AN ASSESSMENT OF FOREIGN EXCHANGE RISK MANAGEMENT PROCESS:

THE CASE OF DAVIS AND SHIRTLIFF COMPANY LIMITED OF ARUSHA TANZANIA

By

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A Thesis Submitted in Partial Fulfilment of the Requirements for Award of the Degree of Master of Science in Accounting and Finance of Mzumbe University

2012
DECLARATION

I Paul, Edward do hereby declare to the faculty of commerce at Mzumbe University of Tanzania, that this thesis is my own work and has not been submitted for any degree or examination in any other University, and that all sources I have used or quoted have been indicated and acknowledged by complete references.

Signature ................................................................

Date ...............................................................


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<td>Bank of Tanzania</td>
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<td>EDC</td>
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<td>IMF</td>
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ABSTRACT

The study was conducted in Arusha Tanzania between August 2011 and May 2012. The main objective was to assess foreign exchange risk management process for Davis & Shirtliff Company Limited. Data were collected from a respondent among the company officials and from the company records.

The results show that fluctuations in exchange rates have huge effect on company’s cash flow when doing business operations dominated by foreign currency. To that effect, the company manages its foreign exchange risk through use of invoicing currency as a hedging technique to curb the risk arising from foreign exchange rate fluctuations.

Furthermore the study revealed that although there are different tools and techniques such as exposure netting, cash pooling, lead and lagging, the company use invoicing currency as the sole technique for managing foreign exchange risk. It was also revealed that, the management of foreign exchange risk of the company is done internally by officials responsible for monitoring all the risks in a particular currency during trading.

Findings from this study are expected to broaden the existing knowledge on management of foreign exchange risk by Davis & Shirtliff Company Limited as well as other similar companies while employing invoicing currency as the only technique. This will provide quick ideas on the use of such technique and where possible establish the need to use other techniques and tools at the same time.

The study recommends some aspects that need to be looked into: First, the need for the company to study other hedging techniques that can be helpful to it in managing foreign exchange exposure in all directions of trading. Second, the need to outsource to the financial institutions such as a bank, company’s foreign exchange risk management task since the bank has the fast track information on foreign currency trading.
CHAPTER ONE
THEORETICAL BACKGROUND

1.1 Introduction
This chapter presents the background of the study. The chapter is divided into nine sections.

1.2 Background of the study
Most Companies that engage in international transactions are vulnerable to foreign exchange risk. This vulnerability occurs especially when debts or expected revenues are quoted in a foreign currency other than in the reporting currency of the exporting Company (Papaioannou, 2006). Davis and Shirtliff Company is one of the companies in Tanzania that engage in international transactions. This company like any other companies of this nature is exposed to foreign exchange risk that has potential losses of revenue.

Foreign exchange risk management is an integral part in every firm’s decisions about foreign currency exposure. Also, it can be referred to as the effects that do arise due to unanticipated exchange rate changes brought on the value of the firm (Allayannis, et al, 2001). The risk does arise after changes that might have taken place in the exchange rates, which will imply that the payments and/or receipts of a company will be subjected to some changes to a particular extent.

To avoid or minimize possible losses due to adverse change in exchange rates, companies that have transactions denominated in a foreign currencies have a tendency to manage the foreign exchange risks.

In order to manage the risk from exchange rate fluctuation, companies have to set a policy that will govern their hedging activities. According to Popov (2003), the policy should define to the management how to identify, measure and manage the risk.
Various actions are undertaken to achieve the identification of risk. These include physical inspection, risk and flow chart analysis, questionnaire usage, financial statement analysis, use of check list, interaction with other departments and historical data collection. Once a risk is identified, it should be measured in order to assess its importance. The management needs to know the measurement strategy in order to understand the type of risk the company is involved in or exposed to.

Management of the identified risk is the final part the policy of a company has to establish. The policy should specify the means of managing the identified exchange rate risk so as to control the effects that might occur if it materializes. Kidwell et al, (2008) suggest that companies should choose a technique or tools in managing the foreign exchange risk that will suite its operations in the economy it serves.

1.3 Overview of Davis and Shirtliff Company Limited

Davis & Shirtliff Group is the leading supplier of water and solar related equipments in the Eastern Africa region. The business activities of the company are focused on four principal product sectors: water pumps, water treatment, swimming pools and solar products.

The Group’s vision is based on the inspiration of becoming the world class organisation comparable in every way to the best international standards by demonstrating exceptional levels of corporate performance, professionalism and integrity. It wants to set an example that an indigenous African organisation can internationally compete at the highest level in its selected field of activity.

The mission for Davis & Shirtliff Group is to concentrate on and dominate on its selected market segments through the dedicated pursuit of excellence in all aspects of its activities. The principal corporate objectives are to provide an exceptional level of service to customers, close and mutually beneficial partnerships with suppliers, rewarding and satisfying careers for employees and growth of the company asset
base whilst at the same time making a worthwhile contribution to the region and its environment.

The company mainly uses Euro as its major foreign currency for purchasing products from foreign countries. This usage of foreign currency on procurement and sale of the products exposes the company’s financial cash flows to the exchange rate exposure due to exchange rate unpredictability. Hedging by a company exposed to such a situation becomes vital since the presence of exchange rate fluctuations may have large effects on the company’s revenue and profitability.

For Davis and Shirtliff the management of foreign exchange risk arises from the situation that, Euro as their major trading currency and dominates the cash flows of the company than other foreign currencies which implies that fluctuation of Euro to Tanzanian shilling have bring a huge financial impact to the company.

Managing of the foreign exchange risk by the company is of great value since most of the prices of the company’s products are fixed with the reflection on how the Tanzania Shillings to Euro trade at either transaction date or contract date. According to Prindll (1976), the most important objectives of hedging to a company are to minimize foreign exchange losses, reduce the volatility of cash flow, protect earnings fluctuations and hedge risk in view of foreign exchange risk fluctuations.

1.4 Statement of the problem

Davis and Shirtliff Company limited was founded as a partnership between EC “Eddie” Davis and FR “Dick” Shirtliff. It was registered under the Companies Act of Tanzania CAP 212 in the year 1998 with the purpose of trading water and solar related equipments from various supplies in and out of Africa at large. It operates in three regions of Tanzania being Dar es Salaam, Mwanza and Arusha being its head quarters.

Companies engaging in foreign transactions are faced with foreign exchange risks that may have significant impact to them in the situation of unpredictable exchange rate fluctuations. To avoid losses that may arise due to unfavourable change in
exchange rates, companies are obliged to protect themselves using different available methods that can be used. Such methods are leading or lagging the payments, invoicing currency, exposure netting, cash pooling, forward contracts and futures. Although there are several methods, there is no common method for all companies. Thus, companies may use different methods in handling the foreign exchange risk it faces. (Giddy and Dufey, 2008)

Davis and Shirliff Company is one of the companies that trade internationally and some of its transactions are denominated in foreign currencies. Like any other companies operating their trade activities in multinational dimensions, the company is also exposed to foreign exchange risk. However, the extent of exposure to risk and its effect on the company’s revenue and profitability is not apparent. This situation raises the interest to explore the extent to which the company is exposed to risk and how such foreign exchange risk affects the company’s revenue and profitability.

1.5 **Objectives of the study**

The objectives of this study are categorized into two parts: thus general objective and specific objectives. In the subsections that follow the detailed explanations of each type of objective is provided.

1.5.1 **General Objective**

The main objective of the study is to determine the extent to which Davis and Shirliff Company Limited is exposed to foreign exchange risk and the strategies used to protect itself against the adverse effect of such risk.

1.5.2 **Specific Objectives**

The specific objectives of the study are as follows:

(i) To establish the extent to which Davis and Shirliff Company Limited is exposed to foreign exchange risk.

(ii) To determine the effect of foreign exchange risk on the company revenues and profitability.
(iii) To find out how Davis and Shirtliff Company Limited manages foreign exchange risk.
(iv) To ascertain the effectiveness of risk management method used by Davis and Shirtliff Company Limited.

1.6 Research Questions
(i) To what extent is Davis and Shirtliff Company Limited exposed to foreign exchange risk?
(ii) What are the effect(s) of foreign exchange risk on the company revenues and profitability?
(iii) How is foreign exchange risk managed at Davis and Shirtliff Company Limited?
(iv) Is the risk management method used by Davis and Shirtliff Company Limited effective?

1.7 Significance of the study
This study is important in that it opens avenues for studies on foreign exchange risk management by companies similar to the Davis and Shirtliff Company Limited in Arusha.

Researching on the company has the purpose of assessing the management of foreign exchange rate risk intending to help the company in strengthening its efforts on the management of foreign exchange risk towards its effects on company’s operations. The study intends to provide information to Davis and Shirtliff Company Limited in enabling it to determine the effectiveness of its management of foreign exchange risk. It will also assist company decision makers upon deciding further hedging alternatives in protecting financial status of their company. Lastly through this study, Davis and Shirtliff Company Limited and the like will know the real outcome of the application on the chosen method on managing foreign exchange risk.
1.8 Limitation of the study
The study was conducted at Davis and Shirtliff Company Limited in Arusha Tanzania. Hence a single company was selected which limits external validity of the findings. Another short coming of this study is that large part of the information was based on the secondary data. Primary data was used to give more insights on the areas that could not be explained by the secondary data.

1.9 Organization of the study
Section two covers the background of the study. In section three covers the overview of the company under the study. The statement of the problem is addressed in section four. The objectives of the study are presented in section five. Thereafter in section six research questions are presented. The significance of the study is presented in section seven. Then section eight of this chapter presents the limitations of this study and section nine describes the organization of the study.
CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction
This chapter reviews different issues, theories, problems and researches done in the area of foreign exchange risk management with the objective of adding knowledge to familiarize the researcher with any relevant information leading to the coverage on foreign exchange risk management under the study.

2.2 Theoretical Literature Review
2.2.1 The concept of Foreign exchange risks
Each company that engages in international trading is exposed to foreign exchange risk. In this facet, the companies are said to be exposed to exchange risk because foreign revenues and expenses are generally denominated by foreign currency. Foreign exchange risk is the exposure of a company, an organization or an institution to the potential impact of movements in foreign exchange rates. The risk is that adverse fluctuations in exchange rates may result in a loss or losses of expected receipts or payments a company would have been exposed to. (BoJ, 2005)

Foreign exchange risk for a business can arise from a number of sources. First it may arise when a company imports or exports goods and the transaction is denominated in a foreign currency. Second exposure may occur when other costs, such as capital expenditure, are denominated in foreign currency. It may also occur when the business has offshore assets such as operations or subsidiaries that are valued in a foreign currency, or foreign currency deposits. Having assets or liabilities with net payment streams denominated in a foreign currency is also the source of foreign exchange risk.

A company that engages in international trading is exposed to foreign exchange risk since its foreign revenues and costs are generally denominated in one or different types of foreign currencies depending on the transactions the company is making. Revenues and costs incurred in a foreign currency are exposed to exchange rate risk.
Often firms have to pay in foreign currency for imported raw materials and receive foreign currency for exported finished goods. This problem becomes more complicated if the firm’s revenue and cost exposures are in different currencies. For companies located in developing economies such as Davis and Shirtliff, their costs will be in local currency being their transactional currency, where their revenues have to be determined depending on how the foreign exchange rate to local currency is.

Generally, each investment in a foreign country that generates cash inflows or outflows denominated in a foreign currency is exposed to a foreign exchange risk. Such cash flows can be revenues from foreign operations, dividends or royalties coming from foreign subsidiaries and expenses paid in a foreign country.

Though it is commonly agreed that firms having transactions denominated in foreign currency are exposed to exchange rate risks, in some occasions a firm without any foreign assets or liabilities or without any international trade can also be exposed to currency risk. Exchange rate unpredictability can affect firm’s competitive position in its home market and as a consequence its profitability. For example, a cheaper product made by cheaper cost of production in home country, may be exported at low costs. In this case, competition in the country of importation will be high since local markets will be expensive.

Apart from the engagement of the firm in international trade other financial activities such as foreign currency borrowing or lending and guarantees, stand for another kind of source of foreign exchange risk. Allayannis and Ofek (2001) found that, exchange rate exposure is positively and significantly related to the level of foreign debt that the firm has. At the same time, foreign debt can be another way to hedge foreign currency exposure since it represents cash flow in foreign currency. It can only be used as an evade when a firm has foreign revenues. Imports represent cash outflow in a foreign currency so it cannot be hedge through foreign debt.
There are various types of foreign exchange risk that a company may face due to its participation in trading activities that involve foreign currencies movements. Foreign currency exposures are generally categorized into the following three distinct types of exposures being transaction exposure, economic exposure, translation exposure and sometimes contingent exposure. These exposures pose risks to firms’ cash flow, competitiveness, market value, and financial reporting.

Transaction exposure is the type of financial risk that is faced by companies that are involved in international trade that currency exchange rates will change after the company has already entered into financial obligation. This exposure due to fluctuation of exchange rates may lead to major losses to firms on their financial obligations.

A firm has transaction exposure whenever it has contractual cash flows being receivables and payables whose values are subject to unanticipated changes in exchange rates due to a contract being denominated in a foreign currency. To realize the domestic value of its foreign-denominated cash flows, a firm must exchange foreign currency for domestic currency. As firms negotiate contracts will set prices and delivery dates in the face of a volatile foreign exchange market with exchange rates constantly fluctuating, firms face a risk of changes in the exchange rate between foreign and domestic currency.

Firms generally become exposed as direct results of activities such as importing and exporting or borrowing and investing. When a company identifies such exposures on the change of the exchange rates, hedging strategies will be established and implemented to control the risk. The most preferred strategy is the use of forward rates by locking to an exchange rate to be used upon a specified future date.

It measures currency by currency and equals the difference between contractually fixed future cash inflows and outflows in each currency. Some of these unsettled transactions, such as foreign currency denominated debt and accounts receivable are already on the balance sheet others such as contracts for future sales are not.
Some actions taken to hedge against translation exposure could increase transaction exposure. Such as, if a currency is expected to weaken, then translation exposure for the current period could be reduced by deferring the sale to a future period. This would reduce account revenue in the current period, but if there is a contract for the sale to take place in the future it would increase transaction exposure.

In order to measure transaction exposure three techniques can be used. The firm can measure the variability of each currency in which it has some transaction. The first step is to identify the currencies in which the transaction will be settled. Then it can measure the volatility of currency based on historical data. However using this approach a firm should be more cautious, historical volatility is not an accurate predictor of future volatility. The measurement based on the correlation between two currencies is also used. The idea is the same for asset correlations of a portfolio. An increase implemented technique used for measurement is the value at risk model. Using past data or simulation, the company can estimate the potential loss over the next day’s given a certain confidence interval.

Economic exposure is the other type of foreign exchange risk which a company can face. This is also a financial risk due to fluctuations of the exchange rates which do affect the company’s earnings from different sources, cash flows to and from the company and foreign investments. (Loderer and Pichler 2002) the extent to which a company is affected by economic exposure depends on the specific characteristics of the company and the particular level of industry it operates.

Companies that face this type of financial risk do attempt to minimize the risk on fluctuations of exchange risk through hedging positions in the foreign exchange market.

Economic exposure can be measured by two techniques, earnings sensitivity and cash flow sensitivity to exchange rates. To measure the earnings sensitivity firms need to separate each line of its income statement and analyze the effect of an increase or decrease of currency.
Where a firm sells its product in a foreign currency to a foreign customer abroad, to assess the financial impact to the home currency, three main effects will take hold to the cash flows denominated in the home currency. First, local sales will increase due to lower competition since foreign products will appear to be more expensive. Second, the sales denominated in home currency will increase. The effects on economical exposure are difficult to estimate because of the numerous interactions.

Cash flow sensitivity can also be implemented, since firms’ value represents the present value of future cash flows, exchange rate is the sensitivity of firm value to exchange rate changes. The other approach is to define exchange rate exposure in terms of a regression of the firm’s total value (or stock return) to the exchange rate. Exchange rate exposure could be thus measured as the slope coefficient between the firms’ value or stock return and the changes in the exchange rate.

For the management of economic exposure first of all, the firm must project its cost and revenue streams over a planning horizon that represents the period of time during which the firm is locked-in, or constrained from reacting to unexpected exchange rate changes. It must then assess the impact of a deviation of the actual exchange rate from the rate used in the projection of costs and revenues.

Steps which should be taken in managing this exposure should be as follows. First there should be estimation on planning horizon as determined by reaction period. Second, determination of expected future spot rate to be used on the settled transaction. Third the company should estimate on expected revenue and cost streams given the expected spot rate. Fourth effect on revenue and expense streams for unexpected exchange rate changes should be estimated so as to know the effects of exchange rate exposure that may be poised on the revenue. Fifth, choice of appropriate currency for debt denomination should be done. Then estimation of necessary amount of foreign currency debt should be determined. Also the company should determine an average interest period of debt.
Subsequently, the effects on the various cash flows of the firm must be netted over product lines and markets to account for diversification effects where gains and losses could cancel out, wholly or in part. The remaining net loss or gain is the subject of economic exposure management. For a multiunit, multiproduct and multinational corporation the net exposure may not be very large at all because of the many offsetting effects.

Another major financial risk due to foreign exchange risk exposure is translation exposure. This form of exposure results from the translation of accounting entries from those entries denominated in foreign currency to the reporting currency such as from USD accounting entries to TSHS as a reporting currency.

Translation exposure is the extent to which its financial reporting is affected by exchange rate movements. As all firms generally must prepare consolidated financial statements for reporting purposes, the consolidation process for multinationals entails translating foreign assets and liabilities or the financial statements of foreign subsidiaries from foreign to domestic currency. While translation exposure may not affect a firm's cash flow it can have a significant impact on a firm's reported earnings and therefore its stock price. Translation exposure is distinguished from transaction risk as a result of income and losses from various types of risk having different accounting treatments. Translation gives special consideration to assets and liabilities with regards to foreign exchange risk, whereas exposures to revenues and expenses can often be managed in advance by managing transactional exposures when cash flows take place.

This type of risk may lead to possible losses on the total value or inflating it hence not representing the actual value of earnings or cash flows. Since the effects of translation exposure may affect the value of the presented income, expenses, assets and liabilities, the difference due to conversion of entries should be reported in the financial statements of the company.
To measure translation exposure the firm needs to estimate future expected earnings of each subsidiary and then need to apply a sensitivity analysis in order to evaluate the potential effect of fluctuations due to exchange rates rate changes. There are other types of exposure which a company may face in its operations especially in international trade. The first one is the contingent exposure. This is the exposure encountered when bidding for foreign projects or negotiating other contracts or foreign direct investments.

The second type of exposure is called operating exposure which reflects the projected cash in and out flows which can alter from operation activities. This is where a company is exposed to when there is a change of varying currency values that are relevant to the operation of the company. The change may affect the total value of the assets of the business hence affecting the overall profitability of the company.

2.3 Impact of foreign exchange risk

Foreign exchange risk to a company can bring favourable or unfavourable effects to the firm financial obligations depending on the transactions the firm has and are denominated in foreign currency. Multinational enterprises and businesses that do international transactions have foreign exchange exposure and significant losses due to changes in exchange rates if they shift unfavourably to the company. Whether a business has an account receivable or accounts payable in foreign currencies, unfavourable movements in the value of foreign transaction will affects its cash in or out flows.

The impact of foreign exchange risk on revenue for a company that participates in international trade can adversely be brought about by changes in exchange rates to a company’s projections. This will mean if the company has the obligation to pay out cash to a supplier in foreign currency, it may end paying more than the actual projected amount to clear its debt. Secondly where the company is subject to receive foreign currency, it may receive as projected but the exchange rate between the home currency and the foreign currency may have gone down to the extent that the
received amount has less value compared to the projected value of the amount at the
time of the transaction.

In the situation where a company in Tanzania such as Davis and Shirtliff has to pay a
supplier being Grundfos Company limited USD 8000 for the supply of borehole
pumps three months from the date of transaction at the exchange rate of Tshs 1600
per 1 USD on that date, the amount disbursed could or should amount to Tshs
12,800,000. Where at the time of settling the costs from the three month earlier
transaction and the exchange rate is found to be Tshs 1750 per 1 USD, then Davis
and Shirtliff will have to spend more Tshs in buying USD than the amount in Tshs it
could have used three months earlier. This will have effect on the revenue of the
company which will be used in financing settlement of the transaction by paying
Grundfos Company. More Tshs will be spent than the budgeted in buying the
amounts of USD 8000 required.

The effect of foreign exchange risk on the company’s profitability is brought through
translation exposure because what is reported on the consolidated accounts will have
effects of the exchange rate exposure. The cash flows to and from the company in the
cause of exchange rate, its effects depend on the volume of goods that are subject to
change price depending on the exchange rate, flexibility of price changes depending
on the exchange rate change and production and sales changes which are also to
change where also exchange rate has effects on them.

If the company will not be able to change and shift quickly on the sales of its
products to counter the effects of exchange rate, profit that could be generated may
be eroded by the exchange rate effect on the price of the product. In the situation
where a company has a subsidiary in another country or in different countries, when
the parent company sends to its subsidiary stocks for sale the value of an inventory in
a foreign subsidiary is determined not only by changes in the exchange rate, but also
by the immediate price charged on the product. Exchange rate change plays a great
cause of price change on the stocks that the subsidiary will receive. The value/price
of the inventory for export may increase or decrease if the local currency in the country of destination appreciates or depreciates.

The effect on company profitability due to foreign exchange rate exposure may rise in a situation where a company has to import raw materials from the foreign supplier. The company will have cash outlay in foreign currency which may differ from time to time depending on the exchange rate changes. The amount of local currency used to generate foreign currency on January to purchase raw materials may differ by either going higher or getting lower on the purchase of raw materials in February. These variations will have a direct effect on the company’s profit since the company will be subjected to price changes effects of its product from time to time.

2.4 Management of foreign exchange risk
Currency risk hedging strategies entail eliminating or reducing this risk and require an understanding of both the ways that the exchange rate risk can affect the operations of economic agents and techniques to deal with the consequent risk implications (Barton et al., 2002). Companies do protect themselves since the changes in exchange rate stimulate changes in the value of a firm’s assets, liabilities and cash flows especially when they are denominated in a foreign currency. Through this fluctuations of the currency markets have impacts in the outgoing payments and the incoming receipts.

Many firms refrain from active management of their foreign exchange exposure, even though they understand that exchange rate fluctuations can affect their earnings and value. They make this decision for a number of reasons.

In most cases, the management considers any use of risk management tools, such as forwards, futures and options as speculative. They claim that such financial manipulations are outside the firm's field of expertise. They further argue that the main business is to manufacture slot machines, and that the company should not be gambling on currencies. They could be right to fear abuses of hedging techniques,
but declining to use forwards, futures, swaps and other instruments may expose the firm to substantial risks.

Second, they claim that exposure cannot be measured. They could be right in that currency exposure is complex and can seldom be gauged with precision. But as in many business situations, imprecision should not be taken as an excuse for indecision.

Third, it is said that the firm is hedged. All transactions such as imports or exports are covered, and foreign subsidiaries are financed in local currency. This overlooks the fact that the bulk of the firm's value comes from transactions not yet completed to the effect that transactions hedging turns out to be incomplete strategy. Fourth, they claim that the firm does not have any exchange risk because it does all its business in dollars or yen, or whatever the home currency is. But it should be noted that even when invoices are made for example to a German customer in dollars, when the mark drops the prices will have to adjust or will be undercut by local competitors. That is to say revenues are influenced by currency changes.

Finally, they assert that the balance sheet is hedged on an accounting basis especially when the functional currency held is the dollar.

Modern principles of the theory of finance propose that the management of corporate foreign exchange exposure may neither be an important nor a legitimate concern. It has been further argued, in the tradition of the Modigliani-Miller Theorem, that a firm cannot improve shareholder value by financial manipulations specifically investors themselves can hedge corporate exchange exposure by taking out forward contracts in accordance with their ownership in a firm. Managers do not serve them by second-guessing what risks shareholders want to hedge. To counter the argument above, the transaction costs are typically greater for individual investors than firms. Yet there are deeper reasons why foreign exchange risk be managed at the firm level.
The assessment of exposure to exchange rate fluctuations requires detailed estimates of the susceptibility of net cash flows to unexpected exchange rate changes (Dufey and Srinivasulu, 1983). Operating managers can make such estimates with much more precision than shareholders who typically lack the detailed knowledge of competition, markets, and the relevant technologies. Furthermore in all but the most perfect financial markets, the firm has considerable advantages over investors in obtaining relatively inexpensive debt at home and abroad, taking maximum advantage of interest subsidies and minimizing the effect of taxes and political risk.

Another line of reasoning suggests that foreign exchange risk management does not matter because of certain equilibrium conditions in international markets for both financial and real assets. These conditions include the relationship between prices of goods in different markets, better known as Purchasing Power Parity and between interest rates and exchange rates usually referred to as the International Fisher Effect.

However deviations from Purchase Power Parity and International Fishers Effect can persist for considerable periods of time especially at the level of the individual firm. The resulting variability of net cash flow is of significance as it can subject the firm to the costs of financial distress or even default. Modern research in finance supports the reasoning that earnings fluctuations that threaten the firm's continued viability absorb management and creditors' time, entail out of pocket costs such as legal fees and create a variety of operating and investment problems including underinvestment in research and development. The same argument supports the importance of corporate exchange risk management against the claim that in equity markets it is only systematic risk that matters to the extent that foreign exchange risk represents unsystematic risk, it can of course be diversified away provided again, that investors have the same quality of information about the firm as management a condition not likely to prevail in practice.

This reasoning is buttressed by the likely effect that exchange risk has on taxes paid by the firm. It is generally agreed that leverage shields the firm from taxes because interest is tax deductible whereas dividends are not. But the extent to which a firm can increase leverage is limited by the risk and costs of bankruptcy. A riskier firm
perhaps one that does not hedge exchange risk, cannot borrow as much. It follows that anything that reduces the probability of bankruptcy allows the firm to take on greater leverage, and so pay less taxes for a given operating cash flow. If foreign exchange hedging reduces taxes shareholders benefit from hedging.

However, there is one task that the firm cannot perform for shareholders to the extent that individuals face unique exchange risk as a result of their different expenditure patterns. They must themselves devise appropriate hedging strategies. Corporate management of foreign exchange risk in the traditional sense is only able to protect expected nominal returns in the reference currency (Eaker, 1981).

It is an obvious truth to suggest that, you cannot manage what is not known. This means that reporting systems are crucial to the entire management process. Most companies utilize some form of standardized reporting to one central location, unless individual entities are viewed as completely independent. Exposure reporting is a key issue, since treasuries can end up over hedged, under hedged, or unhedged because of inadequate information. Timing is also a key consideration, because market opportunities can slip away while managers wait for information on the direction and size of an exposure. The complexities in defining and reporting appropriate exposures underscore the importance of involving treasury personnel at an early stage of the decision-making process. It is important that the area involved in implementing hedging decisions also be part of the process of defining and reporting exposures.

Effective foreign exchange risk management is a financial tool for ensuring the profitability of the company’s primary business. As such, the company should prepare a comprehensive policy statement on foreign exchange risk that clearly states the company’s objectives, the tactics for attaining these objectives, and the allocation of responsibility for exercising these tactics. Whereas for Davis and Shirtliff their comprehensive policy on foreign exchange risk entails that, exchange risk should be determined first by the sections procuring the goods, then consult the finance section for an update and study on the exchange rate movements. The invoice currency is
used as the internal technique for managing the foreign exchange risk that faces the company in their dealings after transactions have taken place internationally.

The occurrence of liberalization in the Tanzanian economy in 1984 resulted in substantial inflow of foreign capital into Tanzania. Simultaneously the dismantling of trade barriers has also facilitated the coming together of the domestic economy with the worlds’ economy. With the globalization of trade and relatively free movement of financial assets, risk management through derivatives products has become a necessity in Tanzania, like in other developed and developing economies around the world. (Muganda, 2004)

As Tanzanian 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 (Muganda, 2004). Businesses conducted under the use of foreign currencies need to focus on the grounds that will not lead them to payments and/or receipt differentials from what is/was agreed through the use of hedging tools as a protection gear.

The issue of currency risk management for non-financial firms is independent from their core business and is usually dealt by their corporate treasuries. Most multinational firms have also risk committees to oversee the treasury’s strategy in managing the exchange rate and interest rate risk. (Lam, 2003)

Where the trading of a company involves payments/receipts which are faced by the changes or risks of foreign exchange rates, financial and revenue effects are subject to occur since there be either losses or little profit to the company. For a company such as Davis and Shirtliff with its involvement in international trade, effects of foreign exchange risks are possible and the company has to manage the risks to avoid financial effects that might be subject to it mostly on its total revenue.
The distribution of foreign exchange rate changes provides a description of the behaviour of foreign exchange rates and of the underlying process determining foreign exchange rate. From the investor's point of view, the specification of this distribution is very helpful in assessing the riskiness of foreign exchange holdings. The form of the distribution and the parameters that describe it suggest the risk of investing in foreign assets (Rossell, 2009). The probability of gaining or losing from foreign exchange transactions depends on the assumed distribution, while the sample variance, often used to reflect the variability of foreign exchange rates, might not be an adequate measure of risk.

The decision regarding a floating exchange rate system in Tanzania has changed the condition for monetary policy. With floating exchange rate in Tanzania, there are no limitations for how much the domestic currency can fluctuate and create insecurities in future cash inflows for companies. Both exporting and importing companies become more exposed to risk in different levels with the exchange rate differentiation than what they had been during the previous system with an inflexible exchange rate.

Where there is floating exchange rate system to the economy such as of Tanzania, companies participating in international trade such as Davis and Shirtliff, are exposed to risks which involve them in defining or setting techniques of combating financial effects mostly to their cash flows and revenue.

The Tanzanian shilling depreciated against foreign currencies after the introduction of the floating exchange rate (Jonung, 2008). This favoured the exporting companies when their goods and services in relative terms became cheaper for their foreign partners.

Deregulations as well as currency partnerships in contribution with large expansion within the financial market has, according to Bennet (1996), evolved to an increasing volatility which in turn has made it more difficult for companies to predict future profits. The uncertainty regarding exchange rates, will exist since there is no a
common currency worldwide that can act as a medium of exchange without favouring any part participating in the trade.

During 2008 exchange rates fluctuations became more rapid due to the financial crisis and recession (IMF 2008). There is a huge uncertainty when it comes to countries’ economies and interest rates which to a great extent affect the exchange rate of currencies. Countries in many parts of Sub-Saharan Africa, like the so called emerging and developing economies, suffer depreciations of their currencies due to global crisis (IMF 2009). What might shake the worlds’ great currencies affects the value of the currencies in the developing economies. Large enough, being on the side of a price taker, developing economies continue to experience the problem of currency depreciation under the comparison of foreign currencies.

Managing of risk by companies in developing economies such as that of Davis and Shirtliff with currencies that depreciate often in the reflection of foreign currencies, tools and strategies or techniques to curb foreign exchange risk have to be set or established by the company to see how they can suit them and their economic conditions.

The use of either tools or techniques by Davis and Shirtliff in curbing risk due to foreign exchange rate changes in developing economies like that of Tanzania, has to be any other technique than those available under the umbrella of a derivative market being Swaps and Futures that are rare in the developing economies like that of Tanzania. Such tools require financial markets which have financial information with the link of other financial markets in various parts of the economic world.

The collapsing of trade and financial flow led to substantial balance of payment gaps, triggering fast depressions and higher exchange rate volatility. The exchange rate losses varied largely with the extent and nature of firm’s exposure to trade and global financial markets (IMF, 2009). Through the occurrence of the fluctuations on the cash inflows and/or outflows of the company the effects expected will be losses when doing business abroad. Profits do result due to the changes in the expected
receipts of the company and the actual income received. But such situations are rarely to take place to the firm since the volatility of the exchange rate may happen leading to the loss of firms’ asset value.

When exposed to foreign exchange risk due to business operations abroad, some companies do tend to take advantage of the imperfection of national markets (Ghulam, 2009). These imperfections to a company tend to bring opportunity in a form such as factors of production and financial assets. With this expansion, comes a variety of associated risk for the international financial management to deal with. One of the risks involved is the foreign exchange risk.

When conducting business operations, huge risks do arise especially when converting domestic currency into international currencies. The company has to make decisions between investment and international trade in order to remain economically and competitively fit (Ghulam, 2009). In order to minimize foreign exchange risk companies need to understand the extent of risk to which they are exposed, understand the solutions for such a risk and develop a plan to curb it.

Popov, (2008) on management awareness suggests that, in the management of foreign exchange risk, the following should be undertaken to determine the management awareness in a company such as Davis and Shirtliff when facing risks from foreign exchange rate changes. These are Identification of risk, Measurement of risk and Management of risk.

For proper management of foreign exchange risk, companies are to adhere to the mentioned steps. Where Davis and Shirtliff are to manage the risk that is brought by the changes of foreign exchange rate, they should identify the risk as to what it is, measure it to determine its effects to the cash flows and revenue or costs, then set the appropriate strategies to manage the risk so as to curb its effects on the company.
2.5 Different strategies used to protect against foreign exchange risk

In order to manage foreign exchange risk, various techniques and tools are used. These are swaps, invoice currency, exposure netting, leading and lagging, forward contract, currency options, hedging and cash pooling. Each of the above techniques has the positive and adverse effects upon its usage in the foreign exchange risk management. The choice of the methods depends on a number of factors. These are:

- Minimizing the effects of exchange rate movements on profit margins,
- Increasing the predictability of future cash flows that are subject to the company,
- Eliminating the need to accurately forecast the future direction of exchange rates,
- Facilitating the pricing of products sold on export markets and
- Protecting a company’s competitiveness where the home currency depreciates against the trading partners foreign currencies.

If a risk can be reduced at a reasonable cost, then it is generally accepted that steps should be taken by managers to protect their companies. However, the nature of the risk in which a company is exposed and purpose of managing the risk are also some of the important factors to be considered by the company when deciding on the hedging strategy to be taken.

Hedging: A hedge is an investment position intended to offset potential losses that may be incurred by a companion investment. Hedging means reducing or controlling risk. This is done by taking a position in the futures market that is opposite to the one in the physical market with the objective of reducing or limiting risks associated with price changes.

Hedging is often considered an advanced investing strategy, but the principles of hedging are fairly simple. The best way to understand hedging is to think of it as insurance. When people decide to hedge, they are insuring themselves against a negative event. This doesn't prevent a negative event from happening, but if it does happen and you're properly hedged, the impact of the event is reduced.
Portfolio managers, individual investors and corporations use hedging techniques to reduce their exposure to various risks. Technically, to hedge you would invest in two securities with negative correlations. Nevertheless, nothing in this world is free, so you still have to pay for this type of insurance in one form or another.

The working of hedging to the company has to be in a way that the company is familiar with the techniques and how it works to suit its protection needs. The hedger tries to fix the price at a certain level with the objective of ensuring certainty in the cost of production or revenue of sale which will be beneficial to the company. The futures market also has substantial participation by speculators who take positions based on the price movement and bet upon it. Also, there are arbitrageurs who use this market to pocket profits whenever there are inefficiencies in the prices. However, they ensure that the prices of spot and futures remain correlated. (Rediff, 2007)

A company is able to hedge the foreign exchange risk attached to an investment by taking another offsetting position. By doing so, it protects itself from a potential loss. The reason why companies hedge is not to make profit but rather as a preventive measure against possible unforeseen losses. All in all the costs of hedging cannot be avoided. (Sooran, 2009)

There are different hedging techniques with the main focus being on futures, forward contracts and options. These techniques derive their value from their underlying asset and are therefore viewed as derivatives though they have some difference in their composure (Damodaran, 2002).

The main difference between a future and an option is that, an option holder has the right to buy the underlying asset while the option holder is obliged to fulfil the terms of the contract. (Hurt and Wisner, 2002).

Hedging with forward contract is the technique among the financial hedging strategies. However, it is not said to be the best strategy to use in all situations
By using forward contracts a company can protect itself from different currency fluctuations. A forward contract is all about the belief of future prices and works in a way as a tool to mitigate loss. (Meera, 2006).

Futures Contracts: A future contract is a standardized contract between two parties to exchange a specified asset of standardized quantity and quality for a price agreed today (the futures price or the strike price) with delivery occurring at a specified future date, the delivery date. The contracts are traded on a futures exchange. The party agreeing to buy the underlying asset in the future, the buyer of the contract, is said to be long, and the party agreeing to sell the asset in the future, the "seller" of the contract, is said to be short.

A futures contract is similar to the forward contract but is more liquid because it is traded in an organized exchange i.e. the futures market. Depreciation of a currency can be hedged by selling futures and appreciation can be hedged by buying futures. Benefits of futures are that there is a central market for futures which eliminates the problem of double coincidence. Futures require a small initial outlay (a proportion of the value of the future) with which significant amounts of money can be gained or lost with the actual forwards price fluctuations.

A company trading with another company out of its trading country’s boundaries will have to go to a foreign stock market futures exchange to purchase standardised trading currency futures equal to the amount to be hedged as the risk is that of appreciation of that currency. As mentioned earlier, the tailor ability of the futures contract is limited i.e. only standard denominations of money can be bought instead of the exact amounts that are bought in other means of hedging such as on forward contracts.

In many cases, the underlying asset to a futures contract may not be traditional commodities at all – that is, for financial futures the underlying asset or item can be currencies, securities or financial instruments and intangible assets or referenced items such as stock indexes and interest rates.
A positive aspect of the future contract is that an investment in future can be hedged by a future contract made at present for the purpose of serving the future transaction, which means that the investment in the future is hedged by an offsetting position. Futures can be very flexible in their timing and are very useful to use when the future date of cash transfer is uncertain (Readhead, 2001). Hedging with futures protects the value of cash flows from potential losses if the exchange rate fluctuates in a non-desired direction as well as giving the possibility to make use of desired fluctuations (Maurer & Valiani, 2007).

However the use of futures in hedging has negative impact in trading because they are not flexible in their size (Walsh, 1995). It means that hedgers will experience difficulties in finding futures with certain desired size, thus, resulting in unnecessary exposures versus extra costs, if taking on a hedge that is smaller versus larger than what is actually required. This inflexibility of size is a result of the liquidity limitation. The hedger may encounter this complication when a large number of contacts are desired.

Research done by (Khazeh and Winder, 2006) shows that, if one aggregates the world’s major currencies in the market and does a comparison between specific time, money market hedges generally outperform option hedges in terms of payables. The conclusion made was that, the medium and large sized companies will benefit more if using money market hedge compared to option hedging.

Leading and Lagging Strategies: This is one of the methods of hedging which involves adjusting the timing of payments and/or collections to reflect future currency expectations. (Roland, 2007). With this technique, a company attempts to collect foreign currency receivables as soon as possible when it expects the currency to depreciate in the near future. The company will always want to disburse foreign currency payables prior the due date if the currency is expected to appreciate. (Hill, 2001).
The favourable situation of using leading and lagging hedging strategy is that, where it is—easy and simple to implement by a company that has operations with its subsidiaries in other countries other than the country of the parent company. (Mathur, 2000).

An additional benefit is that the strategy is often implemented within the organization and the company does not have to consider a third party. Also, can be used in group tax planning as in shifting intra company funds and hence profitability (Parkinson & Walker, 2006).

Lagging strategy is the opposite of leading. The company uses this strategy by delaying collection of foreign receivable if it predicts that the currency will appreciate. Consequently, the company will delay its foreign currency receivables when the expected currency will depreciate. (Hill, 2001) These strategies are mostly used by firms with subsidiaries in other countries. Though used mostly by multinational companies but medium sized and large companies have the tendency to use the same strategy. (Pike & Neale, 2003).

Swaps: This is another tool used to manage foreign exchange risk which aims at reducing long term risk (Madura & Fox, 2007). Swap transactions originated in 1981 when IBM and World Bank entered into a swap agreement and are commonly used in the sector of bank dealings with interest rates (Johnson, 2000).

A swap is a derivative in which counterparties exchange cash flows of one party's financial instrument for those of the other party's financial instrument. The benefits in question depend on the type of financial instruments involved. For example, in the case of a swap involving two bonds, the benefits in question can be the periodic interest (or coupon) payments associated with the bonds.

A swap is a foreign currency contract whereby the buyer and seller exchange equal initial principal amounts of two different currencies at the spot rate. The buyer and seller exchange fixed or floating rate interest payments in their respective swapped
currencies over the term of the contract. At maturity, the principal amount is effectively re-swapped at a predetermined exchange rate so that the parties end up with their original currencies. The advantages of swaps are that firms with limited appetite for exchange rate risk may move to a partially or completely hedged position through the mechanism of foreign currency swaps, while leaving the underlying borrowing intact. Apart from covering the exchange rate risk, swaps also allow firms to hedge the floating interest rate risk (Minar, 2010).

The swap agreement defines the dates when the cash flows are to be paid and the way they are calculated. Usually, at the time when the contract is initiated at least one of these series of cash flows is determined by a random or uncertain variable such as an interest rate, foreign exchange rate, equity price or commodity price. Swaps can be used to hedge certain risks such as interest rate risk, or to speculate on changes in the expected direction of underlying prices. (John, 2006).

Swap involves exchanges of different types of cash flows and thereby differs greatly in complexity; the principles underlying the transaction are the same (Corbett, Healy & Poudrier, 2007). A decision has to be made on the length of period of payments, the underlying notional value, frequency of cash flow exchanges and the size of payments as well as condition in terms of default.

These conditions are agreed upon considering both parties’ needs and interests and therefore the swap does not come in a typical shape. They can range from simple structure to complex structures (Chorafas, 2008).

Different types of swaps exist and each comes in a different shape. Medium sized and large companies need to choose that which suits each best in line with its preferences, conditions and environment (Beenhakker & Damanpour, 1995). These types of swaps are interest rate swaps, currency swaps, credit swaps, commodity swaps and equity swaps.
Interest rate swap is the exchange of a fixed rate loan to a floating rate loan. The life of the swap can range from 2 years to over 15 years. The reason for this exchange is to take benefit from comparative advantage.

Some companies may have comparative advantage in fixed rate markets while other companies have a comparative advantage in floating rate markets. When companies want to borrow they look for cheap borrowing especially from the market where they have comparative advantage.

This type of swap leads companies to perform obligations which are not in their desire but on behalf of the other party i.e. borrowing for the other party in fixed rate when they actually need floating rate.

Currency swaps involves exchanging principal and fixed rate interest payments on a loan in one currency for principal and fixed rate interest payments on an equal loan in another currency. Currency swaps entail swapping both, principal and interest between the parties, with the cash flows in one direction being in a different currency than those in the opposite direction.

Credit swaps is a specific kind of counterparty agreement which allows the transfer of third party credit risk from one party to the other. One party in the swap is a lender and faces credit risk from a third party, and the counterparty in the credit default swap agrees to insure this risk in exchange of regular periodic payments (essentially an insurance premium).

If the third party defaults, the party providing insurance will have to purchase from the insured party the defaulted asset. In turn, the insurer pays the insured the remaining interest on the debt, as well as the principal.

Commodity swap is a swap involving the market price of a commodity. In a commodity swap, a financial institution is usually one of the counterparties. A user of the commodity may agree to pay the financial institution a fixed price for the
commodity in exchange for the institution paying the user the spot price for the same commodity.

On the other hand, a producer of a commodity may agree to pay the financial institution the market price in exchange for receiving a fixed price. A commodity swap usually involves oil and is used to protect against price fluctuations.

Invoice Currency: This is an operational technique that has not received much attention. The firm can shift, share, or diversify exchange risk by appropriately choosing the currency of invoice. (Novella, 2009). The choice of this technique is to determine as to how much the company will be exposed to the fluctuations of exchange rate. (Piercy, 2000).

The use of this technique leaves the company in a situation facing three strategies upon exporting goods in making decisions on pricing its goods. It may decide to price the goods in its own domestic currency (Producer currency pricing), in the foreign currency of the country it exports to (Local currency pricing) or in a different currency called a vehicle currency (Vehicle currency pricing) (Goldberg & Tille, 2008).

Another option is to combine the three choices. The choice to be made by the company is not an easy task since it encounters making a lot of decisions. Consideration has to be on characteristics of the industry and macro economy factors. (Goldberg & Tille, 2008).

However, whatever choice is made on the invoice currency the company decides to choose, its profit will be affected due to fluctuations of exchange rates. If the producer currency is chosen by the company for its exports, the demand of the products will change as the exchange rate changes. Thus, once an order is placed the exporting company knows for sure how much profit is going to be made. On the
choosing of vehicle currency, the results obtained in the demand of the exports as well as profits made on the transaction will vary from time to time. (Wilander, 2006)

According to Wilander, it has been proven that the relative size of a country highly influences its use of invoice currency. If the importing company is industrialized and situated in a large country it is preferable for the exporting company to choose the local currency of the importing country in its pricing. The reason is that it does not risk the firm’s comparative advantage relative to that of domestic firms. That is the reason as to why the US dollar continues to be used the vehicle currency often used. (Donnenfeld & Haug, 2003).

All in all, when a company decides upon its invoicing currency it should take into consideration the gains, expenditures and consequences on its competitive situation that each alternative currency brings. (Anckar & Samiee, 2000).

Through picking up a right currency for invoicing the company can create a more competitive position in the market and maximize the expected profits. (Oi et al, 2004). When the exchange rates fluctuate and create differentials, the exporting company may offer the importing party the opportunity to choose among a set of appropriate currencies. It proves to be a good move if, on the other hand the exporting party is able to offer such a set at a low or no cost. The reason is because the parties are likely to have a different opinion of how the exchange rate will fluctuate in the future. (Ahtiala & Orgler, 2000).

Exposure netting: This is another means used by a company in managing foreign exchange risk in international trade dealings. It involves offsetting exposure in one currency with exposures in another currency mostly of the same denomination. When the exchange rates are expected to shift, losses on the first exposed position are cleared by gains in the second currency.
The underlying assumption of exposure netting is that the net gains or losses on the entire foreign exchange risk exposure in the corporation is what matters, rather than the gain or loss on an individual monetary division. (Shapiro, 1999)

According to Shapiro, exposure netting involves one of these possibilities:

(i) A company can counterbalance a long position in one currency with a short position in the same currency.
(ii) If the exchange rate volatility of two currencies has a positive correlation, then the company can offset a long position in one currency with a short position in the other.
(iii) If the currency movements have a negative correlation, then a short or long position can be used to counterbalance each other.

Cash Pooling: This is the method that centralizes cash management which involves transferring a subsidiary company’s excess cash to a centrally managed account or cash pool. Companies that have utilized this method, have implemented a special corporate entity that collects and disburse funds through a single bank account (Shapiro, 1999). The main objective of cash pooling to a firm is to bring together debit and credit cash balances of all subsidiaries (Ramirez & Tadesse, 2007).

Cash pooling can be arranged in two ways, either automatically where the company’s bank transfers the surpluses from a specific account to a central account at the end of each day. Also can be administered by the firm’s own management who instructs the bank to make the required transfers between the accounts (Graham & Coyle, 2000).

Foreign Debt: Foreign debt can be used to hedge foreign exchange exposure by taking advantage of the International Fischer Effect relationship. This is demonstrated with the example of an exporter who has to receive a fixed amount of dollars in a few months from present. The exporter stands to lose if the domestic currency appreciates against that currency in the meanwhile so, to hedge this, he could take a loan in the foreign currency for the same time period and convert the same into domestic currency at the current exchange rate. The theory assures that the
gain realised by investing the proceeds from the loan would match the interest rate payment in the foreign currency for the loan. (Minar, 2010).

The other technique consists transferring the risk. When transferring the risk to an insurance company, the firm gets indemnified after loss and can continue operating. The disadvantages are that the premium paid represents a large cost incurred by the company. It is also time consuming to set insurance contracts and since losses are covered, risk managers are less careful.

2.6 Effectiveness of foreign exchange risk management strategies

The participation of companies in international trade exposes different companies to the likely effects of foreign exchange rate exposure. The exposure is brought to existence since the companies have to transact or settle their transactions that come in different denominations and in different currencies. Through the use of foreign currency, companies become exposed to the risk brought by exchange rate fluctuations. What a company might have planned to pay at present for the foreign transaction entered earlier on may require a company to use more local currency in buying the foreign currency at the situation where exchange rate movements have adjusted unfavourably.

In an environment where currency fluctuations bear little visible relationship to business essentials, profits can be wiped out in a fraction of a second and business models can be destroyed. (Schamotta, 2010).

In the assessment of foreign exchange risk management strategies, the company should by far most consider the effects on income volatility due to gains and/or losses from the variations exchange rates. The assessment should be done from time to time to avoid large effects on the income volatility. The outcome results due to the applications of the strategies are considered to be highly effective in offsetting the exposure that will have risen due to foreign exchange risk. (Kawaller, 2002).
To achieve an effective strategy measurement to determine its situation should be done in a two way traffic system. The first way is to conduct a prospective assessment on the effects which is to determine the expected expectations of the strategy as to how volatility on the income or revenue will be. The second assessment is to conduct a retrospective assessment, which is a backward looking evaluation; to see how the offsetting of the changes from the exchange risk against cash flows has been from the time it was established. Both means of evaluations go together, but prospective assessment is done first as a means to establish the strategy of hedging.

To enable the company to survive from the effects of exchange risk exposure, it has to establish effective strategies in curbing the foreign exchange risk. The primary objectives of the established strategy in order to achieve true effectiveness, a currency trading framework should be designed with three goals in mind:

- **Cash flow efficiency:** Unpredictable and highly volatile cash flows can wreak havoc on resource allocation, dramatically lowering organizational efficiency. Increasing the predictive accuracy and accounting simplicity associated with the cycle of cash through the business can lower costs and substantially improve strategic planning efforts.

- **Risk alleviation:** Vulnerability to swings in exchange rates can compromise profits and undermine a company’s ability to survive and succeed in new markets. Protecting the bottom line is absolutely crucial in ensuring that companies remain stable and sustainable in the long term.

- **Opportunistic market entry:** Exchange rate volatility represents both risk and opportunity. Few businesses are prepared to completely ignore the opportunities that can be captured when currencies move in a favourable direction, and often leave themselves exposed to risk as a result. In order to survive changes in objectives and leadership, a currency policy should recognize this and create a framework for executing trades at favourable levels, while keeping the organization protected against material risks.
Due to the fluctuations of the economy, building an effective risk management framework begins with envisioning a complete, integrated process. There must be a system created to provide feedback between business objectives and the tools and strategies used to achieve them, so that the organization continually adapts in response to evolving markets and circumstances. To achieve this there are four essential components to be put into consideration by the company in setting effective strategies in curbing exchange rate exposure. These components are:

**Understand:** To manage foreign exchange risk is impossible without having a clear picture of where exposures exist and the processes currently being used to manage them. Once the exposure has been known, means of curbing the risk should be put in practice according to the need of that situation. Mostly, there are three types of external currency risks that can materially influence the company operations and performance especially in the international trade dealings such as for the Davis And Shirtliff Company under the case study. The first one is the transaction exposure which is the simplest and most transparent. It is the gain or loss that can be generated when the exchange rate applied to cash flows changes. When costs or revenues are affected by currency fluctuations, the resulting unpredictability can damage many areas of the business. The second exposure is known as Translation exposure which is more complex and occurs when the value of a foreign asset or liability fluctuates due to exchange rate changes, resulting in a requirement to adjust balance sheet values. Translation vulnerabilities can create volatility on both the statement of comprehensive income and statement of financial position. The third exposure is the economic exposure which affects the company cash flows and revenue due to the environmental operations the company is trading.

After having the exact picture of where exposures lie, it is important for the company to check out the processes and strategies that are currently in position. Clarifying existing procedures for measuring and managing foreign exchange risk can help to identify areas of potential improvement. Mapping out the financial controls that are already in place is essential in determining where weaknesses may be present.
Although the defining of where the exposure is has been done, those setting the strategies to curb effects from foreign exchange risk should specify out exactly on how the objectives of the strategies will be to all concerned with the company or the organization.

*Strategize:* From the understanding of what exposure is and at what angle the risk will affect the company, tactics to ensure the exchange rate exposure is being controlled at company level are defined and established. This is done by ensuring that personnel are clearly accountable, processes are clearly defined, and strategic goals are well understood. A written policy helps to ensure that theory is translated into practice. Formal policies vary widely in length and complexity, and the best are designed to scale up as the business itself evolves. While this process may sound time-consuming, a strong written document can be created relatively quickly and easily—particularly with the assistance of a foreign exchange specialist. According to Schamotta, 2010 a risk policy simply needs to address four issues for one to determine its effectiveness on the strategy;

First the reason for the strategy should be defined. Defining the objectives of a currency risk management program can be tremendously beneficial for internal personnel as well as external stakeholders. The articulation of these goals in a written policy can be paired with on-going education to ensure that all foreign exchange activities are aligned with primary business objectives and risk tolerances.

Second, the exact time or situations for the application of the strategy must be established. The more time that elapses between when an exposure is identified and when an offsetting hedge is placed, the greater the financial risk. Allowing subjectivity into this process is one of the greatest sources of risk for the typical company. Clear deadlines should be communicated, defining when exposures must be reported internally and when offsetting positions must be placed.

Third, implementers of the designed strategy should be known so as to determine the accountability at the company level. Strong policies must be established to clearly
define functions and levels of responsibility within the organization while segregating duties so that appropriate financial controls can be maintained. These roles and responsibilities should be assigned on a functional rather than on an individual basis so that procedures survive the inevitable personnel changes which so frequently derail otherwise sound policies. Ensuring that the personnel is accountable for communicating actual and expected foreign exchange exposures on a timely basis can sharply reduce the number and severity of negative surprises.

Lastly, effective managing currency risk strategy requires the use of hedging tools in a disciplined and pragmatic manner. The strongest policies clearly name the set of financial tools that may be used by risk managers and describe the criteria used to judge their applicability in particular situations.

_Eexecute:_ The application of the strategy designed or chosen by the company in curbing the foreign exchange risk is done with the idea in mind that the chosen strategy has to match the needs of the economic environment of the company. Once the most effective hedging instrument has been chosen for a particular exposure, applying the right trading tactics can mean the difference between success and failure. Day-to-day market movement can present many opportunities for corporate hedgers to enter positions at favourable levels, but large negative moves can wipe out earnings instantly. Corporate risk managers trade tactically by employing pairs of standing market orders to capture opportunities while protecting themselves in the event that markets shift in an unfortunate direction.

Market orders can be placed to automatically trigger a trade when the exchange rate hits a pre-specified level. When the trigger is placed on the favourable side of the market, the order is called a take profit when it is placed on the less favourable side, it is called a stop loss. Pairing both types of order in a disciplined manner can help to optimize trade execution levels, while ensuring that the bottom line is protected against large negative moves. A variant of this tactic is called a trailing stop loss. A trailing stop loss order sets a protection level at a specified percentage away from the prevailing spot price, and moves with favourable movement in the currency.
Adapt: Once the strategy has been set and put into practice managers responsible for monitoring its effectiveness have to review how it performs to provide the need for change. Continual modification and adaptation is an absolutely crucial component of the trading programs. Identifying shortfalls and building on successes is important. Internalizing effective components while discarding and replacing the strategies that are not meeting business goals generally requires that risk managers scale hedging performance against internal objectives rather than against the currency markets. Smoothing out earnings instability and ensuring business sustainability are of great importance, while attempting to generate profits from foreign exchange movements is a sure path to failure.

The refinement process can be formalized by requiring that regular reviews be conducted in line with financial reporting periods. Producing brief performance profile documents at these junctures can help to guide policy adjustments and communicate important information to internal and external stakeholders. Packaging these with the risk management policy itself will create a living document that evolves as the organization does, ensuring that the framework remains relevant and effective as the business evolves over time.

Generally, currency risk also known as foreign exchange risk management can be managed in any of the following two ways, one being internal financial hedge and the second being external financial hedges. Offsetting exposures internally is unquestionably the most cost-efficient and effective method for lowering risk and should always be considered before resorting to external tools. Netting an incoming cash flow against an outgoing one can sharply reduce the amount of currency exposed to exchange rate fluctuations without requiring entering into a financial instrument. Changing functional accounting currencies to better reflect cash flows is an excellent way to reduce the impact of foreign exchange on earnings. Moving operations into a country where revenues are earned is often called natural hedging. Natural hedging can be an effective method for managing structural exposures, particularly when these operations support long term strategic goals.
However, internal hedging methods are often highly found to be difficult to put into full practice due to the limit on the required financial assistance and information. Offsetting cash flows often exposes companies to timing issues, meaning that foreign exchange risk has been swapped for alternative and potentially more harmful forms of uncertainty. Moving business units into other countries can substantially increase other types of risk, and can be quite costly, particularly in the event that growth strategies change. In contrast, external financial hedges are designed to efficiently and precisely target currency risk without increasing other exposures, meaning that they are often the most cost effective and useful tools available. These typically take the form of a financial contract with a currency provider, and contain provisions for the settlement of funds in the future according to an agreed upon formula. Before the choice is made on which financial tool is to be used in curbing the foreign exchange risk exposure the following factors have to be considered;

- First hedge usefulness: The most important factor in selecting a risk management tool is whether it truly reduces or eliminates the targeted exchange risk which the company is or will be exposed to. Not only must the instrument match the currency and timing of the underlying business requirement, but it should also offer a clearly defined protection level against currency movement. Understanding the potential impact of these events is absolutely important in managing risk effectively.

- Second consideration is on assurance as to how the strategy will serve the purpose. Certain hedging instruments require a commitment to exchanging funds at some point in the future, and should only be placed against exposures that carry a high probability of realization so as to avoid the possibility of loss due to the funds used in the exchange of funds.

- Third consideration is on timing flexibility: This is all about the actual time placed or used strategy will take in making the protected cash flow become available in business flow. Forward based tools are priced according to interest rate differentials, making them more flexible than is often realized. Decision on whether to hedge should not be influenced by timing uncertainty, but deciding which instrument to use should be in the trading environment of the company.
Fourth consideration is on how the company will participate in the financial market at the time it hedges its cash flow: A strong hedging program may prove to be a short term competitive disadvantage if exchange rates are moving favourably. Accordingly, most businesses prefer to retain some exposure in the event that markets trend in the right direction.

Fifth consideration is on the company accounting treatment of the cash flow fluctuation brought by the strategy:

Often, hedging instruments actually streamline accounting procedures and reduce reporting complication, but there are instances where this is not the case. Factoring in the accounting implications of an instrument can help to optimize strategies and reduce the possibility of complications down the road.

Sixth consideration is on credit requirements:

Some hedging tools used in curbing the foreign exchange exposure may require the company to find financial source out of its operation that it becomes available at the time of settlement. Due to the possibility of negative market movements, many hedging instruments carry the potential to affect corporate credit arrangements or cash positions. These situations must be known to the firm so as to provide a broader base in determining which tool is most appropriate for the company and its trading environments.

The last consideration is on the complexity of the strategy chosen: When all other factors have been considered, choosing the least complicated instrument has clear advantages. A comprehensive understanding of the mechanics of the product can help to understand how it will perform over its lifetime, and can be valuable when financial decision makers have to express the benefits of a particular strategy at the senior leadership level and beyond.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter comprises of the methodological framework of the study and outlines the research design, study area and population, sampling technique, methods of data
collection and data analysis. This was a case study of which the unit studied was Davis and Shirtliff Company Limited located in Arusha Tanzania. Contrary to other approaches, the case study approach starts with research questions, data collected and analysed and answer the research questions.

3.2 Research Design
This was a case study approach of which the one-short case study was used to measure how the event has affected a particular group on the observations to be made (Ndunguru, 2007). As for this study, the assessment was on management of foreign exchange risk by Davis and Shirtliff Company Limited. The approach was adopted since it is flexible and will offer an in-depth analysis of the data collected. Furthermore, the case study creates conducive environment for utilizing together variety of research tools including questionnaire, interviews and review of documents. The descriptive and analytical approaches were employed together with descriptive approach to enable gaining the understanding of the subject at one point in time or at varying times for comparative purposes. The analytical approach is for emphasizing on the logic of deductive orientations and reliability of data. (Ndunguru, 2007)

3.3 Study area
This study on the management of foreign exchange risk, a case study of Davis and Shirtliff Company, was conducted in Arusha Tanzania where the mentioned company is located. The company conducts its trading activities internationally which involves transacting in foreign currencies with different suppliers in different countries around the world and also in local currency namely the Tanzania shilling.

3.4 Study Population
The study mainly focused on Davis and Shirtliff Company Limited trade where there was an involvement of payments and receipts denominated in local and foreign currency mostly being Euro and Tanzanian shillings. The existence of exchange rate unpredictability lead to the need of managing the risk involved. The population being
the industries that are participating in the international trade with the involvement of foreign currency in their cash flows.

3.5 Sampling Techniques

There are two types of sampling techniques, probability sampling where each element in a population is randomly selected when constituting a sample and has a known, non-zero chance of being selected. And non-random sampling which is technically explained as the chance for each element in a population to be unknown and for some elements is zero (Riley, 2000).

The sample was selected from a sample size of 30 industries that are participating in international trade with the involvement of foreign currency in settling or receipt from their trading activities. Where the selected sample size was dully representative, complete and with no repetition, the study employed different types of sampling procedures depending on the group to get data from. Purposive or judgmental sampling method was used so as to obtain the required firm being Davis and Shirtliff Company Limited which is believed to have the capability of delivering the required data for the study due to its participation in international trade and its receipt and payments it makes in foreign currencies. The sample of firm was chosen from the identified population of firms using the purposive sampling technique to obtain the one that covers the required contents.

3.6 Methods of data collection

Both qualitative and quantitative methods of data collection were employed to collect both primary and secondary data.

3.6.1 Collection of Primary data

The method employed in the collection of primary data for the study was use of questionnaire and interview. A questionnaire was distributed, filled and collected. The use of interview method was to obtain additional information which the questionnaire could not cover. A questionnaire with series of questions was formulated on the management of foreign exchange risk and administered to the firm’s official mainly the accountant in order to obtain the required data for this particular study.
3.6.2 Collection of Secondary data

The secondary data that was reviewed was from Davis and Shirtliff Company. It was the price book indicating how amounts and charges are made to customers during a prevailing period for the exchange rate that has to remain constant for the usage by the customer who has paid 70% of his/her order.

3.7 Methods of data analysis

The data collected from interviews, questionnaire and documents were carefully summarized and analysed such that they meet the objectives of the study and facilitated drawing up of the conclusion and recommendation of the study. The main analytical methods used for quantitative data included descriptive statistical method such as tables, percentage and narrative analytical methods. Qualitative analysis was used to analyse respondents’ opinions but this was used in a very limited form.
CHAPTER FOUR
RESEARCH FINDINGS AND DISCUSSIONS

4.1 Introduction
This chapter presents the results and discussions on the study as per the information gathered from Davis and Shirtliff Company which is the case study regarding foreign exchange risk management.

The study aimed at assessing the management of foreign exchange risk by Davis and Shirtliff Company Limited. The objectives of the study were: to establish the extent to which the company is exposed to foreign exchange risk, to determine the effect of foreign exchange risk on the company revenues and profitability, find out how Davis and Shirtliff Company Limited manages foreign exchange risk and ascertain the effectiveness of risk management method(s) used by Davis and Shirtliff Company Limited.

4.2 Findings and Discussions
4.2.1 The extent to which the company is exposed to foreign exchange risk
The company in its trading deals with different suppliers from different countries across the world. Some of the suppliers are from European countries such as Denmark, Germany, England, Italy and Sweden. Other suppliers are from United Arab Emirates, United States of America and South Africa. The supplies from companies that are located in European countries with the exception of England, the major currency used by Davis and Shirtliff company in settling the cost of the purchases made is Euro. With England the currency used is the Sterling Pound. But most of the company’s imports are from Europe where Euro is the trading currency.

For the purchases that are made outside Europe the United States Dollar is the trading currency the company uses in settling its debts. The payments Davis and Shirtliff Company Limited makes to its suppliers for the supplies made to the company from abroad are in any of the mentioned currencies depending on how the
supplier may require to be paid at the time of trading with the company. Every time the company settles its trading costs with different outside suppliers in foreign currencies, it exposes itself to foreign exchange risk since payments that are made need to be converted from the Tanzanian shillings to the trading currency at the prevailing or agreed exchange rate between the two parties. In table 4.1 different suppliers are shown with their trading currency which is used by the company in settling the costs of purchases. Hence the company has to use the indicated currency to pay the supplier.

Table 4.1: Major foreign purchases by Davis and Shirliff Company Limited

<table>
<thead>
<tr>
<th>COMPANY NAME</th>
<th>PRODUCTS</th>
<th>AMOUNTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRUNDFOS</td>
<td>PUMPS</td>
<td>USD 65,000</td>
</tr>
<tr>
<td>PEDROLLO</td>
<td>PUMPS</td>
<td>EURO 80,000</td>
</tr>
<tr>
<td>LISTER PETTER</td>
<td>GENERATORS</td>
<td>EURO 72,000</td>
</tr>
<tr>
<td>DYLFF</td>
<td>PUMPS</td>
<td>EURO 90,000</td>
</tr>
<tr>
<td>SOSAF</td>
<td>WATER TREATMENT</td>
<td>USD 97,000</td>
</tr>
<tr>
<td>DAVEY</td>
<td>BOOSTER PUMPS</td>
<td>EURO 75,000</td>
</tr>
<tr>
<td>KSB &amp; NASTEC</td>
<td>BOREHOLE PUMPS</td>
<td>EURO 120,000</td>
</tr>
<tr>
<td>ELEMEX</td>
<td>GENERATORS</td>
<td>EURO 70,000</td>
</tr>
<tr>
<td>COOPER</td>
<td>GENERATORS</td>
<td>EURO 72,000</td>
</tr>
<tr>
<td>STECA</td>
<td>SOLAR FRIDGES</td>
<td>EURO 90,000</td>
</tr>
<tr>
<td>MAPRO</td>
<td>AIR BLOWERS</td>
<td>EURO 100,000</td>
</tr>
<tr>
<td>QUALITY POOL</td>
<td>POOL PUMPS</td>
<td>USD 150,000</td>
</tr>
</tbody>
</table>

Source: Davis & Shirliff purchase records (2010).

From the data in Table 4.1 on the major purchases made by the company, among 12 suppliers from whom Davis and Shirliff is purchasing from 9 suppliers from that total require their settlement to be in Euro which implies that around 75% of the total payments made by the company are in Euro and 25% in other foreign currencies.

In response to the submitted questionnaire, the accountant who was the respondent stated that the company quotes majority of its product prices in Tanzanian Shillings (Tshs) while reflecting the exchange rate of Euro since it is the most used currency
by the company. Where there are fluctuations on the Tshs to Euro rate, reflection of the price to the products is also affected since the company has no immediate flexible rate that it can use at once upon the occurrence of fluctuations. The risk the company faces is that, at a certain point in time during its trading, it does sell its products at a lower price than what it could actually fetch in its proposed price trading.

Though the company accepts other major currencies when customers are making payments, it still finds itself at a point where concentration has to be on its major trading currency being Euro because the budgeted sales are dominated by the Euro as the major foreign currency Davis and Shirtliff uses.

4.2.2 The effect on the company revenue and profit due to foreign exchange risk.

It is well known that the effect from foreign exchange risk is on the final income of the company. These effects to the company reduce the expected revenue which had been forecasted by the company. Losses are sometimes observed at different times were changes in the exchange rates vary against the company’s position. One of the effects of foreign exchange risk to the company is the additional cost to the company for capacity building for its people who are solely responsible for the management of foreign exchange risk at all times on its occurrence.
Table 4.2 below shows different types of products and their prices in Euro currency.

**Table 4.2 Price Levels in First Quarter’s Purchases (January to March) 2012**

<table>
<thead>
<tr>
<th>S/NO</th>
<th>DESCRIPTION</th>
<th>NETT (EURO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2088 12V DC High flow surface pump</td>
<td>1,950.00</td>
</tr>
<tr>
<td>2</td>
<td>Dynaflo 62101.6 kW 1ph</td>
<td>2,500.00</td>
</tr>
<tr>
<td>3</td>
<td>Jetplus JY 350 0.53 kW 1ph</td>
<td>2,700.00</td>
</tr>
<tr>
<td>4</td>
<td>Davey Torrium 1.8 kW 1”</td>
<td>4,000.00</td>
</tr>
<tr>
<td>5</td>
<td>High Pressure 5165B Briggs &amp; Stratton</td>
<td>390.00</td>
</tr>
<tr>
<td>6</td>
<td>Multistage Centrifugal Pump WKLn</td>
<td>550.00</td>
</tr>
<tr>
<td>7</td>
<td>CU 200 control kit</td>
<td>900.00</td>
</tr>
<tr>
<td>8</td>
<td>Lister petter 4.5kva generator 1phase</td>
<td>1,230.00</td>
</tr>
<tr>
<td>9</td>
<td>Opti SP 1200 12VDC Hybrid Inverter</td>
<td>7,300.00</td>
</tr>
<tr>
<td>10</td>
<td>Elemax generator sh 7600ex 6.5kva</td>
<td>2,070.00</td>
</tr>
<tr>
<td>11</td>
<td>Dayliff 80w multicrystalline solar panel</td>
<td>190.00</td>
</tr>
<tr>
<td>12</td>
<td>Izzy 350W 12VDC Inverter</td>
<td>300.00</td>
</tr>
<tr>
<td>13</td>
<td>IO 102 switch box for H80</td>
<td>1,400.00</td>
</tr>
<tr>
<td>14</td>
<td>CRFlex 10-2 pump</td>
<td>885.00</td>
</tr>
<tr>
<td>15</td>
<td>Quality qp6 1.1kw pool pump</td>
<td>359.00</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL COSTS (EURO)</strong></td>
<td><strong>26,724.00</strong></td>
</tr>
</tbody>
</table>

Source: Davis and Shirtliff price book (March, 2012).

These products as per table 4.2 were purchased by the company in Euro when the exchange rate was €1- 2,000 Tshs. This implied that, for the company to gain from business trading the exchange rate had to be higher than the one they used to purchase with. The accountant stated that, “The exchange rate went down to as much as €1- 1,995 Tshs. The company’s month revenue was affected due to that change.”

In a plain calculation it would mean that, € 26,724 when the exchange rate was 1€ - 2,000 Tshs, the company could earn Tshs 53,448,000 million. But due to the fall of the exchange rate to €1 – 1,995 Tshs the revenue became Tshs 53,314,380. This implies a fall of revenue by 0.25% equivalent to Tshs 133,620.
At times when the exchange rate is high different from the one at the time of making purchases, revenue outcome from the sales will also change. The accountant affirmed that, “Some purchases were made at the time the exchange rate was €1 – 2,250 TShs. When it reached the time of selling, the Euro rate against Tanzanian shilling had shot up to 2,400 TShs per 1 Euro. The company benefited from the projections we had at the time we were purchasing the goods.” Table 4.3 below shows the comparison of the purchases of the first and second quarter.

Table 4.3 Price levels in second quarter’s purchases (April to June) 2012

<table>
<thead>
<tr>
<th>S/NO</th>
<th>DESCRIPTION</th>
<th>NETT(EURO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Wind Turbine 400W 12V c/w controller</td>
<td>2,337.00</td>
</tr>
<tr>
<td>2</td>
<td>Solar lighting kit 12W amorphous</td>
<td>3,130.00</td>
</tr>
<tr>
<td>3</td>
<td>Apple 5A c/w cable set</td>
<td>3,839.00</td>
</tr>
<tr>
<td>4</td>
<td>TPS 545-5A Charge Controller</td>
<td>4,590.00</td>
</tr>
<tr>
<td>5</td>
<td>Solar Battery 50Ah</td>
<td>433.00</td>
</tr>
<tr>
<td>6</td>
<td>HUB1 Integrated Cable</td>
<td>554.00</td>
</tr>
<tr>
<td>7</td>
<td>Leader Euro swim 50M 0.33 kW 1ph 10m³/hr</td>
<td>918.00</td>
</tr>
<tr>
<td>8</td>
<td>Certkin 63mm Gutter Drain</td>
<td>1,419.00</td>
</tr>
<tr>
<td>9</td>
<td>8No jet standard spa tub</td>
<td>7,845.00</td>
</tr>
<tr>
<td>10</td>
<td>10” Wound Polypropylene Yarn</td>
<td>2,295.00</td>
</tr>
<tr>
<td>11</td>
<td>Alldos DDC 6-10 6 liters'/hr/10 bar</td>
<td>210.00</td>
</tr>
<tr>
<td>12</td>
<td>Dosatron D 25 Adjustable dozer 2.5m 3range</td>
<td>315.00</td>
</tr>
<tr>
<td>13</td>
<td>Buccaner standard unit</td>
<td>1,652.00</td>
</tr>
<tr>
<td>14</td>
<td>Optisperse ADJ 5150 23kgs</td>
<td>918.00</td>
</tr>
<tr>
<td>15</td>
<td>Leader EBS 800 Booster 0.8 kW 1ph</td>
<td>359.00</td>
</tr>
<tr>
<td></td>
<td>TOTAL COSTS (EURO)</td>
<td>30,814.00</td>
</tr>
</tbody>
</table>

Source: Davis and Shirliff price book (June, 2012).

A simple calculation shows that, the projected revenue per product in table 4.2 when the exchange rate was €1 – 2,050 TShs was (€30,815 x 35% Mark-up x 2,050Tshs) the revenue would be Tshs 85,277,745 millions. But due to the favourable fluctuations to 1€ - 2400 Tshs the resulted revenue (€30,814 x 35% Mark-up x
2400Tshs) is TShs 99,837,360 million. The result is an average increase of 14.58% on the company revenue from the estimation.

4.2.3 Managing of foreign exchange risk.
Since majority of the company’s dealings are in foreign currency denomination, the company has developed the use of supplier’s currency as a means of managing the foreign exchange risk the company faces from its dealings. Table 4.4 below shows the selected products whose price is charged as per the supplier’s currency.

Table 4.4 Prices of Products as per Supplier’s Currency being Euro.

<table>
<thead>
<tr>
<th>S/NO.</th>
<th>DESCRIPTION</th>
<th>PRICE (€)</th>
<th>VAT 18%</th>
<th>PRICE(€)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Day Liff pH Plus 3kg</td>
<td>14.00</td>
<td>2.52</td>
<td>16.52</td>
</tr>
<tr>
<td>2</td>
<td>Day Liff Algicure 5L</td>
<td>19.00</td>
<td>3.42</td>
<td>22.42</td>
</tr>
<tr>
<td>3</td>
<td>Day Liff Magic Touch 2L</td>
<td>25.00</td>
<td>4.5</td>
<td>29.5</td>
</tr>
<tr>
<td>4</td>
<td>Day Liff Anti Stain 5L</td>
<td>10.00</td>
<td>1.8</td>
<td>11.8</td>
</tr>
<tr>
<td>5</td>
<td>Chlorine 5kg</td>
<td>20.00</td>
<td>3.6</td>
<td>23.6</td>
</tr>
<tr>
<td>6</td>
<td>Flocculants 5kg</td>
<td>9.00</td>
<td>1.68</td>
<td>10.62</td>
</tr>
<tr>
<td>7</td>
<td>Clear Blue HTH</td>
<td>8.00</td>
<td>1.44</td>
<td>9.44</td>
</tr>
<tr>
<td>8</td>
<td>EcoSalt BMSC20 120w 20gm/hr</td>
<td>1276.00</td>
<td>229.68</td>
<td>1505.68</td>
</tr>
<tr>
<td>9</td>
<td>EcoSalt BMSC26 160w 26gm/hr</td>
<td>2152.00</td>
<td>387.36</td>
<td>2539.36</td>
</tr>
<tr>
<td>10</td>
<td>EcoMatic ECSC40 360w 40gm/hr</td>
<td>2424.00</td>
<td>436.32</td>
<td>2860.32</td>
</tr>
</tbody>
</table>

Source: Davis and Shirtliff quotations (June, 2012).

From table 4.4, the respondent stated that, “The price to the customer requiring those products will have to be in Euro. The prices of the products in the table have been added the mark-up of 35 per cent to cover the costs and profit of the company before tax is charged.” Were the prices where quote in Tshs at a particular exchange rate, it would have meant that any variation in the exchange rate would also cause changes in the company’s projection. By them quoting the price of these products in Euro implies that at any variation of the exchange rate between Tshs to Euro, what was projected will be obtained at full amount and there will be no risk of losing anything due to the effects of foreign exchange rate.
Also in the process of managing the risk brought by the fluctuations of exchange rates, the company has developed a means to which the financial and procurement departments at the company becomes fully responsible in each of the company’s foreign currency dealings, how foreign exchange risk will affect the company and how it should be managed.

The accountant at the company stated that, “Before an order of supplies is made by the procurement unit, the head of procurement has to conduct a market survey to know the prevailing prices in the outside market in foreign currencies for the supplies the company requires. He/she will consult the finance department to obtain the exchange rate situations of the trading currencies for the prices presented. From there he/she will find the currencies with fewer fluctuations so as to reduce the risk from the changes of the exchange rate. The finance department has to choose the currency with less fluctuation so as to avoid risk on the exchange rate fluctuations and then advise the procurement department accordingly”.

4.2.4 The technique used in managing foreign exchange risk.

In managing the foreign exchange risk the company uses invoicing currency. The respondent stated that the company uses invoice currency as the technique of managing foreign exchange risk arising from the foreign currency dealings”. Other hedging tools such as swaps, options and forward contracts require a financial intermediary who has to connect between the parties that are trading. Such an intermediary can be a bank which has to be paid a commission. This will be an additional expense to both parties. With the use of invoicing currency, no intermediary is needed and it only requires the supplier or the trader to fix the price of the products with the reflection to the chosen foreign currency or use the foreign currency in his or her trading.

The use of invoicing currency in hedging foreign exchange risk as an operational strategy is used due to the fact that it provides flexibility to the company to change as to how the trading environment may change in the company dealings. Such ability of flexibility is not found in other hedging strategies that require the use of financial
markets. This technique of invoicing currency in curbing foreign exchange risk gives Davis and Shirtliff Company the ability to choose between the options of sharing the risk effects or shifting the whole risk to the final consumer who pays it through the established price found on the products.

Davis and Shirtliff Company Limited sold submersible pump together with air pressure cylinder to Asilia Lodges and Camp Company Limited which operated in Ngorongoro and Serengeti national park. The cost of the submersible pump was 350 Euros and the air pressure cylinder was 96 Euros. Both prices were as at their price tags at the company’s outlet.

The choice on the mode of payment by the customer to the company for the goods bought can be any of the following alternatives. The first alternative was for customer Asilia Lodges and Camp Company Limited to go in the exchange rate market and buy the Euro then come and pay in Euro. Alternative number two was for Asilia Lodges and Camp Company Limited to buy directly from the company’s shop outlet at the price indicated or in Tanzanian shilling which is derived from the exchange rate between Euro and Tanzanian shillings. But the exchange rates set by the company are at the average rate which is determined by the company officials and it lasts for a period of two weeks. At the time of the effect of this transaction, the trend of the exchange rate between Euro and Tanzanian shillings was as follows.

Table 4.4: Market exchange rate against Company’s average rate

<table>
<thead>
<tr>
<th>DURATION</th>
<th>TSHS PER EURO RATE</th>
<th>AVERAGE RATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>28 FEB – 12 MARCH 2011</td>
<td>2082</td>
<td>2100</td>
</tr>
<tr>
<td>14 MARCH – 26 MARCH 2011</td>
<td>2078</td>
<td>2098</td>
</tr>
<tr>
<td>28 MARCH – 9 APRIL 2011</td>
<td>2080</td>
<td>2110</td>
</tr>
<tr>
<td>11 APRIL – 30 APRIL 2011</td>
<td>2090</td>
<td>2110</td>
</tr>
</tbody>
</table>

Source: Davis and Shirtliff Company Limited sales records May, 2011

The transaction went through at an average rate of 2,110 TShs per Euro on 8th April 2011 since the company wanted to enjoy the service of free delivery of the goods.
they had bought. By the use of that rate, the company had freed itself from the effects on the variations of exchange rate between Euro and TShs. The risk was born by Asilia Lodges and Camp Company Limited since the company’s projected cash flow was met while the Asilia Lodges and Camp Company Limited had to incur the effects of the exchange rate volatility. Missing the projected cash flow had turned to the customer who was Asilia Lodges and Camp Company Limited. The table below shows different prices of the products that were quoted in Tshs in relation to Euro currency are listed.
Table 4.5 Prices of Products in Relation to Euro

<table>
<thead>
<tr>
<th>S/NO</th>
<th>DESCRIPTION</th>
<th>NET (TSHS) 1 Euro – 2090 Tshs</th>
<th>NET (TSHS) 1Euro – 2100 Tshs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Elemax generator sh 7600ex 6.5kva</td>
<td>7,163,700</td>
<td>7,198,000</td>
</tr>
<tr>
<td>2</td>
<td>Quality qP6 1.1kw pool pump</td>
<td>9,599,400</td>
<td>9,605,200</td>
</tr>
<tr>
<td>3</td>
<td>Grundfos sp14a-18 pump c/w 5.5kw motor</td>
<td>11,673,300</td>
<td>11,729,200</td>
</tr>
<tr>
<td>4</td>
<td>Opti 4000w 48vdc inverter charger</td>
<td>13,798,900</td>
<td>13,865,000</td>
</tr>
<tr>
<td>5</td>
<td>DAYLIF 120w multicrystalline solar panel</td>
<td>1,080,400</td>
<td>1,085,600</td>
</tr>
<tr>
<td>6</td>
<td>India mark II hand pump 18m complete</td>
<td>1,315,300</td>
<td>1,321,600</td>
</tr>
<tr>
<td>7</td>
<td>Pedrollo Easypress 1.5 kW 1”</td>
<td>2,043,400</td>
<td>2,053,200</td>
</tr>
<tr>
<td>8</td>
<td>Lister petter 4.5kva generator 1phase</td>
<td>3,640,500</td>
<td>3,658,000</td>
</tr>
<tr>
<td>9</td>
<td>Sololift2 WC-3 Pump 0.62 kW 1ph</td>
<td>23,616,800</td>
<td>23,729,800</td>
</tr>
<tr>
<td>10</td>
<td>Bareshaft Petrol engine pump 5.5HP</td>
<td>6,905,300</td>
<td>6,938,400</td>
</tr>
<tr>
<td>11</td>
<td>Dayliff 80w multicrystalline solar panel</td>
<td>372,270</td>
<td>374,060</td>
</tr>
<tr>
<td>12</td>
<td>Hydroflo VFD Pump VGM 2-6/25</td>
<td>556,650</td>
<td>559,320</td>
</tr>
<tr>
<td>13</td>
<td>Submersible Well Pump 4Skm 100E 0.75 kW</td>
<td>5,543,000</td>
<td>5,569,600</td>
</tr>
<tr>
<td>14</td>
<td>Davey Power Master 450 1.8 kW 1ph/3ph 28m³/hr</td>
<td>2,654,100</td>
<td>2,666,800</td>
</tr>
<tr>
<td>15</td>
<td>Drainage Pump Top Vortex 0.37 kW</td>
<td>916,000</td>
<td>920,400</td>
</tr>
</tbody>
</table>

Source: Davis and Shirtliff price book (June, 2012)

Prices shown in table 4.4 were derived from the exchange rate of 1 Euro – 2,090 TShs for the first column prices from the left at the time of purchasing the products. But the second column price far right, prices are quoted at 1 Euro – 2,100 TShs which is after the review of the exchange rate on the selling period. The use of TShs comes to effect only at times when the exchange rate of Euro to TShs is seen to have stabilized in a period of two weeks.

The exchange rate of €1 - 2100Tshs, which is an average rate, is valid for a period of 14 – 21 working days. The accountant stated that, “the extension of days for the exchange rate is possible only if the customer pays 70 per cent of the costs for the products at the time of making the order”.

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In order to stimulate sales of the company, Davis and Shirtliff Company Limited had developed a policy of allowing customers to pay in instalments for the products they wish to buy. The accountant stated that, for that policy to workout, at the time of placing their order, they must pay an amount which is equal to 70% of the total cost of the product for that order to be considered to be valid. The remaining costs of the product which is amounting to 30% of the total cost should be cleared not later than two weeks from the date when the first one was paid. This situation of allowing the customer to place and pay the order’s initial costs amounting to 70% of the total costs is valid to the company to stay active only for a period of fourteen working days, Monday through Saturday as on count.

If the customer has to transact, a transaction that involves the use of exchange rate, the used exchange rate that will be used for a period of fourteen working days will also be subjected to the similar means of payments. But after the fourteen working days have passed the exchange rate will not continue to serve the customer under that similar contract between the customer and the company, being Davis and Shirtliff Company Limited.

The effect that may result from this type of sale agreement between Davis and Shirtliff and the customer will be absorbed by any of the party provided the sale agreement goes through. Consider the following information for the transactions that were contracted between Davis and Shirtliff Company Limited with different customers.
Table 4.6: Tshs per Euro Exchange Rates used on Sale Agreement

<table>
<thead>
<tr>
<th>Date</th>
<th>Exchange rate at the date of agreement (Tshs against Euro)</th>
<th>Exchange rate at the time of settling the transaction (Tshs against Euro)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/03/2009</td>
<td>2030</td>
<td>2028</td>
</tr>
<tr>
<td>08/06/2009</td>
<td>2034</td>
<td>2036</td>
</tr>
<tr>
<td>30/07/2009</td>
<td>2040</td>
<td>2039</td>
</tr>
<tr>
<td>14/12/2009</td>
<td>2032</td>
<td>2042</td>
</tr>
<tr>
<td>25/01/2010</td>
<td>2038</td>
<td>2045</td>
</tr>
</tbody>
</table>

Source: Davis and Shirtliff Company Limited sales records

On 10/03/2009, Davis and Shirtliff Company Limited entered into a sale agreement with Karam Engineering for the supply of four DGLT 5 5.8 kVA 3 ph Electric start generators at a price of 1,230 Euros each totalling to 4,920 Euros at an exchange rate of Tshs 2,030 per one Euro. The total costs of the supplies in TShs was 9,987,600/- in which Tshs 6,991,320/- was paid on the date of transaction as a 70% value. The remaining amount of Tshs 2,996,280 as the remaining 30% of the sale agreement was paid on the last date of the agreed period. But when the date of settling the balance the exchange rate had dropped to Tshs 2028 per Euro which if could be used could result to a drop of revenue to Davis and Shirtliff Company Limited. The use of invoicing currency as the hedging strategy helped the company to benefit by obtaining what they had projected as their revenue.

The transaction which took place on 30/07/2009 between Davis and Shirtliff Company Limited and Naura Springs hotel for the supply of water treating chemicals and pool pumps at a total cost of 700 Euros, saw the company’s cash flow was protected from the effects of exchange rate volatility due to the sale agreement they had entered with the hotel for the payment of the supplies. At the time of sale exchange rate between Tshs and Euro was Tshs 2040 per Euro. But later when the transaction was settled the exchange rate had fallen to Tshs 2039 per Euro.

A different scenario happened on 25/01/2010 due to the use of the sale agreement. Davis and Shirtliff Company Limited had entered into an agreement of selling 25
drainage pumps to A to Z Company Limited at a total cost of 9,000 Euros at an exchange rate of Tshs 2,038 per Euro. In Tanzanian shillings the total amount was 18,342,000/. The 70% of the amount was paid which was 12,839,400/- and 5,502,600 remained as 30% to be cleared before the sale agreement date had come to an end. Unfortunately on the date of settling the amount due, the exchange rate had shifted up to Tshs 2,045 per Euro. This meant that A to Z Company limited was paying for the product at the cost less than what it could actually cost on that date. If the exchange rate was used for that exchange rate, Davis and Shirtliff Company Limited would collect the following revenue (9000 X 2045 = 18,405,000. The 70% of it would be 12,883,500 and the remaining 30% would be 5,521,500) the effect to the company revenue was a receipt of an amount with TShs 18,900 less.

With these different effects to Davis and Shirtliff Company Limited, the use of this sale agreement is considered to be sale stimulating factor while the company continues to use invoicing currency.

The company tries to update each price of the products bought in foreign currency so as to match the actual changes to the present currency situation. This makes the company to be in a position of avoiding risks that might rise due to rise or fall of the exchange rate. The respondent stated that, invoicing currency is their only technique they use in managing foreign exchange risk and there are no future plans of changing to any other technique that prevails. This was said so because of the experience the company has obtained from the use of invoicing currency as the method of hedging against foreign exchange risk. According to the respondent some losses have been observed but it is found to be the technique with less costs incurred deploying it. The technique according to the respondent is regarded to be suitable due to its flexibility in various situations of currency fluctuations that come to existence.

Since the company has set invoicing currency as its main or only tool for protection against foreign exchange risk, it can be said that the risk is being observed by the company and it has the managing technique set to curb the effects of foreign exchange risks on the company’s financial operations.
Khaas Hai 2011 stated that, when hedging with invoice currency as a means of protecting oneself from risks of foreign exchange the firm can share, shift or diversify the exchange risk by appropriately choosing the currency of invoicing. A firm can avoid the exchange risk by invoicing its products using the domestic currency hence shifting the whole risk to the buyer. The sharing of risk is only and only done by large firms with large financial powers so as not to lose the sale competition. From what was obtained from the accountant, the company shifts the risk to the final buyer by having him or her pay the price proportional to the prevailing exchange rate for that particular product.

From the research it is evident that the company though it incurs costs, it is able to know the extent to which risks from foreign exchange affects its business financial dealings and revenue to the company.

4.2.5 Effectiveness of risk management method used

The major objective of hedging using any strategy is to eliminate or reduce the effects of exchange risk on company’s cash flow. With Davis and Shirtliff Company Limited hedging their cash flows using invoicing currency as their hedging strategy, the purpose served by the strategy is seen on the reduction of the effects of foreign exchange risk on company’s cash volatility. This was observed in the transaction between Davis and Shirtliff Company Limited and Mount Meru Flowers on the supply of 4HS 06/04 submersible borehole pump 2.2 kW 1ph for water supply to the company’s flower plantations.

The price for the pump was €1700. The exchange rate was €1 – 2040 Tshs. But Mount Meru Flowers bought the product by paying in instalments using the average rate of €1 – 2065 Tshs. At the time of settling the final amount for as the cost of the product, the exchange rate had gone to €1 – 2068 Tshs. Due to the exchange rate fluctuations the company had reduced the cash flow effect of 3 Tshs differential per 1 € using their hedging strategy. The respondent stated that, ‘the use of invoicing currency in hedging their cash flows provides them a room to still adjust themselves
to be able to compete in securing more customers. Other strategies require a company to enter into fixed contracts which in the end will not allow possible price adjustments’.

But it was noted that, the company is in the process of establishing a system where in case of any exchange rate differential which is favouring the but not the customer at large, there will be negotiations between the company and those prominent customers so as to reach a suitable agreement on the exchange rate to be used. The following information in table 4.7, provides the gains and loss the company faced on the usage of invoicing currency as the hedging tool.

Table 4.7 The effectiveness of the hedging tool.

<table>
<thead>
<tr>
<th>ITEMS</th>
<th>PRICE AFTER PURCHASE AND ITS’S EXCHANGE RATE</th>
<th>PRICE ON THE SELLING DAY AND IT’S EXCHANGE RATE</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borehole Pump</td>
<td>200,000 or 98 Euros 1€ = Tshs 2040</td>
<td>200,900 or 98 Euros 1€ = Tshs 2050</td>
<td>+ (Gain to the company due to exchange rate movement)</td>
</tr>
<tr>
<td>Elemax Generator</td>
<td>700,000 or 335 Euros 1€ = Tshs 2090</td>
<td>702,830 or 335 Euros 1€ = Tshs 2098</td>
<td>+ (Gain to the company due to exchange rate movement)</td>
</tr>
<tr>
<td>Photo Voltaic Solar panel</td>
<td>1,495,000 or 723 Euros 1€ = Tshs 2068</td>
<td>1,478,535 or 723 Euros 1€ = Tshs 2045</td>
<td>- (Loss due to unfavorable exchange rate movement)</td>
</tr>
<tr>
<td>Chlorine 65% HTH</td>
<td>350,000 or 169 Euros 1€ = Tshs 2075</td>
<td>351,520 or 169 Euros 1€ = Tshs 2080</td>
<td>+ (Gain to the company due to exchange rate movement)</td>
</tr>
<tr>
<td>Alldos Chemical Dosing Pumps</td>
<td>3,000,000 or 1,434 Euros 1€ = Tshs 2092</td>
<td>3,011,400 or 169 Euros 1€ = Tshs 2100</td>
<td>+ (Gain to the company due to exchange rate movement)</td>
</tr>
</tbody>
</table>

Source: Davis and Shirtliff sales records (June, 2011)

From the above table, in the trading days or period were exchange rate movement had gone favourably to the company position, will mean a gain to the company. The prices that were set after the purchase of the products using the prevailing exchange rate had some changes at the time of selling of the product due exchange rate movement. An increase in exchange rate being 1€ = Tshs 2100 at the time of selling compared to 1€ = Tshs 2092 one on the day of purchasing led to a gain to the company. Different from that, loss was observed due to the decrease of exchange rate
being $1€ = Tshs 2045$ at the time of selling of the product compared to $1€ = Tshs 2068$ which was at the time after the purchase was made. Gains or losses to the company due to the use of this hedging technique a subject to how the exchange rate will move and what is the company position on its trading.
CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions
The objective of the study was to assess the foreign exchange risk management for Davis and Shirtliff Company Limited in Arusha, Tanzania. The study finding shows that the company does face transaction exposure being the foreign exchange risk to the company due to changes of exchange rates from its foreign dealings in Euro as its major trading foreign currency. The act of the company of centralizing management of foreign exchange risk enables it to determine its variations of cash flows and currency positions of the company at any moment of trading.

On the extent to which the company is exposed to foreign exchange risk it was found out that around 75% of the payments made by the company were dominated in Euro which means effects on exchange rate between Tshs to Euro brings cash flow problems to the company. The company should try to establish a means of deviating from the use of one currency in that extent.

Regarding the effect of foreign exchange risk on company’s revenue, the company should revise its sales procedures so as to establish new standards such as variation on the agreed exchange rate so as to avoid total effects of the exchange rate on their cash flows.

The company should also try to use another technique in curbing foreign exchange risk at the same time with their present technique so as to measure the performance of the two methods in the same period. This will help the company to know as to how effective is the chosen method compared to the other.

The presence of written policy in any company regarding the management of foreign exchange risk implies that, there is a specific hedging technique that is used and provides benefits to the company as expected. As for the company invoice currency is considered to be the only technique to use that provides what the company expects. A foreign exchange risk to a company raises the need of the company to use any technique it finds fit and suitable in the management of the risk. Any company will
hedge the financial risks it faces as to how it prefers or finds it suitable without affecting its business operations. However there are variations of cash flows to and from the company due to the unexpected variations that the hedging method cannot curb. Through hedging foreign exchange risk companies can reduce any loss that could have affected the company’s revenue in the safest way than handling currency risk through the act of speculating the currency movement.

5.2 Recommendations

- The company should explore other different hedging techniques that are available for combating foreign exchange risk other than the only one they set up being Invoicing Currency.

- The company should outsource the services of managing foreign exchange risk to a financial institution such as a bank since banks have first track information when it comes to foreign exchange fluctuations. When it comes to information on foreign exchange, the bank is believed to have more and more information than any other party that has dealings in foreign currency. Banks are the ones with earliest information on currency fluctuations than how fast a company can manage to get it. From this situation it is evident that a bank is a very important and capable place for managing the risk that can be identified and measured.

- On the part of sale agreement, the company should add a clause which states that, upon finalizing the payment of the amount due, the exchange rate to be used will be the higher of either the market rate or the one in the agreement.

- The company has employed the present hedging technique for more than 10 years. The method seems to be suitable to the company with no other further thoughts of alteration or adoption of another method. Where possible, there should be consideration of studying other techniques so as to come up with new solutions at a wider horizon level which can be utilized in restructuring plans.

- The BoT has charted regulations for each and every trader in Tanzania to adhere to that is charging the customer in Tshs and none other currency. The
company should consider establishing a policy which will fully enable it to follow such regularities.

The company should be flexible and open minded to consider the usage of other techniques which may be helpful where the company faces new foreign currency dealing different from what it is exposed to at the moment.

The company needs to develop a good foreign exchange risk management policy, to be able to know the level of risk for all the currencies and adapt its policy to effectively manage the risks.

Davis and Shirtliff Company Limited ought to measure its foreign exchange exposure; identify properly all the components of its business that is exposed to foreign exchange risk. Also it should perform a sensitivity analysis, calculate what would happen if one’s currency falls or rises by certain amount against the other currency.

With the company having its own staff in managing the foreign exchange risk seems to be on the safe side but a bank could have been the best part to do that for it. The bank has co-ordination with various banks and financial markets something which can enable the company to obtain tailor made services on the managing of foreign exchange risk.

The firm should also consider establishing a good timeframe for payables and receivables in order to implement the most suited foreign exchange risk management process. Through this a can be able to know if the other available means of managing foreign exchange risk can become applicable to the company than usage of only invoicing currency.

5.3 Suggestions for further research
The choice of hedging technique by the company is determined by what is considered suitable economic conditions that are fit for the company trading
situations. The technique will be guided by the written policy of the company. This calls for further research to investigate on how financial markets both local and international helps Tanzanian firms in determining their hedging level from financial exchange rate unpredictability. The study should go further by also focusing on the aids banks can offer to the companies when deciding on the means to hedge against foreign exchange risk.
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APPENDIX 1

QUESTIONNAIRE FOR DAVIS AND SHIRTLIFF COMPANY - TANZANIA

The information I am seeking for, is purely to help me in my research study and hence it is for academic purposes and not otherwise. Would you kindly assist me by answering the following questions?

Put [✓] where appropriate.

1. What is your position at DAVIS AND SHIRTLIFF COMPANY LIMITED?
   ……………………………………………………………………………………………
   ……………………………………………………………………………………………
   ……………………………………………………………………………………………
   ……………………………………………………………………………………………
   ……………………………………………………………………………………………

2. What is your experience concerning the managing of foreign exchange risk?
   ……………………………………………………………………………………………
   ……………………………………………………………………………………………
   ……………………………………………………………………………………………
   ……………………………………………………………………………………………
   ……………………………………………………………………………………………

3. Does your company have a written policy on how to handle exposure on foreign exchange fluctuations?
   YES [ ] NO [ ]

4. If your answer is NO in the above question, state reasons for not having it.
   ……………………………………………………………………………………………
   ……………………………………………………………………………………………
   ……………………………………………………………………………………………
   ……………………………………………………………………………………………
   ……………………………………………………………………………………………

5. Does the company manage the change in exchange rate fluctuations? YES [ ] NO [ ]

6. If your answer for the above question is YES, state the technique(s) used
   ……………………………………………………………………………………………
   ……………………………………………………………………………………………
   ……………………………………………………………………………………………
   ……………………………………………………………………………………………
   ……………………………………………………………………………………………

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7. Is risk and exposure calculated by the employees in the company? YES [ ] NO [ ]

8. Where your answer is NO in the above question, who calculates them?

9. Who is responsible for managing foreign exchange risk in/for your company?

10. How is the foreign exchange risk managed by the company?

11. Does the company use any technique(s) in managing foreign exchange risk? YES [ ] NO [ ]

12. If the answer is YES, which technique(s) is the company currently using to manage foreign exchange risk?

13. Why did the firm choose to use the technique(s) mentioned?

14. Does the technique(s) offer services as was/were expected? YES [ ] NO [ ]

15. If the answer is YES, state an advantage(s) of it/Them

16. If the answer is NO in question 14, state disadvantages observed/experienced
17. Are there any plans to change the current technique(s) of managing foreign exchange risk to another one in order to manage the foreign exchange risk more smoothly and faster?  
   **YES [ ] NO [ ]**

18. If the answer is YES, what is/are the reason(s) for the change?  
   ………………………………………………………………………………………………………
   ………………………………………………………………………………………………………
   ………………………………………………………………………………………………………
   ………………………………………………………………………………………………………

19. Is/are there any technique(s) you find to be suitable to the company in managing the foreign exchange risk but appears to be too complex?  **YES [ ] NO [ ]**

20. If the answer to the above question is YES, mention them.  
   ………………………………………………………………………………………………………
   ………………………………………………………………………………………………………
   ………………………………………………………………………………………………………
   ………………………………………………………………………………………………………

21. What is/are the indicators that make(s) the techniques suitable?  
   ………………………………………………………………………………………………………
   ………………………………………………………………………………………………………
   ………………………………………………………………………………………………………
   ………………………………………………………………………………………………………

22. How long has your company been using the present technique in managing foreign exchange risk?  
   1 year [ ] 2 years [ ] 3 years [ ] 4 years [ ] Other  
   …………………………………

23. Is the present technique the only one to have been used by the company?  
   **YES [ ] NO [ ]**
24. If the answer is NO, what other technique(s) have they been applied by the company?

…………………………………………………………………………………………
…………………………………………………………………………………………
…………………………………………………………………………………………

25. Based on the notional value of contracts, how has your company’s usage of technique(s) in managing foreign exchange management been compared to last year?

Usage has Increased [   ] Usage has Decreased [   ] Usage has Remained Constant [   ]

26. What is the level of management awareness/knowledge on foreign exchange risk?

…………………………………………………………………………………………
………………
…………………………………………………………………………………………

27. Does the management awareness on foreign exchange risk have any impact to the company?

YES [   ] NO [   ]

28. Mention the impact to the company being either positive or negative.

…………………………………………………………………………………………
…………………………………………………………………………………………

29. How has foreign exchange risk affected the financial performance of the company?

…………………………………………………………………………………………
…………………………………………………………………………………………

30. To what extent is the company exposed to foreign exchange risk?

…………………………………………………………………………………………
…………………………………………………………………………………………
APPENDIX 2

INTERVIEW QUESTIONS FOR DAVIS AND SHIRTLIFF COMPANY LIMITED – ARUSHA TANZANIA

1. Why has Davis and Shirtliff Company Limited not considered the usage of another hedging method apart from the one it uses at present?
2. How long does it take to review the prevailing price?
3. What is the exchange rate consideration to the customer who places an order and makes payment above 50% of the total charges?
4. What is the considerate grace period to customers on exchange rate if any available?
5. How does the company derive its selling price of the products?