchange dealings were; use of forward contracts (most frequently used financial instrument), money market hedge, currency swap, currency option, use of fake currency detector, currency scanning machine, dealing with well known customers and holding adequate resources in terms of foreign currency assets and liabilities. It was also ascertained that most forex bureaus followed guidelines from the central bank of Kenya on foreign exchange risk management while at the same time making individual decisions as cases demanded.

5.2 Conclusions

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

Based on research data, most foreign exchange hedging practices were influenced by the forex bureaus 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 programs on financial risk management and use of specific financial instruments to hedge against foreign exchange risk. Most of them carried out regular and systematic assessment of exposure measurement strategies and their exchange risk management policies in general. A number of forex bureaus made use of accounting, transaction and economic exposure measurement strategies. Matching, risk sharing, diversification and selective hedging strategies were extensively used.

Most forex bureaus carried out foreign exchange risk management to some extent. Tables seven and eight were specifically designed to ascertain the extent of exchange risk management by the forex bureaus. Testing the applicability of other practices was one other way to gauge the extent of foreign exchange risk management by the forex bureaus. The average means of the responses from the two tables were 3.91 and 4.01 indicating that the forex bureaus practiced exchange risk management to some extent.

Most forex bureaus utilized quite a number of other practices to some extent. 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. Identifying, measuring and managing risk was a common practice amongst most forex bureaus. Forward contracts and money market hedge were most frequently used instruments than the currency swap and foreign currency option. Diversification and risk matching strategies were more preferred to risk sharing while selective hedging was more preferred to hedging all open

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positions immediately.

5.3 Limitations

Due to the busy schedule of respondents a great deal of time was spent on follow-ups and walk-ins to see to it that the questionnaires were filled. In most cases they were filled in the presence of the researcher and thus this could have negatively affected the quality of responses.

Most forex bureaus with total asset value of less than ten million lacked qualified financial managers as some operated as family business thus delegated the task of filling questionnaires to subordinates, some of whom were not fully conversant with some salient exchange risk management practices. 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 financial market. 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 since interviews could have probably been used to give such clarifications.

Most forex bureaus did not have specific foreign exchange risk management practices. Some had ad hoc practices like dealing with well-known customers and depended on the fake currency detector. It was therefore difficult to generalize some findings considering variations in responses. In such cases, conventional practices were not adopted by most forex bureaus.

Eleven percent of the responding forex bureaus 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.

Twenty two forex bureaus declined to fill in the questionnaires, claiming that their company policies did not allow them to participate in any research activities. Some respondents did not answer some questions and claimed that they were confidential. 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 twenty two forex bureaus participated.

5.4 Recommendations

The central bank of Kenya, forex bureaus and academicians will benefit from the findings of this study. Forex bureaus will be able to compare their risk management practices and those of other comparable ones to assess how well they are doing in their efforts to mitigate the effects of foreign exchange risk. The central bank of Kenya will also be in a position to appreciate the role played by the forex bureaus in fostering a strong financial market and thus intervene to counteract any systematic and unsystematic risk that could result in spillover effects leading to bank runs in the financial market.

Academicians will be able to critic the findings of this study and compare them to other empirical studies in order to gauge the level of foreign exchange risk management amongst forex bureaus in Kenya. 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 forex bureaus participated in foreign exchange risk management to achieve business objectives and profit from exchange rate movements. They based their foreign exchange hedging decisions on speculations and forecasts of currency market fundamentals. This implies that forex bureaus 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 Central Bank of Kenya should intervene and manipulate market fundamentals to eliminate such inefficiencies.

As a sample survey, the findings of the study provide useful information on how accounting theory may not necessarily be an indication of corporate practice. The study has been able to point out the risk exposures that forex bureaus face in the Kenyan environment, how they measure those risks and eventually how they hedge the risk exposures. This is because most of the forex bureaus have individual tailored foreign exchange risk management practices in addition to the accounting theory practice. A detailed analysis of the link between theory and practice is well documented.

5.5 Suggestions for further research

Future researchers should endeavor to ascertain the effectiveness of the chosen foreign exchange risk management practices by the forex bureaus in Kenya. Besides focusing on the risk management practices, researchers should also attempt to ascertain the success of forex bureaus risk management policy and establish a correlation between total asset value, risk and return.

To enhance validity, future studies of this nature should be conducted through interviews with financial managers and other qualified personnel. This will provide more authentic responses and improve on the quality of research work.

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APPENDIX I: LIST OF FOREX BUREAU'S IN KENYA.

NAME OF FOREX BUREAU	LOCATION
1. ABC PLACE FOREX BUREAU LTD	NAIROBI
2. ALPHA FOREX BUREAU LTD	NAIROBI
3. AMAL EXPREDD FOREX BUREAU LTD	NAIROBI
4. AMANA FOREX BUREAU LTD	NAIROBI
5. AMEX FOREX BUREAU LTD	NAIROBI
6. ARCADE FOREX BUREAU LTD	NAIROBI
7. ARISTOCRATS FOREX BUREAU LTD	NAIROBI
8. BAMBURI FOREX BUREAU LTD	MOMBASA
9. BAY FOREX BUREAU (NRB) LTD	NAIROBI
10. BLUE NILE FOREX BUREAU LTD	NAIROBI
11. BLUE SEAS FOREX BUREAU LTD	NAIROBI
12. CAPITAL FOREX BUREAU LTD	NAIROBI
13 CASH LINE FOREX BUREAU	NAIROBI
14. CENTRAL FOREX BUREAU LTD	NAIROBI
15. CHASE BUREAU DE EXCHANGE	NAIROBI
16. COAST FOREX BUREAU LTD	MOMBASA
17. CONTINENTAL FOREX BUREAU LTD	NAIROBI
18. COSMOS FOREX BUREAU LTD	NAIROBI
19. CRATER FOREX BUREAU LTD-	NAKURU
20. CROWN BUREAU DE CHANGE (K) LTD	NAIROBI
21. DAHAB SHILL FOREX BUREAU LTD	NAIROBI
22. DALMAR EXCHANGE BUREAU LTD	NAIROBI
23. DALSAN FOREX BUREAU LTD	NAIROBI
24. DIANI FOREX BUREAU LTD	MOMBASA
25 DOLLAR FOREX BUREAU LTD	MALINDI
26. DOWNTOWN CAMBIO LTD	NAIROBI

27. EURO DOLLAR BUREAU LTD DE CHANGE LTD	NAIROBI
28. FINERATE FOREX BUREAU LTD	NAIROBI
29. FOREX BUREAU AFRO LTD	NAIROBI
30. FORT JESUS FOREX BUREAU LTD	MOMBASA
31. FULUS BUREAU DE CHANGE LTD	MOMBASA
32. GATEWAY FOREX BUREAU LTD	NAIROBI
33. GIANT FOREX BUREAU DE CHANGE LTD	NAIROBI
34. GIGIRI FOREX BUREAU LTD	NAIROBI
35. GIVE AND TAKE FOREX BUREAU LTD	NAIROBI
36. GLORY FOREX BUREAU LTD	NAIROBI
37. GNK FOREX BUREAU LTD	NAIROBI
38. GOLDFIELD FOREX BUREAU LTD-	NAIROBI
39. HILL FOREX BUREAU LTD-	NAIROBI
40. HURLINGHAM FOREX BUREAU	NAIROBI
41. INDUSTRIAL AREA FOREX BUREAU DE	NAIROBI
42. ISLAND FOREX BUREAU LTD	MOMBASA
43. JODECI BUREAU DE CHANGE LTD	NAIROBI
44. KAAH FOREX	NAIROBI
45. KAREN BUREAU DE CHANGE LTD	NAIROBI
46. KAREN FOREX BUREAU	NAIROBI
47. KENZA EXCHANGE BUREAU LTD	NAIROBI
48. LACHE FOREX BUREAU	NAIROBI
49. LANGATA FOREX BUREAU LTD	NAIROBI
50. LANGATA MALL FOREX BUREAU	NAIROBI
51. LEO FOREX BUREAU LTD	MOMBASA
52. LINK FOREX BUREAU (K) LTD	NAIROBI
53. LOKI FOREX BUREAU	LOKICHOGIO
54. MANDEEQ FOREX BUREAU LTD	MOMBASA
55. MANO FOREX BUREAU LTD	NAIROBI
56. MANDEEQ FOREX BUREAU	MOMBASA
57. MARITIME FOREX BUREAU LTD	MOMBASA

58. MASAI MARA FOREX BUREAU LTD	NAIROBI
59. MAXFAIR FOREX BUREAU LTD	NAIROBI
60. METROPOLITAN BUREAU DE CHANGE LTD	NAIROBI
61. MIDDLETOWN FOREX BUREAU LTD	NAIROBI
62 MONA BUREA DE CHANGE	NAIROBI
63. MUTHAIGA FOREX BUREAU LTD	NAIROBI
64. NAAMAGA FOREX BURAU LTD	NAIROBI
65. NAIROBI BUREAU DE CHANGE LTD	NAIROBI
66. NAIROBI FOREX BUREAU LTD	NAIROBI
67 NAMANGA FOREX BUREA	NAMANGA
68. NAWAL FOREX BUREAU LTD	NAIROBI
69. NORWOOD FOREX BUREAU LTD	NAIROBI
70. OVERSEAS FOREX BUREAU LTD	NAIROBI
71 PEAK TOP EXCHANGE BUREAU	NAIROBI
72. PEARL FOREX BUREAU LTD	NAIROBI
73. PEL FOREX BUREAU LTD	KISUMU
74. PENGUIN FOREX BUREAU LTD	MOMBASA
75. PINNACLE FOREX BUREAU LTD	NAIROBI
76. PWANI FOREX BUREAU LTD	MOMBASA
77. RIFT VALLEY FOREX BUREAU LTD	NAKURU
78. SHEPHERDS FOREX BUREAU LTD	NAIROBI
79. SOLID EXCHANGE BUREAU JTD	NAIROBI
80. SPEEDY FOREX BUREAU LTD	NAIROBI
81. STERLING FOREX BUREAU LTD	NAIROBI
82. SUNSHINE FOREX BUREAU LTD	NAIROBI
83. TAIPAN FOREX BUREAU LTD	NAIROBI
84. TAWAKAL FOREX BUREAU LTD	NAIROBI
85. TRADE BUREAU DE CHANGE LTD	NAIROBI
86. TRAVELLERS FOREX BUREAU LTD	NAIROBI
87. TWFIQ FOREC BUREAU LTD	NAIROBI
88. UBANSTAR FOREX BUREAU LTD	NAIROBI

89. UNION FOREX BUREAU LTD	NAIROBI
90. VILLAGE MARKET FOREX BUREAU LTD	NAIROBI
91. WALLSTREET FOREX BUREAU LTD	ELDORET
92. WARWICK FOREC BUREAU LTD	NAIROBI
93. WESTLANDS FOREX BUREAU LTD	NAIROBI
94. YAYA CENTRE EXCHANGE BUREAU LTD	NAIROBI

APPENDIX II: RESEARCH QUESTIONNAIRE

The questionnaire seeks to ascertain foreign exchange risk management practices of forex Bureaus in Kenya

SECTION A: GENERAL INFORMATION

1. For how long has your forex Bureau been operating in Kenya?

    Less than 10 years   ☐

    Between 11 and 20 years   ☐

    More than 21 years   ☐

2. What is the value of your bureau's total assets?

    Less than 10 Million Kenya shillings   ☐

    Between 11 to 20 Million Kenya shillings   ☐

    More than 21 Million Kenya shillings   ☐

3. Does your forex bureau have a risk management department?

    Yes   ☐

    No   ☐

4. Which transactions expose your forex bureau to foreign exchange risk?

....

....

....

5. Which particular currency has the greatest contribution to your bureaus foreign exchange risk?

....

6. Does your forex bureau have training programmes on risk management?

    Yes   ☐   No   ☐

SECTION B: FOREIGN EXCHANGE RISK MANAGEMENT PRACTICES

1. How does your forex bureau measure foreign exchange risk exposure?

....

....

....

2. Which foreign exchange risk exposures does your forex bureau face?

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....

....

....

3. Which Foreign exchange risk management practices does your forex bureau use to mitigate foreign exchange risk emanating from foreign exchange dealings?

....

....

....

....

....

4. How centralized is your foreign exchange risk management function i.e. are your foreign exchange hedging practices governed by guidelines set by the Central Bank of Kenya or you make foreign exchange hedging decisions independently?

....

....

....

5. How often does your forex bureau measure the success of its exchange rate risk management policy?

....

....

....

....

5. Please indicate whether your forex bureau hedges against the following exposures. Kindly rank the extent to which they affect your bureau on a scale of 3-1

Statements	Most Critical (3)	Critical (2)	Not critical at all (1)
1. Translation exposure			
2. Transaction exposure			
3.Economic exposure			

6. Kindly indicate the extent to which financial instruments are used by your forex bureau to hedge against foreign Exchange risk? Please rank them on the scale of 4-1

Statements	Most frequently used (4)	Moderately used (3)	Occasion ally used (2)	Not used at all (1)
1. Money market hedge				
2. Currency Swap				
3.Foreign currency option				
4. Forward contract				
5. Others (Please specify) A).................................				
B).................................				

7. Which hedging strategies does your bureau employ? Please rank the extent to which you use them on the scale of 4-1.

Statements	Most frequently used (4)	Moderately used (3)	Occasion ally used (2)	Not used at all (1)
1. Risk sharing				
2. Matching				
3. Diversification				
4. Others (Please specify) A).................................				
B).................................				

8. Listed Below are statements relating to foreign exchange risk management. Please rank them on a scale of 5-1(by ticking) the extent to which they apply to your forex bureau.

Statements	Very large extent (5)	Large extent (4)	Some extent (3)	Small extent (2)	Not at all (1)
1. Forex bureau's make periodic and systematic assessment of transaction, translation and economic exposures.					
2. Forex bureau's hedge with an aim of profiting from foreign exchange rate movements.					
3. Forex bureau's forecast appreciation and depreciation of relevant currencies during their planning horizons.					
4. A Forex bureau's financial decisions are influenced by its foreign exchange decisions.					
5. Forex bureau's base their hedging activities on individual currency positions.					
6. Forex bureaus use derivatives to build up speculative positions in the currency markets					
9. During periods of relatively high profits, forex bureau's protect themselves less intensively against unexpected exchange rate changes than they usually do.					

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

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 out 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. The main reason for practicing foreign exchange risk management is to achieve business objectives.					
5. Currency markets are information efficient: organizations cannot make speculative gains through predicting future exchange rates.					