Determinants of Hedging Foreign Currency Risk in Kenya: A Survey of Tea Exporting Companies in Mombasa County

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Abstract*: This research project sought to establish the factors affecting the decision to hedge foreign currency risk in Kenya with a focus on tea exporting companies in Mombasa County. The general objective was to establish the determinants of hedging foreign currency risk. The independent variables under consideration were: firm size, firm liquidity, degree of leverage and the cost of hedging. These independent variables created the basis for the specific objectives under review as follows: to find out how the firm size influences the decision to hedge foreign currency risk; to establish how the degree of financial leverage influences the decision of firms to hedge foreign currency risk; to find out how firm liquidity affects the decision to hedge foreign currency risk; and to find out how the cost of hedging influences the decision to hedge foreign currency risk. The theories under review in this research were the interest rate parity theory that was developed by Keynes in 1930 and it applies the law of one price. The other theory under review was the international Fisher effect theory that states that differences in interest rates in different markets can cause a flow of funds from markets with low interest rates to markets with high interest rates. A descriptive research design was used in this research. The target population was 42 tea exporting companies in Mombasa and a random sample of 10 companies was drawn from the 42 companies. The research findings were that the cost of hedging is the major factor affecting the decision to hedge while the size of the firm and firm liquidity also had an above average influence on the decision to hedge. The degree of leverage by the firm had the least impact on the decision to hedge since most of these tea exporting companies are not highly leveraged.*

1.1   Introduction

The collapse of the fixed foreign exchange rate regime in the early 1970s and the increasing globalization of business in the last three decades have resulted in many firms finding themselves increasingly exposed to exchange rate volatility (Papaioannou, 2006). An unexpected change in exchange rates is considered to be a major source of risk, which potentially affects both individual investors through their portfolios and the values of firms with domestic and international investments through their competitive positions.

Armitage et al., (2002), foreign exchange risk exposure is the risk that profits will change if foreign exchange rates change. This exposure can affect the firm's current and future cash flows and therefore there is a vital need for specifically designed strategies to manage it. The process whereby a firm seeks to protect itself from unanticipated changes in exchange rates is known as hedging. The underlying aim of hedging is to establish an offsetting currency position or the firm, so that, whatever is lost or gained on the original foreign currency exposure will be as much as possible offset by a corresponding gain or loss on the currency.

Basically, foreign exchange rates are determined by the relative supply and demand for two currencies, and influenced by the inflation rates and interest rates in the two countries. Before entering into a forward contract, for instance, the buying and selling parties must be acquainted with the determination of the forward exchange rate. On top of that, the relationship between spot exchange rates, forward exchange rates, inflation, and interest would be introduced. This relationship should not always be held in the short run due to a couple of factors, such as transaction costs and government intervention (Giddy et al., 2008).

To manage the risk generated by foreign exchange rate volatility, firms have adopted both financial and operational hedging strategies. Financial hedging refers to both derivative financial instruments and foreign currency denominated debt. Derivatives financial instruments (forwards, futures, swaps and options) have proved to be the most popular financial hedging technique with a healthy growth in use. In addition, there has been a growing trend in the use of foreign currency denominated debt. It is necessary to indicate that firms may engage in using these hedging strategies for speculation purposes (Hegalin, 2006).

While it is true that these financial hedging techniques have sufficient ability to hedge the firm's short-term (transaction) exposure, they are not effective in reducing long-term (operating or

economic) exposure (Wong, 2005). To hedge operating exposure, firms have started implementing operational hedging strategies to reduce long-term foreign exchange rate exposure. An operational hedging strategy is the process whereby firms diversify and disperse their foreign operations across foreign countries and geographical regions, not only to reduce costs, but also to eliminate foreign exchange rate exposure (Al-Shboul, 2007). This strategy results from the fact that corporations have followed the foreign direct investment scenario to create value by extending and expanding their operations abroad, thus establishing an effective hedging strategy for long-term exposure.

1.1.1 Kenyan Perspective

During the era of the fixed exchange rate regime, that covered the period of 1966- 1992, Kenya, like many developing countries, had to frequently devalue its currency in an attempt to reduce the negative effects that RER (Relative Exchange Rate) volatility had on its economy. The adoption of a floating exchange rate system in 1993 marked the climax of efforts to make the RER more aligned to the market determined equilibrium RER, and thus eliminate RER volatility. There is, however, no available evidence that success has since been achieved in realizing the objective for which the foreign exchange market was liberalized. Large volatilities in nominal exchange rates have since characterized Kenya financial market (Kiptoo, 2007).

In 1990 a dual exchange rate system was then adopted that lasted until October 1993, when due to further devaluations the official exchange rate was matched with the interbank rate and the shilling was allowed to float. This was preceded with the abolition of all controls in imports and foreign exchange transactions. The Liberalization stimulated foreign demand and brought about an increase in foreign exchange proceeds from exports. Though the liberalization has brought about positive effects on Kenyan trade, it has left the country vulnerable to the effects of exchange rate variability on import, producer and consumer prices (Ndung'u, 2002).

In Kenya, the exchange rate regimes have evolved along general macroeconomic policies that have been put in place since the country gained its independence in 1964. According to Ndung'u (2000), since independence to 1974, the exchange rate for the Kenya shilling was pegged to the US dollar, but after discrete devaluations the peg was changed to the special drawing rate (SDR). However, during the period of 1974 and 1981 the movement of the nominal exchange rate relative to the dollar was very volatile. This resulted in the shilling depreciating even further when the shilling was devalued again in 1982.

1.2 Statement of the Problem

Foreign exchange exposure for a corporation has everything to do with where you sit. From an economic perspective, corporations experience foreign exchange exposure from any activity of the business that is not wholly dollar denominated: capital, financing, sourcing, selling, etc. Any US dollar denominated activity the company engages in outside of the United States has currency implications and thereby exposes the company. In addition, having international customers or vendors that are procuring or selling, or exposed in some other way, exposes a company. Even having competitors with international exposures exposes the company (Helen, 2011).

Of the risks that developing markets expose investors to, exchange rate risk has to be one of the most challenging to manage. Emerging market currencies have experienced a streak of steady appreciation, but are prone to violent pullbacks. These types of risks can be difficult to manage for investors who are heavily engaged in foreign exchange markets, they are even more difficult for investors who are not. But these dynamics are not restricted to emerging markets. Currency crises can befall any market and history is littered with them (World Gold Council, 2013).

Hedging foreign exchange risk is an established activity for corporations, but one that remains relatively neglected by many investors. While not hedging is understandable for investors who wish to take a view on currencies, many investors are not equipped or willing to do so. In fact, research suggests that hedging is generally a superior alternative (Eun & Resnick, 2010). Foreign exchange hedging has been proven to lower portfolio risk, especially for volatile currencies and those that are positively related to the business cycle.

KPMG study on "Investing in Kenya" reveals that after hitting an all-time low of KShs.106/US$.1 in October 2011, owing to rapid inflation and the recalibration of global risk away from emerging markets, the shilling staged a significant recovery in response to stringent monetary tightening by the Central Bank of Kenya (KPMG, 2012). The study further projects that the Kenyan Shilling will further depreciate in value against the dollar by 2016 to KShs.110/US$.1. Depreciation will be underpinned by current account deficits and relatively high inflation and will be more rapid if political or economic confidence slips.

The current foreign exchange rate crisis has completely changed the financial landscape. With increased international trades between corporations, it therefore becomes necessary for company CFOs to understand emerging issues and factors affecting the decision to hedge. Banks are being forced to deleverage, and companies are experiencing

increased difficulties in getting access to credit and to financial derivatives with which to hedge risks. Small and medium-sized enterprises (SMEs) and mid-caps are, as usual, much more affected than large corporates, but while several surveys have been published on the subject of FX hedging among large corporates, it is not yet clear on exactly what factors affect the decision to hedge foreign currency risk.

1.3 Objectives

1.3.1 General objectives
To establish the determinants of hedging foreign currency risk.

1.3.2 Specific objectives
1. To find out how the firm size influences the decision to hedge foreign currency risk.
2. To establish how the degree of financial leverage influences the decision of firms to hedge foreign currency risk.
3. To find out how firm liquidity affects the decision to hedge foreign currency risk.
4. To find out how the cost of hedging influences the decision to hedge foreign currency risk.

1.4 Research Questions

1. How does the firm size influence the decision to hedge foreign currency risk?
2. How does the degree of financial leverage influence the decision of firms to hedge foreign currency risk?
3. Does firm liquidity affect the decision to hedge foreign currency?
4. How does the cost of hedging influence the decision to hedge foreign currency risk?

1.5 Justification of the Study

The findings of the study are of great importance to help researchers, corporate managers, shareholders and academicians in thrift international financial management. The findings of this research will draw more personal insight in understanding foreign exchange risk management and increase knowledge in this area.

Researchers and students will benefit from this study in that they will be in a position to get information that can help them while carrying out research work in related fields to advance their research papers and projects respectively. This research will also increase the knowledge base concerning the effects of foreign exchange rate fluctuations on horticultural export earnings in Kenya.

The results of the study will aid policy makers and managers to design appropriate policies to improve their hedging strategies and ensure maximum profitability. This include four basic areas: The use of the pricing system; the reform of decision-making processes to allow more integrative approaches to the full range of consequences of their policies; the use of technology policies to help the company to anticipate currency fluctuation and the strengthening of the contribution of the international trade and investment systems.

The financial analysts will be able to factors to consider in making a decision to hedge foreign exchange exposure by firms. It will help businesses to remain competitive, reduce non-cash flows risk because of local currency devaluation, help firms understand and learn best practice procedures to monitor and manage these risks and their impact on profits.

1.6 Scope of the Study

The research will cover the tea exporting companies in Mombasa. This is because they are directly exposed to the currency volatility as they sell tea to Europe, Asia and the Americas and they get paid in foreign currency while settling their bills in Kenyan Shillings.

1.7 Limitations of the Study

As with any study, this study has its limitations. First, the scope of the study is limited by its sample size and industrial coverage. The study only focused on the agricultural industrial specifically tea exports. The survey was based on tea exporting companies only located in Mombasa. The total number of the firms in this study is 10. This is not a good representation of all the firms in Kenya who are exposed to foreign currency volatility. The second limitation of this study concerns the nature of self-reporting questionnaire data. Questionnaires were issued and respondents freely filled them according to how they related and rated the statements. These closed ended statements did not give the respondents a chance to express themselves in the manner or other variables that may influence their firms to hedge. Another limitation of this study is that the author did not fully address the impact of hedging on the financial performance of firms in this study.

LITERATURE REVIEW

2.1 Introduction

Firms dealing in multiple currencies face a risk (an unanticipated gain/loss) on account of

sudden/unanticipated changes in exchange rates, quantified in terms of exposures. Exposure is defined as a contracted, projected or contingent cashflow whose magnitude is not certain at the moment and depends on the value of the foreign exchange rates. The process of identifying risks faced by the firm and implementing the process of protection from these risks by financial or operational hedging is defined as foreign exchange risk management (Diffu, 2011). This paper limits its scope to hedging only the foreign exchange risks faced by firms.

2.2 Theoretical Review

Scholars in the field of foreign exchange have come up with theories related foreign exchange risk. They argue that exchange rates, interest rates and inflation rates are linked to one another through a classical set of relationships these are;

2.2.1 Interest Rate Parity Theory

The Interest Rate Parity theory was developed by Keynes in 1930 and it applies the law of one price. Interest Rate Parity (IRP) theory is used to analyze the relationship between at the spot rate and a corresponding forward (future) rate of currencies. The theory states interest rate differentials between two different currencies will be reflected in the premium or discount for the forward exchange rate on the foreign currency if there is no arbitrage. It further states that size of the forward premium or discount on a foreign currency should be equal to the interest rate differentials between the countries in comparison.

Lei et al., 2007, the size of forward premium (or discount) should be equal to the interest rate differential between two countries of concern. When interest parity exists, covered interest arbitrage (a situation whereby by foreign exchange risk is covered) is not feasible because any interest rate advantage in the foreign country is offset by discount on the forward rate. Hence the act of covered interest rate arbitrage would generate a return that is no higher than what would be generated by a domestic investment.

Huang (2009), argues that IRP is a concept that any disparity in the interest rates of two countries is equalized by the movement in their currency exchange rates. The interest rate differential between two countries is equal to the differential between the forward exchange rate and the spot exchange rate. Interest rate parity plays an essential role in foreign exchange markets, connecting interest rates, spot exchange rates and foreign exchange rates.

In summary therefore this theory implies that equal returns will be generated in two different countries when the expected change in exchange rate is taken into account. As long as the forward represents an expectation regarding the future spot rate, it does not matter where an investor invests, the return will be the same both domestically and in a foreign country.

Therefore covered interest arbitrage has an advantage in that there is an incentive to invest in higher interest rate currency to the point where discount of that currency in the forward market is less than the interest differentials. If the discount on the forward market of the currency with the higher interest rate becomes larger than the interest rate differentials, than it pays to invest in the lower interest currency and take advantage of the excessive of forward premiums on this currency.

2.2.2 International Fisher Effect Theory

The relationship between the nominal interest rates and the expected inflation is of fundamental importance in financial markets. In his seminal book, Fisher (1930), establishes the foundation of the underlying relationship between the nominal interest rate and the purchasing power of money measured by the inflation rate. The response of the nominal interest rate to the inflation rate is known as the Fisher effect in the literature and it is of paramount importance pertinent to the efficiency of the financial markets and the performance of the monetary policy.

The theory is based on the present and future risk free nominal interest rates rather than pure inflation. It states that differences in interest rates in different markets can cause a flow of funds from markets with low interest rates to markets with high interest rates. This theory is to the effect that interest rate differential will only exist if the exchange rate is expected to change in such a way that the advantage of the higher interest rate is offset by the loss of the foreign exchange rate transactions. In an efficient market with no transaction costs, the interest rate differential should be approximately equal to the forward differential. When this holds, the forward rate is said to be at interest rate parity and equilibrium prevails in the money market. Interest parity ensures that the return on a hedged foreign investment will just equal the domestic interest rate on investments of identical risk which means the covered interest differential (Madura, 2007).

Despite its sound theoretical foundation, the full Fisher effect has not been strongly supported empirically. The estimated slope coefficients in regressions of nominal interest rates on different measures of expected inflation rates are significantly different than the theoretical value of unity. Bartram et al., (2005), found that real interest rates were negatively related to the expected inflation rates. It showed that the Fisher effect is similar for taxable and non-taxable interest rates in the US and the Fisher effect was found to usually be less than unity.

The international Fisher effect (IFE) suggests that currencies with high interest rates will have high expected inflation and therefore will be expected to depreciate. Therefore, investors based in the home country may not necessarily attempt to invest in interest bearing securities in foreign countries because the exchange rate effect could offset the interest rate advantage. The exchange rate effect is not expected to perfectly offset the interest rate advantage in every period. It could be less pronounced in some periods and more pronounced in other periods. But advocates of the IFE suggest that on average, investors that attempt to invest in interest bearing securities with high interest rates would not benefit because the best guess of the return after accounting for the exchange rate effect in any period would be equal to what they could earn domestically (Madura, 2007).

2.3 Conceptual Framework

A conceptual framework is an interconnected set of ideas (theories) about how a particular phenomenon functions or is related to its parts. The framework serves as the basis for understanding the causal or correlational patterns of interconnections across events, ideas, observations, concepts, knowledge, interpretations and other components of experience (Marilla, 2010).

The research is based on four independent variables; firm size, degree of leverage, firm liquidity and cost of hedging that influence the dependent variable decision to hedge foreign currency risk.
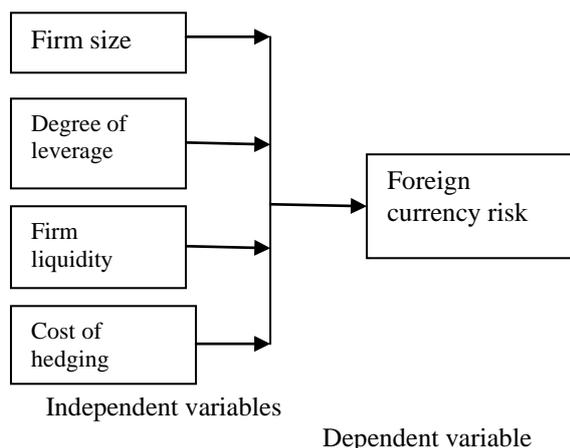

Independent variables

Dependent variable

Fig 2.1. Conceptual framework

2.4 Review of Determinants of Hedging Foreign Exchange Risk

2.4.1 Firm size

Although no clear definition of firm size can be found, it can be measured by the size of corporate book value or the amount of sales. It is believed there is a high correlation between firm size and cash flow which is the foundation for calculating market capitalization. The size of a company can have a positive effect on financial performance because larger firms can use that advantage to get some financial benefits in business relations. Large organizations can obtain cheap funding hence a lower rate of capital. This generates a higher market capitalization rate. The larger the organization, the more complex its operations will probably be and the more its exposure to threatening events (Hoyt et al., 2008).

Firm size acts as a proxy for the cost of hedging or economies of scale. Risk management involves fixed costs of setting up of computer systems and training/hiring of personnel in foreign exchange management. Moreover, large firms might be considered as more creditworthy counterparties for forward or swap transactions, thus further reducing their cost of hedging. The book value of assets is used as a measure of firm size.

The size of companies has a robust impact on hedging decision .There is no doubt that high expenses associates with the establishment of currency risk managing office to carry out research, to find counterparts, to performs transaction, and the installation of special software and salary of personnel. As the result, the large and medium-sized companies are likely to resort to using hedging, the small firms, on the other hands, can't afford to such cost (Sivakumar & Sarkar, 2009).

Most Kenyan banks consider credit/default risk to be the most critical of all the financial risks though empirical evidence shows that foreign exchange risk is the most critical risk for most firms. For most banks, foreign exchange risk management systems were governed by guidelines set by at head office. Most banks, regardless of their size, extensively utilized most of conventional hedging instruments. The size of a firm plays an important role in determining the kind of relationship the firm enjoys within and outside its operating environment. The larger a firm is, the greater the influence it has on its stakeholders. The growing influences of conglomerates and multinational corporations in today's global are indicative of what role size plays within the corporate environment. Punnose, (2008) shows positive relationship between firm size and profitability.

2.4.2 Degree of Leverage

Financial leverage is the degree to which a company uses fixed items, such as debt and preferred equity. A high degree of financial leverage implies high interest payments. As a result, earnings per share are negatively influenced by interest charges. The higher interest payments due to increased

financial leverage, the lower Earnings per Share, EPS. Financial risk is the risk to the shareholders caused by an increase in debt and preferred equities in the firm's capital structure. When a firm increases preferred equities and debt, interest charges increase, and EPS are reduced. As a result, risk to shareholder return increases. A firm should take into account its "optimal capital" structure when making financing decisions to make sure any increases in preferred equity and debt increase the value of the firm (Ignacio, 2010).

According to the risk management literature, firms with high leverage have greater incentive to engage in hedging because doing so reduces the probability, and thus the expected cost of financial distress. Highly levered firms avoid foreign debt as a means to hedge and use derivatives.

Another key determinant of the extent of derivative instruments involves the firm's leverage. The levels of leverage are positively correlated to the likelihood of utilizing hedging. The highly-leveraged firms are defined as the firms which are of high credit quality or shoulder a substantial amount of debt. Hence, hedging enables the highly leveraged firms to reduce the likelihood of falling into financial distress (Sivakumar & Sarkar, 2009).

Theoretical works (Khan et al., 2012 and Pandey, 2006) link financial leverage to performance of firms both positively and negatively. They recognize that the use of financial leverage is like a 'double - edged sword' because it can either magnify the firm's potential gains or losses. Records at the Nairobi Securities Exchange indicate that in the period 2006-2011, listed companies' debt levels oscillated between 22.64 % and 76.2 % (NSE Handbook, 2011). This implies that financial leverage of Kenya's listed firms greatly varies.

2.4.3 Firm Liquidity

A firm needs to maintain a minimum cash balance at all times for serving any accounts and notes payable during that period and as a contingency against unexpected demands on cash. Typically, a firm invests cash in low interest money market accounts to earn interest, because they provide the flexibility of easy cash withdrawal. In contrast, the firm could earn a higher rate of interest if it could invest its cash resources in long-term financial instruments where the firm cannot withdraw its money before the instruments mature without suffering a financial penalty (Prashant & Hendrickson, 2008).

Firms with highly liquid assets or high profitability have less incentive to engage in hedging because they are exposed to a lower probability of financial distress. Liquidity is measured by the quick ratio, i.e. quick assets divided by current liabilities).

Profitability is measured as EBIT divided by book assets.

Liquidity management is important in good times and it takes further importance in troubled times. The efficient management of working capital is important for a company's profitability and wellbeing. There may be no more financial discipline that is more important, more misunderstood, and more often overlooked than cash management (Abuzar, 2004).

There is a close relation between liquidity and firm's hedging decision. The firms with cash restraint tend to hedge against currency risk, the opposite trend is true to cash-rich firms. This is because the firms which are of capital shortage are likely to fail to cover its fixed expenses or pay for the debt claim and consequently financial distress occurs.

In other words, the high level of cash holdings indicates the firm's low possibility of confronting with financial distress and also insures its stable financial condition, so it's not necessary for cash-rich firms to employ hedging solution (Moles, 2002).

2.4.4 Cost of hedging

Given that the cost of fuel is unpredictable, it is prudent to hedge. However, as has been indicated by recent hedging risk exposure(s), it can be a costly undertaking. In 2009, KQ paid Kshs. 1.3bn as hedging cost. In 2010 and 2011, it was anticipated that the airline would pay about Kshs. 985m and Kshs. 1bn respectively in hedging cost. Also, unrealized losses on fuel derivatives could markedly reduce from 2010 as the price of fuel improves and as the company reviews its hedging policy, leading to a return to profitability in the medium term (Anene, 2013).

Hedging seems to be driven by economies of scale, reflecting the high fixed cost of establishing risk management programs. Hedging firms have greater growth opportunities, which is consistent with the argument that hedging helps mitigate the potential under-investment problem of firms. The shareholders maximization argues that firms hedge to reduce various costs involved with highly volatile cash flows. It helps to reduce the expected cost of financial distress as hedging may be motivated by tax incentives. When firms face a convex tax function, hedging should help to reduce expected taxes (Meulbroek, 2002).

Every time a contractor changes cash from one currency into another currency, it must bear a transaction cost. These costs would include the commission fee paid to foreign exchange dealers and bank charges for moving cash from one location to another. Different financial institutions may impose different amounts of transactions costs.

Hedging can be done through the derivatives market or through money markets (foreign debt). In

either case the cost of hedging should be the difference between value received from a hedged position and the value received if the firm did not hedge. In the presence of efficient markets, the cost of hedging in the forward market is the difference between the future spot rate and current forward rate plus any transactions cost associated with the forward contract. Similarly, the expected costs of hedging in the money market are the transactions cost plus the difference between the interest rate differential and the expected value of the difference between the current and future spot rates. In efficient markets, both types of hedging should produce similar results at the same costs, because interest rates and forward and spot exchange rates are determined simultaneously (Sivakumar & Sarkar, 2009).

Firms with greater variability of cash flows are more likely to find themselves in financial distress, ceteris paribus. The transaction costs of financial distress can induce firms to hedge financial price risks since the probability of incurring the costs is reduced. The savings in expected costs will vary directly with the probability of financial distress if the firm does not hedge and with the cost of financial distress. Most studies use the gearing ratio as an indicator of the likelihood of financial distress to measure expected costs of distress (Amrit, 2003).

Whether the cost of hedging far outweighs benefit of risk reduction also is the crucial determinant on the usage of derivative instrument. Hedging expenses normally comprise of variety of transaction costs such as commission charged by brokerage or service fee by dealers, information searching costs, subscription to reports and news channels. Before undertaking hedging contracts, the traders place the mentioned transaction costs into serious considerations and evaluate the difference between the benefit acquired from hedging position and expenses incurred from it.

2.5 Measurement of Foreign Currency Risk

Risk management techniques vary with the type of exposure (accounting or economic) and term of exposure. Accounting exposure, also called translation exposure, results from the need to restate foreign subsidiaries' financial statements into the parent's reporting currency and is the sensitivity of net income to the variation in the exchange rate between a foreign subsidiary and its parent.

Economic exposure is the extent to which a firm's market value, in any particular currency, is sensitive to unexpected changes in foreign currency. Currency fluctuations affect the value of the firm's operating cash flows, income statement, and competitive position, hence market share and stock price.

Currency fluctuations also affect a firm's balance sheet by changing the value of the firm's assets and liabilities, accounts payable, accounts receivables, inventory, loans in foreign currency, investments in foreign banks; this type of economic exposure is called balance-sheet exposure. Transaction Exposure is a form of short term economic exposure due to fixed price contracting in an atmosphere of exchange-rate volatility.

The most common definition of the measure of exchange-rate exposure is the sensitivity of the value of the firm, proxied by the firm's stock return, to an unanticipated change in an exchange rate. This is calculated by using the partial derivative function where the dependent variable is the firm's value and the independent variable is the exchange rate (Torcher, 2005).

A crucial aspect in a firm's exchange rate risk management decisions is the measurement of these risks. Measuring currency risk may prove difficult, at least with regards to translation and economic risk. At present, a widely used method is the value-at-risk (VaR) model. Broadly, value at risk is defined as the maximum loss for a given exposure over a given time horizon with z% confidence. The VaR methodology can be used to measure a variety of types of risk, helping firms in their risk management. However, the VaR does not define what happens to the exposure for the $(100 - z)$ % point of confidence, i.e., the worst case scenario. Since the VaR model does not define the maximum loss with 100 percent confidence, firms often set operational limits, such as nominal amounts or stop loss orders, in addition to VaR limits, to reach the highest possible coverage (Papaioannou & Gatzonas, 2002).

2.6 Empirical Review

Bodnar & Wong (2003), using data from the US, Canada and Japan also find industry differences in foreign exchange exposure and note that that the exposure direction and level are broadly consistent with economic theory. Exchange rates changes have important implications for financial decision-making and for the profitability of firms. One of the central motivations for the creation of the euro was to eliminate exchange rate risk to enable European firms to operate free from the uncertainties of changes in relative prices resulting from exchange rate movements.

Littlefield & Kneiding (2009), found an increase in equity volatility following the breakdown of the Bretton Woods agreement and increased exchange rate volatility but equity risks increased much more for firms with a multinational presence than it did for a control sample of domestic firms. They also found that, exchange rate exposure is asymmetric over different appreciation depreciation periods. These

asymmetries are more pronounced in the financial and non-cyclical sectors.

Using a sample of firms in the automotive industry in the US and Japan, Williamson (2001) found that foreign sales are a major determinant of exposure but there is considerable time variation in exchange rate exposure. However, Griffin & Stulz (2001) finds the effect of exchange rate shocks is minimal in explaining relative US industry performance and is even smaller in other countries that are more open to trade finding that industry effects are more significant than exchange rate effects. While there may be some differences in empirical findings, foreign exchange exposure most likely depends on the competitive structure in an industry. Additional firm characteristics have also been assessed as to their impact on foreign exchange exposure.

Another issue in developing foreign exchange exposure estimates has to do with portfolio size. Generally, there are two major choices in this regard. The first method is to estimate exposure on the firm level and the other method is to estimate the exposure for portfolio groupings, formed either by size, industry, level of international activity, or another criteria. Many studies assess both the firm level and portfolio level exposures. As indicated earlier, prior studies have focused on exposures of internationally involved or multinational firms. Using a large sample of firms from many different countries, Doidge & Williamson (2002), found that foreign exchange exposure is related to the level of foreign activity. They also find that large firms exhibit more foreign exchange exposure than smaller firms.

2.7 Research Summary

Financial theory suggests that risk management can smooth variability in firm value. The notion that risks are redistributed to those better equipped to handle them is a norm in capital markets. Risk is reduced by hedging which involves buying and selling derivatives and these can decrease the variance of the expected value of the firm (Bartram et al., 2009).

As discussed above risk management by use of hedges yields different results on the value of a company. Some studies show that it affects firm value while others show that it does not have a significant impact on firm value. Others studies found that managing risk using financial derivatives does affect firm value and even in this case it depends on the form of derivative used. In light of this, this research will seek to investigate the factors affecting the decision to hedge foreign currency risk

2.8 Critical Review

Arize, Osang & Slottje (2000), investigated the impact of real exchange rate volatility on export flows of eight Latin American countries. The results show that increases in fluctuations of the exchange rate exert a significant negative effect on export demand in both the short and long-run thereby decreasing export earnings. Examining the impact of exchange rate fluctuations on South African export flows, Todani & Munyama (2005), came to more or less the same conclusion with respect to the differential impact of foreign exchange rate fluctuations on export earnings of agricultural and non-agricultural exports.

Mbaya (2013), did a research to investigate effect of interest rates in stabilizing foreign exchange rate in Kenya economy. He concluded that interest rate and money supply have a significant impact on the exchange rate of USD, EURO and GBP. For a country to stabilize its foreign exchange rate, the interest rate and money supply should be checked. The government through CBK should come up with monetary policy that will have an impact on exchange rate thereby making government intervention significant in stabilizing the foreign exchange rate. The research was carried out when many western countries and the rest of the world were in recession or just from recession and soaring of oil prices, a further research should be carried out to period prior to recession and global soaring of oil and petrol prices. The study was limited to period of five years this is because data for earlier years were not available from relevant website and getting them proved costly. A much longer period will increase the accuracy of the findings.

Kidong'oi (2013), conducted a study was to analyze the foreign exchange risk management performance Techniques used by airline companies in Kenya. The study involved analyzing of specific performance techniques used to manage foreign exchange risk by airline companies in Kenya, this included leading and lagging, use of derivatives, payment netting, payment matching and invoicing. From the study, the researcher concludes that the variables; Invoicing and Currency clause, Leading and Lagging and Payment Matching were the main foreign Exchange risk performance techniques used by most airline companies as indicated by most respondents.

Boru (2011), did a study to determine the foreign exchange risk management practices by oil companies operating in Kenyan market. The study found that foreign exchange risk is the second most significant exposure to oil companies after fluctuation in global crude oil prices and therefore most of the companies find it as an important risk to manage. US Dollar is the currency to which all the oil companies are mostly exposed because importation costs are settled in this currency. The study noted that the internal hedging technique of

changing the currency of billing was the mostly used technique by the oil companies while use of forward contracts is most frequently used derivative. As a recommendation, oil companies should enhance their foreign exchange risk management practices by increasing the use of derivatives.

Kipchirchir (2011), studied the relationship between financial performance for multinational corporations in Kenya and exchange rates volatility. Kipchirchir found that there was a strong relationship between financial performance for multinational corporations and exchange rate volatility in Kenya. This was attributed to the difference between trading currency and financial reporting currency.

Wanjohi (2013), did a study on the effect of financial risk management on the financial performance of commercial banks in Kenya. The purpose of this study was to analyze the effect of financial risk management on the financial performance of commercial banks in Kenya. The study found out that majority of the Kenyan banks were practicing good financial risk management and as a result the financial risk management practices mentioned herein have a positive correlation to the financial performance of commercial banks in Kenya.

2.9 Research Gaps

Majority of the studies done have tended to focus on exchange risk management practices of multinational corporations. As such, few studies have been done locally which include: A survey of foreign exchange risk management practices by forex bureaus in Kenya (Ubindi, 2006); Management of foreign exchange risk exposure by foreign owned commercial banks in Kenya (Omagwa, 2005); and a survey of foreign exchange risk management practices adopted by microfinance institutions in Kenya (Njuge, 2012). Little has been done with respect to factors affecting the decision to hedge foreign currency risk by firms involved in international trade (import and export). Thus the present study will report the findings on the factors affecting the decision to hedge foreign currency risk among Kenyan firms involved in international trade.

METHODOLOGY

3.1 Introduction

The chapter presents the research design, population of the study, sample size, data sources and data analysis.

3.2 Research Design

The descriptive research design was used in this research. This design generally describes the characteristics of a particular situation, event or case. It suggests causal linkages between variables by observing existing phenomena and then searching back through available data in order to try to identify plausible causal relationships. This research design is the best in explaining if two variables are related because its main concern is to determine cause and effect relationship and to understand which variable is dependent and which is independent (Burns & Grove, 2003).

3.3 Target Population

The target population refers to the entire group of individuals or objects from which the study seeks to generalize its findings (Cooper & Schindler, 2008). The target population was drawn from the 42 tea purchasing and exporting companies in Mombasa for the past 5 years starting from year 2010 to year 2015 (TBEA, 2016). The study period is selected since it is the time when there was so much volatility in the Kenyan currency and was characterized by rampant shifts in foreign exchange rates due to political and economic factors. Mugenda & Mugenda (2003) explains that the target population should have some observable characteristics, to which the researcher intends to generalize the results of the study. The target population was then stratified into finance department and non-finance departments with the sample only being picked from the finance departments in these organizations.

3.4 Sampling

Sampling is selecting a given number of subjects from a defined population as representative of that population. A random sample of 10 companies was picked for the purpose of this research. The study then applied purposive sampling to select 3 senior employees in the finance department to make sample of 3 respondents from each organization and a sample of 30 respondents. Statistically, in order for generalization to take place, a sample of at least 30 must exist (Cooper & Schindler, 2008).

3.5 Data Collection

This study used primary data collected using questionnaires. The use of questionnaires is considered to obtain objective data since the participants will not be manipulated in any way by the researcher (Hox & Boeije, 2005). The questionnaire included closed-end questions concerning the factors that influence the tea exporters to hedge against foreign currency exposure. The funnel approach was used to design

the questionnaire in which the most general questions were asked first in order to stimulate the participants to think about the factors that influence their decision to hedge against foreign exchange risk and to focus their attention on the topic.

3.6   Pilot Study

The researcher sees the goal of a pilot study in general as related to the aim of the research project of which it forms part. The general goal of a pilot study is to provide information, which can contribute to the success of the research project as a whole. The latter is supported by the following quotes concerning the value and goal of pilot studies: "to see if the beast will fly", "reassessment without tears" and "Do not take the risk. Pilot test first." (Simon, 2011). The general goal thus seems to safe some time, effort and money, which can be lost if a major research study fails because of unforeseen attributes. The goal is thus to test the study on small scale first to sort out all the possible problems that might lead to failure of the research procedure. It might minimize the risk of failure.

The piloting of data collection forms or questionnaires (Carfoot et al., 2002) is particularly important, especially when the target group has to self-complete the form or when several different assessors will be collecting data. This will ensure the form is comprehensible and appropriate, and that questions are well defined, clearly understood and presented in a consistent manner.

3.6.1 Validity

Validity is tested by representativeness of the target population and by consensual judgments' by experts (Mugenda & Mugenda, 2003). During the pilot study, the researcher was focused on the objective of the study and keen in determining any particular parameter which could be included in the actual administration. The researcher ensured questionnaire content validity by asking corporate finance experts in foreign exchange risk mitigation to consider the questions and statements against the board room decisions that they make on a day-to-day basis. In ensuring content validity, the questionnaire included the suggestions that these corporate finance experts asked themselves in a bid to mitigate foreign exchange exposure risk.

3.6.2 Reliability

Mugenda & Mugenda (2003) define reliability as a measure of the degree to which a research instruments yield the same results on repeated trials. Reliability in research is caused by random error, which is the deviation from a true measurement. To

test for reliability the researcher issued the same questionnaires through the test-retest technique to check if he would get similar results if they repeated their questionnaire soon afterwards with the same respondents.

3.7   Data Analysis

According to Marshall & Rossman (1999) data analysis is the process of bringing order, structure and interpretation to the mass data collected. Data collected from the survey was sorted, edited and corded to have the required quality and accuracy. It was then entered into SPSS for generation of frequency tables, inferential statistics were applied and a multiple regression model was employed.

In order to determine the relationship between the dependent and independent variables a regression method was used. In addition descriptive data analysis was used for descriptive data obtained from questionnaires. Generally, descriptive statistics from SPSS gave numerical information regarding the extent by which the independent variables under review determined a firm's hedging decision.

Given the arguments in theoretical framework and literature review, the estimating model for the study was therefore stated as:

$Y = a + B1X1 + B2X2 + B3X3 + B4X4 + e$

Where;

Y = Decision to hedge foreign currency

$B1 – B4$ = Coefficients

$X1$ = Firm size

$X2$ = Degree of leverage

$X3$ = Firm liquidity

$X4$ = Cost of hedging

e = Error term

The regression function shown above was used to investigate the factors affecting the decision to hedge foreign currency risk. The decision to hedge foreign currency risk was the dependent variable as a function of the other independent variables of firm size, degree of firm leverage, firm liquidity and the cost of hedging.

The coefficient of determination (R^2) was used to determine the strength at which the variation in the independent variables explains the variation in the dependent variable.

4.1   Introduction

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. Finally a correlation and regression analysis is performed on the results.

4.2   Response Rate

The study used primary data that was collected through structured questionnaires. Thirty questionnaires were distributed to finance department staffs of 10 tea exporting companies in Mombasa. Out of the 30 questionnaires distributed, 30 were returned to the researcher. This represents a response rate of 100% which was sufficient for making generalization of the whole population. According to Mugenda (2003) response rate above 50% is adequate enough to accomplish study objectives.

Table 4.1 Questionnaire Return Rate

	Frequency	Percentage
Questionnaires returned	30	100%
Questionnaires not returned	0	0%
	30	**100%**

4.3 General Information

This section of the questionnaire sought to establish the tea exporting period of the firm. It is classified in a range of less than two years, 2-5 years, 6-10 years and over 10 years.

Table 4.2 Statistics showing length in years

	Frequency	Percent	Cumulative Percent
2-5 years	3	10.0	10.0
6-10 years	9	30.0	40.0
Over 10 years	18	60.0	100.0
Total	30	100.0	

The results in Table 4.2 on the length of firms exporting tea researched on was that 40% have been

exporting tea between for less than 10 years while the remaining 60% of the firms had been exporting tea for over 10 years. The results mean that majority of the firms had been in operation long enough and this can be taken to imply that the firms have experienced the dynamic currency fluctuation in Kenya. In addition, with the majority of the firms having been in operation long enough and dealing with international currencies, there will be high chance of the firms having identified various factors that can influence their decisions concerning the decision to hedge foreign currency risk.

4.4 Descriptive Statistics

The descriptive analysis below shows the average, and standard deviation of the different variables of interest in the study. It also presents the percentile values of the variables which help in getting a picture about the maximum and minimum values a variable can achieve.

On the question of whether the companies surveyed had established a documented foreign currency risk management policy, 100% of the firms answered in affirmative and this means that they have in place a foreign currency risk management policy/plan in place to effectively manage foreign currency exposure. As to whether the firms under survey used any derivatives in hedging foreign currency risk, 100% of these firms answered in affirmative with the main derivative being the use of forward contracts. The maturity period of these forward contracts were 13.3% 91-180 days and 86.7% over one year as displayed in table 4.3.

Table 4.3 Statistics showing maturity period

	Frequency	Percent	Cumulative Percent
91-180 days	4	13.3	13.3
Beyond one year	26	86.7	100.0
Total	**30**	**100.0**	

4.5 Factors Affecting the Decision to Hedge

The respondents were requested to indicate the extent at which they agree or disagree with a set of statements in a five point Likert scale. The range was "strongly disagree (1)" to "strongly agree (5)". The

scores of "strongly disagree" and "disagree" have been taken to represent a variable which had mean score of 0 to 2 on the continuous Likert scale; (0≤ D <2.4). The scores of "neutral" have been taken to represent a variable with a mean score of 2.5 to 3.4 on the continuous likert scale; (2.5 ≤ N <3.4) and the score of both "agree" and "strongly agree" 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≤ S.A. <5.0). A standard deviation of >0.8 implies a significant difference on the impact of the variable among respondents.

4.5.1 Firm Size

As indicated in the table below, the size of the firm has a great influence on the decision to hedge foreign currency hedging. According to the research findings, the major determinant of firm size when making the decision to hedge against foreign currency exchange risk is the volume of sales that the firm makes that are entirely denominated in foreign currency. This had a high mean of 4.8667 with a minimal standard deviation of 0.34575 from the response given by firms under survey. Although these firms participate in foreign and international markets, they are not fully aware of currency volatility therefore even though they may have a large staff force there is little or no dedication of personnel to study currency trends in the international markets to enable them establish sound currency risk exposure policies.

Therefore, in terms of firm size, huge volumes of sales in the international markets carry a huge weight in making a decision whether to hedge or not as compared to availability of a large staff force in a firm. A firm with a large staff size does not necessarily mean that it is hedging against foreign currency risk.

Table 4.4 Statistics showing firm size

	Mean	Std. Deviation
We have a large staff force therefore easily study and control currency risks due to existence of dedicated personnel on currency risk exposure.	1.9333	1.46059
We make huge volumes of sales denominated in foreign currency hence need to hedge	4.8667	.34575

against currency fluctuation risk.		
We participate in international markets and are fully aware of currency volatility therefore resort to hedging to reduce risk.	3.9667	1.09807

4.5.2 Degree of Leverage

As to whether the exporting firms enter into forward contracts with suppliers of materials and customers so as to avoid debt and ensure that tea bought at the auction is actually sold to ensure an immediate source of finance, the respondents were neutral (mean of 3.233). The respondents generally disagreed with having to take a loan in the foreign currency of outstanding debtors nor sing forward contracts as a source of extra income generating investments due to availability of speculative gains (mean of 2.6 and 2.2 respectively).

From the results, it was evident that the degree of leverage by the firm in terms of borrowed capital or outstanding receivables or payables was not a strong factor that will determine whether to hedge foreign currency risk in Kenya. This implies that outstanding receivables or payables owing by a firm is simply used in the working capital management of the firm. This will help in the operational section of the firm and not the hedging decision by the firm.

Table 4.5 Statistics showing degree of leverage

	Mean	Std. Deviation
We enter into forward contracts with suppliers of materials and customers so as to avoid debt and ensure tea bought at the auction is actually sold therefore an immediate source of finance	3.2333	1.30472

When we have outstanding debtors in a foreign currency, we take a loan in that foreign currency and settle it using proceeds received from those debtors	2.6000	1.52225
We use forward contracts as an extra income generating investments due to speculation gains as a result of differences existing between the spot and forward rates.	2.2000	1.32353

4.5.3 Firm Liquidity

When asked to rate the statement whether they use forward contracts as a way to time their payments of foreign/local denominated payables therefore settle them at a definite exchange rate, respondents agreed with a mean of 4.4667 and a standard deviation of 0.89955 from the mean. This means that majority of the firms' time their payables by use of forward contracts and use the proceeds from maturity of these contracts to pay-off their outstanding creditors.

Respondents were neutral on whether they limit their foreign exchange risk by delaying payments of some purchases and if they minimize foreign exchange risk by making advance payments of purchases and expenses.

Table 4.6 Statistics showing firm liquidity

	Mean	Std. Deviation
We use forward contracts as a way to time our payment of both local/foreign denominated payables therefore settlement is definite in terms of exchange rate	4.4667	.89955
We limit foreign exchange risk by delaying payments of some purchases and expenses in	2.5333	1.38298

foreign currency		
We minimize foreign exchange risk by making advance payments of purchases and expenses (prepayments).	2.4667	1.45586

4.5.4 Cost of Hedging

The major component affecting the decision to hedge was found out to be the cost of hedging by the firms. The research found out that firms care about the hedging cost component and will always negotiate for lower agency commissions from banks and other agencies while hedging.

Table 4.7 Statistics showing cost of hedging

	Mean	Std. Deviation
We always negotiate for lower agency commissions from banks and other agencies while hedging.	4.8667	.34575
We only hedge if and only if the commissions charged are low and are assured of making a forex gain out of the transaction.	2.7333	1.55216
We do not care about the cost of hedging as we consider forward contracts a sure way of managing uncertainties in relation to currency fluctuations.	1.1000	.30513

4.5.5 Foreign Currency Risk

With a mean of 3.5333, respondents agreed to the statement that they always monitor their exposure to foreign currency risk by keeping a tracked record of foreign denominated receivables and payables.

Respondents also agreed that they assess the foreign exchange gains and losses and how it affected their firm in terms of profitability.

Table 4.8 Showing statistics on foreign currency risk

	Mean	Std. Deviation
We always monitor our exposure to foreign currency risk by keeping a tracked record of our foreign denominated receivables and payables	3.5333	1.71672
We always assess the foreign exchange gains or losses in our books of accounts and analyze the impact in determining the value of our firm i.e. in terms of profitability.	4.0000	.74278

4.6   Correlation Analysis

Correlations		Firm size	Degree of leverage	Firm liquidity	Cost of hedging
Firm size	Pearson Correlation	1			
Degree of leverage	Pearson Correlation	-.158**	1		
Firm liquidity	Pearson Correlation	.207**	.345**	1	
Cost of hedging	Pearson Correlation	.712**	-.082**	.207**	1

In order to establish a relationship between the dependent variable and the independent variables, a correlation analysis was performed. This was carried out in two phases in terms of the coefficient of determination (R2) and the Pearson's correlation.

4.6.1 Coefficient of determination (R2)

A coefficient of determination was calculated from the research findings. It reveals the correlation coefficients among the variables used to test their significance in determining hedging by firms. This matrix (table 4.8) provides a view of how much the independent variable can explain or influence the dependent variable (hedging).

In table 4.9 below the coefficient of determination R^2 is 0.659 which shows that 65.9% of the variation in hedging variability is explained by firm size, degree of leverage, firm liquidity and cost of hedging. The value of Adjusted R^2 is 0.605 which shows that 60.5% of the variation in hedging variability that is the dependent variable is likely to be explained by the independent variables that are firm size, degree of leverage, firm liquidity and cost of hedging.

Table 4.9 Coefficient of determination (R2)

R	R Square	Adjusted R Square	Std. Error of the Estimate
.812[a]	.659	.605	.46709

a. Predictors: (Constant), Firm size, Degree of Leverage, Firm Liquidity, Cost of Hedging

4.6.2 Pearson's Correlation Coefficient

The correlation between two variables reflects the degree to which the variables are related. Pearson's correlation reflects the degree of linear relationship between two variables. It ranges from +1 to -1. A correlation of +1 means that there is a perfect positive linear relationship between variables. According to the findings, it was clear that there was a positive correlation between the independent variables, firm size, firm liquidity and cost of hedging while there exists a negative correlation with the degree of leverage in determination of hedging decision by firms.

Table 4.10 Pearson's correlation coefficients Correlations

**correlation is significant at the 0.01 level (2 – tailed)

4.7 Regression Analysis

In order to estimate the relationship that exists between the variables under review, the researcher computed and constructed a regression analysis from the regression matrix in table (4.11) below. The established multiple linear regression equation becomes:

$$Y = 3.31 - 0.584X_1 + 0.276X_2 - 0.651X_3 + 1.14X_4$$

Table 4.11 Results of General Least Square

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	3.310	1.379		2.400	.024
	Firm size	-.584	.365	-.272	-1.600	.122
	Degree of leverage	.276	.073	.486	3.780	.001
	Firm liquidity	-.651	.107	-.789	-6.065	.000
	Cost of hedging	1.140	.358	.530	3.180	.004

The coefficient of intercept C has a value (3.31) though it is insignificant at 95% confidence level that was applied in the analysis. The coefficient of firm size (X1) is -0.584, degree of leverage is 0.276 (X2), firm liquidity (X3) is -0.651 while the cost of hedging (X4) is 1.14. These coefficients are significant at 5% significance level. Of all the independent variables, the cost of hedging (X4) was found to be one that significantly affects the decision to hedge (coefficient of 1.14). This means that a unit increase in the cost of hedging will increase the decision of the firm to hedge or not by 1.14 units.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the key findings of the study as well as the conclusions, limitations of the study, and recommendations for further research.

5.2 Summary of the Findings

The objective of this project was to establish the determinants of hedging foreign currency risk in Kenya: a survey of tea exporting companies in Mombasa County. The study was conducted on the finance department of the targeted sample firms by use of questionnaires that were designed for the respondents to rate the statements in relation to their firms on a likert scale of 1-5 where 1 was "strongly disagree" while 5 was "strongly agree". The primary data in this analysis was collected from the targeted 10 firms in Mombasa. The population of study was tea exporting companies operating in Mombasa, Kenya. From the targeted population of 30 firms, the researcher successfully got data from 30 of the firms representing 100% response rate. All these firms had a documented foreign currency risk management plan and used foreign currency derivatives majorly forward covers as a major hedging tool. Although some of the firms (13.3%) had a maturity period of these forward contracts set to 91 – 180 days, majority (86.7%) of them were hedging beyond one year.

5.2.1 Firm size

The survey revealed that large firms making huge volumes of sales denominated in foreign currency need to hedge against currency fluctuation risk. This had an overall mean of 4.8667 which lies on the strongly agree band. The study shows that firms lay a huge emphasis on how their revenue is distributed in terms of sales and therefore have to hedge especially when they are executed in foreign currencies. Firm

size in terms of employee numbers/staff size does not really have an impact on the decision to hedge since most of them are either oblivious or not aware of the currency exposure their firm is while participating in foreign markets.

5.2.2 Degree of leverage

The study revealed that firms enter into forward contracts with suppliers of materials and customers to ensure that whatever they produce there is a ready market for it ensuring a continuous stream of finance without unnecessarily tying finance to slow moving or dead stocks. Further, the results revealed that firms do not take loans in the currency of their outstanding debtors in order to finance their current operations and repay it off with their debtor proceeds upon settlement.

5.2.3 Firm liquidity

As to whether firm liquidity was a determinant of hedging foreign currency by firms, the research sought to discover how firms used firm liquidity as a factor to hedge against foreign currency risk. When asked whether they use forward contracts as a way to time their payment of both local/foreign denominated payables therefore settlement is definite in terms of exchange rate the researcher got a response mean rate of 4.4667 which ranks as strongly agree by the likert scale rate. However when asked whether they limit foreign exchange risk by delaying payments of some purchases and expenses in foreign currency; and make advance payments of purchases and expenses (prepayments) they were neutral.

5.2.4 Cost of hedging

When asked whether firms do not care about the cost of hedging the respondents strongly disagreed with a response mean rate of 1.1000 indicating that the cost of hedging is a major factor. Further, the questionnaire asked whether firms always negotiate for lower agency commissions from banks and other agencies while hedging. The response rate had a mean score of 4.8667 therefore strongly agreeing that they always negotiated for lower agency commissions with the sole aim of lowering their overall cost of hedging.

5.3 Conclusion

The findings of the study were that firm size, firm liquidity and the cost of hedging are the major factors to consider while hedging against foreign currency by tea exporting firms in Kenya. Although the degree of leverage may be arguably be one of the factors, it doesn't strongly present itself as an enabler

or a hindrance to hedging against currency risks. Tea exporting firms have a documented foreign currency risk management policy and use derivatives for hedging. Forward contracts are highly used for hedging while futures, swaps and options are not used due to lack of a well-developed and established market for such derivatives.

Firm size also contributes to the overall decision on whether to hedge or not. Firms that consider themselves large by virtue of making huge volumes of sales denominated in foreign currency will definitely hedge against currency fluctuation risk. Even so, these firms may hedge by virtue of participating in international markets but most of the respondents were not fully aware of the existing currency volatility in the export business. It was found that this may be attributed to the fact that these firms have a highly engaged staff force that they cannot manage to spare any manpower to study world currencies in the international markets that they participate in so as to identify any potential risk exposures that the firm may be exposed to.

Cost of hedging a currency risk exposure to a firm is a major consideration to be put in place first before carrying a hedge be it in the form of a forward contract or an option. Therefore firms will always try to negotiate for lower agency commissions from banks and any other institutions who are party to this kind of arrangement. Renegotiating these commissions is purely to ensure that these hedging costs and other associated costs to the hedge are minimal. The main concern is not to make any forex gain out of such a transaction but to ensure little or no exposure.

Although firm liquidity plays a major role in other firms (non tea exporting firms), it is not a major variable in determination of hedging in tea exporting firms. These firms do not take loans in the currency of their outstanding debtors with the aim of settling the same from proceeds received from the debtors.

5.4 Recommendations

From the findings of this research, the study recommends that tea exporting firms should explore avenues to enhance capacities within firms for managing foreign currency risk exposure. They should explore the route of continued education for those in workplaces through short term training that should be very practical oriented, this could involve professional organizations for finance specialists, bankers, accountants and consultants. Such training should ideally be out of site because of the need to meet participants from diverse businesses and orientations for training and assessment to avoid internal interruptions. These trainings should not only cover foreign currency risk alone but rather could be preceded by introductory contents on the

import-export trade and the practical market challenges facing the industries.

The Central Bank of Kenya should move at a greater speed to roll out the use of derivatives and also provide necessary training and guidance to non-financial firms on the use of these instruments. Despite the fact that derivatives use is still evolving in Kenya, managers should endeavor to train locally or internationally on these derivatives, so that they can use them knowledgably to mitigate foreign exchange risk. Derivative instruments should be used with caution so that they do not expose the company to greater losses.

It is important for firms to indeed acknowledge that they are faced with a risk that may affect the value of the firm, the expected cash flows of the firm and the profitability too. Management of the currency risk is as important to the firm as any other kind of management. The transaction and economic exposure is especially very important since it affects the cash flows of the firm and thus requires proper hedging.

There should be internal and operational strategies embraced by the firm to mitigate the losses that could arise due to foreign exchange exposure. The strategic plans of the firm of the firm should be such that the exchange risk is mitigated in the long run. The risk department should consider the currency risk as an important part of financials risk that must be managed. The risk managers however must realize that currency movements are unpredictable thus actions taken are just meant to minimize risks.

5.5 Recommendations for Further Studies

The study sought to establish the determinants of hedging foreign currency risk companies in Kenya. The study recommends that a study should be done on the effect of inflation on the foreign currency exchange rate.

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