



EFFECTS OF FOREIGN EXCHANGE RISK MANAGEMENT TECHNIQUES ON PROFITABILITY OF LOCAL BASED MULTINATIONAL CORPORATIONS LISTED IN KENYA

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Abstract: The main objective of this study was to establish the effects of the foreign exchange risk management techniques on the profitability of local based Multination Corporations listed in Kenya. The study intended to identify the influence of forward contracts, futures contracts, swaps contracts and options contracts on the firm profitability of local based multinational corporations listed in Kenya. The target population of the study was the risk managers of the local based Multinational Corporations listed in Kenya, which were 32 in number. The study found out that forwards contracts positively and significantly affect the profitability, futures contract also positively and insignificantly affect the profitability, options contracts positively and insignificantly affect the profitability and lastly swaps contract positively and significantly affect the profitability. The study concluded that foreign exchange risk management techniques influence profitability.

Keywords: Profitability, Forward contract, Future Contract, Option Contract and Swap Contracts

Introduction

The main objective of this study was to establish the effects of the foreign exchange risk management techniques on the profitability of local based Multination Corporations listed in Kenya. The globalization of the economy has led to the emergence of multinational firms. These are firms that engage in businesses across the boundaries of their home countries (Wambua, 2010). The goods could range from manufactured goods as well as professional services such as banking and accountancy firms amongst others. The geographical position of Kenya in Eastern, Central and Sub-Sahara Africa has made her a strategic location for many multinational corporations to set their regional headquarters. Other factors such as good infrastructure, hospitable society and a rising middle class also attract foreign investments. Many multinational corporations in Kenya, import, manufacture, export, borrow foreign currency loans and even reinvest abroad (Mwangi, 2013). In Kenya, there are foreign based and locally based multinational corporations. Some of the foreign-based multinationals corporations include Barclays Bank, Blackberry Ltd, and Coca Cola among others. The examples of the Kenyan based multinationals include KenolKobil Ltd, Kenya Airways, East African Cables among others. The operation of the multinationals in diverse countries leads to their utilization of multiple currencies. These multiple currencies require to be converted to home currencies and vice versa in the course of business operations. This currency conversions exposes the firms to foreign exchange rates fluctuations (Limo, 2014). These fluctuations can lead to loss or gain of value depending on the currencies being exchanged at the time as well as the prevailing economic environment. Currencies become valuable if the demand for the currency is greater than the available supply and vice versa.

Kibe (2016) conceptualized foreign exchange risk management techniques as a strategy or terms used to define all the measures devised by businesses or investors to protect the value of their cash flows,

assets or liabilities from adverse fluctuations of the exchange rate. According to Nakumugisha (2017) futures contract refers to the financial transaction tool entered between two parties who agree to exchange specified services or assets at a specified time in future, at a specified price as per the time the contract is entered into and signed. According to Ng'ang'a, (2013) currency options contracts refer to the right of one party to buy or sell a specific amount of currency at a specified exchange rate on or before an agreed-upon date. Mwangi (2013) conceptualized swaps as an exchange of liabilities denominated in different currency involving two parties who agree to exchange specific amounts of two different currencies at the outset in their home currency. Gherghina (2015) conceptualized the profitability as the ability for a business to earn a profit, it is simply the revenue left over after payments of all the expenses and tax related to the business activities. Profitability ratios are a series of metrics that you can use to measure the relative profitability of a business.

Statement of the Problem

The operations of the MNCs in diverse countries leads to their utilization of multiple currencies that expose them to foreign exchange risks that could either be transaction risk, exchange rate change risks, and translation risks. Kenya as one of the powerful economy within the east African region has diverse local multinational firms that operate within the east Africa counties such as Uganda, Tanzania, Rwanda, South Sudan, and Burundi. Such firms include Kenya Commercial Bank, Uchumi Supermarket, Kenya Airways Ltd amongst others. These firms are exposed to the foreign exchange risks as a result of operating in those countries. For example, according to Juma (2017) Kenyan multinational firms operating in south Sudan lost value due to south Sudanese pound devaluation.

The South Sudanese pound had lost up to 97.3% within a two-year period thus affecting the profitability for Kenyan companies denominated in South Sudanese pounds. In the year, KCB Bank, UAP Holdings and East Africa Breweries had lost up to 5 billion shillings as a result of devaluation of the South Sudan Pound. The UAP Holding Company in that year lost 3.4 billion in south Sudanese operations. Stanbic was reported to have lost 1.1 billion shillings in its South Sudanese businesses in 2016. These losses were attributed to the hyperinflation and the foreign currency devaluation. On the other hand, fuel price volatility caused by fluctuations in exchange rates remains a major challenge for airlines around the world, and Kenya Airways is no exception. As a result, fuel costs rise by 73.6 per cent from Sh19 billion incurred in the 9-month period in 2017 to Sh33 billion in the full year ended in December 2018. The total cost of fuel in the 12-month period of 2017 was Sh25.5 billion, a 30 per cent increase (Kenya Airways, 2018).

The study filled the existing literature gaps. Mahapa (2016) had undertaken a study on the management of the foreign exchange risks exposure by SMEs in South Africa. On the other hand, Matolo, (2014) undertook a study on the effects of foreign exchange risk on firm value of commercial state corporations in Kenya. Mbabazize *et al* (2014) examined the role of foreign exchange risk management on performance management of exporting firms in developing countries with a focus on the Uganda's exporting firms. These studies didn't focus on the kenyan local based multinational firms which is the focus of this study. This study seeks to examine the effects of forward contracts, futures contracts; currency swaps contracts and currency options in the firm profitability of local multinational corporations.

Research Hypotheses

H₀₁: There is no statistical effect of forward contracts on the profitability of local based Multination Corporations listed in Kenya

H₀₂: There is no statistical effect of future contracts on profitability of local based Multination Corporations listed in Kenya

H₀₃: There is no statistical effect of option contracts on profitability of local based Multination Corporations listed in Kenya

H₀₄: There is no statistical effect of swap contracts on profitability of local based Multination Corporations listed in Kenya

Theoretical Review

This study was guided by risk management theory and Purchasing Power Parity theory.

Risk Management Theory

The risk management theory seeks to explain the reasons why risk management is undertaken within firms. Wensik (2005) proposed this theory. Two explanations have been advanced on the reasons for undertaking risk management activities including profit maximization and diversification needs for the firm owners (Limo, 2014). Within the context of the foreign exchange risk management the risk management are undertaken for diverse reasons. These reasons including reduction of the loss of value of the assets held in foreign denominated currencies, reduction of costs hence increased profit margin associated with financial distress aspects, possibility of tax reduction, and increase in firms' debt capacity, therefore generating greater tax advantages from greater leverage (Kihara & Muturi, 2013). Firms mainly engage in risk management strategies on foreign currencies fluctuations with the main aim of reducing losses associated with foreign exchange fluctuations and positioning itself during favorable currency fluctuations to maximize on profitability (Limo, 2014).

Purchasing Power Parity Theory

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

According to Mwige (2016), this theory looks at the relationship between a country's foreign exchange rate and its price level as well as the relationship between changes in those variables. Purchasing power parity (PPP) is an economic theory that states that the exchange rate between two currencies is equal to the ratio of the currencies' respective purchasing power. Theories that invoke purchasing power parity assume that in some circumstances it would cost exactly the same number of, for example, US dollars to buy Euros and then to use the difference in value to buy a market basket of goods as it would cost to directly purchase the market basket of goods with dollars. A fall in either currency's purchasing power would lead to a proportional decrease in that currency's valuation on the foreign exchange market. The concept of purchasing power parity allows one to estimate what the exchange rate between two currencies would have to be in order for the exchange to be at par with the purchasing power of the two countries' currencies. This theory implies that the rate of change of the exchange rate equals the difference between the inflation rates in the two countries. If the percentage

change is positive, then the foreign currency is appreciating and home currency is depreciating. If the percentage change is negative, the foreign currency is depreciating and home currency is appreciating.

When prices change in one country compared to those in another for similar goods and services the exchange rate will change equally but in the opposite direction. This is according to the relative PPP theory. The logic for this is, if one country see rising prices and its international trading partners do not, then, its exports lose value and imports are more in demand because of lower costs. Residents will choose to purchase currency of the country with falling prices and they will sell currency of the country with rising prices. This causes change in the exchange rate. This change occurs for both nominal and real exchange rates. Changes in real exchange rates have an effect on the profitability of a domestic firm with local competitors. This is as a result of deviation from PPP (Mwangi, 2013)

Empirical Literature

Forward Contracts and Firm Profitability

Kibe (2016) examined on the role of forward contracts in mitigating volatility of exchange rates on the Procter and Gamble. To achieve its objectives, the study utilized a correlational research design and a sample made of 50 finance staff members. A mixed methodology in which there was both primary and secondary data collection aspects. The study conceptualized the forward contract as a contract that gives the holder both the right and full obligation to conduct a transaction involving a security or commodity –the underlying asset- at a predetermined future date and at a predetermined price. The study results indicated that 47.7% of the respondents indicated that the forward contracts were utilized for the purposes of hedging foreign currency risks. Using regression analysis, the study further found that a unit increase in currency forward led to a 2.720 increase in performance due to a regression coefficient of 2.720. The relationship was found to be statistically significant at 5% level of significance due to a p value of 0.028.

Futures Contract and Firm Profitability

Focusing on listed firms at Nairobi securities exchange, Mwige (2016) sought to examine the role of foreign exchange hedging methods and financial performance of the firms. To achieve its objectives, the study utilized a correlational research design. Amongst the aspects that the study sought to examine was the role of futures contracts on the firm performance. The study's target population was all listed firms by December of 2012. Secondary data collection was undertaken covering five years from 2008 to 2012. Using regression analysis, the study found that a unit increase in futures contracts led to 1.423 increases in financial performance due to a beta coefficient of 1.423. The results were also found out to be statistically insignificant due to p value of more than 0.05.

Options and Firm Profitability

In a study focusing on the link between the foreign exchange risk management and financial performance, Mugi (2015) undertook a study that was based on commercial banks in Kenya. The study conceptualized currency options contracts as derivatives in which the owner has the right but not obligation to exchange money denominated in one currency into another currency at a pre-agreed exchange rate on a specified date. The study utilized correlation research design and a target population composed of 43 commercial banks. Data was collected for five years from 2009 to 2014. Using correlational analysis, the study found that currency options were positively. Using regression analysis, the study found that a unit increase in currency options will lead to 0.154 decrease in the return on financial performance. These results were found to be insignificant at 5% level of significance due to a p value of more than 0.05.

Swaps and Firm Profitability

Mwawasi, (2016) undertook a study that sought to examine the role of foreign exchange exposure on the performance of floriculture firms in Kenya. Amongst the aspects that were to be examined included the currency swaps. To achieve these objectives, the study used a descriptive survey design and secondary data sourced from flour council of Kenya. Using correlational analysis, the study found that cross currency swaps were positively correlated with return on assets at a correlation coefficient of 0.555. These results were found to be statistically significant at 1% level of significance. Using regression analysis, the study found that a unit increase in cross currency swaps led to a 4.728 increase in financial performance of floriculture due to a beta coefficient of 4.728. These results were found to be statistically significant at 5% level of significance due to a p value of 0.027.

Conceptual Framework

Mugenda and Mugenda, (2003) define a conceptual framework as a hypothesized model, identifying the area under study and the relationship between the dependent and independent variables.

Independent variables

Foreign Exchange Risk Management Techniques

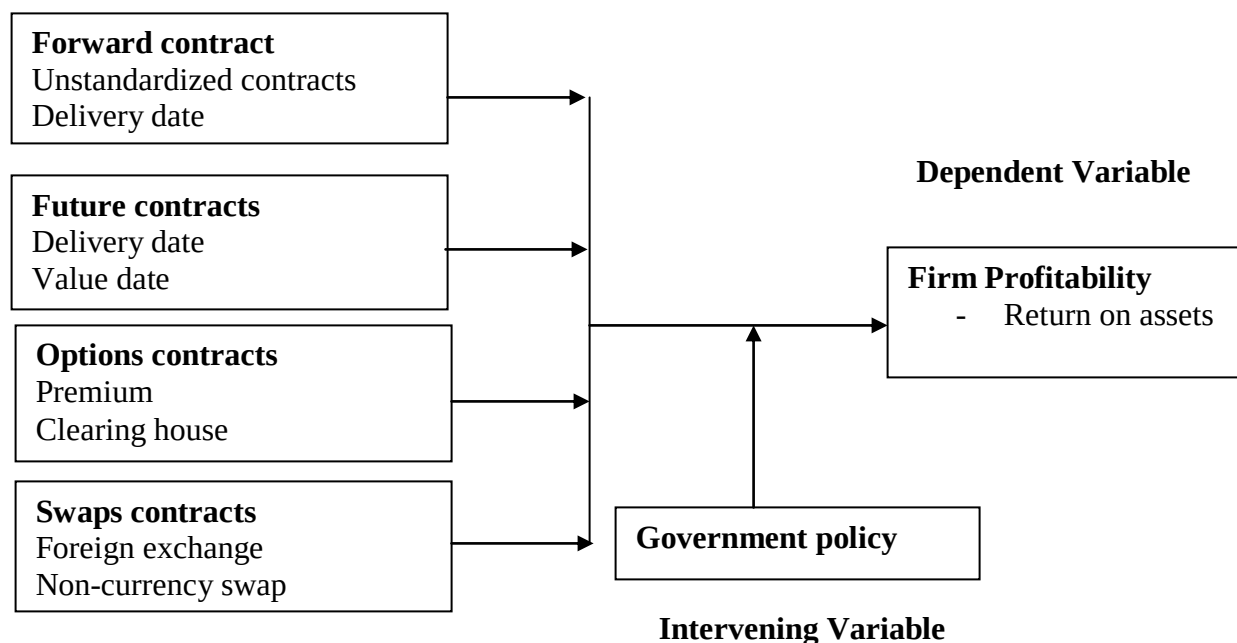


Figure 1 Conceptual framework

It is showing the effect of risk management techniques on profitability of local based multinational corporations listed in Kenya. The study used the conceptual framework to show the relationship between the independent variables and the dependent variable. The dependent variable is the firm profitability of local based multinational companies listed in Kenya, which is measured by use of return on asset. The ROA figure gives investors an idea of how effective the company is in converting the money it invests into net income. The higher the ROA number, the better, because the company is earning more money on less investment. Diverse studies have used different measures for the firm profitability. Matolo (2014) in a study on the commercial state corporations utilized return on assets as a measure for firm profitability. According to Matolo (2014) in his study, return on assets is the most

preferred measure for profitability especially when assessing the risk management techniques since it focuses on the assets of these firms and that is the reason why this study has utilized the return on asset as the only measure for the profitability. The independent variables are foreign exchange risk management technique, which are represented by Futures contracts proxied by delivery date and value of contract, Forward contracts proxied by amount of transactions and value date, Options contracts measured by call option and put option, Swaps contracts measured by foreign exchange rate and periodic interests. The study used the conceptual framework to show now the relationship between the future contracts, forward contracts, options contracts and swaps contract with the firm profitability. The intervening variable is the political stability proxied by government policy.

Research Methodology

This study adopted correlational research design. This research design enabled the researcher to describe the relationship between forward contracts, futures, options and swaps on firm profitability of local based Multination Corporations listed in Kenya. The target population of the study for primary data were the Risk Managers of local based Multinational Corporations listed in Kenya that are 32 in number. For the secondary data, the data were collected from the audited financial statements for 2013 to 2017 for local based Multinational Corporation listed in Kenya, which were obtained from firm's website. This study employed census survey therefore there was no sampling and sample size. Census was appropriate because target population was small and manageable within the time and budget scope of the study

This study used both primary and secondary data in meeting the set objectives of the study. Primary data was used to collect data for independent variable (risk management techniques) while secondary data was used to collect data for dependent variable (profitability). Primary data was obtained by use of closed-ended questionnaires. The questionnaire contained five sections, that is, section A to section E. The sections contained the following information; Section A-Firm Characteristics, Section B-Future contract, Section C-Forwards contract, Section D-Option contract and Section E sought to obtain data on Swaps contract. To measure the statements in section B to section E, the study used a five point Likert scale as follows; Key; 1 = Strongly disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly agree. The study obtained its secondary from audited financial statements of these local based multinational companies using data collection sheet. The secondary data that was collected was for the period between the year 2013 and the year 2017 from firm's websites.

To ascertain whether the research instrument is valid, the study used Content Validity based on responses given by five content experts in the subject matter who comprised of the research supervisor and four experts in the field of risk management decisions and its application. The experts evaluated the relevance of the questions based on the following four-point ordinal scale; 0=Irrelevant, 1=Relevant, 2= Quite Relevant, and 3=Highly Relevant. This study conducted a pilot study to test the reliability of the study questionnaires. The study conducted a pilot study from Barclays Bank Ltd, Total Kenya Ltd and Britam Holding Ltd, which represents 10% of the total of the study sample size. These companies were selected because all of them were Multinational Corporation and that they are exposed to foreign currency fluctuation risk. This study used Cronbach's Alpha Coefficient to test the internal consistency of the structured questionnaires from the pilot data. Nunnally (1978) give a threshold of 0.7 to confirm the reliability of a research tool.

After the data has been collected from the field, it was checked for completeness and then coded and entered in SPSS version 22 for analysis. Coding involved the integration of likert scale into the responses given by respondents for quantitative data analysis.. Both descriptive data analysis and

inferential data analysis was used for this study. Mean, standard deviation, skewness and kurtosis were used for descriptive statistics. Mean was used to indicate the center of responses on average for generalization purposes. Standard deviation on the other hand was used to indicate the level of consensus of respondents of a given metric (Sekaran & Bougie, 2011). According to Kombo and Tromp (2009), from a five point Likert scale, Key; 1 = Strongly disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree. Mean score in the range of 1.0 - 1.4 would imply a agree to a low extent while a mean score of between 1.5 - 2.4 would imply a tendency to agree to a small extent. A mean score of 1.0 - 1.80 depicted strongly disagree, 1.81 - 2.60 indicates disagree while mean score of 2.61 - 3.40 indicates neutral, 3.41 - 4.20 indicates agree and 4.21 - 5.0 indicates strongly agree (Warmbrod, 2014). Similarly, a standard deviation of above 1.0 would imply that there is low consensus, a standard deviation in between 0.5 and 1.0 would imply moderate consensus while a standard deviation of below 0.5 would imply a high consensus (Sekaran & Bougie, 2011).

For inferential statistics, Pearson Correlation Coefficient tests the significance relationship between independent variables and the dependent variable and also gives the strength and direction of relationship. Multiple regression model was used to test the research hypotheses. The research hypotheses was test at 0.05 significance level in order to control for Type I and Type II error. The significance of a relationship is indicated by its associated p-value. P-value helps in rejection of null hypothesis in respect to set significant level. The null hypothesis is rejected if the p-value is less than a predetermined level of significance (Orodho, 2003). In this study, the research hypotheses was test at 0.05 significance level in order to control for Type I and Type II error.

The researcher used the following multiple linear regression model to show how forward contracts, futures, options, swaps can predict the profitability of Multination Corporations listed in Kenya.

$$Y = \alpha + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \varepsilon$$

Where; Y is the dependent variable (Firm Profitability); α = constant; $\beta_1, \beta_2, \beta_3$ and β_4 are the model coefficients; X_1 = futures contract; X_2 = Forwards contract; X_3 = Option contract; X_4 = Swap contracts; e = the error of prediction

Results and Discussion

Reliability Results

Pilot study was carried out to determine the reliability of the questionnaire. The study conducted from Barclays Bank Ltd, Total Kenya Ltd and Britam Holding Ltd, which represents 10% of the total of the study sample size. Reliability analysis was subsequently done using Cronbach's Alpha, which measured the internal consistency by establishing if certain item within a scale measures the same construct. Nunnally (1978) give a threshold of 0.7 to confirm the reliability of a research tool. The findings are indicated in table 4.2

Table 1: Reliability Statistics

Variable	Cronbach's Alpha	N of Items
Forward Contract	0.742	5
Future Contract	0.737	5
Option Contract	0.711	5
Swaps Contracts	0.872	5
Combined Reliability	0.871	20

From Table 1, the Cronbach Alpha was 0.871, which is above 0.7; this indicates that the research instruments were reliable for data analysis. The study also determines the reliability test for each variable where the following were the results; were forward contract had a reliability value of 0.742, future contract registered a value of 0.737, options contract had 0.711 and swaps contract recorded 0.871. This implies there was reliability in the research instrument

Diagnostic Tests

Multicollinearity

Mwangi (2013) conceptualized multicollinearity as a phenomenon in which one predictor variable in a multiple regression model can be linearly predicted from the others with a substantial degree of accuracy. Multi-collinearity does not reduce the reliability of the regression model as a whole, but only affects the calculations regarding individual independent variables. The statistical methods used to test multi-collinearity on data is through the use of Tolerance values, which were used in this study; tolerance values of less than 0.01 depict multi-collinearity among two or more independent variables. The tolerance values for all the independent variables (forward, futures, swap and options contracts) are above 0.01, which depicts that there exists no multi-collinearity between them, which shows zero multi-collinearity among the independent variables. However, for Variance Inflation Factor if it is less than 10 there is no multicollinearity and vice versa. For our study, it depicts that there is no multicollinearity between the variables because their VIF are less than 10. Table 4.13 presents these results.

Table 2 Multi-Collinearity Test

Model	Collinearity Statistics	
	Tolerance	VIF
Forward contract	.838	1.194
Future contract	.706	1.417
Option contract	.960	1.042
Swaps contract	.833	1.200

a. Dependent Variable: Profitability

Normality of profitability

Majority of the statistical procedures are based on the assumptions that the data follows normal distribution. Thus, mostly they assume that the populations from which the samples are taken are normally distributed. Test of normality is carried out to assess the extent to which the variables of interest assume a normal probability distribution. This study tested for normality using histogram. The results for test of normality were presented in Figure 2.

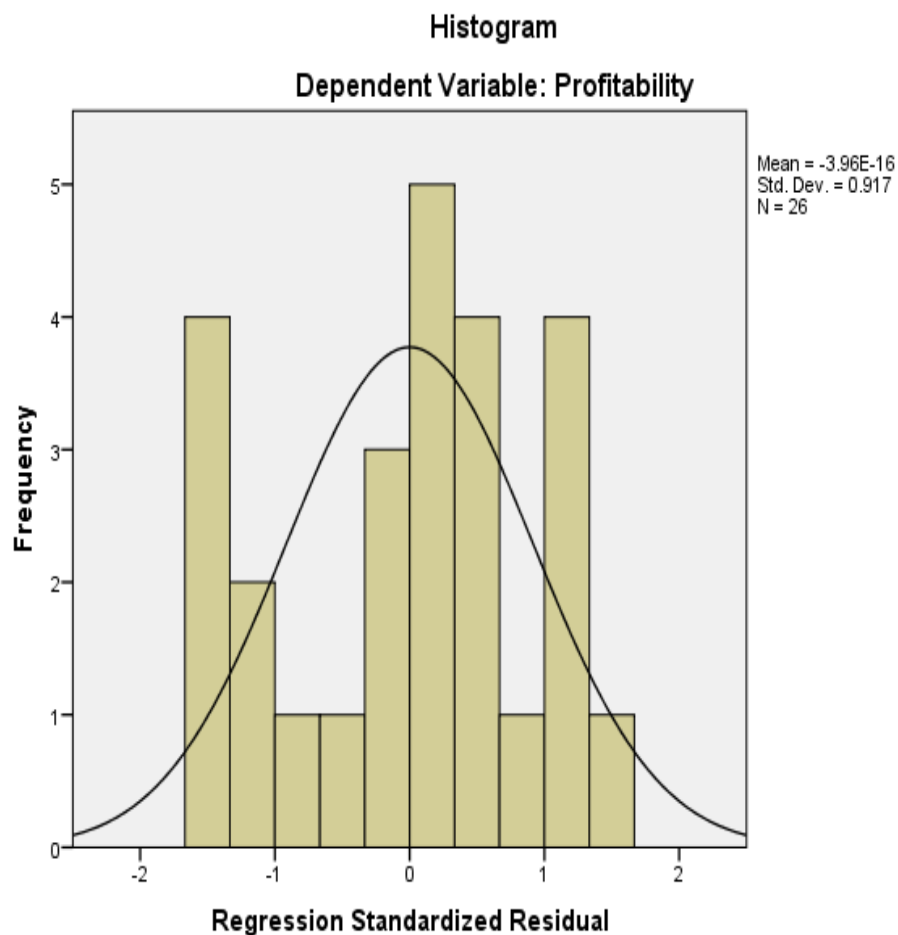


Figure 2: Test for Normality of profitability

Figure 2 above, shows a histogram for profitability data of local based Multination Corporations listed in Kenya which was bell shaped indicating that the data was normally distributed. The standard deviation was 0.917 on a sample of 26 companies indicating normal distribution.

Linearity of profitability

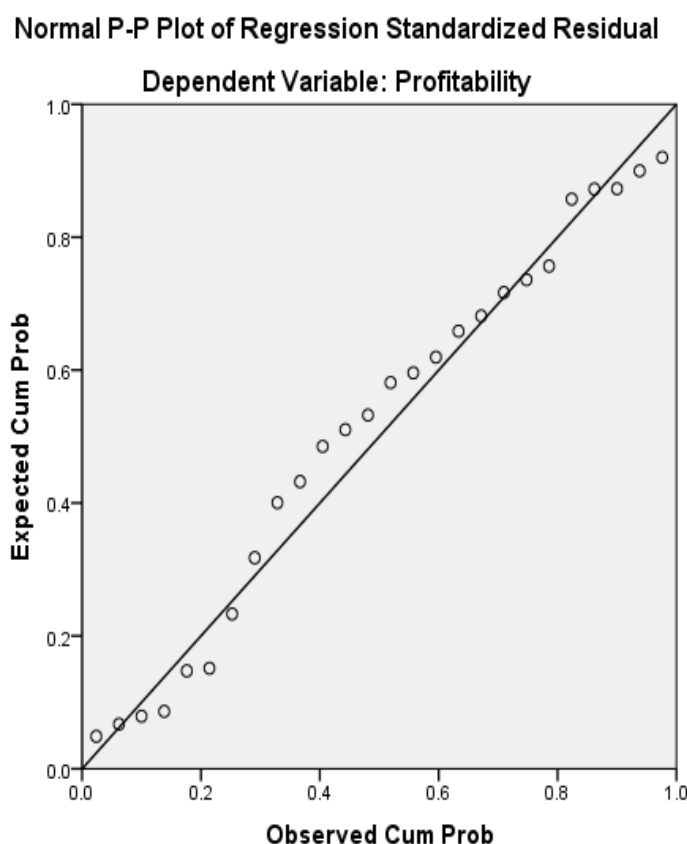


Figure 3: Test for linearity of profitability

Linearity of data means that the values of the outcome variable for each increment of a predictor variable lie along a straight line. Linearity is an important association between the dependent and the independent variables. In this study, linearity was tested using scatter plots. Figure 4.2 above shows there was general linearity of data despite some cases being slightly away from the regression line. The findings also show that the effects of the foreign exchange risk management techniques on the profitability.

Inferential Statistics

It was used to make inference about the study population using data drawn from the population itself, usually based on sample analysis and observation. It enables a researcher to arrive at conclusions that extend beyond the immediate data alone; it basically compares, tests and predicts data

Correlation Analysis

Pearson's Correlation Matrix is used to test the degree of association between two or more variables, in terms of strength and direction, with values ranging from -1 (showing a perfect negative linear relationship) to +1 (showing a perfect positive linear relationship), and zero indicating no relationship between the variables. Correlation coefficients vary numerically between -1.0 and 1.0; the closer the correlation is to 1.0, the stronger the relationship between the two variables.(Mwangi, 2015).

Table 3: Correlation Analysis

		Profitability	Forwards Contract	Futures Contract	Options Contract	Swaps Contract
Profitability	Pearson Correlation	1	.499**	.535**	.354	.308
	Sig. (2-tailed)		.009	.005	.076	.126
	N	26	26	26	26	26
Forwards Contract	Pearson Correlation	.499**	1	.701**	-.096	-.380
	Sig. (2-tailed)	.009		.000	.642	.055
	N	26	26	26	26	26
Futures Contract	Pearson Correlation	.535**	.701**	1	.077	-.060
	Sig. (2-tailed)	.005	.000		.707	.770
	N	26	26	26	26	26
Options Contract	Pearson Correlation	.354	-.096	.077	1	.699**
	Sig. (2-tailed)	.076	.642	.707		.000
	N	26	26	26	26	26
Swaps Contract	Pearson Correlation	.308	-.380	-.060	.699**	1
	Sig. (2-tailed)	.126	.055	.770	.000	
	N	26	26	26	26	26

** . Correlation is significant at the 0.01 level (2-tailed).

Correlation coefficient results on Table 3 below shows that forward contract had a positive correlation coefficient $r = 0.499$, indicating a weak a positive correlation between the forward contracts and profitability. Future contracts had a positive correlation coefficient $r = 0.535$, indicating a strong positive correlation between future contracts and profitability. Options contracts had a weak positive correlation of 0.354 between option contracts and profitability. Swaps contracts has a weak positive correlation factor of 0.308, which implies that swap contracts has weak positive relationship with the profitability.

Multiple Regression Analysis

The study used a multiple linear regression to establish how the use of forwards, futures, options and swaps in foreign exchange management influences the profitability of local based Multination Corporations listed in Kenya. The model summary presented in the table below

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.741 ^a	.548	.462	.94432

Predictors: (Constant), Swaps Contract, Futures Contract , Options Contract, Forwards Contract

The model summary indicates that there was a strong relationship between the observed and predicted values of the dependent variable due to an R-value of 0.741. This implied that the model is relevant and can be applied in a study seeking to establish the effects of forwards, futures, options and swaps contracts in foreign exchange management on profitability of local based Multination Corporations listed in Kenya. R Square of 0.548 implies that 54.8% of the variation in dependent variable was explained by the independent variables of the study. It was therefore established that 54.8% of the changes in the profitability of local based Multination Corporations listed in Kenya could be attributable to forwards, futures, options and swaps in foreign exchange management. Adjusted R Square on the other hand showed the expected level of improvement of the model in adding more predictor variables in the model (Mugenda & Mugenda, 2003). This therefore implied that adding more predictor variable to the model would improve the model less than expected due to an Adjusted R-Square value of 0.462, which is less than the R Square. A standard error of estimate of 0.94432 implied that the regression model was accurate in its prediction since this value was low.

Table 5: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.744	4	5.686	6.376	.002 ^b
	Residual	18.727	21	.892		
	Total	41.471	25			

a. Dependent Variable: Profitability

b. Predictors: (Constant), Swaps Contract, Futures Contract , Options Contract, Forwards Contract

Based on the f-statistics and its associated p-value, it was established that the model provided goodness of fit of data due to $F(0.025)=6.376$ and $p<0.05$. This therefore implied that a model with forwards, futures, options and swaps as its predictor variables was significant in its prediction more than a model with zero predictor variables. The study further sought to establish the significance of each independent variable in predicting the level of profitability. These results are shown in Table 6.

Table 6: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	1.631	.923		-1.766	.092
Forwards Contract	.612	.244	.598	2.506	.021
Futures Contract	.142	.214	.144	.664	.514
Options Contract	.049	.268	.039	.184	.856
Swaps Contract	.618	.282	.517	2.194	.040

a. Dependent Variable: Profitability

As per the SPSS generated Table 6, the established regression equation was:

$$Y = 1.631 + 0.612X_1 + 0.142X_2 + 0.049X_3 + 0.618X_4$$

Holding Forward contract, Future contract, Option contract and swaps contract constant the profitability would be 1.631 units. Independent variables from the regression equation reveal that a unit increase in forward contract led to an increase in profitability by 0.612 units. This implies an increase in the forward contract would positively affect the profitability of the firms; this depicts a positive relationship between the two variables. In addition, a unit increases in future contract led to an increase of profitability by 0.142 units. This implies a positive relationship between the future contract and profitability. In addition, a unit increase in option contracts led to an increase in profitability by 0.049 units; this depicts a positive effect of option contracts on profitability. Lastly, a unit increase in swap contract leads to an increase by profitability by 0.618 units implying a positive effects of swap contracts on the profitability of the local based MNCs listed in Kenya under study. The study used unstandardized beta coefficient.

Test of Hypotheses

To draw inferences about the population of the sampled data, the study used a multiple regression for hypothesis testing. This test-of-significance method is to verify the truth or falsity of a null hypothesis by using sample results, showing that the means of two normally distributed populations are equal. In all the tests, the decision rule was if the P value observed (calculated P) is less than the set alpha (α) that is the confidence level of 0.05, then accept the null hypothesis and if the P value observed is greater than the set alpha of 0.05, do reject the null hypothesis (Limo, 2014). The testing of this hypothesis was done at level of significance of 0.05. The hypothesis was testing using Table 6 above.

Ho1: There is no statistical effects of forward contracts on profitability of local based Multinational Corporations listed in Kenya

Coefficient results in Table 7 above established a positive and statistically significant effect of forward contracts on profitability of local based Multination Corporations listed in Kenya with a Beta value = 0.612 (p-value = 0.021 which is lower than 0.05). Given that the p-value is lower than 0.05, we reject the null hypothesis that there is no statistical effects of forward contracts on the profitability of local based Multinational Corporations listed in Kenya. These findings concur with the findings of Kibe (2016) who found a positive relationship between forward contracts and firm performance and further that the relationship was significant due to p-value of 0.028.

Ho2: There is no statistical effects of future contracts on the profitability of local based Multinational Corporations listed in Kenya

As presented in Table 7, future contract had positive and insignificant effects on the profitability of local based multinational corporation listed in Kenya at a minimum of 95% confidence level (Beta value=0.142, $P=0.514 > 0.05$). Based on these results of Hypothesis H_02 (future contract have no significant effects on the profitability) failed to rejected. By failing to reject the null hypothesis, the results indicated that future contracts have positive insignificant effects on the profitability of local based Multinational Corporations listed in Kenya. These findings concur with Mwige (2016) who sought to examine the role of foreign exchange hedging methods and financial performance of the firms. Amongst the aspects that the study sought to examine was the role of futures contracts on the firm performance. Using multiple regression analysis, the study found that a unit increase in futures contracts led to 1.423 increases in financial performance due to a beta coefficient of 1.423. The results were also found out to be statistically insignificant due to p-value of more than 0.05.

Ho3: There is no statistical effects of options contracts on the profitability of local based Multinational Corporations listed in Kenya

As it presented in Table 7, options had a positively but insignificant effects on the profitability of local based Multinational Corporations listed in Kenya ($p=0.856$) with a minimum of 95% confidence level and a beta of 0.049. The above results thus lead to the accepting the null Hypothesis H_03 ; There is no statistical effects of options contracts on the profitability of local based Multinational Corporations listed in Kenya. By accepting the null hypothesis, the results indicated that there is a positive but insignificant effects of option contract on the profitability. These findings concur with the findings of Mugi (2015) who found a positive but insignificant effects of options on profitability of listed firms. Using regression analysis, the study found that a unit increase in currency options led to 0.154 units increase in the financial performance. The results were found to be insignificant due to a p value of more than 0.05

Ho4: There is no statistical effects of swaps contracts on the profitability of local based Multinational Corporations listed in Kenya

In respect to swaps, as presented in Table 7, the study established a positive and significant effects of swaps contracts on the profitability of local based multinational corporation listed in Kenya at a minimum of 95% confidence level (Beta value=0.618, $P=0.04$, which is lower than 0.05). The fourth hypothesis of study stating that there is no statistical effect of swaps on the profitability of local based Multinational Corporations listed in Kenya was rejected at 5% significance level. This therefore implied that use of swaps significantly predicts positively the level of profitability of local based Multinational Corporations listed in Kenya. These findings concur with the findings of Mwawasi, (2016) who undertook a study that sought to examine the role of foreign exchange exposure on the performance of floriculture firms in Kenya. Amongst the aspects that were to be examined included the currency swaps. Using regression analysis, the study found that a unit increase in cross currency swaps led to a 4.728 increase in financial performance of floriculture due to a beta coefficient of 4.728. These results were found to be statistically significant at 5% level of significance due to a p value of 0.027.

Conclusions of the Study

The study concluded that there was a positive effect of forwards contracts on profitability of Local Based Multinational Corporations listed in Kenya. The metric with the highest mean was the rate of

foreign exchange conversion takes place at a specified future date to manage exchange rate risks. It is concluded that forward contracts significantly affect the profitability of Local Based Multinational Corporations listed in Kenya. The study rejects the null hypothesis that forward contracts has no significant effect on profitability of Local Based Multinational Corporations listed in Kenya

Secondly, the study concluded that there was a positive and insignificant relationship between futures contracts and profitability of Local Based Multinational Corporations listed in Kenya. Futures aspect that was highly ranked was the corporation largely considers future contracts in order to reduce price fluctuations. The study concludes that future contracts positively but insignificant influence the profitability of the firms. The study fails to reject the null hypothesis that there is no significant effect of forward contracts on the profitability of Local Based Multinational Corporations listed in Kenya.

The study further concluded that there was a positive but insignificant effect of options contracts on the profitability of Local Based Multinational Corporations listed in Kenya. The most rated aspect of options in the sample corporations of the aspect of using option contracts to provide protection to corporation against exchange rate fluctuations. The study depicts the option contracts do influence the profitability of the firms. The study fail to reject the null hypothesis that options contracts has no significant effect on profitability of Local Based Multinational Corporations listed in Kenya

In respect to swaps, the study concluded that there was a positive and significant effect of use of swaps on profitability of Local Based Multinational Corporations listed in Kenya. The most ranked aspects of swaps were the corporation customizes swaps contract to hedge financial risk and that the corporation engages in non-currency swaps arrangements. The study concludes that an increase in use of swaps increases the profitability of the firms, the study also reject the null hypothesis that swaps has no significant effect on profitability of Local Based Multinational Corporations listed in Kenya.

Policy Recommendations

The study concluded that there was a positive effect of forwards contracts on profitability of Local Based Multination Corporations listed in Kenya. In addition, forward contracts significantly affect the profitability of Local Based Multinational Corporations listed in Kenya based on this conclusion the study recommends Multinational Corporations listed in Kenya to agree the rate of foreign exchange rate at the time of signing the contract which will takes place at a specified future date to manage exchange rate risks.

The study also concluded that there was a positive and insignificant effect of futures contracts on the profitability of Local Based Multinational Corporations listed in Kenya it is also study concludes future contracts positively influence the profitability of the firms. The study further based on findings recommends Multinational Corporations listed in Kenya largely considers future contracts in order to reduce price fluctuations

The study further concluded that there was a positive and insignificant effect of options contracts on profitability of Local Based Multinational Corporations listed in Kenya. The study depicts the option contracts do influence the profitability of the firms. Based on the conclusion the study recommended that local based Multinational Corporations listed in Kenya to using option contracts to provide protection to corporation against exchange rate fluctuations.

Lastly, the study concluded that swap contracts significantly affect the profitability of Local Based Multinational Corporations listed in Kenya. Based on the conclusion, the study recommended that local based Multinational Corporations listed in Kenya to customizes swaps contract to hedge financial risk and that the corporation to engage in non-currency swaps arrangements.

Recommendations for Further Studies

The study researched the effect of foreign exchange risk management techniques (forwards contracts, futures contracts, options contracts and swaps contracts) could explain 54.8% of the profitability of local based Multinational Corporation listed in Kenya. The remaining 45.2% can be explained by other factors not considered in this study. Therefore, there is need to establish the other factors which affects profitability. This will help to better explain the effect of foreign exchange risk techniques on profitability of local based multinational firms in Kenya. Further, the study can be done on the effect of price volatilities in foreign exchange on the profitability of listed Multinational Corporations listed in Kenya since it was observed that price volatility affects the performance of the firms.

References

- Gherghina, Ș. C. (2015). Corporate Governance Ratings and Firm Value: Empirical Evidence from the Bucharest Stock Exchange. *International Journal of Economics and Financial Issues*, 5(1), 97–110.
- Juma, V. (2017). *Kenyan Firms Count Billions in Losses after South Sudan's Currency Rout*.
- Kibe M. (2016). impact of volatility of exchange rate on foreign direct investment in Kenya. *Journal of International Finance and Money*, 1, 23–34.
- Kihara, M., & Muturi, W. (2013). The Effect of Foreign Exchange Risk Management on Financial Performance of Microfinance Institutions in Kenya. *International Journal of Social Sciences and Information Technology*, II(IV), 543–559.
- Kombo, D. K., & Tromp, D. L. A. (2009). *Proposal and Thesis Writing: An Introduction*. Nairobi, Kenya: Paulines Publications Africa, Don Bosco Printing Press.
- Limo, D. (2014). The Effect Of Foreign Exchange Risk Management On The Financial Performance Of Commercial Banks In Kenya. *Journal of Accounting and Finance*, IV(I).
- Mahapa, R. R. (2016). Management Of Foreign Exchange Risks Exposure By Smes In South Africa. *IOSR Journal of Business and Management*, 2(3), 98–104.
- Matolo, D. (2014). Effects Of Foreign Exchange Risk On Firm Value Of Commercial State Corporations In Kenya. *Corporate Finance Journal*, II(October), 23–25.
- Mbabazize, P. M., Daniel, T., & Ekise, I. E. (2014). The Role Of Foreign Exchange Risk Management On Performance Management Of Exporting Firms In Developing Countries : A Case Study Of Uganda's Exporting Firms. *Research Journals*, 2(3), 1–18.
- Mugenda & Mugenda (2003). *Research Methods: Quantitative and Qualitative Approaches*. Nairobi: Acts Press.
- Mugi, A. N. (2015). The Effect Of Foreign Exchange Risk Management Practices On Financial Performance Of Commercial Banks In Kenya. *Journal of Futures Markets*, iv(v).
- Mwangi G. (2013). Effect of Credit Risk Management Practices on Financial Performance of Commercial Banks in Kenya. *Strategic Journal of Business & Change Management*, II(November).
- Mwangi, W. (2015). *The Implications Of Foreign Exchange Exposure On The Oil Marketing Companies In Kenya*. Unpublished Masters in Business Administration Thesis: United States International University, Africa.

- Mwawasi, S. (2016). The Effects of Foreign Exchange Exposure on the Performance of Floriculture Firms in Kenya. *Journal of Business Management*, iv(v), 12–14.
- Mwige, R. (2016). Relationship Between Foreign Exchange Hedging Methods And Financial Perfomance Of Firms Listed At The Nairobi Securities Exchange. *Journal of Business Management*, (II).
- Nakumugisha M. (2017). price volatility in the coffee sector: a case of Kakuzi limited. *Journal of Business Management*, 12(1), 1–4. <https://doi.org/10.1080/17432979.2017.1270880>
- Ng'ang'a, G. (2013). detereminants of adoption of hedging practices by small and medium size banks in Kenya, Nairobi county. *Research Gate*, 1(II). Retrieved from <http://www.kantakji.com/media/5755/15405.pdf>
- Orodho, A. J. (2003). *Essentials of Educational and Social Science Research Method*. Nairobi: Masola Publishers.
- Saunder, M., Lews, P., & Thornhill, A. (2009). *Research Methods for Business Students* (4th ed.). Harlow: Prentice Hall Financial Times.
- Sekaran, U., & Bougie, R. (2011). *Research Methods for Business: A Skill Building Approach* (5th ed.). Delhi: Aggarwal printing press.
- Wambua, M. (2010). Enterprise Risk Management Strategies and Practices as Determinants of Performance in Commercial Banks in Kenya. *Journal of Accounting and Finance*, iii, 1–66.
- Warmbrod, J. R. (2014). Reporting and Interpreting Scores Derived from Likert-type Scales. *Journal of Agricultural Education*, 55(5), 30–47. <https://doi.org/10.5032/jae.2014.05030>
- Wensik. (2005). *Risk Management theory: the integrated perspective and its application in the public sector* (Vol. 21). Estado, Gobierno, Gestión Pública.