STRATEGIES ADOPTED BY FIRMS IN THE MANAGEMENT OF FOREIGN EXCHANGE RATE RISK IN THE EXPORT PROCESSING ZONE IN ATHI RIVER, KENYA

BY

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DECLARATION

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

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DEDICATION

This work is dedicated to Almighty God, my family for the love, patience and support understanding and continued prayers towards successful completion of this course.

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Work such as this is often the fruit of many minds. In the text and in the bibliography, some of the authors from whom I have derived my ideas are named. Although I have been even more influenced by discussions with friends and colleagues, I am deeply grateful to my Supervisor, Professor Justus Munyoki who has read my work in whole and guided me accordingly and must share the credit for any merit this work may have.

ABSTRACT

Foreign exchange risk has become a more important component of risk management in light of the globalization and internationalization of world markets following increased exposure of firms engaged in international trade. The objective of this study was to establish the strategies adopted by firms in the Export Processing Zone in Athi River to manage foreign exchange rate risk. The specific objectives included establishing the strategies adopted by firms in the Export Processing Zone in Athi River in the management of foreign exchange rate risk and determining effectiveness of the foreign exchange rate risk management strategies adopted by firms in the Export Processing Zone in Athi River in the management of foreign exchange rate risk. This study adopted a descriptive, cross-sectional research design. The target population of the study comprised 45 firms registered at the EPZ Athi River. The study used primary data collected using a questionnaire. The collected questionnaires were inspected for completeness and entered into data analysis software. From the findings, the firms in the export processing zones use various strategies to manage foreign exchange risk exposure, forward contract in foreign currency the and enter into a contract to sell/purchase a set amount of foreign currency at the predetermined price in a given future date, spot rate that allows them to manage foreign exchange fluctuations and also use spot rate existing on the day of transaction for majority of our foreign currency transaction. The study recommends that firms in the export processing zones need to employ risk management policies aimed at reduction of bankruptcy and distress costs, reduction in expected tax payments, reduction in expected payments to stakeholders and reduction in cost of raising funds.

TABLE OF CONTENTS

TABLE OF CONTENTS.....vi

LIST OF TABLE.....viii

CHAPTER ONE: INTRODUCTION.....1

1.1 Background of the study.....1

Concept of Strategy.....2

Foreign Exchange Rate Risk Management.....3

Export Processing Zone.....4

1.2 Research Problem.....5

1.3 Research Objective.....7

1.4 Value of the Study.....7

2.2.1 Purchasing Power Parity Theory 10

2.2.2 The International Fisher Effect Theory 12

2.3.1 Forward Contracts in Managing Foreign Exchange Rate Risk.....13

2.3.2 Cross-Currency Swaps in Managing Foreign Exchange Rate Risk 14

2.3.3 Options in Managing Foreign Exchange Rate Risk.....15

2.3.4 Leading and Lagging in Managing Foreign Exchange Rate Risk.....16

2.3.5 Netting in Managing Foreign Exchange Rate Risk.....17

2.3.6 Price Adjustments in Managing Foreign Exchange Rate Risk.....18

2.4 Research Gap.....19

CHAPTER FOUR: DATA ANALYSIS AND PRESENTATION.....25

4.2 General Information 25

4.3 Strategies Adopted by Firms to Manage Foreign Exchange Rate Risk.....29

4.3.1 Forward Contracts.....29

4.3.2 Spot Rate.....30

4.3.3 Options Strategy.....30

4.3.4 Leading and Lagging.....31

4.3.5 Netting.....32

4.3.6 Price Adjustments.....33

4.4 Effectiveness of the Strategies.....34

4.5 Correlation Analysis.....34

4.6 Regression Analysis.....35

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS.39

5.4 Limitations of the Study 41

5.5 Recommendations.....41

5.6 Recommendations for Future Research 42

REFERENCES.....42

APPENDICES.....46

APPENDIX I: QUESTIONNAIRE.....46

LIST OF TABLE

CHAPTER ONE: INTRODUCTION

1.1 Background of the study

Strategy is concerning with aligning the operations of businesses in line with their operating environment for optimal organization performance (Thompson and Strickland, 2005). Companies participating in international trade are exposed to risks caused by unexpected movements in exchange rate in today's volatile financial markets. The management of this risk has become essential for the survival of such companies. Managing foreign exchange risk 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. Currency risk hedging strategies entail eliminating or reducing this risk, and require understanding of both the ways that the exchange rate risk could affect the operations of economic agents and techniques to deal with the consequent risk implications (Barton, Shenkir, and Walker, 2002). Selecting the appropriate hedging strategy is often a daunting task due to the complexities involved in measuring accurately current risk exposure and deciding on the appropriate degree of risk exposure that ought to be covered.

This study was anchored on the Purchasing Power Parity (PPP) theorem which holds that under a floating exchange regime, a relative change in purchasing power parity for any pair of currency calculated as a price ratio of traded goods would tend to be approximated by a change in the equilibrium rate of exchange between these two currencies (Shapiro and Rutenberg, 1976). The study was guided by the International Fisher Effect Theory developed by Fisher in (1930). This theory uses market interest rates rather than inflation

rates to explain why exchange rates change over time. The Fisher theory simply argues that real interest rate across countries was equal due to the possibility of arbitrage opportunities between financial markets which generally occurs in the form of capital flows.

The establishment of EPZs in Kenya was aimed at facilitating export-oriented industrialization as well as enhancing industrial growth and development in the country. The firms in the export Processing Zone mainly manufacture goods for export into the foreign market. As such, their markets are international; they are exposed to the fluctuations in the foreign currency pricing. This in turn affects their performance thereby creating the need for foreign exchange risk management.

Concept of Strategy

Thompson and Strickland (2005) define strategy as management's action plan for running the business and conducting operations. They note that a strategy represents a managerial commitment to pursue a particular set of actions in growing the business, attracting and pleasing customers, competing successfully, conducting operations and improving the company's financial performance. They further argue that the best indicators of a company's strategy are its actions in the market place and the statements of the managers about the company's current business approaches, future plans and efforts to strengthen its competitiveness and performance. Mintzberg, Lampel, Quin and Ghosal (2002) describe strategy as the pattern or plan that integrates an organization's major goals, policies, and action sequences into a cohesive whole. A well formulated strategy helps to marshal and allocate an organization's resources into a unique and

viable posture based on its relative internal competencies and shortcomings, anticipated changes in the environment, and contingent moves by intelligent opponents.

On the Other hand, Johnson and Scholes (2008) observes that Strategy is concerned with the long-term direction of the firm, scope of an organizations activities, how to achieve some advantage for the organization over competition, search for strategic fit with the business environment and creating opportunities by configuring an organization's resources and competences with the aim of fulfilling stakeholder expectations. The strategy is affected not only by the environmental forces and strategic capability but also by the values and expectations of those who have power in and around the organization.

Foreign Exchange Rate Risk Management

Butler and Barry (2008) define foreign exchange risk as the risk related with the unexpected changes in exchange rates and foreign exchange exposure as the extent to which unexpected changes in exchange rates affect the value of a firm's assets or liabilities. Taggert and McDermott (2000) assert that firms engaged in international business are subject to foreign exchange risk on the payables and receipts in foreign currencies. Fatemi and Glaum (2000) defines foreign exchange risk management as a program of assessment involving identification and quantification and counterstrategies to mitigate exchange rate risk and saves firm's economic value.

According to Featherson, Littlefield and Mwangi (2006), foreign exchange risk arises when fluctuation in the relative values of currencies affects the competitive position or viability of an organization. Firms are exposed to foreign exchange risk if the results of their projects depend on future exchange rates and if exchange rate changes cannot be

fully anticipated. Generally, companies are exposed to, Transaction exposure, Economic exposure and Translation exposure (El-Masry, Abdel-Salam & Alatraby, 2007). Foreign Exchange risk comes about as a disparity between the assets held by a bank and the loans that fund its balance sheet. An unexpected depreciation of the local currency against the United States Dollar (USD) can dramatically increase the cost of servicing debt relative to revenues. It can also negatively affect the creditworthiness of the bank (hence the ability to raise new funds) and even generate a negative net income, with serious consequences for the long-term financial stability of the bank (Moles, 2002).

Export Processing Zone

Export Processing Zone refers to a type of free trade zone (FTZ), set up generally in developing countries by their governments to promote industrial and commercial exports (EPZA, 2015). The first EPZ program 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 generated, technology transferred, backward linkages developed and diversified exports. Managed and promoted by the Export Processing Zone Authority (EPZA), the scheme offers a range of attractive incentives to ensure low cost operations, fast set up, smooth operations and high profitability. An effective one-stop-shop service at the EPZ Authority facilitates the investment process.

There are seven Export Processing Zones (EPZs) strategically located across Kenya constituting an economic proposition that makes a compelling case for companies and businesses to contemplate. The individual EPZs are located in the capital city Nairobi,

Athi River, the Indian Ocean Port city of Mombasa, nearby Kilifi and Malindi along Kenya's North coastline, Voi and Kimwarer in the country's inland Rift Valley region. Kenya is a fiscally sensible destination for assured returns on their investments while engaging in planned and sustainable development of the national economy and providing employment to the country's workforce.

The EPZs specialize in export-oriented investments and particularly to develop projects that attract foreign companies in the areas of food processing, fresh produce, packaging for shelf ready products, wooden products, leather and animal based products, jewellery and gemstones, pharmaceutical products and herbal medicines, medicinal supplies, cosmetic and personal care products, packaging products, textiles, commercial handicrafts, transport equipment, electronic and electrical goods, building materials and furnishings, data processing & audio-visual services and consultancy and professional services (EPZA, 2013).

1.2 Research Problem

Foreign exchange risk has become a more important component of risk management in light of the globalization and internationalization of world markets following increased exposure of firms engaged in international trade (Fatemi & Lufft, 2002). 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 (Denzil and Antony, 2007). Because of the international nature of export processing zone firms, they invoice in

different currencies which in turn exposes them thus calling for appropriate exchange rate risk management methodology (Pickford & Paola, 2012).

The export processing zone based in Athi River has many firms engaged in different businesses for export. However, over the past five years, the country has witnessed high fluctuations in foreign currency with the exchange rate for the USD ranging from Ksh 80-104. This has not only affected the output prices but also the input as majority of their inputs are imported and the output exported. The high fluctuations in the foreign exchange rates have called on the firms to institute appropriate strategic response strategies to manage exchange rate exposure.

Several studies have been conducted on foreign exchange rate risk management. For instance, Njunge (2010) studied foreign exchange risk management practices by micro-finance institution. The study revealed that most companies use currency swaps and currency options as financial instruments to hedge against foreign exchange risk. Secondly, Wekesa (2012) examined the relationship between foreign exchange risk management and profitability of airlines in Kenya and established that airlines often used forwards, futures, money market contracts, options and swaps for hedging in the order of merit. In addition, Mwangi (2013) examined the effect of foreign exchange risk management on financial performance of microfinance institutions in Kenya and established a strong positive relationship between financial performance and use of forward contracts and options as foreign exchange risk management techniques. Further, Limo (2014) examined the effect of foreign exchange risk management on the financial performance of commercial banks in Kenya and established that Options, Forward

Contracts, Cross Currency Swaps, Leading and Lagging, Price Adjustments, Netting accounted for 80.1% of the variations in profitability of commercial banks. These studies were done in relation to the effects of risk management on financial performance and not by looking at the foreign exchange rate risk management practices as strategic response strategies adopted by the firms. This study therefore seeks to achieve the objective by seeking to answer one research question: What strategies have been adopted by firms in the Export Processing Zone in Athi River to manage foreign exchange rate risk?

1.3 Research Objective

To establish the strategies adopted by firms in the Export Processing Zone in Athi River to manage foreign exchange rate risk.

The specific objectives were:

i. To establish strategies adopted by firms in the Export Processing Zone in Athi River in the management of foreign exchange rate risk
ii. To determine effectiveness of the foreign exchange rate risk management strategies adopted by firms in the Export Processing Zone in Athi River in the management of foreign exchange rate risk

1.4 Value of the Study

The findings of this study would be important to several stakeholders including: managers in the Export Processing Zones, Other firms, and customers of the products of Export processing Zones, Government of Kenya and future scholars and researchers.

For the managers in the Export Processing Zones, the findings of this study would be relevant in informing their future foreign exchange risk management plans to ensure minimal exposure. Through the findings of this study, they would learn the application of the foreign exchange rate risk management strategies for optimal organization performance both on the local and international market. For the customers of products from the Export Processing Zones, the findings of this study would inform their budgeting on how to overcome the challenges of foreign exchange rate fluctuation so as to optimize their expenditure.

The findings of this study would also be valuable to the Government of Kenya especially the Ministry of Industrialization in their policy formulation to promote the level of industrialization in Kenya. Export processing zones play a critical role in economic development therefore; the policies formulated would be aimed at promoting the firms within EPZ.

The findings of this study would also be important to future researchers and scholars as it would serve as a source of future references on foreign exchange rate management strategies. The study would further suggest areas for further research where they can research on to extent the level of knowledge.

1.5 Chapter Summary

This chapter provided background information of the study relating to concept of strategies, foreign exchange rate risk management and export processing zone from global, regional and local perspectives. It highlighted the research problem clearly

bringing out the research gap to be filled by the study. The chapter also presented the research objectives and the value of the study.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The chapter presents research work on foreign exchange rate risk management as presented by other scholars and researchers. The chapter specifically covers the theoretical framework and the foreign exchange rate risk management strategies. These are discussed in details below.

2.2 Theoretical Foundation

This study is anchored on two theories: Purchasing Power parity (PPP) and the International Fischer effect theory. These theories explain how organizations go about managing foreign exchange rate risk when transacting across countries.

2.2.1 Purchasing Power Parity Theory

The Purchasing Power Parity (PPP) was first developed by the Swedish economist Gustav Cassel in 1920s to examine the relationship between the exchange rates of different countries. This theory holds if and when exchange rates move to offset the inflation rate differentials between two countries (Shapiro and Rutenberg, 1976). It is also defined as the basis of the “law of one price” which asserts that the exchange rate between two currencies should be equal to the ratio of the price level of identical goods and services in the two countries. The PPP theorem explains the relationship between relative prices of goods and exchange rates (Madura, 2010).

According to the PPP, an increase in the price level of a country would cause depreciation of its exchange rate relative to other countries, thereby keeping the relative

price of identical goods the same across countries (Cumby and Obstfeld, 1981). This theory suggests that exchange rate changes were offset by relative price indices/ inflation since the Law of One Price should hold. PPP follows from the law of one price, which states that in competitive markets, identical goods would sell for identical prices when valued in the same currency (Shapiro and Rutenberg, 1976). It relates to an individual product and its generalization is the absolute version of PPP. Relative PPP relates to changes in prices and exchange rates, rather than on absolute price levels. It states that change in exchange rates is proportional to the change in the ratio of the two nations price levels, structural relationships remaining unchanged. This theorem is relevant for this study because it explains how two currencies vary from one another.

The assumptions for PPP to hold are that goods are identical, all goods are tradable, there are no transportation costs, information gaps, taxes, tariffs, or restrictions of trade, and exchange rates are influenced only by relative inflation rates. Due to these restrictive assumptions and empirical violation of the law of one price which is the building block of PPP, monetary models of exchange rate determination was adopted. Since currencies are considered assets, exchange rates are asset prices that adjust to equilibrate international trade in financial assets. Like other asset prices, exchange rates are determined by expectations about the future. Since currencies are treated as assets this approach is called the asset approach.

2.2.2 The International Fisher Effect Theory

The International Fisher Effect Theory was developed by Irving Fisher in his book The Theory of Interest (1930). It uses market interest rates rather than inflation rates to explain why exchange rates change over time. The theory states that exchange rates changes are balanced out by interest rate changes by arguing that real interest rates across countries is equal due to the possibility of arbitrage opportunities between financial markets which generally occurs in the form of capital flows. Real interest rate equality implies that the country with the higher interest rate should also have a higher inflation rate which, in turn, makes the real value of the country's currency decrease over time.

The relationship between relative interest rates and foreign exchange rates is explained within the interest rate theory of exchange rate expectations. Nominal interest rate differentials between two countries tend to reflect exchange rate fluctuations. Giddy (1977) called this the international Fisher effect, a close relationship to the Fisher effect, a phenomenon observed by Irving Fisher (1896). If the international Fisher effect holds, interest rates in appreciating currencies tend to be low enough, and in depreciating currencies high enough, to offset expected currency gains and losses.

The International Fisher Effect (IFE) theory suggests that foreign currencies with relatively high interest rates would tend to depreciate because the high nominal interest rates reflect expected rate of inflation (Madura, 2010). Does the interest rate differential actually help predict future currency movement? Available evidence is mixed as in the case of PPP theory. In the long-run, a relationship between interest rate differentials and subsequent changes in spot exchange rate seems to exist but with considerable deviations

in the short run (Hill, 2004). The international Fisher effect is known not to be a good predictor of short-run changes in spot exchange rates (Cumby and Obstfeld, 1981).

2.3 Foreign Exchange Rate Risk Management Strategies

A firm, exposed to foreign exchange risk, needs to formulate a strategy to manage it, choosing from multiple alternatives. According to Clark & Judge (2009) hedging instruments depend on the type of exposure. Different instruments have to be used to hedge risks with different natures. For example, a short-term risk should be hedged by a short-term instrument, while a long-term risk has to be hedged with a long-term instrument. Short-term instruments such as foreign currency forwards and/or options are used to hedge short-term exposure generated from export activities, while foreign currency debt and foreign currency swaps into foreign currency (but not into domestic currency) are used to hedge long-term exposure arising from assets located in foreign locations. Risks can be effectively hedged only when the right hedging instruments are chosen. This section explores the various foreign exchange rate risk management strategies employed by firms:

2.3.1 Forward Contracts in Managing Foreign Exchange Rate Risk

A forward contract (FX) is an agreement to purchase or sell a set amount of a foreign currency at a specified price for settlement at a predetermined future date, or within a predetermined window of time. FX forwards help investors manage the risk inherent in currency markets by predetermining the rate and date on which they would purchase or sell a given amount of foreign exchange. According to Bessembinder (1991), corporate risk hedging using forward contracts increases value by reducing incentives to under

invest. At maturity, the person or firm with the long position pays the forward price to the person with the short position, who in turn delivers the asset underlying the forward contact. Forward cover can be settled through delivery, cancellation, extension and early delivery, (Hillier, Grinblatt & Tittman, 2012). Banks usually act as intermediaries and charge a commission for this service.

A forward contract helps protect a portfolio against any possible negative currency move and there are no additional price complications in execution from doing a spot trade. The depreciation of the receivable currency is hedged against by selling a currency forward. If the risk is that of a currency appreciation (if the firm has to buy that currency in future say for import), it can hedge by buying the currency forward. The main advantage of a forward is that it can be tailored to the specific needs of the firm and an exact hedge can be obtained. On the downside, these contracts are not marketable, they can‘t be sold to another party when they are no longer required and are binding (Bessembinder, 1991).

2.3.2 Cross-Currency Swaps in Managing Foreign Exchange Rate Risk

A swap is a foreign currency contract whereby the buyer and seller exchange equal initial principal amounts of two different currencies at the spot rate. Dawson et al (1994) define a swap as an exchange of liabilities denominated in a different currency involving two parties who agree to exchange specific amounts of two different currencies at the outset in their home currency. It involves exchange of stream of currencies or interest rate either between fixed and floating rate of interest (Hillier et al. 2012).

The two parties make periodic payments over time in accordance to predetermined rule to reflect differences in interest rates between the two currencies involved. A cross-currency

swap is generally used at the start of a loan period. Cross currency swaps allow two counter-parties to exchange specific amounts of two different currencies at the outset and to make repayments over time. In a currency swap, interest payments in two currencies are exchanged over the life of the contract, and the principal amounts are repaid either at maturity or according to a predetermined amortization schedule. Lel and Nianian (2007) outline that as a relative new financial derivative used to hedge foreign exchange exposure, currency swaps have a rapid development. Since its introduction on a global scale in early 1980's currency swap market has become one of the largest financial derivative markets in the world.

2.3.3 Options in Managing Foreign Exchange Rate Risk

A currency Option is a contract giving the right, not the obligation, to buy or sell a specific quantity of one foreign currency in exchange for another at a fixed price; called the Exercise Price or Strike Price (Marshal, 1997). It is a unique financial instrument or contract that confers upon the holder or the buyer thereof the right, but not an obligation, to buy or sell an underlying asset, at a specified price, on or up to a specified date. The players involved in option market are option writer and option holder (Hillier, Grinblatt & Tittman, 2012).

The fixed nature of the exercise price reduces the uncertainty of exchange rate changes and limits the losses of open currency positions. Options are particularly suited as a hedging tool for contingent cash flows, as is the case in bidding processes. Call option is a right without obligation to buy, while put option is right without obligation to sell an underlying at a future date which is known as option period at a particular price called

strike price or exercise price, (Hillier et al. 2012). Since they involve such flexibility, a premium is paid up front. The asset underlying a currency option can be a spot currency or a futures contract on a currency. An option on a spot currency gives the option buyer the right to buy or sell the said currency against another currency, while an option on a currency futures contract gives the option buyer the right to establish a long or short position in the relevant currency futures contract. Options on spot currencies are commonly available in the interbank over-the-counter markets, while those on currency futures are traded on exchanges.

Marshal (1997) examined the extent of derivatives and the reasons for their use by carrying out surveys in 250 large UK companies. They found a wide spread use of both forwards and options (96% and 59% respectively). They pointed out that comparing to the primary reason for the use of forwards were company policy, commercial reasons and risk aversions, a good understating of instrument, and price were prominent. While the primary reason to use options was company management.

2.3.4 Leading and Lagging in Managing Foreign Exchange Rate Risk

Another operational technique the firm can use to reduce transaction exposure is leading and lagging foreign currency receipts and payments. To lead means to pay or collect early, whereas lag means to pay or collect late. The firm would like to lead soft currency receivables and lag hard currency receivables to avoid the loss from depreciation of the soft currency and benefit from the appreciation of the hard currency. For the same reason, the firm would attempt to lead the hard currency payables and lag soft currency payables (Jorion, 2001). To the extent that the firm can effectively implement the Lead/Lag

strategy, the transaction exposure the firm faces can be reduced. On translation exposure, Managers, analysts and investors need some idea about the importance of the foreign business. Translated accounting data give an approximate idea of this. Performance measurement for bonus plans, hiring, firing, and promotion decisions. Accounting value serves as a benchmark to evaluate a discounted-cash flow valuation, for income tax purposes and legal requirement to consolidate financial statements (Gachua, 2011).

Lead and lag involves delaying the original payment but within a company's divisions or subsidiaries. If the currency of a subsidiary is sought to appreciate, it may accelerate its payment (leading) and realize the payment before the currency appreciates. The reverse is true if a currency is expected to depreciate, then the company would delay its payment (lagging). However, the first should only take into account the gain or loss from the currency but also the cost for increasing or decreasing the liquidity. According to Abor (2005), a lead strategy, involves attempting to collect foreign currency receivables only when a foreign currency is expected to depreciate and paying foreign currency payables before they are due when a currency is expected to appreciate. On the other hand 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.

2.3.5 Netting in Managing Foreign Exchange Rate Risk

This is the reduction in the number of transactions that a firm needs to make in order to cover an exposure. It requires the firm to have a centralized organization of its cash management. The centralization means that the companies collect foreign currency cash flows between subsidiaries and groups them together as inflows and outflows in the same

currency. The objective of netting is to save transaction costs by netting off intercompany balances before arranging payment. This is where multinational groups engage in intergroup trading i.e. related companies located in different countries trade with one another. The advantages are: reduction in foreign exchange purchase costs, commission, selling and buying rates, and less loss in interest from having money in transit. Loss due to netting positions by swap dealers can be as little as10% for agricultural commodities and quite large for energy and metals (CFTC, 2009).

2.3.6 Price Adjustments in Managing Foreign Exchange Rate Risk

Involves changing prices in different manners. When the local currency of a subsidiary is devaluating, the subsidiary can increase the price, so as to cancel the effect of devaluation. This technique is particularly used in countries where devaluation is high and where derivative markets are efficient. However, as a disadvantage of this method, prices cannot be raised without any consideration about competitors because if prices increase too much the client would choose an equivalent cheaper product/service from a competitor. Flexibility may be exhibited in the ability to pass through changes in the price of inputs or in the general level of prices to consumers through frequent price adjustments (Jacque & Lorange, 1984).

2.4 Research Gap

Wekesa (2012) carried out a study to establish the relationship between foreign exchange risk management and profitability of airlines in Kenya. The study found that airlines often used forwards, futures, money market contracts, options and swaps for hedging in the order of merit. The study however did not focus on the effectiveness of the foreign exchange rate risk management strategies adopted in the management of foreign exchange rate risk. Limo (2014) sought to establish the effect of foreign exchange risk management on the financial performance of commercial banks in Kenya. The study revealed that Options, Forward Contracts, Cross Currency Swaps, Leading and Lagging, Price Adjustments, Netting accounted for 80.1% of the variations in profitability of commercial banks. This study focused on the effects of foreign exchange risk management on the financial performance and did not cover on foreign exchange rate risk management practices as strategic response strategies adopted by the firms.

These studies have been carried out in different contexts and fail to cover on the strategies adopted by firms in the Export Processing Zone in Athi River to manage foreign exchange rate risk. This study therefore seeks to fill the knowledge gap by establishing the strategies adopted by firms in the Export Processing Zone in Athi River in the management of foreign exchange rate risk and determining effectiveness of the foreign exchange rate risk management strategies adopted by firms in the Export Processing Zone in Athi River in the management of foreign exchange rate risk.

2.5 Chapter Summary

This chapter has reviewed the literature that informs the formation of study variables. In particular, it reviewed the theoretical perspective where the Purchasing Power Parity theory and the International Fisher Effect Theory were reviewed. The study then presented foreign exchange rate risk management strategies adopted by organizations as urged out by other scholars and researchers. It also presented the summary and research gaps to be filled by the study.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methodology that was used to carry out the survey, what informed the selection of the research design, why the population was selected, the sampling method used, the data collection instrument, how data was analyzed and data interpretation.

3.2 Research Design

This study adopted a descriptive, cross-sectional research design. This design was adopted in order to observe, describe and document aspects of a situation as it naturally occurs (Polit & Hungler, 1999). This involves the collection of data that would provide an account or description of way in which firms at the EPZ go about in managing their foreign exchange exposure. In this instance, there is no experimental manipulation or any random selection to groups. Descriptive design addresses the "what, how, when, where" questions of the population under study. Cross sectional survey is a type of descriptive research design involving the collection of information from any given sample of the population element once (Ngechu, 2004). Mugenda and Mugenda (2003) noted that a survey attempts to collect data from members of a population and describes phenomenon by asking individuals about their perceptions, attitudes, behaviour or values.

Cross-sectional research design was been chosen because the study included several firms at the EPZ and it appeals for generalization within a particular parameter. The data obtained would be able to be standardized to allow easy comparison. Moreover, it explores the existing status of two or more variables at a given point in time. This design

would enhance a systematic description that is accurate, valid and reliable as possible the strategies adopted by firms in the Export Processing Zone in Athi River to manage foreign exchange rate risk.

3.3 Population of the Study

Mugenda and Mugenda (2003) define a target population as group of individual to which the researcher would like to generalize his results from. It comprises of all potential participants that can make up the study group. According to the EPZA, there were 45 firms operating from the Athi River EPZ (Appendix 1). Therefore, the target population of the study comprised 45 firms registered at the EPZ Athi River (EPZA, 2015). Since these firms are few and can easily be accessed, the study would include all of them in the study hence a census. The study targeted risk managers and/or finance manager/Accountant or their equivalents in each organization because of their role in development of strategies meant to shield the firm from unexpected losses.

3.4 Data Collection

The study used primary data collected using a questionnaire. The questionnaire made use of both open and closed ended questions. For the closed ended questions, the study adopted a five point likert scale where the target respondents indicated the extent of their agreement/disagreement with each statement. The questionnaire was also subdivided into distinct sections including: section A which covered demographic information about the respondents and their firms; section B covered competitive strategies while section C covered foreign exchange rate risk management strategies.

The study targeted risk managers or their equivalents in each organization because of their role in development of strategies meant to shield the firm from unexpected losses. Where this position did not exist, the finance manager/Accountant were approached. In total, the study targeted 45 respondents as per the firms in appendix 1. The questionnaire was administered through a drop and pick later method to allow the target respondents time to respond to the questionnaire.

3.5 Data Analysis

The data collected from the field was majorly quantitative as the respondents were required to indicate their level of agreement with various statements proposed. The collected questionnaires were inspected for completeness and entered into data analysis software (Statistical Package for Social Sciences (SPSS)) for analysis. For open ended questions, the study used content analysis while for closed ended questions; the study applied descriptive statistics including mean and standard deviation. The analyzed data was presented using tables and charts.

In order to evaluate the relationship between the dependent and independent variables, the study conducted a Pearson Product Moment Correlation and multiple regression analysis of the form:

$$\mathbf{Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon}$$

Where **Y** = Foreign Exchange Rate risk Exposure

$\mathbf{X_1}$ =Forward Contracts

$\mathbf{X_2}$ =Cross Currency

$\mathbf{X_3}$ =Options

$\mathbf{X_4}$ =Leading and lagging

$\mathbf{X_5}$=Netting

$\mathbf{X_6}$ =Price adjustment

$\boldsymbol{\varepsilon}$ = Error Term

3.6 Chapter Summary

This chapter presented, explained and justified the different research approaches, techniques and processes the researcher adopted in the course of the study. These included the research design, population of the study, data collection methods and data analysis techniques including the multiple regression model.

CHAPTER FOUR: DATA ANALYSIS AND PRESENTATION

4.1 Introduction

This chapter presents research findings, analysis of the data and interpretation of the data collected from the respondents. It also presents findings and the discussion on strategies adopted by firms in the management of foreign exchange rate risk in the export processing zone in Athi river, Kenya and to also determine effectiveness of the foreign exchange rate risk management strategies adopted by firms in the Export Processing Zone in Athi River in the management of foreign exchange rate risk.

A total of 45 questionnaires were administered out of which 32 were filled and returned giving a response rate of 71.1%. This response rate was made a reality after the researcher dropped the questionnaires and made personal visits and phone calls to the respondents who then completed the questionnaires.

4.2 General Information

The study sought to find out general information of the respondents including position, level of education, period the firm have been in operation, period worked in the firm and the number of employees.

4.2.1 Position in the Company

The study sought to find out the positions that the respondents held in the companies they worked for and the findings are as shown in the Table 4.2 below

Table 4.1: Position in the Company

	Frequency	Percentage
Manager	5	15.6
Accountant	7	21.9
Finance executive	9	28.1
Others	11	34.4
Total	**32**	**100.0%**

From the findings shown in the table above, 15.6% of the respondents had management positions, 29.9% of the respondents were accountants, and 28.1% of the respondents were finance executives while the remaining 34.4% of the respondents were in other position such as the secretaries, human resource and procurement officers

4.2.2 Number of Years Worked in That Position

The study further sought to find out the number of years that the respondents had worked in that particular position in the respective companies. The findings were as shown in the Table 4.3 below.

Table 4.2: Number of Years Worked in That Position

	Frequency	Percentage
less than 2 years	18	56.3
3-5 years	7	21.9
5-7 years	5	15.6
7-10 years	2	6.3
Total	**32**	**100.0**

From the findings displayed in Table 4.3 above, 56.3% of the respondents had worked in that position for less than two years, 21.9% of the respondents had been in that position for a period of between 3-5 years, 15.6% of the respondents had been in that position for a period of between 5-7 years while 6.3% of the respondents had been in that position for a period of between 7-10 years.

4.2.2 Level of Education

The study also sought to find out the level of education of the respondents. The findings are as shown in the Table 4.4 below.

Table 4.3: Level of Education

	Frequency	Percentage
Certificate	3	9.4
Diploma	5	15.6
First degree	10	31.3
Masters	12	37.5
PHD	2	6.3
Others	0	0.0
Total	**32**	**100.0**

From the findings shown in Table 4.4 above, 9.4% of the respondents had certificate level, 15.6% of the respondents had diploma level, 31.3% of the respondents had a first degree, and 37.5% of the respondents had a master's degree while 6.3% of the respondents had a PhD. However none of the respondents had any further qualifications apart from the ones mentioned.

4.2.3 Period that the Firm has been in Operation

The study sought to find out the period that the companies had been in operation and the findings were as shown in the Table 4.5 below.

Table 4.4: Period that the Firm has been in Operation

	Frequency	Percentage
Below 3 years	2	6.3
3-6 years	6	18.8
7-10 years	14	43.8
Over 10 Years	10	31.3
Total	**32**	**100.0**

From the findings shown in the Table 4.5 above 6.3% of the respondents were 6.3% of the companies had been operation for a period of less than 3 years, 18.8% of the

companies had been in operation for a period of 3-6 years, 43.8% of the companies had been operation for a period of between 7-10 years while the remaining 31.3% of the respondents had been in operation for a period of over10 years.

4.2.4 Period Worked in the Firm

The study further sought to establish the period that the respondents had worked in their respective firms. The findings were as shown in Table 4.6 below.

Table 4.5: Period Worked in the Firm

	Frequency	Percentage
Less than 5 years	7	21.9
5-10 years	11	34.4
11-15 years	9	28.1
Over 15 years	5	15.6
Total	**32**	**100.0**

From the findings shown in the table above, 21.9% of the respondents had worked for a period less than 5 years, 34.4% of the respondents had worked for a period of 5-10years, and 28.1% of the respondents had worked for a period of between 11-15 years while 15.6% of the respondents had worked for a period of over 15years.

4.2.5 Number of Employees

The study sought to establish the number of employees that the respective organizations had. The findings were as shown in the Table 4.7 below.

Table 4.6: Number of Employees

	Frequency	Percentage
Less than 30	3	9.4
31-60 employees	6	18.8
61-90 employees	7	21.9
over 90 employees	16	50.0
Total	**32**	**100.0**

From the findings shown in the table above 9.4% of the companies had less than 30 employees, 18.8% of the firms had 31-60 employees, 21.9% of the companies had 61-90 employees, and 50% of the firms had over 90 employees.

4.3 Strategies Adopted by Firms to Manage Foreign Exchange Rate Risk

The study sought to identify the strategies adopted by firms to manage foreign exchange rate risk. The strategies adopted addressed in this study were forward contract, spot rate, options, leading and lagging, netting and price adjustments.

4.3.1 Forward Contracts

The study sought to establish the extent to which forward contracts were being used in the various firms.

Table 4.7: Forward Contracts

	Mean	Std. Dev
We enter into contract to sell/purchase a set amount of foreign currency at a pre-determined price in a given future date	3.0000	.71842
We always transact using forward contract in foreign currency	3.6250	.49187

As shown in Table 4.3, the firms enter into a contract to sell/purchase a set amount of foreign currency at the predetermined price in a given future date the respondents showed that it was to a moderate extent as shown by a mean of 3.0000 and a standard deviation of 0.71842.When asked the extent to which the firms always transact using forward contract in foreign currency the respondents showed that it was to a great extent as shown by a

mean of 3.6250 and a standard deviation of 0.49187 this concurs with Bessembinder (1991),who says that A forward contract is an agreement to purchase or sell a set amount of a foreign currency at a specified price for settlement at a predetermined future date, or within a predetermined window of time.

4.3.2 Spot Rate

The study sought to find out the extent to which the companies used spot rate as strategy to manage foreign exchange risk.

Table 4. 8: Spot Rate

	Mean	Std. Dev
We use spot rate existing on the day of transaction for majority of our foreign currency transactions	3.7500	.98374
Spot Rate allows us to manage foreign exchange fluctuations	3.6250	.87067

When asked the extent to which the firms use spot rate existing on the day of transaction for majority of our foreign currency transaction the respondents implied that it was to a great extent as supported by a mean of 3.7500 and a standard deviation of 0.98374.Asked the extent to which the firms use spot rate that allows them to manage foreign exchange fluctuations the respondents showed that it was also a great extent as shown by a mean of 3.6250 and a standard deviation of 0.87067.

4.3.3 Options Strategy

The study sought to establish the extent to which the firms use options as a strategy to manage foreign exchange risk. The findings were as shown in Table 4.5 below.

Table 4.9: Option

	Mean	Std. Dev
We use currency options when dealing in foreign currency denominated transactions	3.6250	1.12880
We exercise our options when in the money	3.5000	.50800
We let the option expire if we are out of the money	3.6250	.87067

When asked the extent to which the firms use the currency options when dealing in foreign currency the respondents showed that it was to a great extent which was supported by a mean of 3.6250 and a standard deviation of 1.12880.When asked the extent to which the firms exercise options when they are in the money, the respondents showed that it was to a great extent with was shown by a mean of 3.5000 and a standard deviation of 0.50800. When asked the extent to which the companies let the options expire when they are out of the money the respondents indicated that it was to a great extent with a mean of 3.6250 and a standard deviation of 0.87067.

4.3.4 Leading and Lagging

The study sought to establish the extent to which the firms' use Leading and lagging as a strategy to manage foreign exchange risk. The findings were as shown in Table 4.6 below.

Table 4.10: Leading and lagging

	Mean	Std. Dev
We pay for our foreign currency denominated obligations early before major currency changes occur	4.1250	.79312
We collect our foreign currency denominated debts / receivables early before major currency changes occur	3.3750	.70711
We delay payment of our obligations denominated in foreign currency	4.0000	.71842
We delay collection of our obligations denominated in foreign currency	3.5000	1.01600

When asked the extent to which the companies pay for their foreign currency denominated obligations early before major currency changes occur, the respondents indicated that it was to a great extent as supported by a mean of 4.1250 and a standard deviation of 0.79312.Asked on the extent to which they collect their foreign currency denominated debt/receivables early before major currency changes occur, the respondents indicated that it was to a moderate extent as shown with a mean of 3.3750 and a standard deviation of 0.70711,this findings are in line with Abor (2005), who says that a lead strategy involves attempting to collect foreign currency receivables only when a foreign currency is expected to depreciate and paying foreign currency payables before they are due.

On the extents to which the firms delay payment of their obligations denominated in foreign currency, the respondents showed that it was to a great extent as it was shown with a mean of 4.000 and a standard deviation of 0.71842.When asked the extent to which the firms delay collection of their obligations denominated in foreign currency it was established that it was to a great extent, as shown by a mean of 3.5000 and a standard Deviation of 1.01600.

4.3.5 Netting

The study sought to establish the extent to which the firms' use Netting as a strategy to manage foreign exchange risk. The findings were as shown in Table 4.7 below.

Table 4.11: Netting Strategy

	Mean	Std. Dev
We net off our balances with those companies we owe and they owe us money in different currencies	4.0000	1.01600
We keep stock of foreign currency for our transactions	4.5750	0.49187

When asked the extent to which the firms net off their balances with those companies we owe and they owe us money in different currencies the respondents indicated that it was

to a great extent which was supported by a mean of 4.0000 and a standard deviation of 1.01600. The respondents were also asked to give the extent to which the firms keep stock of foreign currency for our transactions and they showed that it was to aver great extent which was supported by a mean of 4.5750 and a standard deviation of 0.49187.

4.3.6 Price Adjustments

The study sought to establish the extent to which the firms' use Price adjustments as a strategy to manage foreign exchange risk. The findings were as shown in Table 4.8 below.

Table 4.12: Price Adjustments

	Mean	Std. Dev
We always change the price of our products in foreign market whenever there are changes in exchange rates	3.8750	.60907
We always maintain foreign currency denominated accounts for easy storage of foreign exchange	3.7500	.98374
We operate bank accounts in foreign countries where customers can pay in for their supplies	3.7545	.99374

Asked on the extent to which the firms always change the price of their products in foreign market whenever there are changes in exchange rates, the respondents showed that it was to a great extent as shown by a mean 3.8750 and standard deviation of . 60907.Asked on the extent to which the companies always maintain foreign currency denominated accounts for easy storage of foreign exchange it was established that it was to a great extent as shown by a mean of 3.7500 and a standard deviation of 0.98374.Asked on the extent to which the firms operate bank accounts in foreign countries where customers can pay in for their supplies the respondents indicated that it was to a great extent as shown by a mean of 3.7545 and a standard deviation of 0.99374.

4.4 Effectiveness of the Strategies

The study further sought to establish how effective the strategies being adopted were. The findings were as shown in the Table 4.9 below.

Table 4.13: Effectiveness of the Strategies

	Mean	Std. Dev
Forward contracts	3.7500	.98374
Cross-Currency SWAPs	3.8750	1.07012
Options	3.8503	.69002
Leading	3.7500	.67202
Lagging	3.9150	.77402

As indicated, the effectiveness of forward contracts the respondents shows that it was effective supported by a mean of 3.7500 and a standard deviation of 0.98374.asked on the effectiveness of Cross-Currency SWAPs, the respondents showed that it was effective as supported by a mean of 3.8750 and a standard deviation of 1.07012.Asked on the effectiveness of options the respondents showed that they were effective as supported by a mean of 3.8503 and a standard deviation of 0.69002.Asked on the effectiveness of leading, the respondents indicated that it was effective as shown by a mean of 3.7500 and a standard deviation of 0.67202.when asked on the effectiveness of Lagging the respondents indicated that it was effective as supported by a mean of 3.9150 and a standard deviation of 0.77402.

4.5 Correlation Analysis

Pearson's correlations analysis was conducted at 95% confidence interval so as to establish the strategies adopted by firms in the Export Processing Zone to manage foreign exchange rate risk. From table 4.15 below, there is a positive correlation in the strategies adopted by the firms of magnitude 0.693 with forward contracts, 0.747 with spot rate, 0.791 leading and lagging, 0.712 with netting, 0.744 with options and a magnitude of 0.742 with price adjustments respectively. The independent variables also had a positive

significant correlation relationship with P-values of 0.017, 0.011, 0.001, 0.004, 0.013 and 0.006 respectively. A correlation coefficient value (r) ranging from 0.10 to 0.29 is considered to be weak, from 0.30 to 0.49 is considered medium and from 0.50 to 1.0 is considered strong.

Table 4.14: Correlation Analysis

	Foreign exchange risk management	Forward Contracts	Spot rate	leading and lagging	netting	option	Price Adjustment
Forward Contract	Pearson Correlation	1					
	Sig. (2-tailed)	.017					
	N	24					
Spot rate	Pearson Correlation	.693	1				
	Sig. (2-tailed)	.011					
	N	24	24				
leading and lagging	Pearson Correlation	.747	.644	1			
	Sig. (2-tailed)	.001	.032				
	N	24	24	24			
netting	Pearson Correlation	.791	.687	.833	1		
	Sig. (2-tailed)	0.004	.004	.030			
	N	24	24	24	24		
options	Pearson Correlation	.742	.576	.665	.612	1	
	Sig. (2-tailed)	0.013	.012	.033	.031		
	N	24	24	24	24	24	
Price Adjustments	Pearson Correlation	.721	.449	.618	.579	.460	
	Sig. (2-tailed)	0.006	.007	.026	.017	.008	1
	N	24	24	24	24	24	24

4.6 Regression Analysis

The study conducted a cross-sectional multiple regression. The findings are shown in Table 4.11 below

Table 4.15: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.851[a]	.725	.659	.57470

Table 4.11 above shows a model summary of regression analysis between six independent variables, Forward contracts, options, price adjustments, SWAPs, leading and Lagging. The value of R was 0.851; the value of R square was 0.725 and the value of adjusted R square was 0.659. From the findings, 85.1% of changes in the effectiveness of the strategies were attributed to the 6 independent variables in the study. Positivity and significance of all values of R shows that model summary is significant and therefore gives a logical support to the study model.

Table 4.16: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	21.743	6	3.624	10.972	.000[b]
Residual	8.257	25	.330		
Total	30.000	31			

ANOVA statistics of the processed data at 5% level of significance shows that the value of calculated F is 10.972 and the value of F critical at 5% level of significance is 1.96. Since F calculated is greater than the F critical (10.972>1.96), this shows that the overall model was significant.

Table 4.17: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	4.312	.213		8.438	.013
Forward contracts	.682	.511	.418	1.334	.041
Spot rate	.798	.617	.177	1.293	.000
Options	.629	.604	.419	1.041	.021
Netting	.457	.356	.338	1.283	.037
Leading and Lagging	.554	.509	.432.	1.145	.030
Price Adjustments	.487	.611	.521	1.278	.471

From the Table 4.13, the regression model can be written as:

$Y=4.312 + 0.418X_1 + 0.177X_2 + 0.419X_3 + 0.338X_4 +0.432X_5+0.521X_6$

Where Y = Foreign exchange risk management, X_1 = Forward contracts, X_2= Spot rate, X_3= Options, X_4= Netting, X5 = Leading and Lagging and X6= Price adjustments

The regression equation above has established that taking all factors into account constant at zero, Foreign exchange risk management would have an autonomous value of 4.312. The findings presented also show that taking all other independent variables at zero, a unit increase in Forward contracts would lead to a 0.418 foreign exchange risk management. A unit increase in Spot rate would lead to a 0.177 increase in foreign exchange risk management. A unit increase in desire for Options would lead to a 0.419 foreign exchange risk management. A unit increase in Netting would lead to 0.338 increases in Foreign exchange risk management. A unit increase in leading and lagging would lead to 0.432 increases in foreign exchange risk management and a unit increase in price adjustments would lead to a 0.521 increase in foreign exchange risk management. All the variables were significant as the P-values were less than 0.05.

4.7 Chapter Summary

This chapter presented data analysis, findings and discussions as collected from the respondents according to the two study research objectives. The findings are arranged in thematic areas to enable adequate response to the objectives of the study. The area covered included general information strategies adopted by firms to manage foreign exchange rate risk, effectiveness of the strategies, correlation analysis and regression analysis.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presented the summary of key data findings, conclusion drawn from the findings highlighted and recommendations made there-to. The conclusions and recommendations drawn were were focused on addressing the purpose of this studyor achieving the research objectives which were to establish strategies adopted by firms in the Export Processing Zone in Athi River in the management of foreign exchange rate risk and to determine effectiveness of the foreign exchange rate risk management strategies adopted by firms in the Export Processing Zone in Athi River in the management of foreign exchange rate risk

5.2 Summery of Findings

The study found out that the firms enter into a contract to sell/purchase a set amount of foreign currency at the predetermined price in a given future date to a moderate extent, and that the firms always transact using forward contract in foreign currency to a great extent. The study established that the firms use spot rate existing on the day of transaction for majority of our foreign currency transaction to a great extent and they also use the firms use spot rate that allows them to manage foreign exchange fluctuations.

The study found out that the firms use the currency options when dealing in foreign currency, exercise options when they are in the money and the companies let the options expire when they are out of the money to a great extent.

The study established that the firms pay for their foreign currency denominated obligations early before major currency changes occur to a great extent. The study found out that the firms collect their foreign currency denominated debt/receivables early before major currency changes occur to a moderate extent. It was also found that the firms delay payment of their obligations denominated in foreign currency and delay collection of their obligations denominated in foreign currency to a great extent. The study found out that the firms net off their balances with those companies we owe and they owe us money in different currencies to a great extent and keep stock of foreign currency for our transactions to a great extent. The study established that the firms always change the price of their products in foreign market whenever there are changes in exchange rates to a great extent. it was also established that the firms operate bank accounts in foreign countries where customers can pay in for their supplies to a great extent. The study also found out that forward contracts, spot rate, options, leading, lagging and price adjustments were all effective in managing foreign exchange risk exposure

5.3 Conclusions

The study therefore concludes that the firms in the export processing zones use various strategies to manage foreign exchange risk exposure, Always transact using forward contract in foreign currencythe and enter into a contract to sell/purchase a set amount of foreign currency at the predetermined price in a given future date .The study also concludes that the firms use spot rate that allows them to manage foreign exchange

fluctuations and also use spot rate existing on the day of transaction for majority of our foreign currency transaction.

Firms net off their balances with those companies they owe money in different currencies and keep stock of foreign currency. The study concluded that firms always change the price of their products in foreign market whenever there are changes in exchange rates. It also concludes that firms operate bank accounts in foreign countries where customers can pay in for their supplies. Finally the study concludes that forward contracts, spot rate, options, leading, lagging and price adjustments are all effective in managing foreign exchange risk exposure.

5.4 Limitations of the Study

The following limitations were faced in the study.

Some of the respondents were afraid in providing the data fearing that the information provided may be used for other purposes other than academic. To counter this limitation, the researcher assured the respondents of the strict confidentiality of the information obtained which would only be used for academic study purposes.

There was limited time to conduct the study. However, the researcher countered this limitation making telephone calls to book appointments and also explained the purpose of the study beforehand such that the responded were prepared to fill the questionnaires within a short time.

5.5 Recommendations

Basing on the study findings, the following recommendations are suggested.

Exporting firms should develop a Foreign Exchange Risk Management framework, which clearly shows their currency risk assessment procedure and implementation of currency risk management strategies. This should be monitored and make adjustments as necessary

The foreign exchange risk management strategies which include forward contracts, spot rate, options, leading, lagging and price adjustments were found to be effective in managing foreign exchange risk, therefore the study recommends that firms should adopt and enhance the use of these strategies to mitigate losses that could arise due to foreign exchange risk.

5.6 Recommendations for Future Research

The study concentrated on strategies adopted by firms in the management of foreign exchange rate risk in the export processing zone in Athi River. A similar study can be carried out in Multinational companies and the EPZ sector because foreign exchange risk is identified as one area of risk created by their international operations.

This study focused on the various foreign exchange risk management practices adopted by firms in the export processing zones the study suggests that a study be carried out to assess the impact of the strategies on the performance of the firms.

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APPENDICES

APPENDIX I: QUESTIONNAIRE

STRATEGIES ADOPTED BY FIRMS IN THE MANAGEMENT OF FOREIGN EXCHANGE RATE RISK IN THE EXPORT PROCESSING ZONE IN ATHI RIVER

Date _____

Please take a few minutes to complete this questionnaire. Your honest answers will be completely anonymous, but your views, in combination with those of others are extremely important in this research. Kindly answer all questions

PART A: Demographic Information

1. State your position _____
2. How long have you worked in this firm in this position?

   Less than 2 years [ ] 3-5 years [ ]

   6-7 years [ ] Above 7 year [ ]
3. What is your highest level of education?

   Diploma [ ] Certificate [ ]

   First degree [ ] Masters [ ]

   PhD [ ] Other (Please explain) _____
4. How long has your firm been in operations?

   Less than 3 years [ ] 4-6 years [ ]

   7-10 years [ ] More than 10 years [ ]
5. How long have you worked for this Firm?

   Less than 5 years [ ] 6-10 years [ ]

   11-15 years [ ] Above 15 year [ ]
6. How many employees are there in your firm?

Less than 30 [ ] 31-60 [ ] 61-90 [ ]

More than 90 [ ]

PART B: STRATEGIES ADOPTED BY FIRMS TO MANAGE FOREIGN EXCHANGE RATE RISK

7. Below are several foreign exchange rate risk management strategies adopted by firms to manage their exposure. Kindly indicate the extent to which each of these strategies have been applied in your organization. Use a scale of 1-5 where 1- no extent, 2-little extent, 3- moderate extent, 4- great extent, 5- very great extent.

FORWARD CONTRACTS	1	2	3	4	5
We enter into contract to sell/purchase a set amount of foreign currency at a pre-determined price in a given future date					
We always transact using forward contract in foreign currency					
SPOT RATE					
We use spot rate existing on the day of transaction for majority of our foreign currency transactions					
Spot Rate allows us to manage foreign exchange fluctuations					
OPTIONS					
We use currency options when dealing in foreign currency denominated transactions					
We exercise our options when in the money					
We let the option expire if we are out of the money					
LEADING AND LAGGING					
We pay for our foreign currency denominated obligations early before major currency changes occur					
We collect our foreign currency denominated debts / receivables early before major currency changes occur					
We delay payment of our obligations denominated in foreign currency					
We delay collection of our obligations denominated in foreign currency					
NETTING					
We net off our balances with those companies we owe and they owe us money in different currencies					
We keep stock of foreign currency for our transactions					
PRICE ADJUSTMENTS					
We always change the price of our products in foreign market whenever there are changes in exchange rates					
We always maintain foreign currency denominated					

accounts for easy storage of foreign exchange					
We operate bank account`ts in foreign countries where customers can pay in for their supplies					

8. What other hedging strategies does your company use to manage foreign exchange rate risk that may not be listed above?

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_____

SECTION C: EFFECTIVENESS OF THE STRATEGIES

9. Kindly indicate the extent to which each of the following foreign exchange hedging strategies has been effective on a scale of 1-5 where : 1- Not effective, 2- less effective, 3- moderately effective, 4- effective and 5- Very effective

	1	2	3	4	5
Forward contracts					
Cross-Currency SWAPs					
Options					
Leading (Paying/collecting early)					
Lagging (Delay in paying / collection)					
Netting					
Price adjustments					

THANK YOU

APPENDIX I: LIST OF FIRMS IN EPZ ATHI RIVER

1. Al-Borj EPZ Ltd.
2. Alltex EPZ Ltd.
3. Ancheneyar EPZ Ltd.
4. Apex Apparels EPZ Ltd.
5. Ashton Apparel EPZ Ltd.
6. Asia Resources EPZ Ltd.
7. Baraka Apparels EPZ Ltd.
8. Birch Investment EPZ Ltd.
9. Blue Bird Garments (K) EPZ Ltd.
10. California Link EPZ Ltd.
11. Cybel Agri EPZ Ltd.
12. De La Rue Currency & Security Print Ltd.
13. E. A. Molasses EPZ Ltd.
14. Equitea EPZ Ltd (In Receivership)
15. Far East Technologies EPZ Ltd.
16. Film Studios EPZ Ltd.
17. Forum International EPZ Ltd.
18. Global Apparels (K) EPZ Ltd.
19. Golden Light EPZ Ltd.
20. Indigo Garments EPZ Ltd.
21. Indu Farm EPZ Ltd.
22. Insight Digital Graphics EPZ Ltd.
23. Insta Products EPZ Ltd.
24. Ivee Aqua EPZ Ltd.
25. Apex Apparels EPZ Ltd.
26. Ashton Apparel EPZ Ltd.
27. Asia Resources EPZ Ltd.
28. Baraka Apparels EPZ Ltd.
29. Birch Investment EPZ Ltd.
30. Blue Bird Garments (K) EPZ Ltd.
31. California Link EPZ Ltd.
32. Cybel Agri EPZ Ltd.
33. De La Rue Currency & Security Print Ltd.
34. E. A. Molasses EPZ Ltd.
35. Equitea EPZ Ltd (In Receivership)
36. Far East Technologies EPZ Ltd.
37. Film Studios EPZ Ltd.
38. Forum International EPZ Ltd.
39. Global Apparels (K) EPZ Ltd.
40. Golden Light EPZ Ltd.
41. Indigo Garments EPZ Ltd.
42. Indu Farm EPZ Ltd.
43. Insight Digital Graphics EPZ Ltd.
44. Insta Products EPZ Ltd.
45. Ivee Aqua EPZ Ltd.

Source: (EPZA, 2015)