INTERNATIONAL JOURNAL OF SOCIAL Sciences and Information Technology
ISSN 2412-0294 www.ijssit.com

http://www.ijssit.com Vol III Issue III, May 2017
ISSN 2412-0294

EFFECT OF FINANCIAL RISKS ON MARKET PERFORMANCE OF PUBLIC MANUFACTURING COMPANIES IN KENYA

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ABSTRACT

Financial risk management of public manufacturing companies listed in Kenya is considered by researchers as a yard stick for determining failure or success of these institutions. Across the manufacturing industry, the most prominent area that erodes the mass of their profit is risk management. The study aimed at studying the effect of financial risks on market performance of public manufacturing companies in Kenya. Its specific objectives included: Determining the effects of default risk on the market performance of public manufacturing companies in Kenya; to evaluate the effects of interest rate risk on the market performance of public manufacturing companies in Kenya; to find out the effects of foreign exchange risk on the market performance of public manufacturing companies in Kenya and to establish the effects of liquidity risk on the market performance of public manufacturing companies in Kenya. The study adopted the descriptive survey within manufacturing companies at the Nairobi Securities Exchange from January 2008 to December 2016. In sampling and sampling design, a purposive sampling technique was employed. Secondary data which included quarterly interest and exchange rates from the Central Bank of Kenya, bad debts expenses expunged from financial statements of these companies, quarterly cash balances and share prices were collected to determine the market performance of these companies. The study employed a modified capital asset pricing model to determine the effect of financial risks on market performance of these companies. SPSS and Microsoft Excel were used in the processing of data and the information generated was presented in the form tables. The study found that default rate risk, the credit rate risk and the exchange rate risk had negative significant effects on market performance of manufacturing companies in Kenya. On the other hand, the interest rate risk was found to have a positive significant effect on market performance of manufacturing companies in Kenya.

Keywords: Financial Risks, Market Performance, Default Risk, Liquidity Risk, Exchange Rate Risk, Interest Rate risk

1.0 Introduction

The amount of risk in the financial system can be thought of as the combined impact of the different types of financial and economic risks. To maintain the stability of the whole financial system, it is important to ensure continuous operations of key financial markets, so that manufacturing firms and other firms can have access to funding when necessary. Several manufacturing firms have either collapsed and or are facing near collapse because of badly functioned financial risks. Thus, their activities have reduced because of their response to the perceived risk making profits and returns to suffer. This has led not only to liquidity and credit shortages and a significance loss of public confidence in the manufacturing sector but also the entire financial system and the economy.

Poor management of financial risks, by manufacturing companies, leads to accumulation of claims from the clients hence leading to increased losses and hence poor market performance (Magezi, 2003). Financial Risk management activities are affected by the risk behavior of managers and the administrators of companies. A vibrant risk management framework can help organizations to reduce their exposure to financial risks, and enhance their market performance (Iqbal and Mirakhor, 2007). Further; it is argued that the selection of financial risk tools tends to be associated with the company's calculative culture the measurable attitudes that senior decision makers display towards the use of financial risk management models. While some financial risk functions focus on extensive risk measurement and risk based performance management, others focus instead on qualitative discourse and the mobilization of expert opinions about emerging risk issues (Mikes and Kaplan, 2014).

Financial risk can be used like an umbrella term for many types of risk associated with financing, including financial transactions that include company loans in risk of default. Jorion and Khoury (1996) illustrates that financial risk arises from possible losses in financial markets due to movements in financial variables. It is usually associated with leverage with the risk that obligations and liabilities cannot be met with current assets. The focus of this study used the term financial risks to broadly cover default risk, interest rate risk, foreign exchange risk and liquidity risk. Financial risk may be caused by variation in interest rates, currency exchange rates, variation in market prices, default risk and liquidity gap that affect the cash flows and therefore its market performance and overall affect the competitive ability of the manufacturing companies. The Basel committee defines credit risk as the potential that a bank borrower or counterparty will fail to meet its obligations in accordance with the agreed terms (Basel committee, 2003). Liquidity Risk arises due to insufficient liquidity for normal operating requirements reducing the ability of banks to meet its liabilities when they fall due. Foreign exchange risk can be defined as the risk of loss when a bank in a foreign exchange transaction pays the currency it sold but does not receive the currency it bought. Foreign exchange risk failures can arise from counterparty default, operational problems, market liquidity constraints and other factors.

Market risk is the risk originating in instruments and assets traded in well-defined markets. (Brunnermeier and Pedersen, 2007)

Managing risk is part of every company's strategic and operational activities, and analyzing risks is an important aspect of a manager's job. Risk management is the process of monitoring risks and taking steps to minimize their impact (Eichhorn, 2004). Financial risk management is the task of monitoring financial risks and managing their impact. It is a sub-discipline of the wider function of risk management and an application of modern financial theory and practice. Financial risk management falls within the financial function of an organization and is a reflection of the changing nature of this function over time. Traditionally, the financial function has been seen in terms of financial reporting and control. The modern approach is to consider the financial function in terms of financial policy and financial decision making. This includes the management of the firm's operational, business and economic risks (Moles, 2013)

Organizations that have financial risk exposure have a possibility of loss but also an opportunity for gain or profit. Financial risks exposure may provide strategic or competitive benefits to companies that critically analyze their market performance. The main reasons for managing financial risk are the same as those for implementing a risk management, as financial risk is a subcategory of the company's risks. One of the main objectives is to reduce the volatility of earnings or cash flows due to financial risk exposure (Dhanini *et al*., 2007). The reduction enables the firm to perform better forecasts (Drogt & Goldberg, 2008). Furthermore, this assures that sufficient funds are available for investment and dividends. Another argument for managing financial risk is to avoid financial distress and the costs connected with it (Triantis, 2000; Drogt & Goldberg, 2008).

1.1 Statement of the Problem

The manufacturing sector in Kenya has been ranked the second after agriculture in terms of its contribution to GDP. In line with Kenya Vision 2030, the manufacturing sector as one of the key drivers for realizing a sustained annual GDP growth of 10 per cent. The manufacturing sector has high, yet untapped potential to contribute to employment and GDP growth. Compared to the agriculture sector, which is greatly limited by land size, the manufacturing sector has high potential in employment creation and poverty alleviation since it is less affected by land size (Bigsten *et al.,* 2010). The manufacturing sector in Kenya however, faces some challenges that affect its growth. According to KNBS report (2016) the manufacturing sector in Kenya grew at 3.5% in 2015 and 3.2% in 2014, contributing 10.3% to Gross Domestic Product (GDP) (KNBS, 2016). On average, however, manufacturing has been growing at a slower rate than the economy, which expanded by 5.6% in 2015. This implies that the share of manufacturing in GDP has been reducing over time. Thus, it can be argued that Kenya is going through premature deindustrialization in a context where manufacturing and industry are still relatively under-developed. Kenya seems to have 'peaked' at a point much lower than in much of Asia.

Financial risk has been termed among the main factors affecting the growth of manufacturing companies in Kenya. The risks exposure in the Kenyan market include; default risk, interest risk, credit risk and market risk, Foreign exchange, Shape, Volatility, Sector, Liquidity, Inflation risks (Korir, 2010). The ever-rising inflation rates, fluctuation of interest rate and exchange rate in Kenya have been major factor to retardant growth in the manufacturing industry in Kenya. Various studies have been conducted on risk management and its impact to performance of business entities in Kenya. Oluwafemi *et al.,* (2014) did a study on risk management and financial performance of banks in Nigeria. The study focused on the association of risk management practices and bank financial performance in Nigeria.

Matthijs (2012) on the other hand conducted a research on the financial performance and risk profile of sustainable firms. The study attempts to shed light on the prime question why companies and investors commit resources to sustainability efforts. Mohamad *et al.,* (2014) also did a study on Inverse relationship of financial risk and performance in commercial banks in Tanzania. The study aimed to examine the simultaneous influence of the financial risks and financial performance of commercial banks in Tanzania. Studies in Kenya have only focused on risk management practices of firms in general without being specific on the financial risk management practices of manufacturing industry.

In summary, there is lack of clarity as to how default, interest rate, foreign exchange rate and liquidity risks affect the market performance of manufacturing companies in Kenya. This study therefore aimed at filling this gap by conducting a thorough study on the effects of financial risks on the market performance of manufacturing firms in Kenya.

1.2 Study Objectives

The overall objective of this study was to determine the effect of financial risks on the market performance of public manufacturing companies in Kenya. The **Specific Objectives** were to;

i. Determine the effect of default risk on the market performance of public manufacturing companies in Kenya.

ii. Evaluate the effect of interest rate risk on the market performance of public manufacturing companies in Kenya.

iii. Find out the effect of foreign exchange rate risk on the market performance of public manufacturing companies in Kenya.

iv. Establish the effect of liquidity risk on the market performance of public manufacturing companies in Kenya.

1.3 Research Hypothesis

H_{01} - Default risk has no significant effect on the market performance of public manufacturing companies in Kenya.

H_{02} – Interest rate risk has no significant effect on the market performance of public manufacturing companies in Kenya.

H_{03}– Foreign exchange risk has no significant effect on the market performance of public manufacturing companies in Kenya.

H_{04}– Liquidity risk has no significant effect on the market performance of public manufacturing companies in Kenya.

2.0 LITERATURE REVIEW

To understand the effects of financial risks on market performance of public manufacturing companies in Kenya, the study adopted two theories to build up the theoretical literature;

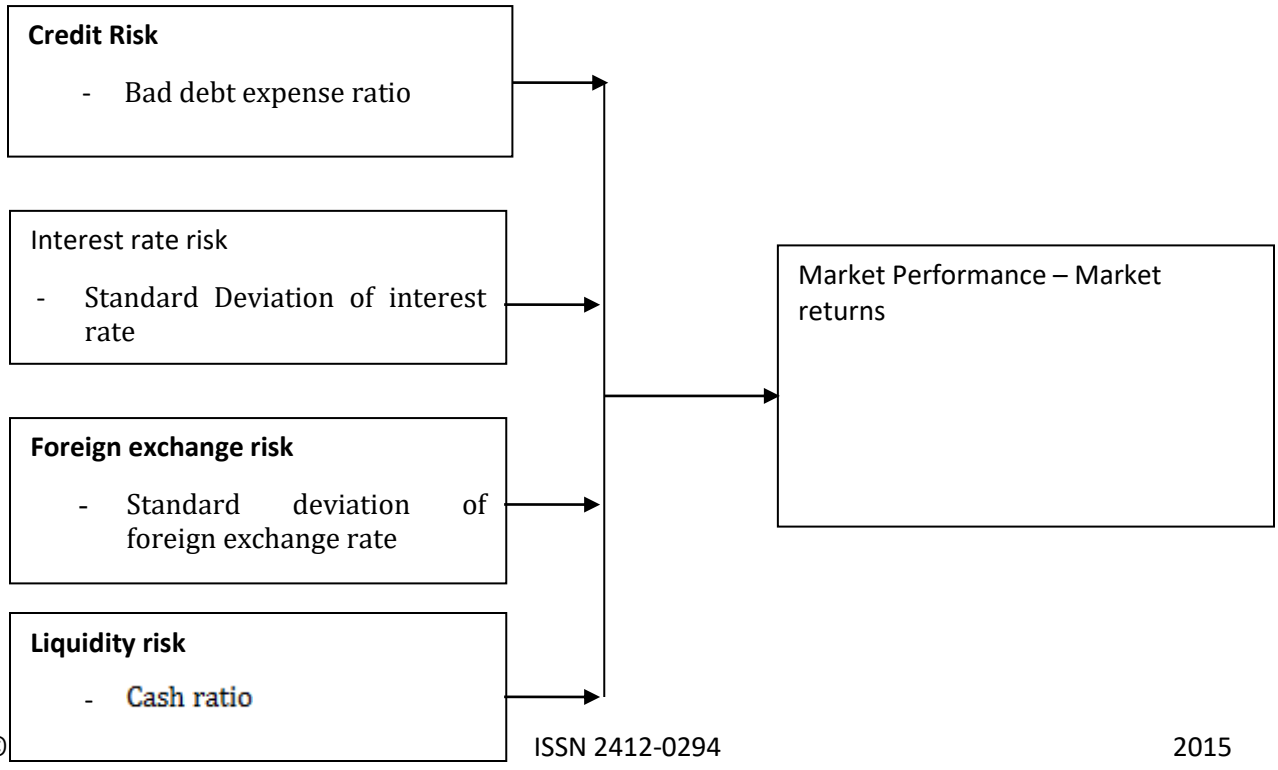
2.1 Financial Distress Theory

Financial distress in enterprises has long been an issue of concern to governments and the investing public. Corporate financial performance can deteriorate for several reasons and in the extreme, may cause companies to go bankrupt or be subject to acquisition by other firms. Corporate bankruptcies have significant adverse consequences for an economy since investors and creditors suffer considerable financial loss (Ahsan *et al.*, 2013).

2.2 The Random Walk Theory

The random walk hypothesis was postulated by Fama (1965) which denoted that successive values of a share are independent of each other being random; and caused by changes in stock information. Fama (1965) opined that a random walk arises within the stochastic model when the environment is such that the evolution of an investor tastes and the process generating new information combine to produce equilibria in which return distributions repeat themselves through time. This argument seems to suggest that the more random the price of a share, there is greater evidence that available information about the stock in the market has affected investor perception, and buying and selling attitudes. This indicates that higher levels of randomness of stock prices evidences market efficiency.

2.3 Conceptual Framework – as displayed by figure 1 below



3.0 Research Methodology

This study adopted a descriptive survey research design. Descriptive design is the best research in identifying phenomena in relation to what, when, who, where and how in a study; which is the phenomenon in this study. The population of this study was all manufacturing companies listed in Nairobi Securities Exchange from January, 2008 to December 2016. The study preferred manufacturing companies because they were not regulated by any government or private organ and therefore my findings could not be as a result of any undue influence. A census survey of all the 10 firms was used to meet the data requirements for hypothesis tests in this study. These included Baumann company ltd, B.O.C. Kenya, British American Tobacco, Carbacid Investment Ltd, East African breweries, Eveready East Africa, Kenya Orchards Ltd, Mumias sugar Company, Unga group and Flame tree group holdings. The study relied on secondary data to assess the effect financial risks on market performance of public manufacturing companies in Kenya. The NSE-20 share index was deemed appropriate for the study. The secondary data entailed the quarterly interest rates from the central bank of Kenya, the quarterly exchange rates from January 2008 to December 2016 from the central bank of Kenya, the quarterly bad debt expense from January 2008 to December 2016 from the financial statements of manufacturing companies listed in Nairobi Securities Exchange, and the quarterly share prices from January 2008 to December 2016 from the Nairobi Securities Exchange. The study therefore employed a modified capital asset pricing model which is an expression of relative risk based on the variability of returns of manufacturing companies being analyzed. This model represents a potentially important step forward in finance used to estimate a stock's required rate of return. CAPM assumes investors prefer lower risk to higher risk when facing a specific expected rate of return. A modified version was developed which includes two additional premiums that aids in estimating the required rate of return. The following equations will be used in guiding the study. The model was specified in equation (i)

$$Ri - Rf = \beta_0 + \beta_1(Rm - Rf) + \beta_2 FRI ----(i)$$

Where:

FRI stood for Financial Risk Indicators. These indicators included Default Risk, Interest Rate Risk, Foreign Exchange Risk, and Liquidity Risk.

Ri was the required return on stock, a variable that was used to measure the market performance of manufacturing companies in Kenya. This is computed as reflected in equation (ii)

$$Ri = \frac{Pe - Pb}{Pb} ----------(ii)$$

Default Rate risk was a financial risk indicator which is described as the chance that companies or individuals will be unable to meet the required payments on their debt obligations. The Bad Debt ratio identified it.

$$Bad\ Debt\ Ratio = \frac{Bad\ Debts}{Debtors} ----------(iii)$$

Interest Rate Risk was also another financial risk indicator. The study captured the effect of interest rate as a measure of financial risk because a change in interest rate could lead to a mismatch between interest paid on deposit and

the interest received on loans. The study employed a 3-quarter moving standard deviation and can be illustrated as in equation (iv)

$$SD = \frac{1}{3}\sum_{i=1}^{3}\sqrt{(\mathrm{I}-\bar{\mathrm{I}})^2} \text{ ---------- } (iv)$$

Foreign Exchange Risk is the risk of change in the company`s future economic value due to adverse foreign exchange rate movements. The study arrived to the foreign exchange risk from the 3-quarter moving standard deviation of quarter Ksh/$ exchange rate from January 2008 to December 2016 as illustrated in equation (v)

$$SD = \frac{1}{3}\sum_{I=1}^{3}\sqrt{(\mathrm{F}-\dot{\mathrm{F}})^2} \quad (v)$$

Liquidity risk was considered as the risk that a manufacturing company may be unable to meet short term financial demands. . The study measured liquidity risk on the cash ratio. This is specified in equation (vi).

$$Cash\ Ratio = \frac{Total\ Cash}{Total\ Assets} - - - - - - - - - - - - - (vi)$$

The study also considered the market risk and the risk-free rate as shown in equations vii and viii below.

$$Rm = \frac{(NSE-20e)-(NSE-20b)}{(NSE-20b)} \text{ ---------- } (vii)$$

$$Rf = \frac{90-day\ TB\ rate}{12} \text{ ---------- } (viii)$$

A multiple regression model that relates the dependent variable to the independent variables was used. The model specified was used to generate the coefficients to be tested using t-statistics at 95% confidence interval. F-ration was used alongside R^2 to test the goodness of fit of the model to data.

4.0 RESEARCH FINDINGS AND DISCUSION

4.1 Findings of Descriptive Statistics

According to the research findings in table 1, the average risk free was 0.0212, with a minimum value of 0.0051, a maximum value of 0.04575, a standard deviation of 0.0087 and a standard error of 0.0015. The distribution of risk free was found to be right skewed and highly peaked as indicated by 0.8651 and 2.4884 skewness and kurtosis values respectively. Market return had an average value of 0.0123, a minimum value of -0.22627, a maximum value of 0.226648, a standard deviation of 0.11481 and a standard error of 0.0194. Market return was also found to be left skewed as indicated by a negative skewness value, -0.35799, and flat peaked with more values lying around the tails as indicated by a kurtosis value of -0.23278. Finally, for the *PR*, the average value was found to be 0.01104 with the lowest value being -0.22566, the highest value being 0.476234 leading to a small range of 0.701896, a standard deviation of 0.1432, a middle value of 0.000165 and a standard error of 0.02421. The distribution of *PR* was found to be right skewed and highly peaked as indicated by 1.0788 and 2.6800 skewness and kurtosis values respectively.

Table 1: The Market Return Descriptive

Descriptives	*Risk Free rate*	*Market Return*	*Price Ratio*
Mean	0.021180714	0.012251	0.011036
Median	0.02095	0.035874	0.000165
Standard Deviation	0.008662487	0.11481	0.143226
Kurtosis	2.488429939	-0.23278	2.679558
Skewness	0.865172504	-0.35799	1.078826
Minimum	0.0051	-0.22627	-0.22566
Maximum	0.04575	0.226648	0.476234
Count	35	35	35

According to the research findings in table 2, the average value for Default Rate Risk was found to be 0.1287, with a minimum value of 0.1540, a maximum value of 0.0951, a standard deviation of 0.0216, a standard error of 0.00364 and a middle value of 0.14214. The distribution of Default Rate Risk was found to be negatively or left skewed and lowly or flat peaked as indicated by -0.5428 and -1.2796 skewness and kurtosis values respectively. Cash Ratio had an average value of 0.02966, a minimum value of -0.018283, a maximum value of 0.034809, a standard deviation of 0.006474 and a standard error of 0.001094. Liquidity Risk was also found to be left skewed as indicated by a negative skewness value, -0.92351, and flat peaked with more values lying around the tails as indicated by a kurtosis value of -1.01513.

Table 2 Independent variables Descriptives

Descriptives	Bad debt ratio	Cash ratio
Mean	0.12873892	0.029662
Median	0.142139755	0.03318
Standard Deviation	0.021587199	0.006474
Kurtosis	-1.27958887	-1.01513
Skewness	-0.54278081	-0.92351
Minimum	0.09509021	0.018283
Maximum	0.15396906	0.034809
Count	35	35

According to the research findings in table 3, the average value for portfolio premium was found to be -0.01014423, with a minimum value of -0.258667492, a maximum value of 0.459183797, a standard deviation of 0.1444, a standard error of 0.0244 and a middle value of -0.01104. The distribution of portfolio premium was found to be positively or right skewed and high peaked as indicated by 1.0521 and -2.7030 skewness and kurtosis values respectively. *Rm-Rf* had an average value of -0.00893, a minimum value of -0.2708, a maximum value of 0.201948, a standard deviation of 0.1174 and a standard error of 0.0198. *Rm-Rf* was also found to be left skewed as indicated by a negative skewness value, -0.48699, and flat peaked with more values lying around the tails as indicated by a kurtosis value of -0.03906.

Table 3 Premium Descriptives

Descriptives	*Rp-Rf*	*Rm-Rf*
Mean	-0.01014423	-0.00893
Median	-0.011042942	0.014399
Standard Deviation	0.144357142	0.117372
Kurtosis	2.70295017	-0.03906
Skewness	1.052095064	-0.48699
Minimum	-0.258667492	-0.27077
Maximum	0.459183797	0.201948
Count	35	35

According to the research findings in table 4, the average value for Standard deviation of the exchange rates was found to be -2.3459, with a minimum value of 0.170141, a maximum value of 7.134284, a standard deviation of 2.088877, and a standard error of 0.353085 and a middle value of 1.420332. The most common value of Standard deviation of the exchange rates was found to be 0.751683 and the distribution was found to be positively or right skewed and high peaked as indicated by 1.0990 and 0.0624 skewness and kurtosis values respectively. Standard deviations of the Interest rates had an average value of 0.5917, a minimum value of 0.0265, a maximum value of 2.5446, a standard deviation of 0.6514 and a standard error of 0.1101. Standard deviations of the Interest rates were found to be positively or right skewed and high peaked as indicated by 1.9970 and 3.5848 skewness and kurtosis values respectively.

Table 4 Price Descriptives for Exchange rate and Interest rate volatility

Descriptives	*Standard deviation exchange rates*	*Standard deviation interest rates*
Mean	2.345852	0.591665
Median	1.420332	0.342977
Standard Deviation	2.088877	0.651426
Kurtosis	0.062393	3.584794
Skewness	1.098953	1.996994
Minimum	0.170141	0.026458
Maximum	7.134284	2.544648
Count	35	35

4.2 Financial Risks and Market Performance

4.2.1 Default Rate risk and market performance

A multiple linear regression was performed with Market Performance (Market returns) as the dependent variable and Default Rate Risk and market premium (Rm-Rf as the predictor variables. The first output in table 5 was the model summary which informed about fitness of the model. The findings indicated that, 55.4850% of variation of the dependent variable (Market performance) was explained by the predictor variables, R^2= 0.581034498; adjusted R^2 = 0.554849154. An ANOVA was used to determine whether the model was

significant in predicting the dependent variable. Table 6 indicated that at 0.05 level of significance the model significantly predicted Market Performance, F (2, 32) =22.1893; p=9.01E-07which is less than 0.05. The third output on table 7, was the Coefficients of Multiple Determinations of the Variables. This showed which independent variables were individually significant predictors of the dependent variable. From table 4.5c, Rm-Rf variables was found to be a significant predictor of the market performance as indicated by a significant p-value of 0.000000531 at 95% confidence level (p=0.000000531<0.05). However, Default Rate Risk was found to be a non-significant predictor as indicated by an insignificant p-value 0.184164 (p=0.184164>0.05). The predicted regression model was given as follows:

Portfolio Premium = 0.133006366 + 0.889129424(Rm-Rf) - 1.050269534(DRR)

From the model, 0.133006366 is the value of market performance holding all the other variables zero. A one unit change in Rm-Rf would change the value of market performance by 0.889129424 and finally holding all other factors constant, a one unit change in Default Rate Risk, would change the value of market performance by -1.050269534.this could therefore indicate that Default rate risk holding all other influencing factors constant may not have a major effect on market performance. The findings are illustrated in tables 5, 6, and 7.

Table 5 Model summary of Default risk and market performance

	Regression Statistics
Multiple R	0.762256189
R Square	0.581034498
Adjusted R Square	0.554849154
Standard Error	0.096314545
Observations	35

Table 6 ANOVA Table for Default risk and market performance

	df	*SS*	*MS*	*F*	*Significance F*
Regression	2	0.411678	0.205839	22.1893	9.01E-07
Residual	32	0.296848	0.009276		
Total	34	0.708525			

Table 7 Coefficients of Multiple Determinations of the Variables

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	0.133006366	0.100756	1.320082	0.196173	-0.07223	0.33824
Rm-Rf	0.889129424	0.142311	6.247807	5.31E-07	0.599252	1.179007
BDR	-1.05026953	0.77376	-1.35736	0.184164	-2.62637	0.525829

4.2.2 Liquidity Risk and market performance

A multiple linear regression was performed with Market Performance (Market returns) as the dependent variable and Rm-Rf and Liquidity Risk as the predictor variables. The findings in table 8 indicated that, approximately 19.8% of the variation in the dependent variable (Market performance) was explained by the predictor variables, R^2= 0.2451; adjusted R^2 = 0.1979. Following the model summary is the analysis of variance (ANOVA) which was used to determine whether the model was significant in predicting the dependent variable Table 9 indicated that at 0.05 level of significance the model significantly predicted Market Performance, F (2, 32) =5.1950; p=0.011123 which is less than 0.05. The ANOVA is the followed by the Coefficients of Multiple Determinations table. This showed which independent variables were individually significant predictors of the dependent variable. From table 10, Rm-Rf and credit risk variables were found to be significant predictors of market performance, t= 11.8509; p=0.009064; CI [-0.13949, 0.156722] and t= -2.72484; p=0.01034; CI [-111.884, -16.1633], respectively at 95% confidence level. The predicted regression model was given as follows:

Portfolio Premium = 2.5268 + 0.8617(Rm-Rf) - 64.0235(CR)

From the model, 2.5268 is the value of market performance holding all the other variables zero. A one unit change in Rm-Rf would change the value of market performance by 0.8617 and finally holding all other factors constant, a one unit change in Liquidity, would change the value of market performance by -64.0235.

Table 8 Model summary of Liquidity Risk and market performance

	Regression Statistics
Multiple R	0.495077725
R Square	0.245101954
Adjusted R Square	0.197920826
Standard Error	0.766733388
Observations	35

Table 9 ANOVA for Liquidity Risk and market performance

	df	*SS*	*MS*	*F*	*Significance F*
Regression	2	6.107974	3.053987	5.194915	0.011123
Residual	32	18.81216	0.58788		
Total	34	24.92014			

Table 10 ANOVA for Liquidity Risk and market performance

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	2.526822061	0.80555	3.136766	0.003652	0.88597	4.167674
Rm-Rf	0.861675281	0.07271	11.8509	0.009064	-0.13949	0.156722
CR	-64.0235457	23.49623	-2.72484	0.01034	-111.884	-16.1633

4.2.3 Foreign Exchange Rate Risk and market performance

A multiple linear regression was performed with Market Performance (Market returns) as the dependent variable and *Rm-Rf* and standard deviation of the exchange rates as the predictor variables. The findings in table 11 indicated that, approximately 19.8% of the variation in the dependent variable (Market performance) was explained by the predictor variables, R^2= 0.2451; adjusted R^2 = 0.1979. Following the model summary is the analysis of variance (ANOVA) which was used to determine whether the model was significant in predicting the dependent variable. Table 12 indicated that at 0.05 level of significance the model significantly predicted Market Performance, F (2, 32) =5.1950; p=0.011123 which is less than 0.05. The ANOVA is the followed by the Coefficients of Multiple Determinations table. This showed which independent variables were individually significant predictors of the dependent variable. From table 13, Rm-Rf and standard deviation of the exchange rates variables were found to be significant predictors of market performance, t= 2.7294; p=0.010224; CI [16.2462, 111.8181] and t= -2.72484; p=0.01034; CI [-111.884, -16.1633], respectively at 95% confidence level. The predicted regression model was given as follows:

Portfolio Premium = 2.5268 + 64.0322(Rm-Rf) -28.632457(STD ER)

From the model, 2.5268 is the value of market performance holding all the other variables zero. A one unit change in market premium (*Rm-Rf)* would change the value of market performance by 64.0322 and finally holding all other factors constant, a one unit change in standard deviation of exchange rates, would change the value of market performance by -28.632457.

Table 11 Model summary of Foreign Exchange Rate Risk and market performance

	Regression Statistics
Multiple R	0.495077725
R Square	0.245101954
Adjusted R Square	0.197920826
Standard Error	0.766733388
Observations	35

Table 12 ANOVA for Foreign Exchange Rate Risk and market performance

	df	*SS*	*MS*	*F*	*Significance F*
Regression	2	6.107974	3.053987	5.194915	0.011123
Residual	32	18.81216	0.58788		
Total	34	24.92014			

Table 13 Coefficients of Multiple Determinations of the Variables

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	2.526822061	0.80555	3.136766	0.003652	0.88597	4.167674
Rm-Rf	64.0321624	23.45976	2.7294	0.010224	16.24619	111.818135
Std er	-28.632457	6.061049	-4.72484	0.01034	-111.884	-16.1633

4.2.4 Interest Rate Risk and Market Performance

A multiple linear regression was performed with Market Performance (Market returns) as the dependent variable and *Rm-Rf* and Standard deviation of interest rates as the predictor variables. The findings in table 14 indicated that, approximately 85.7% of the variation in the dependent variable (Market performance) was explained by the predictor variables, R^2= 0.865016; adjusted R^2 = 0.856579. Following the model summary is the analysis of variance (ANOVA) which was used to determine whether the model was significant in predicting the dependent variable. Table 15 indicated that at 0.05 level of significance the model significantly predicted Market Performance, F (2, 32) =5.1950; p=1.21E-14 which is less than 0.05. The ANOVA is the followed by the Coefficients of Multiple Determinations table. This showed which independent variables were individually significant predictors of the dependent variable. From table 16, *Rm-Rf* and Standard deviation of interest rates variables were found to be significant predictors of market performance, t= 2.888841; p=0.006884; CI [0.022724, 0.131392] and t= 13.72889; p=5.84E-15; CI [1.00162, 1.350618], respectively at 95% confidence level. The predicted regression model was given as follows:

Portfolio Premium = -0.22663+ 0.077058(Rm-Rf) + 1.176119(SD IR)

From the model, -0.22663 is the value of market performance holding all the other variables zero. A one unit change in *Rm-Rf* would change the value of market performance by 0.077058 and finally holding all other factors constant, a one unit change in Standard deviation of interest rates would change the value of market performance by 1.176119.

Table 14 Model summary of Interest Rate Risk and Market Performance

Regression Statistics	
Multiple R	0.930062
R Square	0.865016
Adjusted R Square	0.856579
Standard Error	0.324222
Observations	35

Table 15 ANOVA Table for Interest Rate Risk and Market Performance

	df	*SS*	*MS*	*F*	*Significance F*
Regression	2	21.55631	10.77815	102.5323	1.21E-14
Residual	32	3.363829	0.10512		
Total	34	24.92014			

Table 16 Coefficients of Multiple Determinations of the Variables

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95.0%*	*Upper 95.0%*
Intercept	-0.22663	0.094109	-2.40817	0.021968	-0.41833	-0.03494
Rm-Rf	0.077058	0.026674	2.888841	0.006884	0.022724	0.131392
Sd ir	1.176119	0.085667	13.72889	5.84E-15	1.00162	1.350618

5.0 SUMMARY

5.1 Effect of Default Risk on Market performance.

Default is a key aspect of every company's life. This study provides a simple explanation of the connection between default risk and market returns that does not appeal to market mispricing and is in fact consistent with the risk-return trade-off. The analysis on the effect of default risk and market performance highlighted a complex relationship between default probabilities and market returns. Given that the analysis can obtain these two quantities explicitly within a plausible model of the default process, the study indicated the implications of the model and then compared them with the empirical evidence. The study investigated the relationship between market returns and default probabilities with the help of a calibrated numerical example of the modified CAPM model. The main objective is to highlight the role of the bargaining power coefficient and of the liquidation cost coefficient in determining how default probability and market returns are related to each other. The second objective of the study was to set to establish whether Liquidity Risk affects the market performance of the manufacturing companies in Kenya. The findings revealed that liquidity risk had a significant negative effect on the market performance of manufacturing companies in Kenya both in the short run and in the long run. This implied that manufacturing companies increased exposure to Liquidity risk reduces market returns. It may result by the fact that health of a manufacturing company's loan portfolio may be reflected by changes in liquidity risk and affect the market performance of manufacturing companies. On the other hand, A multiple linear regression was performed with Market Performance (Market returns) as the dependent variable and Rm-Rf and liquidity as the predictor variables. The findings indicated that, approximately 19.8% of the variation in the dependent variable (Market performance) was explained by the predictor variables. The analysis of variance (ANOVA) which was used to determine whether the model was significant in predicting the dependent variable indicated that

at 0.05 level of significance the model significantly predicted Market Performance, F (2, 32) =5.1950; p=0.011123 which is less than 0.05. The ANOVA was the followed by the Coefficients of Multiple Determinations which showed which independent variables were individually significant predictors of the dependent variable. The Rm-Rf and cash ratio variables were found to be significant predictors of market performance. From the model, 2.5268 is the value of market performance holding all the other variables zero. A one unit change in Rm-Rf would change the value of market performance by 0.8617 and finally holding all other factors constant, a one unit change in cash ratio, would change the value of market performance by -64.0235.

5.2 Effect of Exchange Rate Risk on Market performance.

A multiple linear regression was performed with Market Performance (Market returns) as the dependent variable and *Rm-Rf* and standard deviation of the exchange rates as the predictor variables. The indicated that, approximately 19.8% of the variation in the dependent variable (Market performance) was explained by the predictor variables, R^2= 0.2451; adjusted R^2 = 0.1979. Following the model summary is the analysis of variance (ANOVA) which was used to determine whether the model was significant in predicting the dependent variable the findings indicated that at 0.05 level of significance the model significantly predicted Market Performance. The Coefficients of Multiple Determinations then followed the ANOVA. This showed which independent variables were individually significant predictors of the dependent variable. Rm-Rf and standard deviation of the exchange rates variables were found to be significant predictors of market performance, t= 2.7294; p=0.010224; CI [16.2462, 111.8181] and t= -2.72484; p=0.01034; CI [-111.884, -16.1633], respectively at 95% confidence level. From the Regression model, 2.5268 is the value of market performance holding all the other variables zero. A one unit change in *Rm-Rf* would change the value of market performance by 64.0322 and finally holding all other factors constant, a one unit change in standard deviation of exchange rates, would change the value of market performance by -28.632457

5.3 Effect of Interest Rate Risk on Market performance.

A modified Capital Asset Pricing Model was used in a form of a multiple linear regression which was performed with Market Performance (Market returns) as the dependent variable and *Rm-Rf* and Standard deviation of interest rates as the predictor variables. The findings indicated that, approximately 85.7% of the variation in the dependent variable (Market performance) was explained by the predictor variables, R^2= 0.865016; adjusted R^2 = 0.856579. Following the model summary is the analysis of variance (ANOVA) which was used to determine whether the model was significant in predicting the dependent variable the analysis indicted that at 0.05 level of significance the model significantly predicted Market Performance, F (2, 32) =5.1950; p=1.21E-14 which is less than 0.05. The Coefficients of Multiple Determinations then followed the ANOVA. This showed which independent variables were individually significant predictors of the dependent variable. *Rm-Rf* and Standard deviation of interest rates

variables were found to be significant predictors of market performance, t= 2.888841; p=0.006884; CI [0.022724, 0.131392] and t= 13.72889; p=5.84E-15; CI [1.00162, 1.350618], respectively at 95% confidence level. From the model, -0.22663 is the value of market performance holding all the other variables zero. A one unit change in *Rm-Rf* would change the value of market performance by 0.077058 and finally holding all other factors constant, a one unit change in Standard deviation of interest rates would change the value of market performance by 1.176119.

5.4 CONCLUSIONS

5.4.1 Effect of Default Risk on Market performance.

The study investigated the effect of default risk on the market performance of manufacturing companies in Kenya. Default risk is a financial risk indicator which is described as the chance that companies will be unable to meet the required payments on their debt obligations. This was determined by a bad debt ratio. A higher default rate ratio shows that a company is not doing very well both financially and its market performance. Although considerable research effort has been put toward modeling default risk for valuing company debts and derivative products written on it, little attention has been paid to the effects of default risk on market returns. The results concluded that, independently of whether the default spread can explain, predict, or otherwise relate to Market returns, such a relation cannot be attributed to the effects that default risk may have on equities.

5.4.2 Effect of Credit Risk on Market performance

The study also investigated the effect of credit risk on the market performance for manufacturing companies. A sound credit risk management framework is crucial for manufacturing companies so as to enhance profitability and guarantee survival. The key principles in credit risk management process are sequenced as follows: establishment of a clear structure, allocation of responsibility, processes have to be prioritized and disciplined, responsibilities should be clearly communicated and accountability assigned. Effect of Exchange Rate Risk on Market performance the relative degree of importance of the factors, improving the pricing of default risk, screening out bad loan applicants and calculating any reserve needed to meet expected future loan losses. A regression analysis was conducted in the form of a modified capital asset pricing model and the results indicated a negative significant effect between credit ration and market performance.

5.4.3 Effect of Exchange Risk on Market performance

Exchange rate risk movement in Kenya has been variable with periods of rapid depreciation of the domestic currency Kenya Shilling, which adversely affect the Kenyan economy. The results indicated a practical relevance in foreign exchange rate risk management that lies in the fact that, even though there are a number of techniques such as balance sheet hedging, use of derivatives, leading and lagging almost others 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 concluded also that exchange rate risk does not directly affect manufacturing companies and this could be probably because most of these companies do not depend on foreign trade to perform their functions. From these results therefore, the study concluded that exchange rates had a negative significant effect on market performance.

5.4.4 Effect of Interest Rate Risk on Market performance

The study investigated the effects of interest rate on market performance. The study postulates that interest rates are an everyday part of business. In most cases companies pay interest on money they borrow, and when they have extra cash, they receive interest when they place that cash in a safe investment. Manufacturing Companies also charge interest when their customers buy goods and services on credit from them. A rise or fall in interest rates affects these business activities as well as the buying habits of the company's customers. The results also concludes that interest rates were related to the amount of money floating through the economic system, When companies lend out or gives out goods on credit, they charge a high rate of interest that reflects its scarcity value. High interest rates make it more expensive for companies to borrow money to finance their operations, payroll and purchases. High rates also eventually discourage consumers from buying because of the expense involved, which chokes off economic activity. Due to the major effect that interest rates have for market performance of manufacturing companies, the study concluded that interest rates have a positive significant effect on market performance of manufacturing companies.

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