THE IMPACT OF FOREIGN EXCHANGE RISK MANAGEMENT PRACTICES ON FINANCIAL PERFORMANCE OF REINSURANCE COMPANIES IN KENYA

BY:

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DECLARATION

I declare that this research proposal is my original work and has not been presented for a degree or any other academic award in any institution of learning.

NDIRANGU JAMES NGUGI   **D61/P/7124/05**

Signed………………………… 　 Date ………………

This project has been submitted for examination with my approval as the University Supervisor.

DR. JOSIAH ADUDA

Signed………………………… 　 Date ………………

DEDICATION

This research project is dedicated to all my family members and friends for their trust in me and emotional support.

Specifically, I wish to dedicate this to my parents for their inspiration throughout my educational journey and to my wife and two children for the moral and emotional support.

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Table of Contents

LIST OF TABLES

ABBREVIATIONS

CBK   -   Central Bank of Kenya

GAAP   -   Generally Accepted Accounting Principles

IAS   -   International Accounting Standards

IMF   -   International Monetary Fund

Kshs   -   Kenya Shillings

SDR   -   Special Drawing Rights

SPSS   -   Statistical Package for the Social Sciences

USD   -   United States Dollar

ABSTRACT

Organizations that operate beyond their domestic country borders are exposed to foreign exchange risk. Many studies regarding the effect of foreign exchange rate risk have been focused on banking financial institutions, but little has been done with respect to the effect of exchange rate risk on reinsurance companies. This study sought to fill in the knowledge gap by investigating the effect of foreign exchange risk management practices on financial performance of reinsurance companies in Kenya.

Primary data was collected using a questionnaire and secondary data from the firm's financial reports for the years 2008-2012. Multiple regression analysis was used to analyze the data obtained at 95% confidence level.

The study established that the ratio of foreign-currency profit to total profit (p=0.038) and use of operational hedges (p=0.043) were critical variables that managers pursuing shareholder value maximization would need to use so as to have improved financial performance. The foreign currency profit was an important consideration since it implies that the insurance companies enjoyed diversification of both risk and revenue while expanding their customer base. The study also noted that the use of financial hedging instruments was found to be minimal, which indicates that their use was too sophisticated and difficult to implement in developing countries like Kenya with less developed financial systems. The more frequently used means of financial hedging was the choice of currency in which company debt was denominated.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

The lives of human beings and organisations set up or managed by them are characterised by exposure to a variety of risks and much effort is employed in an attempt to mitigate those risks. While a varied number of risks exist, organizations operating in countries other than their home countries face a unique set of risks; they invariably face risks arising from changes in those operating countries vis-à-vis their home countries. One of those risks is the ever-changing relationship between the currencies of the operating country as compared to that of the home country. Krugman and Obstfeld (2003) define this relationship between currencies as the exchange rate, and refer to it as the price of one country's money in terms of another's. Exchange rate risk management is an integral part in every firm's decisions about foreign currency exposure (Allayannis, Ihrig, and Weston, 2001).

Historically, the study of exchange rate risks dates back since the collapse of the Bretton Woods agreement (February 1973) that brought to an end the era of fixed exchange rates (Papaioannou, 2001). Henceforth, the world's currencies have floated with respect to the US Dollar (USD) and the foreign exchange rate regime changed from a fixed exchange rate to a flexible or floating exchange rate, with the subsequent rise in volatility of exchange rates. As noted by Ndungu (1999), Kenya has undergone various exchange rate policy regimes since her independence in 1963. Up to 1974, the exchange rate was

pegged to the US dollar, but after discrete devaluations the peg was changed to the Special Drawing Rights as defined and maintained at the time by the International Monetary Fund (IMF). Between 1974 and 1981, he notes that the movement in the nominal exchange rate in relation to the US Dollar was quite erratic, with depreciation of about 14% and another 20% between 1980 and 1982. Between 1990 and 1993, a dual exchange rate system was adopted, after which the official exchange rate was abolished. In other words, the exchange rate regime changed from a fixed to a floating exchange rate regime. Following the adoption of a floating exchange rate regime, the volatility of the Kenya shilling has thereafter been impacted by economic events and market forces (Ndungu 1999). For example, between July 2008 and December 2013, the exchange rate between the Kenya Shilling and the US Dollar has oscillated between the rates of 65 and 102 per US Dollar, representing a 57% variation. In order to mitigate risks associated with such varied currency fluctuations, organizations may adopt specific foreign exchange risk management practices.

1.1.1 Foreign Exchange Risk Management Practices

Foreign exchange risk management practices refer to the financial strategies, decisions, techniques and activities adopted by organizations to mitigate the effects of foreign exchange exposure. These are primarily aimed at minimizing potential currency losses, as opposed to making profits, from unpredictable and frequent exchange rate movements. A variety of financial management practices are generally used to mitigate foreign exchange risk exposure. Takatoshi, Satoshi, Kiyotaka and Junko (2013) note that firms usually use two means to hedge exchange rate risk; one is a financial hedge through financial market instruments such as exchange rate derivatives or foreign currency debt

and the other is an operational hedge through operational organization of the firm. They suggest that in order to manage long-term exchange rate risks effectively, firms should build operational hedging strategies in addition to widely used financial hedging strategies.

Foreign exchange risk management practices include both internal and external hedging strategies. Internal hedging (also called operational hedging) refers to the use of internal organizational strategies to manage currency exposure and includes all those techniques that do not require external parties. The basic goal of hedging is to eliminate exposure. The most obvious way to reduce the exposure is not to have an exposure. Operational hedging involves activities such as matching of cash inflows and outflows, intercompany netting of receipts and payments, leading and lagging, transfer pricing agreements, pricing policies and asset-liability management (Nathan, 2000). Papaioannou (2006) argues that since currency hedging is often costly, a firm may first consider such "natural" hedges before hedging externally as it would be cheaper do so. External hedging (or financial hedging) involves use of financial derivatives like futures and forward contracts, options, derivatives as well as money market transactions. Papaioannou (2006) notes that hedging instruments are currently available with different varieties and complexity, and that they include both over-the-counter and exchange-traded products. Over-the-counter currency hedging instruments include currency forwards and cross-currency swaps, while exchange-traded products include currency options and currency futures.

1.1.1.1 Choice of Invoicing Currency

Firms may use risk shifting techniques by invoicing all overseas purchases and sales transactions in the home currency of the firm and thereby avoiding transaction exposure related primarily to exports and imports. The choice of invoicing currency therefore passes on the risk induced by exchange rate fluctuations to the importer or exporter and is not borne by the invoicing firm.

1.1.1.2 Matching Cash Inflows and Outflows

Another technique is matching cash inflows and outflows relating to real operating exposure which involves pairing suitably and as best as possible foreign currency inflows with foreign currency outflows with respect to amount and timing. By using the matching technique, the firm attempts to hedge their exposure by denominating some of their long term debt in foreign currency so as to generate offsetting impacts on expected cash flows.

1.1.1.3 Netting

Netting involves hedging the net amount of transaction exposures. It involves the consolidated settlement of receivables, payables and debt among the subsidiaries of the firm. Given that large and globally diverse multinational firms may need to manage exchange rate risk associated with several different currencies, these generally consider their net exposure to currency risk instead of looking at each currency separately. Global firms will achieve netting through a centralized approach to reduce redundancy and added costs in hedging. By use of netting strategies, the organization reduces the volume and amount of transactions it needs to cover an exposure.

1.1.1.4 Leading and Lagging

Leading and lagging strategies aim to reduce transaction gains and losses through timing of foreign currency cash flows. Leading refers to acceleration or speeding up while lagging refers to delaying or slowing down cash flows in response to changes in foreign exchange rates. In a case where the foreign currency in which an existing nominal contract is denominated is appreciating, this strategy proposes paying off the liabilities early (leading) and taking the receivables later (lagging). On the contrary, when the home currency is appreciating, it proposes to slow down payment of liabilities while speeding up taking of receivables.

1.1.1.5 Asset-Liability Management

Asset Liability Management (ALM) is another strategy of managing exchange risks that arise due to mismatches between assets and liabilities. This strategy proposes that for foreign currencies likely to appreciate, firms would increase assets and reduce liabilities in the foreign currency.

1.1.1.6 Forward Contracts

Currency forwards or forward contracts involve an agreement to pay (or receive) a fixed amount of foreign currency at some date in the future. This essentially converts the uncertain future home currency value of this liability (or asset) into a certain home currency value to be received on the specified date, independent of the change in the exchange rate over the remaining life of the contract.

1.1.1.7 Currency Swaps

A currency swap is a financial instrument that allows the buyer to exchange one set of cash flows for another. Thus the buyer of a swap agrees to make periodic payments based upon some financial price and in return receives periodic payments based upon some other financial price.

1.1.1.8 Currency Options

Currency options are contracts that give the owner the right, but not the obligation to trade domestic currency for foreign currency (or vice versa) in a specified quantity at a specified price over a specified time period. Options allow the removal of downside risk without cutting off the upside benefit. Allen (2003) notes that this provides an upside strike in an exchange rate with no obligation to exercise.

1.1.1.9 Currency Futures

Currency futures are equivalent to forward contracts in function, but differ in that they are exchange-traded, have standardized and limited contract sizes and maturity dates. Given that they are only available in certain sizes, maturities and currencies, it is not possible to get an exactly offsetting position to totally eliminate the exposure.

Allen (2003) states that firms with significant exchange rate exposure often need to establish an operational framework of best practices. These practices or principles may include identification of the types of exchange rate risk that a firm is exposed to and measurement of the associated risk exposure; development of an exchange rate risk management strategy; creation of a centralized entity in the firm's treasury to deal with

the practical aspects of the execution of exchange rate hedging; development of a set of controls to monitor a firm's exchange rate risk and ensure appropriate position taking; and establishment of a risk oversight committee in the firm.

1.1.2 Financial Performance of Reinsurance Companies

International Accounting Standards (IAS) 21 envisages that an organization may carry on foreign activities in two ways; it may have transactions in foreign currencies or it may have foreign operations. Additionally, an organization may present its financial statements in a foreign currency. Therefore, every international organization would be impacted by exchange rate volatility irrespective of their nature or reason of existence. International organizations, operating in Kenya have been faced with high volatility of exchange rates and this gives rise to the need for prudent foreign exchange risk management practices that are necessary to achieve the intended goals and objectives of these organizations.

KPMG (2002) provided a definition of reinsurance as the form of insurance where the primary insurer reduces the risk by sharing individual risks or portfolios of risks with a reinsurer against a premium. Reinsurance companies provide insurance coverage to insurance companies in return for a share of the premium paid by the insured as consideration. This enables the insurance company, also known as the ceding company, to transfer and reduce its risk exposure and take up risks with higher limits than would otherwise be possible. The value of the risk requiring reinsurance is therefore almost always high, and for this reason, the prudent financial management, including foreign exchange risk management, of reinsurance companies is a critical function of

management to ensure that they achieve the firm's goals and objectives. Financial performance is used to measure the financial health over time, across industries or sectors in aggregate and can be used to gauge an organization's effectiveness. Therefore, performance measurement is an important managerial responsibility that, when correctly utilized, positively influences individuals and organizations to achieve intended results. Folan, Browne and Jagdev (2007) argued that there is no precise definition of the meaning of performance in the context of management science and as a result financial measurements continue to be the default indicators of managerial quality. Measures of financial performance for reinsurance companies would include profitability measures such as return on assets, return on equity and claims incurred as a percentage of reinsurance premium received. They also include efficiency ratios such as reinsurance premium received to fixed assets, claims paid as a percentage of total expenses, and management expenses as a ratio of total expenses. Liquidity measures of financial performance would include the ratio of cash and bank balances to total assets, current ratio and quick ratios. This study will use the ratio of Earnings before Interest and Tax to Total Assets as the measure of financial performance.

1.1.3 Foreign Exchange Risk Management Practices and Financial Performance of Reinsurance Companies

An important concept relevant to this study is the distinction between the currency of denomination and the currency of determination. Bartram, Dufey and Frenkel (2005) distinguish the currency of denomination of a transaction as the currency in which the payments of contractually fixed agreements are specified. By contrast, the currency of determination indicates which currency is most important in determining the price in the

market. The reinsurance company underwrites risks arising in different countries and currencies. A reinsurance company may have the reinsurance treaties in the same currency as the direct insurance transactions to which they relate, or may group together several direct transactions of the same kind but expressed in different currencies, thus reinsuring various currencies for which payment would be made in one currency. Thus the currency of the reinsurance treaty becomes the currency of denomination, while the currency in which the reinsurance company finances those costs would be considered as the currency of determination. Ehrlich and Tiong (2012) explain this further by stating that foreign exchange rate risk exists because projects typically are implemented domestically, whereas their financing costs are denominated in major currencies. The same is true of reinsurance process. The effect of foreign exchange rate risk on the financial performance of reinsurance companies is therefore an important area of study. Indeed, Starks and Wei (2005) suggest exchange rate fluctuations can push an organization into financial distress and Du (2010) identifies exchange rate risk as a distress factor.

Madura (2011) defines exchange rate risk as the risk that an organization will be affected by exchange rate movements. He argues that international organizations should closely monitor their operations to determine how they are exposed to various forms of exchange rate risk and this requires them to understand how to measure the exposure so as to determine whether and how to protect from such exposure. Clark (2002) defines foreign exchange rate risk as fluctuations in the domestic currency value of assets, liabilities, income or expenditure due to unanticipated changes in exchange rates. Three forms of exchange rate exposure are identified in literature. Economic exposure refers to the

potential changes in future operating cash flows due to unexpected changes in exchange rates during an undetermined time horizon and is related to the organization's operations and competitive position. Transaction exposure is the degree to which the value of determined future cash flows is affected by exchange rate fluctuations with respect to a determined time horizon. Translation exposure arises from translation or conversion of foreign office financial statements to home currency as required by Accounting Standards.

Krugman and Obstfeld (2003) define a foreign exchange market as the market in which international currency trades take place. Just as other prices in the economy are determined by the interaction of buyers and sellers, exchange rates are determined by the interaction of the households, firms, and financial institutions that buy and sell foreign currencies to make international payments. Reinsurance companies that undertake appropriate financial strategies, decisions, techniques and activities to minimize their foreign exchange risk exposure minimize potential currency losses would be expected to generate superior returns compared to those which do not. This is consistent with the study by Guo and Wu (1998) who found that exchange-rate movements exert significant contemporaneous and lagged impacts on the value of firms, particularly those with high involvement in international trade. This indicates that the practices that firms undertake to manage exchange rate exposure does impact on their financial performance.

1.1.4 Reinsurance Companies in Kenya

There are currently seven reinsurance companies operating in Kenya, namely: East Africa Reinsurance Company, Kenya Reinsurance Company, Zep Re (PTA Reinsurance

Company), Africa Reinsurance Company, Swiss Reinsurance Company, Munich Mauritius Reinsurance Company and Continental Reinsurance Company, all of which will form the focus of this study.

Blum, Dacorogna, Embrechts, Neghaiwi & Niggli (2001) noted that the widely held wisdom in the reinsurance industry is that foreign exchange exposure is not a problem as long as the reinsurer maintains assets in the currency in which the liabilities are denominated, that is, does on-balance sheet hedging. He however notes that, while this is true in principle, such a strategy might be difficult to follow in practice and not optimal as it is equivalent to fully hedging the position. He noted that at horizons of several years, complete hedging not only does not lower return variance, it actually increases it for many portfolios. In addition, Levich and Thomas (1993) analyzed the impact of active currency management on internationally diversified portfolios and showed that it can significantly improve returns without overly affecting the risk. Most studies regarding the effect of foreign exchange rate risk have been focussed on banking financial institutions, but little has been done with respect to the effect of exchange rate risk on reinsurance companies.

1.2   Research Problem

Reinsurance companies undertake to cover risks that may be denominated in currencies other than their home currency. An unfavourable change in exchange rates might therefore pose challenges on them delivering on the promised performance. Over the last five years to June 2013, foreign exchange rates between the Kenya Shillings and the US Dollar have oscillated between Kenya Shillings 65 to 102, representing a 57% variation,

according to data from the Central Bank of Kenya. Financial economists posit different opinions on whether foreign exchange risk matters. Graham and Harvey (2001) found that foreign exchange risk is an important risk factor for firms and argue that those firms with considerable foreign operations are sensitive to unexpected exchange rate fluctuations. Adler and Dumas (1984), also argue that organizations, including those with no foreign operations and no foreign currency assets, liabilities, or transactions, are generally exposed to foreign currency risk. On the other hand, Jorion (1990) finds that exchange rate risk does not carry a significant risk premium. Giddy and Gunter Dufey (1992) point out that foreign exchange exposure may neither be an important nor legitimate concern for management, and that, in the tradition of the Modigliani-Miller Theorem, the firm cannot improve shareholder value by financial manipulations. Moreover, they pointed out that the academic evidence linking exchange rate changes to financial performance was weak.

In the Kenyan context, Cherop (2010) in his study on exchange rate fluctuations on tea export earnings among smallholder tea factories in Kenya concluded that exchange rate fluctuation exposure has some effect on their earnings and identified positive correlations between appreciation of the Kenya shilling and earnings performance. Koima (2011) concluded that foreign exchange rates influence the financial performance of multi-national companies listed on the Nairobi Stock Exchange. Maina (2010) found a negative significant relationship between foreign exchange rate and expenditure on capital investments and profitability of electricity generating companies. Kioko (2012) found that prudent foreign exchange management strategies lead to increased profitability for mobile telecommunications companies. It is clear that most of the studies regarding the

effect of foreign exchange rate risk have been focussed on companies engaged in commercial activities, and specifically financial institutions. Little has been done with respect to the effect of exchange rate risk on reinsurance companies. This study will add to the body of knowledge of foreign exchange risk and its effects on this unique but important sector of Kenya's economy.

1.3 Research Objectives

The objective of the study was to determine the impact of foreign exchange risk management practices on the financial performance of reinsurance companies in Kenya.

1.4 Value of the Study

Reinsurance companies play a vital role in the global economy. They reinsure risks from insurers in diverse geographical and economic jurisdictions and undertake to reinsure high-value risks that individual, smaller, insurance companies may be unable or unwilling to underwrite on their own without the possibility of reinsuring the risk. The globalised nature of reinsurance business implies that reinsurers take in business in a number of currencies and are exposed to currency risk (KPMG, 2002). They also note that while strategies such as matching of cash inflows and outflows may sometimes be practiced, it is not always achievable due to uncertainties of timing of inflows and outflows, the influence of accounting standards, foreign exchange control restrictions in certain currencies or jurisdictions, or because holding assets in currencies in which the currency of liabilities is weak would be undesirable. KPMG (2002) identified that currency risk is therefore a major factor in a reinsurer's risk profile depending on the geographical spread of their assets and liabilities. Their study noted the lack of specific

global foreign exchange regulatory requirements for reinsurers. This study would therefore be of value to government agencies and makers of policy affecting the reinsurance sector in identifying the current foreign exchange risk practices and guiding the development of a foreign exchange regulatory framework. This study will also be of significance to the Management and Boards of Directors of reinsurance companies, who will have a better understanding of the impact of foreign exchange rate risk management practices on their firm's financial performance as well as better understand the strategies used by peer organizations to mitigate those risks. Shareholder wealth maximization is an important objective for shareholders. As such, shareholders are keenly interested in the financial performance of the company and this study will help them to understand the impact of foreign exchange risk management practices employed by management on the return on investments. Little research has been conducted on the effect of foreign exchange rate risk on reinsurance companies. The study will contribute to the existing body of knowledge on the subject matter in this sector, form a basis for improved practices of effective foreign exchange risk management as well as provide input for further research.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter reviews literature related to the theoretical framework and empirical studies on foreign exchange risk, foreign exchange rate risk management practices and effect on financial performance. A variety of international and a few local related studies were examined.

2.2 Review of Theories

2.2.1 The Interest Rate Parity Theory

This theory explains how exchange rate values are determined and why they fluctuate as they do. It is also known as the asset approach to exchange rate determination. According to Suranovic (2010), this theory assumes that the actions of international investors—motivated by cross-country differences in rates of return on comparable assets—induce changes in the exchange rate. The theory states that interest rate differentials between two different currencies will be reflected in the premium or discount for the forward exchange rate on the foreign currency if there is no arbitrage, that is, the activity of buying shares or currency in one financial market and selling it at a profit in another. The theory further states that the size of the forward premium or discount on a foreign currency should be equal to the interest rate differentials between those countries. Interest rate parity in a floating exchange system means the equalization of rates of return on comparable assets between two different countries.

There are two types of Interest Rate Parity. The Covered Interest Rate Parity theory states that exchange rate forward premiums or discounts offset interest rate differentials between two countries. It is a condition where the relationship between interest rates and the spot and forward currency values of two countries are in equilibrium. As a result, there are no interest rate arbitrage opportunities between those two currencies. The Uncovered Interest Rate Parity theory states that the difference in interest rates between two countries equals the expected change in exchange rates between those two countries. Theoretically, if the interest rate differential between two countries is 5%, then the currency of the nation with the higher interest rate would be expected to depreciate 5% against the other currency.

2.2.2 The Purchasing Power Parity Theory

Taylor and Taylor (2004) indicate that the purchasing power parity theory has a long history in economics, dating back several centuries, but indicate that the specific terminology of purchasing power parity was introduced in the years after World War I during the international policy debate concerning the appropriate level for nominal exchange rates among the major industrialized countries after the large-scale inflations during and after the war. The theory is considered one of the most influential ways of thinking regarding exchange rates and is based on an extension of and variation to the "law of one price". This law indicates that identical goods would be identically priced in separate markets, in the absence of trade restrictions, because arbitragers would take advantage of any price differences until those differences are eliminated. Similarly, exchange rates should adjust to compensate for price differentials across countries.

The purchasing power parity theory focuses on the inflation-exchange rate relationship. It states that the exchange rate between two countries' currencies equals the ratio of the countries' price levels. Krugman and Obstfeld (2003) observe that in the absence of trade restrictions, changes in the exchange rate mirror changes in the relative price levels in the two countries. Giddy and Dufey (1992) present the Purchasing Power Parity as the rate of change of exchange rate being equal to the difference in inflation rates

There are identified two variants to the Purchasing Power Parity theory. According to Krugman and Obstfeld (2003), Absolute Purchasing Power Parity states that exchange rates equal relative price levels. Relative Purchasing Power Parity, on the other hand states that the percentage change in the exchange rate between two currencies over any period equals the difference between the percentage changes in national price levels. Relative Purchasing Power Parity thus translates absolute Purchasing Power Parity from a statement about price and exchange rate levels into one about price and exchange rate changes. It asserts that prices and exchange rates change in a way that preserves the ratio of each currency's domestic and foreign purchasing powers.

2.2.3 The International Fisher Effect

The International Fisher Effect theory uses inflation rate differentials to explain why exchange rates change over time. This is contrary to the Purchasing Power Parity theory which attributes exchange rate changes to interest rate differentials. However, the two theories are closely related because interest rates are often highly correlated with inflation rates. This theory states that nominal risk-free interest rates contain a real rate of return and anticipated inflation. Therefore, if investors in different countries require the same

real return, interest rate differentials between the countries may be as a result of differential in inflation rates. The theory suggests that the currency of a country with relatively high interest rates will depreciate because high nominal interest rates reflect expected inflation (Madura, 2011),

2.3 Determinants of Financial Performance of Reinsurance Companies

Financial performance is a measure of financial health over time, across industries or sectors in aggregate and can be used to gauge an organization's effectiveness. Various studies have been undertaken on the determinants of financial performance of reinsurance companies. Mehari and Aemiro (2013) investigated the impact of firm level characteristics (size, leverage, tangibility, loss ratio, growth in writing premium, liquidity and age) on performance of insurance companies in Ethiopia, using Return on total assets as the performance measure. They found that the insurers' size, tangibility and leverage were statistically significant and positively related with return on total asset, while loss ratio (risk) is statistically significant and negatively related. Thus, insurers' size, Loss ratio (risk), tangibility and leverage were important determinants of performance of insurance companies in Ethiopia. But, growth in writing premium, insurers' age and liquidity have statistically insignificant relationship with return on assets. Other studies such as Ahmed, Zulfqar and Ahmad (2011) found that size, risk and leverage are important determinants of performance of life insurance companies in Pakistan. According to their study Return on Asset (ROA) had statistically insignificant relationship with growth, profitability, age and liquidity.

2.4   Review of Empirical Studies

A number of empirical studies have examined how firms deal with foreign exchange risk and the effect on their financial performance.

Du (2010) in his study on whether exchange rate matters on asset pricing, concluded that whether firms need to hedge the currency risk depends on whether currency exposure is positive or negative. He argued that firms with positive exposure should hedge the risk to reduce the cost of capital, while firms with negative exposure should not.

Takatoshi, et. al (2013) investigated the effect of exchange rate risk management on the exchange rate exposure of Japanese firms. They noted that firms with larger dependency on foreign markets have larger foreign exchange exposure and that the higher the U.S. dollar invoicing share, the larger the foreign exchange exposure. In addition they found out that local currency (Yen) invoicing itself reduces the foreign exchange exposure. Their findings indicated that Japanese firms utilized operational and financial hedging strategies and price revision policy depending on their choice of invoicing currency.

Glaum (2005) carried out an empirical analysis on foreign exchange risk management in German non-financial corporations and found interesting discrepancies between the positions of the academic literature and corporate practice. He found that numerous firms are concerned about their accounting exposure and some firms are actively managing it. Of the three definitions of exposure offered by financial literature, namely translation, transaction and economic exposure, only economic exposure is considered to be consistent with financial theory (Bartram, Dufey and Frenkel, 2005). However, Glaum (2005) found out that although economic exposure is favoured by the academic literature,

it is of little importance in practice. Further, he found that almost half of the firms studied manage their exchange positions by balancing out cash outflows and inflows first (micro hedging approach), thereby foregoing the possibility to establish the firm's net exposure. The most interesting finding from an academic point of view, however, was the widespread use of exchange rate forecasts and of exchange risk management strategies based on forecasts (selective hedging). By adopting such strategies, the managers indicated that they did not believe that the foreign exchange markets are information efficient and they are able to beat the market with their own forecasts. Academic literature, on the other hand, emphasizes that it is very difficult indeed to make systematically successful exchange rate forecasts.

Bartram et.al (2005) in their study concluded that in the presence of deviations from parity conditions such as purchasing power parity and the international Fisher effect, non-financial corporations are confronted by risks stemming from the impact of unexpected exchange rate changes on the value of the firm. They also found that professional firm-wide risk management does not yet seem to be in place at all non-financial institutions, therefore justifying the strong need for implementing or improving risk management systems outside the financial sector. Jong, Ligterink and Macrae (2002) examined the relationship between exchange-rate changes and stock returns for a sample of Dutch firms over the years 1994-1998 and found that that over fifty percent of the firms were significantly exposed to exchange-rate risk. Barumwete and Rao (2008) on the other hand, in his study on the impact of currency exchange rate movements on the stock returns of European based car companies with market interests in the US, noted that for five out of the six investigated companies, short movements in exchange rates did not

significantly affect their stock returns. They analysed the annual reports of the five companies and found that derivatives instruments such as currency option, foreign exchange forwards, currency futures and currency swaps were used to hedge exchange risk and acknowledged that this might be one of the reasons why it was difficult to capture exchange rate risk.

Guo and Wu (1998) compared the exchange rate exposure before and after financial liberalization in Taiwan. They found out that in the post-liberalization period, exchange-rate movements exert significant contemporaneous and lagged impacts on the value of firms, particularly those with high involvement in international trade. This indicates that foreign exchange exposure impacts on financial performance of firms.

Sekmen (2011) in his study found that exchange rate volatility affects US stock returns and that even though firms engaged in international operations had some methods, such as hedging possibilities, to protect themselves from exchange rate risk, exchange rate volatility might negatively affect firms' profitability because of increasing cost of covering exchange rate risk under a flexible rate system. Owusu-Nantwi and Kuwornu (2011) investigated the relationship between various macroeconomic variables and stock market returns of companies in Ghana. Their empirical findings revealed that there was a significant relationship between stock market returns and consumer price index (inflation), but that the exchange rate did not appear to have any significant effect on the stock returns of companies in Ghana.

Carranza, Cayo and Galdón-Sánchez (2003) analysed the impact of exchange rate volatility on the performance of the Peruvian economy using financial information from

non-financial listed firms. They found evidence that, for firms holding dollar-denominated debt, investment decisions were negatively affected by real exchange rate depreciation. The reasons behind this result was the high degree of liability dollarization and currency mismatch that created the conditions for a balance sheet effect and a financial stress in the aftermath of a currency depreciation, the strong bank-lending channel that follows and reinforces the balance sheet effect, the domestic demand shrinkage that affects severely the firms sales, and the relatively small and poorly diversified export sector in Peru.

Meng and Deng (2013) investigated the effects of interest rate and foreign exchange rate changes on Chinese banks' stock returns. The results suggested that market movement and foreign exchange rate changes are statistically significant in explaining banks' stock returns, despite different reactions from different bank portfolios in regard to risks. Solakoglu (2005) in his study of exchange rate exposure of Turkish firms found that the size of the firm and the level of international activity are significant in lowering the exposure. In addition, firms that can be characterized as net-exporters or net-importers are more likely to have significant exposure to exchange rate movements, implying that foreign exchange rate exposure has significant impact on the financial performance of the firm. El-Masry and Abdel-Salam, (2007) found that exchange rate exposure has a more significant impact on stock returns of the large firms compared with the small and medium-sized companies. Their results provided evidence that the proportion of significant foreign exchange rate exposure was higher for firms which generate a higher percentage of revenues from abroad. Ozun (2007) studied currency exposure in Turkey and found that it is evident that the exchange rate volatility has strong effects on the daily

stock returns of industrial and financial firms, and is statistically significant for the service sector firms.

Several studies have also been carried out in Kenya in the recent past. Cherop (2010) concluded that exchange rate fluctuation exposure has some effect on the earnings of smallholder tea factories in Kenya and identified positive correlations between appreciation of the Kenya shilling and earnings. Koima (2011) concluded that foreign exchange rates influence the financial performance of multi-national companies listed on the Nairobi Stock Exchange. Kioko (2012) also found that prudent foreign exchange management strategies lead to increased profitability for mobile telecommunications companies. Maina (2010) found a negative significant relationship between foreign exchange rate and expenditure on capital investments and profitability of electricity generating companies. Litali (2013) studied the relationship between foreign exchange rate and performance of stock market in Kenya and found that there is no co-integrating relationship between the stock returns and the exchange rates, meaning that there was no long term co-movement between the two variables and none of the variables was predictable on the basis of past values of the other variable, no two way causal linkage between the two variables as well as a weak relationship between the stock market and the foreign exchange market. Ngari (2011) analysed the effect of foreign exchange exposure on the financial performance of companies listed on the Nairobi Stock Exchange and concluded that the use of foreign exchange has an effect on import costs and accounts payables, export revenues and accounts receivables with the net effect on the net income of the companies. Chirchir (2012) examined how changes in exchange rates and stock prices of Kenyan listed companies are related to each and found out that

there is bi-directional causal relationship between exchange rate and share price. As regards the sign of causality, negative causality exists in both directions.

Chiang and Lin (2007) and Pramborg (2005) in separate studies concluded that difficulties of exchange rate risk management existed in underdeveloped foreign exchange markets in Taiwan and Korea respectively. However, it is noteworthy that there has been no similar study undertaken on reinsurance companies in Kenya.

2.5 Conclusion from Literature Review

Review of academic literature reveals that management of foreign exchange risk management practices has an impact on the value of the firm. There is evidence of this from studies undertaken in a variety of markets and sectors in different countries around the world. Studies have noted that firms with positive foreign exchange exposure should actively manage their foreign exchange risk (Du, 2010), that firms with larger dependency on foreign markets have larger foreign exchange exposure (Takeshi, et. al, 2013). There was also evidence that the proportion of significant foreign exchange rate exposure was higher for firms which generate a higher percentage of revenues internationally.

The presence of deviations from parity conditions result in unexpected changes in foreign exchange rates that impact the value of firms. Given that markets are not entirely efficient in Kenya, it is useful for reinsurance companies to consider how to mitigate foreign exchange rate risk. Madura (2011) argues that organizations with international operations should closely monitor their operations to determine how they are exposed to various forms of exchange rate risk. This requires firms to understand how to measure the

exposure and to determine whether and how to protect from such exposure. Studies such as Batram et. al (2005) found evidence that professional firm-wide risk management was not in place in many institutions, thus justifying the need for implementing and improving risk management systems in those organizations.

In Kenya, studies have revealed that foreign exchange rates affect the financial performance of multinational companies (Koima, 2011), and that prudent foreign exchange risk management strategies lead to increased profitability for mobile telecommunications companies (Kioko, 2012). In spite of the difficulties of foreign exchange risk management in developing countries such as Kenya, foreign exchange has been found to have an effect on import costs and accounts payables, export revenues and accounts receivables with the net effect on the net income of the companies in previous studies. No similar studies have been undertaken regarding the impact of exchange rate risk management practices on financial performance of reinsurance companies. Reinsurance companies play an important role in any economy and this study focused on this important business sector.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This chapter contains the methodology used in the research study. It describes the research design, the targeted population and sampling technique, the method used in collecting the data, the data analysis methods and tools used..

3.1.1 Research Design

This research design provides the logical framework of inquiry used in collecting and analysing data for this study. A descriptive approach was used to achieve the objectives of the study. Descriptive research design is a method of research used to describe events to discover inferences or causal relationships. Saunders, Lewis, and Thornhill (2009) suggest that a descriptive study can also be used to generate explanatory information or characteristics about a specific phenomenon as well as make specific predictions. Hopkins (2000) suggests that descriptive studies, as part of a quantitative research design, can be used to determine the relationship between one thing (an independent variable) and another (a dependent variable) in a population, establishing the associations between variables and the causality. This method was therefore suitable for this study as it enabled the researcher to describe the foreign exchange risk management strategies employed by reinsurance companies and their effects on the financial performance. The research design used the foreign exchange risk management practices as the independent

variable while the dependent variable was financial performance as measured using the variable noted.

3.2 Population

Mugenda and Mugenda (1999) describe the target population as the complete set of individuals, cases or objects with some common characteristics to which the researcher wants to generalize the results of the study. In this study, the population included all reinsurance companies operating in Kenya over the period 2008 to 2012. These reinsurance companies included East Africa Reinsurance Company, Kenya Reinsurance Company, Zep Re (PTA Reinsurance Company), Africa Reinsurance Company, Swiss Reinsurance Company, Munich Mauritius Reinsurance Company and Continental Reinsurance Company. The most suited company personnel in the opinion of the researcher were selected to respond to the research questions. This enabled the use of judgment in selecting the respondents that would best achieve the research objectives (Neuman 2005).

3.3 Data collection

This study used both secondary and primary data. Secondary data was collected from financial statements of reinsurance companies for the review period. Primary data was collected using questionnaires. The use of questionnaires was considered to obtain objective data since the participants would not be manipulated in any way by the researcher (Satyanarayana, 1983). The questionnaire included closed-end questions concerning the international involvement of the reinsurance companies and their foreign exchange risk management strategies. The funnel approach was used to design the

questionnaire in which the most general questions were asked first in order to stimulate the participants to think about their foreign exchange management practices and to focus their attention on the topic. This was then followed by more specific questions. To deliver the questionnaire to the target group, the pick and drop method was used and where possible, an interview approach of administering the questionnaire was used.

3.4 Data analysis

The data analysis was done in order to provide convincing conclusions and eliminate alternative explanation. The data analysis involved use of descriptive statistics to present the findings regarding the use of foreign exchange risk management practices employed by reinsurance companies. The study also used correlation analysis to test the strength of association between the independent variables. The study used regression and correlation analysis to test the relationship between financial performance and foreign exchange risk management. The data was analysed using Statistical Package for Social Sciences (SPSS) as well as MS-Excel. A multiple regression model similar to that used by Hansen (2009) was used and was of the form:

$Y = \beta 0 + \beta 1*M1 + \beta 2*M2 + \beta 3*M3 + \beta 4*M4 + \beta 5*M5 + \varepsilon$

Whereby Y was the dependent variable denoting financial performance and refers to Earnings before Interest and Tax, as standardized for size.

$\beta 0$ = the regression constant,

$\beta 1 - \beta 5$ are the regression coefficients,

M1 = the ratio of the equity of the company to its total assets

M2 = the percentage of the fixed assets of the company to its total assets

M3 = the ratio of foreign-currency profits to total profits of the organization

M4 was used to measure of the use of financial means to manage foreign exchange risk

M5 was used to measure of the use of operational means to manage foreign exchange risk

ε = the error term (regression model significance from Analysis of Variance, ANOVA)

3.5 Data validity & reliability

Before embarking on fieldwork, a pilot study would be carried out to pre-test the instruments so as to assess the clarity of items, validity and reliability of the instruments (Mulusa 1988). To ascertain the validity of questionnaire, a pilot test would be carried out among a small target group using face validity to ascertain the validity of the questionnaire. Face validity is actual validity at face value and involves sending test survey items to a pilot group to obtain suggestions for modification. To ensure reliability of the research instrument, the split-half method would be used which would involve splitting the instrument into two halves (odd and even items) then calculating the Pearson's correlation coefficient(r) between the responses (scores) of the two halves. This would be done using both the instruments separately.

CHAPTER FOUR

4.0 DATA ANALYSIS, FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter deals with data analysis, findings and discussion of the findings. It covers the response rate, the impact of foreign exchange risk management practices on the financial performance.

4.2 Research Findings

The study used both primary collected using questionnaires and secondary data gathered from company records from 2008-2012. The research studied the financial records of the seven reinsurance companies operating in Kenya to establish the impact of foreign exchange risk management practices on their financial performance. The response rate from the primary data collection was a hundred percent.

4.3 Descriptive Statistics

Descriptive analyses of the results of the degree of involvement in international activities and foreign exchange risk management practices used by the organizations are presented in the tables below. In terms of the reporting currency used in the organizations` financial reports, the findings indicated that some reinsurance companies used United States Dollar while others used the Kenya Shillings as the reporting currency in their financial reports. The study sought to establish the amount of the organization`s revenue for the period under review.

Table 4.1 below presents the descriptive statistics showing revenues from the year 2008 to the year 2012.

Table 4.1 Descriptive Statistics showing revenues from year 2008-2012

	N	Minimum	Maximum	Mean	Std. Deviation
What was the amount of your organization's revenue in 2008	7	19.70	33.80	28.4286	4.58174
What was the amount of your organization's revenue in 2009	7	27.20	38.20	33.6571	4.19955
What was the amount of your organization's revenue in 2010	7	34.80	44.10	38.5857	3.39334
What was the amount of your organization's revenue in 2011	7	37.90	46.10	41.1571	2.73609
What was the amount of your organization's revenue in 2012	7	43.70	53.50	47.7571	3.65051

Source: Research Findings (2014)

From table 4.1 above, the findings indicate that year 2012 had the highest mean amount of revenue for the organizations under study with a mean of 47.7. The research found that revenue grew over the years from 2008 to 2012. However, the rate of growth in mean revenue when compared to the previous year's mean revenue indicated that growth was slowest in 2011 at a mean rate of 7%, while 2012 had the highest mean growth rate at 18%.

The study sought to find out the relative size of the organizations as measured by the asset base for the period under study. The findings are presented on table 4.2 below.

Table 4.2 Descriptive Statistics for the Size of the Reinsurance Firms

	N	Minimum	Maximum	Mean	Std. Deviation
What was the size of your organization, measured in terms of asset base, in the fiscal 2008	7	25.98	75.40	58.3329	18.13462
What was the size of your organization, measured in terms of asset base, in the fiscal 2009	7	58.89	92.87	81.7086	12.23870
What was the size of your organization, measured in terms of asset base, in the fiscal 2010	7	85.87	128.98	102.3714	14.25384
What was the size of your organization, measured in terms of asset base, in the fiscal 2011	7	108.43	165.60	131.5300	23.77889
What was the size of your organization, measured in terms of asset base, in the fiscal 2012	7	133.34	198.67	162.1957	25.29761

Source: Study Findings (2014)

From table 4.2, the study found that there was growth in the asset base each year from 2008 to 2012 and the mean value of assets had tripled over the period under study. The

mean assets base increased each year but at a decreasing rate, with the least rate of growth found to be in 2012 at 23% relative to the prior year.

The study sought to find out the number of foreign countries that the company had subsidiaries. From the findings, only two or 29% of these reinsurance firms had subsidiaries in foreign countries against five which did not.

The study also sought to establish the extent to which the currency of revenue received match with the currency of the expenditures incurred. This is represented in Table 4.3 below:

Table 4.3 Descriptive Statistics on the Degree to Which the Currency of Revenue Received Matches the Currency of Expenditure Incurred.

	%
No match	29%
Relatively low match	14%
Match to some degree	43%
Relatively high match	14%
Complete match	0%

Source: Study Findings (2014)

The study findings indicate that almost half of reinsurance firms (43%) received revenue in currencies that matched the currency of expenditure to some degree, while 29% of the reinsurance firms stated that revenue received did not match with the currency of the expenditure incurred. 14% of the firms stated that there was a relatively low match, while the other 14% indicated there was a relatively high match. This implies that matching revenues and expenditures is used by reinsurance companies to manage risk more than

half the time (57%), implying that firms were not entirely able to control the currencies in which revenue was received or expenditure incurred.

The study sought to establish whether reinsurance companies had a policy for managing foreign exchange risk. All the firms targeted indicated they had a policy in place for managing foreign exchange risk. The study also sought to find out who was responsible for foreign exchange rate management in their organizations under review. From the findings, the director of finance and accounts, chief accountant as well as other similarly senior employees in the accounts and finance department were responsible for foreign exchange management of the reinsurance firms reviewed. This implies that managing foreign exchange risk is a function that is effectively delegated by the Chief Executive Officers to those who were more directly involved or better placed to manage the risk on a regular basis.

The study also sought to find out the sources of the exchange rates for the transactions and processes in reinsurance firms. Table 4.4 below presents the findings in which majority (57%) of the exchange rates for annual budgets was the central bank of Kenya, while the daily transaction rates were obtained in equal proportions (43%) from the organization`s bank`s over-the-counter exchange rate and the most recent currency conversion.

Table 4.4 Descriptive Statistics on Sources of the Organization`s Exchange Rate for the Transactions and Processes

	Annual Budgets (%)	Daily Transactions (%)	Month-end transactions (%)
Central Bank of Kenya	57	14	0
Organization's bank's over-the-counter exchange rate	0	43	29
Most recent currency conversion	0	43	29
Weighted average of currency conversions	29	0	0
Exchange rate at the time revenue was received	14	0	14
Public website	0	0	29

Source: Study Findings (2014)

The findings as presented in Table 4.4 also indicated that the source of exchange rates for the majority of month-end transactions was spread equally between the organization`s bank`s over-the counter exchange rate, the most recent currency conversion and public websites at 29%. The findings also indicate that one organization used the financial times London as the source of its exchange rate for its month-end transactions. This was included together with the public website category.

The study also sought to find out what processes were used to convert foreign currency to local currency in the organization over the period under review. The results are indicated on Table 4.5 below.

Table 4.5 Descriptive Statistics on how often various Processes were used to convert Foreign Currency to Local Currency

	Always (%)	Very Often (%)	Sometimes (%)	Rarely (%)	Never (%)
Organization's bank's over-the-counter exchange rate	29	14	14	0	43
Third-party consultant negotiates on our behalf	0	0	14	29	57
Directly source quotes from several banks	0	14	43	14	29
Convert with Forex Bureaus	0	0	0	57	43
Other [please specify]	0	0	0	0	0

Source: Study Findings (2014)

The study findings identified that majority of the firms, 29% show that they always used their organization's bank's over-the-counter exchange rate to convert foreign currency.

In terms of the financial means that the organizations used to manage foreign exchange fluctuations in the study period, the study findings indicate that the firms adopted different financial means at different periods. However, most of the firms indicated that the financial means most used was the choice of currency in which company debt was denominated. The findings indicated that at different time periods forward contracts, currency swaps and currency options were used to manage foreign exchange fluctuations.

The study sought to find out whether within the last few years, the degree of attention of the reinsurance firms to the influence of exchange rate fluctuations on their operations

and cash flows had changed. The findings show that majority of the firms (four, or 57%) indicated that the degree of attention had remained the same over the years whereas 43% of the firms indicated that the degree of attention had increased. None of the firms indicated that the degree of attention had decreased.

The study was interested in finding out how often the organizations reviewed used various operational means to manage foreign exchange fluctuation in the last five years. The results indicated that matching cash inflows and outflows as well as matching assets and liabilities were the most preferable operational means to manage foreign exchange fluctuations. In addition to this, netting different currencies` exposures and choice of invoicing currency were also utilized in some periods.

The study was required to find out which departments within reinsurance companies were involved in the management of the foreign exchange risk. Table 4.6 below illustrates these findings.

Table 4.6 Departments involved in the Management of the Foreign Exchange Risk

	Always (%)	Very Often (%)	Sometimes (%)	Rarely (%)	Never (%)
Finance	100	0	0	0	0
Marketing	0	0	57	43	0
Underwriting	29	14	43	14	0
Claims	0	14	43	43	0
Other	0	0	0	0	0

Source: Study Findings (2014)

From the study findings it is clear that the finance department was always (100%) involved in the management of foreign exchange risk. Underwriting department was also involved in managing foreign exchange at least very often (43%), while the involvement of claims department was not very frequent, being only rarely involved almost half of the time (43%).

4.4 Regression Analysis

Basing on the formula:

$$Y = \beta 0 + \beta 1*M1 + \beta 2*M2 + \beta 3*M3 + \beta 4*M4 + \beta 5*M5 + \varepsilon$$

Whereby the independent variable the financial performance (Earnings before Interest and Tax), as standardized for size being influenced by various independent variables. These included: the ratio of the equity of the company to its total assets, the percentage of the fixed assets of the company to its total assets, the ratio of foreign-currency profits to total profits of the organization, the use of financial means to manage foreign exchange risk and the use of operational means to manage foreign exchange risk

Table 4.7 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.863[a]	.744	.739	.232

Source: Study Findings (2014)

Table 4.7 presents the goodness of fit statistics and R square tells how much of the variance in financial performance, the dependent variable is explained by the independent

38

variables, which include the ratio of the equity of the company to its total assets, the percentage of the fixed assets of the company to its total assets, the ratio of foreign-currency profits to total profits of the organization, the use of financial means to manage foreign exchange risk and the use of operational means to manage foreign exchange risk. The study established a value of 0.744 expressed as a percentage. This means that the model explains 74.4% of the variation in financial performance from the perceived impact of foreign exchange risk management practices.

The Adjusted R Square value in the output established in this model was 0.739. This means that the coefficient of determination depicts that the foreign exchange management practices considered bring about a 73.9% variation in financial performance, while 26.1% is brought about by other variables. In all the estimated model coefficients, the p-values were less than .05 (i.e. 0.5>p) implying that the variables tested significantly influence financial performance of the reinsurance firms in Kenya at 5% significance level. The fitted model was diagnosed and found that the regression was statistically significant at the 5% significance level. This shows that the combination of factors considered (the explanatory variables) significantly affect the response variable (financial performance).

To assess the statistical significance of the result, ANOVA was conducted. This tests the null hypothesis that Regression (R) in the population equals 0, and whether the model has predictive ability. The results are presented in Table 4.8 below.

Table 4.8 ANOVAᵃ

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4777.584	4	1194.396	20.147	.048ᵇ
	Residual	118.568	2	59.284		
	Total	4896.152	6			

Source: Study Findings (2014)

Table 4.8 shows that the ANOVA significance was 0.048. From the model, the p value of 0.48 is lower than 0.05, thus, the null hypothesis (Ho) is rejected. The alternative hypothesis (H1) is that the model has an effect on the dependent variable. This study finding indicate that there is no statistical significant equality in the means of the independent and the dependent variables, that the results of the model are significant and that the results do not occur randomly.

Table 4.9 Regression Model Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	9.518	50.022		0.19	0.867
Ratio of the equity of the company to its total assets	-1128.157	340.842	-2.075	-3.31	0.08
Percentage of the fixed assets of the company to its total assets	2.385	70.334	0.005	0.034	0.976
Ratio of foreign-currency profits to total profits of the organization	1354.693	273	2.83	4.962	0.038
Measure of the use of financial means to manage foreign exchange risk	64.037	114.997	0.101	0.557	0.634
Measure of the use of operational means to manage foreign exchange risk	34.61	97.094	0.085	0.470	0.043

Source: Study Findings (2014)

From the data on Table 4.9, the established regression equation model was:

Y = 9.518-1128.157*M1 + 2.385*M2 + 1354.693*M3 + 64.037*M4 + 34.61*M5

41

From the study findings, it was found that when the ratio of the equity of the company to its total assets, the percentage of the fixed assets of the company to its total assets, the ratio of foreign-currency profits to total profits of the organization, the use of financial means and the use of operational means to manage foreign exchange risk were zero, the financial performance of the firm would be 9.518.

The study found that a unit increase in the equity ratio leads to a decrease in financial performance dependent variable by 1128.157, other factors held constant. Table 4.9 further indicates that a unit increase in the percentage of the fixed assets of the company to its total assets leads to an increase in financial performance by 2.385, other factors constant while a unit increase in the ratio of foreign-currency profits to total profits of the organization leads to an increase in financial performance by 1354.693, other factors constant. The research found out that a unit increase in the use of financial means to manage foreign exchange risk leads to an increase in financial performance by 64.037, other factors constant. In addition, a unit increase in the use of operational means to manage foreign exchange risk leads to an increase in financial performance by 34.6, other factors constant.

4.5 Discussion of Findings

Equity represents shareholder's interest in a company and companies may opt to finance assets from either equity or debt. The ratio of equity to total assets indicates the degree to which the company's assets are financed from shareholders' funds and is a good indicator of the use of leverage in a company. Giddy and Gunter Dufey (1992) point out that in the tradition of the Modigliani-Miller Theorem, the firm cannot improve shareholder value by financial manipulations. However, in a frictionless world, financial leverage is

unrelated to the value of the firm, but in a world with tax-deductible interest payments, firm value and leverage are positively related. Berger (1994) pointed out that conventional wisdom held that a higher equity ratio results in lower financial performance as measured by return on equity. This study found similar results in that the ratio of equity to total assets did not significantly improve financial performance (p=0.08).

The percentage of fixed assets to total assets indicates the extent to which fixed assets are financed by owners' equity. Igbal & Mati (2012) in their study focussing on manufacturing companies found a statistically significant positive relationship between non-current assets and firm's profitability. On the contrary, Kabajeh, et. al (2012) found no relationship between return on equity of Jordanian insurance firms to their market returns. This study found similar results to Kabajeh, et al (2012) in that the percentage of the fixed assets of the company to its total assets did not significantly improve financial performance (p=0.976)

Studies have shown that firms with larger dependency on foreign markets have larger foreign exchange exposure (Takeshi, et. al, 2013), and firms which generate a higher percentage of revenues internationally face a significant foreign exchange rate exposure. In the Kenyan context, Cherop (2010) concluded similarly that earnings of smallholder tea factories in Kenya were impacted by foreign exchange changes because the revenues of these factories were generated in foreign currency and found positive correlations between appreciation of the Kenya shilling and earnings. The study established that the ratio of foreign-currency profits to total profits of reinsurance companies significantly increases the financial performance (p=0.038)

The use of external (financial) hedging to manage foreign exchange risk involves use of financial derivatives like futures and forward contracts, options, derivatives as well as money market transactions (Papaioannou, 2006). The use of hedging instruments would include both over-the-counter and exchange-traded products. Over-the-counter currency hedging instruments include currency forwards and cross-currency swaps, while exchange-traded products include currency options and currency futures. From this study, the use of these instruments was found to be minimal, which indicates that their use was too sophisticated and difficult to implement in developing countries like Kenya with less developed financial systems. The more frequently used means of financial hedging was the choice of currency in which company debt was denominated. The study found that the use of financial means (hedging) did not have a significant impact on the financial performance of reinsurance companies (p=0.634).

The use of operational means (hedging) considered in the study included choice of invoicing currency, matching of cash inflows and outflows, intercompany netting of receipts and payments, leading and lagging and matching assets and liabilities. While Takatoshi, et. al (2013) found out that Japanese firms utilized the choice of invoicing using local currency (Yen) to successfully reduce the foreign exchange exposure, this study did not find choice of invoicing currency being used by reinsurance companies as a practice to manage foreign exchange risk. Blum, et. al (2001) noted the widely held wisdom in the reinsurance industry that foreign exchange exposure is not a problem as long as the reinsurer maintains assets in the currency in which the liabilities are denominated, that is, does on-balance sheet hedging. The study found that the use of

operational means (hedging) had a significant impact on the financial performance of reinsurance companies (p=0.043)

CHAPTER FIVE

5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Findings

The objective of the study was to find out the impact of foreign exchange risk management practices on the financial performance of reinsurance companies in Kenya. The study specifically focussed on the ratio of fixed assets of the companies to its total assets, the ratio of foreign-currency profits to total profits, the use of financial means (hedging) to manage foreign exchange risk and the use of operational means (hedging) to manage foreign exchange risk. By investigating these variables, the study aimed to add to the existing body of knowledge on risk management practices. The study focussed on reinsurance companies in Kenya and obtained primary data using questionnaires and some secondary data from the companies' financial statements. Multiple regression analysis was used to analyse the data at 95% confidence level.

The study established that the ratio of foreign-currency profit to total profit (p=0.038) and use of operational hedges (p=0.043) were critical variables that managers pursuing shareholder value maximization would need to use so as to have improved financial performance. The foreign currency profit was an important consideration since it implies that the insurance companies enjoyed diversification of both risk and revenue while expanding their customer base. The study also noted that the use of financial hedging instruments was found to be minimal, which indicates that their use was too sophisticated and difficult to implement in developing countries like Kenya with less developed

financial systems. The more frequently used means of financial hedging was the choice of currency in which company debt was denominated.

5.2   Conclusions of the Study

The study concludes that foreign exchange risk management practices impact on the financial performance of reinsurance companies in Kenya. Specifically, the study concludes that reinsurance companies should aim at obtaining greater foreign revenues and profits through diversifying beyond local borders to the regional, African as well as world markets. El-Masry & Abdel-Salam, (2007) found that the proportion of significant foreign exchange rate exposure was higher for firms which generate a higher percentage of revenues from abroad. In spite of this, the study concludes that receiving foreign revenues and therefore profits does have a significant positive impact on the financial performance of reinsurance companies.

The study also concludes that the use of operational means (hedging), particularly the matching of cash inflows and outflows and the matching assets and liabilities, had a significant impact on financial performance of reinsurance companies. This study did not find choice of invoicing currency being used by reinsurance companies to be a practice that was widely used to manage foreign exchange risk. The findings of this study collaborate the findings of Blum, et. al (2001), who noted that reinsurance companies mostly manage their foreign exchange exposure by maintaining assets in the currency in which the liabilities are denominated, that is, on-balance sheet hedging. The study concludes that given the significance of operational hedging on financial performance, reinsurance companies should seek ways to diversify their approaches for operational hedging to include all possible hedging techniques.

The practical relevance of the research findings in foreign exchange risk management practices lies in the fact that, even though there are a number of financial hedging techniques such as use of derivatives that are available to manage foreign exchange risk in most developed countries, these measures tend to be rather too sophisticated and difficult to implement in developing countries like Kenya with less developed financial systems. The study therefore concludes that foreign exchange risk management practices impact on the financial performance of reinsurance companies in Kenya.

5.3 Recommendations to Policy and Practice

The study recommends that reinsurance companies in Kenya and other organizations operating internationally should explore avenues to enhance capacities within firms for managing foreign exchange risk exposure. This capacity enhancement would cover foreign exchange risk management practices and improved understanding of the relationship between operational hedging practices and how they impact on financial performance of the firms. Batram et. al (2005) found evidence that professional firm-wide risk management was not in place in many institutions, thus justifying the need for implementing and improving risk management systems in those organizations. The study found that senior employees in the accounts and finance department were responsible for foreign exchange management of the reinsurance firms reviewed. However, the degree of involvement of other departments within these companies would need to be enhanced to provide a multi-disciplinary and professional firm-wide risk management approach.

It is recommended that reinsurance companies use a wider variety of operational hedging techniques, recognizing that they have a significant impact on their financial performance. The use of "natural" operational hedging is cheaper to implement.

Despite the fact that this study has contributed to the literature on the impact of foreign exchange risk management practices on the financial performance of reinsurance companies much more needs to be done to improve on foreign exchange risk management practices in Kenya. The availability of financial hedging such as derivatives that are available to manage foreign exchange risk is common in most developed countries, but these measures tend to be rather too sophisticated and difficult to implement in developing countries like Kenya with less developed financial systems. Reinsurance firms would seek for the needed expertise to use make greater use of financial hedging.

5.4 Limitations of the Study

A limitation of the study is that it is recognized that there may be other variables, besides those considered in the model under study, that impact on the financial performance of reinsurance companies. However, since these variables could not be statistically isolated, they would have affected the relationship.

The study could be limited to the reliability of the data. However, since the primary data was obtained from the company officials who were directly involved with foreign exchange risk management practices, it is assumed that the data was reliable.

Another limitation was the limited resources on the part of the researcher. The researcher was self-sponsored in the MBA course, and carried out the research in the most cost effective way. Face to face interviews might have provided more details for the study, however, this was not possible due to budget constraints.

Time was also a limiting factor. The researcher was in full time employment and required to complete the study within the stipulated time.

5.5 Suggestions for Further Studies

The study suggests that further research be undertaken on the relationship between foreign exchange risk exposure of reinsurance companies and their operational effeciency.

The study also suggest that other variables could be used to measure the impact of foreing exchange risk management, including the cost of foreign-denominated debt, foreign-denominated debt as a proportion of total debt on the financial performance of reinsurance companies.

The study also suggests replicaton to insurance companies and a comparison of the insurance and reinsurance companies' practices be derived to determine whether similar conclusions can be drawn for insurance companies as well.

The study also suggests that a similar study be carried out for other types of industries, such as manufacturing firms. While Igbal & Mati (2012) found a statistically significant positive relationship between non-current assets and firm's profitability, this study found it to be statistically insignificant for reinsurance compnaies. A study of the Kenyan context would add value to the body of knowledge in this subject.

In addition, a study is suggested on the influence of broader organizational strategies on foreign exchange risk in reinsurance companies.

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APPENDICES

Appendix I: Questionnaire Cover Letter

Dear Participant,

My name is James Ndirangu and I'm undertaking a survey in partial completion of my studies leading to the award of a Master's Degree in Business Administration from the University of Nairobi, School of Business.

The aim of this study is to examine the impact of foreign exchange risk management practices of the financial performance of reinsurance companies in Kenya. In order to facilitate this process, please find attached a questionnaire for your completion. The questionnaire should take no more than 20 minutes of your time and your submission will be immensely helpful.

Please note that any information provided in your response to the questionnaires will be used for academic purposes only and will be treated with utmost confidence. Names and information regarding any particular respondents will not be disclosed in the final report. Instead, all findings will be summarized to protect the identity of respondents and ensure confidentiality and anonymity.

May I request that you respond to this survey within 5 days of receipt either by completing the attached paper copy or by electronic copy provided for ease of compilation.

I take this opportunity to most sincerely thank you in advance, for your cooperation and timely response. Should you have any questions and /or clarifications, I will be happy to provide them.

Thank you,

Appendix II: Questionnaire

Section 1: General Information

1. Name of Organization_____

2. Title of Respondent _____

3. What is the financial year cycle of your organization? (e.g. Jan 1 to Dec31)_____
   _____

The degree of involvement in international activities

4. What is the reporting currency used in your financial reports? (Please indicate full
   name of currency e.g. United States Dollar) _____

5. What amount of your organization's revenue, expenditure, assets and liabilities
   are in currencies other than Kenya Shillings? (Please indicate the amount in Kshs (M) on
   each row)

	2008	2009	2010	2011	2012	2013
Amounts in Kshs (M)						
Revenue						
Expenditure						
Assets						
Liabilities						

6. What was the relative size of your organization, measured in terms of asset base,
   between the fiscal years 2008 to 2012? (Please indicate amounts in Kenya Shillings
   Million(M) equivalent)

Year	Relative Size in Kshs (M)
Yr 2008	
Yr 2009	
Yr 2010	
Yr 2011	
Yr 2012	
Yr 2013	

7. What is the number of foreign countries in which your company has subsidiaries?

    _____

8. To what extent does the currency of the revenue received match with the currency of the expenditures incurred? (A complete match would mean that all expenses are incurred in the same currency as the one in which the funding I received)

    No match   ☐

    Relatively low match   ☐

    Match to some degree   ☐

    Relatively high match   ☐

    Complete match   ☐

Foreign exchange risk management practices used in the Organization

9. Does your organization have a policy for managing foreign exchange risk?

    Yes   ☐   No   ☐

10. Who is responsible for foreign exchange rate management in your organization?
    (Please indicate the Position or Title)   _____

11. What is the source of your organization's exchange rate for the following transactions and processes? (Please tick against one option in each row)

	Annual Budgets	Daily Transactions	Month-end transactions
Central Bank of Kenya	☐	☐	☐
Organization's bank's over-the-counter exchange rate	☐	☐	☐
Most recent currency conversion	☐	☐	☐
Weighted average of currency conversions	☐	☐	☐
Exchange rate at the time revenue was received	☐	☐	☐
Public website [please specify]	☐	☐	☐
Other [please specify]	☐	☐	☐

12. How often are the following processes used to convert foreign currency to local currency in your organization? (Please tick against one option in each row)

	Always	Very Often	Sometimes	Rarely	Never
Organization's bank's over-the-counter exchange rate	☐	☐	☐	☐	☐
Third-party consultant negotiates on our behalf	☐	☐	☐	☐	☐
Directly source quotes from several banks	☐	☐	☐	☐	☐
Convert with Forex Bureaus	☐	☐	☐	☐	☐
Other [please specify]	☐	☐	☐	☐	☐

13. Did your organization use the following financial means to manage foreign exchange fluctuation in the last five years? (Please tick against one option in each row)

	2008	2009	2010	2011	2012	2013
Forward contracts	☐	☐	☐	☐	☐	☐
Currency swaps	☐	☐	☐	☐	☐	☐
Currency options	☐	☐	☐	☐	☐	☐
Currency futures	☐	☐	☐	☐	☐	☐
Choice of currency in which company debt is denominated	☐	☐	☐	☐	☐	☐

14. Within the last few years, has the degree of attention of your organization to the influence of exchange rate fluctuations on your operations and cash flows changed? (Please tick one option in each row)

It has decreased ☐

It has remained the same ☐

It has increased ☐

15. How often has your organization used the following operational means to manage foreign exchange fluctuation in the last five years? (Please tick against one option in each row)

	2008	2009	2010	2011	2012	2013
Choice of invoicing currency	☐	☐	☐	☐	☐	☐
Matching cash inflows and outflows	☐	☐	☐	☐	☐	☐
Netting different currencies' exposures	☐	☐	☐	☐	☐	☐
Leading and lagging	☐	☐	☐	☐	☐	☐
Matching assets and liabilities	☐	☐	☐	☐	☐	☐
Other [please specify]	☐	☐	☐	☐	☐	☐

16. In your company, are the following departments (or the people responsible for these areas) involved in the management of foreign exchange risk?

	Always	Very Often	Sometimes	Rarely	Never
Finance	☐	☐	☐	☐	☐
Marketing	☐	☐	☐	☐	☐
Underwriting	☐	☐	☐	☐	☐
Claims	☐	☐	☐	☐	☐
Other [please specify]	☐	☐	☐	☐	☐