MANAGEMENT OF FOREIGN EXCHANGE RISK:

(A CASE STUDY OF THE HORTICULTURAL INDUSTRY IN KENYA)

BY

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DECLARATION

a) Declaration by the Student

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

Signed _____ Date:_____

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b) Declaration by the Supervisor

This Research Project has been submitted for examination with my approval as University Supervisor.

Signed _____ Date:_____

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DEDICATION

To my family for support and understanding especially to my to my daughter Joy Vihenda, my sons Derrick Lijodi & Alex Onyino and My dear wife Grace Kavosa who stood by me and supported me both morally and financially during my working on this proposal.

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Despite all the ups and downs, working on this proposal has been a great learning experience.

ABSTRACT

Many currencies now float freely against each other and as a result, exchange rates between different currencies can be volatile and thus leading to unpredictability of their cash flows. As a consequence of the risk exposure from the above changes, the management of the exchange rate risk is of key importance to firms that operate internationally or that use debt finance. The objective of the study was to establish the hedging techniques employed by the horticultural industry in Kenya. The data collection tool was questionnaires that had both closed and open ended questions. The data was analyzed using descriptive statistics with assistance of statistical package for social sciences (SPSS). Output was then presented in terms of pie charts, graphs, frequency tables and reports.

The study found out that the horticultural firms uses various techniques to manage the risk which they face. The techniques they use include payment netting, prepayment, leading and lagging and hedging with derivatives. The major reason found as to why the horticultural firms hedge was found to be to cushion the firms against fluctuation in cash flows, volatility in earnings, tax incentives of derivatives and maintenance of market value. The firms were motivated to hedge by the need to was to reduce volatility in the profit after tax, to reduce the volatility of cash flows, as an alternative means to manage financial risks, firms with alternative means to manage foreign currency risks are likely to use derivatives, to reduce risks faced by the management and to facilitate budgeting and control process in the firm.

ABRIVIATIONS

SAP	Structural Adjustment Program
CBK	Central Bank of Kenya
BIS	Bank of International Settlement
OCC	Over the Counter
FRA	Forward Rate Contract
FDP	Foreign Denominated Debt
FCD	Foreign Currency Derivatives
MNC	Multi-national Currency
FX	Foreign Exchange
CONV	Convertible Debt
PS	Preferred Stock
US	United States
KFC	Kenya Flower Council
FDD	Foreign Denominated Debt
UK	United Kingdom
SPSS	Statistical Package for Social sciences
ESOP	Executive Share Option Plan
ME	Medium Extend
LE	Large Extend
SE	Small Extend

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CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Every business activity is confronted with some risk or the other and coping with risk is an important managerial function. According to Bradley and Moles (2002), risk management has received increased attention in both corporate practice and literature especially the management of financial risks, i.e. the management of foreign exchange risk, interest rate risk and other financial market risks.

Companies must take risk if they are to survive and proper. The risk management function's primary responsibility is to understand the portfolio risks that it plans to take in future. It must decide whether the risks are acceptable and if they are not acceptable, what action should be taken (Hull 2007)

In the Kenyan context, foreign exchange risk management has become increasingly important since the abolishment of the fixed exchange rate system in 1994. The fixed exchange system was replaced by a floating rates system in which the price of currencies is determined by supply and demand of money. Given the frequent changes of supply and demand influenced by numerous external factors, this new system has been responsible for currency fluctuations. These fluctuations expose companies to foreign exchange risk. As a result of the above, firms involved in international trade are subjected to transaction risk arising from payables and receivables in foreign currencies. Another category of stakeholders that will be affected by the change of foreign currencies are the

multinational firms with operations in several countries who will face translation risks from having assets and liabilities denominated in foreign currencies (Bradley and Moles, 2002).

According to Ndungu (1999), the floating exchange rate system adopted in the 1990s was expected to have several advantages to Kenya namely: allow a more continuous adjustment of the exchange rate to shifts in the demand for and supply of foreign exchange; equilibrate the demand for and supply of foreign exchange by changing the nominal exchange rate, rather than the level of reserves and allow Kenya the freedom to pursue its own monetary policy without having to be concerned about balance of payments effects. However, as it turned out, a floating regime was adopted with disequilibrium in the money market and supply constraints in the economy, he argues. The first effect was to raise inflation and to depreciate the exchange rate. After 1993, the exchange rate appreciated under the influence of short-term capital flows taking advantage of the high interest rate on treasury bills. Overall, the exchange rate was no longer stable and imposed risks on importers, exporters, and those whose future contracts were denominated in dollars or hard currencies. Those who were importing on trade credit during this time were uncertain as to what price they would have to pay for foreign exchange when their letters of credit were called, and hence were writing the expected foreign exchange redemption into their price structure. This produced a spiral of inflation. The benefits of a floating exchange rate were not obvious from these experiences (Ndungu, 1999).

Thus the unexpected fluctuations in foreign exchange rates have been an important concern to firms with international business operations since future cash flows, and therefore the value of firms will be affected. The Kenyan horticultural sector came in second in the year 2009 as a source of foreign exchange earner after tourist arrivals (Central Bank of Kenya annual report, 2009). With such an important sector to the Kenyan economy, any risk that will lead to fluctuation in the foreign currency and income, need to be accorded attention. Foreign exchange risk is the risk that an entity will be required to pay more (or less) than expected as a result of fluctuations in the exchange rate between its currency and the foreign currency in which payment must be made. 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 (Madura, 1989). Hedging with derivatives is one of the common techniques used by firms to manage their foreign exchange risks.

1.1.1 Foreign exchange hedging instruments

Theories of optimal hedging demonstrate that capital market imperfections create incentives for firms to use derivative instruments. While these imperfections might be necessary for optimal derivatives use, they are not sufficient conditions. A firm's ultimate decision to use derivatives also depends on the level of its exposure to foreign exchange rate risk. In addition, a firm's choice to use currency derivatives depends on the costs of managing foreign exchange-rate risk (Bradley and Moles (2002).

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 2003, hedging refers to the technique of making offsetting commitments in order to minimize the impact of unfavorable potential outcomes. The risk manager's choice of the different types of hedging techniques may, however, be influenced by costs, taxes, effects on accounting conventions and regulation. Some of the hedging instruments include; Options, Swaps Futures and Forwards.

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. Previous studies have shown a widespread use of derivative products among Canadian, US and European firms in managing their risks including long-run exchange rate exposures (Bradley and Moles, 2002).

1.1.2 Horticultural industry in Kenya

The Horticultural industry in Kenya is made up of fresh cut – flowers and Vegetables and fruits. Most specifically this trade is known as floriculture. Flowers account for about half of Kenya's fresh horticultural exports. The cut flower industry provides direct employment to an estimated 50,000 Kenyans with a further 70,000 employed in related industries. Kenya is a country of great natural beauty and one of the leading flower and ornamental plant producers in the world and certainly the top on the African continent. This East African country produces a wide variety of flowers and ornamental plants for markets in Europe, Asia and America. In 2008, Kenya's floriculture produce was worth

more than US$870 million (Kshs 64 billion) in foreign exchange. Even with the global economic recession which started in late 2008, Kenya's cut flowers and ornamental plants are still well prized around the world, especially in Europe and North America. Other markets for Kenyan flowers and other horticultural produce are in the Middle East and the vast Asian continent.

Currently one of the richest, most influential and best organized industry organizations in Kenya is the Kenya Flower Council(KFC) is involved in a variety of issues of concern to the stakeholders in the industry such as lobbying, looking into better ways of improving worker's safety, environmental protection, industrial regulation, industrial development and floriculture company accreditation, as well as more weighty issues of global carbon dioxide emissions and international industrial diplomacy. The current Kenya Flower Council membership represents more than 70% of the flowers exports. While Kenya was not exporting the products in 1970, it is currently the leading exporter to the European Union, contributing 31% of all flower sales, followed by Columbia with 17% and Israel 16%. The main European Union markets are Holland, Germany, Switzerland, France, and the United Kingdom.

From a very low base, Kenya's fruit and vegetable exports grew 9% per year in the first decade after independence, then 17% per year from 1974-1983 (Minot and Ngigi 2002). Growth slowed over the 1980s and 1990s, but still averaged about 4% per annum over the past decade. By the year 2003, fruit and vegetable exports amounted to US$260m, or 15% of Kenya's total export economy. This impressive growth has

undoubtedly contributed to increased rural incomes and reduced rural poverty, through both direct production effects and linkage effects, as horticultural incomes
from export are re-spent.

The UK and France are the primary markets for fresh vegetable produce from the country, with a share of over 30% by volume. Sales of Kenya based pre-packed high quality vegetables have been increasing annually – particularly snow peas, sugar snaps, baby vegetables, runner beans and French beans. Large volumes of airfreight to the UK are available (on both scheduled and charter flights) In France, the Kenyan produce sales are for French beans (Haricot Verts) and avocadoes. Supplies from Kenya are normally in demand in the months of April/May or August/September.

Germany offers an emerging market for vegetables and fruits, especially with its good airfreight connections. Its central location in Europe centered a round Frankfurt gives it a focal positioning across the European continent. Exports to Dubai are mainly mangoes (varieties Ngowe, Kent, Apple, Sensation and Tommy Atkins). Sales are high mainly in January to March and in October to December. Other exports include small amounts of pineapples, avocadoes and beans.

1.2 Statement of the problem

Many currencies now float freely against each other and as a result, exchange rates between different currencies can be volatile and thus leading to unpredictability of their cash flows. As a consequence of the risk exposure from the above changes, the

management of the exchange rate risk is of key importance to firms that operate internationally or that use debt finance. As was noted by Hentschel and Kothari (1996), risk management has received increasing attention in both corporate practice and literature due to the fluctuation in the foreign currencies denominated transaction. This is particularly true for the management of financial risks, i.e. the management of foreign exchange risk, interest rate risk and other financial market risks.

With the globalization of trade and relatively free movement of financial assets, risk management through the use of derivatives products has become a necessity in Kenya - just like in other developed and developing countries. As Kenyan businesses become more global in their approach, evolution of a broad based, active and liquid Forex derivatives markets is required to provide them with a spectrum of hedging products for effectively managing their foreign exchange exposures (Ndungu, 1999). The horticultural industry in the country is no exception. The sector is a major employer in Kenya as well as a leading foreign exchange earner to the country and thus its overall growth will form an important ingredient to the economical growth of the country. One of the major tools that the horticultural sector can use to cushion its earnings against the forex fluctuations is through hedging the transactions.

However, despite the enormous benefits that can be derived from the derivate market, the Kenyan market has not embraced the system to its capacity. Majority of the Kenyan horticultural exporters have not taken advantage of derivatives use to cushion themselves against the foreign exchange exposure risks. This can be evidenced from the financial

statements of the handful of institutions which provide the services as well as non familiarity of most of the exporters about the existence of the hedgers. In addition few studies have been undertaken locally on the usage and the trading of derivatives locally. Orina (2009) studied on a survey of factors hindering the trading of financial derivatives in the Nairobi Stock exchange. He found out that lack of a thriving derivative market locally is due to limited number of derivative instruments used in the country, lack of knowledge of the existence of the instruments and few financial institutions that transact with the derivatives. As can be evidenced from the above research, there has been no move to study the reasons of why the horticultural sector in Kenya has not fully embraced the usage of these foreign exchange derivatives. This research seeks to identify the reasons behind lack of a thriving use of foreign exchange derivative in Kenya.

1.3 Objective of the study

To determine the hedging techniques used by Horticultural exporters in Kenya.

1.4 Significance of the study

Exchange rate uncertainty is a common problem in the current international trade. Exchange rates under the floating rate system in effect since 1973 have been very volatile, and it is not uncommon for exchange rates to fluctuate dramatically in a short period and thus giving players in international trade quite high level of risk. How these players can reduce or altogether eliminate this risk is of importance to any individual or firm. The study is justified on the basis that foreign exchange risk is a common problem

in the current international trade and hence the study and use of foreign exchange derivatives to mitigate this risk is of profound importance and need to be studied.

The results of the research will provide invaluable information to exporters of flowers in the country as well as other importers generally in the country. This is because the findings of the study will highlight to these parties the existence and benefits of derivatives as hedgers in the financial trade. Financial institutions that offer or have the potential of offering the same derivatives instruments will find the findings of the research invaluable as to the reasons why the potential clients do not take up hedging of their foreign exchange risk relevant and thus help in the formulating of policies to stimulate the usage of the derivatives in the country. It is also believed that the findings of the present study will be invaluable to academia and practitioners of balance of payment in the management of financial risk and in identifying areas where the same has not been implemented.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter is concerned with the review of literature related to the study. An overview of various empirical studies on derivatives and their usage, the theoretical framework, management of foreign exchange risk, reasons for using derivatives, and use of derivatives in various countries and effect of derivatives on firm's derivatives is covered in the section.

2.2 Theoretical Framework

Theories of optimal hedging demonstrate that capital market imperfections create incentives for firms to use derivative instruments. While these imperfections might be necessary for optimal derivatives use, they are not sufficient conditions. Elliott, Huffman and Makar (2003), argue that, given these incentives, a firm's ultimate decision to use derivatives also depends on the level of its exposure to foreign exchange rate risk. In addition, a firm's choice to use currency derivatives depends on the costs of managing foreign exchange-rate risk.

Other schools of thought - as advanced by economist - are extremely doubtful about the possibilities of making predictions of future exchange rate, Taylor (1995). The results of some empirical studies however show that it will be possible to make speculative gains in certain markets over certain periods of time, Dufey and Giddy, (1997). Thus unless financial risks are seriously distorted by the government restrictions on intervention, it

appears to be very difficult indeed to generate profits on the basis of exchange rate forecast. Despite the critical attitude of the academia literature, exchange rate forecast have been found out to be the most popular practice among many firms. Managers believe that currency market are information inefficient and hence are able to profit systematically from exchange rate forecast.

2.2.1 Financial economics theory

This theory suggests that corporate risk management is apt to increase firm value in the presence of capital market imperfections such as bankruptcy costs, a convex tax schedule, or underinvestment problems. According to Carter et al., (2006) risk management can increase shareholder value by harmonizing financing and investment policies. When raising external capital, firms may under invest. Derivatives can be used to increase shareholder value by coordinating the need for and availability of internal funds. Conflicts of interest between the shareholders and debt holders can also lead to underinvestment. An underinvestment problem can occur when leverage is high and shareholders only have a small residual claim on a firm's assets, thus the benefits of safe but profitable investment projects accrue primarily to bondholders and may be rejected, Bessembinder (1991). A credible risk management can mitigate underinvestment costs by reducing the volatility of firm value. As the underinvestment problem is likely to be more severe for firms with significant growth and investment opportunities, various measures such as the market-to-book ratio, research and development to sales ratio, capital expenditure to sales, net assets from acquisitions to size are used for testing the underinvestment hypothesis.

2.2.2 Agency theory

Agency theory extends the analysis of the firm to include separation of ownership and control, and managerial motivation. In the field of corporate risk management agency issues have been shown to influence managerial attitudes toward risk taking and hedging, Smith and Stulz (1985). This theory explains a possible mismatch of interest between shareholders, management and debt holders due to asymmetries in earning distribution, which can result in the firm taking too much risk or not engaging in positive net value projects. Consequently, agency theory implies that defined hedging policies can have important influence on firm value, Fite and Pfleiderer (1995). Agency theory provides strong support for hedging as a response to mismatch between managerial incentives and shareholder interests.

Conflicting interests in the agency relationship between managers and shareholders motivate the use of derivatives. Most senior managers have a highly undiversified financial position because they derive substantial (monetary and non-monetary) income from their employment by the firm. According to Stulz (1990), risk aversion cause managers to deviate from acting purely in the best interest of shareholders by expending resources to hedge diversifiable risk. The time horizon of managers and shareholders may also differ because management compensation is tied to short-term accounting measures. These conflicts of interest can be mitigated by corporate risk management if compensation schemes appropriately link managers' pay to the stock price of the firm, Han (1996). This suggests that the use of stock option plans in a corporation can be a determinant of corporate hedging. Executive stock options can effectively reduce a

manager's risk aversion and thus lower the propensity for using derivatives to decrease idiosyncratic risk.

2.2.3 New Institutional Economics theory

According to Williamson (1998), this theory predicts that risk management practices may be determined by institutions or accepted practice within a market or industry. Moreover, the theory links security with specific assets purchase, which implies that risk management can be important in contracts which bind two sides without allowing diversification, such as large financing contract or close cooperation within a supply chain. Firms in regulated industries provide top management with few opportunities for discretion in corporate investment and financing decisions. Smith and Watts (1992) showed that regulation is a key determinant of a firm's corporate financial policy. Therefore, if regulated firms face tighter scrutiny and face lower contracting costs, then they are less likely to use derivatives to hedge firm risk. According to Froot, Scharfstein, and Stein (2003), if external sources of funds are more costly to a firm than internally generated funds, then the firm could benefit from using derivatives. In particular, firms can hedge cash flows to avoid a shortfall in funds that may require a costly visit to the capital markets and at the same time derivatives are positively related to measures of the firm's investment opportunity set proxies.

2.2.4 Stakeholder theory

Stakeholder theory focuses explicitly on equilibrium of stakeholder interests as the main determinant of corporate policy. In certain industries, particularly high-tech and services, consumer trust in the company being able to continue offering its services in the future

can substantially contribute to company value. However, the value of these implicit claims is highly sensitive to expected costs of financial distress and bankruptcy. Since corporate risk management practices lead to a decrease in these expected costs, company values raise, Klimczak (2005). Therefore stakeholder theory provides a new insight into possible rationale for risk management. However, it has not yet been tested directly. Investigations of financial distress hypothesis provide only indirect evidence Judge (2006). If a firm enters financial distress then it will face costs of default on debt obligations, costs of filing for bankruptcy, and costs related to reorganization and liquidation. Given these costs, firms have incentives to reduce the probability of financial distress. Firms can reduce the likelihood of financial distress by hedging variability in earnings.

2.3 Managing Foreign Exchange Risk

Foreign exchange risk can be managed in various ways. This section discusses techniques used for 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 risk 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

2.3.1 Payments netting

This system is used in international transactions by multinational companies and involves reducing fund transfers between affiliates to only a netted amount. It requires the 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 affiliates. Bilateral payment is valuable only to the extent that subsidiaries sell back and forth to each other Shapiro, (1978). Multilateral netting involves the transfer of a netted amount among three or more affiliates. The use payments netting reduces the physical flow of funds from one subsidiary 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-affiliate cash transfers that result from business transactions. The payoff from multilateral netting systems can be large relative to their expense (Shapiro 2002).

2.3.2 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 the 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 of first-time buyers whose credit worthiness is unknown or whose countries are in financial difficulty. 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).

2.3.3 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.

2.3.4 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. Previous studies have shown a widespread use of derivative products among Canadian, US and European firms in managing their risks including long-run exchange rate exposures (Bradley and Moles, 2002).

2.3.5 Futures Contracts

A futures contract is an agreement to buy or sell a standard quantity of a specified financial instrument or foreign currency at a certain time in the future for a certain price agreed by the two parties. Financial futures are a binding contract locking both the buyer and seller into a particular amount and rate: there is no option on the part of the buyer not to proceed. When a company takes out a futures contract it has to place an initial margin, which represents between 1 and 3 percent of the contract value, of the clearing house of the futures exchange Watson and Head, (2007). As the interest or the exchange rate specified in the futures changes on a daily basis, money is either credit to or debited from the company's margin account, depending on whether the rate is favourable or adverse. If the initial margin drops below a certain safety level, variation margin will be called for from the party concerned in order to top up the account.

2.3.6 Forward 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, (Hill, 2001).

There are two types of forward contracts. Forward rate agreements (FRAs) enable companies to fix, in advance, either a future borrowing rate or a future deposit rate, based on a nominal principal amount, for a given period. While the contracts themselves are binding, the company taking out the FRA is not bound by the contract take out a loan with the provider of the FRA.

Forward exchange contracts (FECs) enable companies to fix, in advance, future exchange rates on an agreed quantity of foreign currency for delivery or purchase on an agreed date. Forward contracts are generally set up via banking institutions and are non-negotiable, legally binding contracts.

2.4 Reasons for Using Derivative

According to Gerzy C, Minton B, and Schrand (1997), there are three factors affecting a firm's derivatives decision: the incentives to use derivatives, the exposure to foreign exchange-rate risk, and the costs of implementing a derivatives strategy

2.4.1 Incentives for Derivatives Use

Managers: Smith and Stulz (2005) demonstrated that when a risk-averse manager owns a large number of the firm's shares, his expected utility of wealth is significantly affected by the variance of the firm's expected profits. The manager will direct the firm to hedge

when he believes that it is less costly for the firm to hedge the share price risk than it is for him to hedge the risk on his own account. Consequently, Smith and Stulz (2005) predict a positive relation between managerial wealth invested in the firm and the use of derivatives. They further argue that, the expected utility of managerial wealth can be a convex function of the firm's expected profits when managers own unexercised options. In this case, managers can choose to increase the risk of the firm in order to increase the value of their options. Assuming derivatives are used for hedging, Smith and Stulz (1985) predict a negative relation between option holdings and derivatives use.

Bondholders*:* Smith and Stulz (2005) further showed that exogenous bankruptcy costs create incentives for bondholders to support optimal hedging. By reducing the variance of a firm's cash flows (or accounting profits); hedging decreases the probability, and thus the expected costs, of financial distress. These exogenous bankruptcy costs can include, for example, the costs related to the deterioration or loss of long-term relationships with suppliers and customers, Shapiro and Titman (2000). They further argued that a hedging strategy will only reduce expected bankruptcy costs to the extent that the firm can commit ex ante to following a hedging strategy after debt proceeds are received. Such a commitment may be achieved directly through bond covenants. Alternatively, bondholders may be able to infer that hedging is an optimal firm strategy in equilibrium for reasons unrelated to reducing the costs of external financing.

2.4.2 Variation and Exposure

Gerzy *et al* observed that firms with greater variation in cash flows or accounting earnings resulting from exposure to foreign exchange-rate risk have greater potential benefits of using currency derivatives. It is found out that the higher a firm's foreign pretax income, the greater the benefits from hedging. Income represents the net of foreign-denominated revenues, and also the direct and indirect expenses, which may be foreign denominated, related to foreign operations. To the extent that costs are a natural hedge of foreign revenues, they argue that, net profit represents the underlying exposure to foreign currency risk. Myers and Smith (2002) and Smith and Stutz (2003) suggest that a firm can reduce its expected taxes by hedging when its corporate tax function is convex. The tax savings would then increase the firm's value. Further, in order to reduce the probability of financial distress, firms should reduce the variance of their cash flows by hedging.

2.4.3 Costs of implementing a derivatives strategy

Costs also play a pivot role in a firm's decision to use currency derivatives and in its choice among derivatives strategies. There are two major components of costs concerned: those associated with initiating and maintaining a risk management program, and those associated with choosing a particular currency derivative instrument. If the costs are high enough, a firm will not use any derivatives. If the costs are low enough, they can still affect a firm's choice among instruments. Costs associated with implementing and maintaining a risk management program, including those related to the acquisition of

expertise, exhibit economies of scale related to the amount of risk managed. The firm size was also found to be a proxy for economies of scale in the costs of hedging.

This line of argument was further discussed by Nance *et al.,* when they observed that there could be either a positive or negative relation between firm size and hedging activity. They observed that smaller firms should hedge more, ceteris paribus, because of the inverse relation between firm size and bankruptcy costs, Warner (1977). It can thus be expected that a negative relation to exist between firm size and the use of derivatives if smaller firms have greater information asymmetries.

2.4.4 Foreign Currency Derivative and Foreign Denominated Derivatives

To mitigate the impact of foreign exchange rate fluctuations, it has been claimed that firms can employ financial hedge strategies through foreign currency derivatives (FCD) and foreign-denominated debts (FDD). Multinational firms that by the nature of their business, engage in international transaction are found to have preference for FDD than FCD. Cheng, He, and Kim (2007) find that the debt ratio is positively associated with the level of foreign operations, which provides the evidence of FDD hedging foreign currency risk. In addition, Elliott, Huffman, and Makar (2003) find a positive relationship between foreign currency exposures and the level of FDD, indicating that FDD may be used as a hedge. The results of Allayannis and Ofek (2001) are that exposures through foreign sales are positively and significantly related to a firm's decision to issue foreign debts and the level of foreign debts.

Haushalter (2000) showed that companies with greater financial leverage manage price risks more extensively. His results also showed that larger companies and companies whose production is located primarily in regions where prices have a high correlation with the prices on which exchange-traded derivatives are based, are more likely to manage risks. On the other hand Nguyen and Faff (2003) find that the use of FCD reduces short-term foreign exchange exposures. They in addition observed that leverage, size and liquidity are important factors associated with the decision to use derivatives Burgman (1996) interprets the positive relationship between leverage and foreign currency risk as multinational corporation's (MNC's) use of FDD to hedge currency risk.

2.5 Use of Derivative in Various Countries

Khim and Liang (1997) claim that the usage and effect of financial derivative instruments on company risk management are different for Singaporean firms in different industries, with different turnover, ownership, international business involvement and listing status. They also find that the volatility and uncertainty in the world's financial markets have affected companies in Singapore differently. However as far as the UK companies are concerned, Grant and Marshalls (1997) survey of between 1994 and 1995 showed that derivatives are rarely used to speculate on market movements. Indeed, the study indicated that derivatives are most commonly used to reduce the volatility of firm’s cash flows. The results also indicated that swaps, forwards and options are commonly used to manage foreign exchange and interest rate risks. They argued that firms seem to be very aware of the need to quantify and price their derivative positions and in a number of cases; they use sophisticated valuation procedures. Still on the UK firms Joseph and

Hewins (1997) examined the motives behind corporate hedging in their questionnaire survey on UK multinational corporations and found that the primary object for corporate hedging is cash flows. The hedging motives appear to be influenced by the management's perceptions of stakeholders' attitudes to risk and financial market behaviour. They also find a relatively weak emphasis on the financial distress motive.

As far as the US firms are concerned, Bodnar (2000) surveyed 530 US nonfinancial firms about the use of financial derivatives. They find that large firms tend to use OTC products, while small firms tend to use a mixture of OTC and exchange-traded products. They also find that 80 per cent of firms use derivatives to hedge firm commitments, and 44 per cent of firms use derivatives to hedge the balance sheet. Their results indicate that 67 per cent of firms expressed high concern of accounting treatment of derivatives. The most important goal of hedge with derivatives is to minimise fluctuations in cash flows. They find that 76 per cent of users have a documented policy with respect to the use of derivatives.

In Swedish firms, the usage of derivative hedgers was evidence among nonfinancial firms, Alkeback and Hagelin (2003). By comparing firms in Sweden with firms in New Zealand and the USA, the results show that 52 per cent of the nonfinancial firms in Sweden use derivatives compared with 53 per cent in New Zealand, Berkman (1997) and 39 per cent in the USA, Bodnar (1996). The study also indicates that usage of derivatives is more common among larger than smaller firms and that the principal use of derivatives is for hedging purposes.

2.6 Effects of Derivatives on a Firms Operation

Risk hedging through the use of derivatives creates shareholder value by taking advantage of market imperfections such as taxes, bankruptcy cost, agency cost, financing constraints and undiversified stakeholders. Academic literature provides evidence that hedging policies do create firm value by reducing expected taxes, expected costs of financial distress and agency costs

The impact of hedging on financial distress and agency cost has also been investigated and Nance, Smith, and Smithson (1993) found out that firms can control the agency and expected financial distress costs associated with long-term financing not only by hedging, but also by issuing convertible debt (CONV) or preferred stock (PS). This is because, as they argue, CONV and PS are possible substitutes for hedging, Thus Nance *et al.* predict negative relations between derivatives use and these debt instruments. They also observe that firms can reduce the expected financial distress and agency costs associated with long-term debt by maintaining greater short term liquidity. This is because converting certain short-term assets, such as inventories or accounts receivable, to cash can create information costs similar to those related to debt financing, the quick ratio can capture the concept of internal wealth better than the current ratio. The greater a firm's quick ratio and the lower its dividend payout ratio, the lower its need to hedge to reduce the expected financial distress and agency costs of straight debt. Froot *et al.* also predict a negative association between liquidity and hedging. This prediction results from interpreting liquidity not as a substitute for long-term debt, but as a measure of the availability of internal funds.

Under investment problem suggested by Myers (1977) and Bessembinder (1991) argue that if most of the gains that accrue from positive net present value projects were distributed to debt holders, shareholders might not be willing to take on such projects. To avoid this problem, a firm needs to make its debt holders feel more secure about debt payments by having lower volatility in the firm's earnings. Hence, hedging is suggested to control the underinvestment problem and increase firm value (Stultz 1985). Stultz (1984) and Smith and Stultz (1985) suggest that if managerial self-interests are important in the decision to hedge, managers with larger stock holdings will be more inclined to direct the firm to hedge.

Corporate risk management has costs too. Managers are the agents of the shareholders. In the absence of proper incentives, managers will not maximise shareholders' wealth. Hence managerial incentive compensation contracts must be designed in such a manner that action taken to increase value to shareholders also lead to increase in their expected utility. Managers may chose to hedge due to their undiversified wealth position in order to maximise their utility. The reduction in earnings volatility leads to reduction in the volatility of earnings stream of management. This may be at a cost to the shareholders.

The management compensation has an impact on the use of derivatives. Smith and Stulz (1985) argue for a positive relationship between management shareholding and derivatives use and a negative relationship between management option holding and derivatives use.

2.7 Empirical Evidence

In perfect markets, derivatives would have no effect on the underlying asset market because they are redundant securities (i.e., they can be synthetically created by some combination of the asset and riskless bonds). With market imperfections, derivatives make the market more complete (Ross, 1976) by allowing investment choices that were previously cost inefficient or impossible due to regulatory or institutional constraints. Since investors benefit from an expanded opportunity set, the required returns and risks in existing asset markets should fall. In addition, Danthine (1978) argues that derivatives, by promoting information-based trading, increase the depth and liquidity of the market and reduce volatility. Grossman (1988) shows that option trading allows diverse opinions about volatility to be revealed that can reduce volatility. Detemple and Selden (1991) show that option trading can allow more efficient risk sharing, which increases the demand for the asset and reduces volatility. Stein (1987) is the only theoretical study that implies volatility could increase, arguing that poorly informed speculators can have a destabilizing effect on the market

According to Bessembinder and Seguin (1992), stock market volatility is inversely related to both the open interest and trading volume of S&P futures after controlling for spot market volume. He found that spot volatility is positively related to unexpected volume and negatively related to expected open interest for eight currency, interest rate, and commodity futures contracts. For the currency and agricultural contracts, spot volatility decreases when unexpected open interest increases. These findings indicate that

futures trading increase the depth and liquidity of the underlying asset market, mitigating the impact of volume shocks on volatility.

Smith and Stulz (1985) demonstrated that when a risk-averse manager owns a large number of the firm's shares, his expected utility of wealth is significantly affected by the variance of the firm's expected profits. The manager will direct the firm to hedge when he believes that it is less costly for the firm to hedge the share price risk than it is for him to hedge the risk on his own account. Consequently, Smith and Stulz further predict a positive relation between managerial wealth invested in the firm and the use of derivatives. They measured the managerial wealth from shares by the log of the market value of common shares beneficially owned (excluding options) by officers and directors as a group. Smith and Stulz (1985) also show that exogenous bankruptcy costs create incentives for bondholders to support optimal hedging. By reducing the variance of a firm's cash flows (or accounting profits); hedging decreases the probability, and thus the expected costs, of financial distress. Breeden and Viswanathan (1996) and DeMarzo and Duffie (1995) developed models in which managerial reputation provides incentives for managers to use derivatives.

DeMarzo and Duffie (1991) argue that equity holders can benefit from hedging when managers have private information about an unobservable risk that affects the firm's payoffs. In their model, hedging gives uninformed equity holders reduced noise in their information sets concerning the variability of a firm's payoffs because hedging reduces their variance. As was proved by DeMarzo and Duffie (1991), equity holders will support

hedging because they can make better portfolio optimization decisions. Thus, De- Marzo and Duffie model suggests that equity holders of firms with greater informational asymmetry will derive greater benefits if the firm hedges.

Gercy et al (1997) on there part showed that foreign-denominated debt can also act as a natural hedge of foreign revenues, thereby decreasing a firm's foreign exchange-rate exposure. On the other hand, foreign debt can increase a firm's exposure to foreign exchange-rate risk if debt-related cash outflows and net foreign-denominated cash inflows are negatively correlated. However, they were unable to determine a correlation from the publicly available data between foreign debt and derivatives use. In addition, variation in a firm's short-term cash flows is related to changes in exchange rates when foreign competitors can affect market prices, and thus demand for domestic output. Costs also play a role in a firm's decision to use currency derivatives and in its choice among derivatives strategies. Gercy et al (1997) considered two major components of these costs: those associated with initiating and maintaining a risk management program and those associated with choosing a particular currency derivative instrument. If the costs are high enough, a firm will not use any derivatives. If the costs are low enough, they can still affect a firm's choice among instruments.

2.8 Conclusion

Risk hedging through the use of derivatives creates shareholder value by taking advantage of market imperfections such as taxes, bankruptcy cost, agency cost, financing constraints and undiversified stakeholders. As a result, hedging policies do create firm

value by reducing expected taxes, expected costs of financial distress and agency costs. In addition, corporate risk management has costs too. Managers are the agents of the shareholders. In the absence of proper incentives, managers will not maximize shareholders' wealth. Hence managerial incentive compensation contracts must be designed in such a manner that action taken to increase value to shareholders also lead to increase

Majority of the studies done have tended to focus on exchange risk management practices of multinational corporations. Little has been done with respect to firms involved in international trade (import and export). Thus the present study will reports the findings on the foreign exchange risk management practices among Kenyan firms involved in international trade. The study will also seek to ascertain the extent to which these firms use exchange risk management techniques for hedging against foreign exchange exposure.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the method that will be used for the study and adopts the following structure: research design, population, population description, data collection methods, and data analysis and methods. The purpose of the study is to establish the hedging techniques employed by the horticultural industry in Kenya.

3.2 Research Design

This study is based upon the premise that firms engaged in international trade are often confronted with foreign exchange risk. Foreign exchange risk management is, therefore, crucial for companies frequently trading in the international market. A descriptive and cross sectional research design was used in this study. This involved eliciting opinions of horticultural exporters in Nairobi on the extent of the use of foreign exchange derivatives in their business. Cross sectional study was used to determine the interrelationship between the variables under consideration. This permitted the researcher to make statistical inference on the broader population and generalized the findings to real life situations and thereby increasing the external validity of the study. The area of coverage of the research was chosen because of the number of the target population existing in city and its environs and also its convenience in terms of time and accessibility given the financial resources available to researcher.

3.3 Population

The population of interest for this research was 98 firms made up of the horticultural exporters that are based in Nairobi. According to the Fresh Produce Exporters Association website, on 31st August 2010, there were 56 and 22 cut flower and Vegetable and Fruits exporters based in Nairobi respectively. Nairobi region was defined for purposes of this research as the area that is administratively under the jurisdiction of Nairobi City Council. The criteria for this selection was based on the fact that horticultural exporters in Nairobi are more representative of those exporters who need to hedge themselves considering the volume of exports they deal with compared to other parts of the country.

3.4 Sample

A systematic sample of all even numbered cut flower firms in the list (Appendix III) was selected for the interview while a census survey was conducted on all the Vegetable and Fruits exporters registered with the Fresh Produce Exporters Association of Kenya due to their limited number. The sampling method adopted was deemed necessary because of the number of cut flower exporters involved. The firms were analyzed to determine the hedging techniques they use to cover themselves against the foreign exchange risk. The study targeted individuals in these organizations charged with the responsibilities of implementing foreign exchange risk mitigation policies.

3.5 Data collection

Primary data was collected by means of a structured questionnaire containing structured questions from the horticultural exporters (Appendix III). The questionnaires were hand delivered to the respondent's offices with a request to fill in the questionnaire in one week time where upon it was be collected later. The target respondents were the finance managers or individuals concerned with arrangement of payment or receipts of foreign currency transactions. These categories of respondent were believed to posses' correct information on the hedging tools and other risk mitigating process of the firm. The sample was restricted to those firms with foreign exchange-rate exposure in the last two years. By eliminating firms with no exposure, the researcher was able to concentrate on the major cross-sectional differences, which affected the incentives for hedging by firms.

The survey instrument involved both closed-ended and open-ended questioners. The open-ended questionnaire encouraged respondents to share as much information as possible in an unconstrained manner. The closed-ended questionnaire, on the other hand, involved "questions" that could be answered by simply checking a box. The questionnaire used consisted of three sections. Section A had general information about the organization and the respondent. Section B aimed to assess whether the management had a documented risk management plan/policy/programme and their ranking of transaction exposure and translation exposure. Section C had more of the firms' specific information on the motivation of hedging practices employed.

3.6 Data Analysis and Presentation

Data obtained from respondents was entered into an SPSS database application for analysis. These data collected was analyzed using descriptive statistics (measures of central tendency and measures of variations) and inferential statistic tools. From the above results, simple correlation analysis was generated to establish the relationship between the trade intensity and the mean values of each foreign exchange risk management technique. Descriptive statistics was basically used in the presentation and analysis of empirical results. The researcher considered the following factors as indicators of foreign exchange-rate exposure and hence the need of hedging: reporting pretax foreign income, foreign sales, long- or short-term foreign-denominated debt or foreign tax expense; discussing (qualitatively) foreign operations in the annual report footnotes.

CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND DISCUSSION

4.1 Introduction

The research objective was to establish the hedging techniques employed by the horticultural industry in Kenya. This chapter presents the analysis and findings with regard to the objective and discussion of the same. The findings are presented in percentages and frequency distributions, mean and standard deviations.

4.2 Characteristics of the respondent firms

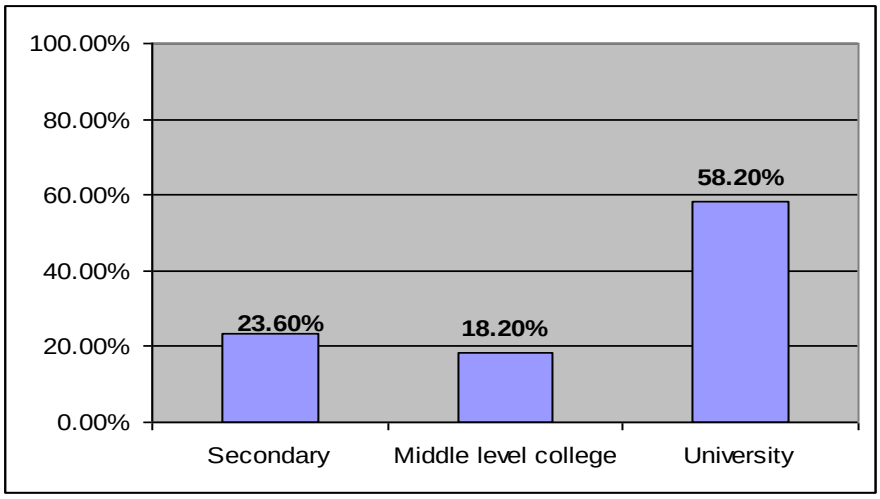
A total of 60 questionnaires were issued out. The completed questionnaires were edited for completeness and consistency. Of the 60 questionnaires used in the sample, only 42 were returned. The remaining 18 were not returned. The returned questionnaires' represented a response rate of 70. %.

4.3 Demographic information

The demographic information considered in this study included level of education and the duration the firm has been exporting horticultural products.

4.3.1 Level of education

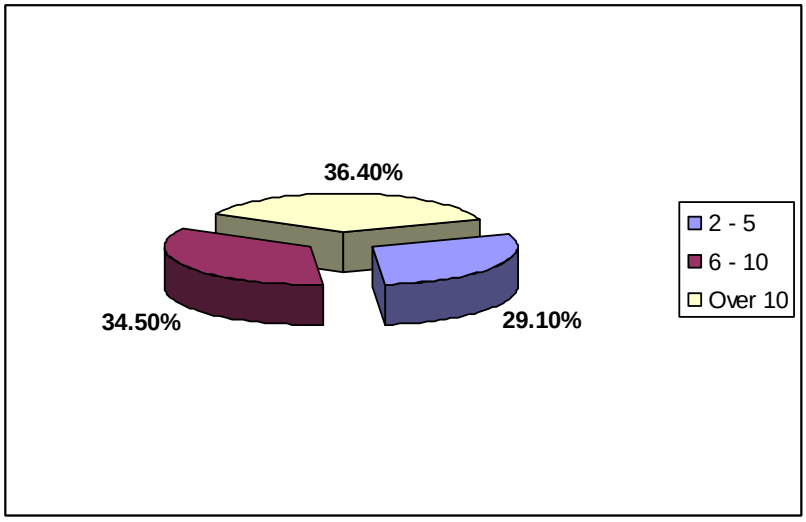
Figure 4.1: Level of education



The findings regarding the level of education of the respondents were that 58.2% of the respondents have university degree, 23.6% have attained secondary level of education while 18.2% have middle level college. Thus this group was considered to be relatively well versed with how derivatives operate and its benefits towards hedging risks resulting from foreign exchange fluctuation in the international trade.

4.3.2 Duration of exporting horticultural products

Figure 4.2: Duration of exporting horticultural products

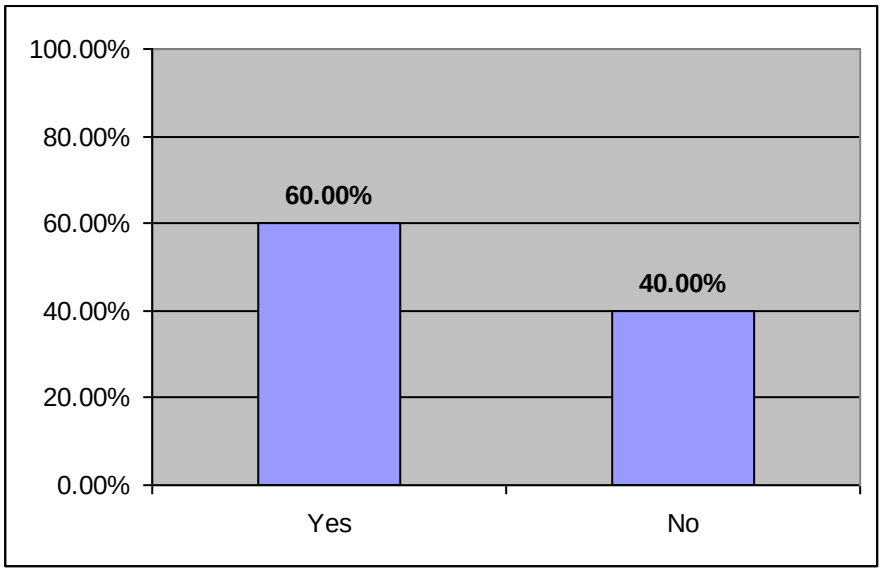


Majority of the respondents said their firms have been exporting the products for a period exceeding 10 years (36.4%) while 34.5% of respondents had been plying the business for between 6-10 years, then 29.1% of the respondents have been in the business for a period of between 2 and 5 years. This group therefore can be considered to have a wealth of experience to give the research more credible information on the use of derivatives by horticultural exporters in the country.

4.4 Existence of risk management plans

4.4.1 Risk management

Figure 4.3: Duration of exporting horticultural products



The findings presented in figure 4.3 shows that 60.0% of the respondents have documented foreign currency risk management plan/policy/programme while 40.0% of the respondents said they do not have. This shows that the firms understands that the business which they engage in has risks which needs a policy to guard them.

4.4.2 Methods used to document foreign currency risk management

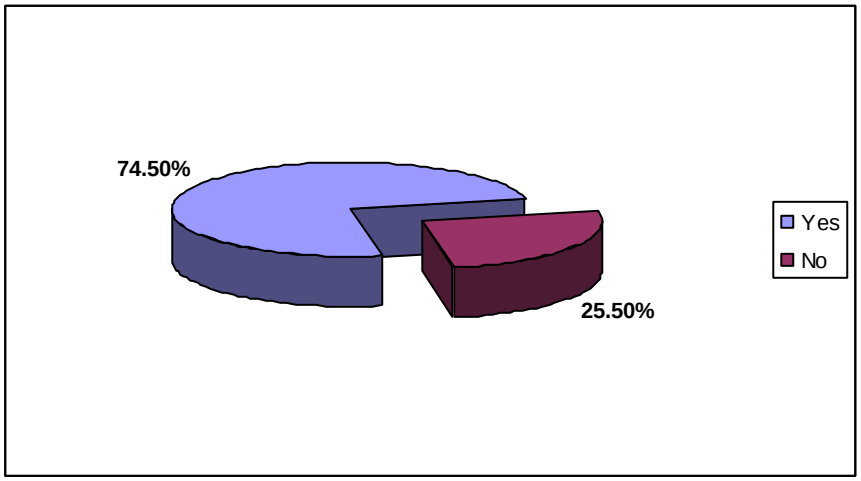
Table 4.1: Methods used to document foreign currency risk management

	Frequency	Percent	Cumulative Percent
None	22	40.0	40.0
Payments netting	8	14.5	54.5
Prepayment	10	18.2	72.7
Lending and lagging	7	12.7	85.5
Hedging with derivatives	8	14.5	100.0
Total	55	100.0	

Majority of the respondents (40.0%) were those who had indicated that they do no have a documented foreign currency risk management plan/policy, 18.2% of the respondents said they use prepayment method, 14.5% said they use payments netting while the other use 14.5% hedging with derivatives and the remaining 12.7% use lending and lagging method. The findings indicate that the firms use different methods which suit the market they serve or the risk which affects them.

4.4.3 Foreign currency derivatives usage

Figure 4.4: Foreign currency derivatives usage



The analysis shows that 74.5% of the respondents said their firms use foreign currency derivatives while 25.5% said they do not use. This shows that the firms value the need to hedge against losses occurring due to fluctuation in exchange rates.

4.4.4 Level of usage of foreign currency derivatives usage

The respondents were to give their independent opinion on the level of usage of foreign exchange derivatives in a five point likert scale. The range was 'very highly used (1)' to 'not at all' (5). The scores of very highly/highly used have been taken to present a variable which had mean score of 0 to 2.5 on the continuous Likert scale ;(0≤ S.E <2.4). The scores of 'moderately used have been taken to represent a variable with a mean score of 2.5 to 3.4 pm on the continuous Likert scale: 2.5≤M.E. <3.4) and The score of both fairly used/not at all have been taken to represent a variable which had a mean score of 3.5 to 5.0 on a continuous Likert scale; 3.5≤ L.E. <5.0). A standard deviation of >1.5 implies a significant difference on the impact of the variable among respondents.

Table 4.2: Level of usage of foreign currency derivatives usage

	Mean	Std. Deviation
Futures	3.4364	2.1409
Forwards	1.0909	.8448
Swaps	3.2909	2.2334
Options	2.8364	1.7079

The findings indicates that only one factor had a mean less than 2.4 indicating that the factor is highly used by the horticultural firms to hedge. Forwards (mean 1.0909) were the derivative used by the firms mostly while options (mean 2.8364) were moderately

used by the respondents. Swaps and Futures (mean 3.2909 and 3.4364 respectively) were used fairly or not at all by the firms. The findings mean that the firms' uses only one derivative at a time and also that majority of the derivatives prefer to use forwards.

4.4.5 Maturity periods derivatives used

Table 4.3: Maturity periods derivatives used

	Frequency	Percent	Cumulative Percent
90 days or less	5	9.1	9.1
91 - 180 days	26	47.3	56.4
To the end of the year	22	40.0	96.4
Beyond one year	2	3.6	100.0
Total	55	100.0	

As evident in table 4.3 above, 47.3% of exporters prefer hedgers with a maturity period of between 91 and 180 days. This was closely followed by those respondents who took derivatives with a maturity period between 181 days to the end of the year at 40 %. 9.1% of the respondents said they use hedgers with maturity period of less than 90 days while 3.6% of the respondents indicated that they arrange for hedging facility with the banks for beyond one year. The preferred choice of the period under which the hedging takes place can also be attributed to the volatile nature of the economy and the level of uncertainty and as such exporters will prefer to hedge in the short term.

4.4.6 Degree of importance placed on the factors

This section covers findings from a question posed to the respondent's to determine the extent to which they rank the importance of cash flow volatility, change in the firm's

market value, tax incentives, volatility in accounting earnings and speculations purpose. Measure of central tendency (mean) and a measure of variation (standard deviation) was used to analyze the data. The respondents had been asked to give independent opinion on above factors and the range was from 1 (Most Important) to 4 (Less Important).

Table 4.4 Degree of importance placed on the factors

	Mean	Std. Deviation
Cushioning fluctuation in cash flows	1.9565	.42121
Maintenance of market value	3.1304	.62136
Tax incentives of derivatives	3.1255	.55358
Volatility in earnings	2.7826	.56440
Speculations	3.8764	.79312

The findings in table 4.4 above show that one of the variables had a mean averaging 2. This means that cushioning cash flow volatility in the international market is considered to be the major reason why the respondents will use hedgers. The effect of derivatives maintaining firms' market value, earnings and the use of derivatives as a speculation toll was least of the reason why the firms hedged with derivatives. With a standard deviation averaging 0.5 for most of the results, it indicates that there was a moderate variability among the respondents as to the extent of importance of the factors to warrant hedging.

4.5 Motivation of hedging practices employed

The respondents were to give their independent opinion on the motivation of managers of the firm to use foreign currency derivatives for hedging in a five point likert scale. The range was 'strongly agree (1)' to 'strongly disagree' (5). The scores of strongly agree/agree have been taken to present a variable which had mean score of 0 to 2.5 on

the continuous Likert scale ;(0≤ S.E <2.4). The scores of 'neutral' have been taken to represent a variable with a mean score of 2.5 to 3.4 pm on the continuous Likert scale: 2.5≤M.E. <3.4) and the score of both disagree/strongly disagree have been taken to represent a variable which had a mean score of 3.5 to 5.0 on a continuous Likert scale; 3.5≤ L.E. <5.0). A standard deviation of >1.1 implies a significant difference on the impact of the variable among respondents.

Table 4.5: Motivation of hedging practices employed

Statement	Mean	Std. Deviation
To reduce volatility in the profit after tax	1.5455	.8567
To reduce risks faced by the management	2.6000	.5644
To reduce the volatility of cash flows	2.0727	1.0862
To reduce the cost of capital of the firm	3.3091	1.1201
To facilitate budgeting and control process in the firm	2.8727	1.2027
Firms with alternative means to manage foreign currency risks are likely to use derivatives	2.5818	.8963
To reduce political risks	4.1091	1.5596
To reduce probability of bankruptcy and financial distress	3.6364	1.1445
Perception of derivatives use by investors, regulators and the public	3.1091	.9939
Alternative means to manage financial risks	2.1455	1.0077
Firm with high proportions of ESOPs outstanding are more likely to resort to usage of derivatives	2.6909	.7667
Disclosure requirement of accounting standards	3.2909	1.1000
High tax credit available from the use of foreign currency derivatives	4.2182	.9167

The findings in table 4.5 above show that only three factors had a mean ranking of above 3.4 (disagree/strongly disagree). These three factors describe instances where the

statements do not reflect the true position. These factors are to reduce political risks (mean 4.1091), to reduce probability of bankruptcy and financial distress (mean 3.6364) and high tax credit available from the use of foreign currency derivatives (mean 4.2182).

However there was a high degree of variation among respondents, an indication that some factors do contribute to the use of foreign currency derivatives for hedging. This is indicated by standard deviation of 1.5596, 1.1445 and .9167 for to reduce political risks, to reduce probability of bankruptcy and financial distress and high tax credit available from the use of foreign currency derivatives respectively.

On the other hand, the results indicate that the respondents were in agreement that the major reasons for using foreign currency derivatives for hedging was to reduce volatility in the profit after tax (mean 1.5455 and standard deviation 0.8567), to reduce the volatility of cash flows (mean 2.0727 and standard deviation of 1.0862), alternative means to manage financial risks (mean 2.1455 and standard deviation 1.0077). The variation of standard deviation of the various statements indicates that there are some firms which agree while others disagree. The other factors however were rated as being neutral which implies that it may contribute to the use of foreign currency derivatives for hedging or not and these factors are; to reduce risks faced by the management, to reduce the cost of capital of the firm, to facilitate budgeting and control process in the firm, firms with alternative means to manage foreign currency risks are likely to use derivatives, perception of derivatives use by investors, regulators and the public, firm with high proportions of ESOPs outstanding are more likely to resort to usage of derivatives and disclosure requirement of accounting standards.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

The study showed that majority of the horticultural products exporting firms has foreign currency risk management plan/policy/programme thus they can cushion themselves against risks occurring due to frequent appreciation of foreign currencies against local currency. The respondents indicated that they use payments netting, lending and lagging prepayment and hedging with derivatives to guard themselves against losses due to fluctuation in currency the risk manager's choice of the different types of hedging techniques may, however, be influenced by costs, taxes, effects on accounting conventions and regulation. The findings shows that the firms' uses foreign currency derivatives since horticultural firms are exposed to foreign exchange risk as their projects depend on future exchange rates and the exchange rate changes cannot be fully anticipated.

It was apparent that in all horticultural firms studied, the level of usage of foreign exchange derivatives varies with some firms using futures, forwards, swaps or options. The derivative used depends with the regulations and conventions in the other countries. The maturity period of derivatives used depends on the duration the firms would like to hedge themselves against and that is confirmed with the difference in the periods the firms indicated as they hedge against. It was interesting in knowing that if a firm decides to hedge, the most important reason for them in using derivatives was to cushion

fluctuation in cash flows. The volatility in earnings came second while the objective of tax incentives of derivatives came third as to the reason of hedging. This means that most of the horticultural firms are more concern with their short cash flows than any other variable especially if the funding of their business would have been sourced from a loan.

It was noted that specific factors which motivates managers to use foreign currency derivatives for hedging were; To reduce volatility in the profit after tax, to reduce the volatility of cash flows, as an alternative means to manage financial risks, firms with alternative means to manage foreign currency risks are likely to use derivatives, to reduce risks faced by the management, firm with high proportions of ESOPs outstanding are more likely to resort to usage of derivatives, to facilitate budgeting and control process in the firm, to reduce the cost of capital of the firm, perception of derivatives use by investors, regulators and the public and disclosure requirement of accounting standards.

5.2 Conclusion

From the research findings and the answers to the research questions, some conclusions can be made about the study.

The horticultural firms dealing with international trade acknowledge that challenges due to fluctuation of currency and therefore they have documented a foreign risk management policy to cushion themselves against the risks and the methods which they use includes payments netting, prepayment, leading and lagging and hedging with derivatives. The result indicates that majority of the firms use foreign exchange derivatives and the highly used foreign exchange derivative is the forwards, futures and swaps.

The maturity period of the derivatives used by the firm varies with the duration the horticultural firms want to hedge themselves against losses. The firms indicated that they place various degrees on the hedging factors but the major factors were to cushion the firms against fluctuation in cash flows, volatility in earnings, maintenance of market value and tax incentives of derivatives. International trade involves various challenges which if not mitigated will lead to severe losses, the firms indicated that motivating factor for them to hedge was to reduce volatility in the profit after tax, to reduce the volatility of cash flows, as an alternative means to manage financial risks, firms with alternative means to manage foreign currency risks are likely to use derivatives, to reduce risks faced by the management, firm with high proportions of ESOPs outstanding are more likely to resort to usage of derivatives, to facilitate budgeting and control process in the firm, to reduce the cost of capital of the firm, perception of derivatives use by investors, regulators and the public and disclosure requirement of accounting standards.

5.3 Recommendation

This study makes a few recommendations that have policy implications for decision makers. The study found out that not all firms have risk management programs and it is recommended that these firms should establish risk management departments or engage risk management professionals who will manage their risks especially during this period of uncertainty in the business environment and thus ensure the survival of their businesses. It is also recommended that international oriented firms and generally other traders engaged in the international trade must learn about hedging techniques and begin to adopt then in managing their foreign exchange risks.

The Kenyan banks should also endeavor to educate their clients on the importance of hedging techniques in managing exchange risk exposure. Banks will also be encouraged to develop more hedging products to assist firms engaged in international trade to manage their foreign exchange risk.

Apart from the horticultural firms, there are many other players engaged in the international trade in the country. In this regard, it is suggested that a research be undertaken to establish the level of foreign exchange derivative usage in other sectors such as in horticulture, tourism, flower and remittances from the Diaspora.

5.4 Recommendations for further Research

The study confined itself to horticultural firms. This research therefore should be replicated in firms engaged in international trade in the country in order to establish the level of foreign exchange derivative techniques in other sectors

5.5 Limitation of the study

This study was based on a sample limited to horticultural firms operating in Nairobi. The study did not cover other horticultural firms operating in Kenya and therefore the findings from the study cannot be assumed to be the true position of the techniques used by the firms operating in Kenya and dealing with international trade.

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APPENDIX I

LETTER OF INTRODUCTION

APPENDIX II

QUESTIONAIRE

The questionnaire seeks to collect information on the hedging techniques employed by the Horticultural firms in Kenya.

PART A: GENERAL INFORMATION

1) Name of the firm (optional)……

2) What is your level of education?

Primary	[ ]	Middle level college	[ ]
Secondary	[ ]	University	[ ]

3) For how long has your firm been exporting horticultural products?

Less than two years	[ ]	6-10 years	[ ]
2-5 years	[ ]	Over 10 years	[ ]

PART B: EXISTENCE OF RISK MANAGEMENT PLANS

4) Does your firm have a documented foreign currency risk management plan/policy/programme?

Yes ( ) No ( )

5) If your answer to the above question is yes, which of the following methods does your firm use?

a) Payments netting ( )

b) Prepayment ( )

c) Leading and lagging ( )

d) Hedging with derivates ( )

e) Others ( ) Please specify ……

6) Does your firm use foreign currency derivatives?

Yes ( ) No ( )

7) If yes, on a scale of 1-5 where (1) very highly used and (5) not at all, please rate the level of use of foreign exchange derivatives by your firm.

(Please tick)

Level of usage	Very highly used	Highly used	Moderately used	Fairly used	Not at all
Futures					
Forwards					
Swaps					
Options					
Others					

8) What is the maturity periods of derivatives used by your firm:-

90 days or less [ ] to the end of the year [ ]

91 – 180 days [ ] Beyond one year [ ]

9.) What degree of importance do you place on the following factors regarding hedging with derivatives? (Please Tick)

Variable	Very important	Important	Indifferent	Less Important
Cushioning fluctuation in cash flows				
Maintenance of market value				
Tax incentives of derivatives				
Volatility in earnings				
Speculations				

Part C MOTIVATION OF HEDGING PRACTICES EMPLOYED

10) In a scale of 1-5, to what extent do you agree with the following statement concerning the motivation of managers of the firm to use foreign currency derivatives for hedging? (Please Tick)

Key 1) Strongly agree 2) Agree 3) Neutral 4) Disagree
5) Strongly disagree

Statement	**1**	**2**	**3**	**4**	**5**
To reduce volatility in the profit after tax					
To reduce risks faced by the management					
To reduce the volatility of cash flows					
To reduce the cost of capital of the firm					
To facilitate budgeting and control process in the firm					
Firms with alternative means to manage foreign currency risks are likely to use derivatives					
To reduce political risks					
To reduce probability of bankruptcy and financial distress					
Perception of derivatives use by investors, regulators and the public					
Alternative means to manage financial risks					
Firm with high proportions of ESOPs outstanding are more likely to resort to usage of derivatives					
Disclosure requirement of accounting standards					
High tax credit available from the use of foreign currency derivatives					

THANK YOU FOR YOUR TIME

APPENDIX III

LIST OF FLOWER COMPANIES AS PER KENYA FLOWER COUNCIL

PRODUCER AND PRODUCT CERTIFICATION STATUS REGISTER OF JUNE 2010

	Company	Type of flower	Physsical Address	E-mail Address/website
1	Africalla Lillies Ltd	Zantadeschia	P.O.Box 709 Village Market	Sales@africalla.com Info@africalla.com www.africalla.com
2	Aquila Dev. Co. Ltd	Roses(Intermediate and sweethearts)	P.O. Box 66743-00800 Westlands	info@aquilaflowers.com gm@acquilaflowers.com ranjit@aquilaflowers.com
3	Bawan Roses Ltd	Roses(Intermediate and sweethearts)	P.O. Box 46037 Nrb P.O. Box 235 Thika	bawan-roses@wananchi.com
4	Beverly Flowers Ltd	Roses(Intermediate and sweethearts)	P.O. Box 53836 Nrb	beverly@nbi.ispkenya.com
5	Bilashaka Flowers Ltd	Roses	P.O. Box 2040-0020117 Naivasha	bilashaka.flowers@zuurbier.com HRM.bilashaka@zuurbier.com
6	Black Petals Ltd	Roses(Intermediate and sweethearts)	P.O. Box 19246 Nairobi	jai@blackpetals.co.ke accounts@blackpetals.co.ke
7	Blooming Oasis Ltd	Roses(Intermediate and sweethearts)	P.O. Box 1739 Naivasha	lex@lex-ea.com tom@lex-ea.com steve@lex-ea.com
8	Bondet Limited	F1 Hybrid seeds	P.O. Box	seeds@bondet.co.ke seeds@bondet.co.ke Andrew.fernandes@bondet.co.ke
9	Charm Flowers Ltd	Lisianthus	P.O. Box 51398-00200 Nairobi	info@charmflowers.com ashki@xharmflowers.com kajal@charmflowers.com
10	Countrywide Connections Ltd	Hypercium;Eryngium	P.O. Box 18436 Nairobi	richard.fernandes@countrywide.co.ke Abraham.kimani@countrywide.co.ke Office@countrywide.co.ke
11	Dave Roses	Roses(Intermediate and sweethearts)	P.O. Box 18436 Nairobi	pjdaveflowers@wananchi.com pjdave@pjdave.com
12	Elbur Flora Ltd	Roses(Intermediate and sweethearts)	P.O. Box 54 Elburgon	eflora@africaonline.co.ke
13	Finlay Flowers Ltd	Roses(Intermediate and sweethearts); (Standard Carnations; Spray Carnations, Freesia, Alstroemeria,	P.O. Box 1966 Kericho 20200	Chris.mclean@finlays.co.ke Edgar.mutai@finlays.co.ke

		Gypsoppilla, Zantadeschia, Solidago,Leather Leaf fern		
14	Finlay Flowers Ltd	”		
15	Lemotit Fern	”		
16	Florema (K) Ltd	Cuttings Begonia	P.O. Box 12420117 Naivasha	ron@floremakenya.co.ke peter@floremakenya.co.ke
17	Gatoka Ltd	Roses	P.O. Box 404 Thika 01000 Kenya	gatoka@swiftkenya.com
18	Grandiflora		P.O. Box 709 Village Markat	info@africalla.com sales@africalla.com www.africalla.co.ke
19	Groove Ltd	Roses	P.O. Box 1322-20117 Naivasha	plow@kenyaweb.com
20	Hamer Limited	Cuttings	P.O. Box 1896 Naivasha	florensis@florensis.co.ke
21	Hamwe Limited	Hypericum	P.O. Box 791 - 20117	farai@harvestflower.com harvest@harvestflowers.com jay@harvestflowers.com
22	Harvest Limited	Roses (T-hybrids,intermediate and sweethearts)	P.O. Box 60158 Nairobi Location: Kinani Road	farai@harvestflowers.com harvest@harvestflowers.com jay@harvestflowers.com
23	Highland Plants Limited		P.O. Box 574-20303 Olkalao	admin@highlandplants.co.ke sales@highlaandplants.co.ke
24	Homegrown (K) Ltd. Farms	Roses (T-hybrids,intermediate and sweethearts) , Standard carnations; Gypsophilia,Gemini, Oriental lilies ,Asiatic hybrid lilies ,Longflora lilies, Longi Asiatic lilies, Gerbera , Solidago , Statice , Hypericum and fillers	P.O. Box 10222-00400 Nairobi	HGKAdmin.NboHQ@f-h.biz richard.fox@f-h.biz
25	Flamingo Farm			
26	King Fisher Farm			
27	Hamerkop Farm			

28	Siraji Farm			
29	Sirimon Farm			
30	Isinya Flowers	Roses (T-hybrids,intermediate and sweethearts)	P.O. Box 1016-00606 Nairobi	isinya@nbi.ispkenya.com info@isinyaroses.com
31	Kariki Ltd	Hpericum	P.O. Box 6038-00100 Thika	Richard.fernandes@countrywide.co.ke Production@kariki.co.ke Personnel@kariki.co.ke
32	Kenya Highlands Nurseries	Roses (T-hybrids,intermediates)	P.O. Box 3474 Nakuru	agricen-tre@africaonline.co.ke
33	Kreative Roses	Roses & Rose planting material. (T-hybrids,intermediate and sweethearts)	P.O. Box 868-00502 Nairobi	info@kordesroses-ea.com farm@kreative-roses.com accounts@kreative-roses.com
34	Kisima Farm Ltd	Roses (T-hybrids,intermediate and sweethearts)	P.O. Box 64 Timau 10406	flowers@kisima.co.ke martin@kisima.co.ke
35	Kudenga Ltd	Hypericum,Eryngium , Agapanthus	P.O. Box 955-20106 Molo	personnel@kudenga.co.ke office@kudenga.co.ke
36	LakeFlowers Ltd	Roses	P.O. Box 1147 Sarit Centre -00606	info@lakeflowers.com Mohamed@lakeflowers.com
37	Lathyflora Ltd	Carnation cuttings, Hedera helix, Lathyrus, Chrysanthemum and succulents	P.O. Box 63276	info@terrasolkenya.com
38	Longonot Horticulture Ltd	Roses (intermediates and sweethearts) ; spray roses ,Gerbera	P.O. Box 1271 Naivasha P.O. Box 32931 Nairobi	Longonot@vegprogroup.com Umang@vegpro-group.com
39	Liki River Farm	Roses (T-hybrids,intermediate and sweethearts) & Rose propagated planting material	P.O. Box 537 Nanyuki	liki@vegpro-group.com sumanta@vegro-group.com piet@vegpro-group.com
40	Live Wire Ltd		P.O. Box 791-20117 Naivasha	info@livewire.co.ke
41	Magana Flowers Kenya Ltd	Roses (T-hybrids,intermediate and sweethearts)	P.O. Box 14618-0800 Nairobi	maganaflowers@swiftkenya.com mnmungai@maganaflowers.com nmmwirigi@maganaflowers.com

42	Matasia Valley Roses	Roses (intermediate and sweethearts)	P.O. Box 62677-00200 Nairobi	lemann@wananchi.com marthtande@yahoo.com
43	Mosi Ltd	Roses (intermediate and sweethearts	P.O. Box 70146 Nrb	transebel@africaonline.co.ke home@transebel.co.ke
44	Mt.Elgon Flowers Ltd	Roses (T-hybrids,intermediate and sweethearts),Spray carnation,Standard carnation, Zantadeschia	P.O. Box 124 Kitale	info@mtelgon.com bea@mtelgon.com info@mweigagrowers.co.ke
45	Mweiga Growers Ltd	Orinthogalum Arabicum	P.O. Box 1017 Nyeri	
46	Nini Ltd	Roses (intermediate and sweethearts	P.O. Box 569 Naivasha	admin@niniltd.com growing@niniltd.com ninltd@africa.co.ke production@niniltd.com
47	Ol-Njorowa Ltd	Roses (intermediate and sweethearts	P.O. Box 18156-00500 Nairobi P.O. Box 879 Naivasha	olnjorowa@iconnect.co.ke mbegufarm@iconnect.co.ke
48	Oserian Dev Co Ltd	Roses;(Spray,sweethe art and intermediate) Carnations,(Standard and Spray), Gypsophyll,Lisinthus Doubles,Fillers Various ,Oriental lilies,Gerbera,Statice.	P.O. Box 43340 Nairobi P.O. Box 209 Naivasha	info@oserian.com ruli.tsakiris@oserian.com www.oserian.com
49	P.J.Dave Flower Ltd	Roses (intermediate and sweethearts)	P.O. Box 18436 Nairobi	pjdaveflowers@wananchi.com pjdave@pjdave.com
50	Pollen Limited	Cuttings…… Seeds(pelargonium,Petunia,impatients Tagetes/marigold,Begonia,Vinca)	P.O. Box 1037 Ruiru	info@syngenta.com benard.ambasa@syngenta.com jane.kimani@syngenta.com
51	Primarosa Flowers Ltd	Roses (intermediate and sweethearts) Chrysanthemum cuttings	P.O. Box 540-00204 Athi River	kumar@primarosaflowers.com vishal@primarosaflowers.com
52	Primarosa Flowers Ltd 0733618361	Roses (T-hybrids,intermediates)	P.O. Box 255 Ol Njororok	an-and@nyh.primarosaflowers.com Jacob@nyh.primarosaflowers.com
53	Red Lands Roses Ltd	Roses (T-hybrids,Spray roses)	P.O. Box10-Ruiru 00232	sales@redlandsroses.co.ke info@redlandsroses.co.ke www.redlamdsroses.com

54	Roseto Ltd	Roses	P.O. Box 3204 Nakuru	roseto|@megaspringroup.com Farm.roseto@megaspingroup.com gm.roseto@gegaspingroup.com hr.roseto@megaspingroup.com
55	Sian Roses Limited	Roses (intermediate and sweethearts)	P.O. Box 15139-00509 Nairobi	jos@sianroses.co.ke info@sianroses.co.ke www.sianroses.co.ke
56	Agriflora Kenya Ltd			
57	Equator Flowers			
58	Maji Mazuri Flowers Ltd			
59	Maasai Flowers Ltd			
60	Winchester Farm Ltd			
61	Simbi Roses	Roses (intermediate and sweethearts)	P.O. Box 769 Thika	
62	Star Flowers		P.O. Box	joenga@vegprogroup.com www.vegprogroup.com
63	Subati Flowers Ltd	Roses (T-hybrids,intermediates)	P.O. Box 25130-0010	ravi@subatiflowers.com
64	Suera Flowers Ltd	Roses (T-hybrids,intermediates) Zantadeschia	P.O. Box 62599 Nairobi	suerafarm@suerafarm.sgc.co.ke
65	Suera Flowers Ltd			
66	Podo Farm			
67	Terrasol Ltd	Geranium	P.O. Box 63276 Nairobi	info@terrasolkenya.com
68	Timaflor Limited	Rose Cut Flowers	P.O. Box 911-10400 Nanyuki	timaflorltd@wananchi.com Lydiamacharia@timafloritd.com
69	Tambuzi Ltd	Scented Roses	P.O. Box 1148 Nanyuki 10400	tim.hobbs@tambuzo.co.ke maggie.hobbs@tambuzi.co.ke
70	Valentine Growers Co. Ltd	Roses (intermediate and sweethearts)	P.O. Box 18755 Nairobi	info@valentinegrowers.com joseph.kamau@valentinegrowers.com Newton@valentineflowers.com esther.njogu@valentinegrowers.com
71	Karura Farm			

72	Kibubuti Farm			
73	Waridi Ltd	Roses (intermediates)	P.O. Box 19294 Nairobi	kadlag@waridifarm.com info@waridi.com jmott@africaonline.co.ke Elizabeth@waridifarm.com
74	Wildfire Ltd	Hypericum,Roses,Molucella	P.O. Box 379 Naivasha	office@wildfireflowers.com
75	Windsor Flowers	Roses (intermediates)	P.O. Box 746 Thika	farm@windsorflowers.com information@windsorflowers.com
76	Xprssions Flora Limited	Roses (T-hybrids)	P.O. Box 48232-00100 Nairobi	info@xflora.net susan.chomba@xflora.net info@xflora.net

Source: Kenya flower council website

Key exporters of vegetable products in Kenya, 2003

	COMPANY	PRODUCT TYPE	ADDRESS
1	**Avenue Fresh Produce**	French beans, Snow peas, sugar snaps, garden peas	P.O. Box 3865, Nyayo Stadium, Nairobi, Kenya Tel: 020-825342/820015 Fax: 020-825288
2	**Belt Cargo Services Ltd**	French beans, Snow peas, Sugar snaps	P.O. Box 54240, Nairobi Kenya Tel: 020-4448821/4448822 Fax: 020-4448820
3	**Bud of Paradise**	Aubergines, Baby carrots, Baby courgettes, Chillies (Red & Green), French beans, Snow peas	P.O. Box 39953, Nairobi Kenya Tel: 020-4440053/4444768 Fax: 020-4449605
4	**East African Growers Ltd**	Asian vegetables- Aubergine, Chillies, Dudhi, Karella, Okra, Ravaya, Tindori, Turia, Varole Baby corn, French beans (fine and extra fine), Pigeon peas, Runner beans, Snow peas, Sugar snaps	P.O. Box 49125, Nairobi Kenya Tel: 020-822017 / 25 / 29 Fax: 020-822155
5	**Everest Enterprises Ltd**	Asian vegetables- Aubergine, Chillies, Dudhi, Karella, Okra, Ravaya, Tindori, Turia, Valore Baby corn, French beans (fine and extra fine) peas, Runner beans, Snow peas, Sugar snaps, Baby Carrots.	P.O. Box 52448, Nairobi Kenya Tel: 020-824141/ 823333 Fax: 020-824195
6	**Fian Green Kenya Ltd**	French beans, Mangtout, Sugar snaps,	P.O. Box 60455-00200, Nairobi. Kenya Tel: 020-821375 Fax: 020- 821374
7	**Frigoken Ltd**	French beans, Mangtout, Sugar snaps,	P.O. Box 30500, Nairobi Kenya Tel: 020-860096/860449/861137 Fax: 020- 860098
8	**Greenlands Agro**	Sugar snaps, snow peas, French beans	P.O. Box 78025, Nairobi Kenya

	producers Ltd		Tel: 020-827080/1/2 Fax: 020- 827078
9	**Hillfarm Fresh Produce Ltd**	Fresh Beans, Mangetout	PO Box 35467, Nairobi Kenya Tel: 020-217722 Fax: 020-217722
10	**Indu Farm EPZ Ltd**	French beans, Snowpeas, Sugar snaps	P.O. Box 42564, Nairobi Kenya Tel: 020-550215/6/7,020-352362 Fax: 020-550220
11	**Jambo Horticultural Export Ltd "2002''**	French beans, Tomatoes, Carrots, Onions, Green pepper	P.O Box 30019, Nairobi Kenya Tel: 020-3753079 Fax: 020-3753079
12	**Kenya Horticultural Exporters (1977) Ltd**	Asian Vegetables- (Aubergine, Chillies, Dudhi, Karella, Okra, Ravaya, Tindori, Turia, Valore), French beans, Sugar snap, Baby corns, Runner beans	P.O. Box 11097-00400 Tom Mboya, Nairobi Kenya Tel: 020-650300 Fax: 020-650303
13	**Makindu Growers and Packers Ltd**	Asian Vegetables- Aubergine, Chillies, Dudhi, Karella, Okra, Ravaya, Tindori, Turia, Valore	P.O. Box 45308, Nairobi Kenya Tel: 020-822812 Fax: 020-822813
14	**Mbogu Tuu**	Asian Vegetables- Aubergine, Chillies, Dudhi, Karella, Okra, Ravaya, Tindori, Turia, Valore	P.O. Box 47070, Nairobi Kenya Tel: 020-566497/564213 Fax: 020-564467
15	**Myner Exporters Ltd**	French beans, Runner Beans, Snowpeas, Sugar-snaps	P.O. Box 11706, Nairobi Kenya
16	**Sacco Fresh Ltd**	French beans, Sugar snaps, Snow peas	P.O Box 22124, Nairobi Kenya Tel: 020-824687/8 Fax: 020-824689

17	**Sunripe (1976) Ltd**	French beans (fine & extra) Runner beans, Snowpeas, Sugarsnaps, Baby carrots, Baby corns	P.O. Box 41852, Nairobi Kenya Tel: 020-822518/879 Fax: 020-822709
18	**Tropical Horticultural Products Ltd**	Asian Vegetables- Tindori, Turia, Valore, Dhuli, Karella, Okra, French beans	P.O. Box 56032, Nairobi Kenya Tel: 020-336132 Fax: 020-336132
19	**Vitacress (K) Ltd**	Carrots, Peas, Salads, Onions	P.O. Box 63249, Nairobi. Kenya Tel: 020-860650/1/2 Fax: 020-860652
20	**Wamu Investments Ltd**	Beans (fine & extra fine), Sugar snaps, Snow peas	P.O. Box 26026, Nairobi Kenya Tel: 020-822441/824990 Fax: 020-824991
21	**Wilham (K) Ltd**	Asian vegetables (Tindori, Turia, Valore, Dudhi Karella, Okra), Baby corn, French beans (fine and extra fine), Runner beans, Snow peas, Sugar snaps	P.O. Box 52494, Nairobi Kenya Tel: 020-822030/7 Fax: 020-822801
22	**Woni Veg-Fru Exporters**	Asian vegetables (Tindori, Turia, Valore, Dudhi Karella, Okra), French beans, Snow peas. Sugar Snaps	P.O. Box 52115, Nairobi Kenya Tel: 020-545303/532805 Fax: 020-650350

Source FPEAK, 2003 *Horticulture Industry*