

**A SURVEY OF FOREIGN EXCHANGE RISK MANAGEMENT PRACTICES BY  
TEXTILE AND APPAREL FIRMS IN EXPORT PROCESSING ZONES IN KENYA**

**BY**

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## DECLARATION

### STUDENT'S DECLARATION

I declare that this is my original work and has not been presented for a degree in any other university.

Sign:  .....

Date: 7/11/2009

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### SUPERVISOR'S DECLARATION

This proposal has been submitted for examination with my approval as university supervisor

Sign:  .....

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## DEDICATION

I dedicate this project to my friends and family.

## AKNOWLEDGEMENT

What a wonderful thing it is for people to live together with peace and love. Indeed it is a great work you have done as friends; to my supervisor, Mrs Nyamute I am greatly indebted to your guidance and support and the timely comments to this research work.

To the teaching fraternity, School of Business, your words of encouragement and pieces of advice were timely. To the MBA fraternity and friends especially Amos, Eric and Florence Mukiria thank you for your great comradeship. Indeed you made my day.

To my family; you are wonderful people, to my parents Kagai's your encouragement moved mountains, to my sisters and brother your assistance was crucial, and to many who contributed in various ways I love you all.

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## Abstract

The aim of this research study was to identify the nature of foreign exchange risk exposure faced by apparel firms in Kenya and to ascertain the foreign exchange risk management practices employed by apparel firms in Kenya.

The population of the study consisted of all 23 EPZ firms that were involved in production and sale of apparel and garment in Kenya as listed in Kenya Export Processing Zone Authority.

Qualitative primary data was used for the study. It was collected through self-detailed administered questionnaires (see appendix II) that had been constructed using open ended, close ended and Likert type of questions.

The primary data collected from the questionnaire was analysed using descriptive statistics such as measures of variation and measures of central tendency. The results were presented in the form of frequency tables, charts and graphs where necessary. The data analysis method was quantitative in nature using descriptive statistics where frequency and percentages were applied.

The study concludes that most firms did not have a risk department or section hence could not also be in a position to have a documented foreign currency management policy.

The study also concludes that most firms had their Chief executive officers as the person responsible for the risk management department.

The study also concludes that the firms had problems when it came to managing of foreign exchange risks. Such problems included getting the right foreign currency mix and frequent changes in exchange rates.

The study recommends that export processing zones firms should have a risk department or section. This can be responsible for the identification, assessment, and prioritization of risks.

followed by coordinated and economical application of resources to minimize, monitor, and control the probability and/or impact of unfortunate events.

The study also recommends that the firms should have a risk manager. He can be left the mandate of circumventing risks that can come from uncertainty in financial markets, project failures, legal liabilities, credit risk, accidents, natural causes and disasters as well as deliberate attacks from an adversars

In addition, the study also recommends that firms need to put in measures to administer foreign currency positions. Managing foreign exchange risk is a fundamental component in the safe and sound management of all institutions that have exposures in foreign currencies

## CHAPTER ONE

### 1.0 INTRODUCTION

#### 1.1 Background of the study

Foreign exchange risk is the magnitude and likelihood of unanticipated changes in exchange rate (Brucaite and Yan, 2000). According to Shapiro (2007), exchange rate exposure is the degree to which a company is affected by changes in exchange rates. Foreign exchange risk can be further subdivided into three exposures: translation, transaction and economic exposures (Fatemi and Gilaum, 2000). Perception of risk by individuals and at corporate level is both complex and subjective. It involves an understanding of risk, a perception of loss and gain, cognitive biases and personality. Despite advances in finance and risk management, satisfactory method for measuring the total financial risk faced by a business at any time remains elusive (Pickford, 2000).

According to Li (2003), financial exchange risk is the exposure of an institution to the potential impact of movements in exchange rates. Foreign exchange risk arises from two factors: currency mismatches in a firm's assets and liabilities (both on and off balance sheet) and foreign currency cash flow mismatches. Such risks continue until the foreign exchange position is covered. The risk may arise from variety of sources such as foreign currency accounts and; cash transactions and services, foreign exchange trading, investments denominated in foreign currencies and investments in foreign companies. He concludes that the amount at risk is a function of the magnitude of potential exchange rate changes and the size and duration of the foreign currency exposure

Fatemi and Gilaum (2000), further observe that in the recent past, risk management has received increased attention in both corporate practice and literature. This greater attention has been triggered by the development of markets for derivative financial instruments. Futures, forward contracts, options, swaps and other complex financial instruments today allow firms to transfer risks to other economic agents who are better able or are more willing to bear them.

Asaf (2004) notes that derivatives such as forward, futures, options and swaps are specialized off balance sheet risk management tools that allow firms to hedge many sources of market wide financial risks. Exchange rate risk could be managed using financial instruments and pricing strategies (Brucate and Yann, 2000). The major growth in the use of derivatives has been fuelled by trends towards securitization and in the increased understanding of the role that derivatives can play in unbundling, packaging and transferring risks (Scholes, 1998). Hedging of foreign exchange risk is beneficial when managers are risk averse and their compensation depends on changing values of the firm (Stulz, 1984).

Foreign exchange risk can be managed using financial instruments and pricing strategies. Forward contract is the most common instrument used in hedging against transaction exposure; a firm can also borrow money in one currency and then exchange it to another currency after which it uses the money generated from its operation to repay the loan; foreign currency option is another facility that gives the buyer the option (right), but not an obligation to buy or sell a certain amount of foreign currency or other securities at a fixed price per unit at a specific date or during a certain time period (Stulz, 1984). Matching strategy (natural hedge) is a way to decrease currency exposure by covering cash outflows by inflows in the same currency; risk sharing can also be employed by two contracting firms and diversification strategy whereby a firm can diversify its operations and making use of funds in more than one capital market and in more than one currency (Brucate and Yan). Empirical studies have been carried out to ascertain various salient aspects on the use of derivatives and other risk management strategies to mitigate foreign exchange risk.

Crabb (2003), indicates that in coping with financial risk, various derivatives products have been developed in the past twenty years and are widely used by large corporations. He has defined a derivative as any financial contract whose value is dependent upon the value of some underlying asset. He denoted that the use of derivatives has led to financial risk management and there is no uniform approach to financial risk management among companies today. Although current best practices are observed, the financial management objectives and the definition of what is exposed to financial market risk vary from one organization to another.

Consequently, what is hedged is subject to what is recognized as exposure. Both economics and finance research have attempted to accurately measure financial risk and determine the appropriate response of the firm to such risk (Crabb, 2003). Developments in financial innovations have increased the need for better risk management. Despite significant evidence of the existence of financial risk, its scientific analysis has hitherto been dominated by a narrow paradigm (Asaf, 2004).

### **1.1.2 Apparel and Textile Firms in Export Processing Zone in Kenya**

Export Processing Zone (EPZ) program in Kenya was established in 1990 to provide an attractive investment opportunity for export-oriented business ventures within designated areas or zones. This sought to help the economy through increased productive capital investment, jobs creation, transfer of technology, creation of backward linkages between the zones and the domestic economy and diversified exports (<http://www.epzkenya.com/>).

Managed and promoted by the Export Processing Zone Authority, the scheme offers a range of attractive incentives to ensure low cost operations, fast set up, smooth operations and high profitability. The EPZ incentive regime in Kenya provides exporting firms with a 10-year tax holiday, unrestricted foreign ownership and employment, and freedom to repatriate unlimited amount of earnings. The firms are also exempt from observing some core labour laws and regulations. For example, until 2003, trade unions could not organise workers in the EPZ firms. In addition, the Factories act (chapter 514) is not being enforced in the zones (<http://www.epzkenya.com/>).

Kenya's Export Processing Zone Authority (EPZA) has been in the forefront of initiating, promoting and providing attractive investment opportunities for the export-oriented business ventures in the country. EPZs are designed to further integrate Kenya into the global supply chain and attract export-oriented investments in the zones, thus achieving its economic objectives.

According to EPZA 2008 annual report, the program has contributed significantly to achieving these objectives with 74 firms in place (23 in textile and apparel sector), close to 60,000 workers employed and contribution of 10.7 % of national exports. Over 70% of EPZ output is exported to the USA under African Growth and Opportunity Act (AGOA). The African Growth and Opportunity Act (AGOA) is a part of U.S. legislation which offered preferential market access to the US for 37 designated Sub-Saharan African (SSA) countries by removing import duties (<http://ipsnews.net/news.asp?idnews=37557>).

The export oriented apparel sector in Kenya, has achieved tremendous growth in the last 5 years, due to improved access to the USA through tariff and quota advantage under the African Growth and Opportunity Act (AGOA). The table below show textile and apparel trade between Kenya and US

Textiles and apparel export and import between Kenya and US between year 2006 and March 2009: - Value (1,000 dollars)

	2006	2007	2008	2009 (Jan - March)
US Exports to Kenya	8,017	9,290	11,772	2,624
US Imports from Kenya	264,074	250,049	247,100	56,517

Source: US Department of Commerce

From the above analysis, the firms are faced with foreign currency risks as their sale of finished products are in foreign markets denominated in foreign currency. They also acquire most of their raw materials from foreign countries hence they cannot avoid the volatility of exchange rates when payment are being made in other currencies other than the domestic currency.

Other transactions the EPZ firms undertake include, funding by parent companies through foreign loans to meet domestic demand and international foreign currency transactions (<http://www.epzkenya.com/>).

Also some of these firms are foreign owned and are required to report to parent company in the foreign currency (Dollar reporting) due to the fact that it is a global currency and most MNCs operate in various parts of the world hence need for a common reporting currency (<http://www.epzkenya.com/>).

Considering the strategic role played by the EPZ firms in Kenya economy, and the nature of their operations there is therefore great need to study the risk management practices employed by EPZ firms to cushion against foreign exchange risks.

## **1.2 Statement of the Problem**

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

The motivation for the study is due to the nature and operations of EPZ firms. For them to remain in production and sale of apparel and textile business and retain the 30,000 local job opportunities at present, they need to import raw materials from USA and other countries and sell finished products to international markets at competitive predictable prices. The said transactions expose these firms to foreign exchange risks. Similarly, some of the firms are owned by foreign companies and therefore they report in parent company reporting currency, others firms borrow funds in foreign currency hence the expected cash inflows / outflow need to be certain



The existence of the foreign exchange risks requires a firm to develop and implement policies that would mitigate negative effects of fluctuating exchange rates. The negative effect of fluctuation exchange rate will have direct impact on the margins hence profitability of the firms will also fluctuate. To check on this, it is fundamental to have some financial management controls employed to sustain the EPZ firms in long run business. Consequently this study will focus on the exchange risk management strategies these firms use to mitigate against foreign exchange exposures

Empirical studies have revealed that of all financial risk exposures, foreign exchange risk has received more attention than interest and inflation rate risks. Exchange rate risk has also been considered to be the most critical of all the financial risk exposures (Brucaite and Yan, 2000). Local studies (Ibindi, 2006), (Omagwa, 2005) have also been done in Kenya on risk management practices but none, known to the researcher, has been done on foreign exchange risk management in the Textile and Apparel in the export processing zone. The study tried to fill the research gap that exist by carrying out a survey of foreign exchange risk management practices by textile and apparel firms in export processing zone by addressing the following questions: What foreign exchange risk exposures face the apparel firms at EPZ?, Which foreign exchange risk management instruments and strategies do the firms use? And to what extent does the empirical evidence apply to foreign exchange hedging practices?

### **1.3 Objectives of the Study**

- i. To identify the nature of foreign exchange risk exposure faced by apparel firms in Kenya
- ii. To ascertain the foreign exchange risk management practices employed by apparel firms in Kenya

### **1.4 Significance of the Study**

This research will make a contribution to the academic literature on the field of foreign exchange management in Kenya where very little is known about corporate practices in the EPZ firms due to few studies in the subject.

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

The findings of this study will help EPZ firms come up with appropriate hedging strategies by analyzing how other firms hedge against the risk

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.0

#### 2.1 Introduction

This chapter presents a review of related literature on the subject under study presented by various researchers, scholars, analyst and authors. The research has drawn materials from several sources which are closely related to the theme and the objectives of the study. Models by the writers are used to illustrate the various sub topics mentioned in the objectives of the study. The specific areas covered in this chapter are foreign exchange risk management in Kenya, nature of foreign exchange risk, importance of financial risk management, measurement and management of foreign exchange exposure and foreign exchange management practices.

#### 2.2 Foreign Exchange Risk Management in Kenya

Omagwa (2005) in his exploratory study on foreign exchange risk management practises by foreign owned commercial banks in Kenya, most banks consider credit/default risk to be the most critical of all the financial risks though empirical evidence shows that foreign exchange risk is the most critical risk for most firms. For most banks, foreign exchange risk management systems were governed by guidelines set by at head office (highly centralized foreign exchange risk management systems). Most banks, regardless of their size, extensively utilized most of conventional hedging instruments. Transaction exposure was rated as the most critical to most banks when compared to translation and economic exposures. Some hedging practices were considered by most banks to be more important than others, foreign currency option and forward contracts were most frequently used; natural hedging/ matching strategy, leading and lagging were also used. Most banks preferred the selective hedging strategy as compared to hedging all open positions immediately.

Uhindi (2006), in his research on foreign exchange risk management by forex bureaus in Kenya, focused on a sample of forex bureaus in Kenya. Transaction exposure was rated as most critical compared to others. Transaction exposure was through buying and selling foreign currencies.

cross currency dealings and investing and financing in foreign currencies. The US dollar, sterling pound and Euro were currencies that were greatly traded and thus had the greatest contribution to foreign exchange risk. The foreign exchange risk management practices they used to mitigate foreign exchange risk were forward contracts (most frequently used), money market hedge, currency swap, and currency option. 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.

### **2.3 Nature of Foreign Exchange Risk**

In trying to explain the fluctuations in exchange rates, several theories have been advanced that link between domestic and foreign inflation, interest rate and exchange rates. These are: the law of one price, the relative version of purchasing power parity, uncovered interest parity theory and covered interest parity theory.

#### **2.3.1 Law of One Price**

According to Reid and Joshua (2004), the law states that in the absence of shipping cost, tariffs and other frictions to international trade identical goods should trade for the same real price in different countries. That is when converted at spot exchange rate into common currency, the price of a homogeneous commodity good will be identical across borders. As the exact price of the homogenous commodity is rarely known in two different countries, price indexes are used in empirical work. One difficulty in measuring purchasing power parity constructed from price indexes is that different countries use different goods to determine their price level, i.e. preference for the goods may vary widely across countries. Hence, even if the law of one price holds in each good, it may not hold overall for dissimilar consumption basket.

#### **2.3.2 Relative Version of Purchasing Power Parity Theory:**

The purchasing power parity hypothesis traces its origin to the writings of the Swedish economist Gustav Cassel (1918)

The original theory states that equal goods in different countries cost the same in the very same countries when measured in terms of the same currency. Cassel declares that deviations from PPP imply that a country's currency is incorrectly valued.

Even if the contemporarily examined forms of PPP are weaker than the original version of PPP, it is still based on the simple hypothesis of arbitrage. If two homogeneous goods are traded at different prices in different countries, this arbitrage opportunity will be utilized, which leads to convergence of the deviations from PPP towards zero (in the absence of arbitrage costs). "Half-life" is the generally applied PPP convergence measure. Rogoff (1996) describes a consensus view in PPP research of three to five year half-lives, which is definitely too slow to be compatible with arbitrage opportunities. Therefore, an intense hunt for empirical half-life evidence, that supports this idea of arbitrage, has accelerated over the last few years.

Different versions of PPP have been examined over the years. The absolute form of PPP has very weak support in empirical studies. In the attempts to find evidence in favour of PPP, weaker and weaker forms of PPP have been specified, sometimes with questionable policy relevance (Horne, 2004). Currently, in the research community, the main focus is on long-run (relative) PPP, (henceforth termed long-run PPP, or just PPP). Given the large variation in the nominal spot rate relative to the variation in inflation rates, international inflation differentials are unlikely to explain changes in the short run exchange rates. This explains the development of the concept of long-run PPP. However, due to the specification of various test methods, there has been an implicit development of different empirical versions of long-run PPP (despite that all these studies claim that they test the very same theory of long-run PPP). It is difficult to quantify how strong different versions of long-run PPP are, but some tests are definitely weaker than others. For instance, if a time-varying equilibrium is allowed, this generally leads to some limitations in the policy implications and its relevance.

Over the years, conclusions regarding the validity of PPP have been under constant debate. In some periods the research community has concluded that PPP holds, and in other periods that PPP is not valid.

PPP was put forward as a long-run equilibrium condition in the post-war period, but after the breakdown of the Bretton Woods system in the early 1970s it was even advocated as a short-run equilibrium (Taylor and Taylor, 2004). During the late 1970s and early 1980s most research concluded that the theory was not valid (see, e.g. Krugman, 1978). Essentially, at this time, only tests for hyperinflation economies indicated support for PPP (see, e.g. Frenkel, 1978). However, a fundamental flaw in the econometrics of the so-called stage-one tests was the failure to take explicitly into account the possible non-stationarity of the relative prices and exchange rates. PPP increasingly came under attack on both theoretical and empirical grounds from the late 1970s to the mid 1990s (Taylor and Taylor, 2004). PPP was tested using real exchange rates with a random walk as the null hypothesis. The alternative hypothesis was that PPP holds in the long run, see, e.g. Huizinga (1987), and Meese and Rogoff (1988). In small samples, it is difficult to distinguish between slow mean reversion and a random walk real exchange rate, and this causes a power problem when only post-Bretton Woods data is used.

An obvious solution to increase power is to rely on long time spans such as in Abuaif and Jorion (1990), Lothian and Taylor (1996) and Taylor (2002), whose findings are in favour of the PPP theory. However, a problem with long-horizon tests is the risk of sample selection bias since countries with long-horizon data tend to be the wealthiest nations in the world. There is usually no available data for third world countries, countries that grew very fast from a low level, or countries that once were rich but are no longer so. Furthermore, it is a well-known fact that increasing the estimation period can cause problems associated with structural breaks and regime changes (e.g. fixed versus floating exchange rate data). It is well documented that unit root tests are misleading in the presence of structural breaks.

In more recent time, PPP researchers such as Frankel and Rose (1996) and others have argued that a solution to these long time-span problems is to apply panel data analysis with shorter time series. Examples of panel studies that support the PPP hypothesis are Cheung et al. (2001), Fleissig and Strauss (2000), Murray and Papell (2002, 2005a), and Wu (1996).



However, as Maddala (1998) explains, panel data analysis creates problems that can be even worse than structural breaks. The worst problem is most likely cross-sectional heterogeneity and it is not clear whether this is a lesser problem than the lack of time homogeneity (structural breaks).

According to Reid and Joshua (2004), this theory implies that the rate of change of the exchange rate equals the difference between the inflation rates in the two countries. If the percentage change is positive, then the foreign currency is appreciating and home currency is depreciating. If the percentage change is negative, the foreign currency is depreciating and home currency is appreciating.

### **2.3.3 Uncovered Interest Parity Theory**

While the purchasing power parity condition applies to the cross border pricing of goods and services, uncovered interest rate parity theory looks into the cross border pricing of financial investments. According to Reid and Joshua (2004), this theory states that, lacking frictions in financial markets, the price of otherwise risk less financial investments or the rate of return received on them, should be identical across borders. The frictions present in the international financial markets are slightly different from those in goods markets. While there are likely to be few frictions in the form of costs to transferring capital across borders, markets for investment capital still include the frictions, causing the imperfect capital mobility such as multiple currencies. Uncovered interest parity requires that overseas returns be expected to equal domestic returns when converted at spot exchange rates. The theory established that in international financial markets, when looking at the domestic currency return on an investment that pays interest in a foreign currency, exchange rate changes must be added to the own currency return

### 2.3.4 Covered Interest Parity

Covered Interest Parity theory states that if we can remove currency risk, the same currency return of two otherwise risks less assets (short term cash deposits) should be identical. This currency risk can be removed through forward contract. The exchange rate that is quoted for transactions taking place in the future is called the forward exchange rate.

### 2.3.5 Interest rate parity theory

Concept that any disparity in the interest rates of two countries is equalized by the movement in their currency exchange rates (Huang 1984). This theory states that the interest rate differential between two countries is equal to the differential between the forward exchange rate and the spot exchange rate. Interest rate parity plays an essential role in foreign exchange markets, connecting interest rates, spot exchange rates and foreign exchange rates (Roll and Yan, 2000).

Most importantly to our purpose, Bilson (1981), Bilson and Hsieh (1983), Huang (1984), and others, have shown that the economic theory relating interest-rate differences among countries to subsequent exchange rate changes (uncovered interest-rate parity) seems to have broken down during the recent float. As a consequence, exchange-rate changes are no longer governed by international interest differentials. Haeche and Townsend (1981) and Meese and Rogoff (1983a, b) have demonstrated that other plausible economic theories, such as purchasing power parity and the monetary model, also add little to random walk forecasts of exchange rates, at least at horizons of less than a year. These studies all reported strong rejections of uncovered interest-rate parity. Subsequent studies have confirmed these results. There is also an active theoretical literature, which attempts to determine if the failure of uncovered interest parity is due to risk aversion or market segmentation rather than market inefficiency. In contrast, Roll and Yan (2000) suggest that forward exchange rates are unbiased predictors of subsequent spot rates and there is really no forward premium puzzle.

### **2.3.6 Arbitrage Pricing Theory**

The underlying principle of the pricing theory involves the recognition that the anticipated return on any asset may be charted as a linear calculation of relevant macro-economic factors in conjunction with market indices (Stephen Ross, 1976). It is expected that there will be some rate of change in most if not all of the relevant factors. Running scenarios using this model helps to arrive at a price that is equitable to the anticipated performance of the asset (Roll and Yan, 2000). The desired result is that the asset price will equal to the anticipated price for the end of the period cited, with the end price discounted at the rate implied by the Capital Asset Pricing Model. It is understood that if the asset price gets off course, that arbitrage will help to bring the price back into reasonable perimeters (Stephen Ross, 1976).

### **2.4 Importance of Financial Risk Management**

Stulz (1996) identified four types of gains emanating from financial risk management. reduction of bankruptcy and distress costs, reduction in expected tax payments, reduction in expected payments to stakeholders and reduction in cost of raising funds. If a firm can implement risk management policy that eliminates the risk of bankruptcy, it essentially sets the present value of these real resources cost to zero and increases the firm value accordingly.

Crabb (2003) noted that in the early 1990s, Procter and Gamble Corporation lost over 100 million dollars through speculative use of derivatives. In 1995, Daimler Benz reported first half interim losses due to the weakening dollar. The company explained that it did not hedge against financial risk because the forecast it received were too dispersed, ranging as they did from 1.2 to DM 1.7 per dollar, therefore, misdirected risk management can lead to huge losses.

Other studies have been carried out in counter argument of the need for risk management (M-M) (1958) in their study of perfect market world of financing irrelevancy, suggest that there is no need for firms to control risks since the investors can accomplish this task themselves in a perfect market by holding a well diversified portfolio.

Dufey (1972) suggest another line of reasoning 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 PPP 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 flows is of significant as it can subject a firm to financial distress or even default.

## **2.5 Measurement and Management of Foreign Exchange Exposure**

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

According to Madura (1995) firms are exposed to three types of exposure namely: Accounting or translation exposure, transaction exposure and economic exposure. Levi (1983) asserts that the concept of accounting exposures arises from the need to translate accounts that are denominated in foreign currencies into 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 the consolidation these accounts must be translated into the reporting currency of the parent company and a decision must be made as to exchange rate that is to be used for translation of various account balances (Logue, 1977).

The following are various methods of measuring foreign exchange exposure:

**Current /Non-current method:** This is a method that divides assets and liabilities into current and noncurrent assets. The current assets and liabilities include trade payable, receivables, inventory etc.

Noncurrent assets are fixed assets- both tangible and intangible and long term debt. Under this method only current assets and liabilities are presumed to change in value when the local appreciates or depreciates vis-à-vis the home currency.

**Monetary/Non-Monetary method** Under this 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.

**Temporal Method:** Under this method, the exchange rate used to translate balance sheet items depend 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 historical exchange rate.

According to Logue (1977), translation exposure can be managed by adjusting fund flows, exposure netting and entering into forward contracts by creating a short position in the foreign currency used to measure a subsidiaries income. If the foreign currency depreciates against home currency, the adverse impact on the consolidated income statement can be offset by the gain on the short position in that currency. If the foreign currency appreciates over some period of concern, there will be a loss in the short position that is offset by a favourable effect on the reported consolidated earnings. However, many firms would not be satisfied with a paper gain that offsets a cash loss. Some of the limitations for hedging transaction exposure are: inaccurate earning 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 with accounting exposure. Exposure netting involves offsetting exposures in one currency with exposures in the same or another currency where exchange rates are expected to 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 foreign exchange rate differences occurs between the time a transaction is contracted and time it is settled. He outlines 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 exposure to these currencies.

Madura (1995) indicates that there are various hedging techniques a firm can use to eliminate transaction exposure. It can use futures hedge by buying currency future contract, which entitles them to receive specified amount in a specified currency for a stated price on a specific date, by this method affirm locks in the amount of its home currency needed for payment or expected to receive. Forwards hedge is also a method to lock in future exchange rate at which the firm can buy or sell a currency. It is similar future contract except that forward contracts are commonly used for large transactions. Money market hedge involves taking money market position to covers future payable or receivable. The other technique is through currency option, this refers to the right but not the obligation to purchase or sell currencies at specified prices (exercise price) within a given period of time. Currency put option provide the right to sell a specified amount in a particular currency while call option provide right to buy a particular currency.

Madura (2007) indicates that, before selecting the above techniques, a firm should compare the cash flows that would be expected from each technique along with reduced risk associated with the hedging. Hedging techniques can vary over time, as the relative advantages of various instruments may change over time.

Shapiro (2007) documents that firms may opt for a currency swap which is an agreement to exchange one currency for another at specified exchange rate and date

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. 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 flow in to different income statement items and subjectively predicting each income statement item based on forecasted exchange rate.

Value at Risk (VAR) is another measure exchange rate risk. The technique describes risk succinctly: it is a percentile of a profit and loss distribution over a specialized horizon. It tries to determine how much the company's underlying cash flows are affected i.e. if foreign exchange rate moves to a certain level. VAR indicates how much profit/loss the company makes (Dowd, 1998)

Alder (1984) 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 recognizes 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 be more to offset the favourable 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.

## **1.6 Foreign Exchange Management Practices**

Foreign exchange risk can be managed in various ways. This section discusses techniques used or hedging against risk. Hedging can be defined as "all actions taken to change the exposed positions of a company in one currency or in multiple currencies" (Prindl, 1976)

According to Clark et al. (1993), hedging refers to the technique of making offsetting commitments in order to minimize the impact of unfavorable potential outcomes. The manager's choice of the different types of hedging techniques may, however, be influenced by costs, taxes, effects on accounting conventions and regulation. The different types of hedging techniques are discussed below.

**Payments netting:** This system is used in international transactions, it involves reducing fund transfers between entities to only a netted amount.

It requires a firm to have a centralized organization of its cash management. There are basically two forms of payments netting. These include bilateral and multilateral netting. Bilateral netting involves the transfer of a netted amount between two entities, it is valuable only to the extent that firms sell back and forth to each other (Shapiro, 1996). Multilateral netting involves the transfer of a netted amount among three or more firms. The use of payments netting reduces the physical flow of funds from one firm to another. As a result, measurable costs such as the cost of purchasing foreign exchange, the opportunity cost of the float (time in transit) and other transaction costs are minimized or eliminated. Netting systems are set up to reduce the costs associated with inter-firms cash transfers that result from business transactions. The payoff from multilateral netting systems can be large relative to their expense (Shapiro, 2007).

**Prepayment:** This method of payment requires the importer to pay the exporter in full before shipment is made (Hill, 2001). Payment is usually made in form of international wire transfer to the exporter's bank account or foreign bank draft. This method affords the supplier the greatest degree of protection and it is normally requested if the trading currency has high exchange rate fluctuations. If currency is thought to appreciate, then prepaying enables the company to pay at a lower rate. If the future rate finally depreciates, the firm is worse off than if it had done nothing. This method poses a big risk to the importer as he/she depends totally on the integrity of the exporter but offers the greatest protection for exporters because no credit extension is required. The primary disadvantage of prepayment is that it can limit the exporter's sales potential (Dennis, 1993)



**Leading and lagging:** A lead strategy involves attempting to collect foreign currency receivables early when a foreign currency is expected to depreciate and paying foreign currency payables before they are due when a currency is expected to appreciate. A lag strategy involves delaying collection of foreign currency receivables if that currency is expected to appreciate and delaying payables if the currency is expected to depreciate (Hill, 2001). Leading and lagging involves accelerating payments from weak-currency countries to strong-currency countries and delaying inflows from strong-currency to weak-currency countries. However, lead and lag strategies can be difficult to implement

The firm must be in the position to exercise some control over payment terms. Leading and lagging is a zero-sum game; that is, while one party benefits, the counterpart loses. Thus, the benefit gained from taking advantage of exchange rates may be outweighed by the cost of losing business due to the zero-sum nature of this method. The practice of leading and lagging has developed as one of many methods of hedging against adverse impacts of exchange rate movements.

**Price Adjustment:** Some companies manage foreign exchange risks by adjusting prices; this is practiced by Ghanaian firms who adjust prices to reflect change in import pricing resulting from currency fluctuation Abor. (2005). The practice has some challenges due to the frequent appreciations of foreign currencies against the LC resulting to difficulty in retaining customers because of high prices of imported inputs. Ghanaian Firms also exhibit low levels of hedging techniques

### **Hedging with derivatives**

Hedging includes all acts aimed at reducing uncertainty about future (unknown) price movements in a commodity, financial security or foreign currency. Undertaking forward or futures sales or purchases of the commodity, security or currency can be done in over the counter (OTC) forward or in the organized futures market. As an alternative to speculation, many financial managers are turning to hedging strategies and using derivatives to reduce foreign currency risk.

## **Forward and Futures Contracts**

A forward contract involves a commitment to trade a specified item at a specified price at a future date. It is a contract made today for delivery of an asset at a pre-specified time in the future at a price agreed upon today. No money changes hands until the expiry time. Futures contract is a special type of contract with standardized delivery dates and sizes that would allow trading on an exchange.

A system of margin requirements is designed to protect both parties against default. Instead of the parties realizing the profit or loss at the expiry date, futures are evaluated every day and margin payments are made across the lifetime of the contract. Forward and futures contracts are relatively similar foreign exchange instruments. Both forwards and futures are agreements that bind two parties to exchange currencies at a fixed exchange rate at a future date. Essentially, both contracts offer the benefit of securing cash flows on imminent transactions (Ricci and Morrison, 1996).

## **Currency Options**

A currency option gives the right, but not the obligation to buy or sell a specific currency at a specific price within a specific period of time. While American options can be exercised in whole or in part at any time up to expiration, European options can be exercised only at expiration. Options provide a number of advantages. It is used to hedge against foreign exchange rate risk arising from import or export of goods. Secondly, it can be used to hedge against exchange rate fluctuations arising from foreign investments or funding in any currency. Finally, options offer a very high degree of gearing or leverage, which makes them attractive for speculative purposes too (Cawdell, 1993).

## **Currency Swaps**

A typical currency swap is an agreement between two parties to exchange two currencies at the spot or current exchange rate, with the agreement that they will reverse the exchange rate that prevailed at the time of the initial exchange (Iyerson, 1993). Currency swaps require the party

receiving the currency with a higher interest rate in that country's currency to pay the interest to the counter party at a rate that represents the interest rate differential between the two countries. Currency swaps provide an opportunity for customers to balance currency resources in situations where there are excess funds in one currency and shortage of funds in another.

Njuguna (2000) asserts that exchange rate policy in Kenya has undergone various regime shifts mostly driven to a large extent by the economic events, especially balance of payment 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 happened in year 1981-1982 with further discrete devaluation. 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 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 series of devaluations, the official exchange rate was abolished by merging the official one with the market at end thus the shilling put to a complete float.

Iceland (1998) says that the floating exchange rate system adopted in the 1990's was expected to have a several advantages in Kenya. First it would allow a more continuous adjustment of exchange rate to shift in the demand for and supply of foreign exchange currencies. Secondly, it would equilibrate the demand and supply of foreign exchange changing the nominal exchange rate rather than the levels of reserves. Thirdly, it would allow Kenya the freedom to pursue its own monetary policy without having to be concerned about balance of payment effects thus the country would have an independent monetary system. Fourthly, under the floating system, external imbalances would be repeated in exchange rate movements instead of reserve movements.

Copeland and Joshi (1996) argue that anticipating the consequences of hedging is difficult since many other economic factors change when foreign exchange rates change.

As 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 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 are assumed to reflect derivatives usage. The results showed that firms that predicted to hedge had lowered foreign exchange exposure, on average, than comparable sample firms.

Nydahl (1999) investigated 47 Swedish firms' foreign exposure. The evidence showed that exposure increases with that 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.

Wong (2000) investigated the foreign exchange exposure of manufacturing firms in the US to test for an association between foreign exchange exposure and derivatives disclosures required by 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.

Dalder (1993) found out that on his extensive survey, 85% of the responding firms used derivatives to manage financial risk about 90% of the firms that responded said that their view would affect the extent to which they hedged. For the company surveyed, the focus on foreign currency risk management was mostly on transaction exposures. He also found that the use of

derivatives was greater for large firms than small firms. Crabb (2003) indicates that the findings of Bailey (2003), Gay (1998), and Rogers (2002) are consistent that the use of derivatives is positively correlated with firm size.

Omugwa (2005) in his study on hedging practices by foreign owned commercial banks in Kenya found out that most hedging practices were influenced by the banks views on the currency market fundamentals. The practices included: forecasting, speculating and taking individual positions in the currency market with the aim of making financial gains, carrying out training programmes on financial risk management and use of specific financial instruments to hedge against foreign exchange risk. Most banks carried out regular and systematic assessment of the exposure measurement strategies and their exchange risk management policies in general. A number of banks made use of accounting, transaction and economic exposure measurement strategies: matching, risk sharing, diversification and selective hedging strategies were extensively used by most banks.

## **2.7 Conclusion of Literature Review**

The purpose of this literature review has been to review the various factors influencing the foreign exchange risk management practices by textile and apparel firms in export processing zones. This study has generally highlighted the various foreign exchange risk management practices by textile and apparel firms. The knowledge of this information shall be used in data collection so as to meet the objective of the study.

However most of these studies have focused on foreign exchange risk management practices in developed nations whose financial position is different from that of Kenya. The ones done in Kenya have focused on different industries other than textile and apparel firms. Thus there is no literature focusing on various foreign exchange risk management practices by textile and apparel firms in Kenya. This study therefore seeks to add literature on the various foreign exchange risk management practices by textile and apparel firms in Kenya.

## CHAPTER THREE

### 3.0 RESEARCH METHODOLOGY

#### 3.1 Introduction

This chapter discusses the methodology that was used in gathering the data, analyzing the data and reporting the results. Here the researcher aimed at explaining the methods and tools used to collect and analyze data to get proper and maximum information related to the subject under study.

#### 3.2 Research Design

This research was an exploratory study carried out to find out the foreign exchange exposures facing the apparel firms, management instruments and strategies used by the firms and to determine their effectiveness' based on empirical evidence. The variables measurement was based on categorical data. The data type was ordinal for each variable used hence the ordinal data treated as interval data. This was the rationale used in this study by utilising likert Scales. This design was chosen because it provided insights into and comprehension of an issue or situation. Exploratory research is a type of research conducted because a problem has not been clearly defined.

The research design used for collecting data will be a census survey carried at 23 apparel firms in Kenya. The design will be useful in describing the characteristics of the firms and determining the frequency of key attributes of the study. Correlation of the dependant variables will also be done using various statistical measures.

#### 3.3 Population

The population of the study consisted of all 23 EPZ firms that were involved in production and sale of apparel and garment in Kenya as listed in Kenya Export Processing Zone Authority (see appendix 1). These firms were preferred because 75% of their output is exported to US markets. Also they imported fabric from outside country. Hence these firms were highly exposed to

foreign exchange risk. Their distribution patterns were in major towns mainly Nairobi, Mombasa and Athi River. The study being a survey implied that data was collected from all 23 EPZ firms that were involved in production and sale of apparel and garment in Kenya. This therefore meant that census method was used.

### **3.4 Data Collection**

Qualitative primary data was used for the study. It was collected through self-detailed administered questionnaires (see appendix II) that had been constructed using open ended, close ended and Likert type of questions. The structured questions were used in an effort to conserve time and facilitate easier analysis as they are in immediate usable form, while the unstructured questions to be used so as to encourage the respondent to give an in-depth and felt response without feeling held back in revealing of any information.

The questionnaire were administered by the treasury managers, finance managers, risk managers or equivalent manager who is involved in foreign exchange risk management in the selected firms 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 were allotted for filling the questionnaire.

#### **3.4.1 Reliability and Validity of Research Instrument**

Validity is the degree by which the sample of test items represents the content the test is designed to measure. Content validity which was employed by this study is a measure of the degree to which data collected using a particular instrument represents a specific domain or content of a particular concept. Mugenda and Mugenda (1999) contend that the usual procedure in assessing the content validity of a measure is to use a professional or expert in a particular field.

To establish the validity of the research instrument the researcher sought opinions of experts in the field of study especially the researcher's supervisor and lecturers. This facilitated the necessary revision and modification of the research instrument thereby enhancing validity

Reliability refers to the consistency of measurement and is frequently assessed using the test-retest reliability method. Reliability is increased by including many similar items on a measure, by testing a diverse sample of individuals and by using uniform testing procedures.

Reliability of the research instrument was enhanced through a pilot study that will be done on 2 FPZ firms in Nairobi. The pilot data will not be included in the actual study. The pilot study allowed for pre-testing of the research instrument. The clarity of the instrument items to the respondents were established so as to enhance the instrument's validity and reliability. The pilot study enabled the researcher to be familiar with research and its administration procedure as well as identifying items that require modification. The result helped the researcher to correct inconsistencies arising from the instruments, which ensured that they measured what is intended.

### **3.5 Data Analysis**

The primary data collected from the questionnaire was analysed using descriptive statistics such as measures of variation and measures of central tendency. The results were presented in the form of frequency tables, charts and graphs where necessary. The data analysis method was quantitative in nature using descriptive statistics where frequency and percentages were applied. The response from the respondents were used to answer the research questions which were the identifying instruments of hedging in the apparel and textile industry against foreign currency risks and the extent this instruments are used. Using the percentage and frequency distribution, the most significant issues in each category of factors were identified and ranked.

The Likert scale was used to analyze the mean score and standard deviation, this helped in determining the extent to which firms use hedging techniques. Data analysis was done using SPSS and Microsoft excel. This generated quantitative reports through tabulations, percentages, and measure of central tendency.



## CHAPTER FOUR

### 4.0 DATA ANALYSIS AND INTERPRETATIONS

#### 4.1 Introduction

This chapter presents the data analysis and interpretations of the findings. Data was analyzed using SPSS and summarized using tables, charts, frequencies and percentages. From the study population of 23 staff filled and returned the questionnaires correctly.

#### 4.2 Social demographic information

##### 4.2.1 Position of respondents

In this section, the aim was to establish the positions of the interviewed respondents. The table below shows the results.

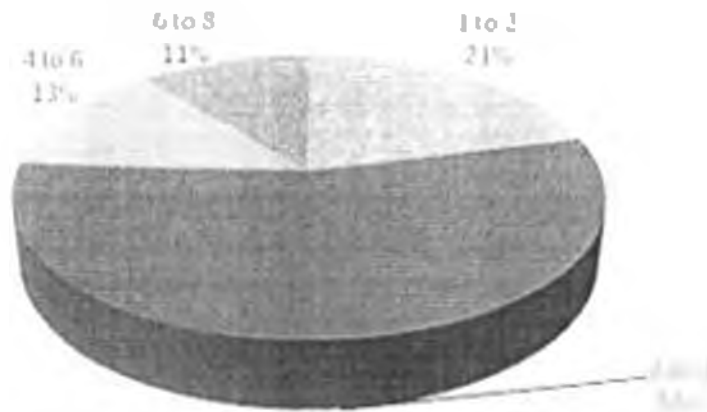
	Frequency	Percent
Finance manager	1	4
General manager	2	9
Office superintendent	2	9
Merchandiser	3	13
Office administrator	6	26
Human resource manager	9	39
Total	23	100

**Table 4.1 Position of respondents**

Data from the table above shows that most of the respondents were human resource managers and consisted of 39 percent while this was closely followed by office administrators who comprised 26 percent while merchandisers were represented by a percentage of 13. The least of the respondents were finance managers who comprised of 4 percent.

#### 4.2.2 Year served in the company

This section aimed at indentifying the number of years that the respondents had served in the company. This was represented in the figure below.

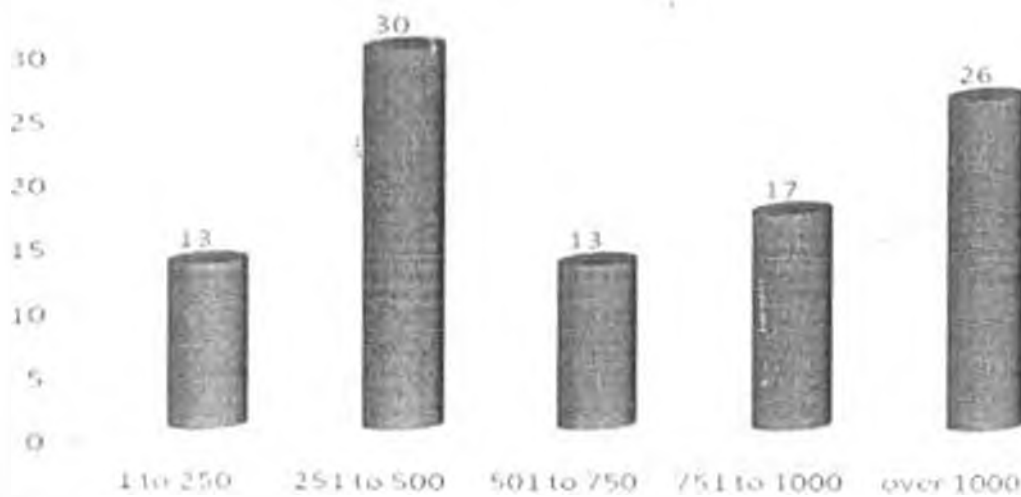


**Figure 4.1 Year served in the company**

As shown in the figure above, most of the respondents had served at their companies for a period of 2 to 4 years, while 21 percent had served for a period of 1 to 2 years. 11 percent of the respondent had served for a period of 6 to 8 years while 13 percent had served for a period of 4 to years.

#### 4.2.3 Number of employees in firm

The aim of the researcher in this section was to establish the number of employees in the firms.

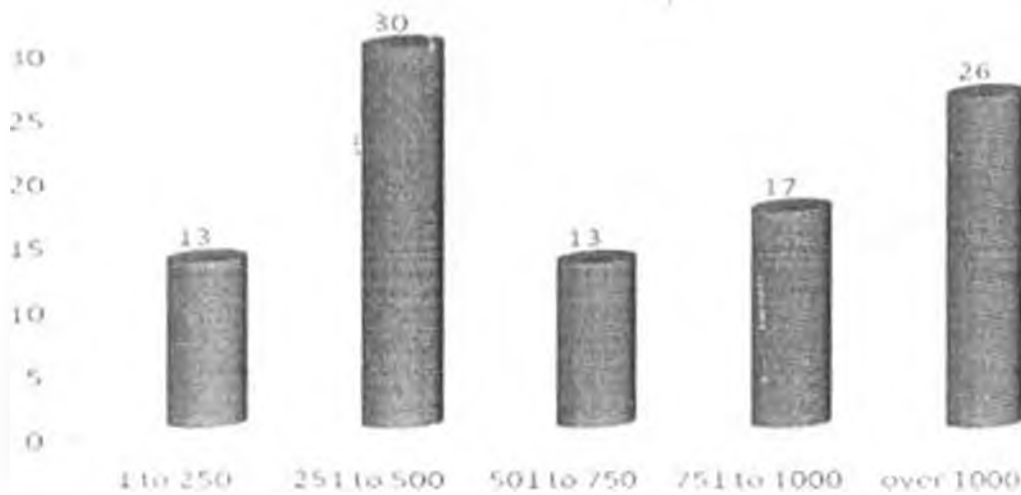


**Figure 4.2 Number of employees in firm**

Data from the figure above shows that most of the firms had 251 to 500 employees (30 percent) followed by 26 percent of the firms which had over 1000 employees. 17 percent had 751 to 1000 employees while 13 percent had 1 to 250 and 501 to 750 employees.

#### **4.2.4 Years of existence**

The study proceeded to determine the number of years of existence of the firms. This is as shown in the figure below.



**Figure 4.2 Number of employees in firm**

Data from the figure above shows that most of the firms had 251 to 500 employees (30 percent) followed by 26 percent of the firms which had over 1000 employees. 17 percent had 751 to 1000 employees while 13 percent had 1 to 250 and 501 to 750 employees.

#### **4.2.4 Years of existence**

The study proceeded to determine the number of years of existence of the firms. This is as shown in the figure below.



**Figure 4.3 Years of existence**

Data portrayed in the figure above shows that most of the firms had been in existence for a period of 6 to 9 years (47 percent) while 42 percent of the firms had existed for a period of 3 to 6 years. 11 percent had been in existence for a period of 1 to 3 years.

#### 4.2.5 Ownership of company

This section aimed at establishing the ownership of the companies.

	Frequency	Percent
wholly owned	3	13
foreign owned	13	57
foreign local owned	7	30
Total	23	100

**Table 4.2 Ownership of company**

Data portrayed in the table shows that most of the companies were foreign owned (57 percent) while 30 percent were both foreign and locally owned. 13 percent were wholly owned.

### 4.3 Financial risks

In this section, the aim was to indentify the various ranking of different financial risks by the respondents.

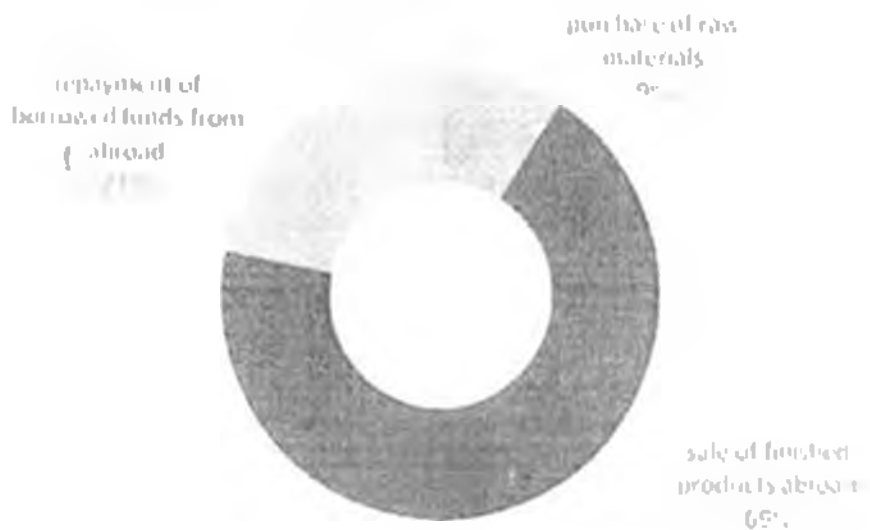
	Highly risk	Risky	Moderate	Less risky	Negligible	Mean
Inflation rate	61	39	0	0	0	1.3913
Exchange rate	44	44	13	0	0	1.6957
Credit risk	13	22	65	0	0	2.5217
Stock prices	0	39	39	22	0	2.8261

**Table 4.3 Financial risks**

The table above shows that inflation rate was considered as a very risky financial risk by majority of the respondents' (61 percent) followed by exchange rate which comprised of 44 percent 65 percent of the respondents ranked credit risk as a moderate financial risk while 22 percent ranked stock prices as a less risky financial risk.

### 4.4 Transactions that expose firm to foreign exchange

The aim of this area of study was to establish the various risks that exposed the firm to the foreign exchange risks.



**Figure 4.4 Transactions that expose firm to foreign exchange**

Data presented in the table above shows that sale of finished products abroad was the main transaction that exposed the firms to foreign exchange as was agreed upon by 9 percent of the respondents and this was followed by 22 percent who cited repayment of borrowed funds from abroad 9 percent cited purchase of raw materials as the transaction that exposed the firms to foreign exchange

**4.4.2 Percentage of foreign denominated purchases to total purchases\*Ownership of the company cross tabulation**

In this area of study, the aim was to establish the percentage of foreign denominated purchases to total purchases and this was cross tabulated against ownership of the company The table below shows the results.

	wholly owned	foreign owned	foreign local owned	Total
60 to 80	3	6	3	12
80 to 100	0	7	4	11
Total	3	13	7	23

**Table 4.4 Percentage of foreign denominated purchases to total purchases\*Ownership of the company cross tabulation**

Data presented in the table above shows that most of the companies (6 out of 23) that were foreign owned had a 60 to 80 percentage of foreign denominated purchases to total purchases while 4 out of 23 of the foreign local owned firms had 80 to 100 as the percentage of foreign denominated purchases to total purchases.

#### 4.5 Frequency of imports

The aim of the researcher in this section was to establish the frequency of imports amongst the companies. This was represented in the table below.

	Frequency	Percent
Weekly	5	22
Monthly	14	61
Quarterly	1	4
semi annually	3	13
Total	23	100

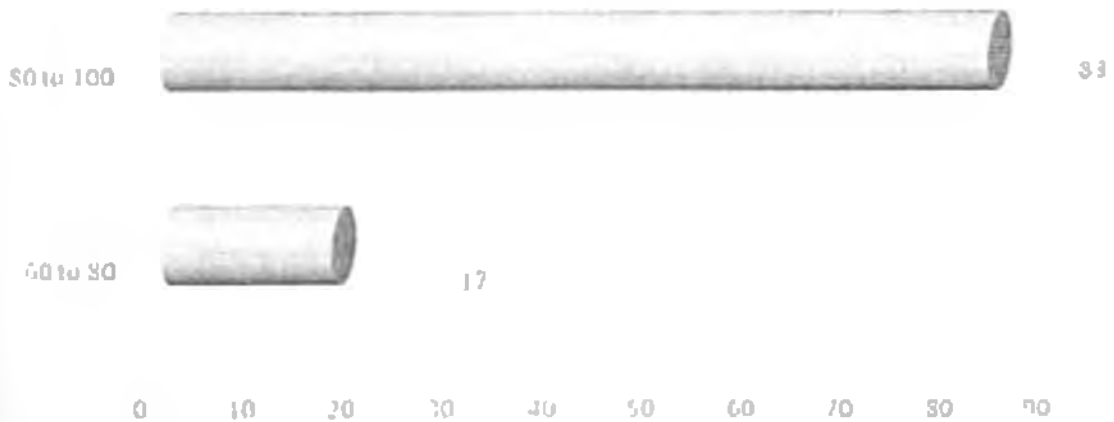
**Table 4.5 Frequency of imports**

Data in the table above shows that majority of the companies imported on a monthly basis (61 percent), while 22 percent imported on a weekly basis. 13 percent imported their goods on a semi annually basis.



#### 4.5.2 Percentage of foreign currency dominated sales to total sales

This section aimed at indentifying the percentage of foreign currency that dominated sales to total sales. This is as shown in the figure below

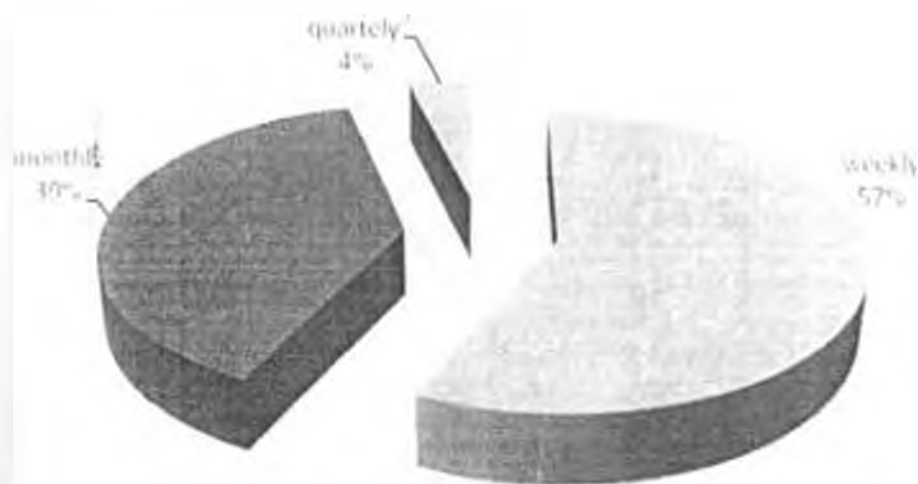


**Figure 4.5 Percentage of foreign currency dominated sales to total sales**

Data from the figure above shows that most of firms had 80 to 100 as the percentage of foreign currency dominated sales to total sales, while only 17 percent had 60 to 80 as the percentage of foreign currency dominated sales to total sales.

#### 4.5.3 Frequency of exports

On this section, the aim was to ascertain the frequency of exports at the companies. The results are represented below.



**Figure 4.6 Frequency of exports**

Data portrayed above shows that most of the firms exported on weekly basis (57 percent) while 39 percent exported on a monthly basis. 4 percent exported on a quarterly basis.

#### **4.6 Management of foreign exchange risk**

This section of study aimed at establishing the respondents various views on management of foreign risk.

	<b>Agree</b>	<b>Disagree</b>
Do you have a documented management department/section	39	61
Does the company have a risk management dept/section	17	83
does firm practice currency hedging	0	23

**Table 4.6 Management of foreign exchange risk**

Data portrayed in the table above shows that most of the respondents disagreed that their companies had a risk management department section comprising of 83 percent closely followed

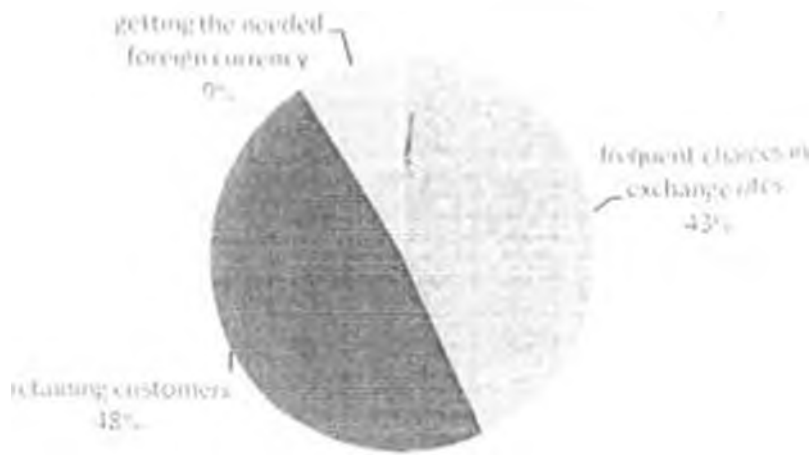
by 61 percent of the respondents who cited that their companies did not have a documented management department. Respondents who agreed that their firms had a risk management department were asked to give the person responsible for the risk management department. 13 percent cited the risk manager, while an equal percent of 13 also cited the chief executive officer as being responsible for the risk management department. 69 percent however gave no comment.



**Figure 4.7 Person responsible for risk management department**

#### **4.7 Problems encountered in managing foreign exchange risk**

This part of study was aimed at establishing the major problems that were encountered in managing foreign exchange risk. The figure below shows the results.

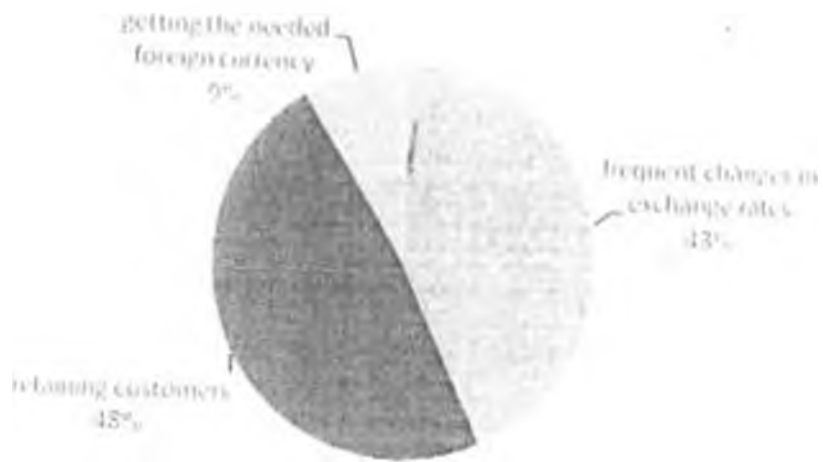


**Figure 4.8 Problems encountered in managing foreign exchange risk**

Data presented in the figure above shows that retaining customers was the most agreed upon problem that encountered the firms in managing foreign exchange risk was retaining customers (48 percent) while 43 percent cited frequent changes in exchange rates. 9 percent cited getting the needed foreign currency as a problem that encountered the firms in managing foreign exchange risk.

#### **4.8 Management of foreign exchange risk**

This area of study aimed at indentifying how the firms used various methods to manage foreign exchange risk. This was ranked on the rate of use on a likert scale and the means and standard deviation obtained.



**Figure 4.8 Problems encountered in managing foreign exchange risk**

Data presented in the figure above shows that retaining customers was the most agreed upon problem that encountered the firms in managing foreign exchange risk was retaining customers (48 percent) while 43 percent cited frequent changes in exchange rates. 9 percent cited getting the needed foreign currency as a problem that encountered the firms in managing foreign exchange risk.

#### **4.8 Management of foreign exchange risk**

This area of study aimed at indentifying how the firms used various methods to manage foreign exchange risk. This was ranked on the rate of use on a likert scale and the means and standard deviation obtained.

	Mean	Std. deviation
use swaps	1.80952	0.7496
set off against affiliated parties	1.95652	0.70571
delay payment when foreign currency are strong and delay accelerate when weak	2.08696	0.94931
forward covers	2.26087	0.61919
buy and save currency in advance	2.34783	1.07063
prepayment/advance payment	2.69565	0.87567
price negotiation	2.86957	0.69442
price adjustment	2.95652	0.47465

**Table 4.7 Management of foreign exchange risk**

On a scale of 1 - not at all to 5 - most used, data from the table above shows that most companies moderately used price adjustments to manage foreign exchange risk as shown by a mean of 2.96, and this was closely followed by price negotiation which comprised of a mean of 2.87. The least used method of management of foreign exchange risk was use of swap as this was represented by a mean of 1.80.

#### 4.9 Percentage of use of instruments

This section was aimed at indentifying the percentage of use of financial instruments.

	0 to 20	20 to 40	40 to 60	60 to 80	80 to 100
Forward contract	8	48	43	0	0
Future contracts	0	57	2	9	9
Currency options	0	32	3	26	9
Currency swaps	29	14	23	14	0

**Table 4.8 Percentage of use of instruments**

Data presented in the table above shows that currency options and future contracts were the most commonly used financial instruments to a higher percentage comprising of 9 percent each. Currency swaps were the least used financial instruments as were used on a percentage of 0 to 20

#### 4.9.2 Percentage of foreign currency denominated purchases hedged

This section of study aimed at indentifying the percentage of foreign currency denominated purchases that were hedged. The results are shown in the figure below.



**Figure 4.9 Percentage of foreign currency denominated purchases hedged**

Data presented in the figure above shows that 17 percent cited 0 to 20 percent of their foreign currency denominated purchases were hedged, while 85 percent gave no comment

#### 4.10.1 Currency you invoice your exports in

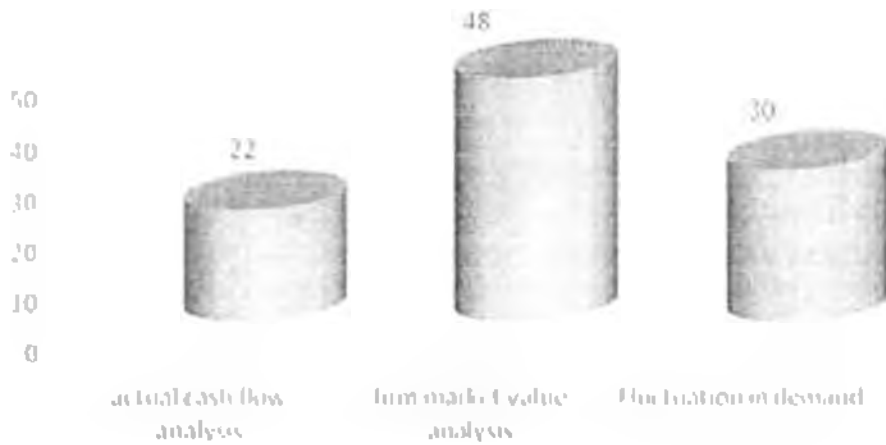
The study in this section aimed at establishing the kind of currency that the firms invoiced their exports in. All respondents agreed that their firms invoiced their exports in US Dollars. The study proceeded to inquire the currency that the firms preferred to pay imports with. Most of the respondents cited that their firms used US Dollars to pay imports with (87 percent), while 13 percent cited they paid using Kenya Shillings. The table below shows the results.

	Frequency	Percent
USD	20	87
KES	3	13
Total	23	100

**Table 4.9 Currency you prefer to pay imports**

#### 4.10.2 Firm measure foreign exchange risk exposure

This section aimed at establishing how the firms measured foreign exchange risk exposure. The figure below shows the results.



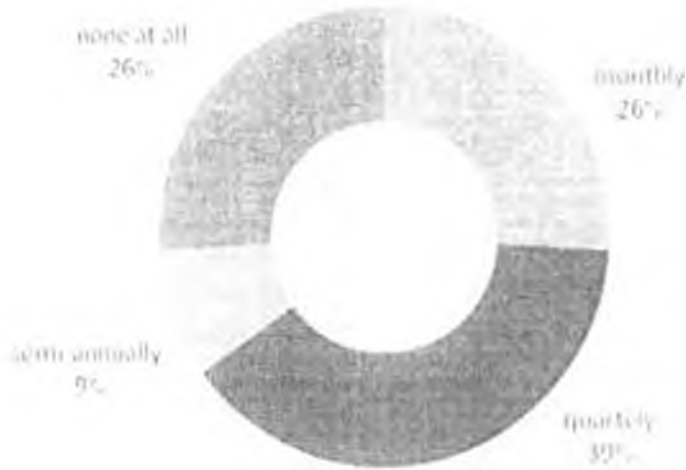
**Figure 4.10 Firm measure foreign exchange risk exposure**

Data from the figure above shows that majority of the firms measured foreign exchange risk exposure using firm market value analysis (48 percent) while this was closely followed by fluctuation in demand which comprised of 30 percent 22 percent of the firms measured their foreign exchange risk exposure using actual cash flow analysis.

#### 4.11 How often firm measures success of its exchange risk management

In this section, the aim was to indentify how often the firms measured success of its exchange risk management. The results are as shown below.





**Figure 4.11 How often firm measures success of its exchange risk management**

Data presented in the figure above shows that most firms measured the success of their exchange risk management on a quarterly basis (39 percent), while 26 percent cited that their firms measured the success of their exchange risk management on a monthly basis. 26 percent cited that their firms did not measure the success of their exchange risk management at all.

## CHAPTER FIVE

### 5.0 SUMMARY OF THE FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter presents the summary of the findings from chapter four, conclusions and recommendations of the study based on the objectives of the study.

#### 5.2 Summary of the Findings

From the study, most of the respondents were human resource managers and consisted of 39 percent while this was closely followed by office administrators who comprised 26 percent. On the issue of period of years that the respondents had worked, the study found that most of the respondents had served at their companies for a period of 2 to 4 years, while 21 percent had served for a period of 1 to 2 years.

The study also ascertained that most of the firms had 251 to 500 employees (30 percent) followed by 26 percent of the firms which had over 1000 employees. On the matter of years of existence, the study found that most of the firms had been in existence for a period of 1 to 9 years (47 percent) while 42 percent of the firms had existed for a period of 3 to 5 years. 11 percent had been existence for a period of 1 to 3 year.

On the matter of ownership, the study established that most of the companies were foreign owned (57 percent) while 30 percent were both foreign and locally owned. 13 percent were wholly owned. On the topic of financial risks, the study found that inflation rate was considered a very risky financial risk by majority of the respondents' (61 percent) followed by exchange rate which comprised of 44 percent.

The study also found that the sale of finished products abroad was the main transaction that exposed the firms to foreign exchange as was agreed upon by 9 percent of the respondents and this was followed by 22 percent who cited repayment of borrowed funds from abroad.

On the issue of importing, the study found that majority of the companies imported on a monthly basis (61 percent), while 22 percent imported on a weekly basis, 13 percent imported their goods on a semi annually basis. The study also ascertained that most of firms had 80 to 100 as the percentage of foreign currency dominated sales to total sales, while only 17 percent had 60 to 80 as the percentage of foreign currency dominated sales to total sales. On the matter of exports, most of the firms exported on weekly basis (57 percent) while 39 percent exported on a monthly basis 4 percent exported on a quarterly basis.

On the issue of risk management, the study found that most of the respondents disagreed that their companies had a risk management department/section comprising of 83 percent closely followed by 61 percent of the respondents who cited that their companies did not have a documented management department.

On issues of the problems that encountered the firms in managing foreign exchange risk, the study found that the most agreed upon problem that encountered the firms in managing foreign exchange risk was retaining customers (48 percent), while 43 percent cited frequent changes in exchange rates.

The study also asserted that most companies moderately used price adjustments to manage foreign exchange risk as shown by a mean of 2.96, and this was closely followed by price negotiation which comprised of a mean of 2.87

On the area of financial instruments, the study found that currency options and future contracts were the most commonly used financial instruments to a higher percentage (81 to 100) comprising of 9 percent each

On currency, all respondents agreed that their firms invoiced their exports in US Dollars. The study proceeded to inquire the currency that the firms preferred to pay imports with. Most of the respondents cited that their firms used US Dollars to pay imports with (87 percent), while 13 percent cited they paid using Kenya Shillings.

In addition, the study found that majority of the firms measured foreign exchange risk exposure using firm market value analysis (48 percent) while this was closely followed by fluctuation in demand which comprised of 30 percent.

The study also asserted that most firms measured the success of their exchange risk management on a quarterly basis (39 percent), while 26 percent cited that their firms measured the success of their exchange risk management on a monthly basis.

### **5.3 Conclusions**

From the study, the study concludes that most firms did not have a risk department or section hence could not also be in a position to have a documented foreign currency management policy.

The study also concludes that most firms had their Chief executive officers as the person responsible for the risk management department.

The study also concludes that the firms had problems when it came to managing of foreign exchange risks. Such problems included getting the right foreign currency mix and frequent changes in exchange rates.

In addition, the study also concludes that most firms did not regularly measure success of their exchange risk management. Most exchange risk management were measured after a period of 12 months.

### **5.4 Recommendations**

The study recommends that export processing zones firms should have a risk department or section. This can be responsible for the identification, assessment, and prioritization of risks followed by coordinated and economical application of resources to minimize, monitor, and control the probability and/or impact of unfortunate events

The study also recommends that the firms should have a risk manager. He can be left the mandate of circumventing risks that can come from uncertainty in financial markets, project failures, legal liabilities, credit risk, accidents, natural causes and disasters as well as deliberate attacks from an adversary.

The study also recommends that firms need to put in measures to administer foreign currency positions to encounter problems related to managing foreign exchange risks. Managing foreign exchange risk is a fundamental component in the safe and sound management of all institutions that have exposures in foreign currencies as it involves prudently managing foreign currency positions in order to control, within set parameters, the impact of changes in exchange rates on the financial position of the institution.

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## APPENDICES

### Appendix I: List of Apparel and Textile Firms in Kenya Under EPZ

NAME	LOCATION
1. Alltex EPZ Ltd	Athi River EPZ
2. Apex Apparels EPZ Ltd.	Indigo EPZ- nairobi
3. Ashton Apparel EPZ Ltd	Ashton Apparel Epz- Mombasa
4. Blue Bird Garments Kenya EPZ Ltd.	King'orani EPZ- Mombasa
5. I I Flasto Tech (I PZ) Ltd.	Kipevu EPZ - Mombasa
6. Forum International EPZ Ltd.	Kapric EPZ- Mombasa
7. Global Apparels (K) FPZ Ltd	Athi River EPZ
8. Kenya Trading EPZ Ltd.	Sameer Industrial EPZ – Nairobi
9. Kapric Apparels FPZ Ltd	Kapric EPZ- Mombasa
10. Kenya Knit Garments EPZ Ltd.	Kapric EPZ- Mombasa
11. Minge Fashion Wear EPZ Ltd	Athi River EPZ
12. MRC Nairobi EPZ Ltd	Athi River EPZ
13. Protex Kenya EPZ Ltd.	Athi River EPZ
14. Rising Sun FPZ Ltd.	Athi River EPZ
15. Rolex Garments FPZ Ltd	Athi River EPZ
16. Senior Best Garments K. EPZ Ltd.	Zois (ii) FPZ- Mombasa
17. Shin Ace Garments K. EPZ Ltd.	Kwa Joinyu EPZ- Mombasa.
18. Sino Link FPZ Ltd.	King'orani EPZ – Mombasa.
19. Texcare Africa EPZ Ltd	Kapric EPZ- Mombasa
20. United Aryan EPZ Ltd.	Indigo I PZ - Nairobi.
21. Upan Wasana FPZ Ltd	Upan Wasana EPZ- Nairobi.
22. Wild Life Works FPZ Ltd.	Wildlife Works EPZ Voi
23. African Apparel FPZ Ltd	Indigo EPZ- nairobi

Source: Export Processing Zones Authority Kenya website [www.epzkenya.com](http://www.epzkenya.com)

## Appendix II: Questionnaire

### Part A: General information

1. Name of the company (optional) -----

2. Position of respondent -----

3. Years served in the company -----

4. Number of employees in the firm

1-250 [ ]

251-500 [ ]

501-750 [ ]

751-1000 [ ]

Over 1000 [ ]

5. How long has the firm been in existence? -----

6. What is the ownership of the company?

Wholly locally owned [ ]

Foreign owned [ ]

Foreign-local owned [ ]

7. Designation of the respondent -----

**Part B: International Trade Status**

1. Please rank the following financial risks from highly risky to negligible risky as shown in table below:

	Highly risk	Risky	moderate	Less risky	negligible
Inflation rate					
Exchange rate					
Credit risk					
Stock prices					

2. Which transactions expose your firm to foreign exchange risks? (Can tick more than once)?

i Purchase of raw materials abroad

ii Sale of finished products abroad

iii Repayment of borrowed funds from abroad

iv Revaluation of assets and liabilities

v Other (specify).....

3. What percentage of foreign denominated purchases to total purchases?

00-20%

..

20-40%

40-60%

60-80%

80-100%

4 What is the frequency of your imports?

Daily

Weekly

Monthly

Quarterly

Semi-annually

Annually

Rarely

5 What percentage of foreign currency denominated sales to total sales?

00-20%

20-40%

40-60%

60-80%

80-100%



6. What is the frequency of your exports?

Daily

Weekly

Monthly

Quarterly

Semi-annually

Annually

Rarely

#### Part C : Management of Foreign Exchange Risk

1. Do you have a documented foreign currency management policy?

Yes

No

2. Does the company have a risk management department/ section?

Yes

No

3. If answer in 1 above is yes, who is responsible for the risk management department?

CEO

Finance manager

Accountant [ ]

Risk Manager [ ]

Other (specify).....

1 What are the problems encountered in managing foreign exchange risk?

Frequent changes in exchange rates [ ]

Retaining customers [ ]

Getting the needed foreign currency [ ]

Getting the right foreign currency mix [ ]

Fluctuation in demand for certain foreign currency [ ]

Other (specify).....

5. How do you manage foreign exchange risk? Rank in order of extent of use.

	Not at all	Least used	Moderately used	Most used
Price adjustment				
Delay payment when foreign currency are strong and delay accelerate when weak				
Forward covers				
Use swaps				
Set off against affiliated parties (Netting)				
Price negotiation				
Prepayment Advance payment				
Buy and save currency in advance				

6. Does the firm practice currency hedging?

Yes      [   ]

No        [   ]

{

7 If the answer above is yes, kindly tick the financial instruments used by your firm to hedge against foreign exchange risk?

- i. Forward contract. (Is used to protect known contractual cashflows, such as exposed transactions) [  ]
- ii. Futures contract. (Are contracts that specify delivery of fixed quantities of foreign currencies on a set delivery date in the future that are traded on an organized market) [  ]
- iii. Currency options. (This is a contract that gives the holder the right but not the obligation to sell or buy currencies at a set price either on a specific date or before some expiration date) [  ]
- iv. Currency swaps. (An agreement in which two parties repay each other's fixed interest rate loans denominated in different currencies) [  ]
- v. Others (specify).....

8 Please rate the percentage of use of the following instruments?

	0 - 20%	20 - 40%	40% - 60%	60% - 80%	80% - 100%
Forward market					
Future contracts					
Currency options					
Currency swaps					
Others					

9. What percentage of your foreign currency denominated purchases are hedged?

00-20%            [   ]

20-40%           [   ]

40-60%           [   ]

60-80%           [   ]

80-100%          [   ]

8 Please rate the percentage of use of the following instruments?

	0 - 20%	20 - 40%	40% - 60%	60% - 80%	80% - 100%
Forward market					
Future contracts					
Currency options					
Currency swaps					
Others					

9. What percentage of your foreign currency denominated purchases are hedged?

00-20%            [   ]

20-40%            [   ]

40-60%            [   ]

60-80%            [   ]

80-100%           [   ]

10. Which currency do you invoice your exports in?

USD

KES

YEN

EURO

ZAR

Other (specify).....

11. Which currency would prefer to pay your imports?

USD

KES

YEN

EURO

Other (specify).....

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

i Hedge all open positions immediately

ii Hedge only those positions where currency loss is expected

13. How does your firm measure foreign exchange risk exposure?

Actual cash flow analysis

Firm market value analysis

Fluctuation in demand

Decrease in market share

Other (specify).....

14. How often does your firm measure the success of its exchange risk management policy?

i. Monthly

ii. Quarterly

iii. Semi- annually

iv. Annually

v. None at all

**Thank you for your participation**